
Screen Configuration Software

Smart Editor

Training Manual Practical Guide

-Contents-

- 1 Practical Guide Configuration
- 2 Preparation
- 3 Trend Sampling Display (Logging)
- 4 Recipes
- 5 Scheduler
- 6 Security
- 7 Operation Logs
- 8 Viewer Functions
- 9 PDF Output of Data Sheets
- 10 Language Changeover
- 11 Device Memory Map
- 12 Convenient Functions

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
October 2024	1214NE0	First edition

Preface

Thank you for selecting the MONITOUCH V10/V9 series.

For correct setup of the V10/V9 series, you are requested to read through this manual to understand more about the product.

For details on other operating procedures for the V10/V9 series, refer to the following related manuals.

Manual Name	Contents	Reference No.
Smart Editor Reference Manual 1	Explains the functions and operation of the V10/V9 series.	1210NE
Smart Editor Reference Manual 2		1211NE
Smart Editor Introductory Manual	Explains the installation procedure of Smart Editor, the process for configuring simple screen programs, as well as how to transfer a created screen program using Smart Editor.	1212NE
Smart Editor Training Manual Beginner's Guide	Explains the screen creation process using Smart Editor with examples in detail.	1213NE
Smart Editor Training Manual Practical Guide		1214NE
V10 Series Unit Operation / Local Mode / Error Screen Manual	Explains the operating procedures, Local mode screens, and error list for the V10 series.	1093NE
V9 Series Troubleshooting/Maintenance Manual	Explains the operating procedures, Local mode screens, and error list for the V9 series.	1068NE
V10/V9/X1 Series Macro Reference	Provides an overview of macros of V-SFT version 6 and explains macro editor operations and macro command descriptions in detail.	1071NE
V10/V9 Series Connection Manual 1	Explains the connection and communication parameters for the V10/V9 series and controllers in detail.	2210NE
V10/V9 Series Connection Manual 2		2211NE
V10/V9 Series Connection Manual 3		2212NE
V10 Series Hardware Specifications	Explains hardware specifications and precautions when handling the V10 series.	2025NE
V9 Series Hardware Specifications	Explains hardware specifications and precautions when handling the V9 series.	2023NE


For details on devices including PLCs, inverters, and temperature controllers, refer to the manual for each device.


Notes:


1. This manual may not, in whole or in part, be printed or reproduced without the prior written consent of Hakko Electronics Co., Ltd.
2. The information in this manual is subject to change without prior notice.
3. Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and other countries.
4. All other company names or product names are trademarks or registered trademarks of their respective holders.
5. This manual is intended to give accurate information about MONITOUCH hardware. If you have any questions, please contact your local distributor.

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 items listed with  **CAUTION** may have serious ramifications.

DANGER

- Never use the output signal of the V10/V9 series for operations that may threaten human life or damage the system, such as signals used in case of emergency. Design the system so that it can cope with a touch switch malfunction. A touch switch malfunction may result in machine accidents or damage.
- Turn off the power supply when you set up the unit, connect new cables, or perform maintenance or inspections. Otherwise, electrical shock or damage may occur.
- Never touch any terminals while the power is on. Otherwise, electrical shock may occur.
- Always close the terminal covers before turning the power on and operating the unit. Otherwise, electrical 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 leaked liquid crystal makes contact with skin or clothing, wash it away with soap and water.
- Never disassemble, recharge, deform by pressure, short-circuit, or reverse the polarity of the lithium battery, nor dispose of the lithium battery in fire. Failure to follow these conditions will lead to explosion or ignition.
- Never use a lithium battery that is deformed, leaking, or shows any other signs of abnormality. Failure to follow these conditions will lead to explosion or ignition.
- Switches on the screen are operable even when the screen has become dark due to a faulty backlight or when the backlight has reached the end of its service life. If the screen is dark and hard to see, do not touch the screen. Otherwise, unintended operations may occur resulting in machine accidents or damage.
- Tighten the mounting screws on the fixtures of the V10/V9 series uniformly to the specified torque indicated below. Excessive tightening may cause deformation, breakage, or malfunction of the touch switch, which may result in damage to the machine or an accident. Insufficient tightening may cause the unit to fall down, short-circuit, or malfunction
 - V1015, V1010, V1008, V9 series: 5.31 lbf-in (0.6 N·m)
 - V1012: 7.97 lbf-in (0.9 N·m)

CAUTION

- Check the appearance of the unit 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 as part of a system related to nuclear energy, aerospace, medical, traffic equipment, or mobile installations, please consult your local sales representative.
- Operate (or store) the V10/V9 series under the conditions indicated in this manual and related manuals. Failure to do so could cause fire, malfunction, physical damage or deterioration.
- Observe the following environmental restrictions on use and storage of the unit. 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 temperatures, 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 vibrations or physical shocks may be transmitted.
- Protective functions may not function properly if a device is not used as specified by the manufacturer.
- Equipment must be correctly mounted so that the main terminal of the V10/V9 series will not be touched inadvertently. Otherwise, an accident or electric shock may occur.
- Check periodically that terminal screws on the power supply terminal block and fixtures are firmly tightened. Loosened screws or nuts may result in fire or malfunction.
- Tighten the terminal screws on the power supply terminal block of the V10/V9 series uniformly to the specified torque indicated below. Improper tightening of screws may result in fire, malfunction, or other serious trouble.
 - V10 series: 7.1 lbf-in (0.8 N·m)
 - V9 series: 7.1 to 8.8 lbf-in (0.8 to 1.0 N·m)
- The V10/V9 series has a glass screen. Do not drop or give physical shock to the unit. Otherwise, the screen may be damaged.
- Correctly connect cables to the terminals of the V10/V9 series in accordance with the specified voltage and wattage. Overvoltage, overwattage, or incorrect cable connection could cause fire, malfunction, or damage to the unit.

CAUTION

- Always ground the V10/V9 series. The FG terminal must be used exclusively for the V10/V9 series with the level of grounding resistance less than 100 Ω. Otherwise, you may sustain an electric shock, a fire may occur, MONITOUCH may not recognize touch operations, and malfunctions may occur.
- Prevent any conductive particles from entering the V10/V9 series unit. 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 operation of the V10/V9 series. Operation with the dust cover attached may result in accidents, fire, malfunction, or other trouble.
- Do not attempt to repair, disassemble, or modify the V10/V9 series unit yourself. Contact Hakko Electronics or the designated contractor for repairs.
- Do not repair, disassemble, or modify the V10/V9 series unit. Hakko Electronics Co., Ltd. is not responsible for any damages resulting from repair, disassembly, or modification of the unit that was performed by an unauthorized person.
- Do not use sharp-pointed tools to press touch switches. Doing so may damage the display unit.
- Only technicians are authorized to set up the unit, connect cables, and perform maintenance and inspection.
- Lithium batteries contain combustible material such as lithium and organic solvents. Mishandling may cause heat, explosion, or ignition resulting in fire or injury. Read the related manuals carefully and correctly handle the lithium battery as instructed.
- Take safety precautions during operations such as changing settings when the unit is running, forced output, and starting and stopping the unit. Any misoperations may cause unexpected machine movement, resulting in machine accidents or damage.
- In facilities where the failure of the V10/V9 series could lead to accidents that threaten human life or other serious damage, be sure that such facilities are equipped with adequate safeguards.
- When disposing of the V10/V9 series unit, it must be treated as industrial waste.
- Before touching the V10/V9 series unit, discharge static electricity from your body by touching grounded metal. Excessive static electricity may cause malfunction or trouble.
- Insert an SD card into the unit in the same orientation as pictured on the unit. Failure to do so may damage the SD card or the slot on the unit.
- The SD card access LED flashes red when the SD card is being accessed. Never remove the SD card or turn off power to the unit while the LED is flashing. Doing so may destroy the data on the SD card. Check that the LED has turned off before removing the SD card or turning off the power to the unit.
- Be sure to remove the protective sheet that is attached to the touch panel surface at delivery before use. If used with the protective sheet attached, MONITOUCH may not recognize touch operations or malfunctions may occur.
- When using V10 series and an analog resistive-film type V9 series unit, do not touch two positions 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 may be activated.
- When using a capacitive V9 series unit, take note of the following cautions.
 - Use a Class 2 power supply for a 24-VDC unit. If an unstable power supply is used, MONITOUCH may not recognize touch operations or malfunctions may occur.
 - Capacitive touch panel types support two-point touch operations. If a third point is touched, the touch operation will be cancelled.
 - Capacitive touch panel types are prone to the influence of conductive material. Do not place conductive material such as metals near the touch panel surface and do not use the panel if it is wet. Otherwise, malfunctions may occur.

[General Notes]

- Never bundle control cables or input/output cables with high-voltage and large-current carrying cables such as power supply cables. Keep control cables and input/output cables at least 200 mm away from high-voltage and large-current carrying cables. Otherwise, malfunction may occur due to noise.
- When using the V10/V9 series 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 each end. However, when communication is unstable, select between grounding one or both ends, as permitted by the usage environment.
- Be sure to plug connectors and sockets of the V10/V9 series in the correct orientation. Failure to do so may lead to damage or malfunction.
- If a LAN cable is inserted into the MJ1 or MJ2 connector, the device on the other end may be damaged. Check the connector names on the unit and insert cables into the correct connectors.
- Do not use thinners for cleaning because it may discolor the V10/V9 series unit surface. Use commercially available alcohol.
- Clean the display area using a soft cloth to avoid scratching the surface.
- If a data receive error occurs when the V10/V9 series unit and a counterpart unit (PLC, temperature controller, etc.) are started at the same time, read the manual of the counterpart unit to correctly resolve the error.
- Avoid discharging static electricity on the mounting panel of the V10/V9 series. Discharging static electricity on the mounting panel may cause malfunction to occur due to noise.
- The V10/V9 series is identified as a class-A product in industrial environments. In the case of use in a domestic environment, the unit is likely to cause electromagnetic interference. Preventive measures should thereby be taken appropriately.
- The signal ground (SG) and frame ground (FG) are connected inside the V9150 series unit. Take care when designing systems.
- The V10/V9 series is equipped with a battery that contains lithium metal and therefore observance of transport regulations is necessary. Hakko Electronics ships V10/V9 series units packed in accordance with transport regulations. If there is a need to transport a V10/V9 series unit after it is once unpacked, transport the unit in accordance with the IATA Dangerous Goods Regulations, International Maritime Dangerous Goods (IMDG) Code, and transport regulations of the countries concerned. Ask your forwarding agent for details of transport regulations.

[Notes on the LCD]

Note that the following conditions may occur under normal circumstances.

- Avoid prolonged display of any fixed pattern. Due to the characteristic of liquid crystal displays, an afterimage may occur. If prolonged display of a fixed pattern is expected, use the backlight auto OFF function.
- The response time, brightness, and colors of the V10/V9 series unit may be affected by the ambient temperature.
- Tiny spots (dark or luminescent) may appear on the display due to the characteristics of liquid crystal.
- Unevenness in brightness and flickering may occur depending on the screen display pattern due to the characteristics of liquid crystal.
- There are variations in brightness and color between units.
- Display colors may vary depending on the viewing angle because a converging lens is used in the backlight unit.

[Notes on Capacitive V9 Series]

- Touch panel operability may not be optimal if used with dry fingers or skin. In such a case, use a capacitive stylus pen.
- Periodically clean the touch panel surface for optimum touch operations.

When cleaning, take note of the following points.

<When cleaning>

- The panel surface is made of glass. Be sure to clean the surface gently with a cloth or sponge. Otherwise, you may scratch or damage the glass.
- Take care not to let cleaning detergent seep into the touch panel unit.
Do not directly apply or spray cleaning detergent on the panel surface.

[Notes on Wireless LAN]

For details regarding supported wireless LAN standards, radio law certifications, and countries where wireless LAN can be used, refer to the "About Wireless LAN on V10 Series" / "About Wireless LAN on V9 Advanced Model" / "About Wireless LAN on V9 Standard Model" manual provided with the V10/V9 series unit at delivery.

Contents

1	Practical Guide Configuration	
1.1	Edit Model.....	1-1
1.2	Connection Configuration	1-1
1.3	Screen Configuration.....	1-1
2	Preparation	
2.1	Creating a New Screen Program.....	2-1
2.2	Creating a Menu Screen.....	2-6
2.2.1	Screen Editing	2-7
3	Trend Sampling Display (Logging)	
3.1	Overview.....	3-1
3.2	Example Screen.....	3-2
3.3	Screen Creation.....	3-3
3.3.1	Logging Server Settings	3-3
3.3.2	Screen Editing	3-7
3.4	Checking Operation on MONITOUCH.....	3-23
3.4.1	List of Used Device Memory Addresses	3-23
3.4.2	Storage Device Specifications	3-23
3.4.3	Operation on MONITOUCH	3-23
4	Recipes	
4.1	Overview.....	4-1
4.2	Example Screen.....	4-2
4.3	Screen Creation.....	4-3
4.3.1	Recipe Settings	4-3
4.3.2	Screen Editing	4-9
4.4	Checking Operation on MONITOUCH.....	4-13
4.4.1	List of Used Device Memory Addresses	4-13
4.4.2	Storage Device Specifications	4-13
4.4.3	Operation on MONITOUCH	4-13
5	Scheduler	
5.1	Overview.....	5-1
5.2	Example Screen.....	5-2
5.3	Screen Creation.....	5-3
5.3.1	Scheduler Settings	5-3
5.3.2	Screen Editing	5-5
5.4	Checking Operation on MONITOUCH.....	5-10
5.4.1	List of Used Device Memory Addresses	5-10
5.4.2	Operation on MONITOUCH	5-10

6 Security

6.1	Overview	6-1
6.2	Example Screen	6-2
6.3	Screen Creation	6-4
6.3.1	Security Settings	6-4
6.3.2	Screen Editing (Example Screen 1)	6-5
6.3.3	Screen Editing (Example Screen 2)	6-12
6.4	Checking Operation on MONITOUCH	6-14
6.4.1	List of Used Device Memory Addresses	6-14
6.4.2	Operation on MONITOUCH	6-14

7 Operation Logs

7.1	Overview	7-1
7.2	Example Screen	7-2
7.3	Screen Creation	7-3
7.3.1	Operation Log Settings	7-3
7.3.2	Screen Editing	7-4
7.4	Checking Operation on MONITOUCH	7-10
7.4.1	List of Used Device Memory Addresses	7-10
7.4.2	Storage Device Specifications	7-10
7.4.3	Operation on MONITOUCH	7-10

8 Viewer Functions

8.1	Overview	8-1
8.2	Example Screen	8-3
8.3	Screen Creation	8-4
8.3.1	PDF Viewer	8-4
8.3.2	Video Player	8-8
8.3.3	Picture Viewer	8-11
8.3.4	Storage Viewer	8-13
8.3.5	Configuration of Other Parts	8-14
8.4	Checking Operation on MONITOUCH	8-15
8.4.1	Storage Device Specifications	8-15
8.4.2	Preparation	8-15
8.4.3	Operation on MONITOUCH	8-16

9 PDF Output of Data Sheets

9.1	Overview	9-1
9.2	Example Screen	9-2
9.3	Screen Creation	9-3
9.3.1	Data Sheet Settings	9-3
9.3.2	Registration of a Data Sheet Screen	9-5
9.3.3	Screen Editing	9-11
9.4	Checking Operation on MONITOUCH	9-16
9.4.1	List of Used Device Memory Addresses	9-16
9.4.2	Operation on MONITOUCH	9-16

10 Language Changeover

10.1	Overview.....	10-1
10.2	Example Screen.....	10-2
10.3	Screen Creation.....	10-3
10.3.1	Font Settings	10-3
10.3.2	Screen Editing	10-4
10.3.3	Redrawing Upon a Language Change	10-15
10.4	Checking Operation on MONITOUCH.....	10-16

11 Device Memory Map

11.1	Overview.....	11-1
11.2	Example Screen.....	11-2
11.3	Connection with the Fuji Electric PXF.....	11-3
11.3.1	Smart Editor Settings	11-3
11.3.2	PXF Settings	11-4
11.4	Screen Creation.....	11-5
11.4.1	Editing Device Memory Maps	11-5
11.4.2	Screen Editing	11-7
11.5	Checking Operation on MONITOUCH.....	11-14
11.5.1	List of Used Device Memory Addresses	11-14
11.5.2	Checking the Communication Status of PXF (PLC2)	11-14
11.5.3	Operation on MONITOUCH	11-15

12 Convenient Functions

12.1	Enlarged Display.....	12-1
12.1.1	Overview	12-1
12.1.2	Example Screen	12-1
12.1.3	Enlarged Display Settings	12-2
12.1.4	Checking Operation on MONITOUCH	12-2
12.2	Expanding the Screen Size	12-3
12.2.1	Overview	12-3
12.2.2	Example Screen	12-4
12.2.3	Screen Creation	12-4
12.2.4	Checking Operation on MONITOUCH	12-6
12.3	VNC Server	12-7
12.3.1	Overview	12-7
12.3.2	Operation Example	12-8
12.3.3	V10/V9 Local Mode Settings	12-8
12.3.4	Checking Operation	12-12
12.4	Component Parts	12-15
12.4.1	Overview	12-15
12.4.2	Example Screen	12-16
12.4.3	Screen Creation	12-17
12.4.4	Checking Operation on MONITOUCH	12-19

1 Practical Guide Configuration

This manual will describe the procedure for creating a screen program of the following configuration.

