



# MONITOUCH V8 series

*Operation Manual*





## Record of Revisions

Reference numbers are shown at the bottom left corner on the back cover of each manual.

Printing Date	Reference No.	Revised Contents
February, 2011	1058NE0	First edition
July, 2012	1058NE1	Second edition



# Preface

---

Congratulations on purchasing the drawing/editing software (V-SFT-5) for the MONITOUCH V8 series. For a clearer understanding, the MONITOUCH V8 series Reference Manual focuses on the outline of each function and the way of using the drawing/editing software (V-SFT-5) according to operating procedures.

## Notes:

1. The copyright of the software is possessed by Hakko Electronics Co., Ltd.
2. Reproduction of the contents of the software and this manual, in whole or in part, without permission of Hakko Electronics Co., Ltd. is prohibited.
3. The specifications of the software and the information in this manual are subject to change without prior notice.
4. If the specifications of the software do not correspond with the contents of this manual, the software specifications have priority.
5. No liability is assumed by Hakko Electronics Co., Ltd. with respect to the influence brought by the result of using the software or this manual.
6. You may use this software on a single central processing unit.

## About Trademarks

- Windows, Word and Excel are registered trademarks of Microsoft Corporation in the United States and other countries.
- All other company names or product names are trademarks or registered trademarks of their respective holders.
- Programmable logic controllers (PLCs) are products of their respective manufacturers.

## About Manuals

---

This manual describes the structure, operating procedures and useful functions of the drawing software “V-SFT-5” for the MONITOUCH V8 series. Following manuals are available for the MONTOUCH V8 series.

Manual Name	Contents	Reference No.
V8 Series Reference Manual	The functions and instructions of the V8 series are explained.	1055NEx
V Series Macro Reference	An overview of macros as well as macro editor operations and macro command descriptions are explained in detail.	1056NEx
V8 Series Introductory Manual	The basic operating procedure of V-SFT version 5 is explained in detail.	1057NEx
V8 Series Operation Manual (this manual)	The information related to the operations of V-SFT version 5, such as software composition, editing procedure or limitations, is explained in detail.	1058NEx
V8 Series Reference: Additional Functions	The additional functions of the MONITOUCH V8 series for the V-SFT version 5.1.0.0 and later are explained.	1060NEx
V8 Series Hardware Specifications	Notes on usage and hardware specifications for the V8 series are explained.	2016NEx
V806 Series Hardware Specifications	Notes on usage and hardware specifications for the V806 series are explained.	2017NEx
V815 Hardware Specifications	Notes on usage and hardware specifications for the V815 are described.	2018NEx
V808CH Hardware Specifications	Notes on usage and hardware specifications for the V808CH are described.	2019NEx
V8 Series Connection Manual	The connection and communication parameters for the V8 series and controllers are explained in detail.	2201NEx
V Series DLL Function Specifications	An overview and contents of DLL files used for Ethernet (HKEtn20.DLL) and CF card (VCFacs.DLL) are explained in detail.	1059NEx

## V8 Series Models

---

The following MONITOUCH V8 series models are available:

Generic Name	Series	Model	V Series Classification
V series	V8 series	V815iX	V8i or V8i series
		V812iS	V8i or V8i series
		V812S	V8
		V810iS	V8i or V8i series
		V810S	V8
		V810iT	V8i or V8i series
		V810T	V8
		V810iC	V8i or V8i series
		V810C	V8
		V808iS	V8i or V8i series
		V808S	V8
		V808iC	V8i or V8i series
		V808C	V8
		V806iT	V8i or V806i series
		V806iC	
		V806iM	
		V806T	V8 or V806 series
		V806C	
		V806M	
		V808iCH	
V808CH			

Please note that the V8 series model names are used as listed above in the manuals.





V8 Series Reference Manual		V8 Series								
Chapter	Content	V815iX	V812iS V810iS V810iT V808iS	V812S V810S V810T V808S	V810iC V808iC	V810C V808C	V808iCH	V808CH	V806iT V806iC V806iM	V806T V806C V806M
14	Multimedia	-	-	-	-	-	-	-	-	-
	Animation	○	○	○	×	×	×	×	×	×
	Video/RGB display	△	△	×	×	×	×	×	×	×
	JPEG display	○	○	○	○	○	○	○	○ <sup>*1</sup>	○ <sup>*1</sup>
	Sound replay function	△	△	×	×	×	×	×	×	×
15	Others	-	-	-	-	-	-	-	-	-
	Data block area	○	○	○	○	○	○	○	○	○
	Memory card mode	○	○	○	○	○	○	○	○	○
	CF card	○	○	○	○	○	○	○	○	○
	SRAM	○	○	○	○	○	○	○	○	○
	CREC	○	○	○	○	○	×	×	○	○
Memo pad (for analog only)	○	○	○	○	○	○	○	○	○	
16	Print	○	○	○	○	○	○	○	○	○
	Data sheet print Serial	○	○	○	○	○	×	×	○	○
	USB	○	○	○	○	○	○	○	○	○
17	Barcode One-dimensional	○	○	○	○	○	○	○	○	○
	Two-dimensional	○	○	○	○	○	○	○	○	○
18	CF card Built-in	○	○	○	○	○	○	○	△	△
	USB	○	○	○	○	○	×	×	○	○
	2-drive connection	○	○	○	○	○	×	×	△	△
19	Ethernet function	○	○	△	○	△	○	×	○	△
	Screen data transfer	○	○	△	○	△	○	×	○	△
	PLC connection	○	○	△ <sup>*2</sup>	○	△ <sup>*2</sup>	○	×	○	△ <sup>*2</sup>
	E-mail	○	○	×	○	×	○	×	○	×
	Web server	○	○	×	○	×	○	×	○	×
A1	Buffering area	○	○	○	○	○	○	○	○	○
	Store target: SRAM	○	○	○	○	○	○	○	○	○
	Store target: CF card	○	○	○	○	○	○	○	○	○
A2	SRAM/clock setting	○	○	○	○	○	○	○	○	○
	Display language	○	○	○	○	○	○	○	○	○
	Multi-language selection	○	○	○	○	○	○	○	○	○
	Displayed character selection	○	○	○	○	○	○	○	○	○
A3	Multi-language screen	○	○	○	○	○	○	○	○	○
	Windows fonts	○	○	○	○	○	○	○	○	○

○: Available △: Optionally available ×: Not available

\*1 Not supported by V806iM and V806M

\*2 Available only for UDP/IP.



V8 Series Reference: Additional Functions		V8 Series								
Chap.	Contents	V815iX	V812iS V810iS V810iT V808iS	V812S V810S V810T V808S	V810iC V808iC	V810C V808C	V808iCH	V808CH	V806iT V806iC V806iM	V806T V806C V806M
15	Item display function	○	○	○	○	○	○	○	○	○
16	FTP server	○	○	×	○	×	○	×	○	×
17	E-mail certification	○	○	×	○	×	○	×	○	×
	Two Ethernet ports	○	△	×	△	×	×	×	△	×
18	Network camera	○	○ <sup>*1</sup>	×	○ <sup>*1 *3</sup>	×	○ <sup>*1</sup>	×	○ <sup>*1*2*3</sup>	×
19	Remote desktop window display (for analog only)	○	○ <sup>*1</sup>	×	○ <sup>*1 *3</sup>	×	○ <sup>*1</sup>	×	○ <sup>*1*2</sup>	×
20	MES interface	○	○	△	○	△	○	×	○	△
21	Operation log/Log viewer	○	○	○	○	○	○	○	○	○
22	Security	○	○	○	○	○	○	○	○	○
23	Macros	○	○	○	○	○	○	○	○	○
24	Tag editing	○	○	○	○	○	○	○	○	○
25	Jump to the target screen	○	○	○	○	○	○	○	○	○
	Refined search filter for project list-view window	○	○	○	○	○	○	○	○	○
	Memory batch change	○	○	○	○	○	○	○	○	○
	Selection order batch change	○	○	○	○	○	○	○	○	○
	Cross-reference Macro command search	○	○	○	○	○	○	○	○	○
	Text search and replacement	○	○	○	○	○	○	○	○	○
	Image file 3D part conversion	○	○	○	○	○	○	○	○	○
	Text comparison	○	○	○	○	○	○	○	○	○
	Selective transfer	○	○	○	○	○	○	○	○	○
	Message/comment transfer	○	○	○	○	○	○	○	○	○
26	USB barcode reader	○	○	○	○	○	×	×	○	○
	USB keyboard	○	○	○	○	○	×	×	○	○
	USB mouse	○	○	○	○ <sup>*3</sup>	○ <sup>*3</sup>	×	×	○ <sup>*3</sup>	○ <sup>*3</sup>
	USB-FDD	○	○	○	○	○	×	×	×	×
27	Ladder transfer USB	○	○	○	○	○	○	○	○	○
	Ethernet	○	○	×	○	×	○	×	○	×

○: Available △: Optionally available ×: Not available

\*1 The 128-color mode is not supported.

\*2 The V806M is not supported.

\*3 Not available on the portrait-orientated V808C/V806



---

# Notes on Safe Usage of MONITOUCH

---

In this manual, you will find various notes categorized under the following levels with the signal words "DANGER," and "CAUTION."




## **DANGER**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



## **CAUTION**

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury and could cause property damage.

Note that there is a possibility that the item listed with  **CAUTION** may have serious ramifications.



## **DANGER**

- Never use the input function of MONITOUCH for operations that may threaten human life or damage the system, such as switches to be used in case of emergency. Please design the system so that it can cope with the malfunction of a touch switch. A malfunction of the touch switch will result in machine accident or damage.
- Turn off the power supply when you set up the unit, connect new cables, or perform maintenance or inspections. Failure to do so could cause electric shock or damage to the unit.
- Never touch any terminals while the power is on. Otherwise, electric shock may occur.
- You must put a cover on the terminals on the unit when you turn the power on and operate the unit. Without the terminal cover in place, electric shock may occur.
- The liquid crystal in the LCD panel is a hazardous substance. If the LCD panel is damaged, do not ingest the leaked liquid crystal. If the liquid crystal spills on skin or clothing, use soap and wash off thoroughly.
- For MONITOUCH using a lithium battery, never disassemble, recharge, deform by pressure, short-circuit, reverse the polarity (+/-) of the battery, or dispose of the battery in fire. Failure to follow these conditions will lead to explosion or fire.
- For MONITOUCH using a lithium battery, never use a battery that is deformed, leaks, or shows any other signs of abnormality. Failure to follow these conditions will lead to explosion or fire.

## CAUTION

- Check the appearance of MONITOUCH when it is unpacked. Do not use the unit if any damage or deformation is found. Failure to do so may lead to fire, damage, or malfunction.
- For use in a facility or for a system related to nuclear energy, aerospace, medical, traffic equipment, or mobile installations, please consult your local distributor.
- Operate (or store) MONITOUCH under the conditions indicated in this manual and related manuals. Failure to do so could cause fire, malfunction, physical damage or deterioration.
- Understand the following environmental limits for use and storage of MONITOUCH. Otherwise, fire or damage to the unit may result.
  - Avoid locations where there is a possibility that water, corrosive gas, flammable gas, solvents, grinding fluids or cutting oil can come into contact with the unit.
  - Avoid high temperature, high humidity, and outside weather conditions, such as wind, rain or direct sunlight.
  - Avoid locations where excessive dust, salt, and metallic particles are present.
  - Avoid installing the unit in a location where vibration or physical shock may be transmitted.
- Equipment must be correctly mounted so that the main terminal of MONITOUCH can not be touched inadvertently. Otherwise, an accident or electric shock may occur.
- Tighten the fixtures of MONITOUCH with a torque in the specified range. Excessive tightening may distort the panel surface. Loose tightening may cause MONITOUCH to come off, malfunction, or be short-circuited.
- Check periodically that terminal screws on the power supply terminal block and fixtures are firmly tightened. Loosened screws may result in fire or malfunction.
- Tighten terminal screws on the power supply terminal block equally to a torque of 0.5 N•m. Improper tightening of screws may result in fire, malfunction, or other trouble.
- MONITOUCH has a glass screen. Do not drop or give physical shock to the unit. Otherwise, the screen may be damaged.
- Connect the cables correctly to the terminals of MONITOUCH in accordance with the specified voltage and wattage. Over-voltage, over-wattage, or incorrect cable connection could cause fire, malfunction or damage to the unit.
- Be sure to establish a ground of MONITOUCH. The FG terminal must be used exclusively for the unit with the level of grounding resistance less than 100Ω. Otherwise, electric shock or fire may occur.
- Prevent any conductive particles from entering the MONITOUCH. Failure to do so may lead to fire, damage, or malfunction.
- After wiring is finished, remove the paper used as a dust cover before starting to operate MONITOUCH. Operation with the cover attached may result in accident, fire, malfunction, or other trouble.
- Do not attempt to repair MONITOUCH at your site. Ask Hakko or the designated contractor for repair.
- Do not disassemble or modify MONITOUCH. Otherwise, malfunctions may occur.
- Hakko Electronics Co., Ltd. is not responsible for any damages resulting from repair, overhaul or modification of MONITOUCH that was performed by an unauthorized person.
- Do not use a sharp-pointed tool when pressing a touch switch. Doing so may damage the screen.
- Only experts are authorized to set up the unit, connect the cables, or perform maintenance and inspections.
- For MONITOUCH using a lithium battery, handle the battery with care. The combustible materials such as lithium or organic solvent contained in the battery may generate heat, explode, or catch fire, resulting in personal injury or fire. Read related manuals carefully and handle the lithium battery correctly as instructed.
- When using a MONITOUCH that has an analog switch resolution with resistance film, do not press two or more points on the screen at the same time. If two or more positions are pressed at the same time, the switch located between the pressed positions will activate.
- Take safety precautions during such operations as setting change during running, forced output, start, and stop. Any misoperation may cause unexpected machine motions, resulting in machine accident or damage.
- In facilities where a failure of MONITOUCH could lead to accident threatening human life or other serious damage, be sure that the facilities are equipped with adequate safeguards.
- At the time of disposal, MONITOUCH must be treated as industrial waste.
- Before touching MONITOUCH, discharge static electricity from your body by touching grounded metal. Excessive static electricity may cause malfunction or other trouble.

---

[General Notes]

- Never bundle control cables and input/output cables with high-voltage and large-current carrying cables such as power supply cables. Keep these cables at least 200 mm away from high-voltage and large-current carrying cables. Otherwise, malfunction may occur due to noise.
- When using MONITOUCH in an environment where a source of high-frequency noise is present, it is recommended that the FG shielded cable (communication cable) be grounded at its ends. However, the cable may be grounded only at one end if necessary due to unstable communication conditions, or for any other reason.
- Plug connectors or sockets of MONITOUCH in their correct orientation. Otherwise, malfunctions may occur.
- Do not use thinners for cleaning because they may discolor the MONITOUCH surface. Use an alcohol-based cleaner which is commercially available.
- If a "data receive error" occurs when MONITOUCH and the counterpart (PLC, temperature controller, etc.) are started at the same time, read the manual for the counterpart unit and handle the error correctly.
- Avoid discharging static electricity on the mounting panel of MONITOUCH. Static charges can damage the unit and cause malfunctions. Otherwise, malfunction may occur due to noise.
- Avoid prolonged display of any fixed pattern. Due to the characteristics of the liquid crystal display, an afterimage may occur. If a prolonged display of a fixed pattern is expected, use the auto OFF function of the backlight.





---

# Contents

---

1	Introduction	
1.1	Installation	
	Before Installing V-SFT .....	1-1
	Operating Environment .....	1-1
	Copyright .....	1-1
	Notes on Usage .....	1-1
	Installation .....	1-2
	Installation Procedure .....	1-2
1.2	Uninstallation	
	Uninstalling from Start Menu .....	1-6
	Uninstalling from Control Panel .....	1-8
1.3	Starting	
	Opening a New File .....	1-10
	Opening an Existing File .....	1-13
	Saving the File .....	1-16
	Save .....	1-16
	Save As .....	1-17
	Closing the File .....	1-18
1.4	Quitting	
2	Editor Configuration	
2.1	Names of Components	
2.2	Menu Bar	
	[File] Menu .....	2-3
	[Property] Dialog .....	2-4
	[Edit] Menu .....	2-7
	[View] Menu .....	2-7
	[Parts] Menu .....	2-7
	[Registration Item] Menu .....	2-8
	[Screen Setting] Menu .....	2-8
	[System Setting] Menu .....	2-8
	[Tool] Menu .....	2-9
	[Window] Menu .....	2-9
	[Help] Menu .....	2-10
2.3	Menu Item [View]	
	Display Method .....	2-11
	Item Dialog .....	2-11
	How to Move .....	2-12
	Item Dialog .....	2-13
	How to Inset .....	2-14
	Item Dialog .....	2-15
	Floating .....	2-15
	Changing the Size of the List-view Window .....	2-16

---

2.4	Types of [View]	
2.5	Toolbar	
	Display Method .....	2-19
	How to Move .....	2-20
	How to Inset .....	2-21
	Names and Contents of Tools .....	2-22
	Standard.....	2-22
	Draw.....	2-23
	Drawing Method.....	2-24
	Edit.....	2-25
	Layout .....	2-26
	Parts.....	2-27
	Parts Mini .....	2-28
	Pattern.....	2-28
	Multi-language.....	2-29
	Font.....	2-29
	Overlap.....	2-30
	Component Parts Editing .....	2-30
2.6	Screen Composition	
	Screen Outline .....	2-31
	What Is an ID? .....	2-33
	ID Number Check.....	2-35
	Screen Structure .....	2-36
	Screen Resolution.....	2-36
	Screen Capacity.....	2-37
	Auto Adjustment for Screen Resolution .....	2-37
	Screen Setting .....	2-39
	[Main] Tab Window .....	2-39
	[Entry] Tab Window.....	2-39
	[Others] Tab Window .....	2-40
	[PLC Memory Transfer] Tab Window .....	2-41
3	Screen Editing	
3.1	Editing Procedure	
3.2	Setting Up Editing Environment	
	Background Color Setting.....	3-2
	Grid Setting.....	3-3
	What Is "Grid"? .....	3-3
	Grid Setting .....	3-4
	Display Environment Setting.....	3-7
	[Display] Tab Window .....	3-7
	[Others] Tab Window .....	3-9
3.3	Basic Operation	
	Calling a Screen.....	3-12
	From the [View] Menu .....	3-12
	From the Screen List.....	3-12
	From Project View .....	3-14
	Copying a Screen .....	3-16
	From the Screen List.....	3-16
	Changing Screen Number .....	3-19
	Deleting a Screen .....	3-22
	From the [Edit] Menu.....	3-22
	From the Screen List.....	3-23

<b>3.4</b>	<b>Setting Menu</b>	
	Menu Types .....	3-25
	Pull-down Type .....	3-25
	Option Button .....	3-25
	Numerical Data Entry Box Type .....	3-26
	Check Box .....	3-26
	List Type .....	3-27
	Command Button .....	3-27
	Underlined Type for Numerical Data Entry .....	3-28
	Underlined Type for Selection .....	3-28
	Memory Setting .....	3-29
	Display Type for Memory Setting .....	3-29
	Memory Types .....	3-32
<b>3.5</b>	<b>Color Types and Settings</b>	
	Color Type Setting .....	3-35
	Color Types .....	3-35
	64k-color Type .....	3-36
	[Custom Color] Dialog .....	3-37
	32k-color Type .....	3-39
	[Custom Color] Dialog .....	3-39
	128-color Type .....	3-40
	[Custom Color] Dialog for 128-color Type .....	3-41
	Monochrome 16 Gray Scales .....	3-42
	Monochrome-Type Colors .....	3-42
	Blinking Setting .....	3-43
	Blinking Setting Procedure .....	3-43
	Blinking Time Setting .....	3-44
<b>3.6</b>	<b>Parts</b>	
	Parts Types and Limitation .....	3-45
	Types of Parts .....	3-45
	Capacity for Parts Placement .....	3-47
	Placing Parts .....	3-49
	From the Parts List .....	3-49
	From the [Parts] Menu .....	3-51
	From the Parts Toolbar .....	3-52
	From Catalog View .....	3-53
	How to Modify the Placed Part .....	3-55
	For Single Part .....	3-55
	For Linked Part .....	3-61
<b>3.7</b>	<b>Parts Placement and Setting</b>	
	Overlap .....	3-65
	Normal Overlap Display .....	3-65
	Multi-overlap (Call-overlap) Display .....	3-72
	Switch / Lamp .....	3-73
	Data Display .....	3-74
	Numerical Data Display / Character Display / Message Display .....	3-74
	Table Data Display .....	3-75
	Message Display / Comment Display .....	3-80
	Entry Mode .....	3-81
	Graph .....	3-84
	Trend Graph / Trend Sampling .....	3-85
	Data Sampling .....	3-86
	Alarm Tracking / Bit Order (Time Order) Alarming / Alarm Sub Display / Alarm Logging .....	3-87
	Graphic / Graphic Relay .....	3-88
	Macro / Interval Timer .....	3-89
	Time Display / Calendar .....	3-90

Recipe .....	3-91
Animation / Sound.....	3-92
Video Display / JPEG Display.....	3-93
Data Block Area / Memory Card / Memo Pad.....	3-94
<b>3.8 Useful Functions for Screen Editing</b>	
[Edit] Menu.....	3-95
Right-click Menu (with No Item Selected).....	3-96
Right-click Menu (with an Item Selected).....	3-97
Paste to the Selected Screen .....	3-98
Multi Copy .....	3-99
Setting Example.....	3-101
Alignment (E.g. Flush Left) .....	3-102
Arrangement (Equal) (E.g. Vertically) .....	3-104
Put All in Same Size .....	3-105
Changing Part.....	3-106
Link / Link Cancel.....	3-106
Change to Switch / Change to Lamp .....	3-106
Modify Part.....	3-108
Batch Change .....	3-109
Setting Method .....	3-109
Detail Setting.....	3-111
Setting Method .....	3-111
Selection Environment Setting.....	3-112
Setting Method .....	3-112

## 4 Drawing

### 4.1 Drawing Toolbar

Display Method .....	4-1
Icons .....	4-2

### 4.2 Attribute Setting Icon

Selecting Colors.....	4-5
Selecting Arrow Type.....	4-7
Selecting Line Style .....	4-7
Limitations on Line Styles .....	4-7

### 4.3 Drawing Methods

Line .....	4-8
Single Line .....	4-8
Continuous Line .....	4-9
Box.....	4-10
Rectangle .....	4-10
Parallelogram .....	4-14
Polygon .....	4-15
Round Chamfering / Chamfering .....	4-18
Circle.....	4-19
Circle .....	4-19
Arc and Sector .....	4-21
Ellipse.....	4-24
Elliptical Arc and Elliptical Sector .....	4-26
Text.....	4-31
How to Enter or Place Text and Multi-text.....	4-31
[Text] Dialog.....	4-32
[Multi Text] Dialog .....	4-36
Dot .....	4-38
Drawing Method.....	4-38

---

Paint .....	4-39
Paint Command Usage.....	4-39
How to Check the Painted Area.....	4-40
Paint Properties.....	4-41
Scale .....	4-42
Bar Graph Scale .....	4-42
Pie Graph Scale.....	4-43
Trend Graph Scale .....	4-46
Pattern.....	4-48
Placing Patterns.....	4-48
Placing Multiple Patterns Continuously .....	4-49
Graphic Call .....	4-51
Placing Graphics.....	4-51
Screen Library.....	4-53
Placing Screen Library.....	4-53
[Screen Library] Dialog .....	4-55
4.4 Graphic Properties Setting	
How to Display the Item Dialog.....	4-58
Example of Item Dialog.....	4-59
5 Registration Items	
5.1 Outline of Registration Items	
5.2 Contents of Registration Items	
5.3 Screen	
Calling a Screen.....	5-3
Screen Editing.....	5-3
5.4 Message	
Message Structure .....	5-4
Relationship between Group Numbers and Absolute Addresses.....	5-5
Calling a Message.....	5-6
Message Editing.....	5-7
Copying and Pasting Messages .....	5-7
Deleting Messages .....	5-8
Message Search and Replacement.....	5-9
Message Display Environment Setting .....	5-10
Mark.....	5-11
5.5 Macro Block	
Macro Block Structure.....	5-12
Calling a Macro Block .....	5-12
Macro Block Editing .....	5-12
5.6 Graphic Library	
Graphic Library Structure .....	5-13
Calling the Graphic Library.....	5-13
Graphic Library Editing.....	5-14
Offset Position Setting .....	5-14
Parameter Setting.....	5-15
Data Display .....	5-22
Graphic Library Environment Setting .....	5-24
Base Screen Dsp. ([Others] Tab Window).....	5-24
Background ([Others] Tab Window) .....	5-25

---

5.7	Overlap Library	
	Overlap Library Structure.....	5-26
	Calling an Overlap Library .....	5-26
	Editing an Overlap Library .....	5-27
	Placing an Overlap Display Part .....	5-27
	Item Placement on Overlap Display .....	5-28
	Other Settings.....	5-29
	Base Screen Display.....	5-29
	Macro Setting.....	5-30
5.8	Screen Library	
	Outline of Screen Library .....	5-31
	Saving of Screen Memory.....	5-31
	Screen Parts Management Through Screen Library.....	5-32
	Screen Library Structure .....	5-32
	Calling a Screen Library.....	5-33
	Screen Library Editing.....	5-33
	Notes on Editing.....	5-33
	Offset Position Setting.....	5-34
	Placing a Screen Library.....	5-34
5.9	Data Block	
	Data Block Structure.....	5-35
	Calling a Data Block.....	5-35
	Data Block Editing.....	5-36
	Parts.....	5-36
	Drawing.....	5-36
	Data Block Environment Setting .....	5-37
	Base Screen Dsp. ([Others] Tab Window) .....	5-37
	Background ([Others] Tab Window).....	5-38
5.10	Pattern	
	Pattern Structure.....	5-39
	Calling a Pattern .....	5-39
	Pattern Editing .....	5-40
	[Pen] Icon .....	5-40
	[Eraser] Icon.....	5-41
	[Straight Line] Icon .....	5-41
	[Rectangle] Icon .....	5-42
	[Circle] Icon .....	5-42
	[Text] Icon .....	5-43
	[Paint] Icon .....	5-45
	[Box Select Area] Icon.....	5-45
	Transforming Patterns .....	5-47
	Image File Import and Storage .....	5-50
	Importing an Image File .....	5-50
	Storing in an Image File .....	5-53
	Pattern Environment Setting.....	5-53
	Display Environment .....	5-54
	Background Color Setting .....	5-54
	Placing a Pattern.....	5-55
5.11	Data Sheet	
	Data Sheet Structure .....	5-56
	Calling a Data Sheet.....	5-56
	Data Sheet Editing.....	5-57
	Data Sheet Setting .....	5-57
	Drawing.....	5-58

---

Data Sheet Environment Setting.....	5-59
Display Environment.....	5-59
Grid Setting.....	5-60
5.12 Page Block	
Page Block Structure .....	5-61
Calling a Page Block.....	5-61
Page Block Editing.....	5-62
5.13 Direct Block	
Direct Block Structure .....	5-64
Calling a Direct Block.....	5-64
Direct Block Editing.....	5-65
5.14 Screen Block	
Screen Block Structure .....	5-67
Calling a Screen Block.....	5-67
Screen Block Editing.....	5-68
5.15 Tile	
Tile Structure.....	5-69
Calling a Tile .....	5-69
Tile Editing .....	5-70
5.16 Animation	
Animation Function Structure.....	5-72
Calling an Animation Function .....	5-72
Animation Editing .....	5-73
Frame Editing.....	5-75
Frame Structure.....	5-75
Frame Editing .....	5-75
5.17 Comment	
Comment Structure .....	5-76
Limitations on Comments .....	5-76
Calling a Comment.....	5-77
Comment Editing.....	5-77
Entering a Comment.....	5-77
Text Properties .....	5-78
Deleting a Comment.....	5-79
Comment Import and Export.....	5-80
[Page] Menu.....	5-83
5.18 Multi-language	
6 Transfer with V8	
6.1 Transfer Methods	
List of Transfer Methods .....	6-1
Using a Communication Cable.....	6-1
V-CP (Serial Port).....	6-1
Ethernet (LAN Port).....	6-2
USB (USB-B Port) .....	6-2
Using a Card .....	6-3
CF Card.....	6-3
Memory Card.....	6-3
Using a Modem .....	6-4
6.2 Type of Transferred Data	
Transfer Data List.....	6-5
System Program File .....	6-6

6.3	Preliminaries	
	Preparation for MONITOUCH.....	6-7
	New MONITOUCH.....	6-7
	Existing MONITOUCH .....	6-8
	Preparation for Peripheral Equipment.....	6-9
6.4	Transfer Procedure (Using a Communication Cable)	
	V-CP .....	6-10
	System Configuration.....	6-10
	Transfer Procedure from the Editor to MONITOUCH .....	6-10
	Transfer Procedure from the Editor to MONITOUCH .....	6-14
	Data Comparison between Editor and MONITOUCH.....	6-16
	Ethernet .....	6-19
	System Configuration.....	6-19
	Transfer Procedure from the Editor to MONITOUCH .....	6-19
	Transfer Procedure from the Editor to MONITOUCH .....	6-24
	Data Comparison between Editor and MONITOUCH.....	6-27
	USB.....	6-29
	System Configuration.....	6-29
	Before Transfer via USB .....	6-29
	Transfer Procedure from the Editor to MONITOUCH .....	6-33
6.5	Transfer Procedure (Using a Card)	
	CF Card .....	6-36
	System Configuration.....	6-36
	Transfer Procedure from the CF card to MONITOUCH.....	6-36
	Memory Card .....	6-43
	System Configuration.....	6-43
	Transfer Procedure from Memory Card to MONITOUCH.....	6-43
6.6	Transfer Procedure (Using a Modem)	
	Preliminaries .....	6-49
	Setting Procedure .....	6-49
	AT Command Setting.....	6-50
	Setting on the V Series .....	6-52
	Description of Connections .....	6-53
	Screen Data Transfer.....	6-54
	Transfer Error Messages Displayed on V-SFT .....	6-55
6.7	After Transfer (Communication with PLC)	
	Connection with PLC .....	6-56
	Preliminaries on MONITOUCH .....	6-56
	Switching to RUN (= Communicating) Mode.....	6-56
	Display Contents after Communication.....	6-57
7	Print	
7.1	Overview	
	Available Printers .....	7-1
	Operating Procedure.....	7-1
	[Option Setting] Dialog .....	7-2
	[Page Setting] Dialog .....	7-2
	Output Range.....	7-3
	Print Format .....	7-5
	Print Preview .....	7-6
	Operating Procedure.....	7-6
	Print Current Window.....	7-6
	Operating Procedure.....	7-6



Print Example.....	7-7
Screen Output.....	7-7
List Output.....	7-7
Table Print.....	7-8
System Setting.....	7-9
Memory Use List.....	7-9
Use Cross-reference.....	7-10
Animation.....	7-11

## 8 Useful Functions

### 8.1 Simulator

Overview.....	8-1
Operating Procedure.....	8-3
Connecting a Computer and the V8 series.....	8-4
Via V-CP.....	8-4
Via Ethernet.....	8-5
Via USB.....	8-5
Screen Data and Simulator Program Transfer.....	8-6
Screen Data Transfer.....	8-6
Setting on MONITOUCH.....	8-8
Starting and Quitting.....	8-11
Starting.....	8-11
Quitting.....	8-12
Starting and Stopping Communication.....	8-13
Starting Communication.....	8-13
Stopping Communication.....	8-13
Communication Setting.....	8-14
Via Ethernet.....	8-15
Via USB.....	8-15
Structure of the [Simulator] Window.....	8-16
Menu Bar.....	8-17
Icon Menu.....	8-20
Structure of the Sheet.....	8-21
[Untitled] Sheet.....	8-23
Memory Addresses Displayed on Simulator.....	8-25
Test Example.....	8-26
Testing Bit Access Device.....	8-26
Testing Word Access Device.....	8-28
Error List.....	8-30

### 8.2 Emulator

Overview.....	8-32
Operating Procedure.....	8-33
Starting and Quitting.....	8-33
Starting.....	8-33
Quitting.....	8-34
Operation.....	8-35
Structure of the [Emulator] Window.....	8-36
Menu Bar.....	8-36
Icon Menu.....	8-37

### 8.3 Useful Tools for Creating a Manual

Copying Screen Image to the Clipboard.....	8-38
Operating Procedure.....	8-39
Copying an Image Displayed on the Editor.....	8-39
Pasting the Copied Image on another Application Software.....	8-40
Converting to Rich Text Format.....	8-41
Operating Procedure.....	8-41

Emulator.....	8-43
Copying an Image Displayed on Emulator.....	8-43
Pasting the Copied Image on another Application Software.....	8-44
<b>8.4 Item List</b>	
Display Method.....	8-45
Item List Window.....	8-46
Configuration.....	8-46
Icon Menu.....	8-47
Operation Procedure.....	8-48
Text Change.....	8-48
Memory Change.....	8-50
Coordinate Change.....	8-51
Display of the Item Dialog.....	8-52
<b>8.5 List of Memory Address in Use</b>	
Operation Procedure.....	8-53
Searching with Memory Range Designated.....	8-53
Searching the Whole File.....	8-55
When [Cross-reference] Is Not Checked:.....	8-56
<b>8.6 Customizing the Toolbar</b>	
Overview.....	8-57
Icon.....	8-57
How to Add.....	8-57
How to Delete.....	8-59
How to Change Order.....	8-60
Separator Line.....	8-61
What Is "Separator Line"?.....	8-61
How to Add.....	8-61
How to Delete.....	8-62
<b>8.7 Other Functions in the [Tool] Menu</b>	
[Tool] Menu.....	8-63
Error Check.....	8-64
Operating Procedure.....	8-64
Reading the Error Check List.....	8-65
List of Memory Use.....	8-67
Operating Procedure.....	8-67
Changing Memory.....	8-69
Changing All Memory.....	8-69
Changing Memory of Selected Items Only.....	8-71
Windows Font Change All/List/Registration.....	8-72
DXF File Convert.....	8-73
Operating Procedure.....	8-73
Copy Image to Pattern.....	8-75
Operating Procedure.....	8-75
Tag Table.....	8-77
<b>8.8 File Management</b>	
File Management Outline.....	8-78
File Management Functions.....	8-78
Files for File Management.....	8-78
File Comparison.....	8-79
Operating Procedure.....	8-79
[Comparison] Window.....	8-80
How to Copy after Comparison.....	8-82
Copying the File.....	8-89
Deleting the File.....	8-90

Dividing and Combining the File .....	8-91
Dividing the File .....	8-91
Combining the File .....	8-92
8.9 Wizard	
Overview .....	8-93
Starting Wizard.....	8-93
Start from Catalog View.....	8-93
Start from [Parts] Menu.....	8-94
8.10 Component Parts	
Overview .....	8-95
Component Parts Placement .....	8-95
Details of Component Parts .....	8-96

## Appendix 1 Font

### Font Types

Differences between Fonts and Windows Fonts .....	A1-2
Distinguishing Fonts on MONITOUCH .....	A1-3
Font Setting Procedure .....	A1-4
Fonts.....	A1-4
Transfer Font Setting .....	A1-6
Font Size .....	A1-7
Enlarge X/Y.....	A1-7
Points.....	A1-7
Memory Sizes of Fonts .....	A1-8

### Language Entry Method

English/Western Europe, English/Western Europe HK Gothic, and English/Western Europe HK Times.....	A1-9
Using "English/Western Europe" Font on Non-compatible Operating System .....	A1-9
Chinese (Traditional) and Chinese (Simplified).....	A1-12
Using "Chinese" Font on Non-compatible Operating System .....	A1-12
Korean.....	A1-14
Using "Korean" Font on Non-compatible Operating System .....	A1-14
Central Europe/Cyrillic/Greek/Turkish.....	A1-16
Using "Central Europe/Cyrillic/Greek/Turkish" Fonts on Non-compatible Operating System.....	A1-16

### HK Gothic and HK Times

Outline.....	A1-18
Points of English/Western Europe HK Gothic/HK Times .....	A1-20
Display Function Specifications .....	A1-20
Setting Procedure .....	A1-21
1. Font Type Setting.....	A1-22
2. Font Setting for Individual Functions.....	A1-23
3. Manual Font Setting.....	A1-25
Automatic Font Setting .....	A1-25
Manual Font Setting.....	A1-25
4. Data Transfer to the V Series.....	A1-27
Notes on Font Data to be Transferred .....	A1-27
Error for the V series .....	A1-28

---

## Windows Font

Limitations.....	A1-29
Option .....	A1-30
Setting Procedure .....	A1-31
In Text Properties Setting.....	A1-31
In Message Editing.....	A1-32
Font Registration.....	A1-33
[Windows Font List] Window.....	A1-35
Location of the Dialog .....	A1-35
Change All Windows Fonts.....	A1-36
Procedure.....	A1-36
Windows Fonts for Language Selection .....	A1-38
Conditions for Language Selection Using Windows Fonts .....	A1-38
Multi-Language Editing Using Windows Fonts.....	A1-38
Windows Font Not Installed on Your Computer Exists in Screen Data .....	A1-39

## Appendix 2 3D Parts

### 64k- or 32k-color Type

Switch / Lamp .....	A2-1
Available Parts .....	A2-1
Setting Procedure .....	A2-3
Flashing Function.....	A2-8
Data Display/Graph/Calendar .....	A2-9
Available Parts .....	A2-9
Setting Procedure .....	A2-9
Customizing .....	A2-14
Notes.....	A2-14
Setting Procedure .....	A2-15

### 128-color Type

Switch / Lamp .....	A2-17
Available Parts .....	A2-17
Setting Procedure .....	A2-19

### Notes

Notes on Dealing with 3D Parts.....	A2-24
Memory Size .....	A2-24
Limitation on Parts .....	A2-25
How to Count Patterns .....	A2-25
Color Pallets.....	A2-26

## Appendix 3 Parts Editing

### Parts

Structure of a Part.....	A3-1
Editable Parts.....	A3-1

### Calling the [Modify Part] Window

Calling .....	A3-2
Closing.....	A3-3

### Parts Editing

Overlap .....	A3-4
Structure.....	A3-4
Procedure.....	A3-4
Switch / Lamp .....	A3-5
Structure.....	A3-5
Procedure.....	A3-5

---

Data Display .....	A3-10
Structure .....	A3-10
Procedure .....	A3-10
Keypad .....	A3-11
Structure .....	A3-11
Procedure .....	A3-11
Slider Switch/Scroll Bar .....	A3-11
Structure .....	A3-11
Procedure .....	A3-11
Graph .....	A3-12
Bar Graph .....	A3-12
Pie Graph .....	A3-13
Closed Area Graph .....	A3-17
Panel Meter .....	A3-19
Statistic Bar Graph .....	A3-20
Statistic Pie Graph .....	A3-21
Trend Graph (Trend Sampling) .....	A3-22
Display Area .....	A3-23
Structure .....	A3-23
Procedure .....	A3-23
Data Sampling .....	A3-24
Structure .....	A3-24
Procedure .....	A3-24
Calendar .....	A3-26
Structure .....	A3-26
Procedure .....	A3-27
<b>After Completion of Parts Editing</b>	
Access from [Parts List] .....	A3-28



# 1 Introduction

## 1.1 Installation

### Before Installing V-SFT

#### Operating Environment

Make sure that your system meets the system requirements given in the following table before starting the V-SFT Ver. 5.

Computer	PC/AT compatible computer for Windows
OS*	Windows98 SE/Me/NT Version 4.0/2000/XP/XP64 Edition/ Vista (32-bit, 64-bit)/7 (32-bit, 64-bit)
CPU	Pentium III processor with 800 MHz or above (Pentium IV 2.0 GHz or above recommended)
Memory	512 MB or above
Hard disk	Free disk space before installation: 1 GB or above
CD-ROM drive	24× or above recommended
Display	Resolution 1024 × 768 (XGA) or above recommended
Display colors	High color (16-bit) or above

\* In the case of Windows NT Version 4.0/2000/XP/XP64 Edition/Vista (32-bit, 64-bit)/7 (32-bit, 64-bit), install the V-SFT editor with authorization of administrator.

#### Copyright

- The software as well as its copyrights or all other rights related to the software is the property of Hakko Electronics Co., Ltd.
- The software may not be used or copied, in whole or in part, without permission of Hakko Electronics Co., Ltd.
- The specifications and components of the software are subject to change without prior notification.
- Hakko Electronics Co., Ltd., bears no responsibility for the results of using the software.
- You must purchase one set of software for each computer in principle.
- Windows is the registered trademark of Microsoft Corporation in the United States.
- All other company names or product names are trademarks or registered trademarks of their respective holders.

#### Notes on Usage

- The software may not be correctly installed if resident programs such as a virus scanning program are running. Be sure to close all applications before installing the software.
- For the CD-ROM, the side on which the product name is printed is front and the other side on which nothing is printed is back.  
If the CD-ROM is scratched with a sharp object, it may not be read correctly. The computer reads backside of the CD-ROM. Touching backside of the CD-ROM and leaving fingerprints will result in malfunction. Handle both sides of the CD-ROM with care.
- When placing the CD-ROM in the CD-ROM drive, pay attention to the orientation of the disc and place the disc in the drive as instructed in the instruction manual of your computer.
- If the free space for memory becomes insufficient during running the configuration software, Windows may forcefully terminate the software.  
To prevent data from being deleted due to forced termination, save the screen data file regularly.

## Installation

---

### Installation Procedure

---

Follow the procedure below to install V-SFT.

1. Boot computer with Windows operating system.
2. Place the "V-SFT Ver. 5" CD-ROM in the CD-ROM drive.  
The display shown below automatically appears on the screen.

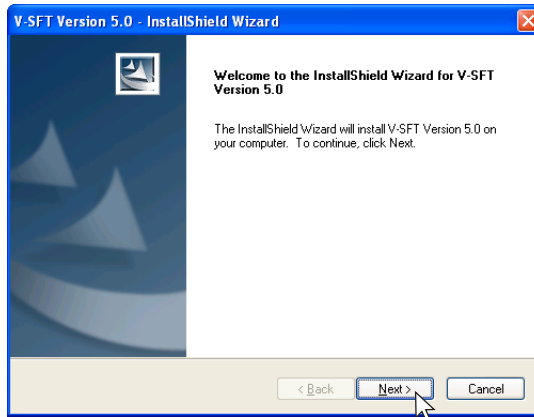


3. Click [INSTALL].

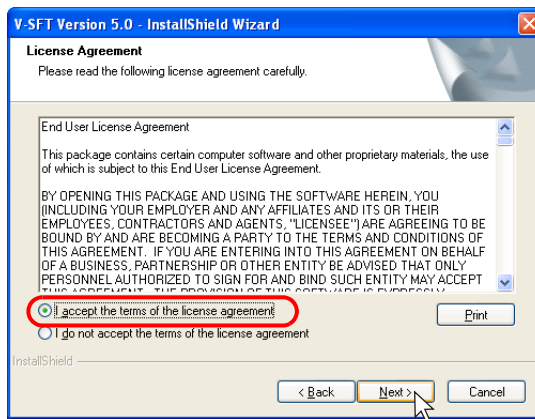




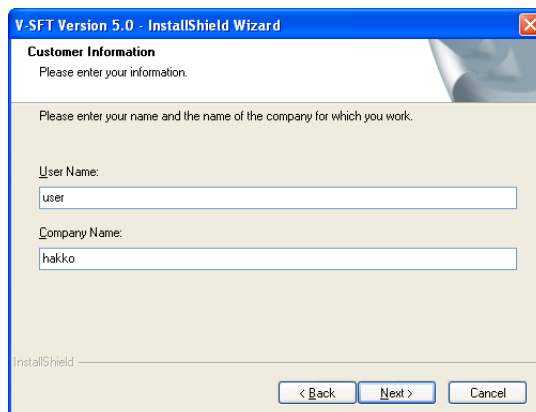
4. The following dialog is displayed: Click the [Next] button.



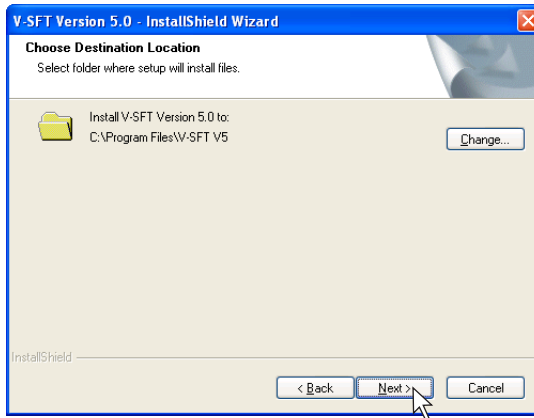
5. The [License Agreement] dialog is displayed. Read the contents thoroughly. If you agree to the License Agreement, select [I accept the terms of the license agreement.] and click the [Next] button.



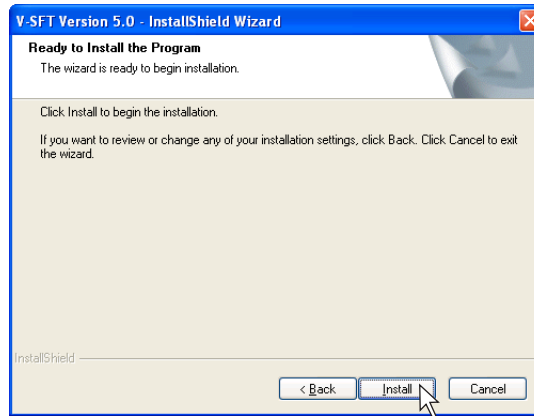
6. The [Customer Information] dialog is displayed. Enter a user name and company name, and click the [Next] button.



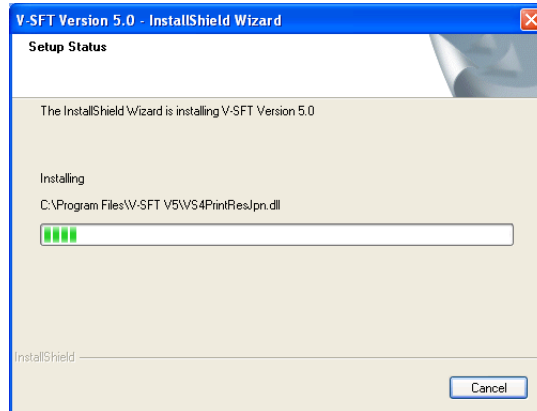
7. The [Choose Destination Location] dialog is displayed.  
If the designated folder is correct, click the [Next] button. To change the folder, click the [Change] button and select the desired folder. Then click the [Next] button.  
The default location of where to install V-SFT depends on the OS in use.
  - For Windows XP/2000/98/Me/NT C:\Program Files\V-SFT V5
  - For Windows Vista (32-bit, 64-bit)/7 (32-bit, 64-bit) C:\MONITOUCH\V-SFT V5



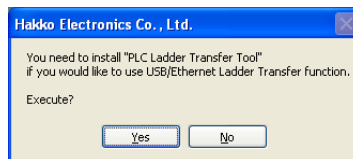
8. The "Ready to Install the Program" dialog is displayed.  
Click the [Install] button.



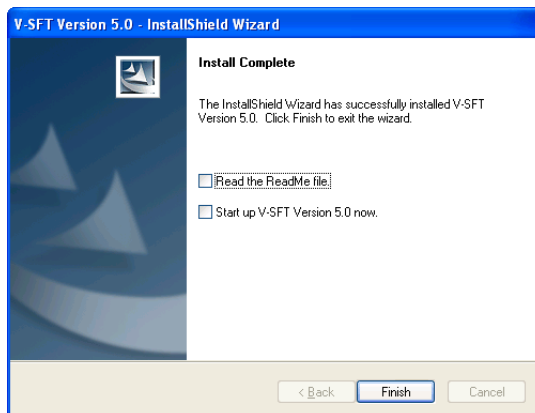
9. Installation is automatically started.  
To cancel installation, click the [Cancel] button.



10. When installation is completed, the following dialog is displayed.  
If you intend to use ladder transfer via USB or Ethernet, click [Yes]. For more information, refer to the V8 Series Reference: Additional Functions.  
If not, click [No].



11. When installation is completed, the following dialog is displayed.



To read the “ReadMe” file, check [ Read the ReadMe file.].  
To start-up the editor immediately, check [ Start up V-SFT Version 5.0 now.].  
Installation wizard is closed by pressing the [Finish] button.

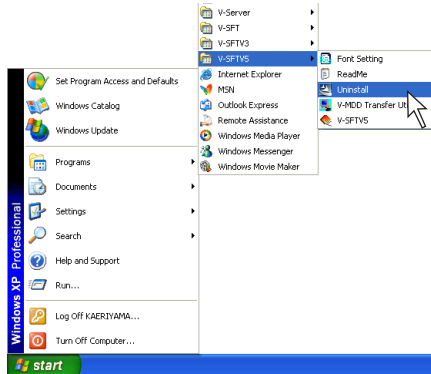
The installation has been completed.

## 1.2 Uninstallation

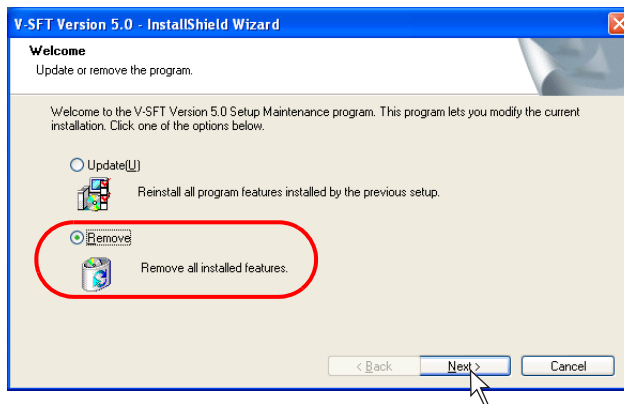
This section describes the procedure for uninstalling the V-SFT Ver. 5. installed on the hard disk.

### Uninstalling from Start Menu

1. Click [Start] → [Programs] → [V-SFT5] → [Uninstall].



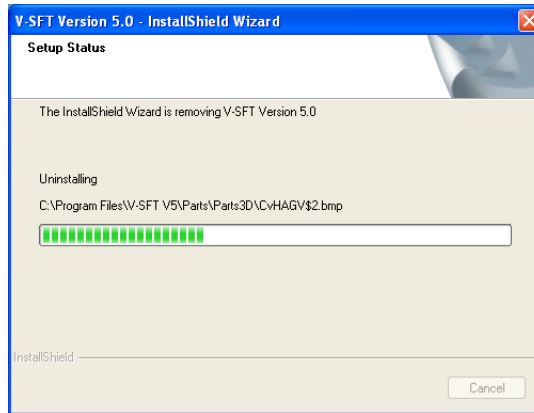
2. The following dialog is displayed:  
Select [Remove] and click the [Next] button.



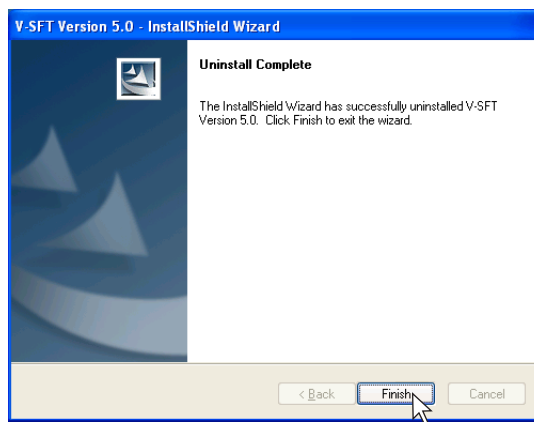
3. The following confirmation dialog is displayed.  
Click the [Yes] button.



4. Uninstallation begins.



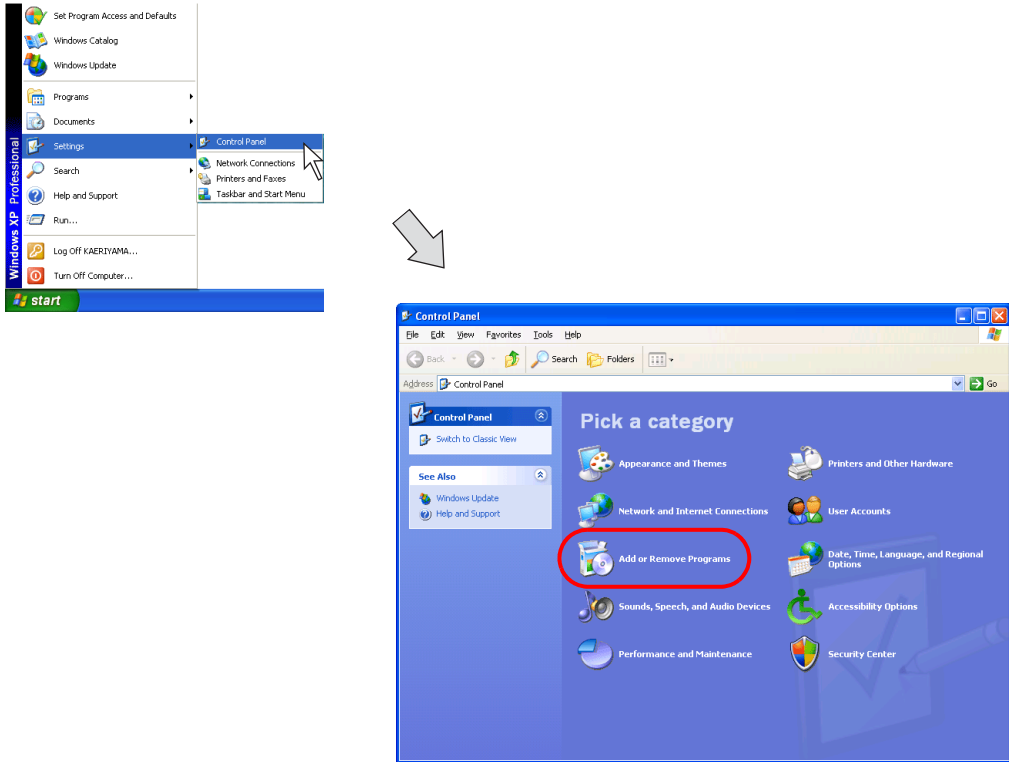
5. When uninstallation is completed, the following dialog is displayed. Click the [Finish] button.



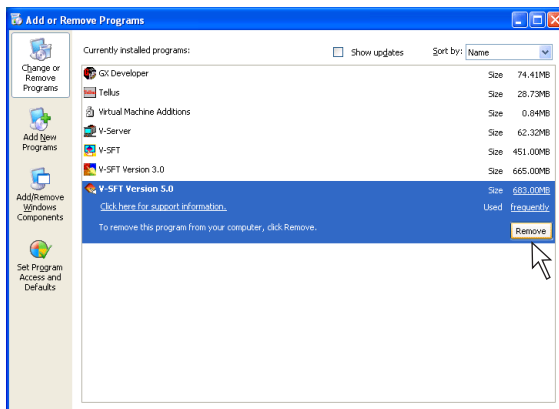
The uninstallation has been completed.

## Uninstalling from Control Panel

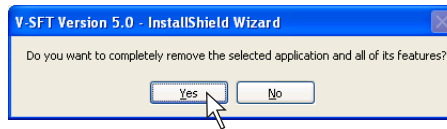
1. Click [Add or Remove Programs] selected from [Control Panel].



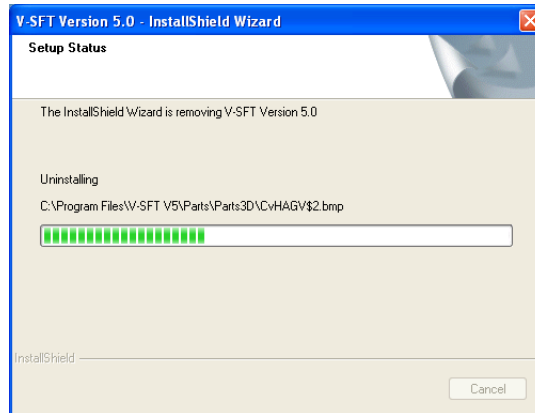
2. The [Add or Remove Programs] dialog is displayed. Select [V-SFT Version 5.0] and click the [Remove] button.



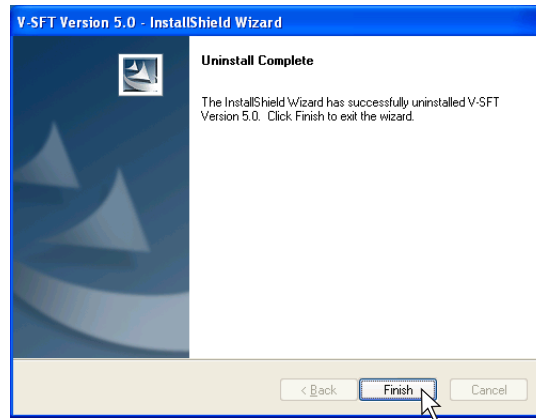
- The following confirmation dialog is displayed.  
Click the [Yes] button.



- Uninstallation begins.



- When uninstallation is completed, the following dialog is displayed.  
Click the [Finish] button.



- The [Add or Remove Programs] dialog is displayed again.  
To finish uninstalling the software, click the [OK] button.

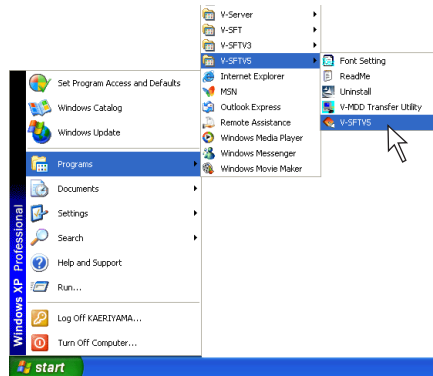
The uninstallation has been completed.

## 1.3 Starting

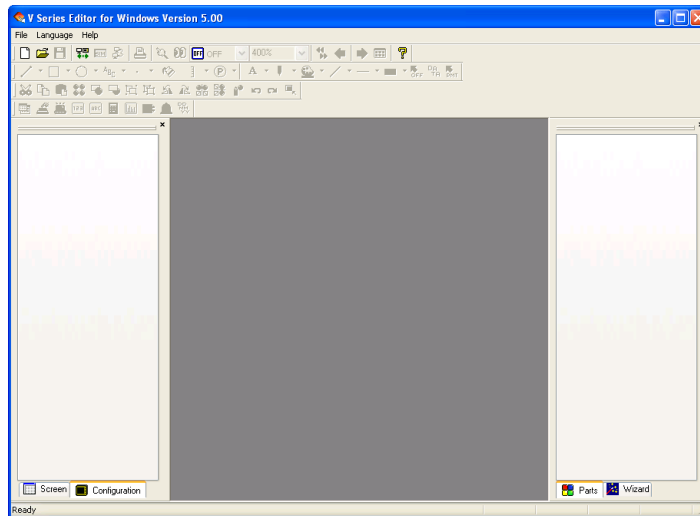
### Opening a New File

Start-up the editor and open a new screen file following the procedure below.

1. Click [Start] → [Programs] → [V-SFTV5] → [V-SFTV5].

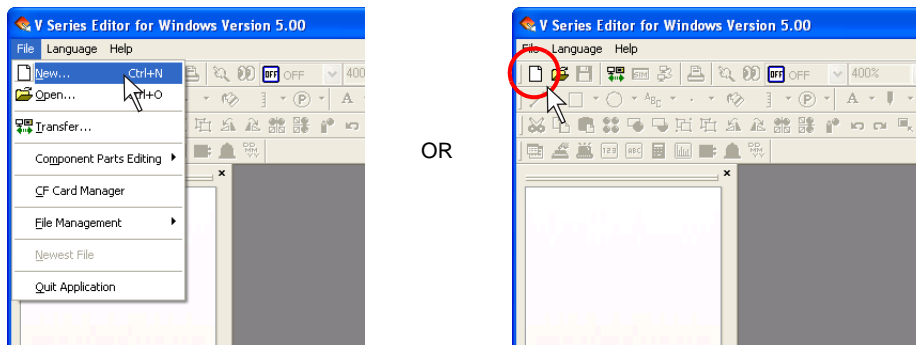


2. V-SFT Ver. 5 is started.

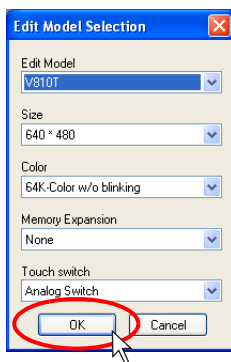




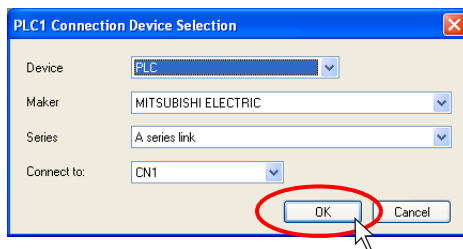
- Click [New] from the [File] menu or click the [New] icon on the toolbar.



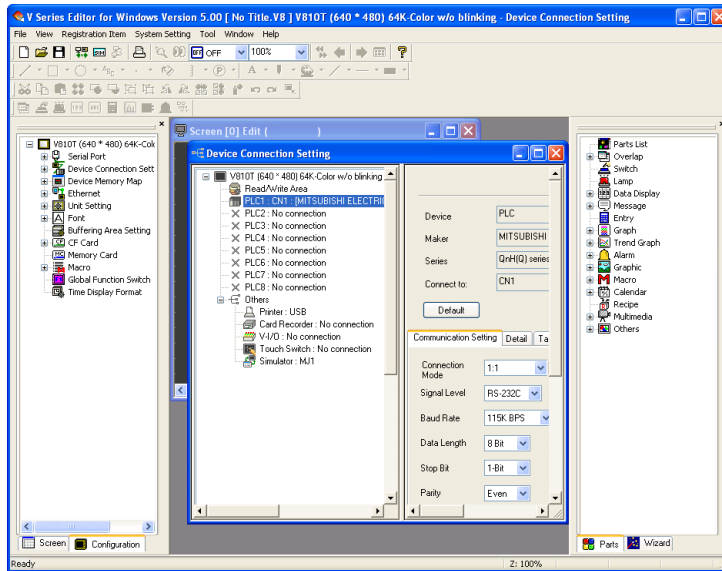
- The [Edit Model Selection] dialog is displayed. Select the model name and click [OK].



- The [PLC1 Connection Device Selection] dialog is displayed. Select the PLC type and click [OK].



- The [Device Connection Setting] dialog for the selected device and the [Screen [0] Edit] window of the new file are cascaded.



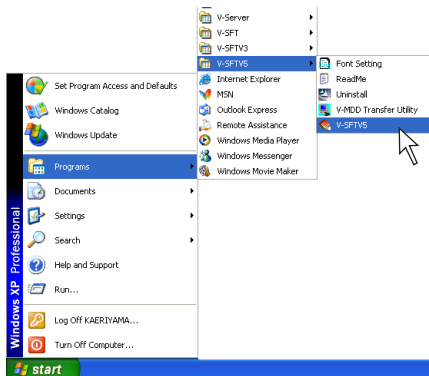
- Make the necessary settings in the [Device Connection Setting] dialog and close the dialog. Only the [Screen [0] Edit] window is now open. Proceed to screen editing in the window. For more information on the [Device Connection Setting] dialog, refer to the V8 Series Connection Manual.

This step completes the procedure for opening a new file.

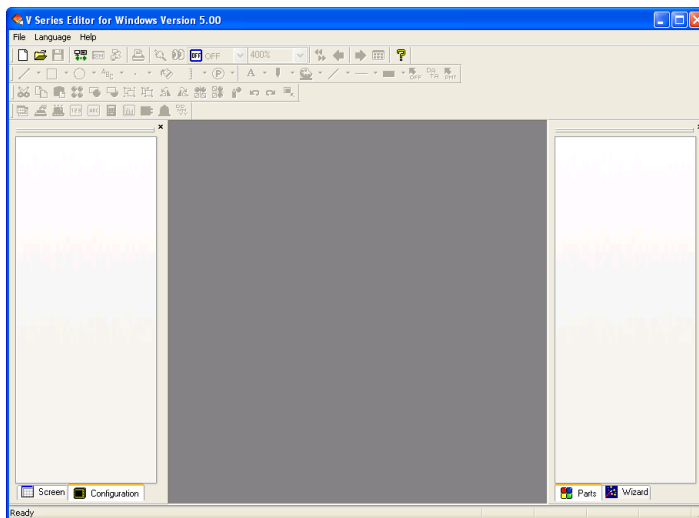
## Opening an Existing File

Open an existing file following the procedure below.

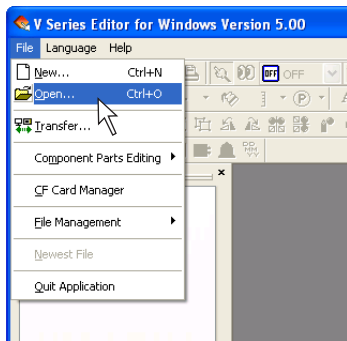
1. Click [Start] → [Programs] → [V-SFTV5] → [V-SFTV5].



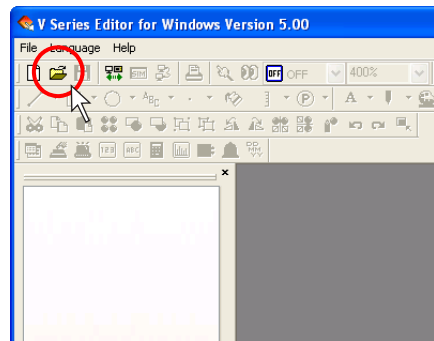
2. V-SFT Ver. 5 is started.



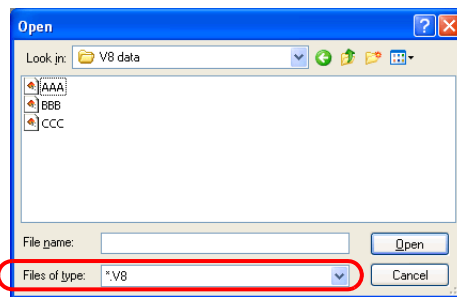
- Click [Open] from the [File] menu or click the [Open] icon on the toolbar.



OR



- The [Open] dialog is displayed. Select a file type from [Files of type], and select the desired file. Click [Open].



**File type**

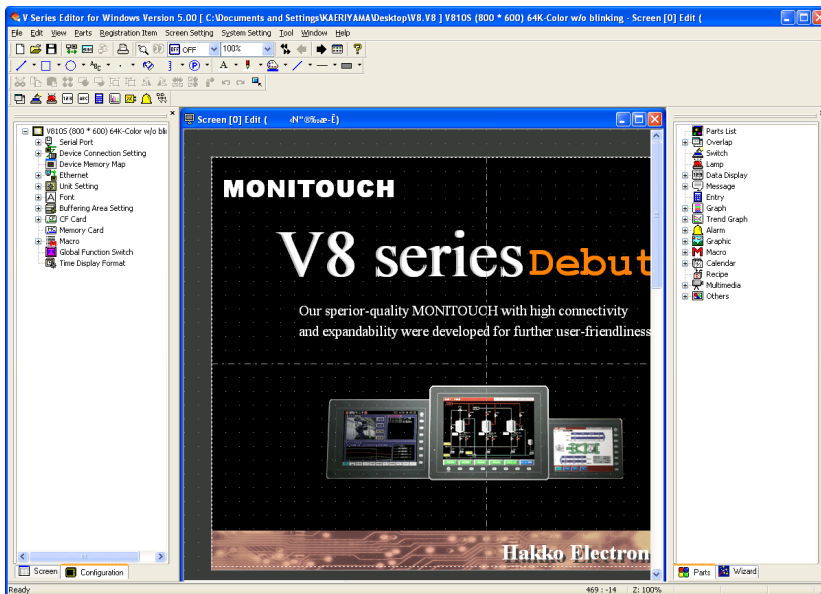
File name:

Files of type:

\*.V8  
\*.V7  
\*.V6  
\*.V4  
\*.80

Extension	Target Model	Remarks
*.V8	V8 series	
*.V7	V7 series	
*.V6	V6 series	
*.V4	V4 series	
*.80	GD-80/81 series	A file with the extension of "*.80" cannot be edited on the V-SFT editor. When the "*.80" file is opened on the editor, it is automatically converted to the V series data.

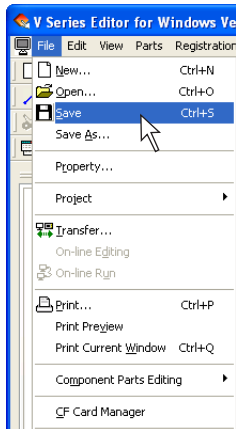
5. The selected screen data file is opened.



## Saving the File

### Save

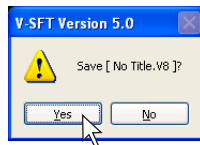
1. Click [Save] from the [File] menu or click the [Save] icon on the toolbar.



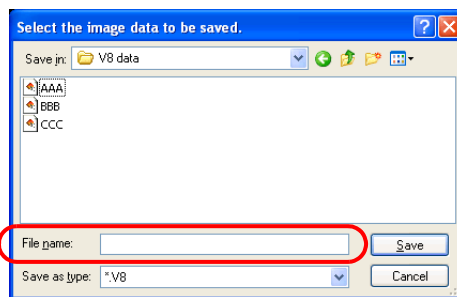
OR



2. When an existing file is opened, it is overwritten at this time. In the case of a new file, the confirmation dialog shown below is displayed. Click [Yes].



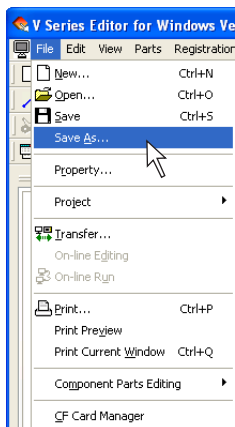
3. The [Select the image data to be saved.] dialog is displayed. Give a name to the file and click [Save].



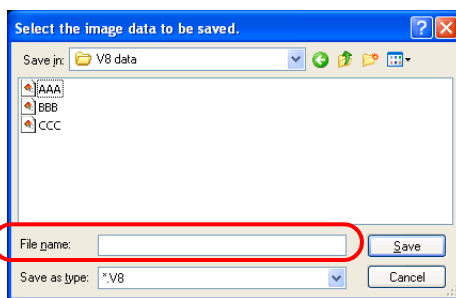
The screen data file has been saved.

## Save As

1. Click [Save As] from the [File] menu.



2. The [Select the image data to be saved.] dialog is displayed. Give a name to the file and click [Save].

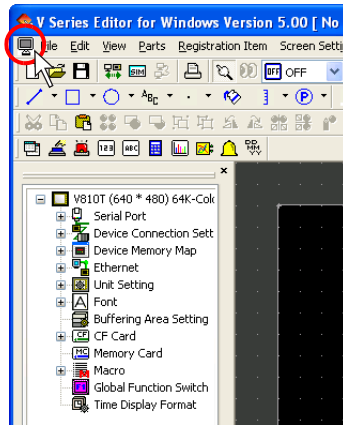


The screen data file has been saved.

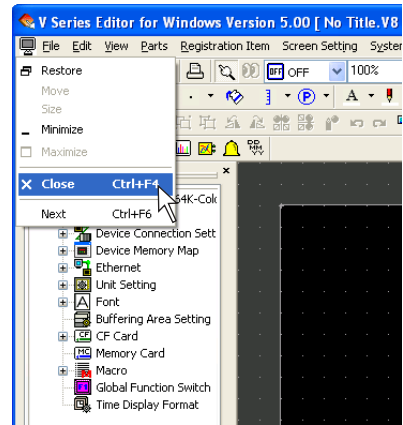
## Closing the File

1. Click the icon on the top left corner of the [Screen Edit] window and click [Close].  
Alternatively, click the [x] button on the top right corner of the [Screen Edit] window.

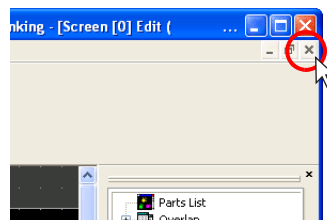
Click the icon of the [Screen Edit] window.



Click [Close].



OR



The file is closed.



Attempting to close a new file calls up the confirmation dialog below.  
Save the file if necessary.

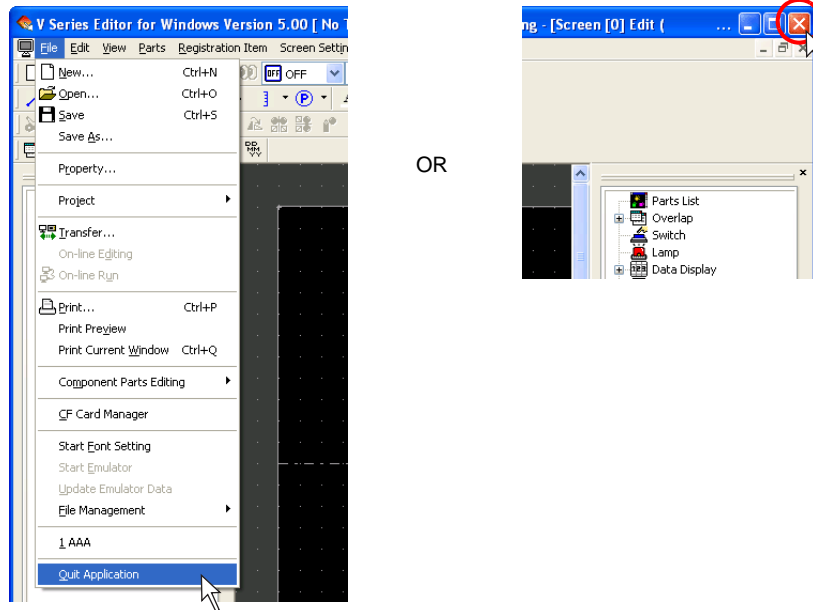




## 1.4 Quitting

Quit the V-SFT Ver. 5 editor following the procedure shown below.

1. Select [Quit Application] from the [File] menu or click the [X] button in the upper right corner of the screen.



2. The file is closed.



An attempt to close a new file calls up the confirmation dialog below.  
Save the file if necessary.



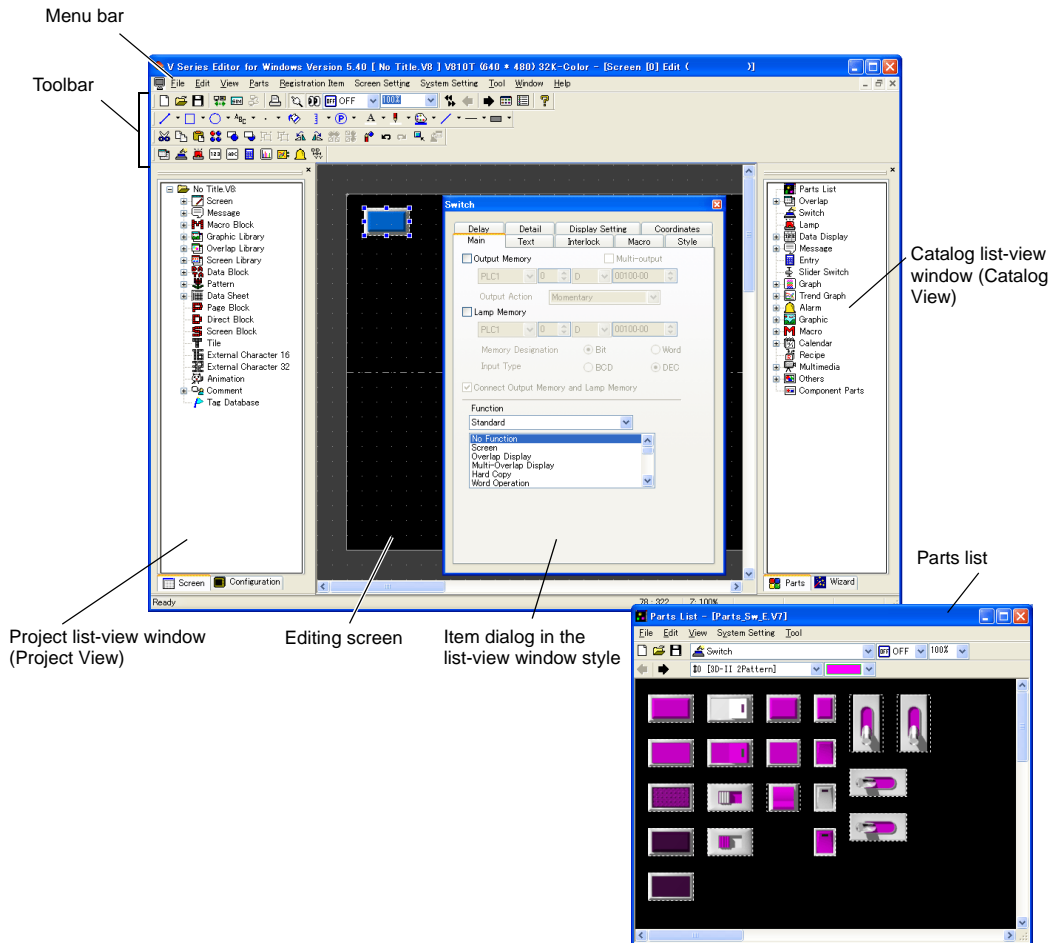
# MEMO



Please use this page freely.

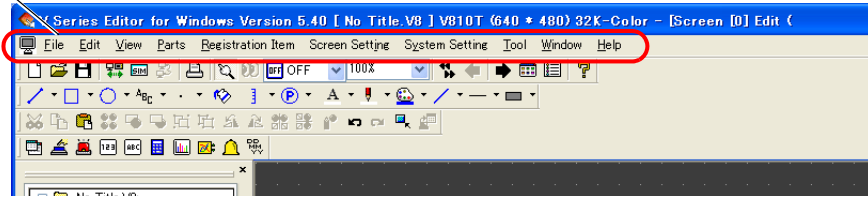
# 2 Editor Configuration

## 2.1 Names of Components



## 2.2 Menu Bar

Menu bar



Title	Content	Refer to:
File	Creates a new file, opens an existing file, transfers data, prints out screen data, sets the properties or starts the CF card manager.	page 2-3
Edit	Tools for copying, cutting, pasting, grouping, placing, arranging, and other functions are available.	page 3-95
View	Sets the drawing environment, such as displaying/hiding a toolbar or list-view window displaying the screen list, changing screens, setting the display environment, displaying grids, or changing the zoom.	page 2-7
Parts	Selects parts or items to be placed.	page 3-51
Registration Item	Edits each library.	page 5-1
Screen Setting	Selects the background color of the screen or defines macros.	page 2-8
System Setting	Sets the edit model, devices to be connected, fonts, etc.	*
Tool	Contains useful functions for screen editing, performs error check or checks memory in use.	page 8-63
Window	Shows windows currently edited.	page 2-9
Help	Refers to the version information or manuals.	page 2-10

\* For more information, refer to "Chapter 1 System Setting" in the V8 Series Reference Manual.

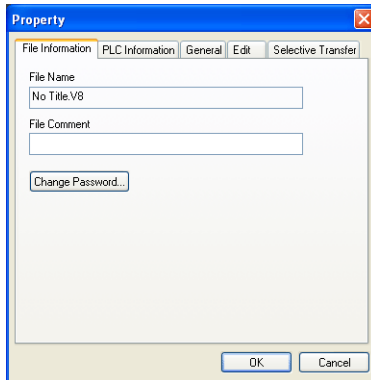
## [File] Menu

New	Opens a new file, and brings up the screen for editing.
Open	Opens an existing screen data file. A screen data file for the V7, V6, or GD-80 series can be opened and converted into a file for the V8 series. For more information, refer to the File Conversion Manual.
Save	Saves the current file. (If it is a new file, you must give a name to the file.)
Save As	Saves the current file under a new or different name.
Property	Allows you to check the information on the current file and to set up the editing environment. For more information, refer to page 2-4.
Project	Becomes active when Fuji Electric's MICREX-SX is designated as PLC1 in the [Device Connection Setting] dialog.
Transfer	Transfers data between the computer and the V8 series or a memory card. For more information, refer to "6 Transfer with V8".
Print	Prints out the created screen data file from the printer connected to the computer. For more information, refer to "7 Print".
Print Preview	Allows you to preview the image to be printed.
Print Current Window	Prints out the window currently opened.
Component Parts Editing	Allows you to edit component parts.
CF Card Manager	Allows you to write the V8 series data to a CF card or to convert the data imported from the CF card to a specific file format. For more information, refer to "Chapter 18 CF Card" in the V8 Series Reference Manual.
Start Font Setting	Selects a font type in language used for displaying text on the editor.
Start Emulator	Launches Emulator or updates the emulator data when any changes are made on the screen. For more information, refer to page 8-43.
Update Emulator Data	
File Management	Compares or copies data between different two files. For more information, refer to page 8-78.
Quit Application	Closes V-SFT Ver. 5.

## [Property] Dialog

Select [Property] from the [File] menu. The [Property] dialog is displayed.

### [File Information] tab window

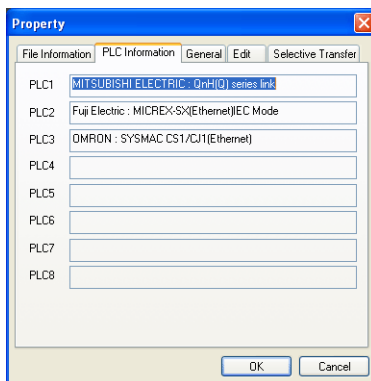


File Name	Displays the screen data file name.
File Comment (16 one-byte characters/8 two-byte characters max.)	The comment for the current screen data file can be entered. The comment entered will be transferred together with the screen data file to MONITOUCH, and will be displayed on the Main Menu screen.
Change Password (6 one-byte alphanumeric characters max.)	It is possible to prohibit the screen data from opening. Once the password is set here, you are requested to give the password anytime when opening the file or displaying the data loaded from MONITOUCH. A password ensures security against unauthorized access.



Manage the password on your own. Note that Hakko Electronics is not liable for any damages resulting from lost or unknown passwords.

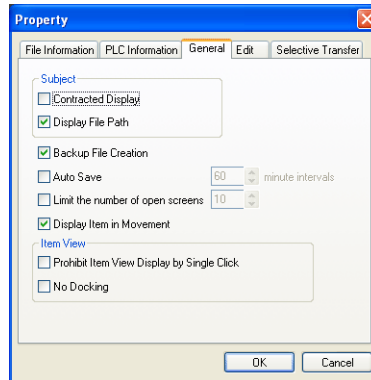
### [PLC Information] tab window



This dialog shows the device names designated as PLC1 to PLC8 in the [Device Connection Setting] dialog.

**[General] tab window**

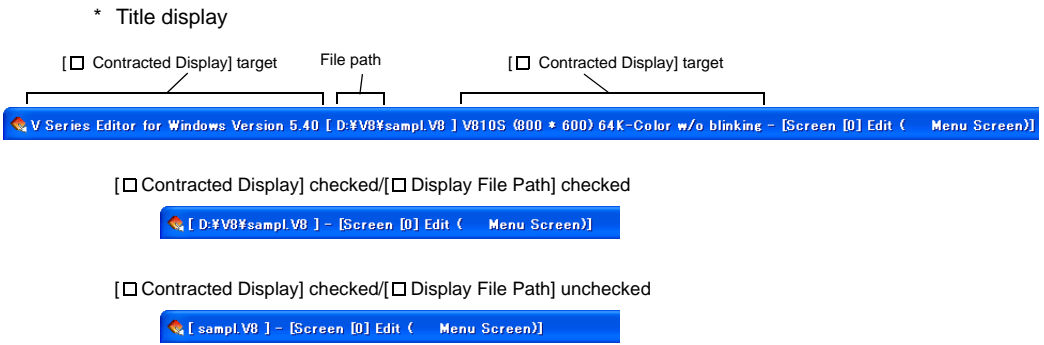
Set the editing environment.



<input type="checkbox"/> Contracted Display *	Check this box when you prefer short window title displayed on top of the editor.
<input type="checkbox"/> Display File Path *	Check this box to display the path of the screen data file on the title displayed on top of the editor. When this box is unchecked, the path is not displayed.
<input type="checkbox"/> Backup File Creation	Check this box to create a backup file (with extension "*.bak") when saving a screen data file. (Data previously saved is saved as a backup file, which is separate from the saved data.) If not necessary, remove the check mark.
<input type="checkbox"/> Auto Save	Check this box to save the screen data file automatically at regular intervals (setting range: 10 to 60 minutes). For a new file, a name should be given when the file is auto-saved for the first time. * The auto-save function does not work when the macro editing window or the message window is opened.
<input type="checkbox"/> Limit the number of open screens	Check this box to set the number of windows to be opened during the editor is running. When this box is unchecked, you can open as many windows as possible.
<input type="checkbox"/> Display Item in Movement	Check this box to display parts graphically on the editor during movement. When this box is unchecked, a dotted box showing the part size is displayed instead.
<input type="checkbox"/> Prohibit Item View Display by Single Click	Check this box to bring up the item dialog by double-clicking on the part.
<input type="checkbox"/> No Docking	Check this box to prevent item dialogs from being inset into the editing screen.

## 2.2 Menu Bar

---

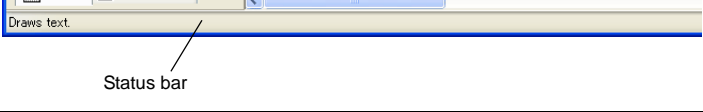
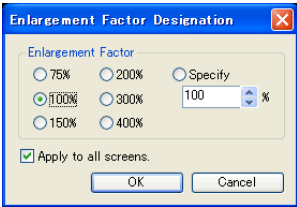




## [Edit] Menu

For more information on the [Edit] menu, refer to “3.8 Useful Functions for Screen Editing” (page 3-95).

## [View] Menu

Toolbar	Shows or hides toolbars. For more information, refer to page 2-19.
View	Shows or hides list-view windows. For more information, refer to page 2-11.
Status Bar	Shows or hides the status bar. 
Jump	Calls a screen.
Preview	Calls the previous screen.
Next	Calls the next screen.
Skip Non-registered Screen	Skips screens that are not registered when scrolling screens.
Screen List	Brings up current screens or graphics in the graphic library in a list form. For more information, refer to page 3-12.
Grid	Sets the properties for the grid display. For more information, refer to page 3-3.
Zoom	Allows you to specify the zoom factor. Check [Specify] to specify the desired factor. When the following dialog is brought up, enter your desired factor here. 
Display Environment	Allows you to set the display environment. For more information, refer to page 3-7.
Detail	Shows or hides the center line.
Redraw	Refreshes the screen display.

## [Parts] Menu

For more information on the [Parts] menu, refer to page 3-51.

## [Registration Item] Menu

For more information on the [Registration Item] menu, refer to “5 Registration Items” (page 5-1).

## [Screen Setting] Menu

This menu is available during screen editing, and the settings are only valid for the screen currently opened.

Screen Setting	Allows you to select the screen background color, item select memory, etc. For more information, refer to page 2-39.
OPEN Macro Edit	Allows you to edit the macro executed when the screen is opened.
CLOSE Macro Edit	Allows you to edit the macro executed when the screen is closed.
CYCLE Macro Edit	Allows you to edit the macro executed while the screen is opened.
Local Function Switch Setting	Allows you to set function switches activated while the screen is opened. For a switch commonly used for all screens, go to the [Global Function Switch Setting] dialog selected from the [System Setting] menu.

## [System Setting] Menu

This menu is used when you make settings of, such as, the edit model, devices to be connected, and fonts.

For more information, refer to “Chapter 1 System Setting” in the V8 Series Reference Manual.

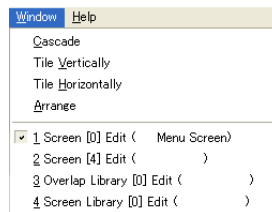
Edit Model Selection	Allows you to select an edit model of the V8 series.
Device Connection Setting	Allows you to select controller models connected to MONITOUCH.
Device Memory Map	Allows you to perform batch data transfer or sampling between controllers.
Ethernet Communication	Allows you to set the network table associated with the use of the IP address of a local port (V8 series) or the macro command EREAD or EWRITE.
Unit Setting	Allows you to make settings associated with MONITOUCH, such as the backlight and the buzzer.
Font Setting	Allows you to set interface languages displayed on MONITOUCH.
Global Function Switch Setting	Allows you to set function switches that are commonly used on all screens displayed on MONITOUCH. For setting function switches enabled while a certain screen is opened, go to [Local Function Switch Setting] dialog selected from the [Screen Setting] menu.
CF Card Setting	Allows you to specify a location of where to connect the CF card and a access folder name.
Attribute Setting	Allows you to set a format, in which writing to a CSV file takes place in recipe mode.
Buffering Area Setting	Allows you to make buffering area settings associated with the use of the sampling function.
Memory Card Setting	Allows you to make settings for the memory card mode (the settings are made automatically when the sampling function is used).
Macro Setting	Allows you to make settings for initial, global, or event timer macro.

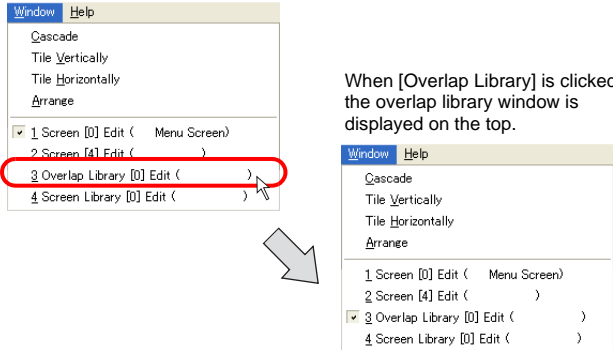
Time Display Format Setting	Allows you to set a user-designated calendar format.
Use Japanese Conversion Function	Allows you to use the Japanese FEP function.

## [Tool] Menu

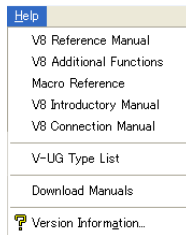
For more information on the [Tool] menu, refer to “8.7 Other Functions in the [Tool] Menu” (page 8-63).


## [Window] Menu



Cascade	Aligns and overlaps multiple windows.
Tile Vertically	Tiles multiple windows vertically.
Tile Horizontally	Tiles multiple windows horizontally.
Arrange	Aligns the minimized windows.
(Window titles)	<p>Displays titles of the windows currently opened.</p>  <p>When [Overlap Library] is clicked, the overlap library window is displayed on the top.</p> <p>Clicking the title of a window brings up the window on the top.</p>

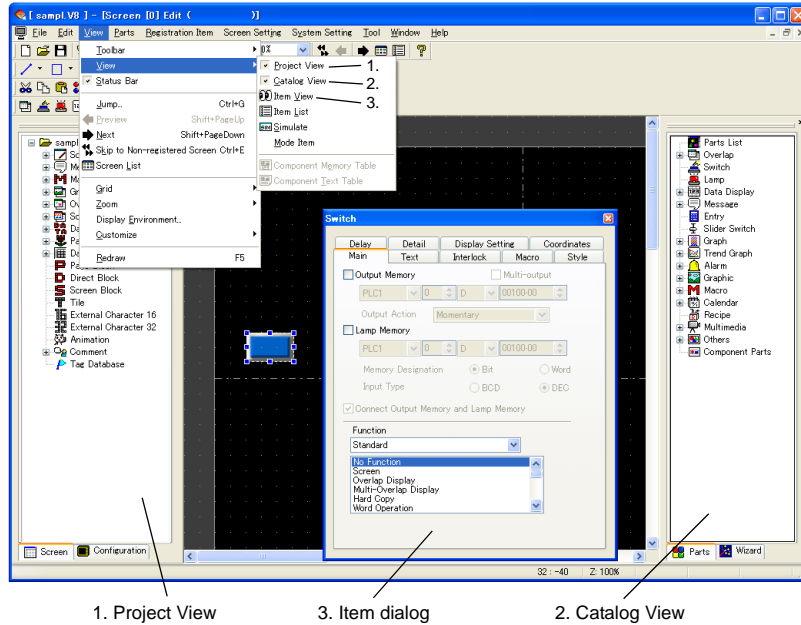
## [Help] Menu



(Manual titles)	Opens a manual in PDF format.
Version Information	<p>Indicates the editor version information.</p> 

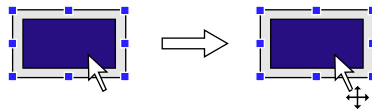
## 2.3 Menu Item [View] Display Method

Select [View] from the [View] menu. Click the desired menu item to be displayed.  
(A check mark denotes that the item is already displayed on the screen.)



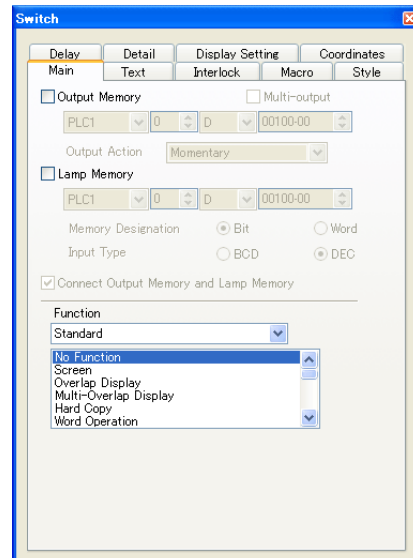
### Item Dialog

The item dialog is displayed at an arbitrary position by clicking on the item.

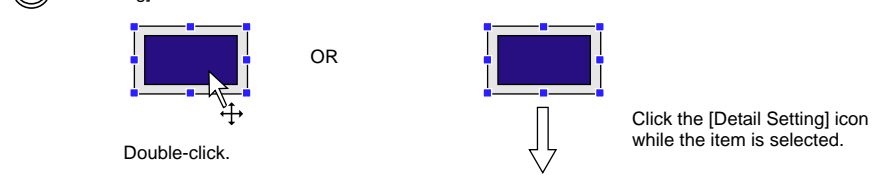


Click on the item.

The item dialog (e.g. switch) is displayed.



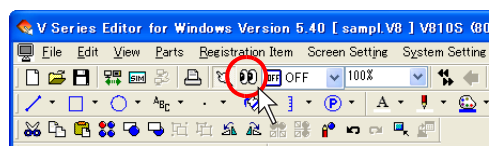
☺ When the item dialog is not displayed by single clicking, double-click the part or click the [Detail Setting] icon.



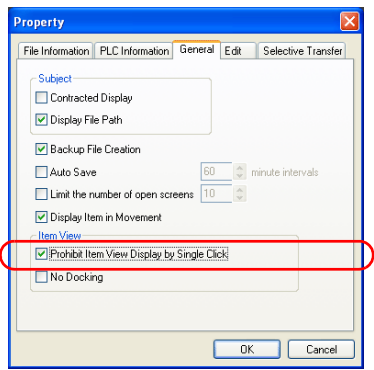
OR

Double-click.

Click the [Detail Setting] icon while the item is selected.

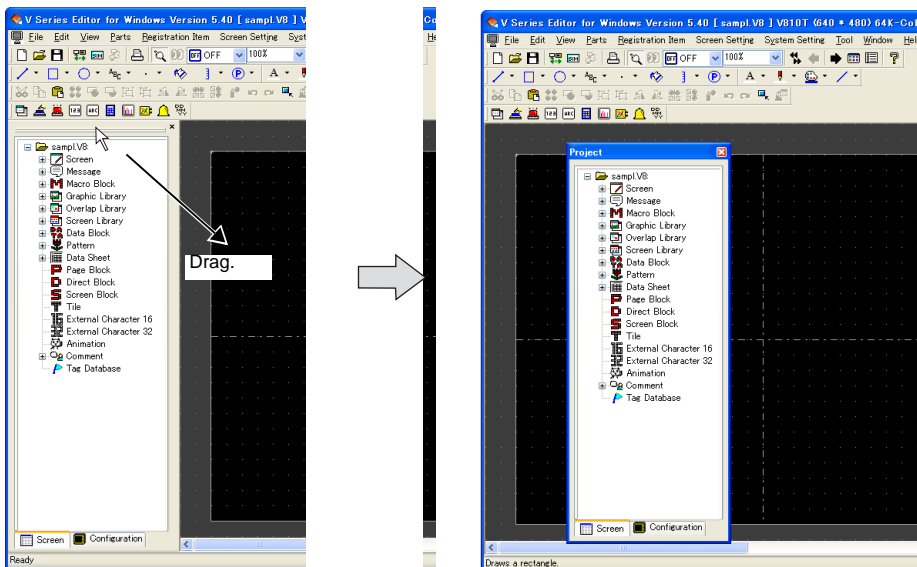


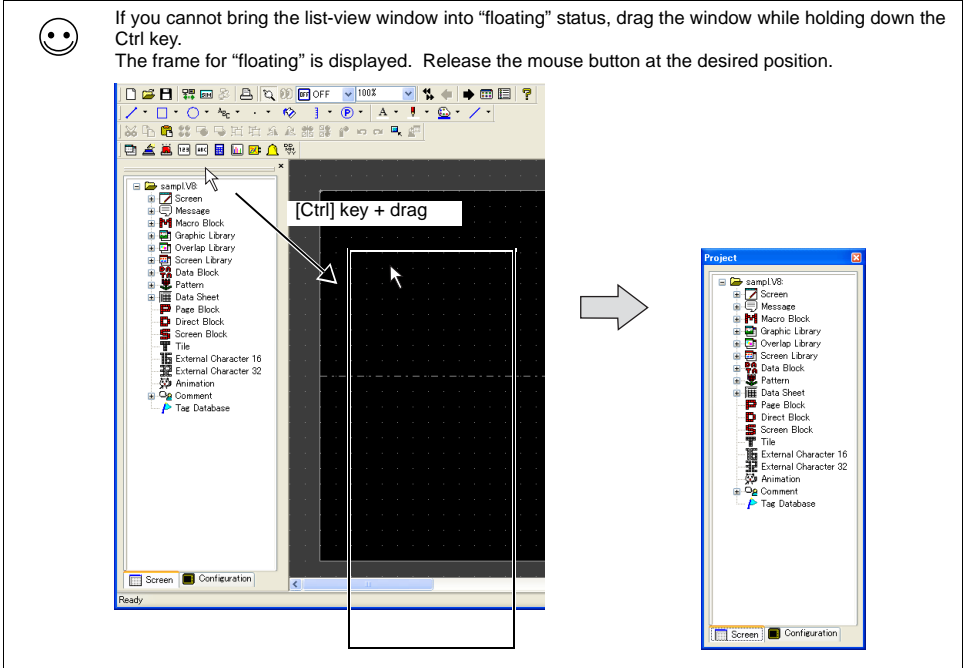
(This is caused when the  Prohibit Item View Display by Single Click] is checked in the [General] tab window selected from [File] → [Property].)



## How to Move

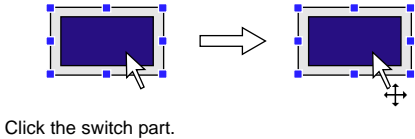
The displayed list-view window can be moved on the editor. By double-clicking the upper side of the list-view window or dragging it to a desired position, the window turns to the “floating” status.



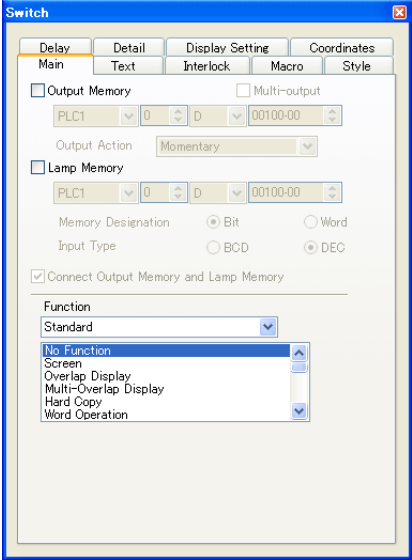


### Item Dialog

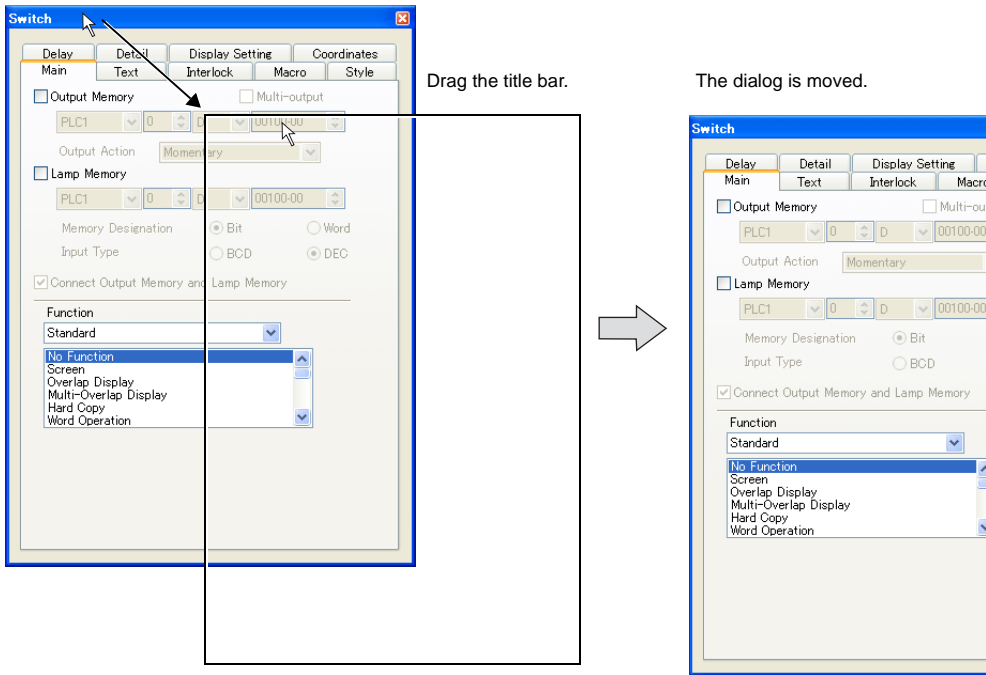
The [Switch] item dialog is displayed by clicking on the switch part placed on the screen.



The [Switch] item dialog is displayed.



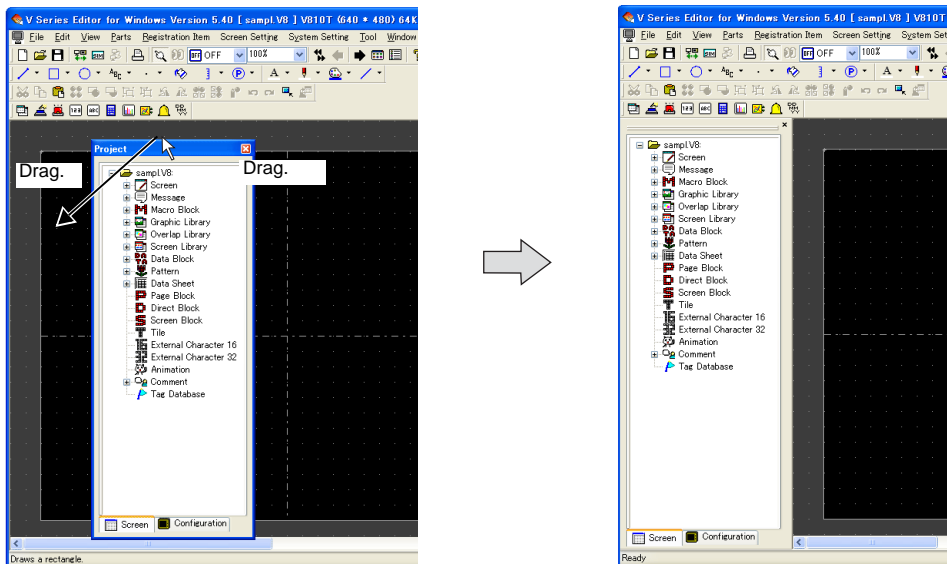
3. The item dialog is moved by dragging the title bar.



## How to Inset

The list-view window in the “floating” status can be inset into the editing screen.

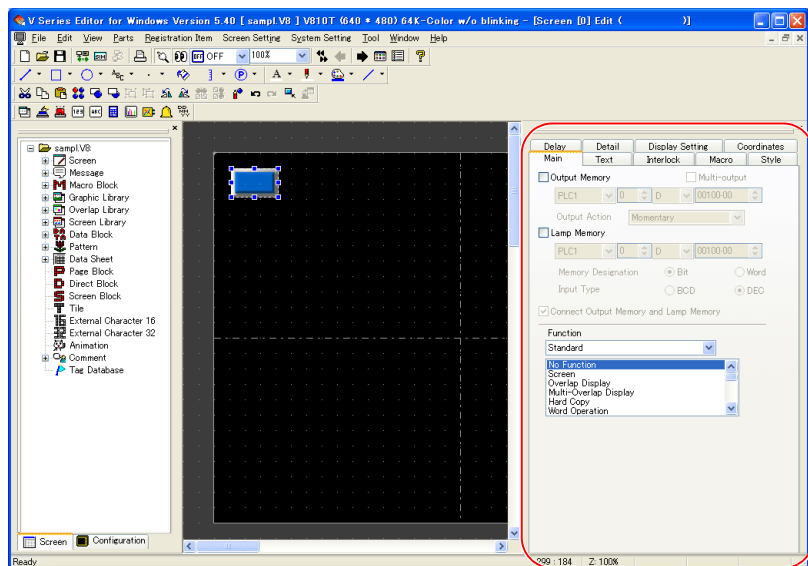
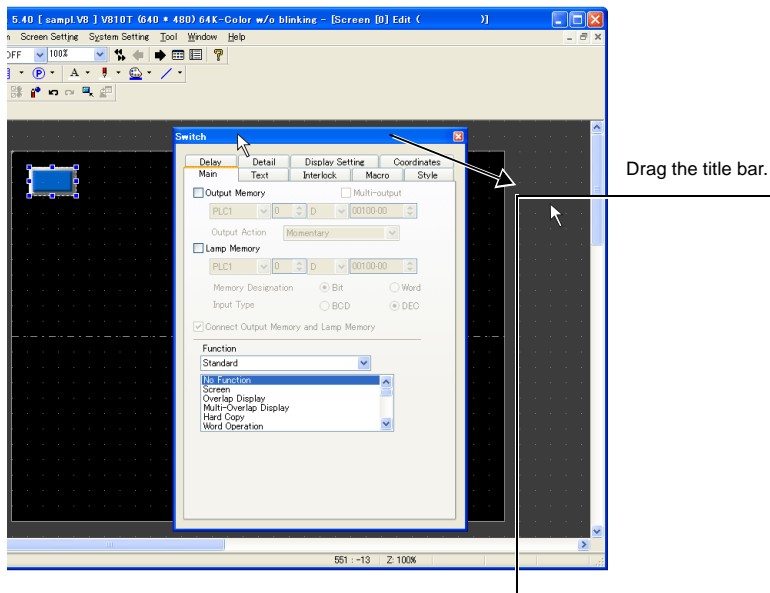
Double-click the title bar of the list-view window or drag it to a desired position. The window is inset into the editing screen.





## Item Dialog

Drag the item dialog to the right side of the editing screen and release the mouse button. Then the dialog is inset into the right side of the editing screen.



The item dialog has been moved. The dialog cannot only be moved rightward but also be moved upward, downward or leftward by following the same procedure.

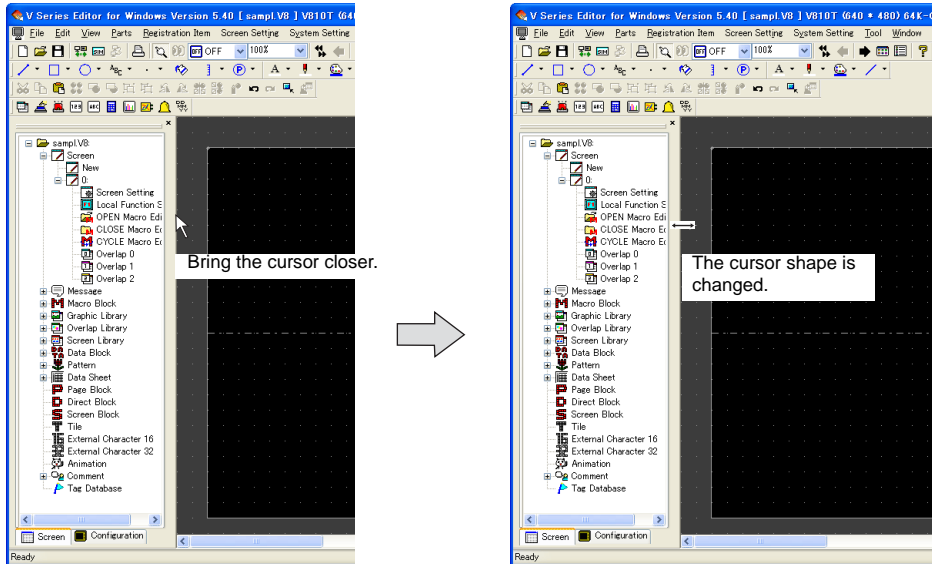
## Floating

The item dialog inset into the editing screen can be brought to the “floating” status. In this case, click [File] → [Property] → [General] →  No Docking]. For more information, refer to page 2-5.

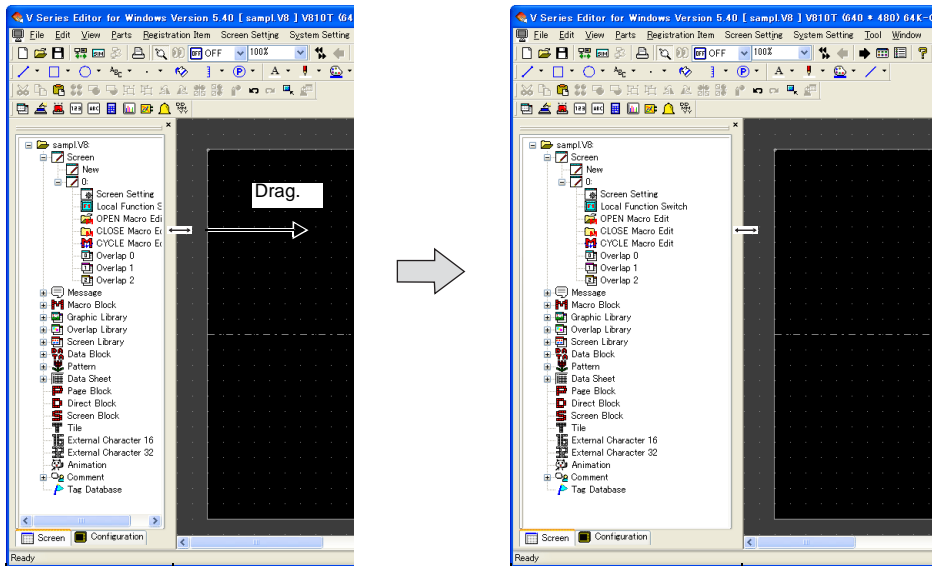
## Changing the Size of the List-view Window

The display size of the list-view window can be changed after it is inset into the editing screen.

Move the cursor to the upper, lower, right or left side of the list-view window. The cursor is changed to the shape for enlarging or reducing the display size.

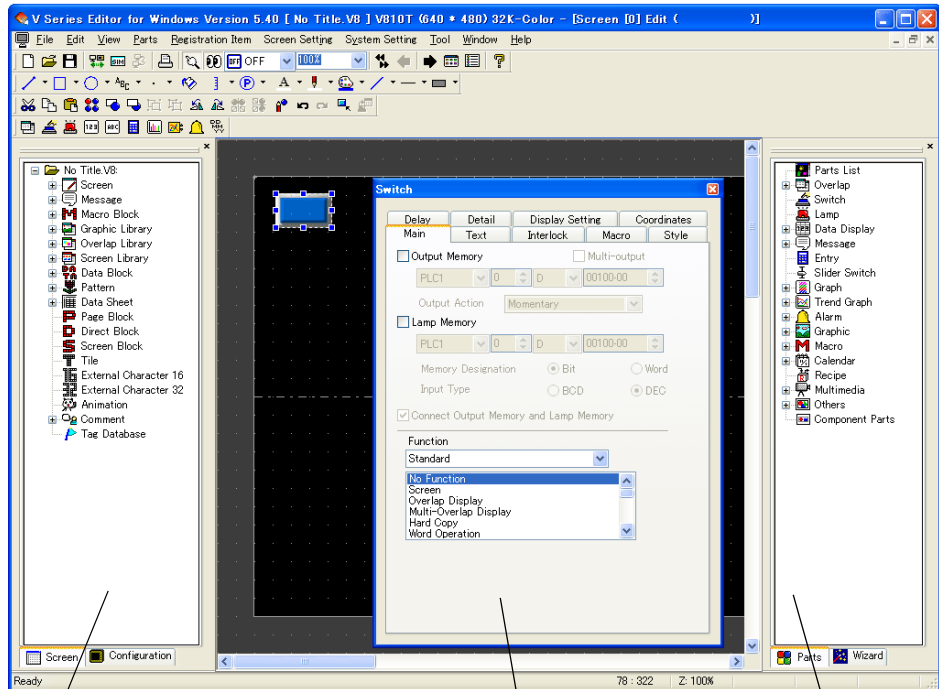


Drag the cursor toward the desired direction with the double-headed cursor displayed. The list-view window can be enlarged or reduced.



Enlarged.

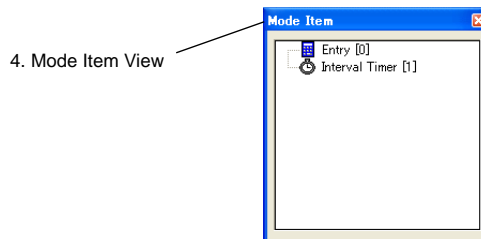
## 2.4 Types of [View]



1. Project View

3. Item dialog

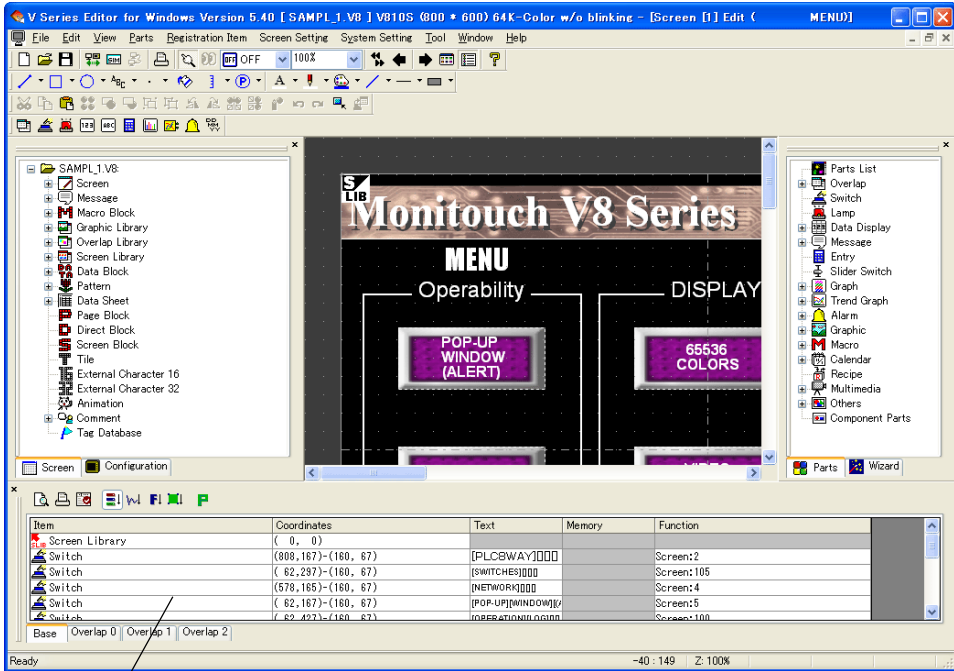
2. Catalog View



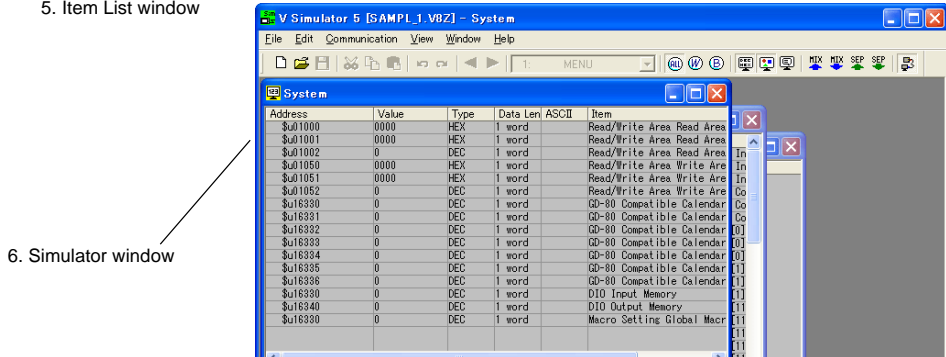
4. Mode Item View

1. Project View	Displays the entire configuration of the screen data or number of screens in a tree-structured format.
2. Catalog View	Displays parts or items to be placed on the screen in a tree-structured format. Parts or items can be placed on the screen by dragging the icon.
3. Item dialog	Settings for each part or item can be checked and changed.
4. Mode Item View	Displays the registration status for items whose area does not exist on the screen (macro mode, multi-overlap, etc.).

## 2.4 Types of [View]



5. Item List window



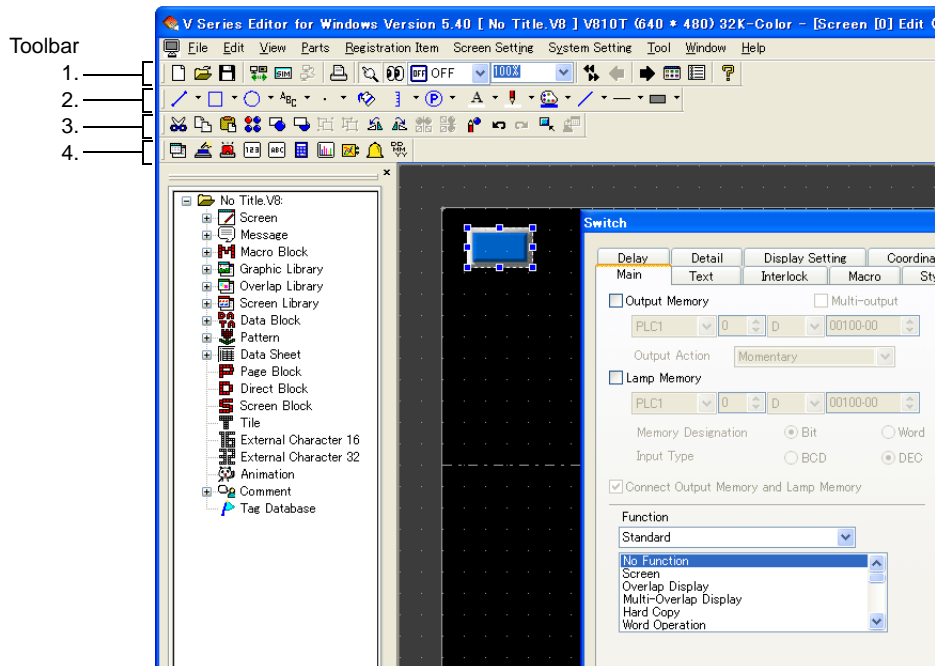
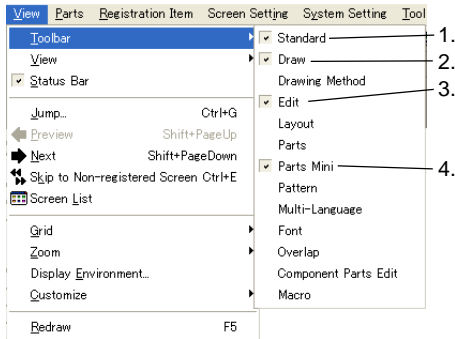
6. Simulator window

5. Item List window	Displays items placed or set on the screen in the list.
6. Simulator window	Screen data can be debugged using the simulation function.

## 2.5 Toolbar

### Display Method

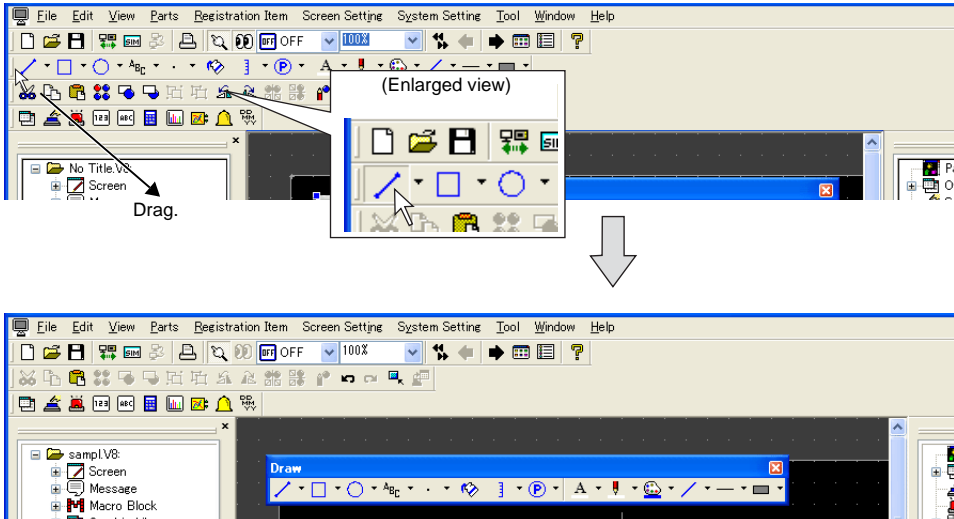
Select [Toolbar] from the [View] menu. Click the desired item to display the corresponding toolbar. (A check mark denotes that the item is already displayed on the screen.)



## How to Move

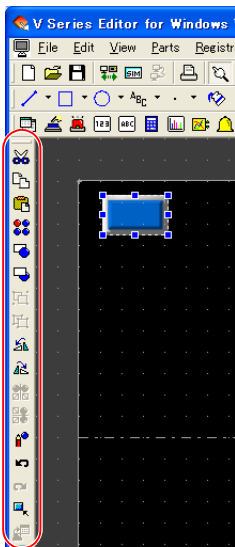
The displayed toolbar can be moved on the editor.

The toolbar turns to “floating” status by dragging the upper side of the icon on the extreme left of the toolbar to the desired position.

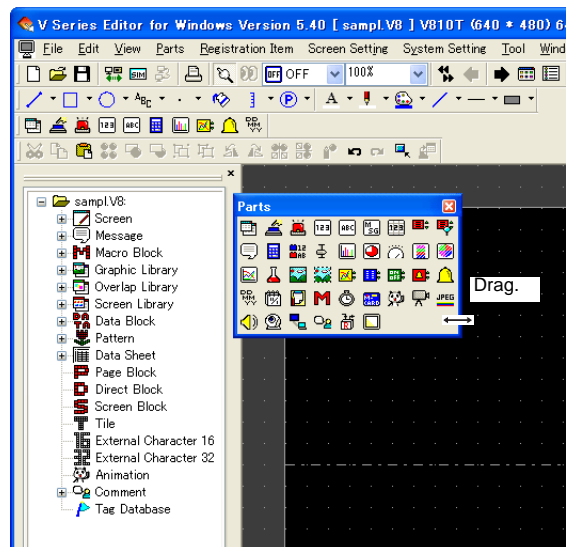


The toolbar can be changed into a desired shape.

Ex. 1)  
Changed by dragging vertically  
([Edit] toolbar)

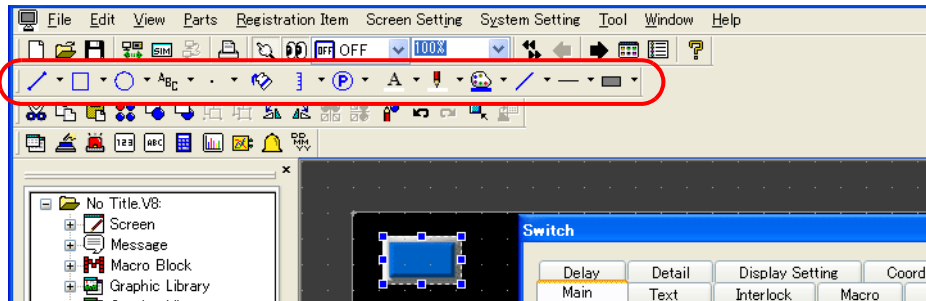
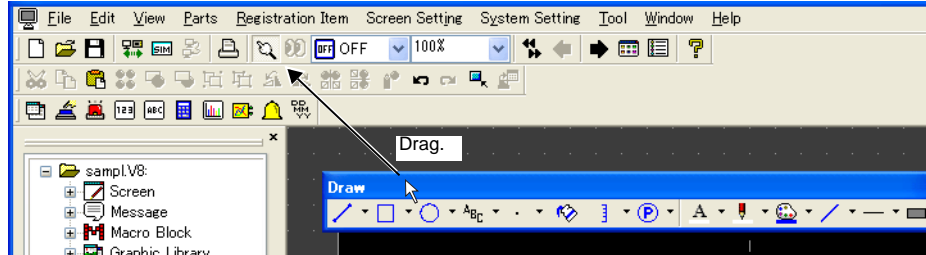


Ex. 2)  
Changed into nine lines  
([Parts] toolbar)



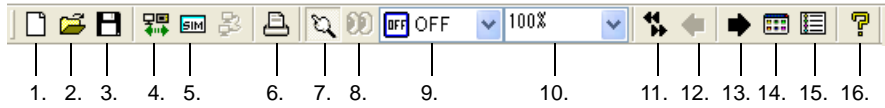
## How to Inset

Drag the toolbar title to the desired position on the editor and release the mouse button. The toolbar is inset into the editing screen.



## Names and Contents of Tools

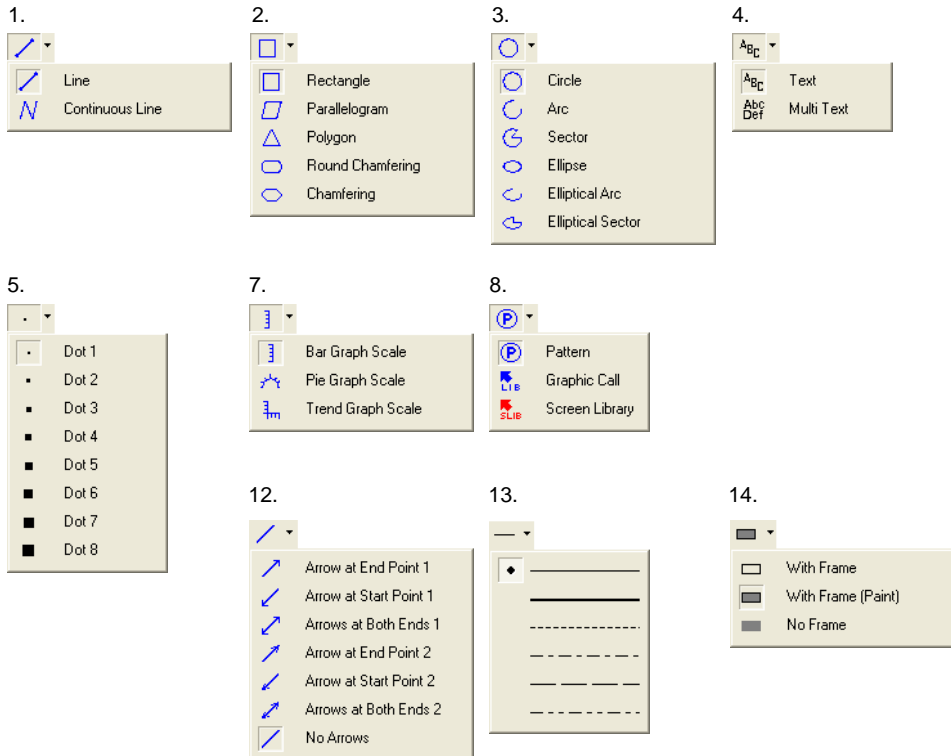
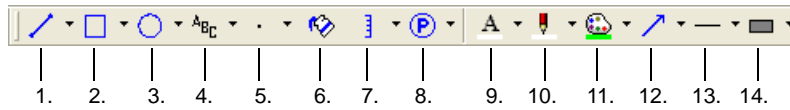
### Standard



1. New	Opens a new file, and brings up the screen for editing.
2. Open	Opens an existing screen data file.
3. Save	Saves the current screen data.
4. Transfer	Transfers the screen data to MONITOUCH.
5. Simulate	Starts up Simulator.
6. Print	Displays the print setting.
7. Select	Cancels editing status, and makes items or parts selectable.
8. Detailed Setting	Displays the item dialog for the selected item or part.
9. Status Selection	Change-over the status of the switch part or lamp part (OFF/ON/P3, etc.)
10. Scaling Display	Specifies zooming factor.
11. Screen Skip	Depressed: Skips unregistered screens. Raised: Displays unregistered screens.
12. Previous Screen	Moves back to the previous screen.
13. Next Screen	Moves to the next screen.
14. Screen List	Displays the screen list window.
15. Item List	Displays items placed or set on the screen in the item list window.
16. Version Information	Displays the version information.

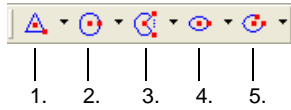


## Draw

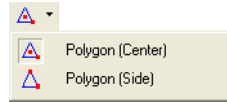


1. Line	Draws straight lines (or continuous lines).
2. Box	Draws boxes (rectangles/parallelograms/polygons, etc.).
3. Circle	Draws circles (ellipses/sectors/elliptical arcs, etc.).
4. Text	Produces text (or multi-text).
5. Dot	Draws dots.
6. Paint	Paints.
7. Scale	Draws scales (bar type/pie type/trend type).
8. Pattern/Library	Places patterns (or graphic library/screen library).
9. Character Color	Specifies a foreground color for text.
10. Line Color/Frame Color	Specifies a line or frame color.
11. Paint Color/Background	Specifies a background color for text or a paint color for boxes.
12. Arrow Type	Specifies arrow type for straight lines.
13. Line Type	Specifies line type such as straight lines, continuous lines or boxes.
14. Frame Type	Specifies frame type for boxes or circles.

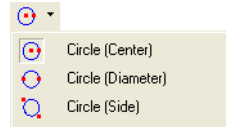
## Drawing Method



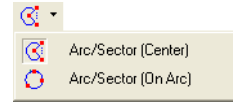
1.



2.



3.



4.

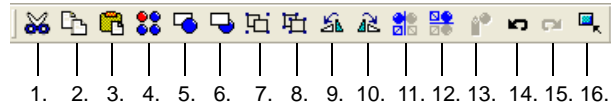


5.



1. Drawing Method for Polygon	Allows you to select drawing method for polygons.
2. Drawing Method for Circle	Allows you to select drawing method for circles.
3. Drawing Method for Arc	Allows you to select drawing method for arcs.
4. Drawing Method for Ellipse	Allows you to select drawing method for ellipses.
5. Drawing Method for Elliptical Arc	Allows you to select drawing method for elliptical arcs.

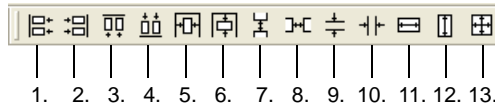
## Edit



1. Cut	Cuts selected item.
2. Copy	Copies selected item.
3. Paste	Pastes copied or cut item.
4. Multi Copy	Copies selected item multiple times.
5. Bring to Top	Brings selected item on the top.
6. Send to Bottom	Sends selected item to the bottom.
7. Group	Groups multiple items selected.
8. Ungroup	Ungroups selected items.
9. Rotate 90 degrees CCW	Rotates selected item 90 degrees counterclockwise.
10. Rotate 90 degrees CW	Rotates selected item 90 degrees clockwise.
11. Horizontal Flip	Flips selected item horizontally.
12. Vertical Flip	Flips selected item vertically.
13. Modify Part	Opens window where selected part is modified.
14. Undo	Cancel action performed last (enabled up to 16 times).
15. Redo	Reverts state before undoing (enabled up to 16 times).
16. Point Search	Depressed: Point search becomes enabled. Raised: Point search is disabled. * For more information on point search, refer to page 3-4.

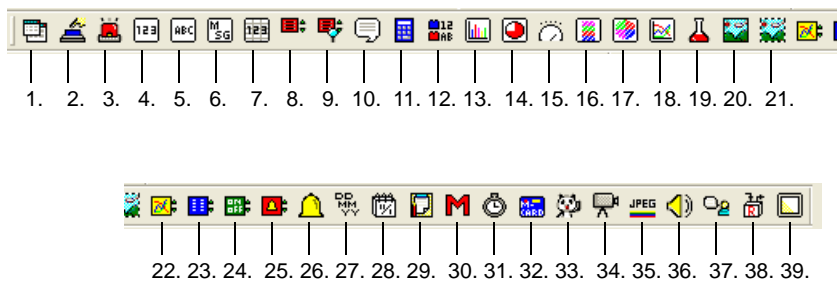
## Layout

This toolbar is active when multiple items are selected.



1. Flush Left	Aligns selected items to the left end of datum item.
2. Flush Right	Aligns selected items to the right end of datum item.
3. Flush Top	Aligns selected items at the top of datum item.
4. Bottom Align	Aligns selected items at the bottom of datum item.
5. Vertical Center Align	Vertically aligns selected items at the center of datum item.
6. Horizontal Center Align	Horizontally aligns selected items at the center of datum item.
7. Vertical Align (Regular Spacing)	Vertically aligns selected items at regular intervals.
8. Horizontal Align (Regular Spacing)	Horizontally aligns selected items at regular intervals.
9. Vertical Align (Specified)	Vertically aligns selected items at specified intervals.
10. Horizontal Align (Specified)	Horizontally aligns selected items at specified intervals.
11. Align Width	Arranges width of selected items to width of datum item.
12. Align Height	Arranges height of selected items to height of datum item.
13. Align Size	Arranges size of selected items to size of datum item.

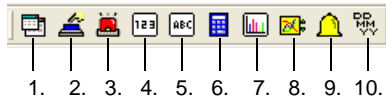
## Parts



1.	Normal Overlap	Places normal overlap display.
2.	Switch	Places switch.
3.	Lamp	Places lamp.
4.	Numerical Data Display	Places numerical data display.
5.	Text Display	Places text display.
6.	Message Display	Places message display.
7.	Table Data Display	Places table data display.
8.	Bit Order Alarming	Places bit order alarming.
9.	Alarm Sub Display	Places alarm sub display.
10.	Message	Places message display.
11.	Entry Mode	Places entry mode.
12.	Data Block Area	Places data block area.
13.	Bar Graph	Places bar graph.
14.	Pie Graph	Places pie graph.
15.	Panel Meter	Places panel meter.
16.	Statistic Bar Graph	Places statistic bar graph.
17.	Statistic Pie Graph	Places statistic pie graph.
18.	Trend Graph	Places trend graph.
19.	Closed Area Graph	Places closed area graph.
20.	Graphic	Places graphic mode.
21.	Graphic Relay	Places graphic relay mode.
22.	Trend Sampling	Places trend sampling.
23.	Data Sampling	Places data sampling.
24.	Alarm Logging	Places alarm logging.
25.	Time Order Alarming	Places time order alarming.
26.	Alarm Tracking	Places alarm tracking.
27.	Time Display	Places time display.
28.	Calendar	Places calendar.
29.	Memo Pad	Places memo pad.
30.	Macro	Places macro mode.
31.	Interval Timer	Places interval timer.
32.	Memory Card	Places memory card mode.
33.	Animation	Places animation.

34. Video Display	Places video display.
35. JPEG display	Places JPEG display.
36. Sound	Places sound item.
37. Comment Display	Places comment display.
38. Recipe	Places recipe mode.
39. Display Area	Places display area.

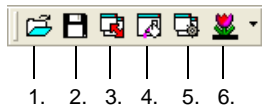
## Parts Mini



1. Normal Overlap	Places normal overlap display.
2. Switch	Places switch.
3. Lamp	Places lamp.
4. Numerical Data Display	Places numerical data display.
5. Text Display	Places text display.
6. Entry Mode	Places entry mode.
7. Bar Graph	Places bar graph.
8. Trend Sampling	Places trend sampling.
9. Alarm Tracking	Places alarm tracking.
10. Time Display	Places time display.

## Pattern

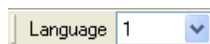
This toolbar is available when [Pattern] is selected from the [Registration Item] menu.



1. Read from Image File	Imports an image file into pattern.
2. Save in Image file	Saves current pattern as a BMP or JPEG file.
3. Change Size	Changes pattern size.
4. Transparent Color Setting	Sets transparent color.
5. Display Environment	Sets display environment.
6. Background	Sets margin color of the pattern editing.

## Multi-language

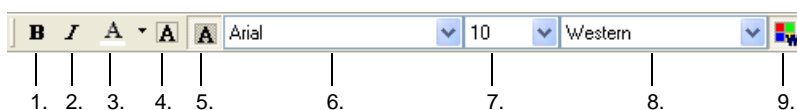
The interface language can be changed when the multi-language environment is set.



1.

1. Language Display	Allows you to change language number (1 to 8).
---------------------	--

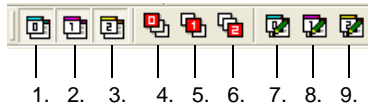
## Font



1. Bold	Sets bold typeface for text.
2. Italic	Sets italic typeface for text.
3. Character Color	Specifies foreground color for characters.
4. Transparent	Makes text transparent.
5. Not Transparent	Makes text non-transparent.
6. Font Name	This item is active when the Windows font is used. Allows you to select Windows font type.
7. Font Size	This item is active when the Windows font is used. Allows you to change Windows font size.
8. Character Set	Allows you to select Windows character set.
9. Windows Font	Depressed: Windows font is available. Raised: Windows font is not available.

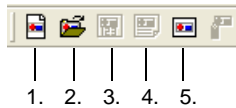
## Overlap

This toolbar is active only when the overlap display is placed.



1. Overlap 0	Shows or hides overlap ID No. 0.
2. Overlap 1	Shows or hides overlap ID No. 1.
3. Overlap 2	Shows or hides overlap ID No. 2.
4. Bring Overlap 0 to Top	Displays overlap ID No. 0 on the top.
5. Bring Overlap 1 to Top	Displays overlap ID No. 1 on the top.
6. Bring Overlap 2 to Top	Displays overlap ID No. 2 on the top.
7. Overlap 0 Edit	Displays the normal overlap ID No. 0 editing screen.
8. Overlap 1 Edit	Displays the normal overlap ID No. 1 editing screen.
9. Overlap 2 Edit	Displays the normal overlap ID No. 2 editing screen.

## Component Parts Editing



1. New	Opens a new component parts editing window.
2. Open	Opens an existing component parts editing window.
3. Component Memory Table	Displays the memory table in the component parts editing window.
4. Component Text Table	Displays the text table in the component parts editing window.
5. Component Parts	Places a component part on the screen.

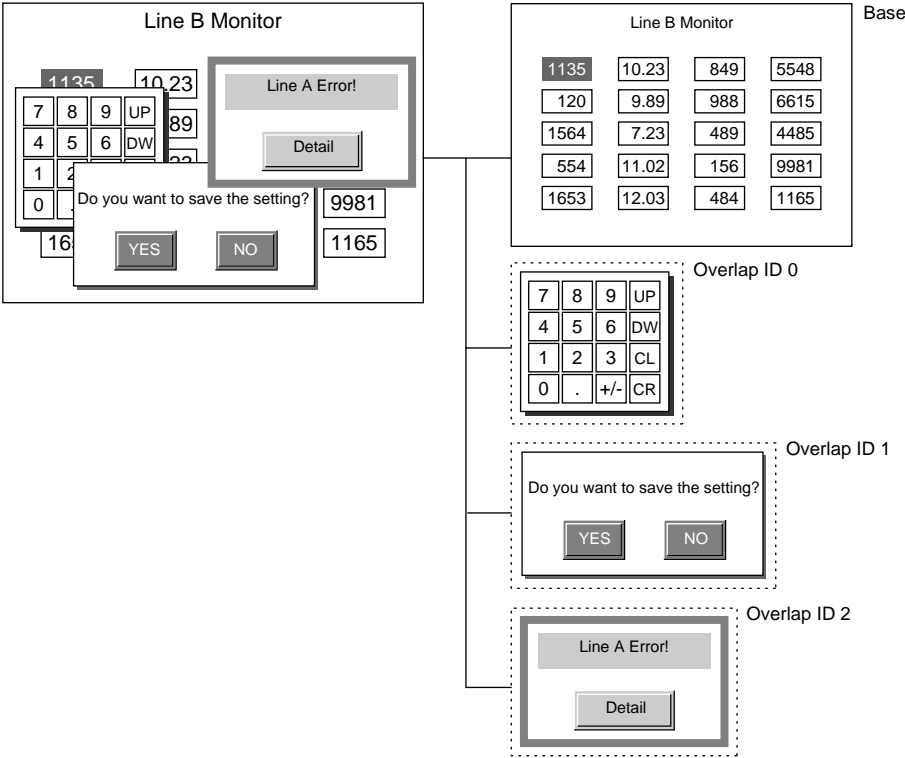


# 2.6 Screen Composition

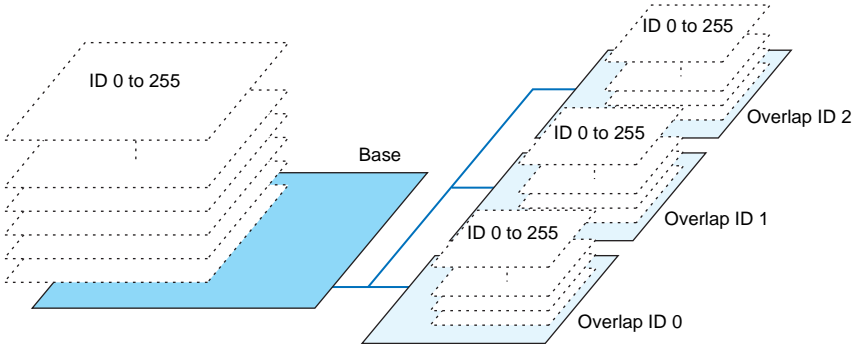
Each display of the V8 series is called a "screen." A maximum of 1,024 screens can be registered in a screen data file. This chapter explains screen composition and elements containing parts and graphics to be displayed on screens.

## Screen Outline

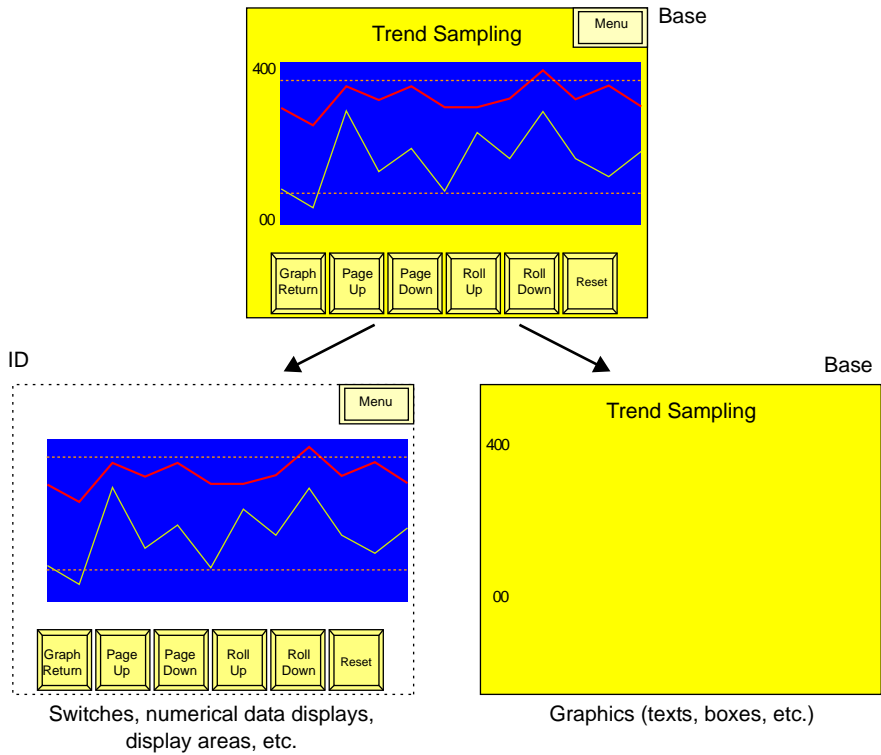
- One screen is composed of a base screen (indispensable) and overlap displays (a maximum of three overlap displays can be placed).



- Each base screen is composed of 256 areas called "ID." These 256 IDs are overlaid like invisible sheets.



- Each ID area contains parts. These parts are given numbers identical to their respective sheet numbers (= ID numbers). Graphics will be directly placed on the base screen and overlap display. These graphics are not given ID numbers.



### What Is an ID?

- "ID" is a number given to each invisible sheet. Every part that functions on the screen is placed on the sheet. To identify its sheet number, an ID number is assigned to each part. Whether one sheet can contain multiple parts or only one part depends on the types of parts. (For more information on the limit on the number of parts, refer to page 3-45.)
- The editor automatically performs ID number allocations. Normally, you do not need to worry about the allocation of ID numbers.

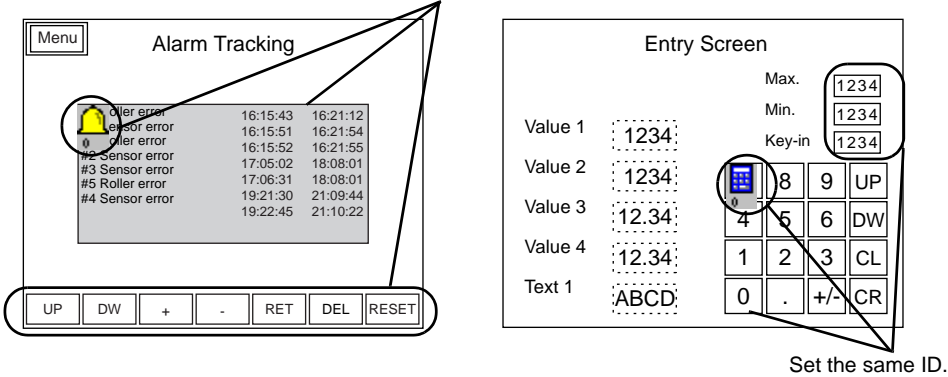
A part that executes its function singly, such as a switch, lamp, numerical data display, or bar graph, has no limit on the number of parts per ID (page 3-45). It is not necessary to worry about ID numbers when placing these types of parts. For the part that can be placed only one per sheet, see the description below.

### Combination of parts

Different parts may be combined to execute a single function. Such parts must share the same ID number.

- Error message display (= alarm display)
- Numerical data entry on the V8 series (= entry mode)

Allocate the same ID number to the display area and the scroll switches.



If the parts are given different ID numbers, they will not work correctly. Check the ID numbers and set them correctly.

**When using screen library:**

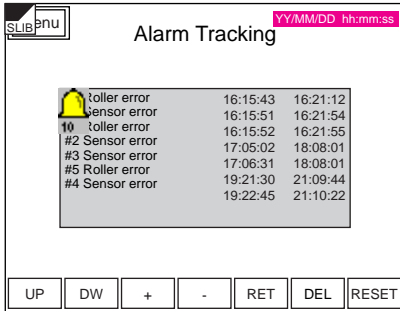
With the use of an editing area called “screen library,” the same part can be placed repeatedly on multiple screens.

Before using this area, check that the ID number registered in the screen library is different from the ID numbers of the parts already placed on screens.

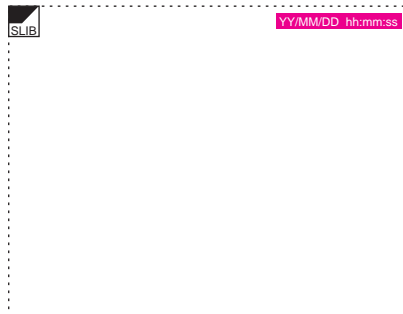
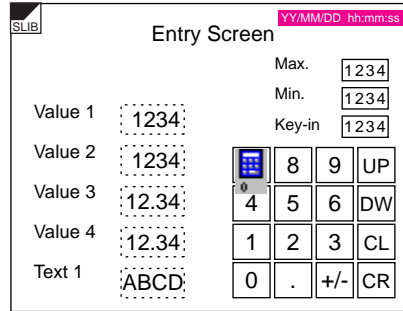
In the case of parts limited in number, using the same ID number will prevent these parts from working correctly.

(For more information on the screen library, refer to “5.8 Screen Library” (page 5-31).)

When the ID number for the alarm display is set to “10”:



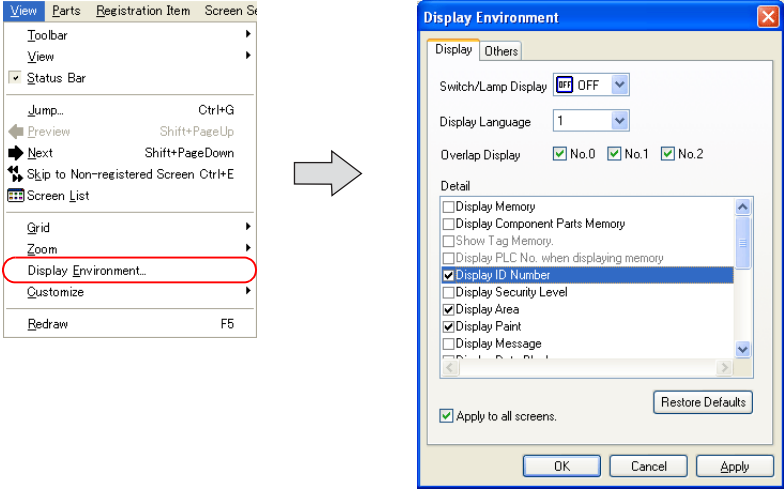
When the ID numbers for the entry mode part is set to “0”:




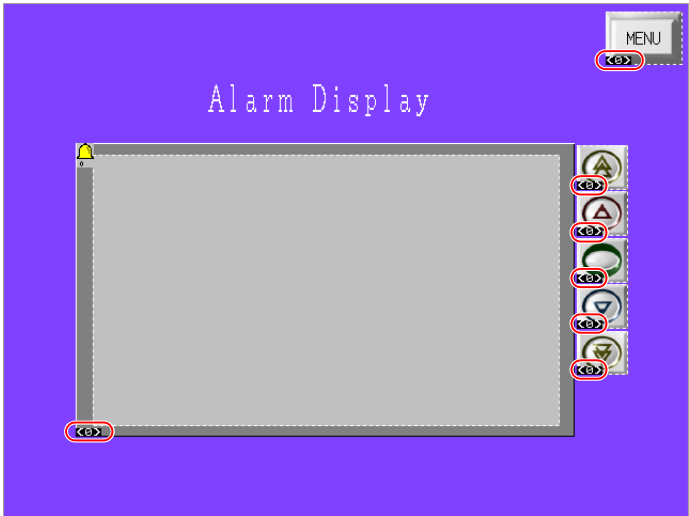
For the calendar part that is placed on both screens, the ID number must be set to the number other than “0” or “10”.

### ID Number Check

To check the ID number of the part placed on the screen, click [Display Environment] from the [View] menu. Then, check [ Display ID Number] for [Detail].



 Displayed ID number

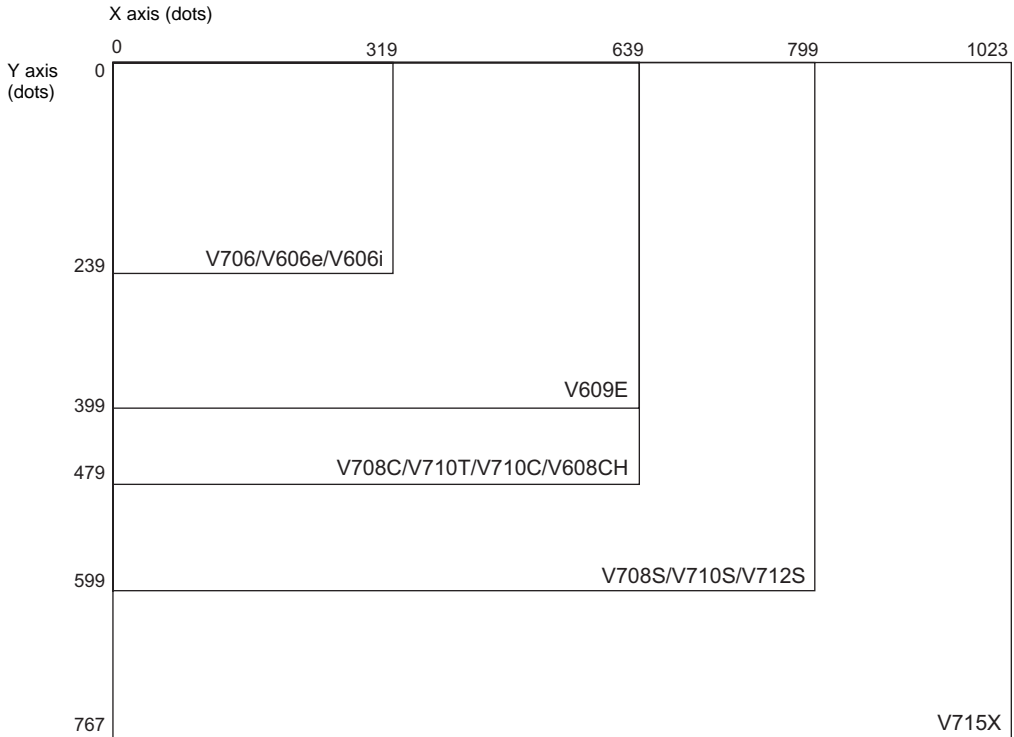


For more information on the [Display Environment] setting, refer to "Display Environment Setting" in "3.2 Setting Up Editing Environment" (page 3-7).

# Screen Structure

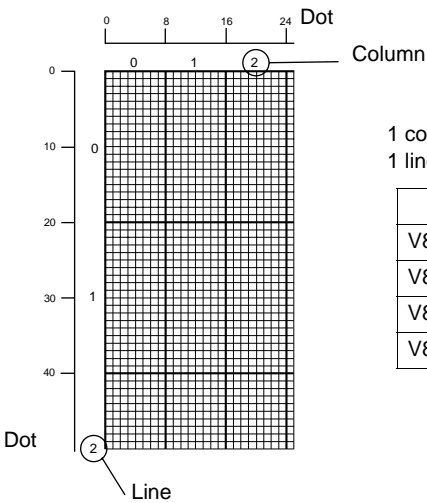
## Screen Resolution

Screen resolution varies with different models of the V8 series.



### Lines and columns

Lines and columns are used as units to designate coordinates of overlaps or sizes of character displays.



1 column = 8 dots  
1 line = 20 dots

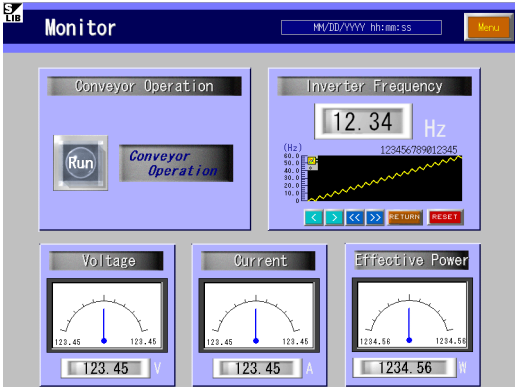
Model	Column	Line
V806T/V806C/V806M	40	12
V808C/V810C/V810T/V808CH	80	24
V808S/V810S/V812S	100	30
V815X	128	38

### Screen Capacity

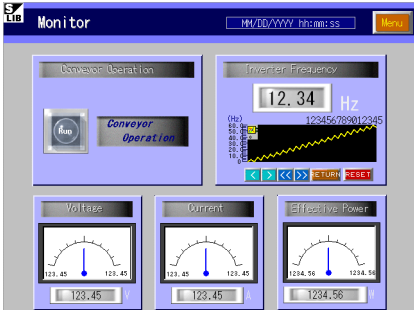
- There is no limitation of available memory per screen for the V8 series. (Available memory on a screen is limited to 256 KB for the V7 series, and to 128 KB for the V6 series.) However, there is the limitation of the number of items registered with one screen. For more information, refer to “Capacity for Parts Placement” (page 3-47).
  - One file is capable of storing 4,000 screens.
  - The memory capacity of one file differs depending on the V8 series model as well as the font type in use. For more information, refer to “Appendix 3 Display Language” in the V8 Series Reference Manual.
  - Make sure to check the use environment and available memory when registering screens.
- \* If a screen data file exceeds the maximum capacity, an attempt to transfer the file causes an alarm message “The size is too large to communicate” and results in transmission failure.**

### Auto Adjustment for Screen Resolution

When you change the current edit model to another, it is possible to make the screen resolution adjust automatically to fit in its own screen display.

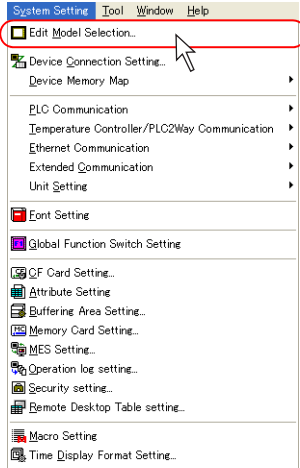


The resolution of 800 × 600 is changed to 640 × 480 when the edit model is changed.

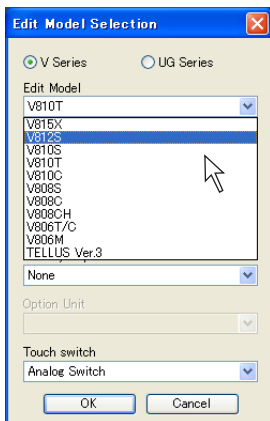


As an example, change the edit model from V810T to V812S following the procedure shown below.

1. Click [Edit Model Selection] from the [System Setting] menu.

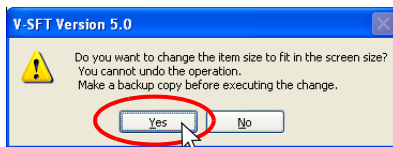


- The [Edit Model Selection] dialog is displayed.  
Change [Edit Model] from [V810T] to [V812S], and click [OK].



[V810T] is changed to [V812S].

- The confirmation dialog is displayed.



- Click [Yes]. Then the screen resolution is automatically adjusted.  
When you click [No], the edit model is changed while the screen resolution remains as it is.

**Notes**

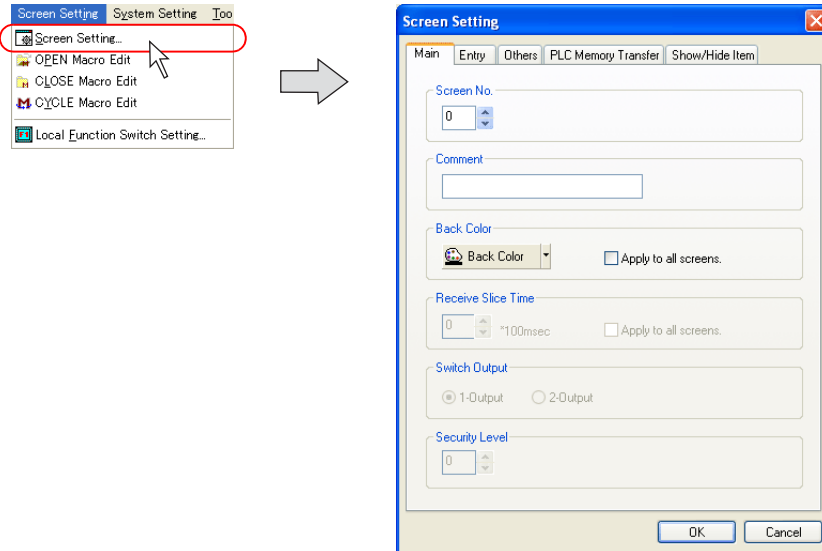
- The target area for the auto adjustment function is:  
screen, screen library, overlap library, graphic library, data block
- The character properties are adjusted according to the screen resolution; however, those of the following functions will not be changed.  
Bit order alarming, alarm sub display, time order alarming, alarm logging, message, data sampling, alarm tracking, memory card
- The video display size is not changed automatically.
- For the parts whose size will not be changed automatically, adjust them manually.
- For performing auto adjustment neatly with the analogue switch type, go to [View] → [Grid] → [Grid Setting], and uncheck [ Place switches on switch grids].



## Screen Setting

Select a screen background color or other settings which are unique to the screen in the [Screen Setting] dialog.

Clicking [Screen Setting] in the [Screen Setting] menu brings up the [Screen Setting] dialog shown below.



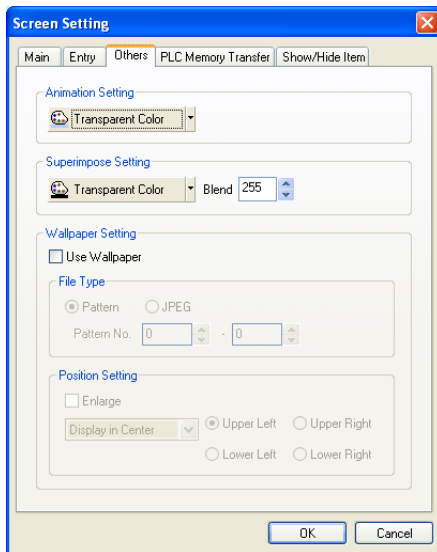
### [Main] Tab Window

Screen No. (0 to 1023)	Allows you to change a screen number assigned to the current screen.
Comment (16 one-byte characters/8 two-byte characters)	Allows you to add a comment to the current screen.
Back Color	Allows you to select a background color for the current screen.
Switch Output	This option is active only when the V8 series switch type is the matrix type. For more information, refer to “Chapter 3 Switch” in the V8 Series Reference Manual.

### [Entry] Tab Window

- Item Select Memory  
This option is active when numerical data display or character display parts with the setting of [Display Function: Entry Target] are placed in the entry mode on the base screen.  
For more information, refer to “Chapter 7 Entry Mode” in the V8 Series Reference Manual.

## [Others] Tab Window



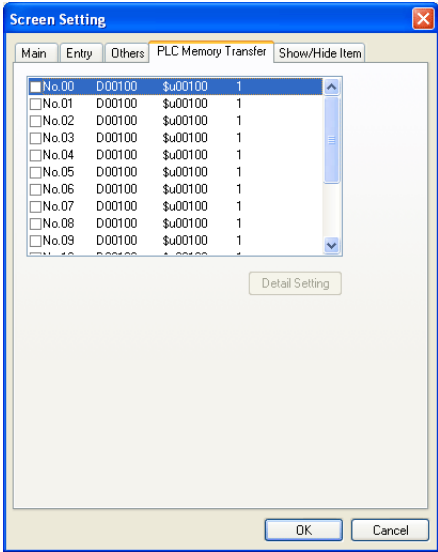
Animation Setting	Set this option when using the animation function. For more information, refer to “Chapter 14.1 Animation” in the V8 Series Reference Manual.
Superimpose Setting	Set this option when using the superimpose function on the overlap display. For more information, refer to “Chapter 2 Overlap” in the V8 Series Reference Manual.
Wallpaper Setting	It is possible to use a bitmap file or a JPEG file as screen wallpaper. When <input type="checkbox"/> Use Wallpaper is checked, the following options become active.
File Type (Pattern/JPEG *)	Select a file type.  When [Pattern] is selected: Set Pattern No. (0 to 1023). A bitmap or JPEG file to be used as the wallpaper is imported into the screen data file and handled as a pattern.  When [JPEG] is selected: Specify a JPEG file name (within eight one-byte alphanumerics) to be used as wallpaper.
Position Setting	<input type="checkbox"/> Enlarge This option is active when [Pattern] is selected. When this box is checked, a selected file can be enlarged under equal magnification, and placed with respect to the upper left corner of the screen. When this box is unchecked, the following options become active.  [Position Setting] (Display in Center/Tile/Display in the Corner) Places the selected file at the selected position. When [Display in the Corner] is selected, select either [Upper Left], [Upper Right], [Lower Left], or [Lower Right].

\* For the procedures to store JPEG files into a CF card or other information about JPEG files, refer to “Chapter 14.3 JPEG Display” in the V8 Series Reference Manual.

### [PLC Memory Transfer] Tab Window



This tab window is not available when [Universal Serial] or [Without PLC Connection] is selected for PLC1 to PLC8 in the [Device Connection Setting] dialog.



When you mainly use PLC memory for the macro and also directly use PLC memory for macro commands, a read to PLC memory occurs and as a result, the display speed is slowed. To avoid this, copy memory necessary for each cycle to the internal memory and execute macro commands in the internal memory. Through this process, speed down can be decreased. Using these options, specify the copy source and the copy target for each screen.

MEMO

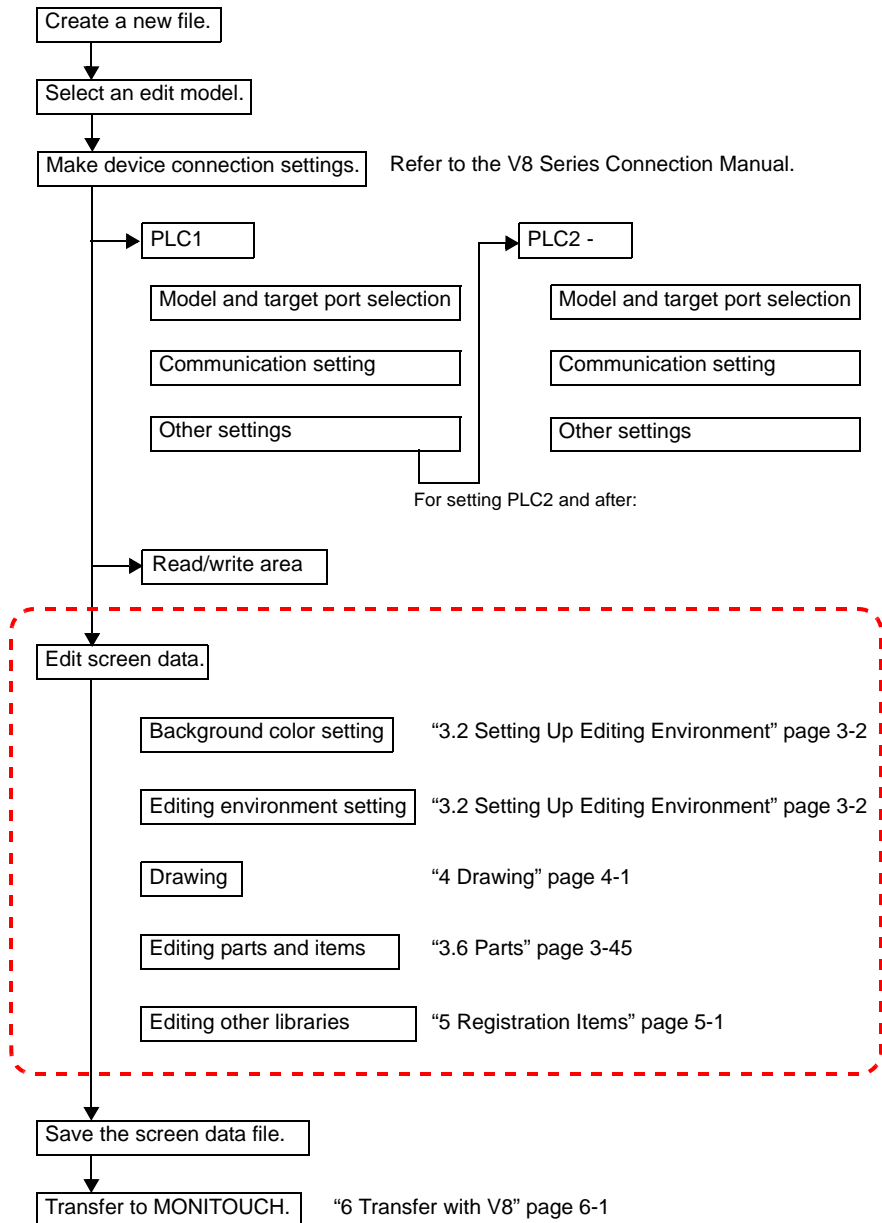


Please use this page freely.

# 3 Screen Editing

## 3.1 Editing Procedure

The following flowchart shows the procedure from creating a new screen data to transferring the created screen data to the V8 series.



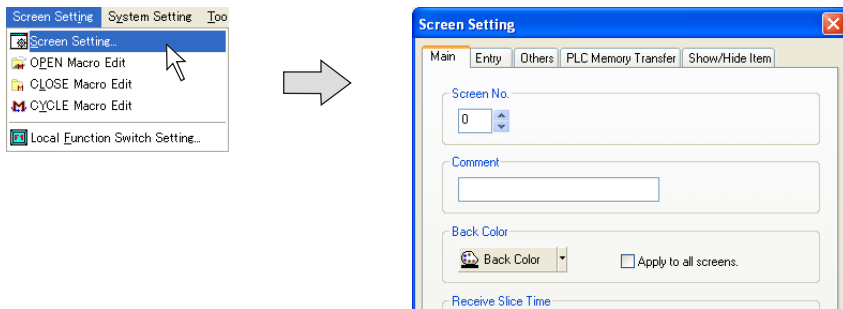
This chapter explains the setting procedures for the items in the above dotted frame.

## 3.2 Setting Up Editing Environment

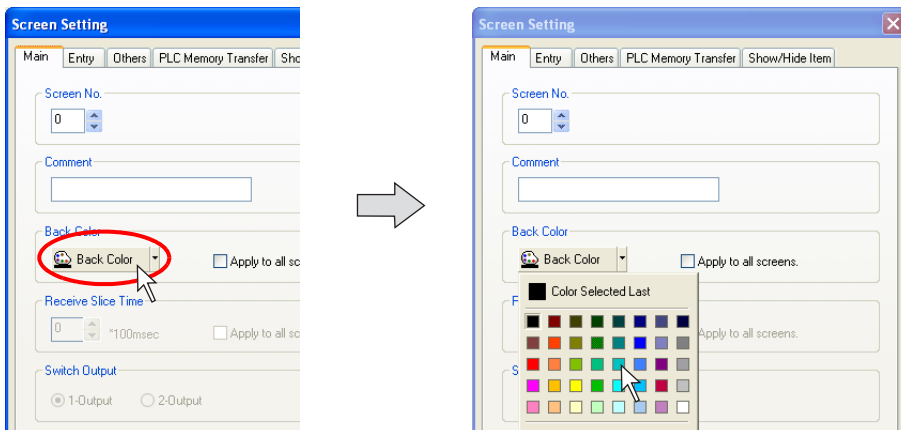
### Background Color Setting

Follow the procedure shown below to change the screen background color during screen editing.

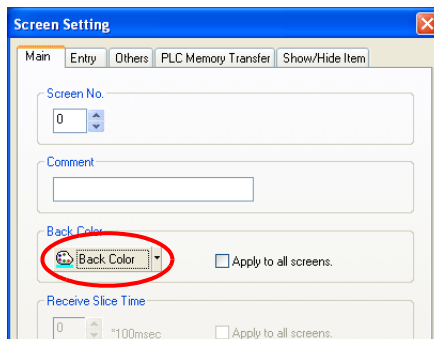
1. Click [Screen Setting] from the [Screen Setting] menu.  
The [Screen Setting] dialog is displayed.



2. Click the [Back Color] button. The pull-down menu for selecting a color is displayed.  
Select a background color as desired.

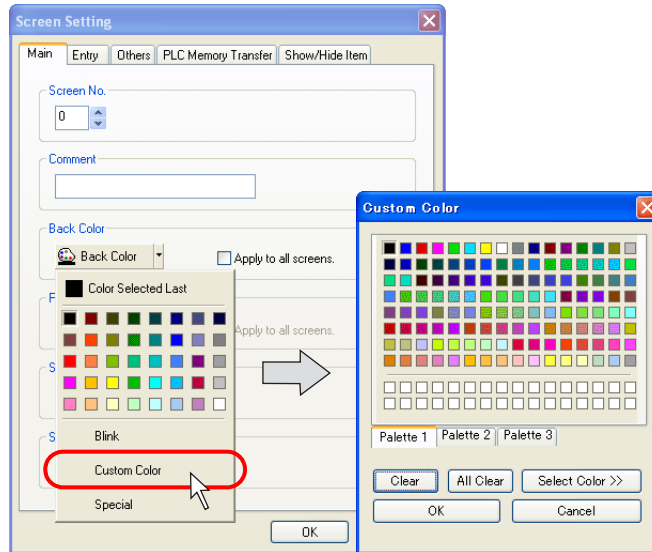


3. The selected color is displayed on the icon.





If you want to select any color other than colors listed in the pull-down menu, click [Custom Color] in the menu. The [Custom Color] dialog is displayed.

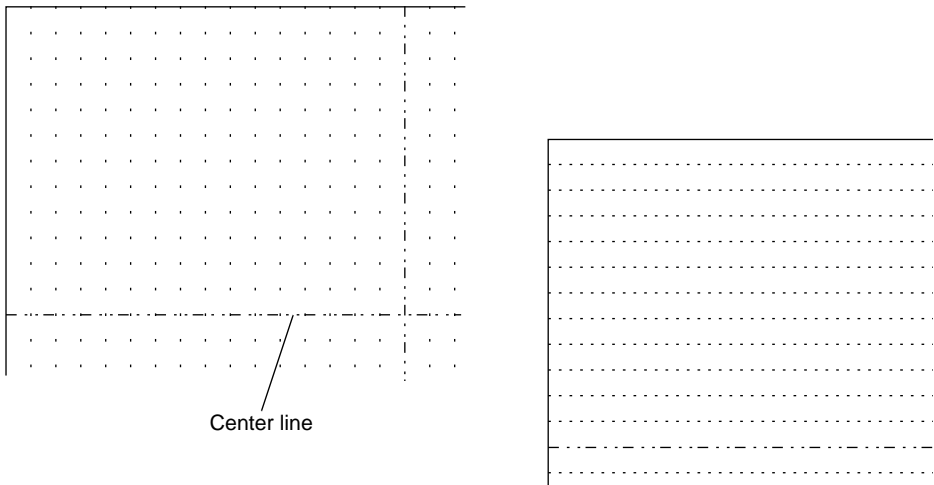


Select a color as desired.

## Grid Setting

### What Is “Grid”?

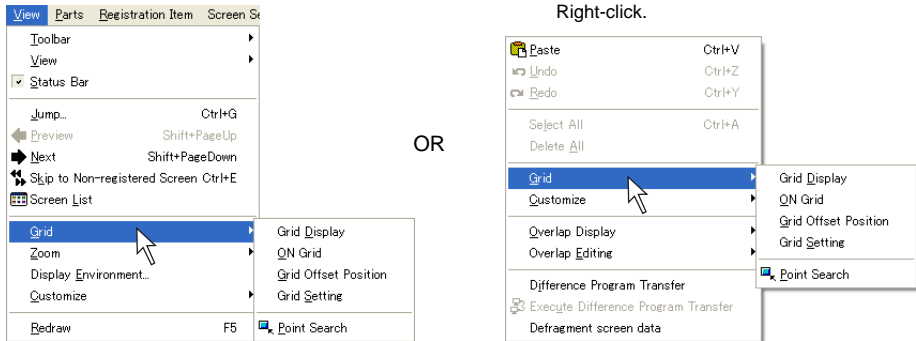
“Grid” is used as a guide when graphics or parts are placed. This is not displayed on MONITOUCH, but displayed on the editor only.

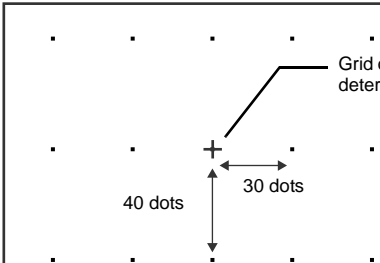
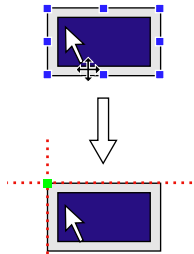
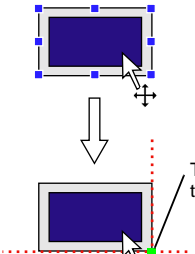


Aside from the grid, you can show/hide the center lines. Click [View] → [Customize]. Check or uncheck [Center Line Display] to show or hide the center lines.

## Grid Setting

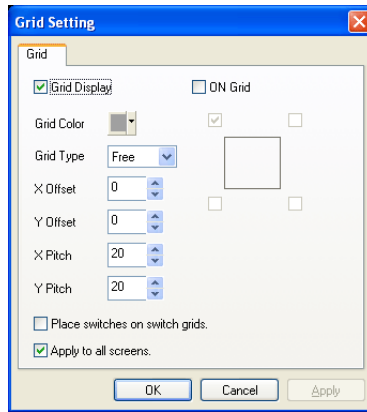
Click [Grid] from the [View] menu, or click [Grid] from the right-click menu.

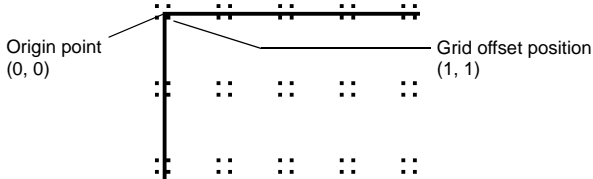
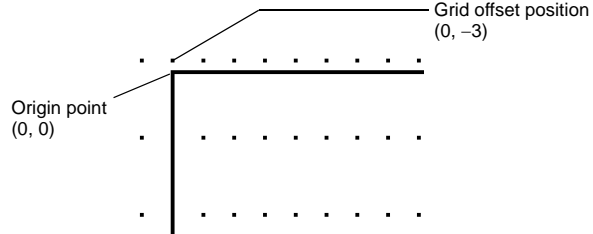


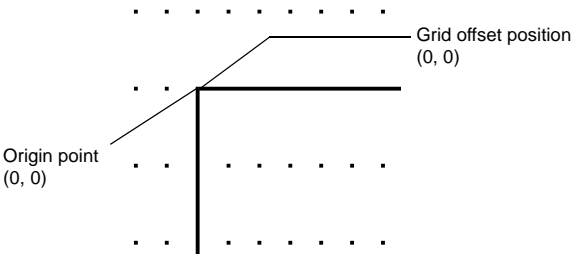
Grid Display	Shows grids when this option is checked. Unchecking this option clears grids from the screen.
ON Grid	When this option is checked, items are moved or changed based on the grid. ("ON Grid" is not valid for overlap displays.)
Grid Offset Position	<p>This menu is active when [Free] is chosen for [Grid Type]. When this menu is checked, the grid offset position is determined by clicking the desired position on the screen.</p> <p>Example: X pitch: 30, Y pitch: 40</p>  <p>Grid offset position (Grid position is determined based on this point.)</p>
Grid Setting	Clicking this menu brings up the [Grid Setting] dialog. For more information on the [Grid Setting] dialog, refer to the next page.
Point Search	<p>When this menu is checked, the handle closest the dragged point becomes the datum point.</p> <p>By dragging at the upper left:</p>  <p>Upper left handle becomes datum point.</p> <p>By dragging at the upper right:</p>  <p>Upper right handle becomes datum point. The datum handle turns green.</p>



[Grid Setting] dialog



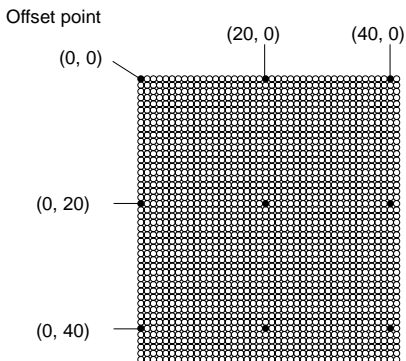
<input type="checkbox"/> Grid Display	Shows grids when this option is checked. Unchecking this option clears grids from the screen.
<input type="checkbox"/> ON Grid	When this option is checked, items are moved or changed based on the grid. ("ON Grid" is not valid for overlap displays.)
Grid Type (Free / Switch / 1-Byte / Mode)	Allows you to select the grid type.  <b>Free:</b> You can freely set a desired grid.  <b>Switch:</b> This grid is used for the matrix type switch. The grid is based on the unit: 16 × 20 dots (the unit of switch: 14 × 18 dots plus spaces: 2 × 2 dots). The datum point is placed at the coordinates (1, 1).    <b>1-Byte:</b> The grids are based on the unit: 8 × 20 (the unit of one-byte character: 8 × 16 dots plus four Y-axis dots). The reference point is placed at coordinates (0, -3).  

	<p><b>Mode:</b>                  The mode grid is equivalent to the one-byte character grids, but its offset position differs.                  The mode grid is based on the unit: 8 × 20 dots. The datum point is placed at the origin point (0, 0).                  Lines and columns are used to indicate item positions.</p> 
Grid Color	Allows you to select the desired grid color.
X Offset *1 Y Offset	This option is active when [Free] is chosen for [Grid Type]. The offset coordinate is specified. * The offset coordinate can be specified for [Grid Offset Position] selected from the [Grid] right-click menu.
X Pitch *1 Y Pitch	This option is active when [Free] is chosen for [Grid Type]. The pitch is specified.
<input type="checkbox"/> Place switches on switch grids.	When this option is checked, switches are moved or changed based on the switch grid, irrespective of the grid setting.
<input type="checkbox"/> Apply to all screens.	When this option is checked, the grid settings are applied to all screen editing windows.

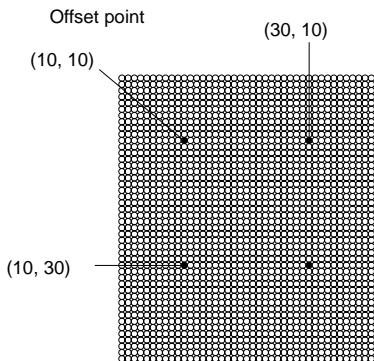
\*1 Relation between “offset” and “pitch”

Grids are placed from the offset point at intervals specified by X and Y pitches as shown in the examples below.

Ex. 1)  
 [X Offset: 0]  
 [Y Offset: 0]  
 [X Pitch: 20]  
 [Y Pitch: 20]



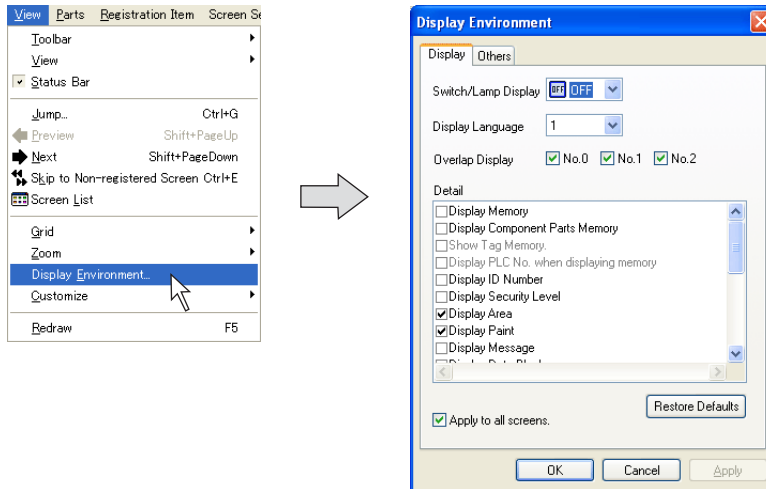
Ex. 2)  
 [X Offset: 10]  
 [Y Offset: 10]  
 [X Pitch: 20]  
 [Y Pitch: 20]




## Display Environment Setting


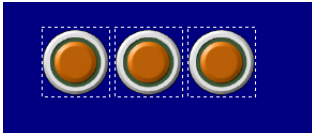

The display environment on the screen can be set all at once.

Click [Display Environment] from the [View] menu. The [Display Environment] dialog is displayed.

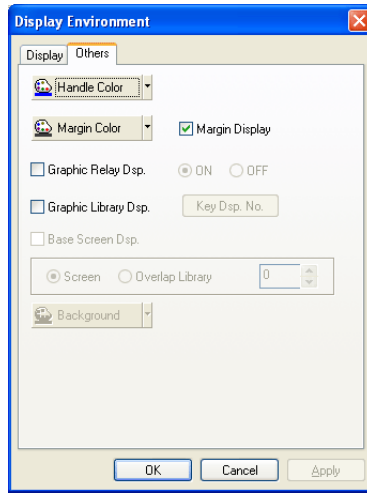


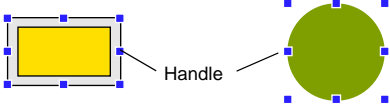
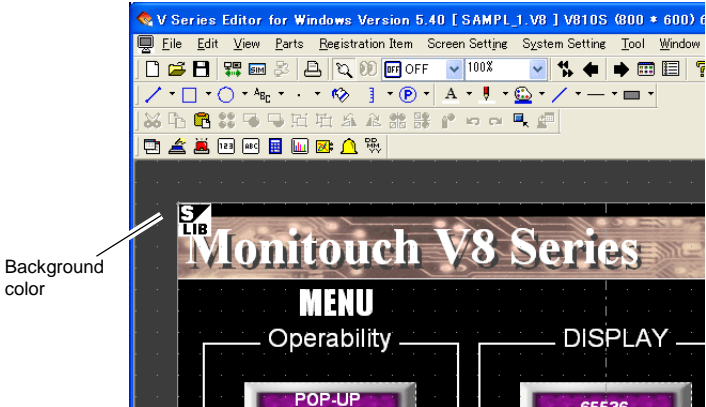
### [Display] Tab Window

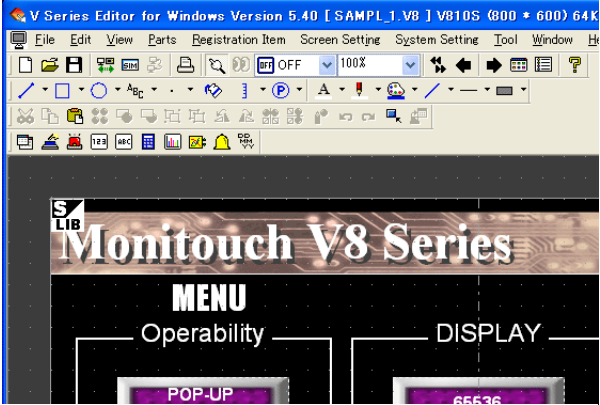
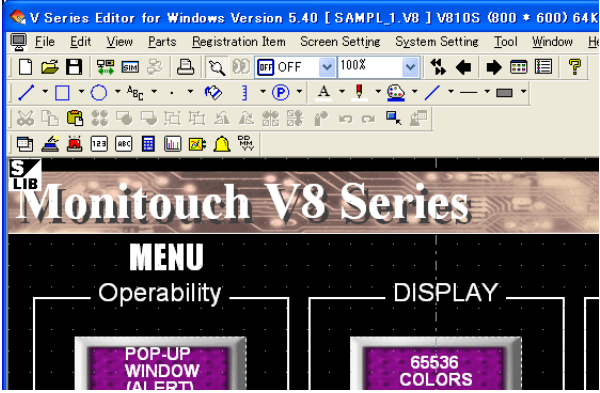
Switch/Lamp Display		Allows you to select the display status of switch parts or lamp parts selecting from [ON], [OFF], and [P3] - [P16]. * This option can also be set from the [Standard] toolbar.
Display Language		This option is set to select an interface language. The interface language is changed selecting from [1] to [8]. * This option can also be set from the [Multi-language] toolbar.
Overlap Display		Allows you to select respectively whether to show or hide overlap ID numbers from 0 to 2. * This option can also be set from the [Overlap] toolbar or from the right-click menu.
Detail	<input type="checkbox"/> Display Memory	When this option is checked, the memory set for each item is displayed. 
	<input type="checkbox"/> Display Component Parts Memory	When this option is checked, the memory set for each item of component parts is displayed.

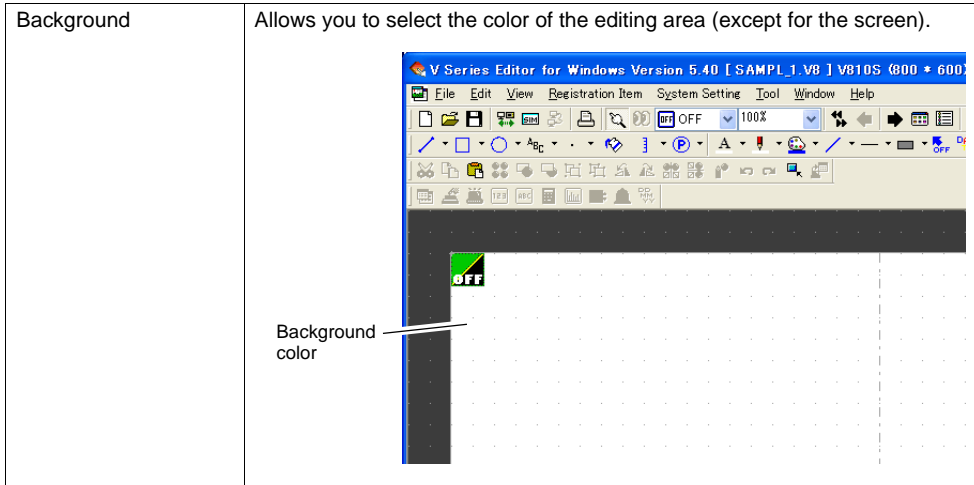
<input type="checkbox"/> Display ID Number	When this box is checked, the ID number of each part is displayed.	
<input type="checkbox"/> Display Area	When this option is checked, the area of each part (the touch switch area in case of a switch) is displayed with dotted lines.	
<input type="checkbox"/> Display Paint	When this option is checked, the graphic drawn with the [Paint] icon is displayed as painted. When this box is unchecked, [x] is displayed as the paint start point.	<p style="text-align: center;">Checked: <span style="margin-left: 150px;">Unchecked:</span></p> 
<input type="checkbox"/> Display Message	When this option is checked, messages set for bit order alarming/message (applicable only when [Block] or [Internal Command] is set)/alarm tracking are displayed on the screen.	
<input type="checkbox"/> Display Data Block	This option is valid only when a data block area is set on the screen. When this option is checked, contents registered in the data block area are displayed on the screen.	
<input type="checkbox"/> Display MLIB/GLIB/SLIB Mark	When this option is checked, the MLIB (overlap library) mark, GLIB (graphic library) mark and SLIB (screen library) mark are displayed.	
<input type="checkbox"/> Interlock Text with the Switch	When a switch part or lamp part is enlarged/reduced in size while this option is checked, the text on the switch part or the lamp part is also enlarged/reduced.	
<input type="checkbox"/> Display in Monochrome 8-tone Colors	This option is valid on MONITOUCH of monochrome type. When this option is checked, the colors on the screen are displayed in the monochrome 8-gradation colors.	
<input type="checkbox"/> Limit of Edit Model Area	When this option is unchecked, items can be placed in the marginal area (right or bottom). When this option is checked, items can only be placed within the available area for the edit model.	
<input type="checkbox"/> Display Path of Animation	This option is valid only for animation. When this option is checked, the path of animated graphics is displayed.	
<input type="checkbox"/> Display Center Line	When this option is checked, the center lines are displayed.	
<input type="checkbox"/> Display Component Parts Icon	When this option is checked, the component part icon is displayed.	
<input type="checkbox"/> Apply to all screens.	When this option is unchecked, the display environment setting is only applied to the current screen. When this option is checked, the setting is applied to all screens.	

**[Others] Tab Window**



<p>Handle Color</p>	<p>Chooses the color of handles shown around the selected item.</p> 
<p>Background</p>	<p>Chooses the background color around the editing area.</p> 

<p><input type="checkbox"/> Margin Display</p>	<p>When this option is checked, the space (margin) is created at the left and the upper side of the editing area with the color set for [Margin Color]. If you uncheck this option, the margin area disappears.</p> <p>Checked:</p>  <p>Unchecked:</p> 
<p><input type="checkbox"/> Graphic Relay Dsp.</p>	<p>This option is valid only for the graphic relay display. When this option is checked, the ON/OFF status in the graphic relay display can be checked.</p>
<p><input type="checkbox"/> Graphic Library Dsp.</p>	<p>This option is valid when the entry mode or graphic display is set. For the entry mode display, this option is enabled when [<input type="checkbox"/> Graphic] is checked. When [Graphic] is checked, graphics registered in the graphic library can be displayed on the character entry key. For the graphic display, graphics can be displayed on the screen provided that [Internal] is chosen for [Designate].</p>
<p><input type="checkbox"/> Base Screen Dsp.</p>	<p>This option is valid during the editing of the graphic library, overlap library, or data block. When this option is checked, a screen or overlap library is displayed on the editing window.</p>

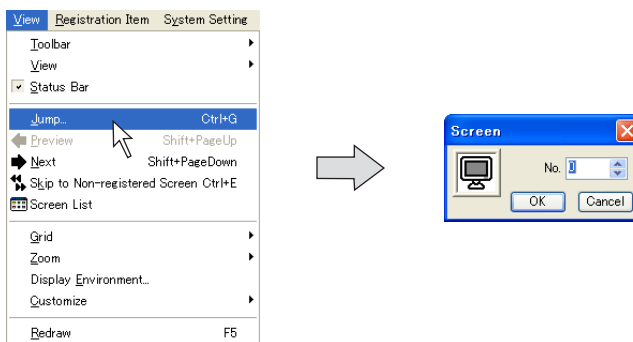


## 3.3 Basic Operation

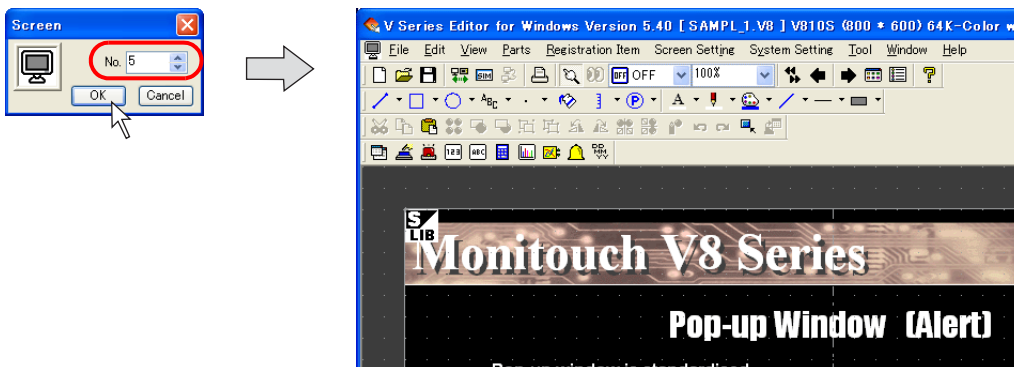
### Calling a Screen

#### From the [View] Menu

1. Click [Jump] from the [View] menu.  
The dialog to specify the screen number is displayed.



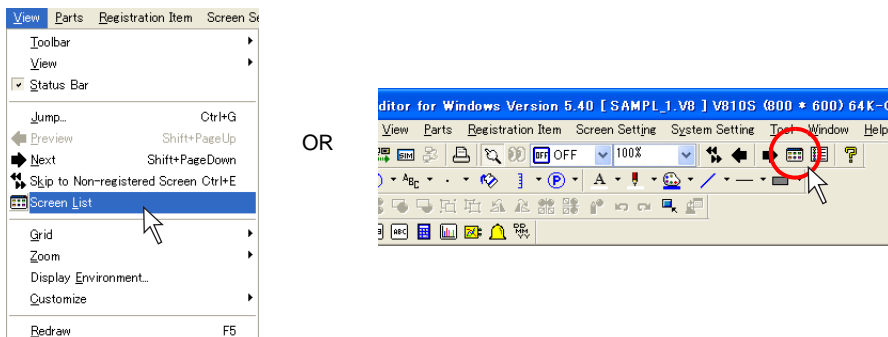
2. Specify the desired number and click [OK].  
The corresponding screen appears.



\* In this case, the newly called screen appears instead of the screen previously opened.

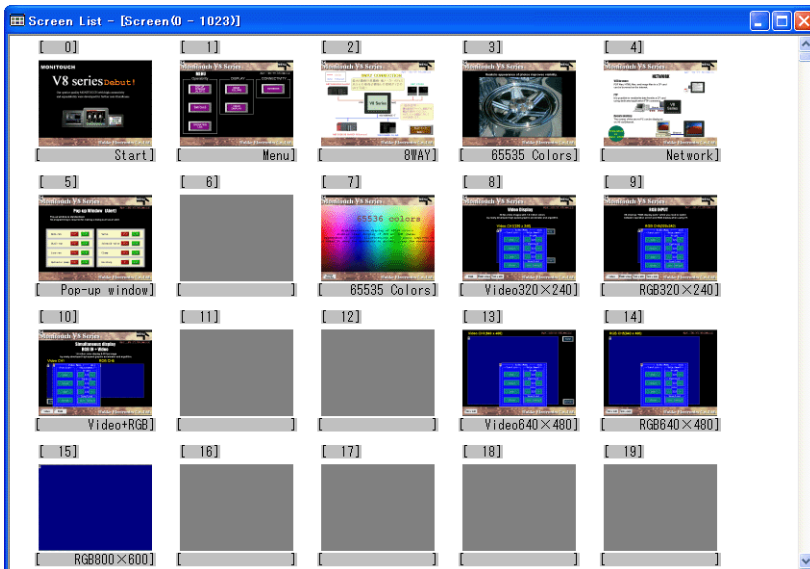
#### From the Screen List

1. Bring up the screen list.  
Click [Screen List] from the [View] menu or click the [Screen Display] icon on the toolbar.





2. The [Screen List] window is displayed.

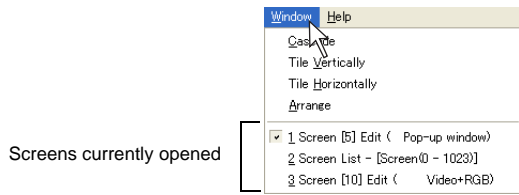


3. Double-click the number of the desired screen. The corresponding screen appears.



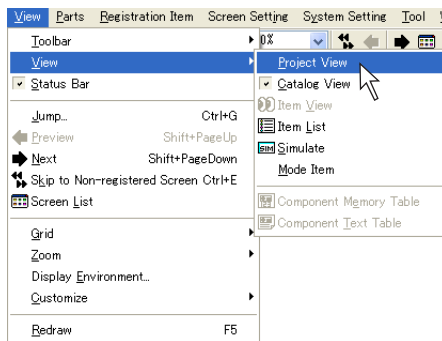
Brings up the screen by double-clicking.

- \* The screen called by double-clicking is displayed while the screen previously opened or the [Screen List] window is displayed.  
It is possible to check which screens are currently opened in the [Window] menu.

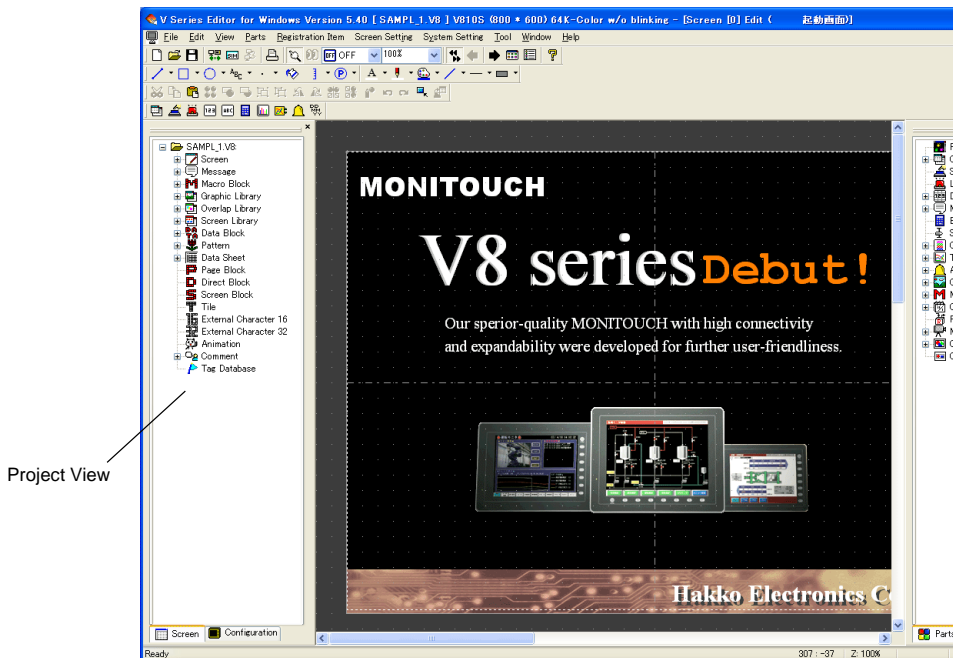


## From Project View

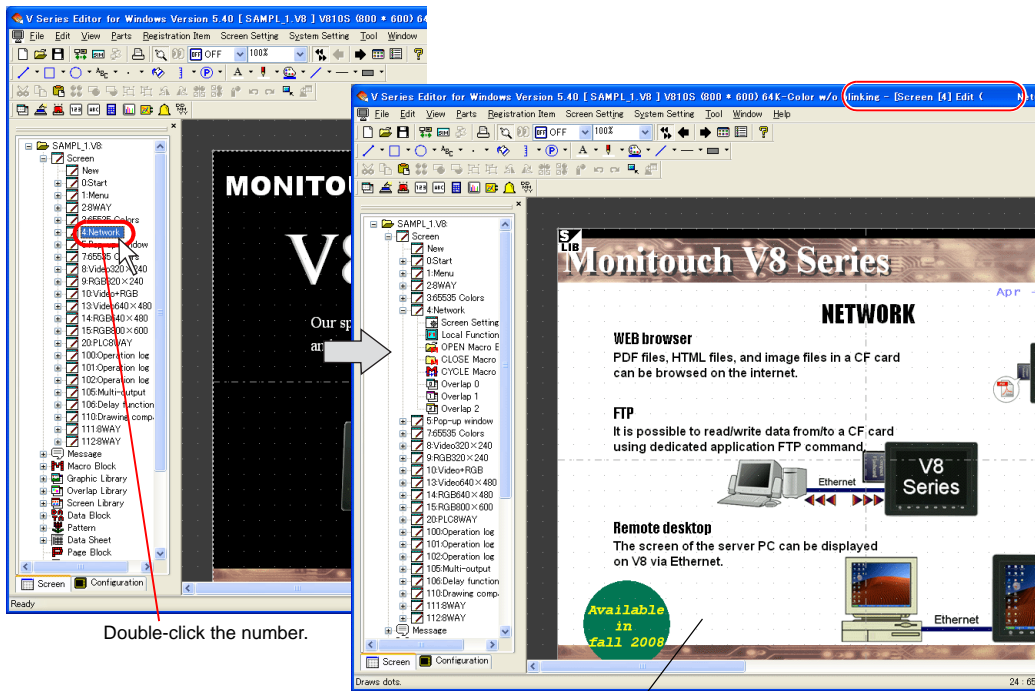
1. Bring up Project View.  
Click [View] → [View] → [Project View].



2. Project View is displayed.



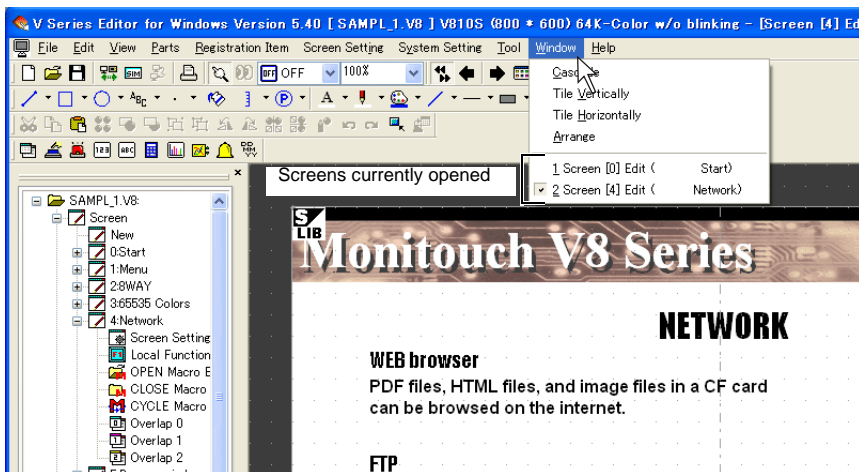
- Double-click the desired number displayed in the tree view under [Screen]. The corresponding screen appears.



Double-click the number.

The corresponding screen (e.g. screen No. 30) is displayed.

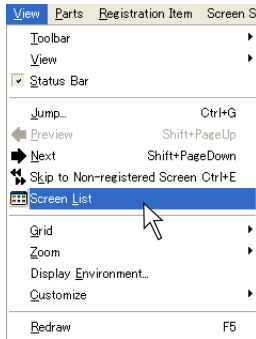
- \* The screen called by double-clicking is displayed while the screen previously opened is displayed. It is possible to check which screens are currently opened in the [Window] menu.



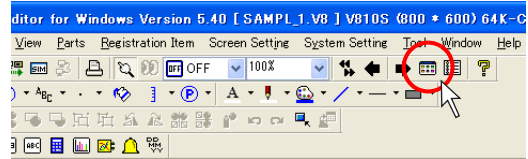
## Copying a Screen

### From the Screen List

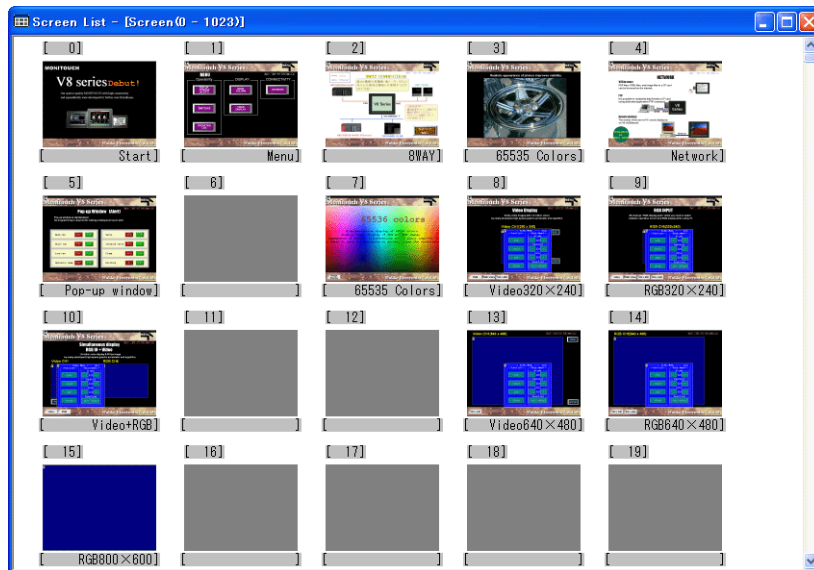
1. Bring up the screen list.  
Click [Screen List] from the [View] menu or click the [Screen List] icon on the toolbar.



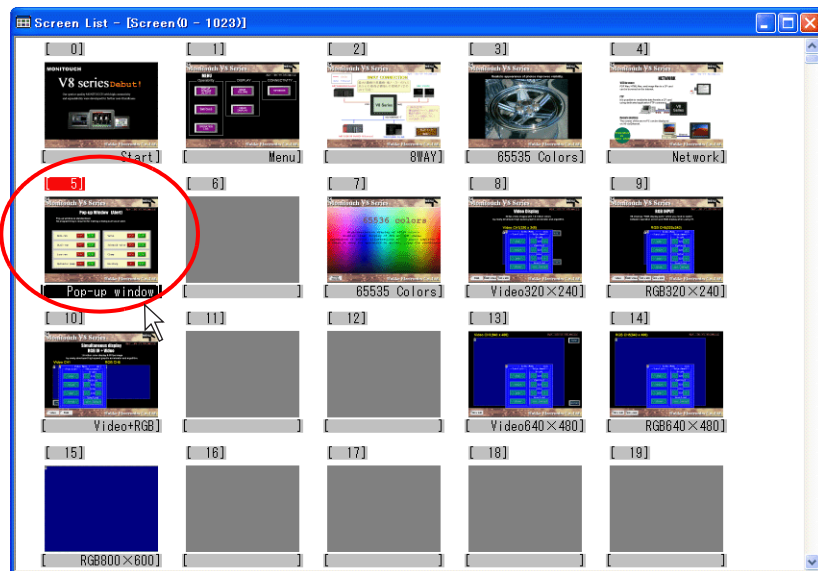
OR



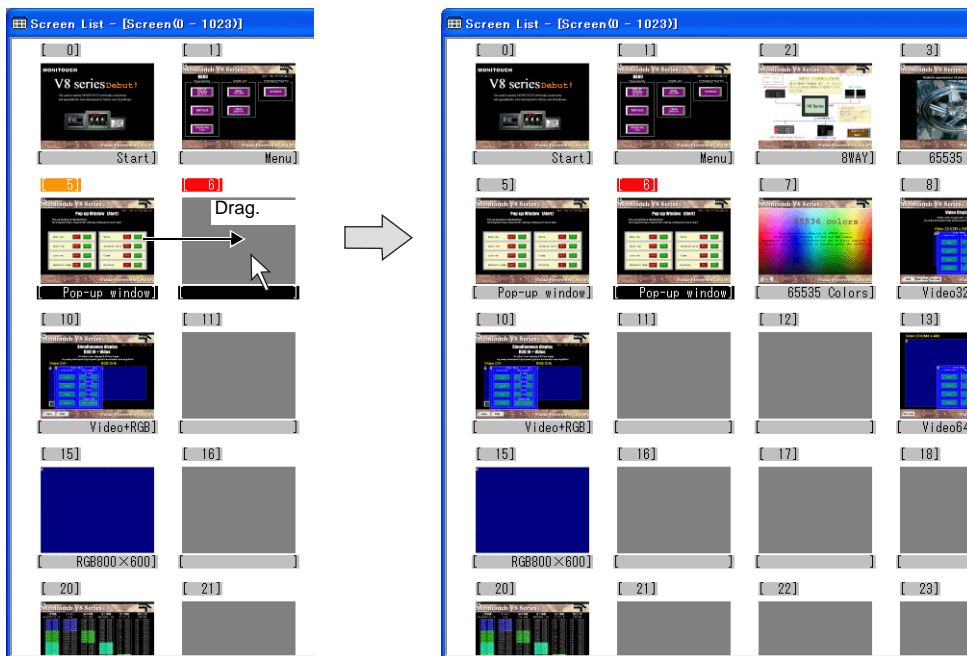
2. The [Screen List] window is displayed.



- Click a copy source screen. (The number is highlighted in red.)

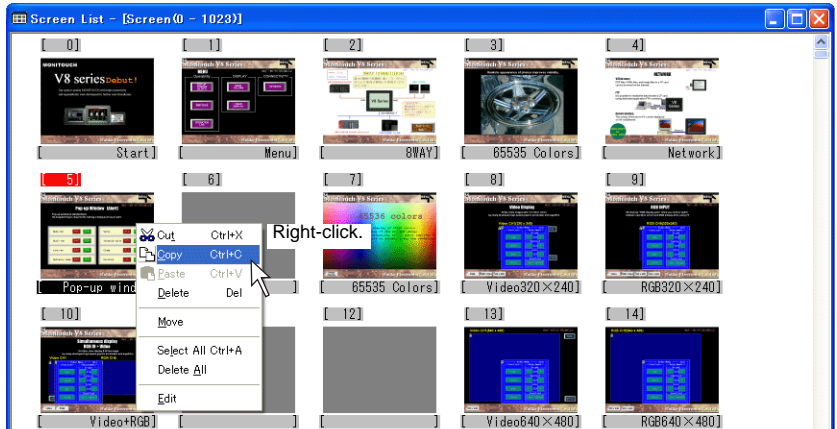


- Drag the copy source screen to the copy target number. The copied screen is pasted to the copy target.





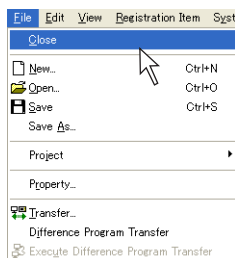
The screen can also be copied following the procedure below: right-click and click [Copy] while the copy source is selected. Click the copy target and select [Paste] from the right-click menu.



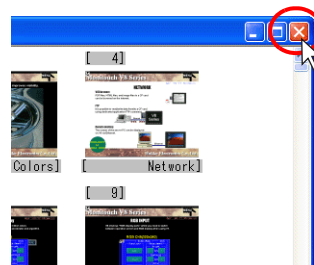
- When a screen has already existed in the copy target, the overwrite confirmation message appears.  
If you allow to overwrite, click [OK].



- Click [Close] from the [File] menu or click the [Close] icon.  
The former screen is displayed again.

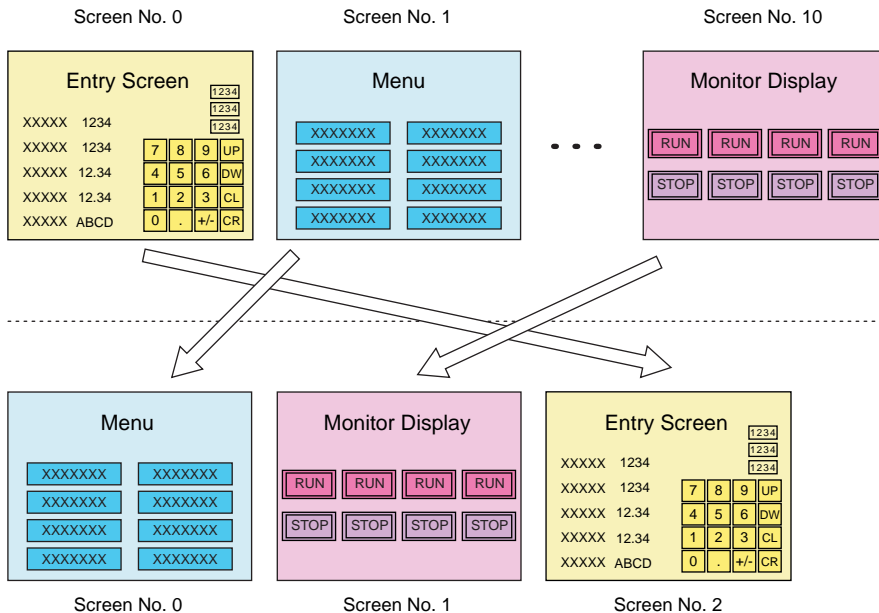


OR



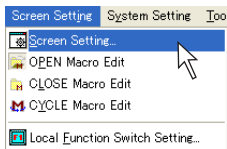
## Changing Screen Number

You can interchange screen numbers or change the registered screen number during editing the screen.

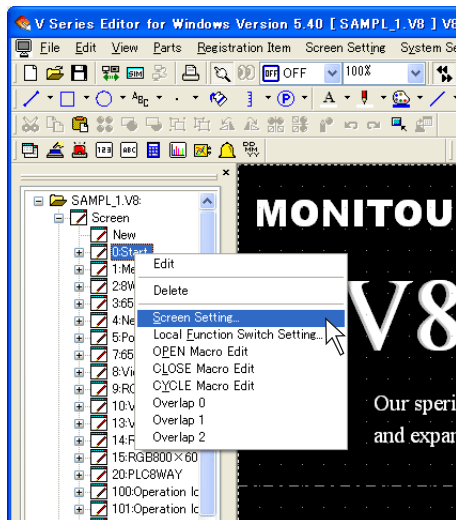


You can easily change screen numbers using unregistered numbers. This section describes how to change screen No. 0 to the unused number, 2.

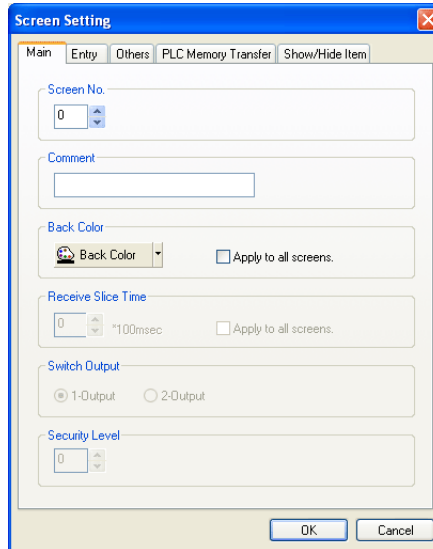
1. Click [Screen Setting] from the [Screen Setting] menu, or right-click the desired number on Project View and click [Screen Setting].



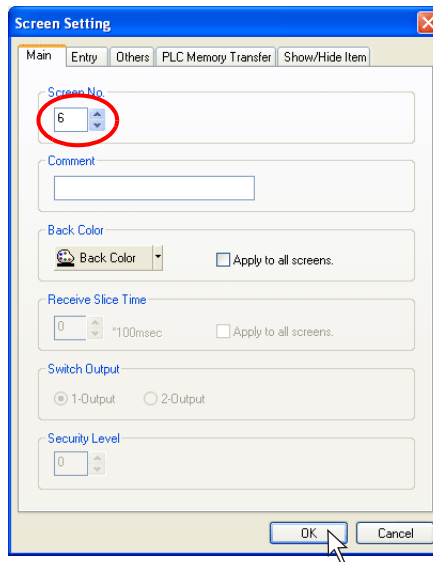
OR



2. The [Screen Setting] dialog is displayed.



3. In the [Main] tab window, change the number for [Screen No.] to the unused number and click [OK].



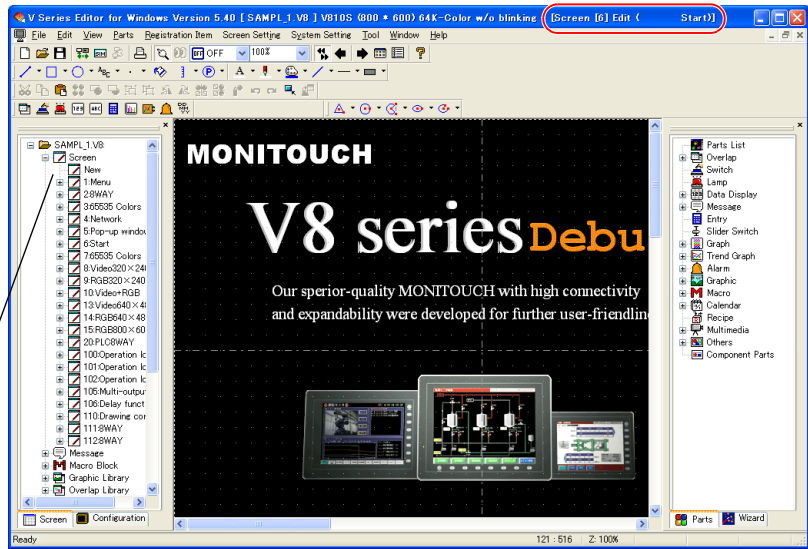
- \* You cannot specify a number that is already used.  
If the number duplicates, the following alarm dialog appears.



Ex.) When specifying screen No. 1  
when screen No. 1 already exists:



- The screen number is changed to the number specified in step 3.

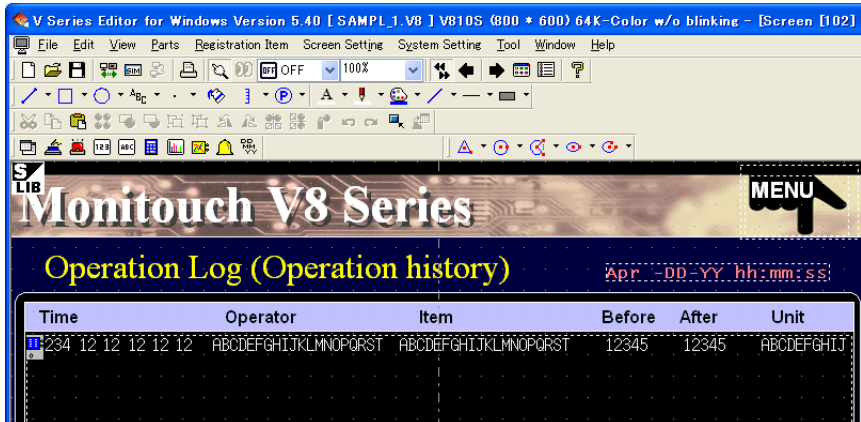


Screen No. 0 is changed to No. 6.  
(Screen No. 0 disappears.)

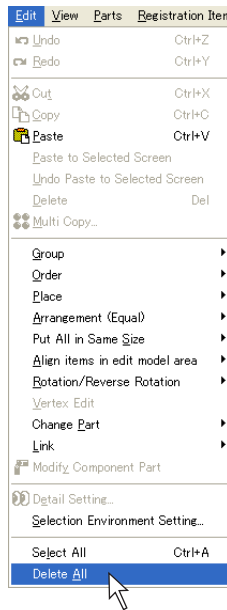
## Deleting a Screen

### From the [Edit] Menu

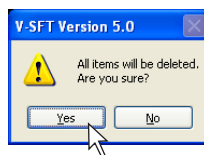
1. Display the screen to be deleted.



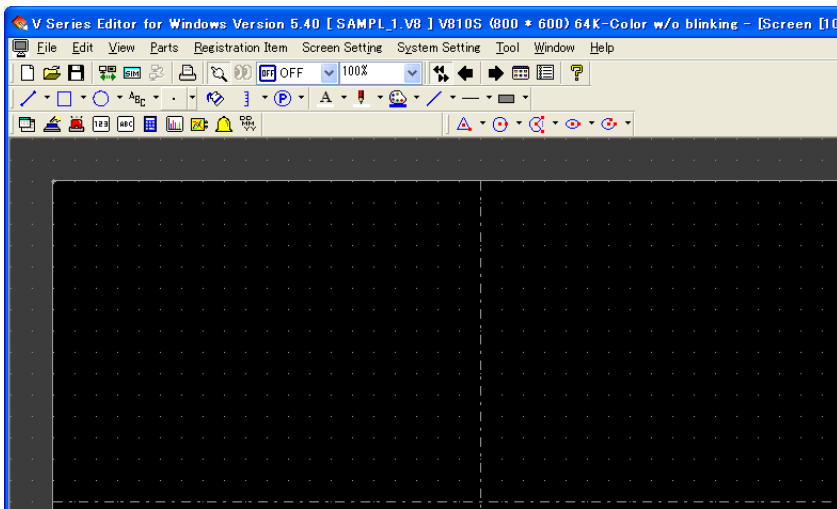
2. Click [Delete All] from the [Edit] menu.



3. The following dialog is displayed: Click [Yes].



- The displayed screen is deleted.

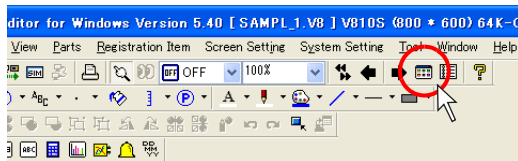


### From the Screen List

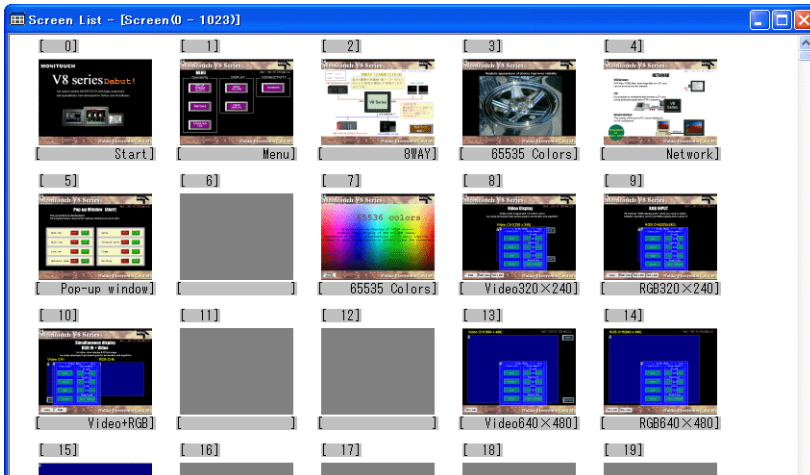
- Bring up the screen list.  
Click [Screen List] from the [View] menu or click the [Screen List] icon on the toolbar.



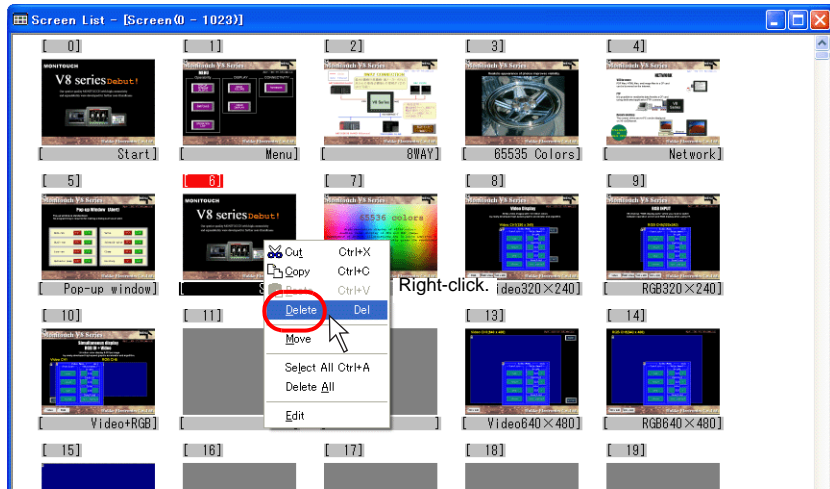
OR



- The [Screen List] window is displayed.



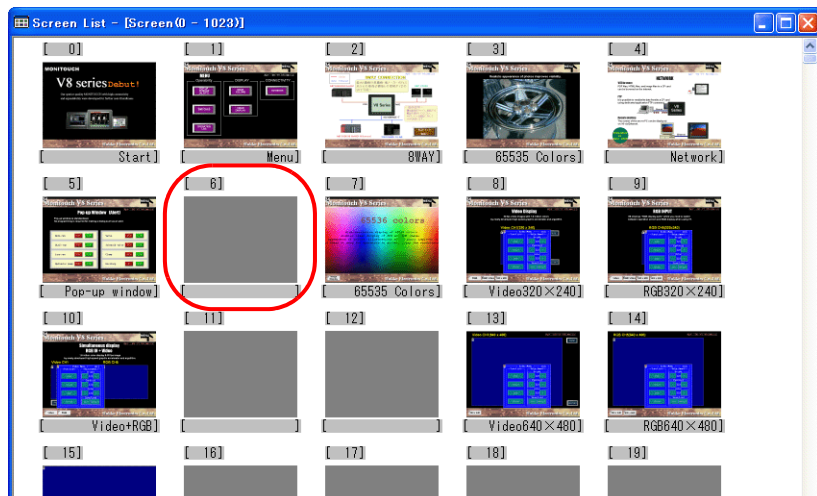
3. Click the screen to be deleted. (The number is highlighted in red.)  
Click [Delete] from the right-click menu.



4. The confirmation message appears. Click [OK].



5. The selected screen is deleted.

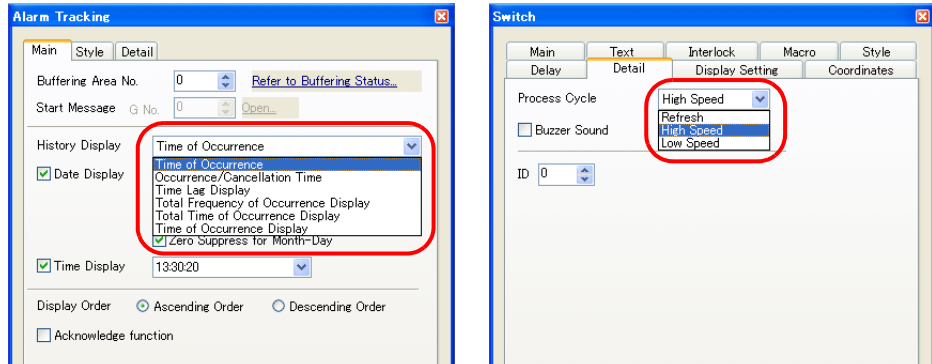


## 3.4 Setting Menu

There are several types of setting menus on the list-view window or dialog of the editor. This section provides some examples of these menu types.

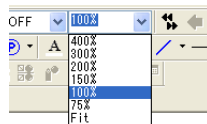
### Menu Types

#### Pull-down Type



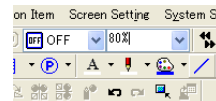
- Click the arrow button or item itself to bring up the pull-down menu.
- Click the desired item and then click [OK].
- In the case of the pull-down menu for zoom, you can directly enter the zooming factor in the field.

Select from the pull-down menu.

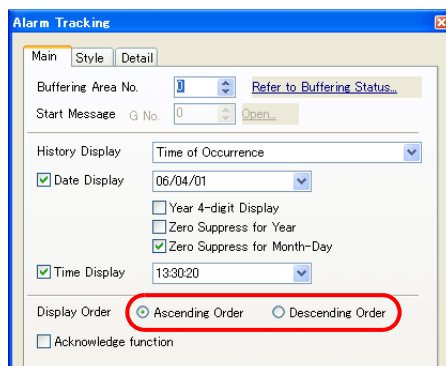


OR

Enter the desired value directly.

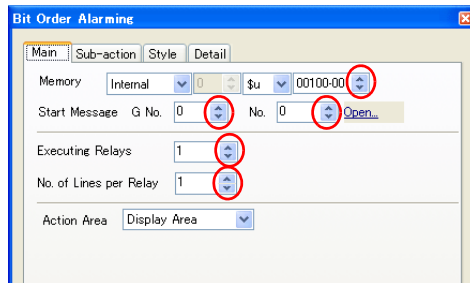


#### Option Button

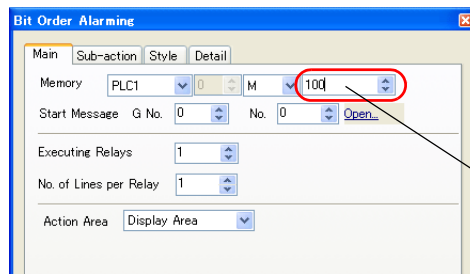


- This button is used when there are two or three choices.

## Numerical Data Entry Box Type

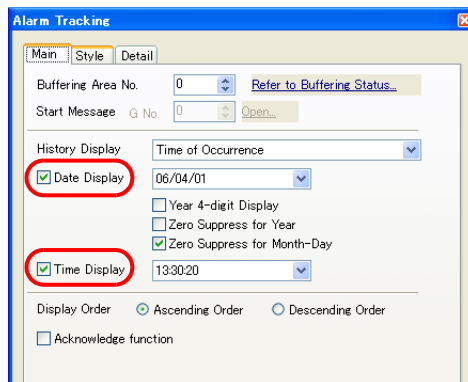


- Change the value using the up/down arrow buttons.
- You can also enter the value in the field directly.



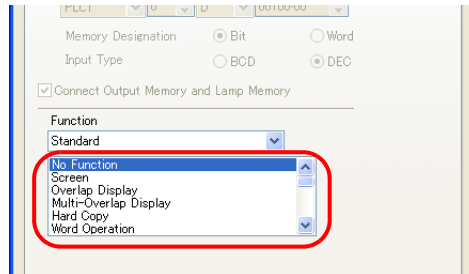
Enter the desired value directly.

## Check Box

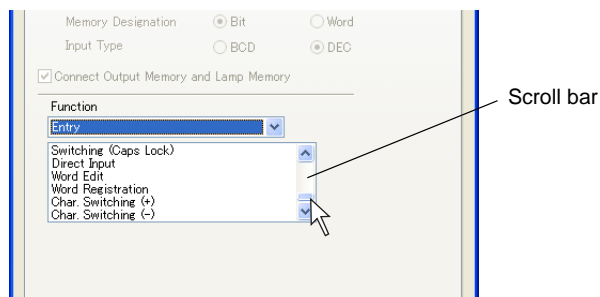


- Clicking the box brings up a check mark, and the setting becomes enabled.

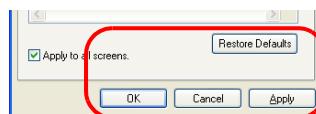
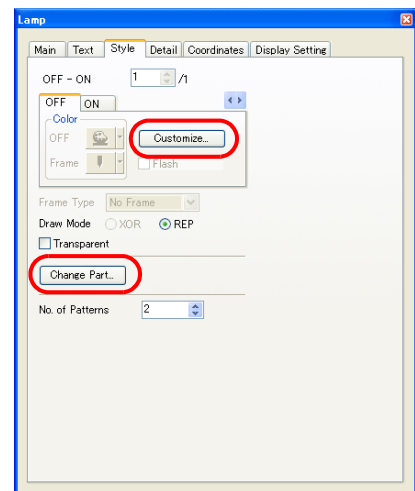
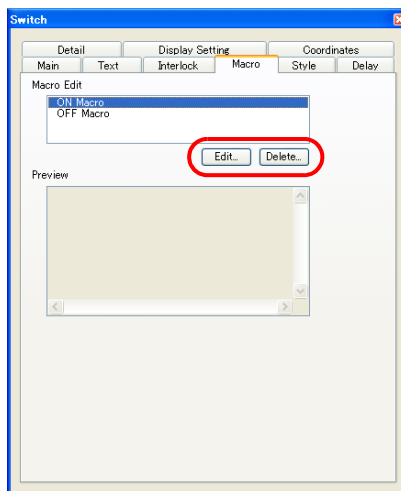
## List Type



- By clicking the item in the list, it is highlighted. This denotes that the item is selected.
- If some options are hidden, you can bring them up using the scroll bar.

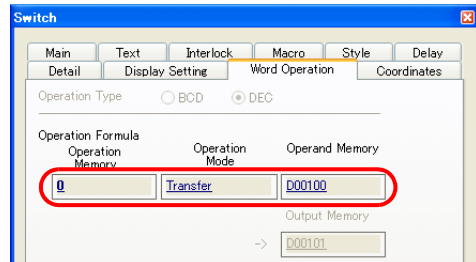
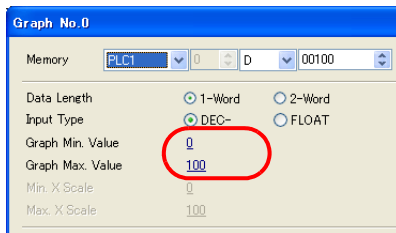


## Command Button

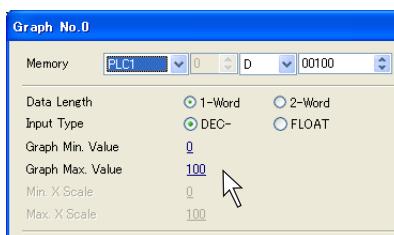


- Clicking the command button moves to the next editing window or closes the current editing.

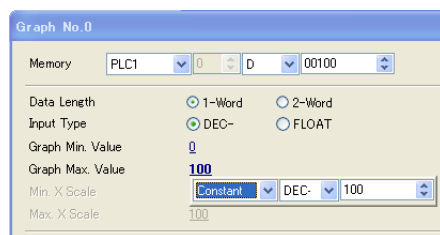
## Underlined Type for Numerical Data Entry



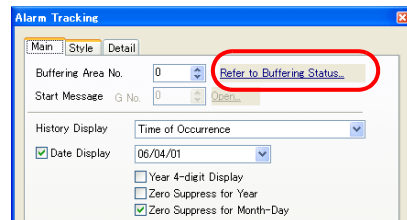
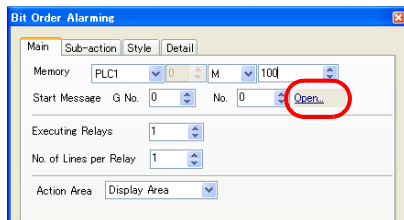
- Clicking the underlined data brings up the data entry menu. Enter the desired value in the data entry menu.



Click.



## Underlined Type for Selection



- Clicking this item jumps to the corresponding setting menu or editing area.



## Memory Setting

This section explains how to allocate memory addresses to parts (e.g. lamp parts and numerical data displays) and read area and write area in the [Device Connection Setting] dialog selected from the [System Setting] menu.

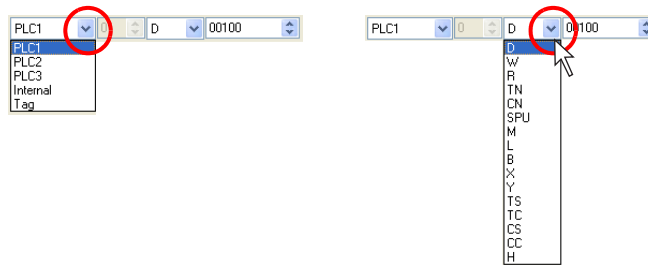
### Display Type for Memory Setting

#### Normal type

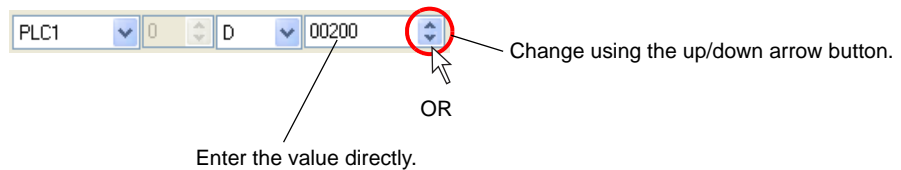
The figure below shows the normal type.



You can select the memory type and address type from the pull-down menu.



Change the value using the up/down arrow button or enter the desired value in the field directly.



### Simple type

This type is used in the following setting.

- [System Setting] → [Device Connection Setting] dialog  
[Read Area], [Write Area], [Calendar memory]

Read Area	PLC1	D00000
Write Area	PLC1	D00050

- When the temperature control memory is selected:

Memory

PLC2	1:#D00100
------	-----------

Click the calculator icon. The [Memory Input] dialog is displayed.  
Specify the desired memory address here.

Read Area	PLC1	D00000
Write Area	PLC1	D00050

**Memory Input** PLC1 MITSUBISHI ELECTRIC : A series ...

Type: D      00000

Indirect

7	8	9	E	F
4	5	6	C	D
1	2	3	A	B
0	-	:	CL	CR

OK    Cancel    Open...

- \* **You cannot enter the value directly in the numerical data field. However, when the up/down arrow button is shown, you can select the value using the arrow button.**

Read Area	PLC1	D00000
Write Area	PLC1	D00050

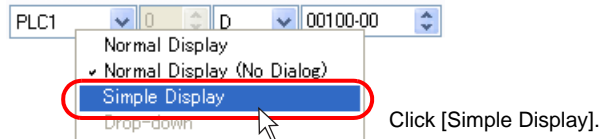


### How to change the display type

To change the display type between normal and simple display type, right-click the mouse close to the memory type field.

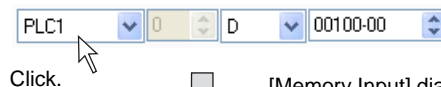
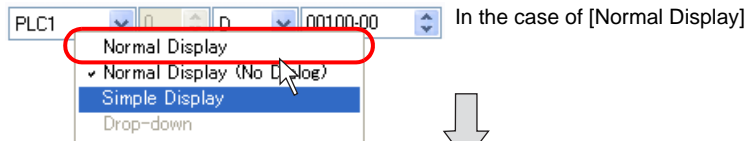


The display types are shown in the pull-down menu. Select the desired type.

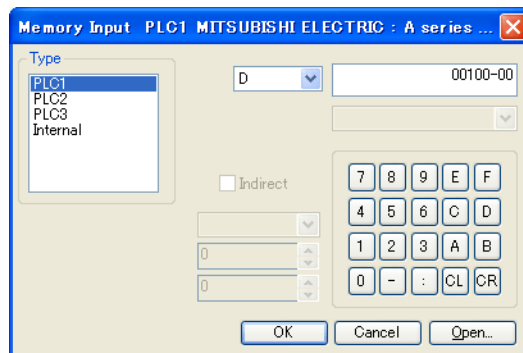
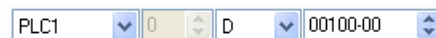


[Normal Type] provided here denotes [Normal Type (No Dialog)].

When [Normal Display] is selected, the appearance is the same as [Normal Display (No Dialog)]; however, [Memory Input] dialog appears every time the value is changed.



[Memory Input] dialog is displayed each time you click.



## Memory Types

### [PLC Memory]

This defines the memory of the connected PLC.

Ex.) Mitsubishi [A Series Link] (1 : 1)

Ex.) Yokogawa [FA-M3] (1 : 1)

Ex.) Mitsubishi [A Series Link] (1 : n)

1. CPU No.	This field becomes active when [Yokogawa: FA-M3], etc. is selected.
2. Port number	This field becomes active when [1 : n] communication is selected.

### [Internal Memory]

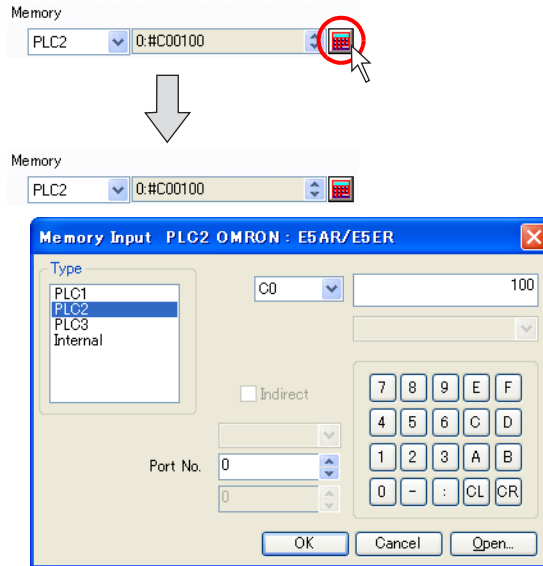
This defines the memory address range to be set in the V8 series.

\$u (user memory)	For more details on the definition or range of the internal memory, refer to “Appendix 6 Internal Memory” in the V8 Series Reference Manual.
\$L/\$LD (user memory/non-volatile)	
\$T (user memory/per screen)	
\$M (user memory/per macro)	
\$MC (user memory/per macro)	
\$C (user memory/for component parts)	
\$s (system memory)	
\$P (system memory/8-way communication)	

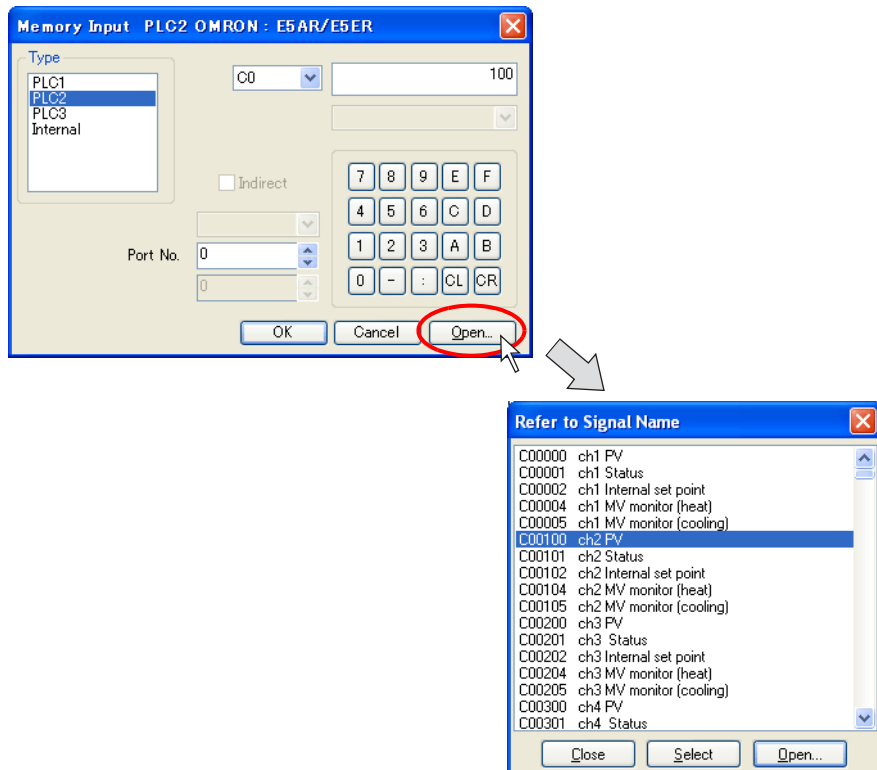
## Address list

This address list becomes available in conjunction with the use of a temperature controller or an inverter.

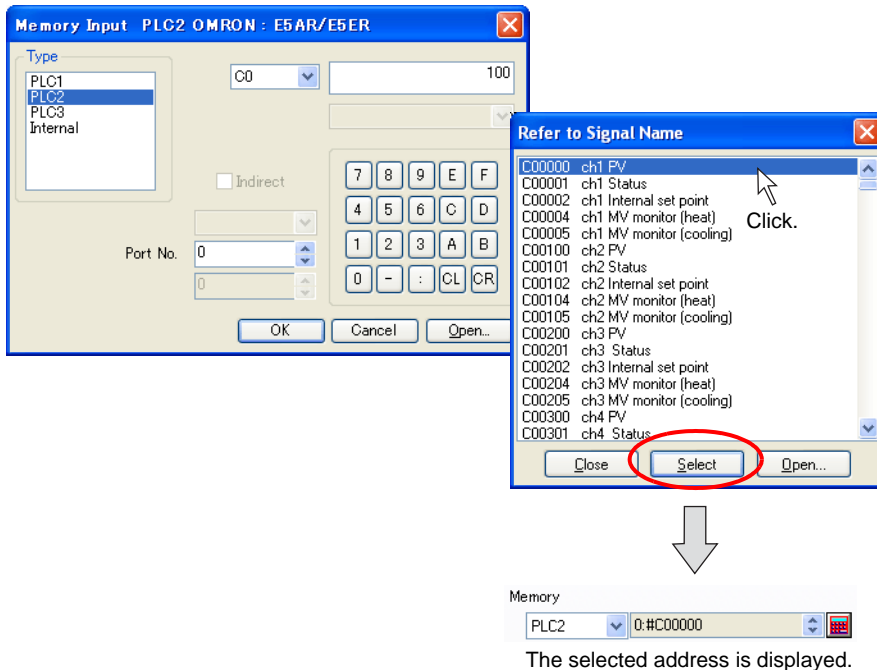
Click the calculator icon. The [Memory Input] dialog is displayed.



Clicking the [Open] button brings up the address list of the selected temperature controller.

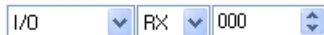


Select the desired address and click the [Select] button. The memory address is set and the former setting dialog is displayed again.



**[I/O Memory]**

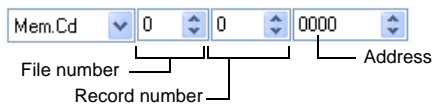
This memory is available when the I/O communications, such as CC-LINK, T-LINK or OPCN-1, etc., is used.



**[Memory Card]**

This memory is available when [Type: Data File] is selected in the [Memory Card Setting] window selected from the [System Setting] menu.

Specify the file number, record number and address in the record.

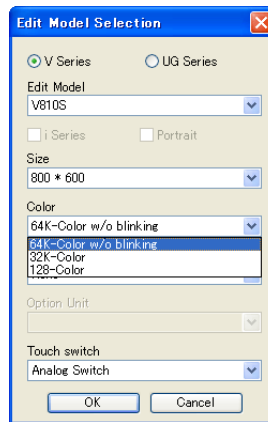


## 3.5 Color Types and Settings

This section explains the color types available with the V8 series and their setting procedure.

### Color Type Setting

Click [System Setting] → [Edit Model Selection]. In the dialog displayed, select your desired color type under [Color].



### Color Types

Available color types differ, depending on the models of the V8 series.

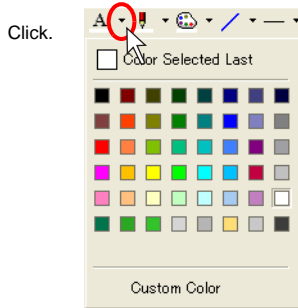
○: Available    △: Setting required    -: Not applicable

Model	64k colors (No blinking)	32k colors (32k-color blinking)	128 colors (16-color blinking)	Monochrome
V815iX	○	△	-	-
V812iS/V812S	○	△	△	-
V810iS/V810S	○	△	△	-
V810iT/V810T	○	△	△	-
V810iC/V810C	○	△	△	-
V808iS/V808S	○	△	△	-
V808iC/V808C	○	△	△	-
V806iT/V806T	○	△	△	-
V806iC/V806C	○	△	△	-
V806iM/V806M	×	×	×	Monochrome 16 gray scales
V808iCH/ V808CH	○	△	△	-

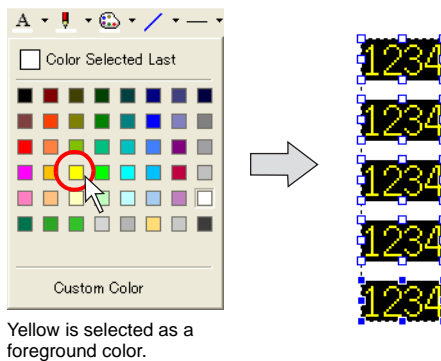
Color setting procedure varies with the color types.  
See the following pages for more information.

## 64k-color Type

Click the “▼” button on the right of the color change icon or the color change button.  
The pull-down menu for selecting a color is displayed.

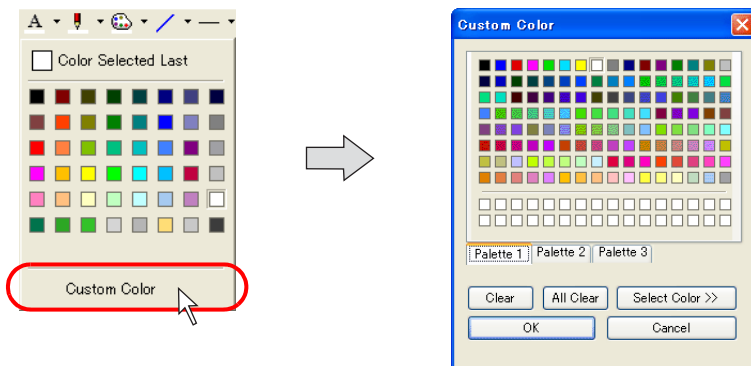


Click your desired color in the pull-down menu.  
The color clicked is applied as the color of the specified item(s) and/or the color change icon.



Yellow is selected as a foreground color.

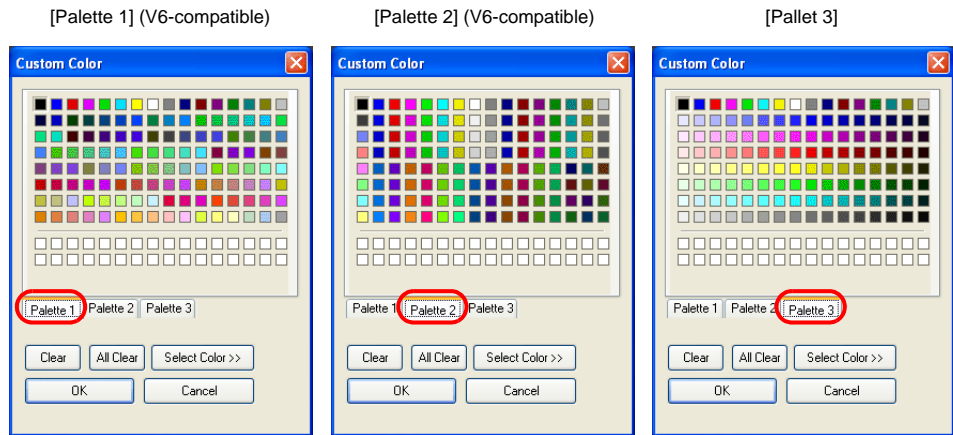
If you do not find your desired color in the pull-down menu, click [Custom Color].  
The [Custom Color] dialog is displayed.



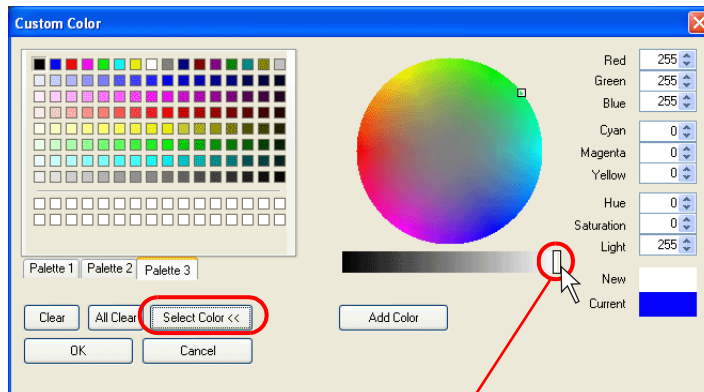


## [Custom Color] Dialog

The [Custom Color] dialog enables you to select colors from 32,000 or 64,000 colors. Clicking [Palette 1], [Palette 2], or [Palette 3] brings up its own color palette. Click your desired color and [OK]. The graphic is then displayed in the selected color. When the 128-color type is selected, only palette 1 or palette 2 can be displayed.



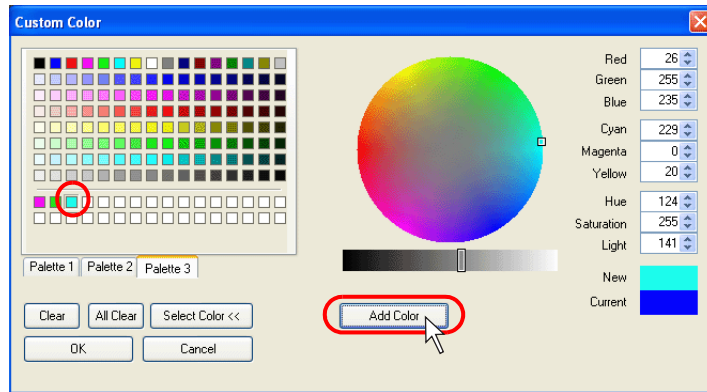
If none of these palettes include your desired color, click the [Select Color] button. The [Custom Color] dialog enlarges to provide the section for more detailed color setting.



Move the slider on this bar to adjust the shade of a color.  
(Slide it to the right (the white side) for a lighter color.)

By clicking anywhere on the circle, the color at the clicked point is displayed at [New]. For further adjustments to the color, use the slider on the bar or change the values for the individual color options.

When the new color is satisfactory, click the [Add Color] button. The new color is registered and displayed in the area of the two-line boxes at the bottom of the color palette, from the top left box in order.

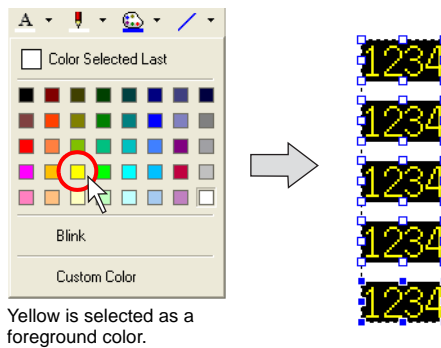


## 32k-color Type

Click the “▼” button on the right of the color change icon or the color change button.  
The pull-down menu for selecting a color is displayed.



Click your desired color in the pull-down menu.  
The color clicked is applied as the color of the specified item(s) and/or the color change icon.



### [Custom Color] Dialog

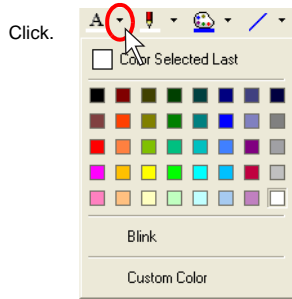
For more information, refer to “64k-color Type” page 3-36.

## 128-color Type



Even a 64k-color-displayable model can be set to 128-color mode. If you wish to create screens in 128-color mode, go to the [Edit Model Selection] dialog from the [System Setting] menu and select [128-Color] under [Color].

Click the “▼” button on the right of the color change icon or the color change button. The pull-down menu for selecting a color is displayed.



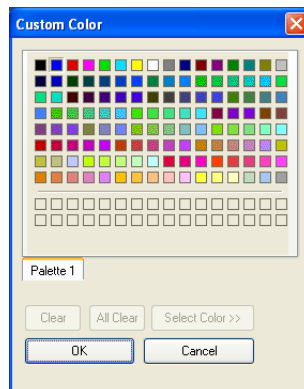
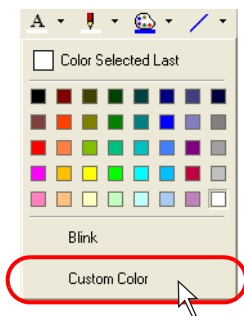
Click your desired color in the pull-down menu. The color clicked is applied as the color of the specified item(s) and/or the color change icon.



Yellow is selected as a foreground color.



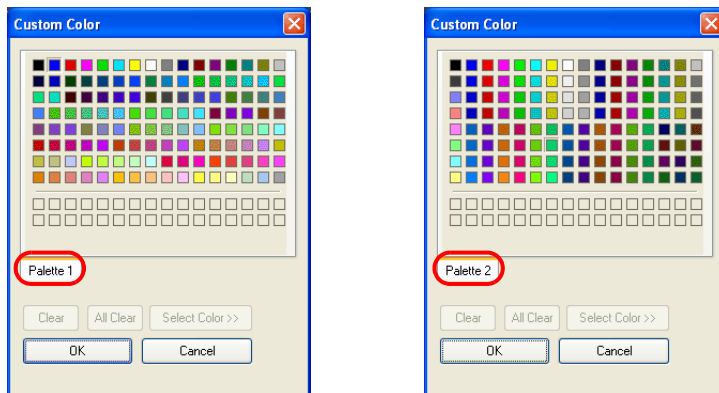
If you do not find your desired color in the pull-down menu, click [Custom Color]. The [Custom Color] dialog is displayed.



## [Custom Color] Dialog for 128-color Type

The [Custom Color] dialog enables you to select colors from 128 colors. [Palette 1] or [Palette 2] is displayed in the dialog.

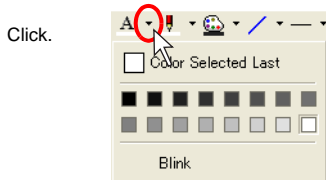
- [Palette 1]  
Gives the palette of the basic 128 colors.
- [Palette 2]  
Gives the palette for 3-D parts.  
(To show [Palette 2], click [System Setting] → [Unit Setting] → [General Settings] and check  Use 3-D Parts.)



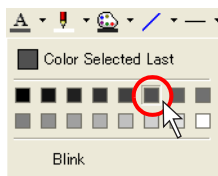
Click a desired color and [OK]. Then the graphic is displayed in the selected color.

## Monochrome 16 Gray Scales

Click the “▼” button on the right of the color change icon or the color change button.  
The pull-down menu for selecting a color is displayed.



Click your desired color in the pull-down menu.  
The color clicked is applied as the color of the specified item(s) and/or the color change icon.



The foreground color is selected.

## Monochrome-Type Colors

In the monochrome type, there may be slight differences between colors shown in 16-gradation colors on the editor software and colors displayed on MONITOUCH.  
Displayed colors will also vary, depending on which option, [Normal] or [Reversed Image], is selected for [Display] (click [System Setting] → [Unit Setting] → [Backlight]).  
Refer to the following table for details.

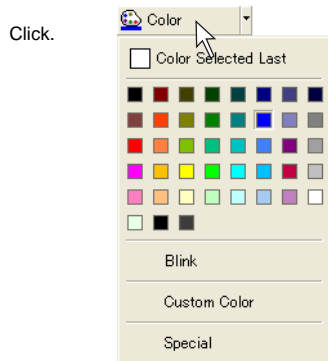
Model	Display Place	[System Setting] → [Unit Setting] → [Backlight]	
		[Display: Normal]	[Display: Reversed Image]
V806iM/ V806M	Editor		
	MONITOUCH		

## Blinking Setting

In the course of color settings, blinking can be selected. Note that blinking is not available with the 64k-color type.

### Blinking Setting Procedure

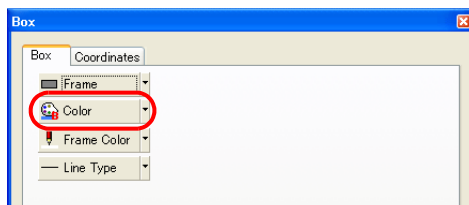
1. Click the “▼” button on the right of the color change icon or the color change button. The pull-down menu for selecting a color is displayed.



2. Click [Blink]. A check mark appears at [Blink].



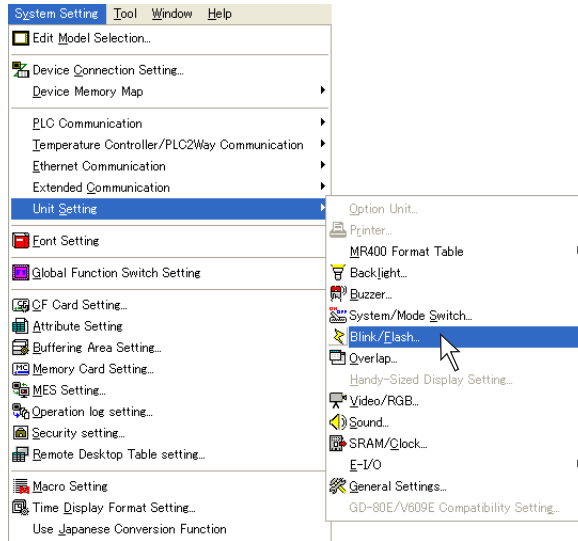
3. Click a color as desired. The color clicked is applied as the color of the specified item(s) and/or the color change icon. Also, “B” is attached to the icon, indicating that the blinking setting has been made.



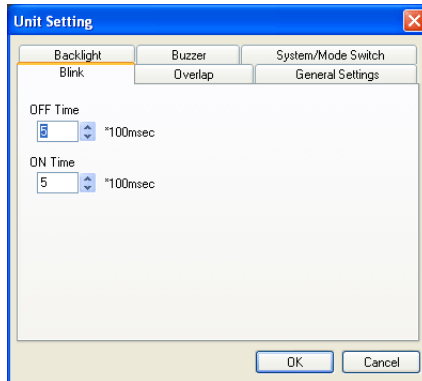
## Blinking Time Setting

It is possible to change the blinking interval. Set the item as described below.

1. Select [System Setting] → [Unit Setting] → [Blink/Flash].  
The [Unit Setting] dialog is displayed.



2. Set [OFF Time] and [ON Time] in the [Blink/Flash] tab window.



The specified blinking time is valid as a common setting in the screen data file. It is not allowed to specify different times as individual blinking settings.



## 3.6 Parts

### Parts Types and Limitation

The parts listed below can be placed on the screen.

#### Types of Parts

Parts		Type	Remarks
Overlap	Normal Overlap	SP	SP: single part
	Call-overlap	I	I: Item which does not have an area
	Multi-overlap	I	
Switch		SP	
Lamp		SP	
Data Display	Numerical Data Display	SP	
	Character Display	SP	
	Message Display	SP	
	Table Data Display	SP	
Message	Message	MP	MP: combined parts
	Comment Display	MP	
Entry		MP	
Graph	Bar Graph	SP	
	Pie Graph	SP	
	Closed Area Graph	SP	
	Panel Meter	SP	
	Statistic Bar Graph	SP	
	Statistic Pie Graph	SP	
Trend	Trend Graph	SP	
	Trend Sampling	MP	
	Data Sampling	MP	
Alarm	Alarm Tracking	MP	
	Bit Order Alarming	MP	
	Alarm Sub Display	MP	
	Time Order Alarming	MP	
	Alarm Logging	MP	
Graphic	Graphic	MP	
	Graphic Relay	MP	
Macro	Macro	I	
	Interval Timer	I	
Calendar	Time Display	I	
	Calendar	SP	
Recipe		MP	
Multimedia	Animation	MP	
	Video	MP	
	JPEG Display	MP	
	Sound	I	
	Network camera display	MP	
	Remote desktop display	MP	

### 3.6 Parts

---

Others	Data Block Area	MP	
	Memory Card	MP	
	Memo Pad	MP	
Screen Library (*1)		I	

\*1 Screen library type differs depending on items registered in the screen library.

## Capacity for Parts Placement

The maximum number of parts permitted for one screen is determined, depending on the types of parts. The limitation and the maximum number of the parts are listed below.

Parts		Limit per ID	Limit per Base/Overlap	Limit per Screen		
				V815iX V812(i)S V810(i)T/S V808(i)S	V810(i)C V808(i)C V808(i)CH	V806
Overlap	Normal Overlap	–	–	3		
	Call-overlap	–	–			
	Multi-overlap	–	–			
Switch		None	None	1024 (*1)		192 (*1)
Lamp		None	None	1024		192
Data Display	Numerical Data Display	None	None	Setting memory		
	Character Display	None	None	Setting memory		
	Message Display	None	None	Setting memory		
	Table Data Display	1	256	Setting memory		
Message	Message	1	256	Setting memory		
	Comment Display	1	256	Setting memory		
Entry		1	1	4		
Slider Switch		None	None	1024 (*1)		192 (*1)
Graph	Bar Graph	None	None	Setting memory		
	Pie Graph	None	None	Setting memory		
	Closed Area Graph	None	None	Setting memory		
	Panel Meter	None	None	Setting memory		
	Statistic Bar Graph	1	256	Setting memory		
	Statistic Pie Graph	1	256	Setting memory		
Trend	Trend Graph	1	256	Setting memory		
	Trend Sampling	1	256	Setting memory		
	Data Sampling	1	256	Setting memory		
Alarm	Alarm Tracking	1	256	Setting memory		
	Bit Order Alarming	1	256	Setting memory		
	Alarm Sub Display	1	256	Setting memory		
	Time Order Alarming	1	256	Setting memory		
	Alarm Logging	1	256	Setting memory		
Graphic	Graphic	1	256	Setting memory		
	Graphic Relay	1	256	Setting memory		
Macro	Macro	1	256	Setting memory		
	Interval Timer	1	256	Setting memory		
Calendar	Time Display	None	None	Setting memory		
	Calendar	1	256	Setting memory		
Recipe		1	4	Setting memory		

Parts		Limit per ID	Limit per Base/Overlap	Limit per Screen		
				V815iX V812(i)S V810(i)T/S V808(i)S	V810(i)C V808(i)C V808(i)CH	V806
Multimedia	Animation	1	256	Setting memory	-	-
	Video	1	4	4	-	-
	JPEG Display	1	256	Setting memory		
	Sound	1	256	Setting memory	-	-
	Network Camera Display	1	1	4 (*2)		
	Remote Desktop Display	1	1	4 (*2)		
Others	Data Block Area	1	4	4		
	Memory Card	1	1	4 (*3)		
	Memo Pad	1	1	1 (Not available with matrix type)		
Screen Library		None	None	(*4)		

- \*1 Switches, slider switches, and scroll switches are included in these limits.
- \*2 These parts are not available with the 128-color type and the V806M model.
- \*3 A maximum of four memory card modes can be set on one screen (four layers) though there is a limitation.  
For instance, two layers of one screen cannot contain one list display each. But it is possible that one part contains one list display, and a different part of the same screen contains one format screen.
- \*4 When a screen library is placed on the screen, the parts registered in the screen library are subject to the same limit of items in the chart above.

### Setting memory

“Setting memory” in the previous chart means the number of memory locations, which is read on one screen. This does not mean the number of words used on a screen.

The maximum permissible number of memory locations varies with models of the V8 series.

Model	No. of Memory Locations per Screen
V8 series	1024
V806 series	256

The read area under [System Setting] → [Device Connection Setting] → [Read/Write Area] is counted as one memory location. (The write area is not the count target.) Therefore, to determine the maximum number of memory locations for a part, subtract one from the number indicated in the above chart.

Examples:

- One memory location is counted even when 10 words are used in bit order alarming.
- Switch output memory is not counted as setting memory. For lamp memory, however, each lamp memory location used is counted as one.
- Each data display is counted as one memory location. If maximum and minimum values are set, one memory location each is counted. Therefore, it is counted as three in total.

## Placing Parts

There are four methods to place parts. This section provides each procedure to place the part.

### From the Parts List

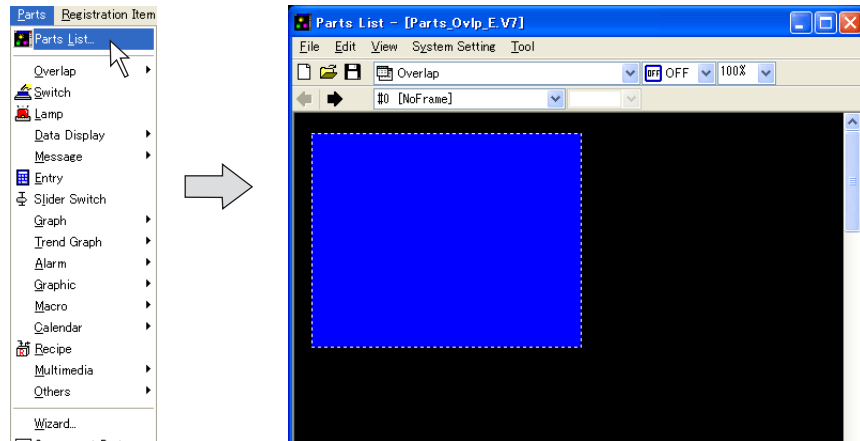
#### What is the parts list?

The “parts list” is the window which contains various parts and from which you can select a desired part.

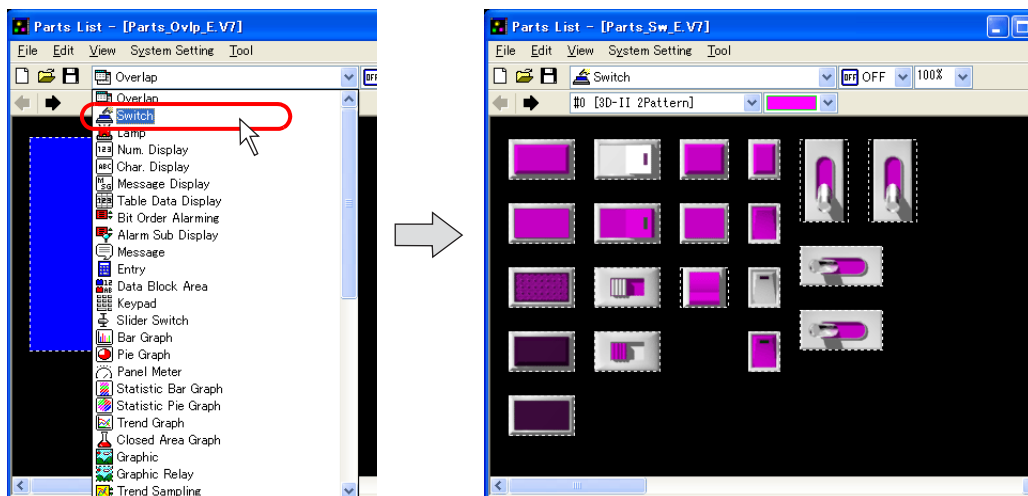
Parts can also be selected from the screen data file (extension: \*.V8) in addition to the parts file.

#### Placement procedure (e.g. switch)

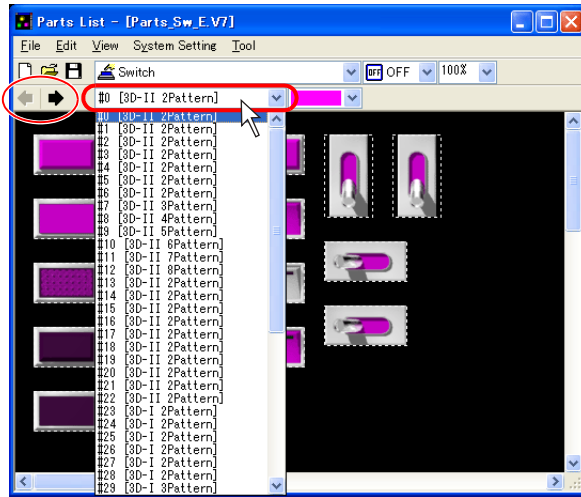
1. Bring up the parts list on the screen.  
Select [Parts List] from the [Parts] menu.  
The [Parts List] window opens.



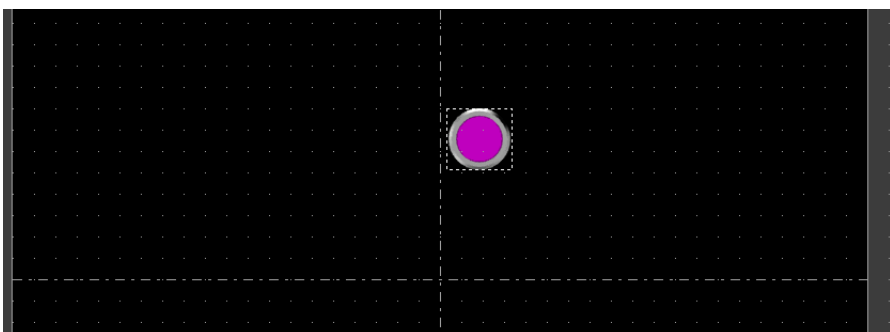
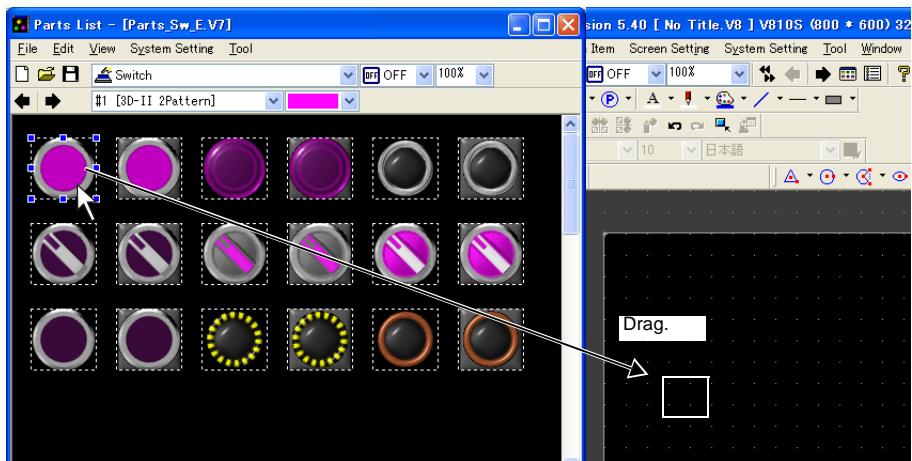
2. Select [Switch] from the pull-down menu. (When it has already been selected, go to step 3.)



- Find the desired part in the switch list changed with the arrow icon or from the pull-down menu.

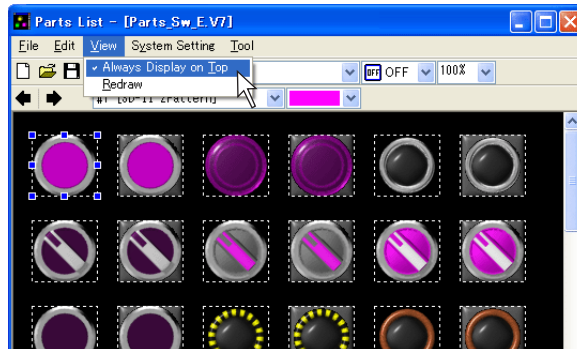


- Select a switch as desired and drag it on the screen. A new switch part is placed on the screen.





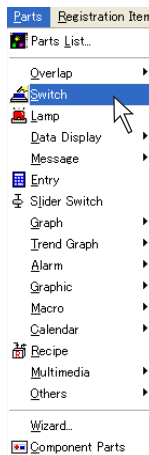
To hide the parts list behind the editing window, uncheck the [Always Display on Top] in the [View] menu of the [Parts List] window.



## From the [Parts] Menu

### Placement procedure (e.g. switch)

1. Click [Switch] from the [Parts] menu.  
Move the mouse to the editing window. The part is displayed with the cursor.



The part is displayed with the cursor moved.



\* The part displayed here is the default or the one which was changed or selected last.

2. Click the mouse in an arbitrary position on the screen. The switch part selected in step 1. is placed on the screen.



Click.



The switch part is placed.

## From the Parts Toolbar

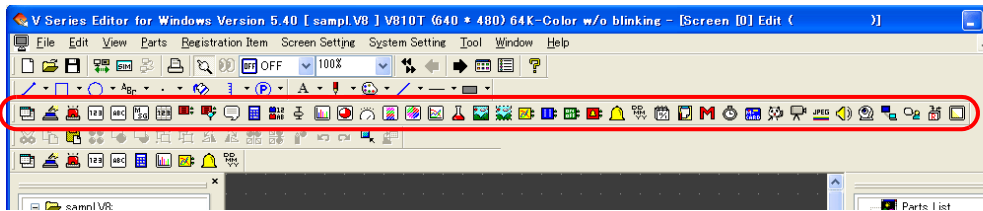
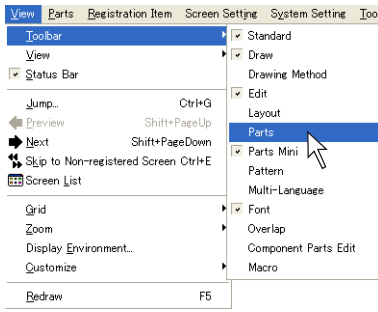
### What is the parts toolbar?

This is the menu which contains minimized tools.

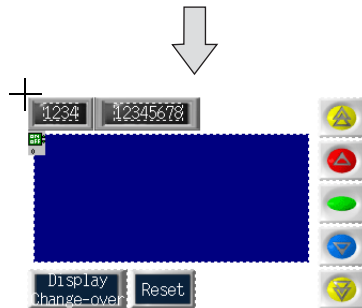
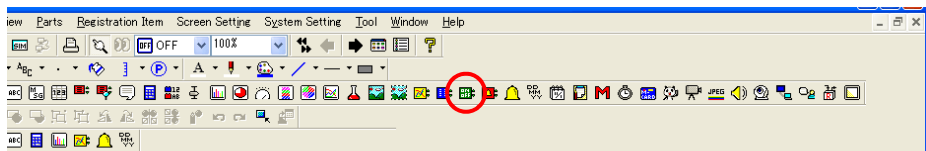
There two types of toolbars: the [Parts] toolbar which contains all of the parts, and the [Parts Mini] toolbar which can be customized with frequently-used parts. This section provides the procedure using the [Parts] toolbar.

### Placement procedure (e.g. alarm logging)

1. Bring up the [Parts] toolbar on the screen.  
Click [View] → [Toolbar] → [Parts].  
(When it has already been checked, go to step 2.)  
The [Parts] toolbar is displayed.



2. Click the [Alarm Logging] icon.  
Move the mouse to the editing window. The part is displayed with the cursor.

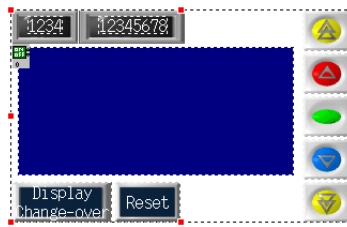


The part is displayed with the cursor moved.

\* The part displayed here is the default or the one which was changed or selected last.



- Click the mouse in an arbitrary position on the screen. The alarm logging part selected in step 2. is displayed.



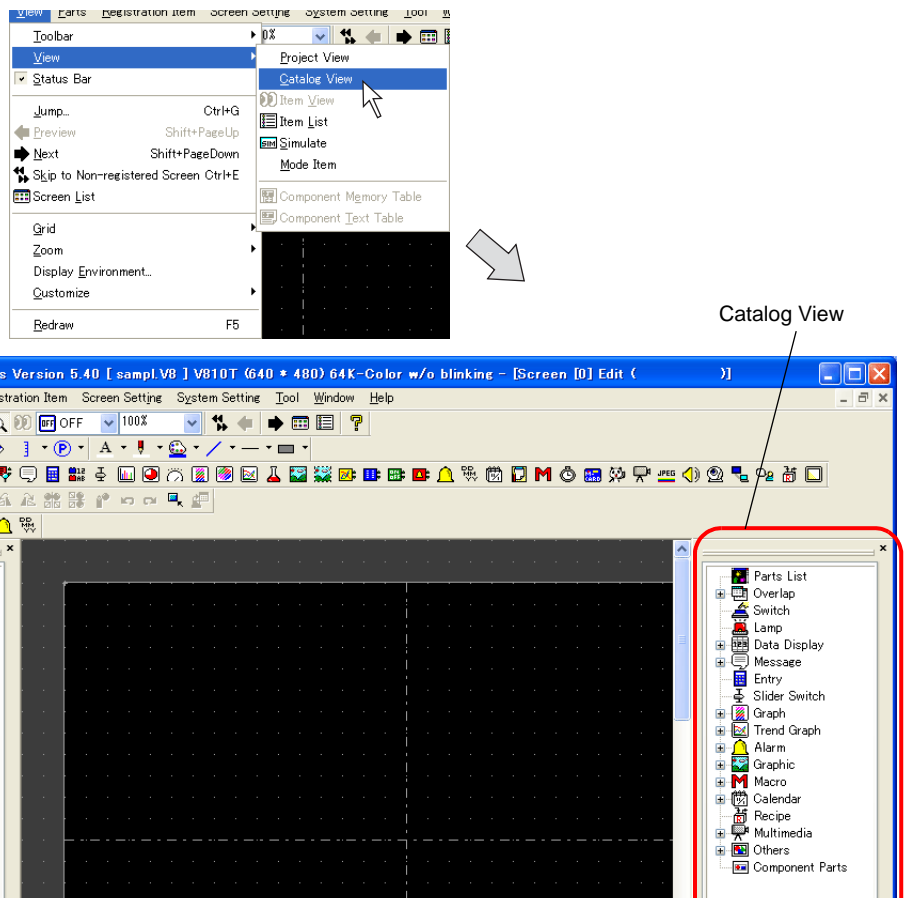
## From Catalog View

### What is “Catalog View”?

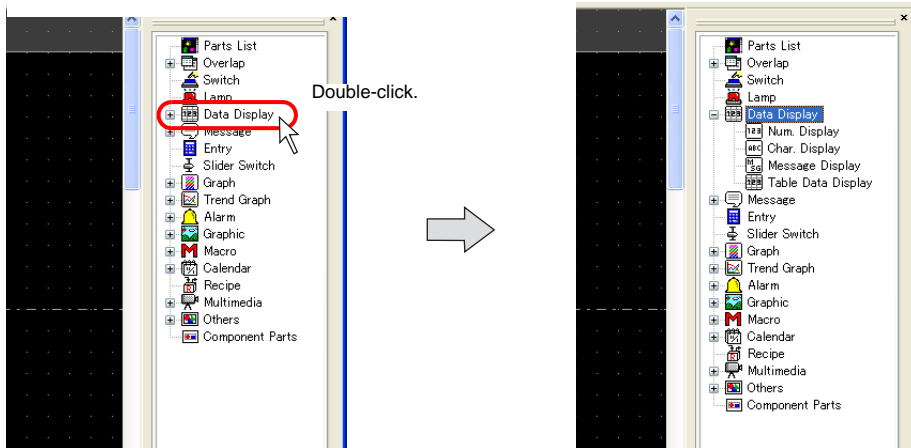
This is the window which displays each part in a tree-structured form. The window can be displayed as a part of the editor because it is a list-view window style.

### Placement procedure (e.g. numerical data display)

- Bring up Catalog View on the screen.  
Click [View] → [View] → [Catalog View].  
Catalog View is displayed.

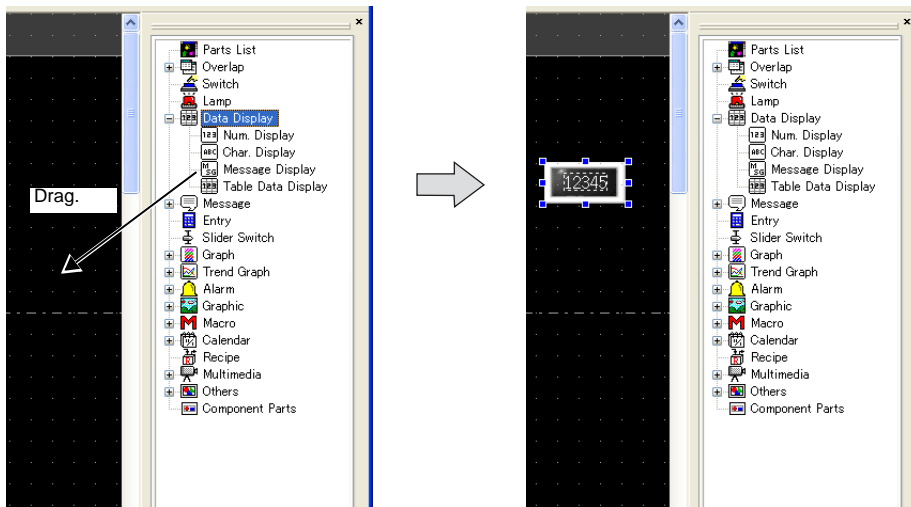


2. Double-click [Data Display] on Catalog View.  
The lower hierarchy appears.



☺ Hierarchical parts are only included in the parts marked with " . ".  
When the " . " mark is not displayed, drag the part directly as described in step 3.

3. Select [Num. Display] and drag it on the screen.  
The numerical data display part is placed on the screen.



## How to Modify the Placed Part

### For Single Part

#### Item dialog

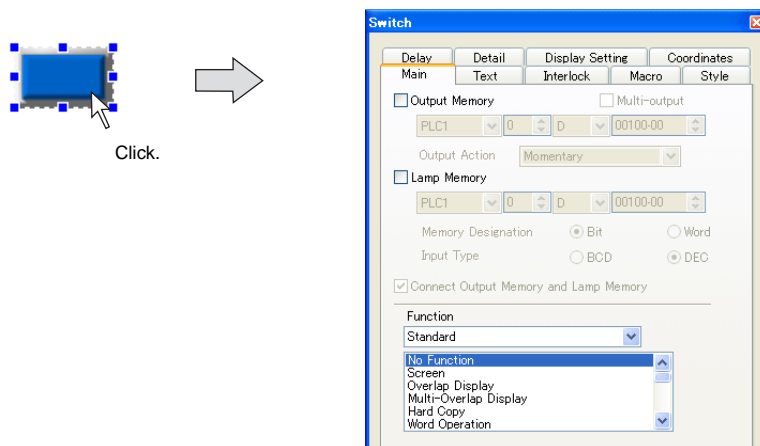
The setting for all parts placed on the screen can be changed or checked in the item dialog. Setting options contained in the item dialog vary depending on the item; however, the operation procedure is roughly the same.

The item dialog is displayed by clicking or double-clicking the parts placed on the screen. For the procedure to move the dialog, refer to “2.3 Menu Item [View]” (page 2-11).

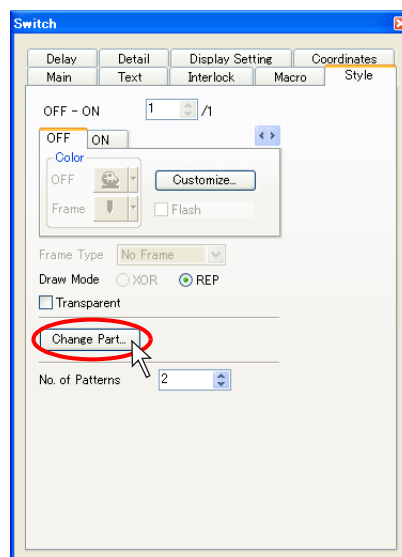
#### Changing part design

When modifying the design of the placed part, operate the item dialog following the procedure below. (e.g. switch)

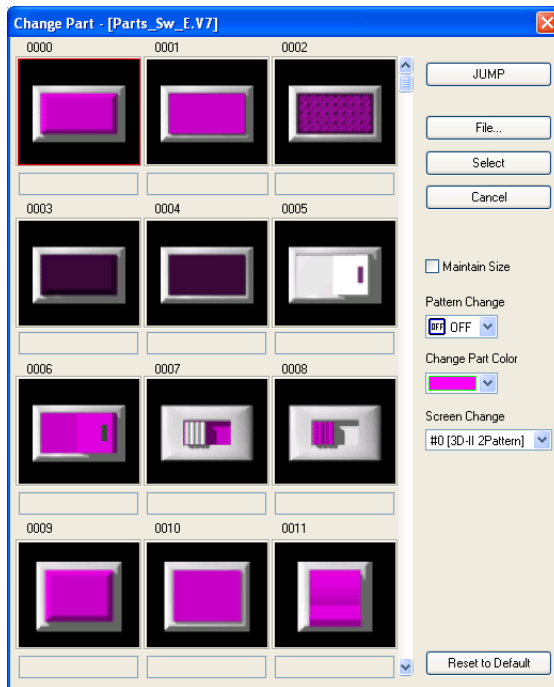
1. Click the switch part and bring up the [Switch] item dialog.



2. Open the [Style] tab window and click the [Change Part] button.



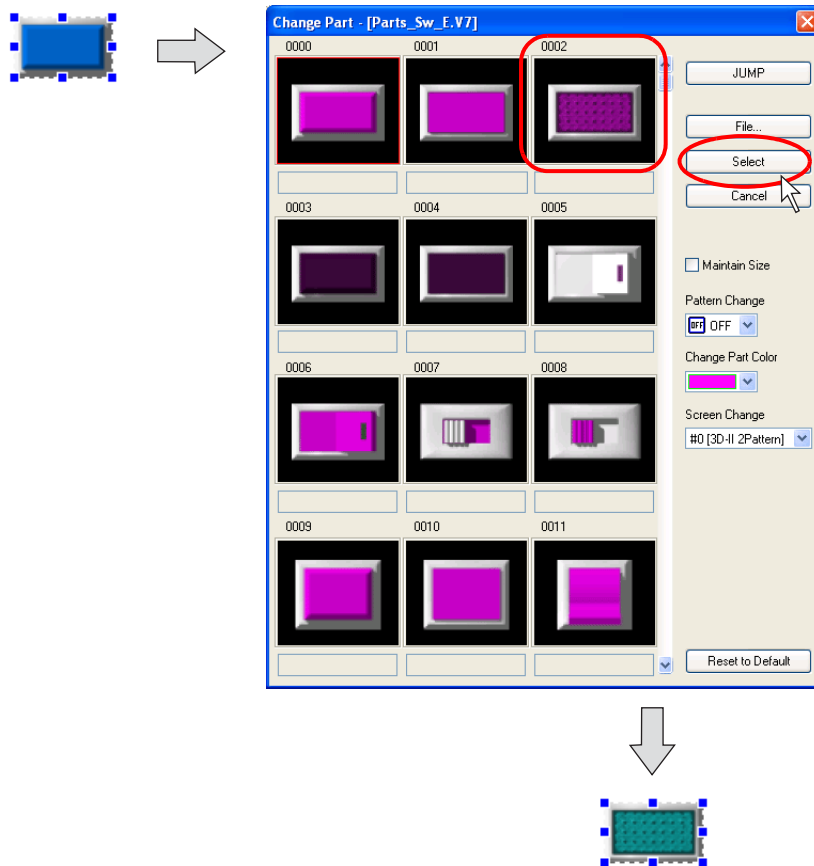
3. The switch parts list is displayed in the [Change Part] dialog.



The setting options in the list are described below.

JUMP	Clicking this menu brings up the [Part Call] dialog. By specifying a part number and clicking [OK], the parts list including the specified number is displayed.
File	Allows you to select the screen data file (*.V8) or parts file (*.V7P). This button is used when a desired part cannot be found in the list or the file including the part to be used is not opened.
Select	Determines the parts selected from the list. Clicking this button replaces the existing part with the new one, and closes the [Change Part] dialog.
Cancel	Closes the [Change Part] dialog.
<input type="checkbox"/> Maintain Size	When this box is checked, the design of the placed part can be changed while its size and other settings are maintained. When this box is unchecked, the default size of each part takes effect.
Pattern Change	This option is valid only for the switch or lamp part. The status display of the OFF, ON or P3 patterns can be shown on the parts list.
Change Part Color	This option is valid only for the 3D part. The part color is selected.
Screen Change	Changes the parts list display.
Reset to Default	Displays the default parts list which is selected at the first start-up of the editor.

- Choose the desired part and click the [Select] button.  
The former [Switch] dialog is displayed again. The selected part is displayed on the screen.



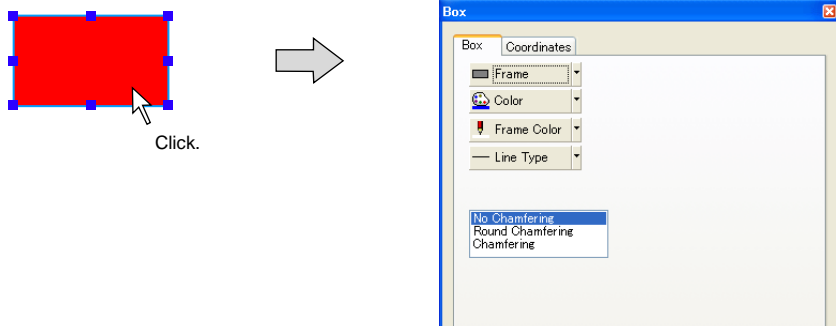
### Changing coordinate and size

In order to change the part location, it can be designated in the item dialog.

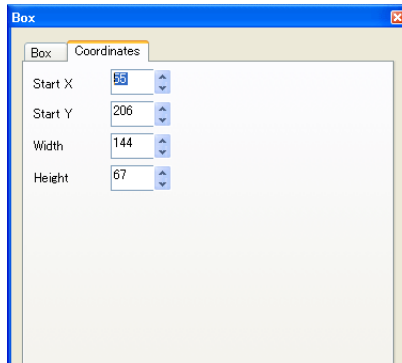
For the item whose size can be changed with dot size designation, such as a switch, lamp, graph, box or circle, it is possible to change the part size in the item dialog as well.

Following example shows the case of the box.

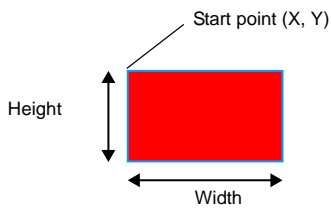
- Click the box part and bring up the [Box] item dialog.



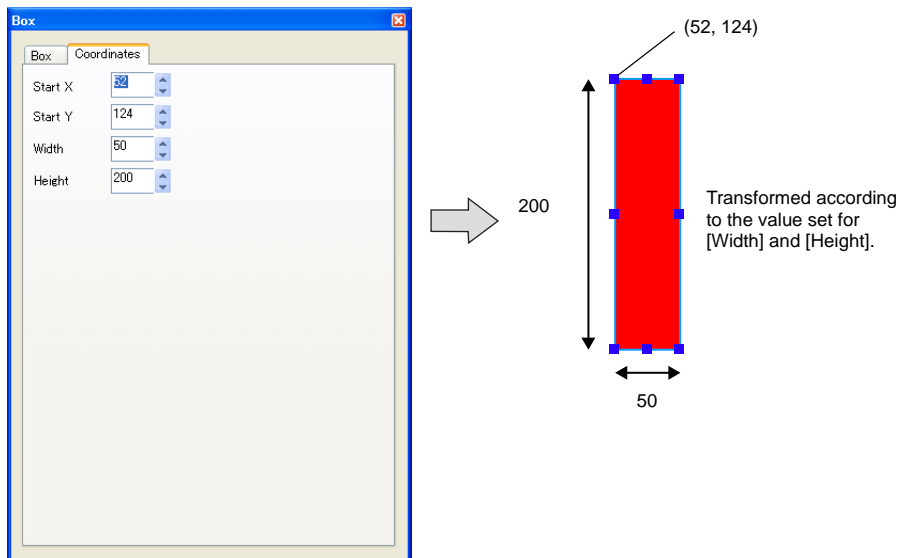
- Open the [Coordinates] tab window.



Start X (dots)	Specifies the X coordinate of upper left of the box.
Start Y (dots)	Specifies the Y coordinate of upper left of the box.
Width (dots)	Specifies the width of the box.
Height (dots)	Specifies the height of the box.



- When an arbitrary value is specified, the box on the screen is moved or transformed accordingly.



### Files used for parts modification (for the V8, V7, V6, or V4 series)

Parts such as switches, lamps, or data displays (“SP” or “MP” parts mentioned on page 3-45) are registered in screen data files or parts files.

When replacing a placed part with another one, select the necessary file and select your desired part from it.

There are the following parts files with six different extensions:

File	Extension	Type
Screen data file	*.V7	V8/V7 series
	*.V6	V6 series
	*.V4	V4 series
Parts file	*.V7P	V8/V7 series
	*.V6P	V6 series
	*.V4P	V4 series

The following parts files are provided from Hakko Electronics.

- Screen data file (e.g. V7 series)

Parts	Screen Data File Name
Overlap	Parts_Ovlp.V7
Switch	Parts_Sw.V7
Lamp	Parts_Lp.V7
Numerical Data Display	Parts_NumDsp.V7
Character Display	Parts_CharDsp.V7
Message Display	Parts_MsgDsp.V7
Table Data Display	Parts_GridDsp.V7
Bit Order Alarming	Parts_Relay.V7
Alarm Sub Display	Parts_RelaySub.V7
Message	Parts_MassageMode.V7
Entry	Parts_EntryMode.V7
Data Block Area	Parts_DataBlockArea.V7
Keypad	Parts_KeypadGp.V7
Bar Graph	Parts_BarGraph.V7
Pie Graph	Parts_PieGraph.V7
Panel Meter	Parts_PanelMeter.V7
Statistic Bar Graph	Parts_Stat_BarGraph.V7
Statistic Pie Graph	Parts_Stat_PieGraph.V7
Trend Graph	Parts_TrendGraph.V7
Closed Area Graph	Parts_ClosedAreaGraph.V7
Graphic	Parts_GraphicMode.V7
Graphic Relay	Parts_GraphicRelay.V7
Trend Sampling	Parts_TrendSampling.V7
Data Sampling	Parts_Datasampling.V7
Alarm Logging	Parts_BitSampling.V7
Time Order Alarming	Parts_RelaySampling.V7
Alarm Tracking	Parts_AlarmDsp.V7
Time Display	Parts_DateDsp.V7

Parts	Screen Data File Name
Calendar	Parts_CalenderDsp.V7
Memo Pad	Parts_MemoPad.V7
Macro	Parts_Macro.V7
Interval Timer	Parts_Timer.V7
Memory Card	Parts_MemoryCard.V7
Animation	Parts_Animation.V7
Video Display	Parts_Video.V7
JPEG Display	Parts_JpegDsp.V7
Sound	Parts_Wave.V7
Recipe	Parts_Recipe.V7
Comment Display	Parts_CommentItem.V7
Digital Switch	Parts_DigiSw.V7
Radio Button	Parts_RadioButton.V7

- Parts file


Parts File Name		Type	Remarks
V7	Std.V7P	32k colors	2D parts for V7
	Parts_j.V7P	32k colors	
	3DStd.V7P	32k colors	3D parts for V7
	3Dnow_p2.V7P	32k colors	
	3Dnow_p3.V7P	32k colors	
	3Dnow_p4.V7P	32k colors	
	3Dnow_p5.V7P	32k colors	
	3Dnow_p6.V7P	32k colors	
	3Dnow_p7.V7P	32k colors	
	3Dnow_p8.V7P	32k colors	
	3Dfront.V7P	32k colors	3D parts for V6
	3Dside.V7P	32k colors	
	Std_128.V7P	128 colors	2D parts for 128-color V7
	Parts_j128.V7P	128 colors	
3Dfront_128.V7P	128 colors	3D parts for 128-color V7	
3Dside_128.V7P	128 colors		
V6	Std.V6P	128 colors	2D parts for V6
	Parts_j.V6P	128 colors	
	3Dfront.V6P	128 colors	3D parts for V6
	3Dside.V6P	128 colors	
	Parts_mono.V6P	128 colors	
V4	Std.V4P	16 colors	
	Parts_j.V4P	16 colors	



## For Linked Part

### What Is “Linked Part”?

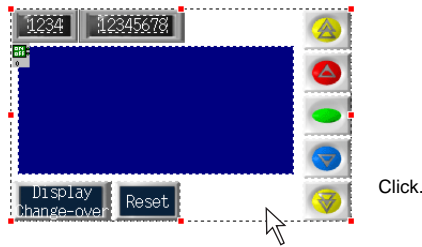
Unlike single parts, such as a switch, lamp, data display, etc., there is a kind of part that consists of multiple individual parts, but is placed as a single part (e.g. bit order alarming, alarm tracking, trend sampling, etc.). This is called a “linked part.”

 When the part is selected with the red handle by clicking on it, it is a linked part.

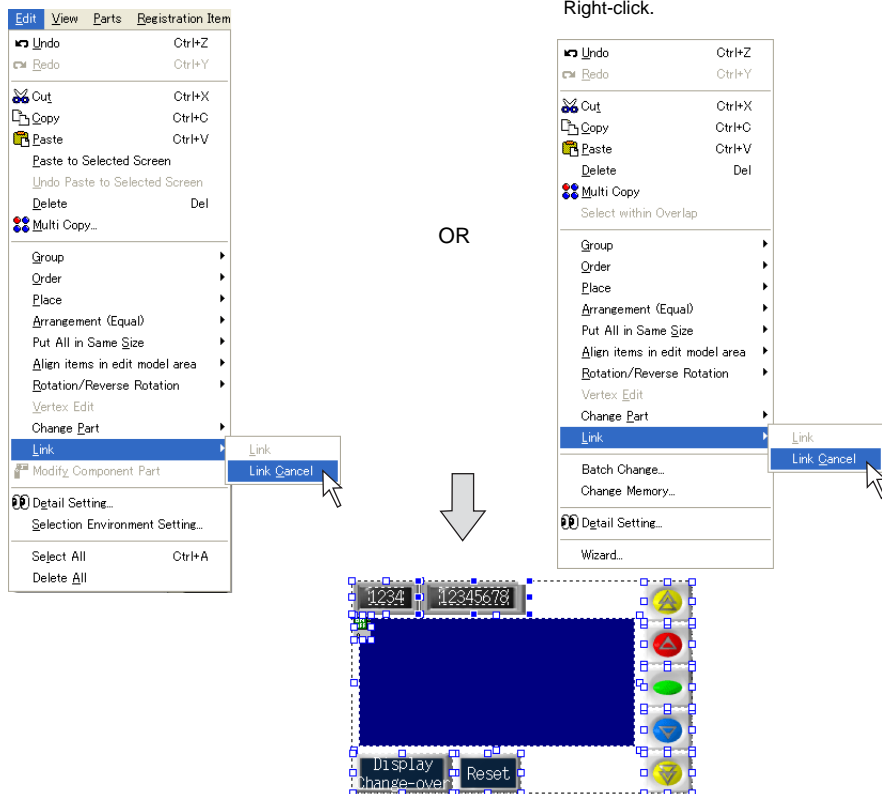
To change the size or delete unnecessary items included in the linked part, it is necessary to remove the linkage to make it possible to perform layout or edit individually. This section describes the procedure.

### Removing linkage

1. Click the linked part.



2. Click [Edit] → [Link] → [Link Cancel], or right-click the mouse and click [Link] → [Link Cancel]. The selected linked-part is separated into individual pieces.

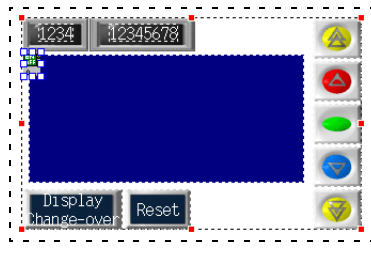


## Linkage

When the linked part has been once separated into individual pieces, it is recommended to link them again after editing.

Follow the procedure below to link the parts.

1. Select the parts to be linked together.

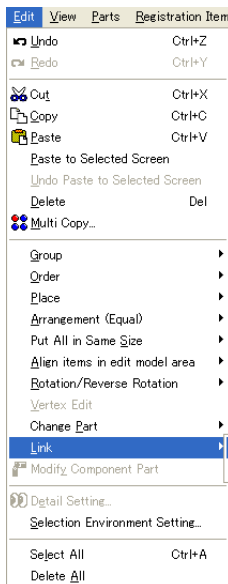


Drag the mouse enclosing all of the parts to be linked.



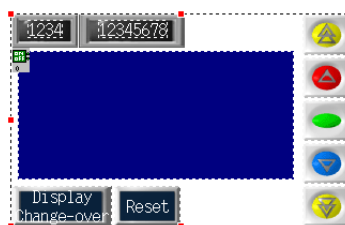
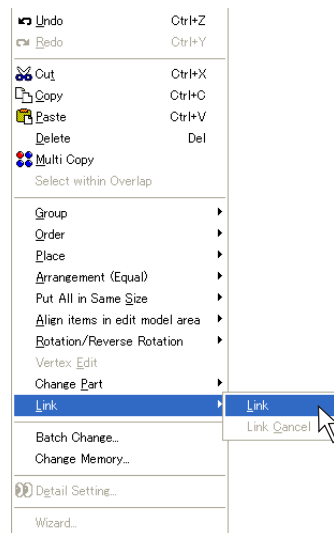
If it is difficult to select parts at one time, click the parts one by one while holding down the Shift key. Multiple parts can be selected.

2. Click [Edit] → [Link] → [Link], or right-click the mouse and click [Link] → [Link]. The selected parts are linked and the red handle is displayed around the linked part.



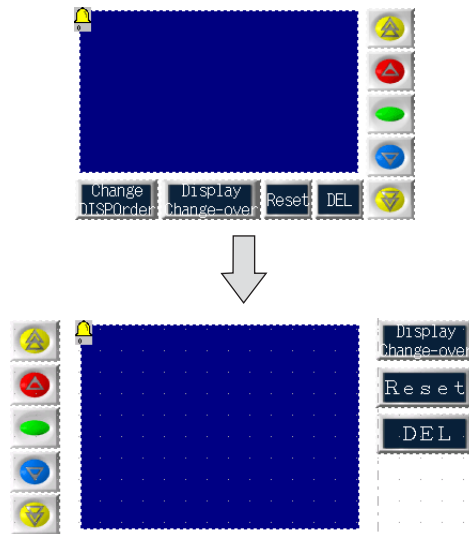
OR

Right-click.

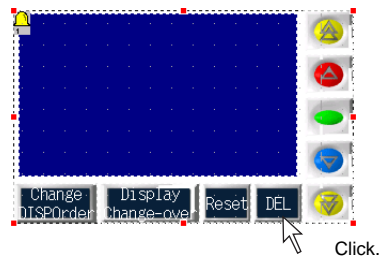


### Example of modification (for alarm tracking)

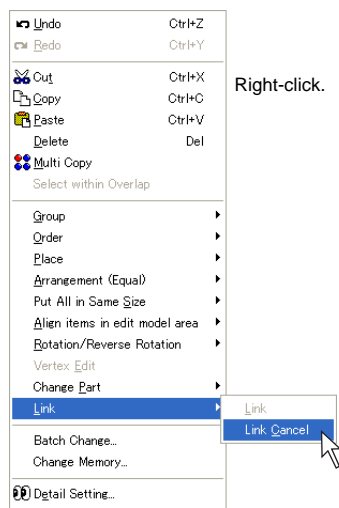
This section provides the procedure to change the linked part as shown below.



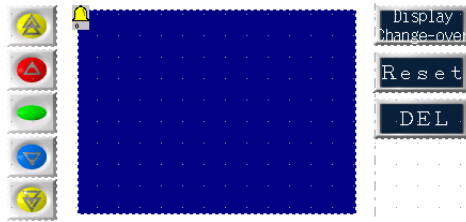
1. Select the alarm tracking part placed on the screen. The parts is enclosed with the red handle.



2. Right-click the mouse and click [Link] → [Link Cancel] while the part is selected as in step 1. The linked part is separated into individual pieces.



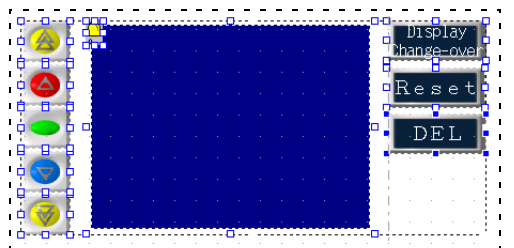
3. Change the parts layout as shown in the figure below.



\* The [Alarm Tracking] icon can also be moved; however, it is recommended to place it at the upper left of the display area part.

4. When the layout is determined, select all parts to be linked, and click [Link] selected from [Link] in the right-click menu.

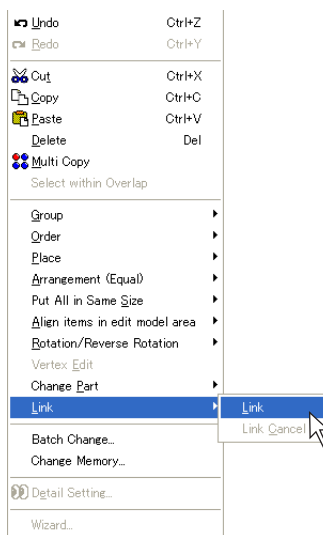
The selected parts are linked and become a linked part.



Drag the mouse enclosing all of the parts to be linked.



Right-click.



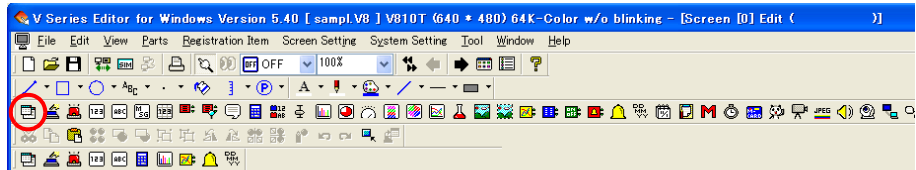
## 3.7 Parts Placement and Setting

### Overlap

#### Normal Overlap Display

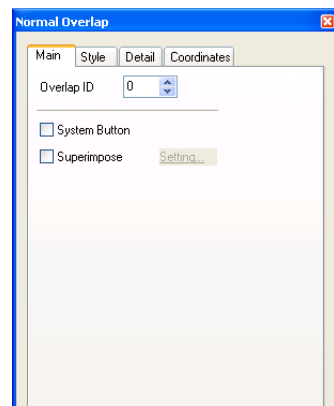
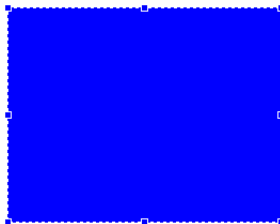
##### Placement procedure

1. Click the [Normal Overlap] icon on the parts toolbar and move the mouse to the screen. The normal overlap display appears on the screen.



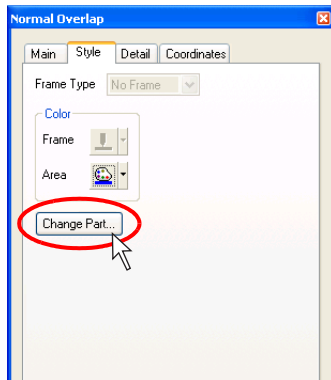
The part is displayed with the cursor moved.

2. Click the mouse in the desired position. Normal overlap display part is placed. The [Normal Overlap] item dialog is displayed at the same time.

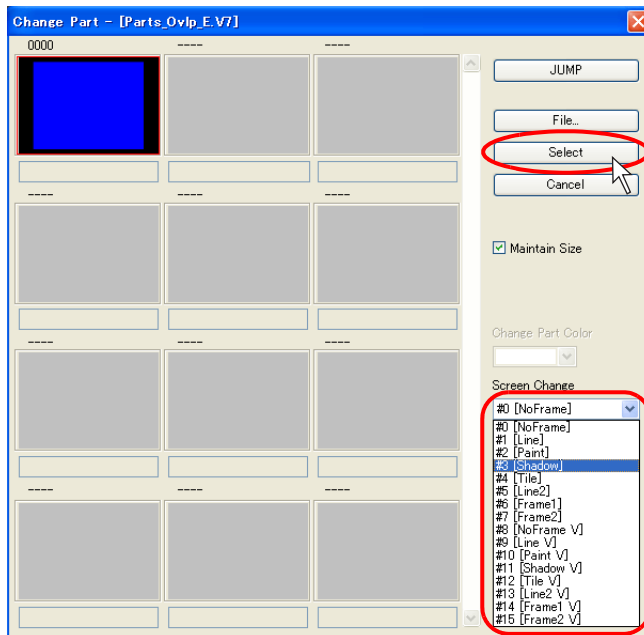


\* If the item dialog is not displayed, double-click on the normal overlap display part.

3. To change the part design, open the [Style] tab window in the item dialog, and click [Change Part].



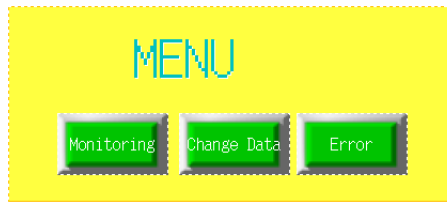
4. The [Change Part] dialog is displayed. From the pull-down menu of [Screen Change], select a display type as desired, and then click the [Select] button. The former [Style] tab window is displayed again. It is possible to change colors as well in the [Style] tab window.



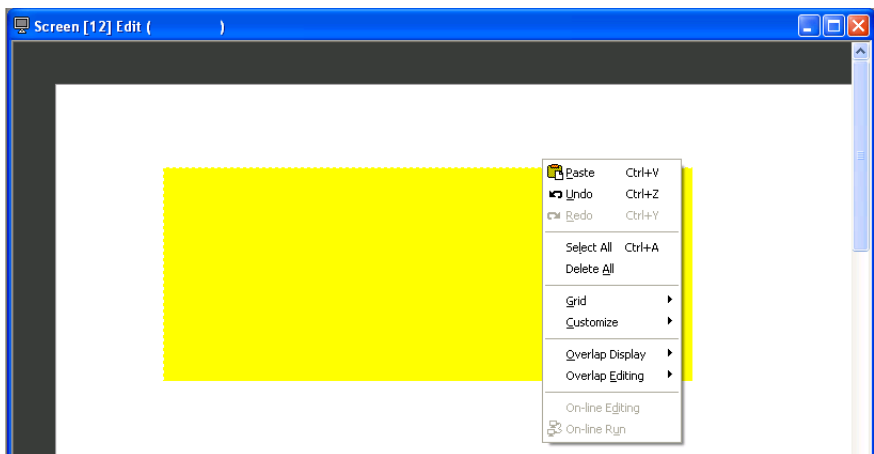
5. If another setting, such as display size, is necessary to be changed, change the setting from the item dialog.

### Item placement on overlap display

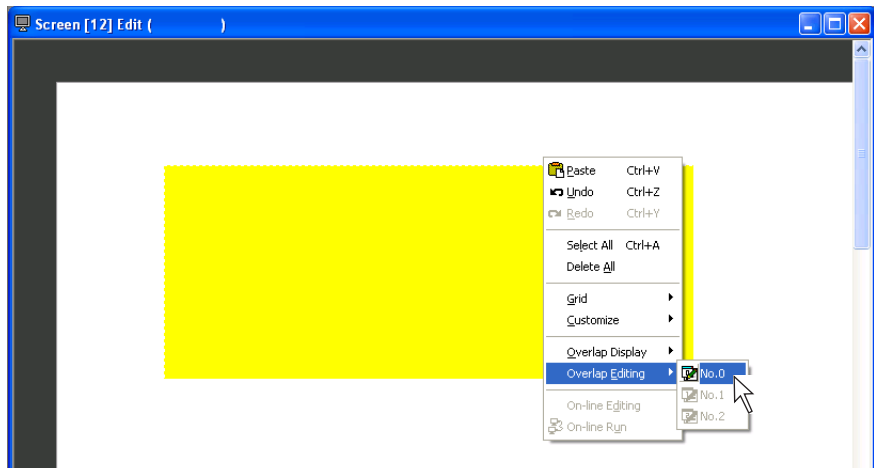
This section explains the procedure for creating an overlap display including the following items.



1. Right-click somewhere on the screen including the normal overlap display part.
  - \* Note that the normal overlap display part is deselected when you right-click on the screen.



2. Click [Overlap Editing] → [No. 0]. The sub-menu item [No. 0] is depressed.



Other than right-clicking, you may alternatively perform the following when attempting to edit an overlap display.  
Click [View] → [Toolbar] → [Overlap]. The overlap toolbar including the overlap editing icons is displayed. Clicking the [No. 0] icon achieves the same state as that after the above-mentioned right-clicking.

3. Now the [Screen Edit] window is switched to the [Overlap Edit] window.



4. Click the [Switch] icon and place it on the overlap display.



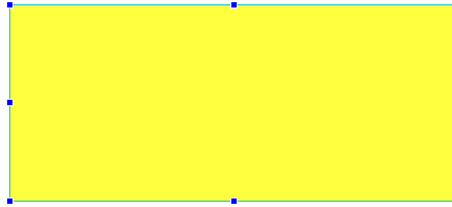




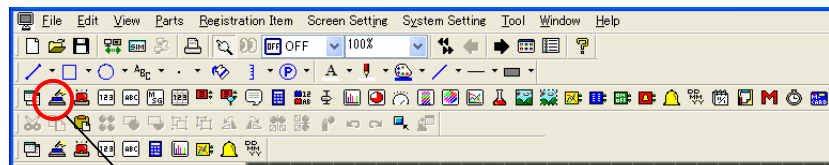
You can also place an item on the overlap display in the following manner without switching the window with [Overlap Editing].

While the overlap display is selected with handles, click the [Switch] icon and drag the switch part to the screen.

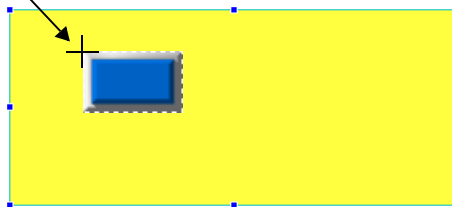
When the switch part is moved to the overlap display, click the mouse.  
The switch part is placed on the overlap display.



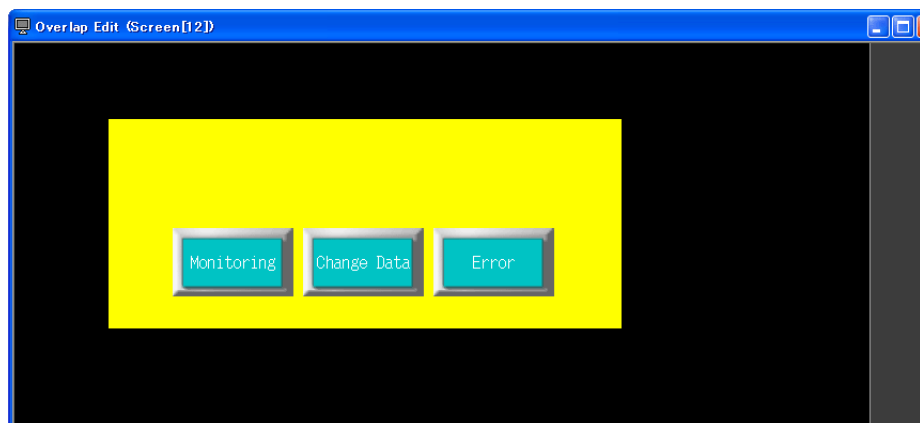
Select the overlap.



Drag the mouse to move the switch part to the overlap display.



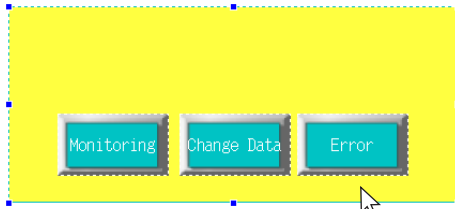
5. Make copies of the placed switch part, and place text on the switch parts.



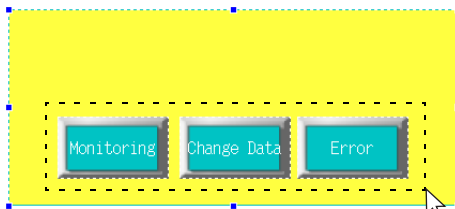


The following two methods are available to select multiple items on the overlap display without switching the window with [Overlap Editing]. One method for selecting is clicking the parts one by one while the Shift key is held down after selecting the overlap display.

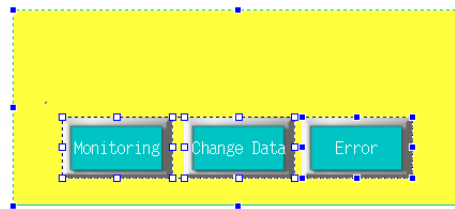
The other method is clicking [Select within Overlap] from the right-click menu and enclosing parts to be selected with the mouse within the overlap display area.



The overlap display part is selected by clicking the mouse once.

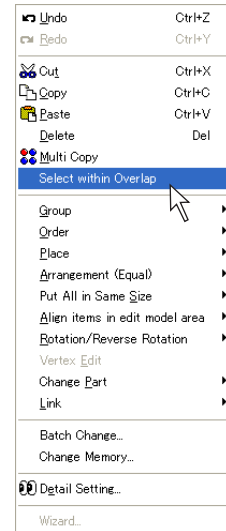


Select multiple parts on the overlap display at one time.



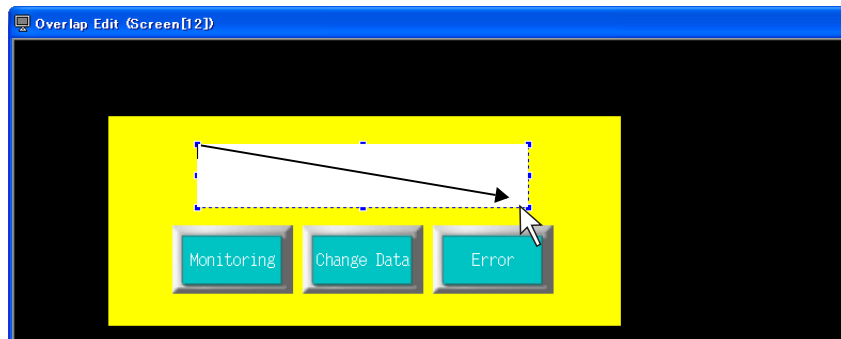
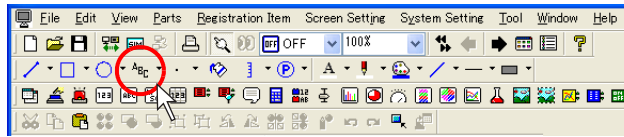
Multiple parts are selected.

Right-click.

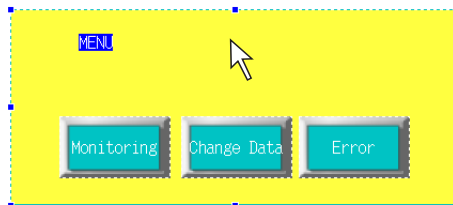


6. Next, place the text as a graphic on the overlap display.

- Click the [Text] icon on the toolbar, and draw a box for text entry by dragging the mouse at the desired position on the overlap display.



- The cursor is displayed on the box drawn in the step 7. Enter "Menu" and click any position other than the text box. The entered text is displayed on the screen.



- When changing the size or the color, click (or double-click) the text to bring up the item dialog. Make changes as necessary in the dialog.



- When editing is completed, right-click → [Overlap Editing] → [No. 0] or click the [No. 0] in the overlap editing icons.

The former [Screen Edit] window is displayed.

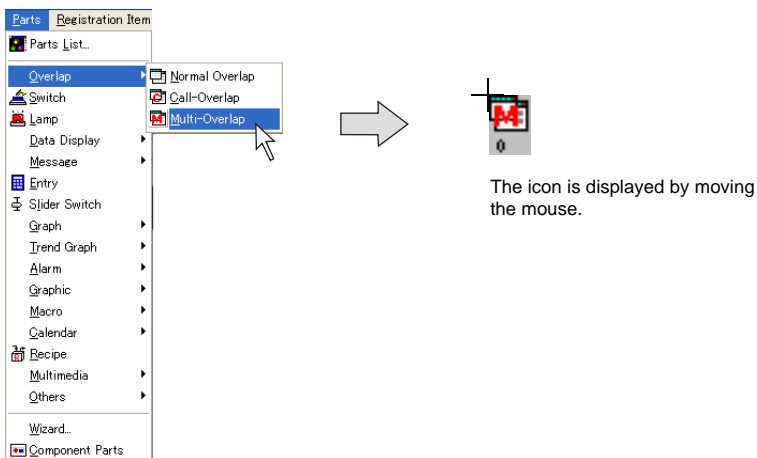
The above step completes the overlap editing.

## Multi-overlap (Call-overlap) Display

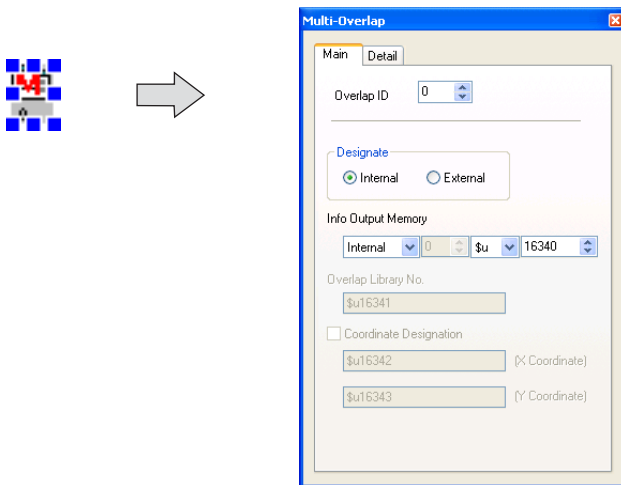
### Placement procedure

The multi-overlap (or call-overlap) display is selected from the [Parts] menu or Catalog View. The actual overlap display is edited in the overlap library.

1. Click [Parts] → [Overlap] → [Multi-overlap].  
The [Multi-overlap] icon appears on the screen.



2. Click the mouse in the desired position. The multi-overlap icon is placed.  
The [Multi-overlap] item dialog is displayed at the same time.



\* When the item dialog is not displayed, double-click the multi-overlap display.

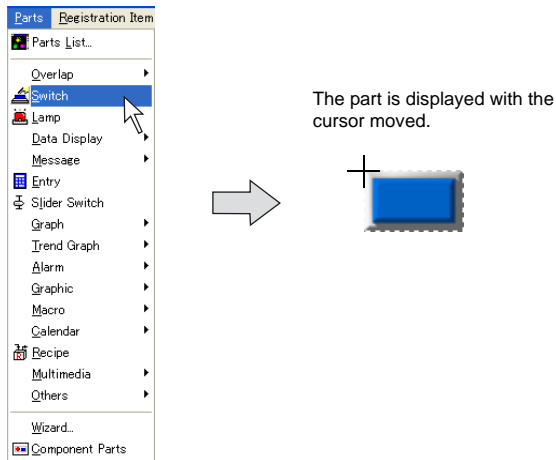
### Overlap display placement and editing

The multi-overlap display is placed or edited using the “overlap library.”  
For more information on the “overlap library,” refer to “5.7 Overlap Library” (page 5-26).

## Switch / Lamp

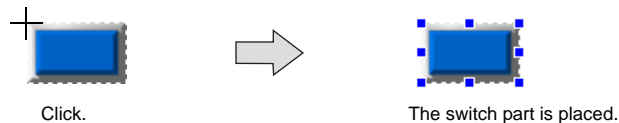
### Placement procedure

1. Click [Switch] or [Lamp] in the [Parts] menu, or drag it from the parts list or Catalog View. Move the mouse to the editing window. The part is displayed along with the cursor.