1.1 Edit Model

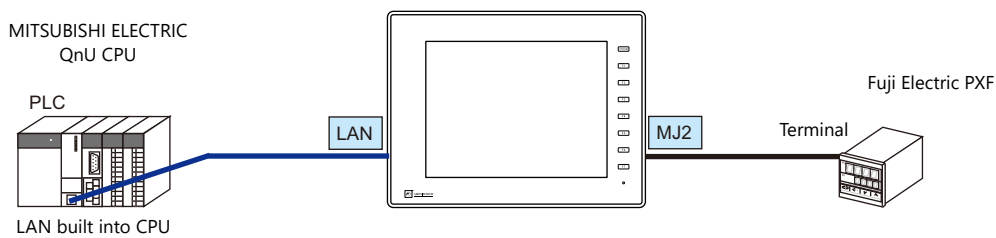
V1010iS or V9100iS (800 × 600 dots)

1.2 Connection Configuration

PLC1: MITSUBISHI ELECTRIC: QnU series (built-in Ethernet), Connection port: LAN (UDP)

PLC2: Fuji Electric PXF (MODBUS RTU), Connection port: MJ2

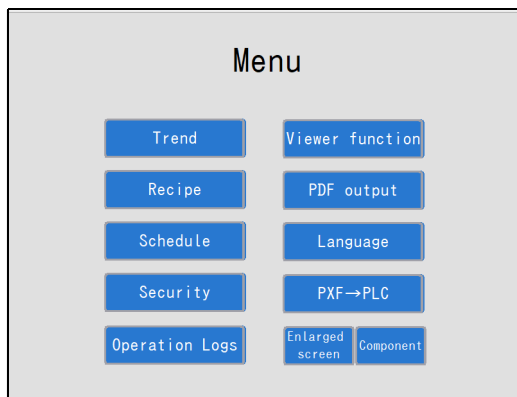
PLC3 to 8: Not used.



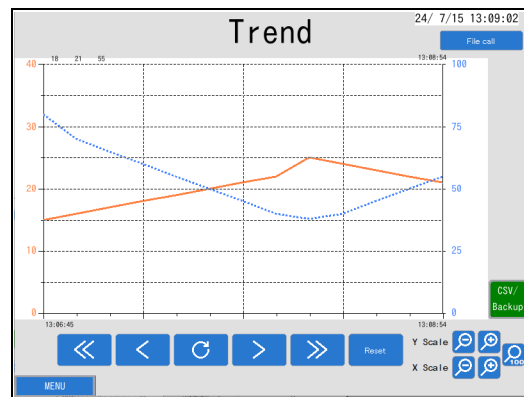
1.3 Screen Configuration

Screens

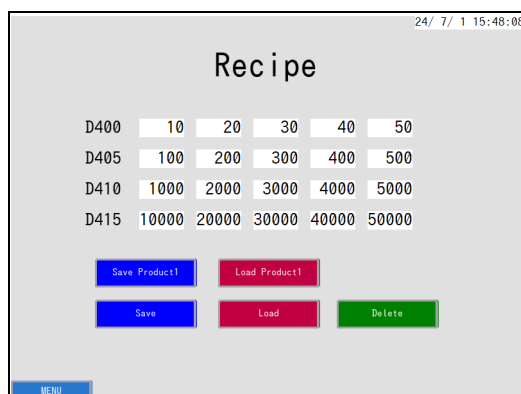
- Screen No. 0 (page 2-1)



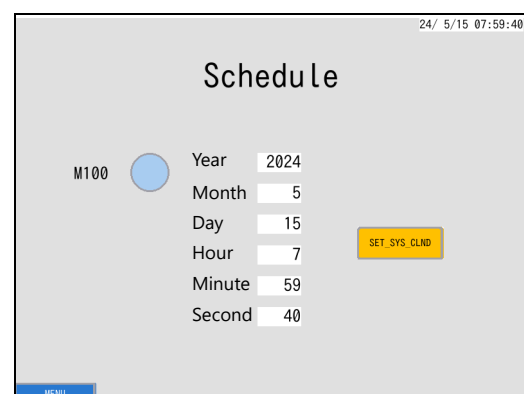
- Screen No. 1 (page 3-1)



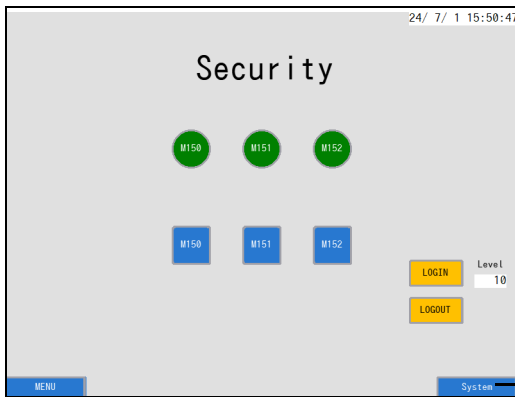
- Screen No. 2 (page 4-1)



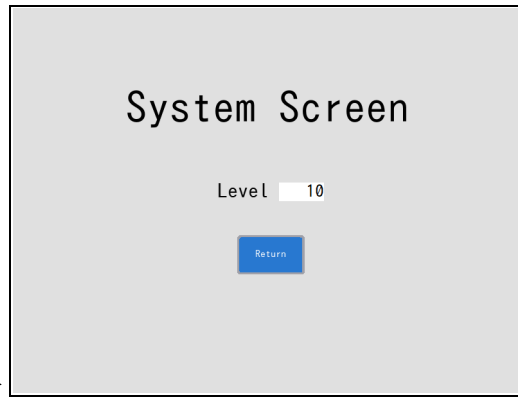
- Screen No. 3 (page 5-1)



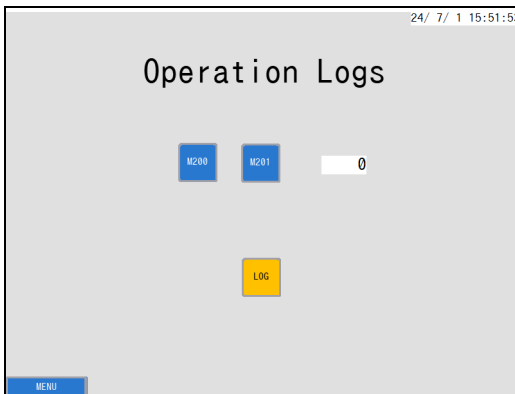
- Screen No. 4 (page 6-1)



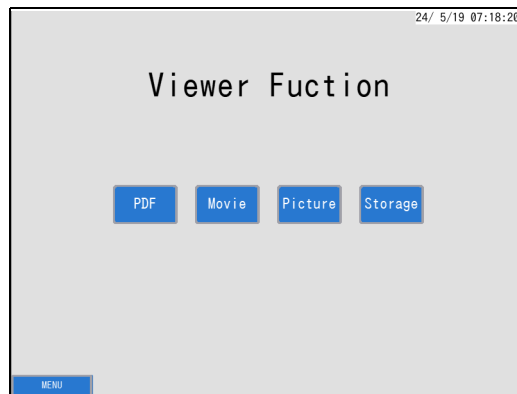
Screen No. 12



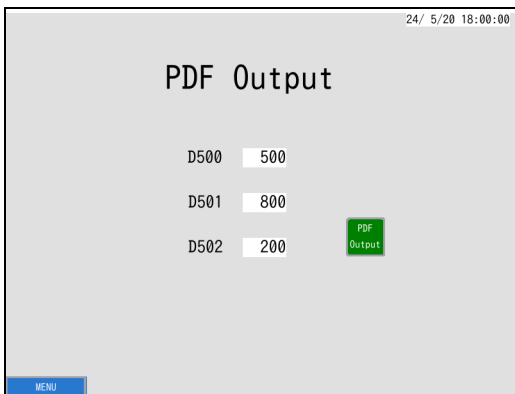
- Screen No. 5 (page 7-1)



- Screen No. 6 (page 8-1)



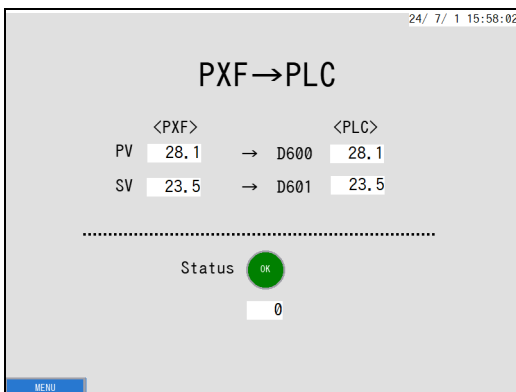
- Screen No. 7 (page 9-1)



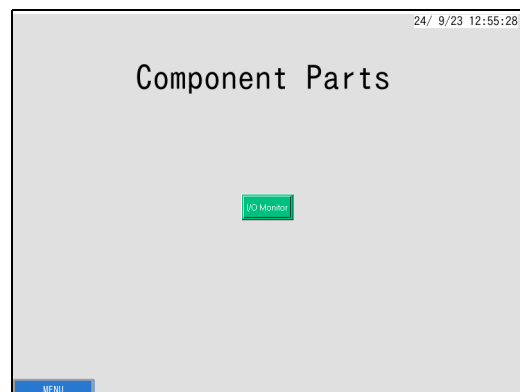
- Screen No. 8 (page 10-1)



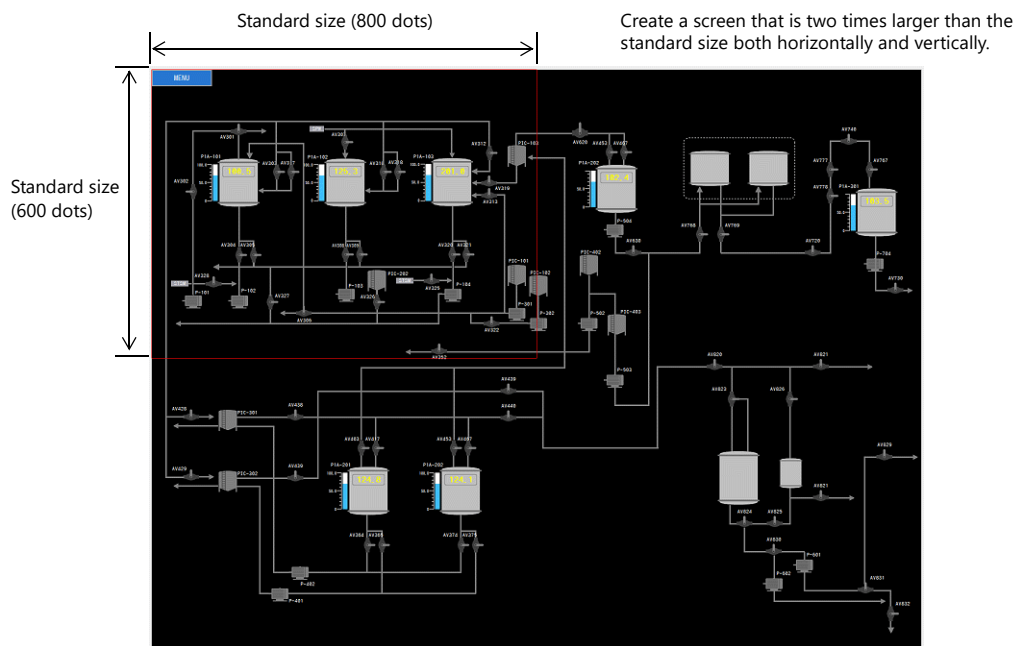
- Screen No. 9 (page 11-1)



- Screen No. 11 (page 12-15)

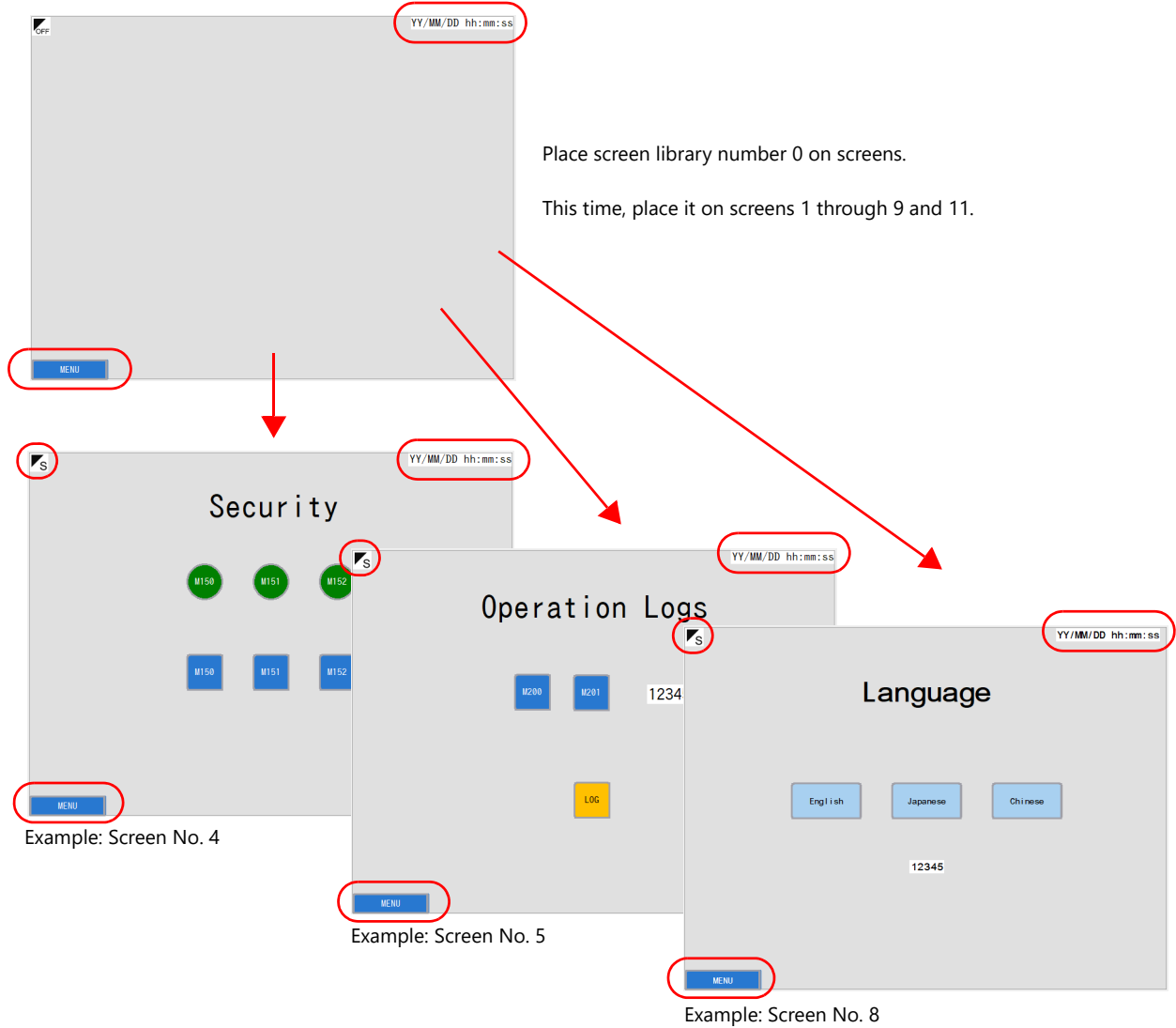


- Screen No. 10 (page 12-3)



Screen Library

- Screen library No. 0 (page 3-18)



Screen library

Call a screen library to each base screen for placement.