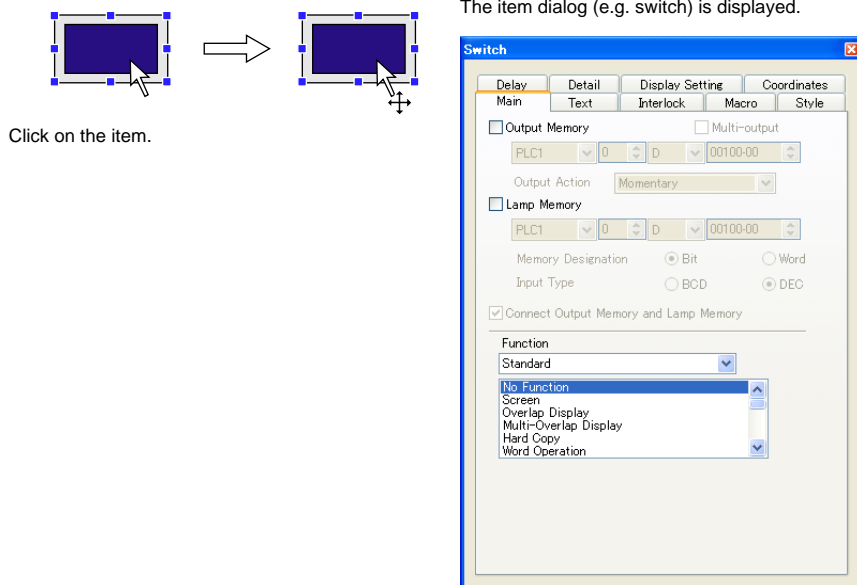
\* The part displayed here is the default or the one which was changed or selected last.

2. Click the mouse in an arbitrary position on the screen. A switch part is placed on the screen.



### Setting method

The item dialog is displayed by clicking or double-clicking on the parts placed on the screen.

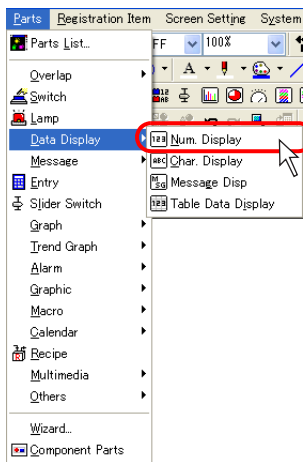


## Data Display

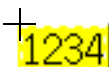
### Numerical Data Display / Character Display / Message Display

#### Placement procedure

1. Click the item selected from [Parts] → [Data Display], or drag it from the parts list or Catalog View. Move the mouse to the editing window. The part is displayed along with the cursor.

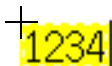


The part is displayed with the cursor moved.



\* The part displayed here is the default or the one which was changed or selected last.

2. Click the mouse in an arbitrary position on the screen. The selected data display part is placed.



Click.

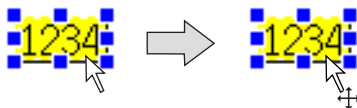


The numerical data display part is placed.

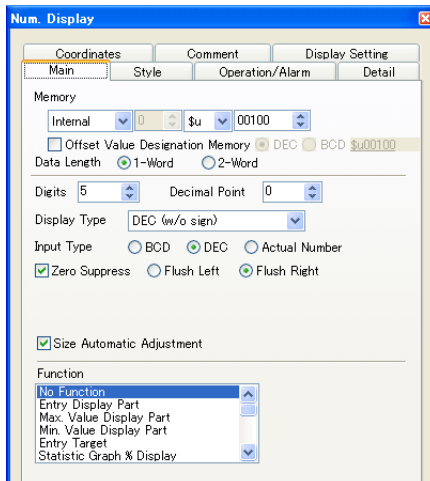
#### Setting method

The item dialog is displayed by clicking or double-clicking on the parts placed on the screen.

The item dialog (e.g. numerical data display) is displayed.



Click on the item.



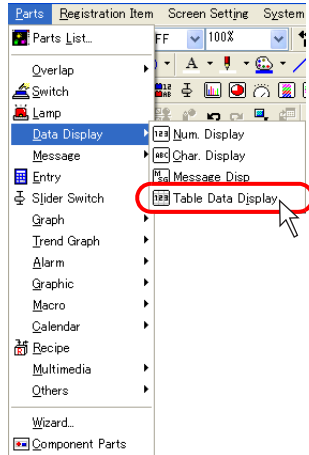
## Table Data Display

Table data display parts are not included in parts files.  
They are placed by setting the corresponding dialog.

### Placement procedure

1. Click [Parts] → [Data Display] → [Table Data Display], or drag the part from the parts list or Catalog View.

Move the mouse to the editing window. The table data display part is displayed along with the cursor.



The part is displayed with the cursor moved.

12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345

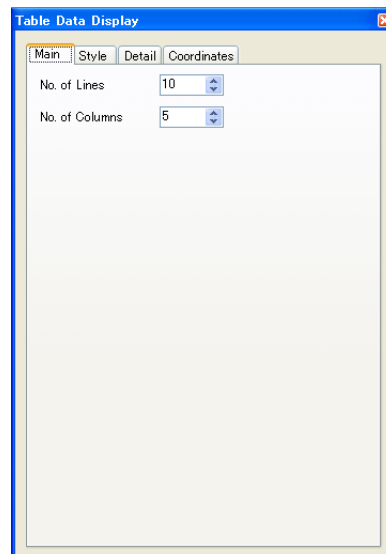
2. Click the mouse in an arbitrary position on the screen. The table data display part is placed.

### Setting method

The item dialog is displayed by clicking or double-clicking on the part placed on the screen.

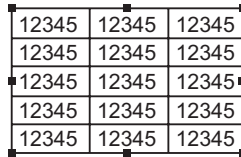
Click on the table data display part.

12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345
12345	12345	12345	12345	12345

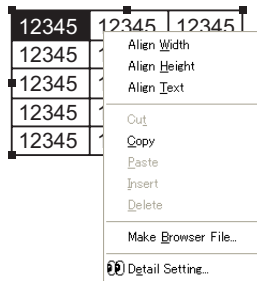


### Data setting or modifying procedure

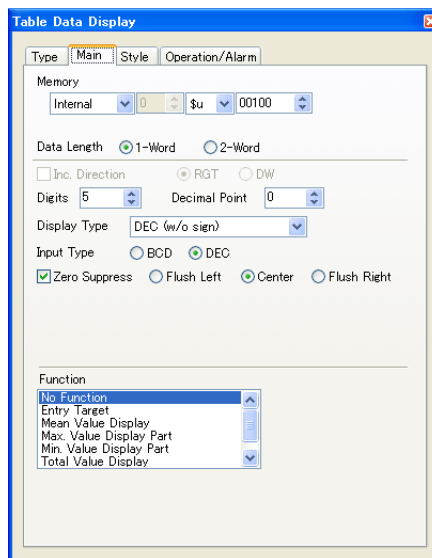
1. Click the table data display part. The item dialog is brought up and handles are shown all around the part.



2. Right-click the mouse on a cell whose setting is to be changed. The cell is highlighted and the right-click menu is displayed.



3. Select [Detail Setting] from the menu. The [Table Data Display (Num. Display)] item dialog is displayed.



4. Set the options in the dialog. Select a necessary data display type from numerical display, character display, message display, or text in drawing.



### Property change for multiple data cells

1. Click the table data display part. The item dialog is brought up and handles are shown all around the part.

12345	12345	12345
12345	12345	12345
12345	12345	12345
12345	12345	12345
12345	12345	12345

2. Right-click the mouse on a cell whose setting is to be changed. The cell is highlighted and the right-click menu is displayed.

12345	12345	12345
12345	12345	12345
12345	12345	12345
12345	12345	12345
12345	12345	12345

Alien Width  
 Alien Height  
 Alien Text  


---

 Cut  
 Copy  
 Paste  
 Insert  
 Delete  


---

 Make Browser File...  
 Detail Setting...

3. Select two or more desired cells by right-dragging. The cells are highlighted. The right-click menu is displayed at the same time.

12345	12345	12345
12345	12345	12345
12345	12345	12345
12345	12345	12345
12345	12345	12345

Alien Width  
 Alien Height  
 Alien Text  


---

 Cut  
 Copy  
 Paste  
 Insert  
 Delete  


---

 Make Browser File...  
 Detail Setting...


4. Select [Detail Setting] from the menu. The [Table Data Display (Num. Display)] item dialog is displayed.  
When data cells of different types are selected, the [Table Data Display (xxxx)] dialog for the top left cell is displayed.

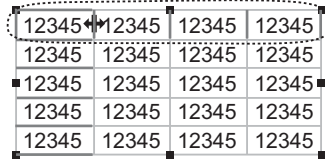


After the [Table Data Display (xxxx)] dialog displayed as mentioned above is set, the setting is reflected through the remaining selected cells.  
(When [Inc. Direction] is not checked, the previous memory address setting is maintained.)


### Change of cell height and cell width

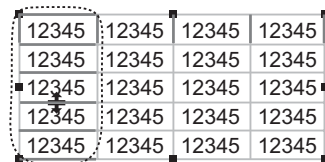
- When changing the width of the cell, specify a demarcation line in the top line as shown below.

The cursor changes into “.” Drag it until the cell is adjusted to the desired width.



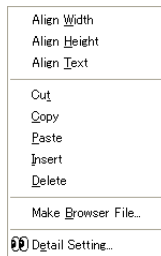
- When changing the height of the cell, specify a demarcation line in the first column as shown below.

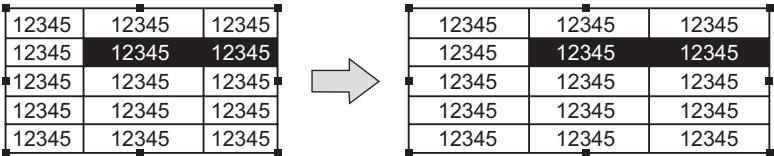
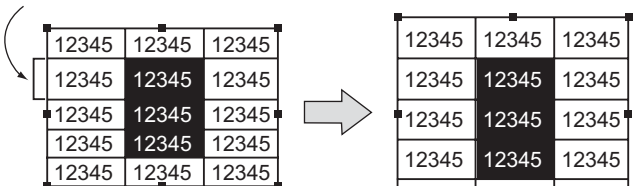
The cursor changes into “.” Drag it until the cell is adjusted to the desired height.

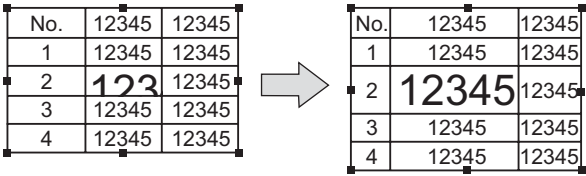


### Right-click menu

When cells are selected by right-clicking or right-dragging, a pop-up menu is displayed.



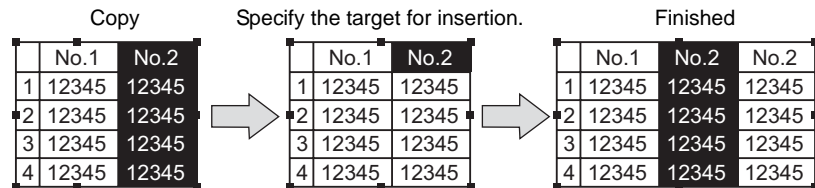
Align Width	<p>All cells are adjusted to the width of the top left cell in the selected cells.</p> <p>This width is applied to all cells.</p> 
Align Height	<p>All cells are adjusted to the height of the top left cell in the selected cells.</p> <p>This height is applied to all cells.</p> 

Align Text	The cells in a table are adjusted so that the largest data item fits into a cell. 
Cut	This command is used for editing lines or columns.
Copy	This command is used for copying selected items. When it is clicked, [Paste] becomes active.
Paste	When multiple columns or lines are pasted, the cell designated as the target is placed at the top of the pasted data. A data area larger than the table cannot be pasted.
Insert	This command is used for editing lines or columns. When lines are copied or cut (selected lines are highlighted), they are inserted above the designated target. When columns are copied or cut, they are inserted on the left of the designated target.
Delete	This command is used for deleting on a line-by-line or column-by-column basis.
Make Browser File	This command is used for the web server function. For more information, refer to "Chapter 19.5 Web Server" in the V8 Series Reference Manual.
Detail Setting	This command is used for bringing up the item dialog.



The [Cut], [Insert], and [Delete] commands are used for editing lines or columns.

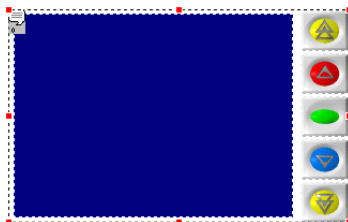
E.g.: Insert



## Message Display / Comment Display

### Placement procedure

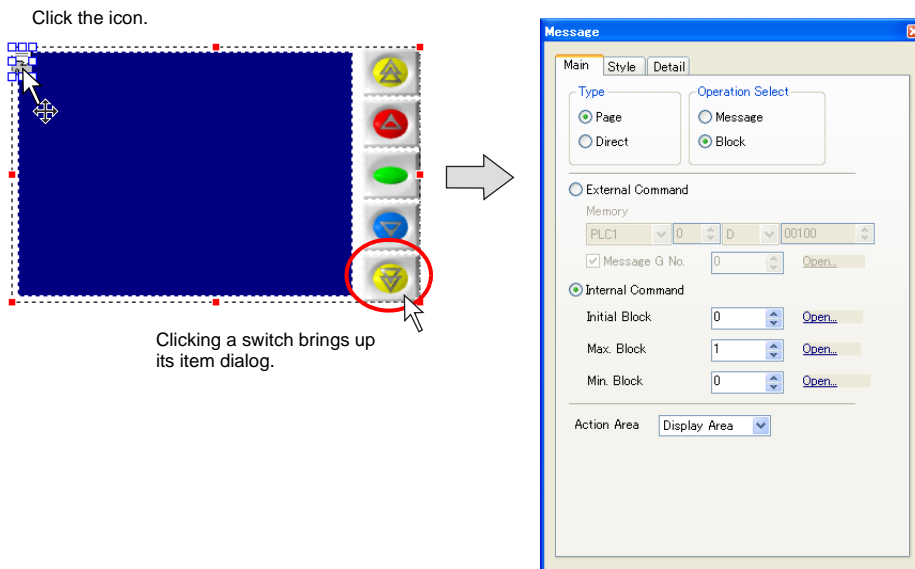
1. Click [Parts] → [Message] → [Message] or [Comment Display], or drag the part from the parts list or Catalog View.  
Move the mouse to the editing window. The part is displayed along with the cursor.
- \* **The part displayed here is the default or the one which was changed or selected last.**
2. Click the mouse in an arbitrary position on the screen. The message display or comment display part is placed.



### Setting method

When the [Message] or [Comment Display] icon is clicked (or double-clicked), the corresponding item dialog is displayed.  
By clicking the display area part or any switch part, the item dialog for the clicked part is displayed.

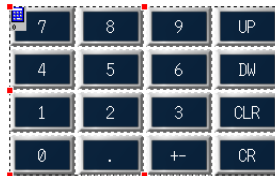
The item dialog is displayed.



## Entry Mode

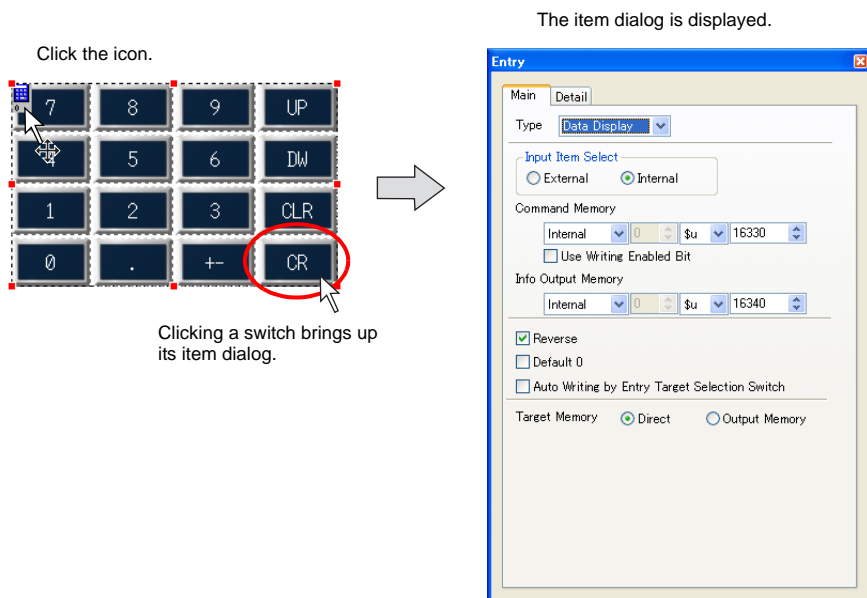
### Placement procedure

1. Click [Parts] → [Entry] (or drag [Entry] from Catalog View).  
Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in a desired position on the screen. The part is placed in that position.



### Setting method

When the [Entry] icon is clicked (or double-clicked), the [Entry] dialog is displayed. By clicking any switch part, the item dialog for the switch is displayed.

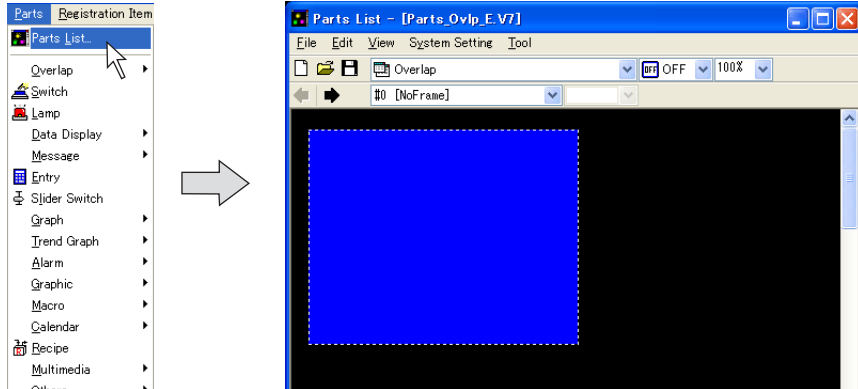


Once a keypad or a keyboard in entry mode is placed on the screen, modifying the design of the contained switches all at once is not possible. (They can be modified one by one though.)

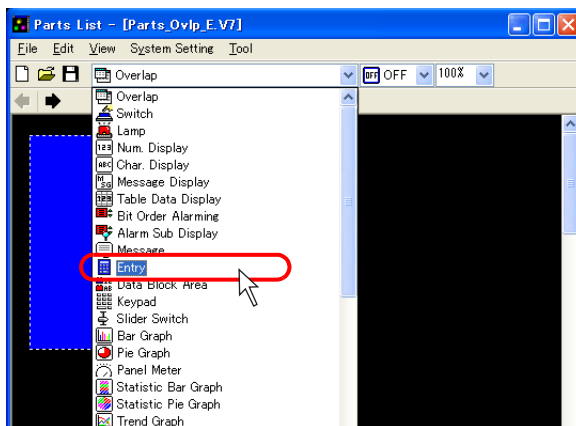
If you wish to select a keypad or keyboard in entry mode prior to placing it on the screen, go to the [Parts List]. For more information, refer to the next section.

### Placement from the parts list

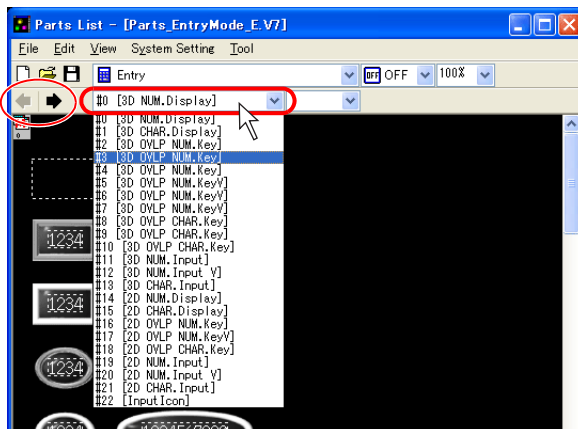
1. Bring up the parts list on the screen.  
Select [Parts List] from the [Parts] menu.  
The [Parts List] window opens.



2. Select [Entry] from the pull-down menu.

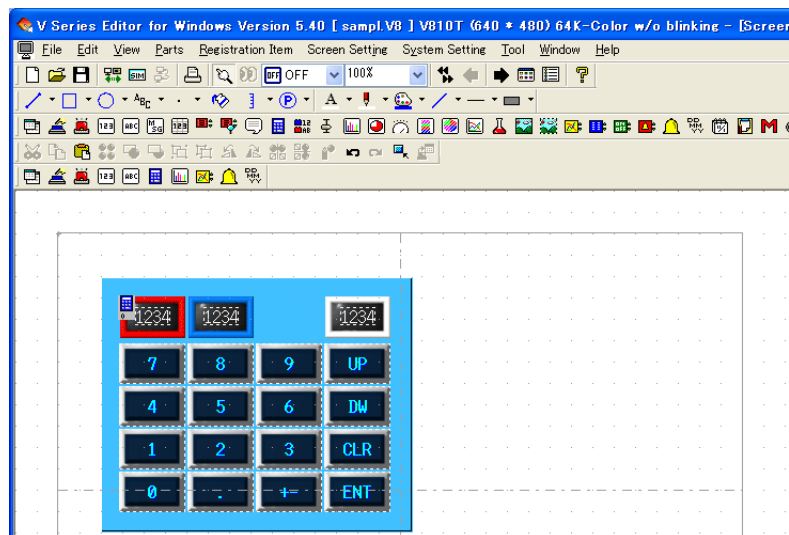
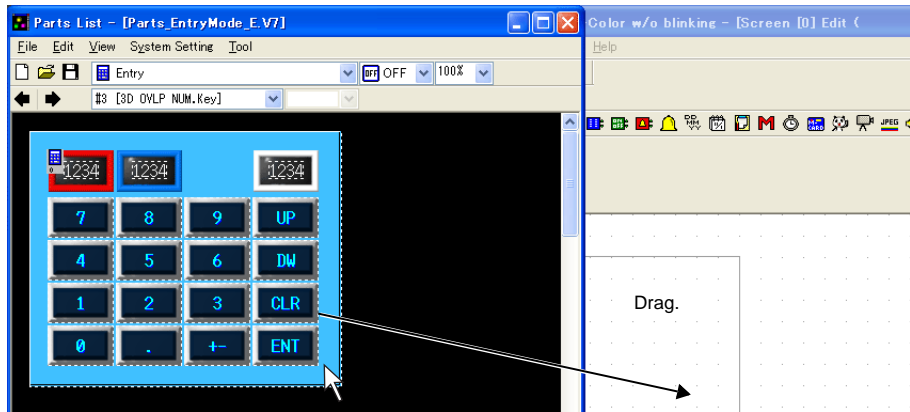


3. Find the desired part in the list changed with the arrow icon or from the pull-down menu.

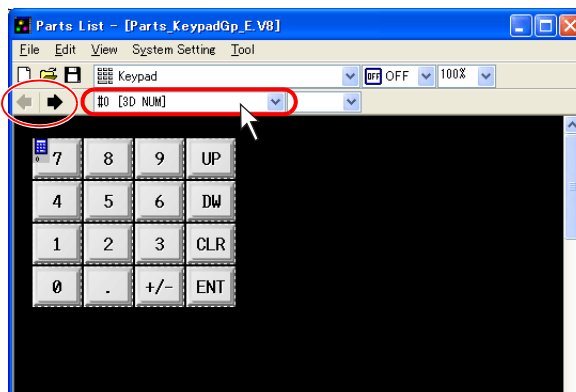


☺ The [Parts List] window offers various kinds of parts, for example, screens containing only numerical data or character displays, containing numerical data or character displays linked to a keypad or a keyboard, and containing a keypad placed on an overlap display.

- Select the desired item and drag it on the screen.  
The part is placed on the screen.



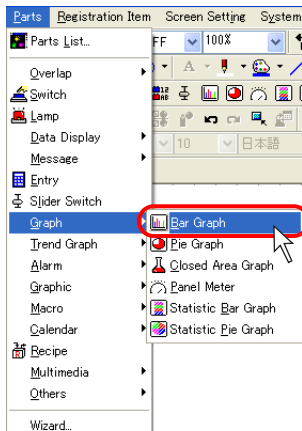
- In the [Parts List] window, there is also an option [Keypad]. Under [Keypad], you can select a keypad from varied designs.  
Select options according to your purpose.



## Graph

### Placement procedure

1. Click the item selected from [Parts] → [Graph], or drag it from the parts list or Catalog View. Move the mouse to the editing window. The part is displayed along with the cursor.



The part is displayed with the cursor moved.



\* The part displayed here is the default or the one which was changed or selected last.

2. Click the mouse in an arbitrary position on the screen. The graph part is placed.



Click.

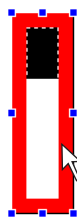


Place a part.

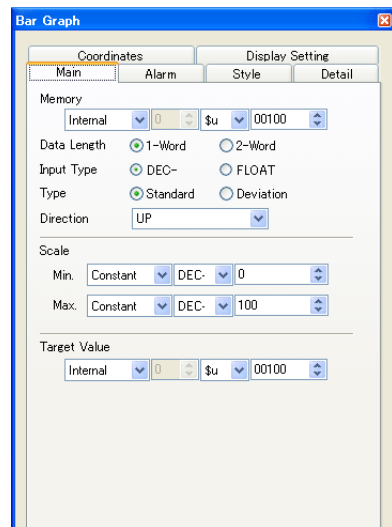
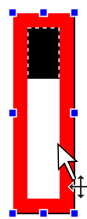
### Setting method

The item dialog is displayed by clicking or double-clicking on the parts placed on the screen.

The item dialog (e.g. bar graph) is displayed.



Click on the item.

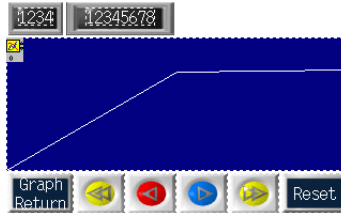




## Trend Graph / Trend Sampling

### Placement procedure

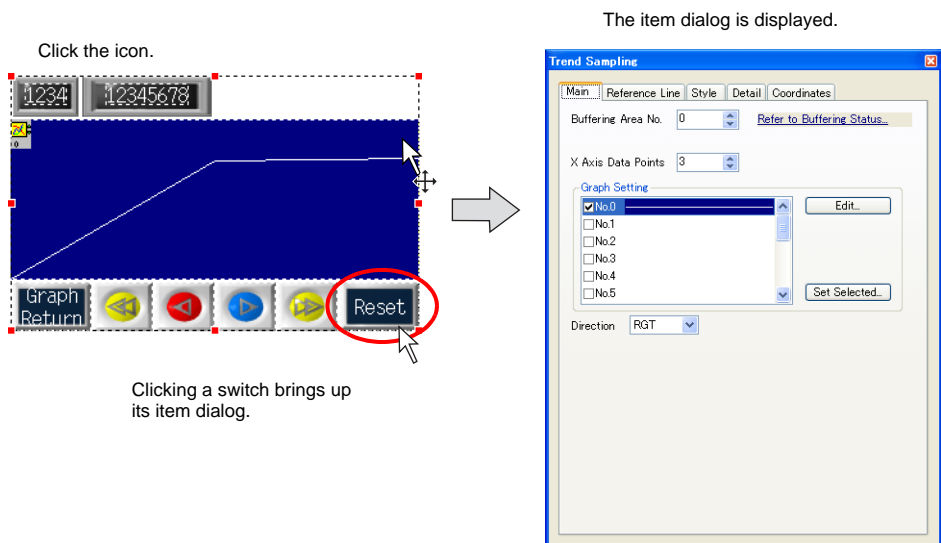
1. Click [Parts] → [Trend] → [Trend Graph] or [Trend Sampling], or drag the part from the parts list or Catalog View.  
Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in an arbitrary position on the screen. The part is placed in the position.



### Setting method

When the trend graph or trend sampling area is clicked (or double-clicked), the corresponding item dialog is displayed.

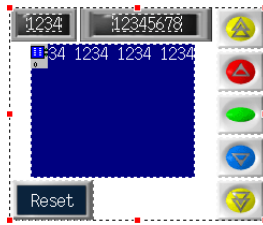
In the case of the trend sampling area, clicking each switch part brings up the item dialog for the switch.



## Data Sampling

### Placement procedure

1. Click [Parts] → [Trend] → [Data Sampling], or drag the part from the parts list or Catalog View. Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in an arbitrary position on the screen. The data sampling part is placed.



### Setting method

When the [Data Sampling] icon is clicked (or double-clicked), the [Data Sampling] dialog is displayed. By clicking (or double-clicking) the display area part for data sampling, the [Data Sampling Display Area] dialog is displayed.

By clicking any switch part, the item dialog for the switch is displayed.

Click the icon.

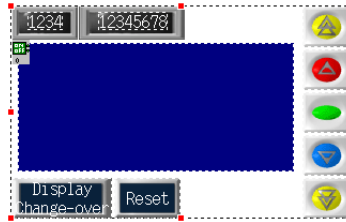
The item dialog is displayed.

Clicking the display area brings up the item dialog for the data sampling display area.

## Alarm Tracking / Bit Order (Time Order) Alarming / Alarm Sub Display / Alarm Logging

### Placement procedure

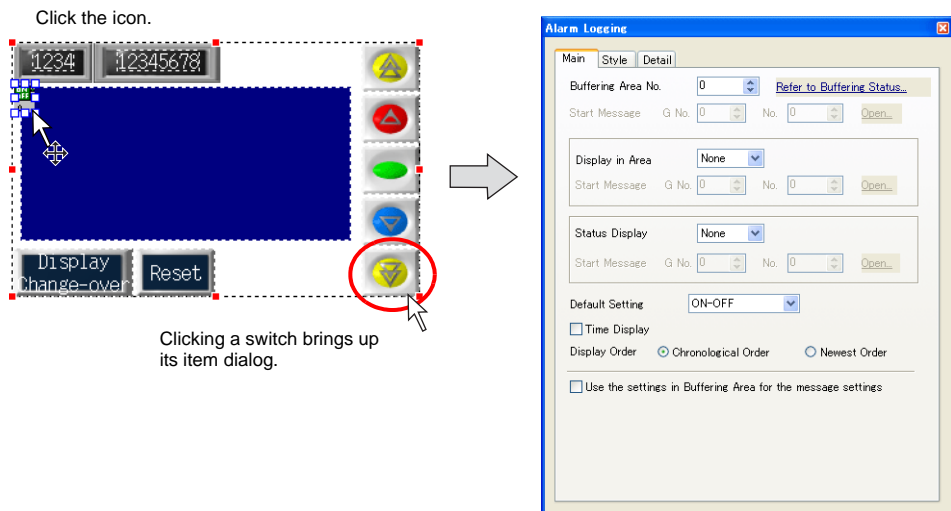
1. Click the item selected from [Parts] → [Alarm], or drag it from the parts list or Catalog View. Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in an arbitrary position on the screen. The linked part is placed.



### Setting method

When the icon is clicked (or double-clicked), the corresponding item dialog is displayed. By clicking the display area part or any switch part, the item dialog for the clicked part is displayed.

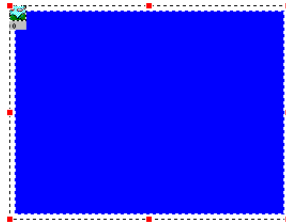
The item dialog is displayed.



## Graphic / Graphic Relay

### Placement procedure

1. Click [Parts] → [Graphic] → [Graphic] or [Graphic Relay], or drag the part from the parts list or Catalog View.  
Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in an arbitrary position on the screen. The graphic mode part or graphic relay mode part is placed.

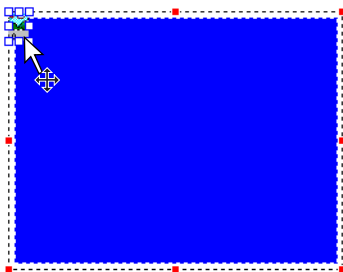


### Setting method

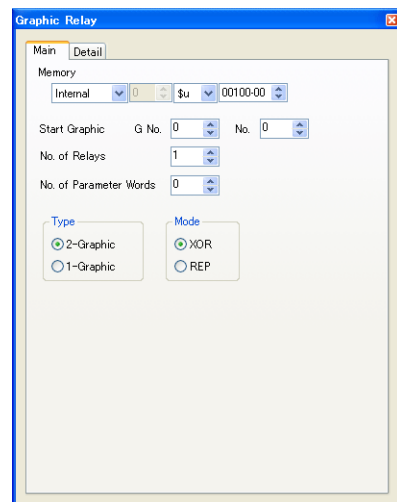
When the [Graphic] or [Graphic Relay] icon is clicked (or double-clicked), the corresponding item dialog is displayed.

By clicking the display area part or any switch part, the item dialog for the clicked part is displayed.

Click the icon.



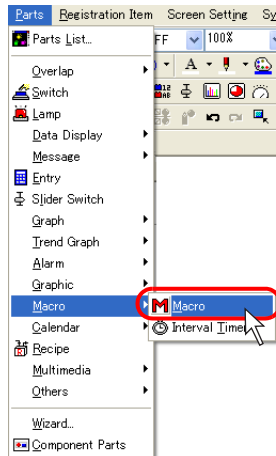
The item dialog is displayed.



## Macro / Interval Timer

### Placement procedure

1. Click the item selected from [Parts] → [Macro], or drag it from the parts list or Catalog View. Move the mouse to the editing window. The icon is displayed along with the cursor.



The icon is displayed by moving the mouse.



2. Click the mouse in an arbitrary position on the screen. The icon is placed.



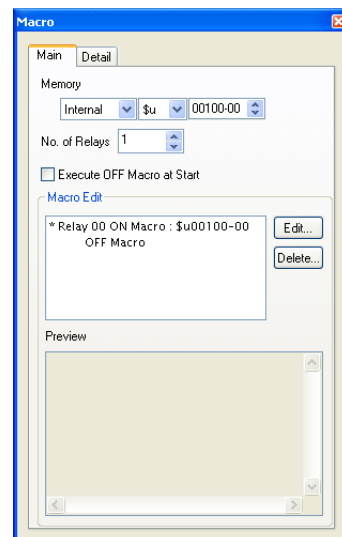
Click.



The icon is placed.

### Setting method

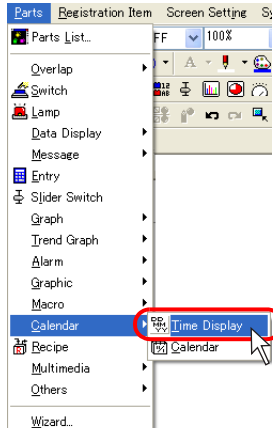
Click (or double-clicking) on the placed icon brings up the item dialog.



## Time Display / Calendar

### Placement procedure

1. Click [Time Display] or [Calendar] selected from [Parts] → [Calendar], or drag the part from the parts list or Catalog View.  
Move the mouse to the editing window. The part is displayed along with the cursor.



The part is displayed with the cursor moved.



- \* When [Calendar] is clicked, the default part or the part modified or selected last is displayed.  
When [Time Display] is clicked, the fixed part is always displayed.

2. Click the mouse in an arbitrary position on the screen. The item is placed.



Click.



The item is placed.

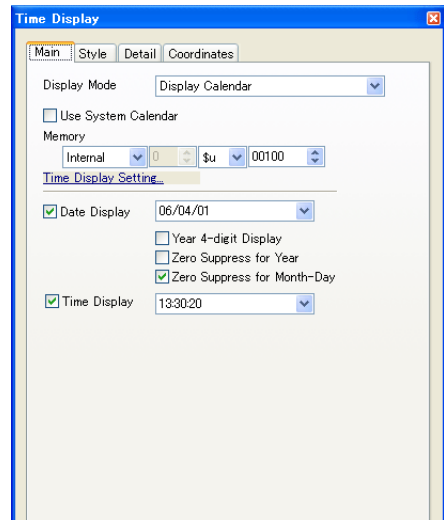
### Setting method

The item dialog is displayed by clicking (or double-clicking) on the item placed on the screen.

The item dialog (e.g. switch) is displayed.



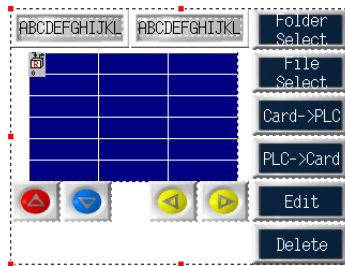
Click on the item.



## Recipe

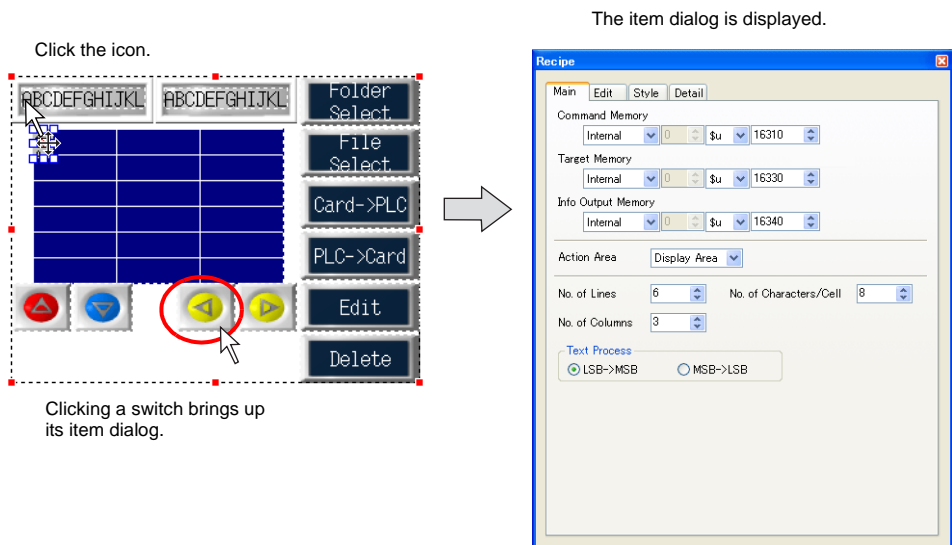
### Placement procedure

1. Click [Recipe] in the [Parts] menu, or drag it from the parts list or Catalog View.  
Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in an arbitrary position on the screen. A recipe part is placed on the screen.



### Setting method

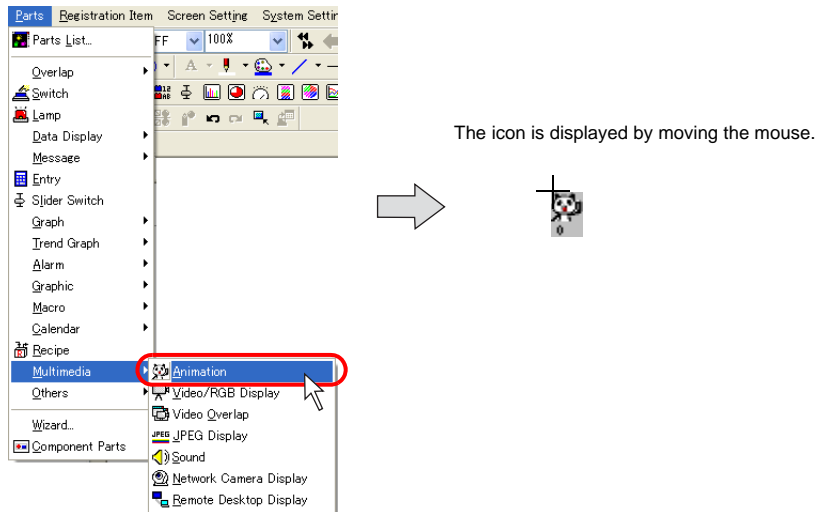
When the [Recipe] icon is clicked (or double-clicked), the [Recipe] dialog is displayed.  
By clicking the display area part or any switch part, the item dialog for the clicked part is displayed.



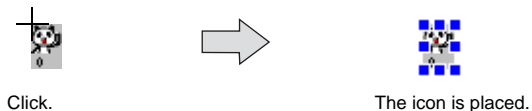
## Animation / Sound

### Placement procedure

1. Click the item selected from [Parts] → [Multimedia], or drag it from the parts list or Catalog View. Move the mouse to the editing window. The icon is displayed along with the cursor.

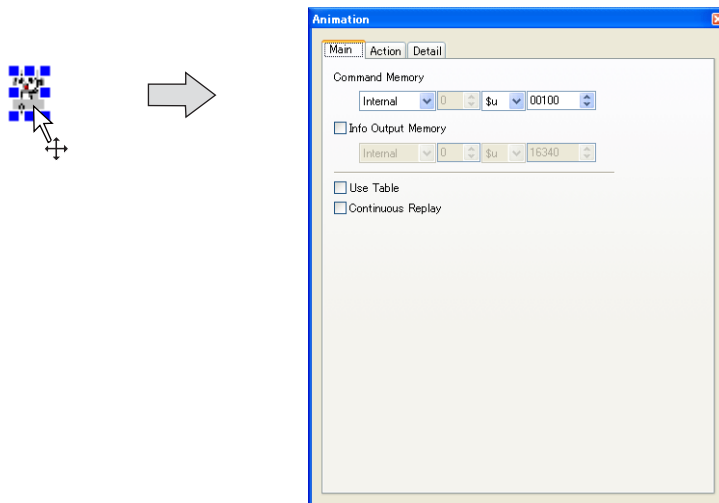


2. Click the mouse in an arbitrary position on the screen. The icon is placed.



### Setting method

Click (or double-clicking) on the placed icon brings up the item dialog.

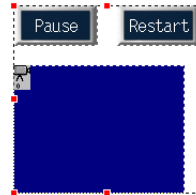




## Video Display / JPEG Display

### Placement procedure

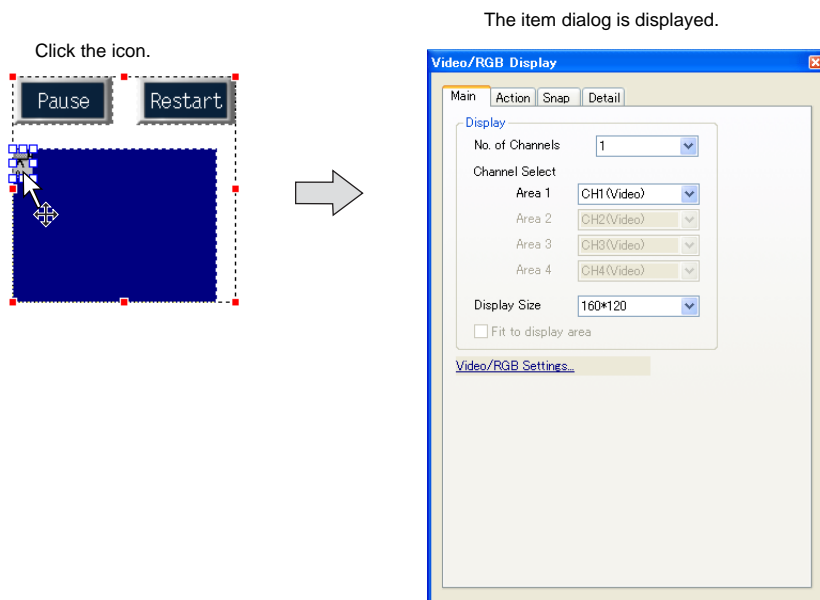
1. Click [Parts] → [Multimedia] → [Video/RGB Display], or click [Parts] → [Multimedia] → [JPEG Display]. (Alternatively, drag it from the parts list or Catalog View.)  
Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in an arbitrary position on the screen. The video display or JPEG display part is placed.



### Setting method

When the [Video Display] or [JPEG Display] icon is clicked (or double-clicked), the corresponding item dialog is displayed.

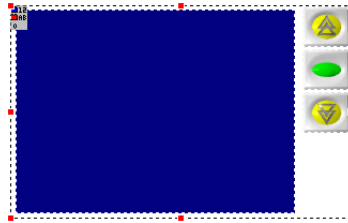
By clicking the display area part or any switch part, the item dialog for the clicked part is displayed.



## Data Block Area / Memory Card / Memo Pad

### Placement procedure

1. Click the item selected from [Parts] → [Others], or drag it from the parts list or Catalog View. Move the mouse to the editing window. The part is displayed along with the cursor.
2. Click the mouse in an arbitrary position on the screen. The part is placed in the position.



### Setting method

When the icon is clicked (or double-clicked), the corresponding item dialog is displayed.  
 By clicking the display area part or any switch part, the item dialog for the clicked part is displayed.

The item dialog is displayed.

Click the icon.

Clicking a switch brings up its item dialog.

**Data Block Area**

Main Detail

Designate

Internal  External

Block No. Read Memory

PLC1 0 D 00100

Initial Displayed Block 0

Min. Block 0

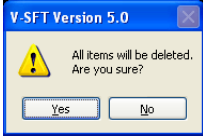
Max. Block 0

## 3.8 Useful Functions for Screen Editing

### [Edit] Menu

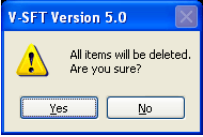
The [Edit] menu provides the following functions:

Edit	Content	Refer to:
Undo	Cancels actions that you performed.	–
Redo	Becomes active when [Undo] is performed. This command restores the screen to the state before the execution of [Undo].	–
Cut	Cuts the selected item and moves it to the clipboard.	–
Copy	Copies the selected item to the clipboard.	–
Paste	Pastes the item in the clipboard to the screen.	–
Paste to the Selected Screen	–	page 3-98
Undo Paste to Selected Screen	–	page 3-98
Delete	Deletes the selected item. Select a part or a graphic (or parts or graphics) to be deleted with handles, and click this command.	–
Multiple Copy	–	page 3-99
Group	Groups the selected items. Select multiple items at the same time and click this command. To cancel, select the grouped items and click [Ungroup].	–
Order	Offers four sub-menu items [Bring to Front], [Send to Back], [Bring to Top], and [Send to Bottom]. Your selected item on the screen is moved according to the selection from the four.	–
Place	–	page 3-102
Arrangement (Equal)	–	page 3-104
Put All in Same Size	–	page 3-105
Rotation/Reverse Rotation	Offers four sub-menu items [Rotate 90 degrees CCW], [Rotate 90 degrees CW], [Horizontal Flip], and [Vertical Flip]. Your selected item is rotated or flipped according to the selection from the four. (This command applies to only graphics, not text).	–
Vertex Edit	–	page 4-17
Change Part	–	page 3-106
Link	–	page 3-61
Detail Setting	Brings up the item dialog for the selected item. Select an item and click this command.	–
Select Environment	–	page 3-112
Select All	Selects all items placed on the screen.	–

Delete All	<p>Clicking this brings up the dialog shown below.</p>  <p>When [Yes] is clicked, all items are deleted from the screen.</p>	-
------------	---	---

## Right-click Menu (with No Item Selected)

The right-click menu provides the following menu items:

Edit	Content	Refer to:
Paste	Pastes the item in the clipboard to the screen.	-
Undo	Cancels actions performed.	-
Redo	Becomes active when [Undo] is performed. This menu item restores the screen to the state before the execution of [Undo].	-
Select All	Selects all items placed on the screen.	-
Delete All	<p>Clicking this brings up the dialog shown below.</p>  <p>When [Yes] is clicked, all items are deleted from the screen.</p>	-
Grid	-	page 3-3
Customize	Shows/hides the center lines.	-
Overlap Display	Shows/hides a normal overlap.	page 3-98
Overlap Editing	Allows you to enter into overlap editing.	page 3-67

## Right-click Menu (with an Item Selected)

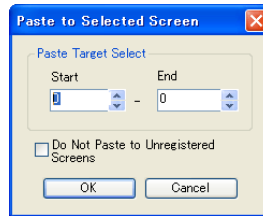
The right-click menu provides the following menu items:

Edit	Content	Refer to:
Undo	Cancels actions performed.	–
Redo	Becomes active when [Undo] is performed. This menu item restores the screen to the state before the execution of [Undo].	–
Cut	Cuts the selected item and moves it to the clipboard.	–
Copy	Copies the selected item to the clipboard.	–
Paste	Pastes the item in the clipboard to the screen.	–
Delete	Deletes the selected item(s). Select a part or a graphic (or parts or graphics) to be deleted with handles, and click this menu item.	–
Multi Copy	–	page 3-99
Select within Overlap	–	page 3-98
Group	Groups the selected items. Select multiple items at the same time and click this menu item. To cancel, select the grouped items and click [Ungroup].	–
Order	Offers four sub-menu items [Bring to Front], [Send to Back], [Bring to Top], and [Send to Bottom]. An item selected on the screen is moved according to the selection from the four.	–
Place	–	page 3-102
Arrangement (Equal)	–	page 3-104
Put All in Same Size	–	page 3-105
Rotation/Reverse Rotation	Offers four sub-menu items [Rotate 90 degrees CCW], [Rotate 90 degrees CW], [Horizontal Flip], and [Vertical Flip]. An item selected on the screen is rotated or flipped according to the selection from the four. (This menu item applies to only graphics, except for text).	–
Vertex Edit	–	page 4-17
Change Part	–	page 3-106
Link	–	page 3-61
Batch Change	–	page 3-109
Change Memory	–	page 8-69
Detail Setting	–	page 3-111
Wizard	–	page 8-93

## Paste to the Selected Screen

Items selected on one screen can be pasted to multiple screens at the same time. Follow the steps described below.

1. Click items on the screen or drag the mouse to select multiple parts.
2. Click [Paste to Selected Screen] from the [Edit] menu.  
The following dialog is displayed.



Paste Target Select (Start / End)	Specify the screen numbers to which you wish to paste the selected item.
<input type="checkbox"/> Do Not Paste to the Unregistered Screens	When the selected item should not be pasted on unregistered screens, check this box. To paste the selected item on unregistered screens, remove the check mark.

3. Click [OK]. Paste operation is performed.



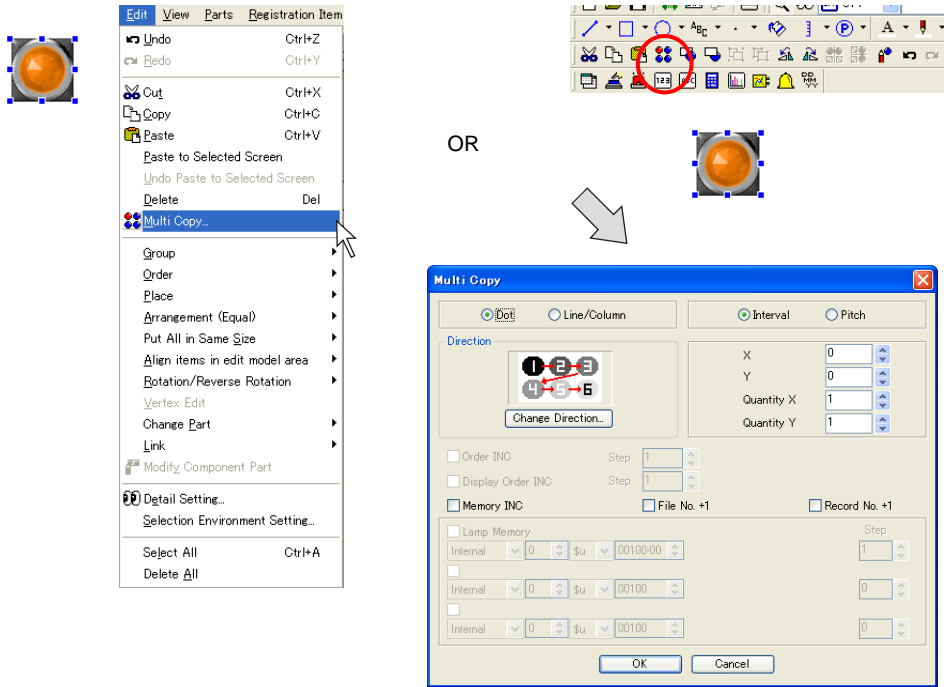
If paste operation is performed on a layer (such as an overlap) where the number of items per screen is limited and the number reaches the limit, the error message "No more Overlap can be registered." is displayed.

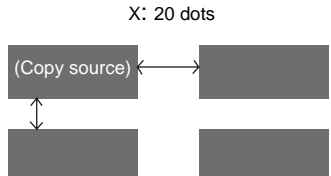
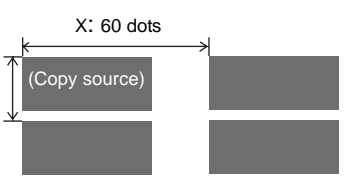


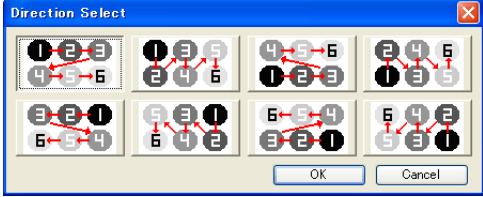
To cancel [Paste to Selected Screen] that you performed, click [Undo Paste to Selected Screen] in the [Edit] menu.

## Multi Copy

A part or a graphic (parts or graphics) can be copied multiple times at one time.  
 Select a part or a graphic (or parts or graphics), and click this menu (or the [Multi Copy] icon).  
 The [Multiple Copy] dialog is displayed.



Dot Line/Column	Choose either option for placing copied parts on the screen, by dots or by lines/columns. For more information on the line and column, refer to page 2-36.
Interval / Pitch	Choose either option for placing copied parts on the screen, by pitch or at intervals.  When [Interval] is chosen: X: 20 Y: 10 Quantity X: 2 Quantity Y: 2 Y: 10 dots  When [Pitch] is chosen: X: 60 Y: 20 Quantity X: 2 Quantity Y: 2 Y: 20 dots 
X / Y	Specify distances along the X and Y directions for placing copied parts. The unit for these values is [Dots] or [Line/Column] that is selected.
Quantity X / Quantity Y	Specify the number of required copies. The copy must be included in this number.

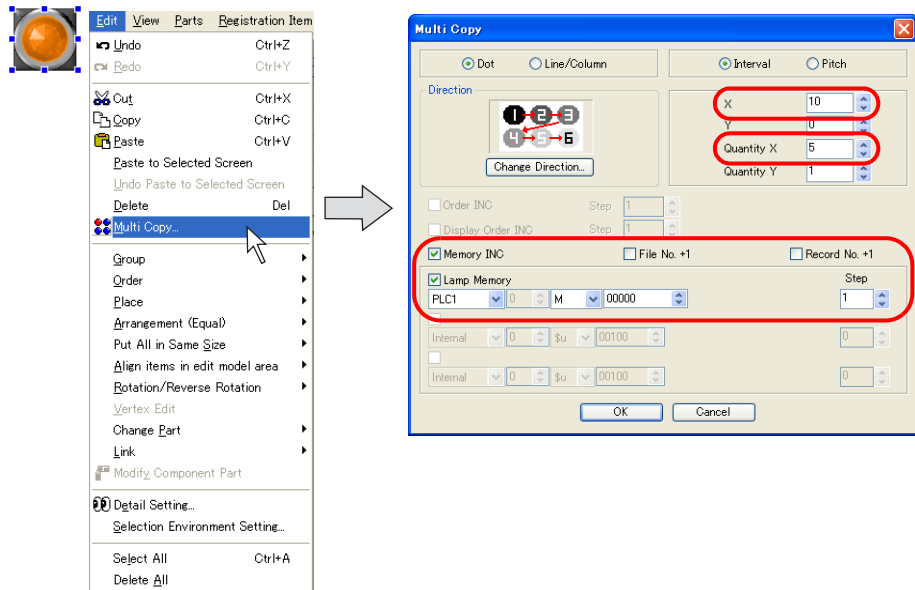
<p>Direction</p>	<p>When the check box of [Memory INC] or [Order INC] is turned on, it determines the direction of placing copied parts. When changing the direction, click [Change Direction]. The [Direction Select] dialog is displayed. Choose the desired direction and click [OK]. The selected direction becomes valid.</p> 
<p>Order INC</p>	<p>This option is valid when making multiple copies of a data display part for which [Order INC] is set. If you wish to increment the [Order INC] setting for copies to be made, check this option. [Order INC] is provided with the [Step] setting.</p>
<p>Display Order INC</p>	<p>This option is valid when making multiple copies of a switch/lamp part for which [Function: Mode] or [Function: Recipe Display] is set. If you wish to increment the [Display Order] setting for copies to be made, check this option. [Order INC] is provided with the [Step] setting.</p>
<p>Memory INC</p>	<p>This option is valid when using a switch/lamp or data part as the copy source. Specify the top memory address for the copy source. Memory addresses are allocated for the number of copies. [Memory] and [Step] become active.</p>
<p>Used Memory</p>	<p>Specify the top memory address of the copy source.</p>
<p>Step</p>	<p>Specify the increment (in words or bits) when increasing the memory address consecutively. When "1" is entered, the allocated addresses are incremented by one word or bit. When "2" is entered, the allocated addresses are incremented by two words or bits.</p>
<p>File No. +1 Record No. +1</p>	<p>These options are useful when [Memory Card] is selected as the memory type. If you wish to increment the file/record number, check the option.</p>



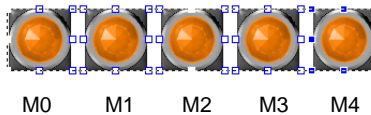
## Setting Example

This section provides the procedure to make five copies of the lamp part and place them horizontally using the multiple copy function.

1. Select the lamp part, and click [Multi Copy] from the [Edit] menu, click the [Multi Copy] icon or from the right-click menu. The [Multi Copy] dialog opens.
2. Set as shown below.



3. Click [OK]. Five copied lamps are horizontally placed.

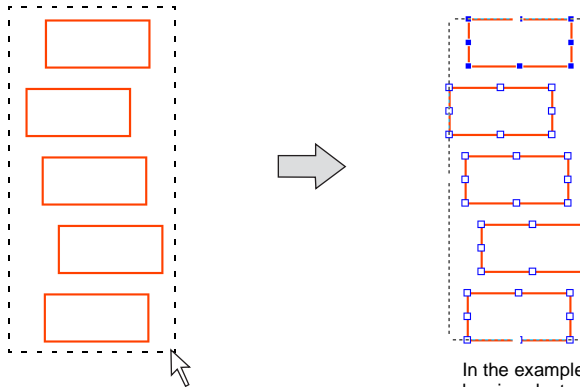


The valid setting items in the [Multi Copy] dialog vary depending on the selected parts. The above example shows the setting items for the lamp part only.

## Alignment (E.g. Flush Left)

The procedure for aligning five boxes randomly placed with a box placed at the extreme left is shown below.

1. Select the five boxes randomly placed at one time.  
The reference item for alignment is selected and has a blue handle.

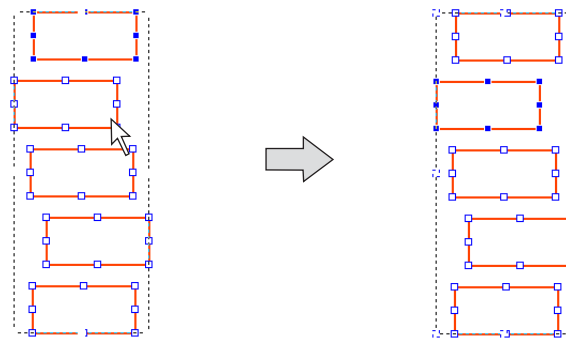


In the example above, the uppermost box is selected with the blue handle.



When multiple items are selected, the most recently created or placed item is given the blue handle.

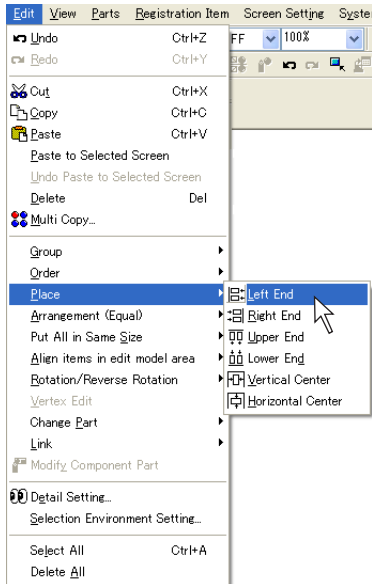
- \* When the box on the extreme left is designated with the blue handle, go to step 3.
2. To make the box on the extreme left as the reference, change the handle color of the box on the extreme left to blue. Click the box on the extreme left while holding down the Ctrl key. The handle of the box on the extreme left will turn blue.



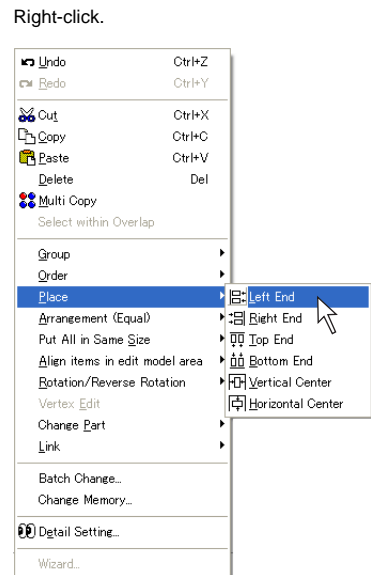
Click the box on the extreme left while holding down the Ctrl key.

The blue handle moves to the clicked box.

- Click [Edit] → [Place] → [Left End], or click [Place] → [Left End] from the right-click menu. All boxes are left-aligned with reference to the box with the blue handle.

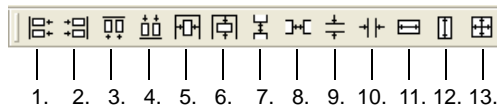


OR



Alignment can be performed not only from the [Edit] menu but also from the [Layout] toolbar displayed by clicking [View] → [Toolbar] → [Layout].

[Layout] toolbar

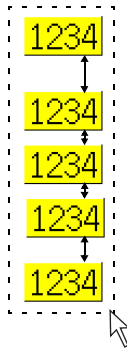


1. Flush Left
2. Flush Right
3. Flush Top
4. Bottom Align
5. Vertical Center Align
6. Horizontal Center Align
7. Vertical Align (Regular Spacing)
8. Horizontal Align (Regular Spacing)
9. Vertical Align (Specified)
10. Horizontal Align (Specified)
11. Align Width
12. Align Height
13. Align Size

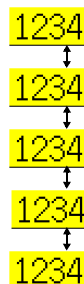
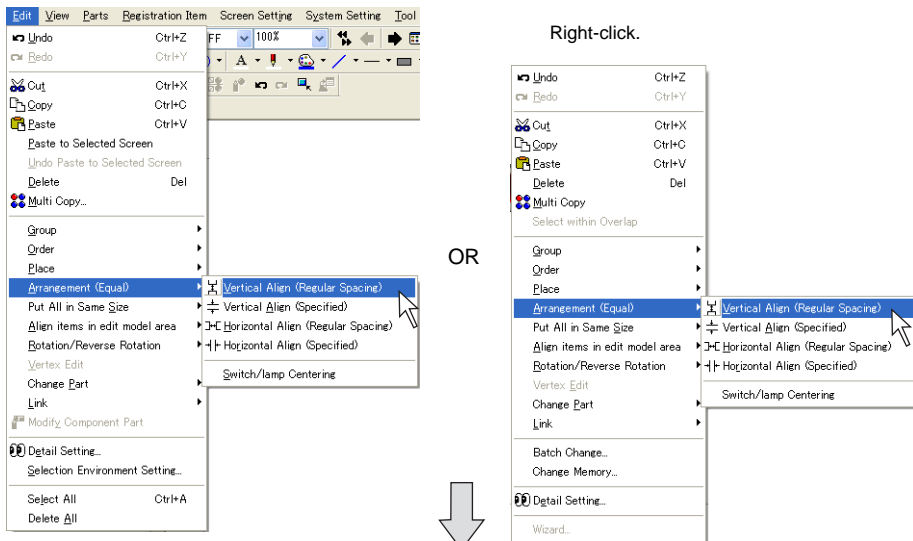
## Arrangement (Equal) (E.g. Vertically)

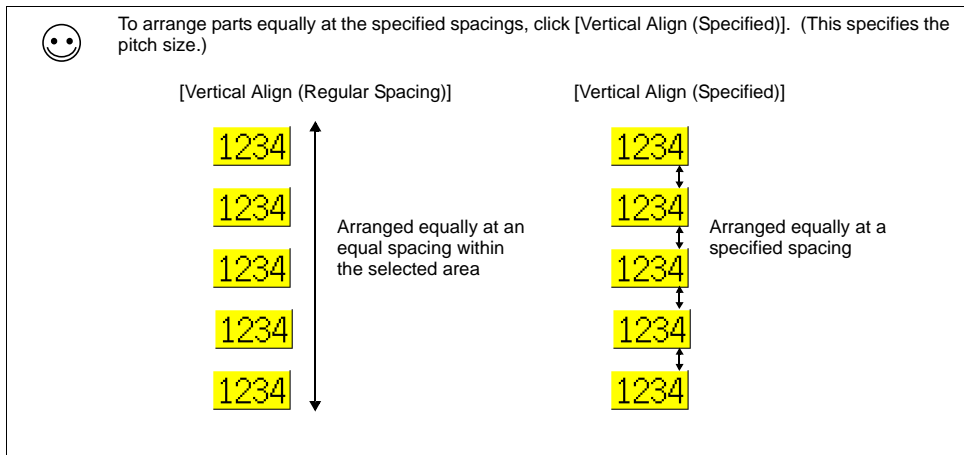
This section describes the procedure to arrange numerical data display parts vertically at equal spacings.

1. Select the five numerical data display part placed as shown below at one time.



2. Click [Edit] → [Arrangement (Equal)] → [Vertical Align (Regular Spacing)], or right-click the mouse and click [Arrangement (Equal)] → [Vertical Align (Regular Spacing)].  
The numerical data display part is arranged at equal spacings within the selected area.





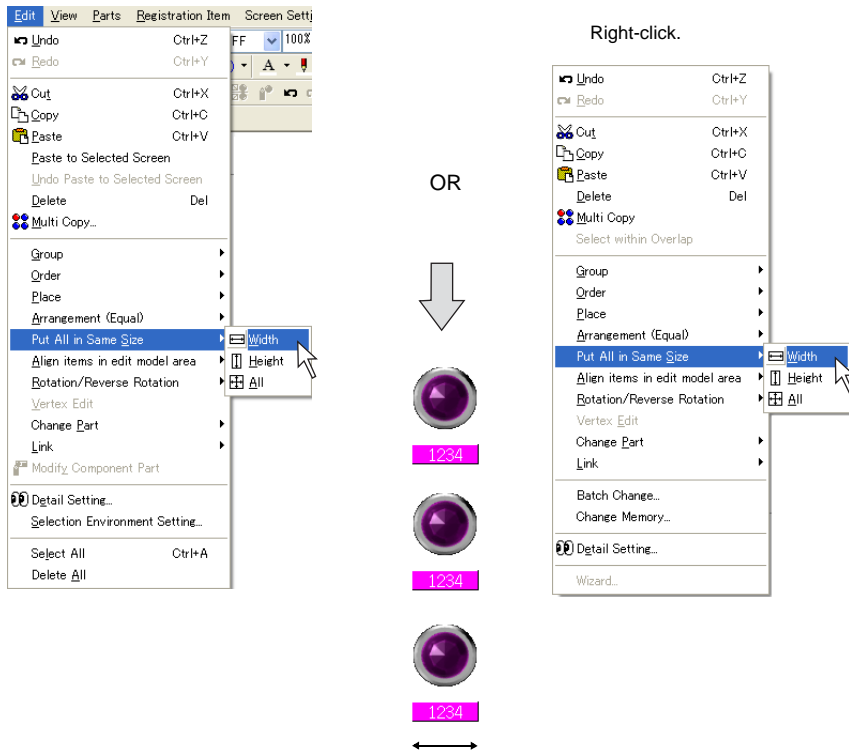
## Put All in Same Size

This section, for example, explains how to resize different parts to the same width.

1. As shown below, select the placed parts at the same time. The reference item for alignment is selected and has a blue handle.



- Click [Edit] → [Put All in Same Size] → [Width], or right-click the selected parts and click [Put All in Same Size] → [Width]. All the other parts are formed to the width of the part enclosed with blue handles.



## Changing Part

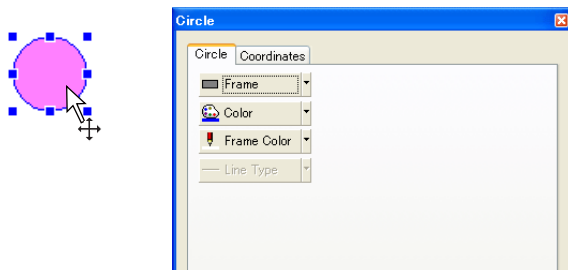
### Link / Link Cancel

When a linked part is selected, [Link] becomes active ([Edit] → [Link]).  
 For more information, refer to page 3-61.

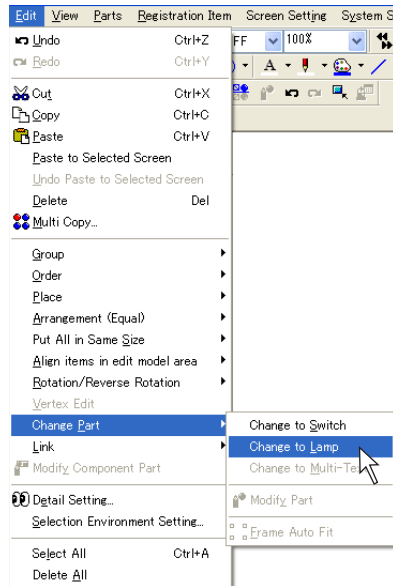
### Change to Switch / Change to Lamp

A graphic can be changed to a switch or lamp part easily. In addition, changing a switch part to a lamp part or vice versa is possible.  
 For example, this section explains how to change a drawn circle to a lamp part.

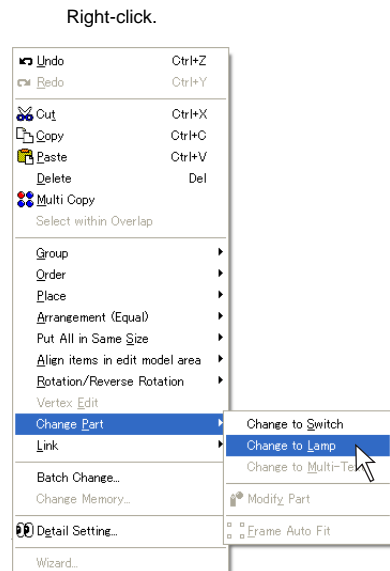
- Click the circle.



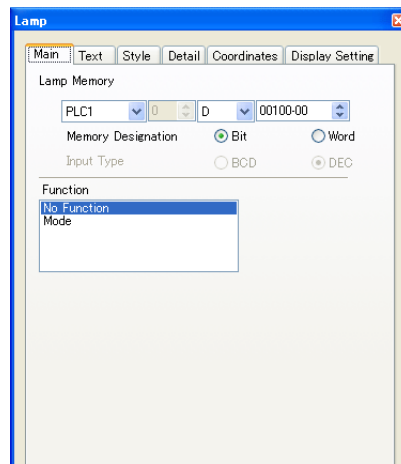
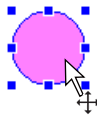
- Click [Edit] → [Change Part] → [Change to Lamp], or right-click the circle, and click [Change Part] → [Change to Lamp].



OR



- The circle becomes a lamp part.

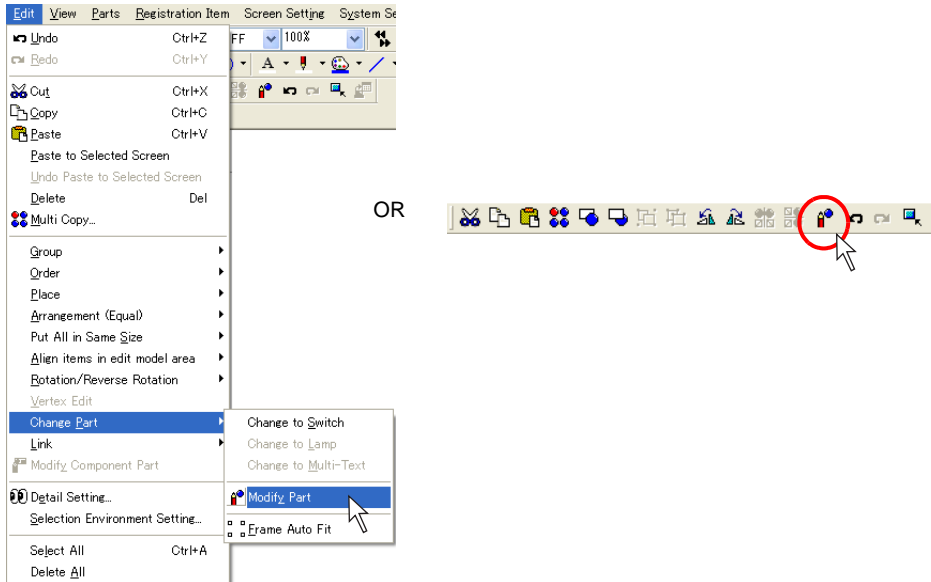


The above manner using [Change to Lamp] or [Change to Switch] applies to the only ON and OFF patterns of a switch/lamp part. For a switch/lamp with 3 or more patterns (3 or more notches), the additional pattern(s) must be created separately. For pattern editing procedure (such as OFF/ON/P3), refer to "Modify Part" on the following pages.

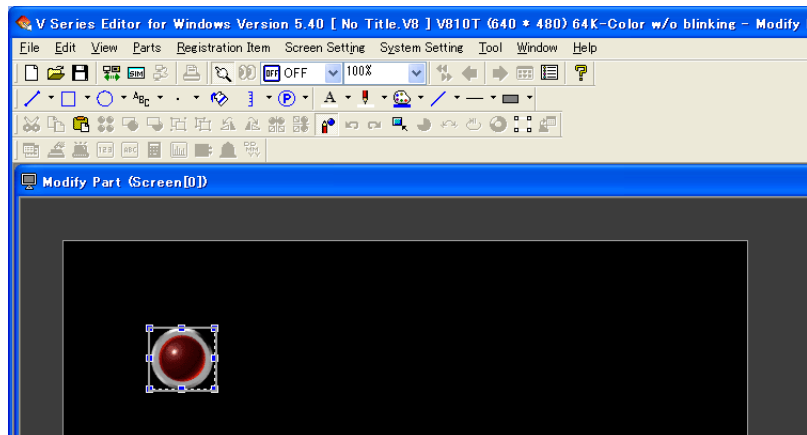
## Modify Part

When modifying the design of any part you placed, use the [Modify Part] icon.

1. Click the part you wish to modify. Click [Edit] → [Change Part] → [Modify Part], or right-click the part and click [Change Part] → [Modify Part]. Or, click the [Modify Parts] icon.



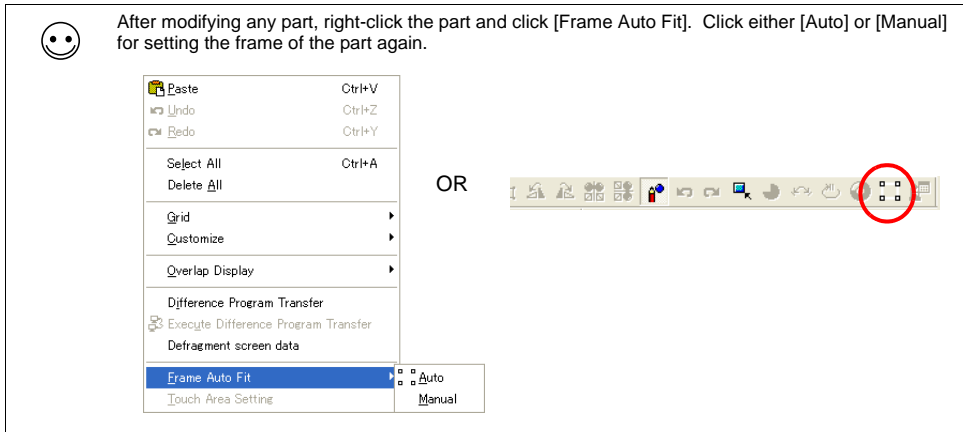
2. The [Modify Part] window is displayed. Using drawing items, etc., modify the part to a design as desired.



When modifying a switch or lamp part, you can switch between [ON] or [OFF] for its status display on the menu bar and make a modification to each pattern.



☺ After modifying any part, right-click the part and click [Frame Auto Fit]. Click either [Auto] or [Manual] for setting the frame of the part again.



OR

- When the modification has been completed, click the [X] button at the top right corner of the window or the [Modify Parts] icon. You can go back to the previous screen.

☺ For how to edit each type of part, refer to “Appendix 3 Parts Editing”.

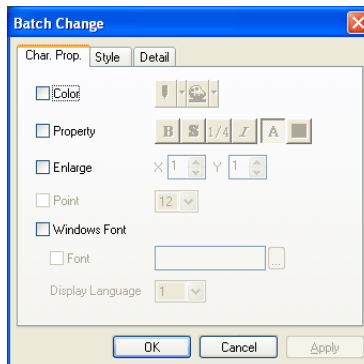
## Batch Change

While multiple graphics are selected, changes can be made in a batch to the colors and sizes of their text and lines.

### Setting Method

Select two or more graphics as desired and right-click → [Batch Change]. The [Batch Change] dialog is displayed:

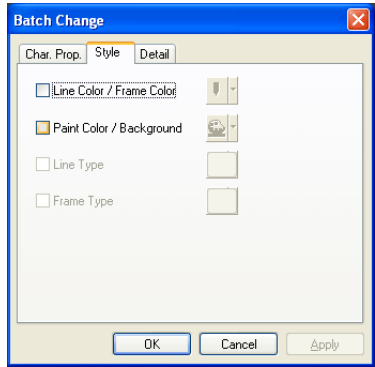
#### [Char. Prop.] tab window



<input type="checkbox"/> Color	Select the color of the characters or the background color.
<input type="checkbox"/> Property	Select character properties, such as character thickness, shadow setting, italic typeface, and transparency.
<input type="checkbox"/> Enlarge	Set the enlargement factors for character resizing.
<input type="checkbox"/> Point	Set the point size of characters. [Point] is valid for Gothic or Windows fonts.

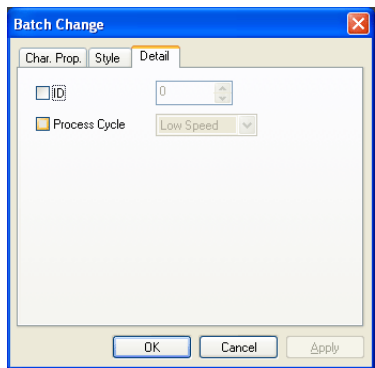
<input type="checkbox"/> Windows Font	Checking <input type="checkbox"/> Windows Font] enables changes to Windows fonts. Windows font change can be made on a language-by-language basis by switching the interface language on the screen.
---------------------------------------	--

**[Style] tab window**



<input type="checkbox"/> Line Color/Frame Color	Select the color of the graphic lines or frames.
<input type="checkbox"/> Paint Color/Background	Select the paint/background color of the graphics.
<input type="checkbox"/> Line Type	Select the line type of the graphics. Depending on graphics, usable line types are limited. For more information, refer to "Limitations on Line Styles" page 4-7.
<input type="checkbox"/> Frame Type	Select the frame type of the graphics.

**[Detail] tab window**



<input type="checkbox"/> ID	Select the ID number of the graphics for batch change.
<input type="checkbox"/> Process Cycle	Select the process cycle of the graphics for batch change.

## Detail Setting

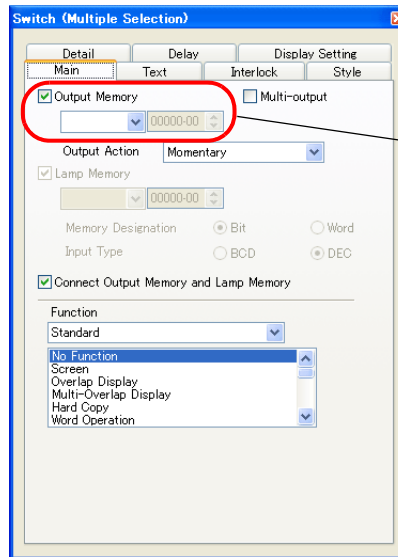
While multiple parts, such as switches, are selected, changes can be made in a batch to their functions or memory locations.

Batch changes in this manner are executable for the parts below:

- switches, lamps, data displays (numerical data display, character display, message display),
- graphs (bar graph, pie graph, closed area graph, panel meter, statistic bar graph, statistic pie graph)

## Setting Method

Select two or more parts as necessary, and right-click → [Detail Setting], or click [Edit] → [Detail Setting]. When multiple switches are selected, the following dialog appears.



Nothing is displayed because the setting varies with the switches.

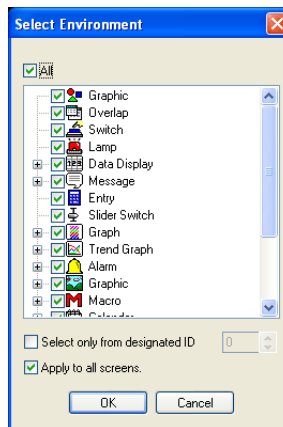
## Selection Environment Setting

Mouse-selectable items can be designated.

### Setting Method

Click [Edit] → [Selection Environment Setting].

The [Select Environment] dialog is displayed.



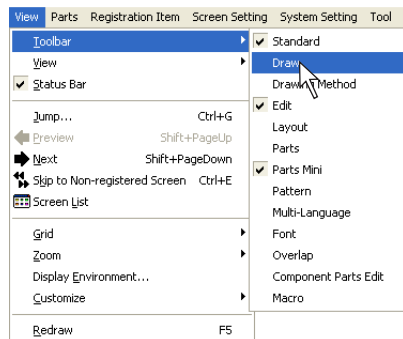
<input type="checkbox"/> All	When this option is checked, all options are checked as selectable with the mouse. When this option is unchecked, you can check only the desired options.
(Individual check boxes)	When any box is checked, the item becomes selectable with the mouse. You may check two or more boxes.
<input type="checkbox"/> Select only from designated ID	When this option is checked, ID setting is enabled. Only the specified ID becomes selectable with the mouse.

# 4 Drawing

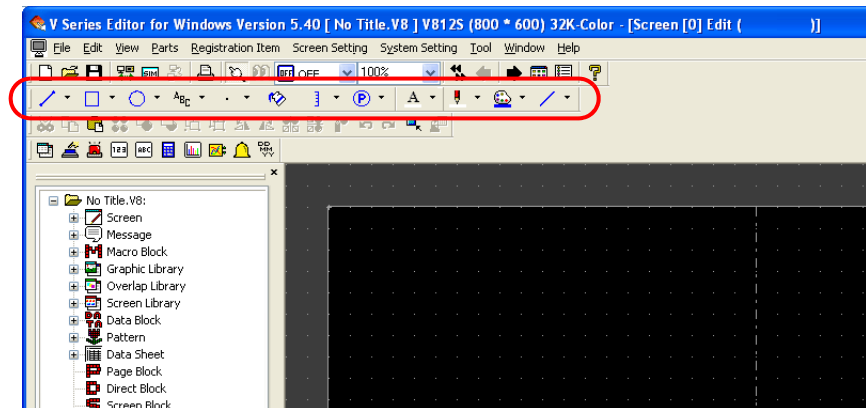
## 4.1 Drawing Toolbar Display Method

Use tools on the toolbar when drawing graphics. The toolbar is displayed at the first start-up. When the toolbar is hidden previously, it will not be displayed at the next start-up. In this case, bring up the toolbar by following the procedure described below.

1. Click [View] → [Toolbar] → [Draw].

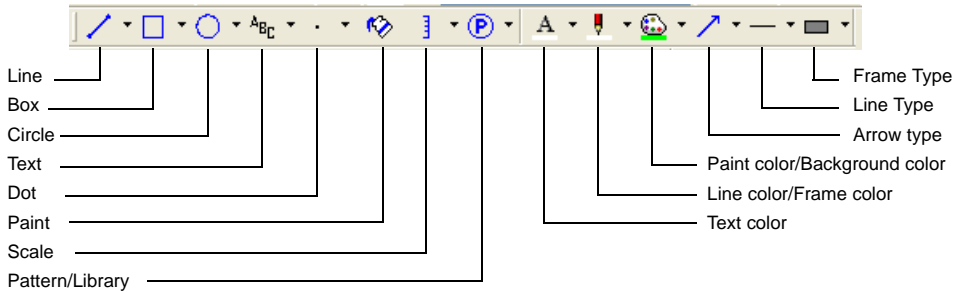





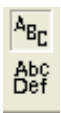
2. The drawing toolbar appears.













## Icons

The drawing toolbar contains the following icons.



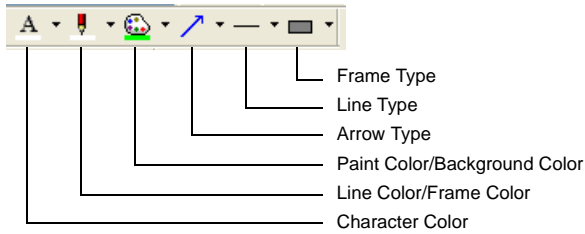
Icon	Item	Content	Refer to:
	Line	Draws straight lines, continuous lines and arrows.	page 4-8
	Box	Draws boxes, parallelograms and polygons.	page 4-10
	Circle	Draws circles, arcs, sectors, ellipses, elliptical arcs and elliptical sectors.	page 4-19
	Text	Draws text graphics.	page 4-31

Icon	Item	Content	Refer to:
	Dot	Draws dots.	page 4-38
	Paint	Paints the enclosed area.	page 4-39
	Scale	Draws bar graphs/pie graphs/trend graph scales.	page 4-42
	Pattern/Library	Places parts stored in the pattern list, graphic library or screen library.	page 4-48
	Character Color	Allows you to specify foreground color for text graphics.	page 4-5
	Line Color/Frame Color	Allows you to specify line or frame color for a line or box.	page 4-5
	Paint Color/Background Color	Allows you to specify a background color for text graphic or a paint color for box.	page 4-5
	Arrow Type	Allows you to specify a arrowhead.	page 4-7
	Line Type	Allows you to specify a line style.	page 4-7

Icon	Item	Content	Refer to:
	Frame Type	Allows you to select a frame type for box or circle.	page 4-10

## 4.2 Attribute Setting Icon

The drawing toolbar contains the following attribute setting icons.



An attribute which is set before drawing graphics affects all new graphics you draw. To change attributes after drawing graphics, set each attribute while the target graphic is selected.



Click.

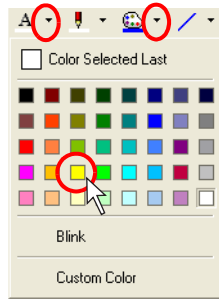


Click the attribute setting icon on the toolbar.  
= changing color

If the attribute setting icon is used while multiple graphics are selected, the attributes of all graphics selected can be changed at one time.



Drag the mouse enclosing all of the parts to be changed.



Select a foreground color and a background color.



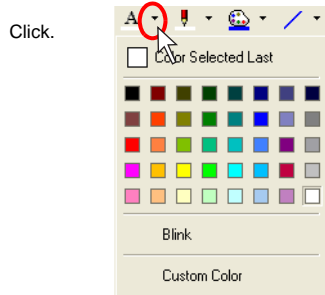
The color is changed.



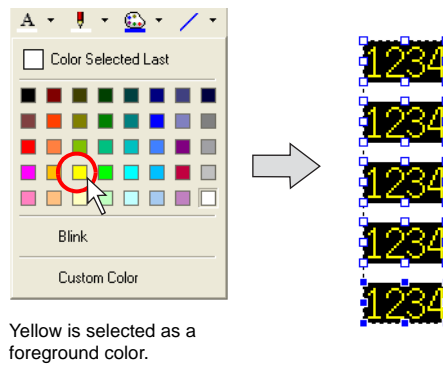
## Selecting Colors

Select colors for text, line, frame, paint or background by following the procedures shown below.

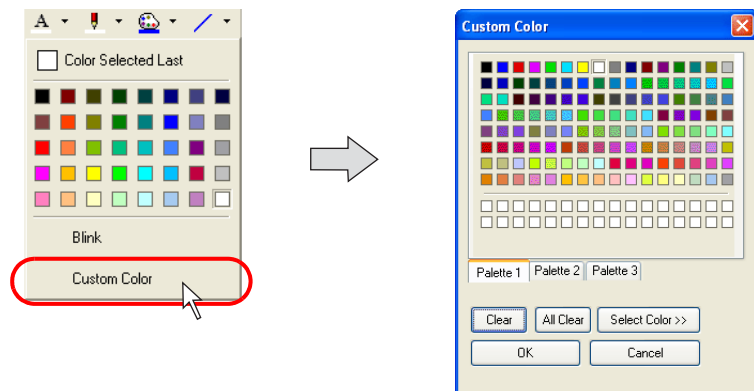
1. Click the “▼” mark on the right of each icon.  
The pull-down menu for selecting a color is displayed.



2. If you find a color you like in the menu, click the color.  
The item is displayed in the selected color.



3. If you want to select any colors other than the ones in the menu, click [Custom Color].  
The [Custom Color] dialog is displayed.

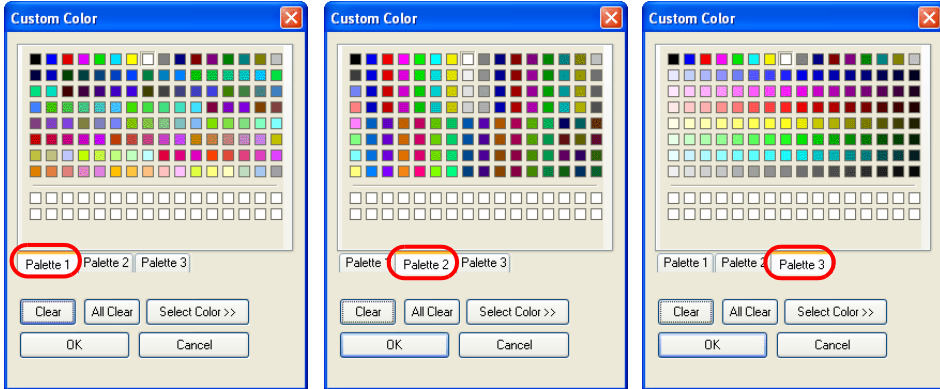




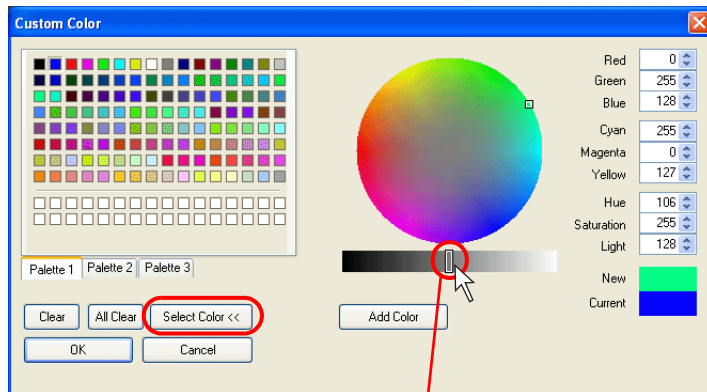
**[Custom Color] dialog**

A maximum of 64,000 colors (or 32,000 or 128 colors depending on the setting) is available in this dialog.

Clicking [Palette 1], [Palette 2] or [Palette 3] brings up each color palette. (For more information on color palette such as a palette type or so on, refer to “3.5 Color Types and Settings” (page 3-35). Click a desired color and [OK]. Then the graphic is displayed in the selected color.



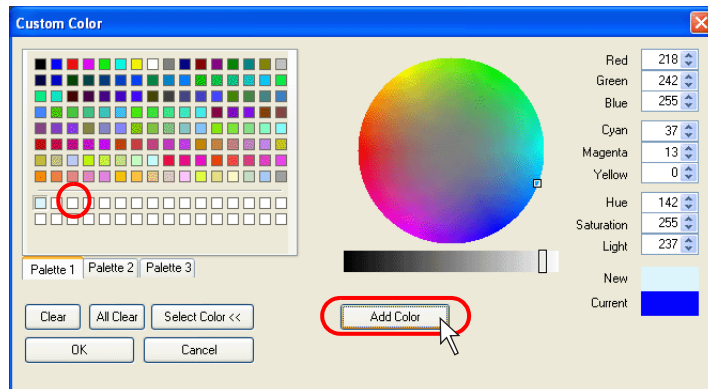
If you cannot find a color which meets your preference, click the [Select Color>>] button. A more detailed color creation menu is detailed.



Change the brightness by sliding this bar.  
(If you prefer brighter color, move the bar toward right (white).)

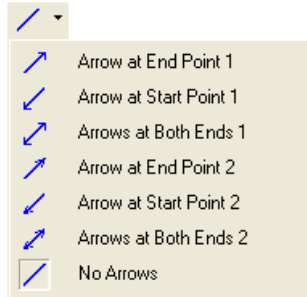
When you click the desired portion on the circle, a corresponding color is shown in the “New” field. The color can be adjusted finely by sliding the bar or changing the value of each field.

When a color is determined, click the [Add Color] button. The color newly created is displayed at the bottom two lines in order.



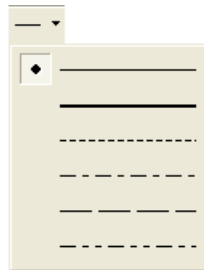
## Selecting Arrow Type

The following arrowheads are available.



## Selecting Line Style

Line styles can be selected for lines, boxes and circles. There are six line styles available.



## Limitations on Line Styles

- [Thick Line] can be selected for the following items.  
straight lines, rectangles
- Line style selection is not possible for the following items. They are drawn with solid lines.  
chamfered boxes (round chamfering, chamfering), parallelograms with frame (painted), polygons, circles, sectors, ellipses

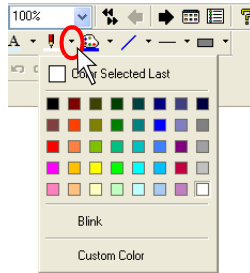
## 4.3 Drawing Methods

Drawing methods of items are explained.

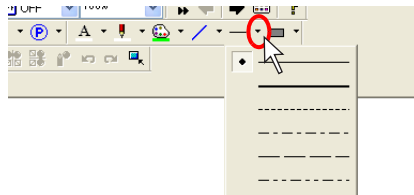
### Line

#### Single Line

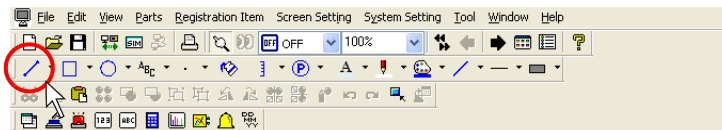
1. Click the “▼” mark on the right of the [Line Color/Frame Color] icon on the toolbar.  
Select the desired color from the list displayed.



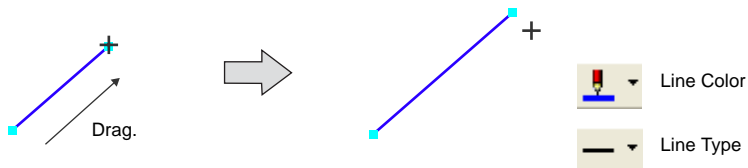
2. Click the “▼” mark on the right of the [Line Type] icon.  
Select the desired line style from the list displayed.



3. Click the [Line] icon on the toolbar.  
The [Line] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



4. Drag the mouse from the start point to the end.  
A line is drawn in the color selected in step 1 and in the line style selected in step 2.



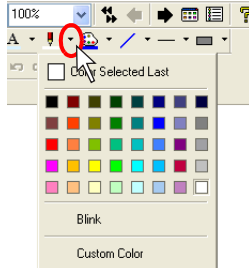
5. To reset the drawing setting, right-click or click the mouse at the desired position on the screen.  
By dragging the mouse again without resetting it, you can draw another line continuously.



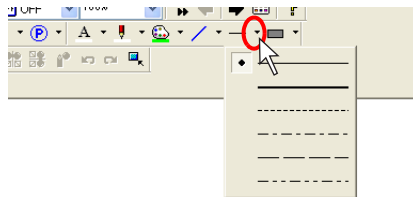
When you drag the mouse while holding down the SHIFT key, it is possible to draw a horizontal or vertical line.

## Continuous Line

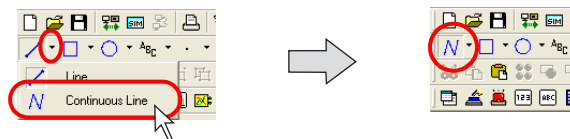
1. Click the “▼” mark on the right of the [Line Color/Frame Color] icon on the toolbar. Select the desired color from the list displayed.



2. Click the “▼” mark on the right of the [Line Type] icon. Select the desired line style from the list displayed.



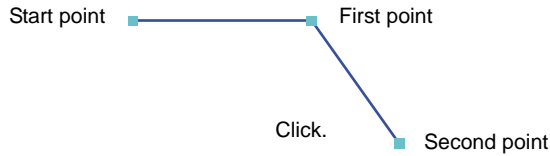
3. Click the “▼” mark on the right of the [Line] icon on the toolbar. The pull-down menu is displayed. Select [Continuous Line]. The [Continuous Line] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



4. Click at the start point. Then click at the first point. The first line is drawn.

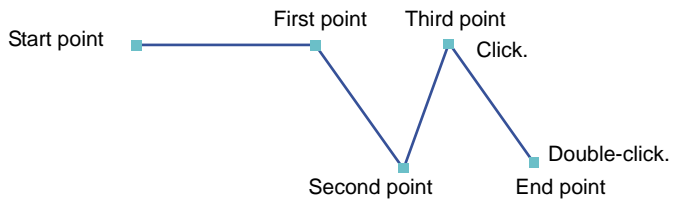


5. In the same manner, move the mouse to the second point and click.



To erase the line you have drawn, right-click the mouse.

6. At the end point, double-click the mouse button.  
The continuous line is terminated.



7. To reset the drawing setting, right-click or double-click the mouse button.  
By dragging the mouse again without resetting it, you can continuously draw another continuous line.

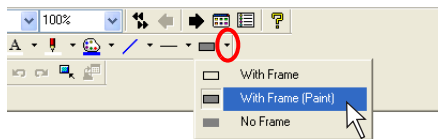
## Box

---

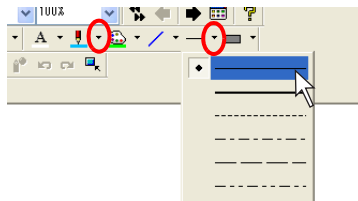
### Rectangle

---

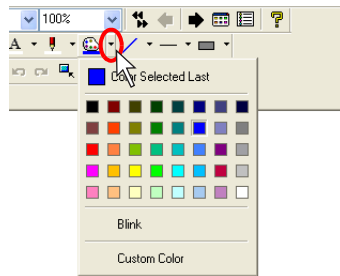
1. Click the “▼” mark on the right of the [Frame Type] icon on the toolbar.  
Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



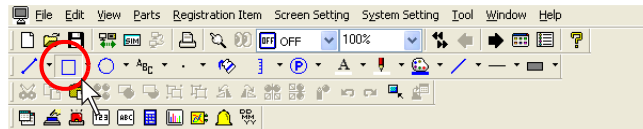
2. Likewise, select a line style from the [Line Type] icon and a frame color from the [Line Color/Frame Color] icon respectively.



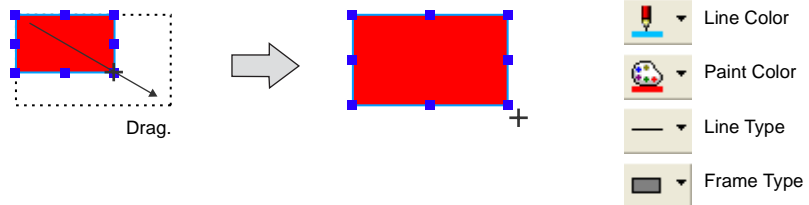
3. Select a paint color for inside the frame from the [Paint Color] icon.



4. Click the [Box] icon on the toolbar.  
The [Box] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



5. Drag the mouse from the start point to the end point.  
The box is drawn with properties set in steps 1. through 3.

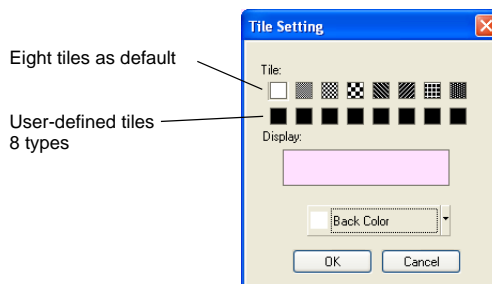


A rectangle can be drawn from any corner.  
By dragging the mouse while holding down the SHIFT key, a square can be drawn.

6. To reset the drawing setting, right-click or click the mouse at the desired position on the screen.  
By dragging the mouse again without resetting it, you can draw another box continuously.

### Selecting a tile

Tiles can be selected when painting boxes or circles.  
A maximum of 16 tiles can be used.  
Eight tiles are registered as default.



### 4.3 Drawing Methods

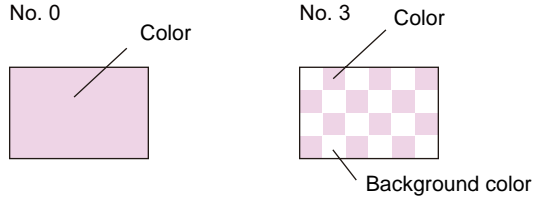
---

You can register eight additional tiles as required.

For the procedure of registering user-defined tiles, refer to “5.15 Tile” (page 5-69).

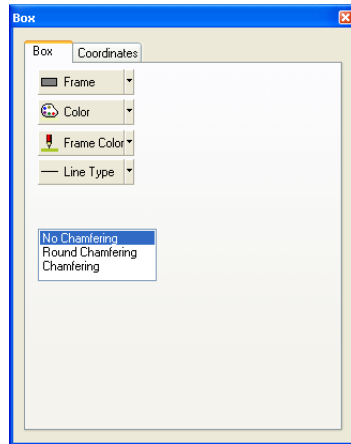
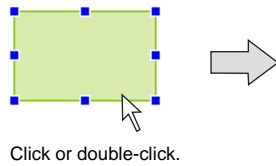
When a tile at the extreme left is selected, the area is painted in the color set for [Color].

When another tile is selected, the area is painted in the colors set for [Color] and [Background Color].

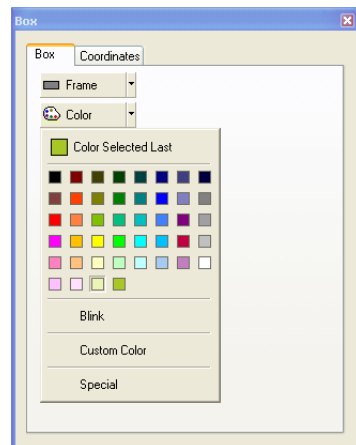
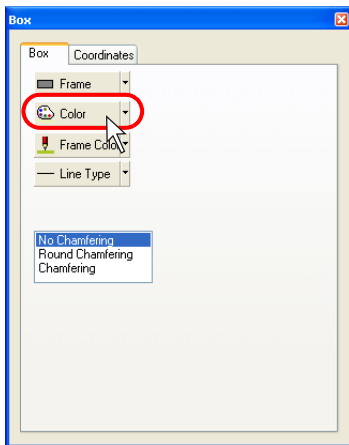


As an example, the procedure for setting the tile for the box with paint is described below.

1. Click or double-click the box item.  
The item dialog for the box is brought up.

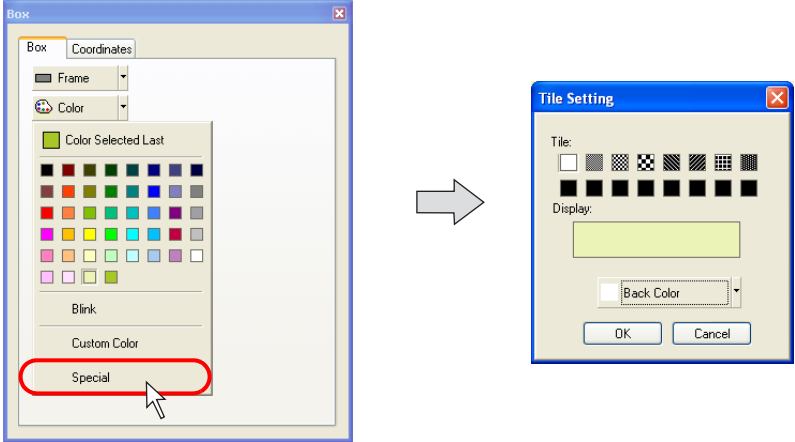


2. Click the [Color] button in the [Box] tab window.  
The following pull-down menu is displayed.

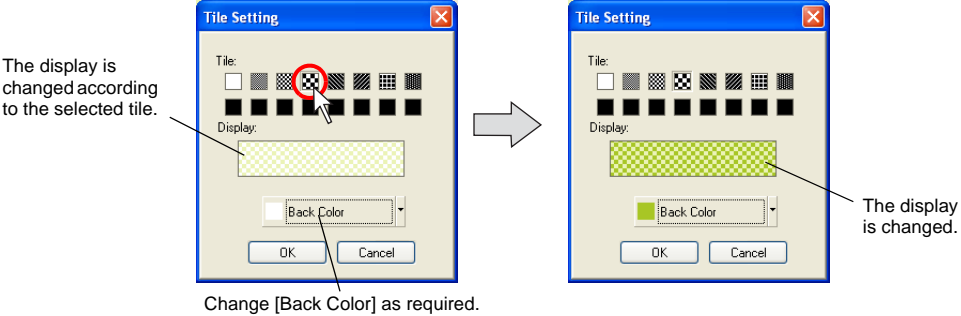




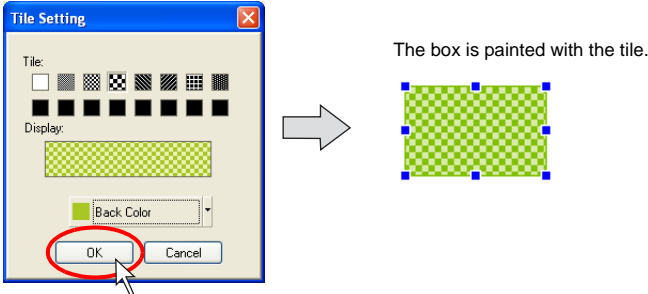
- 3. Click [Special].  
The [Tile Setting] dialog is displayed.



- 4. Choose the desired tile from the [Tile] field in the dialog.  
The tile whose color is those currently selected in [Color] and [Back Color] is displayed.  
Choose a background color by clicking [Back Color] to make your desired tile pattern.

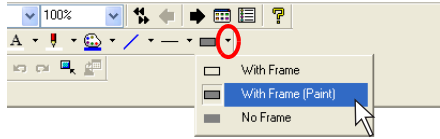


- 5. Click [OK] when the settings are complete.  
The selected box item is painted with the tile you set.

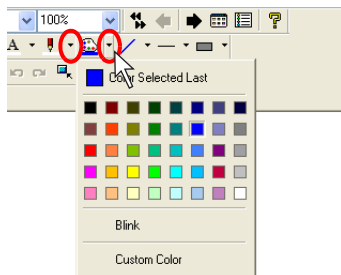


## Parallelogram

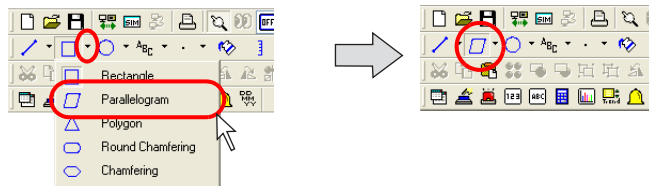
1. Click the “▼” mark on the right of the [Frame Type] icon on the toolbar. Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



2. Select a frame color from the [Line Color/Frame Color] icon and a color of the frame inside from the [Paint Color] icon.



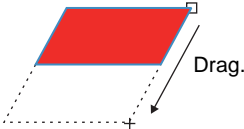
3. Click the “▼” mark on the right of the [Box] icon on the toolbar. Click [Parallelogram] from the pull-down menu. The [Parallelogram] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



4. Drag the mouse from the start point to the end point of the upper side.

Drag.  
 Start point □ ————— + End point

- 5. Drag from the end point of the upper side to the corresponding point of the lower side.



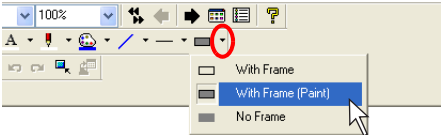
- 6. The parallelogram is drawn by clicking the mouse.



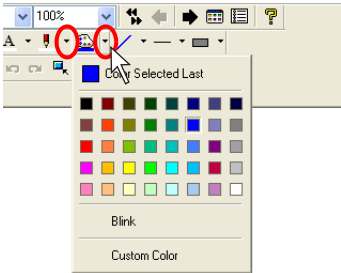
- 7. To reset the drawing setting, right-click or double-click the mouse.  
By dragging the mouse again without resetting it, you can draw another parallelogram continuously.

### Polygon

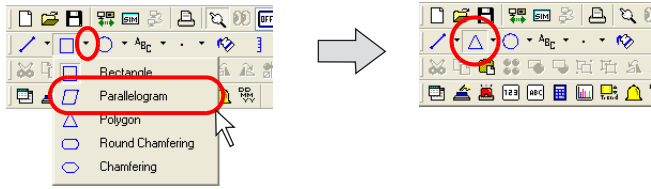
- 1. Click the “▼” mark on the right of the [Frame Type] icon on the toolbar. Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



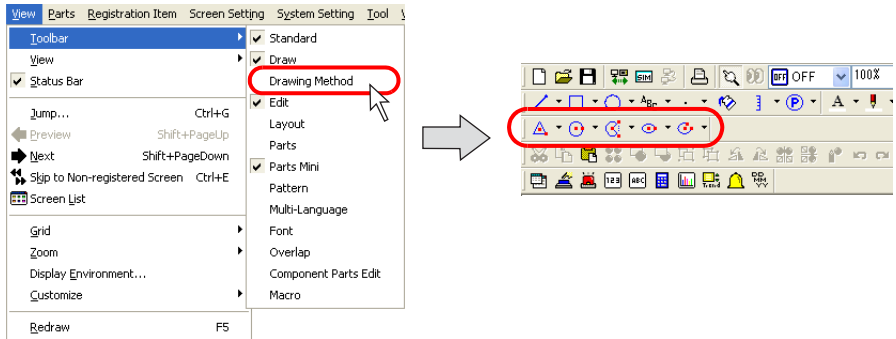
- 2. Likewise, select a frame color from the [Line Color/Frame Color] icon and a color of the frame inside from the [Paint Color] icon.



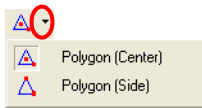
- Click the “▼” mark on the right of the [Box] icon on the toolbar.  
Click [Polygon] from the pull-down menu.  
The [Polygon] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



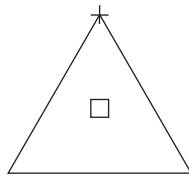
- Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.



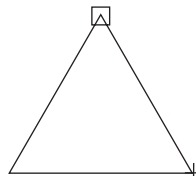
- Click the “▼” mark on the right of the [Polygon] icon displayed at the extreme left of the toolbar.  
The pull-down menu is displayed.



Polygon (Center):  
Drag from the center  
to a corner.



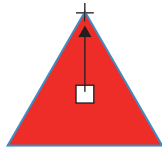
Polygon (Side):  
Drag from the start point to  
the end point of one side.



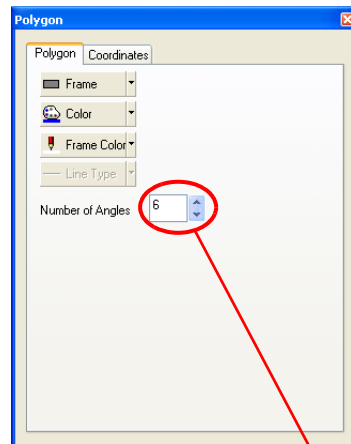
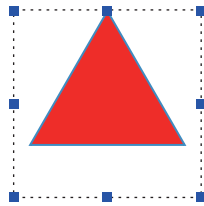
□: Start point  
+: End point

Selects [Polygon (Center)].

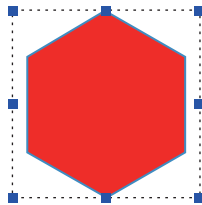
6. Drag the mouse from the center to a corner. Then the polygon is drawn.



7. The number of angles can be changed in the [Polygon] item dialog.



[Number of Angles] is changed from "3" to "6".



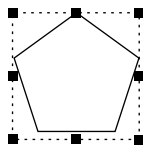
8. To reset the drawing setting, right-click or double-click the mouse.  
By dragging the mouse again without resetting it, you can draw another polygon continuously.



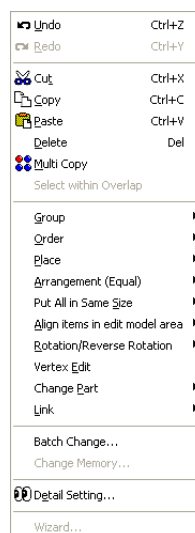
#### [Vertex Edit]

To change the angular position or radius of the polygon drawn on the screen, use the [Vertex Edit] command.

Click the drawn polygon and right-click on it.  
The following right-click menu is displayed:

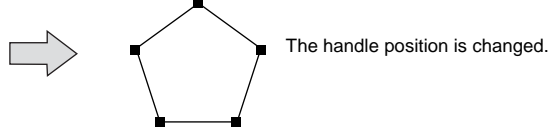
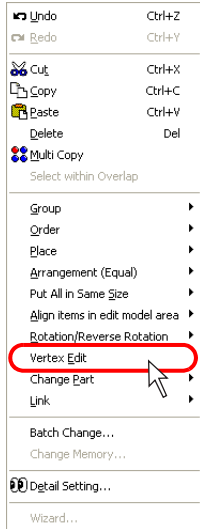


Click and then right-click on it.



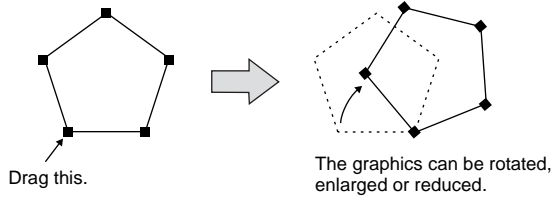
The right-click menu is displayed.

Click [Vertex Edit].  
Handles are shown at its corners.



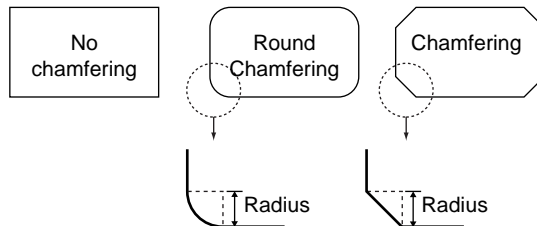
Click [Vertex Edit].

Dragging the handle allows you to move the polygon or change the radius.



### Round Chamfering / Chamfering

A "chamfered box" is created by transforming the corner of a rectangle (box).



Select either [Round Chamfering] or [Chamfering] before drawing the rectangle.



When a chamfered box is selected, it is impossible to change a line style. All the lines are drawn in solid lines.

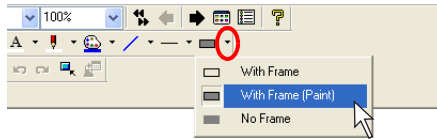


When [With Frame (Paint)] for a round-chamfered box is selected, XOR display cannot be used. For example, if [With Frame (Paint)] is specified for a round-chamfered box in graphic-relay mode, its display is disabled on MONITOUCH. For more information on XOR display, refer to "Chapter 11 Graphic" in the V8 Series Reference Manual.

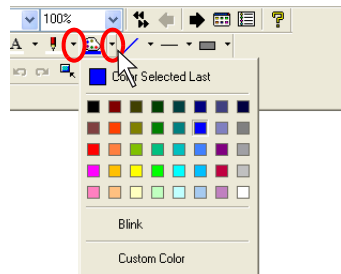
## Circle

### Circle

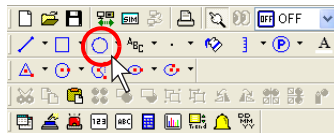
1. Click the “▼” mark on the right of the [Frame Type] icon on the toolbar. Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



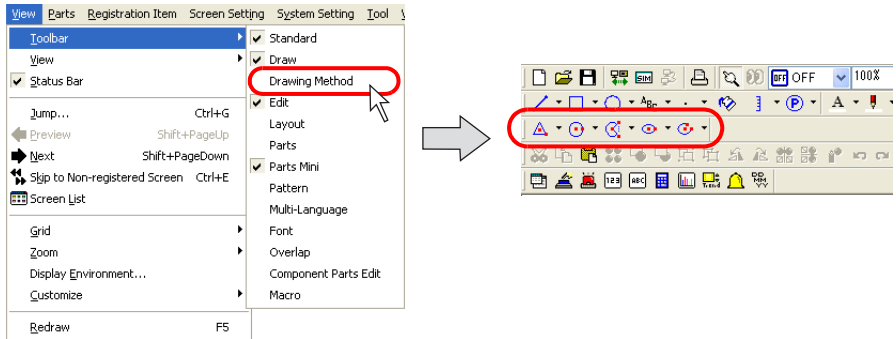
2. Likewise, select a frame color from the [Line Color/Frame Color] icon and a color of the frame inside from the [Paint Color] icon.



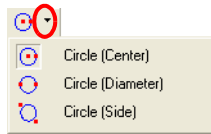
3. Click the [Circle] icon on the toolbar. The [Circle] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



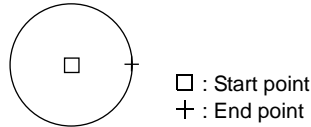
- Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.



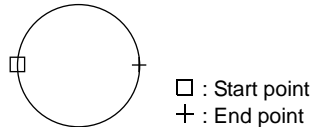
- Click the “▼” mark on the right of the [Circle] icon.  
The pull-down menu is displayed.



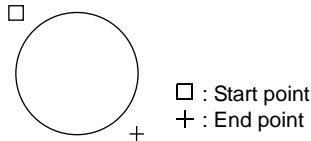
**Circle (Center):**  
Drag from the center for the radius.



**Circle (Diameter):**  
Drag from one side to the other for the diameter.



**Circle (Side):**  
Drag from the start point to the end point of the box where an inscribed circle is drawn.



Select [Circle (Center)].

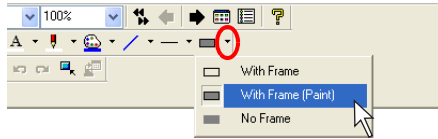
- Drag the mouse from the center to the desired radius. The circle is drawn.
- To reset the drawing setting, right-click or double-click the mouse button.  
By dragging the mouse again without resetting it, you can draw another circle continuously.



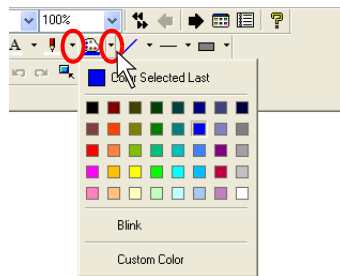
## Arc and Sector

### Drawing method: [Arc and Sector]

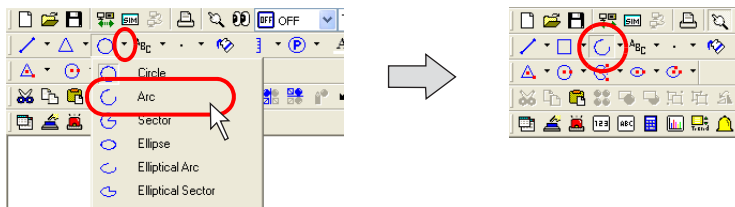
1. Click the “▼” mark on the right of the [Frame Type] icon on the toolbar. Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



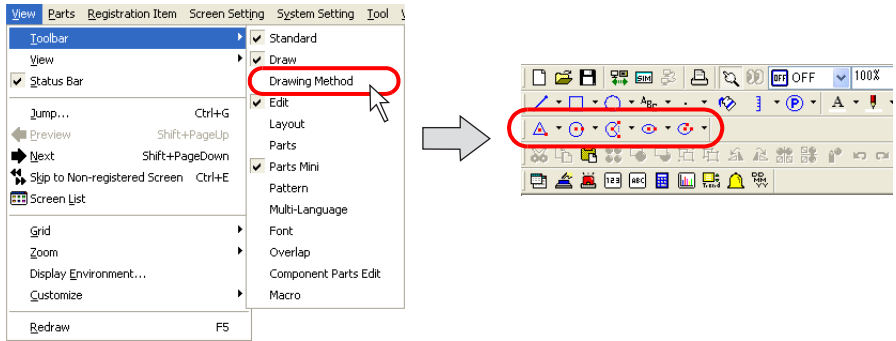
2. Likewise, select a frame color from the [Line Color/Frame Color] icon and a color of the frame inside from the [Paint Color] icon.



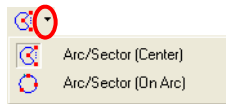
3. Click the [Arc] or [Sector] icon on the toolbar. The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



- Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.

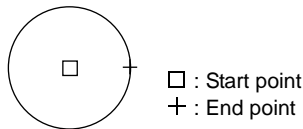


- Click the “▼” mark on the right of the [Arc/Sector] icon.  
The pull-down menu is displayed.

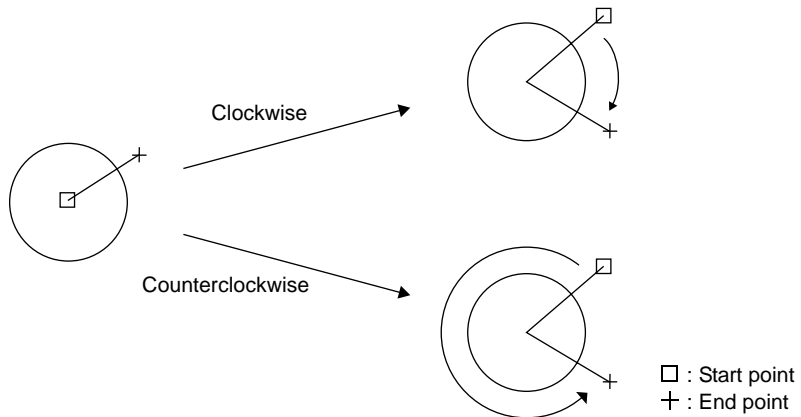


Selects [Arc/Sector (Center)].

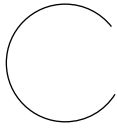
- Drag from the center to the desired radius.



- When you stop dragging, a line is displayed. Click the mouse at the start point of the arc or sector.
- Move the cursor along the arc to the end point of the arc. The section drawn counter-clockwise remains as an arc.



- Clicking the mouse draws the arc or sector.

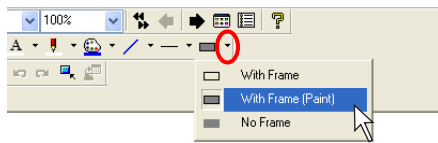


- To reset the drawing setting, right-click or double-click the mouse.

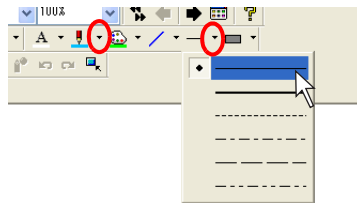
By dragging the mouse again without resetting it, you can draw another arc or sector continuously.

### Drawing method: [Arc and Sector (On Arc)]

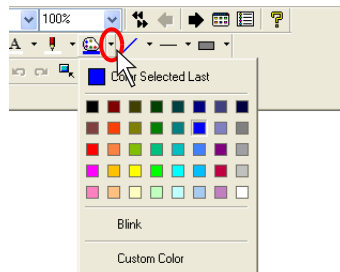
- Click the “▼” mark on the right of the [Frame Type] icon on the toolbar. Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



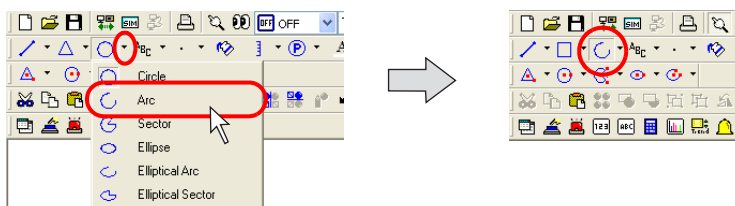
- Likewise, select a line style from the [Line Type] icon and a frame color from the [Line Color/Frame Color] icon respectively.



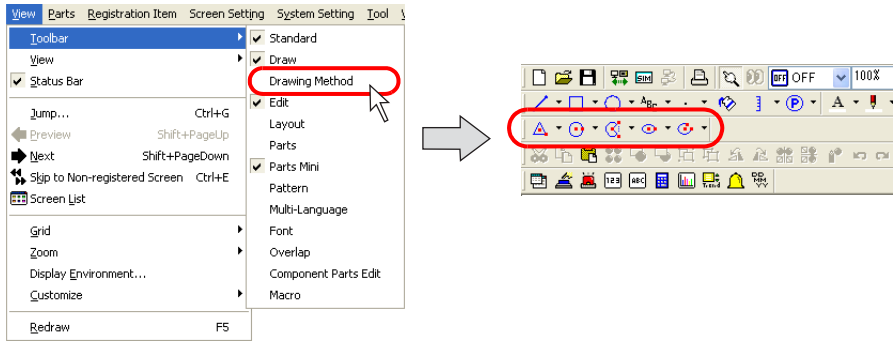
- Select a paint color for inside the frame from the [Paint Color] icon.



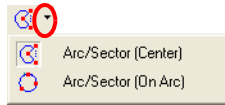
- Click the [Arc] or [Sector] icon on the toolbar. The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



5. Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.

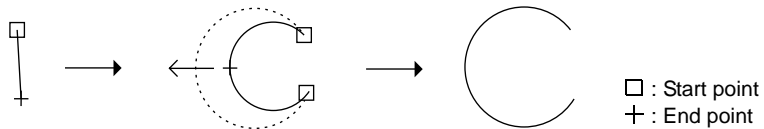


6. Click the “▼” mark on the right of the [Arc/Sector] icon.  
The pull-down menu is displayed.



Selects [Arc/Sector (On Arc)].

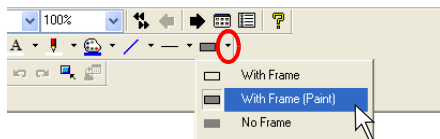
7. Drag the mouse from the start point to the end point.
8. When the mouse is released, the arc or sector is displayed.
9. Clicking the mouse to the desired position draws the arc or sector.



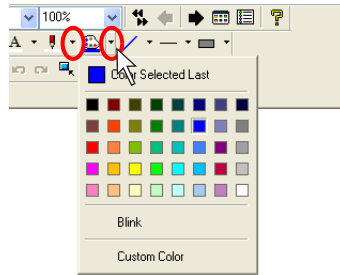
10. To reset the drawing setting, right-click or double-click the mouse.  
By dragging the mouse again without resetting it, you can draw another arc or sector continuously.

## Ellipse

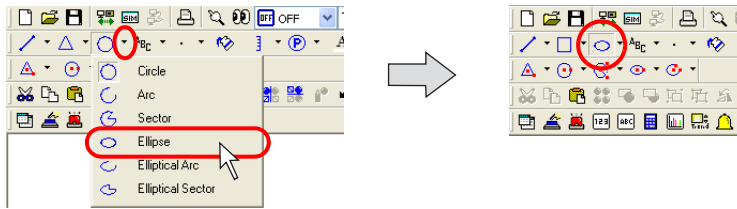
1. Click the “▼” mark on the right of the [Frame Type] icon on the toolbar.  
Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



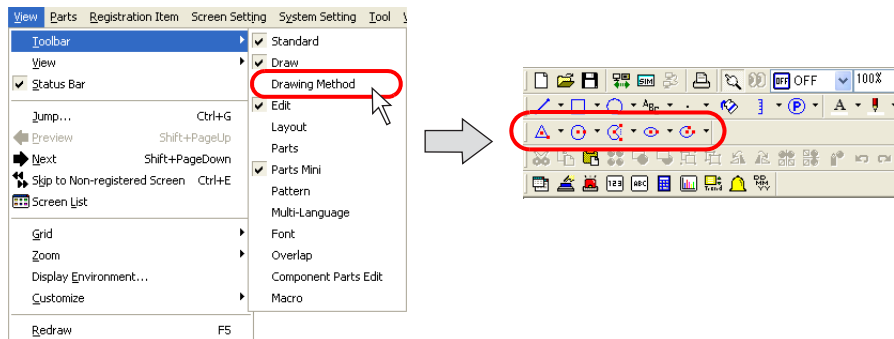
- Likewise, select a frame color from the [Line Color/Frame Color] icon and a color of the frame inside from the [Paint Color] icon.



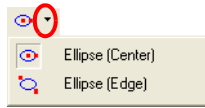
- Click the [Ellipse] icon on the toolbar.  
The [Ellipse] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



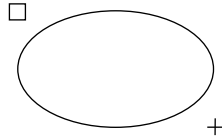
- Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.



- Click the “▼” mark on the right of the [Ellipse] icon. The pull-down menu is displayed.

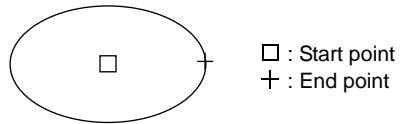


Ellipse (Center):  
 Drag from the start point to the end point of the box where an inscribed ellipse is drawn.



Selects [Ellipse (Center)].

Ellipse (Edge):  
 Drag from the center for the major radius.



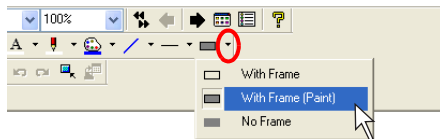
- Drag the mouse from the center to the desired radius. The ellipse is drawn.
- To reset the drawing setting, right-click or double-click the mouse. By dragging the mouse again without resetting it, you can draw another ellipse continuously.

## Elliptical Arc and Elliptical Sector

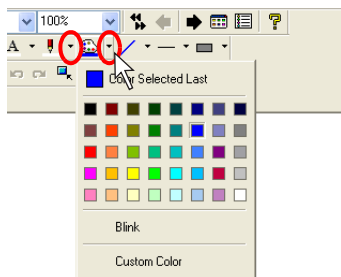
---

### Drawing method: [Elliptical Arc (Center)]

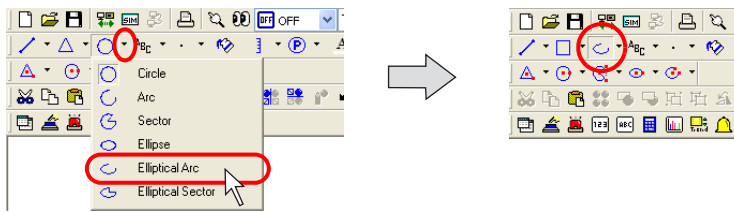
- Click the “▼” mark on the right of the [Frame Type] icon on the toolbar. Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)



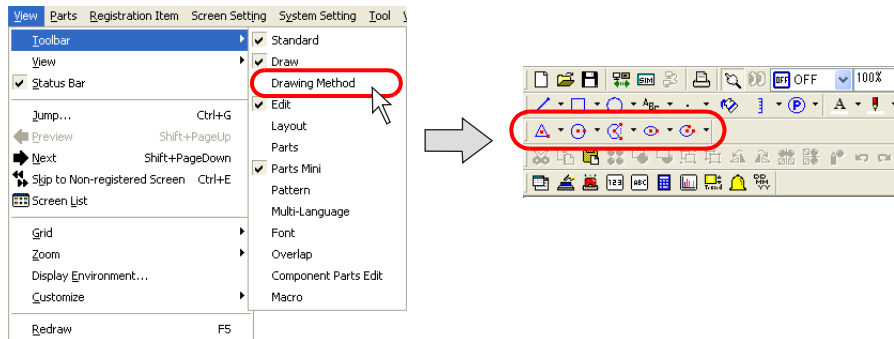
- Likewise, select a frame color from the [Line Color/Frame Color] icon and a color of the frame inside from the [Paint Color] icon.



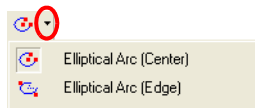
- Click the [Elliptical Arc] or [Elliptical Arc] icon on the toolbar.  
The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



- Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.

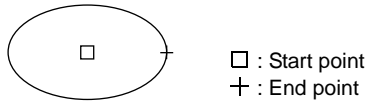


- Click the “▼” mark on the right of the [Elliptical Arc/Elliptical Sector] icon.  
The pull-down menu is displayed.

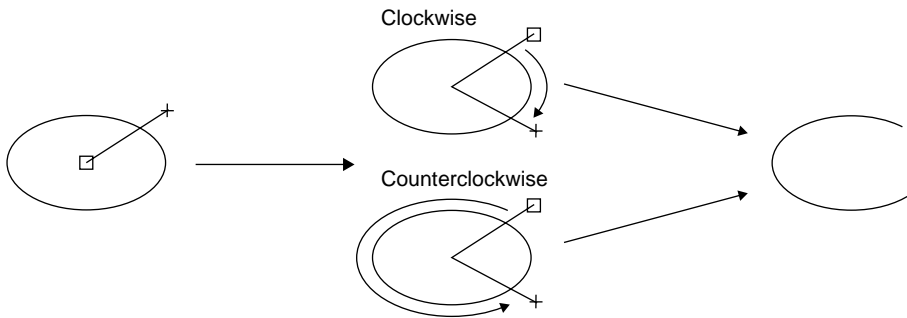


Select [Elliptical Arc (Center)].

6. Drag from the center to the desired radius.



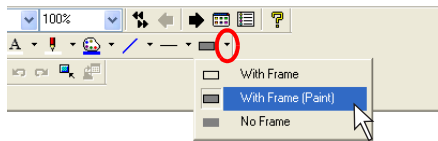
7. When you stop dragging, a line is displayed. Click the mouse at the start point of the elliptical arc or sector.
8. Move the cursor along the arc to the end point of the arc. The section drawn counter-clockwise remains as an arc.
9. Clicking the mouse draws the elliptical arc or sector.



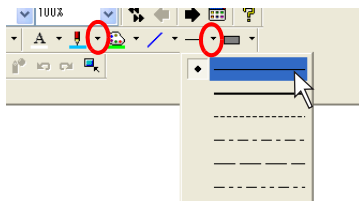
10. To reset the drawing setting, right-click or double-click the mouse. By dragging the mouse again without resetting it, you can draw another elliptical arc or sector continuously.

**Drawing method: [Elliptical Arc (Edge)]**

1. Click the “▼” mark on the right of the [Frame Type] icon on the toolbar. Select the desired frame type from the list displayed. ([With Frame (Paint)] is selected as an example.)

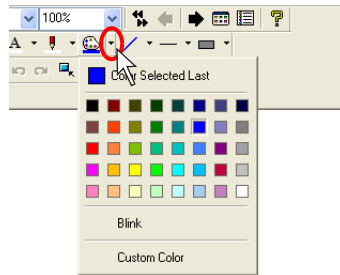


2. Likewise, select a line style from the [Line Type] icon and a frame color from the [Line Color/Frame Color] icon respectively.

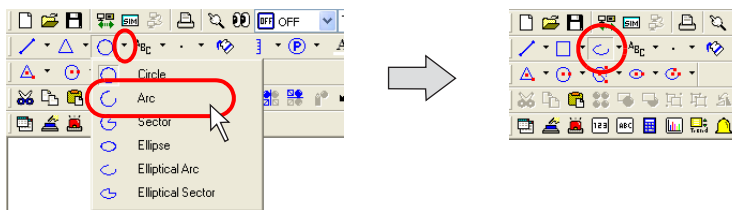




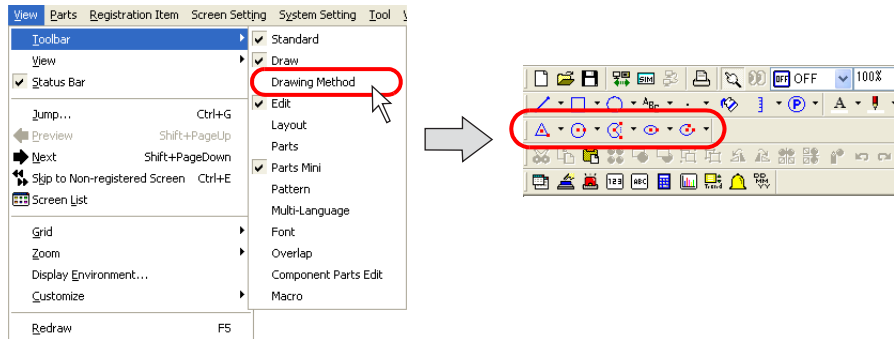
3. Select a paint color for inside the frame from the [Paint Color] icon.



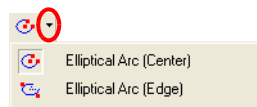
4. Click the [Elliptical Arc] or [Elliptical Arc] icon on the toolbar.  
The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



5. Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.

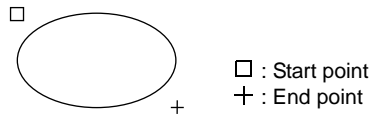


6. Click the “▼” mark on the right of the [Elliptical Arc/Elliptical Sector] icon.  
The pull-down menu is displayed.

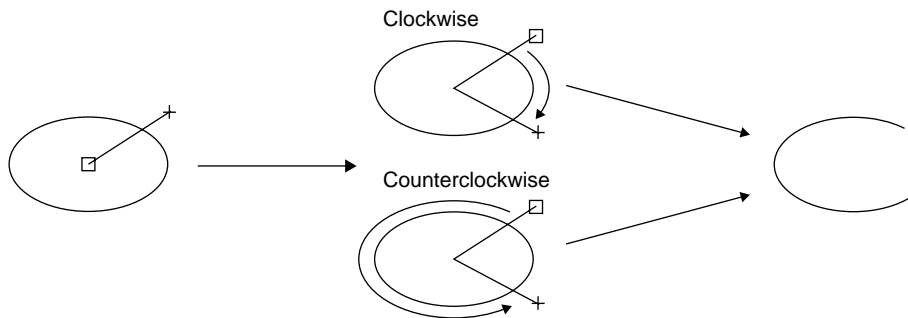


Select [Elliptical Arc (Edge)].

7. Drag the mouse from the start point to the end point.



8. When you stop dragging, a line is displayed. Click the mouse at the start point of the elliptical arc or sector.
9. Move the cursor clockwise (portion to be erased) or counter-clockwise (portion to be drawn) along the elliptical arc or sector, and click on the end point.
10. Clicking the mouse draws the elliptical arc or sector.

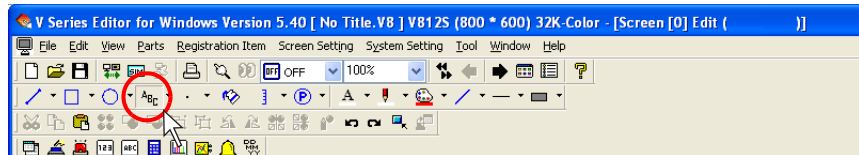


11. To reset the drawing setting, right-click or double-click the mouse. By dragging the mouse again without resetting it, you can draw another elliptical arc or sector continuously.

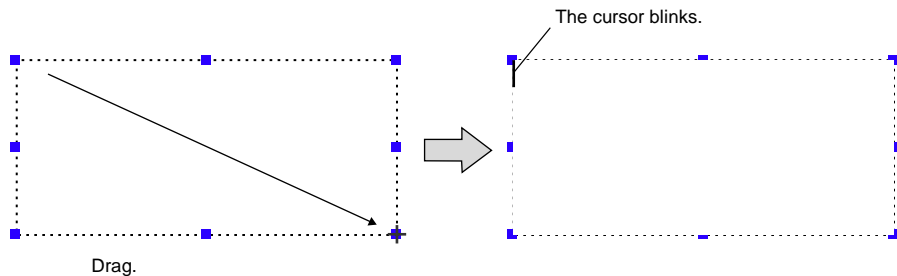
## Text

### How to Enter or Place Text and Multi-text

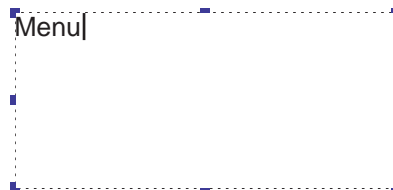
1. Click the [Text] icon on the toolbar.  
The [Text] icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



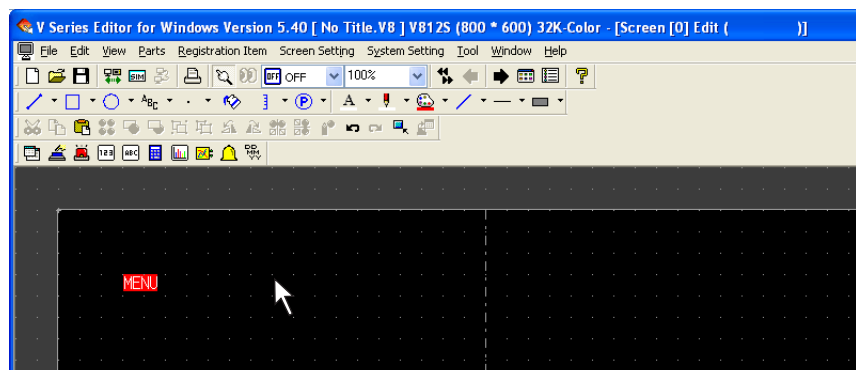
2. Drag the mouse from the start point to the end.  
The field is created and the blinking cursor appears.



3. Enter text.  
(The text is displayed with tentative properties at this time. The text properties are reflected after performing step 4.)



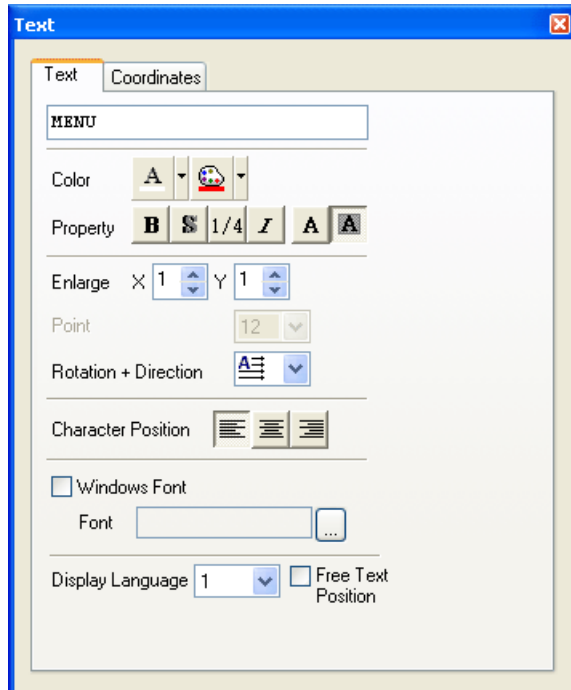
4. Click the mouse at any position other than the text.  
The text entered in step 3. is displayed.



5. Change the text properties in the item dialog.

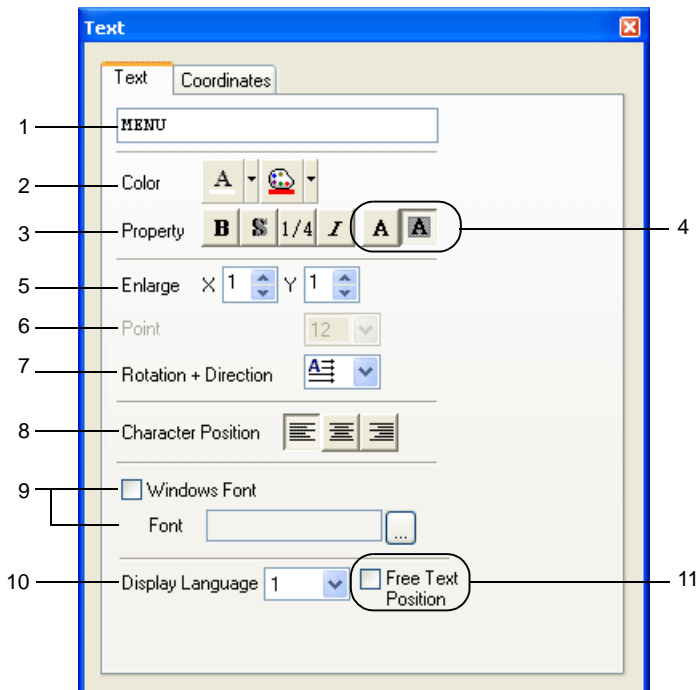
## [Text] Dialog



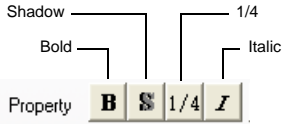

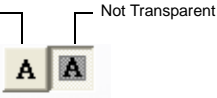
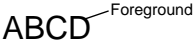

Clicking (or double-clicking) the [Text] item brings up the [Text] dialog shown below.

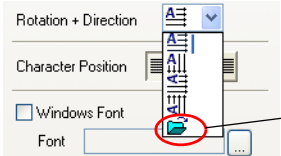
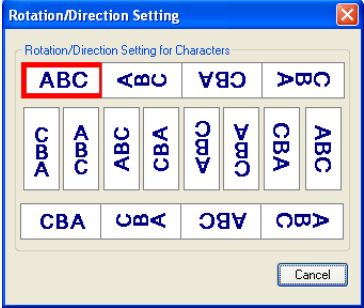



### [Text] tab window:

Text can be entered when the cursor is blinking in the text field.  
If the cursor is not blinking in the text field, click the mouse on the text field.

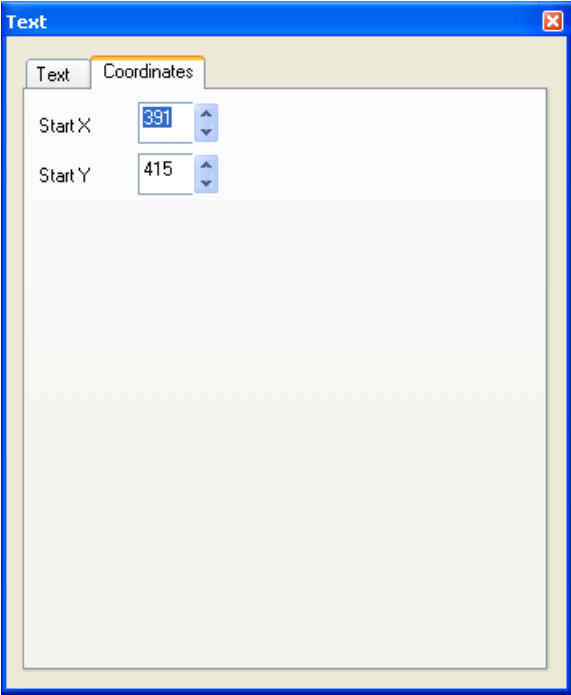


1	Text field	<p>Enter text. The maximum permissible number of characters per line depends on the number of displayed dots.</p> <table border="1"> <thead> <tr> <th>No. of displayed dots</th> <th>Max. number of characters (1-byte)</th> </tr> </thead> <tbody> <tr> <td>640 × 480</td> <td>80</td> </tr> <tr> <td>800 × 600</td> <td>100</td> </tr> </tbody> </table>	No. of displayed dots	Max. number of characters (1-byte)	640 × 480	80	800 × 600	100
No. of displayed dots	Max. number of characters (1-byte)							
640 × 480	80							
800 × 600	100							
2	Color (Char. Color/ Background)	<p>Set the color for text.</p>  <p>When [Transparent] is not selected (refer to “Transparent” item), be sure to set the background color.</p> 						
3	Property	<p>Select the bold (*1), shadow, 1/4 (*2) or italic typeface for text.</p>  <p>[Shadow]</p>  <p>*1 [Bold] is valid only when [X: 1] is selected for [Enlarge]. *2 [1/4] is valid only for 1-byte alphanumeric characters.</p>						
4	Transparent	<p>Select whether or not to make text background transparent.</p>  <p>[Transparent]</p>  <p>[Not Transparent]</p> 						

<p>5</p>	<p>Enlarge (1 - 8)</p>	<p>Specify enlargement factor for text.          "1" to "8" can be specified for [Enlarge X] or [Enlarge Y].          Correspondence between character sizes and values for [Enlarge] is shown below:</p> <table border="1"> <thead> <tr> <th>Enlarge</th> <th>One-byte (W × H dots)</th> <th>Two-byte (W × H dots)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8 × 16</td> <td>16 × 16</td> </tr> <tr> <td>2</td> <td>16 × 32</td> <td>32 × 32</td> </tr> <tr> <td>3</td> <td>24 × 48</td> <td>48 × 48</td> </tr> <tr> <td>4</td> <td>32 × 64</td> <td>64 × 64</td> </tr> <tr> <td>5</td> <td>40 × 80</td> <td>80 × 80</td> </tr> <tr> <td>6</td> <td>48 × 96</td> <td>96 × 96</td> </tr> <tr> <td>7</td> <td>56 × 112</td> <td>112 × 112</td> </tr> <tr> <td>8</td> <td>64 × 128</td> <td>128 × 128</td> </tr> </tbody> </table> <p>* If you select [System Setting] → [Font Setting] and select [Gothic] (or Gothic (IBM Extended Character)), [English/Western Europe HK Gothic] or [English/Western Europe HK Times], and check the box for [<input type="checkbox"/> Windows Font], this setting is disabled.</p>	Enlarge	One-byte (W × H dots)	Two-byte (W × H dots)	1	8 × 16	16 × 16	2	16 × 32	32 × 32	3	24 × 48	48 × 48	4	32 × 64	64 × 64	5	40 × 80	80 × 80	6	48 × 96	96 × 96	7	56 × 112	112 × 112	8	64 × 128	128 × 128
Enlarge	One-byte (W × H dots)	Two-byte (W × H dots)																											
1	8 × 16	16 × 16																											
2	16 × 32	32 × 32																											
3	24 × 48	48 × 48																											
4	32 × 64	64 × 64																											
5	40 × 80	80 × 80																											
6	48 × 96	96 × 96																											
7	56 × 112	112 × 112																											
8	64 × 128	128 × 128																											
<p>6</p>	<p>Point (8 - 72)</p>	<p>Specify the number of points for character.</p> <p>* If you select [System Setting] → [Font Setting] and select a font other than [Gothic] (or Gothic (IBM Extended Character)), [English/Western Europe HK Gothic] or [English/Western Europe HK Times], and uncheck the box for [<input type="checkbox"/> Windows Font], this setting is disabled.</p>																											
<p>7</p>	<p>Rotation + Direction</p>	<p>Set the combination of text rotation or direction.          Four combinations are displayed in the drop-down menu.</p>  <p>When selecting an option other than the above, click the icon at the bottom. The dialog that allows selection from all options is displayed:</p> 																											

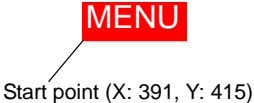
8	Character Position (Flush Left/Centering/Flush Right)	Select a position with which characters are aligned. 
9	<input type="checkbox"/> Windows Font	Check this box when using Windows font. For more information on the Windows fonts, refer to "Windows Font" (page A1-29 in "Appendix 1 Font".
10	Display Language	This setting is effective when you create multi-language screen data. For more information, refer to "Appendix 3 Display Language" in the V8 Series Reference Manual.
11	<input type="checkbox"/> Free Text Position	This setting is effective when multi-language screens are edited. Text position can be moved arbitrarily for the language selected as [Display Language].

**[Coordinates] tab window**



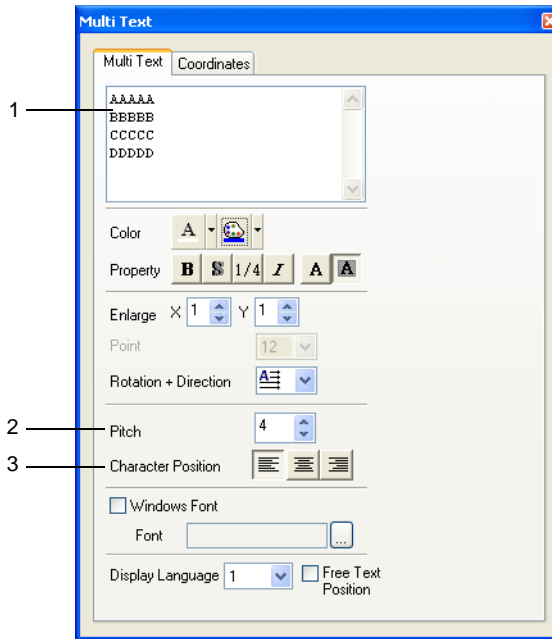
Start X	Specify the X coordinate at the lower left corner of the item in dots.
Start Y	Specify the Y coordinate at the lower left corner of the item in dots.

\* Start point X/Y for text



## [Multi Text] Dialog

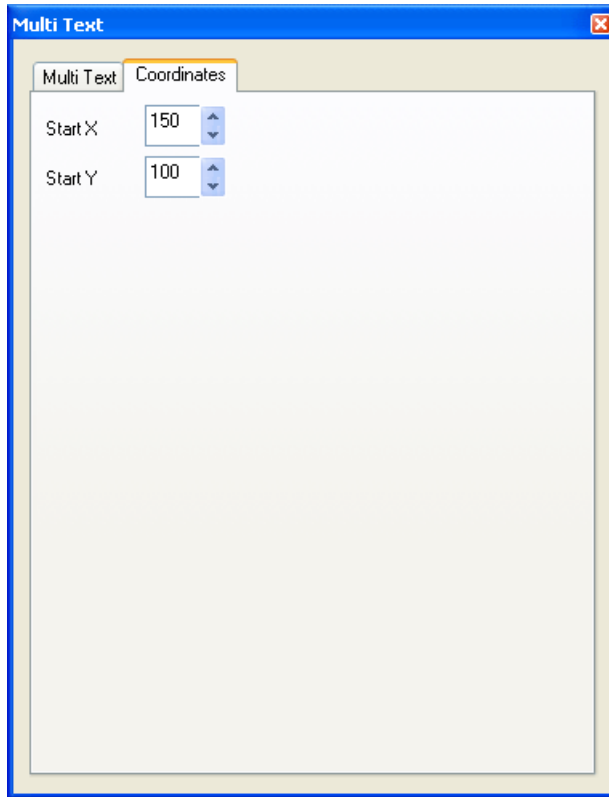
Clicking (or double-clicking) the [Multi Text] item brings up the [Multi Text] dialog shown below.



Only different options from those included in the [Text] tab window is provided below.

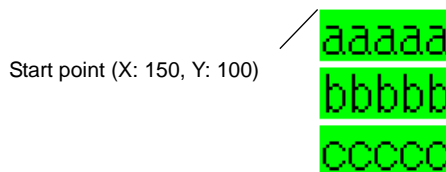
1	Multi-text field	<p>Enter multi-text. The maximum permissible number of characters per line depends on the number of displayed dots.</p> <table border="1"> <thead> <tr> <th rowspan="2">Number of displayed dots</th> <th colspan="2">Maximum (1-byte)</th> <th rowspan="2">Limitation (*2)</th> </tr> <tr> <th>Available characters per line</th> <th>Lines (*1)</th> </tr> </thead> <tbody> <tr> <td>640 × 480</td> <td>80</td> <td>24</td> <td rowspan="2">Max. number of characters: 3825 (1-byte)</td> </tr> <tr> <td>800 × 600</td> <td>100</td> <td>30</td> </tr> </tbody> </table> <p>*1 The above figures shows the case when "4" is set for [Pitch]. *2 When the Windows font is used, height × width should be approx. 2000k dots. For more information on Windows font, refer to page A1-29.</p>	Number of displayed dots	Maximum (1-byte)		Limitation (*2)	Available characters per line	Lines (*1)	640 × 480	80	24	Max. number of characters: 3825 (1-byte)	800 × 600	100	30
Number of displayed dots	Maximum (1-byte)			Limitation (*2)											
	Available characters per line	Lines (*1)													
640 × 480	80	24	Max. number of characters: 3825 (1-byte)												
800 × 600	100	30													
2	Pitch (0 - 32)	Specify the desired line spacing. The maximum available number varies depending on this setting.													
3	Character Position (Flush Left/Centering/ Flush Right)	Select the character position to be aligned.													



**[Coordinates] tab window**

Start X	Specify the X coordinate at the upper left corner of the item in dots.
Start Y	Specify the Y coordinate at the upper left corner of the item in dots.

\* Start point X/Y for text



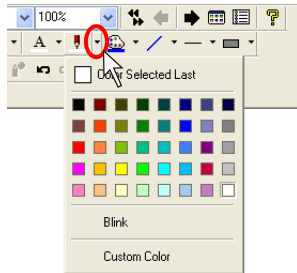
# Dot

---

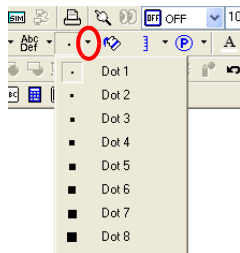
## Drawing Method

---

1. Click the “▼” mark on the right of the [Line Color/Frame Color] icon on the toolbar. Select the desired color from the list displayed.



2. Click the “▼” mark on the right of the [Dot] icon. The pull-down menu is displayed.



Choose the dot size.  
The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.

3. Click the mouse on the screen.  
A dot is drawn in the color selected in step 1. and in the size selected in step 2.
4. To reset the drawing setting, right-click the mouse button or click the [Select] icon. By dragging the mouse again without resetting it, you can draw another dot continuously.

## Paint

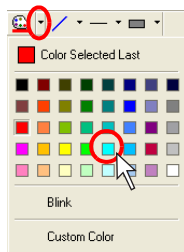
This command is used to paint an enclosed area.

### Paint Command Usage

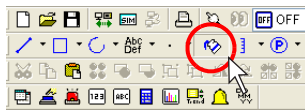
1. Draw an enclosed area.



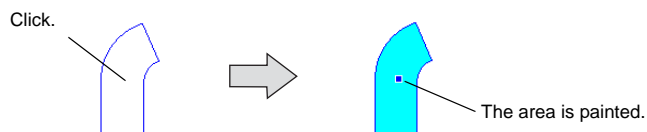
2. Select a paint color from the [Paint Color] icon.



3. Click the [Paint] icon on the toolbar.  
The [Paint] icon is depressed.



4. Click on the enclosed area. The area is painted in the selected color.

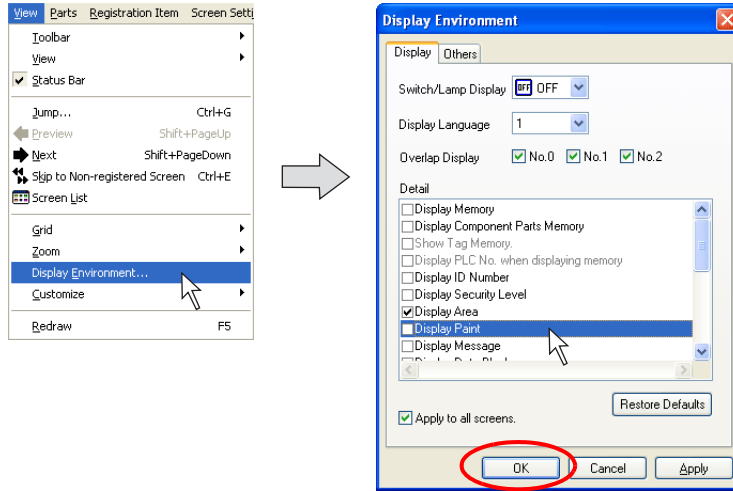


5. To escape from the paintable state, right-click the mouse or click the [Select] icon. By clicking the mouse again without escaping, you can execute painting continuously.

## How to Check the Painted Area

You can easily check the area where you have executed painting or cancel painting by removing a check mark from [Paint Display].

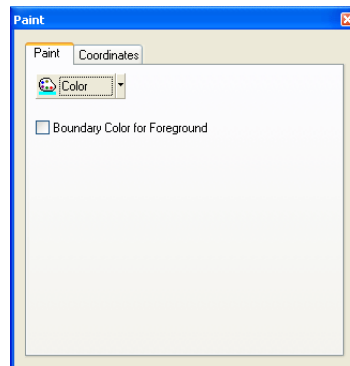
1. Click [Display Environment] from the [View] menu.  
Remove the check mark from  Display Paint for [Detail] and click [OK].



2. Painted color is removed from the area, and the area is only displayed with the "x" mark.

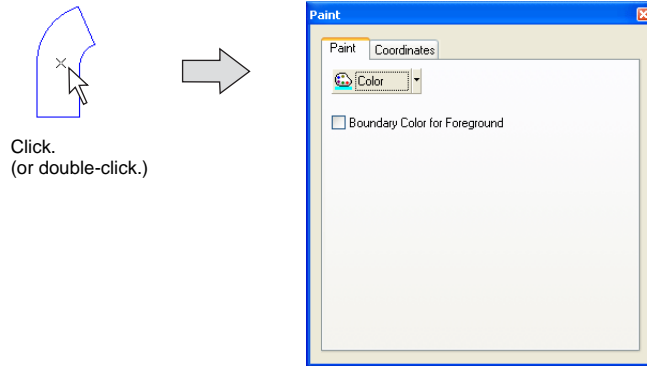


3. Click or double-click on the "x" mark. The [Paint] dialog appears.



## Paint Properties

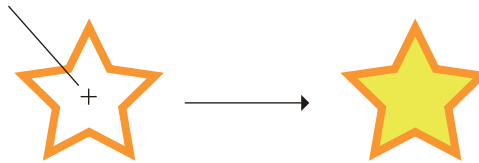
Click or double-click the painted area ("x" mark). The [Paint] dialog appears.



### Boundary Color for Foreground

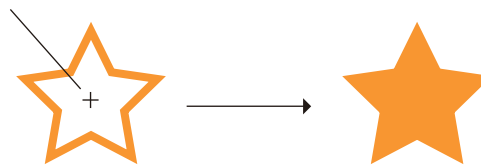
- Unchecked:  
The enclosed area can be painted in a color different from the one selected for [Foreground].

Painting is possible even if the foreground color is different from the boundary color.



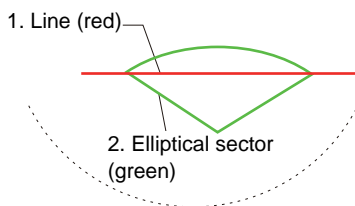
- Checked:  
The enclosed area can be painted in the same color as the one selected for [Foreground].

Painting is possible in the same color as the boundary color.

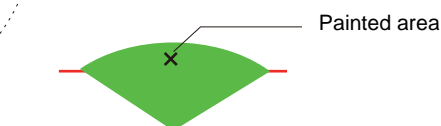


Example: If you draw an elliptical sector on the line and paint the enclosed area, it is painted as shown below.

Paint the graphic drawn as below.

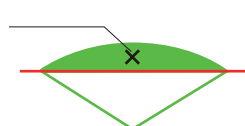


In the [Paint] tab window:  
 Boundary Color for Foreground  
[Foreground: Green]



(Paint color (green) runs through red area, and stops at the green area.)

In the [Paint] tab window:  
 Boundary Color for Foreground  
[Foreground: Green]



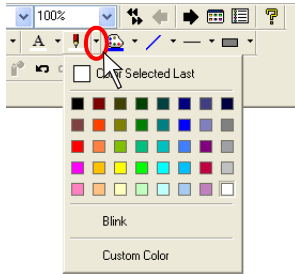
(Paint color (green) stops at the red (or green) area.)