If there are parts such as switches, lamps, entry parts, and time display parts which are to be used across multiple screens, such parts can be registered in a screen library for centralized management.

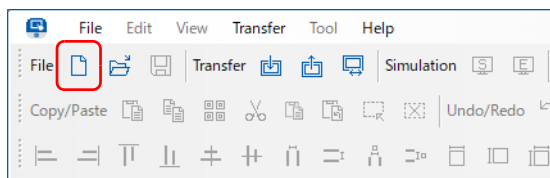
Up to 4,000 screens can be registered between numbers 0 to 9999.

2 Preparation

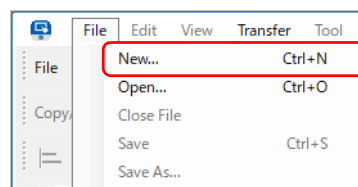
2.1 Creating a New Screen Program

Create a new screen program.

1. Start Smart Editor.
2. Click the [New] icon or [File] → [New].



or



3. The [Edit Model Selection] window is displayed. In this manual, configure the following settings and click [OK].

V1010iS

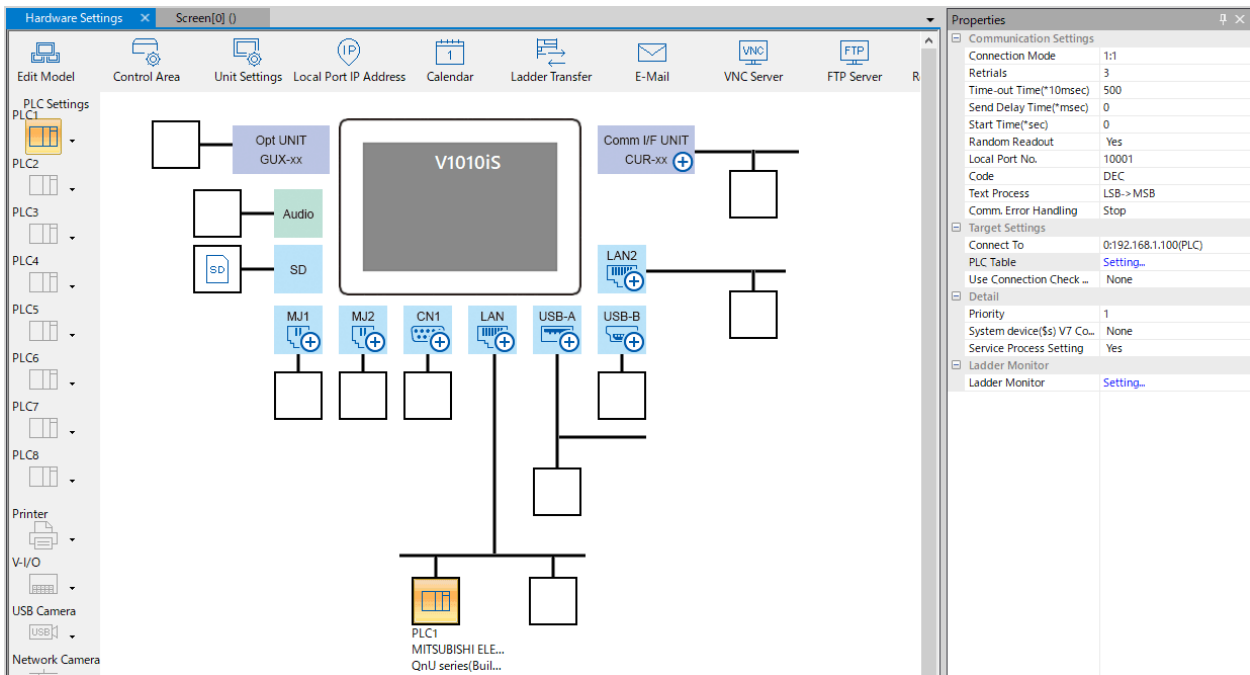
V9100iS

Item	Description	Setting Value	
		V1010iS	V9100iS
Series	Select the MONITOUCH series.	V10	V9
Edit Model	Select a model.	V1010iS	V910* iS
Installation	Select the installation direction of MONITOUCH.	Landscape	
Size	The display resolution of the selected model is displayed.	800 × 600	
Color	Select the number of display colors.	32K-Color w/ blinking	

4. The [Connection Device Selection] window is displayed.
Select the following PLC model and connection port and click [OK].

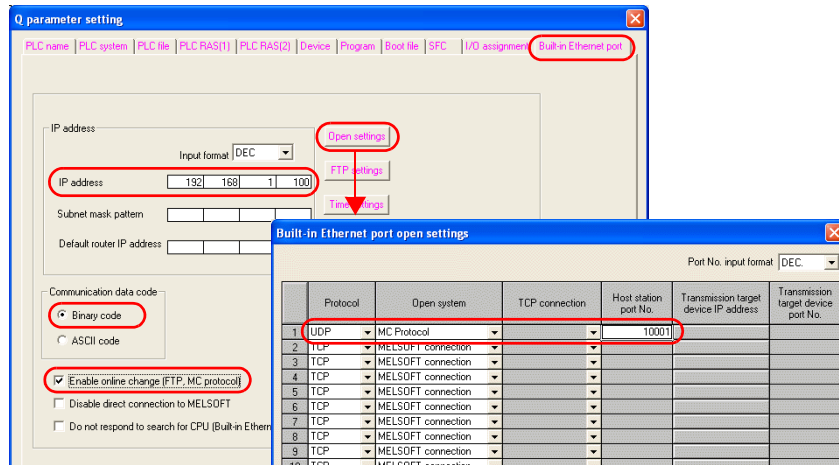
Item (PLC1)	Description	Setting Value
Connected Device	Select the connected device (PLC, temperature controller etc.).	PLC
Manufacturer	Select the manufacturer and model of the connected device.	MITSUBISHI ELECTRIC QnU series (built-in Ethernet)
Model		
Unit Port	Select the connection port on the V10/V9 series unit.	LAN (UDP)

- The [Hardware Settings] window and the [Properties] pane are displayed. Configure the properties as shown below.



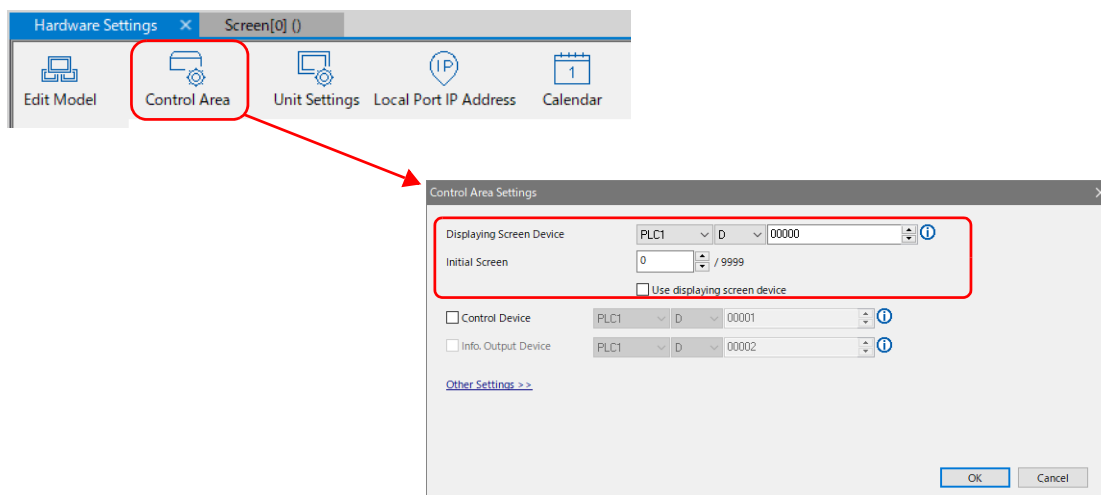
Item	Description	Setting Value																											
Communication Settings	Connection Mode	Select a connection mode. 1:1																											
	Local Port No.	Select a port number for MONITOUCH to communicate with the PLC. 10001																											
Target Settings	Connect To	This setting is valid when [Connection Mode] is set to [1:1]. Select the IP address of the PLC registered in the PLC table described below. Communications are executed with the PLC selected here. 0: 192.168.1.100 (PLC)																											
	PLC Table	Click [Setting] to display the [PLC Table] window. Set the IP address and port number of the PLC. <div data-bbox="539 1205 1072 1429" data-label="Table"> <table border="1"> <caption>PLC Table</caption> <thead> <tr> <th>No.</th> <th>Port Name</th> <th>IP Address</th> <th>Port No.</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>PLC</td> <td>192.168.1.100</td> <td>10001</td> </tr> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> </div>	No.	Port Name	IP Address	Port No.	0	PLC	192.168.1.100	10001	1				2				3				4				5		
No.	Port Name	IP Address	Port No.																										
0	PLC	192.168.1.100	10001																										
1																													
2																													
3																													
4																													
5																													

* Match the PLC table settings with the settings configured on the PLC programming software. Example: GX Works2 [PC Parameter] → [Built-in Ethernet port]



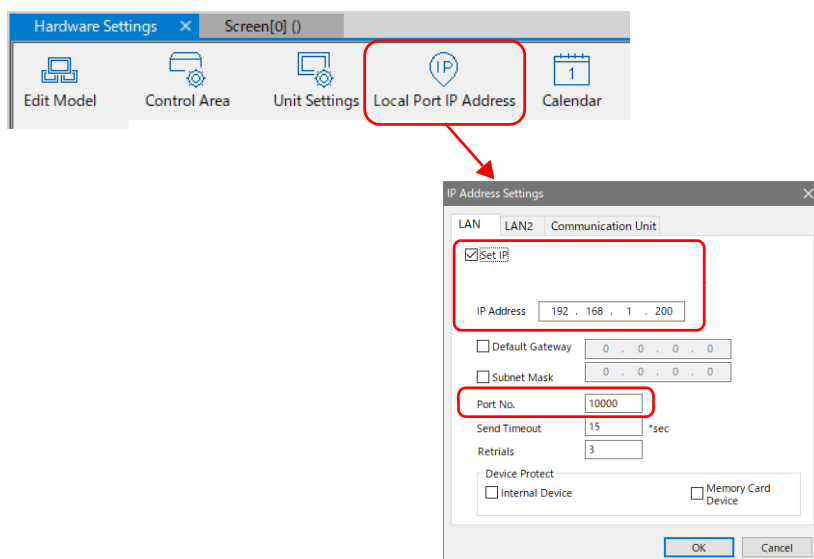
Refer to the Connection Manual.

6. Configure the [Hardware Settings] → [Control Area] settings.



Item	Description	Setting Value
Displaying Screen Device	This device memory is used to switch over the screen by an external command. When the screen number to show is specified, the display switches to the corresponding screen. If a screen was switched using an internal switch, the current display screen number is stored in this device memory.	D00000
Initial Screen	Set the screen number to display at startup. If the [Use displaying screen device] checkbox is selected, the screen number set for [Displaying Screen Device] is displayed as the initial screen.	0

7. Configure the [Local Port IP Address] settings.



Item	Description	Setting Value
Set IP	When this checkbox is selected, the IP address of MONITOUCH can be set.	Selected
IP Address	Set the IP address of MONITOUCH.	192.168.1.200
Port No.	Specify the port number to use for communications with other MONITOUCH units and PCs. * This is not used for communications with the PLC.	10000

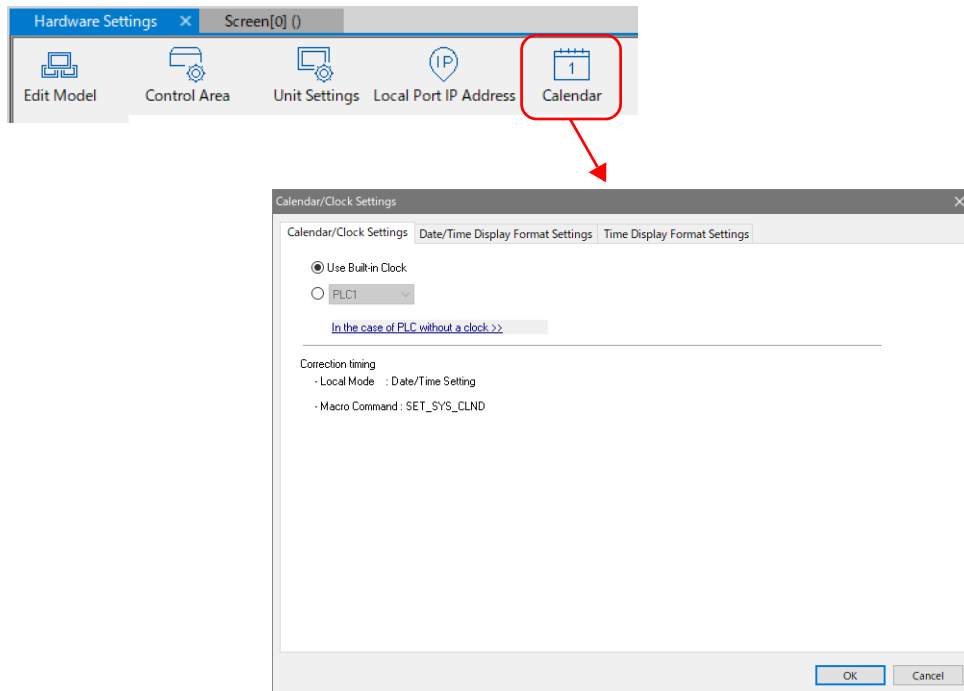


The IP address can also be set on MONITOUCH on the Local mode → LAN Setting screen. For details on the setting procedure, refer to "V10/V9 IP Address Settings" page 12-8.

- * If a setting is changed in Local mode, the Local mode setting takes priority. To restore the settings of the screen program, press the [Restore Screen Data Settings] switch on the respective Local mode screen.

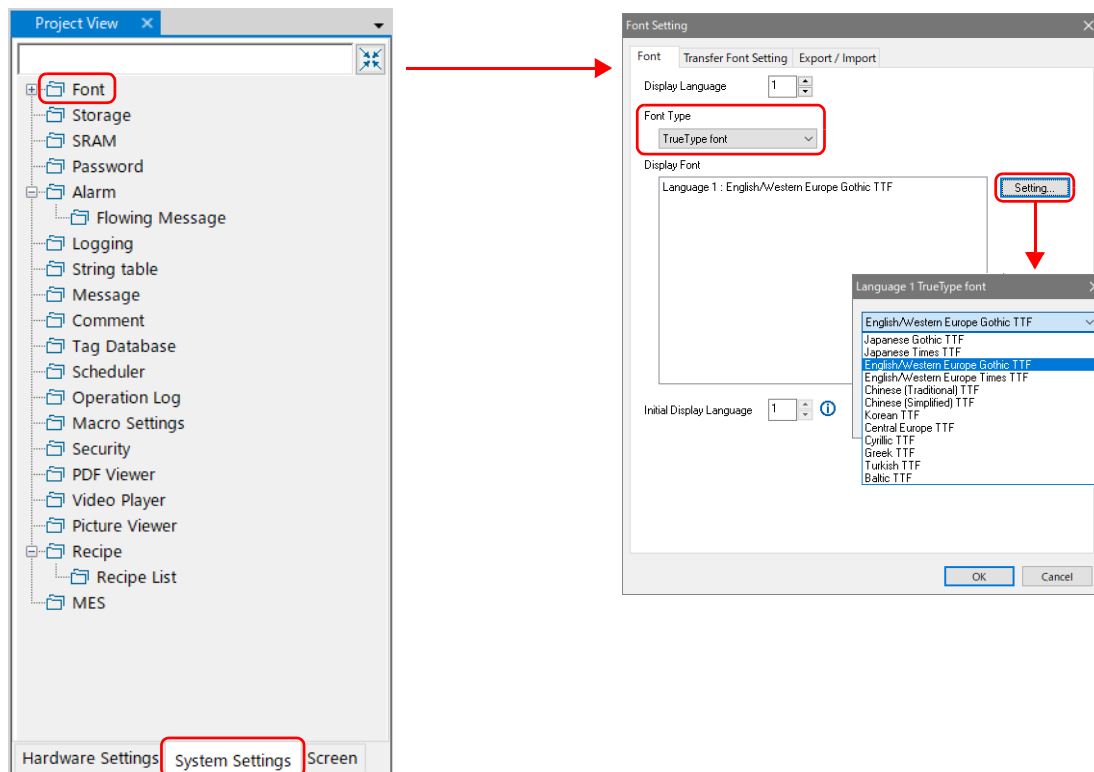
2 Preparation

8. Configure the [Calendar] settings.



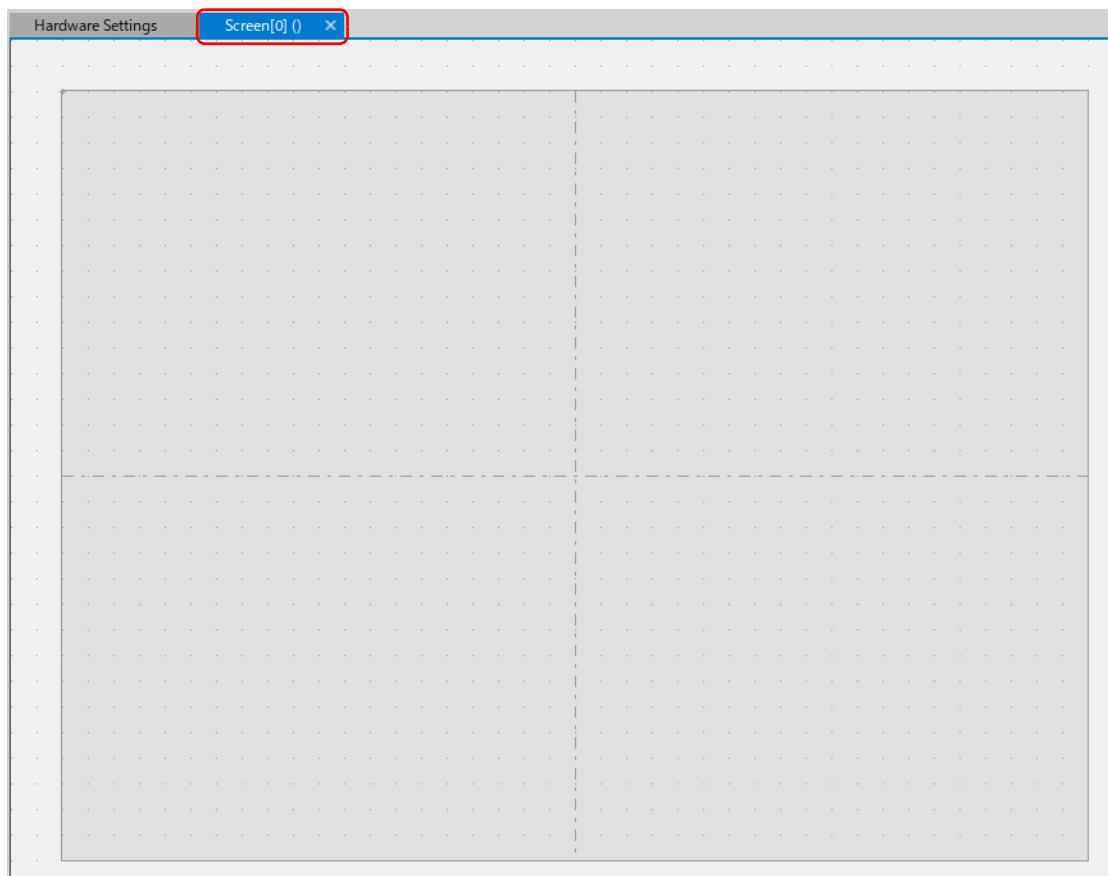
Item	Description	Setting Value
Use Built-in Clock	Use the built-in clock of MONITOUCH.	Use Built-in Clock
PLC radio button	Read the built-in clock of the PLC at the correction timing.	

9. Double-click [Font] at the [Project View] pane → [System Settings] tab to display the [Font Setting] window, and configure font settings.



Item	Description	Setting Value
Font Type	Select a font type from [TrueType font], [Bitmap font], [Gothic font], and [Stroke font].	TrueType font
Display Font	Set the display languages via the [Setting] button.	English/Western Europe Gothic TTF

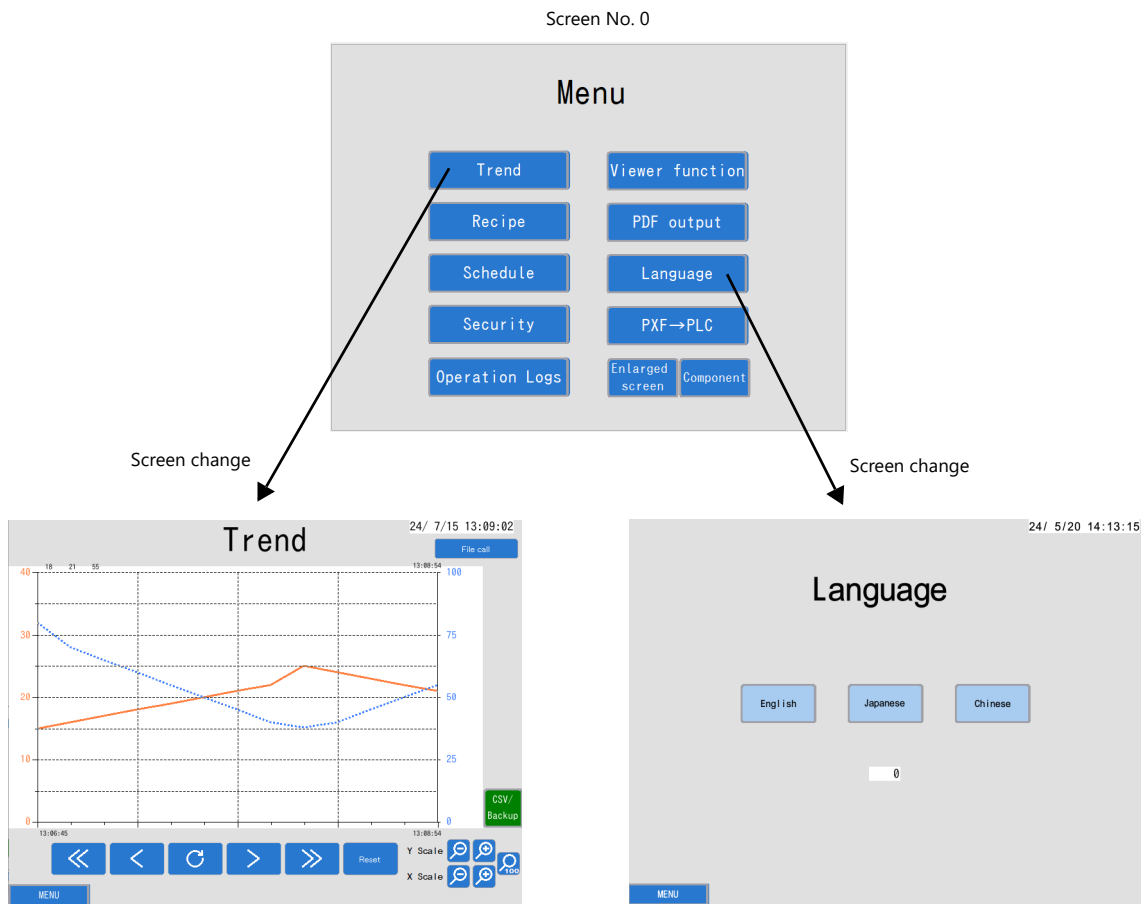
10. Click the [Screen [0]] tab to switch to the editing screen.



This completes the initial settings for when creating a new screen program.

2.2 Creating a Menu Screen

Create a menu screen on screen number 0.
Create switches for changing between screens.



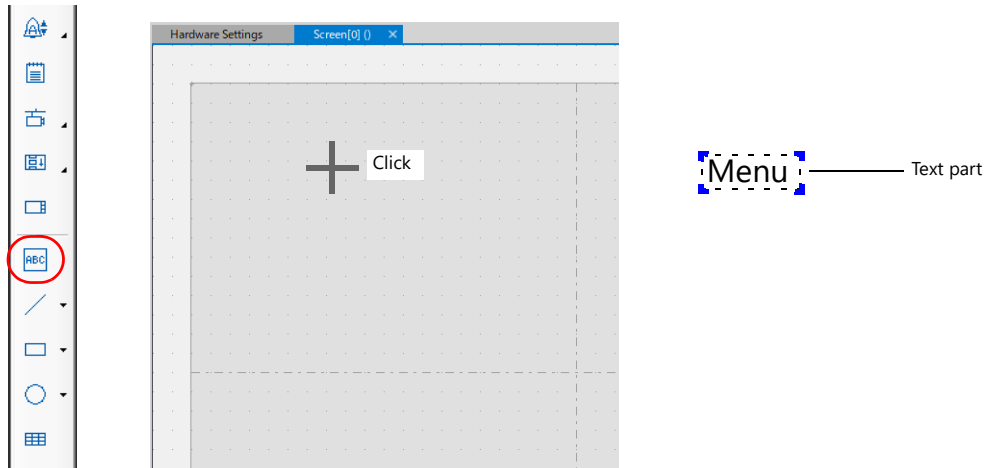
2.2.1 Screen Editing

Display screen No. 0.

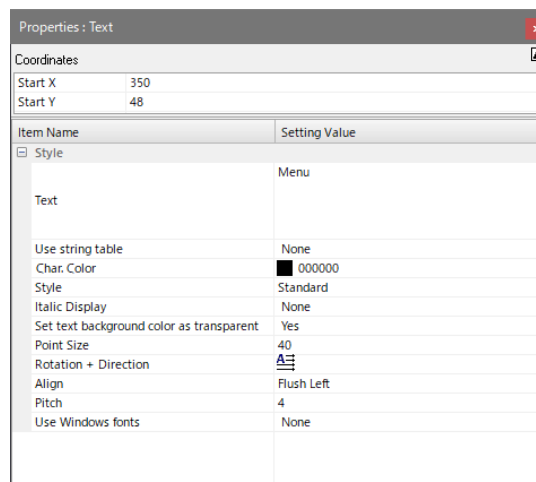
Placing Text

Create a screen title.

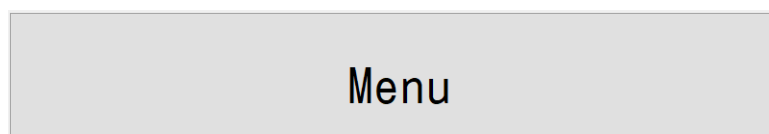
1. Click [Text] on the parts bar. After the mouse cursor changes to a crosshair, click on the screen and input text.



2. Click a location on the screen other than the text.
3. Click the text to display the [Properties] pane. Change the color and size properties of the text.

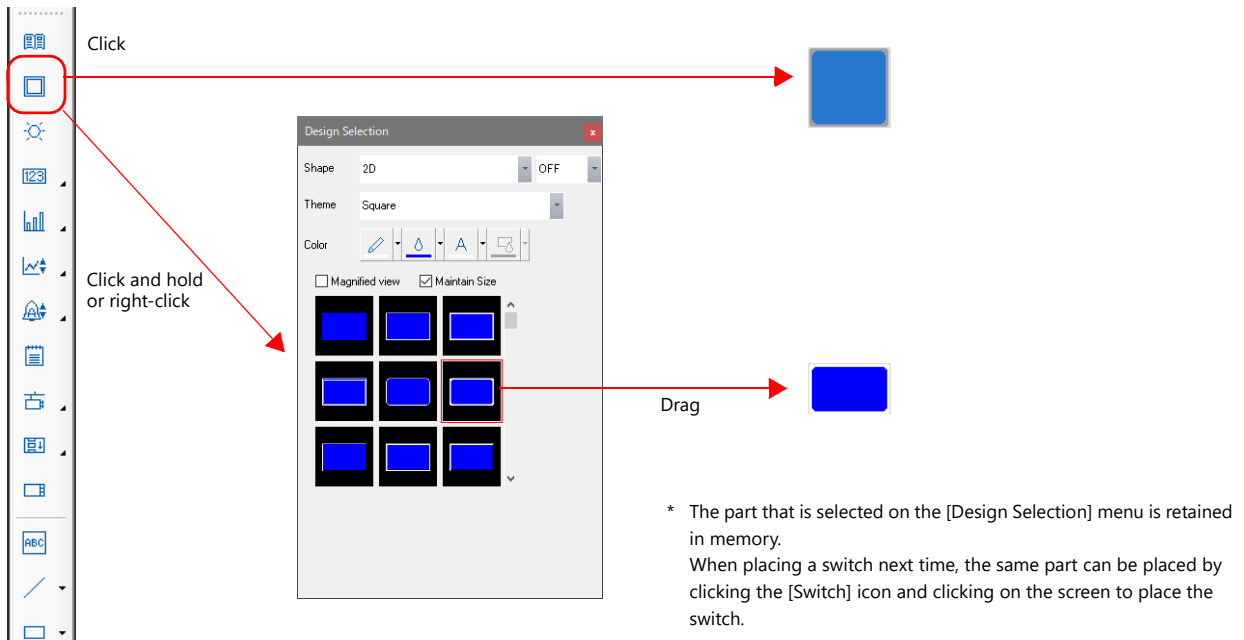


This completes the text creation process.