# Scale

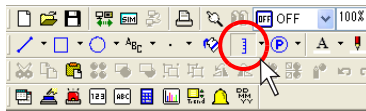
## Bar Graph Scale

### Drawing method

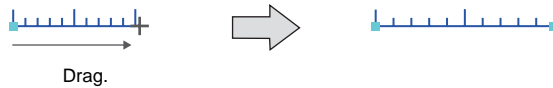
1. Select a line color from the [Line Color/Frame Color] icon on the toolbar.



2. Click the [Scale] icon on the toolbar.  
The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



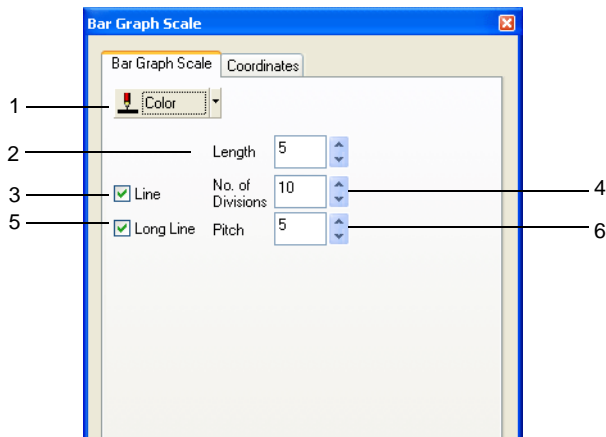
3. Drag the mouse from the start point to the end.  
A scale is drawn in a color selected in step 1.



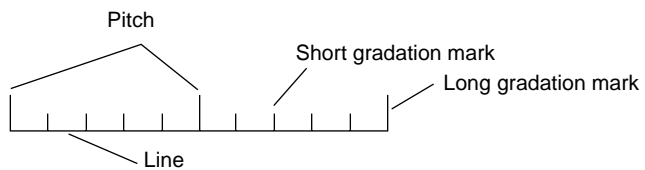
4. To reset the drawing setting, right-click or double-click the mouse button. By dragging the mouse again without resetting it, you can draw another scale continuously.

### [Bar Graph Scale] dialog

Clicking (or double-clicking) the bar graph scale brings up the [Bar Graph Scale] dialog shown below.



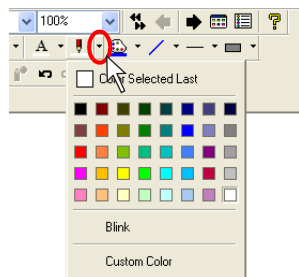
1	Color	Choose a color for the bar graph scale.
2	Length (1 - 16)	Set the length of short gradation marks. Enter the numerical value in the data field, or set the desired value using the Up/Down button.
3	Line	When this box is checked ( <input checked="" type="checkbox"/> ) , the scale is drawn with lines. When this box is not checked ( <input type="checkbox"/> ) , the scale is drawn without lines.
4	No. of Divisions (1 - 255)	Set the number of divisions of the scale. Enter the numerical value in the data field, or set the desired value using the Up/Down button.
5	Long Line	When this box is checked ( <input checked="" type="checkbox"/> ) , long gradation marks are attached to the scale at the specified pitch. When this box is not checked ( <input type="checkbox"/> ) , long gradation marks are not attached.
6	Pitch (1 - 16)	This option is active when [Long Line] is checked. Specify the pitch for long gradation marks. Enter the numerical value in the data field, or set the desired value using the Up/Down button.



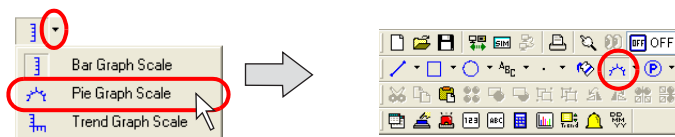
## Pie Graph Scale

### Drawing method

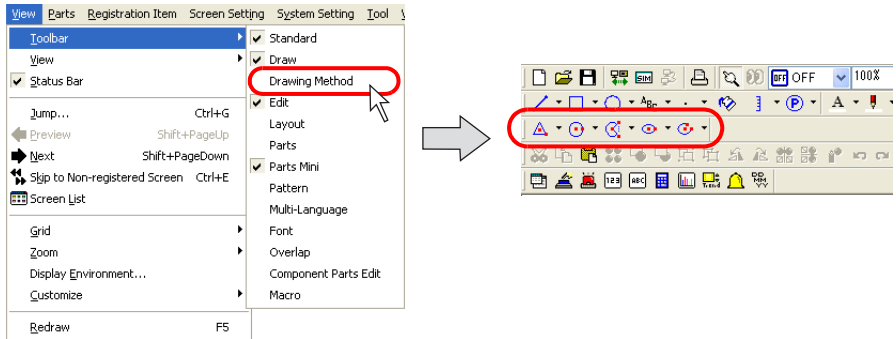
1. Select a line color from the [Pen Color] icon on the toolbar.



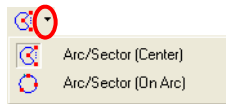
1. Click the “▼” mark on the right of the [Scale] icon on the toolbar.  
Select [Pie Graph Scale] from the scale type displayed.  
The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



2. Select the drawing method.  
Click [View] → [Toolbar] → [Drawing Method].  
The [Drawing Method] toolbar is displayed.

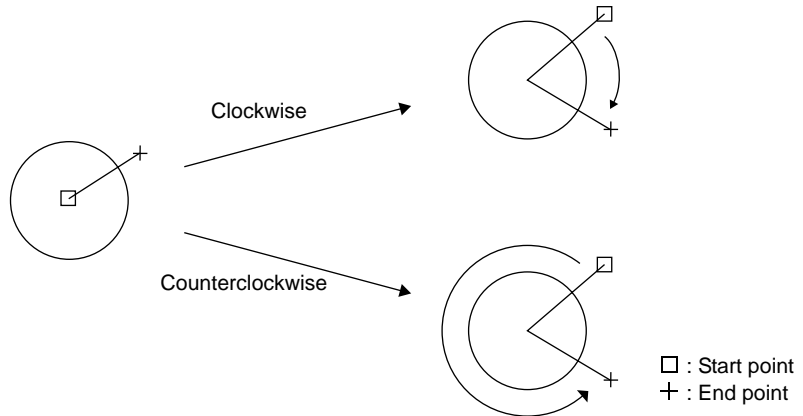


3. Click the “▼” mark on the right of the [Arc/Sector] icon.  
The pull-down menu is displayed.



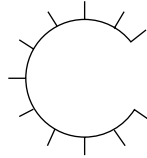
Selects [Arc/Sector (Center)].

4. Drag from the center to the desired radius.
5. When you stop dragging, a line is displayed. Click the mouse at the start point of the arc.
6. Move the cursor clockwise (portion to be erased) or counter-clockwise (portion to be drawn) along the arc, and click on the end point.





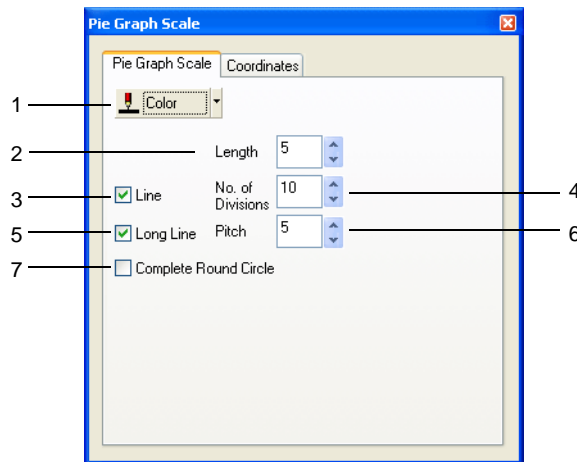
7. Clicking the mouse draws the pie graph scale.



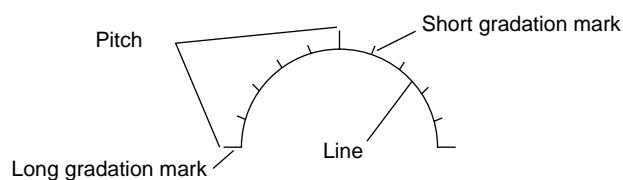
8. To reset the drawing setting, right-click or double-click the mouse button. By dragging the mouse again without resetting it, you can draw another scale continuously.

### [Pie Graph Scale] dialog

Clicking (or double-clicking) the pie graph scale brings up the [Pie Graph Scale] dialog shown below.



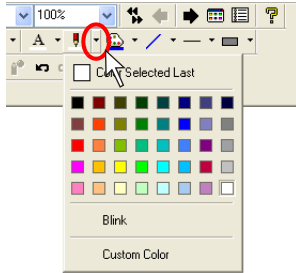
1	Color	Choose a color for the pie graph scale.
2	Length (1 - 16)	Set the length of short gradation marks. Enter the numerical value in the data field, or set the desired value using the Up/Down button.
3	Line	When this box is checked ( <input checked="" type="checkbox"/> ) , the scale is drawn with lines. When this box is not checked ( <input type="checkbox"/> ) , the scale is drawn without lines.
4	No. of Divisions (1 - 255)	Set the number of divisions of the scale. Enter the numerical value in the data field, or set the desired value using the Up/Down button.
5	Long Line	When this box is checked ( <input checked="" type="checkbox"/> ) , long gradation marks are attached to the scale at the specified pitch. When this box is not checked ( <input type="checkbox"/> ) , long gradation marks are not attached.
6	Pitch (1 - 16)	This option is active when [Long Line] is checked. Specify the pitch for long gradation marks. Enter the numerical value in the data field, or set the desired value using the Up/Down button.
7	Complete Round Circle	When this option is checked, the shape of the graph becomes circle, not arc.



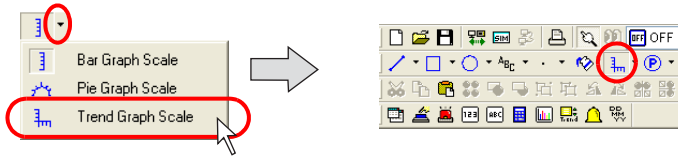
## Trend Graph Scale

### Drawing method

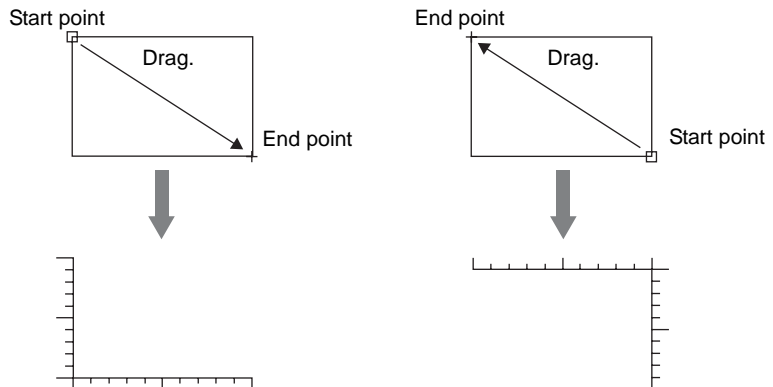
1. Select a line color from the [Pen Color] icon on the toolbar.



1. Click the “▼” mark on the right of the [Scale] icon on the toolbar. Select [Trend Graph Scale] from the scale type displayed. The icon is depressed and the mouse cursor is turned into a cross-shaped cursor.



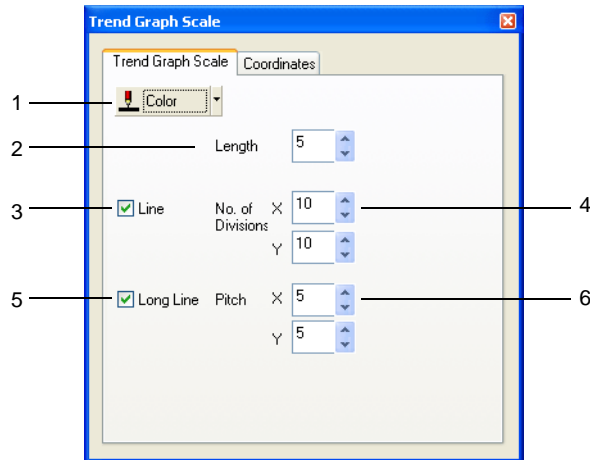
2. Drag the mouse from the start point to the end point in the same way as drawing a rectangle. The trend graph scale is drawn.



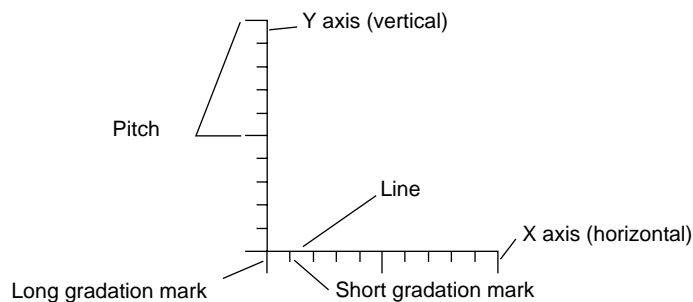
3. To reset the drawing setting, right-click or double-click the mouse button. By dragging the mouse again without resetting it, you can draw another scale continuously.

**[Trend Graph Scale] dialog**

Clicking (or double-clicking) the trend graph scale brings up the [Trend Graph Scale] dialog shown below.



1	Color	Choose a color for the trend graph scale.
2	Length (1 - 16)	Set the length of short gradation marks. Enter the numerical value in the data field, or set the desired value using the Up/Down button.
3	Line	When this box is checked ( <input checked="" type="checkbox"/> ) , the scale is drawn with lines. When this box is not checked ( <input type="checkbox"/> ) , the scale is drawn without lines.
4	No. of Divisions (1 - 255)	Set the number of divisions of the scale. Enter the numerical value in the data field, or set the desired value using the Up/Down button. Separate settings for the X and Y axes are required.
5	Long Line	When this box is checked ( <input checked="" type="checkbox"/> ) , long gradation marks are attached to the scale at the specified pitch. When this box is not checked ( <input type="checkbox"/> ) , long gradation marks are not attached.
6	Pitch (1 - 16)	This option is active when [Long Line] is checked. Specify the pitch for long gradation marks. Enter the numerical value in the data field, or set the desired value using the Up/Down button. Separate settings for the X and Y axes are required.



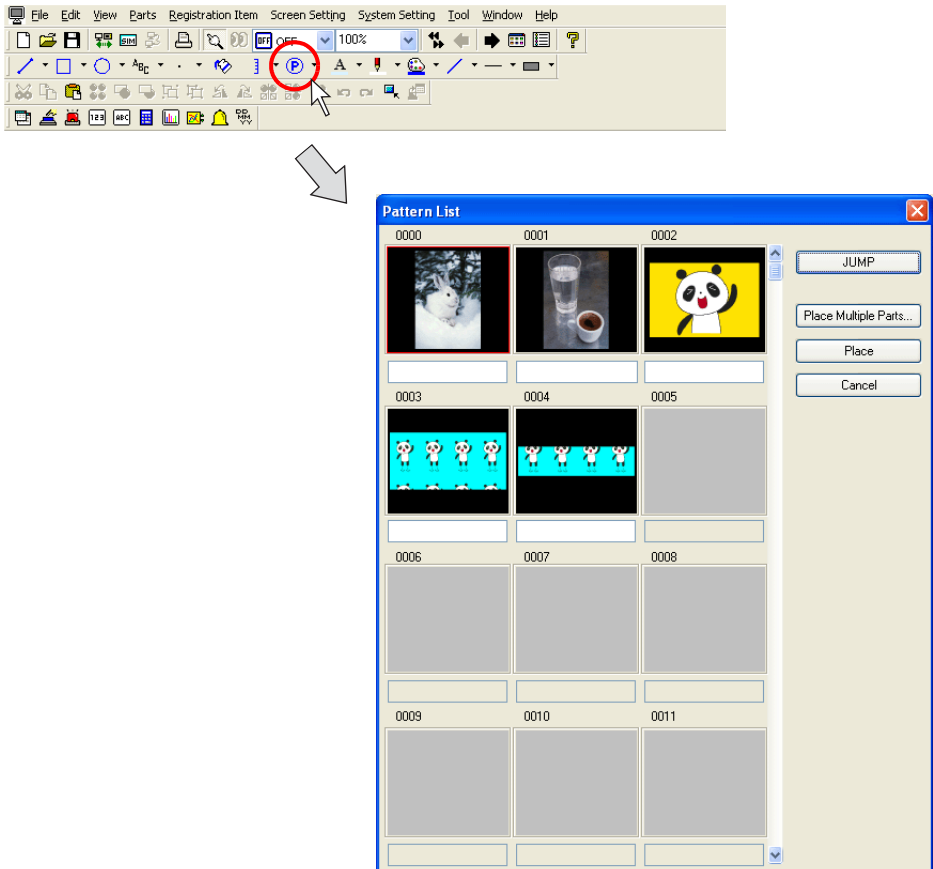
## Pattern

This command is used to place a pattern registered in the pattern edit area on the screen.  
For multi-language screens, pattern numbers are selectable on a language-by-language basis.



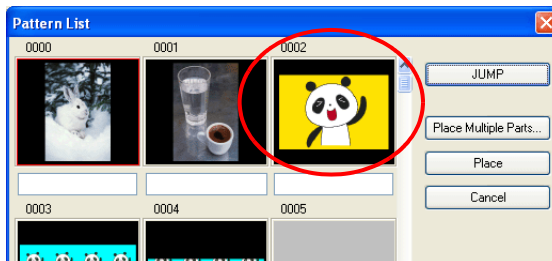
For pattern registration and pattern edit area, refer to “5.10 Pattern” (page 5-39).

Clicking the [Pattern] icon brings up the following pattern list window.



## Placing Patterns

1. In the [Pattern List] window, click the desired pattern.





To call the desired pattern, click the [JUMP] button.

- Click [Place]. A selected pattern is displayed along with the cursor.

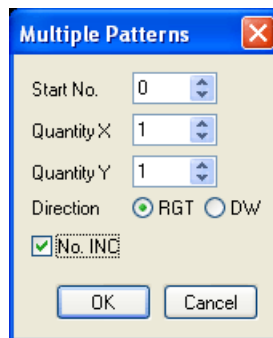


- Click the mouse in the desired position. The pattern is placed.
- To quit placing patterns, right-click the mouse or click the [Select] icon. By clicking the mouse again without doing so, you can place another pattern continuously.

## Placing Multiple Patterns Continuously

This is useful when placing split-registered patterns in alignment.

- In the [Pattern List] window, click the [Place Multiple Parts] button. The [Multiple Patterns] dialog shown below is displayed. The following options are included in the dialog.



Start No.	Specify the top pattern number to be placed.
Quantity X/Y	Specify the quantity of patterns along the X axis and the Y axis.
Direction (RGT / DW)	Choose either direction of aligning patterns in multi-placement.
No. INC	Check this box ([ <input checked="" type="checkbox"/> No. INC]) when placing patterns increasing the number by one. When this is not checked ([ <input type="checkbox"/> No. INC]), the same patterns are copied for multi-placement.

2. Set up as shown below and click [OK].

Start No.: 3

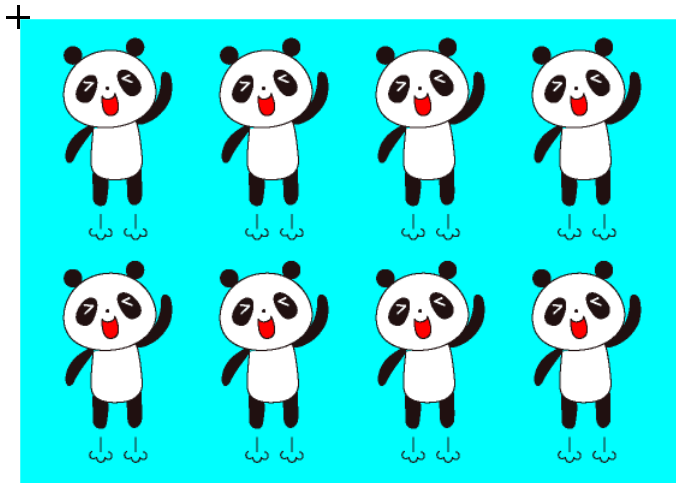
Quantity X: 1

Quantity Y: 2

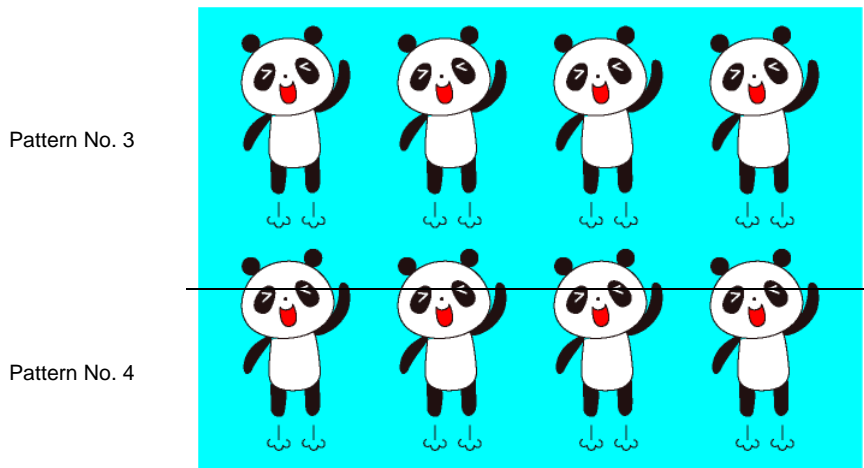
Direction: DW

No. INC: Checked

A selected pattern is displayed along with the cursor.



3. Click the mouse in the desired position. Multiple patterns are placed in alignment.



## Graphic Call

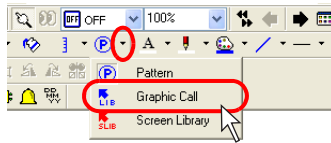
“Graphic call” is used to place a graphic registered in the graphic library on the screen.



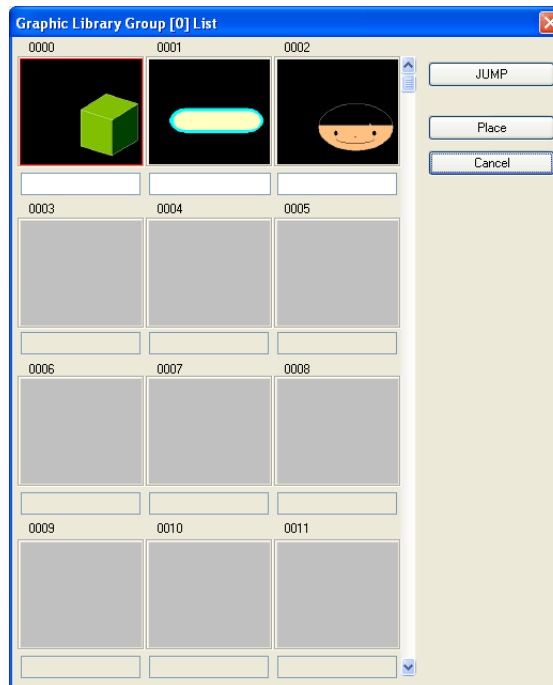
For more information on graphic registration and graphic library, refer to “5.6 Graphic Library” (page 5-13).

## Placing Graphics

1. Click the “▼” mark on the right of the [Pattern] icon on the toolbar. Select [Graphic Call] from the list displayed.



2. The following [Graphic Library List] window is displayed:

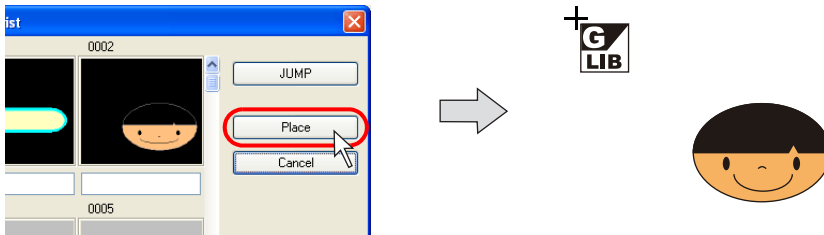


3. Click the desired graphic.



To call the desired graphic, click the [JUMP] button.

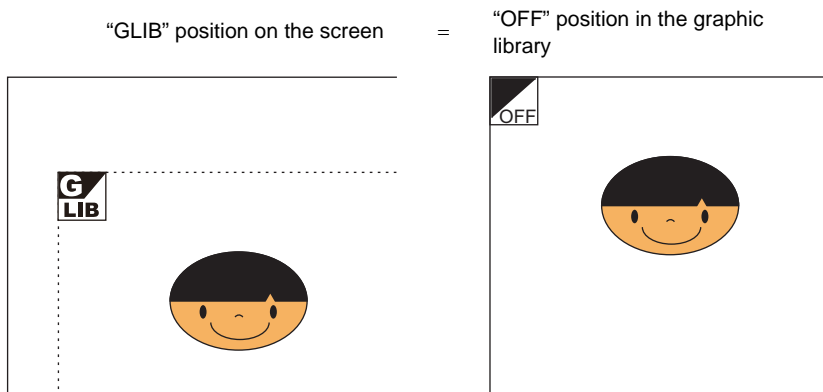
4. Click [Place].  
A graphic call icon is displayed along with the cursor.



5. Click the mouse in the desired position. The graphic is placed with the [GLIB] mark at the clicked position.



The reference position of placing a graphic is the "offset" position on the graphic library. For more information on "offset," refer to page 5-14.



To call a graphic that is called with the graphic call command using another graphic call command (nesting), a maximum of eight nests is possible.



## Screen Library

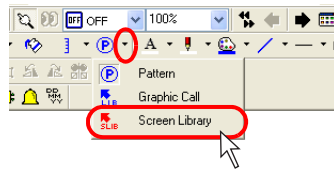
“Screen library” is used to place a screen registered in the screen library.



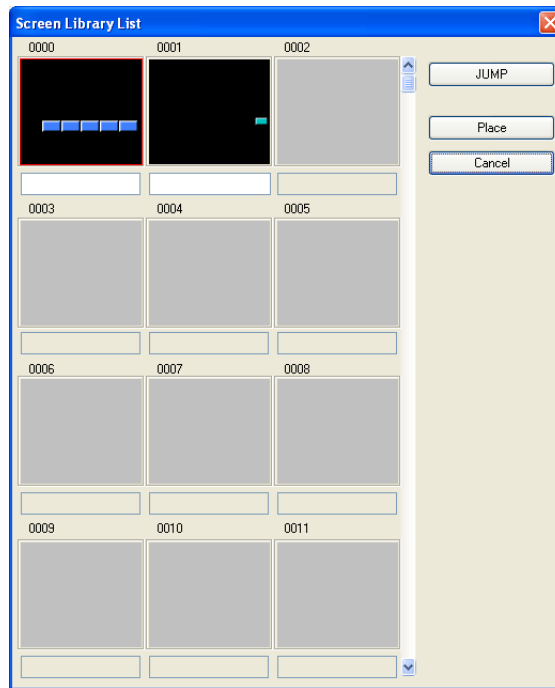
For more information on screen library, refer to “5.8 Screen Library” (page 5-31).

### Placing Screen Library

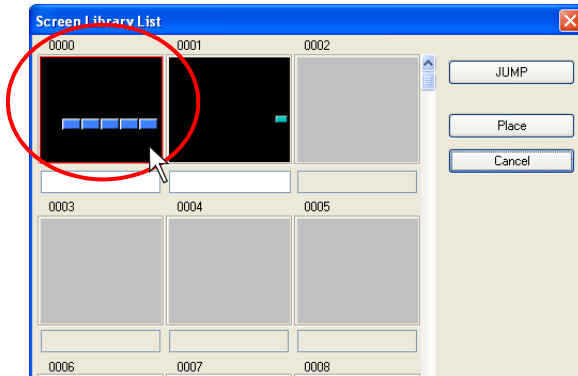
1. Click the “▼” mark on the right of the [Pattern] icon on the toolbar. Select [Screen Library] from the list displayed.



2. The following [Screen Library List] window is displayed:



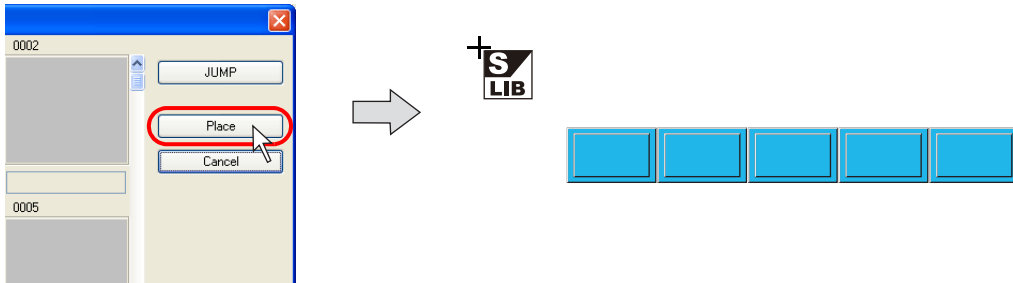
3. Click the desired library.



To call the desired library, click the [JUMP] button.

4. Click [Place].

The selected screen and the screen library icon is displayed along with the cursor.

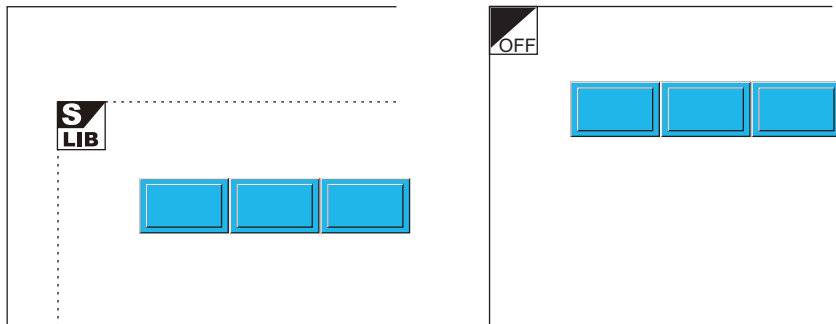


5. Click the mouse in the desired position. The screen is placed with the [SLIB] mark at the clicked position.



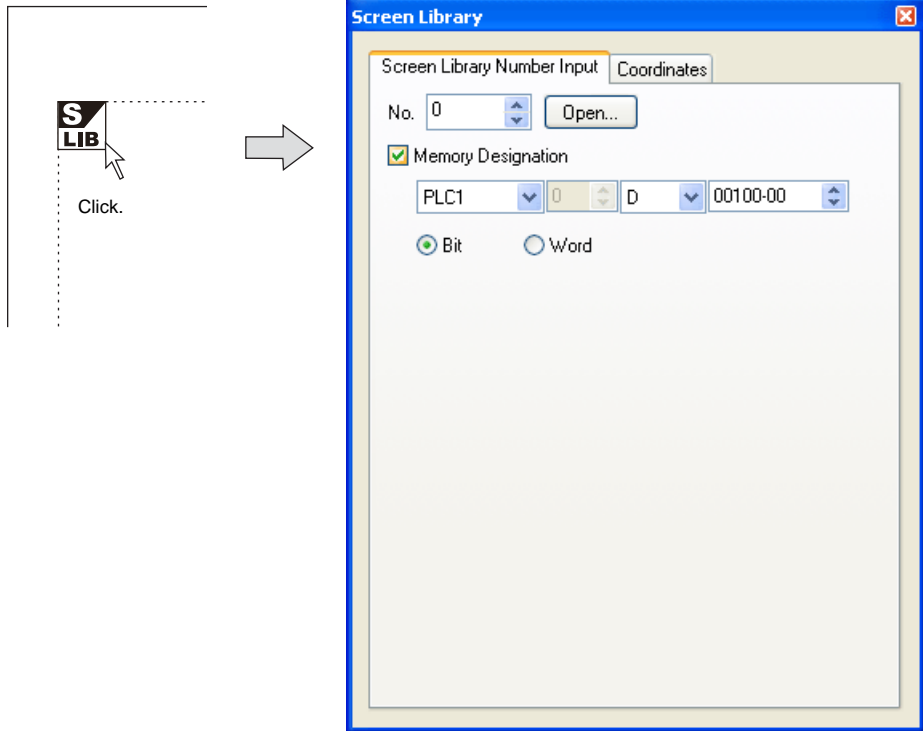
The reference position of placing a screen is the "offset" position on the screen library. For more information on "offset," refer to page 5-34.

"SLIB" position on the screen = "OFF" position in screen library



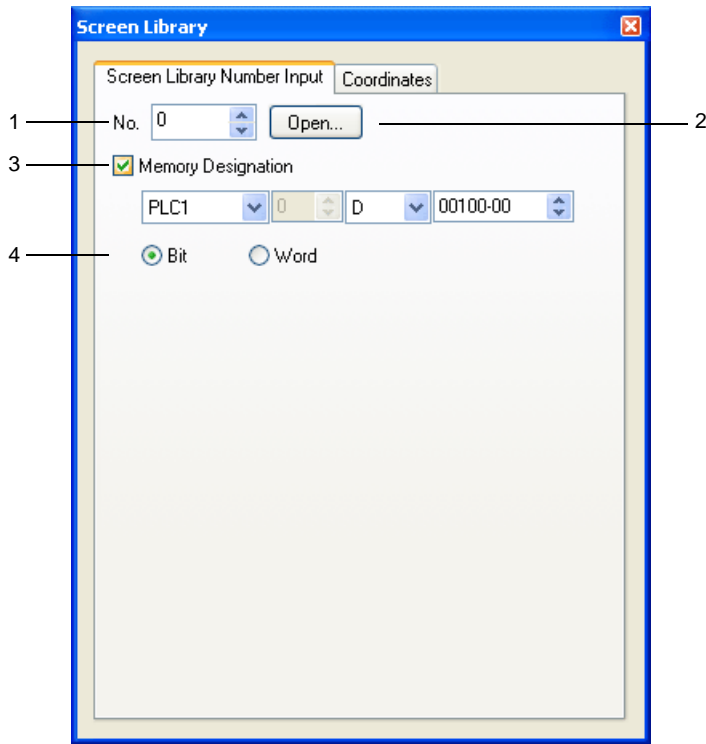
## [Screen Library] Dialog

The [Screen Library] dialog is displayed by clicking the [SLIB] mark. The library is displayed also by selecting the [SLIB] mark and then selecting [Detail Setting] from the right-click menu.



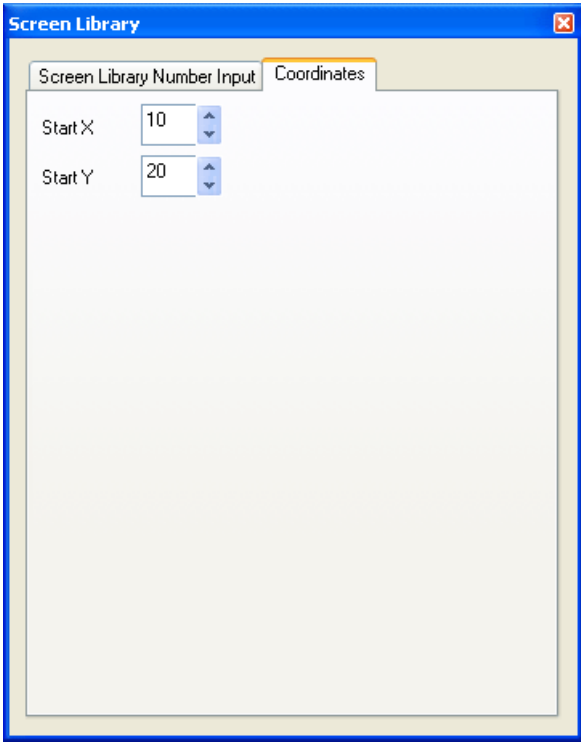
**[Screen Library Number Input] tab window**

When a screen selected from the screen library is placed, changing the screen library number or showing/hiding the screen is executable according to memory designation.



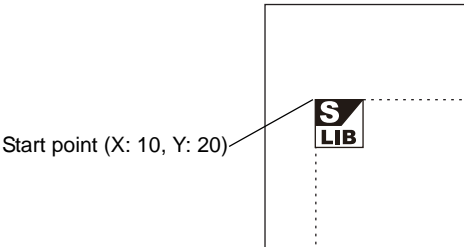
1	Screen library number	Enter your desired screen library number.
2	Open	Pressing this button calls up the [Screen Library List] window.
3	Memory Designation	<p>Set the memory location for showing/hiding or changing the screen selected from the screen library.</p> <p><b>* When the memory location has been designated, screen switching according to the memory designation takes place at the time of redrawing. There are two methods of redrawing the screen:</b></p> <p><b>Method 1: Switch the screen.</b></p> <p><b>Method 2: Execute the macro command RESET_SCRN.</b> (For more information, refer to the V Series Macro Reference Manual.)</p>
4	Bit/Word	<ul style="list-style-type: none"> <li>• Bit When this option is checked, the screen is shown/hidden according to bit setting/resetting.</li> <li>• Word When this option is checked, the screen is displayed according to the screen library number directly specified.</li> </ul>

[Coordinates] tab window



Start X	Specify the X coordinate at the upper left corner of the [SLIB] mark in dots.
Start Y	Specify the Y coordinate at the upper left corner of the [SLIB] mark in dots.

\* Start X and Y points of the screen library



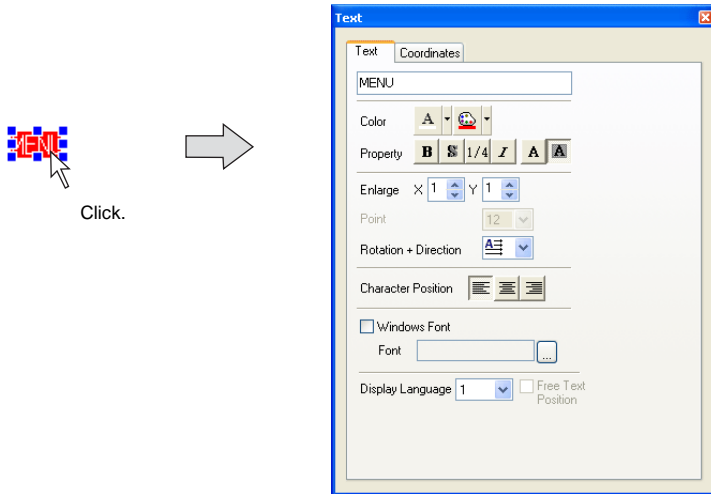
## 4.4 Graphic Properties Setting

Graphic properties can be set in each item dialog.

### How to Display the Item Dialog

#### Display by clicking

As default, clicking on the item brings up the corresponding item dialog.

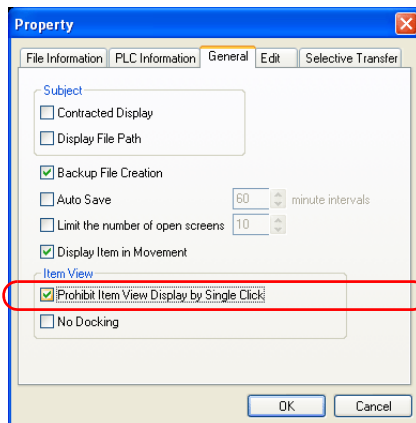


For more information on operating the item dialog, refer to “2.3 Menu Item [View]” (page 2-11).

#### Display by double-clicking

It is also possible to display the item dialog by double-clicking on the item.

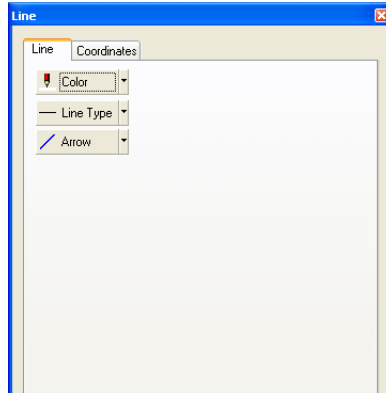
Click [File] → [Property] and open the [General] tab window. Check [ Prohibit Item View Display by Single Click].



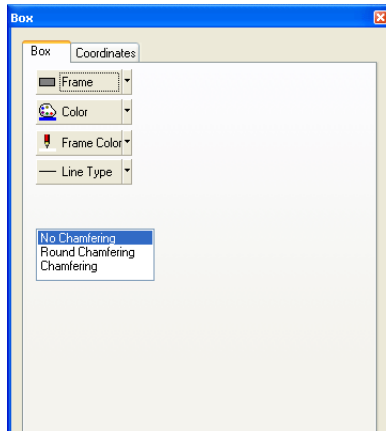
The item dialog is displayed by double-clicking the mouse instead of single clicking.

## Example of Item Dialog

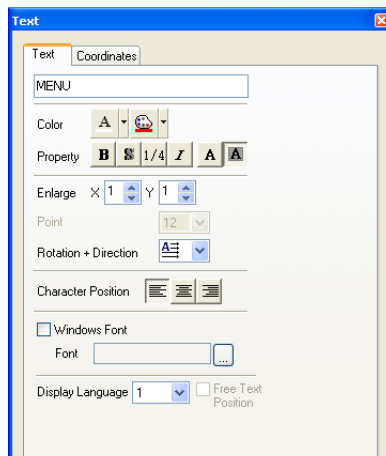
### Line



### Box



### Text



# MEMO



Please use this page freely.



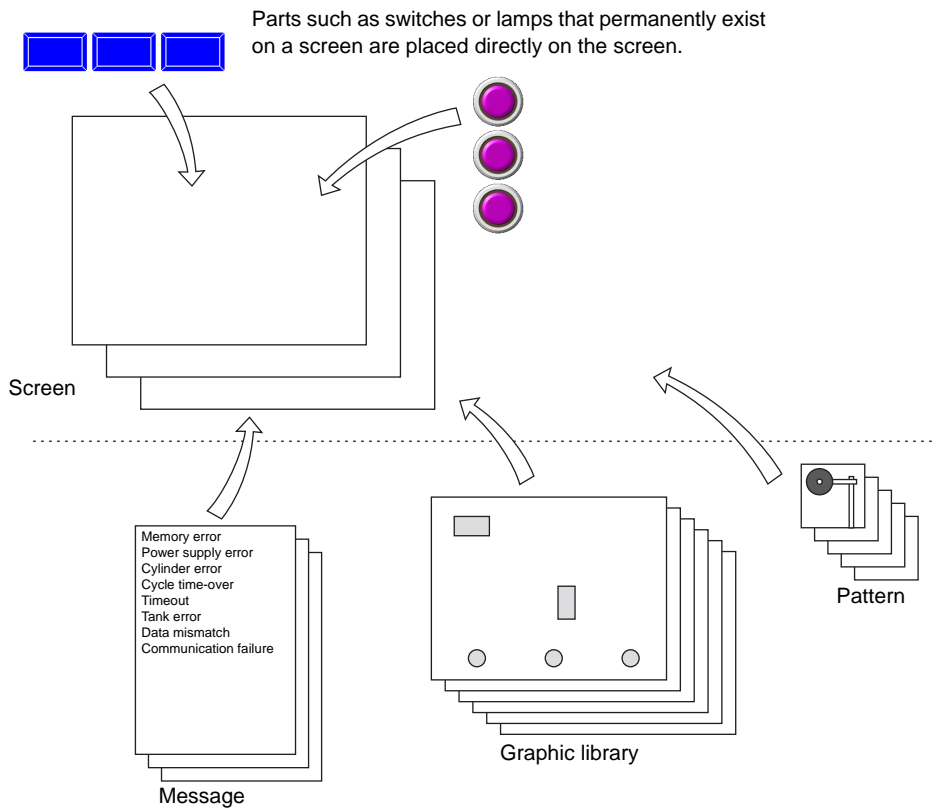
# 5 Registration Items

## 5.1 Outline of Registration Items

V8-series screen data files consist of areas called screens.

Parts and graphics can be placed on screens.

Meanwhile, data items or graphics, the contents of which will vary according to circumstances, cannot be placed on screens. Thus, these items are registered in different areas.



Items that will vary according to the circumstances are registered in different areas.

These areas are called registration items. When editing these items, start from selection from the [Item] menu.

## 5.2 Contents of Registration Items

The following table indicates the contents of the registration items and their uses.

Registration Item	Uses	Refer to:
Screen	–	page 5-3
Message	Used for bit order alarming, message, alarm logging or alarm tracking	page 5-4
Macro block	Used in macros	page 5-12
Graphic library	Used for graphic call, graphic mode, graphic relay mode, etc.	page 5-13
Overlap library	Used for overlap displays	page 5-26
Screen library	Used for screens and overlap displays	page 5-31
Data block	Used for data block areas	page 5-35
Pattern	Used for drawing on screens, in graphic library, etc.	page 5-39
Data sheet	Used for data sheets	page 5-56
Page block	Used for alarm sub display or message mode	page 5-61
Direct block	Used for alarm sub display or message mode	page 5-64
Screen block	Used for bit order alarming	page 5-67
Tile	Used for drawing	page 5-69
Animation	Used for animation	page 5-72
Comment	Used for comment display	page 5-76
Multi-language	Used for changing the language used on the screen	page 5-83

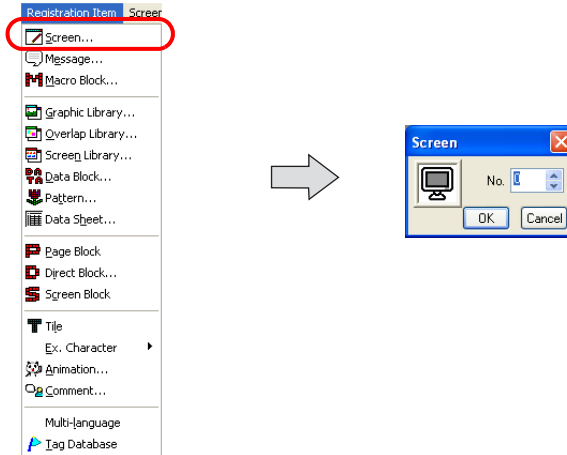
## 5.3 Screen

A screen is an editing window to be opened at start-up of the editor software.

### Calling a Screen

To go to a different screen from the current screen or while a different registration item window is opened, select [Screen] from the [Registration Item] menu.

(Alternatively, you can call the screen from the [Screen] menu in Project View.)



The [Screen] dialog is displayed. Specify the screen number to be opened and click [OK].

### Screen Editing



Refer to each individual chapter in this manual for editing a screen.

For limitations on screen editing such as a limited number of parts, refer to “2.6 Screen Composition” (page 2-31).

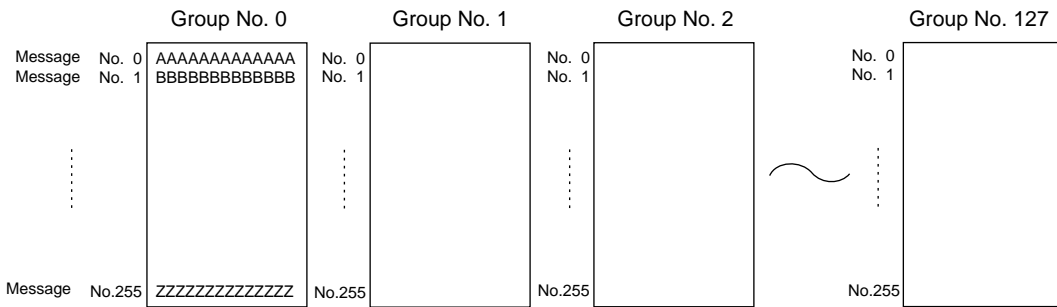
## 5.4 Message

It is possible to register user's desired texts in the message editing area.  
 Texts for the bit order alarming, message mode, alarm logging or alarm tracking (parts) that will vary according to the circumstances are registered in this area and can be displayed by the message display function.

### Message Structure

The message editing area is divided into 128 groups.  
 Each of which can contain 256 message lines. Therefore, you can register a maximum of 32768 lines.

Message



The maximum permissible number of characters per line depends on the number of displayed dots specified for MONITOUCH.

Number of Displayed Dots	Max. Number of Characters (1-byte)
800 × 600	100
640 × 480	80

## Relationship between Group Numbers and Absolute Addresses

Each message is given a group address (message group number and line number) as well as an absolute address (line number only).

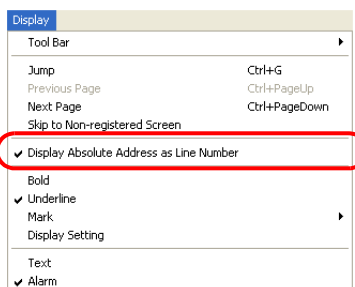
Ordinary Addresses (Groups)		Absolute Addresses	
Group No.	Message No.	Group No.	Message No.
0	0000 - 0255	(None)	0000 - 0255
1	0000 - 0255		0256 - 0511
2	0000 - 0255		0512 - 0767
3	0000 - 0255		0768 - 1023
4	0000 - 0255		1024 - 1279
5	0000 - 0255		1280 - 1535
6	0000 - 0255		1536 - 1791
7	0000 - 0255		1792 - 2047
8	0000 - 0255		2048 - 2303
9	0000 - 0255		2304 - 2559
10	0000 - 0255		2560 - 2815
⋮	⋮	⋮	⋮
126	0000 - 0255		32256 - 32511
127	0000 - 0255		32512 - 32767



### How to check absolute addresses

You can check absolute addresses in the [Message Edit] window.

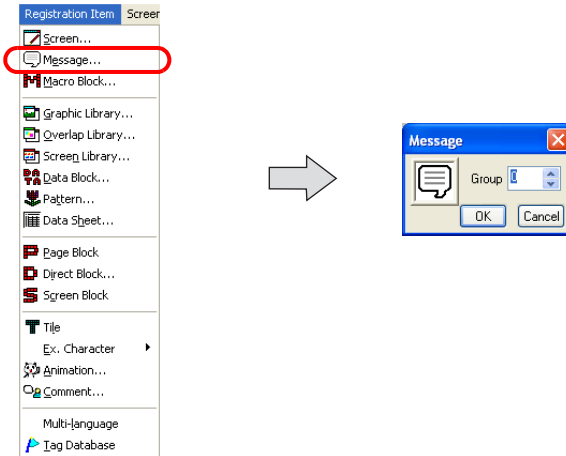
Click [Display] → [Display Absolute Address as Line Number]. The field showing line numbers switches to show absolute addresses.



## Calling a Message

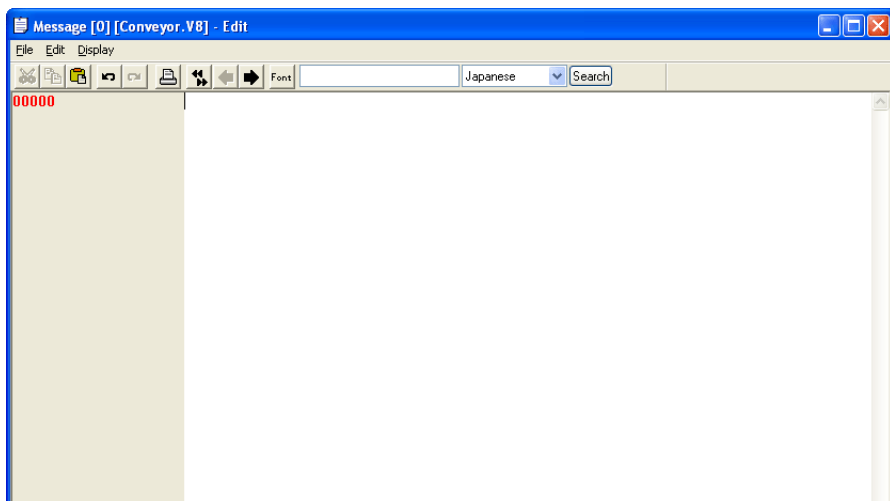
Select [Message] from the [Registration Item] menu.

The [Message] dialog is displayed. Specify the message group number to be opened and click [OK].  
(Alternatively, you can call the screen from the [Screen] menu in Project View.)



### [Message Edit] window

The following window is displayed.



## Message Editing

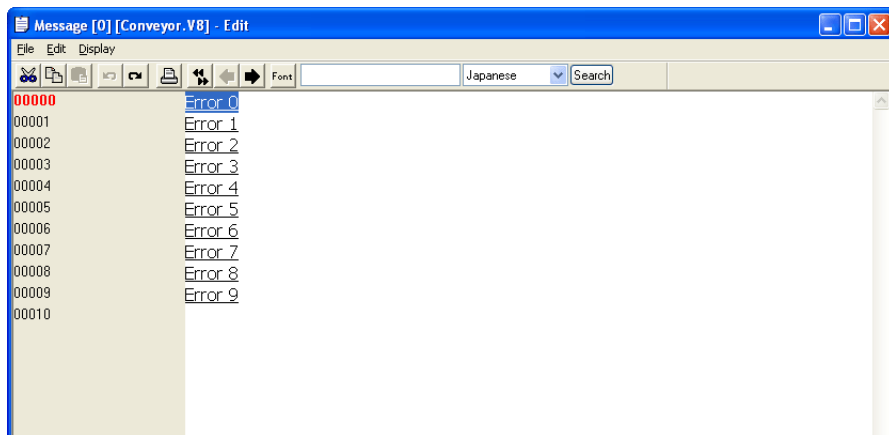
Messages are entered in the same way as characters in graphics.



To shift to the next group, click the [Next] icon on the icon bar.

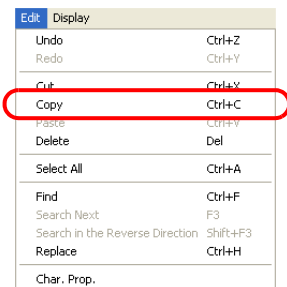
## Copying and Pasting Messages

1. Specify messages as the copy source by dragging the mouse. The messages are highlighted.

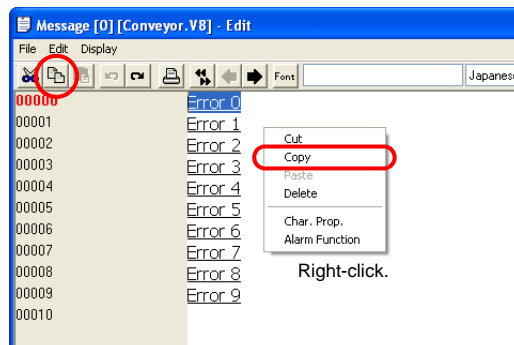


To select all messages in the group, click [Select All] from the [Edit] menu.

2. Select [Copy] from the [Edit] menu or the right-click menu, or click the [Copy] icon on the edit toolbar. The messages are copied to the Windows clipboard.

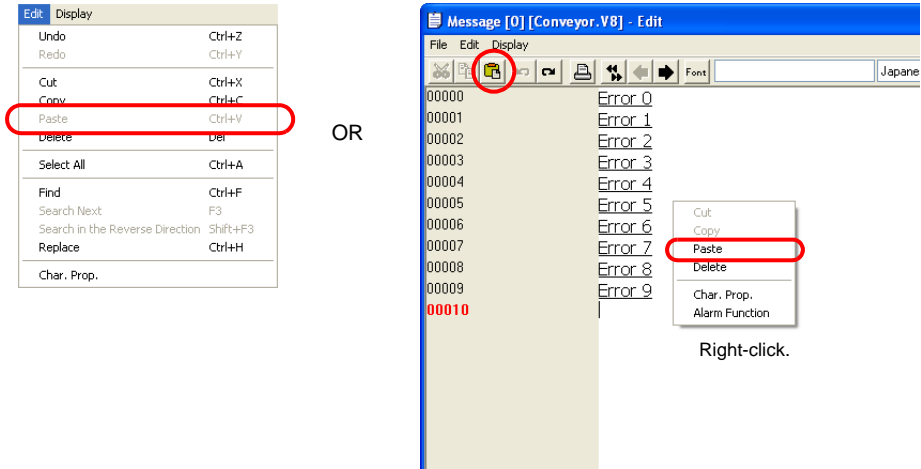


OR



Right-click.

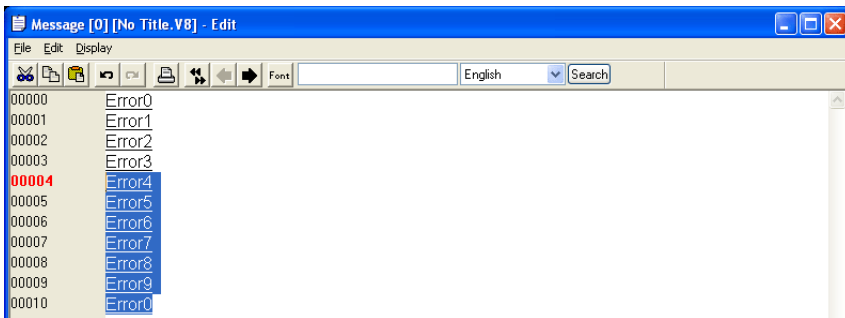
3. Move the cursor to the copy target position. Select [Paste] from the [Edit] menu or the right-click menu, or click the [Paste] icon on the edit toolbar. The specified messages are copied to the position.



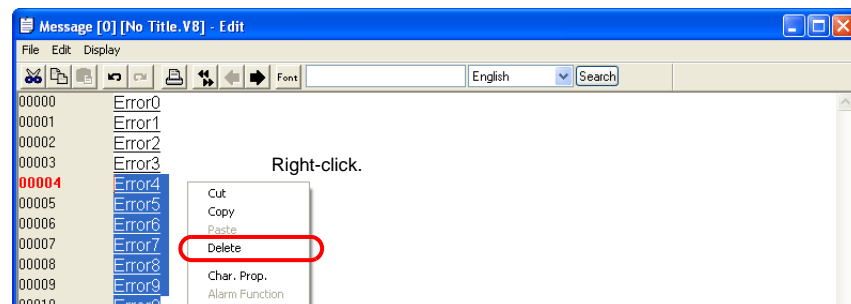
The [Paste] command inserts messages into the specified position so that the following lines move down accordingly.

## Deleting Messages

1. Specify messages to be deleted by dragging the mouse. The messages are highlighted.



2. Select [Delete] from the [Edit] menu or the right-click menu (or press the Delete key on the keyboard). The specified messages are deleted.



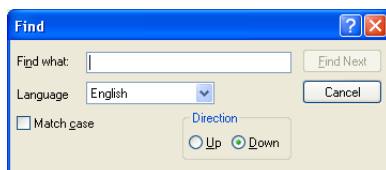


## Message Search and Replacement

Searching for or replacing messages is possible.

### Search

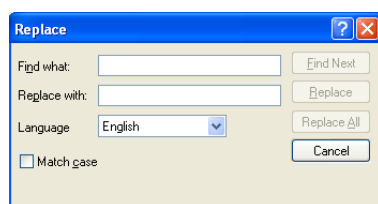
1. In the [Message Edit] window, check the position of the mouse cursor.
2. Select [Find] from the [Edit] menu.  
The [Find] dialog is displayed.



3. Enter the string to be searched for into the [Find what] field.
4. Set [Language] according to the language used for message editing.  
(Search is performed based on the character codes corresponding to the [Language] setting.)
5. Select an option from [Direction].  
Select [Up] when searching the window upward from the cursor position. Select [Down] when searching the window downward from the cursor position.
6. Check [Match case] to make a distinction between upper-case and lower-case letters during searching messages.
7. Clicking [Find Next] starts searching the window in the selected direction.

### Replacement

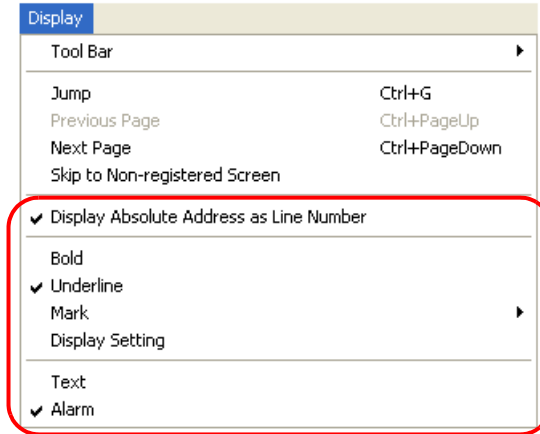
1. In the [Message Edit] window, check the position of the mouse cursor.
2. Select [Replace] from the [Edit] menu.  
The [Replace] dialog is displayed.



3. Enter the desired strings respectively into the [Find what] and [Replace with] fields.
4. Set [Language] according to the language used for message editing.  
(Search and replacement are performed based on the character codes corresponding to the [Language] setting.)
5. Check [Match case] to make a distinction between upper-case and lower-case letters during searching messages.
6. Clicking [Find Next] starts searching the window downward from the cursor position.  
When [Replace] is clicked, the string for [Find what], if found during searching downward from the cursor position, is replaced with the string for [Replace with], and search continues.  
When [Replace All] is clicked, all the strings for [Find what], if found during searching downward from the cursor position, are replaced with the string for [Replace with].

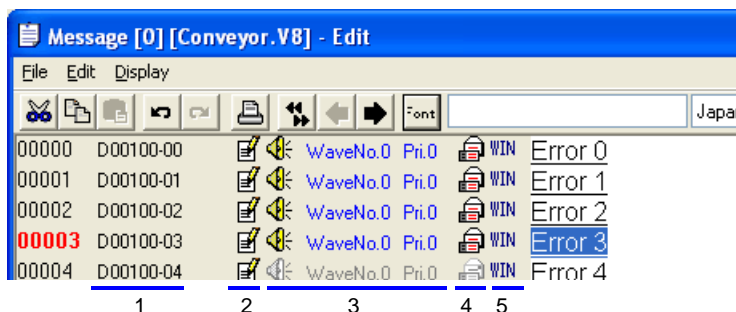
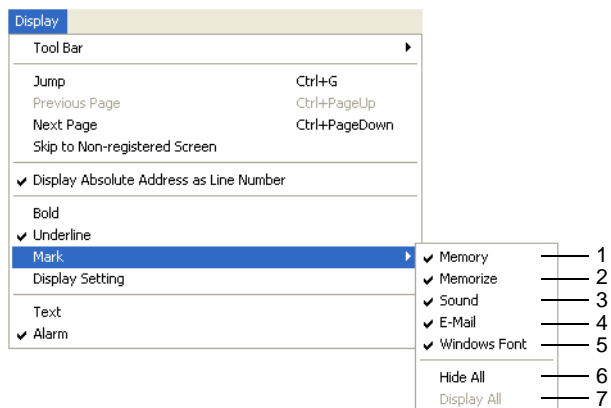
## Message Display Environment Setting

The [Display] menu contains commands for messages.



Display Absolute Address as Line Number	When this command is unchecked, the line numbers (0 - 255) in each group are displayed at the extreme left of the window. When checked, absolute addresses are displayed instead on the extreme left. For more information on absolute addresses, refer to page 5-5.
Bold	When this command is checked, message characters are displayed in bold typeface similar to the [Bold] option available on screens.
Underline	When this command is checked, registered messages are underlined. Each underline is drawn by the number of the characters typed for the message. For registered messages containing spaces etc., this command can be used when counting the number of characters in the messages.
Mark	Available sub-menu items for this command vary, depending on whether [Text] or [Alarm] is selected below [Mark]. Much more sub-menu items become active when [Alarm] is selected. For more information, refer to the next page.
Text / Alarm	Either [Text] or [Alarm] can be selected. Selecting [Alarm] is recommended when the alarm tracking function is in use.

## Mark



The following displays are available.

1	Memory (with [Alarm] checked)	When this command is selected, the allocation of memory used for alarm display is displayed.
2	Memorize (with [Alarm] checked)	Checked lines are stored as history records in the alarm tracking mode. Unchecked lines are not stored in history records.
3	Sound (with [Alarm] checked)	When this command is selected, the column that indicates settings with/without sound output is displayed.
4	E-mail (with [Alarm] checked)	When this command is selected, the column that indicates settings with/without e-mail is displayed.
5	Windows Font	When this command is selected, the column that indicates whether or not Windows fonts are used is displayed.
6	Hide All (with [Alarm] checked)	When this command is clicked, the sub-menu items are unchecked all at once.
7	Display All (with [Alarm] checked)	When this command is clicked, the sub-menu items are checked all at once.



Refer to the V8 Series Reference Manual for more information on the following: For alarm tracking, refer to “Chapter 10.3 Alarm Tracking (Historical).” For sound output, refer to “Chapter 14.4 Sound.” For e-mail, refer to “Chapter 19.4 E-Mail.”

## 5.5 Macro Block

Macro programs are registered in macro blocks.

Macro blocks are executed by CALL commands in the macro mode or in other macro programs.



For more information on macros, refer to the V Series Macro Reference Manual.

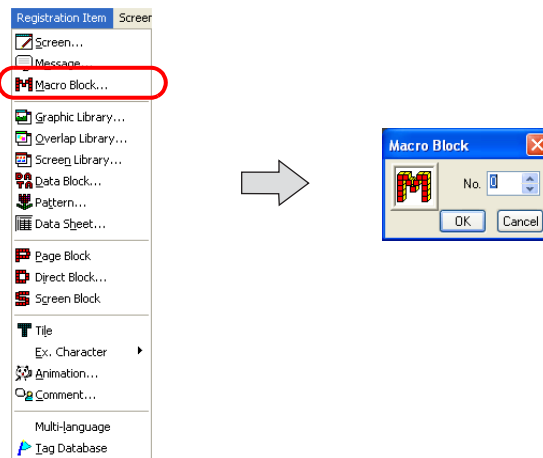
### Macro Block Structure

A maximum of 1,024 macro blocks can be registered. A maximum of 1,024 lines can be set for one macro block.

### Calling a Macro Block

Select [Macro Block] from the [Registration Item] menu.

The [Macro Block] dialog is displayed. Specify the macro block number to be opened and click [OK]. (Alternatively, you can call the screen from the [Screen] menu in Project View.)



### Macro Block Editing

For more information on macro editing, refer to "Chapter 2 Edit" in the V Series Macro Reference Manual.

## 5.6 Graphic Library

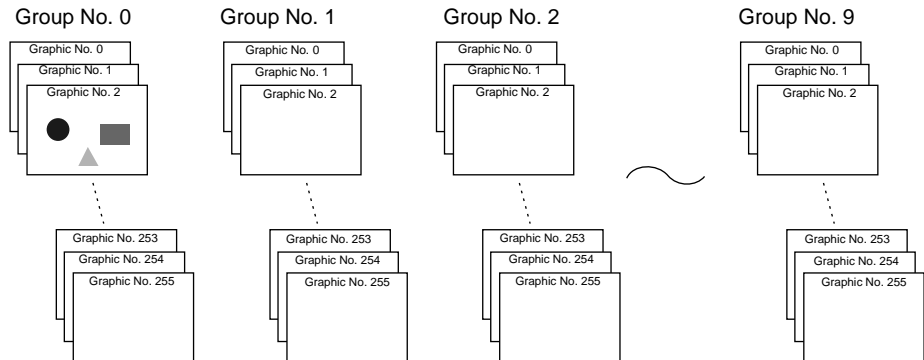
Graphics or numerical data displays that will be displayed by bit setting (ON) are registered in the graphic library.

### Graphic Library Structure

A graphic library screen and a screen are the same in size.

A total of 2,560 graphic library screens are divided into 10 groups for registration.

Therefore, one graphic library group is capable of storing 256 screens.

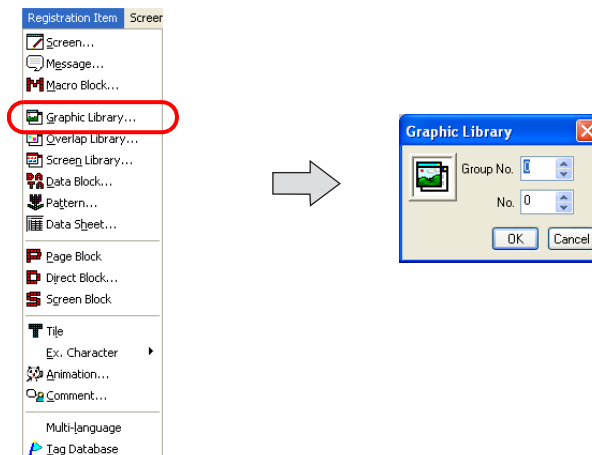


### Calling the Graphic Library

Select [Graphic Library] from the [Registration Item] menu.

The [Graphic Library] dialog is displayed. Specify the graphic library group number to be opened and the desired graphic number. Click [OK].

(Alternatively, you can call the screen from the [Screen] menu in Project View.)



## Graphic Library Editing



Only graphics can be registered in the graphic library (parts cannot be registered).

Use this drawing toolbar for graphic library.



Except for the points below, the editing procedure using the drawing toolbar is the same as the procedure for screens.



For more information, refer to "Graphic Call" (page 4-51) in "4 Drawing".

This section explains the graphic editing procedure specific to the graphic library.

### Offset Position Setting

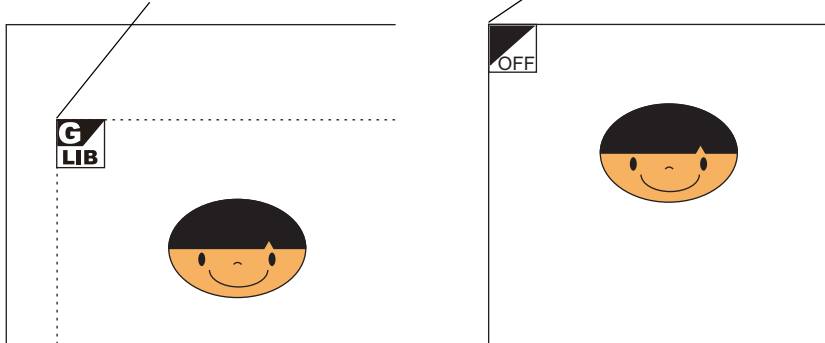
#### Outline of offset position

Every graphic library screen in the graphic library has a reference position called an offset. When a registered graphic is called to the screen, it is placed based on the offset position.

The offset position in the graphic library is equivalent to the graphic call (GLIB) position in drawing as well as the top left corner in a display area.

Example:

Placement by [Graphic Call] on the drawing toolbar = "OFF" position in the graphic library



An offset position in the graphic library is shown with an "OFF" mark.

## Changing an offset position

Every graphic library screen in the graphic library has an offset position at coordinates X, Y (0, 0) as default. To change the position, follow the procedure below.

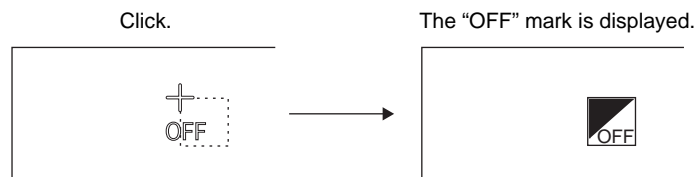
1. Click the [Offset] icon on the drawing toolbar.



2. A cross-shaped cursor marked with "OFF" appears.



3. Click the mouse in an arbitrary position on the screen. The offset mark is displayed at that location.



Changing the offset position prior to registering a graphic is not valid. Set an offset position after registering a graphic.

## Parameter Setting

### Outline of parameter

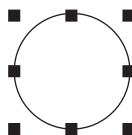
Graphics registered in the graphic library may be moved or transformed on the screen. If data displays (to be explained later) are registered, they also may be moved, transformed, or changed in displayed value. For these items which are moved, transformed or changed, memory must be allocated. This memory is called the "parameter."



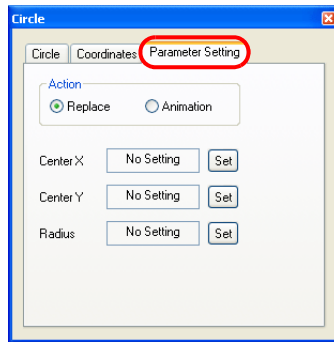
Setting parameters only in the graphic library is not sufficient for moving, transforming, or changing graphics. Make sure to set parameters for each part on the screen.

### Parameter setting procedure

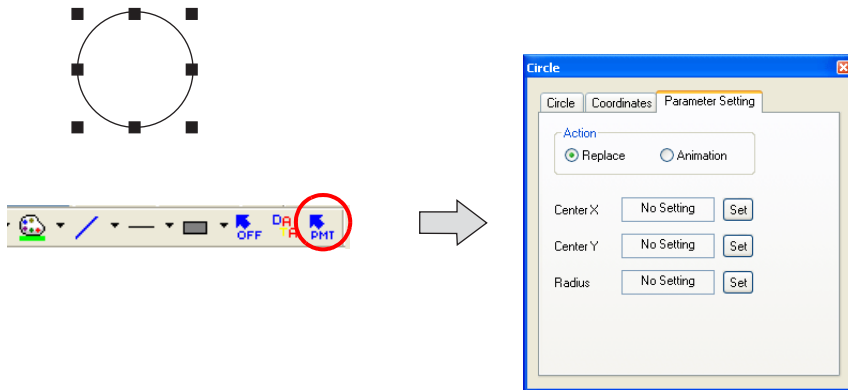
1. Click on a graphic in the graphic library to select it.



2. When the graphic is clicked (or double-clicked), the corresponding item dialog is displayed. In the dialog, open the [Parameter Setting] tab window.



The tab window is also displayed by clicking the [Parameter] icon on the drawing toolbar while the graphic is selected.



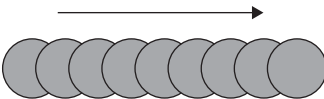
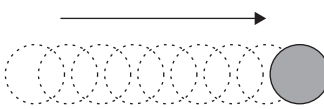
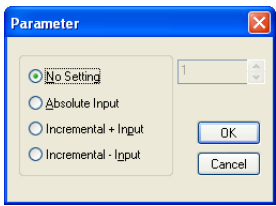
For more information on the setting items, refer to the next section.



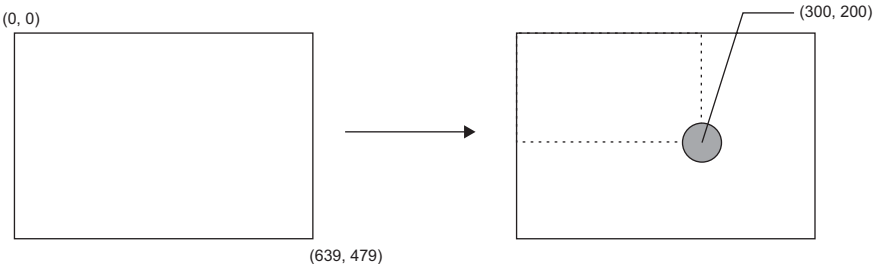
The options in the [Parameter Setting] dialog vary with the selected graphic. For more information, refer to page 5-20.

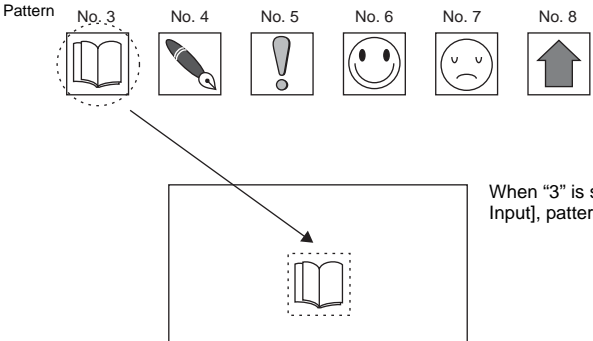
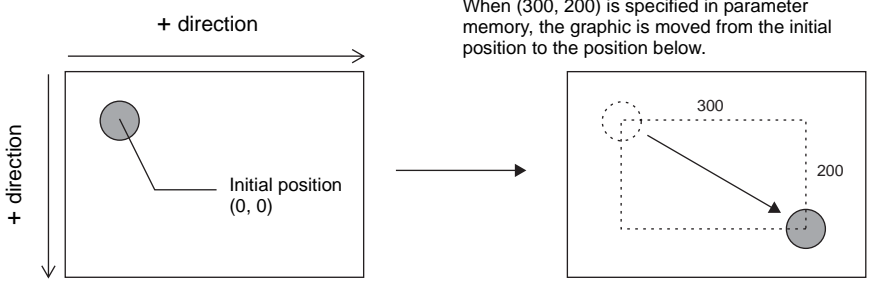
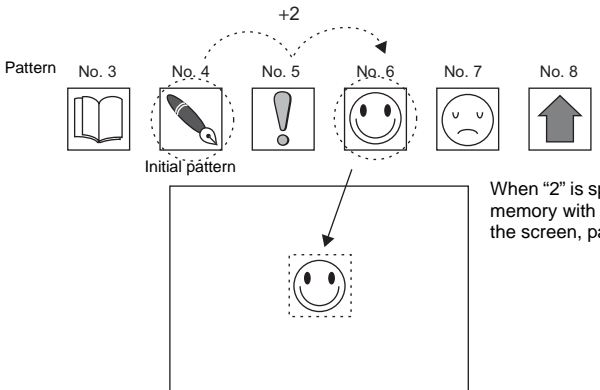


**[Parameter Setting] tab window**

<p>Action</p>	<p>When moving, transforming, or changing graphics, the new one is placed over the previous one, or the previous one is cleared before the new one is placed on the screen. Select either manner.</p> <p><b>[Replace]</b> The new graphic is placed over the previous one. Therefore, the previous one remains on the screen.</p>  <p><b>[Animation]</b> Only the new graphic is placed on the screen.</p> 
<p>Set (For each option)</p>	<p>When you go to a setting item and click its [Set] button, the [Parameter] dialog is displayed.</p>  <p>Refer to the following description for details.</p>

- [Parameter] dialog

<p>No Setting</p>	<p>No memory is allocated.</p>
<p>Absolute Input</p>	<p>Allows you to specify the parameter value in absolute coordinates.</p> <p>Specifying coordinates: With respect to coordinates (0, 0) at the top left corner of the screen and (639, 479) at the bottom right corner (or (319, 239) or (799, 599) or (1023, 767)), specify the coordinates for moving a graphic in memory.</p> <p>When (300, 200) is specified in parameter memory with [Absolute Input] checked, the graphic is moved to the position below.</p> 

	<p><b>Specifying a number:</b>          (Valid for patterns and graphic call)          Specify a registered pattern number or a graphic number (from 0 to 1023) in the graphic library directly.</p>  <p>When "3" is specified under [Absolute Input], pattern No. 3 is displayed.</p>
<p><b>Incremental + Input</b></p>	<p>Allows you to specify parameter values in incremental coordinates in the plus direction.</p> <p><b>Specifying coordinates:</b>          Based on a graphic position regarded as (0, 0), specifying a positive coordinate value in memory moves it in the plus direction and specifying a negative coordinate value moves it in the minus direction.</p>  <p>When (300, 200) is specified in parameter memory, the graphic is moved from the initial position to the position below.</p> <p><b>Specifying a number:</b>          (Valid for patterns and graphic call)          Based on a placed pattern or graphic number regarded as "0," specifying a positive value in memory calls a pattern or a graphic of a greater number, and specifying a negative value calls a pattern or a graphic of a smaller number.</p>  <p>When "2" is specified in the parameter memory with pattern No. 4 placed on the screen, pattern No. 6 is called.</p>

<p>Incremental - Input</p>	<p>Allows you to specify parameter values in incremental coordinates in the minus direction.</p> <p>Specifying coordinates: Based on a placed graphic position regarded as (0, 0), specifying a positive coordinate value in memory moves it in the minus direction and specifying a negative coordinate value moves it in the plus direction.</p> <div> <p>When (200, 200) is specified in parameter memory, the graphic is moved from the initial position to the position below.</p> </div> <p>Specifying a number: (Valid for patterns and graphic call) Based on a placed pattern or graphic number regarded as "0," specifying a positive value calls a pattern or a graphic of a smaller number, and specifying a negative value calls a pattern or a graphic of a greater number.</p> <div> <p>When "3" is specified in the parameter memory with pattern No. 8 placed on the screen, pattern No. 5 is called.</p> </div>
<p>No.</p>	<p>When using parameters, be sure to set a parameter number in the [Parameter] dialog.</p> <div> </div> <p>For more information on parameter numbers, refer to Chapter 11, "Graphic Display" (page 11-10) in the Reference Manual.</p>

### Parameter setting items

The following table indicates parameter items valid for each graphic.

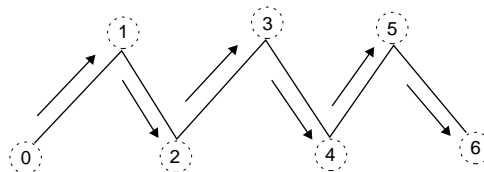
Graphic	Parameters	Refer to:
Line	Start point, end point	
Continuous line	Point 0 (- n) coordinates	1
Box	Start point, end point	
Parallelogram	Start point, PX2, PY2, PX3, PY3	2
Polygon	Center coordinates, radius, start angle, number of angles	
Circle	Center coordinates, radius	
Arc/sector	Center coordinates, radius, start angle, end angle	
Ellipse, elliptical arc, elliptical sector	Center coordinates, X radius, Y radius	
Text	Start point (coordinates of the first character: bottom left)	
Pattern	Start point (top left coordinates), pattern number	3
Paint*1	Start point	4
Graphic call	Start point, library number	
Dot	Start point	
Data display	Start point (bottom left coordinates of the first numeral)	*2

\*1 [Paint] is not depicted normally when [Action: Animation] is selected in the [Parameter Setting] dialog.

\*2 For information on data display parameters, refer to page 5-23.

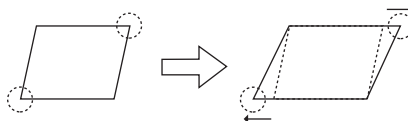
1. Continuous line (points 0 - n coordinates)

When continuous lines are drawn like this, parameters can be set for seven points.

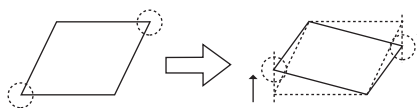


2. Parallelogram

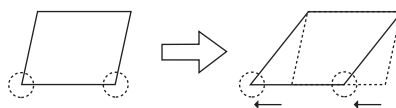
- PX2



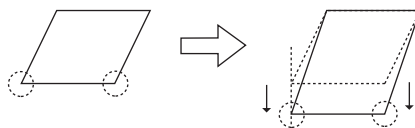
- PY2



- PX3



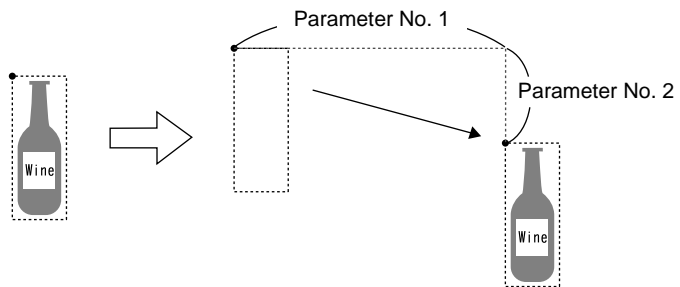
- PY3



## 3. Pattern

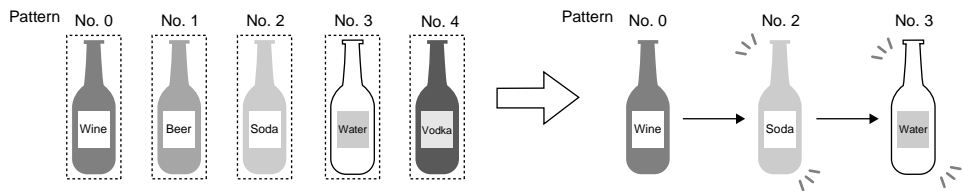
- Start point

The top left corner of the pattern becomes the start point.



- (Pattern) No.

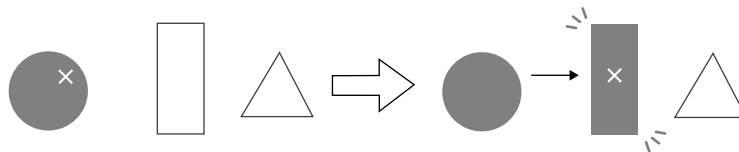
When a parameter for pattern number has been set, commanding the pattern number brings up the corresponding graphic.



## 4. Paint (start point)

The start point coordinates can be changed by a command from memory specified with a parameter.

In this case, only REP is available; therefore, the previous paint (e.g.: circle) remains.

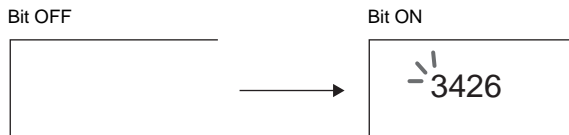


## Data Display

### Outline of data display in graphic library

In the graphic library, it is possible to use a function similar to data display parts as used on the screen. The usage is as follows:

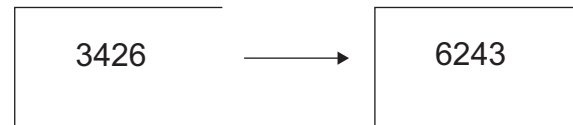
- Showing/deleting a data display through bit setting (ON)/resetting (OFF)



- Moving a data display on the screen (by parameter setting)



- Showing variations in data (by parameter setting)

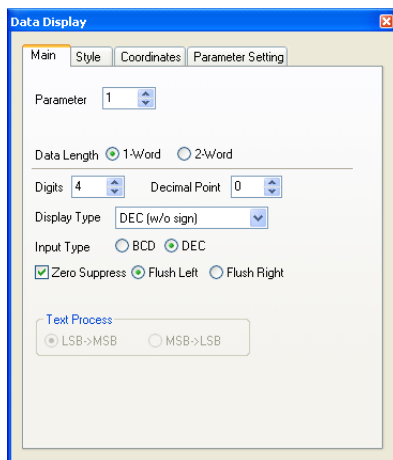


### Data display placement procedure

- Go to the drawing toolbar and click the [Data Display] icon. Dragging the mouse to the screen shows a data display with a cross-shaped cursor.



- The [Data Display] dialog for the placed data display opens. (If the dialog does not appear, double-click the data display.)

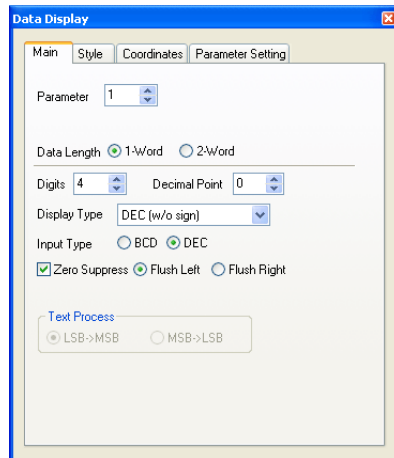


## Data display setting procedure

Click (or double-click) the placed data display.  
The [Data Display] dialog is displayed.

Click or double-click.

1234



- [Main] tab window

Parameter	Allows you to define the parameter memory. For more information on numbers, refer to "Chapter 11 Graphic" in the V8 Series Reference Manual.	
Display Type	DEC (w/o sign)	
	DEC (w/ -sign)	
	DEC (w/ +-sign)	
	HEX	
	OCT	
	BIN (binary)	
	CHAR	
MSG	Message display	

- [Parameter Setting] tab window

This tab window is used to make settings for showing data variations and moving the data display.

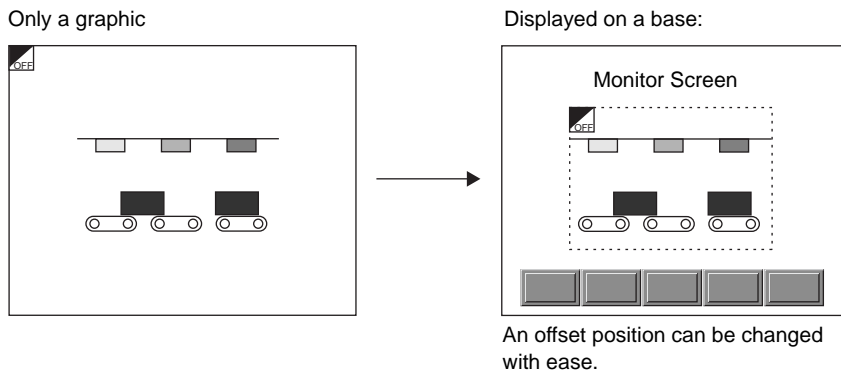
Action	When moving or changing the data display, the new one is placed over the previous one, or the previous one is cleared before the new one is placed on the screen. Select either manner.  [Replace] The new graphic is placed over the previous one. Therefore, the previous one remains on the screen.  [Animation] Only the new graphic is placed on the screen.
Set (For each option)	When you go to a setting item and click its [Set] button, the [Parameter] dialog is displayed. For more information, refer to page 5-17.

## Graphic Library Environment Setting

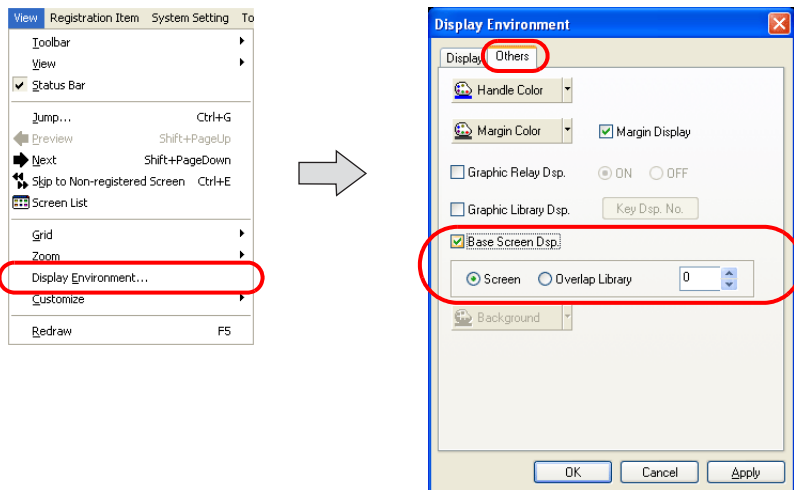
Environment setting for the graphic library is also started from [Display Environment] in the [Display] menu, as performed for screen editing.  
Therefore, this section explains the display environment settings that are different from those in screen editing.

### Base Screen Dsp. ([Others] Tab Window)

While editing a graphic in the graphic library, a screen or overlap library can be placed behind the graphic to check the actual image.



Select [View] → [Display Environment].  
The [Display Environment] dialog is displayed. Open the [Others] tab window.  
Check [Base Screen Dsp.]. Selection from [Screen] and [Overlap Library] is made possible. Select either one and specify the desired number.  
Click [OK]. The selected screen is placed behind the graphic.



If no screen is displayed, select [Redraw] from the [View] menu or press the F5 key on the keyboard.



## Background ([Others] Tab Window)

It is possible to change the background color in the graphic library.



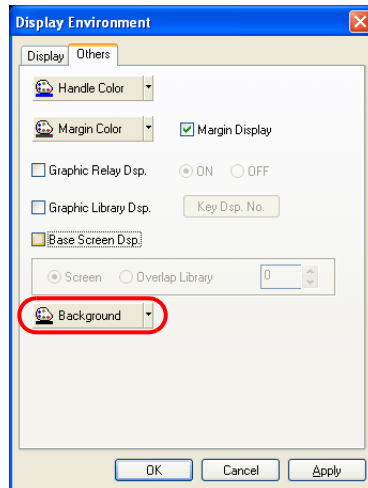
When the graphic library is called, its background setting is ignored and thus only the registered graphic is recognized as a target.

Select [View] → [Display Environment].

The [Display Environment] dialog is displayed. Open the [Others] tab window.

Select the desired background color and click [OK].

The graphic library is shown on the background colored as specified.

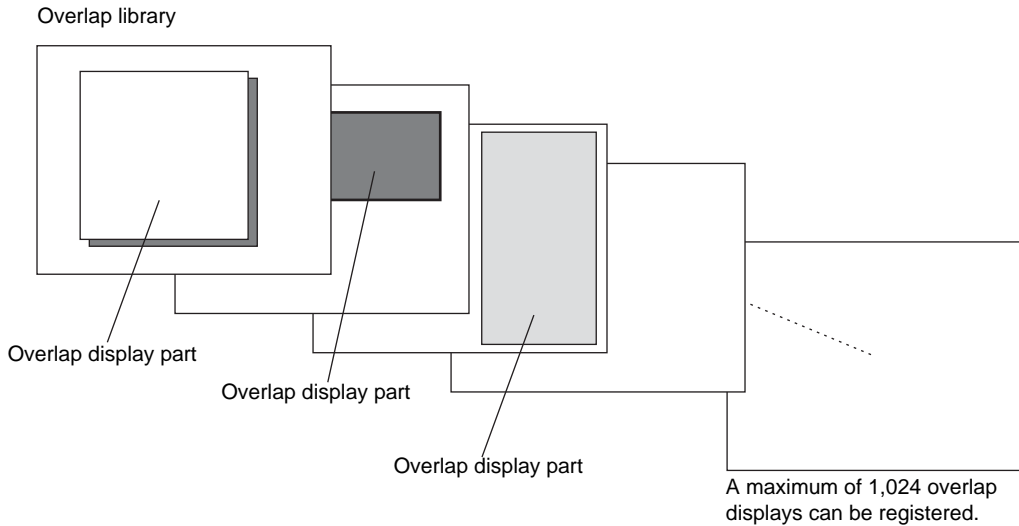


## 5.7 Overlap Library

This is an area where overlap displays are registered.

### Overlap Library Structure

A maximum of 1,024 overlap displays can be registered in the overlap library.  
 One overlap display part is registered per editing window.

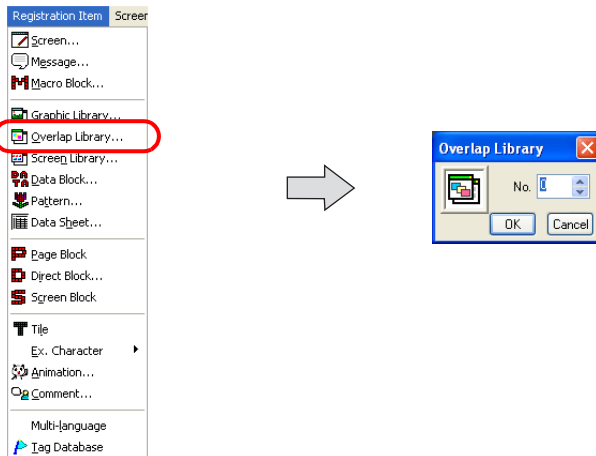


### Calling an Overlap Library

Click [Overlap Library] from the [Registration Item] menu.

The [Overlap Library] dialog is displayed. Specify the number of the overlap library to be opened and click [OK].

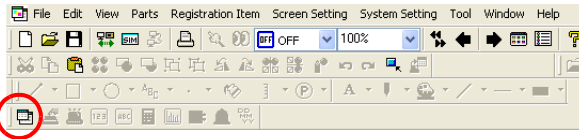
(Alternatively, you can call the screen from the [Screen] menu in Project View.)



## Editing an Overlap Library

### Placing an Overlap Display Part

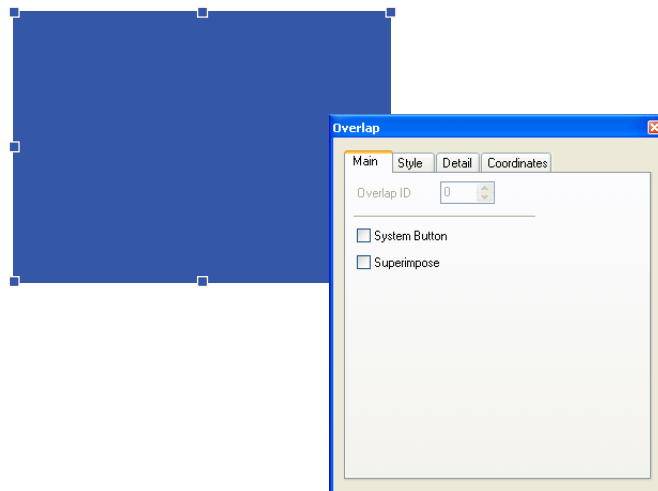
1. Click the [Normal Overlap] icon on the toolbar.



2. A cross-shaped cursor and the overlap display part are displayed on the screen.



3. Click the mouse in an arbitrary position. The overlap is placed. When the overlap part is selected, the [Overlap] dialog is displayed. (If the dialog does not appear, double-click the overlap part.)



For more information on the setting items, refer to "Chapter 2 Overlap" in the V8 Series Reference Manual.

## Item Placement on Overlap Display

---

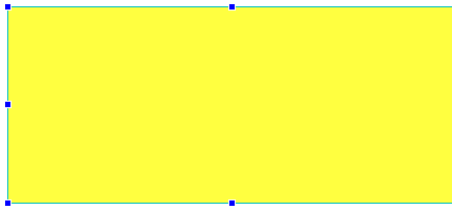
For item placement on an overlap display, you may start the procedure from either of the following:

Method 1: Select the overlap.

Method 2: Bring up the [Overlap Edit] window.

The following explains method 1. For explanation of method 2, refer to "Item placement on overlap display" page 3-67.

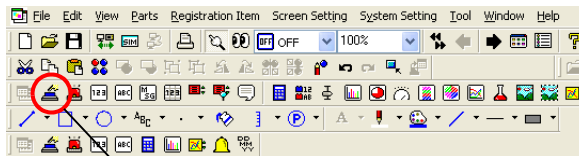
1. Select the normal overlap display part placed on the screen. Then, it is enclosed with the handle.



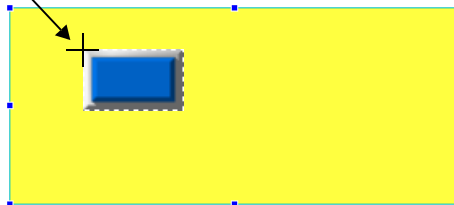
2. While the handle is displayed, click the [Switch] icon on the parts toolbar and move the cursor to the screen.

Click the mouse on the overlap display.

A switch part is placed on the overlap display.



Place the switch part on the overlap display by moving and clicking the mouse.



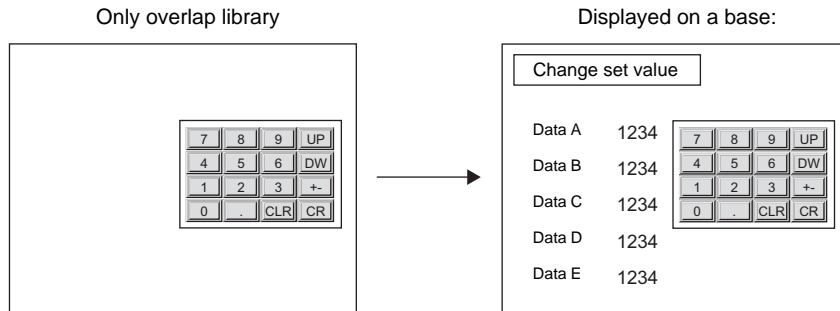
For more information on other placement or editing procedures, refer to page 3-67.

## Other Settings

Make the following settings as desired for the overlap library.

### Base Screen Display

During overlap library editing, a screen can be placed behind the overlap to check the actual image.

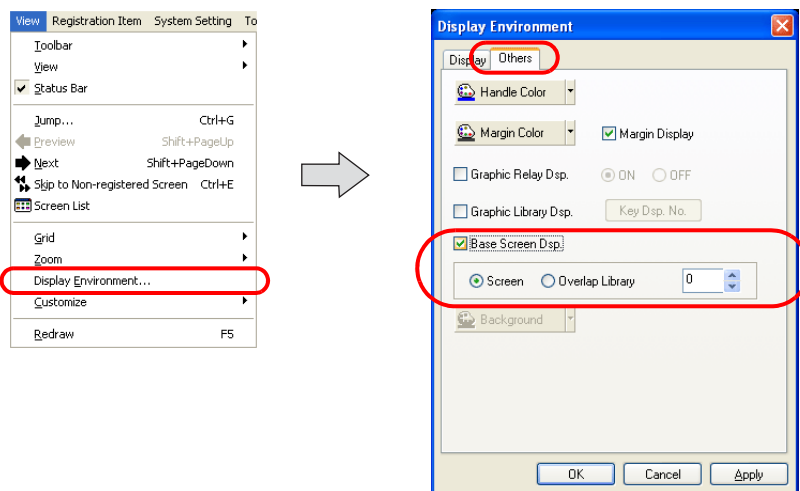


Select [View] → [Display Environment].

The [Display Environment] dialog is displayed. Open the [Others] tab window.

Check [Base Screen Dsp.]. [Screen] becomes active. Click [Screen] and specify the desired number.

Click [OK]. The selected screen is placed behind the overlap display.



If no screen is displayed, select [Redraw] from the [View] menu or press the F5 key on the keyboard.

## Macro Setting

An OPEN macro and a CLOSE macro can be set for the overlap display parts registered in the overlap library. These macros can be executed when the registered overlap part is displayed (OPEN macro) on or erased (CLOSE macro) from the screen.



Macro is a function to execute computation processing for user programs using the V8-series commands. For more information on macro commands, refer to the V Series Macro Reference Manual.



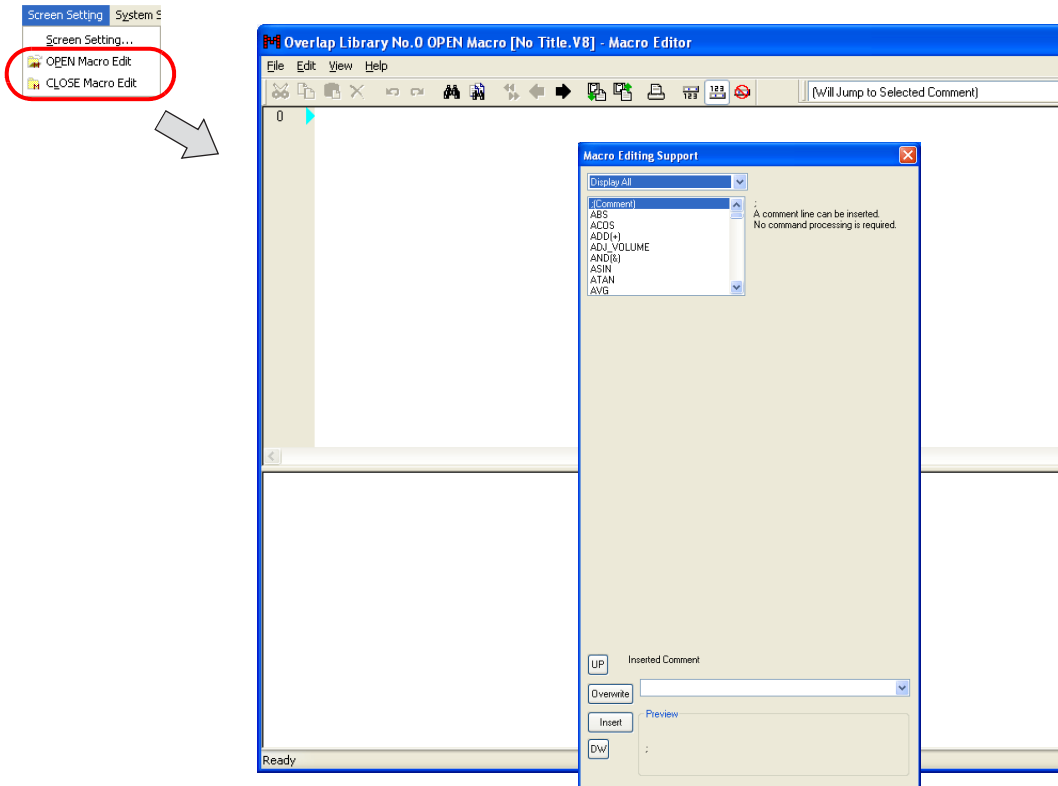
If a registered overlap library is set as a call-overlap on the screen, these macro settings become invalid. Set the overlap as a multi-overlap on the screen when enabling the macro settings.



If you delete an overlap library that includes a macro setting, be sure to delete the macro as well. Failure to delete the macro will cause an error during error check and the error will be detected also on MONITOUCH.

### Macro setting commands

Select [OPEN Macro Edit] or [CLOSE Macro Edit] from the [Screen Setting] menu. The corresponding macro editing window is displayed.



### Macro editing and deleting



For more information, refer to "Chapter 2 Edit" in the V Series Macro Reference Manual.

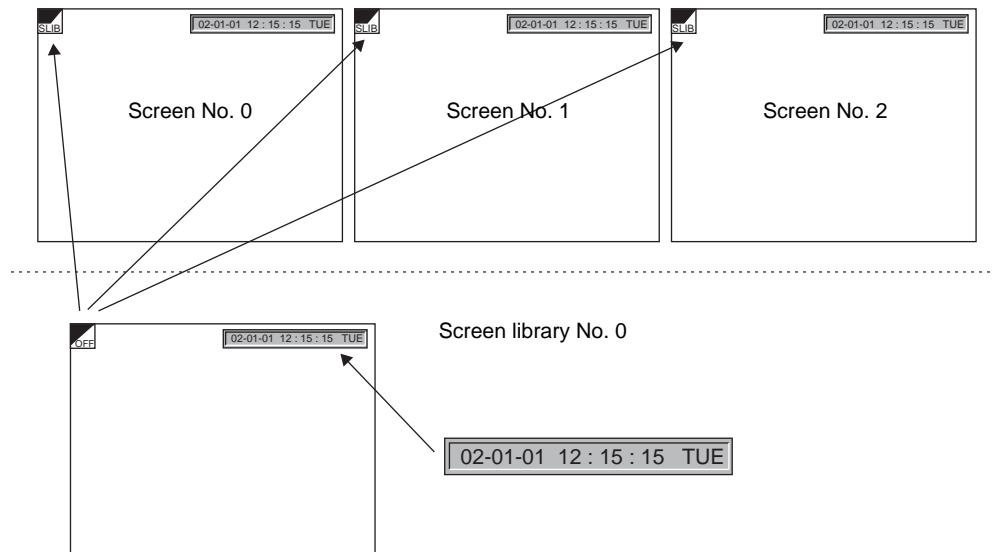
## 5.8 Screen Library

### Outline of Screen Library

If parts of switches, lamps, entry mode, time display, etc. have been registered in a screen library, it can be placed on the base screen or overlaps so as to help you create screens easily. Screen libraries are useful also in the following points.

#### Saving of Screen Memory

In the example below, a calendar part is registered in screen library No. 0 and the screen library is placed on three screens.



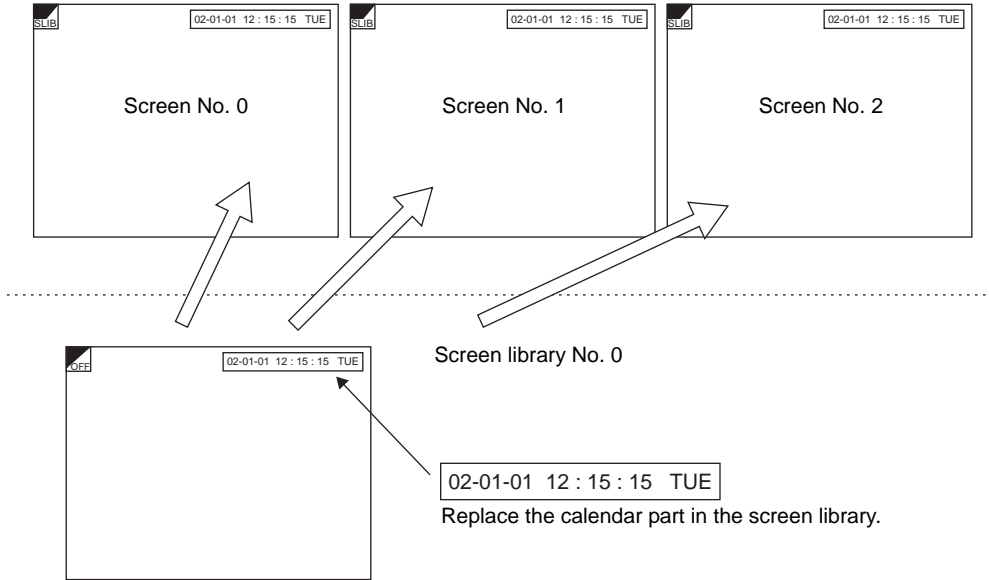
- Memory used by a Hakko Electronics standard calendar part is about 300 bytes.  
When the calendar parts are placed on three screens directly, 900 bytes are used.  
 $300 \times 3 = 900$  bytes
- When a 300-byte calendar part is registered in a screen library and the part is placed on a screen, 315 bytes and 7 bytes are used respectively.  
 $315 + 7 + 7 + 7 = 336$  bytes
- By using screen library, 564 bytes ( $900 - 336 = 564$ ) are saved.



Use of screen library saves memory.

## Screen Parts Management Through Screen Library

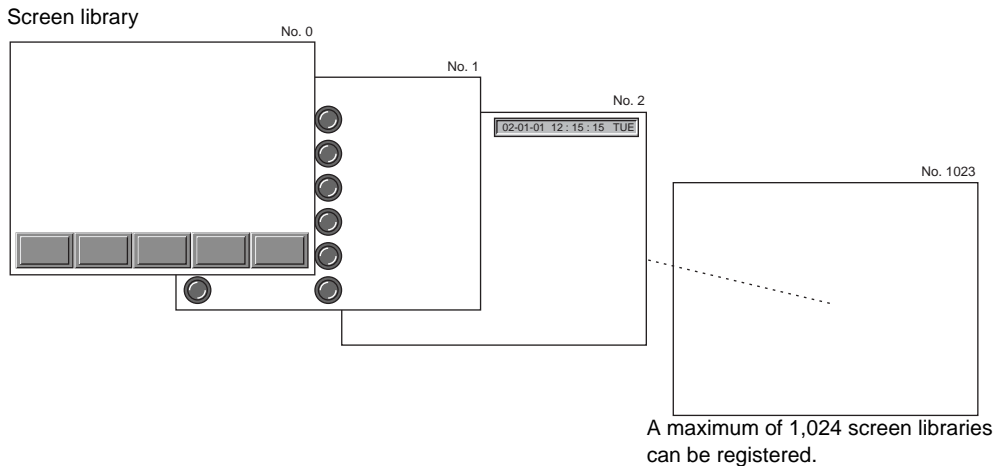
Should a part registered in a screen library be replaced after it has been placed on screens, replace it in the screen library only. The parts on the screens are also replaced simultaneously. When the calendar part in screen library No. 0 has been replaced, the parts on screen Nos. 0 to 2 are also replaced.



Screen library is available for management of parts on screens.

## Screen Library Structure

A maximum of 1,024 screen libraries can be registered.  
The maximum permissible memory for one screen library is 256 kB.



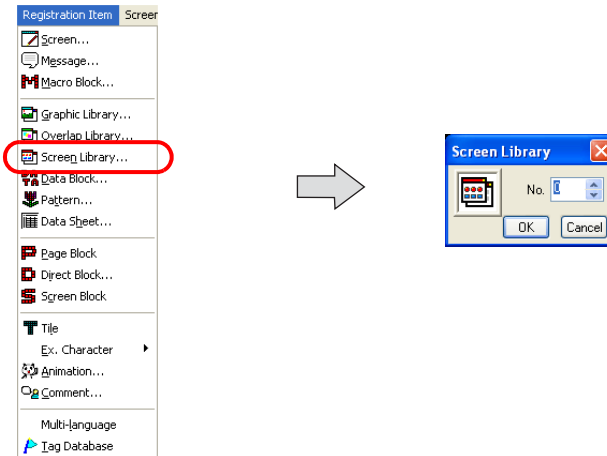


## Calling a Screen Library

Select [Screen Library] from the [Registration Item] menu.

The [Screen Library] dialog is displayed. Specify the screen library number to be opened and click [OK].

(Alternatively, you can call the screen from the [Screen] menu in Project View.)



## Screen Library Editing

Most parts valid on screens are valid in screen libraries as well.

Parts and graphics can be placed in the same manner as on screens.

### Notes on Editing

- The functions below are not valid for screen libraries though they are valid for screens.
  - Overlap
  - OPEN/CLOSE/CYCLE macro
  - Local function switch setting
  - Screen library
- When placing a screen library on the screen, check that parts to be placed do not exceed the limited number.  
 Depending on the part type, only one piece can be registered on one ID. When placing a screen library containing such a part on screens, make sure that the same ID number is not used for multiple parts. Take care of ID numbers of parts at the time of registering parts in screen library. To avoid a problem like the one described above, ID number 100 and higher should be allocated to screen libraries because such numbers may not be used generally.  
 (Also take care not to use one ID number repeatedly in different screen libraries.)
- There are cases in which only one part (entry mode, memory card) can be used on one sheet, or only one part (memo pad) can be used on one screen. Take the above note into consideration when placing a screen library containing such a part on the base screen or the overlap display.

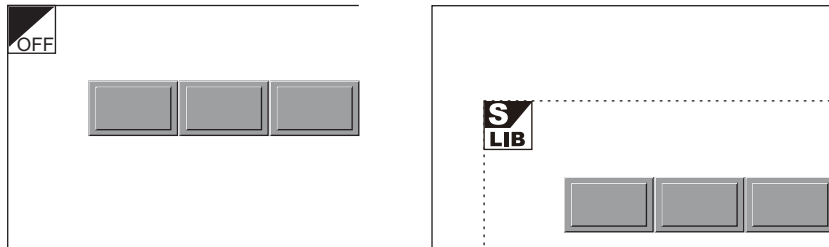


For more information on the limitation on screen parts placement, refer to "Capacity for Parts Placement" (page 3-47) in "3 Screen Editing".

## Offset Position Setting

Every screen library has a reference position called an offset.  
When a registered screen library is called to the screen, it is placed based on the offset position.

“OFF” position in screen library = “SLIB” position on the screen



Screen library shows the offset position with an “OFF” mark.

### Changing an offset position

Every screen library has an offset position at coordinates X, Y (0, 0) as default. To change the position, follow the procedure below.

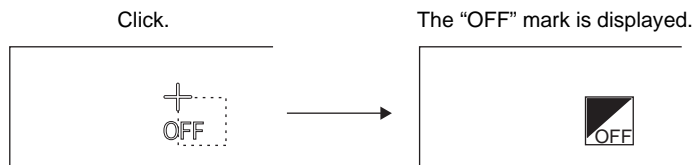
1. Click the [Offset] icon on the drawing toolbar.



2. A cross-shaped cursor marked with “OFF” appears.



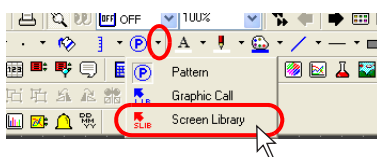
3. Click the mouse in an arbitrary position on the screen. The offset mark is displayed at that location.



Changing the offset position prior to registering a screen library is not valid. Set an offset position after registering a screen library.

## Placing a Screen Library

A registered screen library can be placed on the screen.  
Click the [Screen Library] icon on the drawing toolbar and follow the procedure for placement.



For more information, refer to “Screen Library” (page 4-53) in “4 Drawing”.

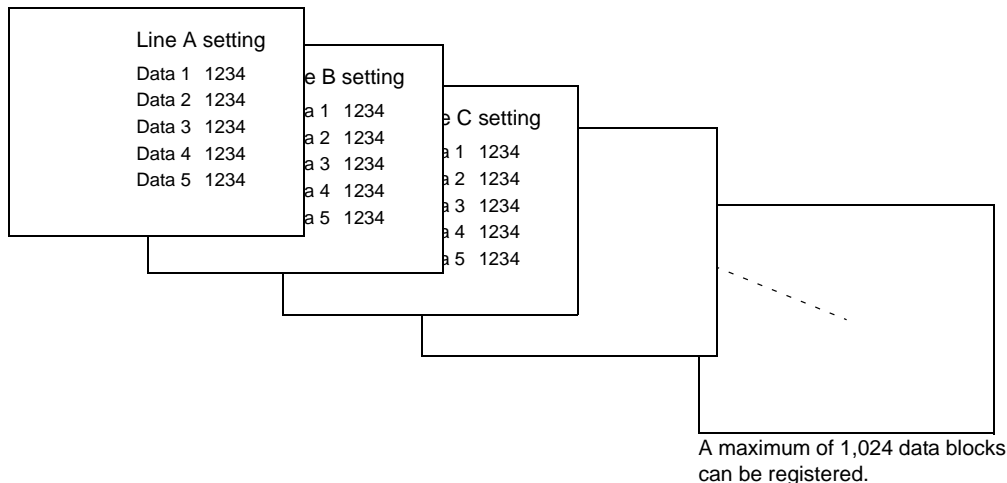
## 5.9 Data Block

Data blocks (parts) are provided as areas where data displays such as numerical data or character display parts or graphics are registered.

### Data Block Structure

A maximum of 1,024 data blocks can be registered.

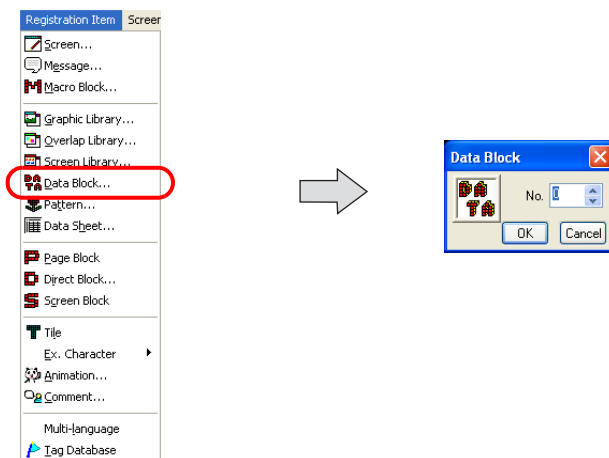
Data block



### Calling a Data Block

Select [Data Block] from the [Registration Item] menu.

The [Data Block] dialog is displayed. Specify the data block number to be opened and click [OK]. (Alternatively, you can call the screen from the [Screen] menu in Project View.)



## Data Block Editing

### Parts

Numerical data display, character display and table data display parts can be placed in the same manner that they are placed on the screen.



For more information, refer to “3.7 Parts Placement and Setting” (page 3-65).

### Drawing

Except for the following, the drawing tools can be used in the same manner as used on the screen.



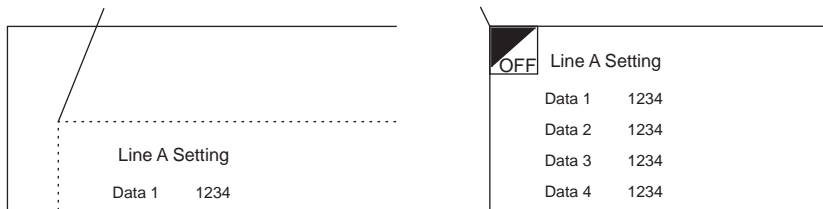
For more information, refer to “4 Drawing”.

### Offset position setting

Every data block has a reference position called an offset.

A registered data block is always placed on the screen with respect to the offset position.

Data block display area on the screen = Offset position on the data block



An offset position on the data block is shown with an “OFF” mark.

### Changing an offset position

Every data block has an offset position at coordinates X, Y (0, 0) as default. To change the position, follow the procedure below.

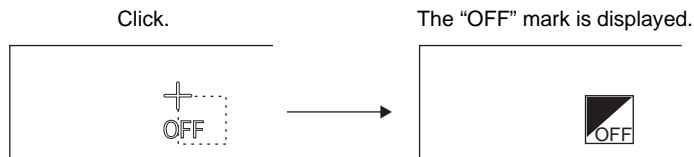
1. Click the [Offset] icon on the drawing toolbar.



2. A cross-shaped cursor marked with “OFF” appears.



3. Click the mouse in an arbitrary position on the screen. The offset mark is displayed at that location.



Changing the offset position prior to registering a data block is not valid. Set an offset position after registering a data block.

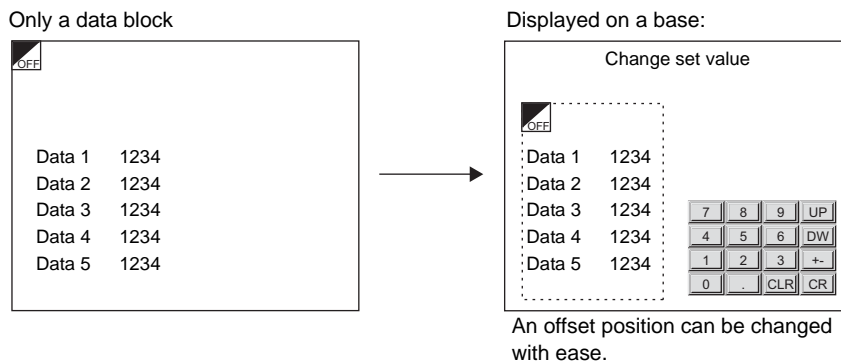
## Data Block Environment Setting

Environment setting for the data block is also started from [Display Environment] in the [View] menu, as performed for screen editing.

Therefore, this section explains the display environment settings that are different from those in screen editing.

### Base Screen Dsp. ([Others] Tab Window)

While editing a data block, a screen or overlap library can be placed behind the data block to check the actual image.

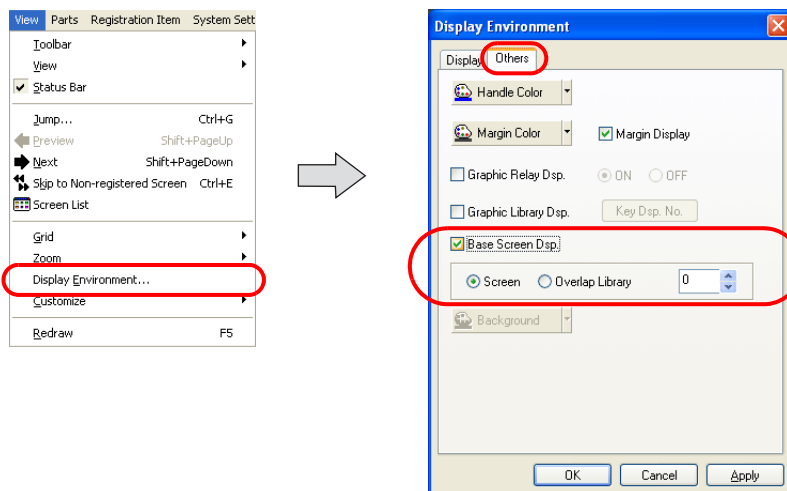


Select [View] → [Display Environment].

The [Display Environment] dialog is displayed. Open the [Others] tab window.

Check [Base Screen Dsp.]. Selection from [Screen] and [Overlap Library] is made possible. Select either one and specify the desired number.

Click [OK]. The selected screen is placed behind the data block.



If no screen is displayed, select [Redraw] from the [View] menu or press the F5 key on the keyboard.

## Background ([Others] Tab Window)

It is possible to change the background color of a data block.



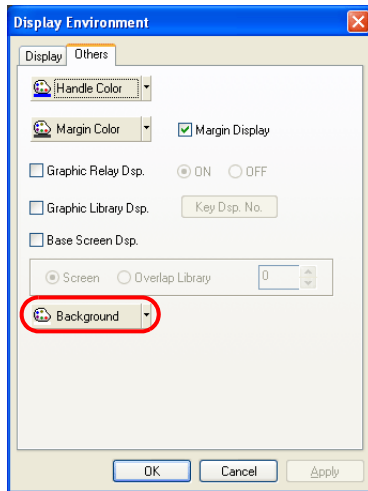
When a data block is called, its background setting is ignored and thus only the registered data is recognized as a target.

Select [View] → [Display Environment].

The [Display Environment] dialog is displayed. Open the [Others] tab window.

Select the desired background color and click [OK].

The data block is shown on the background colored as specified.

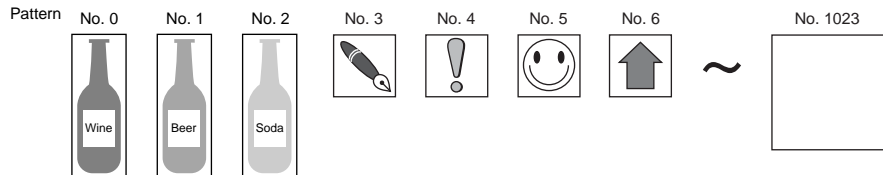


## 5.10 Pattern

Patterns are the areas where bitmap files are imported and graphics are drawn in dots and then registered.

### Pattern Structure

A maximum of 1,024 patterns can be registered.



The maximum data capacity per pattern is 1 MB.

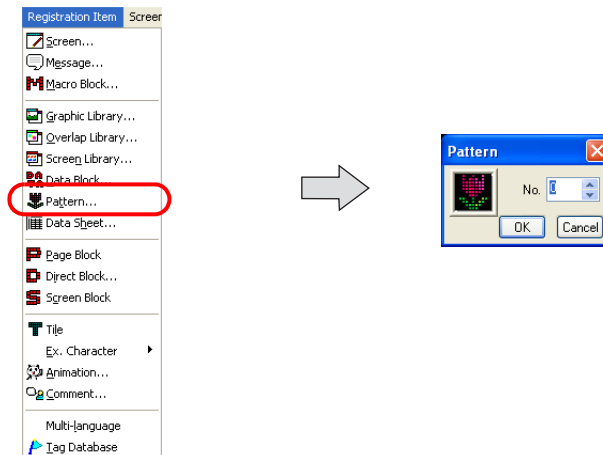
The maximum permissible X and Y sizes of a pattern are 1,024 dots and 768 dots respectively.

In the case of capturing a bitmap file larger than 1 MB, the file will be divided into 1 MB sections so that the bitmap can be captured.

### Calling a Pattern

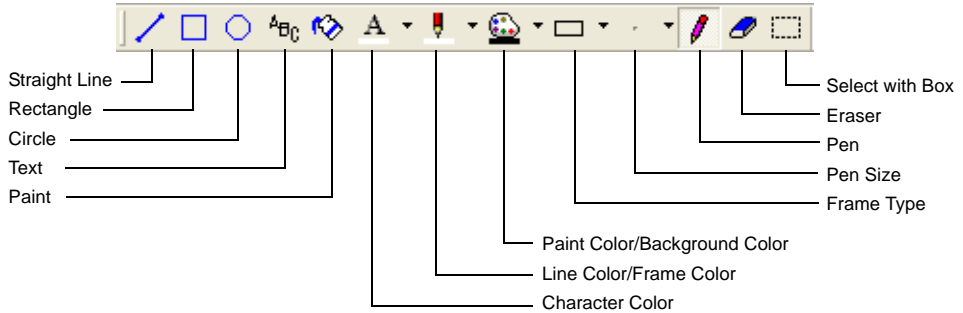
Select [Pattern] from the [Registration Item] menu.

The [Pattern] dialog is displayed. Specify the pattern number to be opened and click [OK]. (Alternatively, you can call the screen from the [Screen] menu in Project View.)



## Pattern Editing

The following toolbar is provided for pattern drawing.



### [Pen] Icon

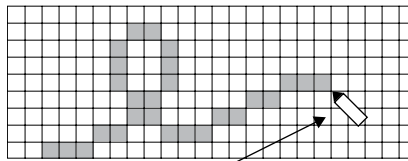
The [Pen] icon enables you to draw freehand.

1. Select your desired pen color with the [Line Color/Frame Color] icon, right-click color with the [Paint Color/Background] icon, and pen size with the [Pen Size] icon.

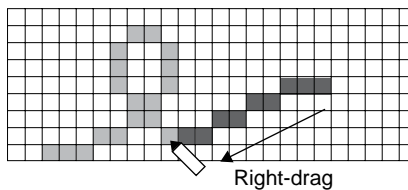


2. Click the [Pen] icon. In the [Pattern Edit] window, draw a graphic by clicking or dragging the mouse.

The previously selected color and the pen size apply to the graphic you are drawing.



3. To draw in the color for [Paint Color/Background], right-click or right-drag the mouse.

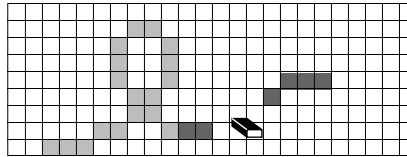




## [Eraser] Icon

The [Eraser] icon enables you to erase graphics freehand.

1. Select your desired size using the [Pen Size] icon.
2. In the [Pattern Edit] window, click or drag the mouse over the graphic. The eraser in the size for [Pen Size] erases the graphic.



Click or drag.

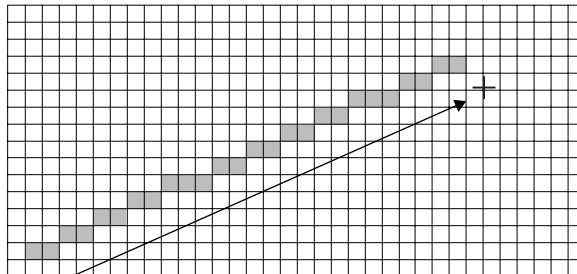


Operation by the eraser command is the same as drawing in dots using black color.

## [Straight Line] Icon

The [Straight Line] icon enables you to draw straight lines.

1. Select your desired line color with the [Line Color/Frame Color] icon, right-click color with the [Paint Color/Background] icon, and pen size with the [Pen Size] icon.
2. Click the [Straight Line] icon. In the [Pattern Edit] window, draw lines by dragging the mouse. The previously selected color and the pen size apply to the line you are drawing.



Drag.

3. To draw in the color for [Paint Color/Background], right-drag the mouse.

## [Rectangle] Icon

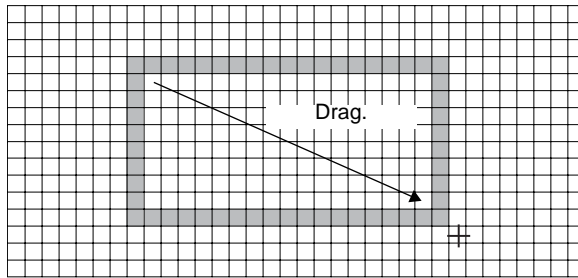
---

The [Rectangle] icon enables you to draw boxes.

1. Make necessary settings in advance with the [Line Color/Frame], [Paint Color/Background], and [Frame Type] icons.



2. Click the [Rectangle] icon. In the [Pattern Edit] window, draw lines by dragging the mouse. The previous settings apply to the box you are drawing.

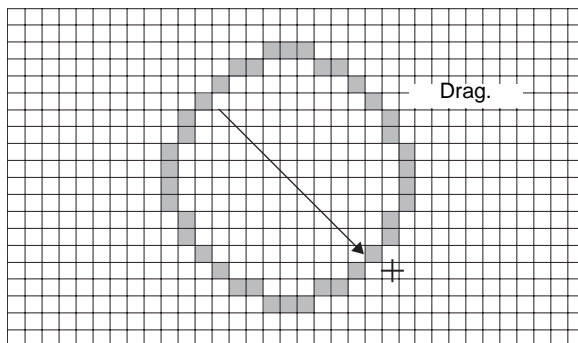


## [Circle] Icon

---

The [Circle] icon enables you to draw circles.

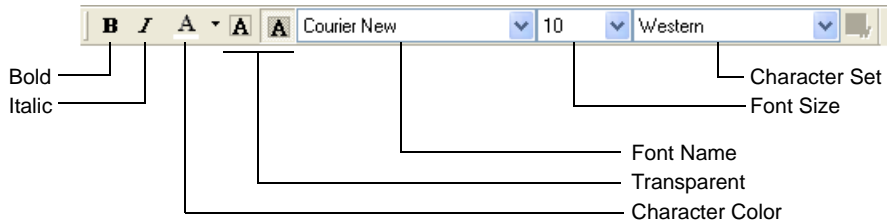
1. Make necessary settings in advance with the [Line Color/Frame], [Paint Color/Background], and [Frame Type] icons.
2. Click the [Circle] icon. In the [Pattern Edit] window, draw lines by dragging the mouse. The previous settings apply to the circle you are drawing.



## [Text] Icon

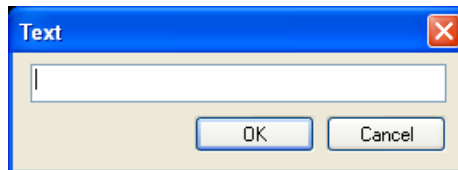
A font available for use under Windows can be imported as a bitmap. Follow the steps below.

1. Make necessary settings in advance with the [Font] toolbar.

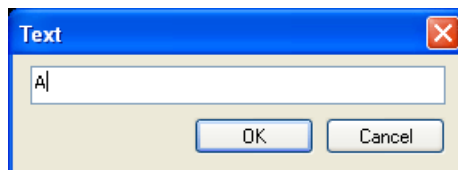


Make settings for fonts as desired.

2. Click the [Text] icon.  
The [Text] dialog is displayed.

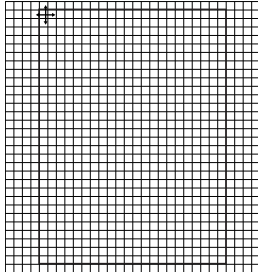


3. Key in a text as desired.

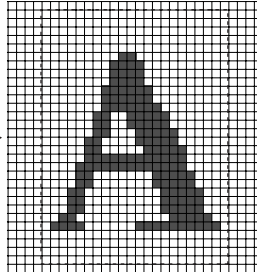


4. Click [OK]. In the [Pattern Edit] window, a box as large as the text is displayed. Clicking the mouse places the text.

Dragging the mouse displays a box.



Releasing the mouse places the text.



If the pattern size in the window is too small at the time of clicking the mouse in step 4, the following message appears.



By clicking [Yes], the pattern is enlarged to a size that suits the text.  
When [No] is clicked, the text is displayed imperfectly because the pattern that remains the same in size is too small to show the whole text.



It is not possible to change the placed text.  
When correcting the text, delete it or cancel it by the [Undo] icon.

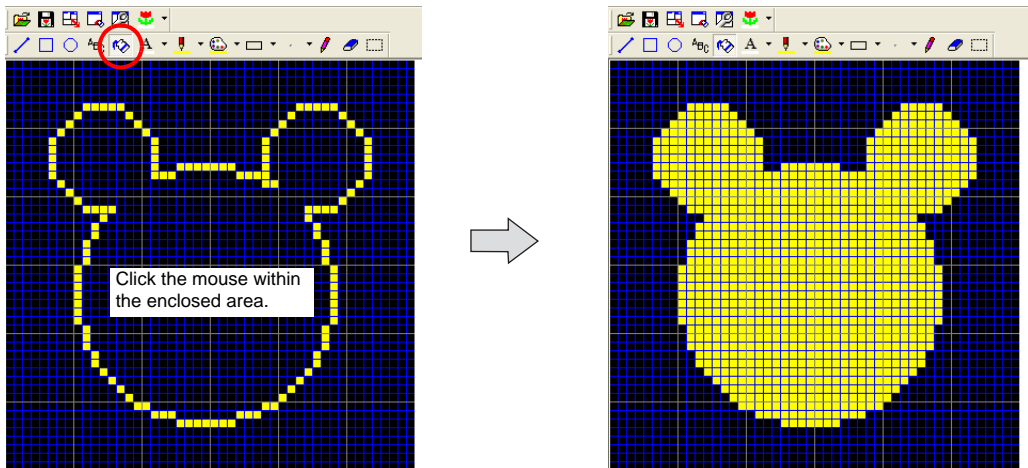
## [Paint] Icon

The [Paint] icon enables you to paint graphics.

1. Select your desired paint color with the [Paint Color/Background] icon.



2. Click the [Paint] icon, and click the graphic in the [Pattern Edit] window.  
The graphic (enclosed area) is painted in the selected color.

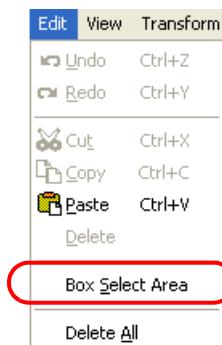


## [Box Select Area] Icon

This icon is used when specifying a pattern area. Dragging the mouse over a pattern encloses it. The enclosed area becomes a target for copy or deletion.

### [Box Select Area] usage

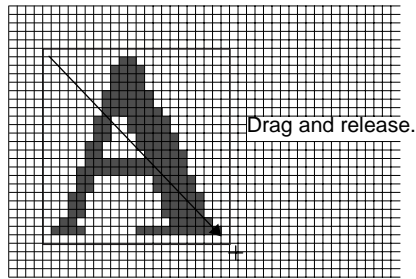
1. Select [Box Select Area] from the [Edit] menu or click the [Box Select Area] icon.



OR

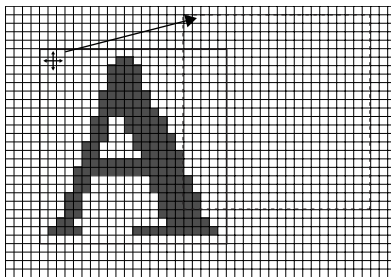


2. In the [Pattern Edit] window, drag the mouse from the start point to the end point as drawing a box.

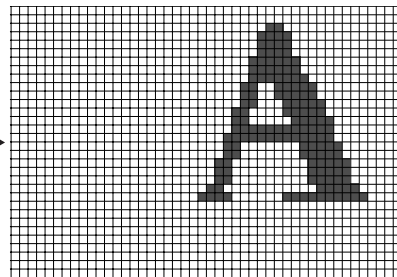


3. A box is displayed.  
Execute a necessary function such as copy or deletion.  
To move the box, drag it.

Drag the displayed box.

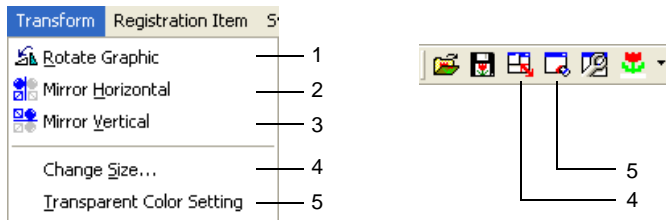


Release the mouse to finish the movement.



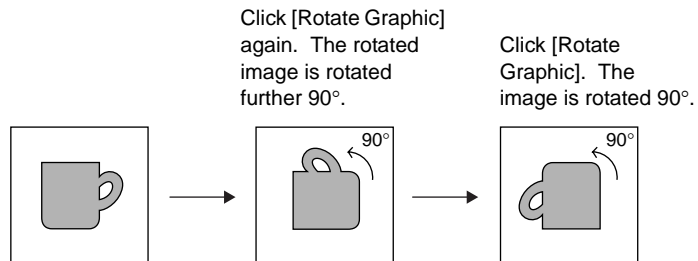
## Transforming Patterns

This section explains the commands in the [Transform] menu.



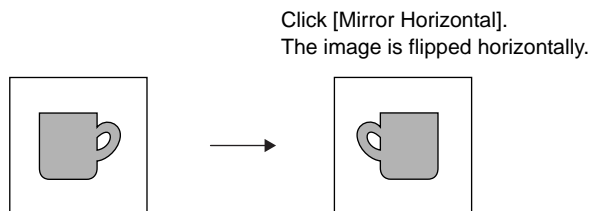
### Rotate Graphic

Clicking this icon rotates the registered pattern 90°.



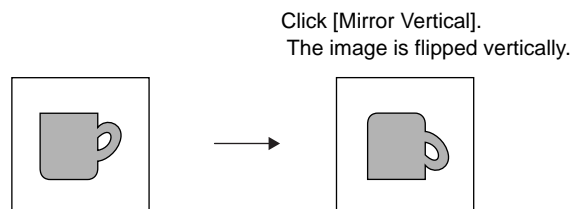
### Mirror Horizontal

Clicking this icon flips the registered pattern horizontally.



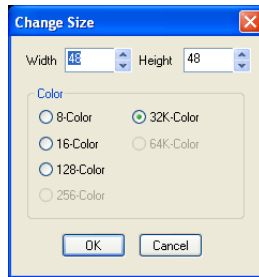
### Mirror Vertical

Clicking this icon flips the registered pattern vertically.



### Change Size

This command is used to change a pattern size.  
Clicking this command brings up the [Change Size] dialog.



The available setting ranges are as follows:

Width (X): 1 - 1024

Height (Y): 1 - 768

Color: 8-color/16-color/128-color/32k-color/64k-color



The above-mentioned setting ranges take effect on the condition that the data size of one pattern is 1 MB or smaller.



If a size change is made during pattern editing or when a pattern has been completed, the created pattern data is deleted.



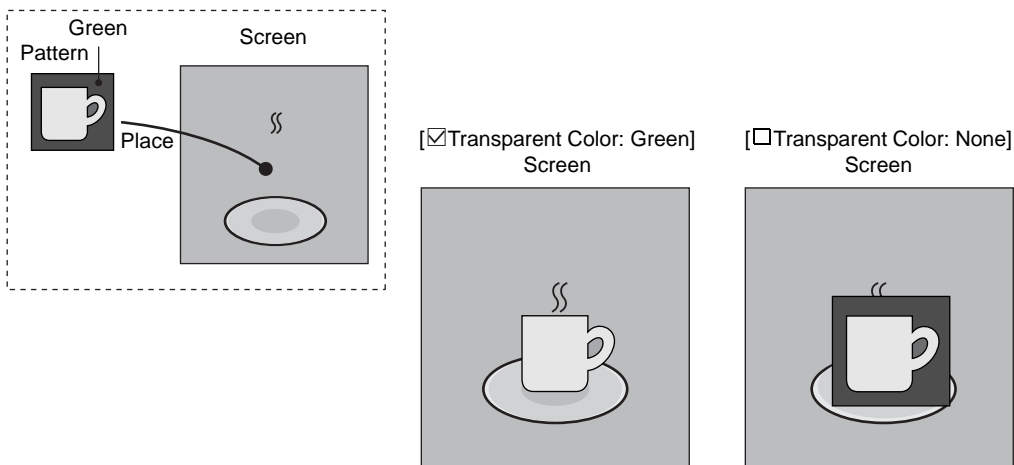
## Transparent Color Setting

When a pattern is animated in graphic relay mode, etc., the pattern is displayed in the XORed color. If the screen background is not colored black, therefore, the pattern may not be displayed in its actual color.

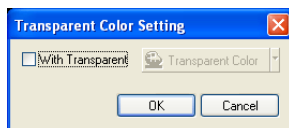
To display the pattern in its actual color without the influence on the background, a transparent color setting is effective. (Set the color that you do not want to display as transparent when the pattern is placed on the screen.)

As a transparent color, only one color can be set for each pattern.

Even in a case where animation is not used, a transparent color setting is reflected through pattern placement on the screen.



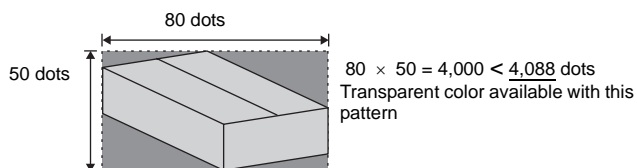
Clicking this command brings up the [Transparent Color Setting] dialog.



\* The following limitation is imposed on the transparent color setting for patterns. Ignoring the limitation will disable the transparent color setting, and the pattern is displayed in the color XORed with the background.

	V815iX/V812xS/ V810xS/V810xT/ V808xS	V810xC V808xC V808xCH	V806
One-pattern size <sup>*1</sup>	4,088 dots		
Maximum number per screen <sup>*2</sup>	512 pcs	128 pcs	64 pcs
Total size per screen <sup>*2</sup>	768,000 dots	512,000 dots	256,000 dots

\*1 Pattern size = X size × Y size



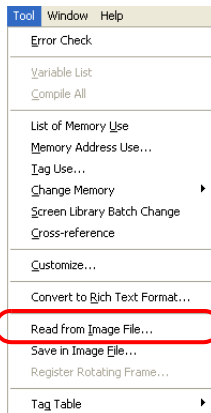
\*2 Transparent patterns, transparent switches, and transparent lamps are included in these limits.

## Image File Import and Storage

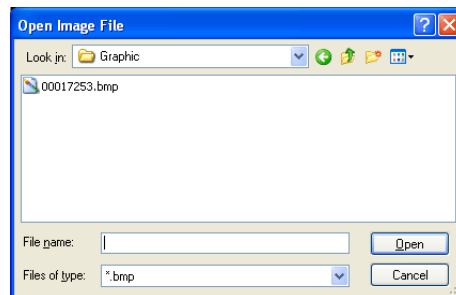
It is possible to import bitmap or JPEG files into pattern editing. It is also possible to store patterns as bitmap or JPEG files.

### Importing an Image File

1. Click the [Read from Image File] from the [Tool] menu or the [Read from Image File] icon on the toolbar.  
The [Open Image File] dialog is displayed.



OR



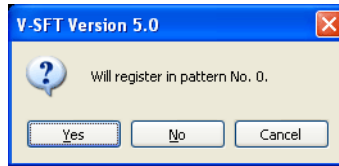
2. Select the desired file and click [Open].  
The following dialog is displayed:



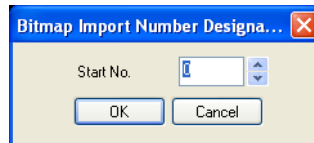
For more information on the setting, refer to page 5-51.

Click [Place].

3. The following confirmation dialog is displayed.  
Clicking [Yes] imports the bitmap file.



4. Clicking [No] brings up the [Bitmap Import Number Designation] dialog. Enter the top pattern number to be imported and click [OK]. The bitmap data is imported.

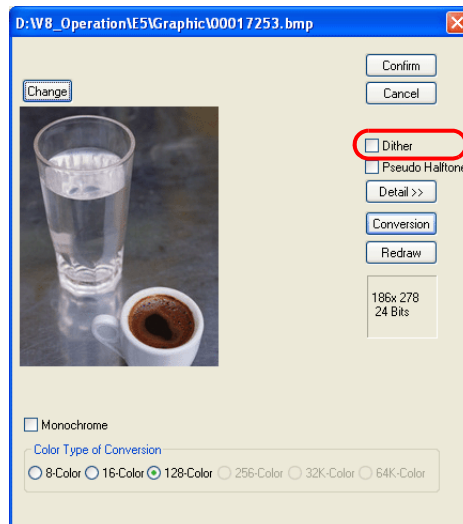


### Dialog for image import

Dither

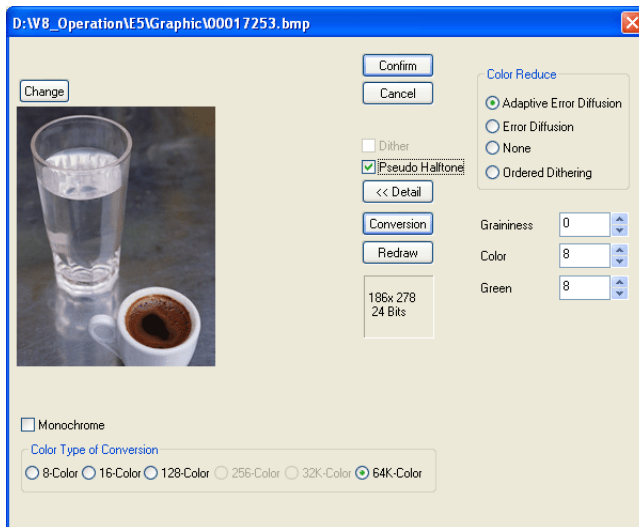
When this option is checked, dithering can be performed to make the colors of the bitmap closer to the original.

The option is invalid when [64K-color] or [32K-color] is selected for [Color Type of Conversion].



[Detail>>]

This option brings up the detailed menu for [Pseudo Halftone] as the following: The contents are shown below:



Adaptive Error Diffusion	Error diffusion adapted to each individual part of the image can be performed. This function places emphasis on smoothness of image more than the following [Error Diffusion] does.
Error Diffusion	If a color of the source image is not included in the color palette, two bits in similar colors are placed alternately so as to reproduce the color.
None	A palette similar to the source image color is selected.
Ordered Dithering	Error diffusion pattern is made closer to regular pattern.
Graininess (0 - 3, standard: 1)	Specify a level of graininess. The smaller the entered value, the lower the graininess becomes.
Color (0 - 15, standard: 8)	Assign priority to brightness or color for depicting. When a specified number gets smaller, brightness takes priority over color.
Green (0 - 15, standard: 8)	Assign priority to blue-green-based color or red-yellow-based color for depicting. When a specified number gets smaller, green-based color takes priority over other colors.
Conversion	Clicking this option (depressed) brings up the preview of the placed image.

[Conversion]

Clicking this option (depressed) brings up the preview of the placed image.

[Redraw]

When any setting [Dither] or [Pseudo Gradation] has been changed while the [Convert] button is depressed, the image according to the change is previewed by clicking [Redraw].

[ Monochrome (8-tone)]

When this option is checked, the image quality is degraded to the monochrome 8-tone level. The pattern is reduced in data size as a result.

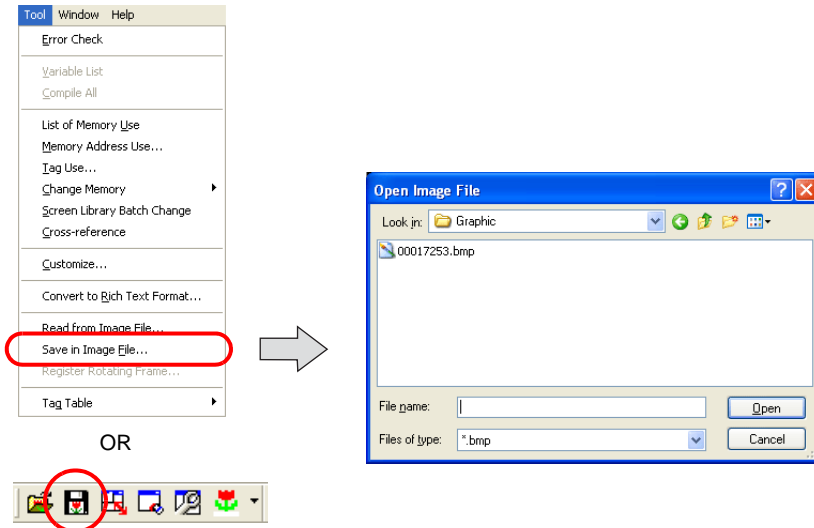


In the case of the V8-series (128-color): When the [Use 3D Parts] (in the [General Setting] tab window opened in the [Unit Setting] dialog selected from the [System Setting] menu) setting is changed, the palette is also changed and the colors of the placed bitmap vary accordingly. To bring the bitmap to the initial condition, repeat pasting operation of the bitmap.

## Storing in an Image File

The pattern currently opened can be stored in a bitmap file (with an extension .bmp) or a JPEG file (with an extension .jpg).

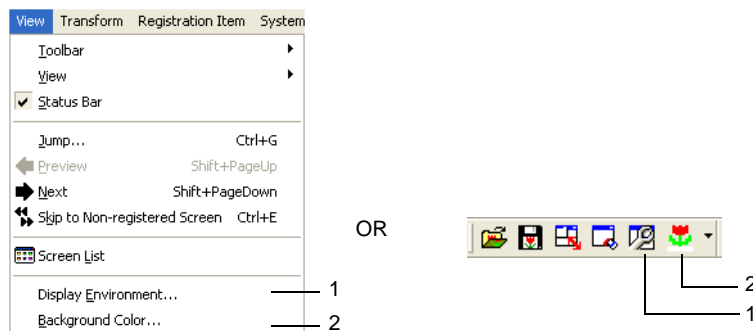
1. Click [Tool] → [Save in Image File]. Or, click the [Save in Image File] icon on the toolbar. The [Select Image File to be Saved] dialog is displayed.



2. Give a name to the file and click [Save]. The pattern is now stored as a bitmap or JPEG file.

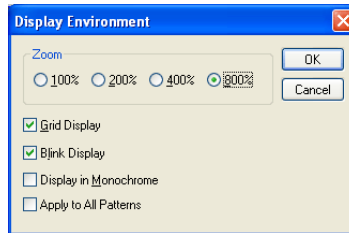
## Pattern Environment Setting

The [View] menu or the pattern toolbar includes the following commands.



## Display Environment

Clicking [Display Environment] from the [View] menu or the [Display Environment] icon brings up the following dialog.



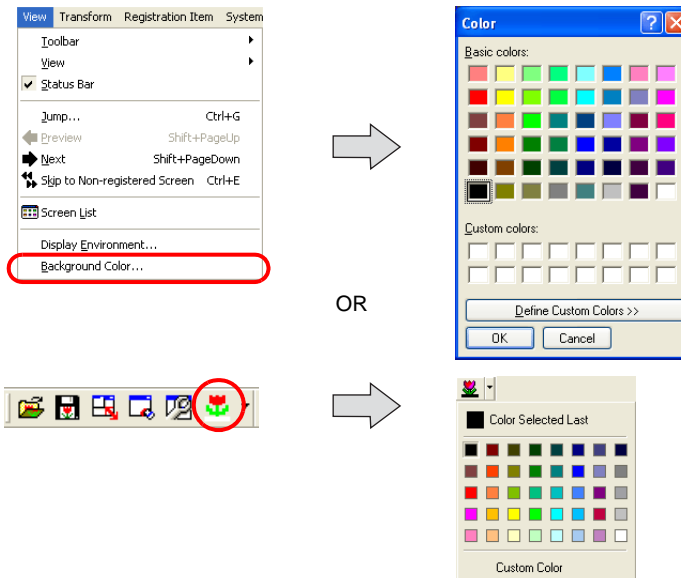
Zoom (100%/200%/400%/800%)	Select a zoom in % for display. Default setting is 800%.
<input checked="" type="checkbox"/> Grid Display	Select whether or not to display grids in the background.
<input checked="" type="checkbox"/> Blink Display	It is possible to distinguish the color set to flash on the pattern. When unchecked, the color set to flash is indistinguishable from the normal color.
<input type="checkbox"/> Display in 8-tone Monochrome	When the monochrome display type is in use, checking this option displays patterns in 8- or 2-gradation colors. Therefore, patterns are made closer to images displays with MONITOUCH.
<input type="checkbox"/> Apply to All Patterns	When this option is checked, the display environment settings made in this dialog are reflected through all patterns.

## Background Color Setting

When editing a pattern, it is possible to view the actual screen background color.

Clicking [View] → [Background Color] or “▼” button on the right of [Background] icon brings up the menu for selecting a background color. Select the desired color and click [OK].

The pattern edit window background color changes.



## Placing a Pattern

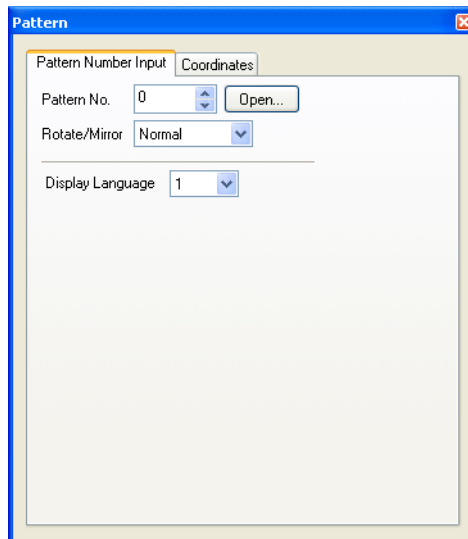
Registered patterns can be placed on screens or in the graphic library. Click the [Pattern] icon on the drawing toolbar to place a pattern.



For more information, refer to “Pattern” (page 4-48) in “4 Drawing”.

After a pattern placement, the [Pattern No.] can be changed and [Rotate/Mirror] operations can be performed.

Click (or double-click) the placed pattern (within 4,088-dot size), or select it with handles and click [Detail Setting] icon. The [Pattern] dialog is displayed.



### Pattern number setting on multi-language screens

For multi-language screens, pattern numbers are selectable individually for [Display Language]. Go to the [Open] button when selecting a pattern.

### Size of a placed pattern

- On the condition that the data size of a pattern is 1 MB or smaller, the pattern is allowed to be as large as 1,024 dots wide (X size) and 768 dots high (Y size). However, if [Rotate/Mirror] operation is performed with a pattern placed on a screen or in a graphic library, the size is limited to 4,088 dots or smaller (pattern size = X size × Y size).
- When animation is performed with patterns in the graphic mode or the graphic relay mode, patterns that are 4,088 dots or less in size tend to be displayed more smoothly.
- Once a pattern is placed, it cannot be reduced but can be enlarged. If a pattern is 4,088 dots or less in size, its size can be multiplied by integers. Note that if a pattern that does not exceed 4,088 dots is enlarged on the screen or in the graphic library, it may exceed 4,088 dots, and thus be subject to the limitations described above in the case of [Rotate/Mirror] operation or animation.

## 5.11 Data Sheet

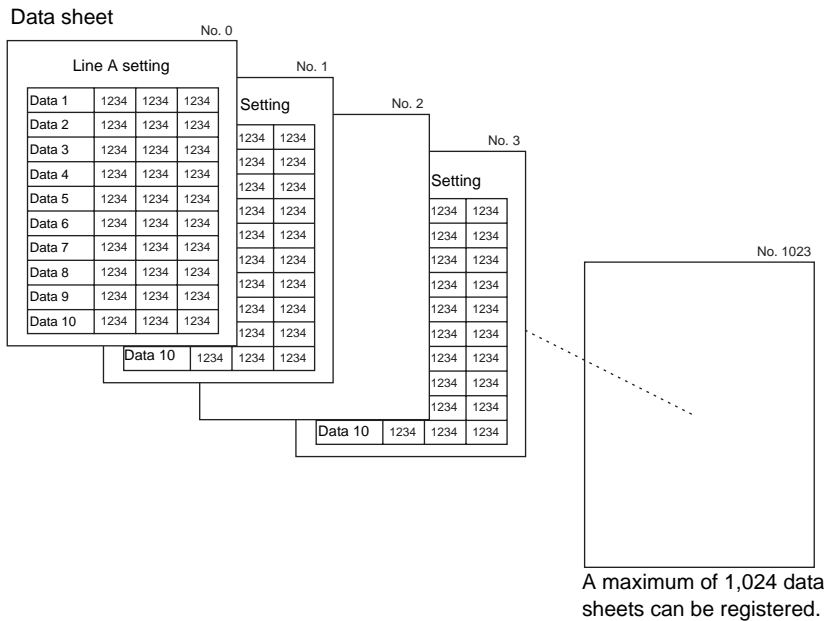
When data sheet screens have been registered, data in the format of data sheet can be printed out from MONITOUCH by means of the data sheet function.

### Data Sheet Structure

A maximum of 1,024 data sheets can be registered.

Make settings for a data sheet including the size and orientation in the [Data Sheet Page Setting] dialog.

For information on the dialog, refer to the next page.

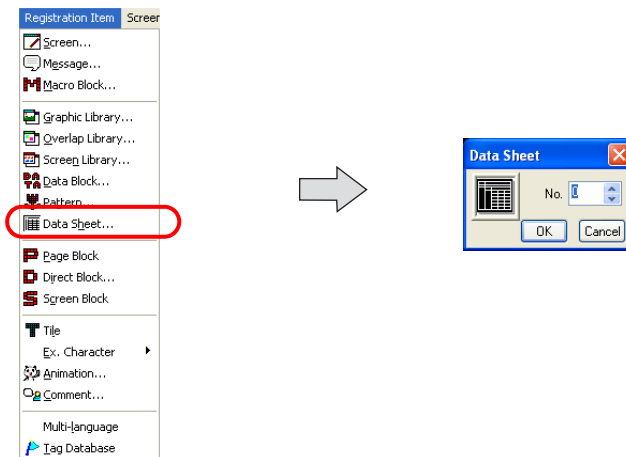


A maximum of 1,024 data sheets can be registered.

### Calling a Data Sheet

Select [Data Sheet] from the [Registration Item] menu.

The [Data Sheet] dialog is displayed. Specify the data sheet number to be opened and click [OK]. (Alternatively, you can call the screen from the [Screen] menu in Project View.)





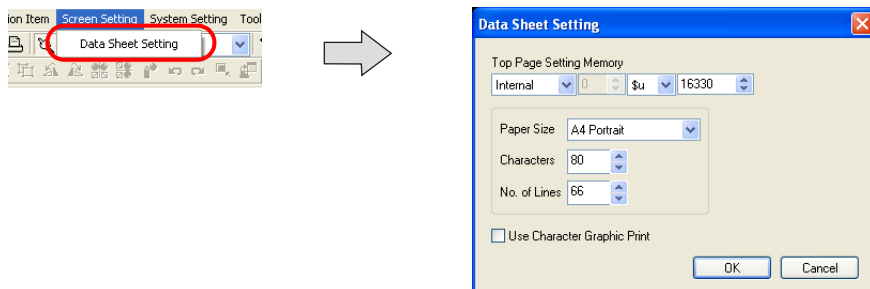
## Data Sheet Editing

### Data Sheet Setting

It is necessary to set the size of a data sheet, the number of characters, etc. in the [Data Sheet Setting] dialog.

Click [Data Sheet] from the [Screen Setting] menu.

The [Data Sheet Setting] dialog is displayed.



Top Page Setting Memory	<p>This option determines the first page of printing. The contents are shown below:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Address</th> <th>Content</th> </tr> </thead> <tbody> <tr> <td>n</td> <td>Beginning print page</td> </tr> <tr> <td>n + 1</td> <td>Number of pages to be printed</td> </tr> </tbody> </table> <p>For more information , refer to “Chapter 16 Print” in the V8 Series Reference Manual.</p>	Address	Content	n	Beginning print page	n + 1	Number of pages to be printed										
Address	Content																
n	Beginning print page																
n + 1	Number of pages to be printed																
Paper Size	(A4 Portrait, A4 Landscape, 15-Inch Landscape, User Designation) Select the sheet size and the sheet orientation.																
Characters (16 - 152)	Specify the number of characters per line of data sheet.																
No. of Lines (2 - 152)	Specify the number of lines per page of data sheet.																
<input type="checkbox"/> Use Character Graphic Print	<p>When this option is checked, charts can be printed out clearly. The number of lines also varies. How this relates to the printout paper is shown below.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Paper Size</th> <th>Characters</th> <th>No. of Lines</th> <th>No. of Lines with Character Graphic Used</th> </tr> </thead> <tbody> <tr> <td>A4 portrait</td> <td>80</td> <td>66</td> <td>108</td> </tr> <tr> <td>A4 landscape</td> <td>114</td> <td>40</td> <td>64</td> </tr> <tr> <td>15-inch landscape</td> <td>136</td> <td>64</td> <td>64</td> </tr> </tbody> </table>	Paper Size	Characters	No. of Lines	No. of Lines with Character Graphic Used	A4 portrait	80	66	108	A4 landscape	114	40	64	15-inch landscape	136	64	64
Paper Size	Characters	No. of Lines	No. of Lines with Character Graphic Used														
A4 portrait	80	66	108														
A4 landscape	114	40	64														
15-inch landscape	136	64	64														

\* Printed out images differ as shown below.

Use Character Graphic Print

No. 0	data
No. 1	data
No. 2	data
No. 3	data

Use Character Graphic Print

No. 0	data
No. 1	data
No. 2	data
No. 3	data

## Drawing

### Straight Line

Straight lines can be drawn by dragging.



It is possible to draw lines only horizontally or vertically. Continuous lines as well as diagonal lines are not available.

### Rectangle

Only boxes without painting can be drawn.

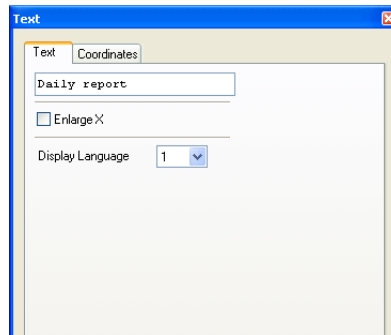
### Text

When the [Text] icon is clicked and then the mouse is clicked on or dragged to the screen, the text entry area is created on the screen. The [Text] dialog is displayed at the same time.

If you make changes to the properties after entering text, go to the [Text] dialog.