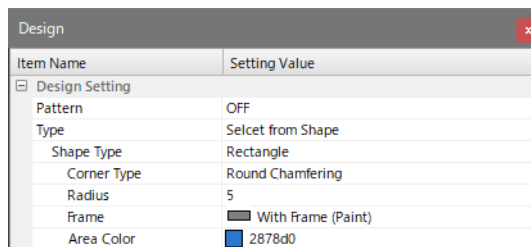


Placing a Switch (for Changing Screens)

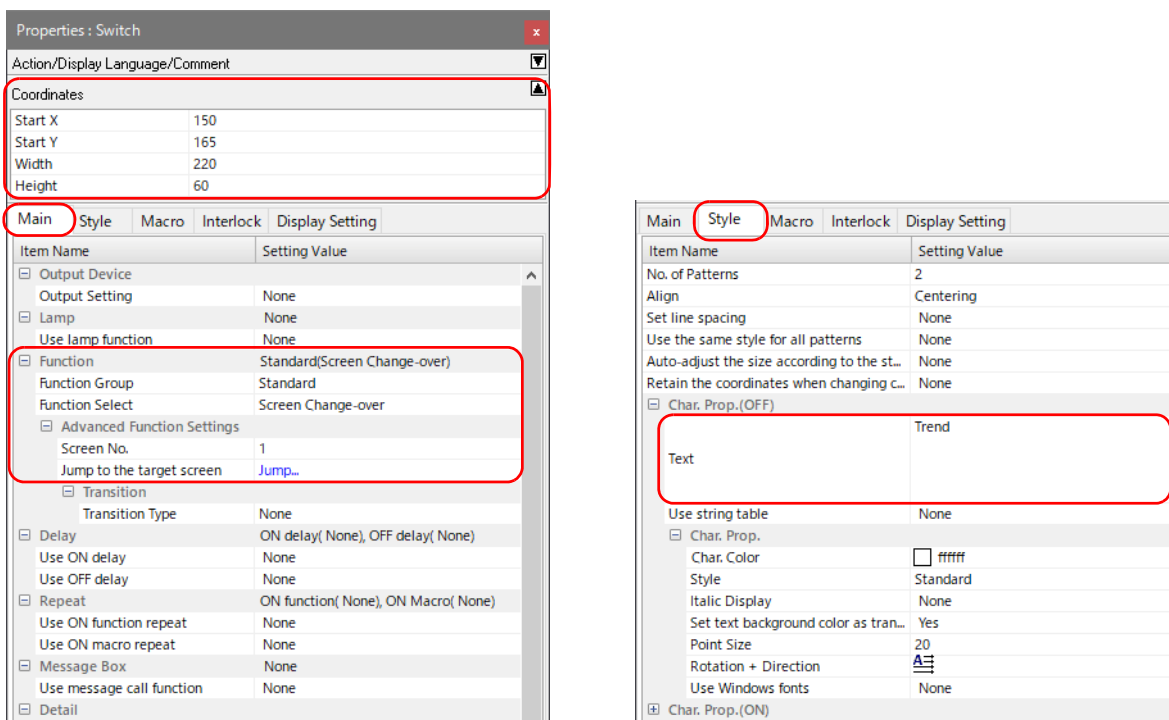
1. Place a switch from the parts bar → [Switch].



2. Click the switch to display the [Properties] pane and [Design] properties pane.
3. Set the design and color of the switch on the [Design] properties pane.



4. Make the following settings on the [Properties] pane.



- Coordinates
Specify the placement coordinates (upper left corner of the part), and the size (width and height).

• Main

Item		Description	Setting Value
Function	Function Group	Specify the function.	Standard
	Function Select		Screen Change-over
	Advanced Function Settings		Screen No. 1

• Style

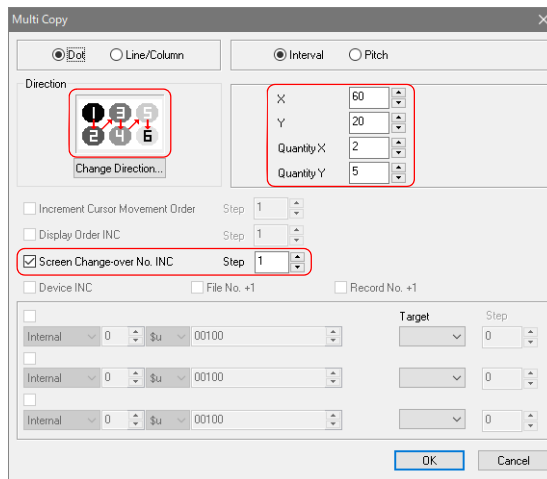
Register text and set the text color and size.

Item		Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.	Trend

Creating Multiple Copies of Switches

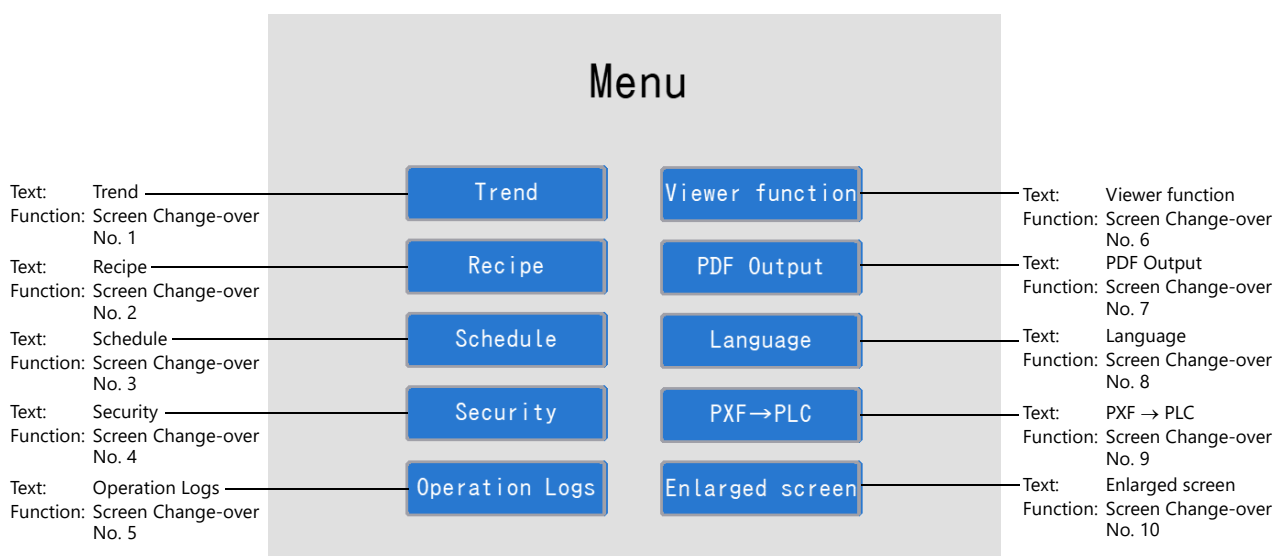
Make multiple copies of a switch.

1. Select the placed switch and click [Multi Copy] on the right-click menu.
2. Configure the following settings and click [OK].



[X]: 60
[Y]: 20
[Quantity X]: 2
[Quantity Y]: 5

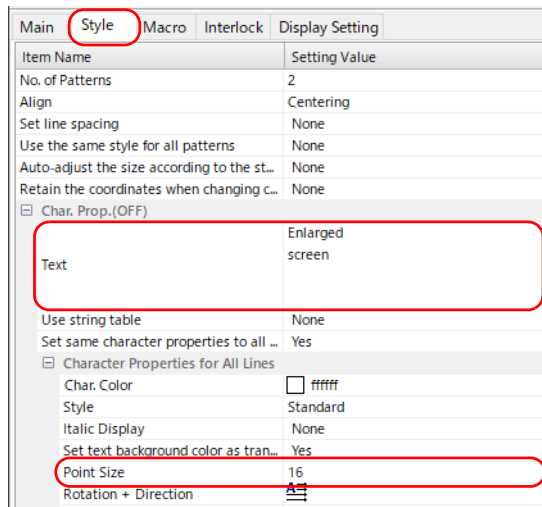
3. The switch is copied, resulting in 10 switches.
Set the text to display on each switch as shown below. The function of each switch is set automatically by the multi copy function.



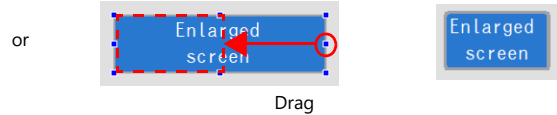
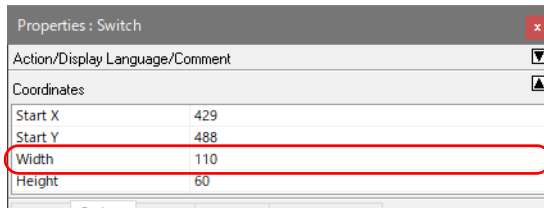
Reducing the Switch Size and Adding a Switch

Reduce the size of the [Enlarged screen] switch, and then add a [Component] switch to the right.

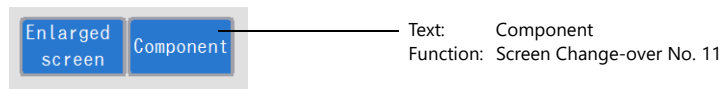
1. Select the [Enlarged screen] switch to display the [Properties] pane, and then add a line break in the text and change the point size.



2. Reduce the width in the [Coordinates] settings on the [Properties] pane, or reduce the width by dragging a handle.



3. Copy the [Enlarged screen] switch and paste a copy to the right.
4. Change the function and text displayed on the switch as shown below.

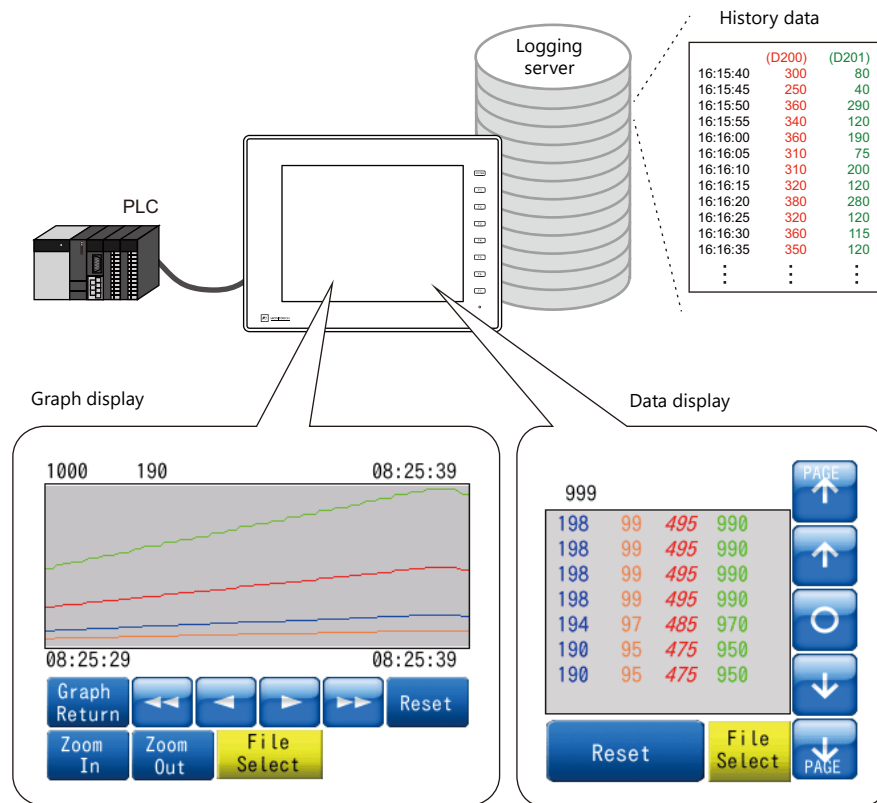


This completes creation of the menu screen (screen number 0).

3 Trend Sampling Display (Logging)

3.1 Overview

PLC device memory values can be read regularly and changes in their values can be displayed on line graphs or as numerical data (text). Data is read according to a fixed cycle or a 0 → 1 change in the bit status of a trigger bit. History data is accumulated in an area referred to as a logging server.



A single area can display a maximum of 16 graph lines or data.

Configure the following two items.

- Logging server: For accumulating changing data.
- Trend sampling display part: For displaying accumulated data.



Logging server

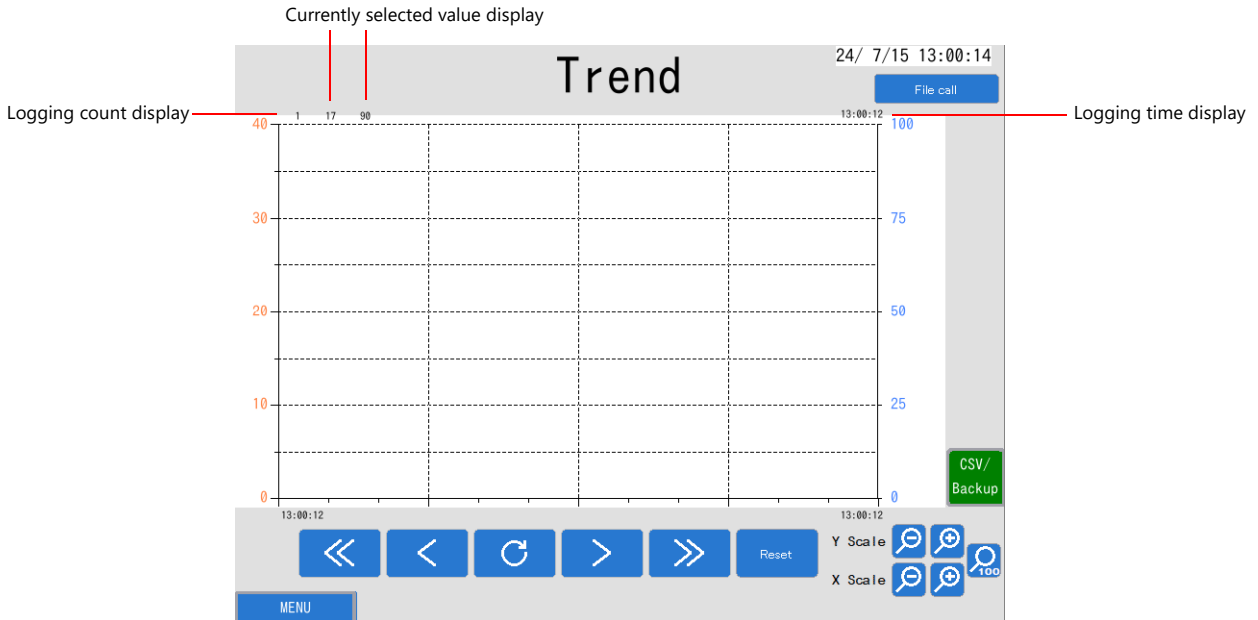
This area is for saving logged data. A maximum of 12 areas can be registered.

Logged data is saved according to the internal storage setting (DRAM/SRAM) first, and can then be output to a storage device (SD card or USB flash drive).

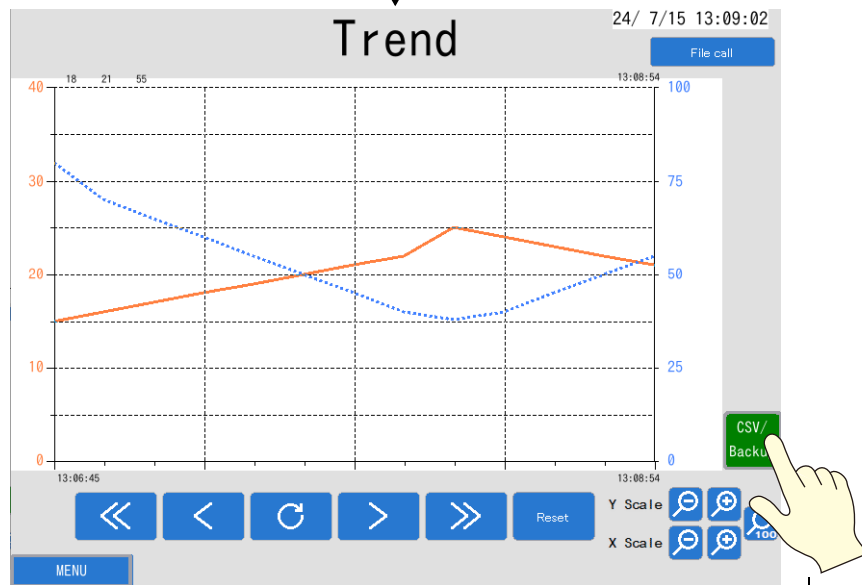
3.2 Example Screen

This chapter explains how to create a graph display screen that captures history data from D300 and D301 when the M10 trigger bit turns ON (0 → 1).

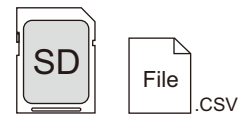
Screen No. 1



Continue logging when the M10 trigger bit turns ON (0 → 1).



Output a CSV/backup file when the M100 storage output bit turns ON (0 → 1).



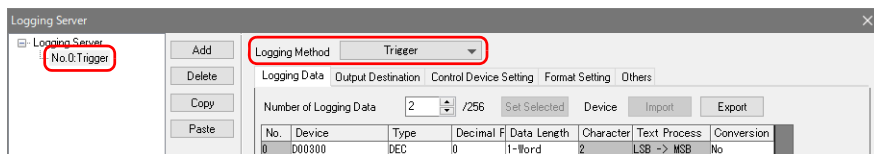
3.3 Screen Creation

3.3.1 Logging Server Settings

1. Double-click [Logging] at the [Project View] pane → [System Settings] tab to display the [Logging Server] window.
2. Click [Add], set [Additional] to "0", and click [Complete].



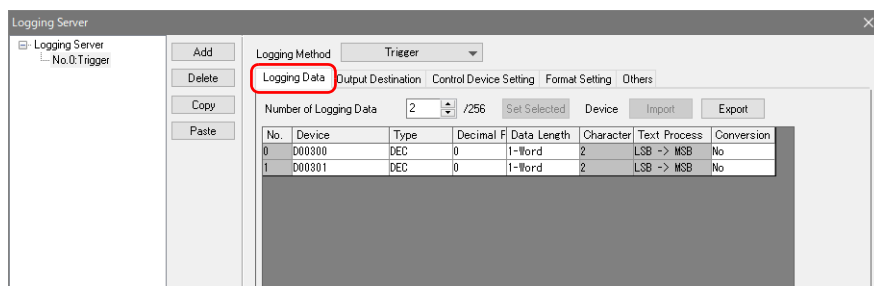
3. Select [No. 0] and set [Logging Method] to [Trigger].



Item	Details	Setting Value
Logging Method	Set the logging method. Trigger Perform logging when the [Trigger Bit] device memory changes from 0 to 1. Constant Cycle Perform logging at the cycle set for [Logging Time].	Trigger

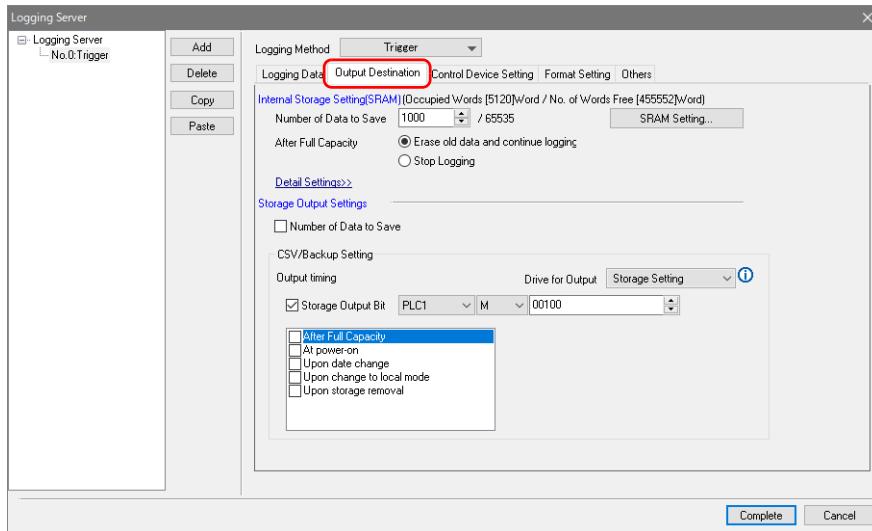
4. Configure the following settings.

- Logging Data



Item	Details	Setting Value
Number of Logging Data	Set the total number of points to log. Max. 256 points	2
Device	Set the logging device memory.	No. 0: D300 No. 1: D301
Type Decimal Point Data Length	Set the data format of the specified device memory.	[Type]: DEC [Decimal Point]: 0 [Data Length]: 1-Word

• Output Destination



- Internal Storage Setting

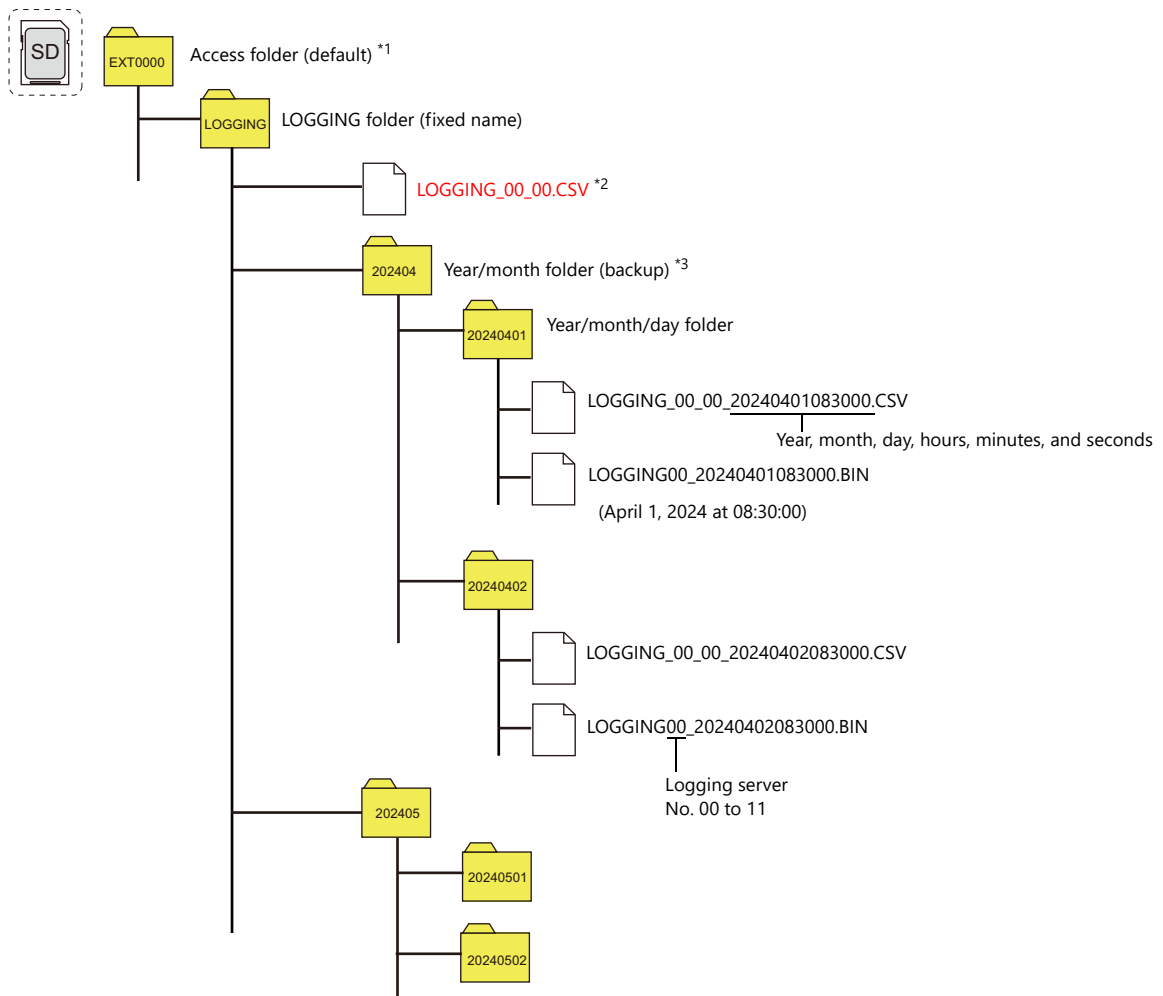
Item	Details	Setting Value
Number of Data to Save	Set the number of data entries to save in logging.	1000
After Full Capacity	Set the operation to perform when the value of [Number of Data to Save] is exceeded.	Erase old data and continue logging
Device Type (Click [Detail Settings >>])	<p>SRAM When power is turned OFF, history data is backed up (retained by battery) even when changing between RUN and Local mode. The amount of free space and total used space can be checked via [SRAM Setting].</p> <p>DRAM All history data is cleared when power is turned OFF or when changing between RUN and Local mode.</p>	SRAM
SRAM Setting	Configure the SRAM settings. Refer to page 3-22 . SRAM Auto Format	Selected

- Storage Output Settings

Item	Details	Setting Value
Number of Data to Save	Set the amount of data saved in the internal storage settings to save to a BIN file.	Deselected
Output timing	Output data saved in the internal storage settings to storage as a CSV/backup file. Output is performed at the set timing. Storage Output Bit (0 → 1) / After Full Capacity / At power-on / Upon date change / Upon change to local mode / Upon storage removal	Storage Output Bit M100
Drive for Output	<p>Select the output destination.</p> <p>Storage Setting: Specify at [Project View] pane → [System Settings] tab → [Storage] → [Storage Connection Target] C: Built-in Socket D: USB A Port</p> <p>The folder configuration of storage is as follows.</p> <ul style="list-style-type: none"> • CSV output destination (output drive)\access folder\LOGGING folder • Backup output destination (output drive)\access folder\LOGGING\year/month folder\year/month/day folder 	Storage Setting

* Storage folder configuration

Example: Logging server number 0, CSV filename: LOGGING_00_00, Output drive: Storage Setting (Built-in Socket)

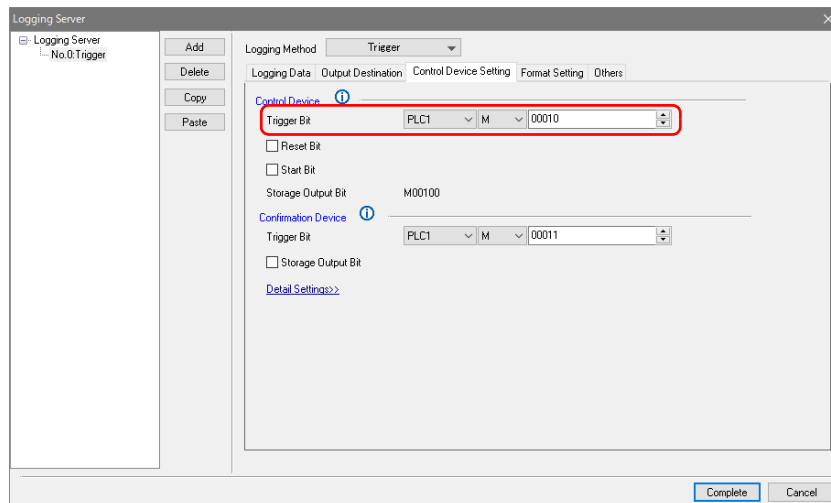


*1 The folder name can be changed via the [Project View] pane → [System Settings] tab → [Storage].

*2 For details on changing the filename, refer to [page 3-6](#).

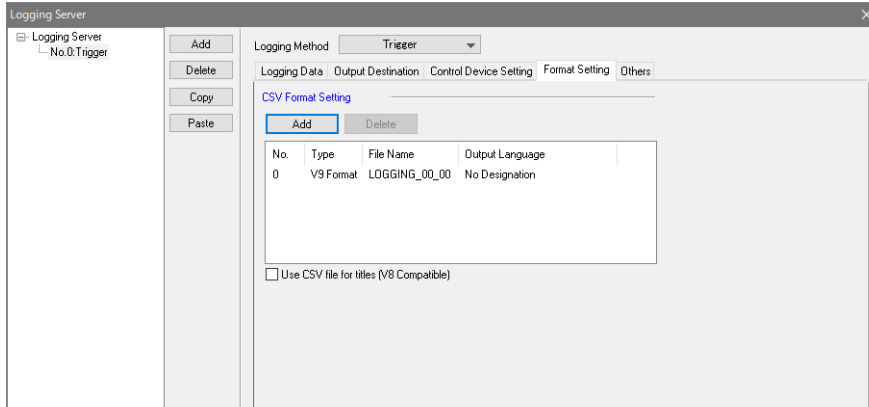
*3 If a backup is not required, select the [Others] → [Do not output backup files] checkbox.

• Control Device Setting



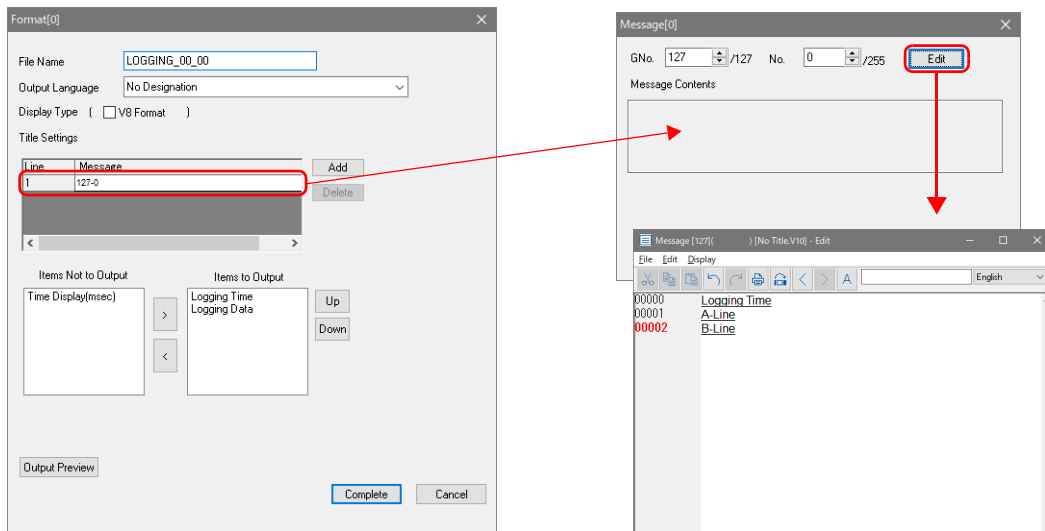
Item	Details	Setting Value
Control Device Trigger Bit	Set the trigger bit to use when [Logging Method] is set to [Trigger]. Logging is executed by this bit. 0 → 1: Perform logging once.	M10
Confirmation Device Trigger Bit	When the trigger bit of the control device memory turns ON, this bit automatically turns ON.	M11

• Format Setting



Item	Details	Setting Value
CSV Format Setting	These settings are for saving history to CSV files. Multiple CSV formats can be registered using the [Add] button.	No. 0*1
Use CSV file for titles (V8 Compatible)	Add titles in the same way as for the V8 series. This is not used in this manual.	Deselected

*1 Double-click number 0 to display the [Format [0]] window.