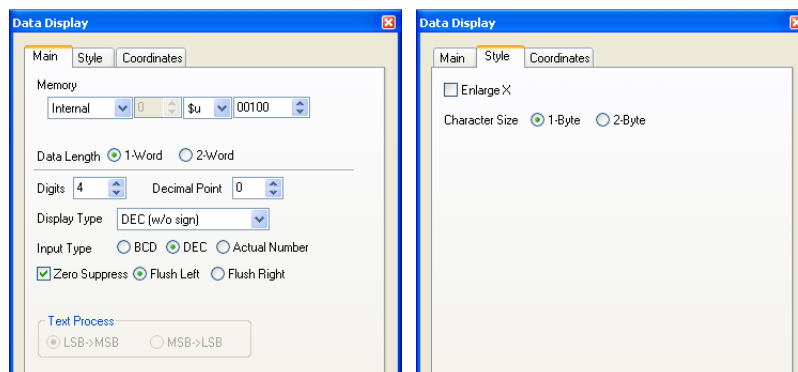
The X and Y enlargement factors for text are set to 1.

Only when  Enlarge X is checked, the X size is doubled.



### Data Display

Clicking (or double-clicking) the data display part placed by clicking the [Data Display] icon brings up the [Data Display] dialog shown below.



Character enlargement is limited to X: 1 x Y: 1.

Only when  Enlarge X is checked, the X size is doubled.



#### Displaying the calendar part

A calendar display can be set on a data sheet using a numerical data display.

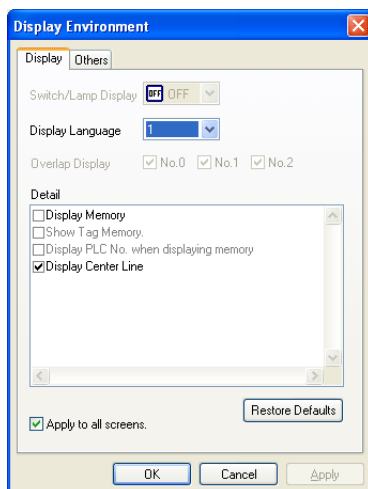
The calendar data is stored in system memory addresses \$s160 to 166.

By placing the calendar data with numerical data display on a data sheet, the calendar is also printed out at the time of data sheet printing.

## Data Sheet Environment Setting

### Display Environment

Clicking [Display Environment] from the [View] menu brings up the following dialog.



#### [Display] tab window

Display Language	This option is active only when the language selection function is in use. Allows you to select the interface language number.
<input type="checkbox"/> Display Memory	When this option is checked, the memory set for each data display part is displayed.
<input type="checkbox"/> Display Center Line	When this option is checked, the center lines are displayed.

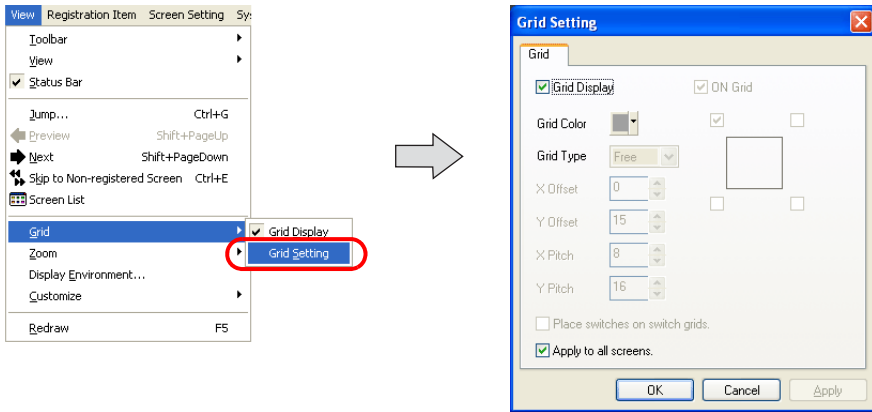
#### [Others] tab window

Handle Color	Allows you to select a color of handles shown around the selected item.
Background	Allows you to choose the background color around the editing area.
<input type="checkbox"/> Margin Display	When this option is checked, the space (margin) is created at the left and the upper side of the editing area with the color set for [Margin Color]. If you uncheck this option, the margin area disappears.

## Grid Setting

On data sheets, graphics, texts, and data display parts can be placed based on the fixed grids. Texts and data displays are placed along grid dots. Lines and boxes are placed on spaces between grid dots. A grid color and whether or not to show grids can be selected in the [Grid Setting] dialog.

Click [View] → [Grid] → [Grid Setting].  
The [Grid Setting] dialog is displayed.

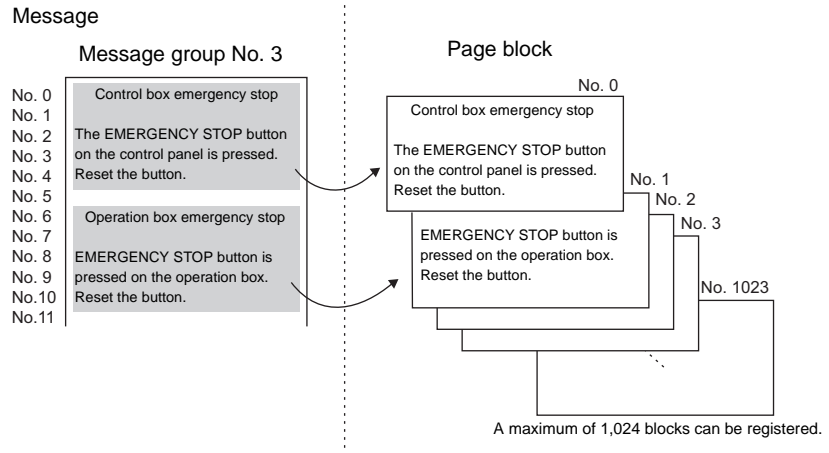


## 5.12 Page Block

Registered messages can be divided into groups and registered in page blocks. Page blocks are used in the alarm sub display mode (parts) or the message mode (parts).

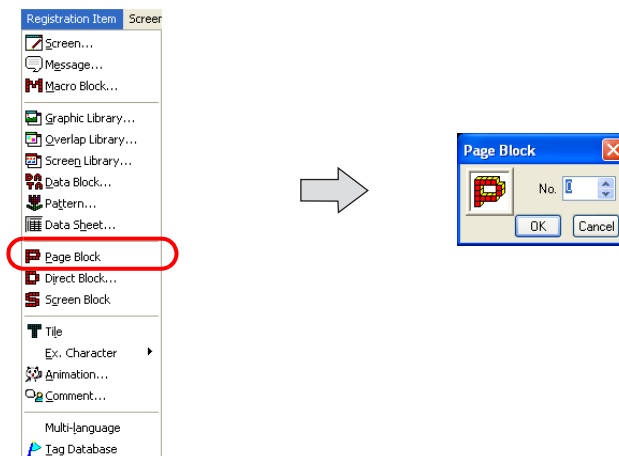
### Page Block Structure

A maximum of 1,024 page blocks can be registered. One page block can contain 256 lines.



### Calling a Page Block

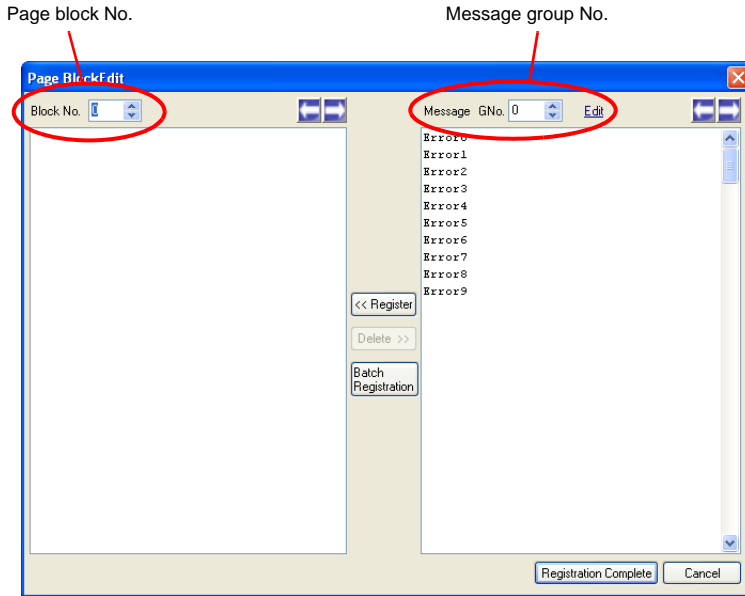
Select [Page Block] from the [Registration Item] menu. The [Page Block] dialog is displayed. Specify the page block number to be opened and click [OK]. (Alternatively, you can call the screen from the [Screen] menu in Project View.)



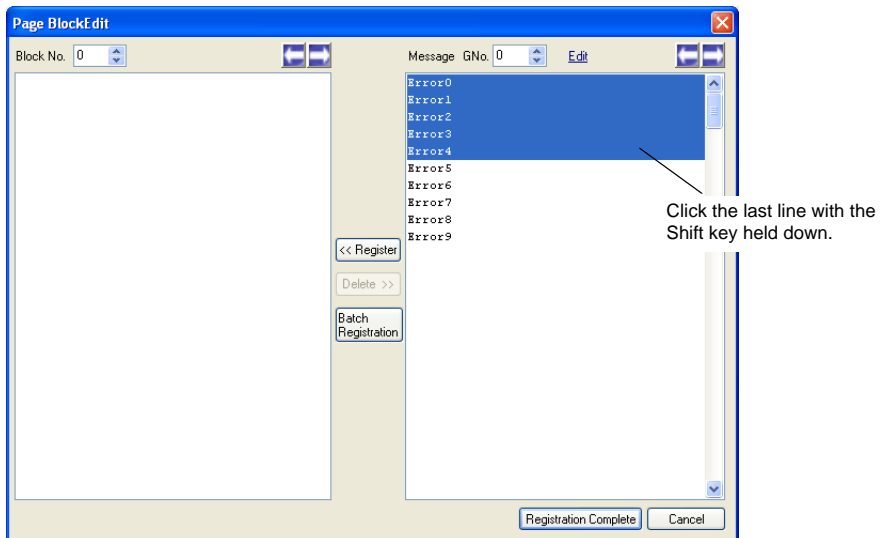
## Page Block Editing

In the [Page Block Edit] window, editing is performed on a block-by-block basis. Follow the procedure below.

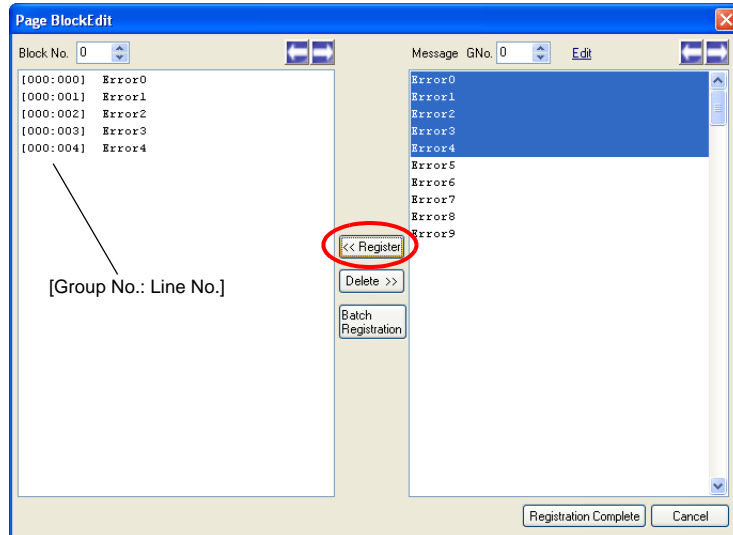
1. Check the current block number and also the message group number you are going to use.



2. In the right area under [Message GNo.], select the lines to be used for a page block by clicking the first line and then the last line while you are holding down the Shift key.



- Click the [Register] button.  
In the left area under [Block No.], the selected messages are registered.



- To proceed with block No. 1 registration (and after), increment the block number by one using the “→” button provided on the right of [Block No.]. Then follow the above steps.
- On completion of the registration, press the [Registration Complete] button.  
(To cancel the registration, click the [Cancel] button.)  
This step completes the page block editing.

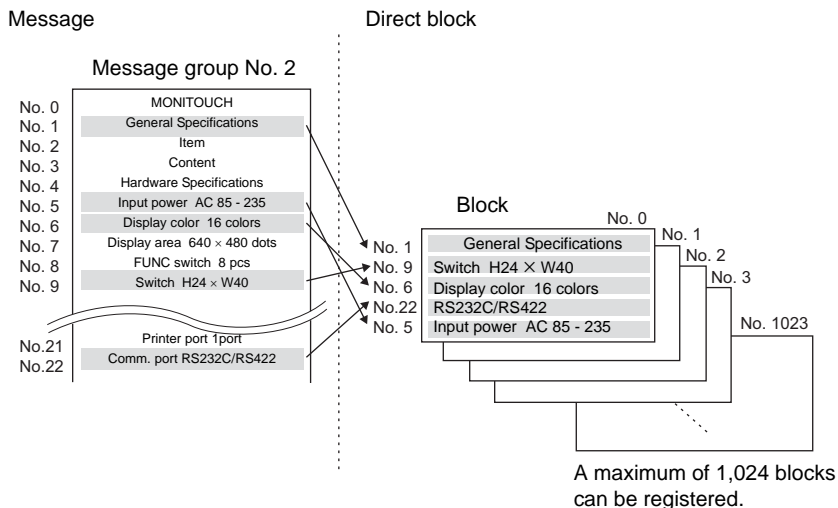
## 5.13 Direct Block

Lines selected as desired from the previously registered messages in different groups can be re-registered in direct blocks.  
 Unlike page blocks, you can choose messages as desired line by line and register them in an arbitrary order.

Direct blocks are used in the alarm sub display mode (parts) or the message mode (parts).

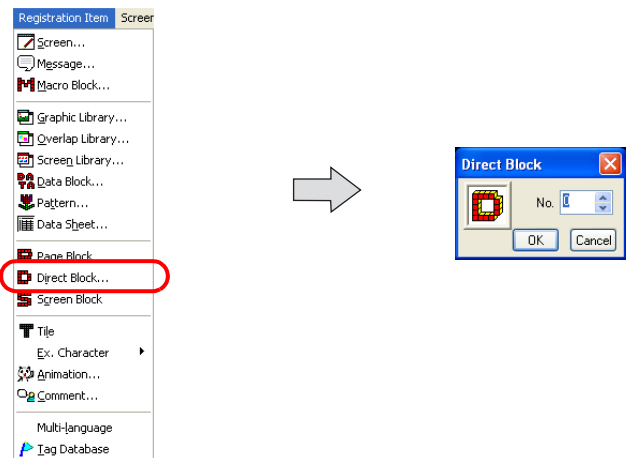
### Direct Block Structure

A maximum of 1,024 direct blocks can be registered.  
 One direct block can contain 256 lines.



### Calling a Direct Block

Select [Direct Block] from the [Registration Item] menu.  
 The [Direct Block] dialog is displayed.  
 (Alternatively, you can call the screen from the [Screen] menu in Project View.)



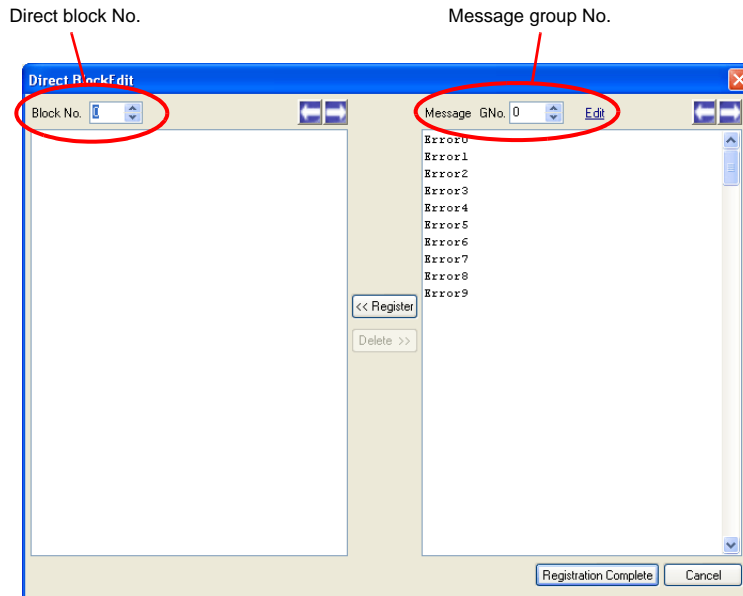
Check the desired block number range and click [OK].  
 The [Direct Block Edit] window is displayed.  
 (Alternatively, you can call the screen from the [Screen] menu in Project View.)



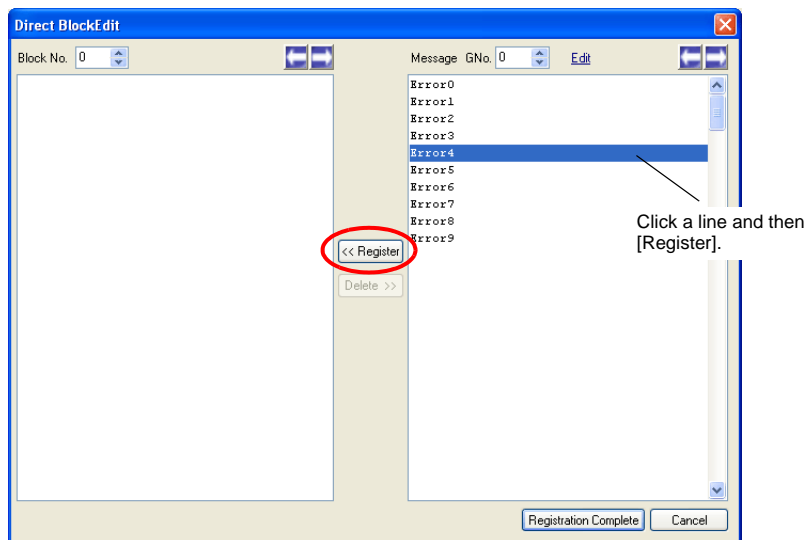
## Direct Block Editing

In the [Direct Block Edit] window, editing is performed on a block-by-block basis. Follow the procedure below.

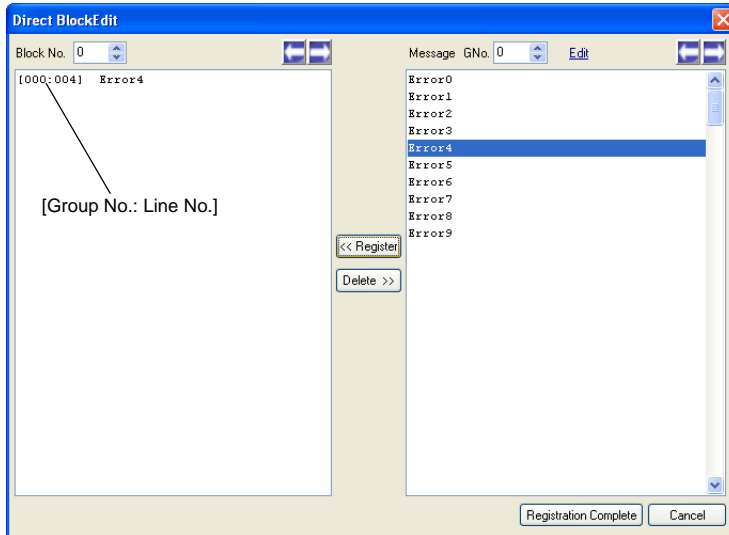
1. Check the current block number and also the message group number you are going to use.



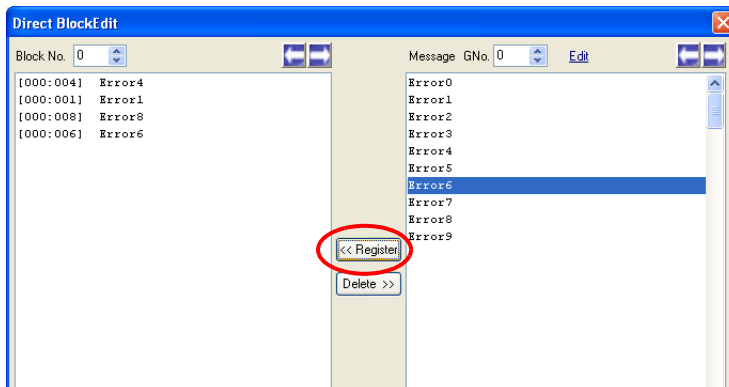
2. In the right area under [Message GNo.], click the line to be used for a direct block and then click the [Register] button.



3. In the left area under [Block No.], the selected messages are registered.



4. To proceed with the next message registration, click the message and then the [Register] button.



To select messages at the same time, hold down the Ctrl key and click your desired messages.

5. To proceed with block No. 1 registration (and after), increment the block number by one using the “→” button provided on the right of [Block No.]. Then follow the above steps.
6. On completion of the registration, press the [Registration Complete] button. (To cancel the registration, click the [Cancel] button.) This step completes the direct block editing.

## 5.14 Screen Block

When [Screen Call] (in the [Bit Order Alarming] dialog) is chosen in the bit order alarming mode (parts), screen blocks must be specified.



For more information on the screen call function, refer to “Chapter 10 Alarming” in the V8 Series Reference Manual.

### Screen Block Structure

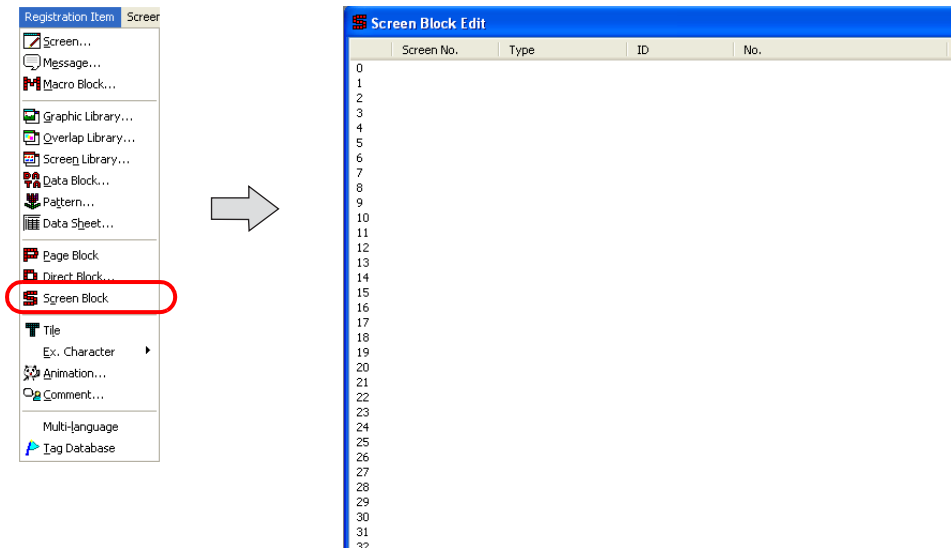
A maximum of 1,024 screen blocks can be registered.

### Calling a Screen Block

Select [Screen Block] from the [Registration Item] menu.

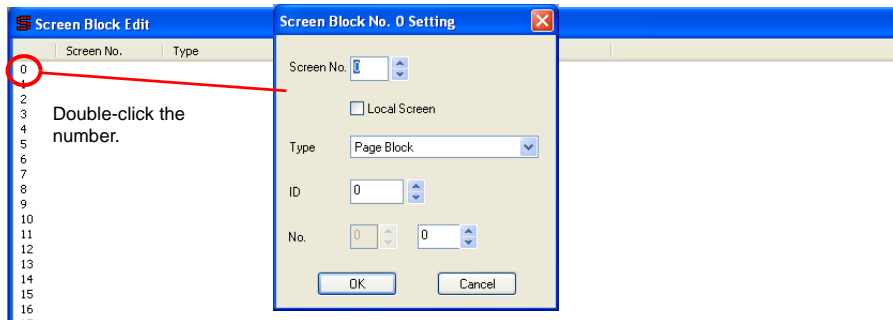
The [Screen Block Edit] window is displayed.

(Alternatively, you can call the screen from the [Screen] menu in Project View.)



## Screen Block Editing

Double-click the block No. 0.  
The [Screen Block No. 0 Setting] dialog is displayed.



Set each option in the window, referring to the description below.

Screen No.	Specify the screen number to be used as a screen block.
<input type="checkbox"/> Local Screen	Click ( <input checked="" type="checkbox"/> ) this option when the original bit order alarming mode screen and the screen to be called as a screen block are the same. In the case that alarm messages linked to different data blocks respectively, it is convenient that only the data block numbers are switched on the same screen according to the currently active message. For this operation, in the [Screen Block Edit] window, change only the numbers for [Block No.] related to the same screen. Register several screen blocks of the same screen number with [Local Screen] checked. With these settings, a screen call is set where different blocks are displayed depending on the bit activation.
Type	Select the part type included in the screen that is specified for [Screen No.]. <ul style="list-style-type: none"> <li>• Page Block/Direct Block These blocks are available when the message mode is selected. Select either one in accordance with the block used in the message mode on the specified screen.</li> <li>• Graphic Library When the graphic mode is used on the specified screen, choose this option.</li> <li>• Data Block When [Block] is chosen for [Type] in the [Entry] dialog (for the entry mode) or a data block area is set on the specified screen, choose this option.</li> <li>• No Designation When no part (= mode) as the above is used on the specified screen, choose this option.</li> </ul>
ID	This option is necessary when something other than [No Designation] is selected for [Type]. Specify the same ID as the one where the mode selected by [Type] is registered.
No.	This option is necessary when something other than [No Designation] is selected for [Type]. Specify the block or library number of the contents that are applied to the sub-display of the original alarm message.



Checking [ Local Screen] shows "Local Screen" in the cell under [Screen No.].

## 5.15 Tile

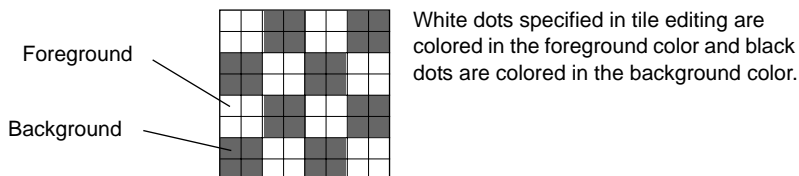
For painting a graphic, a paint pattern can be selected from eight default types plus up to eight extra patterns that you register.

### Tile Structure

A maximum of 8 tiles can be registered.

The size of one tile is  $8 \times 8$  dots.

White dots specified on a tile are regarded as areas in the foreground color and black dots are regarded as areas in the background color.

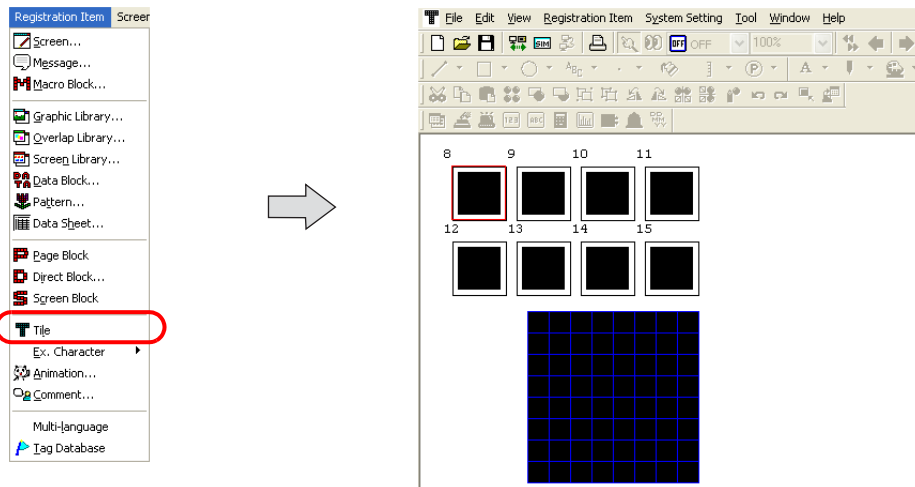


### Calling a Tile

Select [Tile] from the [Registration Item] menu.

The [Tile Edit] window is displayed.

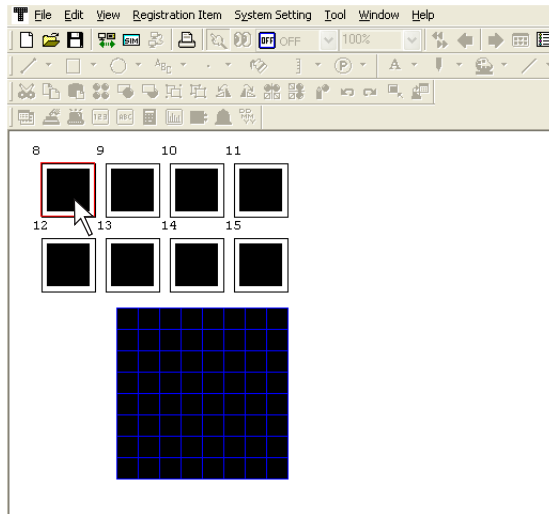
(Alternatively, you can call the screen from the [Screen] menu in Project View.)



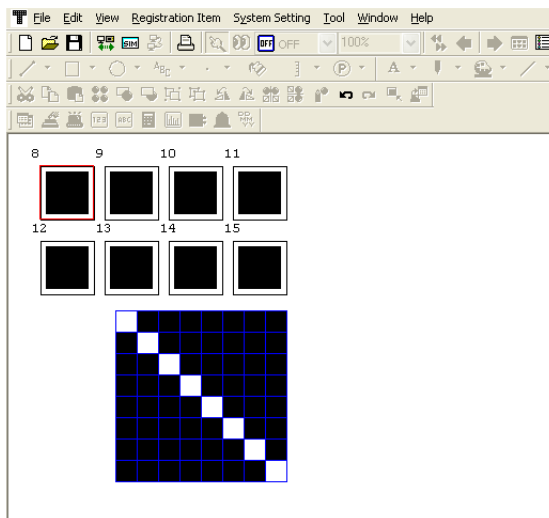
## Tile Editing

Follow the procedure below.

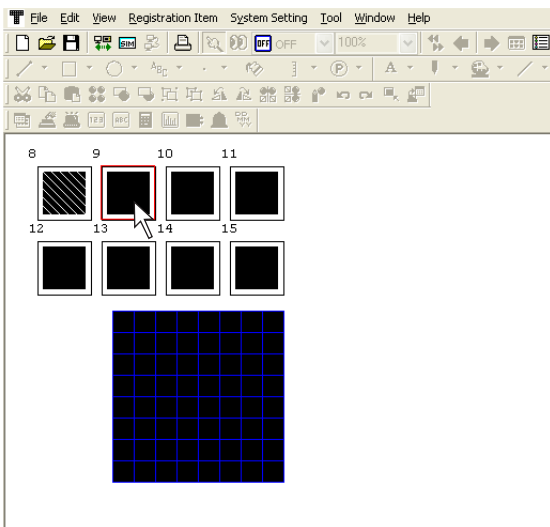
1. Select a tile number to be registered by clicking.



2. Create a tile in the tile editing area.  
Draw white dots by clicking or dragging. Draw black dots by right-clicking or right-dragging.



- When the tile is complete, click the next tile number. The previous tile number shows the registered image.



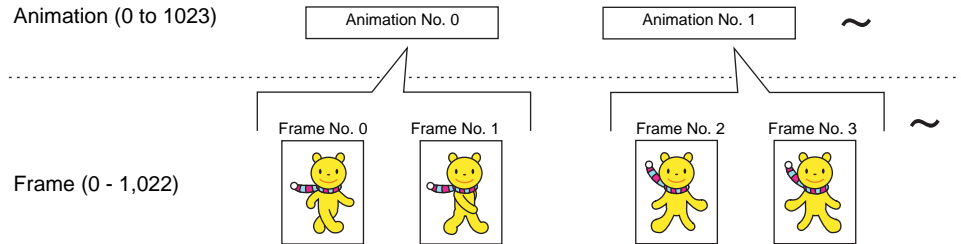
- Perform the same procedure for the remaining tile numbers.

## 5.16 Animation

This area is provided for the use of the animation function.  
Graphics for animation are registered.

### Animation Function Structure

There are [Animation] and [Frame] sections in the animation function. Graphics are registered in [Frame] sections and graphics to be used are selected in [Animation] sections.



A maximum of 1,024 animation settings from No. 0 to No. 1,023 can be registered.  
A maximum of 1,023 frames from No. 0 to No. 1022, which are defined in [Animation], can be registered.

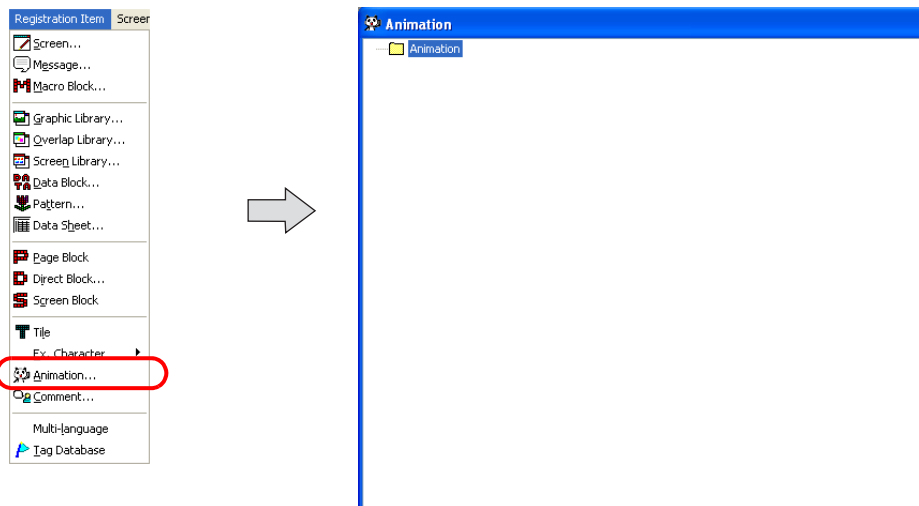
### Calling an Animation Function

Select [Animation] from the [Registration Item] menu.

The [Animation] window is displayed.

By making necessary settings in the window, [Animation] folders and their respective [Frame] folders are displayed.

(Alternatively, you can call the screen from the [Screen] menu in Project View.)

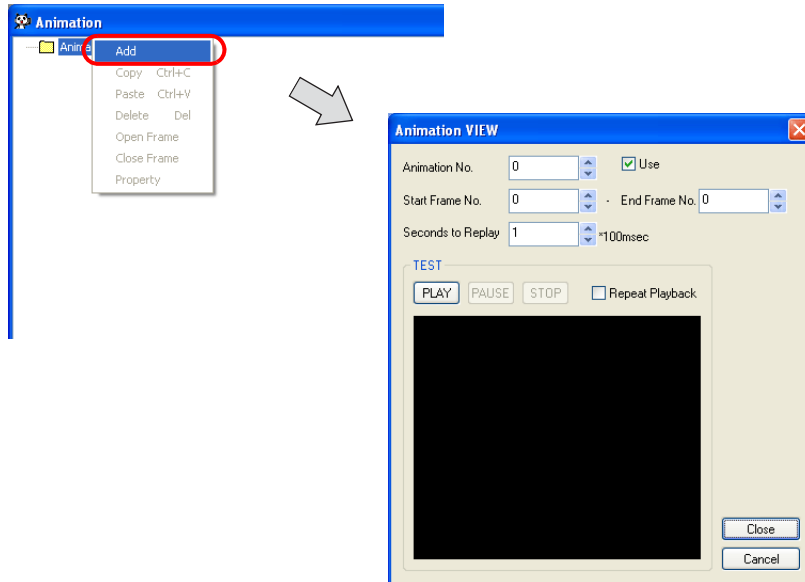




## Animation Editing

In the [Animation] dialog, the number of frames and an animation speed are set, and the actual animated image can be checked.  
Follow the procedure below.

1. Right-click [Animation] and click [Add].
2. The [Animation VIEW] dialog is displayed.  
Start setting from animation No. 0.



Animation No. (0 - 1,023)	The animation number you are currently editing is displayed. You can change the animation number by clicking the up/down arrow buttons. You can also enter the number directly without using the buttons.
<input checked="" type="checkbox"/> Use	A check mark for this option denotes that the animation number has been set. To clear the setting, uncheck this box.
Start Frame No. End Frame No. (0 - 1022)	Specify the number (range) of frames to be used for this animation.
Seconds to Replay (×100 msec)	Set the switching cycle (speed) in which you switch and display the frames that you specified for [Start Frame No.] and [End Frame No.].
[TEST] [PLAY] [PAUSE] [STOP] [ <input type="checkbox"/> Repeat Playback]	When the frames have been registered, you can check the actual motion of animation.

3. When the dialog setting is concluded, click the [Close] button.  
The [Animation] window is displayed again.

4. The [Animation] sub-folders as set in step 2 are displayed.



To go back to the [Animation VIEW] dialog, right-click the desired folder [Animation No. xxxx] and click [Property].



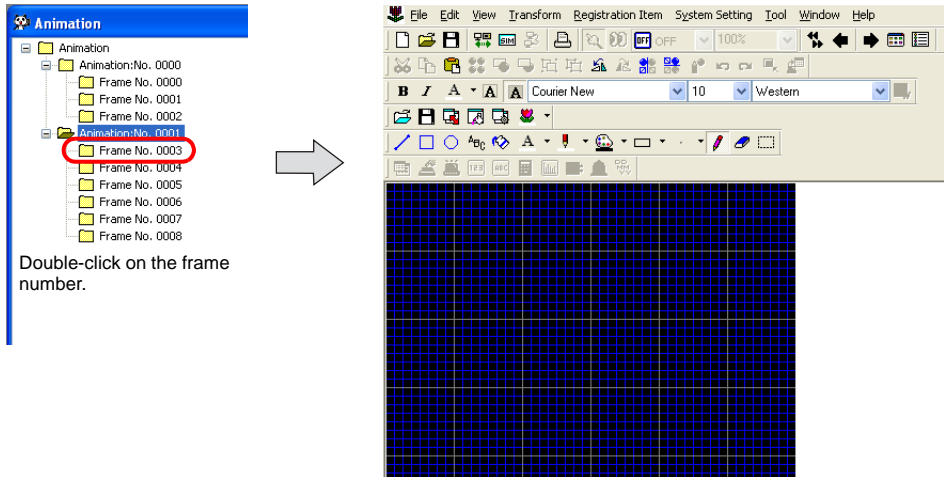
5. Double-clicking a displayed folder [Animation No. xxxx] brings up as many [Frame] folders as the number set in step 2.



## Frame Editing

In the [Animation] window, double-click the desired [Frame No. xxxx] under an [Animation No. xxxx] folder.

The [Frame Edit] window is displayed.



Double-click on the frame number.

## Frame Structure

A maximum of 1,023 frames from No. 0 to No. 1,022 can be registered.

The maximum capacity per frame is 1 MB.

The maximum permissible X and Y sizes of a pattern are 1,024 dots and 768 dots respectively.

## Frame Editing

Frames can be edited in the same manner as for patterns.



For more information on editing, refer to page 5-40 .

## 5.17 Comment

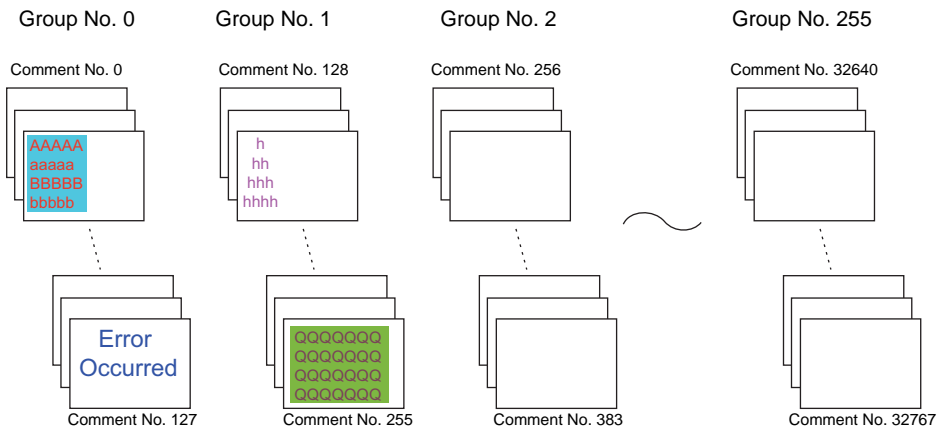
Text consisting of multiple lines can be registered with an allocated comment number and can be called by bit setting or designation of the number. This function is called comment display and a “comment” refers to an area where text is registered.

The color and size of text can arbitrarily be set on a comment-by-comment basis.

### Comment Structure

There are 256 comment groups. A maximum of 128 comments can be registered with one group (127 comments maximum with group No. 0), thus a maximum of 32767 comments can be registered in total.

Comment



### Limitations on Comments

Note the following limitations.

Available characters per line (1-byte)	127 maximum*
Available characters per comment (1-byte)	1024 maximum
Available comments	32767

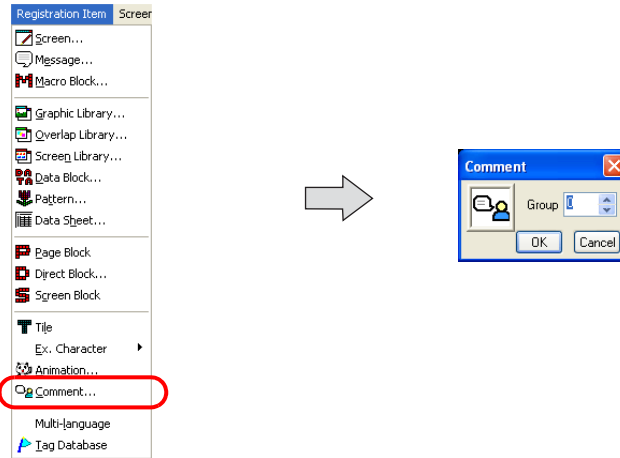
\* The maximum permissible number of characters per line depends on the number of displayed dots specified for MONITOUCH.

Number of Displayed Dots	Max. Number of Characters (1-byte)
800 × 600	100
640 × 480	80

## Calling a Comment

Click [Comment] from the [Registration Item] menu.

The [Comment] dialog is displayed. Specify the comment group number to be opened and click [OK].  
(Alternatively, you can call the screen from the [Screen] menu in Project View.)

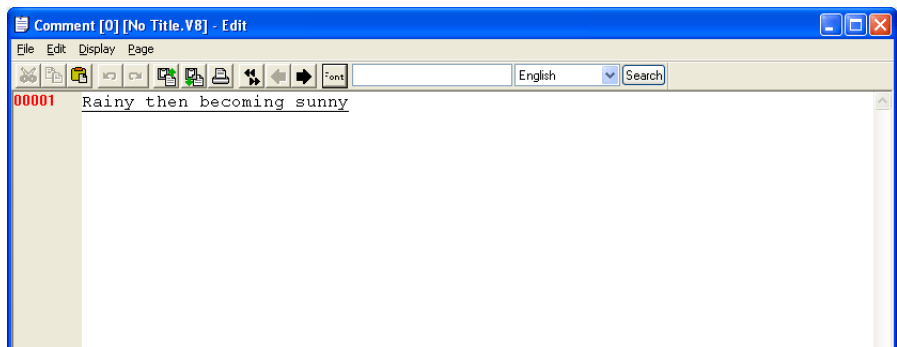


## Comment Editing

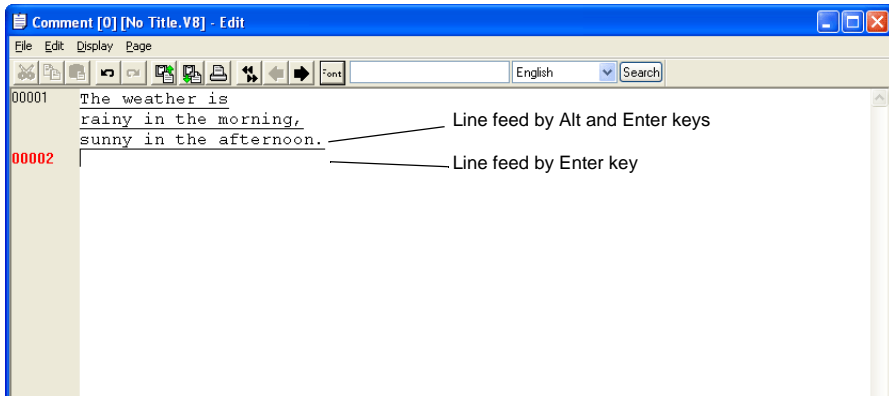
The procedural steps for comment registration are as follows:

### Entering a Comment

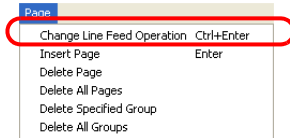
1. In the [Comment Edit] window, start from No.1 for entering a comment.  
Enter the text of the comment just as you type characters normally.



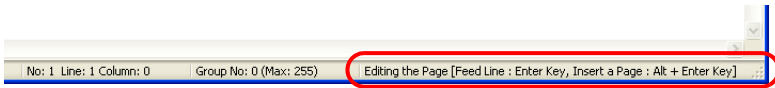
- To go to comment No. 2, press the Enter key.  
When entering two or more lines in comment No. 1, hold down the Alt key and press the Enter key.



☺ Contrary to the above, the Enter key can be used to go to the next line at the same comment number, and the Alt and Enter keys can be used to go to the next comment number. To achieve this, click [Page] → [Change Line Feed Operation].



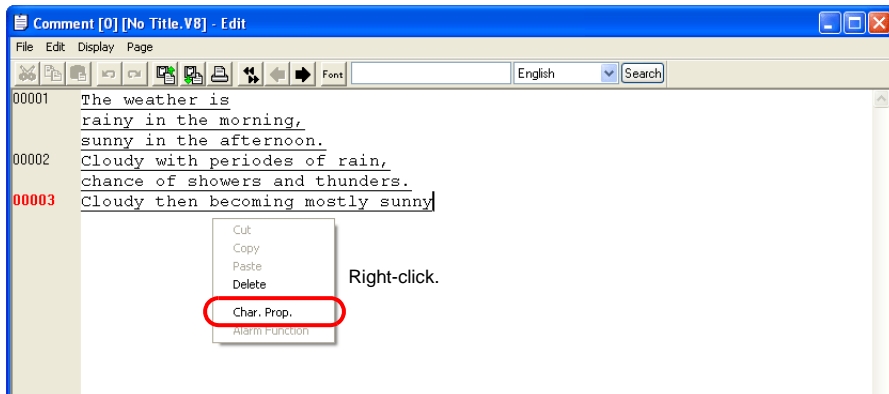
You can see whether or not [Change Line Feed Operation] is checked also on the status bar.



## Text Properties

Text properties can be changed on a comment-by-comment basis.

- Move the cursor to the comment for property setting.
- Right-click the mouse, and click [Char. Prop.].  
The [Char. Prop.] dialog is displayed.



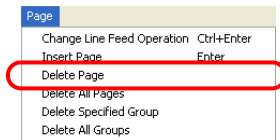
3. In the dialog, set the options of [Color], [Enlarge], [Windows Font], etc. as necessary.
4. Click [Setting]. The settings made in the dialog are reflected through the text.
  - \* **The text properties you set cannot be previewed in the [Comment Edit] window (only the color is previewed) unless [Windows Font] is set.**  
**When necessary, go to the [Screen Edit] window or MONITOUCH to preview the text properties.**



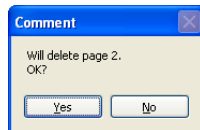
To shift to the next group, click the [Next] icon on the icon bar.

## Deleting a Comment

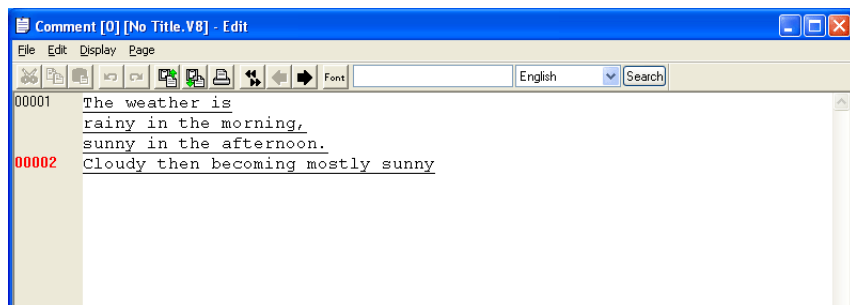
1. Move the cursor to the comment to be deleted.
2. Click [Page] → [Delete Page].



3. The following dialog is displayed:



4. When [Yes] is clicked, the corresponding comment is deleted and the comments entered below are moved up.



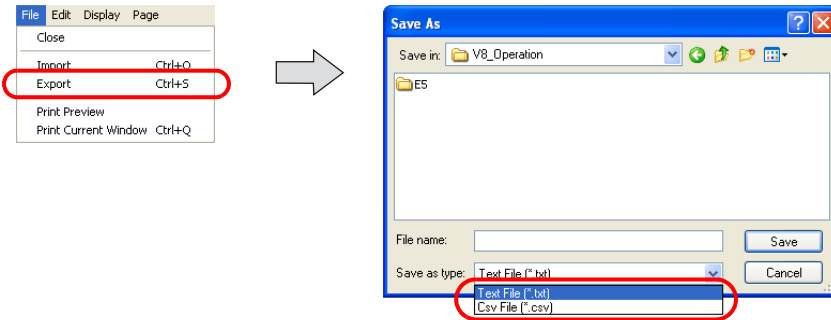
## Comment Import and Export

Text registered as comments can be exported, and at the same time, text can be imported from another data source.

- Two formats, TXT and CSV, are supported.
- Once text is imported, undoing is not possible.
- If a text import is executed during multi-language editing, the text is imported to the displayed language number you are currently editing.

### Comment import and export procedure

1. In the [Comment Edit] window, click [Import] or [Export] from the [File Menu] as necessary.
2. Either [Open] or [Save As] dialog is displayed.  
For [Save as type:], choose [Text File (\*.txt)] or [Csv File (\*.csv)]. Then open the desired file, or name and save the file.



### About the TXT format

One comment in the TXT format uses at least three lines (for the comment number, comment text, and text properties).

The format consists of:

- Comment number (1 - 32767): //
- Comment text: "(comment text)"
- Text properties

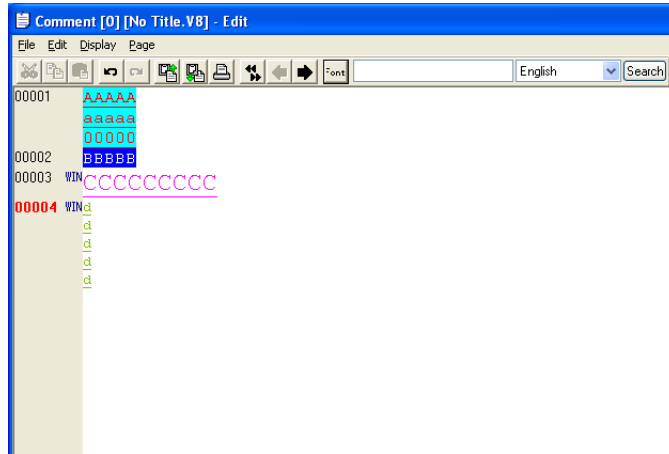
The items of text properties are delimited by commas (","):

foreground color, background color, typeface, italic, transparency, start position, rotation, size X, size Y

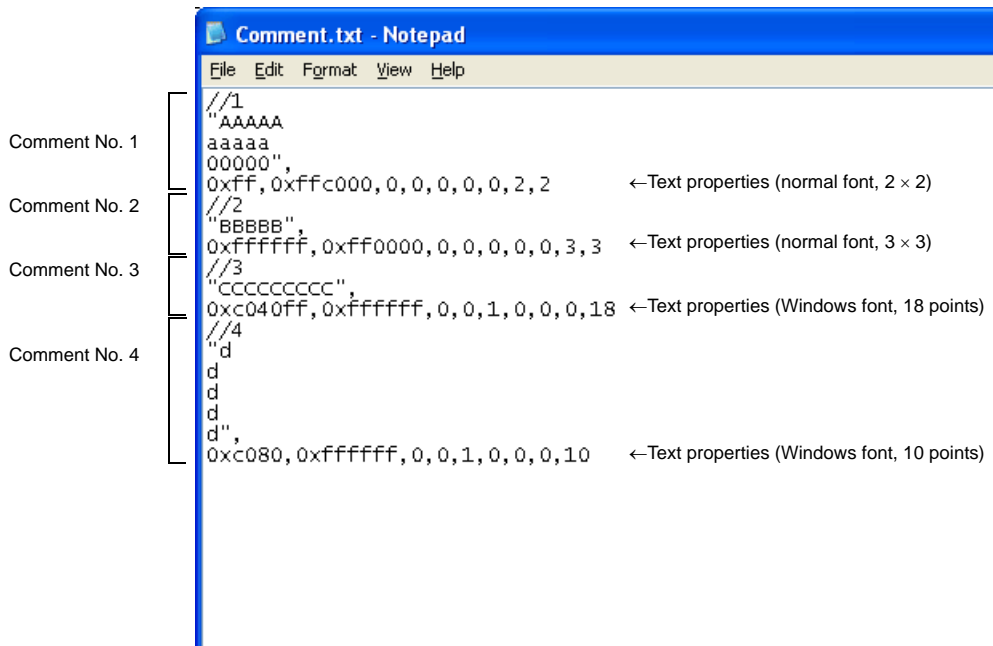
Foreground color	hexadecimal RGB value starting with 0x
Background color	hexadecimal RGB value starting with 0x
Typeface	0: normal, 1: 1/4, 2: bold, 3: shadow
Italic	0: no, 1: yes
Transparency	0: no, 1: yes
Start position	0: flush left, 1: center, 2: flush right * Only 0: flush left is available at present.
Rotation	0: →, 1: ↑, 2: ↓
Size X	When the normal fonts are in use, an enlargement factor in the horizontal direction (1 - 8) is specified. When the Windows fonts are in use, "0" is specified.
Size Y	When the normal fonts are in use, an enlargement factor in the vertical direction (1 - 8) is specified. When the Windows fonts are in use, the number of points is specified.



The following is an example of comments exported in the TXT format.



TXT format



### About the CSV format

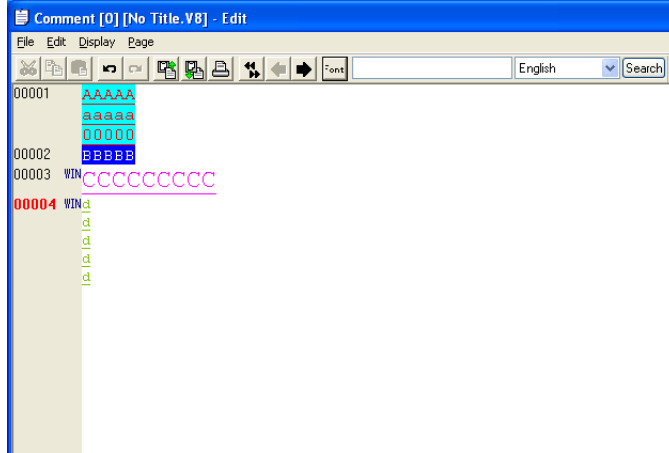
The format consists of:

comment number, comment text, foreground color, background color, typeface, italic, transparency, start position, rotation, size X, size Y



For description of the format, refer to the section of the TXT format.

The following is an example of comments exported in the CSV format.

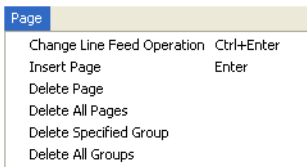


### CSV format

Comment.csv											
	A	B	C	D	E	F	G	H	I	J	K
1		AAAAA aaaaa									
2	1	00000	ff	ffc000	0	0	0	0	0	2	2
3	2	BBBBB	ffff	ff0000	0	0	0	0	0	3	3
4	3	CCCCCCC	c040ff	ffff	0	0	1	0	0	0	18
5		d									
6		d									
7		d									
8	4	d	c080	ffff	0	0	1	0	0	0	10
9											
10											

## [Page] Menu

The [Page] menu is the menu specific to comment editing.



Change Line Feed Operation	<p>Unchecked:                  Enter key: used to newly insert the next comment number                  Alt and Enter keys: used to insert lines in the same comment</p> <p>Checked:                  Enter key: used to insert lines in the same comment                  Alt and Enter keys: used to newly insert the next comment number</p>
Insert Page	Performs a line feed in the position specified by the cursor. The comments following the cursor position is/are given the next (and the following) comment numbers.
Delete Page	Deletes the comment specified by the cursor.
Delete All	Deletes all comments.

## 5.18 Multi-language

This area is provided for the use of the language selection function.



For more information, refer to “Appendix 3 Display Language” in the V8 Series Reference Manual.

# MEMO



Please use this page freely.

## 6 Transfer with V8

This chapter explains the procedure for transferring the screen data between MONITOUCH and the editor.

### 6.1 Transfer Methods

Data can be transferred between MONITOUCH and the computer installed with the editor via a card or while these two are connected with a cable.

#### List of Transfer Methods

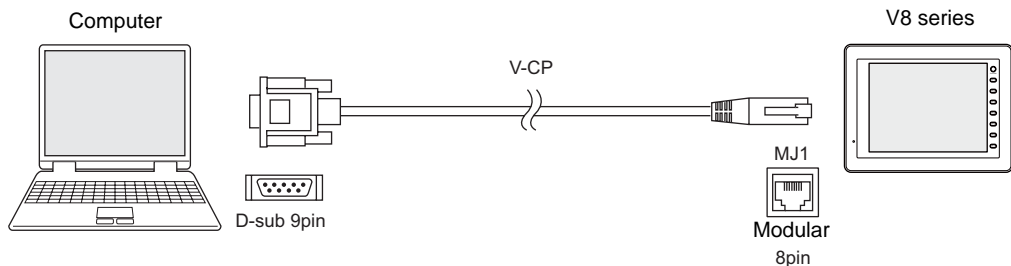
Transfer Method	Model	
	V8i	V8
V-CP	○	○
Ethernet	○	△*1
USB	○	○
CF card	○	○
Memory card (CREC)	○	○
Modem	○	○

\*1 Available only when the communication I/F unit "CU-03-3" is mounted.

#### Using a Communication Cable

##### V-CP (Serial Port)

Connect MJ1 (modular jack for transfer) of MONITOUCH and the computer using Hakko Electronics' data transfer cable "V-CP."



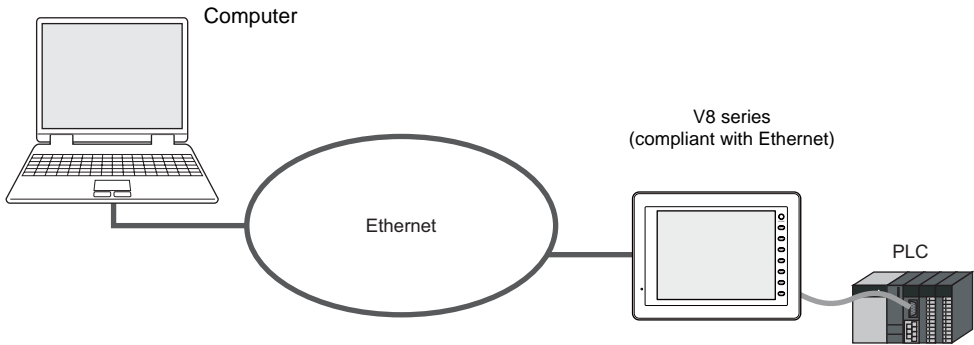
When the USB port is provided on the computer instead of the D-sub 9-pin serial interface, use a USB → D-sub 9-pin serial converter which is commercially available.

For transfer procedure, refer to page 6-10.

### Ethernet (LAN Port)

---

Connect the LAN port on MONITOUCH and the computer via Ethernet. (For models other than the V8i, a communication I/F unit is necessary.)  
Use a LAN cable. (Use a cross cable when establishing peer-to-peer network.)

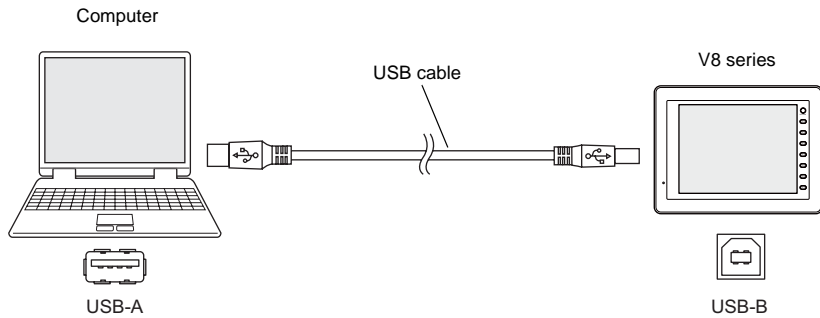


For transfer procedure, refer to page 6-19.

### USB (USB-B Port)

---

Connect the USB-B port on MONITOUCH and the USB-A port on the computer using a USB cable.

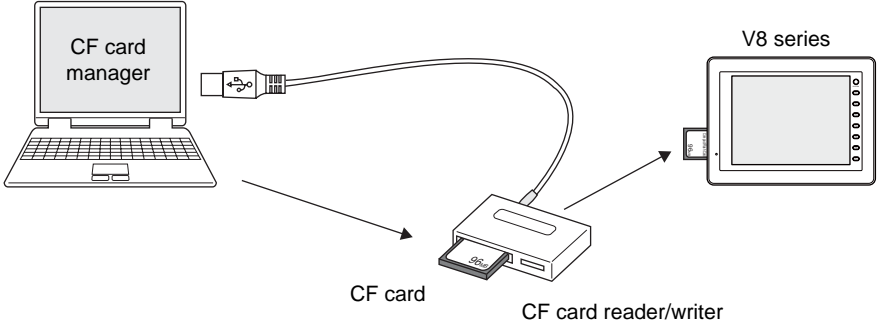


For transfer procedure, refer to page 6-29.

# Using a Card

## CF Card

Data in the computer is first stored on a CF card which is commercially available, and then insert the CF card into MONITOUCH to transfer the data.

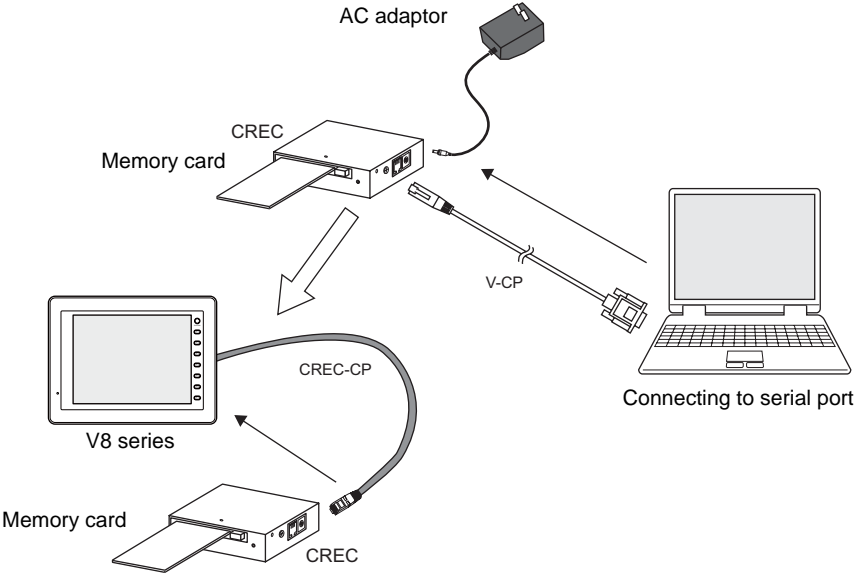


The appropriate environment to read from or write to the CF card is required on the computer side.

For transfer procedure, refer to page 6-36.

## Memory Card

Data in the computer is first stored on a memory card using Hakko Electronics' "CREC" (card recorder) and "REC-MCARD" (memory card) and then attach CREC with REC-MCARD to MONITOUCH. Data is then transferred to MONITOUCH.

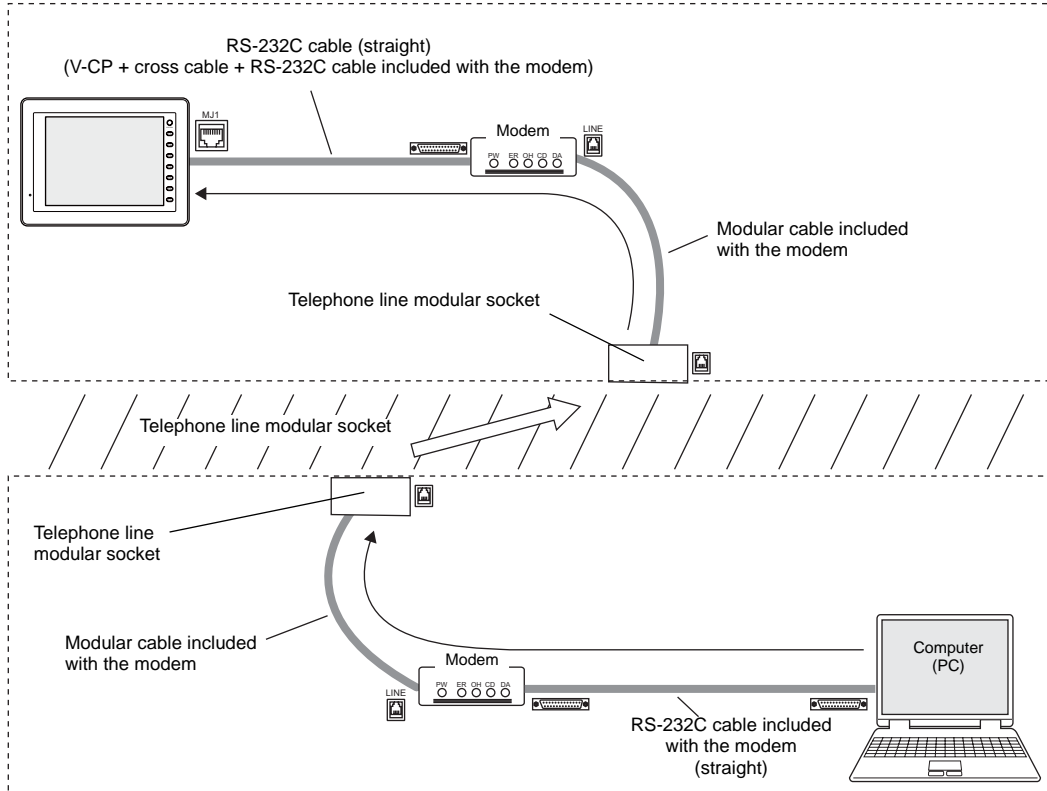


When connecting CREC and the computer, use the AC adaptor included with CREC as well as V-CP.

For transfer procedure, refer to page 6-43.

## Using a Modem

Screen data can be transferred via telephone line.



For more information, refer to page 6-49.



## 6.2 Type of Transferred Data

There are many kinds of data which can be transferred to the V8 series.

However, it is not necessary to worry about what kind of data to be transferred, except that of the screen data.

When [Screen Data] is selected and data transfer is started, other necessary data is automatically transferred together with the screen data.

### Transfer Data List

Transfer Data	Contents
Screen Data (extension: ".V8")	This is the screen data file of MONITOUCH.
I/F Driver (extension: ".TPC")	This is the communication driver. The driver file type varies with the devices connected.
Display System Program (extension: ".prg")	This is the system program file for MONITOUCH. This file is transferred to update the MONITOUCH program.
Font Data	This is the source file of fonts displayed on MONITOUCH. This file is automatically transferred when the screen data with a different font setting is transferred to MONITOUCH. The contents of the Main Menu screen are also updated by transferring this data.
SRAM Data (extension: ".RAM")	This file is used when an SRAM cassette or a built-in SRAM is in use. This file is transferred to make a backup copy of the SRAM data.
Station No. Table (extension: ".dtmA")	This file is used when the station number table is used for Ethernet or temperature control network. This file is transferred to update the station number table.
Ladder Comm. Prg. (extension: ".lcmA")	This is a program file used for the ladder transfer function.
Printer Driver (extension: ".pdrA")	This is the printer driver used for the EPSON STYLUS PHOTO series.
Basic Japanese Dictionary (extension: ".fcpA")	This is a program file used for the Japanese FEP function.
Multi-link (extension: ".MlpA")	This is a program file used for connection with multi-link or multi-link 2.
Simulator Program (UniPLC_*.tpc)	This is a program file used for Simulator. Three kinds are provided for the serial, USB, and Ethernet ports. When [ <input type="checkbox"/> Use Simulator] is checked in the [Transfer] dialog, this file will be sent at the time of screen data transfer.

## System Program File

The following table shows the system program files corresponding to each MONITOUCH model.

MONITOUCH Model		Program File	
		Normal Mode	128-color Mode
V815iX		V8150.prg	-
V812(i)S/V810(i)S		V8120.prg	V81202.prg
V810(i)T		V8100.prg	V81002.prg
V810(i)C		V8100C.prg	V8100C2.prg
V808(i)S		V8080.prg	V80802.prg
V808(i)C	Landscape	V8080C.prg	V8080C2.prg
	Portrait	V8080CV.prg	-
V806(i)T/V806(i)C	Landscape	V8060.prg	V80602.prg
	Portrait	V8060V.prg	-
V806M		V80602.prg	-
V808(i)CH		V8080CH.prg	V8080CH2.prg

Normally, it is not necessary to transfer the files above.

Files are transferred to update a program or the entire MONITOUCH system.



**Keep the power on during system program transfer. Shutting off the computer may causes errors to MONITOUCH.**



To update the entire system, it is recommended to use [System Update].  
In this case, however, executing [System Update] re-transfers the whole system file so you may have to transfer the screen data again.  
As a basic procedure, transfer the screen data after executing [System Update].

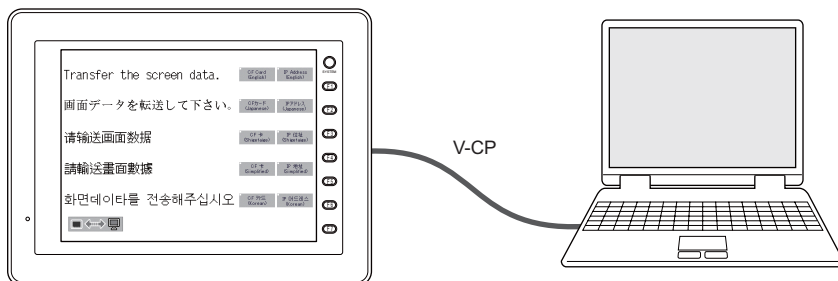
## 6.3 Preliminaries

### Preparation for MONITOUCH

The screen status before starting transfer varies between new MONITOUCH and the existing one.

#### New MONITOUCH

When a new MONITOUCH is started for the first time, the following screen appears.

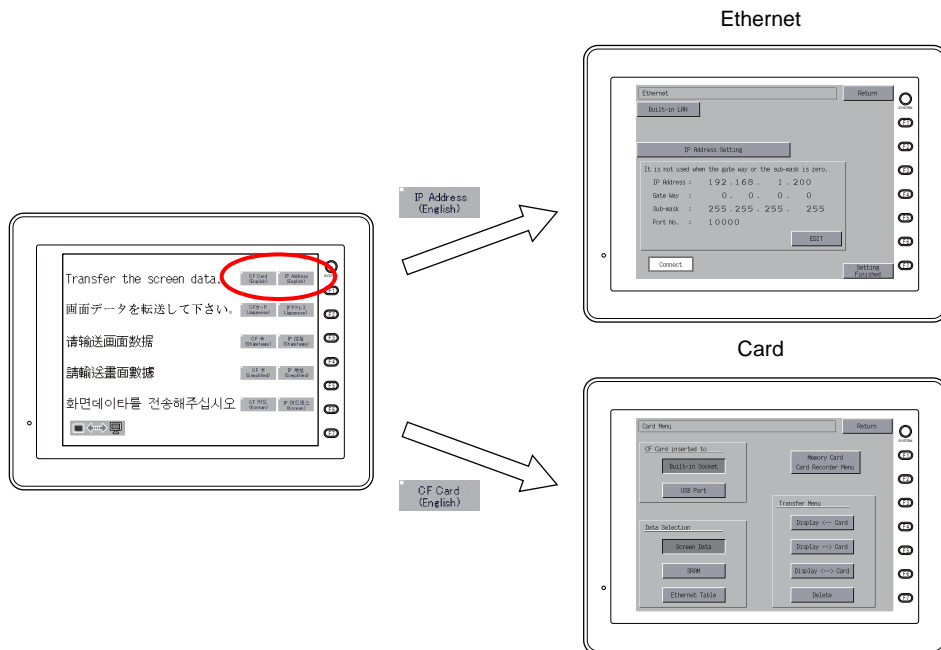


#### When transferring via V-CP or USB:

The data can be transferred from the screen shown above.

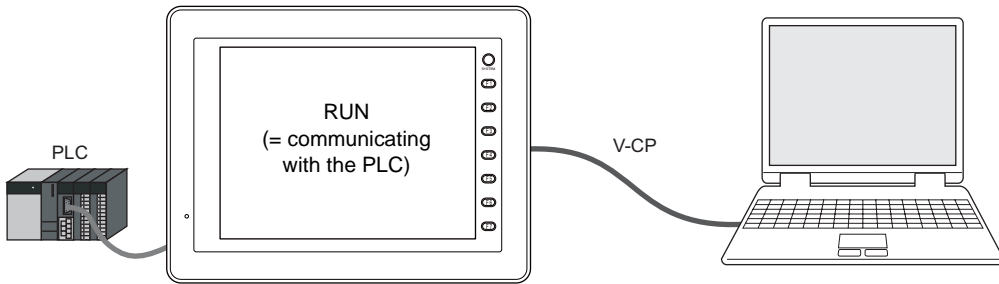
#### When transferring via Ethernet or a card:

Press the switch on the screen and bring up each setting menu or transferring screen.



## Existing MONITOUCH

When the existing MONITOUCH is started, it is in a RUN state.



The data can be transferred in the RUN mode or after the Main Menu screen is displayed.

### When transferring via V-CP:

When [No connection] is specified for [MJ1] (modular jack 1) in the Project View associated with the screen data already transferred to MONITOUCH, data transfer is allowed even while MONITOUCH is in RUN mode.

However, if anything other than [No connection] is set for [MJ1], the MONITOUCH screen must be switched to the Main Menu before data transfer.

To display the Main Menu screen:  
 Press the [SYSTEM] switch. When the menu is displayed, press the [F1] switch. Then the Main Menu screen is displayed.

→
→

If the screen is not changed by pressing the [SYSTEM] or [F1] switch, the switch may be prohibited or set to become active when the switch is held down for a certain time.  
 Hold down the [SYSTEM] and [F7] ([F5] for the 5.7-inch model) switches at the same time. Alternatively press the [SYSTEM] switch and then hold down the [F1] and [F7] ([F5] for the 5.7-inch model) switches at the same time.  
 For more information, refer to the description regarding the function switch in the V8 Series Hardware Specifications.

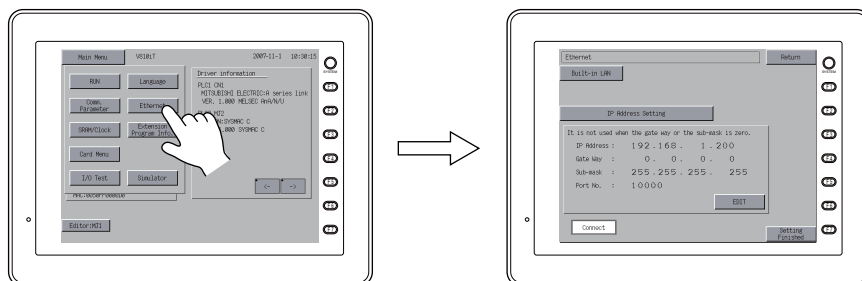
### When transferring via USB:

The screen data can be transferred in the RUN mode as well as from the Main Menu screen.

### When transferring via Ethernet:

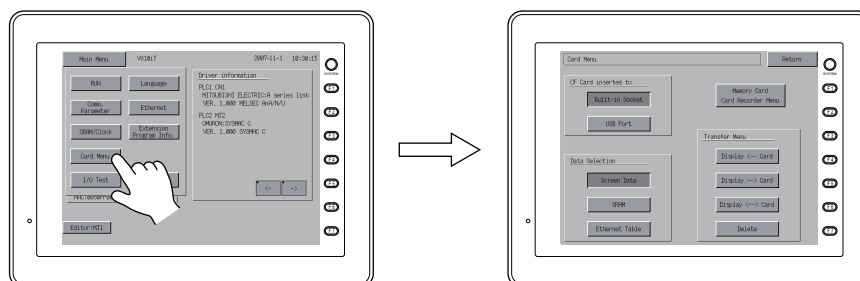
When the IP address or subnet mask is correctly set for Ethernet transfer, the screen data can be transferred in the RUN mode as well as from the Main Menu screen.

However, it is necessary to display the Ethernet screen from the Main Menu screen to check or change the current setting.



### When using a card:

To transfer data using a CF card or memory card, display the Card Menu screen from the Main Menu screen.



- \* In the case of the automatic uploading using a CF card, it is not necessary to display the Main Menu screen. For more information on the automatic uploading, see “Chapter 18. CF Card” in the V8 Series Reference Manual.

## Preparation for Peripheral Equipment

Depending on the transfer method, it is necessary to prepare peripheral equipment (LAN cable, CF card, etc.) in addition to MONITOUCH and accessories included with MONITOUCH. Please prepare them which is commercially available near you if it is not required to use dedicated equipment.

## 6.4 Transfer Procedure (Using a Communication Cable)

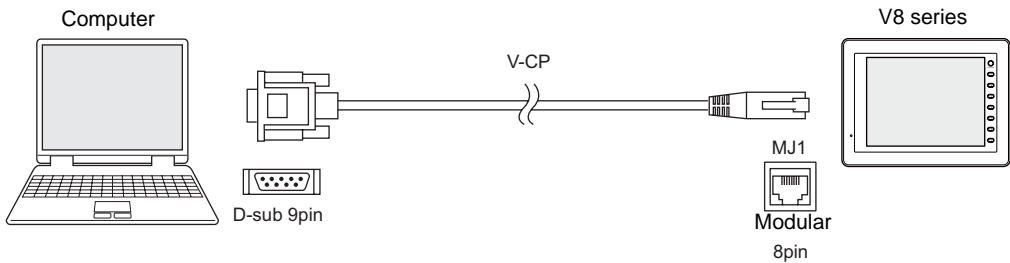
### V-CP

---

#### System Configuration

---

The data is transferred in the following system configuration using V-CP.

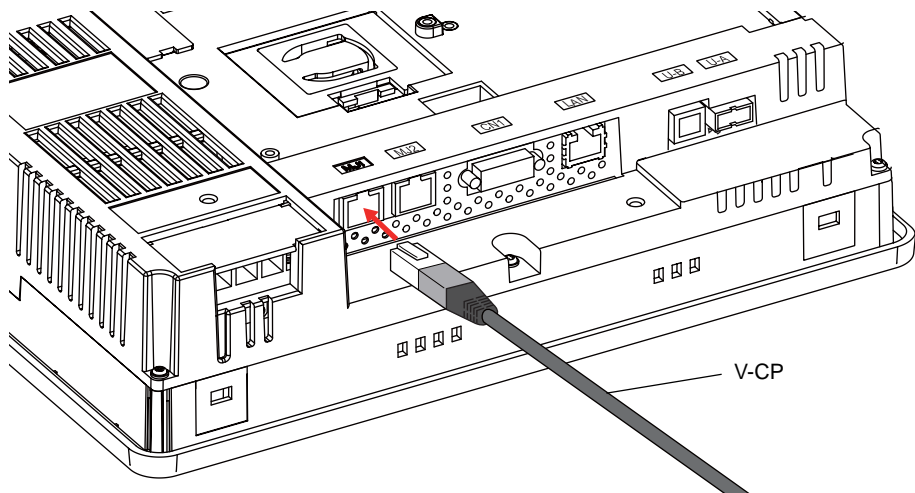


#### Transfer Procedure from the Editor to MONITOUCH

---

1. Connect MONITOUCH (MJ1) and the computer using V-CP.

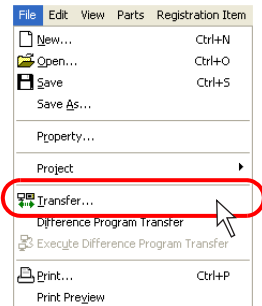
E.g. V810iT



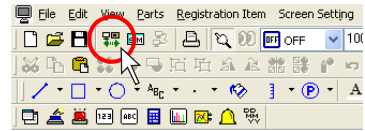
When [No Connection] is not set for the MJ1, display the Main Menu screen on MONITOUCH.

2. On the editor, open the screen data to be transferred.

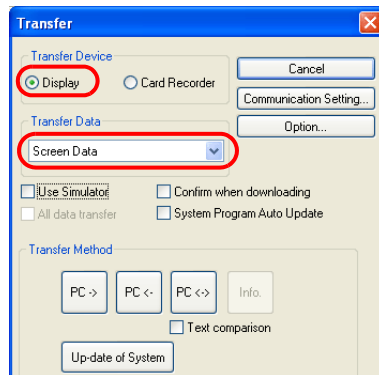
- Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



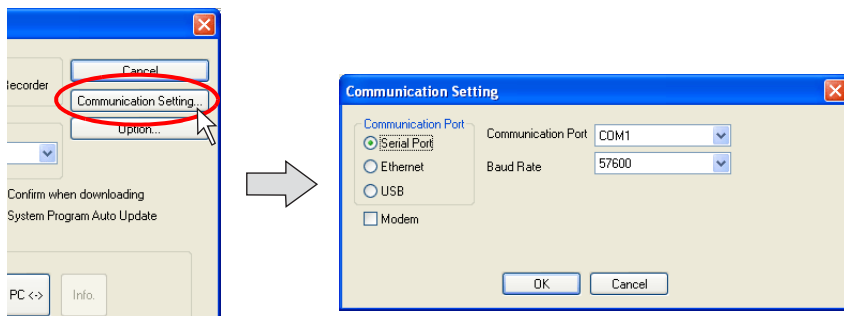
OR



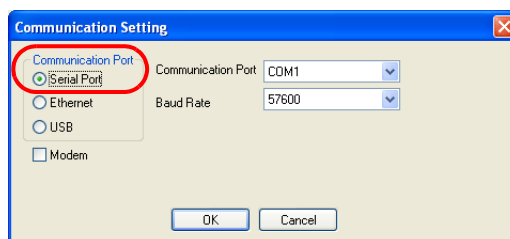
- The [Transfer] dialog is displayed. Select [Display] for [Transfer Device], and [Screen Data] for [Transfer Data]. Leave  Use Simulator unchecked at this time. (When using Simulator, check this box.)



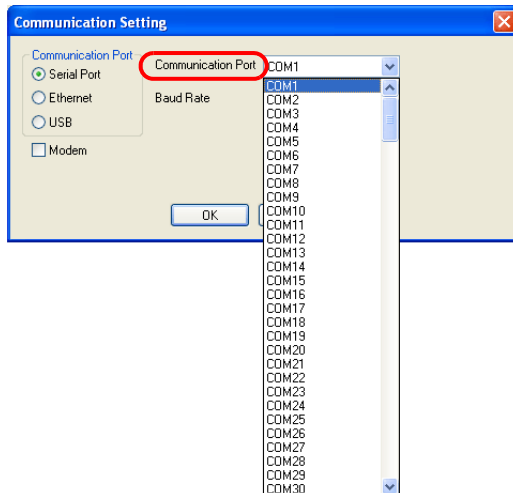
- Click the [Communication Setting] button. The [Communication Setting] dialog is displayed.



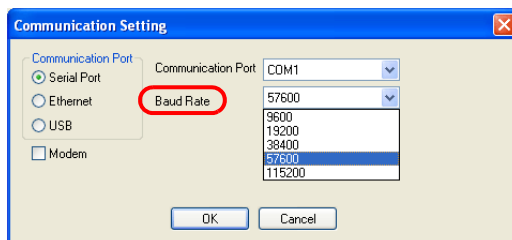
- Select [Serial Port] for [Communication Port].



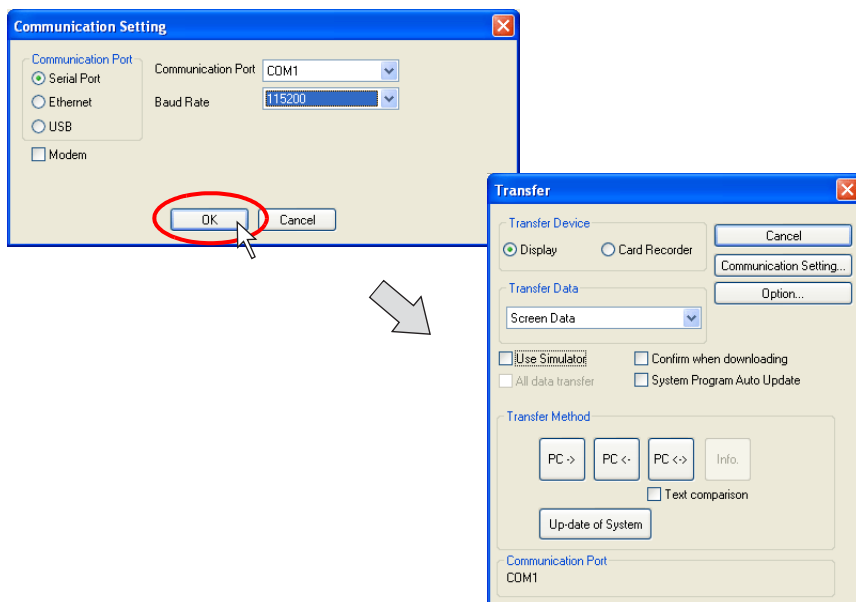
7. For [Communication Port], select the port used for connecting V-CP on the computer. (When using a USB-serial converter, select the COM port set for the USB port.)



8. Specify the baud rate for [Baud Rate]. [57600] bps is set as default. [115200] bps can be set depending on the computer. Check the available rate, and specify its maximum.

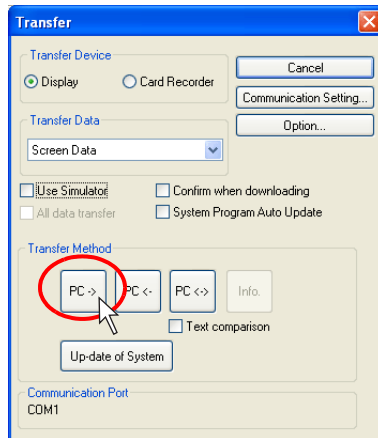


9. When settings are completed, click [OK]. The former [Transfer] dialog is displayed again.

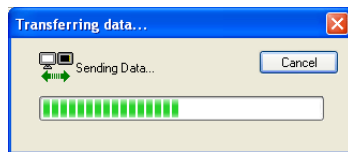




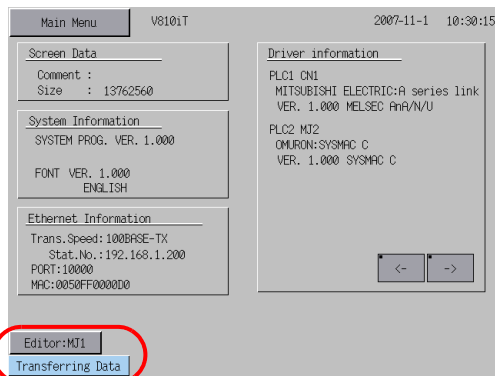
10. Click the [PC ->] button. Data transfer is started.



11. During data transfer, the following dialog is displayed.



On MONITOUCH, the screen is changed to the Main Menu screen shown below.

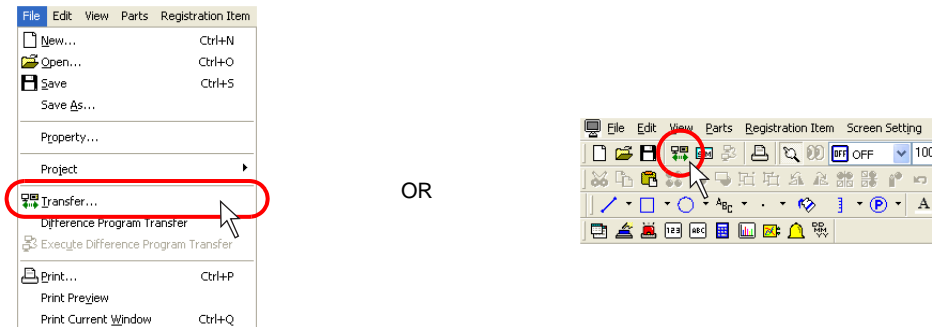


12. When the data transfer is completed, the display indicating that the data transfer is in process disappears.

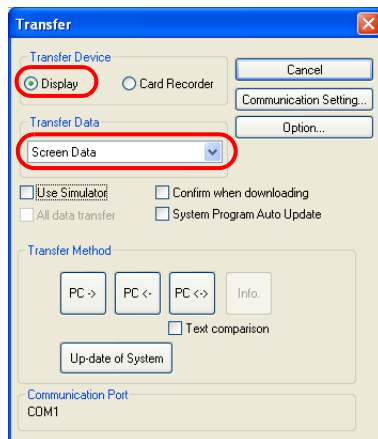
Data transfer has been completed.

## Transfer Procedure from the Editor to MONITOUCH

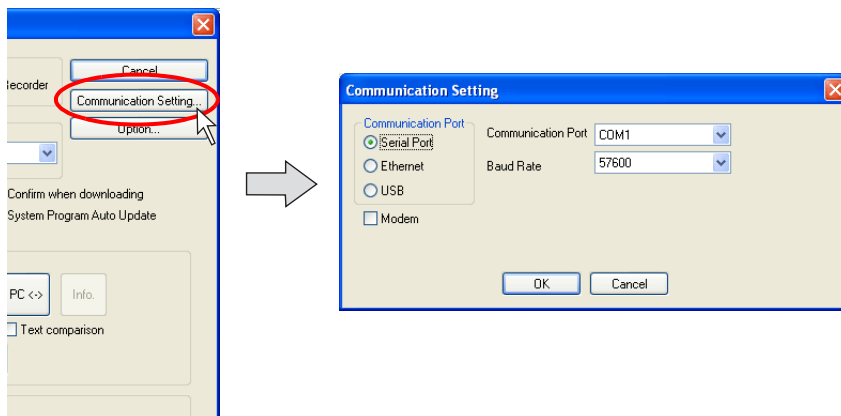
1. Connect MONITOUCH (MJ1) and the computer using V-CP.  
When [No Connection] is not set for the MJ1, bring up the Main Menu screen on MONITOUCH.
2. Start up the editor.
3. Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



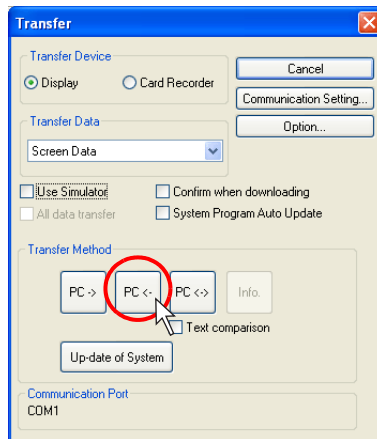
4. The [Transfer] dialog is displayed.  
Select [Display] for [Transfer Device], and [Screen Data] for [Transfer Data].



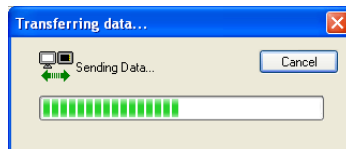
5. Click the [Communication Setting] button.  
The [Communication Setting] dialog is displayed.



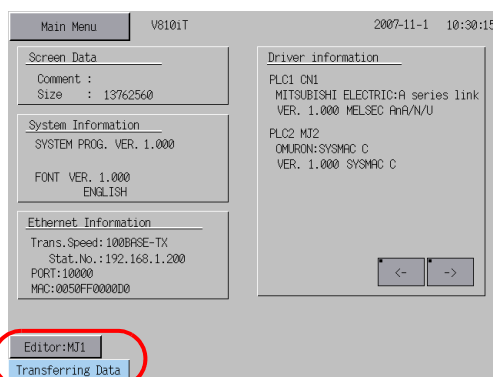
6. Select [Serial Port] for [Communication Port].
7. For [Communication Port], select the port used for connecting V-CP on the computer.  
(When using the USB-serial converter, select the COM port set for the USB port.)
8. Specify the baud rate for [Baud Rate].  
[57600] bps is set as default. [115200] bps can be set depending on the computer.  
Check the available rate, and specify its maximum.
9. When settings are completed, click [OK]. The former [Transfer] dialog is displayed again.
10. Click the [PC ←] button. Data transfer is started.



11. During data transfer, the following dialog is displayed.



On MONITOUCH, the screen is changed to the Main Menu screen shown below.



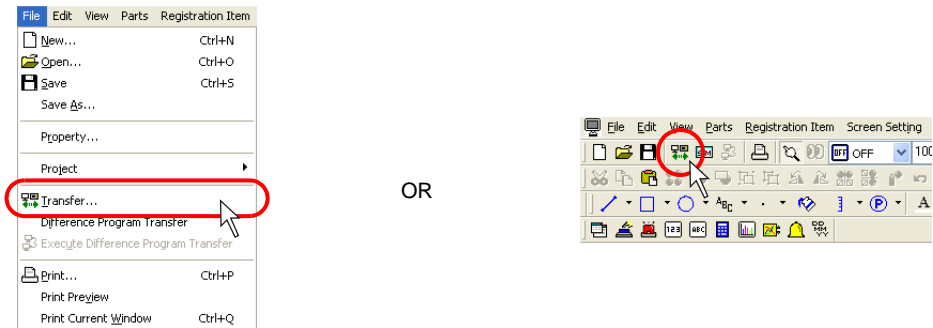
12. When the data transfer is completed, the display indicating that the data transfer is in process disappears.

Data transfer has been completed.

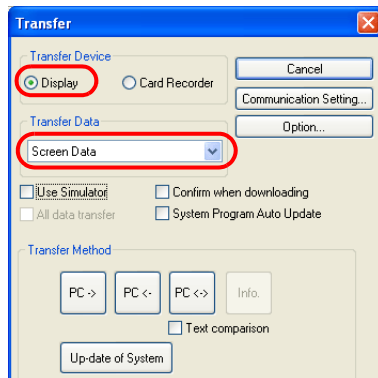
## Data Comparison between Editor and MONITOUCH

Screen data can be compared between MONITOUCH and the computer. Data comparison is useful to check if there are any differences between the data transferred from MONITOUCH and the original present in MONITOUCH.

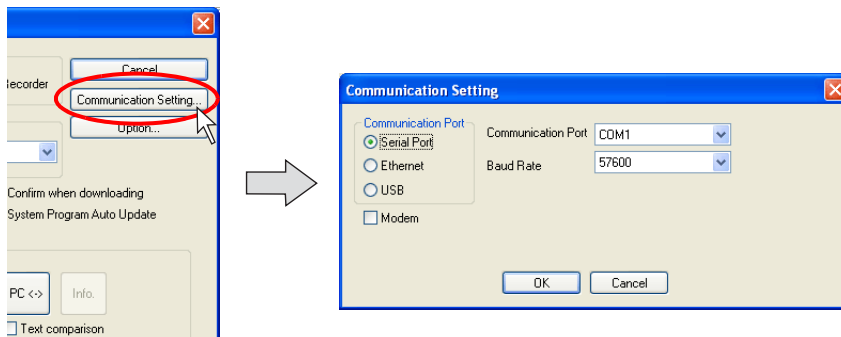
1. Connect MONITOUCH (MJ1) and the computer using V-CP.  
If [No Connection] is not set for the MJ1, display the Main Menu screen on MONITOUCH.
2. Start up the editor and open the screen data file to be compared.  
(The native data file transferred from MONITOUCH is acceptable.)
3. Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



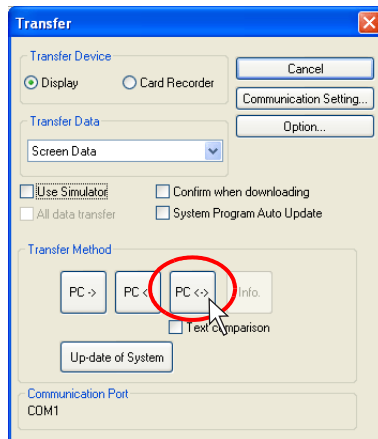
4. The [Transfer] dialog is displayed.  
Select [Display] for [Transfer Device], and [Screen Data] for [Transfer Data].



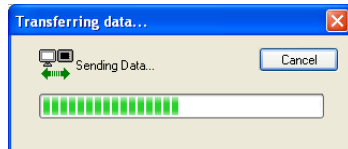
5. Click the [Communication Setting] button.  
The [Communication Setting] dialog is displayed.



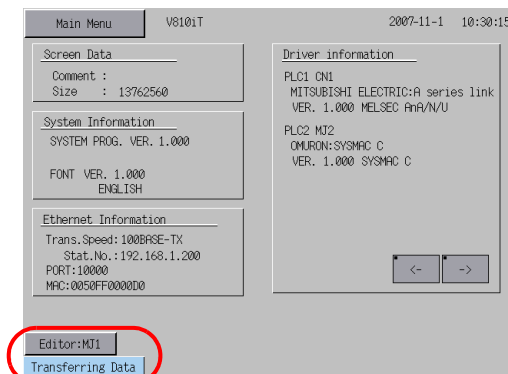
6. Select [Serial Port] for [Communication Port].
7. For [Communication Port], select the port used for connecting V-CP on the computer. (When using the USB-serial converter, select the COM port set for the USB port.)
8. Specify the baud rate for [Baud Rate].  
[57600] bps is set as default. [115200] bps can be set depending on the computer. Check the available rate, and specify its maximum.
9. When settings are completed, click [OK]. The former [Transfer] dialog is displayed again.
10. Click the [PC <->] button. Data comparison is started.



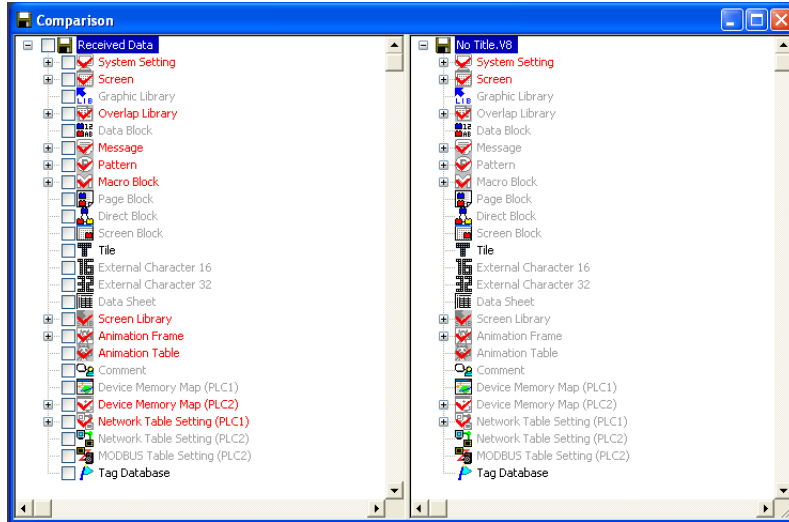
11. During comparison, the following dialog is displayed.



On MONITOUCH, the screen is changed to the Main Menu screen shown below.

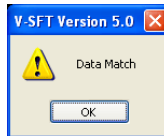


12. When the data comparison is completed, the display indicating that the data transfer is in process disappears.  
When any differences are found, a window showing the result of comparison is displayed as below.



The displayed contents are the same as the one displayed when two files are compared.  
For more information, refer to "File Comparison"(page 8-79) in "8.8 File Management".

13. When the data is found to be exactly the same, the following dialog appears.



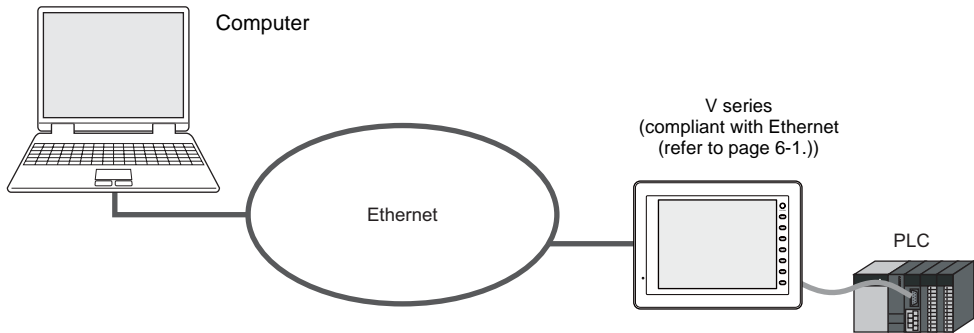
Click [OK]. The [Comparison] window showing the result of comparison is displayed.

Data comparison has been completed.

## Ethernet

### System Configuration

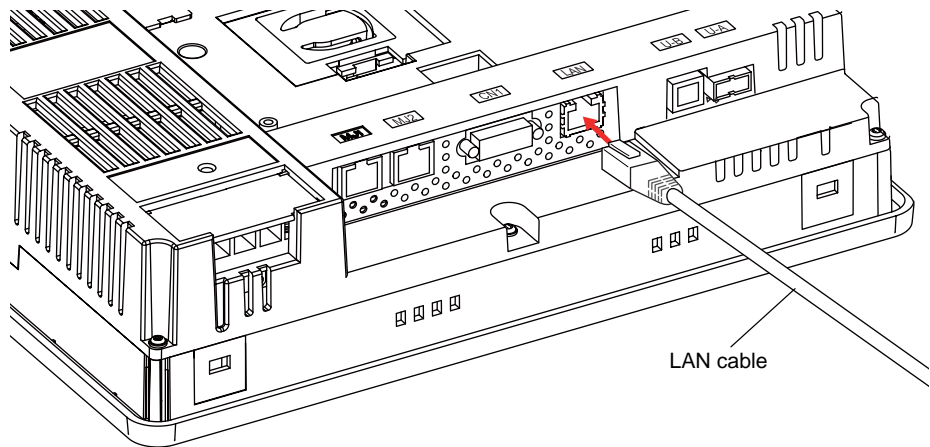
The data is transferred in the following system configuration via Ethernet.



### Transfer Procedure from the Editor to MONITOUCH

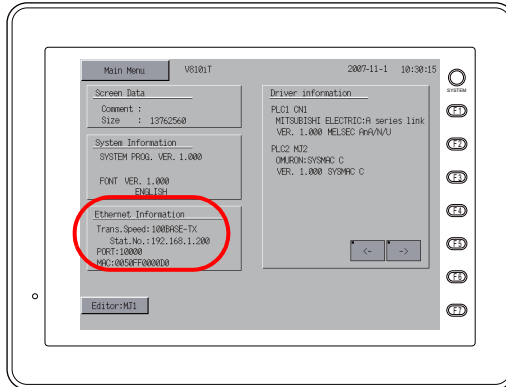
1. Connect the LAN port of MONITOUCH (or LAN port of CU-03-3) and the computer using a LAN cable.

E.g. V810iT (LAN port)

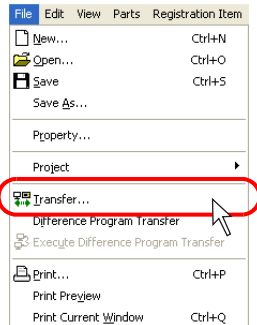


Please provide your own LAN cable.  
When connecting a LAN cable to the hub, prepare a straight cable. When connecting it to the computer directly, provide a cross cable.

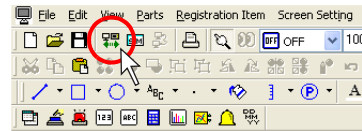
2. Check the setting, such as connecting status or IP address setting, on the Main Menu screen.



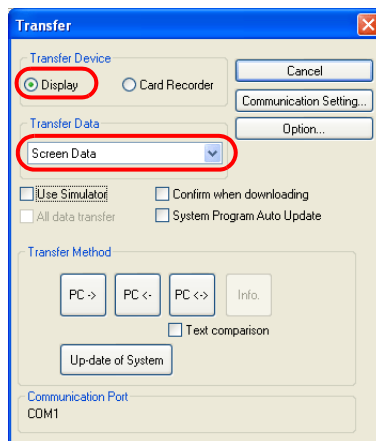
3. On the editor, open the screen data to be transferred.
4. Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



OR

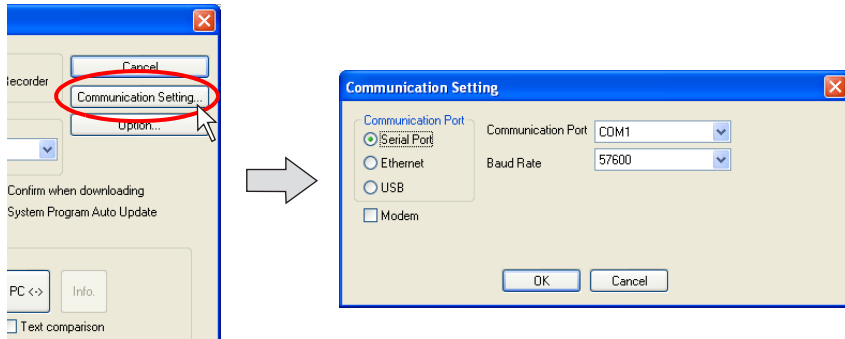


5. The [Transfer] dialog is displayed. Select [Display] for [Transfer Device], and [Screen Data] for [Transfer Data].

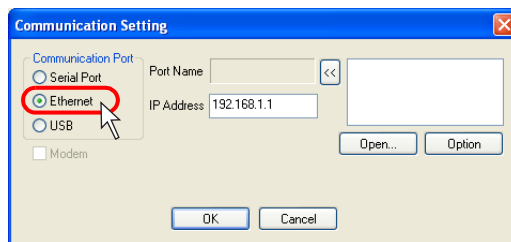




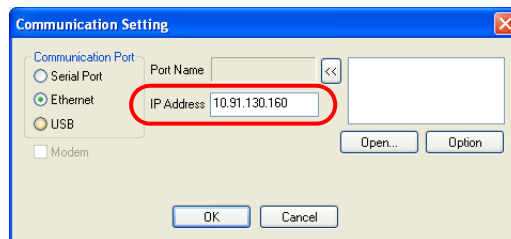
6. Click the [Communication Setting] button.  
The [Communication Setting] dialog is displayed.



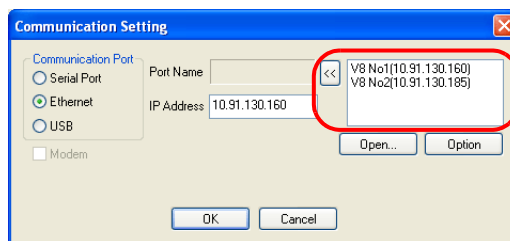
7. Select [Ethernet] for [Communication Port].



Specify the IP address of MONITOUCH for [IP Address].

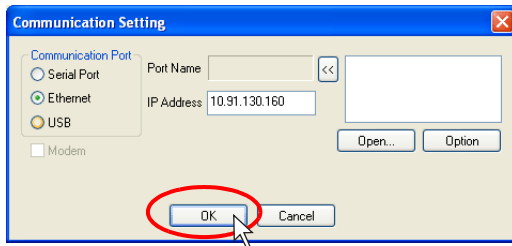


For the screen data where the network table has been set, the table contents are displayed in the upper right field.

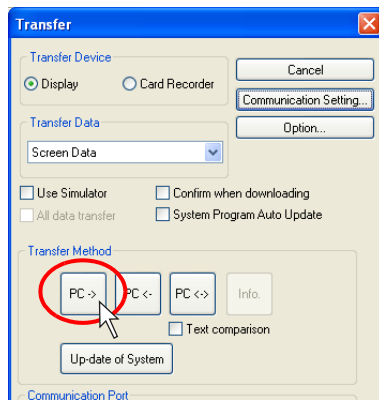


The IP address of the transfer target can also be selected from the table. Select the target IP address and click the [<<] button. The IP address is set in the [IP Address] field.

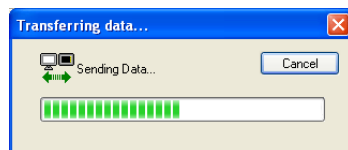
8. When settings are completed, click [OK]. The former [Transfer] dialog is displayed again.



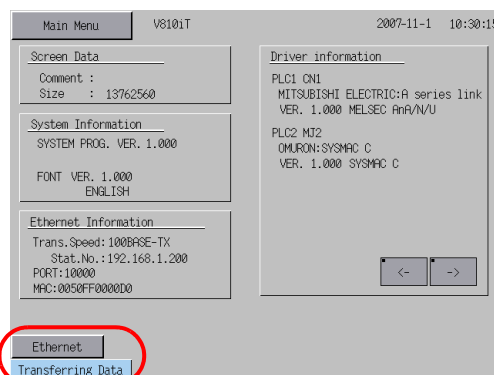
9. Click the [PC ->] button. Data transfer is started.



10. During data transfer, the following dialog is displayed.



On MONITOUCH, the screen is changed to the Main Menu screen shown below.



11. When the data transfer is completed, the display indicating that the data transfer is in process disappears.

Data transfer has been completed.



To check if the Ethernet connection is correctly established, send a "PING" command from the computer.

#### Checking method using a PING command

E.g.: When the IP address of MONITOUCH is set as "172.16.200.150": Check on the computer if the connection is correctly established.

Launch "Command Prompt" on the computer.

```

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
E:\Documents and Settings\n-higashi.HAKKO>_

```

Key-in "PING \_ 172.16.200.150" and press the [ENTER] key.

```

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
E:\Documents and Settings\n-higashi.HAKKO>ping 172.16.200.150_

```

When the connection is established, the following results are shown.

```

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
E:\Documents and Settings\n-higashi.HAKKO>ping 172.16.200.150
Pinging 172.16.200.150 with 32 bytes of data:
Reply from 172.16.200.150: bytes=32 time<1ms TTL=60
Reply from 172.16.200.150: bytes=32 time<1ms TTL=60
Reply from 172.16.200.150: bytes=32 time<1ms TTL=60
Reply from 172.16.200.150: bytes=32 time<1ms TTL=60
Ping statistics for 172.16.200.150:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
E:\Documents and Settings\n-higashi.HAKKO>_

```

Connection  
OK

When the connection is not established, the following results are shown.

```

Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
E:\Documents and Settings\n-higashi.HAKKO>ping 172.16.200.150
Pinging 172.16.200.150 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 172.16.200.150:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
E:\Documents and Settings\n-higashi.HAKKO>_

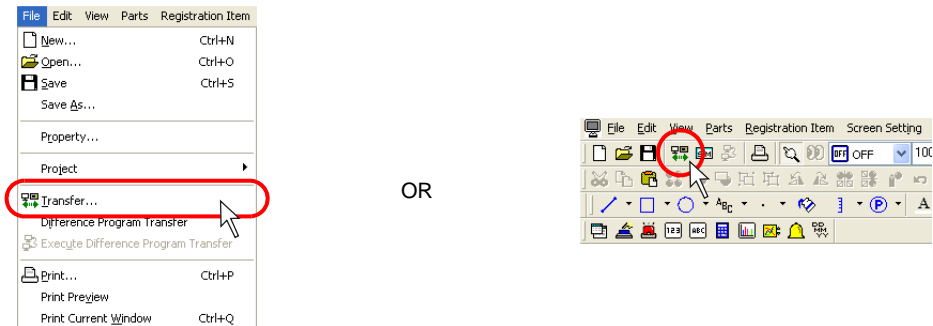
```

Not  
connected

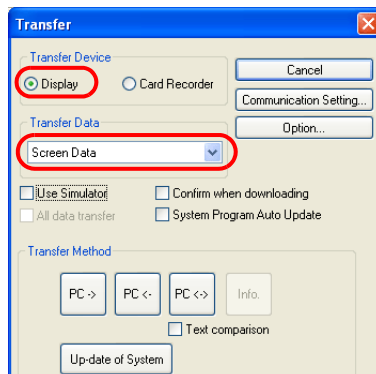
In this case, check the IP address of MONITOUCH or the computer, or make sure that the connecting cable is connected securely.

## Transfer Procedure from the Editor to MONITOUCH

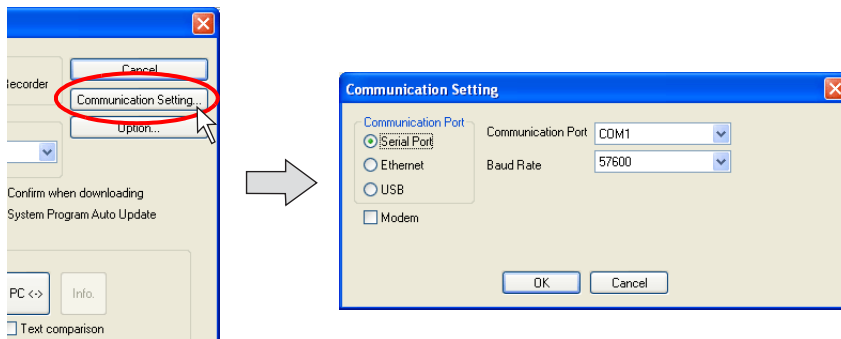
1. Connect the LAN port of MONITOUCH (or LAN port of CU-03-3) and the computer using a LAN cable.  
Check the setting, such as connecting status or IP address setting, on the Main Menu screen.
2. On the editor, open the screen data to be transferred.
3. Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



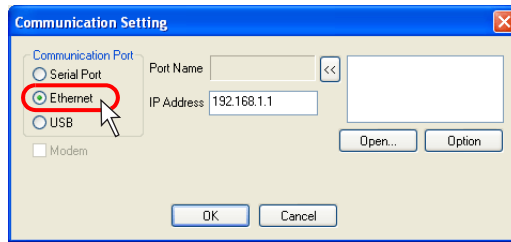
4. The [Transfer] dialog is displayed.  
Select [Display] for [Transfer Device], and [Screen Data] for [Transfer Data].



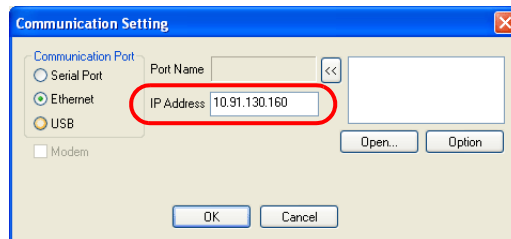
5. Click the [Communication Setting] button.  
The [Communication Setting] dialog is displayed.



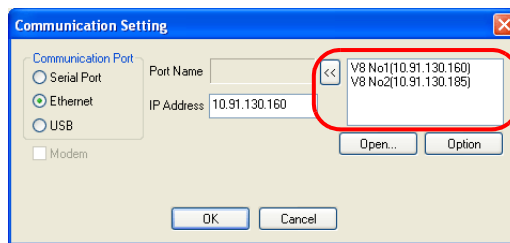
6. Select [Ethernet] for [Communication Port].



- Specify the IP address of MONITOUCH for [IP Address].

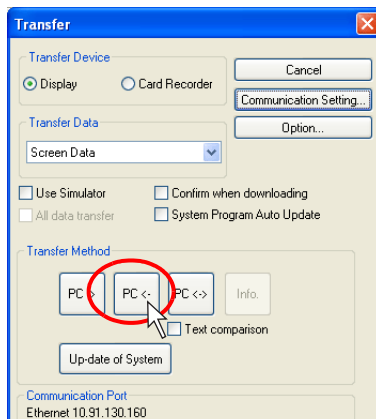


- ☺ For the screen data where the network table has been set, the table contents are displayed in the upper right field.

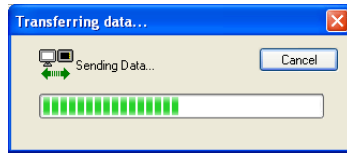


The IP address of the transfer target can also be selected from the table. Select the target IP address and click the [<-] button. The IP address is set in the [IP Address] field.

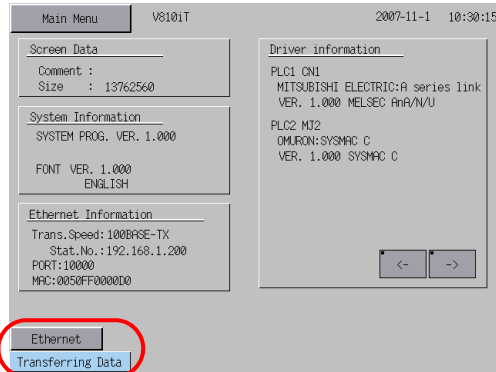
7. When settings are completed, click [OK]. The former [Transfer] dialog is displayed again.  
8. Click the [PC<-] button. Data transfer is started.



9. During data transfer, the following dialog is displayed.



On MONITOUCH, the screen is changed to the Main Menu screen shown below.



10. When the data transfer is completed, the display indicating that the data transfer is in process disappears.

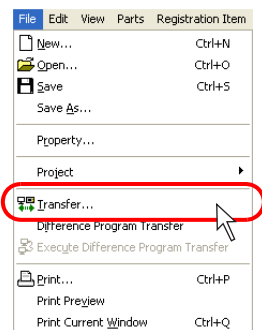
Data transfer has been completed.

## Data Comparison between Editor and MONITOUCH

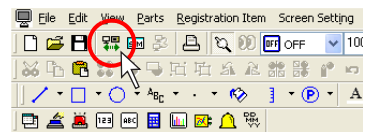
Screen data can be compared between MONITOUCH and the computer.

Data comparison is useful to check if there are any differences between the data transferred from MONITOUCH and the original existed in MONITOUCH.

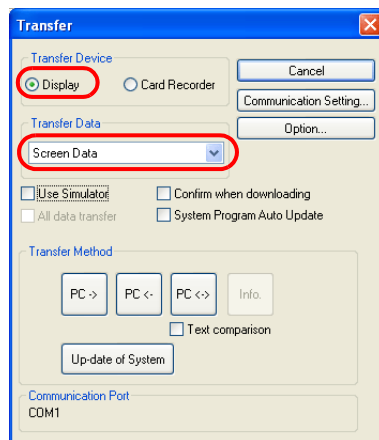
1. Connect the LAN port of MONITOUCH (or LAN port of CU-03-3) and the computer using a LAN cable.  
Check the setting, such as connecting status or IP address setting, on the Main Menu screen.
2. Start up the editor and open the screen data file to be compared.  
(The native data file transferred from MONITOUCH is acceptable.)
3. Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



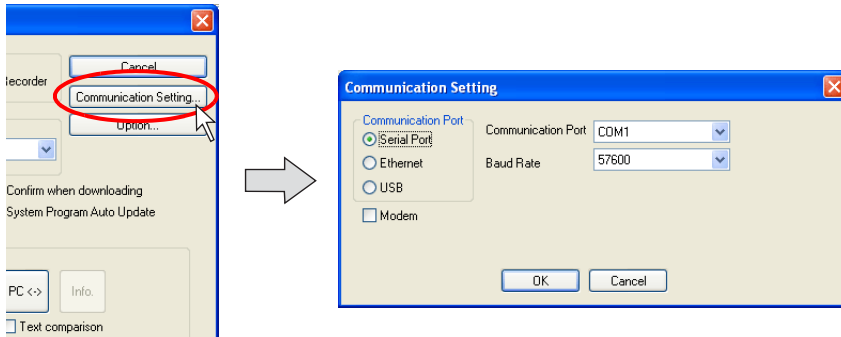
OR



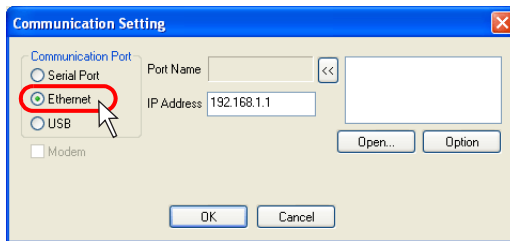
4. The [Transfer] dialog is displayed.  
Select [Display] for [Transfer Device], and [Screen Data] for [Transfer Data].



5. Click the [Communication Setting] button.  
The [Communication Setting] dialog is displayed.

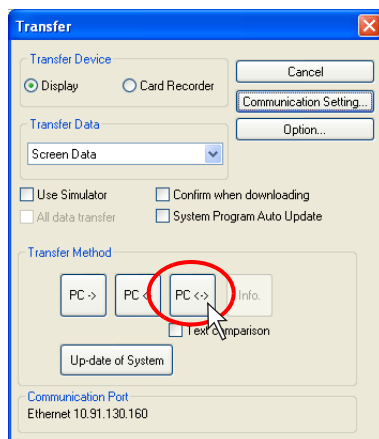


6. Select [Ethernet] for [Communication Port].



Specify the IP address of MONITOUCH for [IP Address].

7. When settings are completed, click [OK]. The former [Transfer] dialog is displayed again.
8. Click the [PC <->] button. Data comparison is started.



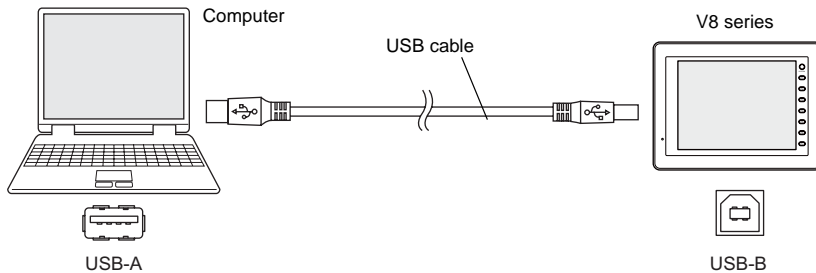
Follow the same procedure as the case using V-CP.  
For more information, refer to page 6-16.



## USB

### System Configuration

The data is transferred in the following system configuration via USB.



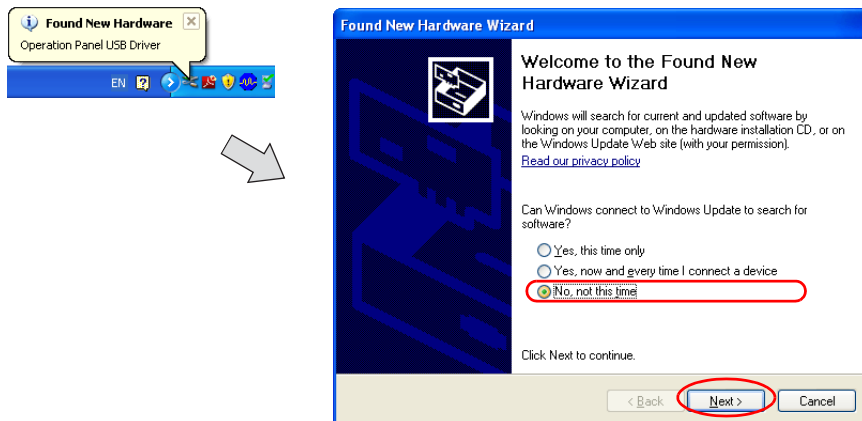
### Before Transfer via USB

#### Installing the USB driver

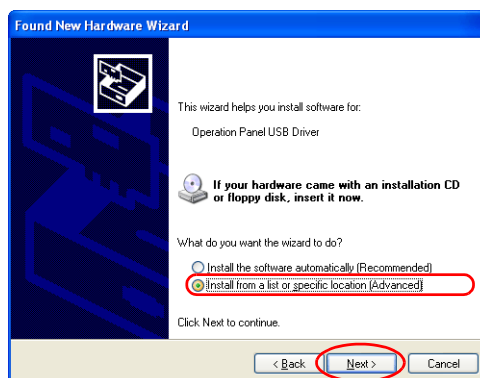
As an example, the installation procedure on Windows XP is described below.

\* **When using USB on Windows 98, use Windows 98 Second Edition or later version.**

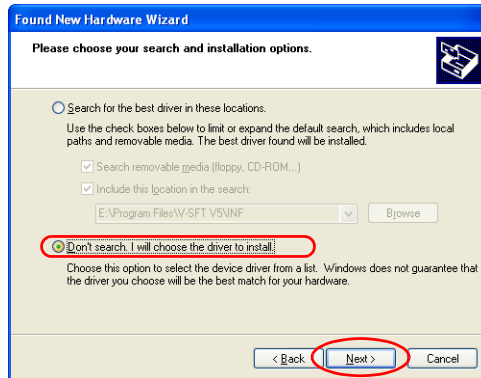
1. Connect the USB-B port of MONITOUCH (with the power on) to the computer (with the power on) using a USB cable.
2. The message "Found New Hardware" and then the driver installation wizard appear on the computer. Select [No, not this time] and click the [Next] button.



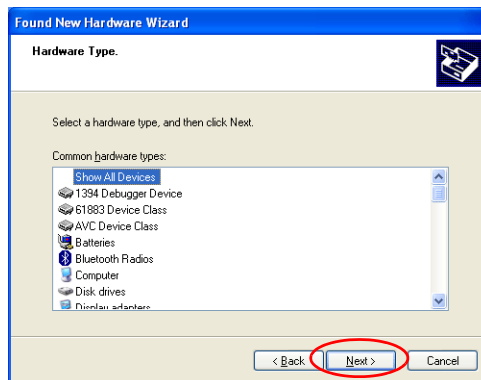
3. The following dialog is displayed. Select [Install from a list or specific location (Advanced)] and click [Next].



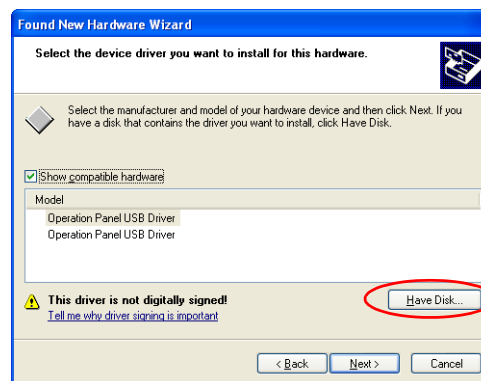
4. Select [Don't search. I will choose the driver to install] in the following dialog, and click [Next].



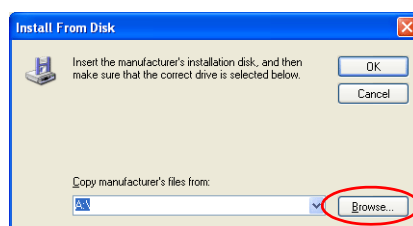
5. The dialog below is displayed. Click the [Next] button.



6. The following dialog is displayed. Click [Have Disk].



7. The [Install From Disk] dialog is displayed. Click [Browse].

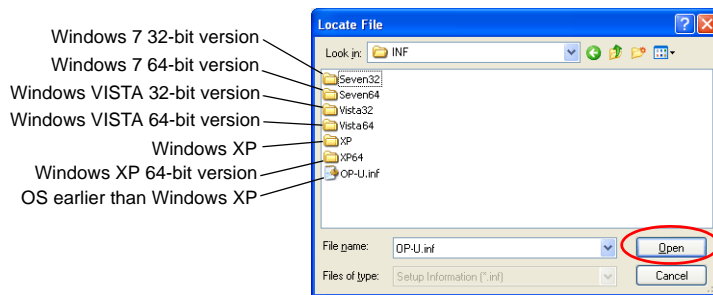


8. The USB driver “OP-U.inf” is automatically stored in the installation folder within the V-SFT-5 editor (“INF” folder in the V-SFT V5 as an example).

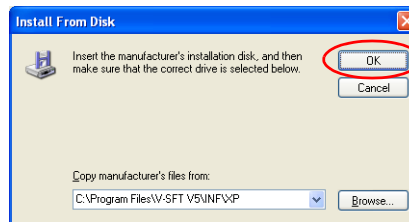


The USB driver to be installed varies, depending on the OS installed on your computer. Be sure that the driver is correct.

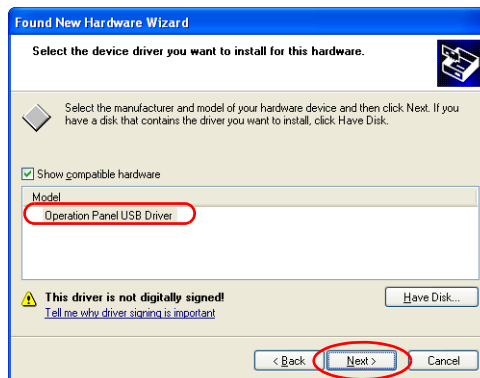
Select the “OP-U.inf” file and click the [Open] button.



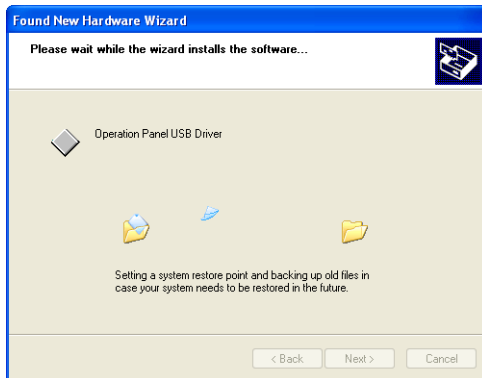
9. The previous dialog is displayed again. Check the path shown under [Copy manufacturer's files from:] and click [OK].



10. The following dialog is displayed. Check that [Operation Panel USB Driver] is shown under [Models:]. Click [Next].



11. The driver installation is started.

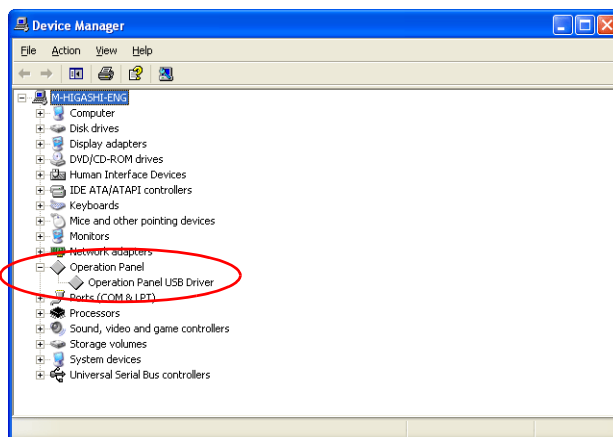


12. The dialog shown below is displayed on completion of installation. Click [Finish].



### USB driver recognition

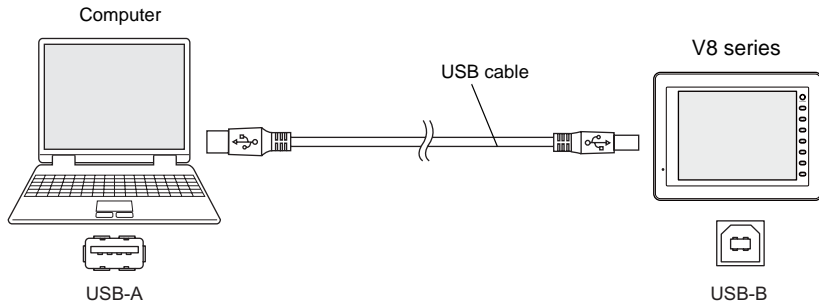
When the driver has been installed successfully, the [Device Manager] window shows “Operation Panel - Operation Panel USB Driver.”



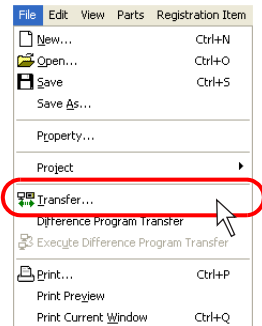
This option disappears when MONITOUCH is disconnected from the computer. If [Other Device] or [?] is shown even while the connection via USB is maintained, the USB driver is not recognized. If this occurs, uninstall the USB driver once and reinstall it.

## Transfer Procedure from the Editor to MONITOUCH

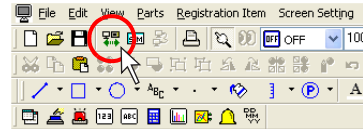
1. Connect MONITOUCH (USB-B) and the computer using a USB cable.



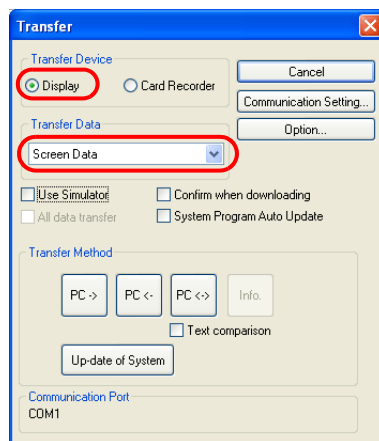
2. Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



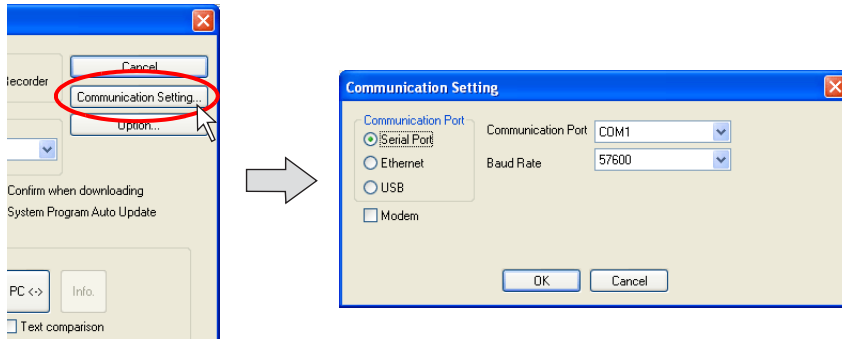
OR



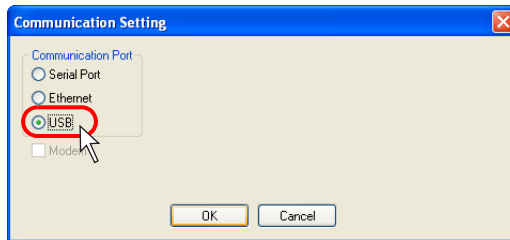
3. The [Transfer] dialog is displayed.  
Select [Display] for [Transfer Device], and [Screen Data] for [Transfer Data].  
Leave  Use Simulator unchecked at this time.  
(When using Simulator, check this box.)



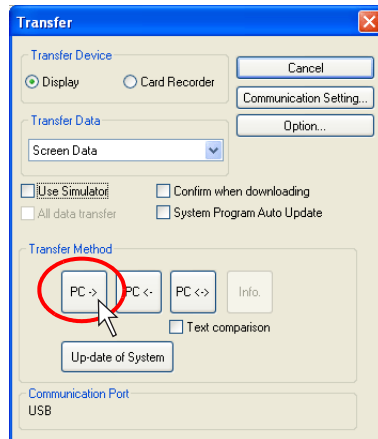
4. Click the [Communication Setting] button.  
The [Communication Setting] dialog is displayed.



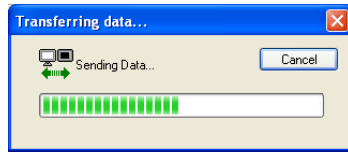
5. Select [USB] for [Communication Port].



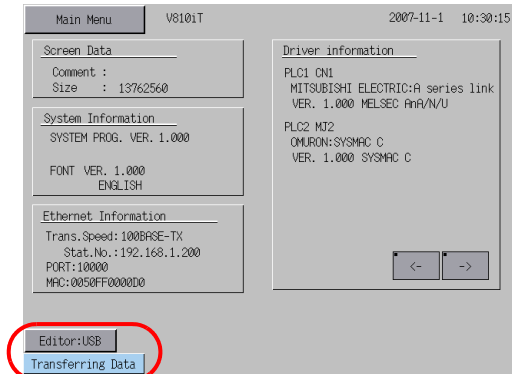
6. When completing the setting, click [OK]. The former [Transfer] dialog is displayed again.
7. Click the [PC ->] button. Data transfer is started.



8. During data transfer, the following dialog is displayed.



On MONITOUCH, the screen is changed to the Main Menu screen shown below.



9. When the data transfer is completed, the display indicating that the data transfer is in process disappears.

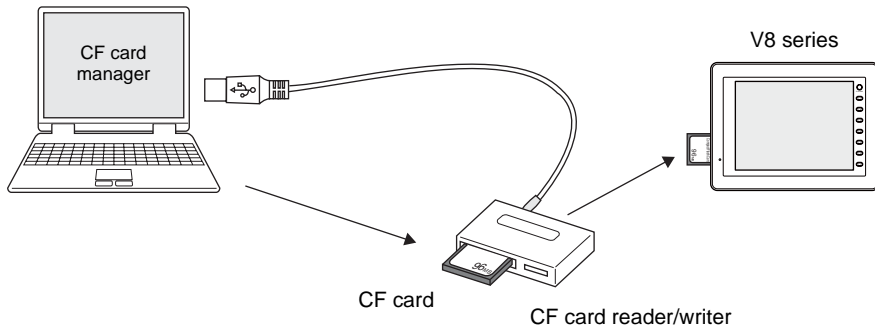
Data transfer has been completed.

(Data can be transferred from or compared with MONITOUCH by following the same procedures as for V-CP.)

## 6.5 Transfer Procedure (Using a Card) CF Card

### System Configuration

Data is transferred in the following system configuration using a CF card.



### Transfer Procedure from the CF card to MONITOUCH

When a memory card is used, data is transferred following the procedure described below.

1. Transfer from the editor to the CF card (CF card manager)
2. Transfer from the CF card to MONITOUCH

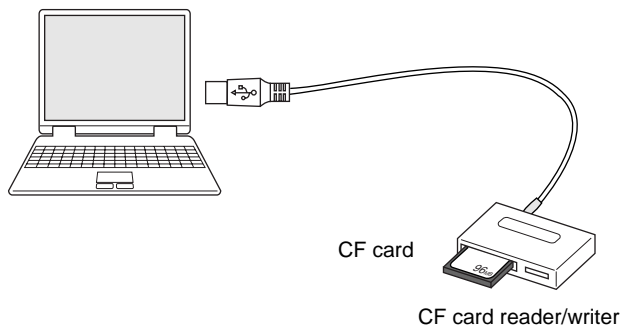


Conversely, to transfer the data from the CF card to MONITOUCH, follow the two steps described below.

1. Transfer from the CF card to MONITOUCH
2. Transfer from the editor to the CF card (CF card manager)

#### 1. Transfer procedure from the editor to the CF card (CF card manager)

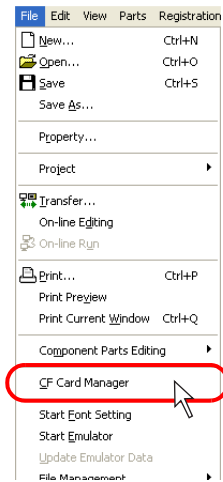
- 1) Insert (or connect) the CF card into the computer.



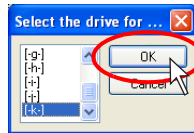
Check the drive allocation for the CF card in advance.  
(In the example, "F" is allocated to the CF card drive.)



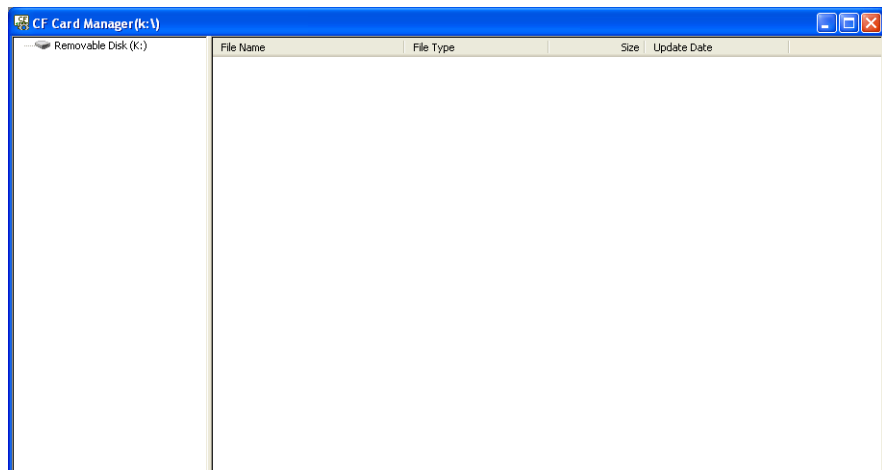
- 2) Click [CF Card Manager] selected from the [File] menu.



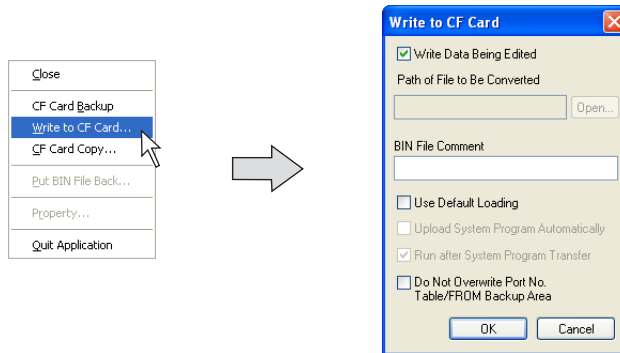
- 3) The dialog for specifying the drive is displayed.  
Specify the drive that you have checked in step 1. (e.g. K drive), click [OK].



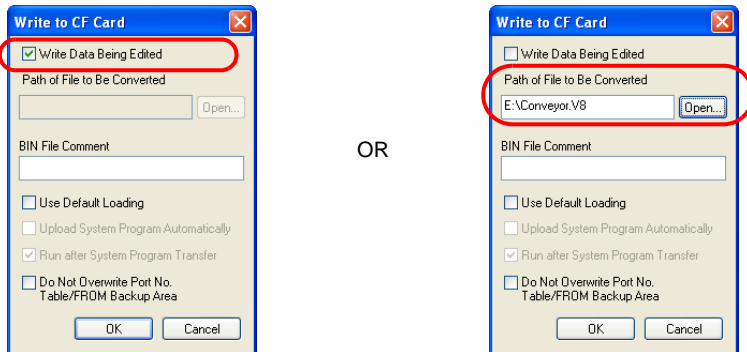
- 4) The [CF Card Manager] window is displayed.



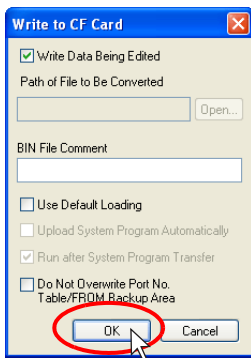
- 5) Click [Write to CF Card] selected from the [File] menu.  
The [Write to CF Card] dialog is displayed.



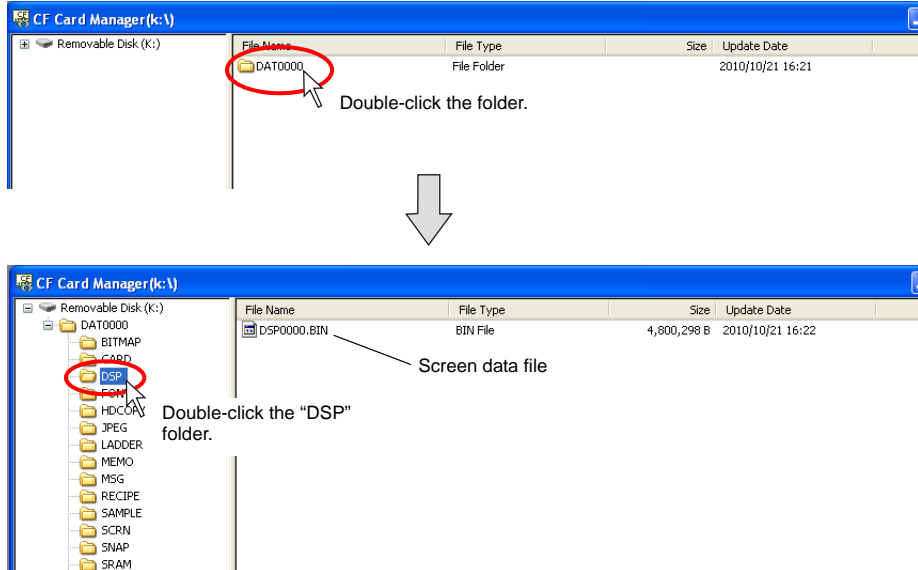
- 6) When transferring the data currently opened, check [ Write Data Being Edited].  
When selecting the screen data file as desired, uncheck [ Write Data Being Edited], and click the [Open] button for [Path of File to Be Converted].



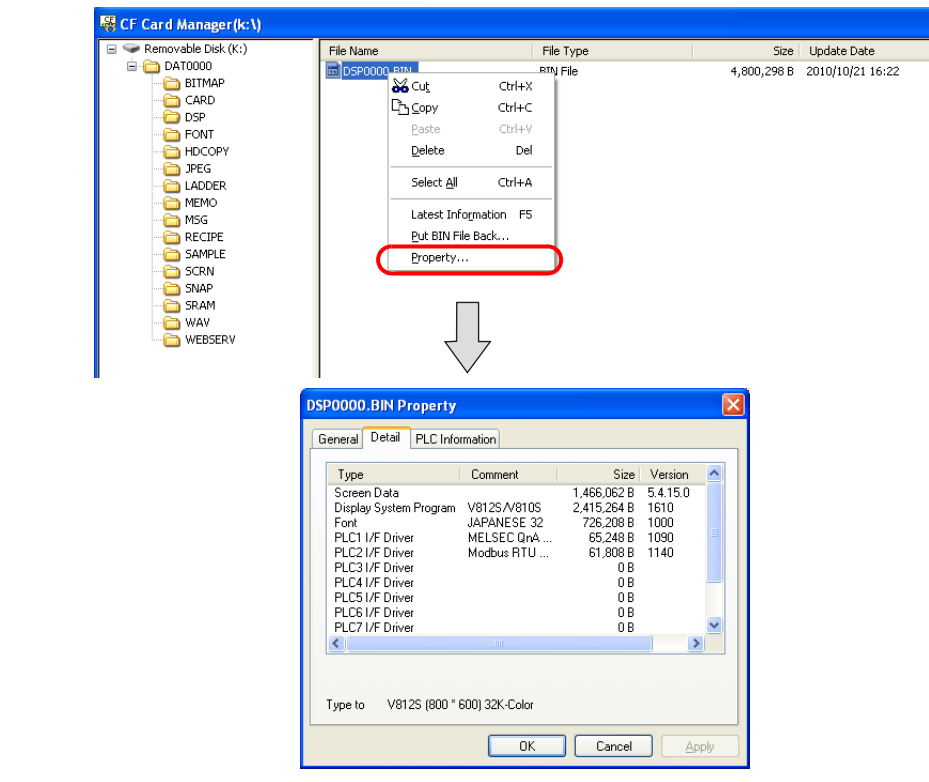
- 7) Click [OK].  
The data is written to the CF card.



- 8) When writing is completed, the access folder is automatically created in the CF card. In the "DSP" folder created in the access folder, you can find that the [DSP0000.BIN] file is newly created. This "DSP0000.BIN" file is the screen data file.

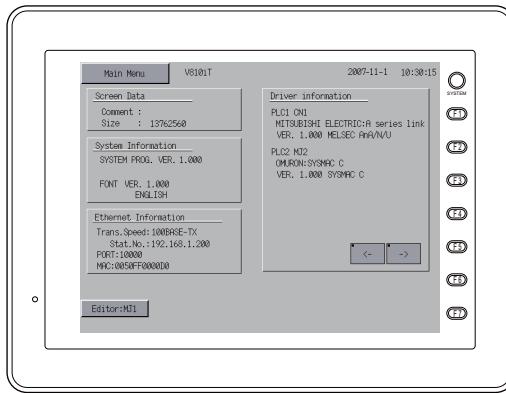


- Select the BIN file and click [Property] from the right-click menu. Then you can check the details of the file.



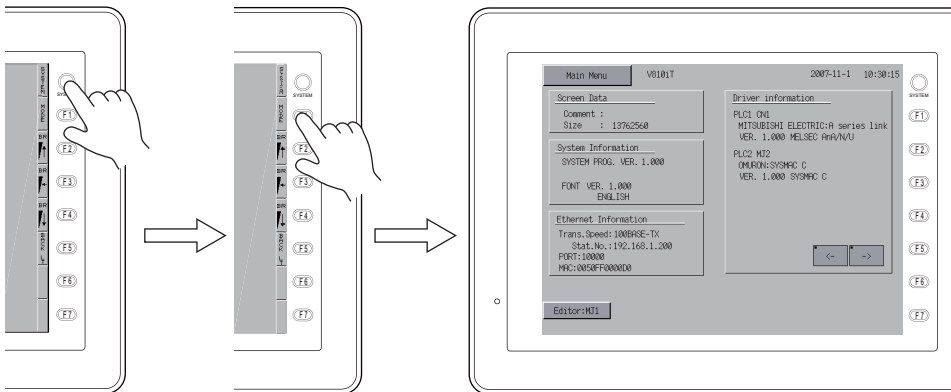
## 2. Transfer Procedure from the CF Card to MONITOUCH

- 1) Display the Main Menu screen on MONITOUCH.



To display the Main Menu screen:

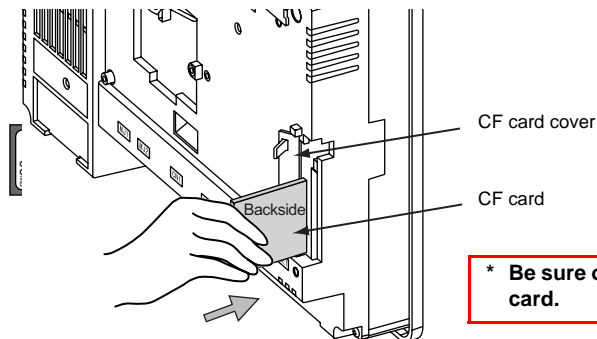
Press the [SYSTEM] switch. When the menu is displayed, press the [F1] switch. Then the Main Menu screen is displayed.



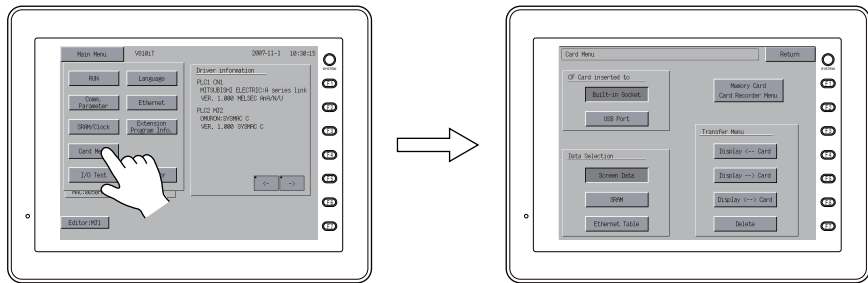
If the screen is not changed by pressing the [SYSTEM] or [F1] switch, the switch may be prohibited or set to become active when the switch is held down for a certain time.

For more information, refer to the description regarding the function switch in the V8 Series Hardware Specifications.

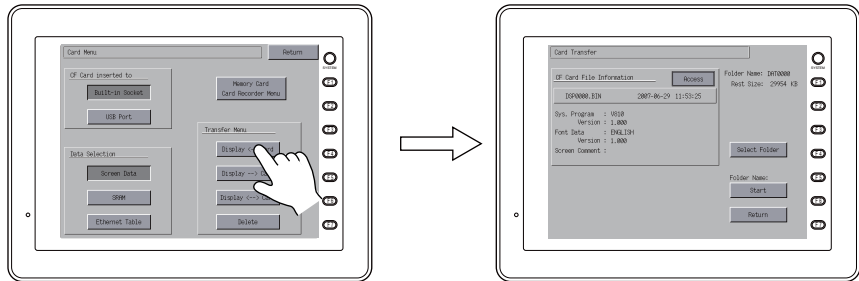
- 2) Insert the CF card that contains the screen data into MONITOUCH.



- 3) On MONITOUCH, press the [Main Menu] switch → [Card Menu] switch.  
The Card Menu screen is displayed.

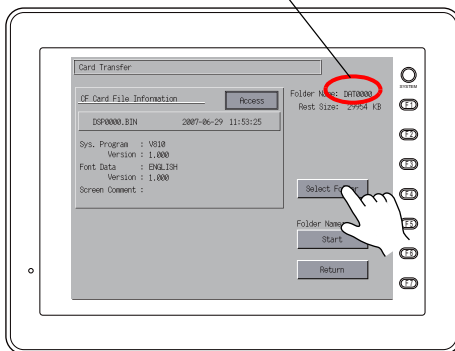


- 4) Select [Screen Data] under [Data Selection] and an option as desired under [CF Card inserted to].  
Press the [Display <--- Card] switch.  
The [CF Card File Information] window is displayed.



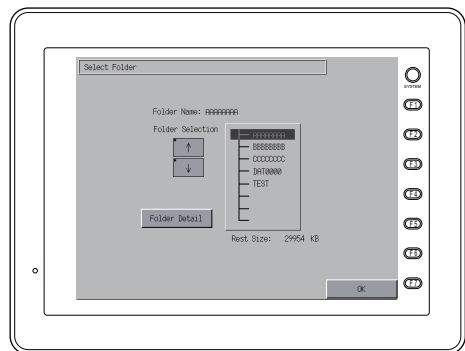
- 5) When the name of the access folder created in the CF card is shown as [Folder Name], go to the next step (step 6).  
When a different name is displayed as [Folder Name], press the [Select Folder] switch and select the appropriate folder.

When the target folder name is not displayed:

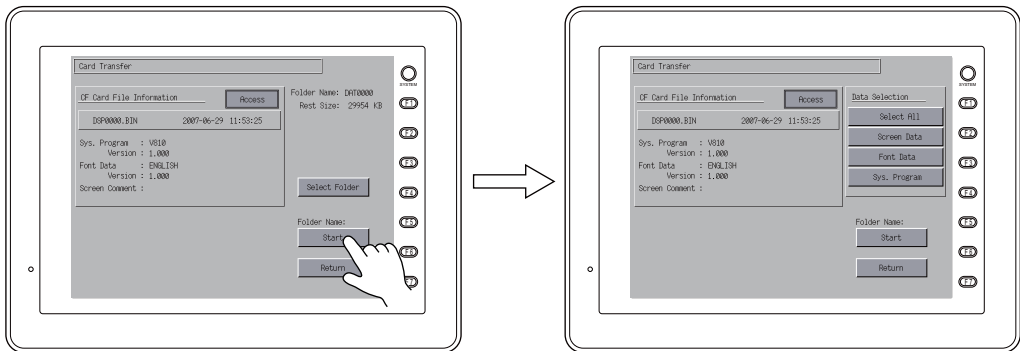


Press the [Select Folder] switch.

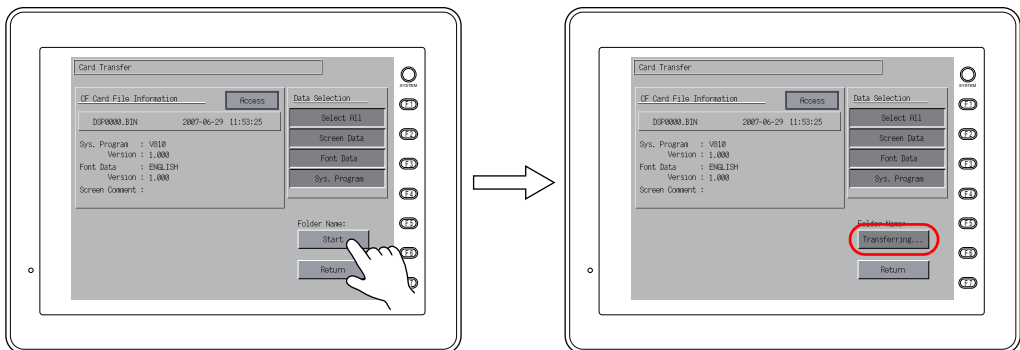
Select the target folder.



- 6) Press the [Select Data] switch. The [Data Selection] dialog is displayed. The switch name changes from [Select Data] to [Start].

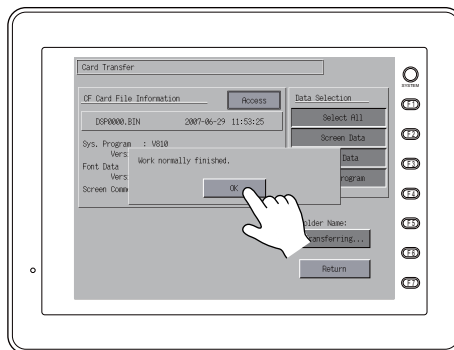


- 7) Select the data to be transferred. In this example, press the [Select All] switch so that all data will be transferred. Press the [Start] switch. The switch name changes from [Start] to [Transferring].



- 8) When the data has been transferred successfully, the Main Menu screen is displayed again.

When [Select All] or [Sys. Program] is selected as the data to be transferred, the Main Menu screen is displayed on completion of transfer. Otherwise, the following window is displayed when data transfer is completed.



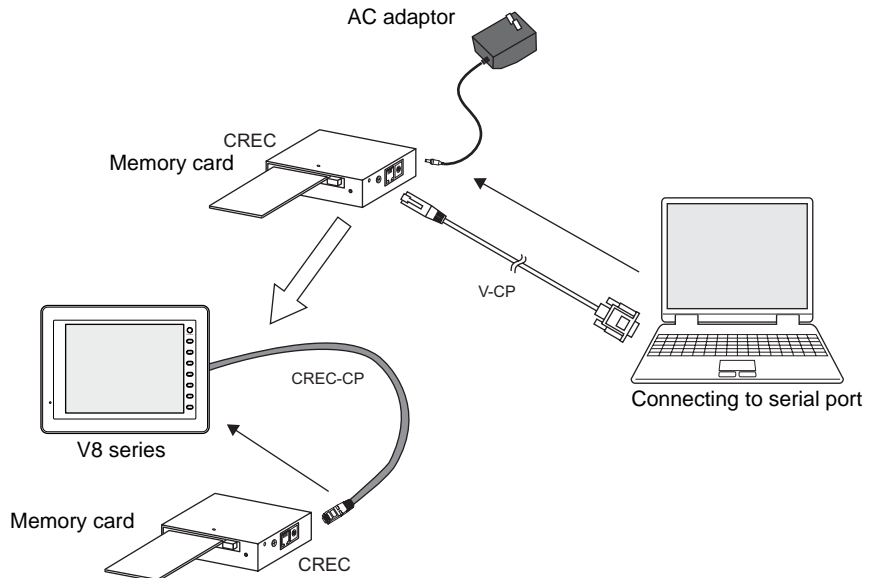
Press the [OK] switch. The Card Transfer screen will appear. Return to the Main Menu screen using the [Return] switch.

Data transfer has been completed.

## Memory Card

### System Configuration

Data is transferred in the following system configuration using a memory card.



### Transfer Procedure from Memory Card to MONITOUCH

When a memory card is used, data is transferred by following the procedure described below.

1. Transfer from the editor to the memory card
2. Transfer from the memory card to MONITOUCH

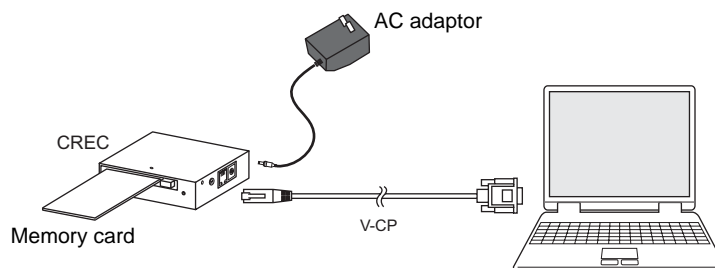


Conversely, to transfer data from the memory card to MONITOUCH, follow the two steps described below.

1. Transfer from the memory card to MONITOUCH
2. Transfer from the editor to the memory card

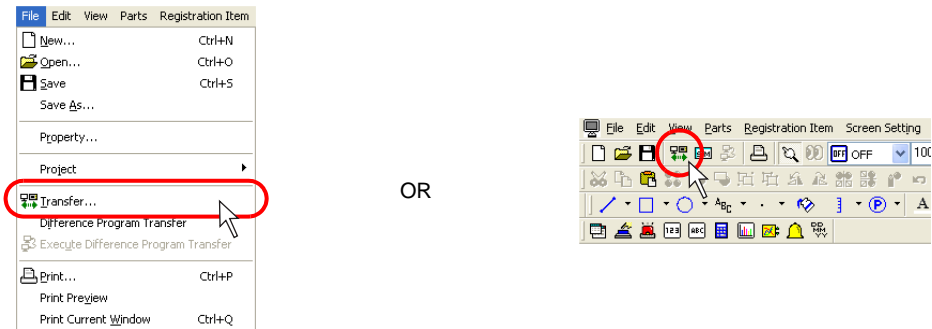
#### 1. Transfer procedure from the editor to the memory card

- 1) Connect the computer and CREC (card recorder), and insert the memory card into CREC.

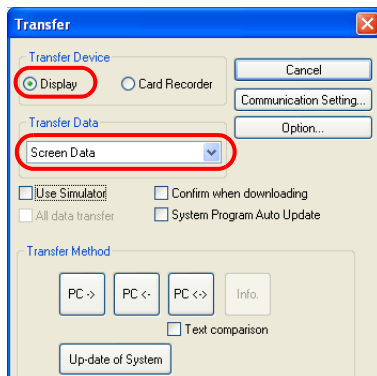


Connect the AC adaptor (included as an accessory) to CREC.

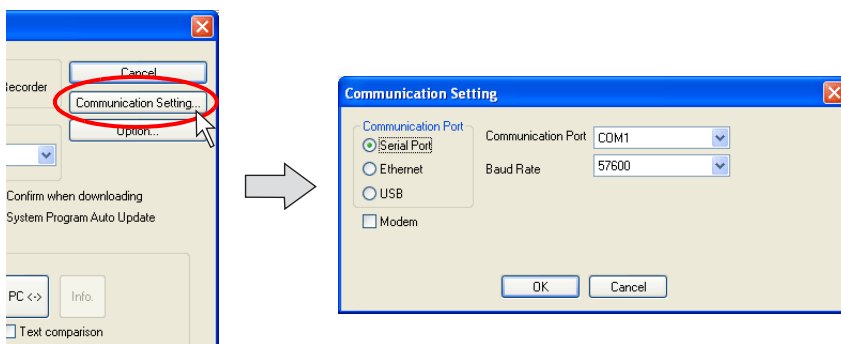
- 2) Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.



- 3) The [Transfer] dialog is displayed.  
Select [Card Recorder] for [Transfer Device], and [Screen Data] for [Transfer Data].  
(To transfer all data, check [All data transfer]. In this example, the screen data is transferred alone.)

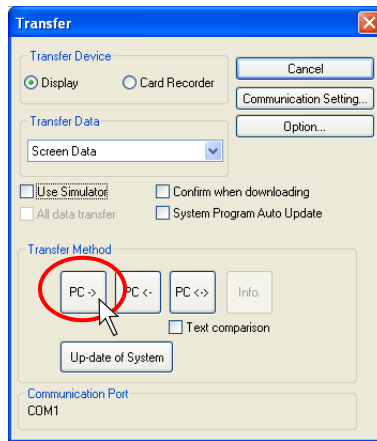


- 4) Click the [Communication Setting] button.  
The [Communication Setting] dialog is displayed.

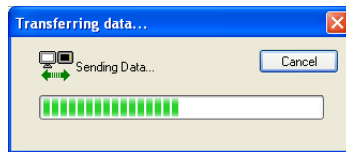




- When checking the setting for [Communication Port] and [Baud Rate], click [OK]. The former [Transfer] dialog is displayed again. Click the [PC ->] button. Data transfer is started.



- During data transfer, the following dialog is displayed.

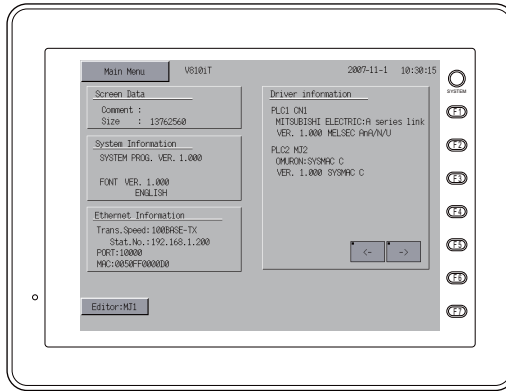


- When the data transfer is completed, the display indicating that the data transfer is in process disappears.