Item	Details	Setting Value
File Name	Set the name of the CSV file. Default: LOGGING_xx.yy.CSV (xx: Logging server number, yy: Format number) * For details on file output destinations, refer to page 3-4 .	LOGGING_00_00 (default)
Output Language	Set the language used in the CSV file. No Designation: Output using the displayed language. Language 1 to 32	No Designation
Display Type	Select the checkbox for V8 compatibility.	Deselected
Title Settings	Add a title to the first line (lines 1 to 10) of the CSV file. Titles are registered from [Edit] → [Message Edit].	Line 1 GNo. 127, No. 0 No. 0: Logging Time No. 1: A-Line No. 2: B-Line
Items to Output	Use the [<] and [>] buttons to set the items to output to the CSV file. Use the [Up] and [Down] buttons to change the order of output. Logging Time / Time Display (msec) / Logging Data * All logged data is output. The cells for "Logging Time" and "Time Display (msec)" are separated.	Logging Time Logging Data
Output Preview	Display a preview of CSV file to be output.	-

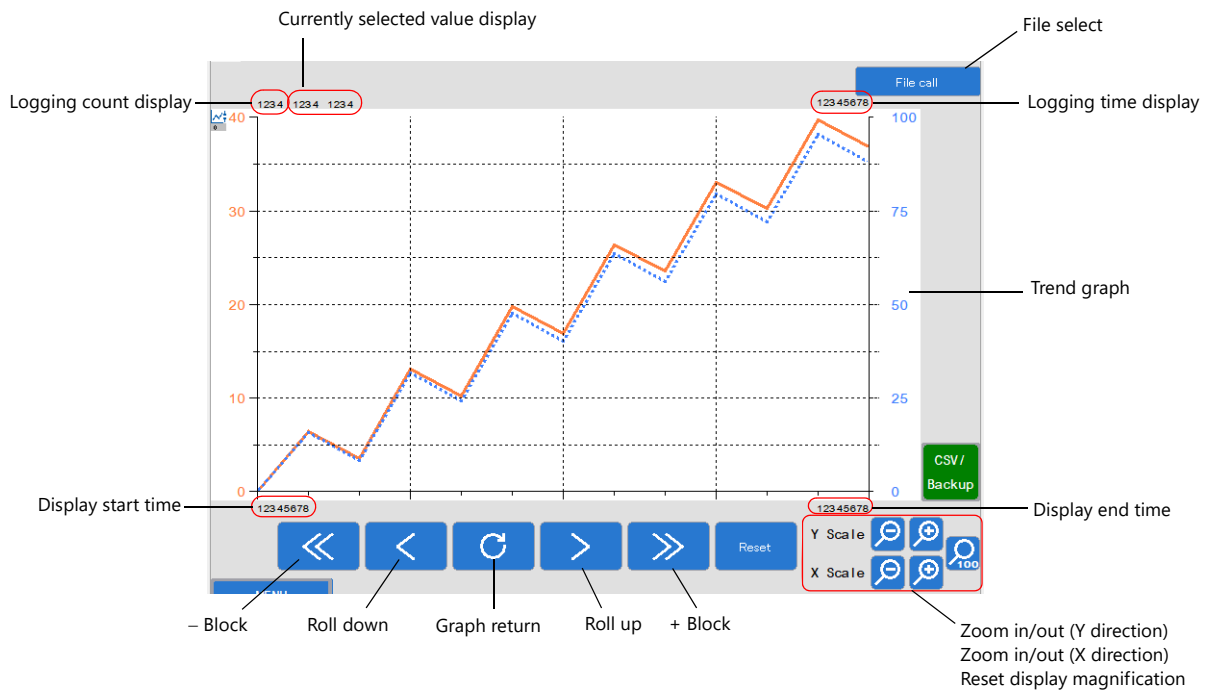
Click [Complete].
This completes the necessary settings.

3.3.2 Screen Editing

Trend Sampling Display Parts

Configuration of Trend Sampling Display Parts

The parts that comprise a trend sampling display part are as follows.



Item	Description
Logging Count Display	Displays the current number of history data entries or the number of selected history data entries.
Currently Selected Value Display	Displays the latest history data or the selected history data.
File Select	Select a backup file saved to a storage device for display.
Logging Time Display *1	Displays the latest logging time or the selected logging time.
Display start time *1	Displays the logging time of the oldest data on the currently displayed graph.
Display end time *1	Displays the logging time of the newest data on the currently displayed graph.
- Block	Moves the display back one page.
Roll Down	Moves the cursor to the previous point.
Graph Return	Flashes when the cursor is displayed after pressing [+ Block] or [- Block]. Pressing this button when it is flashing will stop it from flashing and return the graph to the latest display state.
Roll Up	Moves the cursor to the next point.
+ Block	Moves the display forward one page.
Reset	Press once to illuminate the switch and press again within two seconds to clear the graph. Logging resumes after clearing. If the switch is not pressed again within two seconds, the switch goes out and a reset is not performed.
Zoom out (X direction)	Reduces the X-axis scale of the currently displayed graph. (8 → 4 → 2 → 1 → 1/2 → 1/4 → 1/8 times)
Zoom in (X direction)	Enlarges the X-axis scale of the currently displayed graph. (1/8 → 1/4 → 1/2 → 1 → 2 → 4 → 8 times)
Zoom out (Y direction)	Reduces the Y-axis scale of the currently displayed graph. (8 → 4 → 2 → 1 → 1/2 → 1/4 → 1/8 times)
Zoom in (Y direction)	Enlarges the Y-axis scale of the currently displayed graph. (1/8 → 1/4 → 1/2 → 1 → 2 → 4 → 8 times)
Reset Display Magnification	Sets the magnification of the displayed graph to 100%.

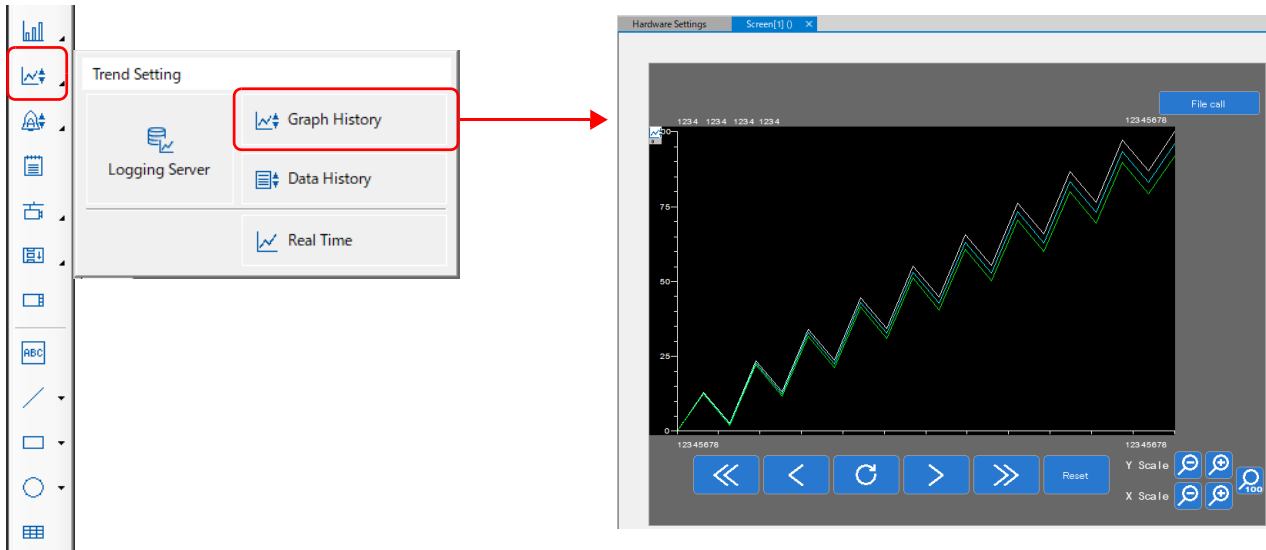
*1 Up to the year, month, and day can be displayed if enough digits are specified.

Less than 8 digits	No display	18 digits	Month, day, hours, minutes, seconds, and milliseconds
8 to 11 digits	Hours, minutes, and seconds	19 to 22 digits	Year, month, day, hours, minutes, and seconds
12 to 13 digits	Hours, minutes, seconds, and milliseconds	23 digits or more	Year, month, day, hours, minutes, seconds, and milliseconds
14 to 17 digits	Month, day, hours, minutes, and seconds		

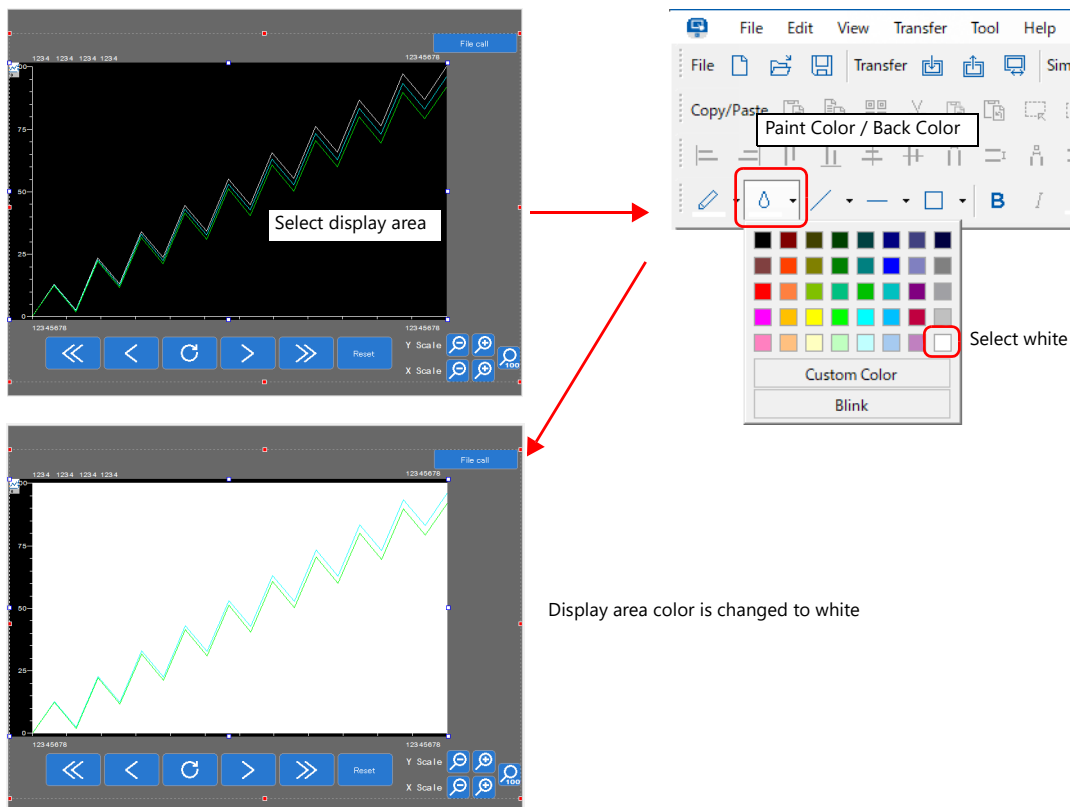
Placing Trend Sampling Display Parts

Place a part from [Trend Sampling].

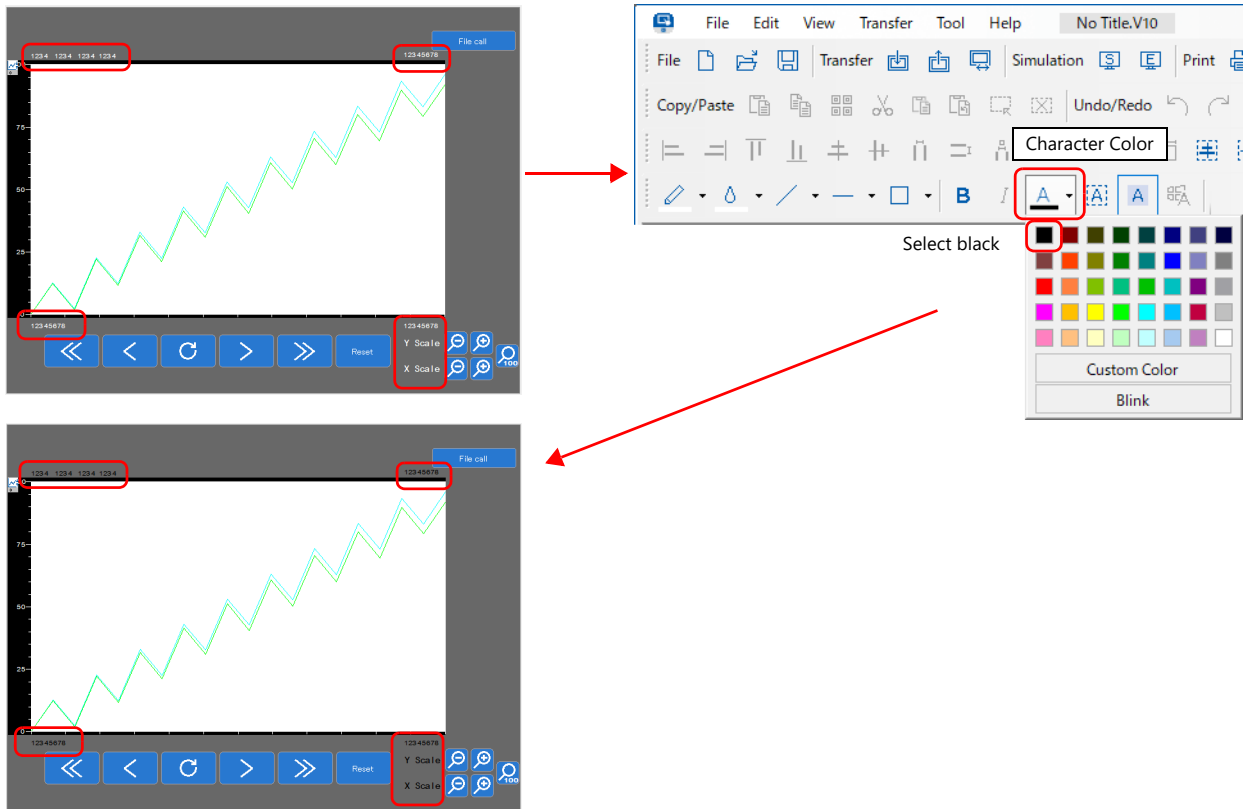
1. On the parts bar, click and hold the [Trend Graph] icon, and then click and place a [Graph History] display part.