Data transfer has been completed.

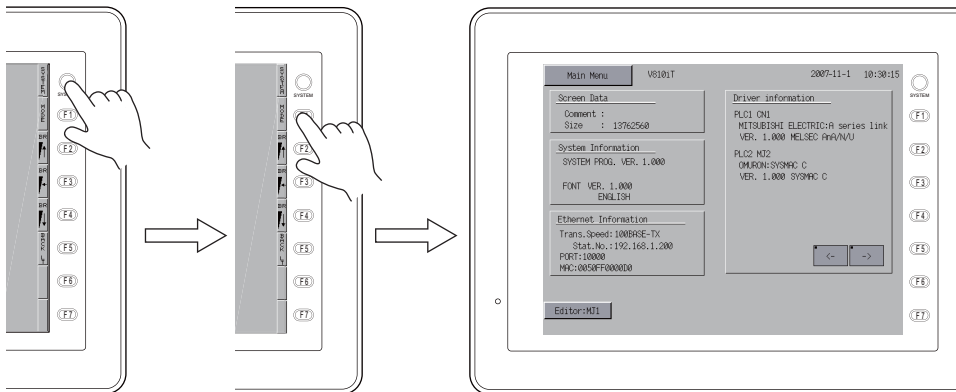
## 2. Transfer procedure from memory card to MONITOUCH

- 1) Display the Main Menu screen on MONITOUCH.



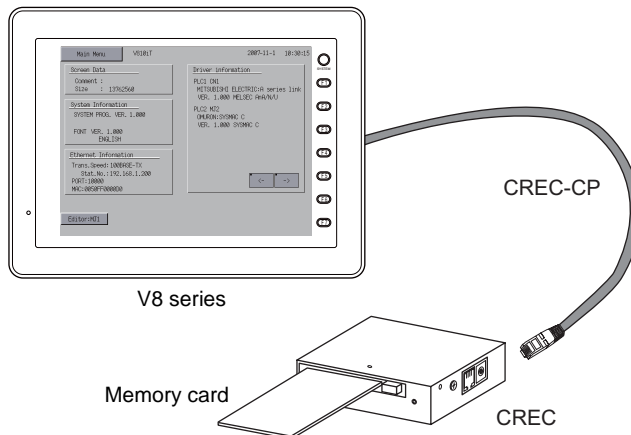
To display the Main Menu screen:

Press the [SYSTEM] switch. When the menu is displayed, press the [F1] switch. Then the Main Menu screen is displayed.

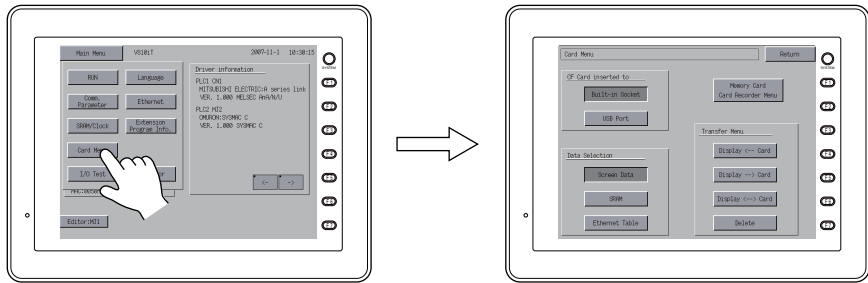


If the screen is not changed by pressing the [SYSTEM] or [F1] switch, the switch may be prohibited or set to become active when the switch is held down for a certain time. For more information, refer to the description regarding the function switch in the V8 Series Hardware Specifications.

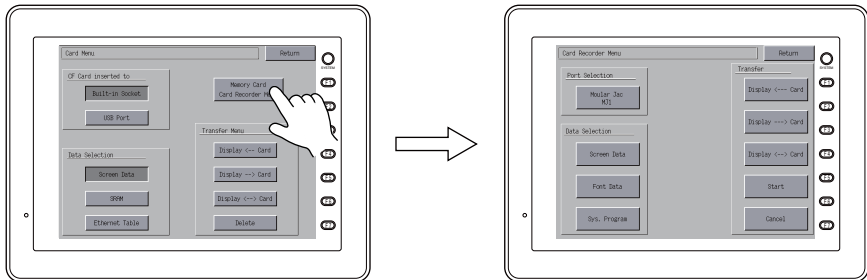
- 2) Connect CREC (card recorder) and MONITOUCH, and insert the memory card into CREC.



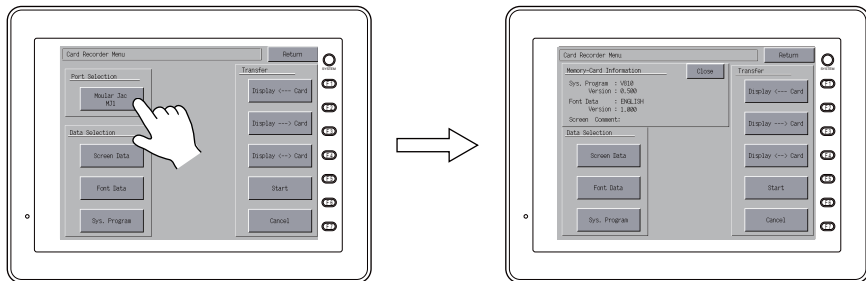
- 3) Press the [Card Menu] switch.  
The Card Menu screen is displayed.



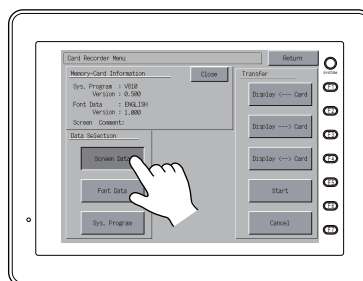
- 4) Press the [Memory Card Card Recorder Menu] switch.  
The Card Recorder Menu screen is displayed.



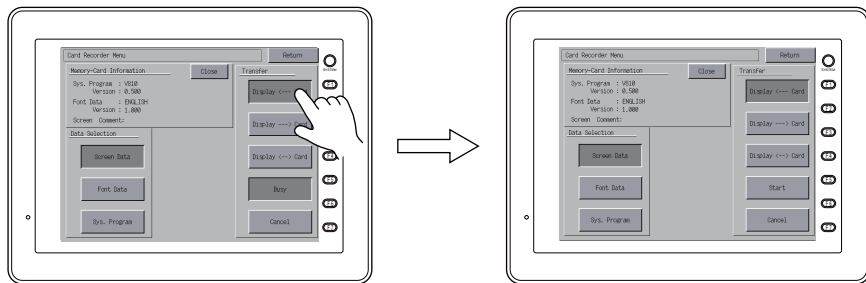
- 5) Press the [Modular Jack MJ1 (or 2)] switch in the [Port Selection] field.  
The [Memory Card Information] dialog is displayed.



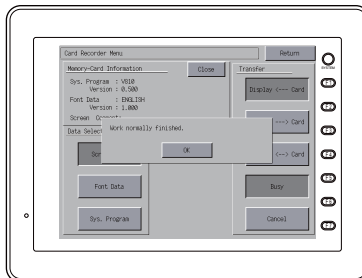
- 6) Press the [Screen Data] switch under [Data Selection]. (If information on the system program or font data is displayed, [Font Data] or [Sys. Program] can also be selected.)



- 7) Select [Display <--- Card] in the [Transfer] field, and press the [Start] switch. Data transfer is started. During data transfer, the [Start] switch changes into [Busy].



- 8) When the data transfer is completed, the following message is displayed. Press the [OK] switch.



😊 When the system program is transferred using the [Program] switch, the Main Menu screen is brought up on completion of data transfer.

- 9) Press the [Return] switch. The Main Menu screen is displayed again.

Data transfer has been completed.

## 6.6 Transfer Procedure (Using a Modem)

With modems, it is possible to transfer screen data to the V series in a remote place.



### Preliminaries

#### Receive (V series) side

- Modem (Accessories: RS-232C cable, modular cable, AC adaptor)
- V-CP
- RS-232C cross cable (page 6-53)
- V-SFT or communication software (HyperTerminal, etc.)

#### Send (computer) side

- Modem (Accessories: RS-232C cable, modular cable, AC adaptor)
- V-SFT

### Setting Procedure

#### Receive (V series) side

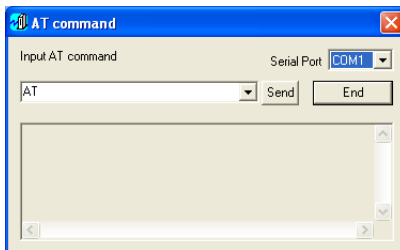
1. Connect the modem on the receive (V series) side to a computer according to the instruction manual.
2. Transfer AT commands to the modem.
3. Disconnect the modem from the computer, and connect the modem to the V series. (Refer to page 6-53.)
4. Set a baud rate used between the V series and the modem. (Refer to page 6-52.)

#### Send (computer) side

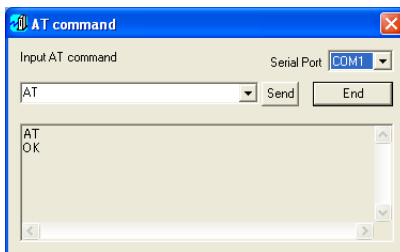
1. Connect the modem on the send (computer) side to a computer according to the instruction manual.
2. Start up V-SFT. Transfer AT commands to the modem. (Refer to page 6-50.)
3. Make settings for communications between the computer and the modem. (Refer to page 6-54.)
4. Transfer the V-series screen data. (\* On-line editing is not allowed.)

## AT Command Setting

1. Double-click "SendAT.exe" existing in the folder where the V-SFT version 5 software is installed (e.g. C:\ProgramFiles\V-SFTV5).
2. The [AT Command] dialog is displayed.



3. Select a serial port at [Serial Port].
4. Select [AT] from the pull-down menu and click the [Send] button.



5. [OK] is displayed when the modem and the computer are connected correctly.
6. Send the commands below.  
The setting items and the contents may vary depending on the model of the modem. Check the settings for your modem.

AT commands for the receive (V series) side

Option	Contents
Result code presence/absence	Q0 (presence)
Result code display format	V1 (word format)
Echo back	E1 (yes)
Communication standard selection	B0 (ITU-T standard)
ER signal control	&D0 (ER signal normally ON)
Flow control*1	&K0 (No flow control)
Number of calls until arrival	S0 = 1 (except for "0")
Writing to non-volatile memory*2	&W0 The current operation status to be written to "STORE PROFILE 0"

\*1 Do not use the XON/XOFF flow control.

\*2 This command is required when you turn off the modem power after AT command setting.

## AT commands for the send (computer) side

Option	Contents
Result code presence/absence	Q0 (presence)
Result code display format	V1 (word format)
Echo back	E1 (yes)
Communication standard selection	B0 (ITU-T standard)
ER signal control	&D2 (Line to be disconnected at ER ON → OFF)
Flow control <sup>*1</sup>	& K0
Writing to non-volatile memory <sup>*2</sup>	&W0 The current operation status to be written to "STORE PROFILE 0"

\*1 Do not use the XON/XOFF flow control.

\*2 This command is required when you turn off the modem power after AT command setting.

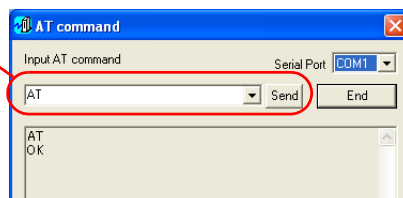
If the settings for your modem are the same as the above, select the commands below from the pull-down menu and send the AT commands.

Receive (V series) side	AT B0 E1 Q0 V1 & D0 & K0 S0 = 1
Send (computer) side	AT B0 E1 Q0 V1 & D2 & K0

[OK] appears when the commands have been transferred correctly.

- Turning the modem power off deletes the transferred commands. Therefore, select [AT&W0] from the pull-down menu and send it.  
[OK] appears when the commands have been transferred correctly.
- If the settings for your modem differ from above, delete the written AT commands and directly enter the AT commands described in your modem's manual.

Enter the AT command directly into this field.



The AT command setting has been completed.

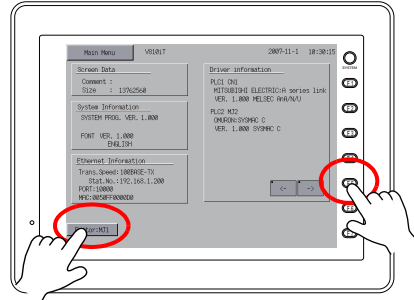


If the V-SFT software is not available on the receive side, follow the steps below using communication software such as HyperTerminal.)

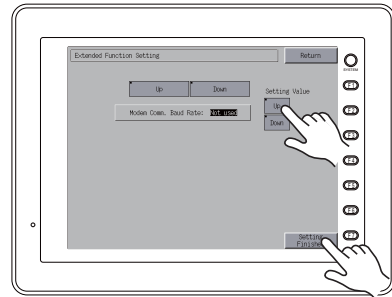
## Setting on the V Series

Set a baud rate used between the V series and the modem.

1. Press the [Editor: MJ1] switch and the [F5] switch at the same time on the Main Menu screen of the V series. The Extended Function Setting screen is displayed.



2. Select the baud rate for [Modem Comm. Baud Rate] using the arrow switch [↑]/[↓]. Press the [Setting Finished] switch to finish the selection. (Selectable options: 4800, 9600, 19200, 38400, 57600, 115200)

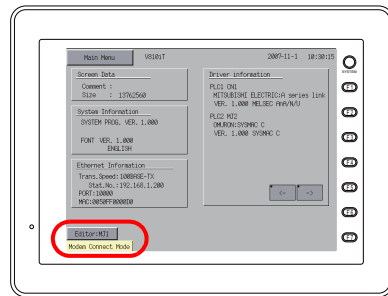


After the [Setting Finished] switch is pressed, the switches and function switches on the Main Menu screen will not work for 15 seconds.



Pressing the [Setting Finished] switch sends AT commands to the modem automatically and sets the baud rate used between the V series and the modem.

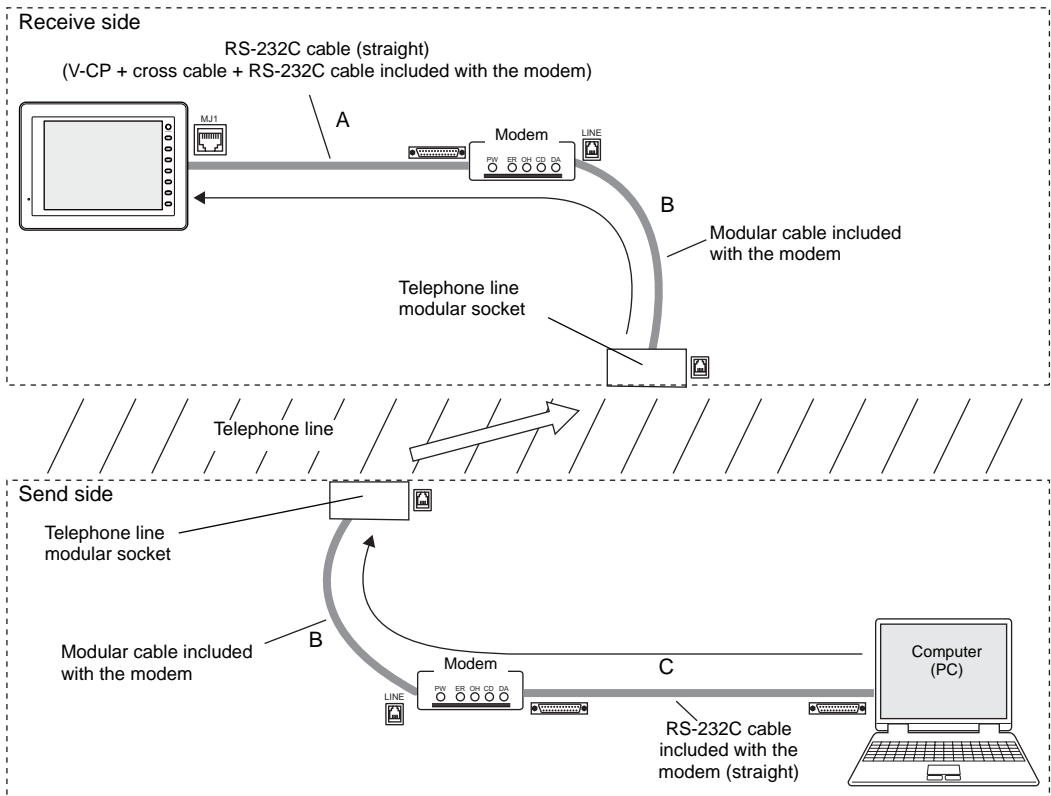
3. The Main Menu screen is redisplayed automatically. [Modem Connect Mode] automatically appears under [Editor: MJ1].



When transferring screen data from the computer to MONITOUCH connected via V-CP without modems, [Not used] is specified for [Modem Comm. Baud Rate].



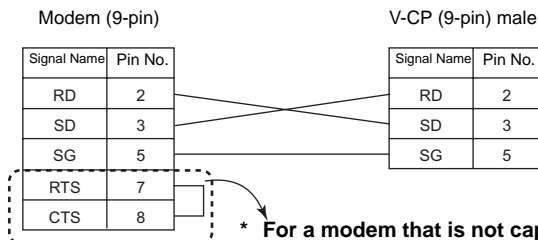
## Description of Connections



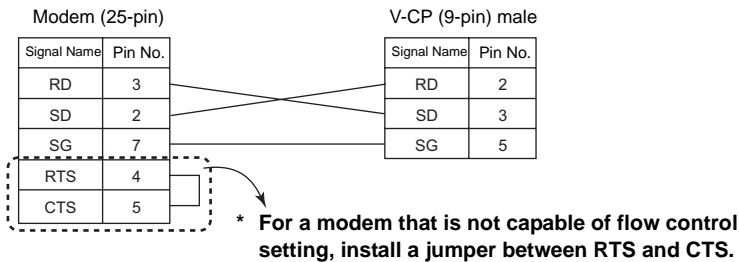
### Connection between V series and modem (A)

- Connect V-CP to the MJ1 on the back of the V series.
- Connect the RS-232C cable accompanying the modem to the RS-232C connector on the back of the modem.
- The cable to connect V-CP and the RS-232C cable accompanying the modem should be arranged for by the customer.
- Cross cable connection diagram  
The V-CP is a cross cable. To bring the signal connection to a straight state, manufacture another cross cable to be connected.

9-pin connector of the modem



25-pin connector of the modem



### Connection between modem and telephone line (B)

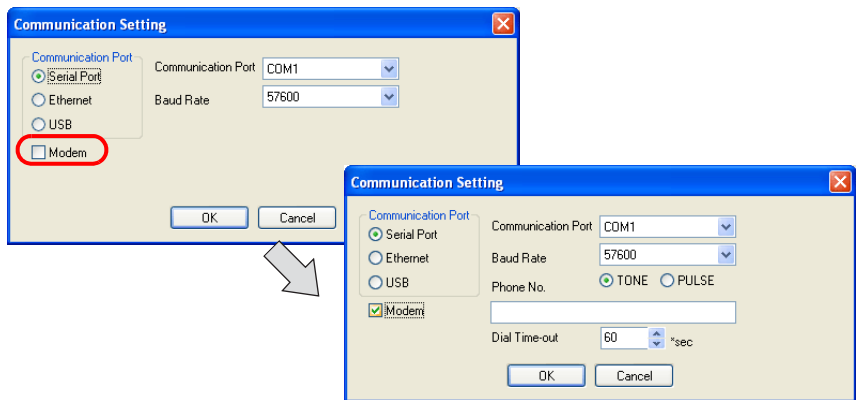
Connect the modular cable accompanying the modem between the modular jack (LINE) for telephone line on the back of the modem and the telephone line modular socket. If the distance between the modem and the telephone line is as long as tens of meters, data transfer failure may occur.

### Connection between modem and computer (C)

Connect the RS-232C cable accompanying the modem between the RS-232C connectors on the back of the modem and on the computer.

## Screen Data Transfer

1. Start up V-SFT and open the screen data file to be transferred.
2. Click the [Transfer] icon on the toolbar or click [Transfer] from the [File] menu. The [Transfer] dialog is displayed.
3. Click [Communication Setting]. The [Communication Setting] dialog is displayed.
4. Check the  Modem box. The following setting options for the modem is displayed.



Communication Port (COM1 to COM256)	Select a serial port.
Baud Rate (9600/19200/38400/57600)	Select a data transfer rate between the computer and the modem.
TONE/PULSE	Select [TONE] (pushbutton) or [PULSE] (dial) according to the telephone line type in use.
Telephone No.	Specify the telephone number of the receiver.
Dial Time-out (sec)	Set a timeout period until a normal response is given from the receiver. The default is 60 seconds.

5. When the setting is concluded, click [OK]. The [Transfer] dialog is displayed again.
6. Click [PC ->] for [Transfer Method]. Screen data transfer is started.



When screen data transfer with a modem is executed while the Main Menu screen is displayed, a message "Transferring Data" appears at the bottom left of the screen. The message disappears on completion of transfer.

For about 15 seconds after the message disappears, the switches and the function switches on the Main Menu screen do not work.

## Transfer Error Messages Displayed on V-SFT

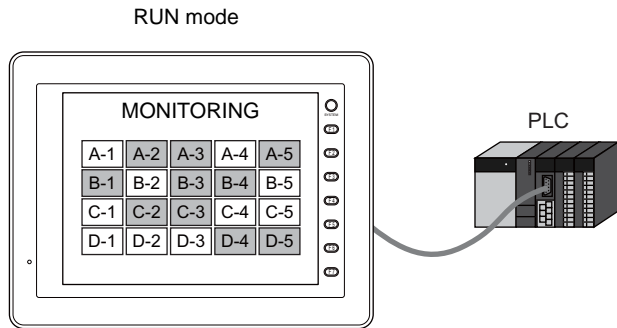
The following error messages are displayed on the editor.

Error Message	Symptom and Solution
No response from target.	Check the connection with the other end for power-on/-off or cable disconnection.  Timeout may occur before a response is returned. Extend the timeout period.
The circuit is cut.	The telephone line is disconnected on the other end.
Command error	A command that is not applicable to the target modem is transferred.
The target line is busy.	The target line is busy.
The telephone number is not specified.	Set the telephone number.
Cannot detect dial tone.	The response "NO DIALTONE" is returned.

## 6.7 After Transfer (Communication with PLC)

### Connection with PLC

- To establish communication between MONITOUCH and a PLC, it is necessary to connect them using a communication cable.  
When establishing 1:1 connection with a PLC, normally use the CN1 port (D-sub 25-pin) on MONITOUCH.



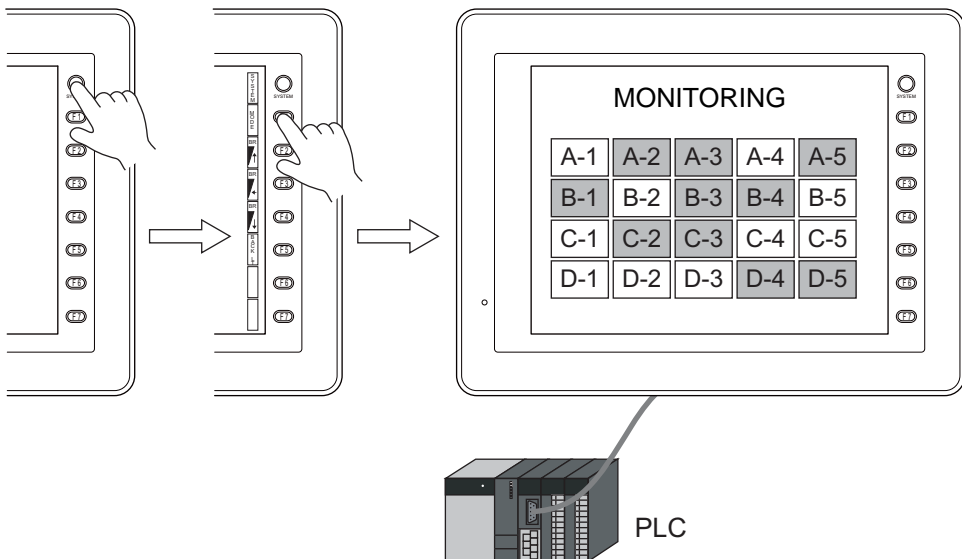
- For more information on wiring or the setting for connection, refer to the V8 Series Connection Manual.

## Preliminaries on MONITOUCH

### Switching to RUN (= Communicating) Mode

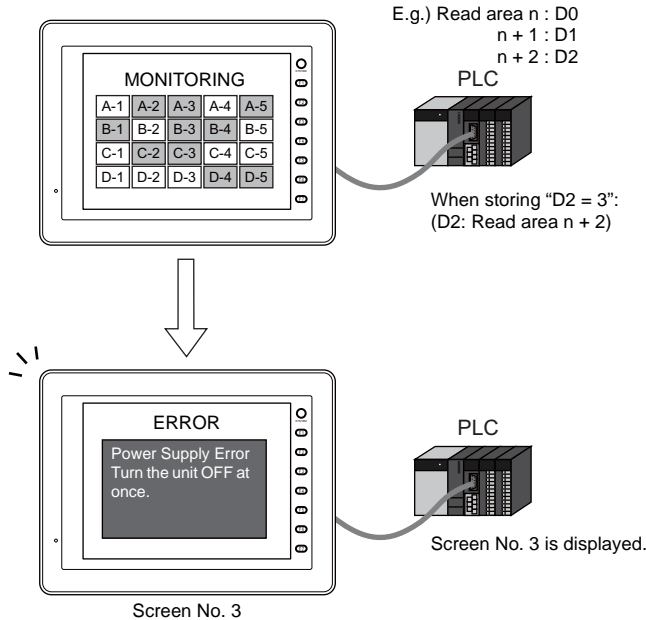
When the Main Menu screen is displayed during screen data transfer, it is necessary to restore the RUN state.

Press the [SYSTEM] function switch. When the menu is displayed, press the [F1] switch. Then, MONITOUCH is switched to the RUN state.



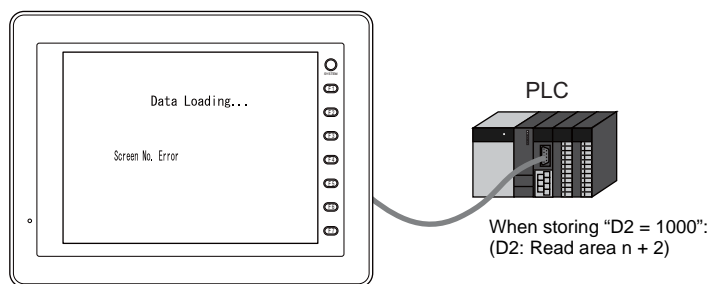
## Display Contents after Communication

- When MONITOUCH starts communication with the PLC, it displays the screen specified in the read area address "n + 2".



When reviewing the value set for [Read Area], go to [System Setting] → [Device Connection Setting] → [Read/Write Area].  
For more information, refer to "Chapter 1 System Setting" in the V8 Series Reference Manual.

- If a value not existing in the screen data file is set in [Read Area] "n + 2", the following error message is displayed.



The message shown above is displayed when screen No. 1000 does not exist in the screen data.

- Check and correct the value in the read area address "n + 2".

# MEMO

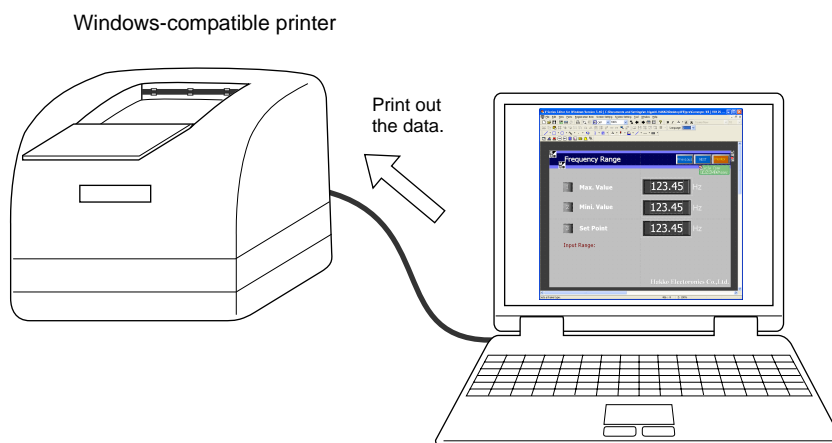


Please use this page freely.

# 7 Print

## 7.1 Overview

The screen data file currently edited can be printed out from the printer connected to the computer.



\* When printing the data from the printer connected to MONITOUCH, refer to “16. Print” in the Reference Manual separately provided.

## Available Printers

Printing can be executed from the editor using any printer that is available in the Windows environment.

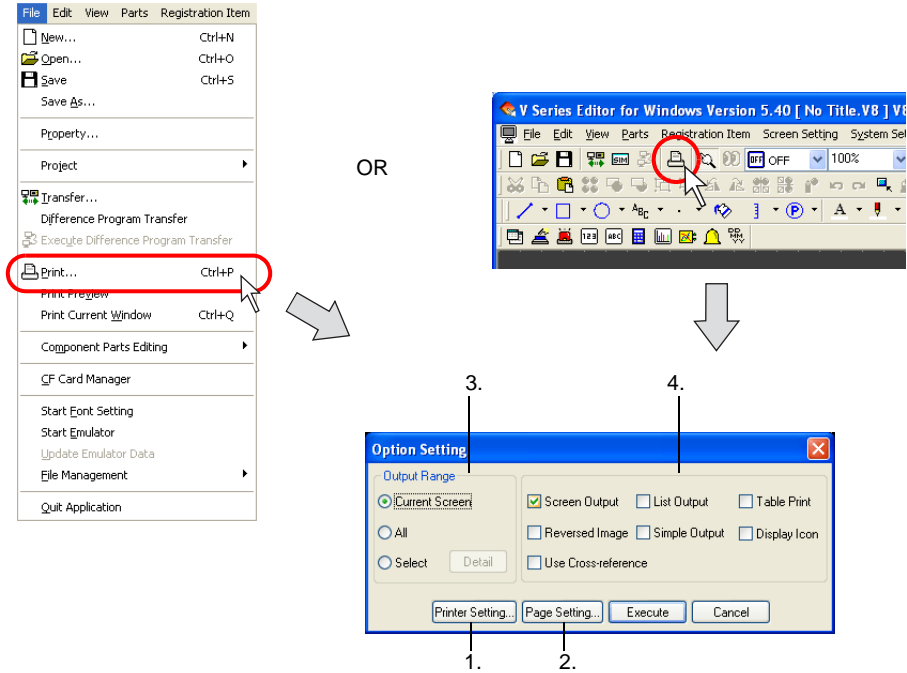
\* Note that there is a limitation on available printers to execute printing from MONITOUCH.

## Operating Procedure

1. Prepare the printer.  
Connect a printer to the computer.
2. Open the screen data.
3. Set the printing environment ([File] → [Print] → [Option Setting] dialog) (page 7-2).
  - Printer setting
  - Page setting
4. Set the print target ([File] → [Print] → [Option Setting] dialog).
  - Output range (page 7-3)
  - Print format (page 7-5)
5. Printing

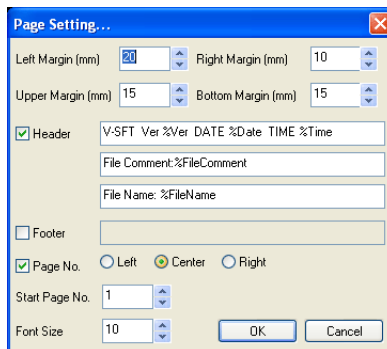
## [Option Setting] Dialog

Click [Print] from the [File] menu or click the [Print] icon on the toolbar.  
The [Option Setting] dialog is displayed.



1. Printer Setting	Makes the printer setting as same as the one on Windows, such as the printer model, paper size, and so on.
2. Page Setting	Sets the print format. For more information, refer to page 7-3.
3. Output Range	Allows you to select the range to be printed out. For more information, refer to page 7-3.
4. Print Format	Allows you to set the output format for printing. For more information, refer to page 7-5.

## [Page Setting] Dialog





Left Margin (mm)	Specify the left margin.
Right Margin (mm)	Specify the right margin.
Upper Margin (mm)	Specify the upper margin.
Bottom Margin (mm)	Specify the lower margin.
<input type="checkbox"/> Header	Specify the contents of the header. As default, the header is displayed, comprising three lines that respectively denote the date of print, the file comment, and the file name. Text is changeable as needed.
<input type="checkbox"/> Footer	Specify the contents of the footer. No footer is selected as default.
<input type="checkbox"/> Page No.	Select whether to show and where to print page numbers.
Start Page No.	With [Page No.] checked, specify the start page number.
Font Size	Specify the size of the characters to be printed.

## Output Range

### Current Screen

The window currently opened on the editor is printed out.

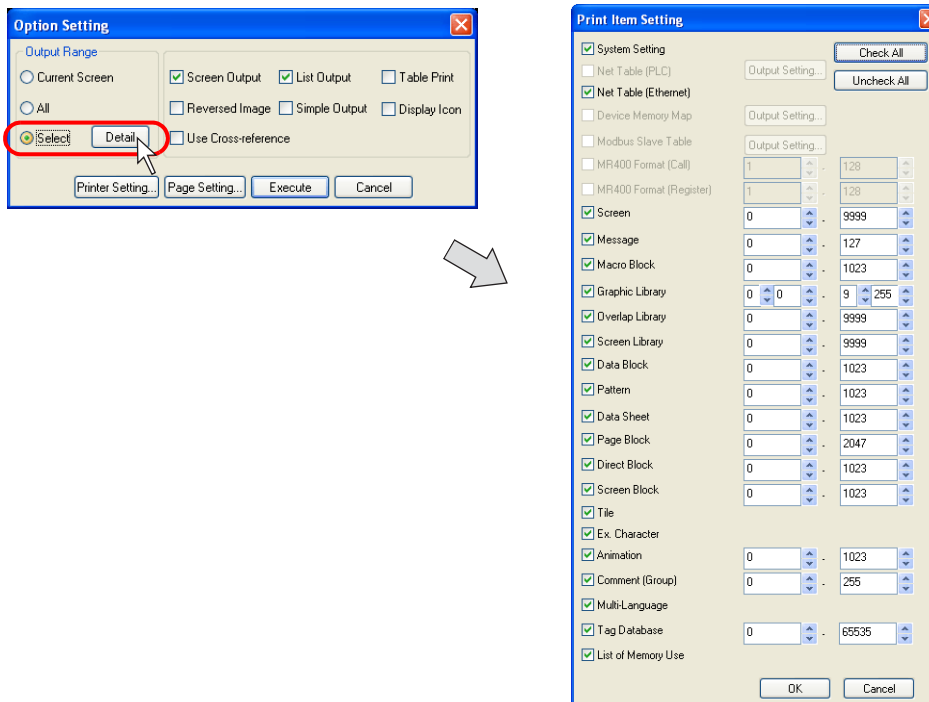
### All

All content of the screen data file is printed out.

### Select

This option is used to select the range to be printed out. By checking this option, the [Detail] button becomes active. Then, click the button.

The [Print Item Setting] dialog is displayed.



<input type="checkbox"/> System Setting	Check this option to print the system setting data.
<input type="checkbox"/> Net Table (PLC)	This option becomes active when [Mitsubishi: Net10], [Omron: SYSMACCS1/CJ1DNA] or [Omron: SYSMACCS1/CJ1 DNA (Ethernet)] is selected for the PLC model. Check this option to print the registered network table.
<input type="checkbox"/> Net Table (Ethernet)	Check this option to print the network table for Ethernet.
<input type="checkbox"/> Device Memory Map	Check this option to print the contents of the device memory map, selected through the [Output Setting] button.
<input type="checkbox"/> Modbus Slave Table (0 to 255)	This option becomes active when Modbus slave communication is used. Check this option to print out the memory table (Modbus table) used for Modbus slave communication.
<input type="checkbox"/> MR400 Format (Call) (0 to 128)	This option becomes active when Sato's barcode printer MR-400 is connected. Check this option to print the contents registered in [MR400 Format (Call)].
<input type="checkbox"/> MR400 Format (Register) (1 to 128)	This option becomes active when Sato's barcode printer MR-400 is connected. Check this option to print the contents registered in [MR400 Format (Register)].
<input type="checkbox"/> Screen (0 to 1023)	Check this option to print the screen.
<input type="checkbox"/> Message (0 to 127)	Check this option to print the contents registered in [Message] selected from the [Registration Item] menu.
<input type="checkbox"/> Macro Block (0 to 1023)	Check this option to print the contents registered in [Macro Block] selected from the [Registration Item] menu.
<input type="checkbox"/> Graphic Library (0: 0 to 9: 255)	Check this option to print the contents registered in [Graphic Library] selected from the [Registration Item] menu.
<input type="checkbox"/> Overlap Library (0 to 1023)	Check this option to print the contents registered in [Overlap Library] selected from the [Registration Item] menu.
<input type="checkbox"/> Screen Library (0 to 1023)	Check this option to print the contents registered in [Screen Library] selected from the [Registration Item] menu.
<input type="checkbox"/> Data Block (0 to 1023)	Check this option to print the contents registered in [Data Block] selected from the [Registration Item] menu.
<input type="checkbox"/> Pattern (0 to 1023)	Check this option to print the contents registered in [Pattern] selected from the [Registration Item] menu.
<input type="checkbox"/> Data Sheet (0 to 1023)	Check this option to print the contents registered in [Data Sheet] selected from the [Registration Item] menu.
<input type="checkbox"/> Page Block (0 to 1023)	Check this option to print the contents registered in [Page Block] selected from the [Registration Item] menu.
<input type="checkbox"/> Direct Block (0 to 1023)	Check this option to print the contents registered in [Direct Block] selected from the [Registration Item] menu.
<input type="checkbox"/> Screen Block (0 to 1023)	Check this option to print the contents registered in [Screen Block] selected from the [Registration Item] menu.
<input type="checkbox"/> Tile	Check this option to print the tile pattern.
<input type="checkbox"/> Ex. Character	Check this option to print external characters.
<input type="checkbox"/> Animation (0 to 1023)	Check this option to print the contents registered in [Animation] selected from the [Registration Item] menu.
<input type="checkbox"/> Comment (Group) (0 to 255)	Check when printing the contents registered in [Comment] selected from the [Registration Item] menu.
<input type="checkbox"/> Multi-Language	This option becomes active when [2] or more is specified for [Interface Languages] in the [Font Setting] menu. Check this option to print the multi-language editing window.

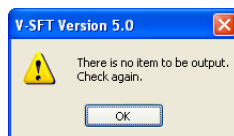
<input type="checkbox"/> List of Memory Use	Check this option to print items registered in the screen data file.
Check All	Clicking this button checks all options enabled.
Uncheck All	Clicking this button unchecks all options that have been checked.

To go back to the former [Option Setting] dialog, click [OK].

## Print Format

<input type="checkbox"/> Screen Output	Screen images are printed.
<input type="checkbox"/> List Output	Items set for the screen are printed. (For the printed image, refer to page 7-7.)
<input type="checkbox"/> Table Print	The table of screen images is printed. (For the printed image, refer to page 7-8.) When this option is checked, the <input type="checkbox"/> Screen Output and <input type="checkbox"/> List Output options are prohibited.
<input type="checkbox"/> Reverse Image	This option becomes active when <input type="checkbox"/> Screen Output is checked. The screen is printed in reverse video. Only the white and black portions are reversed.
<input type="checkbox"/> Simple Output	If the printed screen data is difficult to see, check this box. Legibility may be improved.
<input type="checkbox"/> Display Icon	Check this option when you wish to additionally print the icons of overlaps or items.
<input type="checkbox"/> Use Cross-reference	The memory addresses allocated in the screen library or overlap library are printed out together with each registered item. (For the printed image, refer to page 7-10.) This option is valid for the following items.  Message: When messages are printed out, memory addresses set for the bit order alarming are also printed. Graphic Library: When the graphic library is printed, memory addresses set for the graphic relay are also printed. Page Block/Direct Block/Screen Block: When the page block, direct block or screen block is used for the alarm sub display and is printed, the corresponding bit memories are also printed out.

- \* The print formats described above are always active for any items to be printed out. However, for the item that cannot be printed in the selected print format, the following message appears when [Execute] is clicked.



When this message is displayed, make sure that the item to be printed and the print format are correctly selected.

Click [Execute] to complete the setting. Printing is started.  
To cancel the printing, click the [Cancel] button.

## Print Preview

---

Printed image can be previewed on the editor.

### Operating Procedure

---

1. Open the screen data file.
2. Click [Print Preview] from the [File] menu.
3. Set the range to be printed out ([Option Setting] dialog).
  - Output range
  - Other settings

The setting items in [Option Setting] are the same as the [Option Setting] dialog selected from [File] → [Print].

For more information, refer to page 7-2.

4. Display the preview.

## Print Current Window

---

When printing the window (of a screen, messages, macro editor, etc.) currently opened, perform the steps below.

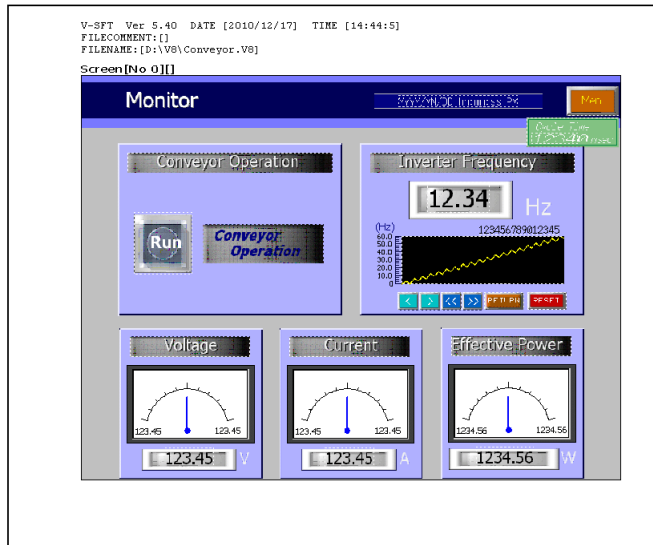
### Operating Procedure

---

1. Open the screen data file.
2. Click [File] → [Print Current Window].
3. The window currently opened is printed.

## Print Example

### Screen Output



### List Output

```
V-SFT Ver 5.40 DATE [2010/12/17] TIME [14:48:36]
FILECOMMENT: []
FILENAME: [D:\V8\Conveyor.V8]
Screen[No 0]]

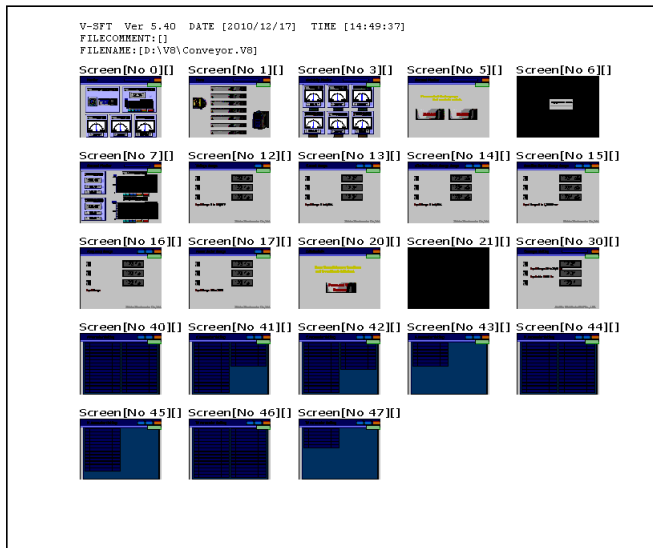
[Screen Setting]
Item Select Memory      : None
PLC Memory Transfer    : None
Receive Slice Time     : 0 *100msec
Security Level         : 0
[Show/Hide Item]
Address the screen
[OPEN Macro]
No Setting
[CLOSE Macro]
No Setting
[CYCLE Macro]
0 : RET
1 ;
2 : su00624 = $L00620 - $L00622 (D)
3 : su00626 = su00624 X 1000 (D)
4 : su00632 = $L00628 - $L00630 (D)
5 : su00098 = PLC2[ 1.400001] (W)
6 : su00636 = su00626 X su00098 (D)
7 : su00634 = su00636 / su00632 (D)
8 : su00102 = su00634 + $L00638 (D)
9 ;
Use Local Function Switch None
Blend                      : 255

[Base]
[ID No]Name Display Coordinates:( 104, 77)-( 184, 117)
Display Function          : No Function
Memory                   : su00100
Display Type              : DEC (w/o sign)
Input Type                : DEC
Digits                   : 5
Decimal Point             : 0
Data Length               : 1-Word
Zero Suppress            : Yes Flush Right
Char. Prop.               : Normal
Italic                   : None
Transparent               : Yes
Rotation                 : Normal
Direction                 : ROT
Spacing                   : No Designation
Display Position
Enlarge
X : 1
Y : 1
Character Size           : 1-Byte
Process Cycle            : High Speed

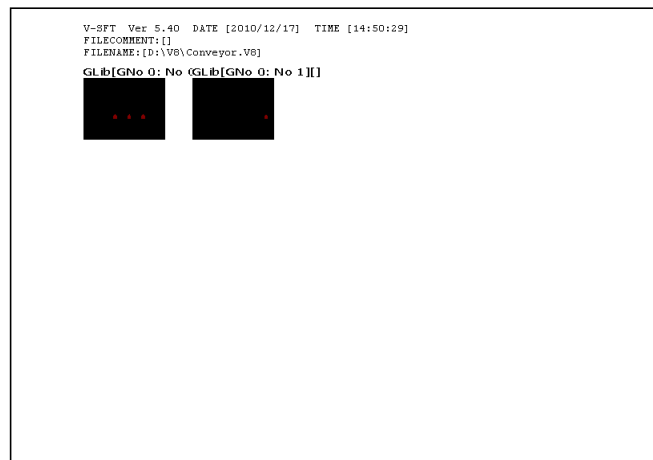
[Display Setting]
Always Show
```

## Table Print

### Screens



### Graphic library





## Use Cross-reference

### Message

```
V-SFT Ver 5.40 DATE [2010/12/17] TIME [14:56:15]
FILECOMMENT: {}
FILENAME: [D:\V8\Conveyor.V8]

*** Message Group 0 ***
(== 00000 ==) Relay $J00330-00 [ ]
Relay Su00330-00
Relay Su00330-00
Relay Su00330-00
Relay Su00330-00

(== 00001 ==) Relay $J00330-01 [ Max. value is less than Mini. value ]
Relay Su00330-01
Relay Su00330-01
Relay Su00330-01
Relay Su00330-01

(== 00002 ==) Relay $J00330-02 [ Set Point shall not be over Max. Value. ]
Relay Su00330-02
Relay Su00330-02
Relay Su00330-02
Relay Su00330-02

(== 00003 ==) Relay $J00330-03 [ Set Point shall not be less than Mini. Value. ]
Relay Su00330-03
Relay Su00330-03
Relay Su00330-03
Relay Su00330-03

(== 00004 ==) Relay $J00330-04 [ Enter a value and over 45 ]
Relay Su00330-04
Relay Su00330-04
Relay Su00330-04
Relay Su00330-04

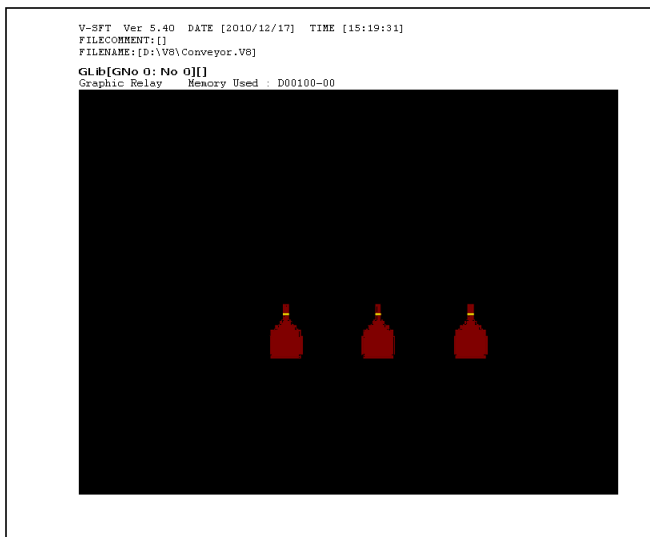
(== 00005 ==) Relay $J00330-05 [ Enter a value and over 50 ]
Relay Su00330-05
Relay Su00330-05
Relay Su00330-05
Relay Su00330-05

(== 00006 ==) Relay $J00330-06 [ Enter a value and below 6 ]
Relay Su00330-06
Relay Su00330-06
Relay Su00330-06
Relay Su00330-06

(== 00007 ==) Relay $J00330-07 [ Enter a value and below 65 ]
Relay Su00330-07
Relay Su00330-07
Relay Su00330-07
Relay Su00330-07

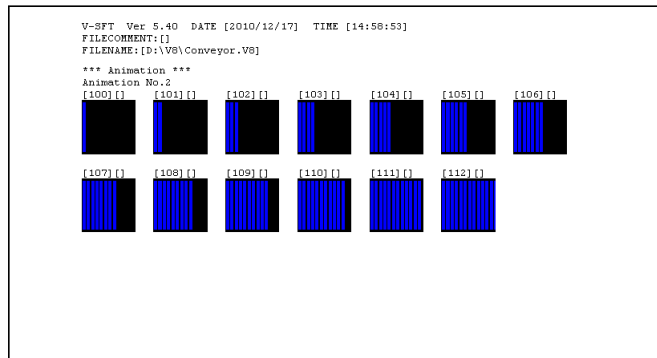
(== 00008 ==) Relay $J00330-08 [ Enter a value and below 100 ]
Relay Su00330-08
Relay Su00330-08
Relay Su00330-08
Relay Su00330-08
```

For the graphic library:





## Animation



# MEMO



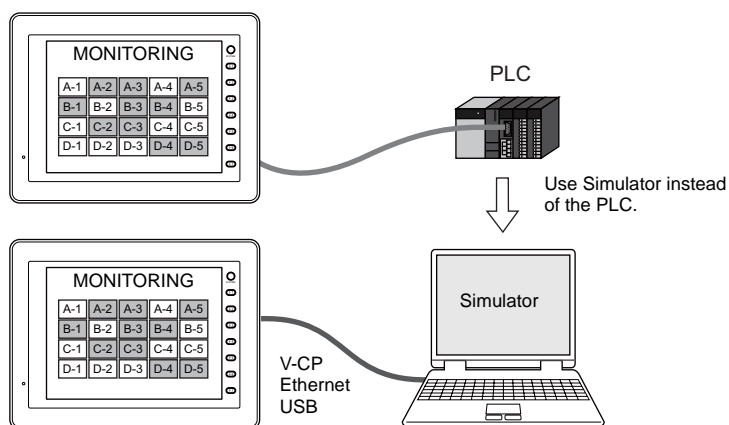
Please use this page freely.

# 8 Useful Functions

## 8.1 Simulator

### Overview

- Normally, when a MONITOUCH screen has been created, an operation check is performed while MONITOUCH is connected to the PLC. However, it is possible to perform an operation check without the PLC using Simulator function. The Simulator runs on Windows, and it is possible to set/reset bit device as well as input data to word device.



If the operation is simple, it can be checked on Simulator as on the PLC.

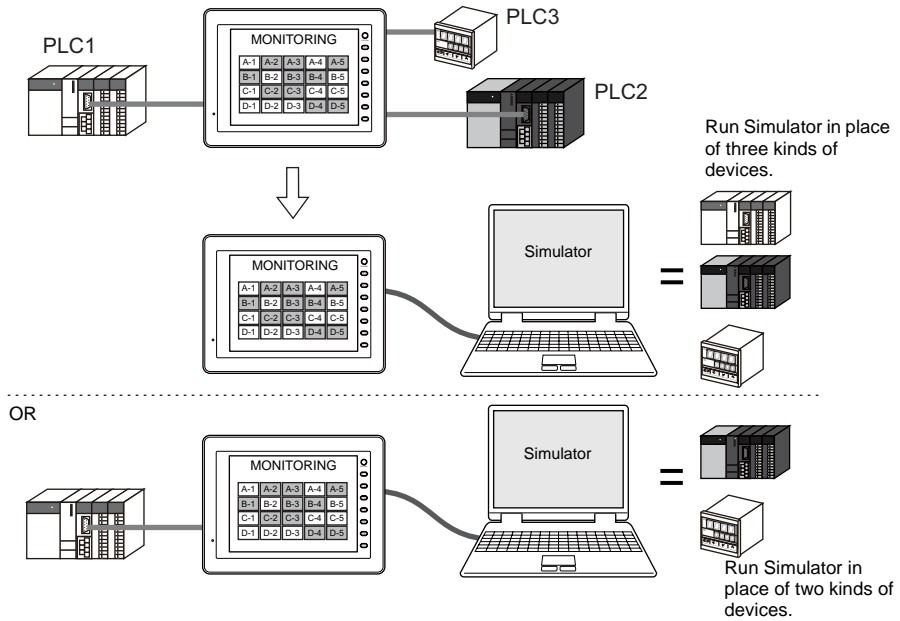


If neither PLC nor MONITOUCH are present, use "Emulator" to perform an operation check.

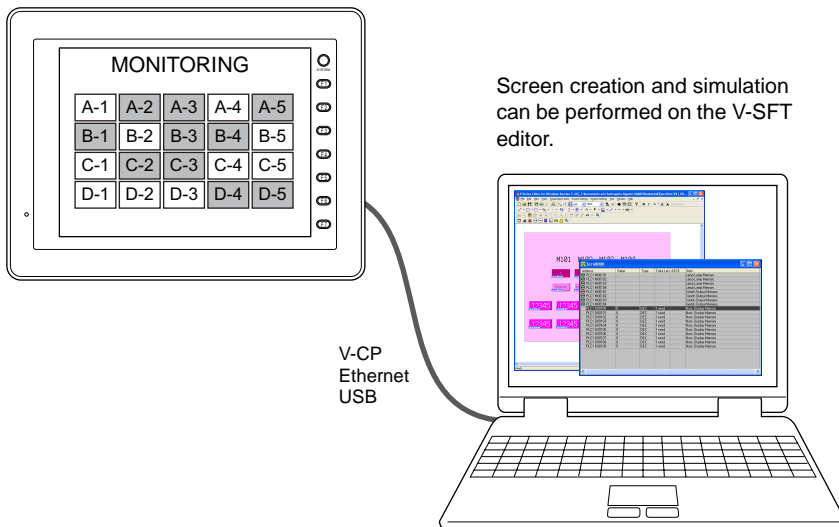
For more information, refer to page 8-43.

- \* **Simulator is enabled only in connection format of 1:1 between the V8 unit and its connected device. Therefore, Simulator is disabled in connection formats of 1:n and n:1.**
- \* **Simulator is also disabled where connection is established with a barcode reader or the V8 unit and its connected device are in slave communication (V-Link or MODBUS slave).**

- The V8 series is able to communicate with a maximum of 8 kinds of external devices, such as PLCs (8-way communication). Simulator can also be run for a maximum of 8 kinds of devices. For example, Simulator may be run only for two of the eight kinds of devices, and the remaining devices may be actually connected to MONITOUCH for operation check.



- As Simulator works on the V-SFT editor (configuration software for the V series), the operation can be checked easily during screen editing. The operations of the parts placed on the screen can be checked between just the computer and the V series. Since screen creation and debugging are performed on one computer, the time for screen creation will decrease.



- Based on the memory assigned to the screen data for the V series, simulation sheets are automatically created on a screen-by-screen basis.

## Operating Procedure

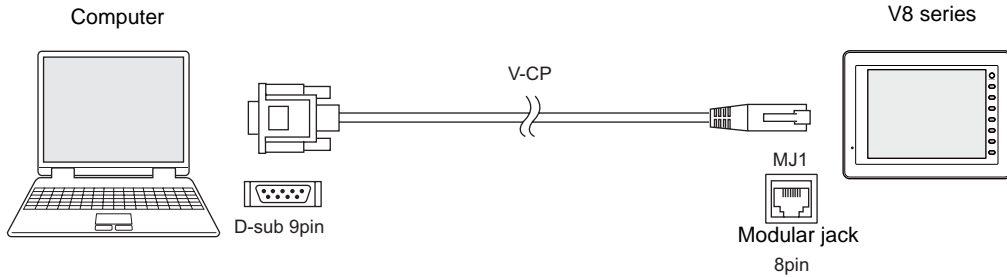
---

1. Open the screen data file.
2. Establish connection between the computer and the V8 series (page 8-4).
3. Transfer the screen data to MONITOUCH.
  - Transferring the screen data and the Simulator program (page 8-6)
  - Simulator settings on MONITOUCH (page 8-8)
4. Start Simulator (page 8-11).
  - Starting communication
  - Stopping communication
5. Change the communication settings when needed.
  - How to change the communication settings (page 8-14)
6. Perform a test.
  - Testing bit access device (page 8-26)
  - Testing word access device (page 8-28)

## Connecting a Computer and the V8 series

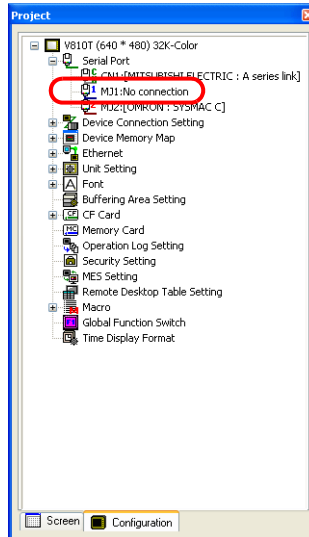
### Via V-CP

Connect the V8 series to a computer using the data transfer cable (V-CP).



Be sure to connect the cable to MJ1 (modular jack 1) of the V8 series.  
On the editor software, check that [MJ1: No connection] is set.

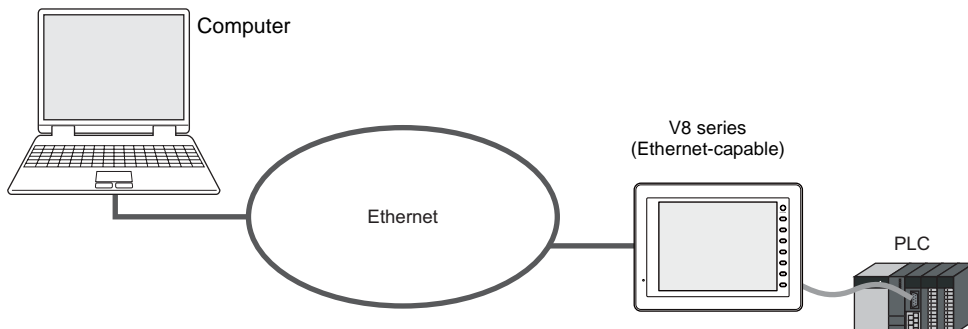
- \* To see the above, go to the Project View (click [View])→ [View], and check [Project View]), select the [Configuration] tab at the bottom. The information on [MJ1] is specified under [Serial Port].



## Via Ethernet

Connect the V8 series to a computer using a LAN cable.

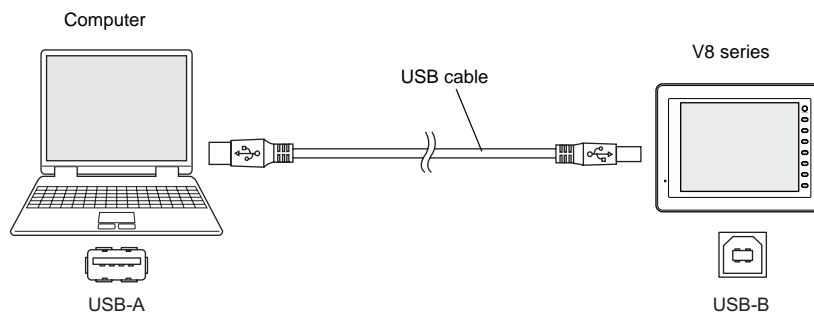
Be sure to connect the cable to the LAN port of the V8 series. (This applies only to the model V8i. For models other than V8i, a communication I/F unit is additionally required.)



## Via USB

Connect the V8 series to a computer using a USB cable.

Be sure to connect the cable to the USB-B port of the V8 series.



## Screen Data and Simulator Program Transfer

Transfer the screen data and the Simulator program to MONITOUCH.

😊 What is the Simulator program?  
The Simulator program is a driver file that MONITOUCH requires for using Simulator.  
The driver files are:

File Name	Connection Format	Display on MONITOUCH
UniPLC_S.tpc	Serial (with V-CP)	MJ1 (Serial)
UniPLC_E.tpc	Ethernet	EtherNet (UDP)
UniPLC_U.tpc	USB	USB-B (Device)

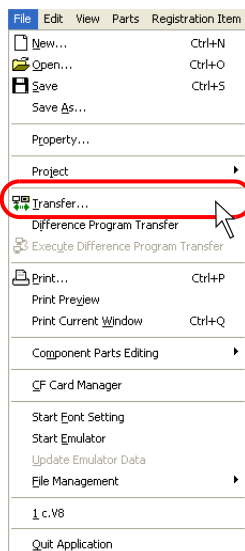
\* To see the display on MONITOUCH, go to the Main Menu screen and press the [Simulator] switch. For more information, refer to page 8-8.

A driver file will automatically be transferred to MONITOUCH according to the connection format: file "UniPLC\_S.tpc" in the case of serial communication via V-CP, file "UniPLC\_E.tpc" in the case of connection via Ethernet, or file "UniPLC\_U.tpc" in the case of connection via USB.

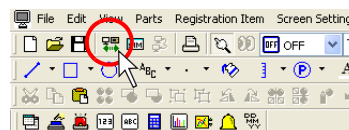
### Screen Data Transfer

Follow the steps below to transfer the screen data.

1. Click [Transfer] from the [File] menu or click the [Transfer] icon on the toolbar.  
The [Transfer] dialog is displayed.

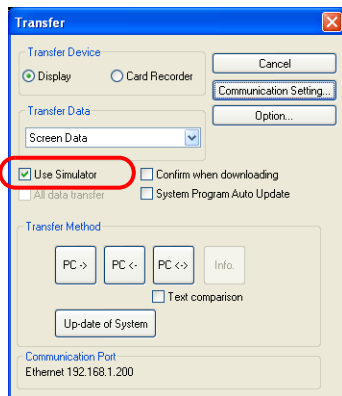


OR





- The [Transfer] dialog is displayed.  
Check  Use Simulator.



For the other setting items ([Communication Setting], etc.), refer to "6.4 Transfer Procedure (Using a Communication Cable)" (page 6-10).

- Select [Screen Data] for [Transfer Data] and click the [PC ->] button.  
The screen data is transferred together with the Simulator program.

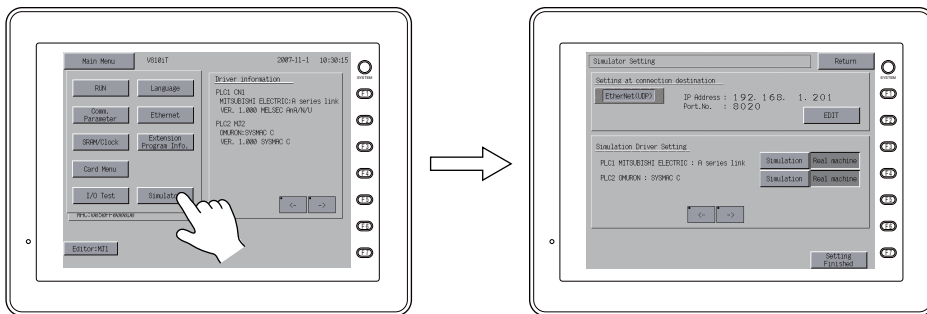


If you wish to transfer the Simulator program independently, select [Simulator Program] for [Transfer Data] and click the [PC->] button.  
In the file selection dialog that appears, select the target file and execute its transfer.

## Setting on MONITOUCH

The use of Simulator instead of [Real machine] must be specified on MONITOUCH. Follow the steps below.

1. After screen data transfer, press the [Main Menu] switch on the Main Menu screen displayed on MONITOUCH. Next, press the [Simulator] switch.

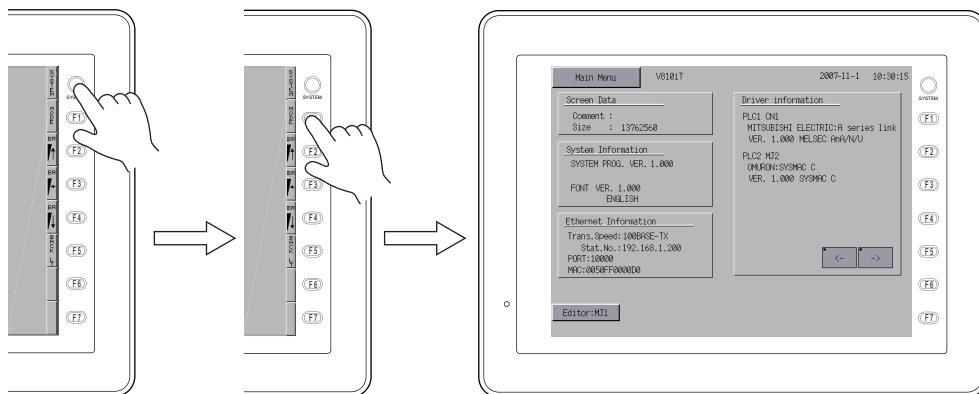


- \* If the [Simulator] switch is inactive, screen data might be transferred with  Use Simulator unchecked in the [Transfer] dialog or a transfer failure is suspected. Locate the problem and resend the screen data.



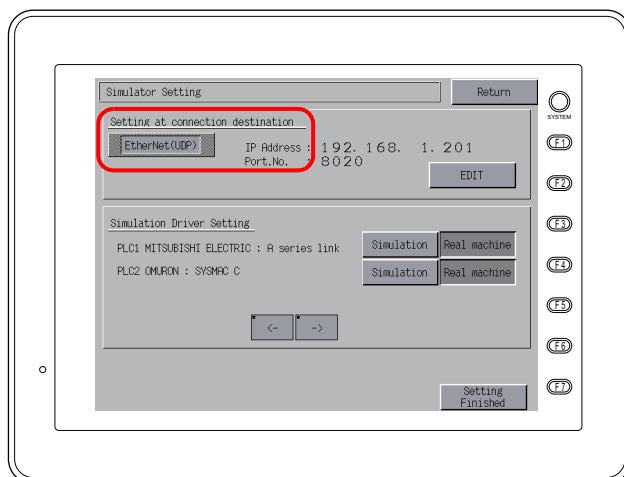
To display the Main Menu screen:

Press the [SYSTEM] switch. When the menu is displayed, press the [F1] switch. Then the Main Menu screen is displayed.



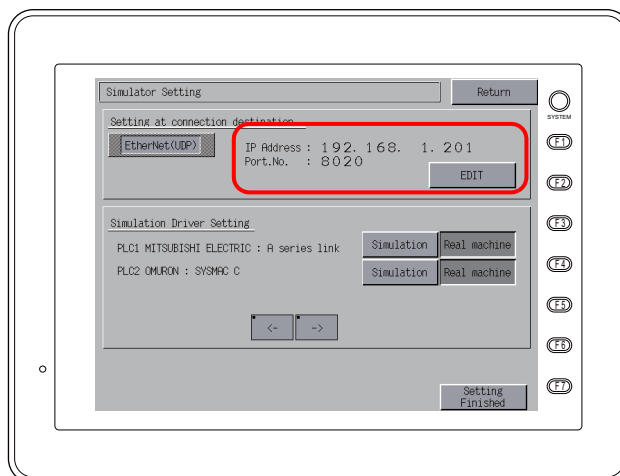
If the [SYSTEM] or [F1] switch does not work, the switch may be prohibited or holding down the switch for a certain time may be required for the switch to work. For more information, refer to the description regarding the function switches in the V8 Series Hardware Specifications.

2. The Simulator Setting screen is displayed.  
Check that what is displayed under [Setting at connection destination] coincides with the actual communication format between MONITOUCH and the computer.



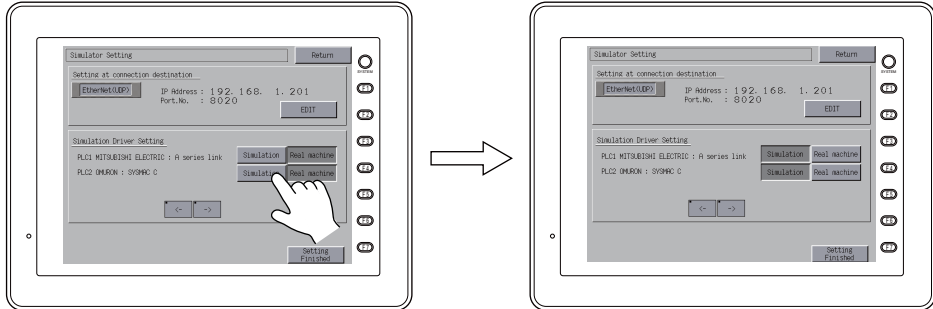
Display	Remarks
MJ1 (Serial)	Simulator is run while connection is established between MJ1 (modular jack 1) of MONITOUCH and the computer with the V-CP cable.
EtherNet (UDP)	Simulator is run while connection is established between the LAN port of MONITOUCH and the computer with the LAN cable.
USB-B (Device)	Simulator is run while connection is established between the USB-B port of MONITOUCH and the USB-A port of the computer with the USB cable.

3. When [EtherNet (UDP)] is selected for [Setting at connection destination], proceed to setting the [IP Address] and [Port No.].  
When [MJ1 (Serial)] or [USB-B (Device)] is selected for [Setting at connection destination], go to step 4.



IP Address	Specify the IP address of the target computer. Pressing the [EDIT] switch calls up the keypad. Key in the IP address on the keypad. The default IP address is "192.168.1.201".
Port No.	Specify the port number for Simulator. Pressing the [EDIT] switch calls up the keypad. Key in the port number on the keypad. This port number must be the same as the port number in the [Communication Setting] dialog for Simulator ([File] → [Communication Setting]). The default is "8020".

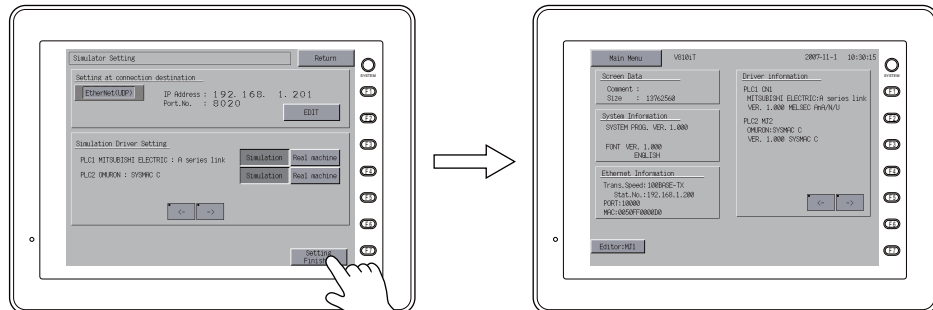
- Go to the [Simulator Driver Setting] next. Specify for which device(s) you wish to run Simulator. In the section of [Simulator Driver Setting], device names corresponding to the logical ports PLC1 to PLC8 are displayed, each of which is provided with the [Simulation] and [Real machine] switches. Press the [Simulation] switch for a device to be checked by Simulator.



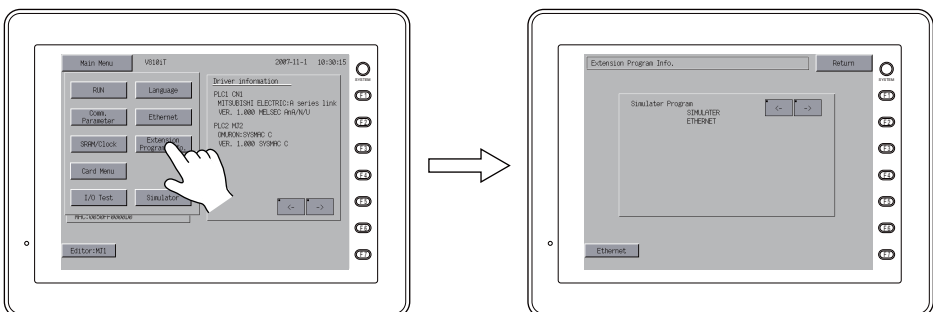
When running Simulator for PLC1 and PLC2, for example, press the [Simulation] switches for both.

☺ If you do not use Simulator, press the [Real machine] switch(es). Resending the screen data is not necessary.

- Press the [Setting Finished] switch. The Main Menu screen is displayed again.



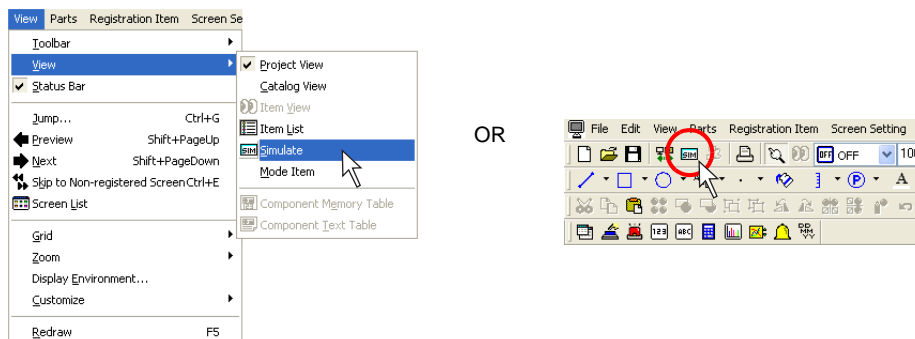
☺ **How to review the Simulator program version**  
 Press the [Main Menu] switch and then the [Extension Program Info.] switch.  
 The Extension Program Info. screen is displayed.  
 The screen shows the Simulator program version and the kind of the program, [SERIAL], [ETHERNET], or [USB].



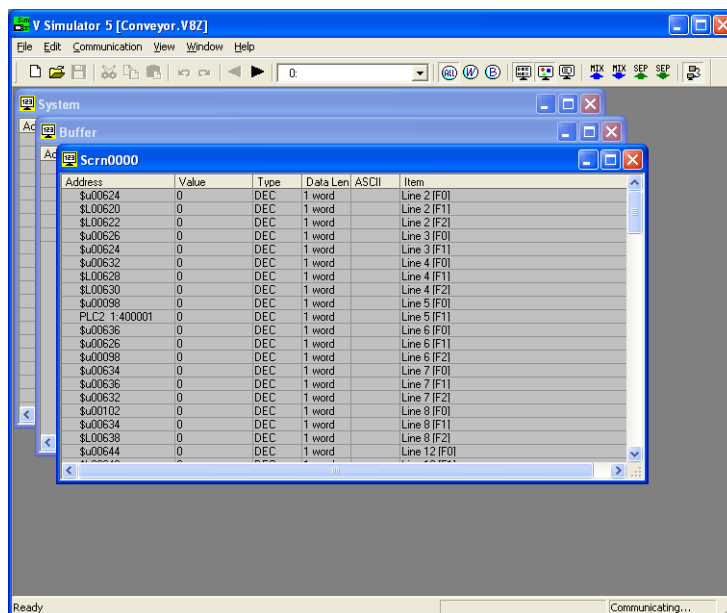
## Starting and Quitting

### Starting

1. Click [View] → [View] → [Simulate], or click the [Simulate] icon on the toolbar.



2. Simulator is started.  
Communication with MONITOUCH is started at this time.  
Addresses assigned to the screen data currently opened on the editor are automatically displayed in the [Simulator] window.

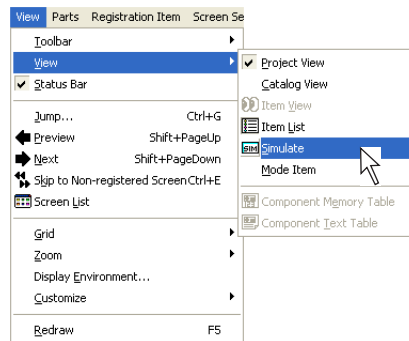
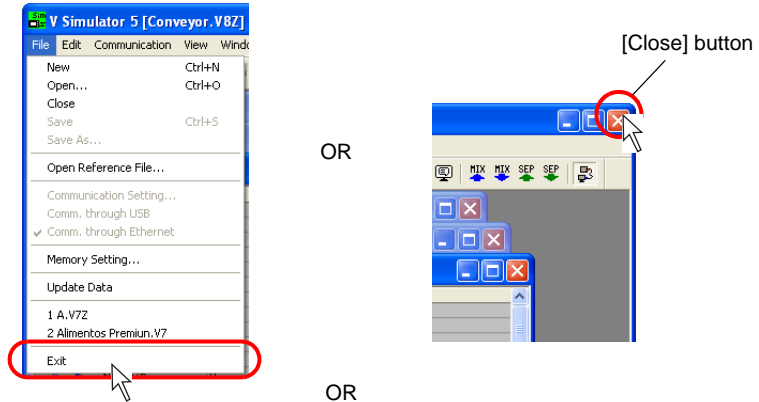


If the Main Menu screen is displayed on the V series, switch it to the RUN screen by pressing the [SYSTEM] switch and then the [F1] switch or pressing the [Main Menu] switch and then the [RUN] switch.

Simulator starts to communicate with MONITOUCH.

## Quitting

1. On Simulator, click [File] → [Exit], or click the close button. On V-SFT alternatively, click [View] → [View] → [Simulate]. The menu item [Simulate] being depressed is reset.



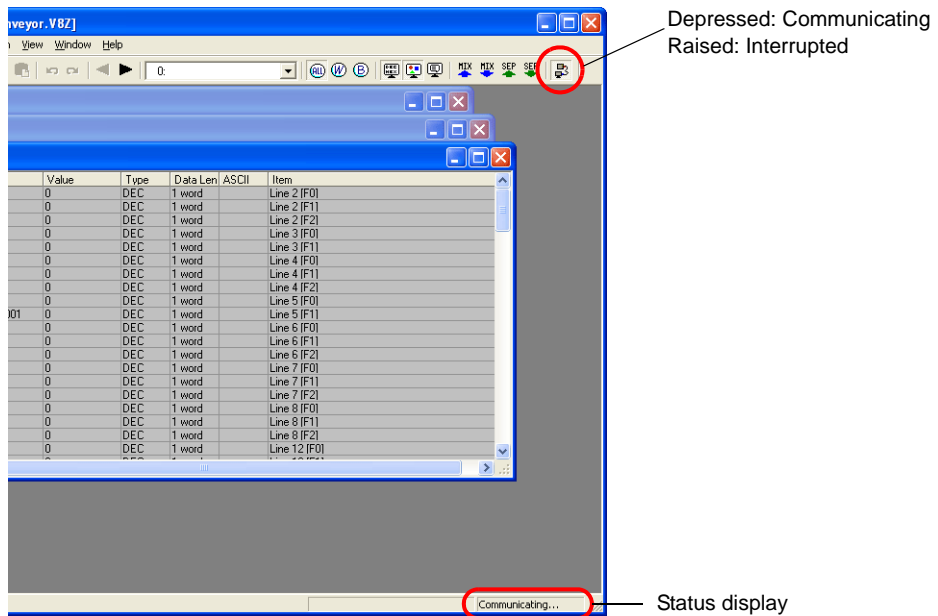
2. Exit from Simulator.  
 Simulator terminates the communication with MONITOUCH. MONITOUCH is then brought to a state of "SIM Communication Error Simulator Not Connected".

## Starting and Stopping Communication

### Starting Communication

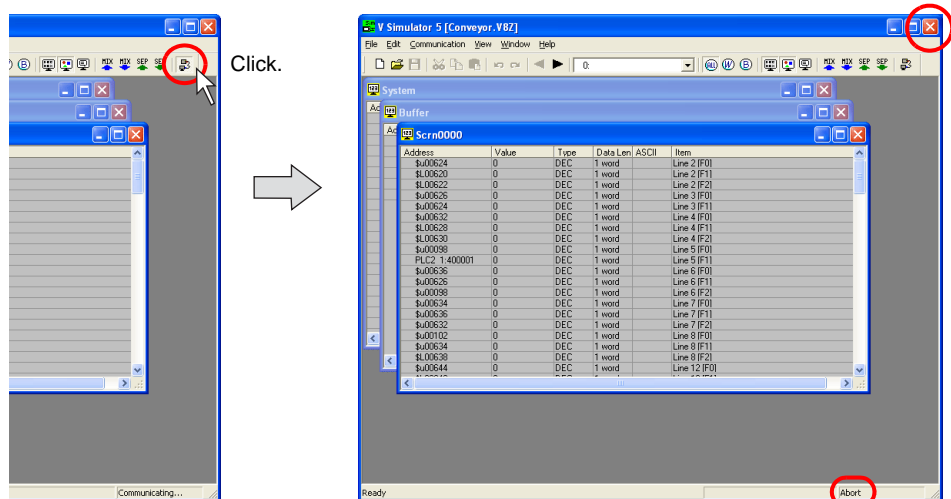
Communication using Simulator is started when the [Simulator] window is opened.

The communication status is shown on the [Communication] icon or on the status display at the bottom of the window.



### Stopping Communication

Click the [Communication] icon and make it raised (communication stopped).



The message "SIM Communication Error Simulator Not Connected" appears at the upper left of the screen on MONITOUCH.

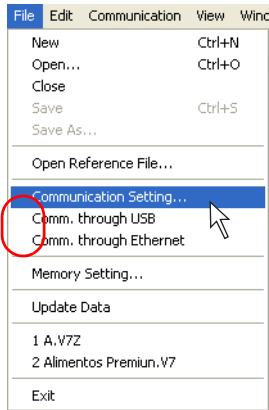
## Communication Setting

Make the required settings for communications between the computer and the V8 series. If the settings are faulty, the V8 series and computer will not communicate correctly. In such an event, be sure to check the settings.

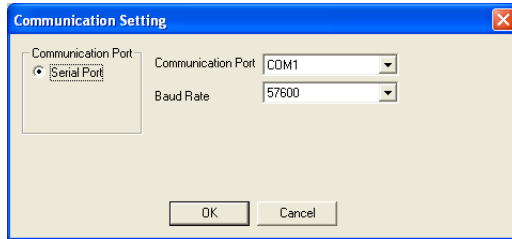
**\* Before checking the communication settings, suspend the communication between devices.**

### Serial communication

1. Click [File] on Simulator.  
Check that [Comm. through USB] and [Comm. through Ethernet] are unchecked. Click [Communication Setting].



2. The [Communication Setting] dialog is displayed.

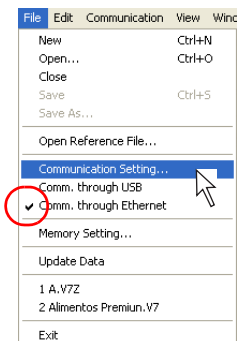


Communication Port	Serial Port
Communication Port COM1 - COM256	Select a communication port number for RS-232C of the computer.
Baud Rate	Set a baud rate used between the V8 series and the computer. (This has no relation to the actual communication baud rate between the V8 series and the PLC.)

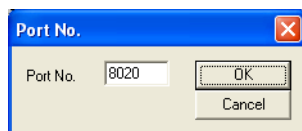


## Via Ethernet

1. Click [File] on Simulator.  
Check that [Comm. through Ethernet] is checked. Click [Communication Setting].



2. The [Port No.] dialog is displayed.

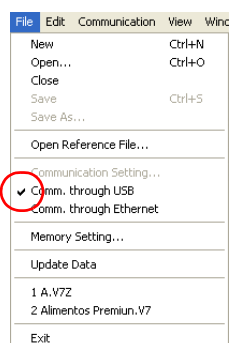


Port No.  
1024 - 65535

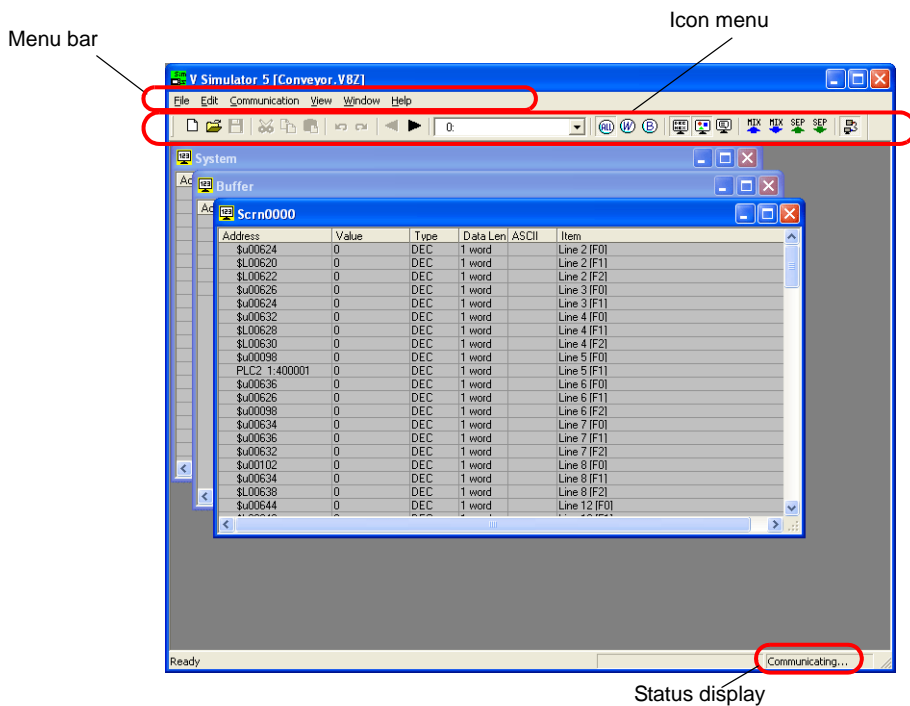
The default is "8020".  
If you have changed this port number, make the same change to the port number set on MONITOUCH.

## Via USB

- Click [File] on Simulator.  
Check that [Comm. through USB] is checked. This completes the setting required.

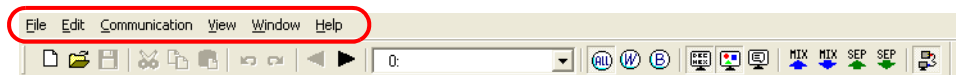


## Structure of the [Simulator] Window

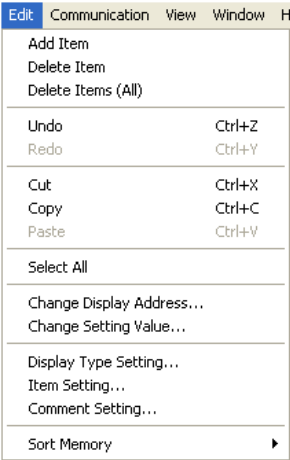
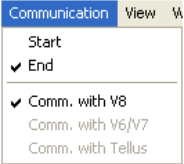


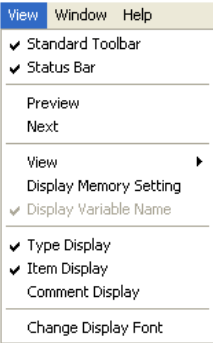
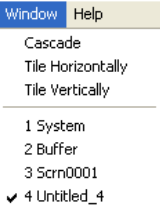
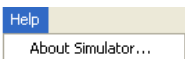
Menu bar		For more information, refer to page 8-17.
Icon menu		For more information, refer to page 8-20.
Sheets	[System]	Displays a list of addresses used for system settings of the screen data file.
	[Scrn xxxx]	Displays a list of addresses used on each screen.
	[Buffer]	Displays addresses assigned to the buffers. Those addresses are displayed only when memory is designated in the buffering area.
	[Mlib xxxx]	Displays addresses assigned to the overlap libraries. Those addresses are displayed when a multi-overlap or a call-overlap is displayed during screen data simulation.
	[Untitled]	Displays addresses newly registered. For more information on registering a new address, refer to page 8-23.
Status display		Displays the current Simulator status (communicating or interrupted).

## Menu Bar

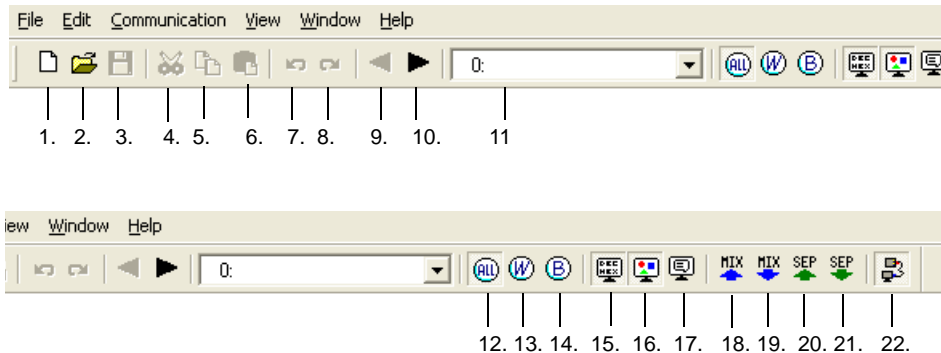


[File] menu		
	New	Opens an [Untitled] sheet.
	Open	Opens an existing screen data file (*.V8) or a memory table file (*.sim).
	Close	Closes the sheet being open.
	Save	Saves the sheet being open.
	Save As	Saves the sheet being open under a different name.
	Open Reference File	Opens a data file (*.V8" for example) for Simulator to refer to.
	Communication Setting	Allows you to proceed to serial or Ethernet communication settings. (Refer to page 8-14.)
	Comm. through USB	This menu item is automatically checked when communication via USB takes place.
	Comm. through Ethernet	This menu item is automatically checked when communication via Ethernet takes place.
	Memory Setting	Allows you to specify the range of memory addresses to be used for Simulator.
	Update Data	If changes have been made to the source screen data for simulation, clicking this menu item accordingly updates the screen data displayed on Simulator.
	Exit	Terminates Simulator. (Refer to page 8-12.)

<p><b>[Edit] menu</b></p> 	<p><b>Add Item</b></p> <p><b>Delete Item</b></p> <p><b>Delete Items (All)</b></p> <p><b>Undo</b></p> <p><b>Redo</b></p> <p><b>Cut</b></p> <p><b>Copy</b></p> <p><b>Paste</b></p> <p><b>Select All</b></p> <p><b>Change Display Address</b></p> <p><b>Change Setting Value</b></p> <p><b>Display Type Setting</b></p> <p><b>Item Setting</b></p> <p><b>Comment Setting</b></p> <p><b>Sort Memory</b></p>	<p>This menu item is active on the [Untitled] sheet. Adds new address.</p> <p>This menu item is active on the [Untitled] sheet. Deletes address.</p> <p>This menu item is active on the [Untitled] sheet. Deletes all addresses.</p> <p> Cancels actions performed.</p> <p>Reverts to the state prior to undo.</p> <p>This menu item is active on the [Untitled] sheet. Cuts selected address.</p> <p>Copies selected address.</p> <p>This menu item is active on the [Untitled] sheet. Pastes copied or cut address.</p> <p>Selects all addresses on the sheet.</p> <p>This menu item is active on the [Untitled] sheet. Allows you to change selected address to another.</p> <p>Allows you to change the value for selected address.</p> <p>Allows you to change the display format of selected address.</p> <p>This menu item is active on the [Untitled] sheet. Allows you to set items for selected addresses.</p> <p>This menu item is active on the [Untitled] sheet. Allows you to set comments on selected addresses.</p> <p>Allows you to select a memory display method.</p>
<p><b>[Communication] menu</b></p> 	<p><b>Start</b></p> <p><b>End</b></p> <p><b>Comm. with V8</b></p> <p><b>Comm. with V6/V7</b></p> <p><b>Comm. with Tellus</b></p>	<p>Starts communications.</p> <p>Ends communications.</p> <p>This menu item is automatically checked when communication with the V8 unit takes place.</p> <p>This menu item is automatically checked when communication with the V6 or V7 unit takes place.</p> <p>This menu item is automatically checked when communication with TELLUS takes place.</p>

<p>[View] menu</p> 	Standard Toolbar	Displays the toolbar when this menu item is checked.
	Status Bar	Displays the status bar when this menu item is checked.
	Preview	This menu item is active on the [Scrn xxxx] sheet. Displays the previous screen.
	Next	This menu item is active on the [Scrn xxxx] sheet. Displays the next screen.
	View	Allows you to select memory addresses to be shown.
	Display Memory Setting	Allows you to select which addresses of PLC1 - PLC8 are displayed.
	Type Display	Displays [Type] / [Data Length] / [ASCII].
	Item Display	Displays item.
	Comment Display	Displays comment.
	Change Display Font	Allows you make font settings, such as the size of the font displayed on the sheet.
<p>[Window] menu</p> 	Cascade	Cascades sheets.
	Tile Horizontally	Tiles sheets horizontally.
	Tile Vertically	Tiles sheets vertically.
<p>[Help] menu</p> 	About Simulator	Displays the version of Simulator.

## Icon Menu



1. New	Opens a new sheet [Untitled]. With this sheet, you can register and check addresses that do not exist on the [System] or [Scrn xxxx] sheet automatically created. (Refer to page 8-23.)
2. Open	Opens an already stored sheet.
3. Save	Saves an [Untitled] sheet under a new name.
4. Cut	This icon is active on the [Untitled] sheet. Cuts selected address.
5. Copy	Copies selected address.
6. Paste	This icon is active on the [Untitled] sheet. Pastes copied or cut address.
7. Undo	Cancels actions performed.
8. Redo	Reverts to the state prior to undo.
9. Previous Screen	This icon is active on the [Scrn xxxx] sheet. Displays the previous screen.
10. Next Screen	This icon is active on the [Scrn xxxx] sheet. Displays the next screen.
11. Active Screen	Displays screen numbers currently opened.
12. Display All	Displays all word items and bit items.
13. Word	Displays word item.
14. Bit	Displays bit item.
15. Format Display	Displays [Type] / [Data Length] / [ASCII].
16. Item Display	Displays item.
17. Comment Display	Displays comment.
18. Mix Sort (numerical)	Sorts memory addresses.
19. Mix Sort (reverse)	
20. Separate Sort (numerical)	
21. Separate Sort (reverse)	
22. Communication	Starts or stops communication. (Refer to page 8-13.)

## Structure of the Sheet

This example includes the format display, item display, and comment display.

1. Address	2. Value	3. Type	4. Data Len	5. ASCII	6. Item	7. Comment
\$u00624	0	DEC	1 word		Line 2 (F0)	
\$L00620	0	DEC	1 word		Line 2 (F1)	
\$L00622	0	DEC	1 word		Line 2 (F2)	
\$u00626	0	DEC	1 word		Line 3 (F0)	
\$u00624	0	DEC	1 word		Line 3 (F1)	
\$u00632	0	DEC	1 word		Line 4 (F0)	
\$L00628	0	DEC	1 word		Line 4 (F1)	
\$L00630	0	DEC	1 word		Line 4 (F2)	
\$u00098	0	DEC	1 word		Line 5 (F0)	
PLC2 1:400001	0	DEC	1 word		Line 5 (F1)	
\$u00636	0	DEC	1 word		Line 6 (F0)	
\$u00626	0	DEC	1 word		Line 6 (F1)	
\$u00098	0	DEC	1 word		Line 6 (F2)	
\$u00634	0	DEC	1 word		Line 7 (F0)	
\$u00636	0	DEC	1 word		Line 7 (F1)	
\$u00632	0	DEC	1 word		Line 7 (F2)	
\$u00102	0	DEC	1 word		Line 8 (F0)	
\$u00634	0	DEC	1 word		Line 8 (F1)	
\$L00638	0	DEC	1 word		Line 8 (F2)	
\$u00644	0	DEC	1 word		Line 12 (F0)	
\$L00640	0	DEC	1 word		Line 12 (F1)	
\$L00642	0	DEC	1 word		Line 12 (F2)	
\$u00646	0	DEC	1 word		Line 13 (F0)	
\$u00644	0	DEC	1 word		Line 13 (F1)	
\$u00652	0	DEC	1 word		Line 14 (F0)	
\$L00648	0	DEC	1 word		Line 14 (F1)	
\$L00650	0	DEC	1 word		Line 14 (F2)	
\$u00198	0	DEC	1 word		Line 15 (F0)	
PLC2 1:400013	0	DEC	1 word		Line 15 (F1)	
\$u00656	0	DEC	1 word		Line 16 (F0)	

1. Address	Shows address.
2. Value	Shows setting value currently entered.
3. Type	Shows display format currently set.
4. Data Length	Shows data length currently set.
5. ASCII	This item becomes active only when [Display] is selected for [ASCII]. Shows current setting value in ASCII code format.
6. Item Display	Shows item name and setting item for the address.
7. Comment Display	This is enabled for the item set on the [Untitled] tab window. Shows comment registered on the [Untitled] tab window.

### How to change the value (word address)

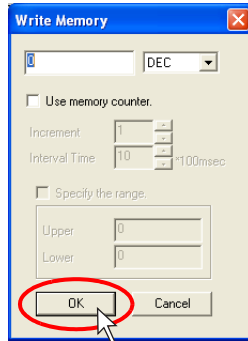
1. Double-click the [Value] field, or click [Change Setting Value] from the right-click menu.

Address	Value	Type	Data Len	A
\$u00624	0	DEC	1 word	
\$L00620	0	DEC	1 word	
\$L00622	0	DEC	1 word	
\$u00626	0	DEC	1 word	
\$u00624	0	DEC	1 word	
\$u00632	0	DEC	1 word	
\$L00628	0	DEC	1 word	
\$u00630	0	DEC	1 word	
\$u00098	0	DEC	1 word	
PLC2 1:400001	0	DEC	1 word	
\$u00636	0	DEC	1 word	
\$u00626	0	DEC	1 word	
\$u00098	0	DEC	1 word	
\$u00634	0	DEC	1 word	
\$u00636	0	DEC	1 word	
\$u00632	0	DEC	1 word	
\$u00102	0	DEC	1 word	
\$u00634	0	DEC	1 word	
\$L00638	0	DEC	1 word	
\$u00644	0	DEC	1 word	
\$L00640	0	DEC	1 word	
\$L00642	0	DEC	1 word	
\$u00646	0	DEC	1 word	
\$u00644	0	DEC	1 word	
\$u00652	0	DEC	1 word	
\$L00648	0	DEC	1 word	
\$L00650	0	DEC	1 word	
\$u00198	0	DEC	1 word	
PLC2 1:400013	0	DEC	1 word	
\$u00656	0	DEC	1 word	

OR

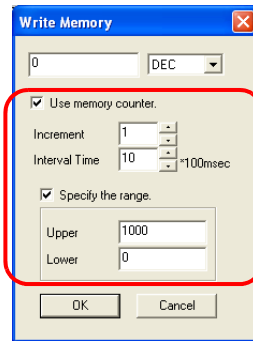
Address	Value	Type	Data Len	ASCII	Item
\$u00624	0	DEC	1 word		Line 2 (F0)
\$L00620	0	DEC	1 word		Line 2 (F1)
\$L00622	0	DEC	1 word		Line 2 (F2)
\$u00626	0	DEC	1 word		Line 3 (F0)
\$u00624	0	DEC	1 word		Line 3 (F1)
\$u00632	0	DEC	1 word		Line 4 (F0)
\$L00628	0	DEC	1 word		Line 4 (F1)
\$u00630	0	DEC	1 word		Line 4 (F2)
\$u00098	0	DEC	1 word		Line 5 (F0)
PLC2 1:400001	0	DEC	1 word		Line 5 (F1)
\$u00636	0	DEC	1 word		Line 6 (F0)
\$u00626	0	DEC	1 word		Line 6 (F1)
\$u00098	0	DEC	1 word		Line 6 (F2)
\$u00634	0	DEC	1 word		Line 7 (F0)
\$u00636	0	DEC	1 word		Line 7 (F1)
\$u00632	0	DEC	1 word		Line 7 (F2)
\$u00102	0	DEC	1 word		Line 8 (F0)
\$u00634	0	DEC	1 word		Line 8 (F1)
\$L00638	0	DEC	1 word		Line 8 (F2)
\$u00644	0	DEC	1 word		Line 12 (F0)
\$L00640	0	DEC	1 word		Line 12 (F1)
\$L00642	0	DEC	1 word		Line 12 (F2)
\$u00646	0	DEC	1 word		Line 13 (F0)
\$u00644	0	DEC	1 word		Line 13 (F1)
\$u00652	0	DEC	1 word		Line 14 (F0)
\$L00648	0	DEC	1 word		Line 14 (F1)
\$L00650	0	DEC	1 word		Line 14 (F2)
\$u00198	0	DEC	1 word		Line 15 (F0)
PLC2 1:400013	0	DEC	1 word		Line 15 (F1)
\$u00656	0	DEC	1 word		Line 16 (F0)

2. The [Write into Memory] dialog opens.  
Set the desired value and click [OK].



### Memory counter

Checking [ Use Memory Counter] makes it possible to increment or decrement values within the specified range at specified intervals.



When this box is checked, the "" mark is displayed on the left of the address displayed on the tab window.

Clicking the mark executes increment or decrement.

Address	Value	Type	Data Len	ASCII	Item
\$00624	0	DEC	1 word		Line 2 (F0)
\$00620	0	DEC	1 word		Line 2 (F1)
\$00622	0	DEC	1 word		Line 2 (F2)
\$00626	0	DEC	1 word		Line 3 (F0)
\$00624	0	DEC	1 word		Line 3 (F1)
\$00632	0	DEC	1 word		Line 4 (F0)
\$00630	0	DEC	1 word		Line 4 (F1)
\$00630	0	DEC	1 word		Line 4 (F2)
\$00630	0	DEC	1 word		Line 5 (F0)
PLC2 1:400001	0	DEC	1 word		Line 5 (F1)
\$00636	0	DEC	1 word		Line 6 (F0)
\$00626	0	DEC	1 word		Line 6 (F1)
\$00998	0	DEC	1 word		Line 6 (F2)
\$00634	0	DEC	1 word		Line 7 (F0)
\$00636	0	DEC	1 word		Line 7 (F1)
\$00632	0	DEC	1 word		Line 7 (F2)
\$00102	0	DEC	1 word		Line 8 (F0)
\$00634	0	DEC	1 word		Line 8 (F1)
\$00638	0	DEC	1 word		Line 8 (F2)
\$00644	0	DEC	1 word		Line 12 (F0)
\$00640	0	DEC	1 word		Line 12 (F1)
\$00642	0	DEC	1 word		Line 12 (F2)
\$00646	0	DEC	1 word		Line 13 (F0)
\$00644	0	DEC	1 word		Line 13 (F1)

3. The entered value is displayed on the sheet. It is also recognized on MONITOUCH.



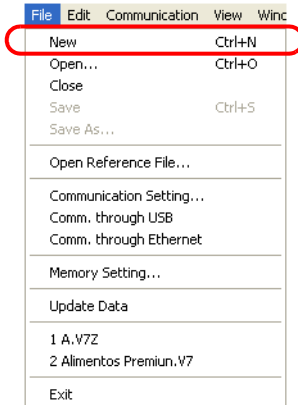
## [Untitled] Sheet

### Adding a new address

When you check addresses that are not shown on the [System] or [Scrn xxxx] sheet, it is necessary to create a new [Untitled] sheet for adding or inserting those addresses.

The procedure for adding a new address is described below.

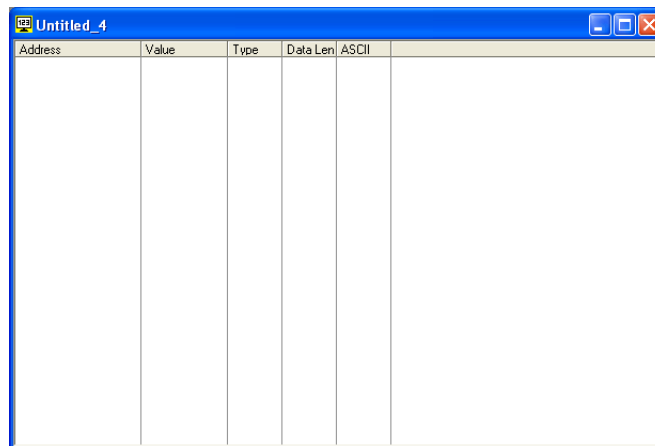
1. Create a new sheet.  
Click [File] → [New], or click the [New] icon.



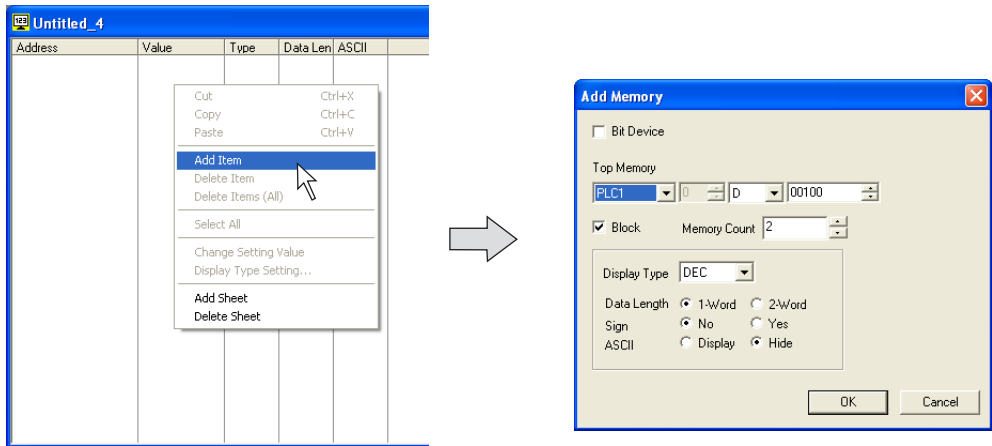
OR



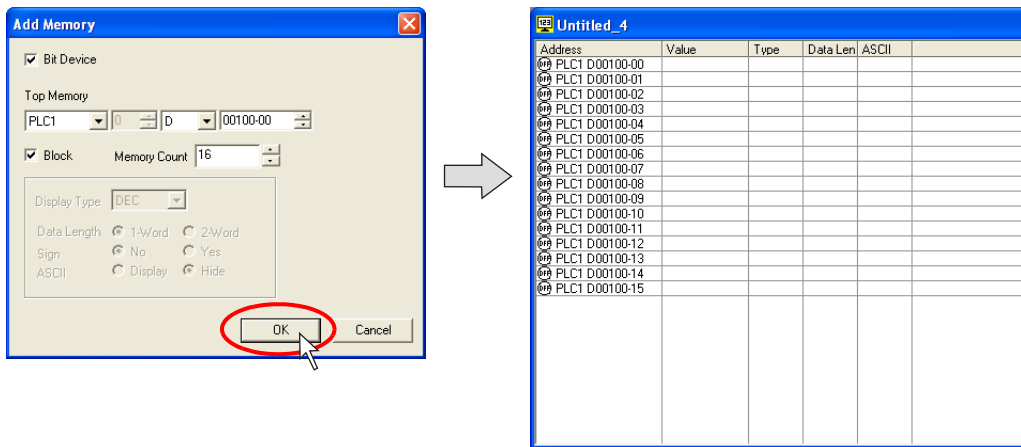
2. A new [Untitled] sheet is open.



3. Click [Add Item] from the right-click menu.  
The [Add Memory] dialog opens.



4. For the bit access device, check [ Bit Device].  
Make the desired settings and click [OK].  
New addresses are displayed on the sheet.

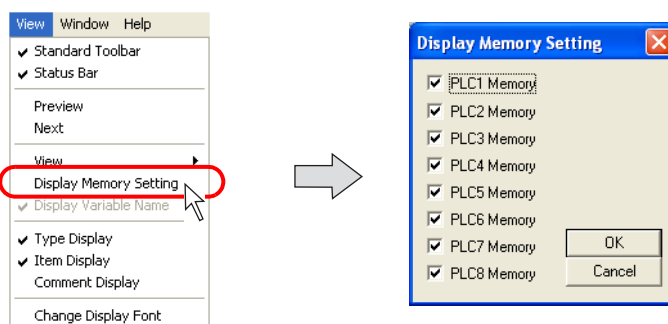


## Memory Addresses Displayed on Simulator

- In the case of the V8 series, Simulator is able to run for up to eight kinds of devices in communication with the V8 unit (8-way communication). Whether or not to use Simulator is selectable for each of the connected devices. If the addresses of devices, for which Simulator is not used, are shown on Simulator, the addresses turn red on the Simulator sheet (as shown below). Changes to the values for these addresses made on Simulator will not take effect.

Address	Value	Type	Data Len	ASCII	Item
PLC1 M0101					Switch Output Memory
PLC1 M0101					Switch Lamp Memory
PLC1 M0102					Switch Output Memory
PLC1 M0102					Switch Lamp Memory
PLC1 M0103					Switch Output Memory
PLC1 M0103					Switch Lamp Memory
PLC1 M0104					Switch Output Memory
PLC1 M0104					Switch Lamp Memory
PLC1 D0100	0	DEC	1 word		Num. Display Memory
PLC1 D0101	0	DEC	1 word		Num. Display Memory
PLC1 D0102	0	DEC	1 word		Num. Display Memory
PLC1 D0103	0	DEC	1 word		Num. Display Memory
PLC1 D0104	0	DEC	1 word		Num. Display Memory
PLC1 D0105	0	DEC	1 word		Num. Display Memory
PLC1 D0106	0	DEC	1 word		Num. Display Memory
PLC1 D0107	0	DEC	1 word		Num. Display Memory
PLC1 D0108	0	DEC	1 word		Num. Display Memory
PLC1 D0109	0	DEC	1 word		Num. Display Memory
PLC2 DM00100	0	DEC	1 word		Num. Display Memory
PLC2 DM00101	0	DEC	1 word		Num. Display Memory
PLC2 DM00102	0	DEC	1 word		Num. Display Memory
PLC2 DM00103	0	DEC	1 word		Num. Display Memory
PLC2 DM00104	0	DEC	1 word		Num. Display Memory
PLC2 DM00105	0	DEC	1 word		Num. Display Memory
PLC2 DM00106	0	DEC	1 word		Num. Display Memory
PLC2 DM00107	0	DEC	1 word		Num. Display Memory
PLC2 DM00108	0	DEC	1 word		Num. Display Memory
PLC2 DM00109	0	DEC	1 word		Num. Display Memory
PLC2 CH00100-00					Lamp Lamp Memory

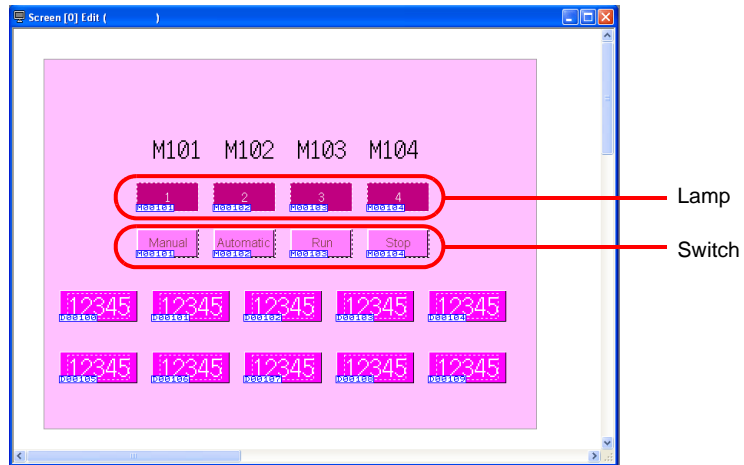
- Addresses of only the selected devices PLC1 to PLC8 can be displayed. Click [View] → [Display Memory Setting]. The [Display Memory Setting] dialog is displayed.



Check options [PLC1 Memory] - [PLC8 Memory] as desired. Click [OK]. Only the addresses of the selected devices will be displayed on Simulator.

## Test Example

Testing will be explained using the screen shown below as an example.

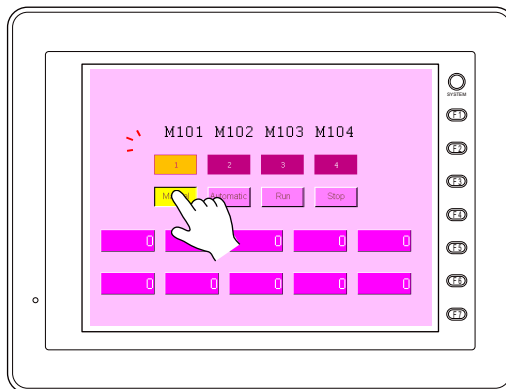


## Testing Bit Access Device

### From the V8 series to Simulator

Use Simulator to check the output signal. As an example, M101 is allocated to the [Auto] switch on the extreme left as an output memory.

1. Press the [Auto] switch on the extreme left of the V series.



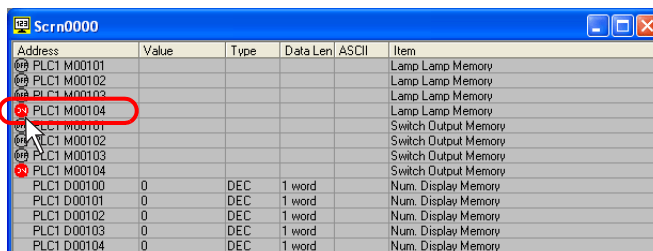
2. M101 will turn on at Simulator. The left icon will change from [OFF] to [ON].

Address	Value	Type	Data Len	ASCII	Item
PLC1 M00101					Lamp Lamp Memory
PLC1 M00102					Lamp Lamp Memory
PLC1 M00103					Lamp Lamp Memory
PLC1 M00104					Lamp Lamp Memory
PLC1 M00101					Switch Output Memory
PLC1 M00102					Switch Output Memory
PLC1 M00103					Switch Output Memory
PLC1 M00104					Switch Output Memory
PLC1 D00100	0	DEC	1 word		Num. Display Memory
PLC1 D00101	0	DEC	1 word		Num. Display Memory
PLC1 D00102	0	DEC	1 word		Num. Display Memory
PLC1 D00103	0	DEC	1 word		Num. Display Memory
PLC1 D00104	0	DEC	1 word		Num. Display Memory
PLC1 D00105	0	DEC	1 word		Num. Display Memory
PLC1 D00106	0	DEC	1 word		Num. Display Memory

## From Simulator to the V8 series

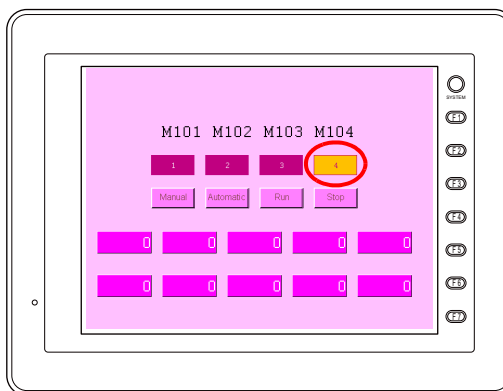
Use Simulator to turn the lamp on. As an example, M104 is allocated to the lamp "4" on the extreme right.

1. On Simulator, click the [OFF] icon for M104 (lamp memory).  
The icon will change from [OFF] to [ON].



Address	Value	Type	Data Len	ASCII	Item
PLC1 M00101					Lamp Lamp Memory
PLC1 M00102					Lamp Lamp Memory
PLC1 M00103					Lamp Lamp Memory
PLC1 M00104	1				Lamp Lamp Memory
PLC1 M00101					Switch Output Memory
PLC1 M00102					Switch Output Memory
PLC1 M00103					Switch Output Memory
PLC1 M00104					Switch Output Memory
PLC1 D00100	0	DEC	1 word		Num. Display Memory
PLC1 D00101	0	DEC	1 word		Num. Display Memory
PLC1 D00102	0	DEC	1 word		Num. Display Memory
PLC1 D00103	0	DEC	1 word		Num. Display Memory
PLC1 D00104	0	DEC	1 word		Num. Display Memory

2. Lamp "4" will light up on MONITOUCH.



While a memory address is selected with the cursor on Simulator, the corresponding bit access device is set or reset at each press the space key on the keyboard.

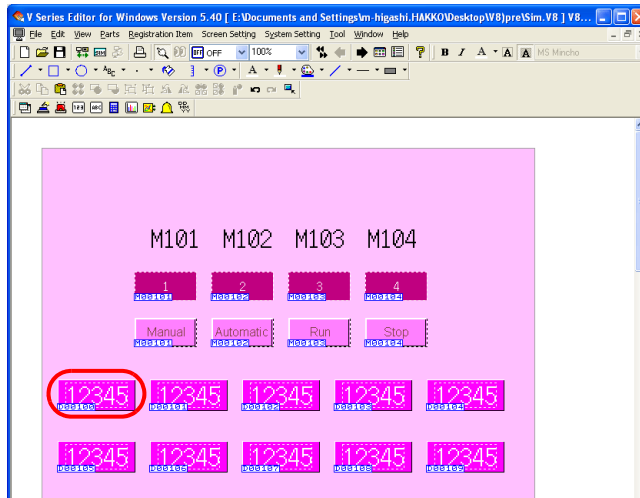


### Setting/resetting multiple bits simultaneously

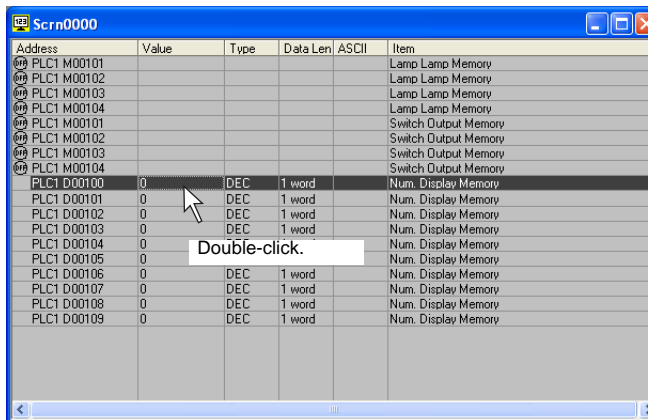
1. Select bit access devices that will be set/reset (multiple selections possible).  
Select sequentially by holding down the [SHIFT] key and clicking the mouse.  
Select randomly by holding down the [CTRL] key and clicking the mouse.
2. Pressing the space key sets the bits.
3. Pressing the space key again resets the bits.

## Testing Word Access Device

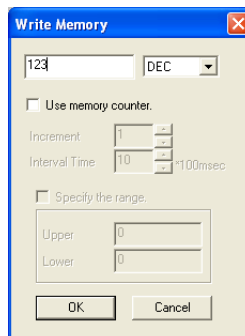
The procedure for changing the numerical value of the data display is described here. As an example, the value D100 will be changed.



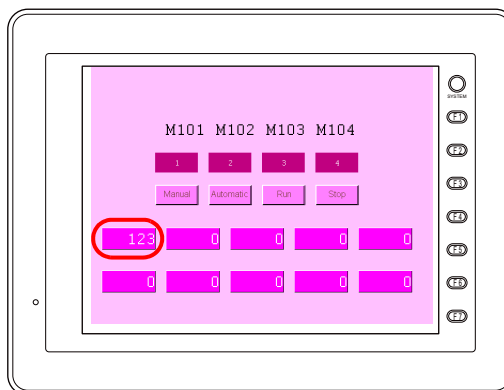
1. Double-click the field "D100" on Simulator.



2. The [Write into Memory] dialog is displayed.
3. Key-in a value as desired. (If necessary, change the format of the value to be entered.)  
As an example, "123" is entered in decimal notation.



4. Click on [OK] to close the dialog.
5. "123" is displayed on MONITOUCH.



#### Entering numerical values for multiple pieces of memory simultaneously

1. Select the memory that you will set numerical values for (multiple selections possible).  
Select sequentially by holding down the Shift key and clicking the mouse.  
Select randomly by holding down the Ctrl key and clicking the mouse.
2. Right-click on any of the lines that are selected, and then click [Change Setting Value].
3. Set the desired number and click [OK]. The numbers of all the selected lines will be changed simultaneously.





Message	Content	Measures
SIM Communication Error Simulator Not Connected/	After a request for communication transmitted to the computer (Simulator), the computer returns no reply within the preset time.	Take corrective actions according to the following. If the problem persists, restart Simulator.
		Serial communication <ul style="list-style-type: none"> <li>• Wiring Connect the V-CP cable to MJ1 (modular jack 1).</li> <li>• Simulator setting Set the [Communication Port] and [Baud Rate] ([File] → [Communication Setting]).</li> </ul>
		Ethernet communication <ul style="list-style-type: none"> <li>• Wiring LAN cable connection Connect a cable to the LAN port.</li> <li>• Simulator setting Check [<input checked="" type="checkbox"/> Comm. through Ethernet] in the [File] menu. Review the [Port No.] ([File] → [Communication Setting]). (The port number must be the same as that in Simulator setting made on the V8 unit.)</li> <li>• V8 unit setting Review the IP address and port number under [Setting at connection destination] on the Simulator Setting screen. Make the IP address the same as the IP address of the computer. Make the port number the same as the port number set on Simulator.</li> </ul>
		USB communication <ul style="list-style-type: none"> <li>• Wiring Connect a USB cable to the USB-B port.</li> <li>• Simulator setting Check [<input checked="" type="checkbox"/> Comm. through USB] in the [File] menu.</li> </ul>
	Simulator is terminated, or suspends communication.	Check Simulator. <ul style="list-style-type: none"> <li>• Check [<input checked="" type="checkbox"/> Start] in the [Communication] menu.</li> <li>• Check the range of memory addresses ([File]→[Memory Setting]).</li> </ul>
SIM Communication Error Ethernet Error xxx(x)	Error during communication with Ethernet	Check the cables and IP address for any errors (such as 801: link disconnection) associated with Ethernet communication.
SIM Communication Error Format	Format error (characters in nonconforming formats)	A communication error arises between the V8 series and the computer. Check if there are any adverse effects due to noise, etc.

## 8.2 Emulator Overview

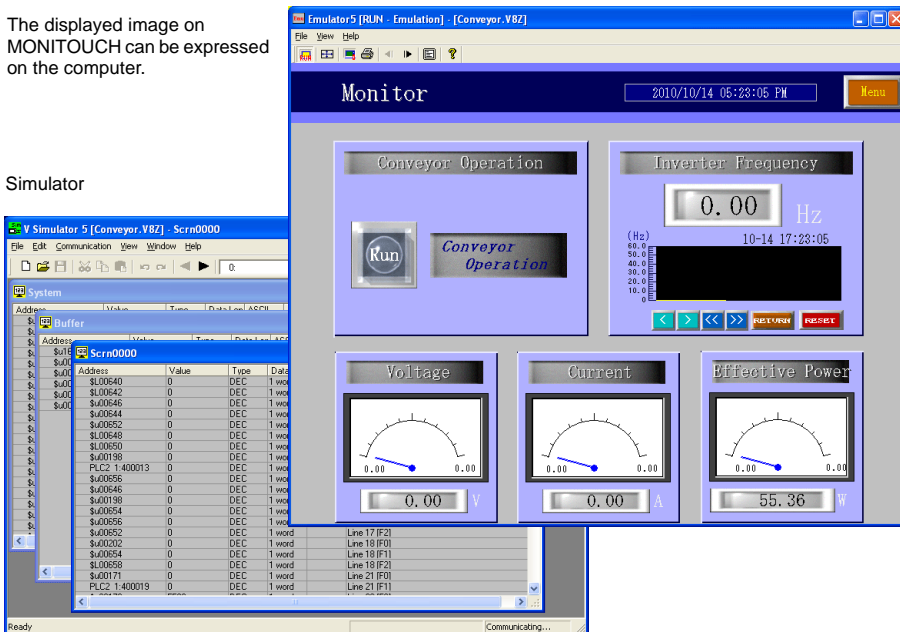
Even if there exists no MONITOUCH or other devices connected, created screens can be operated with Emulator.

This means that Emulator replaces MONITOUCH and Simulator replaces the devices connected to MONITOUCH.

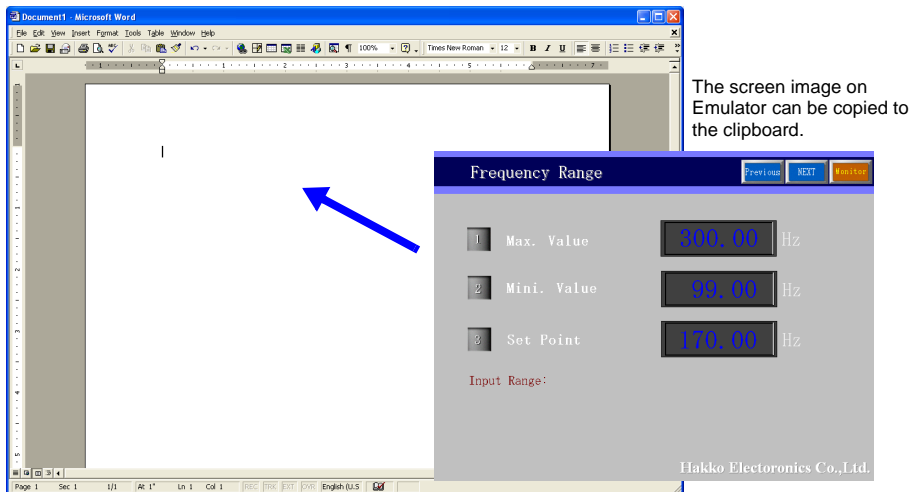
Emulator

The displayed image on MONITOUCH can be expressed on the computer.

Simulator



Emulator enables you to easily paste screens used for machine operation to documents in a manual you are creating. (Refer to page 8-43.)



The screen image on Emulator can be copied to the clipboard.

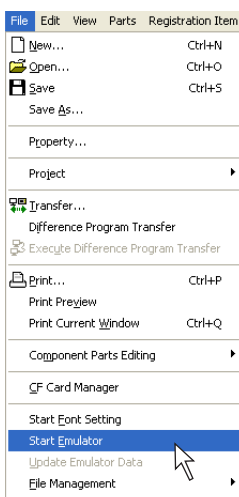
## Operating Procedure

1. Open the screen data file.
2. Start Emulator. (page 8-33)
  - Operation check on Simulator and Emulator (page 8-35)
3. Close Emulator (page 8-33).

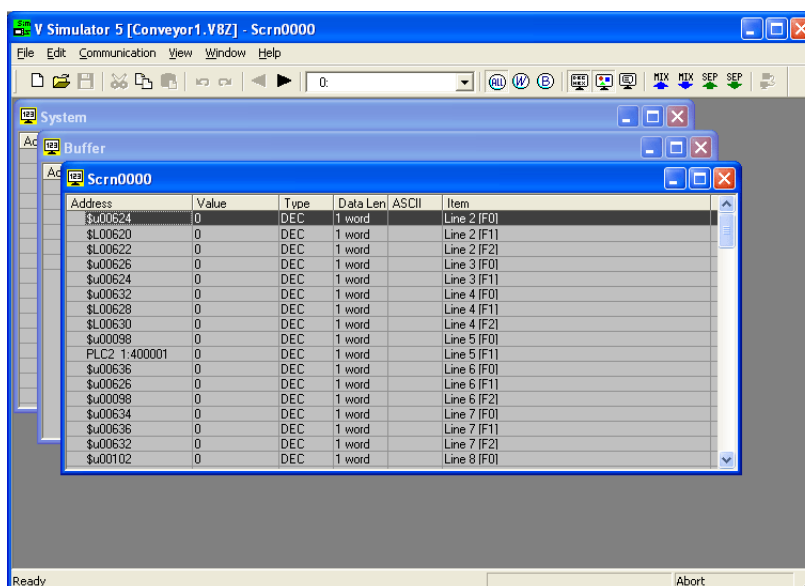
## Starting and Quitting

### Starting

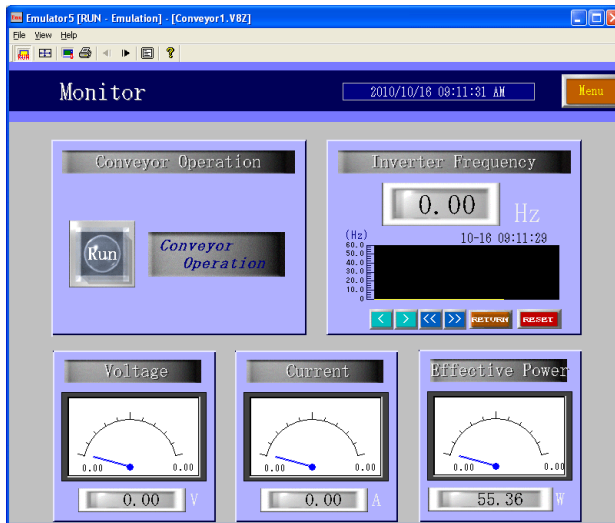
1. Click [File] → [Start Emulator].



2. Simulator is automatically started.

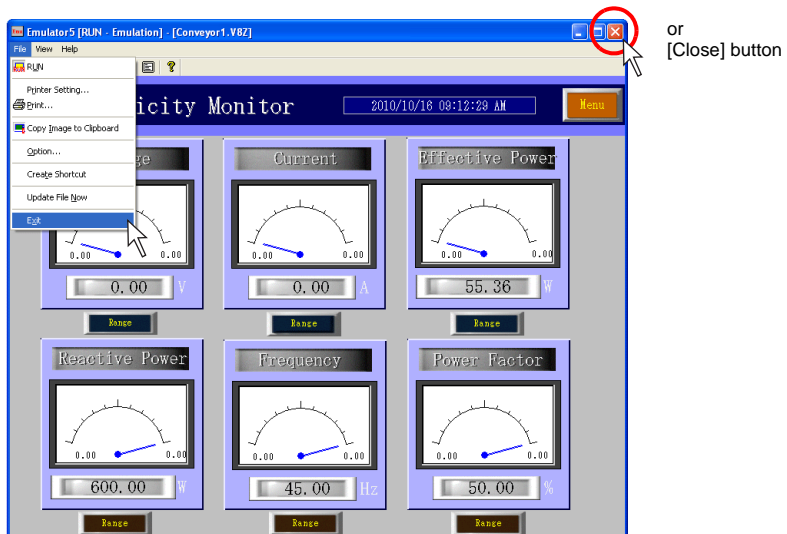


3. The [Emulator] window is opened.



## Quitting

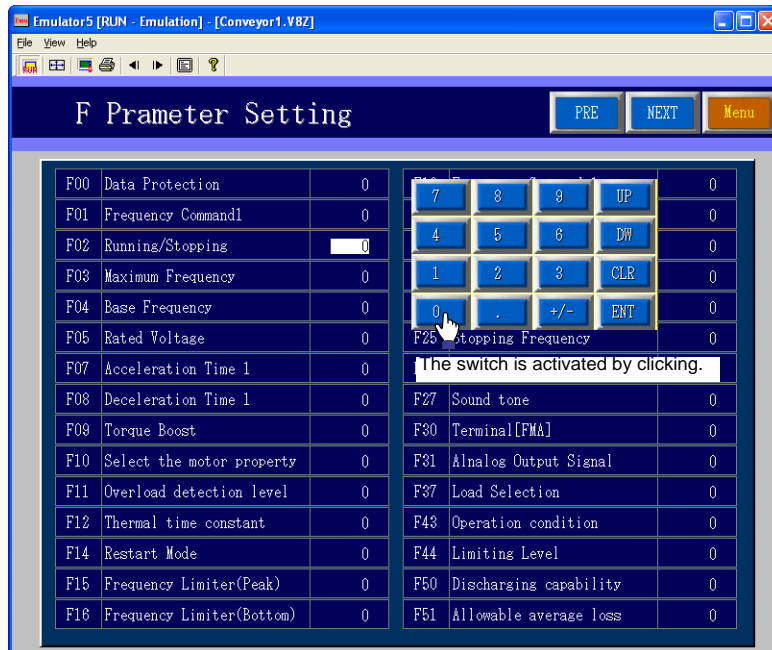
1. In the [Emulator] window, click [Exit] from the [File] menu or the [Close] button.



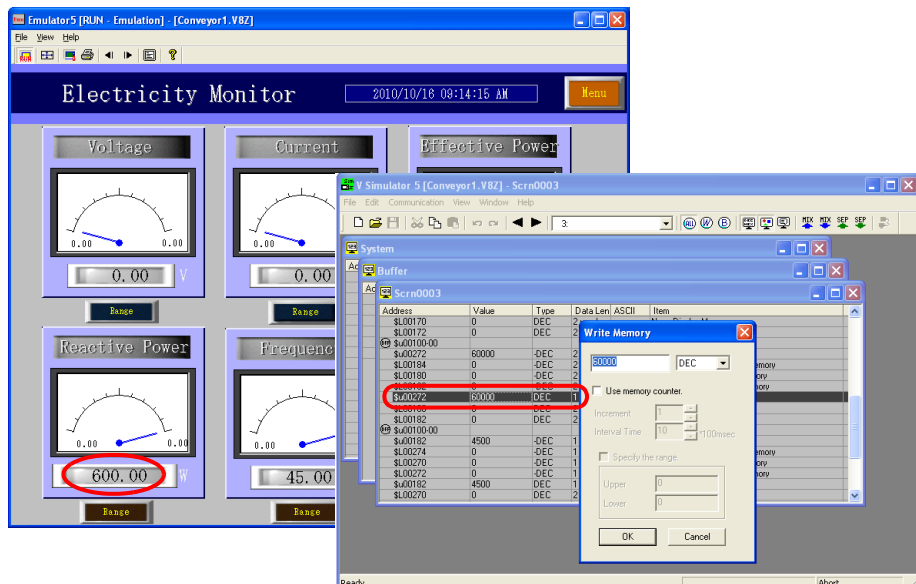
2. The [Emulator] window is closed.  
The [Simulator] window is closed at the same time.

## Operation

- When you click on a switch part on the screen displayed on Emulator, the switch reacts in the same way as it reacts on MONITOUCH.

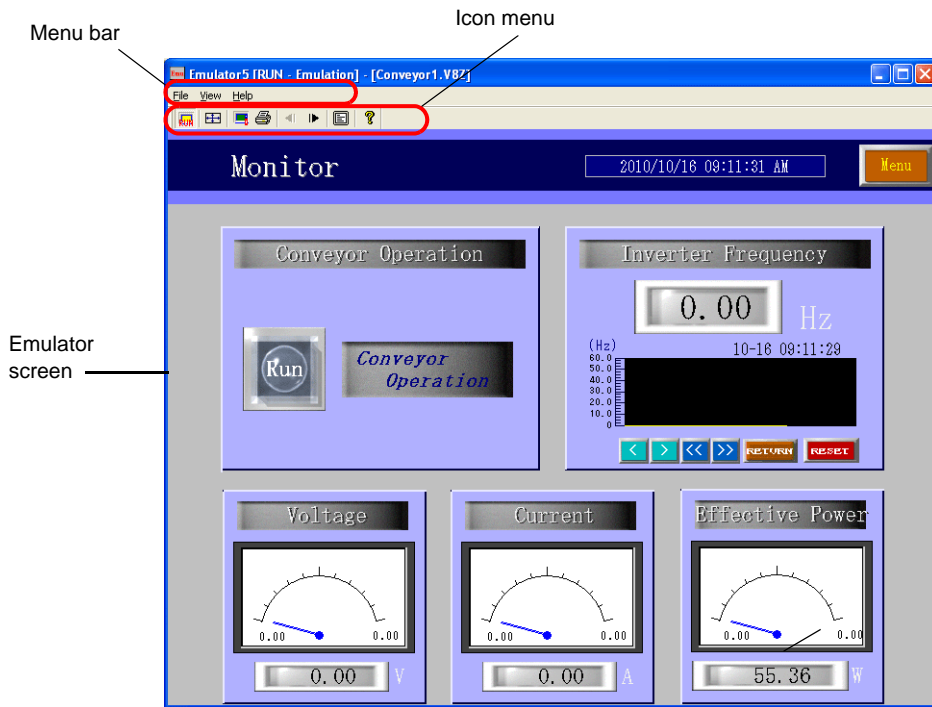


- To change the setting value for the connected device, use Simulator.



For more information on operating Simulator, refer to “8.1 Simulator” (page 8-1).

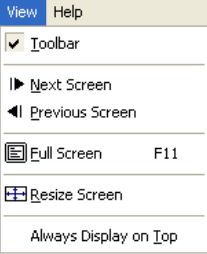
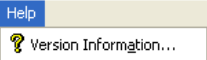
## Structure of the [Emulator] Window



Menu bar	For more information, refer to page 8-36.
Icon menu	For more information, refer to page 8-37.
Emulator screen	Operations to be performed on the V8 unit can be emulated on Emulator.

### Menu Bar

<p>[File] menu</p>	RUN	Switches the status of Emulator (RUN or STOP).
	Printer Setting	Allows you to make printer settings for printing Emulator screens.
	Print	Prints out Emulator screen.
	Copy Image to Clipboard	Copies Emulator screen image to the clipboard.
	Option	Allows you set optional settings associated with Emulator startup.
	Create Shortcut	Creates Emulator shortcut.
	Update File Now	Updates the screen data file. * The same operation is executable from [Update Emulator Data] in the [File] menu in V-SFT.
	Exit	Terminates Emulator.

<p>[View] menu</p> 	Toolbar	Displays the toolbar when this menu item is checked.
	Next Screen	Displays the next screen.
	Previous Screen	Displays the previous screen.
	Full Screen	Maximizes the Emulator screen.
	Resize Screen	Resizes the Emulator screen to the size set on V-SFT.
	Always Display on Top	Brings the Emulator screen to the top all the time while multiple applications are running.
<p>[Help] menu</p> 	Version Information	Displays the version of Emulator.

## Icon Menu



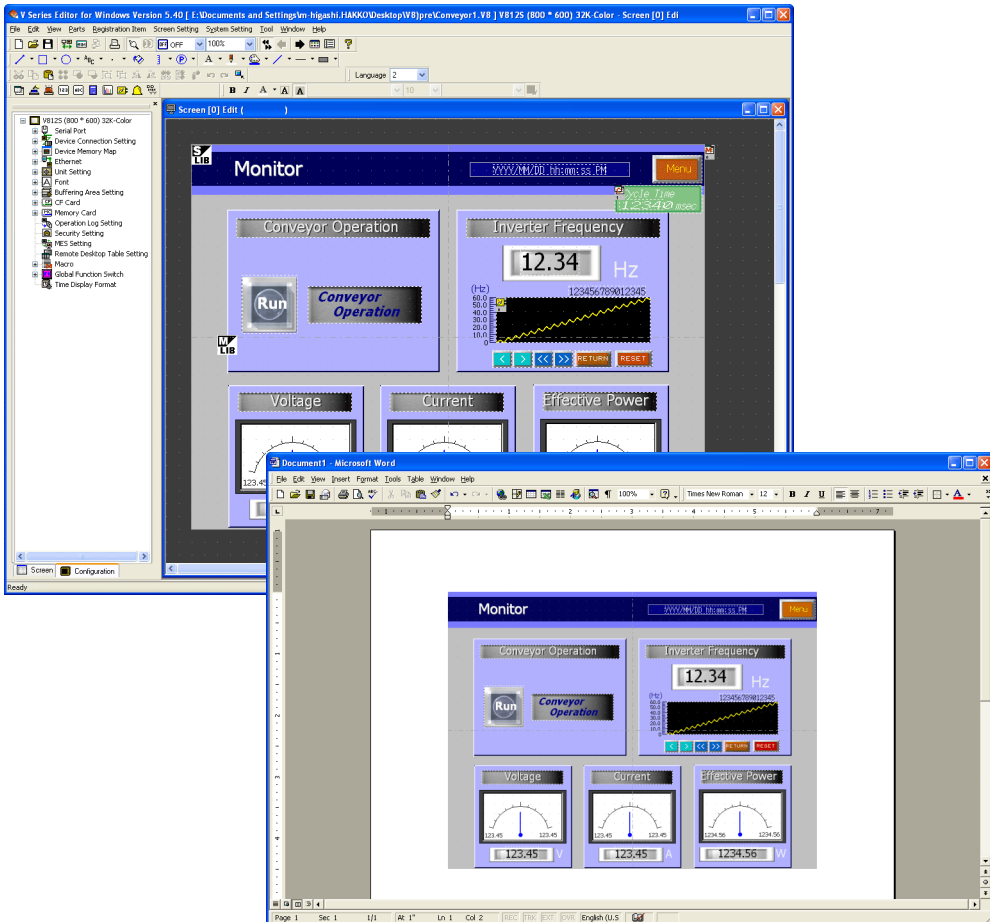
1. RUN	Switches the status of Emulator (RUN or STOP).
2. Resize Screen	Resizes the Emulator screen to the size set on V-SFT.
3. Copy Image to Clipboard	Copies Emulator screen image to the clipboard.
4. Hard Copy	Prints Emulator screen image.
5. Previous Screen	Displays the previous screen.
6. Next Screen	Displays the next screen.
7. Full Screen	Maximizes the Emulator screen.
8. Version Information	Displays the version of Emulator.

## 8.3 Useful Tools for Creating a Manual

This section explains useful editing functions for creating an operation manual for a system including MONITOUCH.

### Copying Screen Image to the Clipboard

The screen displayed on the editor can be copied to the clipboard.  
The copied image can be imported into Word, Excel or other application software.



The following screen images can be copied to the clipboard.

- Screen
- Graphic library
- Overlap library
- Data block
- Screen library

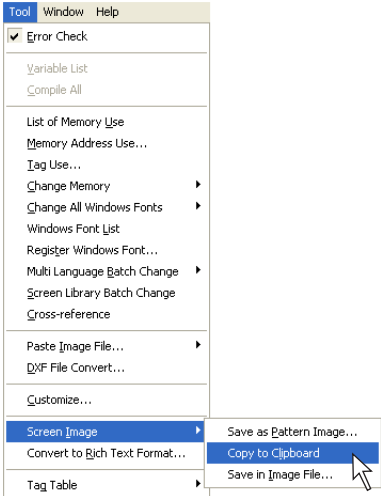


### Operating Procedure

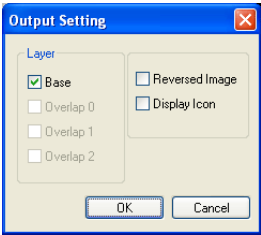
1. Open the screen data file.
2. Copy the screen image displayed on the editor (page 8-39).
3. Paste the copied image on another application software (page 8-40).

### Copying an Image Displayed on the Editor

1. Open the desired screen on the editor.
2. Click [Tool] → [Screen Image] → [Copy to Clipboard].



3. The following dialog is displayed. Check the option you wish to output to the clipboard. Click [OK].



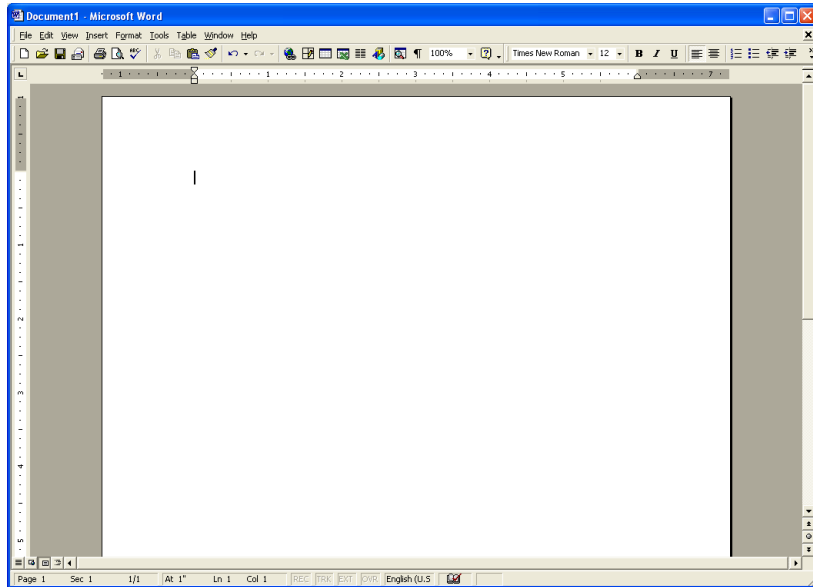
Layer Base Overlap 0 Overlap 1 Overlap 2	Select a layer to be output to the clipboard.
Reversed Image	Check this option when you output an image in reverse video.
Display Icon	Check this option when you output the icon of MLIB, SLIB, or entry mode.

The screen image has been copied to the clipboard.

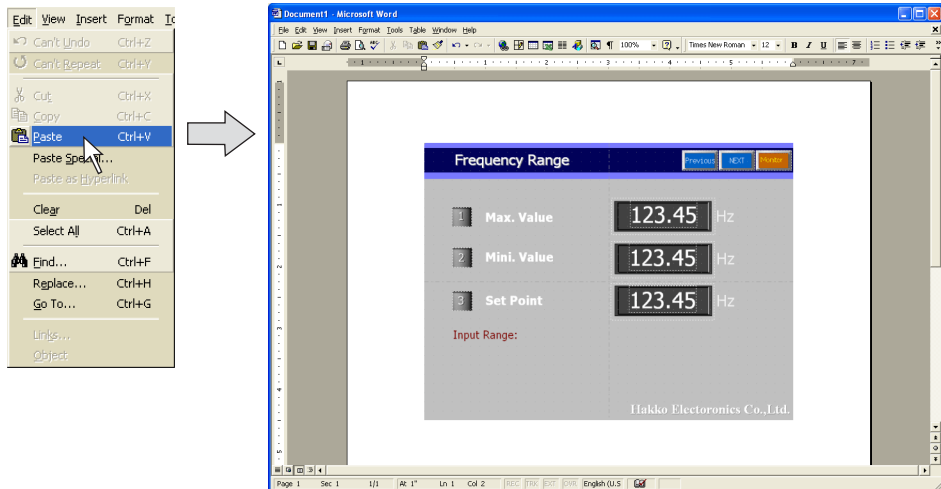
## Pasting the Copied Image on another Application Software

Next, paste the copied image on a screen of another application software. (This section explains how to paste the copied image to the screen of Microsoft Office Word.)

1. Start up the Word software.
2. Move the cursor to the position to place the copied image.



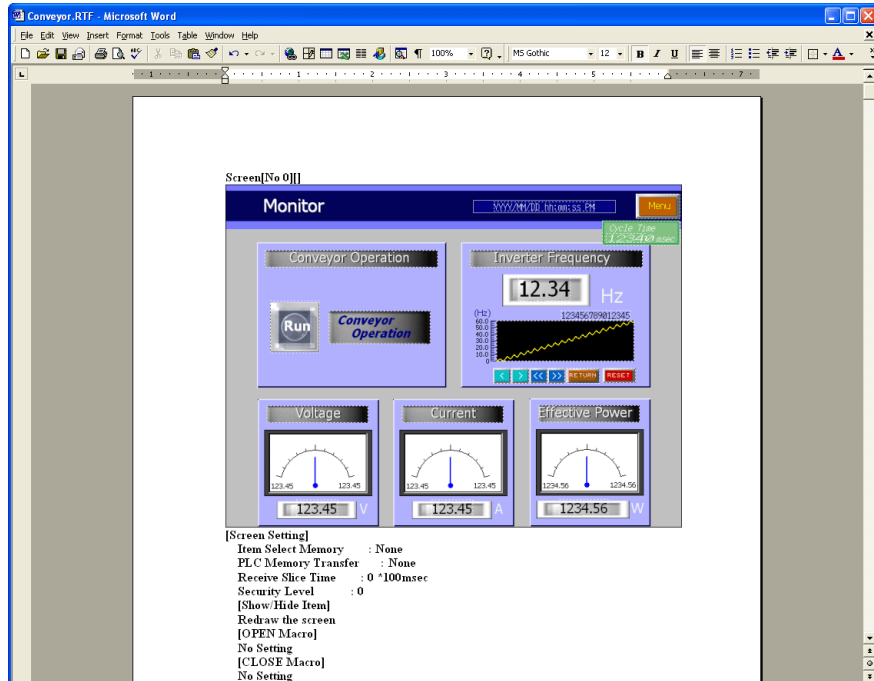
3. Click [Paste] from the [Edit] menu.  
The copied image is pasted on the Word document.



## Converting to Rich Text Format

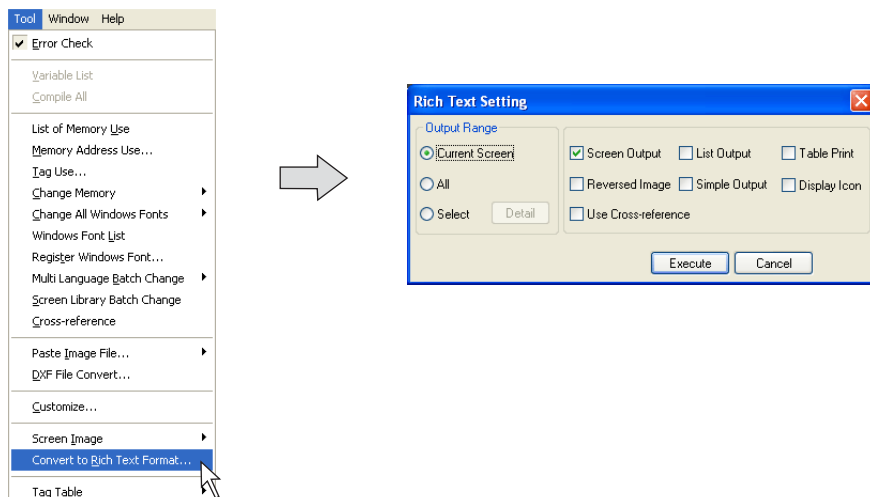
The contents of the screen data file can be converted to the Rich Text file (with a extension [.rtf]) as the same image as printing from the editor.

This function makes it possible to check the screen setting or the image picture and to avoid wasting paper. By using this function, only the necessary data can easily be selected and printed out.



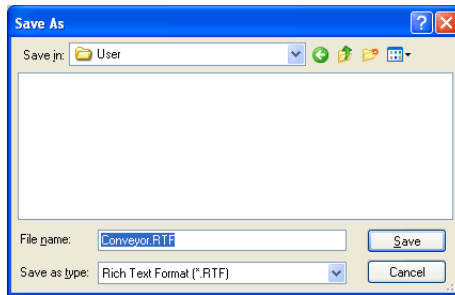
## Operating Procedure

1. Click [Convert to Rich Text Format] from the [Tool] menu.  
The [Rich Text Setting] dialog is displayed.

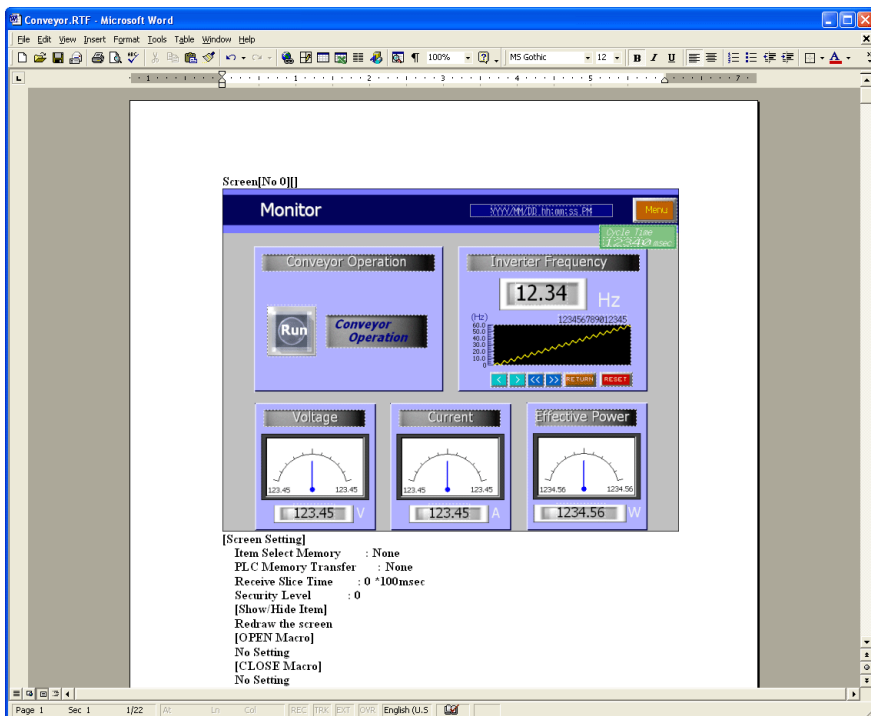


- \* The setting items are almost the same as those in [Print] window selected from the [File] menu.  
For more information, refer to "7 Print" (page 7-1).

2. When the setting is completed, click [Execute].  
The following dialog is displayed:



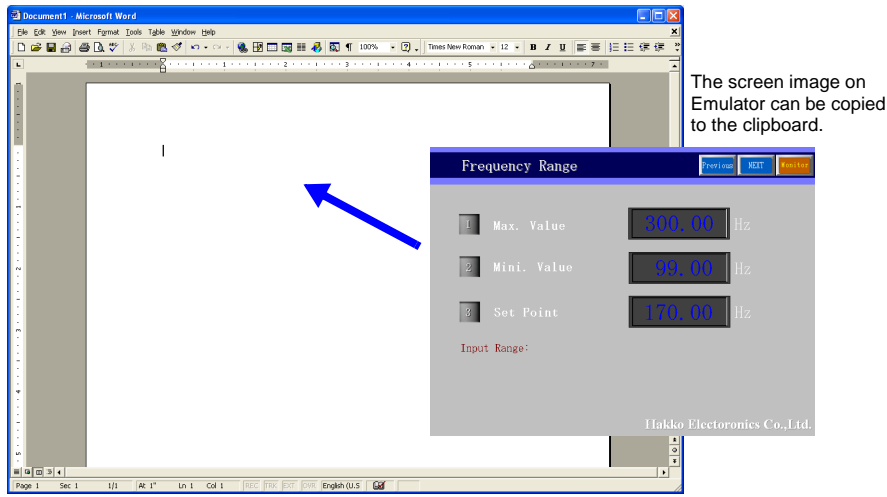
3. Give a name to the file and save it to the desired place in Rich Text format.
4. The Rich Text file saved in step 3. can be opened in Word.



☺ The file size of the Rich Text file made by the editor is much larger because it is not compressed. To reduce the size, open the Rich Text file in Word, and save it as the normal document file (e.g. [.doc]) using the [Save As] command.

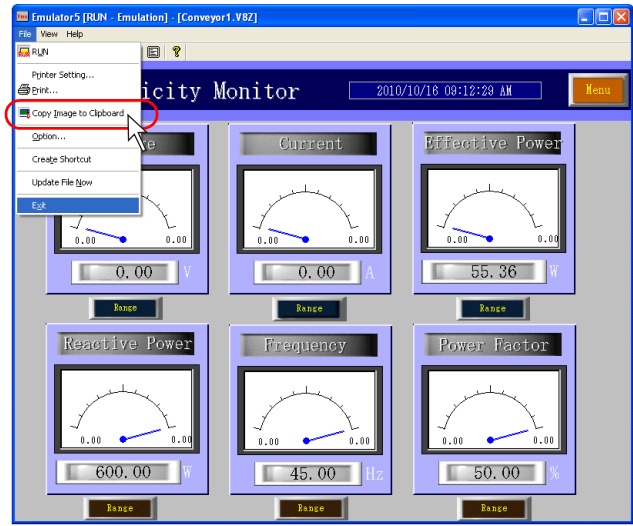
# Emulator

Emulator enables you to easily paste screens used for machine operation to documents in a manual you are creating.



## Copying an Image Displayed on Emulator

1. Open the desired screen on Emulator.
2. Click [File] → [Copy Image to Clipboard] on Emulator.



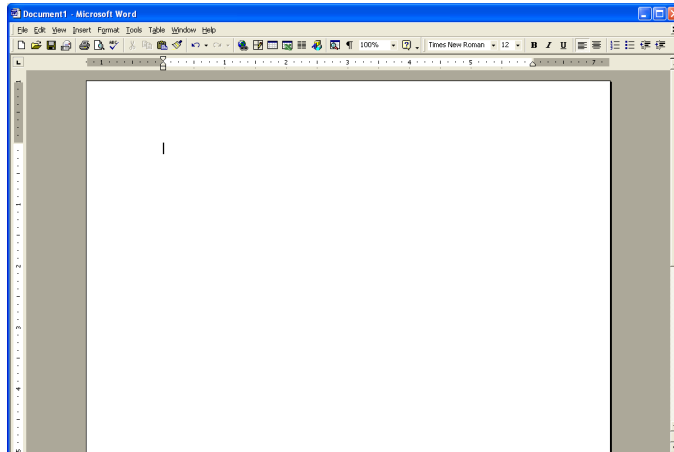
The screen image has been copied to the clipboard.

## Pasting the Copied Image on another Application Software

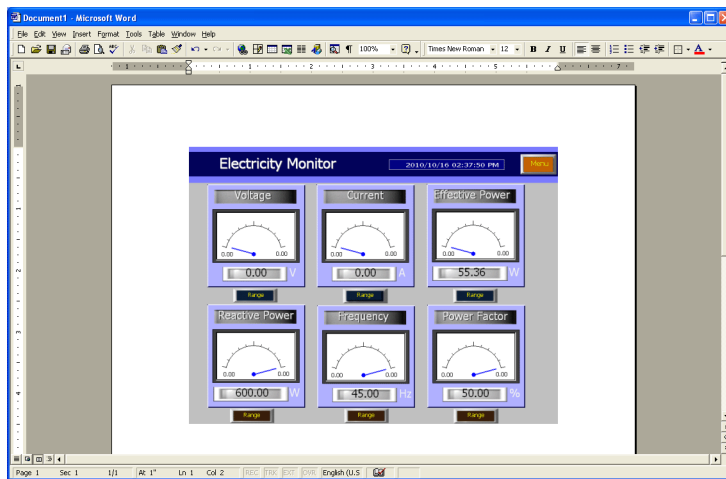
---

Next, paste the copied image in the clipboard on another application software.  
(This section explains how to paste the copied image to the screen of Microsoft Office Word.)

1. Start up the Word software.
2. Move the cursor to the position to place the copied image.



3. Click [Edit] → [Paste].  
The copied image in the clipboard is pasted on the Word document.

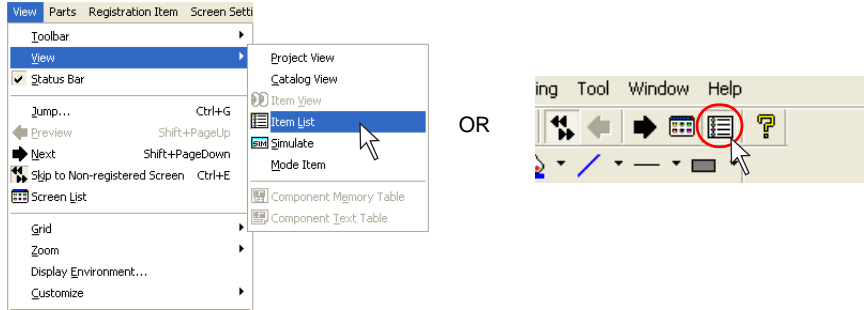


## 8.4 Item List

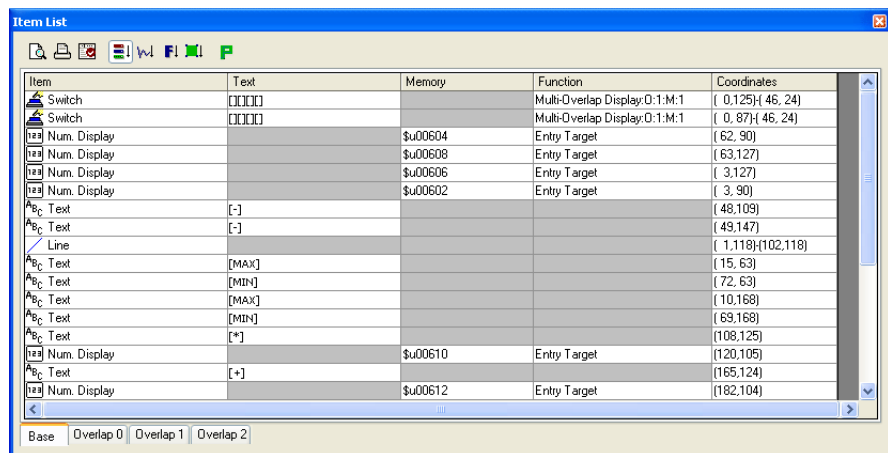
Items used on the editing screen can be listed.

### Display Method

1. Click [View] → [View] → [Item List], or click the [Item List] icon.

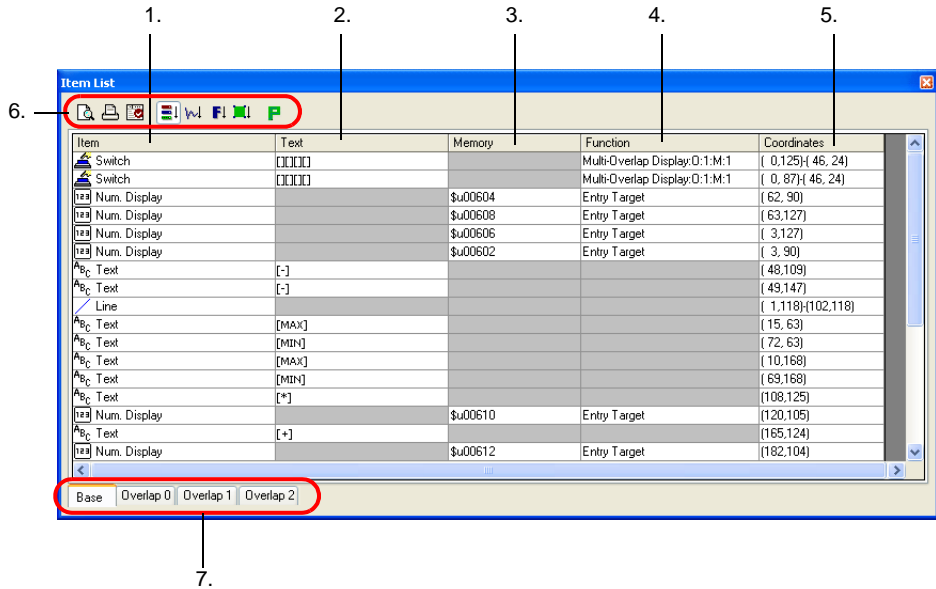


2. The [Item List] window is displayed.



## Item List Window

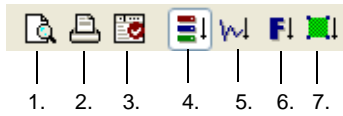
### Configuration

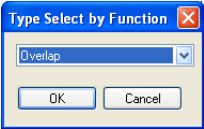


1. Item	Displays item name.
2. Text	Displays the text given to switch, lamp, or text items.
3. Memory	Displays the memory address assigned to the item.
4. Function	Displays the function of the item.
5. Coordinates	Displays the coordinates of the item placed.
6. Icon menu	Refer to the next page.
7. Tab window	There are four tab windows; [Base], [Overlap 0], [Overlap 1] and [Overlap 2]. Displays items registered in each area.



## Icon Menu



1. Print Preview	Allows you to preview the item list to be printed.
2. Print Current Window	Prints the item list.
3. Display Setting	Allows you to select items to be displayed on the item list in your specified order.
4. By Registration	Sorts items in the order of registration.
5. By Graphic	Displays only graphic items.
6. By Function	Displays only the items of the selected function. 
7. Selected Item	Displays only items selected on the base screen.

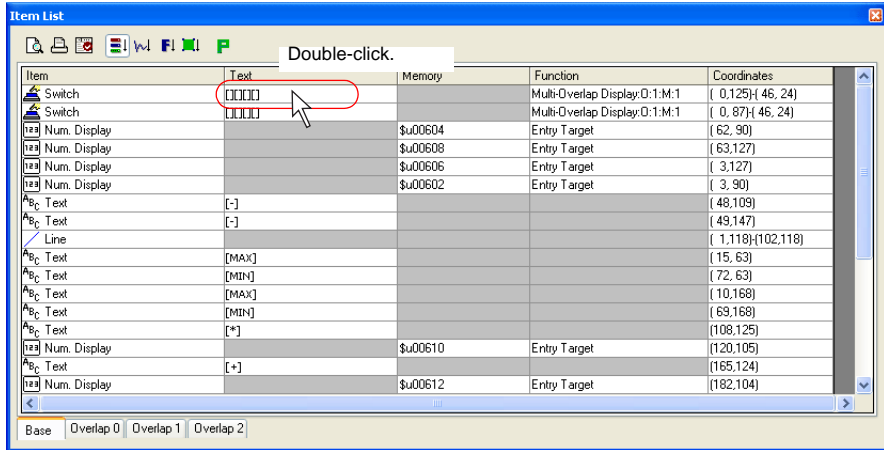
# Operation Procedure

## Text Change

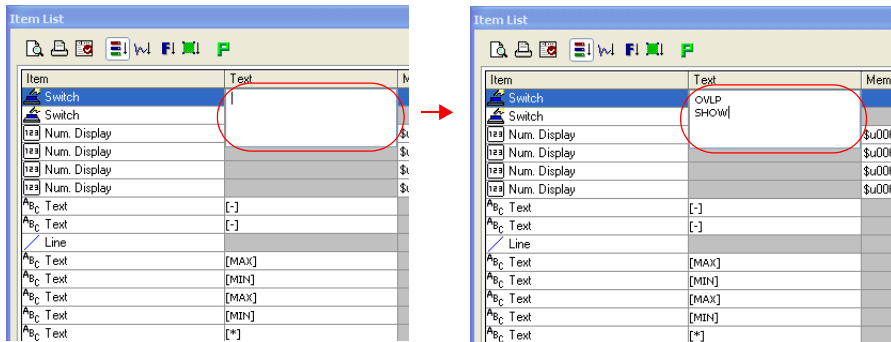
Text given to an item can be changed in the [Text] column on the item list.

### [Item]: Switch/Lamp

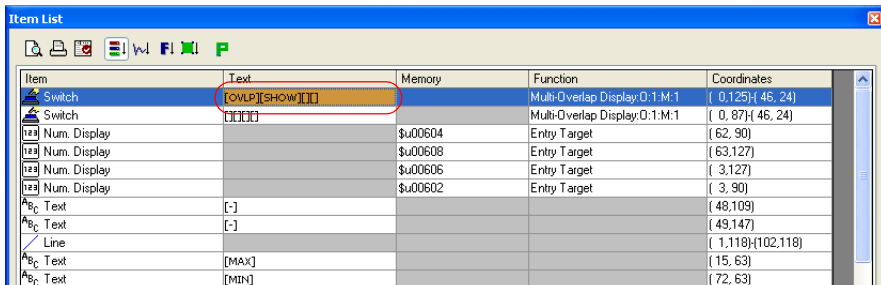
1. Double-click the [Text] cell of your target switch or lamp.



2. Text entry is now allowed in the cell. Key in text as desired.  
The maximum permissible number of characters per line varies with the size of the target switch or lamp.

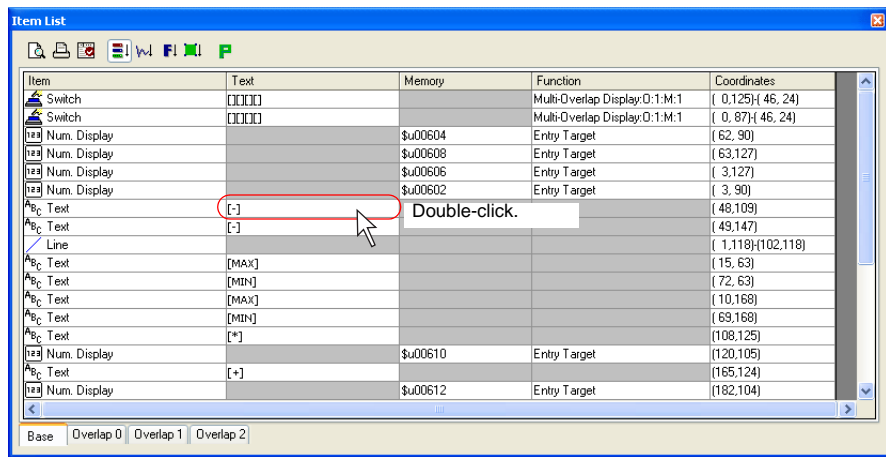


3. The text keyed in is put in square brackets line by line.

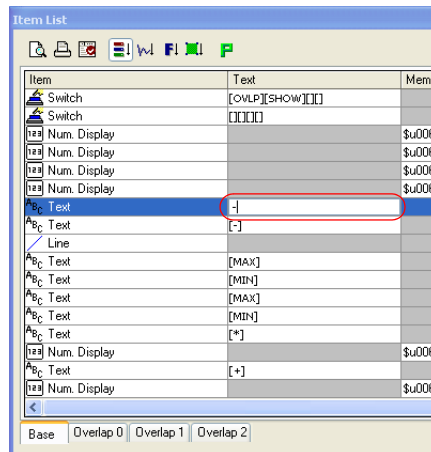
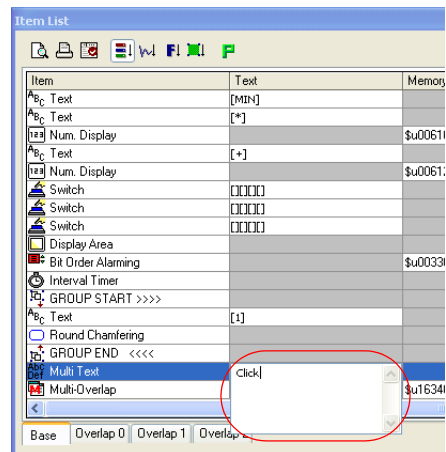


**[Item]: Text/Multi Text**

1. Double-click the [Text] cell of your target text or multi-text item.



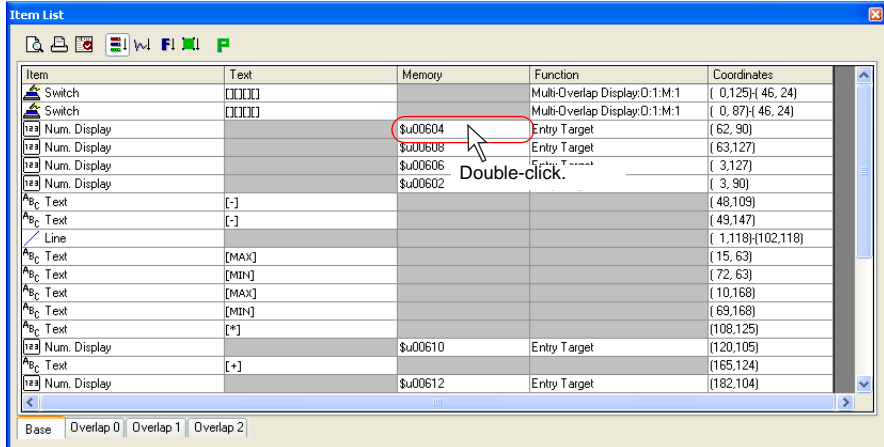
2. Text entry is now allowed in the cell. Key in text as desired.

**[Item: Text]****[Item: Multi Text]**

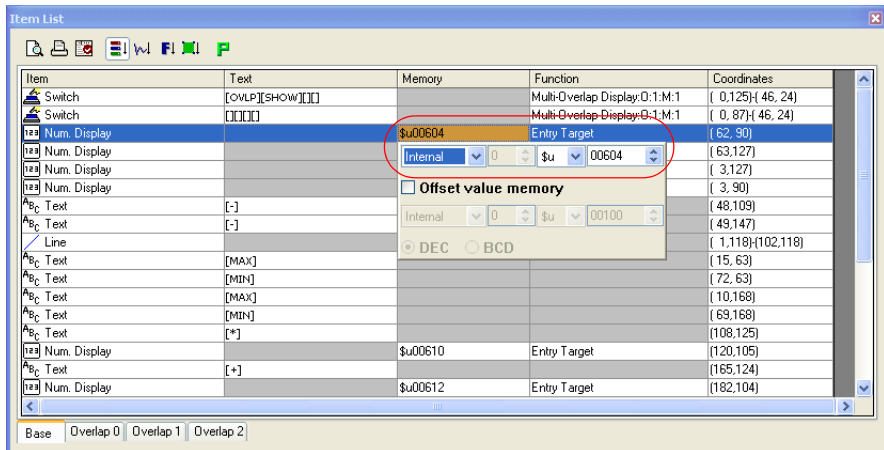
## Memory Change

The memory address assigned to an item can be changed in the [Memory] column on the item list.

1. Double-click the [Memory] cell of the target item.



2. The memory setting fields are displayed. Change the current memory address to the desired location.

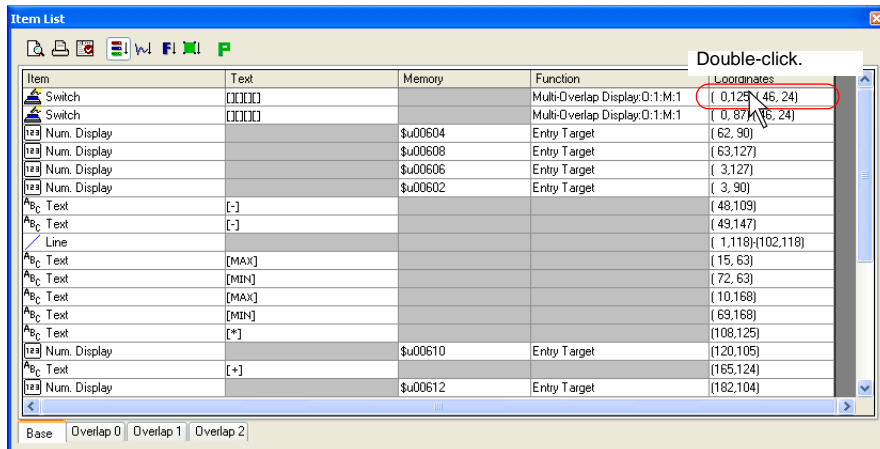


Only the output memory is valid for switches.

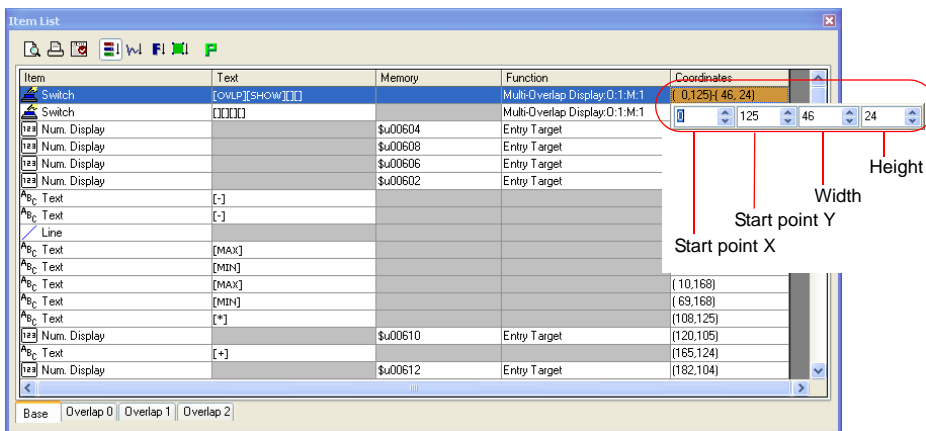
## Coordinate Change

Coordinates specified for an item can be changed in the [Coordinates] column on the item list.

1. Double-click the [Coordinates] cell of the target item.



2. The coordinate setting fields are displayed. Change the current coordinates to the desired values.



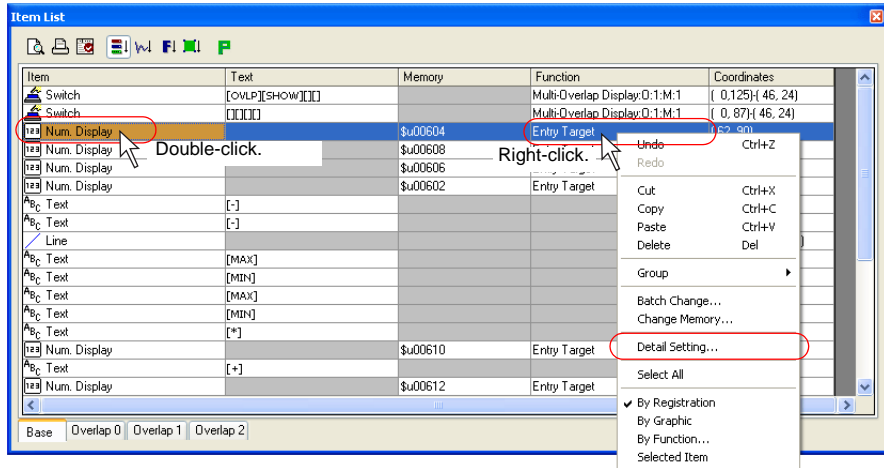
☺ The contents of the coordinate setting fields vary with the kinds of items.

Example:  
 Switch and lamp: start point X, start point Y, width, and height  
 Numerical data display: start point X and start point Y  
 Line: start point X, start point Y, end point X, and end point Y

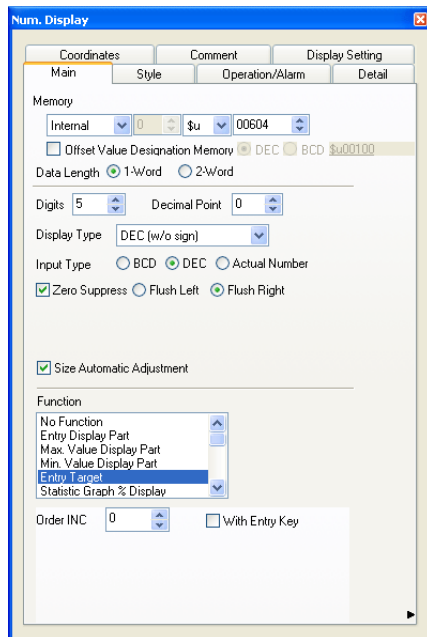
## Display of the Item Dialog

Changes to item settings, except for [Text], [Memory], and [Coordinates], can be made from the item dialog.

1. Double-click the [Item] or [Function] cell of your desired item or click [Detail Setting] in the right-click menu of the item.



2. The item dialog is displayed. Make necessary changes in the dialog.



## 8.5 List of Memory Address in Use

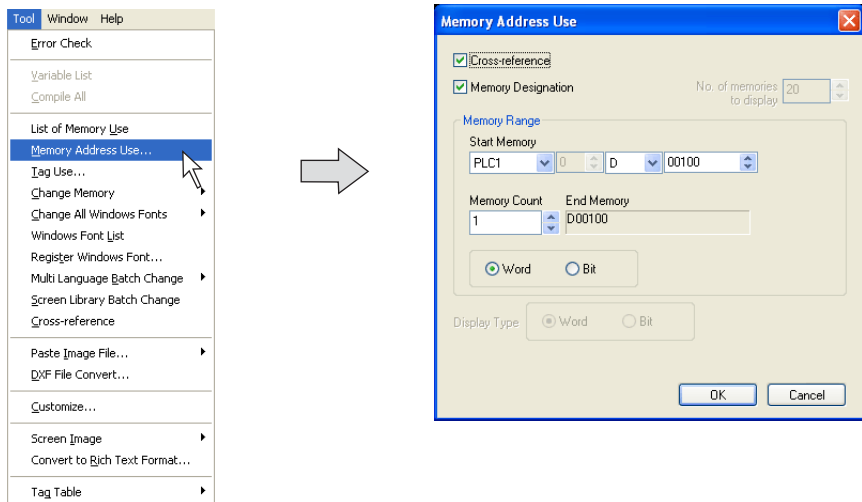
It is possible to search memory addresses used in the file and to find where they are used.

### Operation Procedure

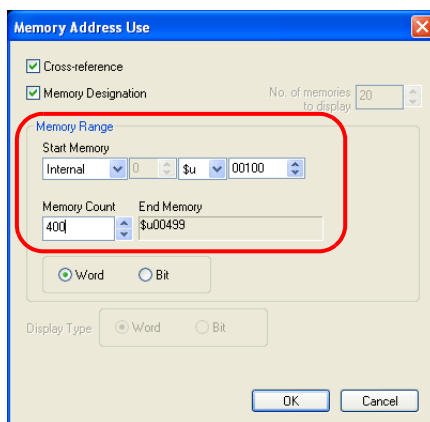
#### Searching with Memory Range Designated

This section explains how to find where memory addresses of \$u100 to \$u499 (400 words) are used.

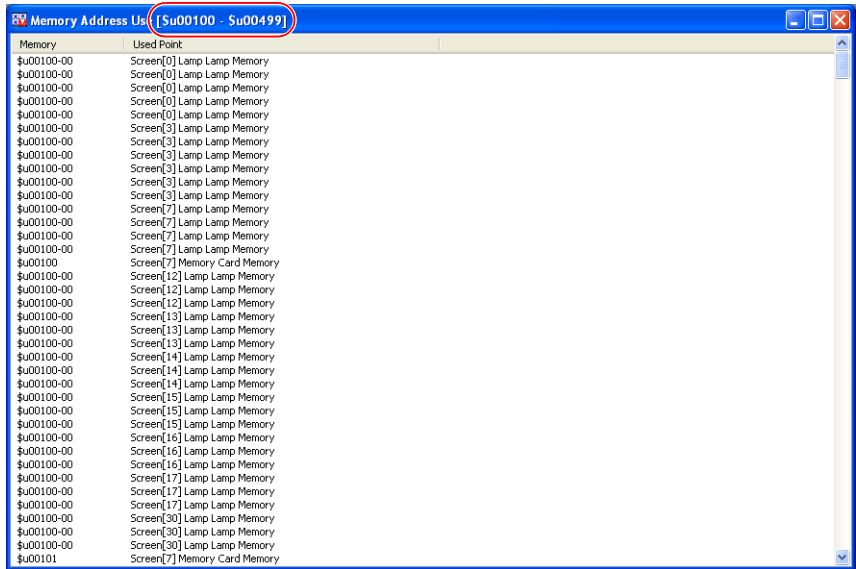
1. Click [Memory Address Use] from the [Tool] menu.  
The [Memory Address Use] dialog is displayed.



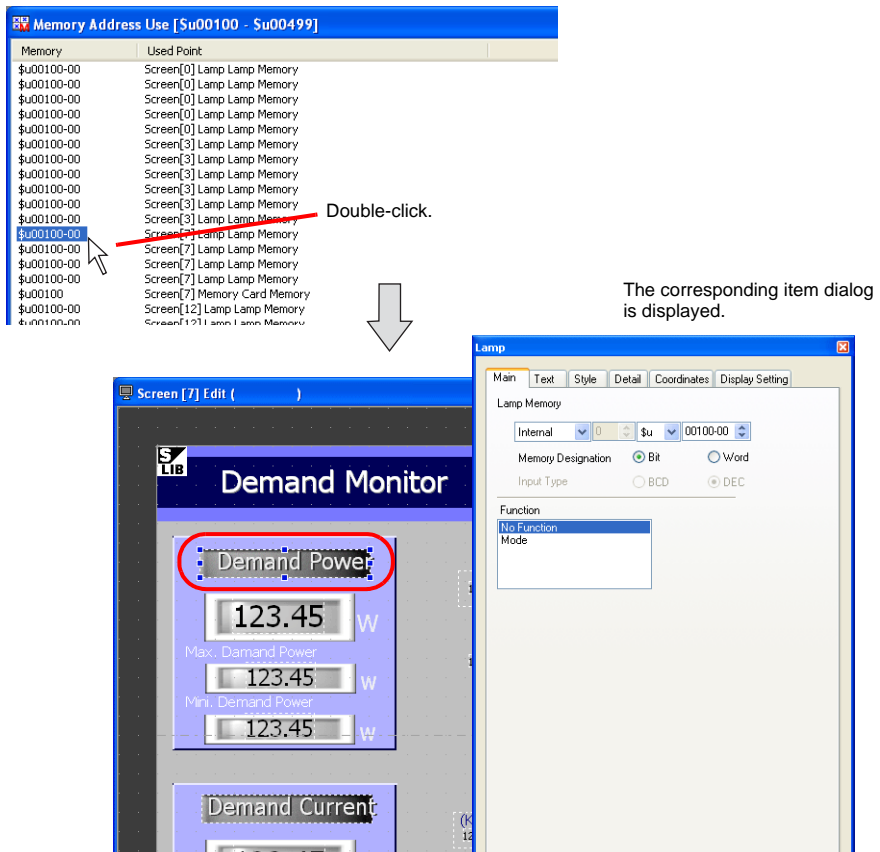
2. Keep [ Cross-reference] checked.
3. Check [ Memory Designation] as well.
4. Specify [\$u100] for [Start Memory] and [400] for [Memory Count].



- Click [OK]. The list of memory addresses within the specified range is displayed in the [Memory Address Use] window.



- Double-clicking the item in the list displays the corresponding screen or item dialog.

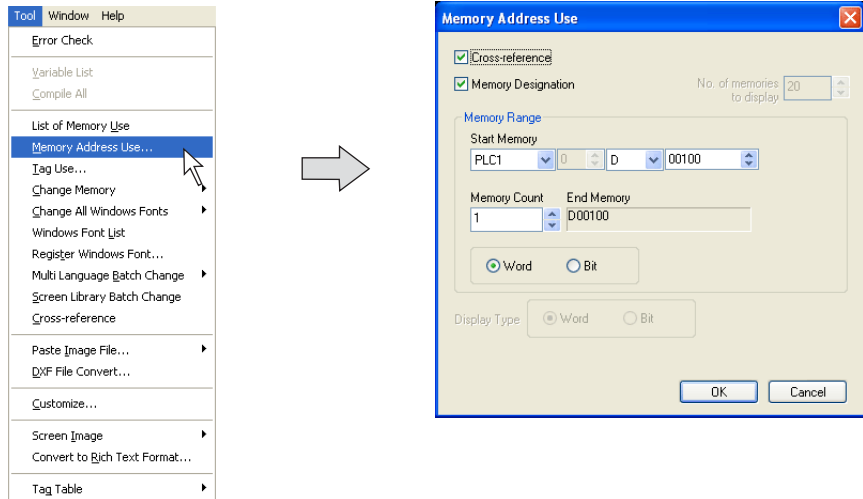




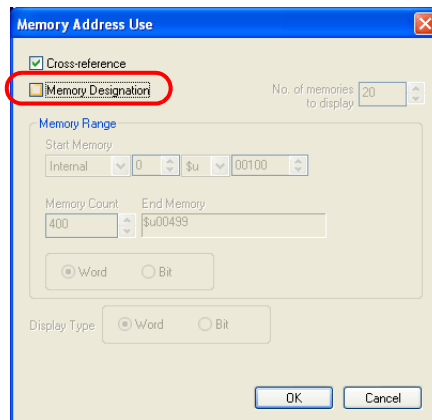
## Searching the Whole File

This section explains how to find which memory is used and where it is allocated in the whole file.

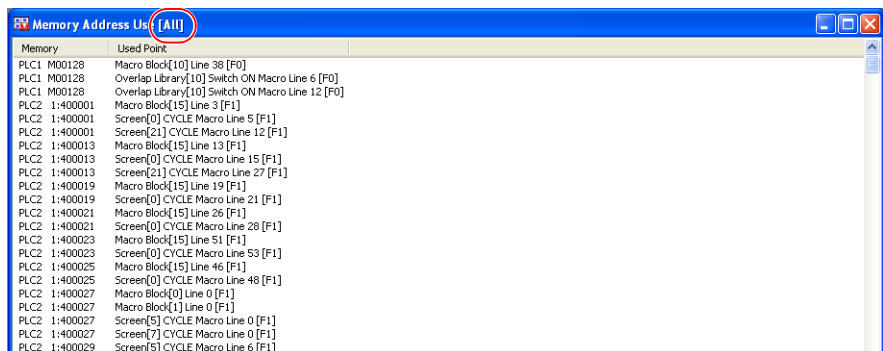
1. Click [Memory Address Use] from the [Tool] menu.  
The [Memory Address Use] dialog is displayed.



2. Uncheck [ Memory Designation].



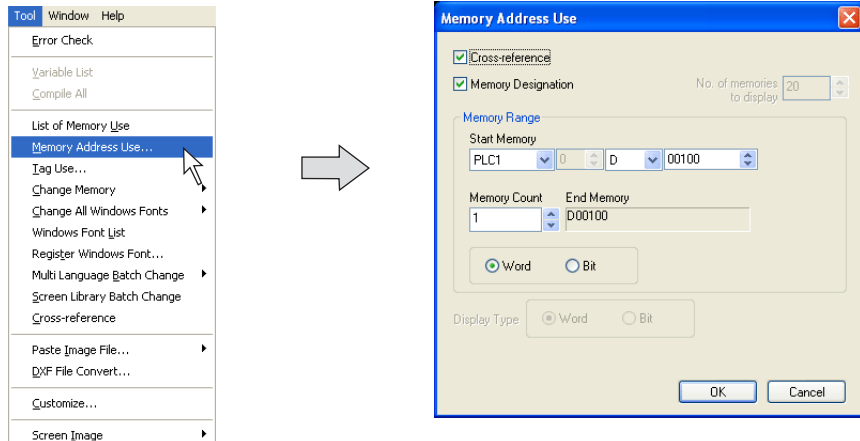
3. Click [OK].  
The memory address list of the whole file is displayed in the [Memory Address Use] window.



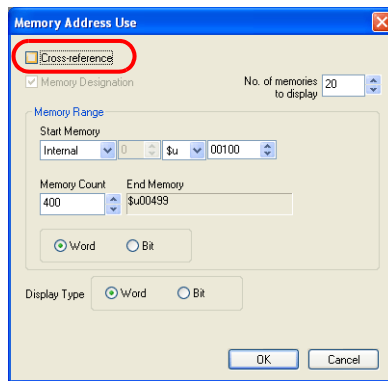
## When [Cross-reference] Is Not Checked:

The following procedures show how the [Memory Address Use] window displays the list when  [Cross-reference] is unchecked.

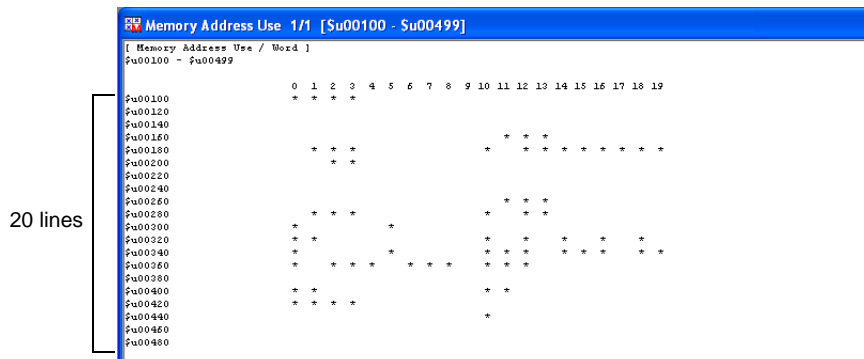
1. Click [Memory Address Use] from the [Tool] menu.  
The [Memory Address Use] dialog is displayed.



2. Remove the check mark from  [Cross-reference].  
When [No. of memory to display] becomes active, select the desired number.  
Also, specify the desired range of available memory in the [Memory Range] field.



3. Click [OK].  
The memory address list within the specified range is displayed in the [Memory Address Use] window.



## 8.6 Customizing the Toolbar

### Overview

On the default toolbar, parts are randomly placed regardless of your preference or the frequency of use.

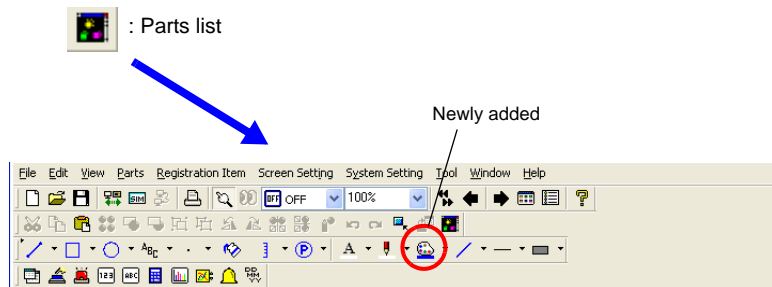
The V-SFT editor supports the toolbar customizing function, thus, icons on the toolbar can be added, changed, or deleted.

You can arrange the toolbar to suit your preference and enhance its usability.

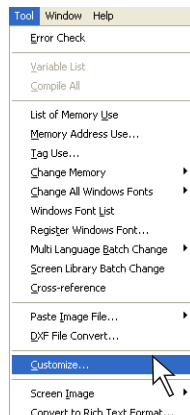
### Icon

#### How to Add

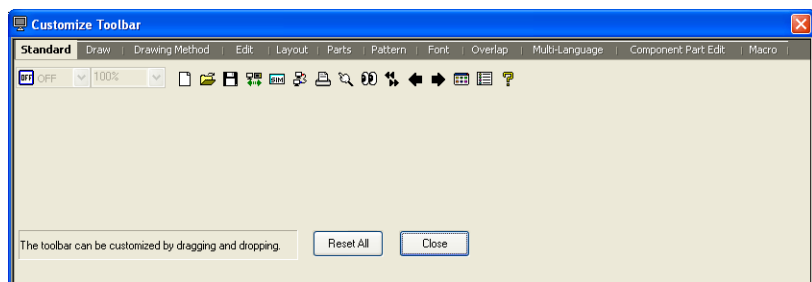
This section explains how to add the [Parts List] icon (= [Parts] → [Parts List]) to the extreme right of the [Edit] toolbar as an example.



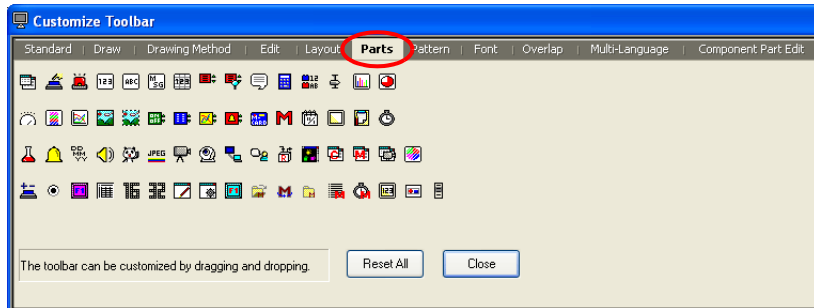
1. Click [Customize] from the [Tool] menu.



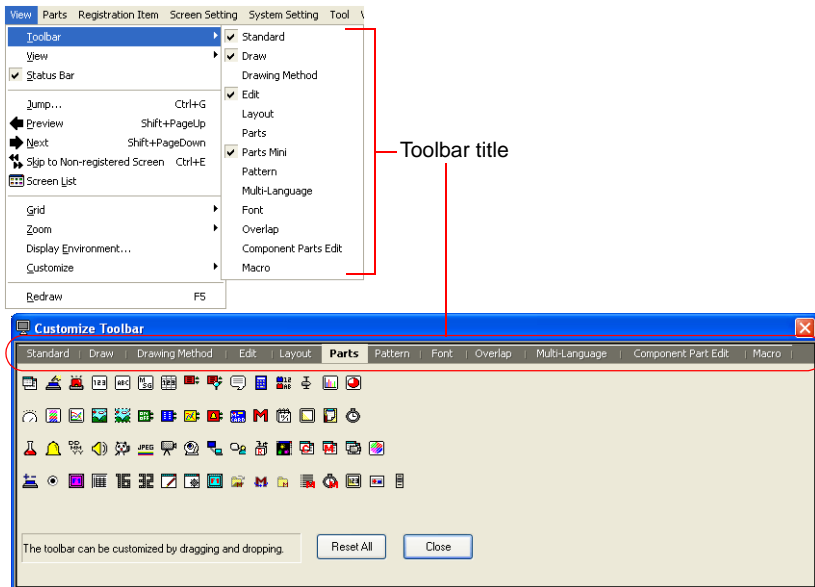
2. The [Customize Toolbar] dialog is displayed.



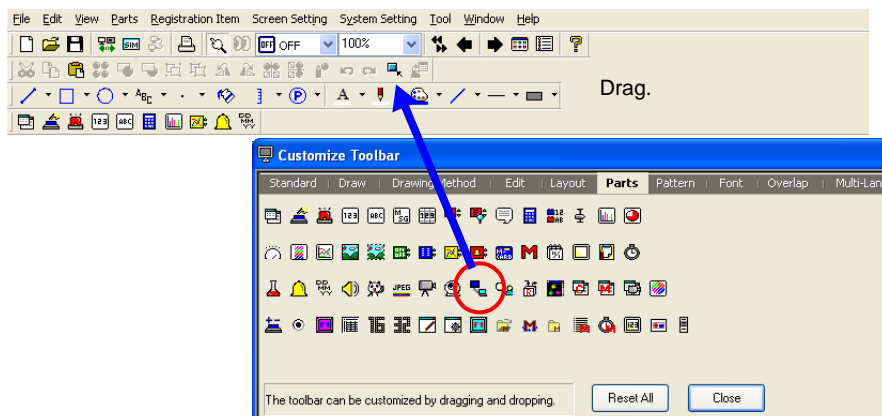
3. Click the [Parts] tab window.  
Icons related to the [Parts] toolbar are listed.



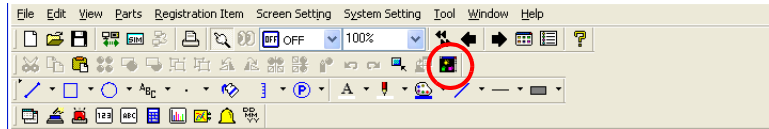
Each tab window in the [Customize Toolbar] dialog is equivalent to the titles selected from [Toolbar].



4. You can add the desired icon on the toolbar by dragging and dropping.  
Click the [Parts List] icon and drag it to the extreme right of the [Edit] toolbar.



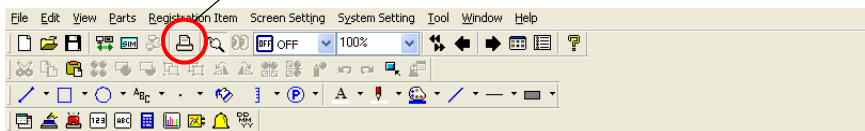
- When the mouse is released, the [Parts List] icon is added to the toolbar.



## How to Delete

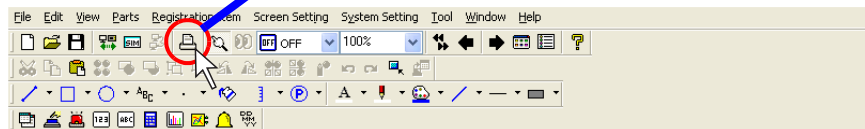
As an example, delete the [Print] icon on the [Standard] toolbar.

Delete.

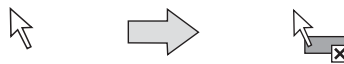


- Hold down the Alt key and drag the [Print] icon out of the toolbar.

Hold down the Alt key and drag the icon out of the toolbar.

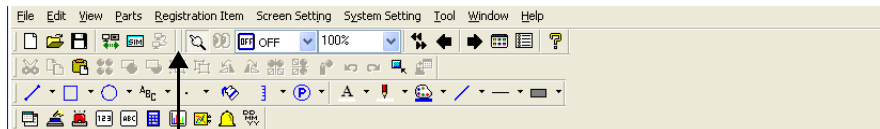


When the icon can be removed, the cursor shape is changed as shown below.



When the icon is dragged out of the toolbar while the Alt key is held down.

- The [Print] icon disappears.

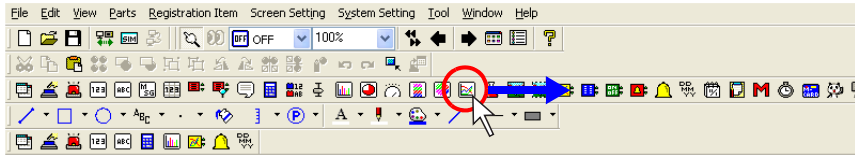


The [Print] icon is removed.

## How to Change Order

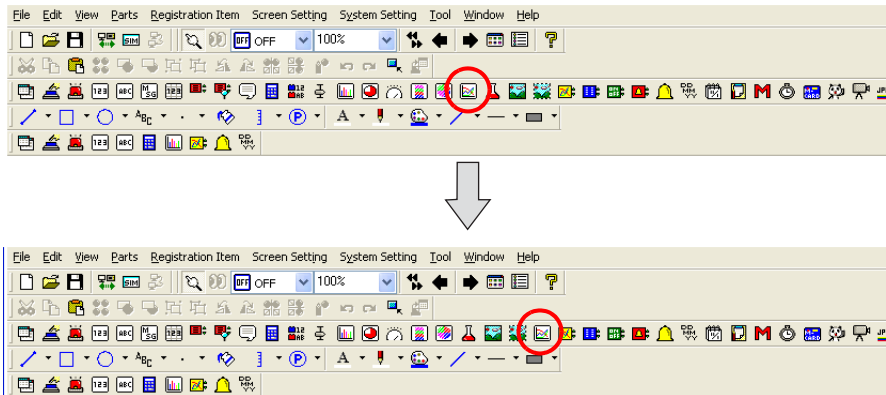
This section explains how to change the order of icons on the [Parts] toolbar as an example.

1. Hold down the Alt key and drag the [Trend] icon toward the desired direction.



Hold down the Alt key and drag the icon toward the desired direction.

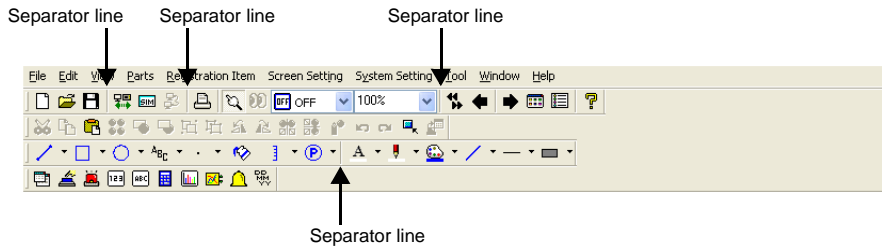
2. The [Trend] icon is moved to the dragged point.



## Separator Line

### What Is “Separator Line”?

The toolbar can be vertically separated with a line.  
This line is called a “separator line” in this section.

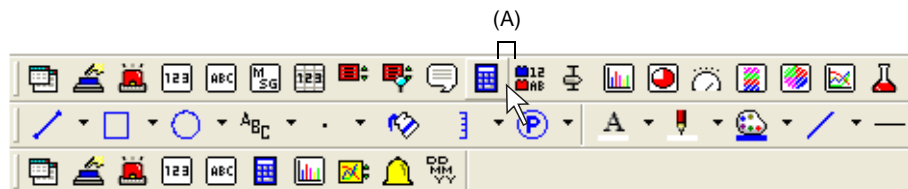


This section describes how to add or delete a separator line.

### How to Add

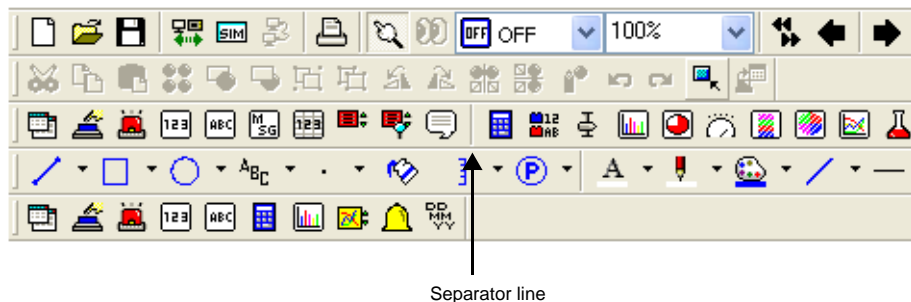
This section explains how to add a separator line between the [Message] icon and the [Entry] icon on the toolbar as an example.

1. Hold down the Alt key and click the right side (indicated as “A”) of the [Entry] icon.



Click the position marked “A” while holding down the Alt key.

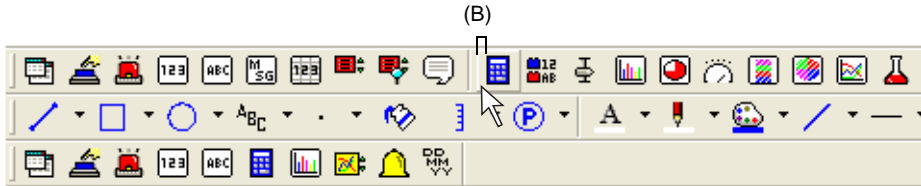
2. The separator line is displayed on the left of the [Entry] icon.



## How to Delete

This section explains how to delete the separator line added between the [Message] icon and the [Entry] icon on the toolbar as an example.

1. Hold down the Alt key and click the left side (indicated as "B") of the [Entry] icon.



Click the position marked "B" while holding down the Alt key.

2. The separator line displayed on the left of the [Entry] icon is deleted.





## 8.7 Other Functions in the [Tool] Menu

### [Tool] Menu

The [Tool] menu provides the following functions:

Tool	Uses	Refer to:
Error Check	Current editing files are checked for errors.	page 8-64
List of Memory Use	Memory capacity available on the current editing file is displayed.	page 8-67
Memory Address Use	Memory addresses used in the current editing file are displayed.	page 8-53
Change Memory	Memory addresses used in the current editing file are changed.	page 8-69
Windows Font Change All	The current setting for Windows fonts is changed at one time.	*1
Windows Font List	Windows font names used in the current editing file are listed.	*1
Register Windows Font	Windows fonts used for text and registered in the current editing file are checked and changed.	*1
Paste Image File	Image files (with extension of “bmp”, “jpg” or “jpeg”) are imported as patterns.	*2
DXF File Convert	DXF files are imported as graphics.	page 8-73
Customize	Contents of the toolbar are arranged as desired.	page 8-57
Screen Image (Save as Pattern Image)	The current screen image is registered as patterns.	page 8-75
Screen Image (Copy to Clipboard)	The current screen image is copied to the clipboard.	page 8-38
Convert to Rich Text Format	The printing image of a screen data is saved as a Rich Text file format.	page 8-41
Tag Table	Set the tag table when using Allen Bradley’s Control Logix.	*3

\*1 For more information on the Windows fonts, refer to “Windows Font” (page A1-29) described in “Appendix 1 Font”.

\*2 For more information on pasting screen image, refer to “Image File Import and Storage” (page 5-50) described in “5.10 Pattern”.

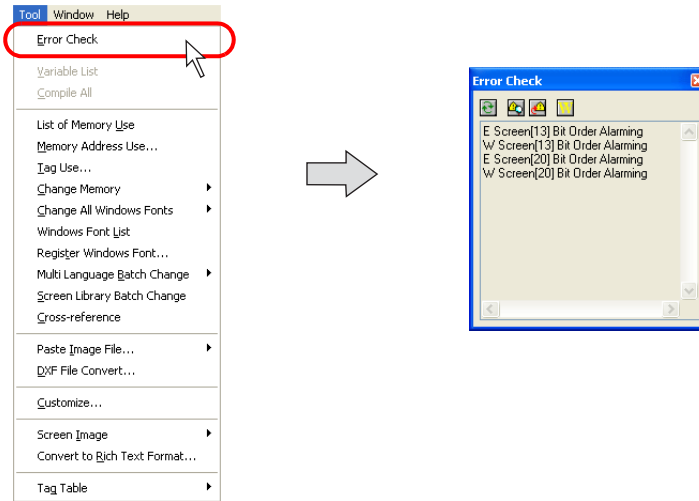
\*3 For more information, refer to the manual “Connection to A • B Control Logix.”

## Error Check

The files can be checked for errors. If any error is found, its cause and remedies are displayed.

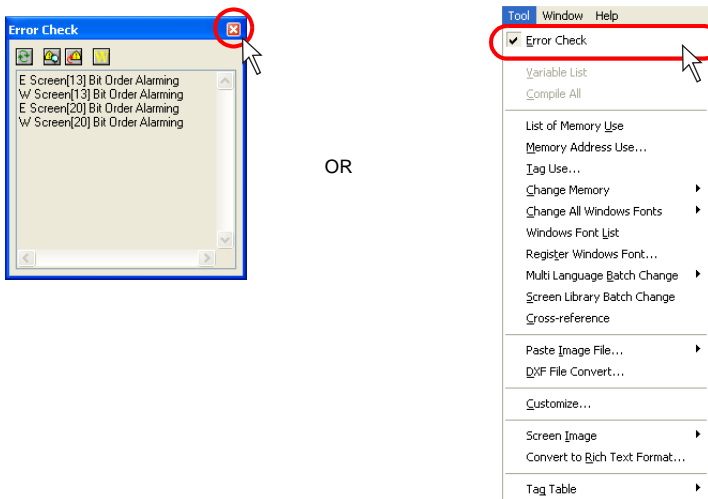
### Operating Procedure

1. Select [Error Check] from the [Tool] menu.
2. The check result is indicated in the [Error Check] window.



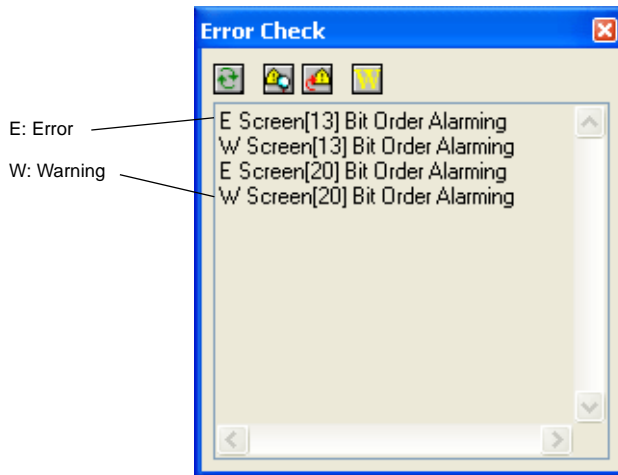
When no error is found, "No Error" is displayed.

3. To close this window, click the [x] (Close) button at the upper right, or the click the [Error Check] in the [Tool] menu again to remove a check mark.



## Reading the Error Check List

When an error occurs, the following [Error Check] window is displayed.



### Difference between error and warning

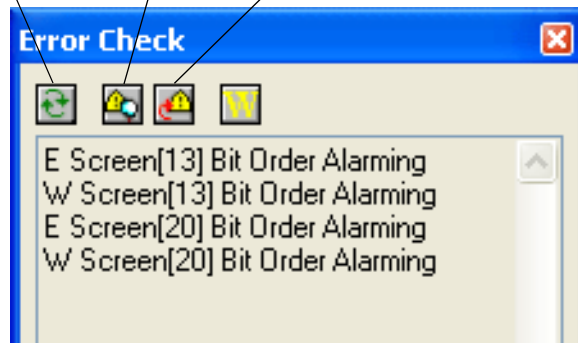
[E] denotes an error. If you attempt to transfer data indicated with [E] to MONITOUCH, "Data has some error." is displayed and MONITOUCH may not be in the RUN mode, or not work correctly. Be sure to transfer data when no errors are present.

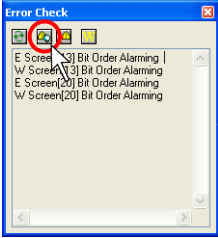


[W] denotes a warning. This is a moderate error that is detected due to a discrepancy in settings but does not cause any problem in operation of MONITOUCH.

### Icon menu

The following icons are displayed in the [Error Check] window.

Error Check Update      Error Details      Jump to Error Item



Error Check Update	The latest error information is displayed.
Error Details	<p>Clicking an error message in the list brings up a cursor. Then, click the [Error Details] icon. The detail of the error is displayed.</p> <div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Click the [Error Details] icon while the cursor is displayed.</p>  </div> </div> 
Jump to Error Item	It is possible to jump to the error occurring position.

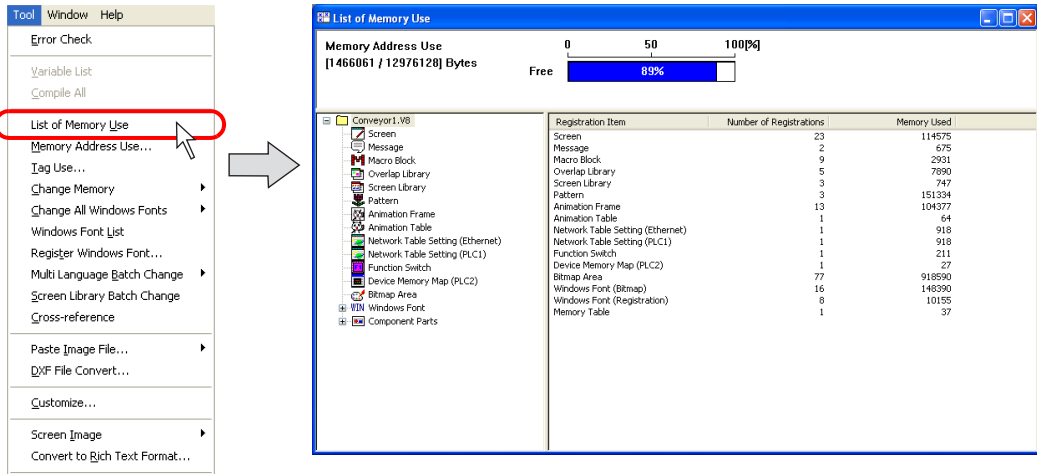
## List of Memory Use

This window indicates the remaining memory and items registered in screen data files.

### Operating Procedure

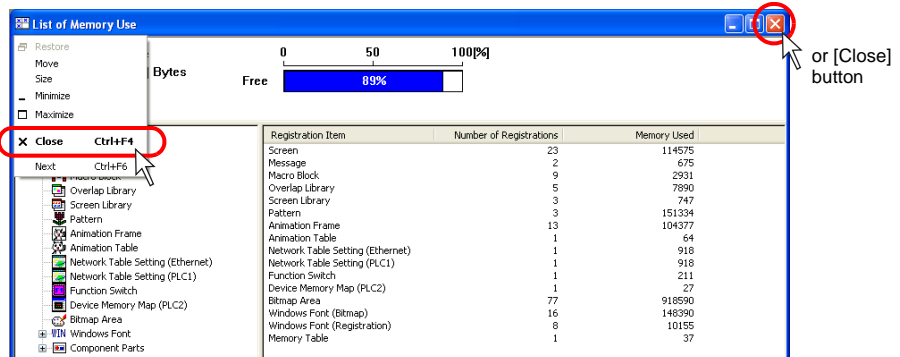
#### Opening/closing the list of memory use

1. Click [List of Memory Use] from the [Tool] menu.
2. The [List of Memory Use] window is displayed.



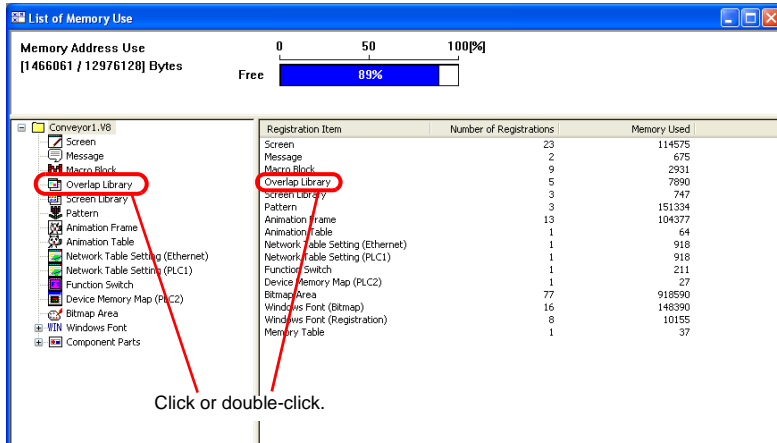
- The [Memory Used] is expressed in the number of bytes.
- Bitmap area  
This is a bitmap data to be used for 3D parts or custom parts.

3. To close the window, click the [X] (Close) button at the upper right, or the click the upper left icon and select [Close].

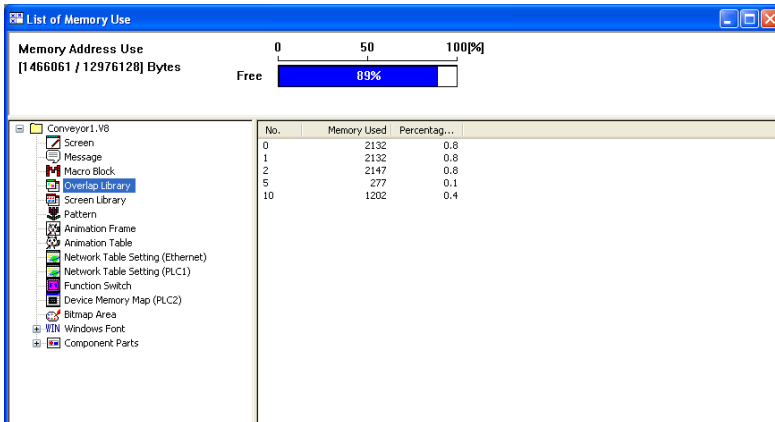


### Bringing up the detailed list of edit items

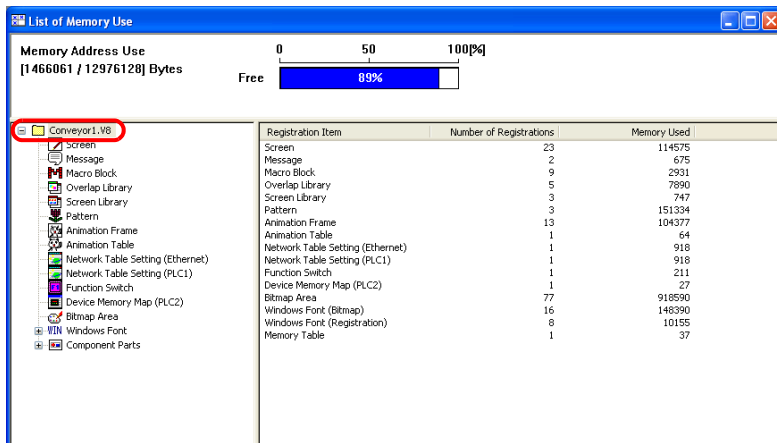
1. Click the box of the desired item on the left of the [List of Memory Use] window, or double-click the registered item on the right of the window.



2. The registered item list is displayed.



3. To restore the window, click the file name displayed at the top left corner.



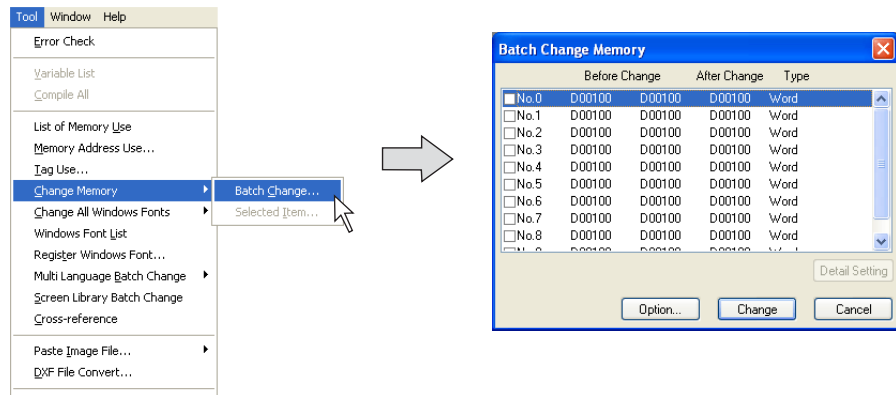
## Changing Memory

### Changing All Memory

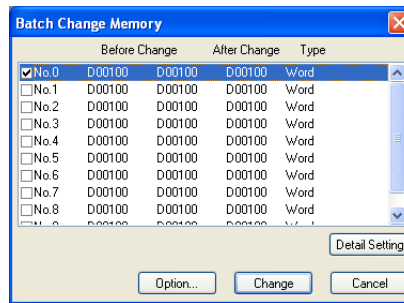
Memory addresses allocated to the current editing file can be changed in a batch. Up to 10 different memory ranges can be defined.

#### Operating procedure

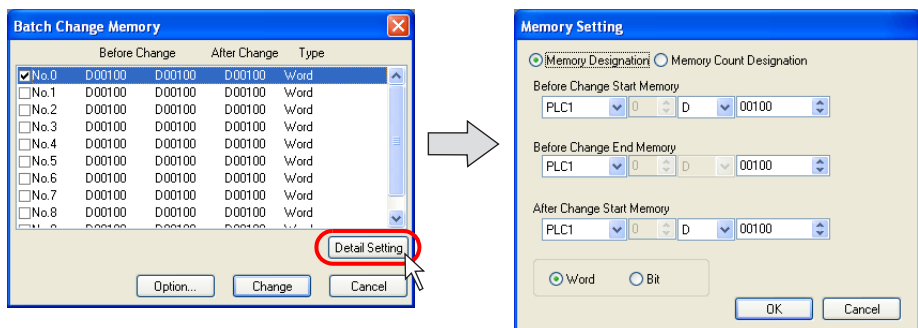
1. Click [Tool] → [Change Memory] → [Batch Change].
2. The [Batch Change Memory] dialog is displayed.



3. Click on the check box for the desired number. The [Detail Setting] button is enabled.



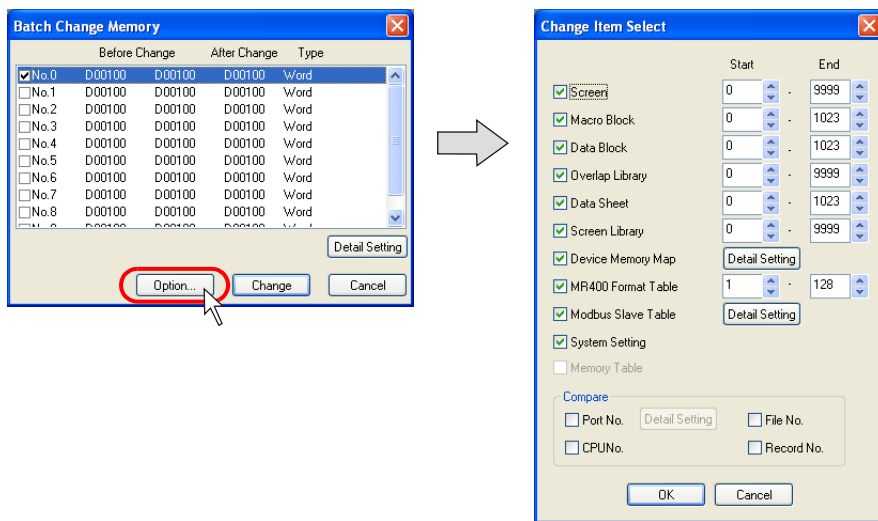
4. Click the [Detail Setting] button. The [Memory Setting] dialog is displayed.



5. Choose [Bit] or [Word]. Memory change is performed in units of bits or words as selected.
6. Enter the first address of the memory addresses to be changed for [Before Change Start Memory] Likewise, enter the last address of the memory addresses to be changed for [Before Change End Memory].
7. Enter the desired first address after change for [After Change Start Memory] in the same manner.
8. When settings are completed, click [OK]. The former [Batch Change Memory] dialog is displayed again.
9. Click [Option] and select items of which memory addresses should be changed. For more information, refer to the next section.
10. Click [Change]. The specified memory addresses are changed in a batch.

### Option setting

Clicking the [Option] button in the [Batch Memory Change] dialog brings up the following [Change Item Select] dialog.



<input type="checkbox"/> Screen <input type="checkbox"/> Macro Block <input type="checkbox"/> Data Block <input type="checkbox"/> Overlap Library <input type="checkbox"/> Data Sheet <input type="checkbox"/> Screen Library <input type="checkbox"/> Device Memory Map <input type="checkbox"/> MR400 Format Table <input type="checkbox"/> Modbus Slave Table <input type="checkbox"/> System Setting	Check the options targeted for memory change. For specifying the range of memory addresses, enter the desired numbers for [Start] and [End].
<input type="checkbox"/> Memory Table	This option is used for component parts.
<input type="checkbox"/> Port No.	This option is valid when [1:n] (multi-drop) is selected for [Connection Mode]. Check this option to include the port numbers of PLC1 - PLC8 in targets for memory change.
<input type="checkbox"/> CPU No.	Check this option when a CPU number is set for the connected device.
<input type="checkbox"/> File No. <input type="checkbox"/> Record No.	Check these options to include memory card addresses in targets for memory change.

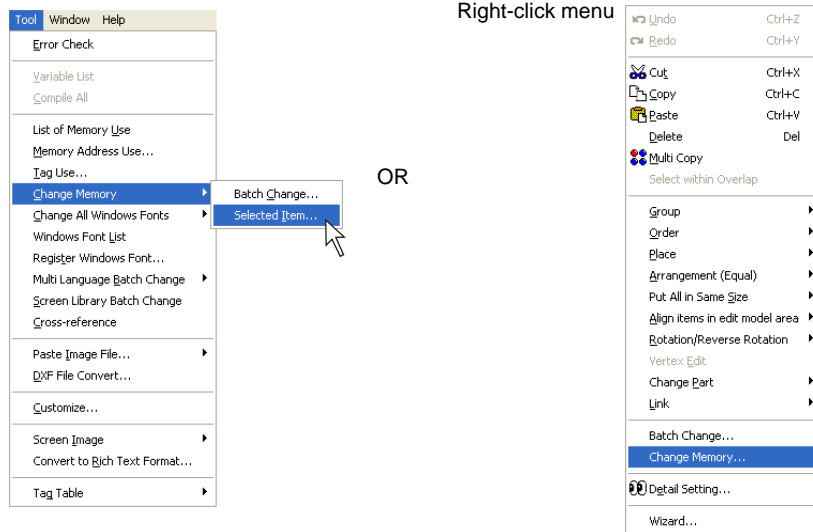


## Changing Memory of Selected Items Only

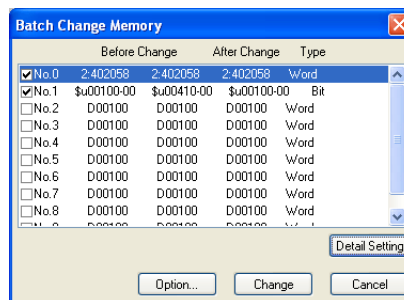
Memory addresses of the selected screen items in the current editing file can be changed simultaneously.

### Operating procedure

1. Select the desired items for memory change.
2. Click [Tool] → [Change Memory] → [Selected Item], or click [Change Memory] in the right-click menu.



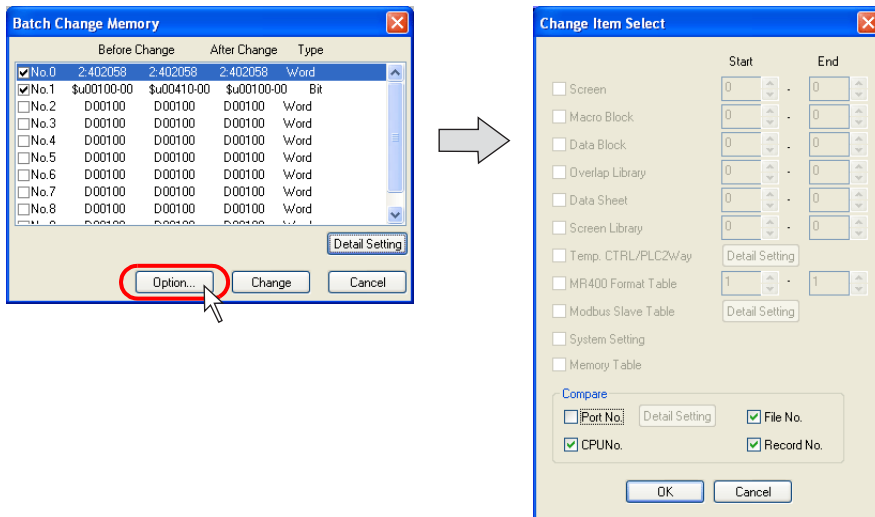
3. The [Batch Change Memory] dialog is displayed. The memory addresses assigned to the selected items automatically appear in the dialog.



4. Click on the check box for the desired number. The [Detail Setting] button becomes enabled.
5. Click the [Detail Setting] button. The [Memory Setting] dialog is displayed.
6. Choose [Bit] or [Word]. Memory change is performed in units of bits or words as selected.
7. Enter the first address of the memory addresses to be changed for [Before Change Start Memory]. Likewise, enter the last address of the memory addresses to be changed for [Before Change End Memory].
8. Enter the desired first address after change for [After Change Start Memory] in the same manner.
9. When settings are completed, click [OK]. The former [Batch Change Memory] dialog is displayed again.
10. Click [Option] and select items of which memory addresses should be changed. For more information, refer to the next section.
11. Click [Change]. The specified memory addresses are changed in a batch.

### Option setting

Clicking the [Option] button in the [Batch Memory Change] dialog brings up the following [Change Item Select] dialog.



<input type="checkbox"/> Port No.	This option is valid when [1:n] (multi-drop) is selected for [Connection Mode]. Check this option to include the port numbers of PLC1 - PLC8 in targets for memory change.
<input type="checkbox"/> CPU No.	Check this option when a CPU number is set for the connected device.
<input type="checkbox"/> File No. <input type="checkbox"/> Record No.	Check these options to include memory card addresses in targets for memory change.

## Windows Font Change All/List/Registration

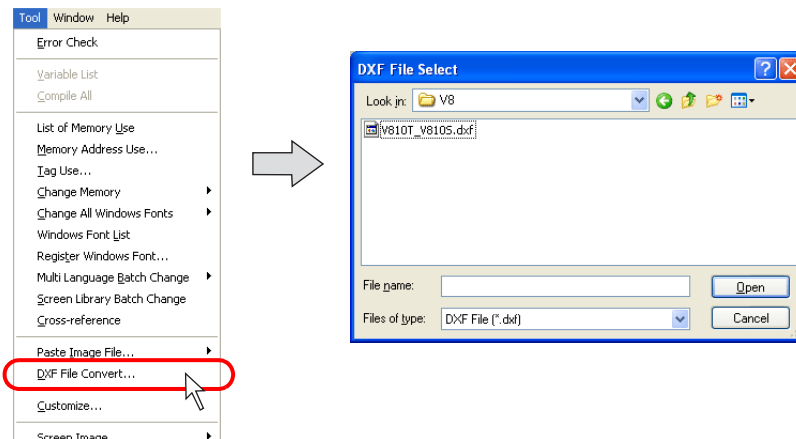
These menus are available when Windows fonts are used.  
 For more information, refer to "Windows Font" (page A1-29) in "Appendix 1 Font".

## DXF File Convert

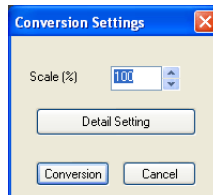
A DXF file can be imported into a screen data file as graphic data.

### Operating Procedure

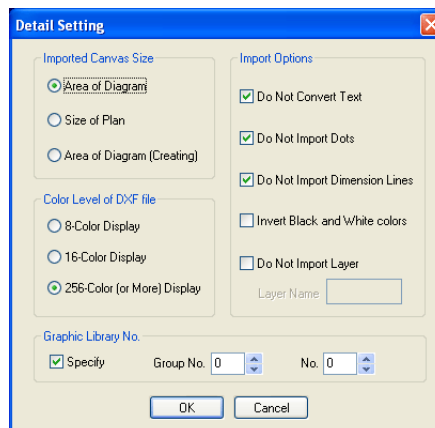
1. Select [DXF File Convert] from the [Tool] menu.  
The [DXF File Select] dialog is displayed.



2. Choose the desired DXF file and click [Open].  
The [Conversion Settings] dialog is displayed.




3. Specify zooming factor. Available range is from 10 to 250%.
4. Click [Detail Setting] and select conditions for importing.  
For more information, refer to the next page.



5. Click [OK].

The cross-shaped cursor with the dot-lined square is displayed.

Clicking any location on a screen shows the converted DXF file as the grouped drawings.



These figures are converted to the drawings in the V-SFT editor. The drawings are grouped. The displayed color depends on the original DXF file. For more information, refer to the next section.

**[Detail Setting] options**

The following items are included.

Imported Canvas Size	
Area of Diagram	Only areas containing graphics are read during file import.
Size of Plan	Drawing sizes are read during file import.
Area of Diagram (Creating)	If the graphics could not be read in the above manner, V-SFT sets an area and the data within the area is read.
Color Level of DXF File	
8-Color Display	Choose the option specified for DXF file creation.
16-Color Display	
256-color (or More) Display	
Import Options	
<input type="checkbox"/> Do Not Convert Texts	Choose whether or not text in DXF file is converted. (1 character is converted into 16 × 16 dots.)
<input type="checkbox"/> Do Not Import Dots	Choose whether or not dots as graphics are ignored.
<input type="checkbox"/> Do Not Import Dimension Lines	Choose whether or not the dimension lines in DXF file are ignored.
<input type="checkbox"/> Invert Black and White Colors	Choose whether or not inverting to black-on-white is executed. (When a file is imported into the V-SFT editor, white-on-black or some other color line is used for display as default.)
<input type="checkbox"/> Do Not Import Layer	Choose whether or not layers not to be converted are specified. Specify the name of such layers instead of their numbers.
Graphic Library No.	
<input type="checkbox"/> Specify	When blocks are used in a DXF file, register them in the graphic library.  Choose this option to specify the graphic library number for which the blocks are registered.

After setting, click [OK].

## Copy Image to Pattern

The screen being displayed on the computer can be registered as a pattern.

A pattern can be pasted to a screen change switch to show the target screen instead of text, or can be used in various ways.

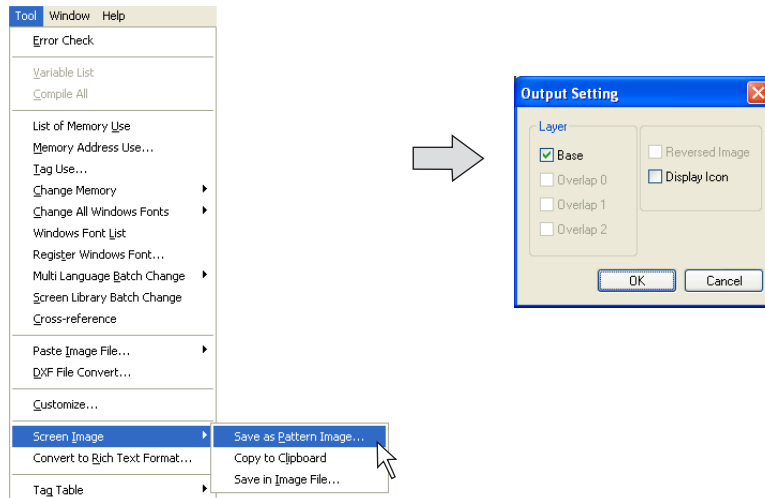


The following items can be registered as patterns:

- Screen
- Graphic library
- Multi-overlap
- Data block
- Screen library

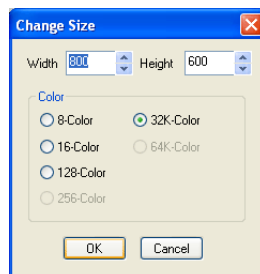
## Operating Procedure

1. Bring up the desired screen.
2. Click [Tool] → [Screen Image] → [Save as Pattern Image].
3. The [Output Setting] dialog is displayed. Check the option you wish to output as a pattern. Click [OK].



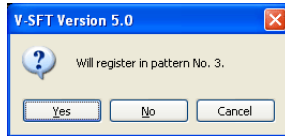
Layer Base Overlap 0 Overlap 1 Overlap 2	Select a layer to be output as a pattern.
Reversed Image	Check this option when you output an image in reverse video.
Display Icon	Check this option when you output the icon of MLIB, SLIB, or entry mode.

4. The [Change Size] dialog is displayed.

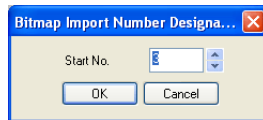


Width Height	Specify the size of the pattern. The maximum permissible size is equivalent to the screen size.
Color 8-Color/16-Color/128-Color/32 K-Color/64K-Color	Select the number of colors usable for the pattern.

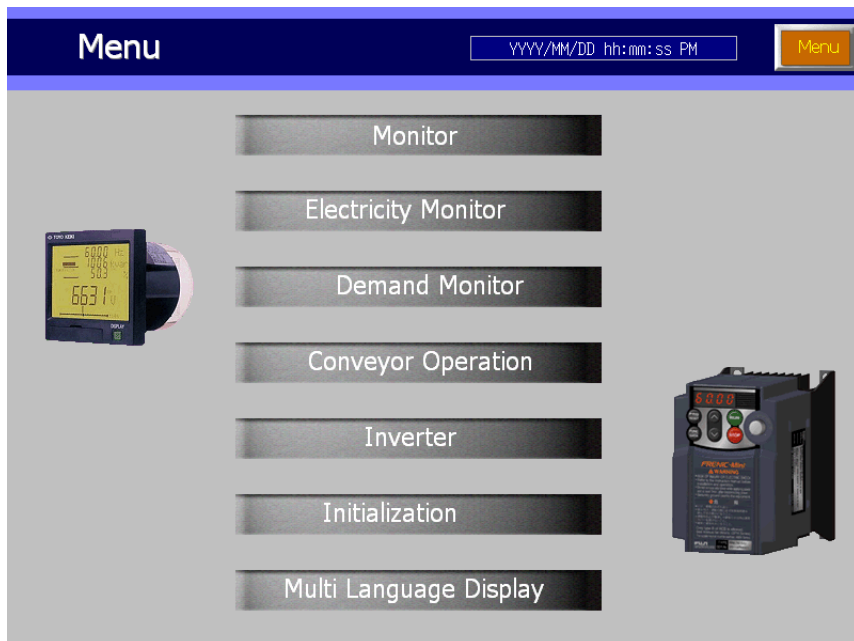
- Click [OK].  
The message “Will Register in pattern No. x” appears.  
When the destination in the message is OK, click [Yes]. When changing the destination, click [No].



Clicking [No] brings up the [Bitmap Import Number Designation] dialog. Specify the desired number.



Ex.: If the following screen is converted to a pattern, it changes as shown below.



Pattern size [800 × 600]



Pattern size [120 × 90]



## Tag Table

---

For more information, refer to the manual “Connection with to A • B Control Logix.”

## 8.8 File Management

The file management function makes it possible to compare two screen data files and find out what the differences are.

It is also possible to copy items, such as screens, messages, graphic libraries, etc., which have been found to be different.

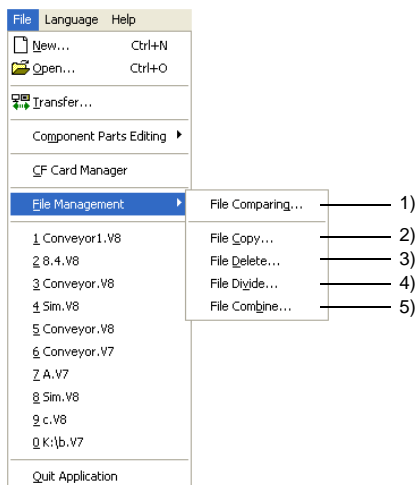
A screen data file can be partitioned for storage on floppy disks, and can be recombined.

### File Management Outline

#### File Management Functions

The following options are included in [File Management].

- 1) Compares files, and copies the necessary data item only.
- 2) Copies entire files.
- 3) Deletes unnecessary files.
- 4) Partitions a file occupying large amounts of memory.
- 5) Recombines the partitioned file.



#### Files for File Management

The following four types of files can be handled by the file management function.

- V8 screen data file (extension: "\*.V8")
- V7 screen data file (extension: "\*.V7")
- V6 screen data file (extension: "\*.V6")
- V4 screen data file (extension: "\*.V4")



Specify two files with the same extensions when copying or comparing files.  
The file management function is not available for files with different extensions.

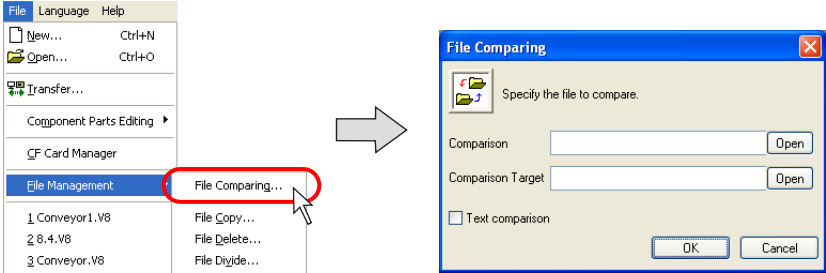


# File Comparison

Two screen data files are compared and the result is reported. If necessary, you can copy a data item that exists at the source file but does not exist in the target file on this window.

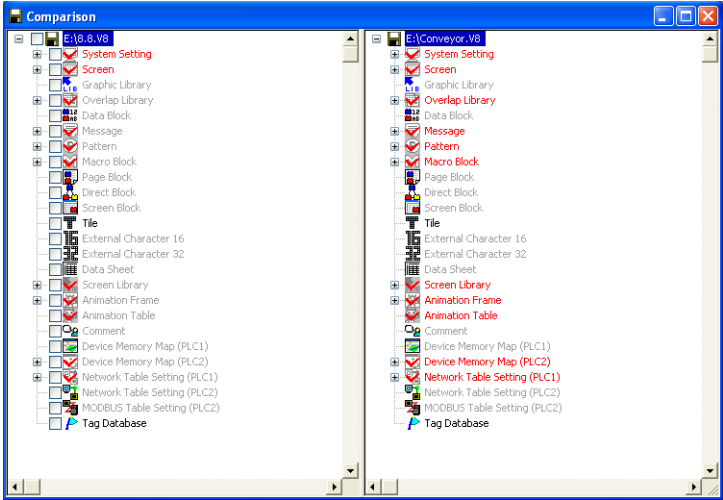
## Operating Procedure


1. Select [File Managing] from the [File] menu.
2. Select [File Comparing].
3. The [File Comparing] dialog shown below is displayed.




Specify the files to be compared.

4. Click [OK]. File comparison is started. When any differences are found, the following window appears. For more information on the contents displayed in the window, refer to the next page.




 When the files are consistent, a message "Data Match" is displayed. Click [OK]. The [Comparison] window is displayed.


 The 'Data Match' dialog box has a title bar 'V-SFT Version 5.0' and a close button. It contains a yellow warning triangle icon and the text 'Data Match'. At the bottom, there is an 'OK' button.

## [Comparison] Window

The window shows the data source to be compared (copy source) on the left and the data in the target (copy target) on the right.



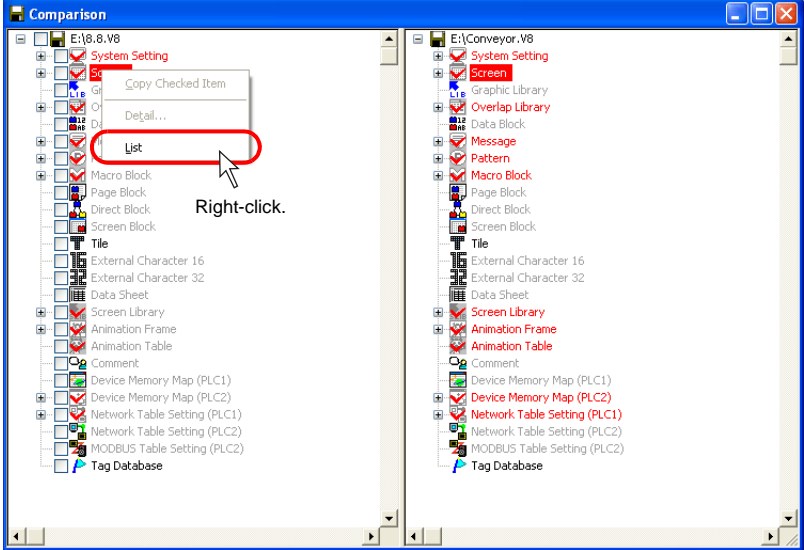
The text color or icon display varies according to the result of comparison.

Content	Color	Icon
The compared item exists in both files. The data content of the one coincide with the other.	Black	Normal
The compared item exists in both files. The data content of the one do not coincide with the other.	Red	Checked
The compared item only exists in one file.	Does not exist: gray Exists: red	Checked

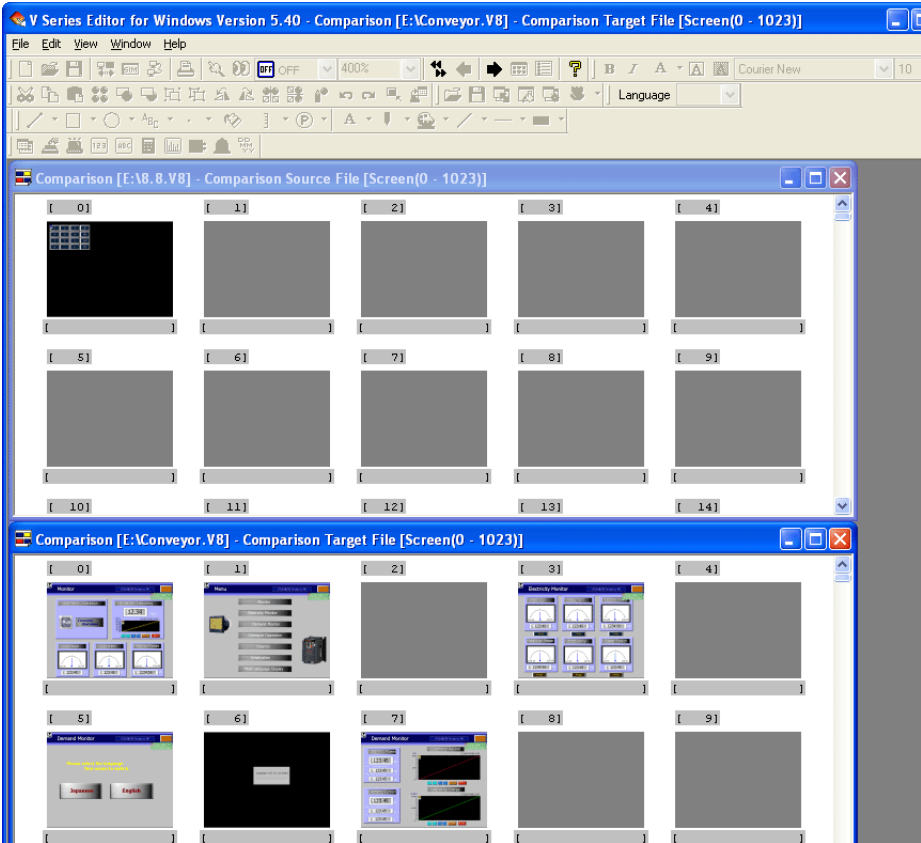
**Details of result (checking on screen)**

If any differences are found, the result of the comparison is displayed on the screen.

- 1. Right-click on the item which is detected as discrepant and click [List].



- 2. The lists of the compared files are respectively displayed on the screen.



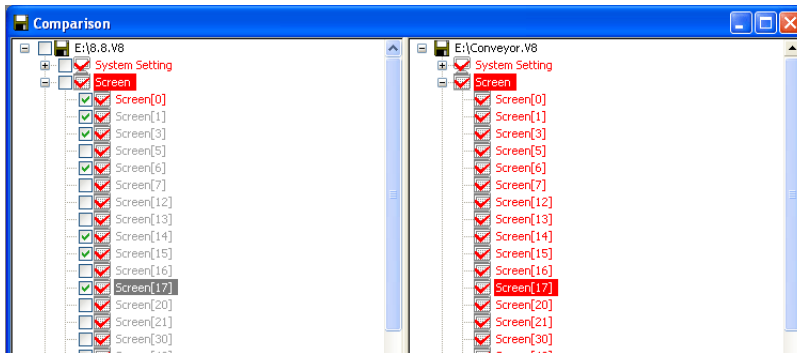
## How to Copy after Comparison

After comparison has been made, the data item existing in the data source to be compared (copy source) can be copied to the data in the target (copy target). There are three methods to copy the item.

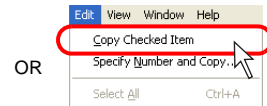
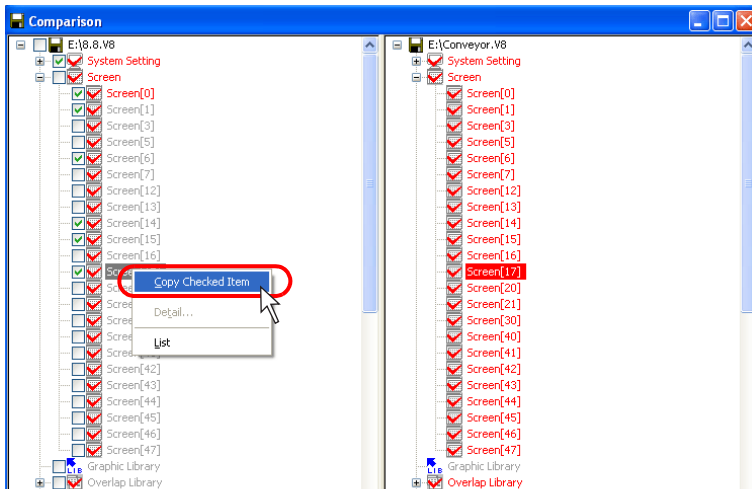
### Checking the box:

The same number is assigned to the copy source and the copy target. (Target: All)

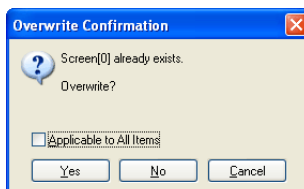
1. In the copy source window, check the box of the item of which you want to copy.



2. Right-click on the checked item, or select the checked item and click the [Edit] menu. Then, click [Copy Checked Item].



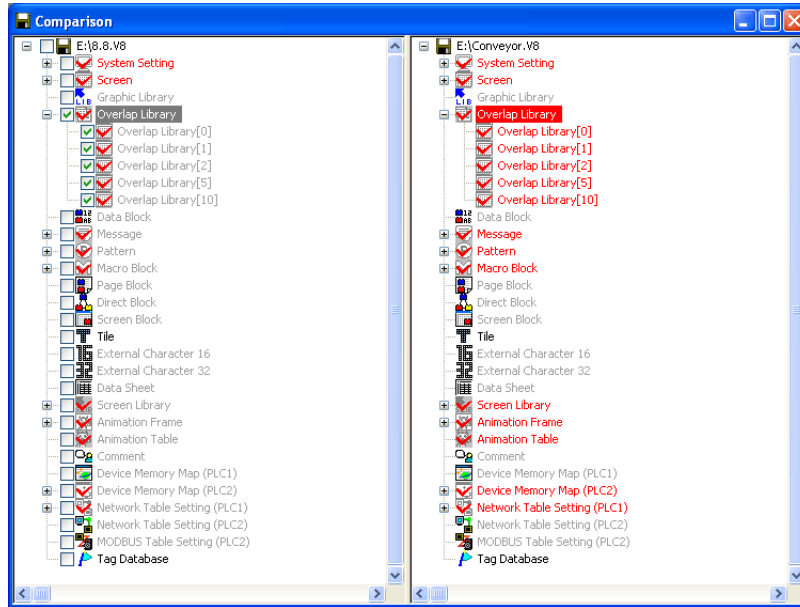
3. The checked item is copied to the copy target. If the item already exists in the copy target file, the following [Overwrite Confirmation] dialog appears. The data item is overwritten by clicking [Yes].



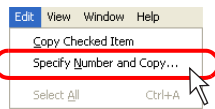
### Specifying a number:

It is possible to copy multiple items in a batch by specifying their numbers.  
(Target: All items except for items included in [System Setting])

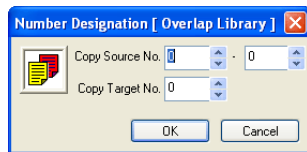
1. Select the item to be copied in the copy source.



2. Select [Specify Number and Copy] from the [Edit] menu.



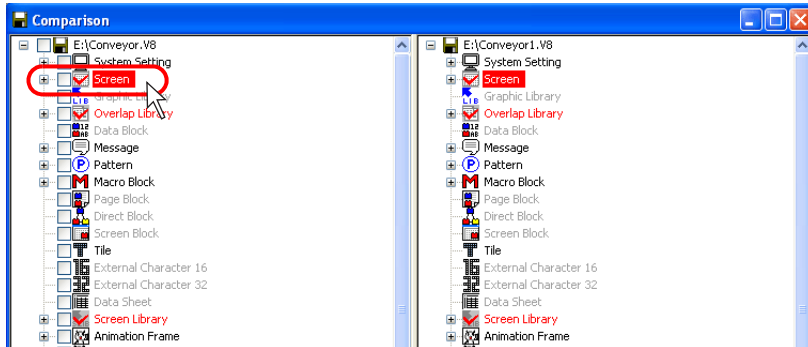
3. The [Number Designation] dialog is displayed.  
Specify the desired numbers for [Copy Source] and [Copy Target], and click [OK].  
Copying is executed.



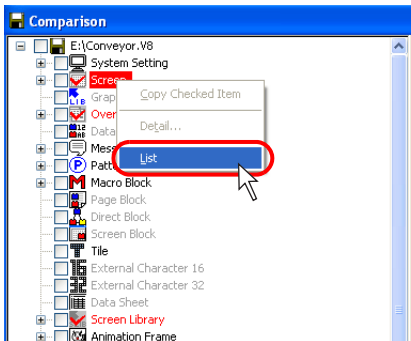
**Dragging and dropping on the screen:**

(Target: Screen, graphic library, overlap library, data block, data sheet, screen library, animation frame)

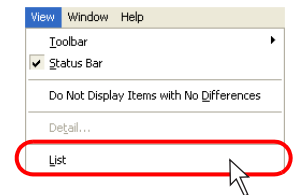
1. Select the item to be copied in the copy source.



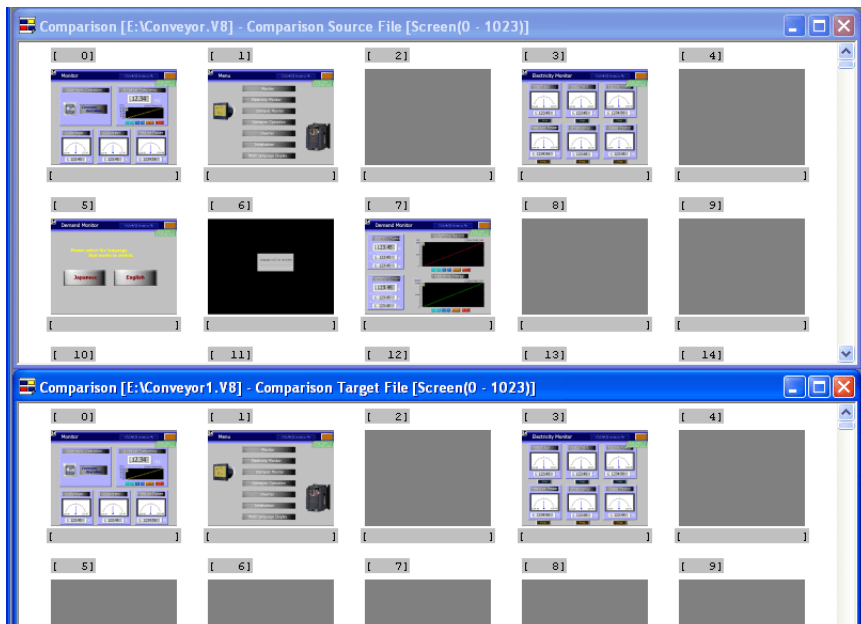
2. Click [List] from the right-click menu or from the [View] menu.



OR

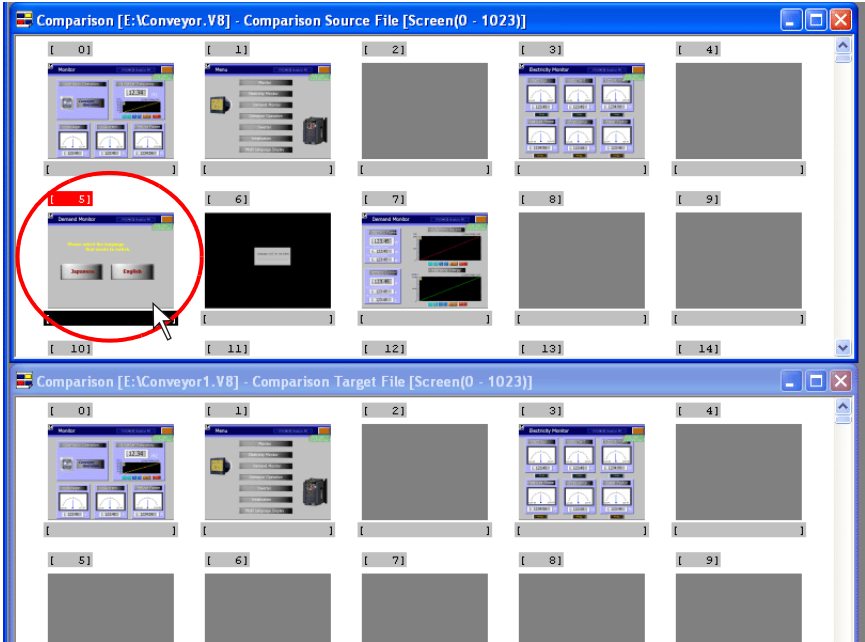


3. The copy source and target files are displayed.  
The source file window is placed above the other.

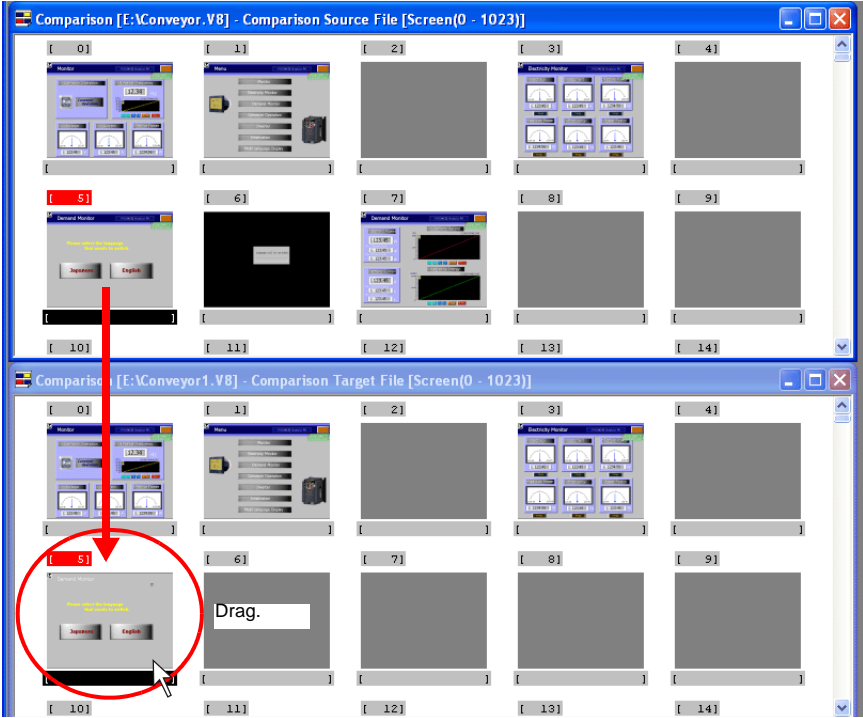


If necessary, scroll the file window until the desired number comes into view.

- 4. Click the screen to be copied in the source file window. The screen number is highlighted in red.

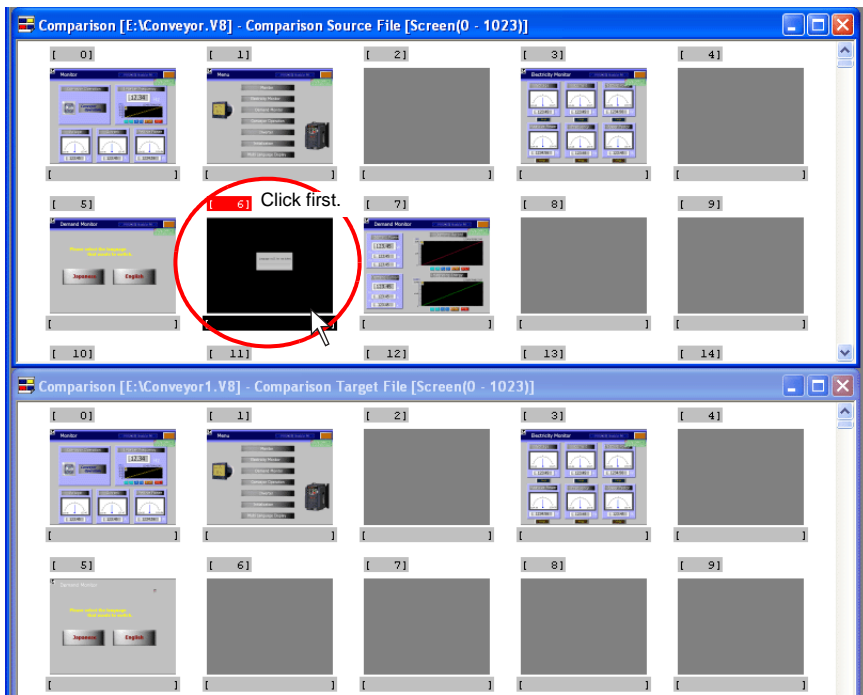


- 5. Drag the selected screen to the desired target box number. The copied screen is displayed in the target position by releasing the mouse.

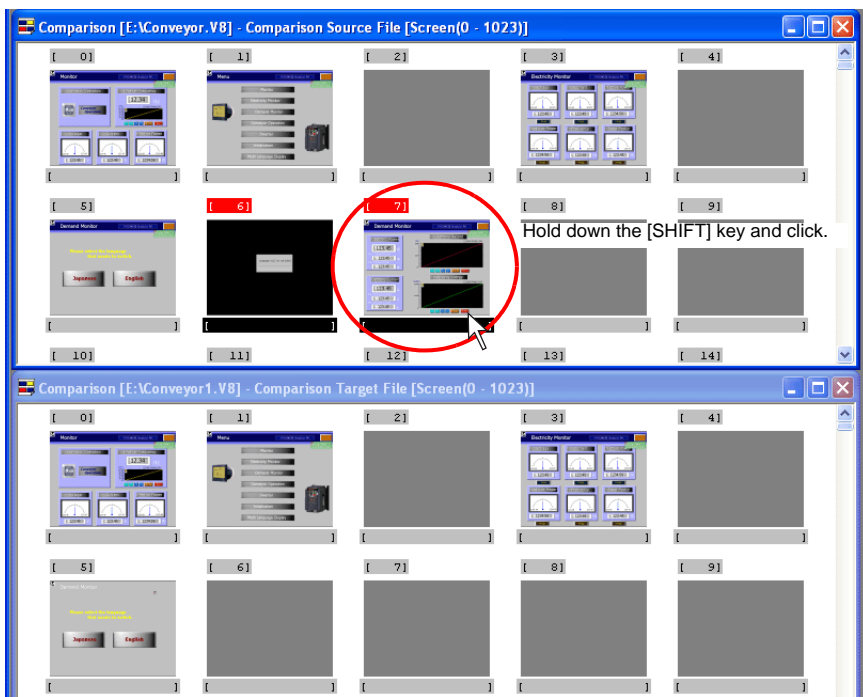


In the case of a screen, only the screen is copied. The pattern or graphic library that is used on the screen is not copied.

- To copy consecutive screens, click the first number of the source screens.

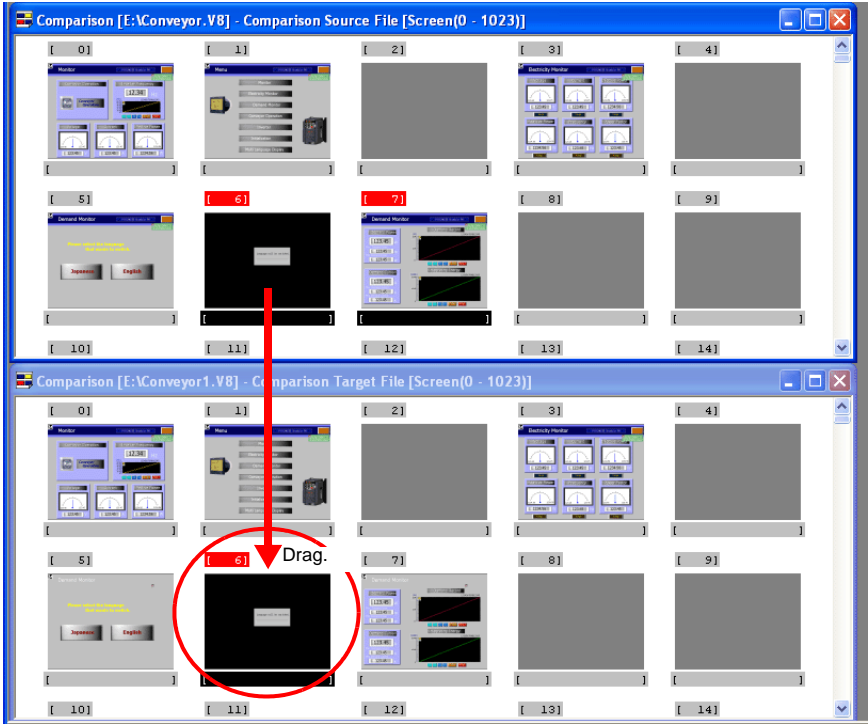


- Click the last number of the copy source screen while holding down the [SHIFT] key. The screens from the first number to the last number are selected at one time.





- 8. Drag one of the selected screens to the copy target box. All the selected screens are copied to the target file window at one time by releasing the mouse.



- 9. When copying non-consecutive screens, click the screens one by one while holding down the [CTRL] key.
- 10. Drag one of the selected screens to the copy target box. All the selected screens are copied to the target file window at one time by releasing the mouse.

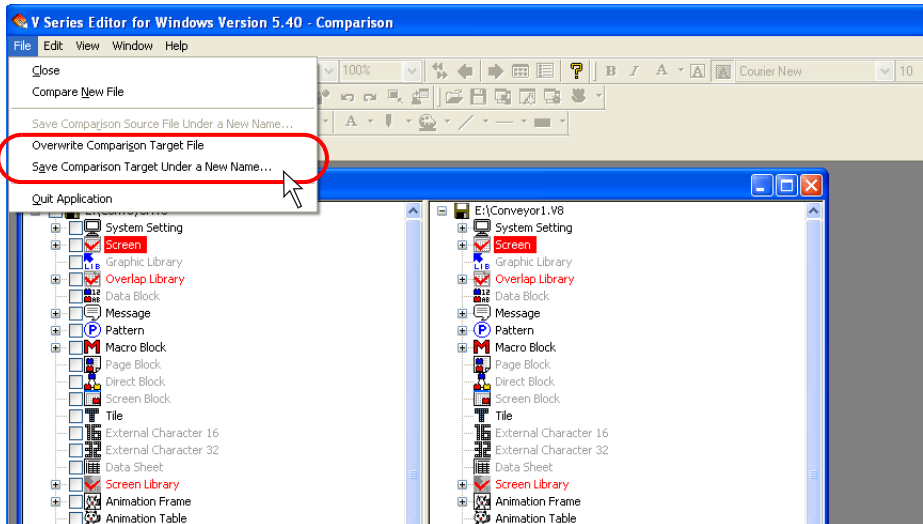


Even if non-consecutive screens are selected, their copies are placed sequentially in the target file window.

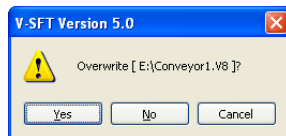
### Saving the file

Before closing the comparison window, choose whether or not to save the copied data.

1. Click on the [File] menu.
2. Click [Overwrite Comparison Target] or [Save Comparison Target Under a New Name] as desired.

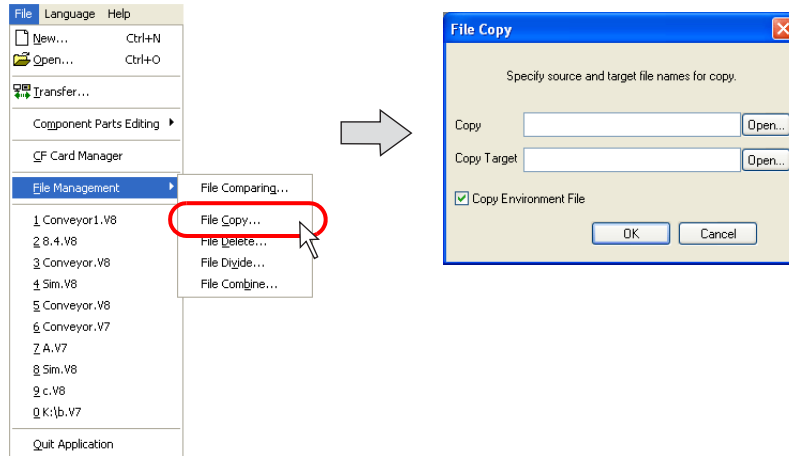


3. When closing the comparison window without saving the data, click [No] in the following dialog. The screen data file is closed while the data is not saved.



## Copying the File

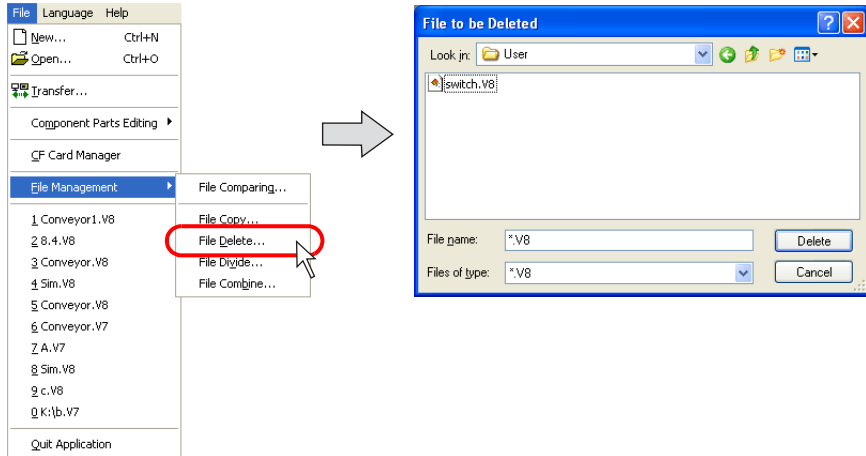
1. Select [File Managing] from the [File] menu.
2. Click [File Copy].
3. The [File Copy] dialog is displayed.  
Specify the desired files for [Copy Source] and [Copy Target].



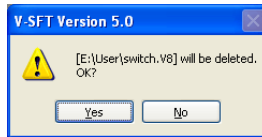
4. When [ Copy Environment File] is checked, the environment file for the copy source file (with extensions ".env") is also copied.  
The environment file is not copied when unchecked.
5. Click [OK]. Copying is executed.

## Deleting the File

1. Select [File Managing] from the [File] menu.
2. Click [File Delete].
3. The [File to be Deleted] dialog is displayed.  
Specify the file to be deleted.



4. Click [Delete].  
The confirmation dialog is displayed.



5. Click [Yes]. The file and its environment file having the same name are deleted.

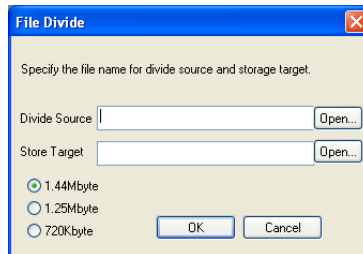
## Dividing and Combining the File

The V8 series can create a screen data file of a large size.

However, such a file cannot be stored on only one floppy disk. Using [File Divide] and [File Combine], the file can be divided into several sections for storage on floppy disks and can be recombined.

### Dividing the File

1. Click [File] → [File Management] → [File Divide].  
The [File Divide] dialog is displayed.



2. Specify the desired file name for [Divide Source].  
Clicking [Open] brings up the [File to be Divided] dialog. A file can be selected from the dialog.
3. Specify the desired file name for [Store Target].  
The extensions “.div” is provided.



At this time, the divided sections of the file cannot be stored on floppy disks. Store them on the hard disk once.

4. Select the floppy disk capacity from [1.44 Mbyte], [1.25 Mbyte], or [720 kbyte].
5. Click [OK]. The file is divided automatically.



The divided sections of the file are stored in the format of “file name (n).div.” Save all the files to recombine them.

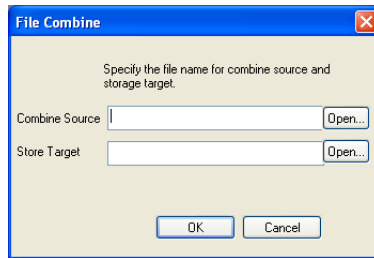
## Combining the File

---



When the divided sections of a file are stored on different floppy disks, copy them to one directory in advance.

1. Click [File] → [File Management] → [File Combine].  
The [File Combine] dialog is displayed.



2. Specify the desired file name for [Combine Source].



The divided sections of the file are stored in the format of "file name (n).div." Specify one of the divided sections.

3. Click [Open]. At the same time, the file name before division is entered for [Store Target].
4. Click [OK]. The sections are combined automatically.

## 8.9 Wizard

### Overview

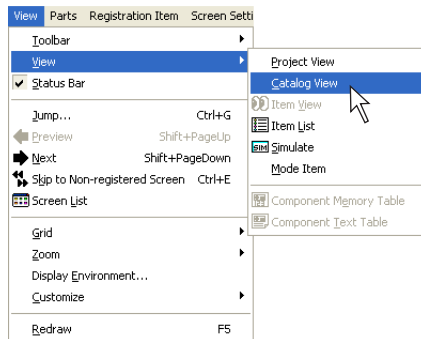
The wizard function is provided to aid you to set the entry mode or alarm tracking mode, which might seem difficult because it is necessary to combine with other parts like switches or display areas. Screens in these modes can be created with ease by following the following step-by-step instructions.

### Starting Wizard

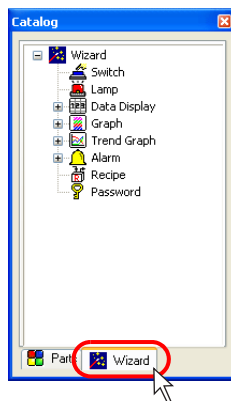
Open the [Wizard] dialog from Catalog View or from the [Parts] menu.

#### Start from Catalog View

1. Display Catalog View.  
If Catalog View is not displayed on the screen, click [View] → [View] → [Catalog View].



2. Click [Wizard] in Catalog View.  
The list of the item which can be set through the wizard is displayed.



3. Double-clicking a listed item starts the wizard.



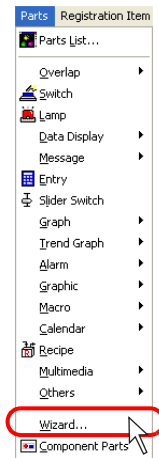
Not all parts are available in [Wizard].  
To place parts not included in [Wizard], use another tool like the [Parts List] menu.

---

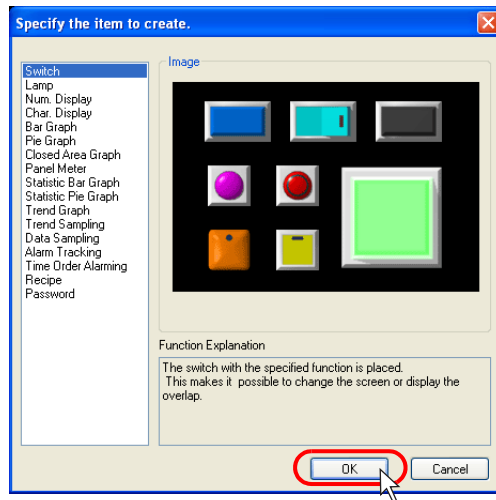
## Start from [Parts] Menu

---

1. Click [Parts] → [Wizard].



2. The [Specify the item to create.] dialog is displayed. This dialog shows the list of items, for which the wizard is provided.



3. Select an item and click [OK]. The wizard starts.



## 8.10 Component Parts

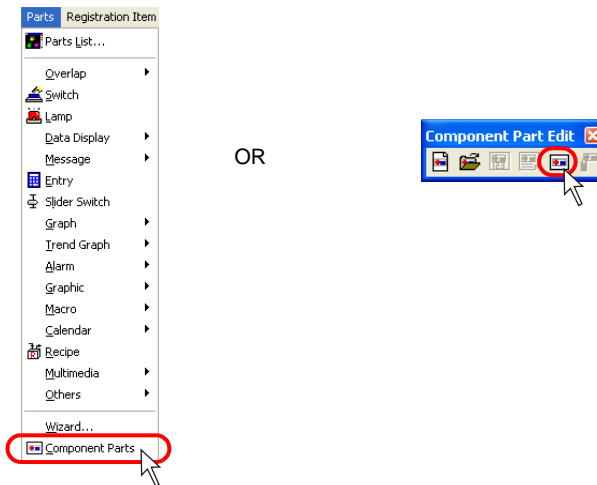
### Overview

V-SFT version 5 provides component parts that are available as I/O monitor screens associated with connections to PLCs of different manufacturers and also screens associated with connections to inverters or temperature controllers.

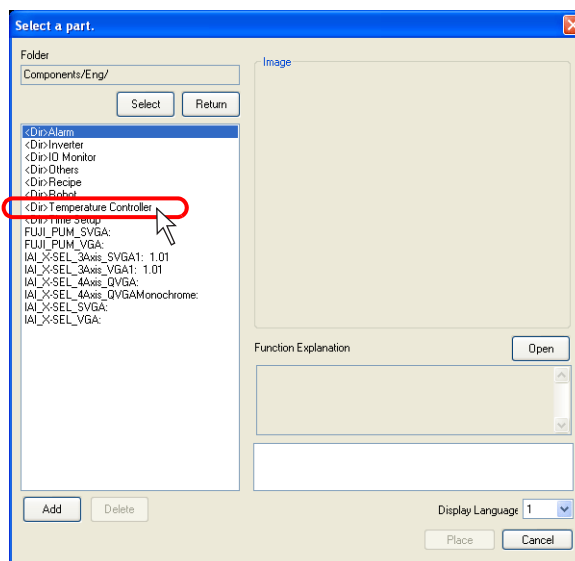
Component parts should help you create screens because these parts can be placed on screens.

### Component Parts Placement

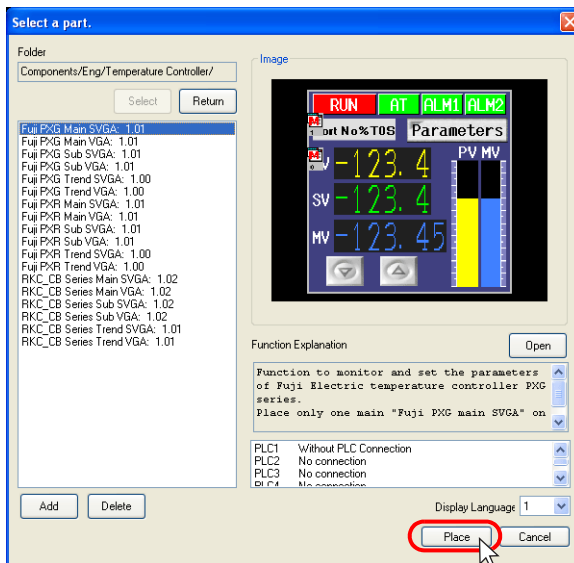
1. Click [Parts] → [Component Parts], or click [Component Parts] icon.



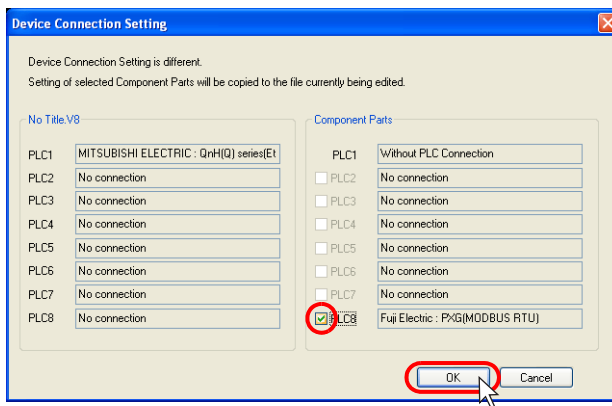
2. The [Select a part.] dialog including the component parts selection menu is displayed. Double-click the desired part.



- The component parts list is displayed according to your selection. Select the target file and click [OK].



- If the device connection settings differ between the screen data being edited and the component part, the following dialog is displayed. Select an option to be copied under [Component Parts] and click [OK].



- The component part is placed on the screen.

## Details of Component Parts

For more information on the individual component parts, refer to the Operation Manual. The Operation Manual is installed in the folder below.

C:\Program Files\V-SFT V5\Parts\Components

# Appendix 1 Font

## Font Types

The following fonts and languages are available on MONITOUCH.

Fonts	Languages	Characters
Japanese	Japanese, English	JIS level 1 + level 2 + ANK code
Japanese 32	Japanese, English	JIS level-1 Kanji + ANK code
English/Western Europe	English, Icelandic, Irish, Italian, Dutch, Swedish, Spanish, Danish, German, Norwegian, Portuguese, Finnish, Faeroese, French	ISO-8859-1: Latin1 (Expanded ASCII code)
Chinese (Traditional)	Chinese (traditional), English	BIG5 code (A141 to C67E) + ASCII code
Chinese (Simplified)	Chinese (simplified), English	GB2312 code (A142 to FEEF) + ASCII code
Korean	Hangul, English	KS code (A142 to C8FE) + ASCII code
Gothic	Japanese, English	JIS level 1 + level 2 + ANK code
Gothic (IBM Extended Character)	Japanese, English	JIS level 1 + level 2 + IBM extended code (FA40 to FC4B) + ANK code
English/Western Europe HK Gothic	English, Icelandic, Irish, Italian, Dutch, Swedish, Spanish, Danish, German, Norwegian, Portuguese, Finnish, Faeroese, French	ISO-8859-1: Latin1 (Expanded ASCII code)
English/Western Europe HK Times		
Central Europe	Croatian, Czech, Hrvatska (Croatian), Hungarian, Polish, Romanian, Slovakian, Slovene	CP1250 code
		ISO code *1 (ISO-8859-2: Latin2)
Cyrillic	Russian, Ukrainian, Kazakh, Bulgarian, Uzbek, Azerbaijani	CP1251 code
		ISO code *1 (ISO-8859-5: Latin5)
Greek	Greek	CP1253 code
		ISO code *1 (ISO-8859-7: Latin7)
Turkish	Turkish	CP1254 code
		ISO code *1 (ISO-8859-9: Latin9)
Baltic	Estonian, Latvian, Lithuanian	CP1257 code

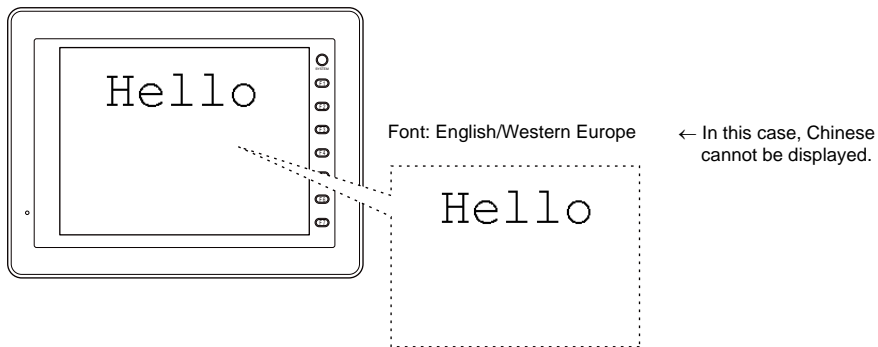
\*1 For ISO code, select [System Setting] → [Font Setting], select the font and check the box for  ISO Code].

\*2 To display a language other than those shown above, use “Windows fonts.”  
(For more information on the difference between fonts and Windows fonts, refer to the next page.)

## Differences between Fonts and Windows Fonts

### Fonts

- When making font settings, click [System Setting] → [Font Setting].
- A maximum of eight languages, language 1 - language 8, can be set. Screens are displayed in set languages when the font files are stored in the V8 unit or the CF card.

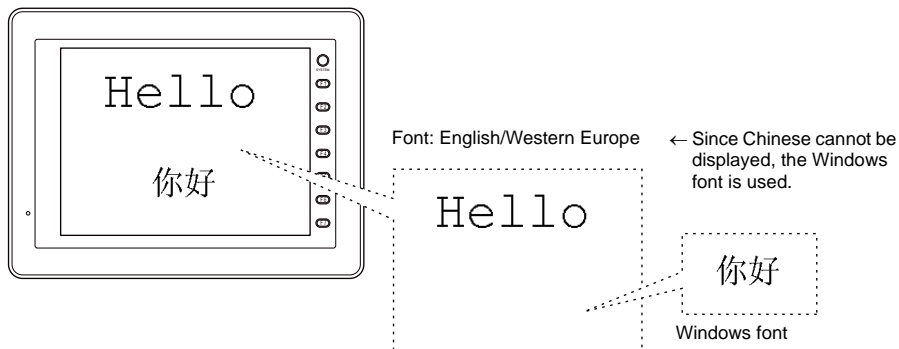


- When making font settings to be transferred to MONITOUCH, click [System Setting] → [Font Setting] → [Transfer Font Setting].

☺ When multiple fonts are selected in the [Transfer Font Setting] tab window, language switch is enabled even without the use of a CF card. In this case, however, the screen data capacity is decreased by the size of the font files.

### Windows fonts

- Windows font setting is made for each item.
- When displaying smooth typefaces or small characters, or characters in different character codes on the same screen, use Windows fonts so that text representation as desired will be achieved.

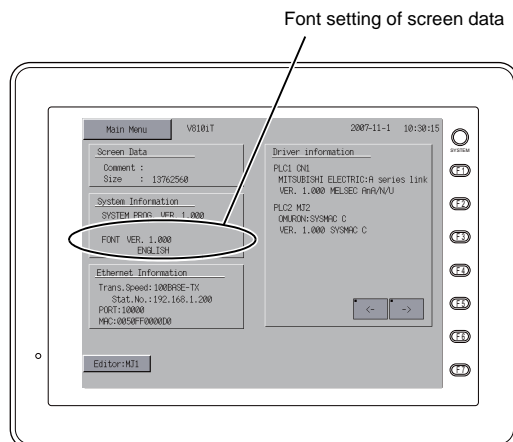


With a font setting made in a screen data file, the Windows font specified for the file is used in such a manner as to draw character outlines graphically. Therefore, more memory tends to be needed and limitations may apply depending on used functions. For more information, refer to page A1-29.

## Distinguishing Fonts on MONITOUCH

You can see which font is in use on MONITOUCH.

The font name is displayed in the following position on the Main Menu screen displayed on MONITOUCH.



### Font names

The following font names are displayed on the Main Menu screen:

Fonts	On the Main Menu Screen
Japanese	JAPANESE
Japanese 32	JAPANESE 32
English/Western Europe	ENGLISH
Chinese (Traditional)	CHINESE (TRAD.)
Chinese (Simplified)	CHINESE (SIMP.)
Korean	KOREAN
Gothic	HA Gothic
Gothic (IBM Extended Character)	HA Gothic (IBM)
English/Western Europe HK Gothic	HK Gothic
English/Western Europe HK Times	HK Times
Central Europe	Central Euro. CP *
Cyrillic	Cyrillic CP *
Greek	Greek CP *
Turkish	Turkish CP *
Baltic	Baltic CP
Two or more selected from the above	MULTI LANG

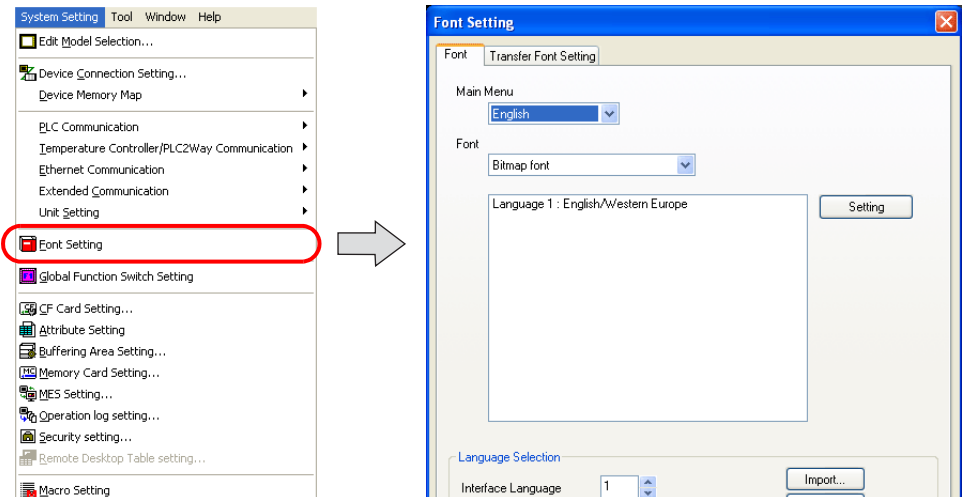
\* When [ ISO Code] is checked in the [Font Setting] dialog, "CP" disappears from the Main Menu screen.

# Font Setting Procedure

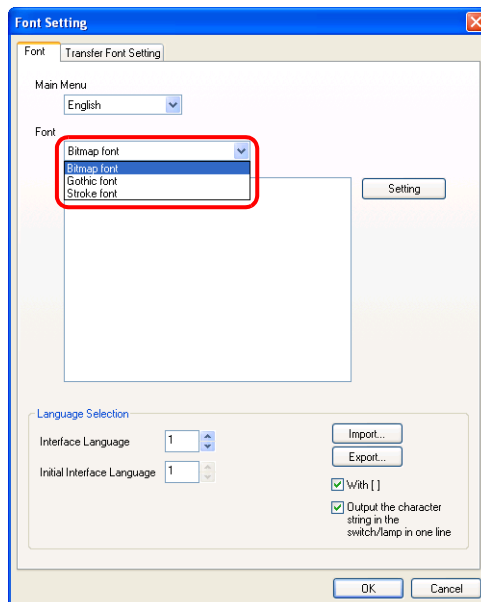
## Fonts

This section explains the procedure for setting a font to be used in screen data.

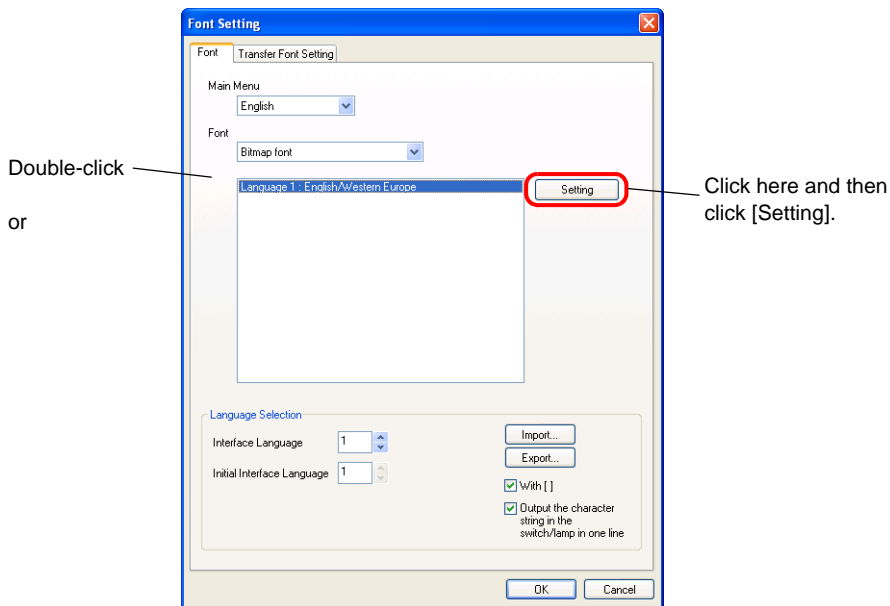
1. Select [System Setting] → [Font Setting].  
The [Font Setting] dialog is displayed.



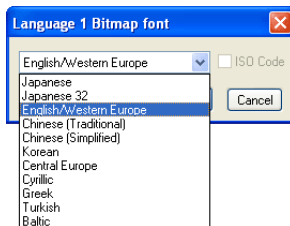
2. Select the desired font for [Font].



- To change to another language, double-click on [Language 1: English/Western Europe], or click on [Language 1: English/Western Europe] and then click the [Setting] button.



- The dialog shown below is displayed. Select the desired font from the drop-down list and click [OK].



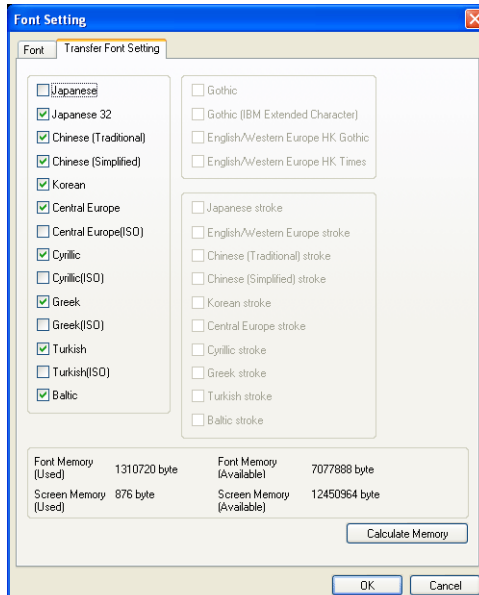
## Transfer Font Setting

This section explains the font settings for transfer to MONITOUCH. The V8 series is capable of storing multiple font settings. When necessary fonts are selected in the dialog below, the language displayed on the V8 unit can be switched to any of these languages without the use of a CF card.



More fonts to be transferred to MONITOUCH will decrease the screen data capacity. In terms of avoiding memory shortage, do not select unnecessary fonts.

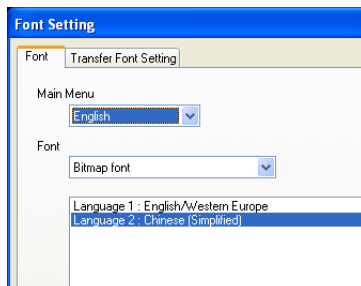
Default settings



### Notes on creating multi-language screens

When all of the languages selected as [Interface Language: 2 - 8] in the [Font] tab window are selected in the [Transfer Font Setting] tab window, no CF card is required. However, if a font selected in the [Font] tab window is deselected in the [Transfer Font Setting] tab window, a CF card must be used.

Interface Language: 2  
Language 1: English/Western Europe  
Language 2: Chinese (Simplified)



CF card unnecessary



CF card necessary





## Font Size

Depending on the font type, the font size can be specified by point or by using [Enlarge X/Y].

Fonts	Size Specifying Method
Japanese	Enlarge X/Y
Japanese 32	
English/Western Europe	
Chinese (Traditional)	
Chinese (Simplified)	
Korean	
Gothic	Points
Gothic (IBM Extended Character)	
English/Western Europe HK Gothic	
English/Western Europe HK Times	
Central Europe	Enlarge X/Y
Cyrillic	
Greek	
Turkish	
Baltic	

### Enlarge X/Y

“1” to “8” can be specified for [Enlarge X] or [Enlarge Y]. Correspondence between character sizes and values for [Enlarge] is shown below:

Enlarge	1	2	3	4	5	6	7	8
One-byte (W × H dots)	8 × 16	16 × 32	24 × 48	32 × 64	40 × 80	48 × 96	56 × 112	64 × 128
Two-byte (W × H dots)	16 × 16	32 × 32	48 × 48	64 × 64	80 × 80	96 × 96	112 × 112	128 × 128

### Points

Points	Remarks
8	One-byte 6 × 11 dots, two-byte 11 × 11 dots
9	One-byte 6 × 12 dots, two-byte 12 × 12 dots
10	One-byte 7 × 13 dots, two-byte 13 × 13 dots
11	One-byte 8 × 15 dots, two-byte 15 × 15 dots
12	One-byte 8 × 16 dots, two-byte 16 × 16 dots
14	One-byte 10 × 19 dots, two-byte 19 × 19 dots
16	One-byte 11 × 21 dots, two-byte 21 × 21 dots
18	One-byte 12 × 24 dots, two-byte 24 × 24 dots
20	One-byte 14 × 27 dots, two-byte 27 × 27 dots
22	One-byte 15 × 29 dots, two-byte 29 × 29 dots
24	One-byte 16 × 32 dots, two-byte 32 × 32 dots
26	One-byte 18 × 35 dots, two-byte 35 × 35 dots
28	One-byte 19 × 37 dots, two-byte 37 × 37 dots
36	One-byte 24 × 48 dots, two-byte 48 × 48 dots
48	One-byte 32 × 64 dots, two-byte 64 × 64 dots
72	One-byte 48 × 96 dots, two-byte 96 × 96 dots

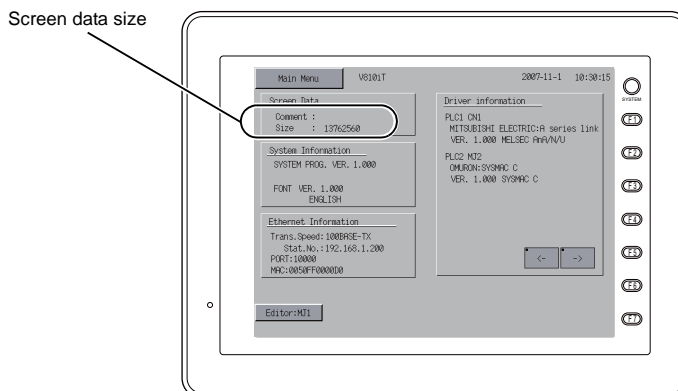
## Memory Sizes of Fonts

Depending on the font type, the memory used varies.  
The following memory sizes are required for these individual font types.

(Unit: kbytes)

Fonts	Size *1
Japanese	230
Japanese 32	710
English/Western Europe	41
Chinese (Traditional)	238
Chinese (Simplified)	184
Korean	121
Gothic	*2
Gothic (IBM Extended Character)	*2
English/Western Europe HK Gothic	*2
English/Western Europe HK Times	*2
Central Europe	6
Cyrillic	6
Greek	6
Turkish	6
Baltic	6

- \*1 The screen data size can be checked on the Main Menu screen of MONITOUCH.  
(Refer to the following figure.)



- \*2 In the case of HK Gothic/Times fonts, the available size varies depending on the setting in the screen data file, such as manual font setting.  
For more information on gothic fonts, refer to page A1-18.

## Language Entry Method

### English/Western Europe, English/Western Europe HK Gothic, and English/Western Europe HK Times

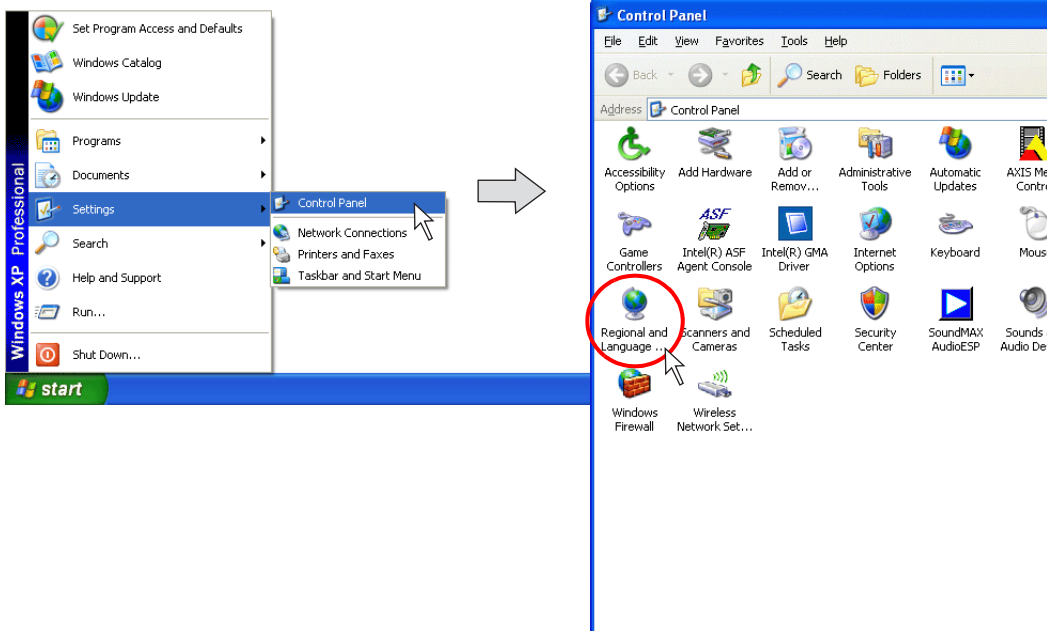
Key in characters in the same manner as you type each language on your computer.

#### Using “English/Western Europe” Font on Non-compatible Operating System

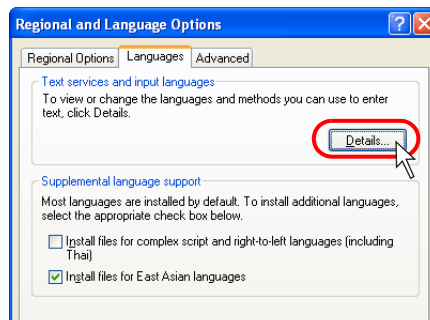
This section explains how to enter German text on Windows XP, for example.

##### IME installation

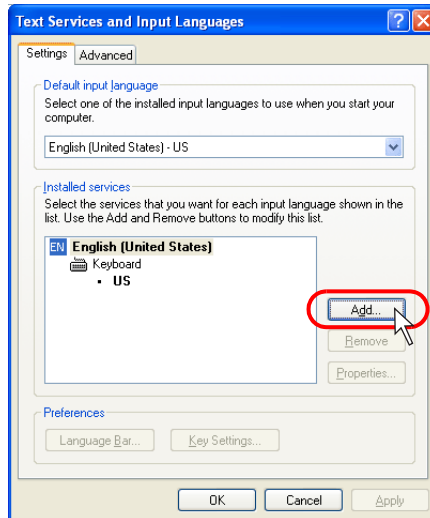
1. On Windows XP, click [Start] → [Settings] → [Control Panel]. The [Control Panel] window is displayed.  
Double-click [Regional and Language Options]. The [Regional and Language Options] dialog is displayed.



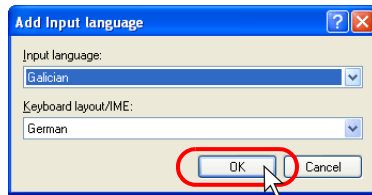
2. Open the [Languages] tab window. Click the [Details] button.



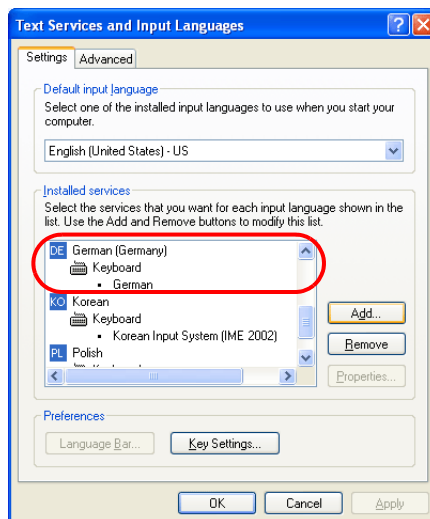
3. The [Text Services and Input Languages] dialog is displayed.  
Click the [Add] button.



4. The [Add Input Language] dialog is displayed.  
Select [German (Germany)] under [Input language] and [German] under [Keyboard layout/IME].  
Click [OK].



5. In the [Text Services and Input Languages] dialog, "German (Germany)" appears under [Installed services].



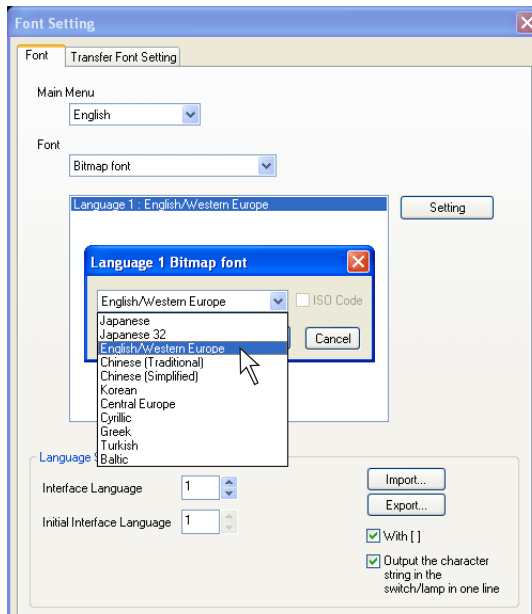
- Click [OK]. The German language is added (the indicator [DE German (Germany)]) is added to the types of IME).  
The [Regional and Language Options] dialog is displayed again.



- Click [OK] to close the dialog.

### Text entry procedure

- Start up the V-SFT version 5. Click [System Setting] → [Font Setting]. In the [Font Setting] dialog, select [Bitmap font] under [Font] and [English/Western Europe] for [Language 1].



- When editing items or entering text, select [DE German (Germany)] on the Windows XP's IME bar.



- Type German words and place them on the screen.

Frühling


Tag

Stunde

When typing in other languages, follow the same procedural steps.

## Chinese (Traditional) and Chinese (Simplified)

Key in characters in the same manner as you type Chinese characters (traditional or simplified) on your computer.

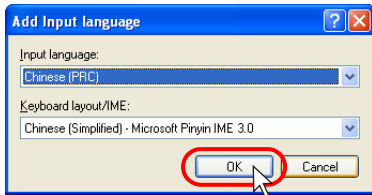
 Enter Traditional Chinese characters in BIG5 code, and Simplified Chinese in GB2312 code.

## Using “Chinese” Font on Non-compatible Operating System

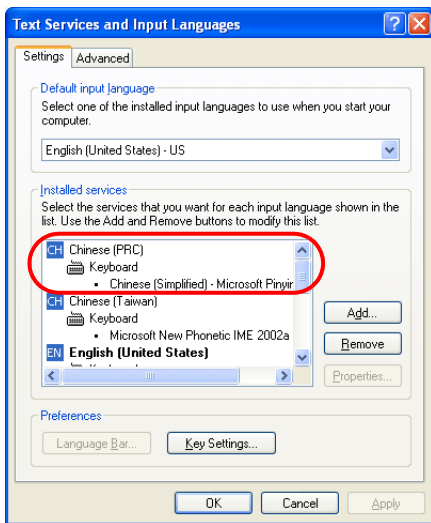
This section explains how to enter Chinese (simplified) text on Windows XP, for example.

### IME installation

1. On Windows XP, click [Start] → [Settings] → [Control Panel]. The [Control Panel] window is displayed.  
Double-click [Regional and Language Options]. The [Regional and Language Options] dialog is displayed.
2. Open the [Languages] tab window. Click the [Details] button.
3. The [Text Services and Input Languages] dialog is displayed.  
Click the [Add] button.
4. The [Add Input Language] dialog is displayed.  
Select [Chinese (China)] under [Input language] and [Chinese (Simplified) - Microsoft Pinyin IME 3.0] under [Keyboard layout/IME]. Click [OK].



5. In the [Text Services and Input Languages] dialog, “Chinese (PRC)” appears under [Installed services].



- Click [OK]. The Chinese language is added (the indicator [CH Chinese (China)]) is added to the types of IME).

The [Regional and Language Options] dialog is displayed again.



- Click [OK] to close the dialog.

### Text entry procedure

- Start up the V-SFT version 5. Click [System Setting] → [Font Setting]. In the [Font Setting] dialog, select [Chinese (simplified)] under [Font].
- When editing items or entering text, select [CH Chinese (China)] on the Windows XP's IME bar.
- Type Chinese characters and place them on the screen.



When typing in Chinese (traditional), follow the same procedural steps.



Chinese Writer (KODENSHA) is also available as IME software.

## Korean

---

Key in characters in the same manner as you type Hangul alphabets on your computer.



Kanji characters cannot be used. Only Hangul alphabets can be displayed.

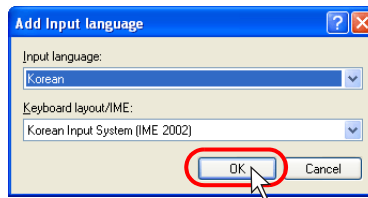
### Using “Korean” Font on Non-compatible Operating System

---

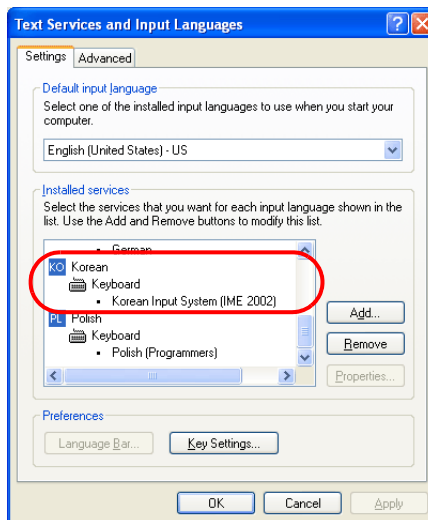
This section explains how to enter Korean text on Windows XP, for example.

#### IME installation

1. On Windows XP, click [Start] → [Settings] → [Control Panel]. The [Control Panel] window is displayed.  
Double-click [Regional and Language Options]. The [Regional and Language Options] dialog is displayed.
2. Open the [Languages] tab window. Click the [Details] button.
3. The [Text Services and Input Languages] dialog is displayed.  
Click the [Add] button.
4. The [Add Input Language] dialog is displayed.  
Select [Korean] under [Input language] and [Korean Input System (IME 2002)] under [Keyboard layout/IME]. Click [OK].



5. In the [Text Services and Input Languages] dialog, “Korean” appears under [Installed services].





- Click [OK]. The Korean language is added (the indicator [KO Korean] is added to the types of IME).  
The [Regional and Language Options] dialog is displayed again.



- Click [OK] to close the dialog.

### Text entry procedure

- Start up the V-SFT version 5. Click [System Setting] → [Font Setting]. In the [Font Setting] dialog, select [Korean] under [Font].
- When editing items or entering text, select [KO Korean] on the Windows XP's IME bar.
- Type Hangul alphabets and place them on the screen.



Korean Writer (KODENSHA) is also available as IME software.

## Central Europe/Cyrillic/Greek/Turkish

---

Key in characters in the same manner as you type each language on your computer.

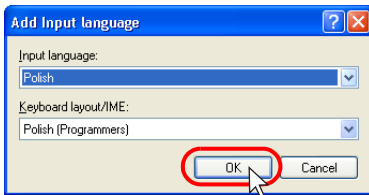
### Using “Central Europe/Cyrillic/Greek/Turkish” Fonts on Non-compatible Operating System

---

This section explains how to enter Polish text on Windows XP, for example.

#### IME installation

1. On Windows XP, click [Start] → [Settings] → [Control Panel]. The [Control Panel] window is displayed.  
Double-click [Regional and Language Options]. The [Regional and Language Options] dialog is displayed.
2. Open the [Languages] tab window. Click the [Details] button.
3. The [Text Services and Input Languages] dialog is displayed.  
Click the [Add] button.
4. The [Add Input Language] dialog is displayed.  
Select [Polish] under [Input language] and [Polish (programmer)] under [Keyboard layout/IME].  
Click [OK].



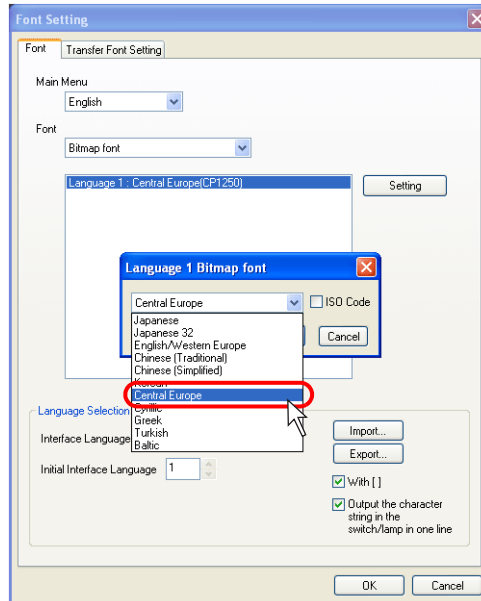
5. In the [Text Services and Input Languages] dialog, “Polish” appears under [Installed services].
6. Click [OK]. The Polish language is added (the indicator [PL Polish] is added to the types of IME).  
The [Regional and Language Options] dialog is displayed again.



7. Click [OK] to close the dialog.

### Text entry procedure

1. Start up the V-SFT version 5. Click [System Setting] → [Font Setting]. In the [Font Setting] dialog, select [Bitmap font] under [Font] and [Central Europe] for [Language 1]. (Keep  ISO Code unchecked.)



2. When editing items or entering text, select [PL Polish] on the Windows XP's IME bar.
3. Type Polish characters and place them on the screen.

Dojazd

Zbiegac'

Rampa

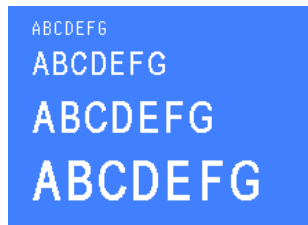
## HK Gothic and HK Times

---

### Outline

---

On the V series it is possible to use fonts similar to the Windows True Type fonts (Arial and Times). The font similar to Arial is called English/Western Europe HK Gothic. The font similar to Times is called English/Western Europe Times.



English/Western Europe HK Gothic



English/Western Europe HK Times

The English/Western Europe HK Gothic and English/Western Europe HK Times fonts used for the V series are Hakko Electronics' original fonts.

The English/Western Europe HK Gothic and HK Times feature:

- The English/Western Europe font creates a smooth typeface when the specified enlargement factors are even numbers; however, only a normal typeface is available when the factors are odd numbers. With the English/Western Europe HK Gothic or HK Times font, a smooth typeface is created in any size.

English/Western Europe font

Enlargement factors: odd (1 × 1)

A green square containing the text 'ABCDEFGG' in a single line, demonstrating the English/Western Europe font at 1x enlargement.

(3 × 3)

A green square containing the text 'ABCDEFGG' in a single line, demonstrating the English/Western Europe font at 3x enlargement.

Enlargement factors: even (2 × 2)

A green square containing the text 'ABCDEFGG' in a single line, demonstrating the English/Western Europe font at 2x enlargement.

English/Western Europe HK Gothic font

12 points

A blue square containing the text 'ABCDEFGG' in a single line, demonstrating the English/Western Europe HK Gothic font at 12 points.

20 points

A blue square containing the text 'ABCDEFGG' in a single line, demonstrating the English/Western Europe HK Gothic font at 20 points.

28 points

A blue square containing the text 'ABCDEFGG' in a single line, demonstrating the English/Western Europe HK Gothic font at 28 points.

36 points

A blue square containing the text 'ABCDEFGG' in a single line, demonstrating the English/Western Europe HK Gothic font at 36 points.

- In the case of the English/Western Europe font, the minimum enlargement factors are X: 1 and Y: 1. When smaller characters should be displayed, the 1/4 size must be selected. With the English/Western Europe HK Gothic or HK Times font, the number of points is used to specify a character size in place of enlargement factors. The minimum permissible number of points is eight. A smoother typeface can be realized as a result.

## English/Western Europe font

Minimum size (1/4)  
(1 × 1)



## English/Western Europe HK Gothic font

Minimum size 8 points  
9 points  
10 points  
12 points



It is not possible to use the English/Western Europe HK Gothic or HK Times font in combination with the English/Western Europe font.

## Points of English/Western Europe HK Gothic/HK Times

The following sizes are supported.

Points	Selection from Used or Not used
8	Available
9	Available
10	Available
11	Available
12	Set to be used
14	Available
16	Available
18	Available
20	Available
22	Available
24	Available
26	Available
28	Available
36	Available
48	Available
72	Available

← When [English/Western Europe HK Gothic] or [English/Western Europe HK Times] is selected for [Font], the 12-point size is automatically recognized as the font to be used and the data is transferred to the V series.

## Display Function Specifications

Characters available for display	Latin1	Icelandic, Irish, Italian, English, Dutch, Swedish, Spanish, Danish, German, Norwegian, Portuguese, Finnish, Faeroese, French		
Character sizes	8 points	6 × 11 dots		
	12 points	8 × 16 dots		
Displayed characters	Display resolution	320 × 240	640 × 480	800 × 600
	8 points	53 characters × 21 lines	100 characters × 43 lines	100 characters × 54 lines
	12 points	40 characters × 15 lines	80 characters × 30 lines	100 characters × 37 lines

---

## Setting Procedure

---

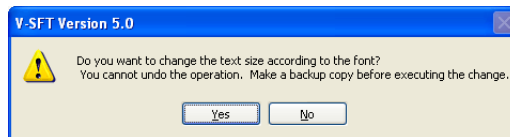
1. Font type setting (page A1-22 in this chapter)  
Select [English/Western Europe HK Gothic] or [English/Western Europe HK Times] for [Font].
2. Font setting for individual functions in use (page A1-23 in this chapter)  
Specify the number of points as a character size in property setting when setting a part, mode, or text in drawing.
3. Manual font setting (page A1-25 in this chapter)  
When automatic font setting is not valid for any function set in step 2, make a manual font setting.
4. Data transfer to the V series (page A1-27 in this chapter)  
Transfer the screen data using the HK font to the V series.

# 1. Font Type Setting

In the [Font Setting] dialog selected from the [System Setting] menu, select [English/Western Europe HK Gothic] or [English/Western Europe HK Times] for [Font].



If you attempt to change a [Font] setting from [English/Western Europe] to [English/Western Europe HK Gothic] or [English/Western Europe HK Times], the following alarm message appears.



When [Yes] is clicked, the English/Western Europe font is converted into the HK Gothic or HK Times (whichever is selected) that is in the number of points closest to the X enlargement factor of the English/Western Europe font. If no backup copy of the screen data is saved, click [No] and save a backup copy.

If you attempt to change a [Font] setting from [English Western Europe HK Gothic] or [English/Western Europe HK Times] to [English/Western Europe], an alarm message appears as well. The table below shows the character sizes in relation to font conversion.

[English/Western Europe] → HK Fonts

Points	X enlargement factor
1	12
2	24
3	36
4	48
5	72
6	72
7	72
8	72

HK Fonts → [English/Western Europe]

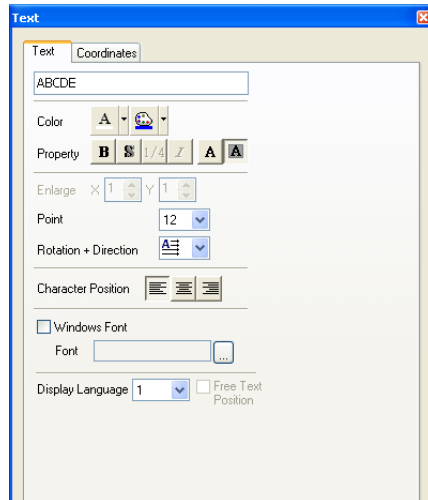
Points	X and Y enlargement factors
8	1 × 1
9	1 × 1
10	1 × 1
11	1 × 1
12	1 × 1
14	1 × 1
16	1 × 1
18	1 × 1
20	2 × 2
22	2 × 2
24	2 × 2
26	2 × 2
28	2 × 2
36	3 × 3
48	4 × 4
72	6 × 6



## 2. Font Setting for Individual Functions

With [English/Western Europe HK Gothic] or [English/Western Europe HK Times] selected for [Font], the character property setting made for a function (part or mode) is altered to the setting for the HK font.

Ex.) Text



When either HK font is used, specify a character size in points in the dialog. Both X and Y sizes are enlarged/reduced equally according to the specified number of points.



[1/4] and [Italic] options are inactive in the property setting.

For each function (part of mode), the number of character points, and whether automatic or manual font setting is to be made for placed texts, differ as the table on the following page indicates.

**Note:**

For automatic font setting and manual font setting mentioned in the table, refer to “Manual Font Setting.”

Function	Automatic Font Setting	Manual font Setting	No. of Points
Switch, lamp	Texts on switch and lamp	–	Variable
Numerical data display	Numerical data display	–	Variable
Character display	–	Character display	Variable
Message display	–	Message display	Variable
Bit order alarming mode	Message in display area *, messages on switch and lamp	–	Variable in display area, Limited to 12 points on switch and lamp
Alarm sub display	Message in display area	–	Variable
Message mode	Message in display area, messages on switch and lamp (Requirements: [Block] is selected for [Action select] and [Internal] for [Command].)	Message in display area, messages on switch and lamp (Requirements: [Block] or [Message] is selected for [Action select] and [External] for [Command].)	Variable in display area, Limited to 12 points on switch and lamp
Data sampling	Numerical data display, character display	–	Limited to 12 points
Alarm logging	Message in display area	–	Limited to 12 points
Time order alarming	(as mentioned for “Relay mode”)	–	(as mentioned for “Bit order alarming mode”)
Alarm tracking	Message in display area, numerical data display	–	Limited to 12 points
Memory card mode	File number and record number displays in display area	File name and record name displays in display area	Variable
Calendar display	Calendar numerical data and text	–	Variable
Time display	Time display	–	Variable
Table data display	Numerical data display and text in drawing *	Character and message displays	Variable
Text in drawing	Displayed characters	–	Variable
Multi-text	Displayed characters	–	Variable
Data sheet	(None)	(None)	(None)

\* Refer to the notes on the following page.



\* In the case of the matrix type (V6)  
 Spacing of characters is different between the matrix type and the analog type. The matrix type shows characters based on dots at regular intervals. The space between characters varies with the specified number of points.

20-point-size characters in the relay mode

Touch switch: Analog switch

```
Machine Error
System Error
Communication Error
Emergency Stop
RUN Mode Stop
Setting Value Over
```

Touch switch: Matrix switch

```
Machine Error
System Error
Communication Error
Emergency Stop
```

### 3. Manual Font Setting

In the case of the HK fonts, character codes used on screens will be recognized automatically or manually, depending on the used functions (part or mode) (see the table on the previous page).

#### Automatic Font Setting

By means of automatic font setting, character codes used on the screen are recognized and only partial sections of the font data including the codes are transferred to the V series.

There is no special operation to be performed by the user.

#### Manual Font Setting

When text data, for instance, to be displayed on a character display or message display will vary, such text data is not determined on the software. In such a case, select probable items of font data to be used and transfer them to the V series. This operation is a manual font setting.

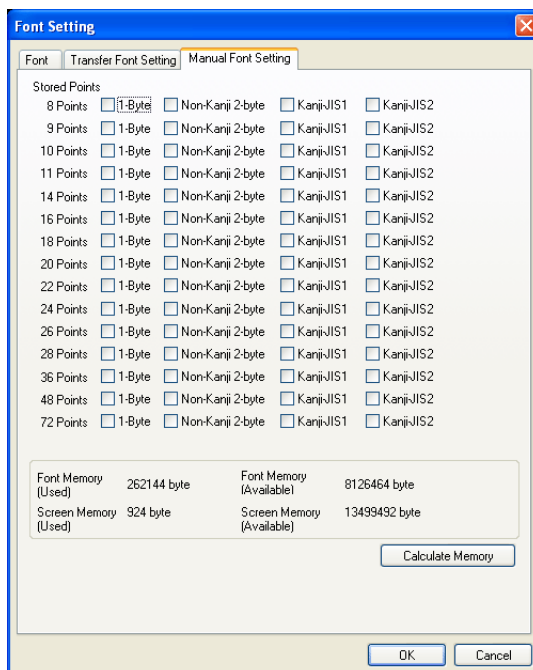
It is necessary to check the number of points specified for the placed text as well as the function (mode or part) in which the text is placed. Whether or not to make manual font settings is determined as a result. (See the table on page A1-24 in this chapter.)



Since the 12-point size data is transferred to the V series first, manual font setting is not necessary. For more information on the 12-point size data, see page A1-27 in this chapter.

When any function (mode or part) that needs manual font setting is used on the screen, proceed to set the [Font Setting] dialog.

1. Open the [Font Setting] dialog from the [System Setting] menu. Open the [Manual Font Setting] tab window.



As seen from the window, every option is provided with a check box.

Check the boxes of the options used in the screen data. All checked options are transferred as font data.

2. Click the [Capacity Calculation] button. The amounts of memory used by the checked options and available memory are indicated.



Memory for manual font setting data is limited to 4 MB for the V7 (or 6 MB if only manual font setting data is stored in a CF card) and to 2 MB for the V6 even if available memory still remains. Check the value specified for [Remaining Font].

3. When the tab window setting is concluded, click [OK].

## 4. Data Transfer to the V Series

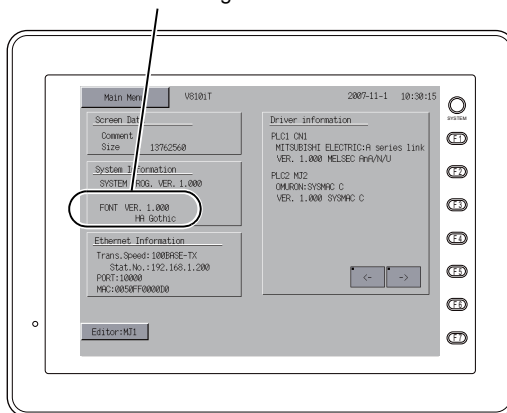


When a V6 is used, transfer the V6 system program to the V6 to update the program before transferring screen data.

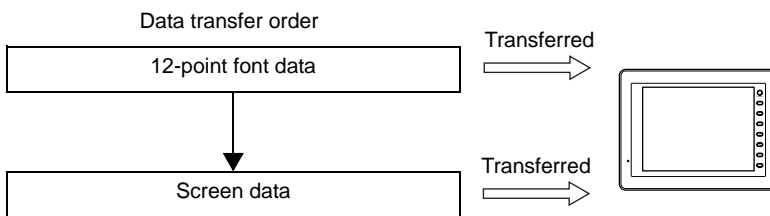
Transfer screen data including the HK font data to the V series.

In the [Transfer] dialog, select [Screen Data] and click the [PC ->] button. The screen data and the font data are transferred to the V series.

This section changes.



When screen data is transferred, the 12-point font data is always transferred to the V series first.



### Notes on Font Data to be Transferred

If changes are made to the [Manual Font Setting] tab window during online editing, the correct font data according to the changes will not be transferred. Stop online editing and perform data transfer.

## Error for the V series

---

- Item No.  
22 : Expansion font
- Error No. (as per the following)

Error No.	Contents	Remedies
204	The font data specified by manual font setting in the screen data does not exist in the V series. Texts specified by automatic font setting are displayed normally. However, in the case of font data that does not exist on the V series, texts are displayed in the 12-point size temporarily.	Transfer the screen data again.

## Windows Font

- Windows fonts can be displayed on MONITOUCH. Because Windows font settings can be changed for individual parts and messages, a high degree of flexibility will be allowed for screen creation.
- Windows fonts also allow for multi-language display on one screen.



With Windows fonts, it becomes possible to display multiple languages on one screen and also to switch the language (switch only the displayed characters while the screen layout remains the same) without the necessity to use a CF card.

When creating this sort of multi-language screens, set the number of languages to “2” or more, select the same font (ex.: Japanese 32) for the languages, and use necessary Windows fonts respectively for the languages (page A1-38).

## Limitations



If your computer is not installed with the Windows fonts that are used in the screen data, the computer cannot be used to edit text in those fonts.

The limitations on the use of Windows fonts:

- Windows fonts occupy a large memory space in screen data.
- Available Windows fonts differ between text in drawing/text for messages and variable text.
- When multiple languages are used on the screen together with Windows fonts, the same text properties apply to all these languages.

## Option

Depending on parts that use Windows fonts, setting items required for these parts vary. See the table below for details:

Parts		Necessary Settings		
		Text Properties (page A1-31)	Message Edit (page A1-32)	Font Registration (page A1-33)
Text in graphic	---	<input type="radio"/>	---	---
Multi-text *7	---	<input type="radio"/>	---	---
Text in switch	---	<input type="radio"/>	---	---
Text in lamp	---	<input type="radio"/>	---	---
Data display	Numerical data *1	<input type="radio"/>	---	Automatic
	Text *1	<input type="radio"/>	---	<input type="radio"/>
	Message	<input type="radio"/>	<input type="radio"/>	---
Table data display	Numerical data *6	<input type="radio"/>	---	Automatic
	Text	<input type="radio"/>	---	<input type="radio"/>
	Message	<input type="radio"/>	<input type="radio"/>	---
	Text in graphic	<input type="radio"/>	---	---
Bit order alarming	---	<input type="radio"/>	<input type="radio"/>	---
Alarm sub display	---	<input type="radio"/>	<input type="radio"/>	---
Message mode	---	<input type="radio"/>	<input type="radio"/>	---
Sampling *8	Data sampling	<input type="radio"/> *2	---	---
	Alarm logging *3*4	<input type="radio"/>	<input type="radio"/>	---
	Time order alarming *4	<input type="radio"/>	<input type="radio"/>	---
	Alarm tracking *4	<input type="radio"/>	<input type="radio"/>	---
Time display	---	<input type="radio"/>	---	Automatic
Calendar	---	<input type="radio"/>	---	Automatic
Memory card mode	---	Unavailable		
Recipe	---	Unavailable		
Comment display	---	<input type="radio"/> *5	---	---
Data sheet	---	Unavailable		



- The font selected in the [Font Setting] dialog (click [System Setting] → [Font Setting]) takes effect for text display (instead of Windows fonts) in situations as the following:  
A part placed on the screen requires settings for both text properties and message editing, but the settings are not made completely.  
Any Windows-font-disabled part is placed on the screen.
- If no font is registered for a part that requires font registration, spaces are displayed in place of characters.

\*1 When Windows fonts are used, the option selected for [Function] must be [No Function], [Entry Display Part], [Entry Target], [Max. Value Display Part], [Min. Value Display Part] or [Digital Switch]. Windows fonts are not available with data display in graphic library.

\*2 Go to the [Main] tab window in the [Sampling Display Area] dialog for setting.

\*3 Set the character ON and OFF colors in the [Alarm Logging] dialog. The color setting in message editing is disabled.

\*4 The size of time display/status display in the sampling area is fixed.

\*5 Go to the dialog opened in comment registration (click [Registration Item] → [Comment]).

\*6 Windows fonts are disabled if [Max. Value Display Part], [Min. Value Display Part], or [Total Value Display] is selected for [Function].



- \*7 There is a limit on the multi-text size as the following:  
height × length = 120,000 bytes or fewer for one piece of multi-text
- \*8 When sampling data is printed out, Windows fonts are not available.

## Setting Procedure

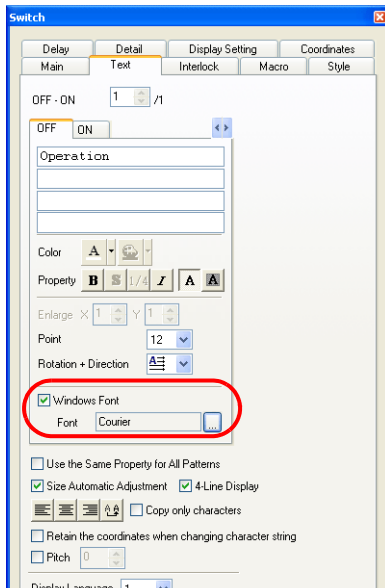


It is possible to perform Windows font settings for multiple items all at once.  
For more information, refer to “Change All Windows Fonts” (page A1-36).

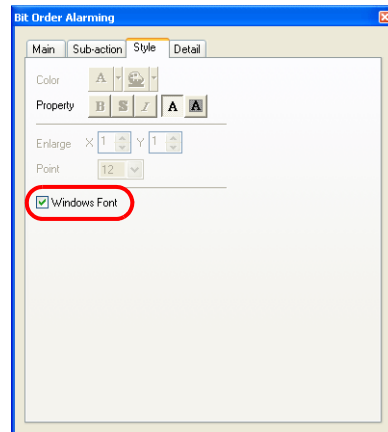
### In Text Properties Setting

1. Open the item dialog for the part.
2. Open the [Text] or [Style] tab window. Check  Windows Font].

Switch:



Bit order alarming:



3. The name of the Windows font is displayed.



For description of the [Windows Font Registration] button, refer to “Font Registration” (page A1-33).

4. Click the button provided for [Font]. In the dialog to be displayed, select the desired font name and the number of points.



For a part that requires also message editing, follow step 2 only (check [Windows Font]).  
Windows font settings are made in message editing.



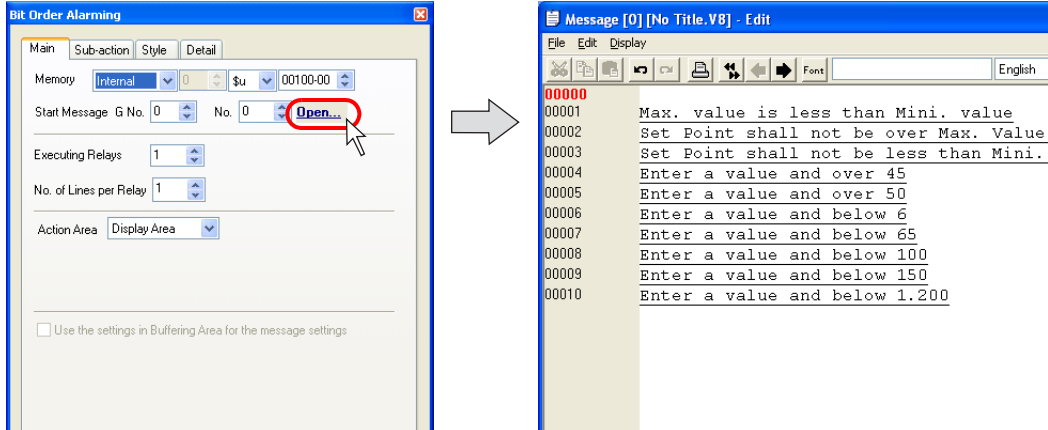
Only the monospaced Windows fonts can be used for numerical data and character display parts.  
Proportional fonts are not available.

Example:

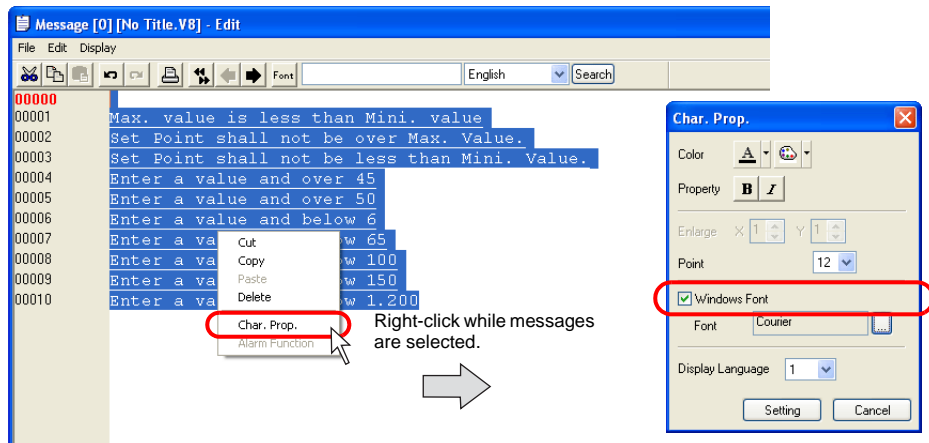
Fonts	Availability
MS Gothic	○
MS P Gothic	×
Courier	○
Arial	×

## In Message Editing

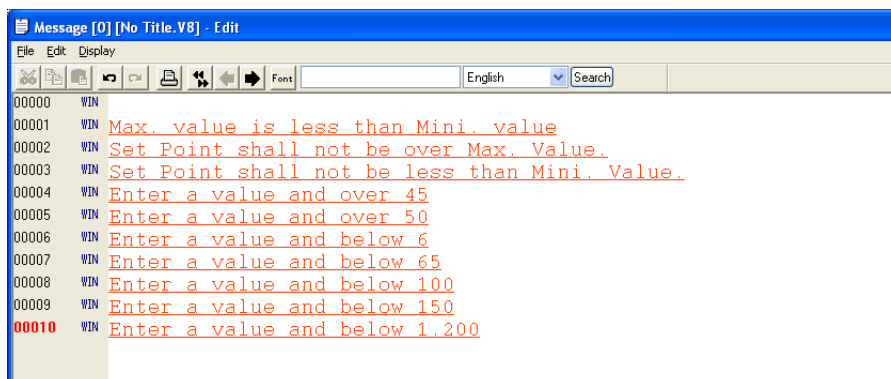
1. In the item dialog for the part, click [Open]. Or, click [Registration Item] → [Message]. The [Message Edit] window is displayed.



2. Select the target messages and right-click the mouse. From the right-click menu, click [Char. Prop.].



3. In the [Char. Prop.] dialog, check [ Windows Font]. Select the desired color, number of points, font, etc. Click [Setting] to go back to the [Message Edit] window. The window shows the messages in the Windows font as set.



## Font Registration

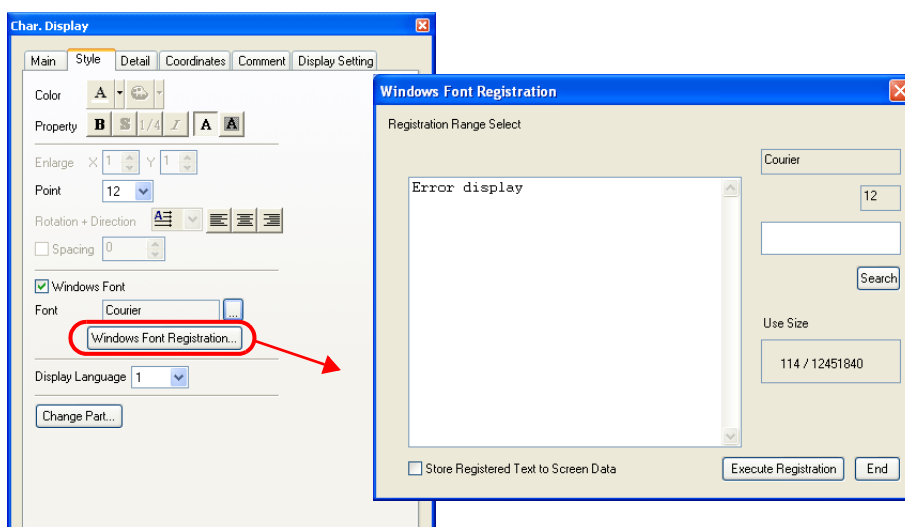
In the case of some parts, setting text properties for Windows fonts activates the [Windows Font Registration] button.

Unlike fixed text used for text in drawing or message display, the above-mentioned parts are likely to display varied characters. Therefore, it is necessary to register all such probable characters through [Windows Font Registration] so as to make them displayable on MONITOUCH.



Characters that are not registered are displayed as spaces on MONITOUCH.

1. Open the [Style] tab window in the [Char. Display] dialog.
2. Click the [Windows Font Registration] button. The [Windows Font Registration] dialog is displayed.

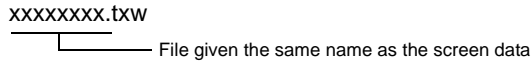


Registration Range Select	In the area provided, register the text to be displayed in the selected Windows font.
Search	This button searches the area under [Registration Range Select] for the text entered in the box. The text will be highlighted if found. Once you have registered text, you do not need to repeat its registration.
Use Size	The data size of the registered text in the currently selected font is displayed. The maximum size is 256 kB. <b>* The data size of characters in the same font and the same point size is displayed. If there are characters in the same font but in different point sizes, they are assumed to be different. These characters must be registered separately.</b>
<input type="checkbox"/> Store Registered Text to Screen Data	When this option is unchecked, a font registration file <sup>*1</sup> (with an extension .txw) will not be stored in MONITOUCH. Because the file will be necessary when screen data is transferred from MONITOUCH, be sure to store the file together with the screen data. <sup>*2</sup> When this options is checked, a font registration file (with an extension .txw) will be stored together with the screen data in MONITOUCH. The larger the file size, the smaller the available memory becomes for the screen data.
Execute Registration	This button registers the text you entered under [Registration Range Select].
End	This button ends the font registration.

- \*1 For details on the font registration file (with an extension \*.txw), refer to the following page.
- \*2 If the txw file is lost, the registered text will be rebuilt from the screen data.  
The text then will be registered in the order of the character codes.

**Font registration file**

At the time of storing screen data including Windows font setting, a file shown below will be stored in the same place of the screen data.



This file stores the text registered through font registration. Whenever you store screen data, store the font registration file at the same time. Be sure to make no changes to the file.  
 If the font registration file is lost or revised, the registered font data may be deleted or altered. Registration will be required again in such a case.

**[Windows Font Registration] dialog**

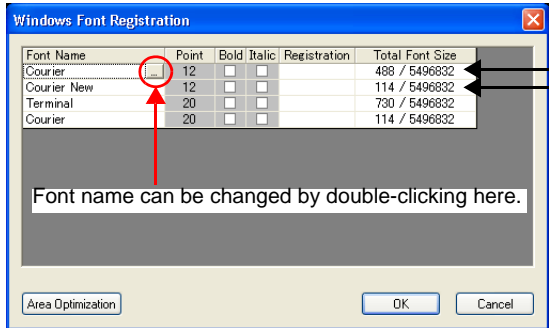
The [Windows Font Registration] dialog offers the list of the fonts registered in screen data and their memory sizes.

You can also change the font names in the dialog.



The [Windows Font Registration] dialog lists only the fonts registered through [Windows Font Registration] for character display parts. To see other Windows fonts used in graphics, etc., open [Windows Font List].

- Location of the dialog  
 Click [Tool] → [Register Windows Font]. The [Windows Font Registration] dialog is displayed.



Characters in different point sizes must be registered separately even though they are in the same font.



Settings under [Point], [Bold], and [Italic] cannot be changed in the above dialog. If necessary, go to the dialog for the part.

- [Area Optimization]  
 If any font is changed, the data size of the text is changed accordingly and the memory area is optimized.

## [Windows Font List] Window

The [Windows Font List] window offers the list of the Windows font names used in screen data, setting locations, point sizes, language numbers, etc.

### Location of the Dialog

Click [Tool] → [Register Windows Font]. The [Windows Font List] window is displayed.

Font Name	Font Size	Registration Item	Item Name	Langu...
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier New	18	Screen [3]B	Num. Display	1
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier New	18	Screen [3]B	Num. Display	1
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
Arial Unicode MS	12	Screen [3]B	Text	1
Arial	12	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier New	18	Screen [3]B	Num. Display	1
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier New	18	Screen [3]B	Num. Display	1
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2

- Double-clicking a font name in the window causes a jump to the screen where the font is set.
- If a font that does not exist in your computer is used in screen data, its name is colored red. For more information, refer to “Windows Font Not Installed on Your Computer Exists in Screen Data” (page A1-39).

## Change All Windows Fonts

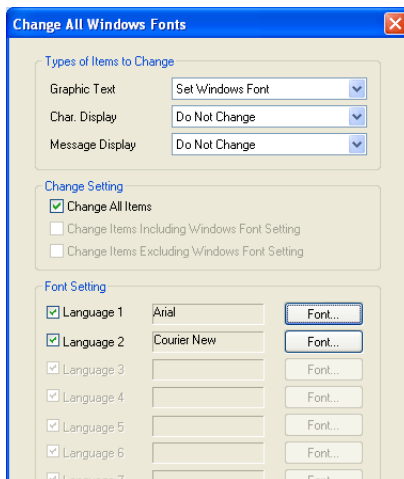
It is possible to make/cancel/change Windows font settings all at once.

### Procedure

1. Click [Tool] → [Change All Windows Fonts].
2. From the sub-menu to be displayed, select an item according to your purpose.

Change All	Check this item when making changes to all items in the screen data you are currently editing.
Current Window Change	Check this item when making changes to all items in the window you are currently editing.
Selected Item	Check this item when making changes to selected items.

3. The [Change All Windows Fonts] dialog is displayed.



Types of Items to Change	<p>Select items to which batch setting applies.</p> <p>Do Not Change Reset Windows Font Set Windows Font</p> <p>The target items and their categories are:</p> <table border="1"> <tr> <td>Graphic text</td> <td>Text in drawing Multi Text Comment display Text on switch/lamp Table data display (text in drawing)</td> </tr> <tr> <td>Character display*1</td> <td>Numerical data display Character display Table data display (numerical data/character) Sampling display area Time display Calendar</td> </tr> <tr> <td>Message display*2</td> <td>Message display Table data display (message) Bit order alarming Alarm sub display Message mode Alarm logging Time order alarming Alarm tracking</td> </tr> </table>	Graphic text	Text in drawing Multi Text Comment display Text on switch/lamp Table data display (text in drawing)	Character display*1	Numerical data display Character display Table data display (numerical data/character) Sampling display area Time display Calendar	Message display*2	Message display Table data display (message) Bit order alarming Alarm sub display Message mode Alarm logging Time order alarming Alarm tracking
Graphic text	Text in drawing Multi Text Comment display Text on switch/lamp Table data display (text in drawing)						
Character display*1	Numerical data display Character display Table data display (numerical data/character) Sampling display area Time display Calendar						
Message display*2	Message display Table data display (message) Bit order alarming Alarm sub display Message mode Alarm logging Time order alarming Alarm tracking						

Change Setting	<input type="checkbox"/> Change All Items <input type="checkbox"/> Change Items Including Windows Font Setting <input type="checkbox"/> Change Items Excluding Windows Font Setting
Font Setting	Press the [Font] button. In the dialog to be displayed, select your desired font.

- \*1 Proportional fonts are not available with character display (page A1-31).  
If you attempt to use such a font, the following error message appears.  
Select a non-proportional font instead.



- \*2 In the case of message display, batch change applies to only the style of each item.  
If you change Windows font settings for messages registered through the [Registration Item] menu, manual setting is required.

4. Click [OK] at the end of the setting in the dialog.

Once a batch change is executed, it is not possible to undo the operation.

5. Batch change has been completed.

## Windows Fonts for Language Selection

A CF card is not necessary when Windows fonts are used for language selection. Some limitations, however, apply to the above.

### Conditions for Language Selection Using Windows Fonts

- Font setting  
For the interface languages, select the same font (the [Font Setting] dialog).  
If different fonts are selected, a CF card must be used.
- Screen data capacity  
Windows fonts will occupy a large memory space in screen data. Check available memory constantly.  
In comparison to the amount of memory consumed for screen data without Windows fonts, the amount may be doubled if Windows fonts are used.
- Text properties  
Except for the font type selection, the same text properties apply to the languages.  
For all the languages, [Windows Font] must be checked, and the other properties including the point size must be the same. Therefore, checking [Windows Font] for only one of the languages (the second language, for example) is not allowed.

### Multi-Language Editing Using Windows Fonts

- Multi-language editing is performed basically on the screen in the editor software or in the [Multi-language [n] Edit] window (click [Registration Item] → [Multi-language]).



If text converted to a CSV file ([System Setting] → [Font Setting] → [Export]) is read into another editor software, whether or not this operation is supported depends on which language is used. Whenever you wish to use [Export], consult with your local distributor.

- If any language is incorrectly displayed in the [Multi-language [n] Edit] window, click [Tool] → [Multi-language Setting] and select the correct font in the [Multi-language Edit Setting] dialog.

The screenshot shows the 'Multi-language Edit Setting' dialog box with the following settings:

- Language 1: Japanese
- Language 2: English/Western Europe
- Language 3: Chinese (Simplified)
- Language 4: Korean

The 'Multi-language [0] Edit' window displays a table with the following columns: No., Japanese, English (ENG), and Japanese (CHN/SU/Japanese (KOR)).

No.	Japanese	English (ENG)	Japanese (CHN/SU/Japanese (KOR))
247	[ROB]	[ ]	[ ]
248	[日本語] [ ] [ ]	[Japanese][ ] [ ]	[日文][ ] [ ] [ ]
249	[英語] [ ] [ ]	[English][ ] [ ]	[英文][ ] [ ] [ ]
250	[中国語] [ ] [ ]	[Chinese][ ] [ ]	[中文][ ] [ ] [ ]
251	[韓国語] [ ] [ ]	[Korean][ ] [ ]	[韓文][ ] [ ] [ ]
252	[多言語機能]	[Multi Language Display]	[多种语言功能]
253	[多言語機能]	[Multi Language Display]	[多种语言功能]
254	[*CFカード内「Font」]	[Font data is stored to the FON]	[字体保存在CF卡中的“Font”文]
255	[*CFカード内「Font」]	[Font data is stored to the FON]	[字体保存在CF卡中的“Font”文]
256	[多言語表示]	[Multi Language Display]	[多种语言功能]
257	[多言語表示]	[Multi Language Display]	[多种语言功能]
258	[多言語表示]	[Multi Language Display]	[多种语言功能]
259	[多言語表示]	[Multi Language Display]	[多种语言功能]
260	[多言語表示]	[Multi Language Display]	[多种语言功能]
261	[1つの画面で、複数の言語	[It is possible to implement mult	[在一个画面上可以转换显示多
262	[変換中]	[ ]	[ ]
263	[しばらくお待ちください。]	[Language will be switched.]	[转换语言。]
264	[パスワード機能により、	[ ]	[ ]
265	[パスワード機能により、	[ ]	[ ]
266	[Password機能]	[ ]	[ ]
267	[Password機能]	[ ]	[ ]
268	[HELP]	[ ]	[ ]
269	[登録Password一覧]	[ ]	[ ]
270	[No]	[ ]	[ ]
271	[権限]	[ ]	[ ]
272	[Password]	[ ]	[ ]
273	[1]	[ ]	[ ]
274	[管理者]	[ ]	[ ]
275	[ADMINI]	[ ]	[ ]
276	[2]	[ ]	[ ]
277	[モニタ]	[ ]	[ ]
278	[USER]	[ ]	[ ]
279	[3]	[ ]	[ ]



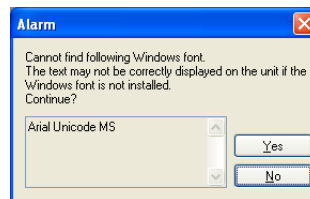
## Windows Font Not Installed on Your Computer Exists in Screen Data

If any Windows fonts that are not installed on your computer are used in screen data, the text in such fonts cannot be edited or modified. Because of this fact, the search and prohibition function intended to check for whether or not fonts that are not installed on your computer are used, areas where editing/modification is prohibited, etc. has been enhanced.

### At the time of opening a file

Example:

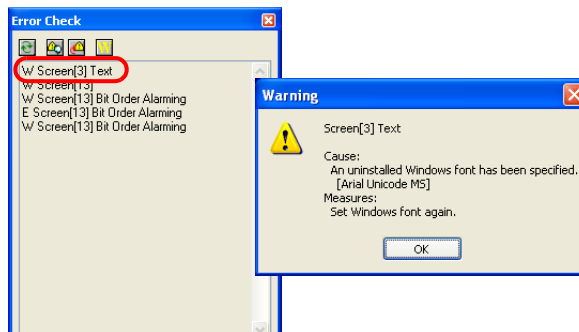
In a case where you try to open screen data including the Arial Unicode MS font though the font is not installed on your computer:



To open the file, click [Yes]. To cancel, click [No].

### At the time of error checking

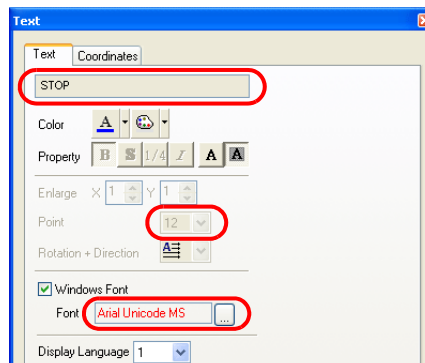
The execution of error check detects any fonts that are not installed on your computer.



### At the time of text property checking

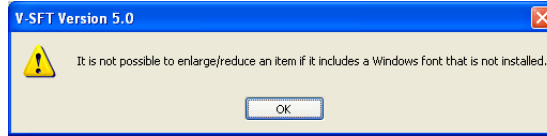
Any font name that is not installed on your computer is colored red.

While such a font is selected, the correction of/addition to registered characters and the correction of the point size are disabled.



### At the time of enlargement/reduction

If you try to enlarge or reduce any item including a font that is not installed on your computer, the following error message appears and the item is restored to the original size.



### [Windows Font List] window

If any Windows font used in screen data is not installed on your computer, the location where the font is set is shown in the [Windows Font List] window.

Font Name	Font Size	Registration Item	Item Name	Langu...
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier New	18	Screen [3]B	Num. Display	1
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier New	18	Screen [3]B	Num. Display	1
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
MS Gothic	10	Screen [3]B	Num. Display	1
Courier	10	Screen [3]B	Num. Display	2
Arial Unicode MS	12	Screen [3]B	Text	1
Arial	12	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2
Courier New	18	Screen [3]B	Num. Display	1
Courier	18	Screen [3]B	Num. Display	2
Courier	18	Screen [3]B	Text	1
Courier	18	Screen [3]B	Text	2

### [Windows Font Registration] window

Windows fonts used in character display are listed in the [Windows Font Registration] dialog. If any Windows font used in screen data is not installed on your computer, the font name is colored red also in this window. Size change and additional registration are not allowed for the font.

Font Name	Point	Bold	Italic	Registrati	Total Font Size
Courier New	12	<input type="checkbox"/>	<input type="checkbox"/>		836 / 12451840
NSimSun	12	<input type="checkbox"/>	<input type="checkbox"/>		456 / 12451840
GB Gothic	48	<input checked="" type="checkbox"/>	<input type="checkbox"/>		7448 / 12451840
NSimSun	48	<input checked="" type="checkbox"/>	<input type="checkbox"/>		6232 / 12451840
Courier New	48	<input checked="" type="checkbox"/>	<input type="checkbox"/>		7087 / 12451840

## Appendix 2 3D Parts

The 3D parts provided by Hakko Electronics will make parts placed on screens seem more real. This chapter explains the procedure and precautions for 3D parts settings in the course of screen creation.

The following explanation slightly varies with the color types selected for the individual edit models. According to your color type setting ([System Setting] → [Edit Model Selection] → [Color]), read the corresponding section in this chapter.

For information on the features of parts, refer to the V8 Series Reference Manual.

### 64k- or 32k-color Type

This section explains the available 3D parts and the necessary settings. Please familiarize yourself with these.

\* For the 128-color type, refer to “128-color Type” (page A2-17).

### Switch / Lamp

#### Available Parts

You may select 3D parts from the [Parts List] or from the [Change Part] in the item dialog. The following parts files are provided.

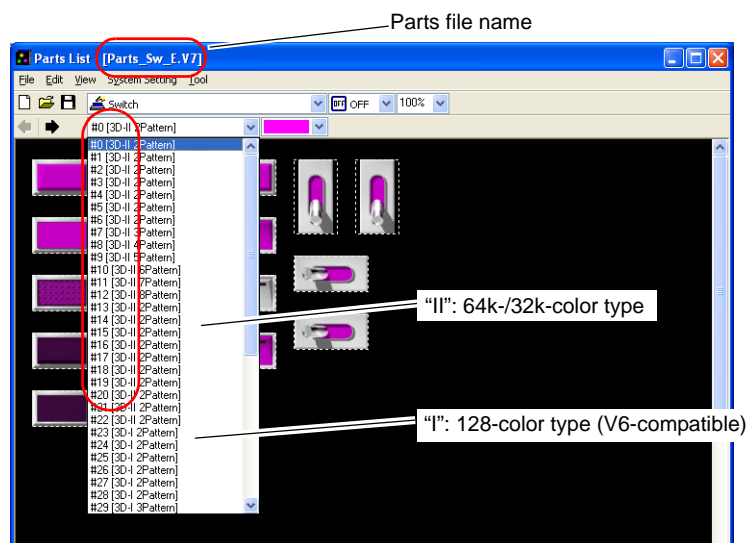
Parts	Parts File
Switch	Parts_Sw.V7
Lamp	Parts_Lp.V7



The parts files are stored in the “\*\*\*\V-SFT V5\Parts” folder.

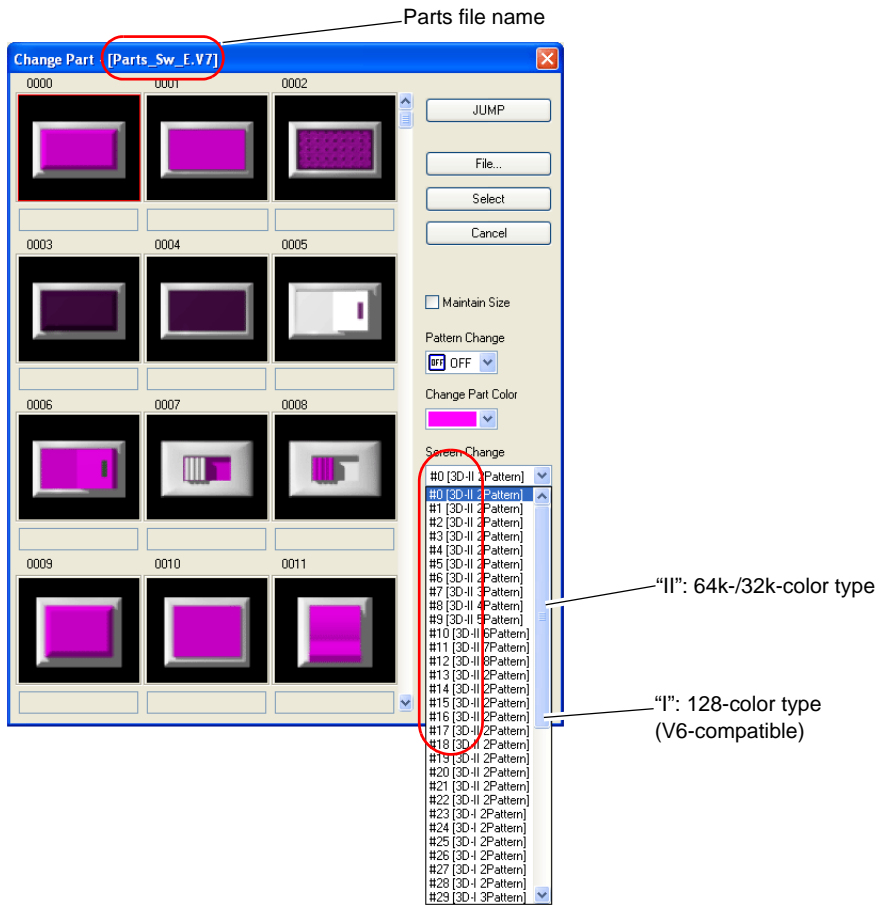
As for the “Parts” folder, “Parts3D” folder, and bitmap files in the folder, do not move their locations and change their names.

#### Selection from [Parts List]



\* Using parts with “II” (such as “3D-II”) in their comment fields is recommended. Parts with “I” are for 128-color type (V6-compatible).

### Selection from [Change Part]



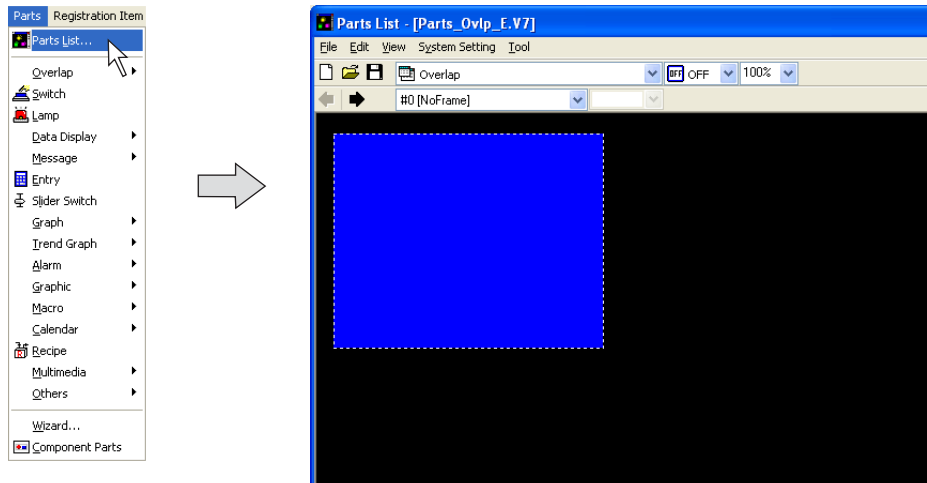
\* Using parts with "II" (such as "3D-II") in their comment fields is recommended. Parts with "I" are for the 128-color type (V6-compatible).

## Setting Procedure

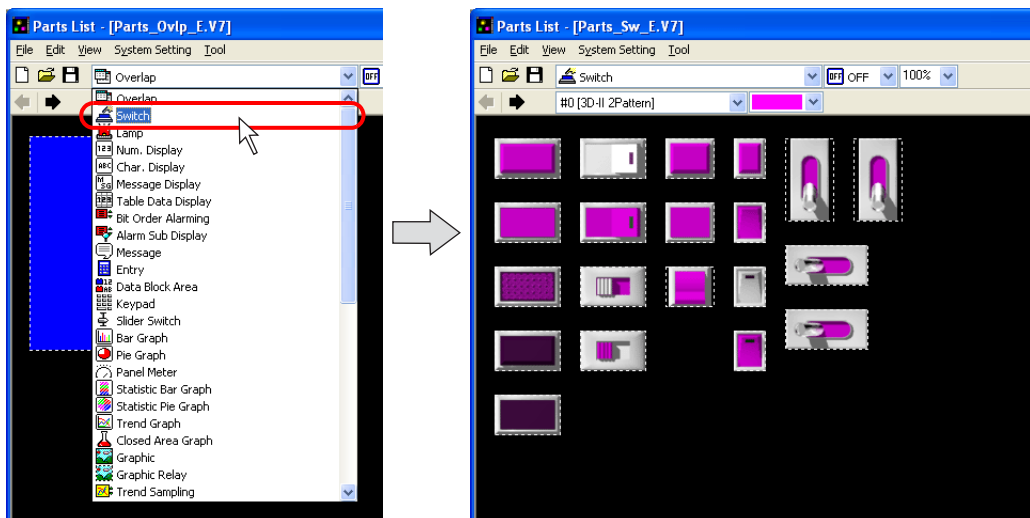
This section explains the procedure for setting a 3D part, taking a switch for example. The same procedure applies to 3D lamp part settings.

### Selection from [Parts List] (new placement)

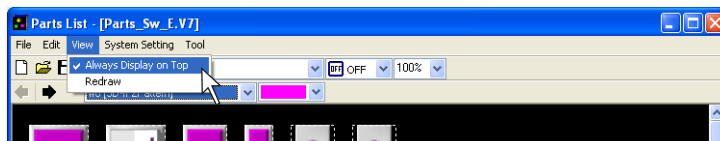
1. Click [Parts] → [Parts List].  
The [Parts List] window opens.



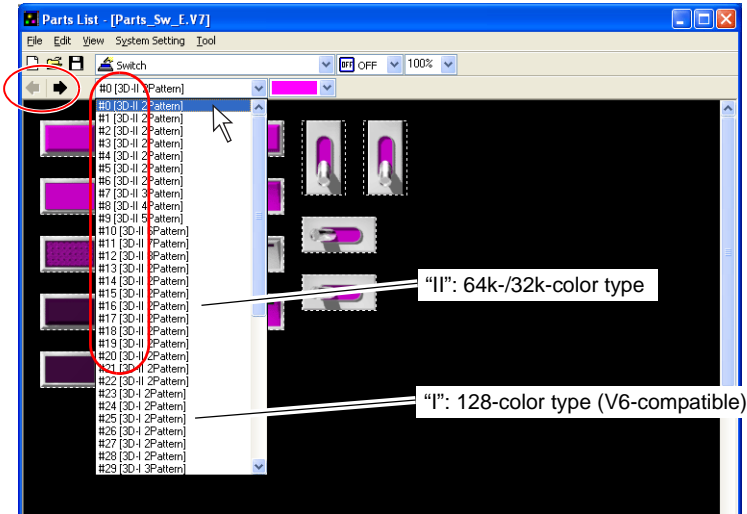
2. Select [Switch] from the pull-down menu. (When it has already been selected, go to step 3.)



To hide the parts list behind the editing window, uncheck the [Always Display on Top] in the [View] menu of the [Parts List] window.

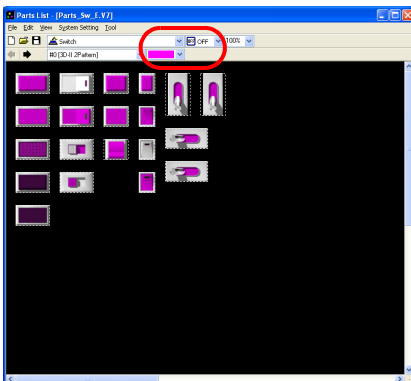


- Find the desired part in the switch parts list. The list is changed with the arrow icons or by selection from the pull-down menu.
  - \* Using parts with "II" (such as "3D-II") in their comment fields is recommended. Parts with "I" are for the 128-color type (V6-compatible).

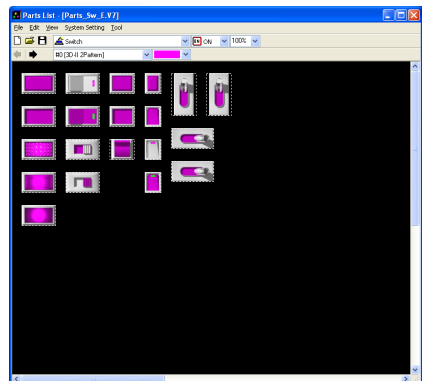


In the [Parts List] window, you can see the images of switches turned on and off and in different colors.

OFF images



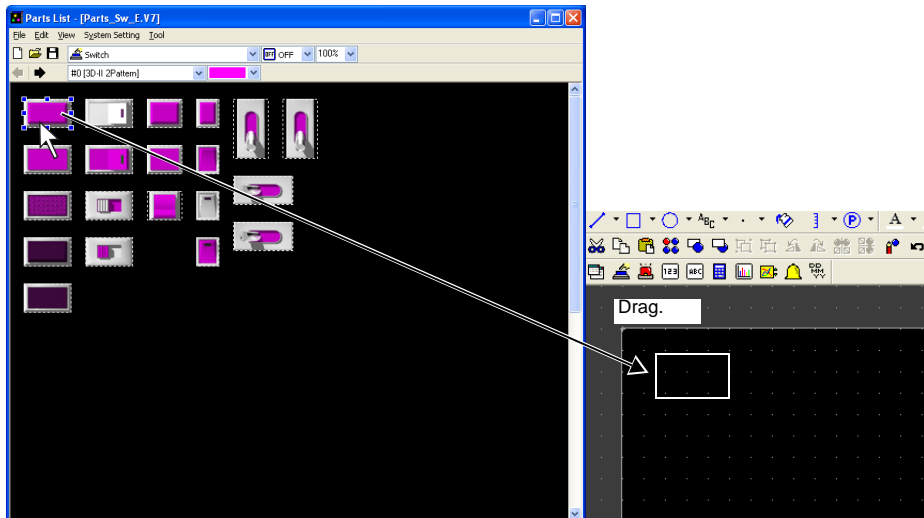
ON images



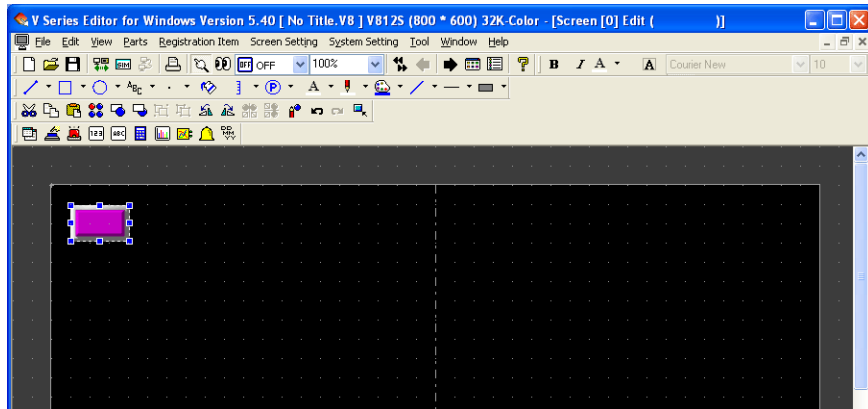
Switch.



4. Select the desired part in the desired color. Drag it onto the screen.



5. The switch part selected above is placed on the screen.



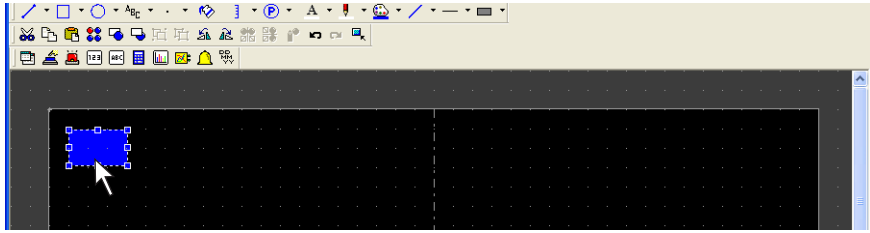
3D parts are provided with the flashing function that makes a switch or a lamp flash between different patterns: ON pattern or pattern P3 to P128 and OFF pattern.

For more information on the setting, refer to "Flashing Function" page A2-8.

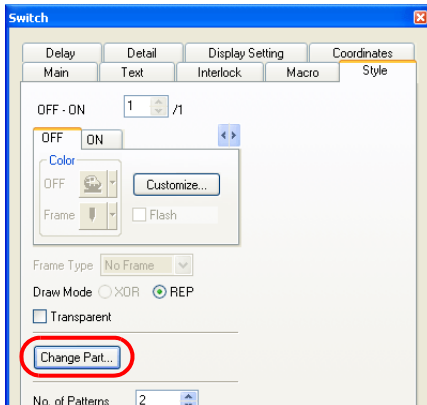
For more information on the features of parts, refer to the V8 Series Reference Manual.

### Selection from [Change Part] (with a switch already placed)

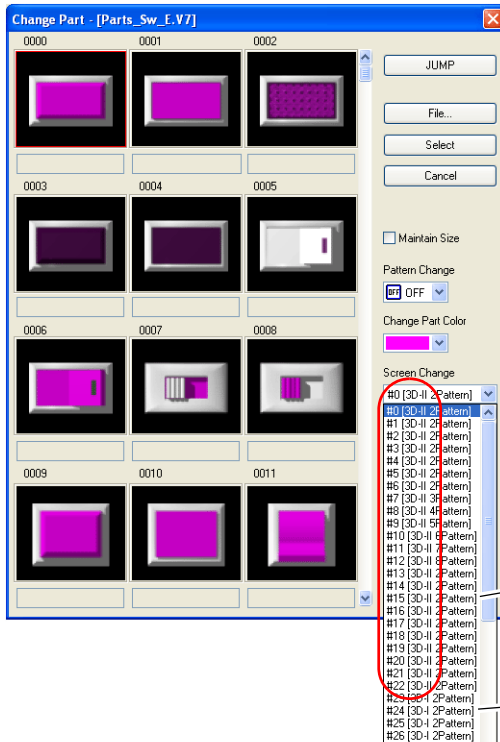
1. Click or double-click the switch placed on the screen.



2. In the [Switch] dialog, open the [Style] tab window and click [Change Part].



3. The [Change Part] dialog is displayed. Find the desired part in the switch parts list selected from the pull-down menu.



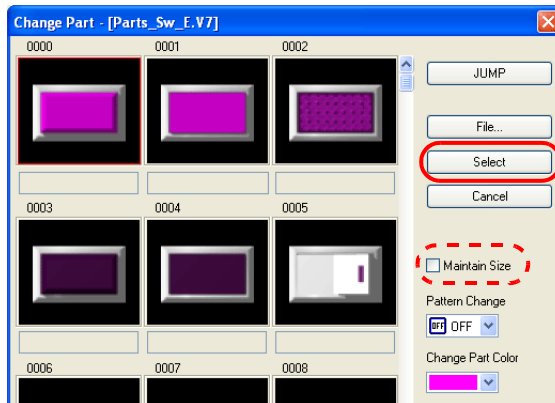
"I": 64k-/32k-color type

"I1": 128-color type (V6-compatible)



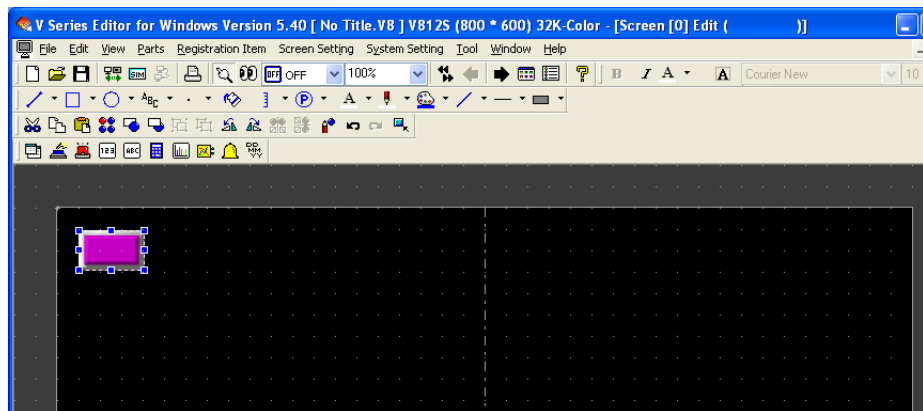
- \* Using parts with “II” (such as “3D-II”) in their comment fields is recommended. Parts with “I” are for the 128-color type (V6-compatible). For more information on the [Change Part] dialog, refer to “How to Modify the Placed Part” page 3-55.

4. Select your desired part and click [Select].



With  Maintain Size checked, the size and setting of the existing switch remain the same even after it is replaced with a newly selected part.

5. The switch part on the screen is replaced with the part selected above.

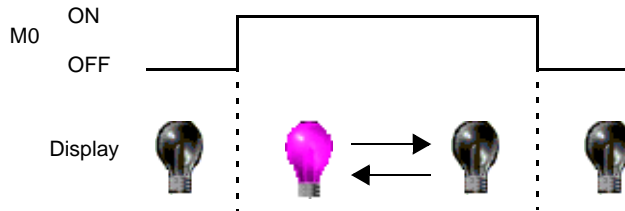


3D parts are provided with the flashing function that makes a switch or a lamp flash between different patterns: ON pattern or pattern P3 to P128 and OFF pattern. For more information on the setting, refer to “Flashing Function” page A2-8. For more information on the features of parts, refer to the V8 Series Reference Manual.

## Flashing Function

3D parts can flash between different patterns: the ON pattern or pattern P3 ñ P128 and the OFF pattern.

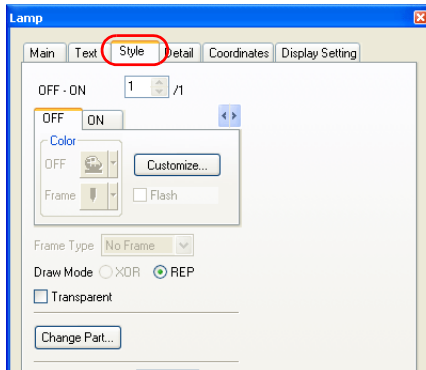
Ex.) Lamp memory M0



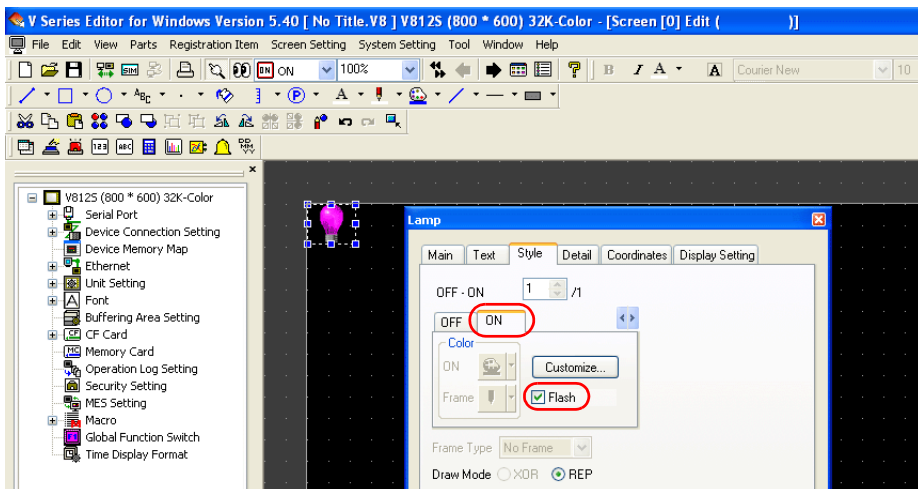
### Setting Procedure

This section explains the procedure for setting a lamp that flashes while it is on. The same procedure applies to switches.

1. Go to the [Lamp] dialog and open the [Style] tab window.



2. Select the tab of the pattern for flashing. Check  Flash.



For a flashing time setting, click [System Setting] → [Unit Setting] → [Blink/Flash].

## Data Display/Graph/Calendar

### Available Parts

You may select 3D parts from the [Parts List] or from the [Change Part] in the item dialog. The following parts files are provided.

Parts		Parts File
Data display	Numerical data display	Parts_NumDsp.V7
	Character display	Parts_CharDsp.V7
	Message display	Parts_MsgDsp.V7
Graph	Bar Graph	Parts_BarGraph.V7
	Pie graph	Parts_PieGraph.V7
	Closed area graph	Parts_ClosedAreaGraph.V7
	Panel meter	Parts_PanelMeter.V7
	Statistic bar graph	Parts_Stat_BarGraph.V7
	Statistic pie graph	Parts_Stat_PieGraph.V7
Calendar		Parts_CalenderDsp.V7



The parts files are stored in the “\*\*\*\V-SFT V5\Parts” folder.

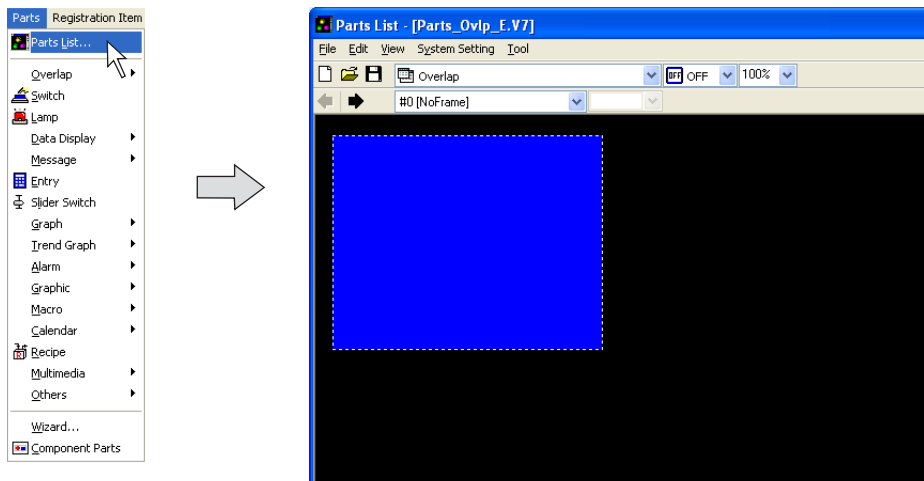
As for the “Parts” folder, “Parts3D” folder, and bitmap files in the folder, do not move their locations and change their names.

### Setting Procedure

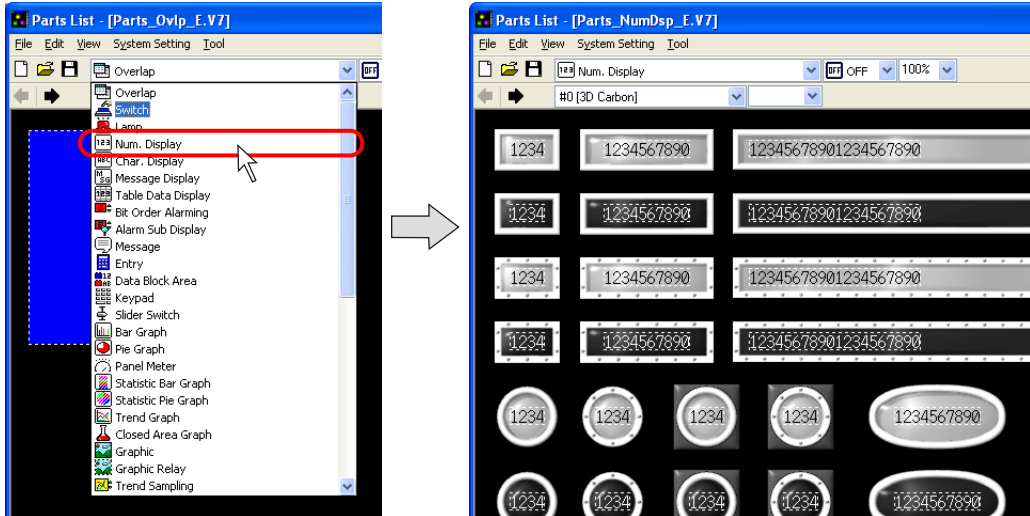
This section explains the procedure for setting a 3D part, taking a numerical data display for example. The same procedure applies to the other kinds of parts.

#### Selection from [Parts List] (new placement)

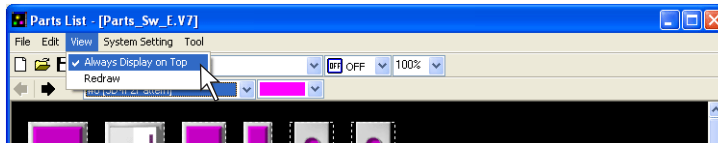
1. Click [Parts] → [Parts List].  
The [Parts List] window opens.



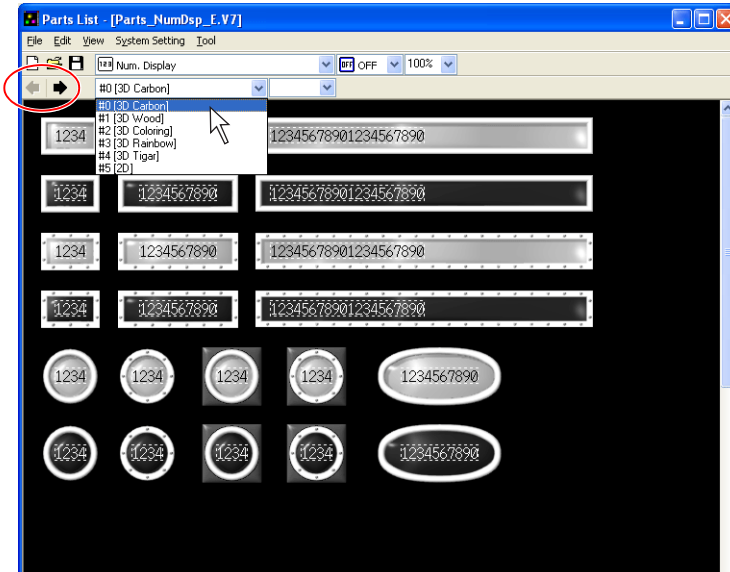
2. Select [Num. Display] from the pull-down menu. (When it has already been selected, go to step 3.)



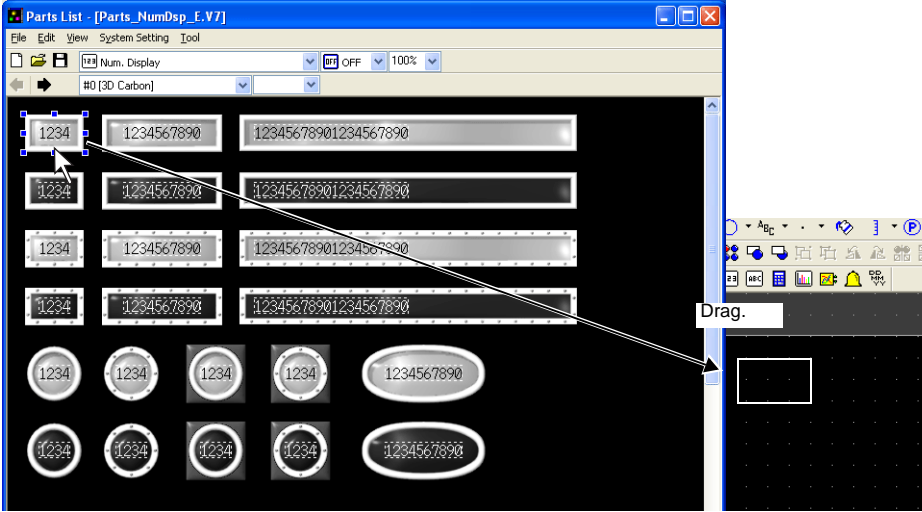
To hide the parts list behind the editing window, uncheck the [Always Display on Top] in the [View] menu of the [Parts List] window.



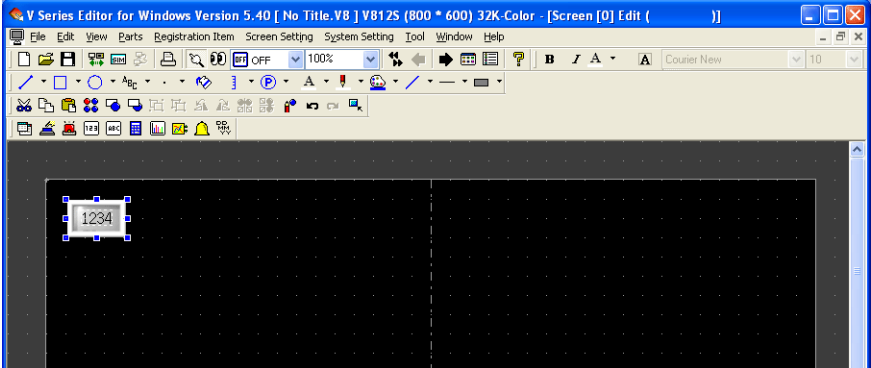
3. Find the desired part in the numerical data display parts list. The list is changed with the arrow icons or by selection from the pull-down menu



- 4. Select the desired part and drag it onto the screen.



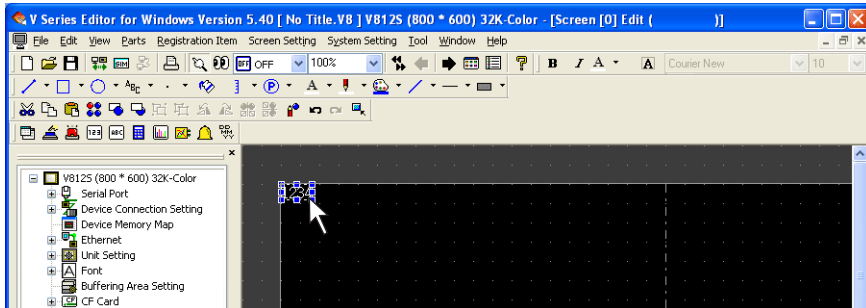
- 5. The numerical data display part selected above is placed on the screen.



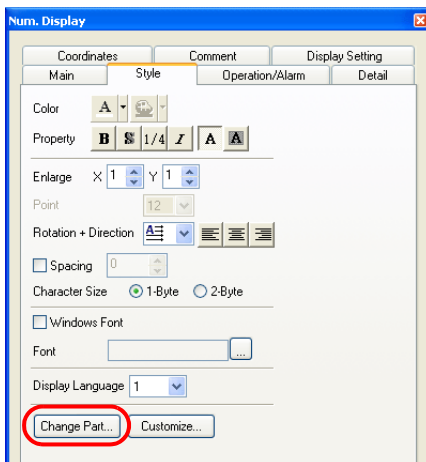
For more information on the features of parts, refer to the V8 Series Reference Manual.

### Selection from [Change Part] (with a part already placed)

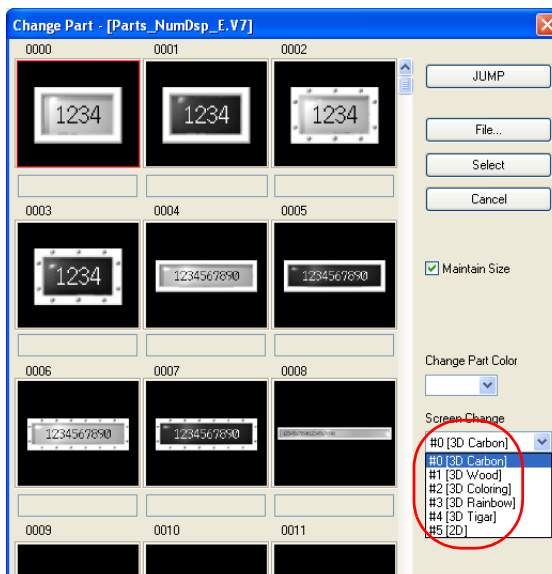
1. Click or double-click the numerical data display placed on the screen.



2. In the [Num. Display] dialog, open the [Style] tab window and click [Change Part].

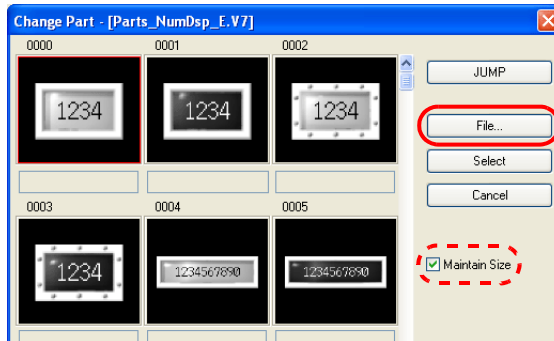


3. The [Change Part] dialog is displayed. Find the desired part in the numerical data display parts list selected from the pull-down menu.



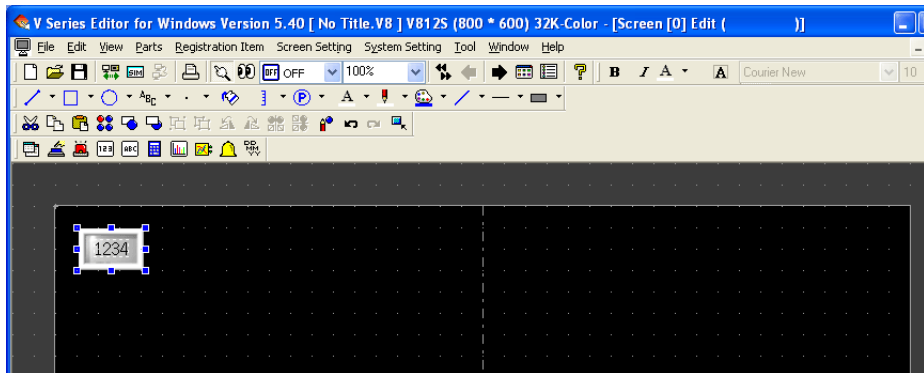
\* For more information on the [Change Part] dialog, refer to “How to Modify the Placed Part” page 3-55.

4. Select the desired part in the desired color and click [Select].



[With  Maintain Size] checked, the size and setting of the existing part remain the same even after it is replaced with a newly selected part.

5. The numerical data display part on the screen is replaced with the part selected above.



For more information on the features of parts, refer to the V8 Series Reference Manual.

## Customizing

User-created bitmap files are usable for designing parts such as switches. You may use a bitmap file in two ways for creating a new part and editing a part already placed on the screen.

This chapter explains the procedure for editing a part already placed on the screen. For creating a new part from a bitmap file, refer to the V8 Series Reference: Additional Functions.

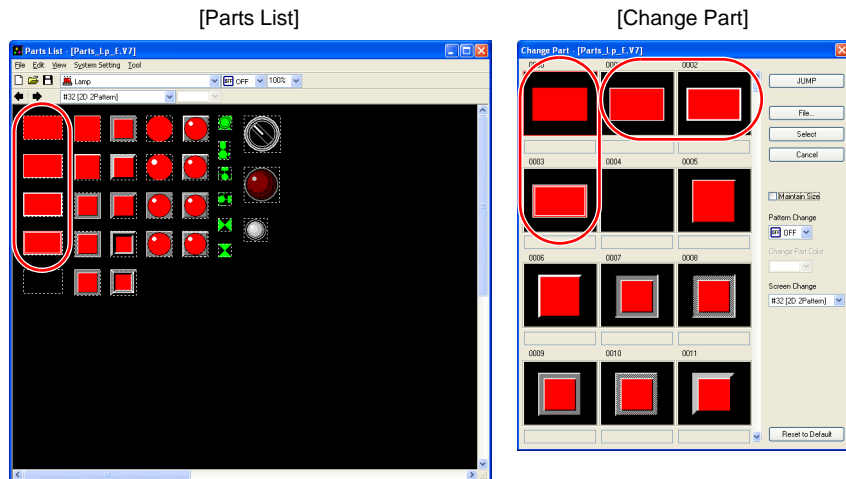
### Notes

Some switch and lamp parts cannot be customized.

- Switch parts



- Lamp parts

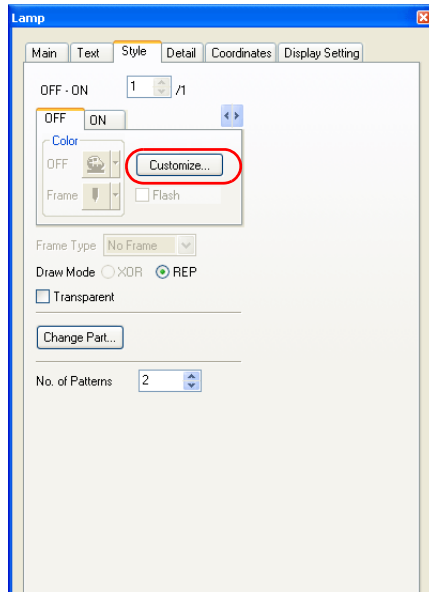




## Setting Procedure

This section explains the procedure for customizing a lamp part. The same procedure applies to the other kinds of parts.

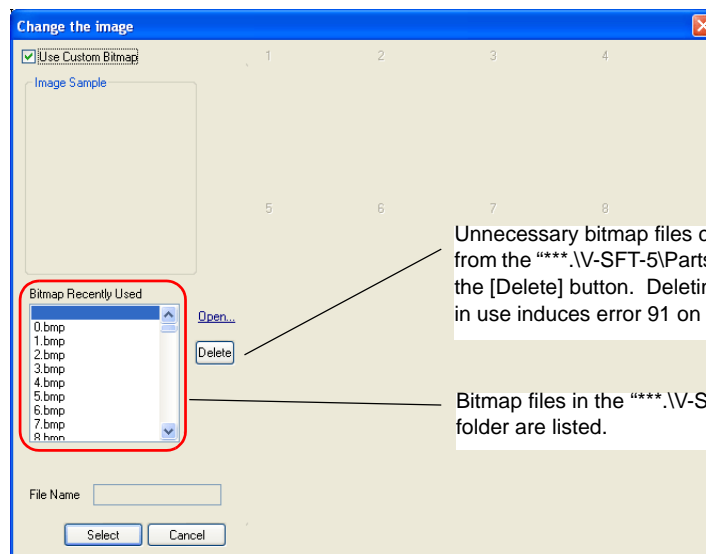
1. Go to the [Lamp] dialog and open the [Style] tab window. Click [Customize].



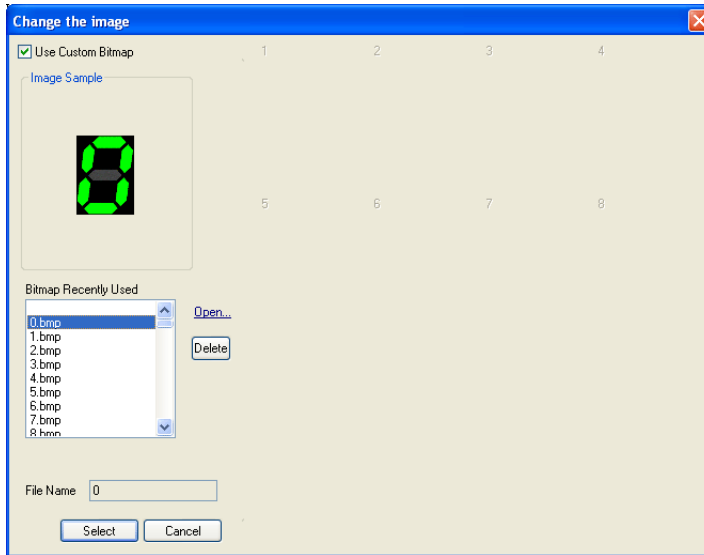
2. [Check Use Custom Bitmap].  
If the bitmap file you need is not found under [Bitmap Recently Used], select the file through the [Open] button. The bitmap file you selected will be copied to the "\*\*\*\*.\V-SFT-5\Parts\User" folder and additionally listed under [Bitmap Recently Used].



Checking Use Custom Bitmap deletes the image of [Image Sample].



3. The selected bitmap file name and the bitmapped image are displayed. Perform step 2 for each pattern of the lamp part.



For switch and lamp parts, custom bitmap files must be used for each pattern. If not, error 91 will occur on MONITOUCH.

# 128-color Type

This section explains the available 3D parts and the necessary settings. Please familiarize yourself with these.

\* For the 64k- or 32-k color type, refer to “64k- or 32k-color Type” (page A2-1).

## Switch / Lamp

### Available Parts

You may select 3D parts from the [Parts List] or from the [Change Part] in the item dialog. The following parts files are provided.

Parts	Parts File
Switch	Parts_Sw.V7
Lamp	Parts_Lp.V7



The parts files are stored in the “\*\*\*\V-SFT V5\Parts” folder.

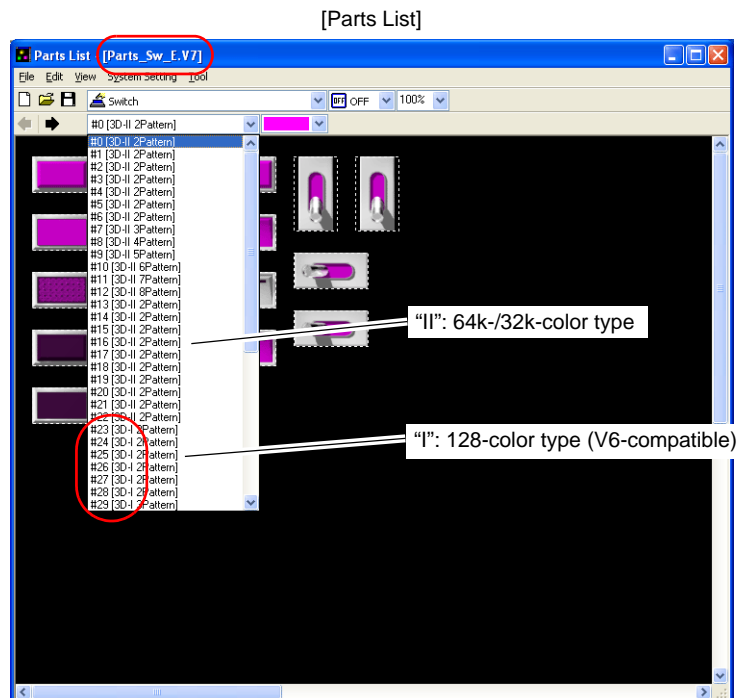
As for the “Parts” folder, “Parts3D” folder, and bitmap files in the folder, do not move their locations and change their names.

### Selection from [Parts List]

Use parts with “I” (such as “3D-I”) in their comment fields.



Using a part with “II” in its comment field will issue a warning during error check, and the part will not be colored correctly.



### Selection from [Change Part]

Use parts with "I" (such as "3D-I") in their comment fields.



Using a part with "II" in its comment field will issue a warning during error check, and the part will not be colored correctly.

[Change Part]

Change Part [Parts\_Sw\_E.V7]

0000 0001 0002

0003 0004 0005

0006 0007 0008

0009 0010 0011

JUMP

File...

Select

Cancel

Maintain Size

Pattern Change

OFF

Change Part Color

Screen Change

- #0 [3D-II 2Pattern]
- #1 [3D-II 2Pattern]
- #2 [3D-II 2Pattern]
- #3 [3D-II 2Pattern]
- #4 [3D-II 2Pattern]
- #5 [3D-II 2Pattern]
- #6 [3D-II 2Pattern]
- #7 [3D-II 3Pattern]
- #8 [3D-II 4Pattern]
- #9 [3D-II 5Pattern]
- #10 [3D-II 6Pattern]
- #11 [3D-II 7Pattern]
- #12 [3D-II 8Pattern]
- #13 [3D-II 2Pattern]
- #14 [3D-II 2Pattern]
- #15 [3D-II 2Pattern]
- #16 [3D-II 2Pattern]
- #17 [3D-II 2Pattern]
- #18 [3D-II 2Pattern]
- #19 [3D-II 2Pattern]
- #20 [3D-II 2Pattern]
- #21 [3D-II 2Pattern]
- #22 [3D-II 2Pattern]
- #23 [3D-II 2Pattern]
- #24 [3D-I 2Pattern]
- #25 [3D-I 2Pattern]
- #26 [3D-I 2Pattern]
- #27 [3D-I 2Pattern]
- #28 [3D-I 2Pattern]
- #29 [3D-I 2Pattern]

"II": 64k-/32k-color type

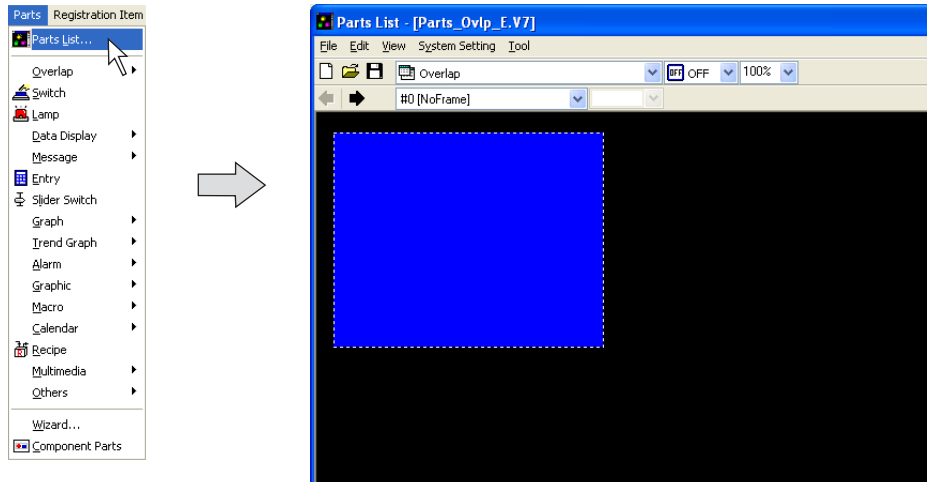
"I": 128-color type (V6-compatible)

## Setting Procedure

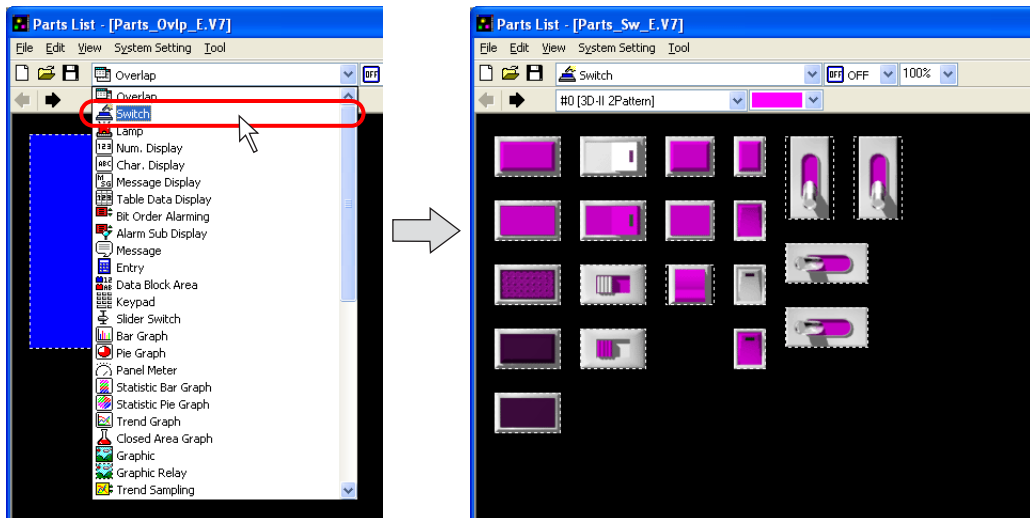
This section explains the procedure for setting a 3D part, taking a switch for example. The same procedure applies to 3D lamp part settings.

### Selection from [Parts List] (new placement)

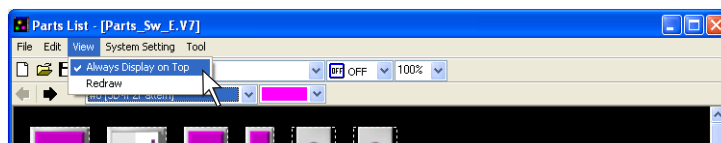
1. Click [Parts] → [Parts List].  
The [Parts List] window opens.



2. Select [Switch] from the pull-down menu. (When it has already been selected, go to step 3.)



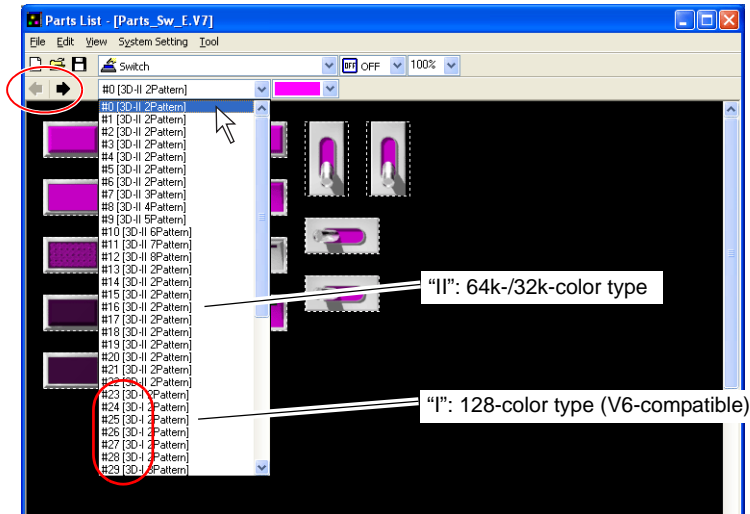
To hide the parts list behind the editing window, uncheck the [Always Display on Top] in the [View] menu of the [Parts List] window.



- Find the desired part, which is with "I" (such as "3D-I") in its comment field, in the switch parts list. The list is changed with the arrow icon or selection from the pull-down menu.

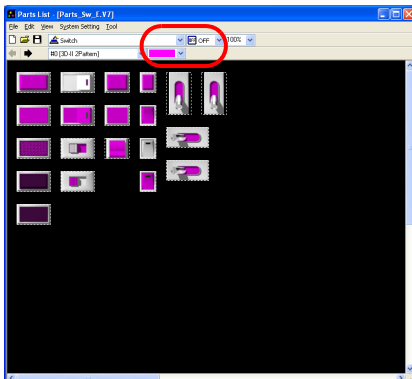


Using a part with "II" in its comment field will issue a warning during error check, and the part will not be colored correctly.

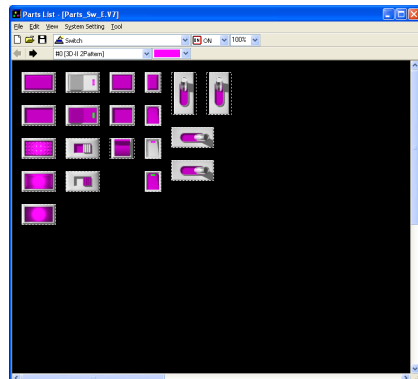


In the [Parts List] window, you can see the images of switches turned on and off and in different colors.

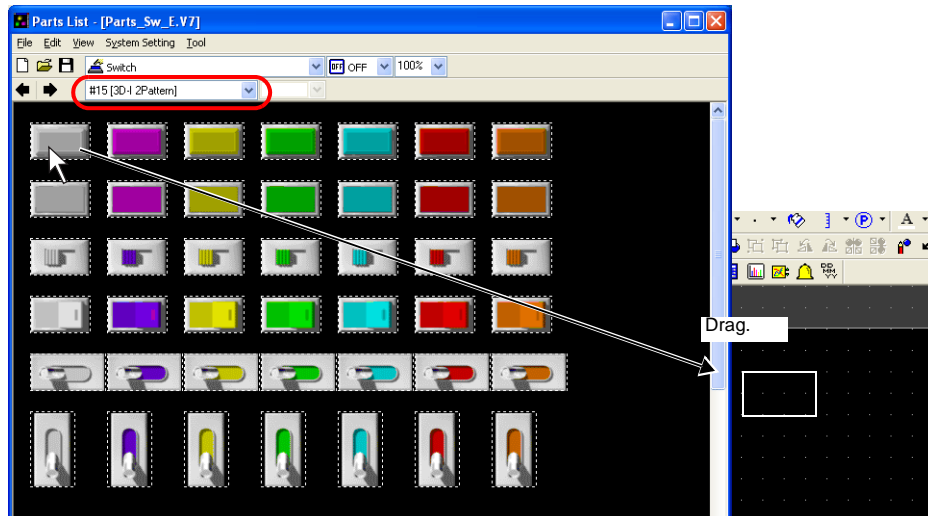
OFF images



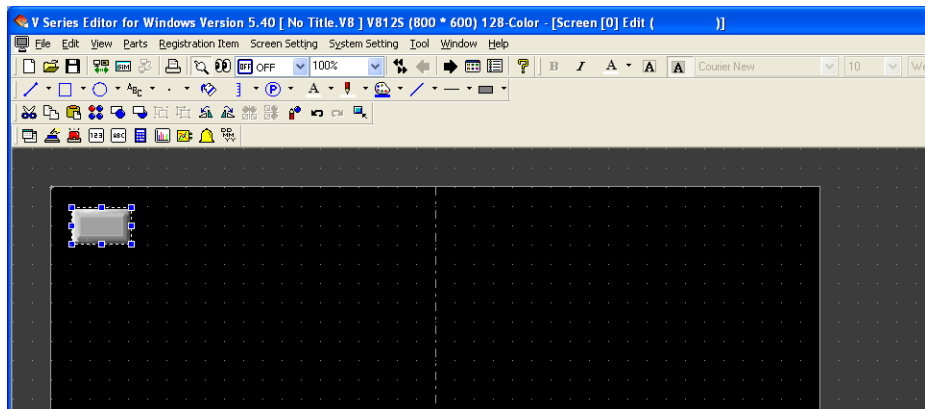
ON images



4. Select the desired part and drag it onto the screen.



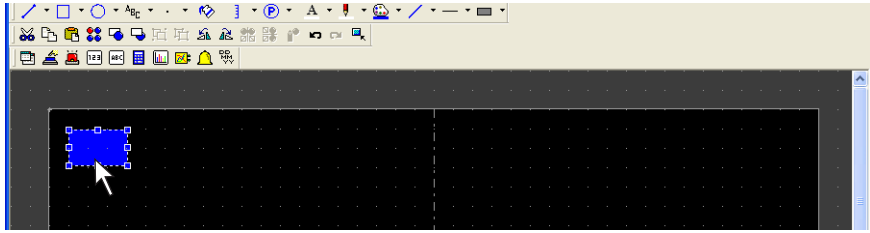
5. The switch part selected above is placed on the screen.



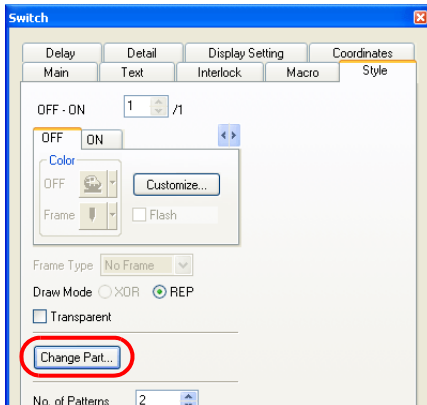
For more information on the features of parts, refer to the V8 Series Reference Manual.

### Selection from [Change Part] (with a part already placed)

1. Click or double-click the switch placed on the screen.



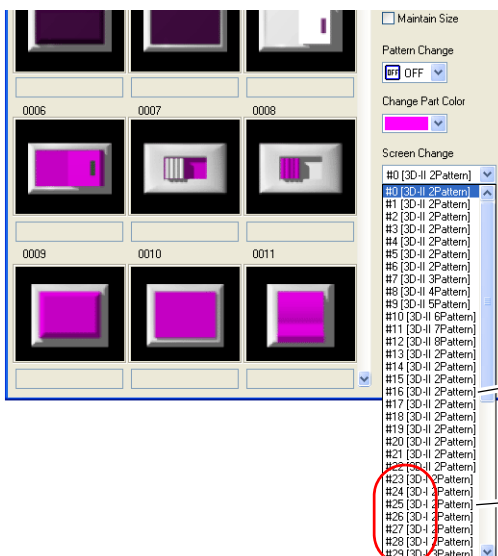
2. In the [Switch] dialog, open the [Style] tab window and click [Change Part].



3. The [Change Part] dialog is displayed. Find the desired part, which is with "I" (such as "3D-I") in its comment field, in the switch parts list. The list is changed by scrolling in the dialog or selection from the [Screen Change] pull-down menu.



Using a part with "I" in its comment field will issue a warning during error check, and the part will not be colored correctly.



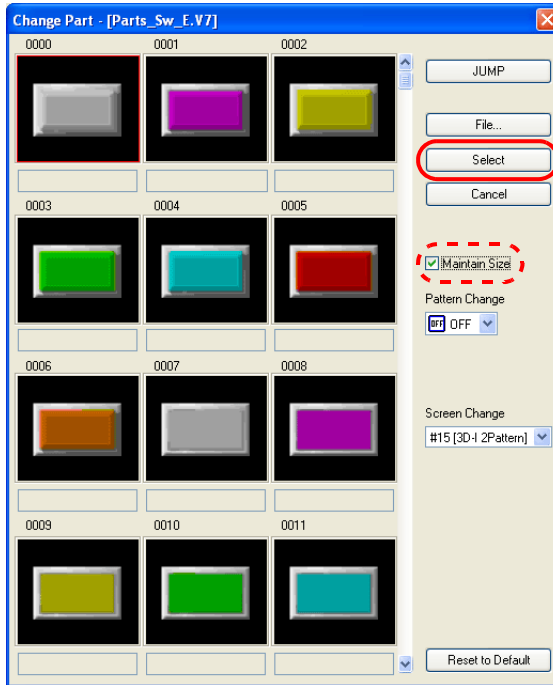
"I": 64k-/32k-color type

"I": 128-color type (V6-compatible)

\* For more information on the [Change Part] dialog, refer to "How to Modify the Placed Part" page 3-55.

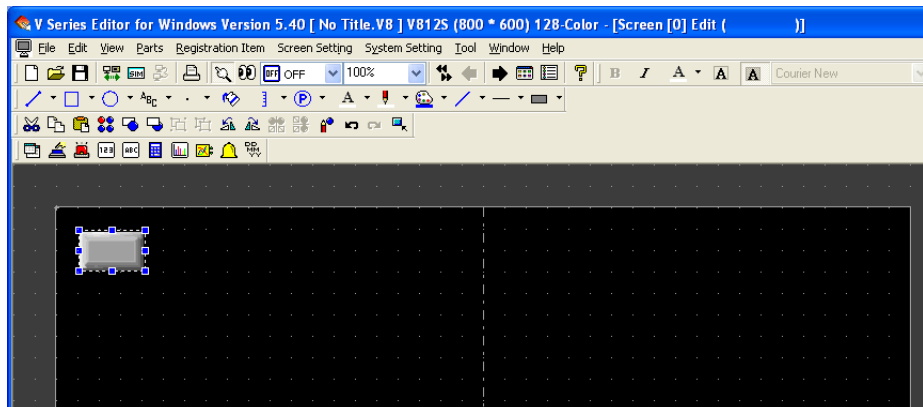


- Select the desired part and click [Select].



[With  Maintain Size] checked, the size and setting of the existing part remain the same even after it is replaced with a newly selected part.

- The switch part on the screen is replaced with the part selected above.



For more information on the features of parts, refer to the V8 Series Reference Manual.

## Notes

### Notes on Dealing with 3D Parts

- A bitmap file used in the screen data may not be stored in the "\*\*\*\*.\V-SFT-5\Parts\User" folder, which exists in your computer. When you open the screen data on the computer in an attempt to edit it, the bitmap file will automatically be created and registered with the folder. However, the automatic creation mentioned above will not take place if a bitmap file under the same name exists. In such a case, rename the bitmap file or delete the already existing file under the same name from the "\*\*\*\*.\V-SFT-5\Parts\User" folder. Note that the above automatically created bitmap file is not completely identical to the original file. Therefore, copy the original bitmap file to the "\*\*\*\*.\V-SFT-5\Parts\User" folder and use the copy.
- REP is valid as the drawing mode for switches and lamps.
- Any area drawn in black (code 0000) is automatically recognized as a transparent color on MONITOUCH. If you wish to hide an area on the screen, draw the area in black. If you need to show a black area without transparency, draw the area in a color (code) similar to black.

### Memory Size

3D parts require more memory compared to 2D parts. Check the memory occupied in the [List of Memory Use] displayed from the [Tool] menu. To see the status of memory use for 3D parts, go to [Bitmap Area]\*.



If you have transferred screen data larger than the permissible memory size, the message "Communication is not possible because the size is too large." is displayed. Edit the data within the permissible memory size and resend it.

Ex.) One 3D switch part placed on the screen

No.	Memory Used	Percentage of Use (%)
1	4783	1.8
2	4783	1.8

The ON and OFF patterns of the switch are separately counted (two as a total).  
(Numbers are allocated to the patterns in the order of registration.)

\* In the case of 64k- or 32k-color type, the bitmap area shows the data used for customized parts in addition to 3D parts.

For more information on the customization, refer to "Customizing" page A2-14.

## Limitation on Parts

One 3D parts file is allowed to use a maximum of 1,023 patterns.

### How to Count Patterns

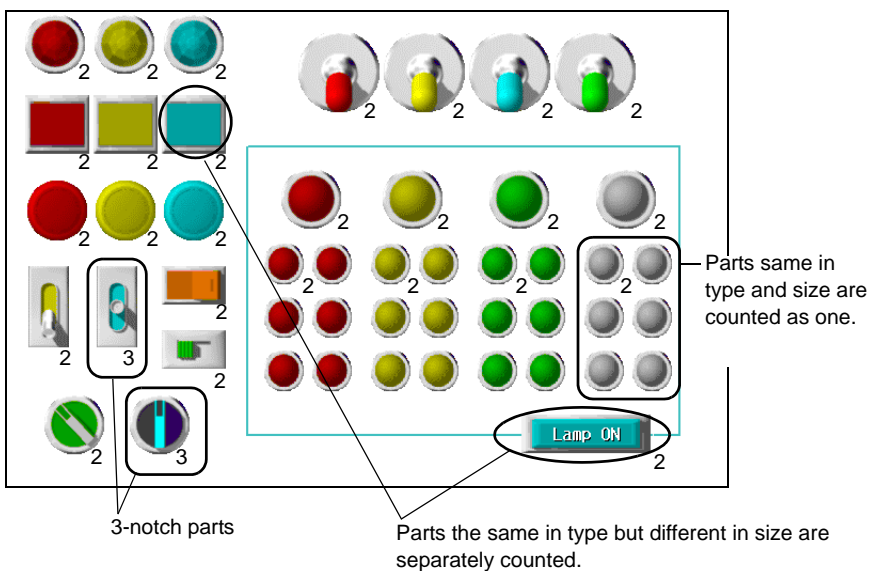
- One part or two or more parts the same in type and size are placed on the screen:
  - Switch / lamp: The number of notches of one part
  - Parts other than switch and lamp: One pattern
- Parts the same in type but different in size are placed on the screen:
  - Switch / lamp: The number of notches of every part
  - Parts other than switch and lamp: Every part counted as one pattern

<Example:>

Fifty eight patterns are used for the switches and the lamps on the following screen.

$$2 \text{ (notches)} \times 26 \text{ (pieces)} + 3 \text{ (notches)} \times 2 \text{ (pieces)} = 58$$

Each value at the lower right denotes the number of notches.



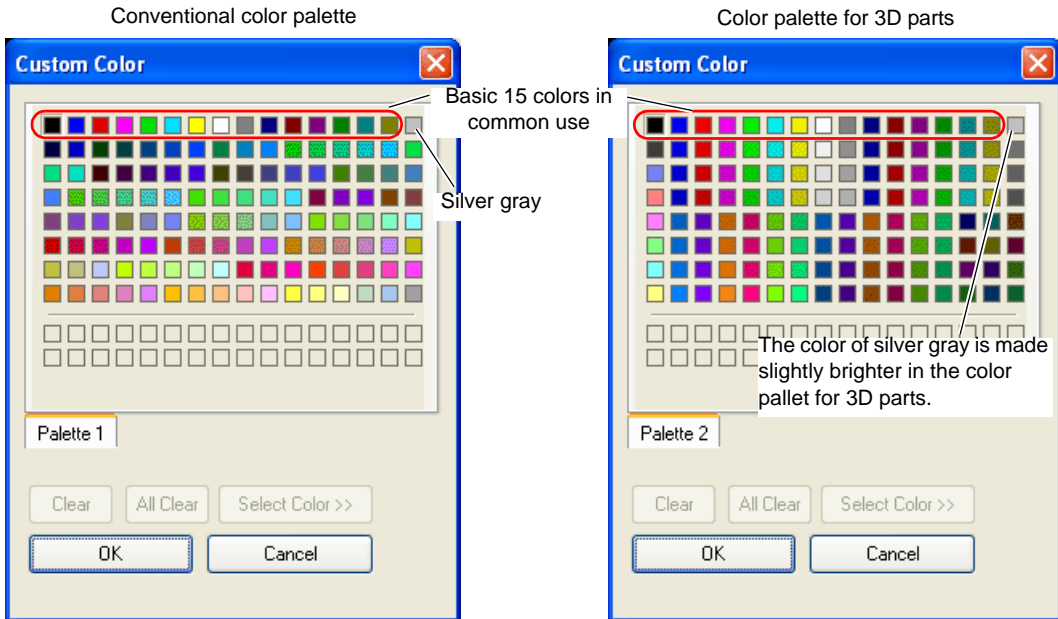
## Color Palettes

**\* For 128-color type only**

In a case where [ Use 3D Parts] is checked ([System Setting] → [Unit Setting] → [General Settings]), the pallet file to be loaded is the one for 3D parts used for the 128-color type of the V7 series or earlier (V710C/V708C/V6 series). When this option is unchecked, the conventional color pallet file will be loaded instead. Therefore, the colors set for 3D parts, other than the basic 15 colors, will vary.



If [ Use 3D Parts] is unchecked for any created screen, it is displayed in colors that vary from the previously set colors.



# Appendix 3 Parts Editing

## Parts

Parts are selectable from the parts list included in the editor.

User-created parts are also available.

You may modify the design of a part using a user-created bitmap file as explained in “Customizing” page A2-14. Also you may draw a part using boxes or lines ([Modify Part]).

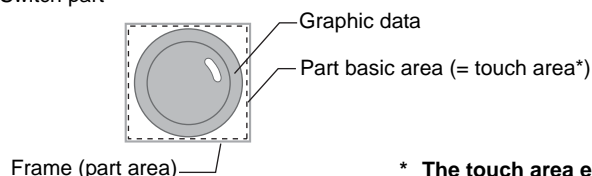
This chapter explains how to edit a part through [Modify Part].

Parts you create can be saved as the screen data (“\*.V8”) and selected from the parts list. (For more information, refer to “After Completion of Parts Editing” page A3-28.)

### Structure of a Part

Parts are the same in structure though they are different in property. The components of a part are the basic area that possesses part properties, the graphic data, and the frame (part area) that denotes the overall size (involving the basic area and the graphic data) of the part.

Ex.) Switch part



\* The touch area exists for switch parts only.

### Editable Parts

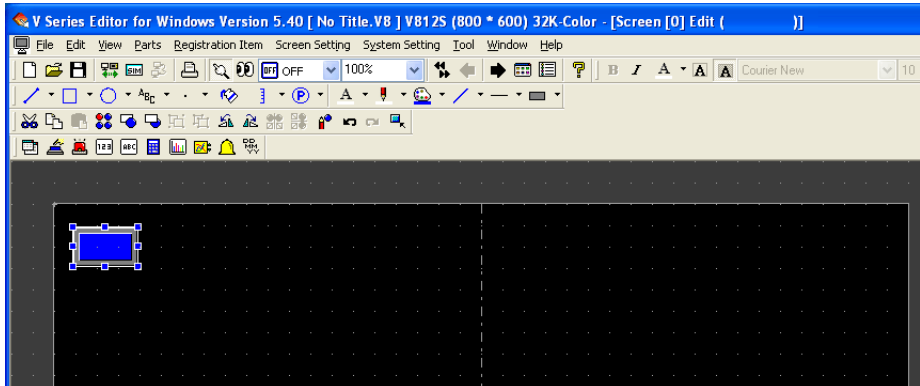
The parts listed below are editable.

Parts		Refer to:
Overlap		page A3-4
Switch / lamp		page A3-5
Data display	Numerical data display	page A3-10
	Character display	
	Message display	
Keypad		page A3-11
Slider switch		page A3-11
Graph	Bar graph	page A3-12
	Pie graph	page A3-13
	Closed area graph	page A3-17
	Panel meter	page A3-19
	Statistic bar graph	page A3-20
	Statistic pie graph	page A3-21
	Trend graph/ Trend sampling	page A3-22
Display area		page A3-23
Data sampling		page A3-24
Calendar		page A3-26

# Calling the [Modify Part] Window

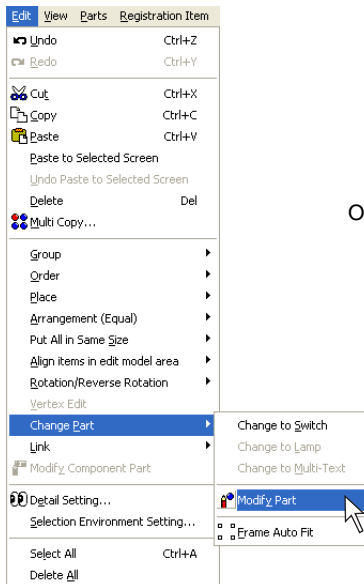
## Calling

1. Select the part to modify.



2. Call up the [Modify Part] window by any of the following procedures:

- Click [Edit] → [Change Part] → [Modify Part].
- Click the [Modify Parts] icon on the toolbar.
- In the right-click menu, click [Change Part] → [Modify Part].

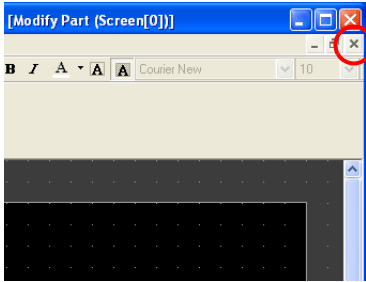
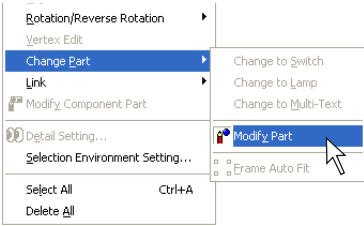


OR



# Closing

1. When the part editing is completed, close the [Modify Part] window by any of the following procedures:
  - Click [Edit] → [Change Part]→ [Modify Part].
  - Click the [x] mark at the upper right.
  - Click the [Modify Parts] icon on the toolbar.



OR

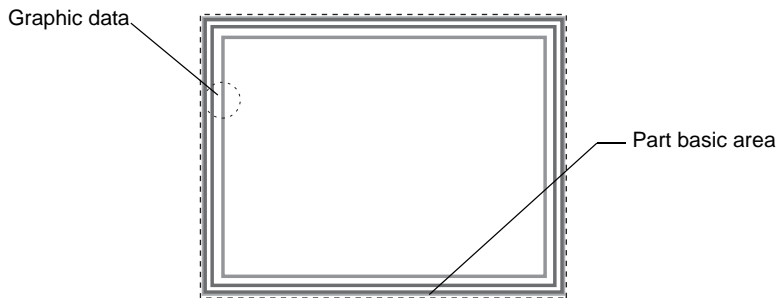


2. Go back to the previous screen.

# Parts Editing

## Overlap

### Structure



\* Overlap display parts are provided with no frame.

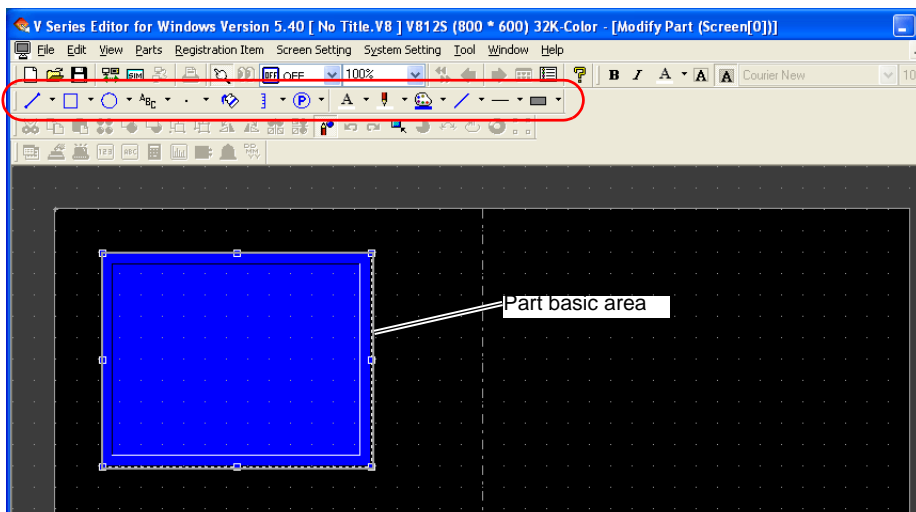
### Procedure

This section explains the procedure for editing a normal overlap display part. Follow the same procedure also when an overlap display with the overlap library is registered ([Registration Item] → [Overlap Library]).

1. Select the overlap display to edit, and open the [Modify Part] window.
2. Using drawing icons etc., edit its design as desired.  
For editing procedure with drawing icons, refer to “4 Drawing” page 4-1.



- Drawing outside the part basic area is invalid. Perform all drawing inside the part basic area.
- The color of the part basic area can be selected in the item dialog of the overlap display on the base screen.

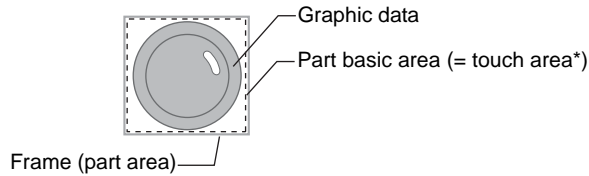


3. Go back to the base screen.



## Switch / Lamp

### Structure



\* The touch area exists for switch parts only.

### Procedure

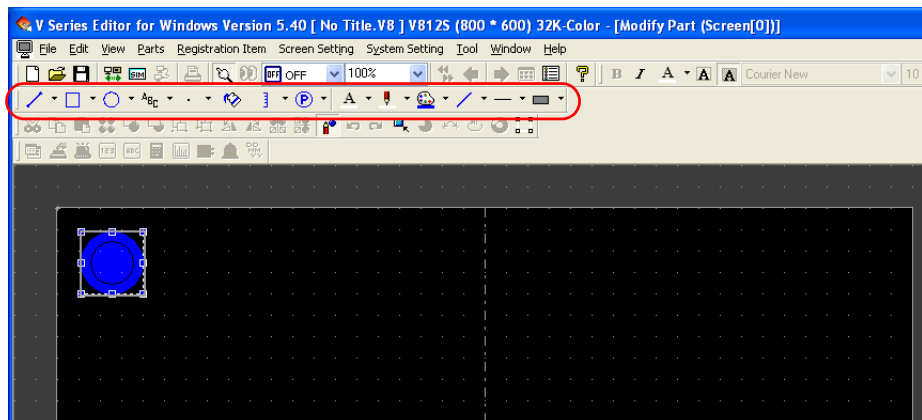
This section explains the procedure for editing a switch part. The same procedure applies to lamp part editing.



In a case where [ Place switches on switch grids.] ([View] → [Grid]) is checked, placing or scaling a switch part or setting its touch area is based on the switch grid.

With a V8 unit of the analog switch type, unchecking the above option allows you to edit a switch on a dot-by-dot basis, independently from the switch grid. With a V8 unit of the matrix switch type, however, be sure to check [Place switches on switch grids.] before editing a switch part.

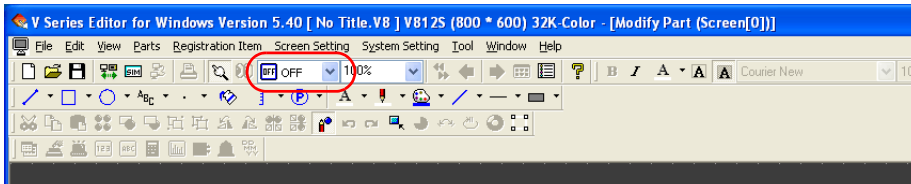
1. Select the switch part you wish to edit, and open the [Modify Part] window.
2. Using drawing icons, etc., edit its design as desired.  
For editing procedure with drawing icons, refer to "4 Drawing" page 4-1.



- When you proceed to editing the other patterns of the switch, select a pattern from [OFF], [ON], [P3], and after, and follow step 2.



- For creating a switch or a lamp, the graphic of its ON pattern is placed over the graphic of its OFF pattern. Even a slight deviation from each other will not display the switch or the lamp correctly. In the [Modify Part] window, copy the graphic of the OFF pattern. Change the window to the window for ON pattern editing and paste the copy to the window.
- Whether the patterns (OFF, ON, P3 and after) of a switch or a lamp you edited are displayed on MONITOUCH as intended depends on the [Draw Mode: XOR or REP] in the [Style] tab window of the item dialog. Extra care is needed in this mode setting.



\* For more information on graphic properties, refer to “Properties of graphic frames and areas” (page A3-7).

- On completion of editing the patterns of the switch, set its touch area again.  
For more information on setting the touch area, refer to “Re-setting the touch area” (page A3-7).



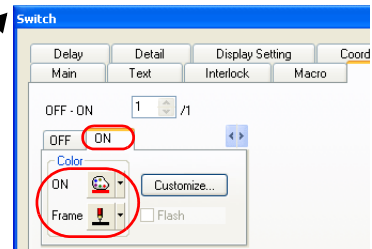
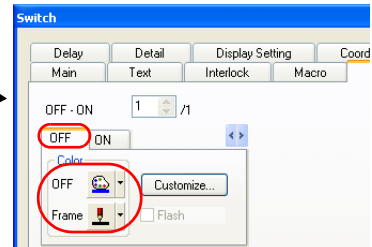
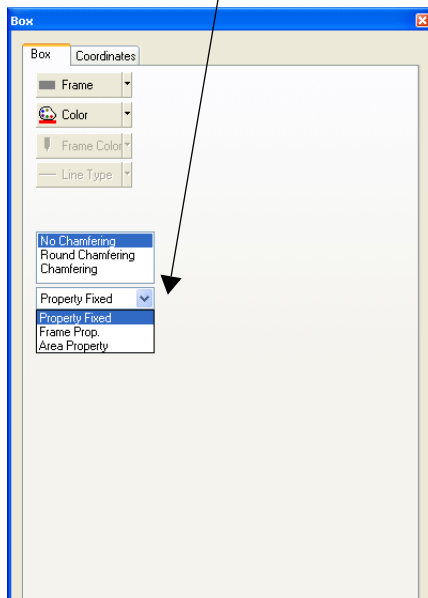
A lamp part, which has no touch area, needs re-setting its basic area instead.  
For how to re-set the area, refer to “Re-setting the part basic area” (page A3-8).

- Set the frame of the switch part again.  
For how to re-set the frame, refer to “Re-setting the frame” (page A3-9).
- Go back to the base screen.

### Properties of graphic frames and areas

In the case of editing a switch or lamp part, frame and area properties can be set for the graphics of ON and OFF patterns. Once a pattern of a switch or a lamp is provided with the frame property ([Frame Prop.]) or area property ([Area Property]) setting, its color can be changed directly from the [Switch] or [Lamp] dialog. When [Frame Prop.] or [Area Property] is selected, its corresponding color setting can be made in the following location:

Graphic Properties		On Switch / Lamp
Editing the OFF pattern graphic	Frame property	OFF frame color
	Area property	OFF color
Editing the ON pattern graphic	Frame property	ON frame color
	Area property	ON color



\* The same applies to lamp parts.

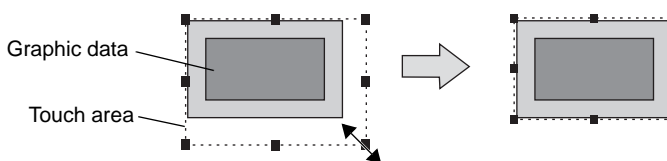
### Re-setting the touch area

Every switch part has a touch area. Pressing the touch area activates the switch. If the graphic data of a switch part deviates from the touch area during editing, the switch may become inactive or may be activated by pressing anywhere outside the switch. Re-setting the touch area is required to avoid such a deviation problem.

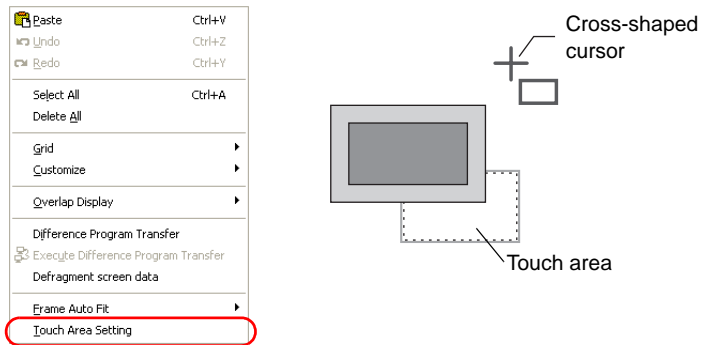
When a switch is placed on V-SFT, its dotted frame denotes the touch area.

There are the following two methods of touch area setting:

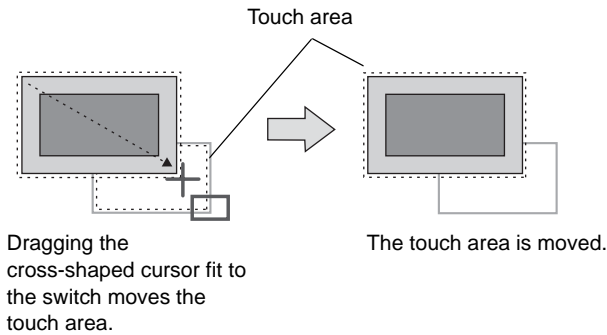
- Dragging
  - 1) Select the dotted frame of the target switch part. Or, click [View] → [View] → [Item List], and select the target switch part.
  - 2) The handles now appear along the touch area. Drag one of the handles with the mouse.



- Move to an arbitrary position
  - 1) In the right-click menu, click [Touch Area Setting]. A cross-shaped cursor appears.



- 2) Adjust the touch area to your desired position by dragging the cross-shaped cursor.

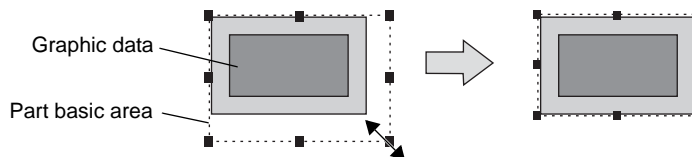


### Re-setting the part basic area

Every part has a part basic area\*, which is a part identifying area. If an edited graphic of a lamp part, for example, deviates from its basic area, the ON and OFF patterns of the lamp will not be switched correctly due to the deviation. Re-setting the part basic area is required to avoid such a deviation problem. When a part is placed on V-SFT, its dotted frame denotes the part basic area. The following section explains the procedure for setting a part basic area, taking a lamp part for example.

- \* As for a switch part, its touch area is equivalent to the part basic area.  
**For how to re-set the touch area, refer to “Re-setting the touch area” (page A3-7).**

- 1) Select the dotted frame of the target lamp part. Or, click [View] → [View] → [Item List], and select the target lamp part.
- 2) The handles now appear along the basic area. Drag one of the handles with the mouse.



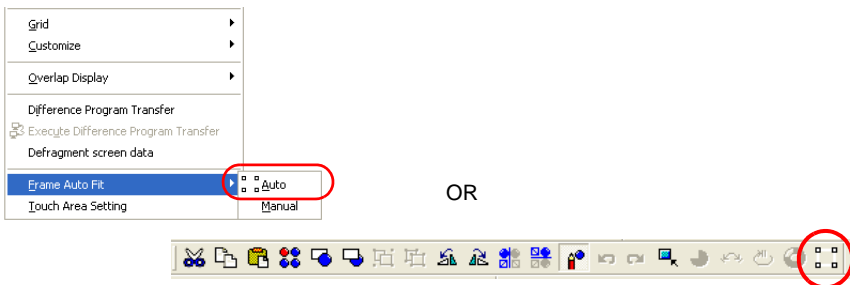
### Re-setting the frame

Every part has a frame (in default color: gray). The frame of a part denotes its overall size, comprising the graphic data and the basic area (the touch area in the case of a switch part). For a graphic freely drawn, its frame may not fit the size of the drawn graphic. Re-setting the frame is required to avoid such a deviation problem.

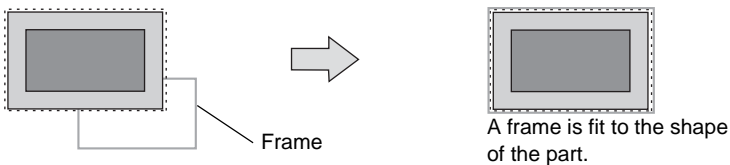
There are the following two methods of frame setting:

- Automatic setting

- 1) In the right-click menu, click [Frame Auto Fit] → [Auto], or click the [Frame Auto Fit] icon on the toolbar.



- 2) The frame is fit to the graphic data and the touch area.

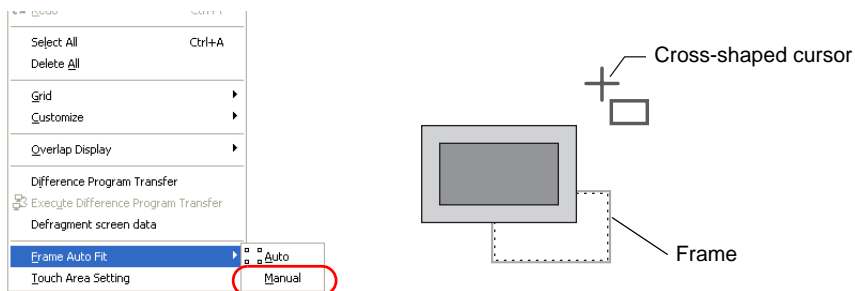


Frame re-setting is also executable on the base screen. Select the target part (or parts), and follow the either procedure:

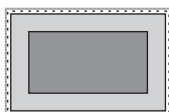
- In the right-click menu, click [Change Part] → [Frame Auto Fit].
- Click [Edit] → [Change Part] → [Frame Auto Fit].

- Manual setting

- 1) In the right-click menu, click [Frame Auto Fit] → [Manual]. A cross-shaped cursor appears.



- 2) Adjust the frame to the desired position by dragging the cross-shaped cursor.



## Data Display

Data display parts include numerical data display, character display, and message display parts.

### Structure

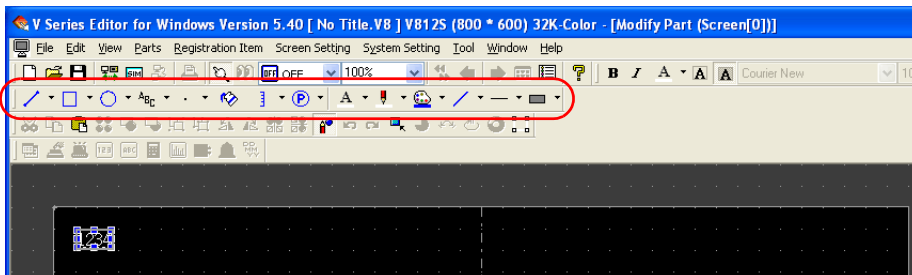
Ex.) Numerical data display



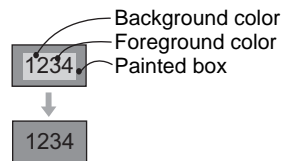
### Procedure

This section explains the procedure for editing a numerical data display part. The same explanation applies to character and message display parts.

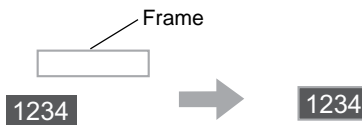
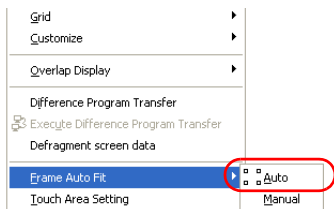
1. Select the numerical data display you wish to edit, and open the [Modify Part] window.
2. Using drawing icons, etc., edit its design as desired.  
For editing procedure with icons, refer to “4 Drawing” page 4-1.



For a numerical data display part with a painted box as its background, taking steps as the following is recommended: in the [Style] tab window in the [Num. Display] dialog, select [Not Transparent] and set [Background color] at [Color] to the color of the painted box. If [Transparent] is checked, the numerical data display part displayed on MONITOUCH will flicker at the time of display value switching and will decrease in display speed.



3. On completion of editing, click [Frame Auto Fit] in the right-click menu.  
For more information on the frame and its setting method, refer to “Re-setting the frame” (page A3-9).

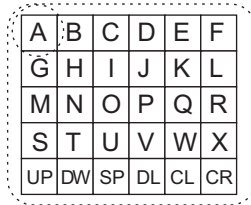


4. Go back to the base screen.

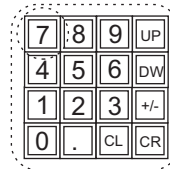
## Keypad

### Structure

A keypad part for numerical or text entry consists of multiple switch parts.



A keypad part consists of multiple switch parts.



### Procedure

The editing procedure is the same as that for switch parts.\*  
For more information, refer to "Switch / Lamp" (page A3-5).

- \* **The switch parts are linked. Therefore, the switch parts need to be unlinked prior to editing. In the right-click menu, click [Link] → [Link Cancel]. Or, click [Edit] → [Link] → [Link Cancel].**  
Once the switch parts are unlinked, linking them again is recommended after editing is finished.

## Slider Switch/Scroll Bar

### Structure

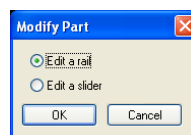
A slider switch part or a scroll bar part consists of a sliding switch and a rail. The slide switch and the rail must be edited independently.

Similar to a switch part, each of slider switch and scroll bar parts has a touch area.

- Rail
  - Sliding switch
- 

### Procedure

1. Select the slider switch part you wish to edit and open the [Modify Part] window. The [Modify Part] dialog is displayed.



2. The sliding switch and the rail must be edited independently. Select [Edit a rail] or [Edit a slider] and click [OK].

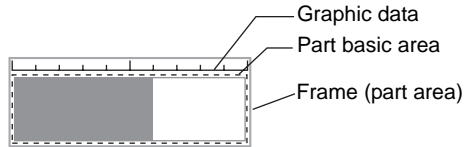
The editing procedure is the same as that for switch parts.  
For more information, refer to "Switch / Lamp" (page A3-5).

## Graph

There are seven kinds of graph parts: bar graph, pie graph, panel meter, statistic bar graph, statistic pie graph, trend graph, and closed area graph parts. Graph editing method varies with the kinds of parts.

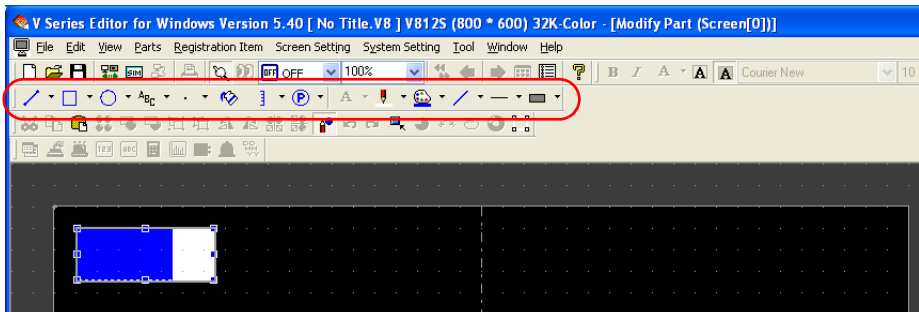
### Bar Graph

#### Structure

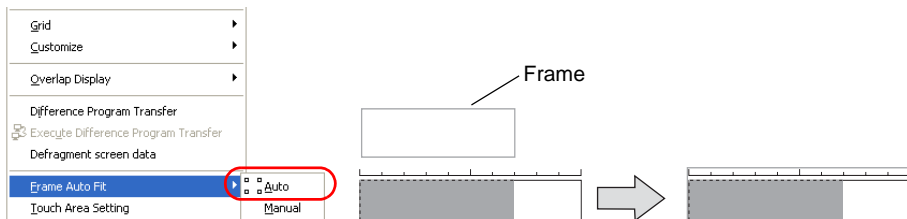


#### Procedure

1. Select the bar graph part you wish to edit, and open the [Modify Part] window.
2. Using drawing icons, etc., edit its design as desired.  
For editing procedure with icons, refer to "4 Drawing" page 4-1.



3. On completion of editing, click [Frame Auto Fit] in the right-click menu.  
For more information on the frame and its setting method, refer to "Re-setting the frame" (page A3-9).



4. Go back to the base screen.



## Pie Graph

Pie graph parts are divided into the following types.

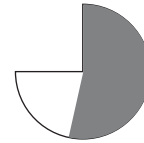
Symmetrical without  
internal circle



Circle without internal circle



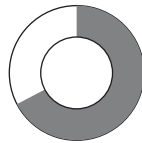
Asymmetrical without  
internal circle



Symmetrical with  
internal circle



Circle with internal circle

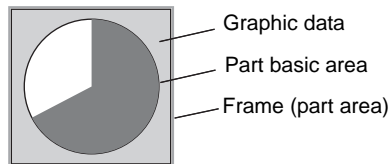


Asymmetrical with  
internal circle



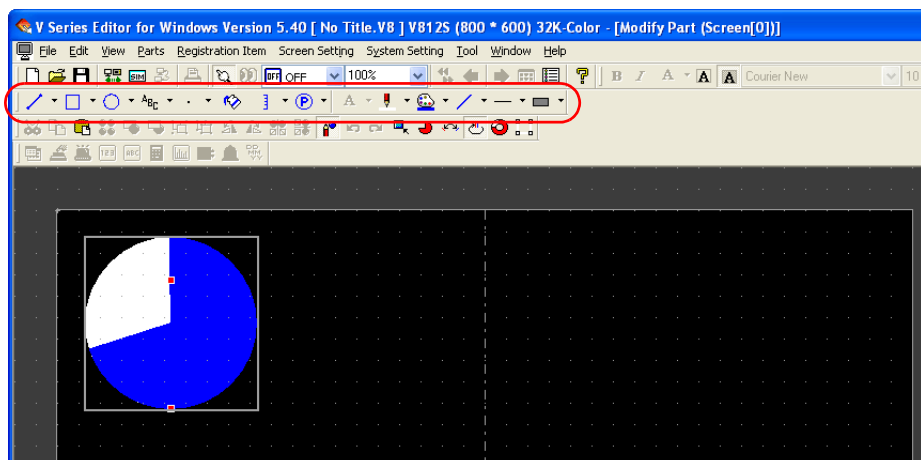
### Structure

Ex.) Circle without internal circle



### Procedure

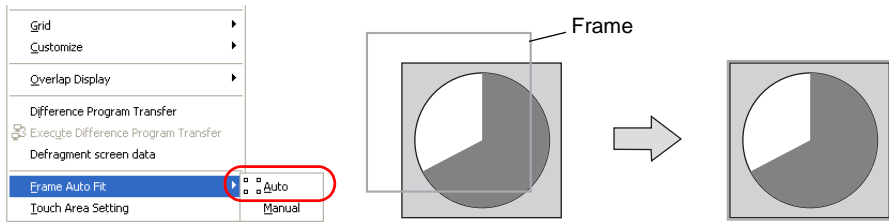
1. Select the pie graph part you wish to edit, and open the [Modify Part] window.
2. Using drawing icons etc., edit its design as desired.  
For editing procedure with icons, refer to "4 Drawing" page 4-1.  
For how to edit pie graph parts, refer to "Icons dedicated to pie graph editing" (page A3-14).



Minimum permissible sizes are designated for pie graph parts.

- For a pie graph part without internal circle, the minimum radius is set to 16 dots.
- For a pie graph part with internal circle, the minimum radius of the internal circle is set to 10 dots, and the minimum difference between the radii of the internal circle and the external circle is set to 16 dots.

- On completion of editing, click [Frame Auto Fit] in the right-click menu.  
For more information on the frame and its setting method, refer to “Re-setting the frame” (page A3-9).



- Go back to the base screen.

### Icons dedicated to pie graph editing

Some icons become active only for editing pie graph parts. Those icons do not appear for the other graph parts. The contents are shown below:



- A. [Different Start and End Angles]
- B. [Symmetrical]
- C. [Same Start and End Angles]
- D. [With Internal Circle]

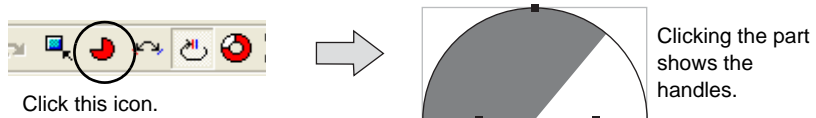
#### A. [Different Start and End Angles]

Only pie graph parts in any form, such as a sector form, other than circle have start and end angles.

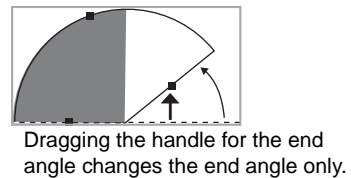
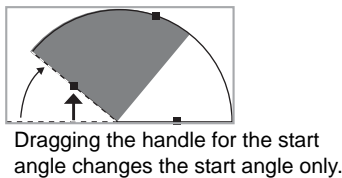
These angles are changeable in the course of part editing.

(Procedure)

- Click the [Different Start and End Angles] icon.  
When you click the pie graph part next, handles appear around the part.



- Drag the handle for either the start or end angle. The start and end angles can be changed separately.

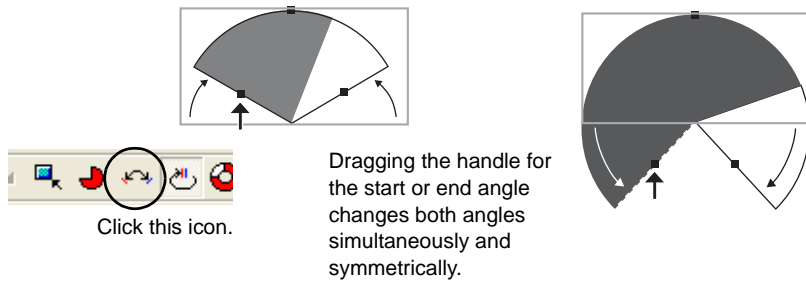


B. [Symmetrical]

Both the start and end angles are changeable at the same time.

(Procedure)

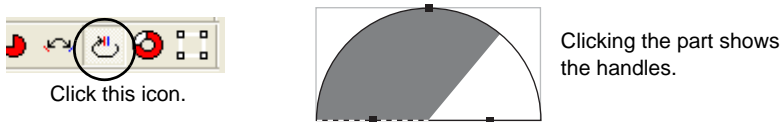
1. Click the [Symmetrical] icon.  
When you click the pie graph part next, handles appear around the part.
2. Drag the handle for either the start or end angle. Both the start and end angles are changed simultaneously and symmetrically.



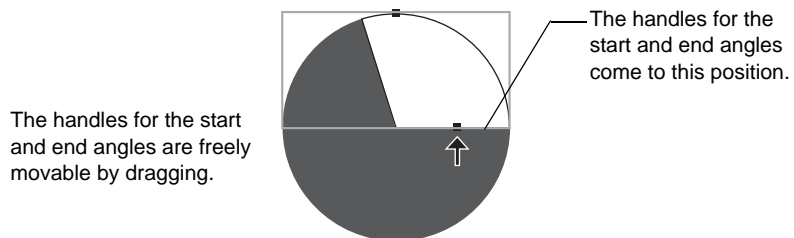
C. [Same Start and End Angles]

(Procedure)

1. Click the [Same Start and End Angles] icon.  
When you click the pie graph part next, handles appear around the part.



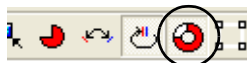
2. Drag the handle for either the start or end angle. The handles for the start and end angles are brought to the same position. The graph thereby becomes a circle. (The handle for the start angle is moved to the handle for the end angle.)



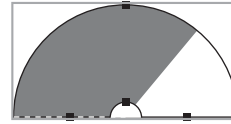
D. [With Internal Circle]

(Procedure)

1. Click the [With Internal Circle] icon.  
Clicking the icon makes an internal circle (hole) in the pie graph part.

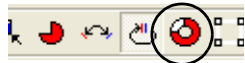


Clicking this icon makes it depressed.

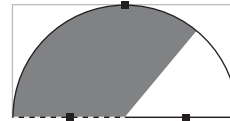


An internal circle is made in the pie graph part.

Clicking the depressed [With Internal Circle] icon resets it. The internal circle (hole) is deleted from the pie graph part as a result.

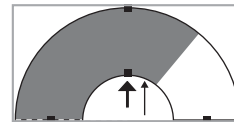
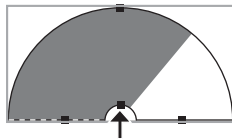


Click the depressed icon to reset it.



Clicking the pie graph part deletes its internal circle.

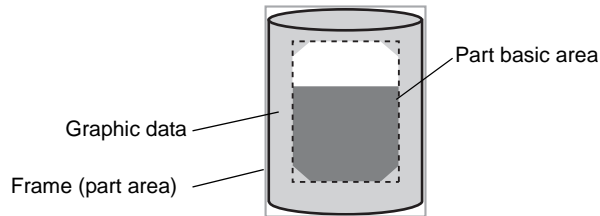
2. While the pie graph part has an internal circle (hole), drag the handle of the internal circle.  
The internal circle is changed in size by dragging the handle.



Dragging this handle upward changes the size of the internal circle only.

## Closed Area Graph

### Structure



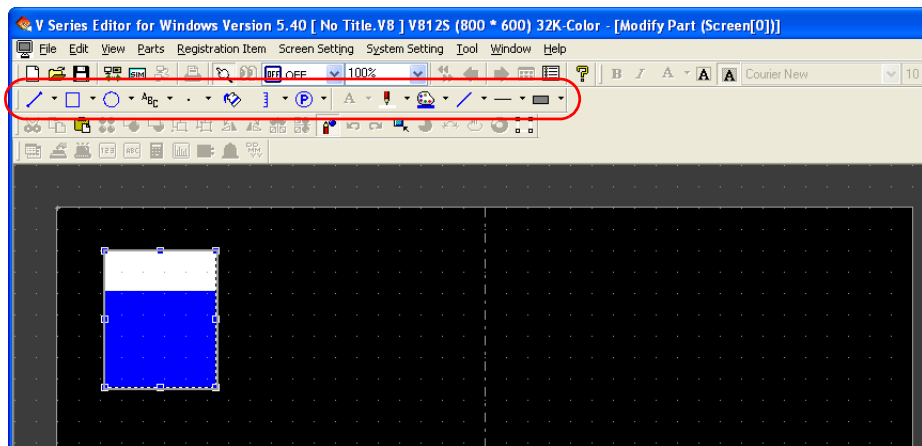
### Procedure

1. Select the closed area graph part you wish to edit, and open the [Modify Part] window.
2. Using drawing icons etc., edit its design as desired.  
For editing procedure with icons, refer to "4 Drawing" page 4-1.



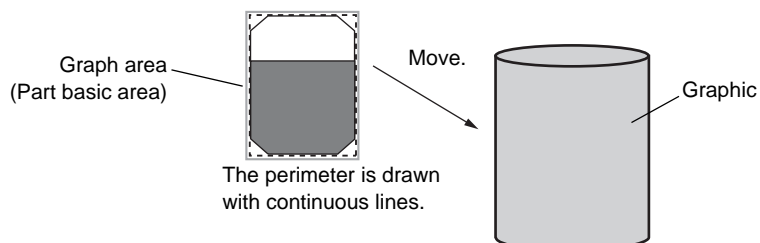
#### Tools useful for drawing

- "Grid Setting" page 3-4
- "Item List Window" page 8-46



The maximum size of a closed area graph is 65,536 bytes (height x width).  
(32,768 bytes for the models V806i and V806)

3. Proceed to the setting of the graph area in the dotted frame (= part basic area). The graph area serves as a graph identifying area. Move the graph area (dotted frame) to the graphic you drew. Adjust the graph area appropriately while dragging the handle.



☺ If you wish to use the whole of the drawn graphic as a graph area, select the graph area or the graphic, open the right-click menu, and select [Fit Area to Graphic]. The graph area is fit to the graphic.

Graph area (Part basic area)

Graphic (Continuous lines)

4. Go to [Paint Position Setting] in the right-click menu.

☺ **Paint (start) position setting**  
Set a graph start point, equivalent to the paint (start) position.  
Click [Paint Position Setting] in the right-click menu. Next, move the mouse to the graph area and click on the target position.  
(The "x" mark of the paint (start) position is moved along the horizontal line at a level one dot higher from the lower limit of the graph.)

Ex.)

Graph area

Graph upper limit

Paint (start) position

Graph lower limit

Direction

Ex.)

Graph area

Graph lower limit

Shift the graph area upward by one dot or more.

Direction

In cases where the vertex of the graphic is not matched with the vertex of the graph area, or the graphic is shaped in such a manner that painting discontinues partially within the graphic, such closed area graphs cannot be painted correctly.

Ex.)

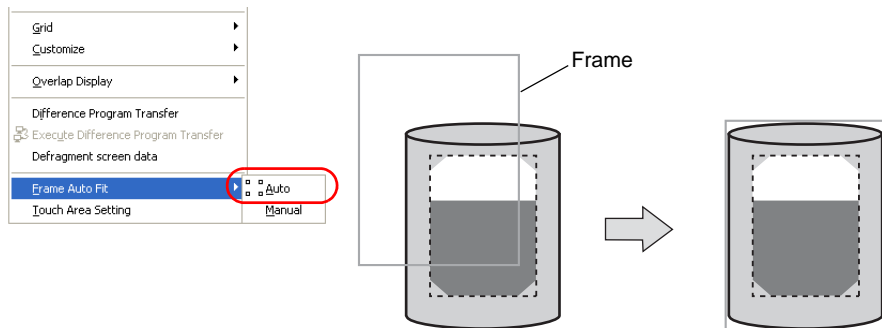
The vertex of the graphic does not exist here.

Painting discontinues in this portion.

Direction

Paint (start) position

5. On completion of editing, click [Frame Auto Fit] in the right-click menu. For more information on the frame and its setting method, refer to “Re-setting the frame” (page A3-9).

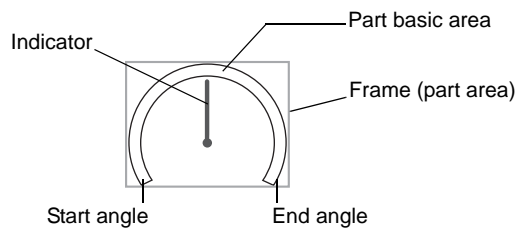


6. Go back to the base screen.

## Panel Meter

### Structure

A panel meter part is almost the same as a pie graph part in structure. When a pie graph part is adopted as the part basic area, the panel meter shows a graph value with the area painted in [Target Value] color. Meanwhile, a panel meter with an indicator shows a graph value with the indicator.



### Procedure

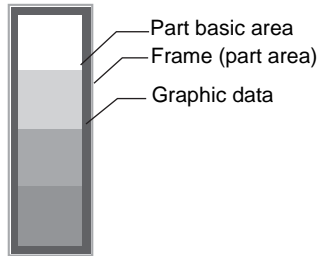
The editing procedure is the same as that for pie graph parts. For more information, refer to “Pie Graph” (page A3-13).



Every panel meter part contains an internal circle. When editing a panel meter part, the [With Internal Circle] icon is inactive. Minimum permissible sizes are designated for panel meter parts. The minimum radius of the internal circle is set to 10 dots, and the minimum difference between the radii of the internal circle and the external circle is set to 16 dots.

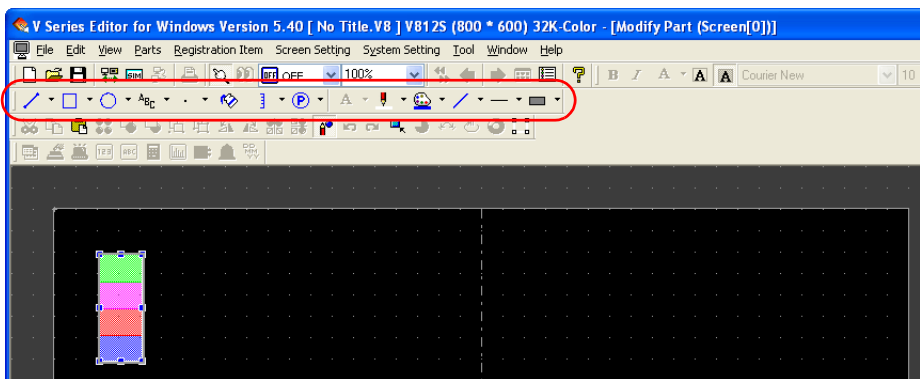
## Statistic Bar Graph

### Structure

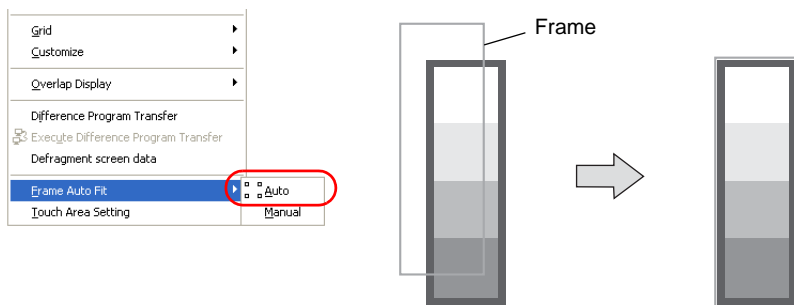


### Procedure

1. Select the statistic bar graph part you wish to edit, and open the [Modify Part] window.
2. Using drawing icons etc., edit its design as desired.  
For editing procedure with icons, refer to "4 Drawing" page 4-1.



3. On completion of editing, click [Frame Auto Fit] in the right-click menu.  
For more information on the frame and its setting method, refer to "Re-setting the frame" (page A3-9).



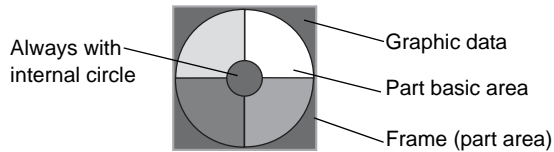
4. Go back to the base screen.



## Statistic Pie Graph

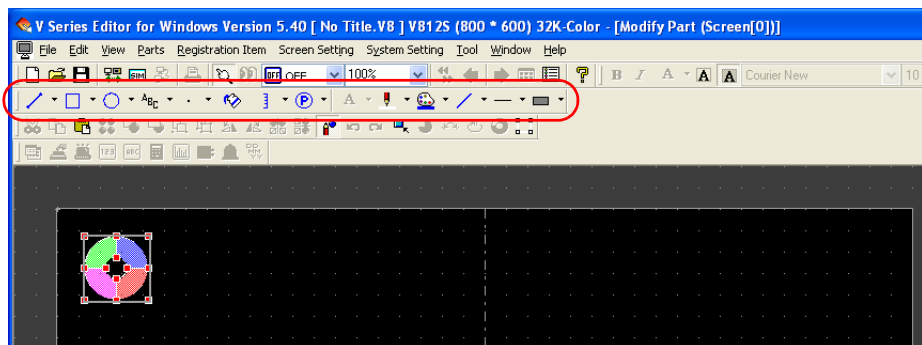
There is only one type of statistic pie graph part. Unlike pie graph parts, varied forms, such as a sector, do not exist. Every statistic pie graph part is in a form of circle with internal circle.

### Structure

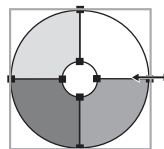


### Procedure

1. Select the statistic pie graph part you wish to edit, and open the [Modify Part] window.
2. Using drawing icons etc., edit its design as desired.  
For editing procedure with icons, refer to "4 Drawing" page 4-1.

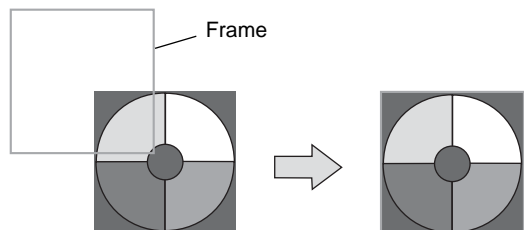
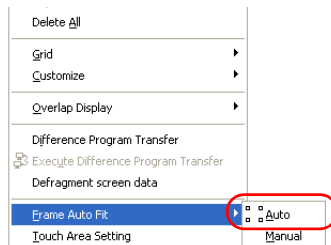


Minimum permissible sizes are designated for statistic pie graph parts. The minimum radius of the internal circle is set to 10 dots, and the minimum difference between the radii of the internal circle and the external circle is set to 16 dots.



Point the cursor to any handle and change the size of the circle.

3. On completion of editing, click [Frame Auto Fit] in the right-click menu.  
For more information on the frame and its setting method, refer to "Re-setting the frame" (page A3-9).

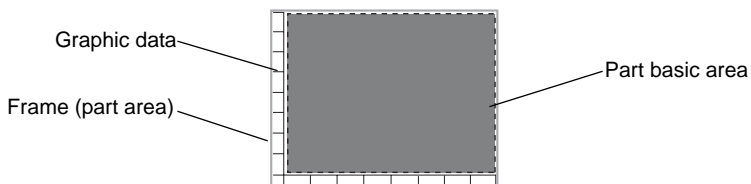


4. Go back to the base screen.

## Trend Graph (Trend Sampling)

A trend graph part is displayed when you select [Trend Graph] from the [Parts] menu and then select [Trend Graph] or [Trend Sampling].

### Structure



### Procedure

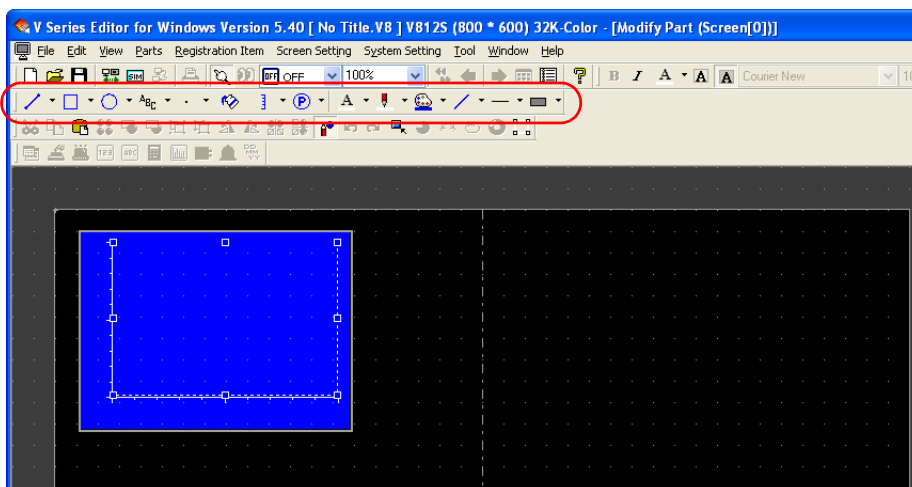
This section explains the procedure for editing a trend graph part\*. The same procedure applies to trend sampling part editing.

\* **The components of a trend graph part are linked. Therefore, the components need to be unlinked prior to editing. In the right-click menu, click [Link] → [Link Cancel]. Or, click [Edit] → [Link] → [Link Cancel]. Once the components are unlinked, linking them again is recommended after editing is finished.**

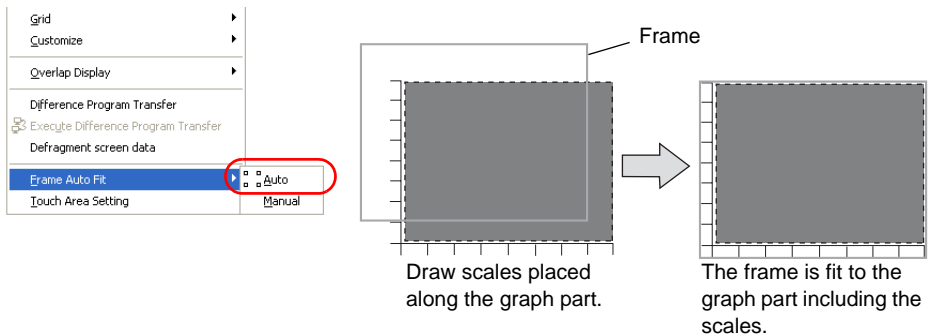
1. Select the trend graph part you wish to edit, and open the [Modify Part] window.
2. Using drawing icons etc., edit its design as desired.  
For editing procedure with icons, refer to “4 Drawing” page 4-1.



In the case of trend sampling, note that graphics drawn in the part basic area will not be displayed correctly on MONITOUCH.



- On completion of editing, click [Frame Auto Fit] in the right-click menu. For more information on the frame and its setting method, refer to “Re-setting the frame” (page A3-9).



- Go back to the base screen.

## Display Area

Display area parts are used to display messages for bit order alarming or in the message mode, or to display graphics in the graphic mode.

### Structure



### Procedure

The editing procedure is almost the same as that for overlap editing.

For more information on editing, refer to “Overlap” (page A3-4).

However, frame setting is allowed for display area parts. Unlike an overlap display part, the basic area and the graphic area of a display area part are independent from each other. In the course of editing a display area part, frame re-setting is necessary to determine the size of the part.

For more information on the frame, refer to “Re-setting the frame” (page A3-9).

- \* **The components of a display area part are linked. Therefore, the components need to be unlinked prior to editing. In the right-click menu, click [Link] → [Link Cancel]. Or, click [Edit] → [Link] → [Link Cancel]. Once the components are unlinked, linking them again is recommended after editing is finished.**



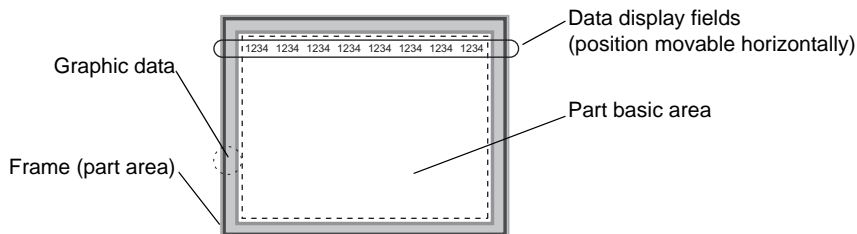
Note that graphics drawn in the part basic area will not be displayed correctly on MONITOUCH.

## Data Sampling

A data sampling part is displayed when you select [Trend Graph] from the [Parts] menu and then select [Data Sampling].

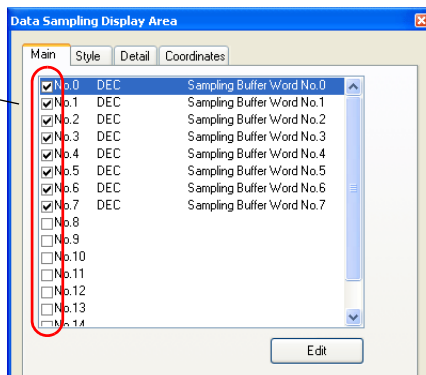
### Structure

A data sampling part consists of data display fields in addition to the basic area and the graphic data. The data display fields, which are different from data display parts, exist only in data sampling parts. The data display fields are placed only in the first line. (The data display fields are movable only to right and left.)



One data sampling part can show a maximum of 16 data display fields. Whether or not to show data Nos. 1 to 16 is selectable in the [Data Sampling Display Area] dialog. For more information on the features of data sampling, refer to the V8 Series Reference Manual.

Check or uncheck the boxes to show or hide the data items.



### Procedure

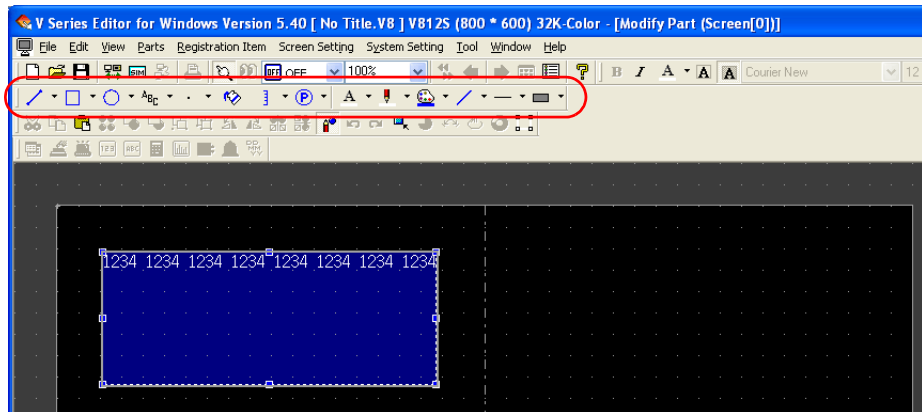
- \* **The components of a data sampling part are linked. Therefore, the components need to be unlinked prior to editing. In the right-click menu, click [Link] → [Link Cancel]. Or, click [Edit] → [Link] → [Link Cancel]. Once the components are unlinked, linking them again is recommended after editing is finished.**

1. Select the data sampling part you wish to edit, and open the [Modify Part] window.

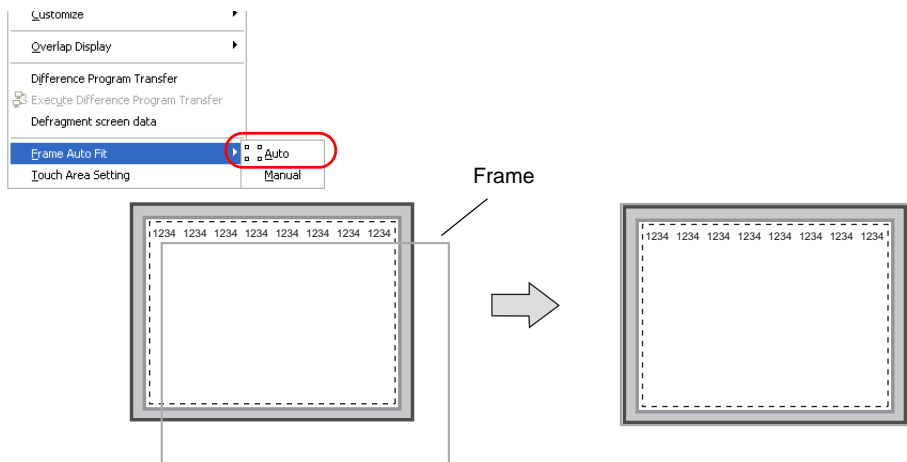
- Using drawing icons etc., edit its design as desired.  
For editing procedure with icons, refer to “4 Drawing” page 4-1.



Note that graphics drawn in the part basic area will not be displayed correctly on MONITOUCH.



- On completion of editing, click [Frame Auto Fit] in the right-click menu.  
For more information on the frame and its setting method, refer to “Re-setting the frame” (page A3-9).



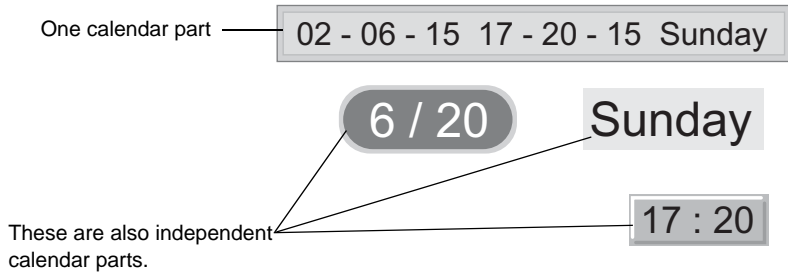
- Go back to the base screen.

**Moving the data display fields on a data sampling part**

- Click the data sampling part so that handles are shown.
- Click one data display field you wish to move.  
Only the field is selected with handles.
- Drag the clicked field to the right or left.

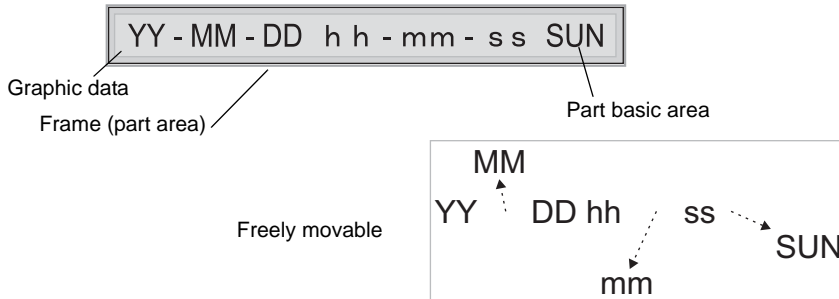
## Calendar

One calendar part is capable of containing the entire calendar information (year, month, day, hour, minutes, seconds, and the day of the week). Meanwhile, the calendar information can be divided into components. These components can be registered one by one.



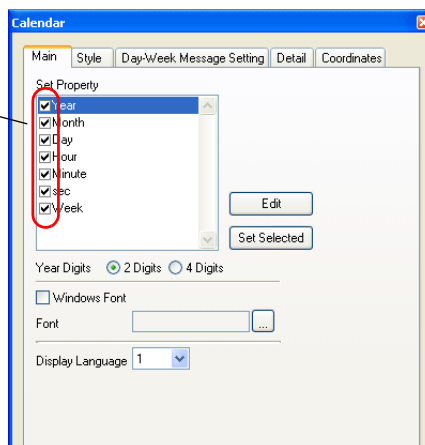
## Structure

A calendar part has a structure consisting of several components. These components can be individually moved and enlarged during editing.



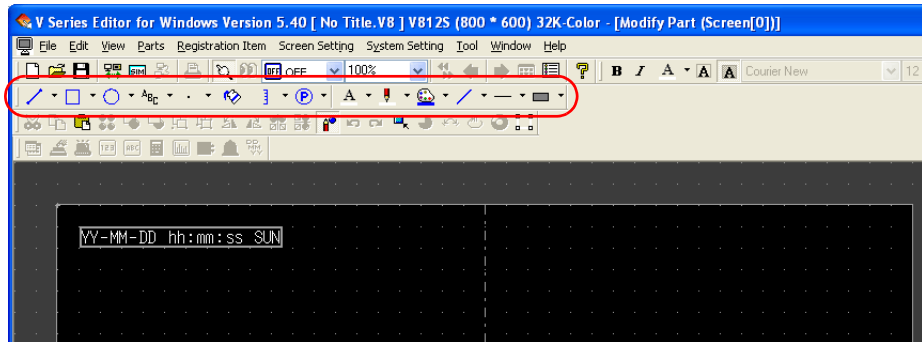
You can select components of a calendar part in the [Calendar] dialog. The calendar part will contain the components checked in the dialog. For more information on the features of calendar part, refer to the V8 Series Reference Manual.

Check or uncheck the boxes to show or hide the data items.

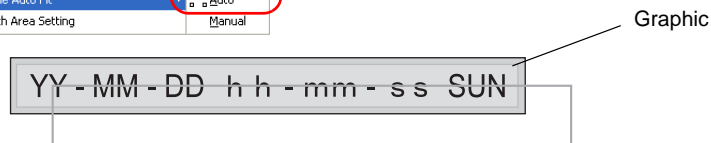
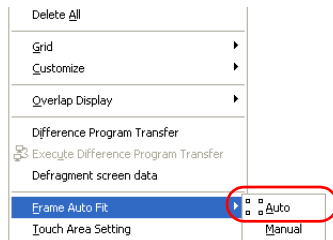


## Procedure

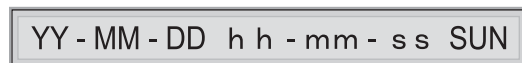
1. Select the calendar part you wish to edit, and open the [Modify Part] window.



2. Using drawing icons etc., edit its design as desired.  
For editing procedure with icons, refer to "4 Drawing" page 4-1.
3. On completion of editing, click [Frame Auto Fit] in the right-click menu.  
For more information on the frame and its setting method, refer to "Re-setting the frame" (page A3-9).



The frame is fit to the calendar part including the graphic.



4. Go back to the base screen.

---

## After Completion of Parts Editing

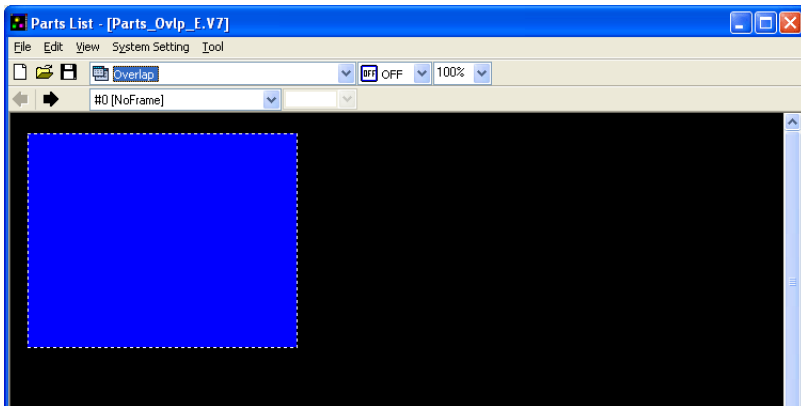
---

Once your original parts created in the [Modify Part] window are saved as the screen data (“\*.V8”), they can be loaded from [Parts List] window and added to the parts list.

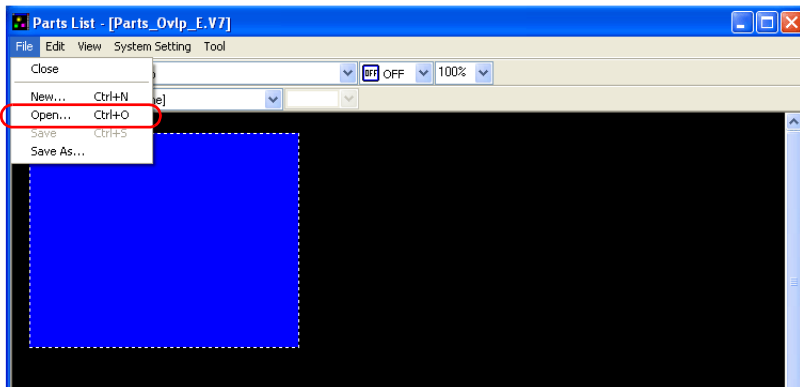
### Access from [Parts List]

---

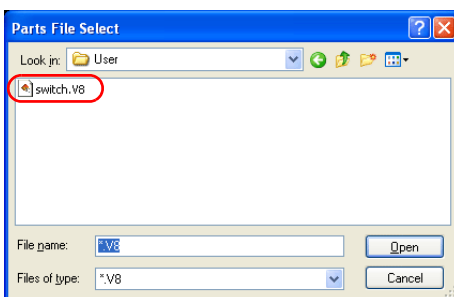
1. Click [Parts] → [Parts List]. The [Parts List] window is displayed.



2. Click [File] → [Open].

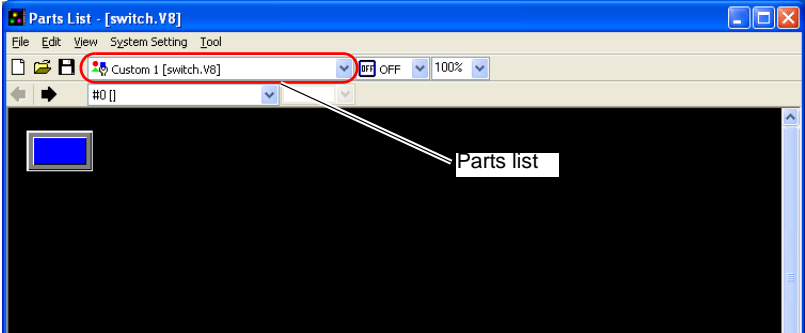


3. The [Parts File Select] dialog is displayed. Select the screen data file you wish to add to the parts list. Click [Open].



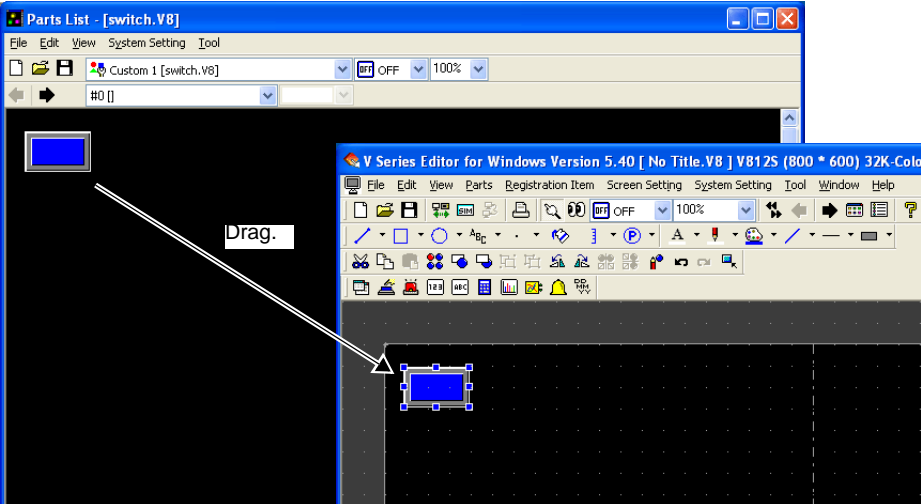


- 4. The screen data file you selected is opened in the [Parts List] window, and added to the parts list as a "Custom" file.



A maximum of four custom files can be added to the parts list.

- 5. Select the part placed in the [Parts List] window and drag it to the editing screen.



# MEMO



Please use this page freely.

**Hakko Electronics Co., Ltd.**  
**[www.monitouch.com](http://www.monitouch.com)**

**Sales**      **890-1, Kamikashiwano-machi, Hakusan-shi,**  
**Ishikawa, 924-0035 Japan**  
**TEL +81-76-274-2144    FAX +81-76-274-5136**