2. Change the color of parts from the properties toolbar.
 - Click the trend sampling display, select a part to change the color of by clicking, and change the color from the properties toolbar.
 - Changing the color of the display area from black to white



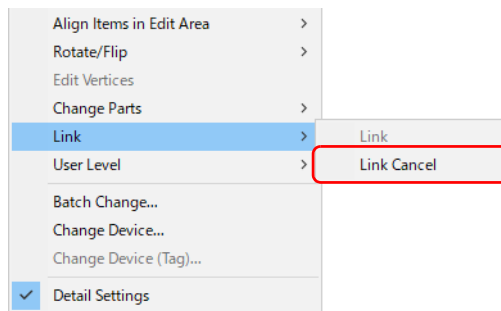
- Changing the character color for numerical data displays and text parts from white to black
Change the character color for the numerical data displays and text parts marked in red one by one.



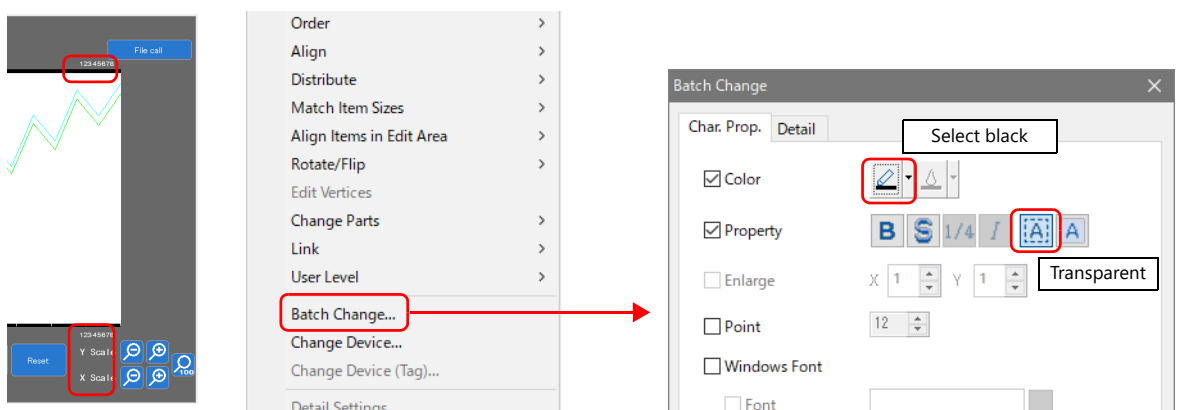
3



- Canceling links
Select a part, display the right-click menu and select [Link] → [Link Cancel] to select individual parts and change settings.



- Batch change
After canceling the linked state, select multiple parts, display the right-click menu, and use the [Batch Change] function to collectively change the character color of the selected parts.



Hereafter, change settings on the [Properties] pane.

Detailed Settings

When a placed part is selected, the [Properties] pane and [Design] properties pane are displayed.

[Properties] pane: Detailed function settings

[Design] properties pane: Color settings and design change

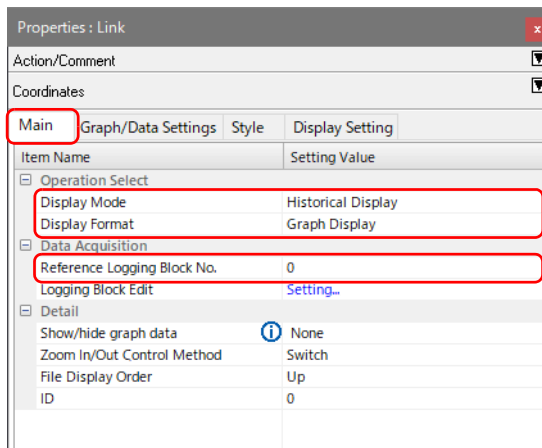
Select the linked parts to access settings of the trend sampling display part.

Select the linked parts and then select individual parts, such as a switch, to access settings of that part.

[Properties] pane

Display the [Properties] pane of the trend sampling display part and configure details.

- Main

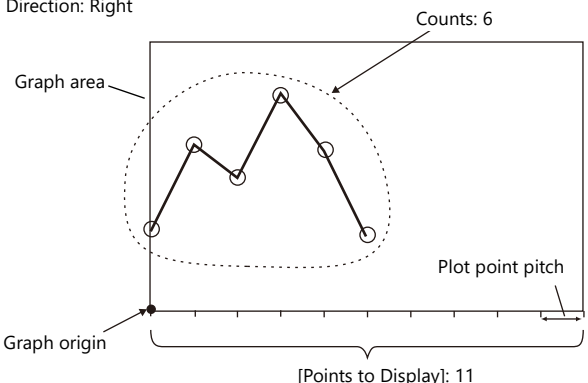



Item		Details	Setting Value
Operation Select	Display Mode	Select [Historical Display].	Historical Display
	Display Format	Select [Graph Display].	Graph Display
Data Acquisition	Reference Logging Block No.	Set the logging block number for displaying on the trend graph.	0
	Logging Block Edit	The logging block can be checked via [Setting].	

• Graph/Data Setting

Graph No.	Logging Word No.	Device	Input Type	Data Length	Min.	Max.	Display Type	Line Type	Line Thickness	Color
0	0	D00300	DEC-/BCD	1-Word	0	40	Line Graph	—————	3	Orange
1	1	D00301	DEC-/BCD	1-Word	0	100	Line Graph	3	Blue

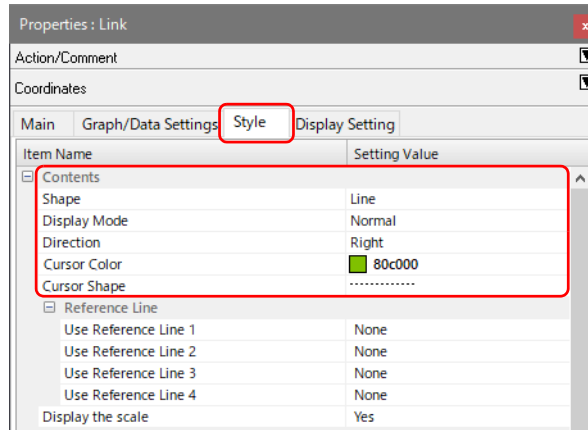
Item Name	Setting Value
Number of Graphs	2
Points to Display	13
Batch Change	Setting...
Graph	
Graph No.0	
Logging Word No.	0
Input Type	DEC-/BCD
Data Length	1-Word
Minimum	0
Maximum	40
Display Type	Line Graph
Line Type	—————
Line Thickness	3
Color	ff8040
Graph No.1	
Logging Word No.	1
Input Type	DEC-/BCD
Data Length	1-Word
Minimum	0
Maximum	100
Display Type	Line Graph
Line Type
Line Thickness	3
Color	4080ff

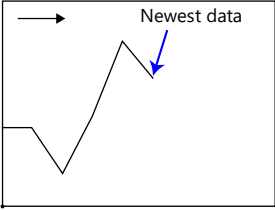
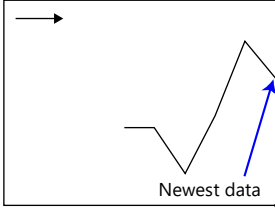
Item	Details	Setting Value	
		Graph No. 0	Graph No. 1
Logging Word No.	Specify which word the data corresponds to among [Number of Logging Data] in the [Logging Server] settings.	0	1
Device	A device memory is automatically displayed according to the [Logging Word No.].	D300 (input automatically)	D301 (input automatically)
Input Type	Set the data format of the device memory.	DEC-/BCD	DEC-/BCD
Data Length	Set the data length of the device memory.	1-Word	1-Word
Minimum/Maximum	Set the minimum and maximum values for logging data.	0 to 40	0 to 100
Display Type	Set the line type or point type and color.	Line Graph	Line Graph
Line Type		Solid line	Dotted line
Line Thickness		3	3
Color		Orange (ff8040)	Blue (4080ff)
Number of Graphs	Set the number of graph lines.	2	
Points to Display	Set the number of plot points along the horizontal axis. Direction: Right 	13	

 **Batch change**
 This function is useful for setting the data length and minimum and maximum graph values collectively for multiple graphs when these values are the same.

1. Specify the number of graphs.
2. Click [Batch Change] → [Setting] to display the [Set Selected] window.
3. Set [Data Length], [Graph Min.Value], and [Graph Max.Value] and click [OK]. The settings are applied to all graphs collectively.

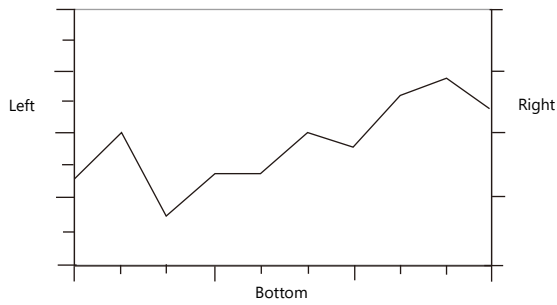
• Style (Contents)



Item	Details	Setting Value
Shape	Specify the graph shape.	Line
Display Mode	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>[Direction]: Right, [Display Mode]: Normal</p>  </div> <div style="text-align: center;"> <p>[Direction]: Right, [Display Mode]: Pen Recorder</p>  </div> </div>	Normal
Direction	Set the direction of graph lines.	Right
Cursor Color	Set the color and shape of the cursor for when scrolling.	Light green (80c000)
Cursor Shape		Dotted line
Reference Line	Display reference lines in the graph area. A maximum of 4 lines can be displayed.	None

• Style (Scale)

Scales and reference values can be displayed along the left, right, bottom, and top sides of the graph. In this example, a scale is displayed on the left, right, and bottom sides.



Reference Line

Display the scale Yes

Scale

Axis Color 000000

Background ffffff

Length 5

Advanced Scale Settings

Left

Display the scale Yes

Setting

Small scale alignment Equal divide

No. of divisions 8

Display major tick marks Yes

Interval 2

Display grid line Yes

Color 000000

Line Type

Also apply to minor tick marks Yes

Show target value Yes

Style Setting Setting...

Also apply to minor tick marks None

Range Setting Setting...

Right

Display the scale Yes

Setting

Small scale alignment Equal divide

No. of divisions 4

Display major tick marks None

Display grid line None

Show target value Yes

Style Setting Setting...

Range Setting Setting...

Bottom

Display the scale Yes

Setting

Small scale alignment Equal divide

No. of divisions 12

Display major tick marks Yes

Interval 3

Display grid line Yes

Color 000000

Line Type


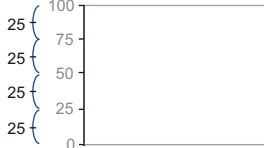
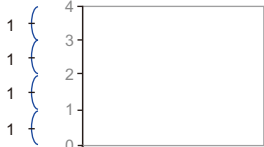
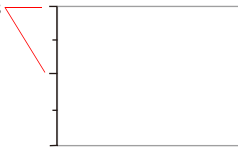
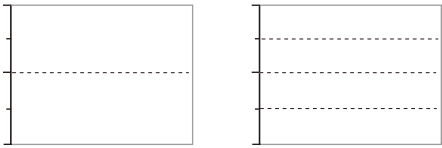
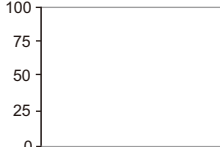
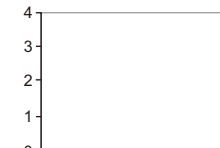
Also apply to minor tick marks None

Show target value None

Range Setting Setting...



Item	Details	Setting Value
Display the scale	Scales can be displayed along the left, right, bottom, and top sides of the graph.	Yes
Axis Color Background	Select the color of the major and minor tick marks, and axis lines of the scale. This setting is common to the background color for the left, right, bottom, and top sides.	[Axis Color]: Black (000000) [Background]: White (ffffff)
Length	Set the length of the minor tick marks of the scale. Setting range: 1 to 16 This setting is common to all left, right, bottom, and top sides. The thickness of lines is fixed.	5
	<p>Minor tick marks</p>	

Item		Details		Setting Value		
Advanced Scale Settings	Display the scale	Display scales.		Left: Yes Right: Yes Bottom: Yes Top: None		
Left Right Bottom Top	Small scale alignment	<ul style="list-style-type: none"> Equal divide (unit: divisions) Minor tick marks are equally spaced according to the set number of divisions along the axis line. <p>Example: [No. of divisions]: 4</p>  <ul style="list-style-type: none"> Equal interval (unit: intervals) Minor tick marks are spaced at the specified interval based on the range (maximum and minimum values of the specified graph or an arbitrary setting value) set via [Range Setting]. *1 <p>Example: [Interval]: 25 Graph No. 0 Graph minimum value: 0 Graph maximum value: 100</p>  <p>Example: [Interval]: 1 Scale value: 0 to 4</p> 		Left	Right	Bottom
	Equal divide	Equal divide	Equal divide			
	Divisions: 8	Divisions: 4	Divisions: 12			
Display major tick marks	Interval	<p>Display major tick marks. Major tick marks are twice the length of minor tick marks. The thickness of lines is fixed.</p> <p>Major tick marks</p> 		Yes	None	Yes
		[Interval]: 2			[Interval]: 3	
Display grid line	Color Line Type Also apply to minor tick marks	<p>Grid lines are drawn at the major and minor tick marks of the scale. Set the line color and line type. It is possible to only display grid lines at the positions of major tick marks.</p> <ul style="list-style-type: none"> Grid lines only at major tick marks Grid lines at major and minor tick marks 		Yes	None	Yes
		[Color]: Black			[Color]: Black	
		[Line Type]: Dotted line			[Line Type]: Dotted line	
		[Also apply to minor tick marks]: Yes			[Also apply to minor tick marks]: None	
Advanced Scale Settings	Show target value	<p>Display reference values on the scale. Reference values are displayed based on the range (maximum and minimum values of the specified graph or an arbitrary setting value) set via [Range Setting].</p> <p>Example: [Range Setting]: Match with graph No. 0 Graph minimum value: 0 Graph maximum value: 100</p>  <p>Example: [Range Setting]: Arbitrary values: 0 to 4</p>  <p>* For the top and bottom sides, reference values are displayed based on the number of display points or the arbitrary setting range.</p>		Yes	Yes	None
Left Right Bottom Top	Style Setting	[Style Setting]		[Style Setting]		
	Also apply to minor tick marks	[Digit]: 3		[Digit]: 3		
	Range Setting	Color: Orange		Color: Blue		
		[Point]: 12		[Point]: 12		
		[Also apply to minor tick marks]: None		[Range Setting]: Match with graph No. 1		
		[Range Setting]: Match with graph No. 0				

[Design] Properties Pane

Parts can be added/deleted, and the color settings and design of parts can be changed.

The currently selected value display part ((3) in following figure) is not used.

Deselect the [Currently Selected Value Display] checkbox circled in red on the [Design] properties pane.

The image shows a trend sampling display with three value display parts labeled (1), (2), and (3). Part (3) is circled in red. The Design properties pane is open, showing a list of settings. The 'Currently Selected Value Display' checkbox is checked and circled in red. A red arrow points from the circled checkbox in the Design pane to the circled part (3) on the display.

3

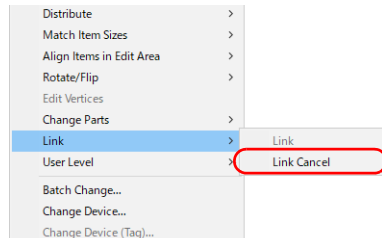
Item	Description	Setting
Design Setting	Type	Select from catalogs (fixed)
	Part Type	Display the part type selection window from [Setting], and then select a design.
Additional parts settings	Displays a list of parts related to the selected trend sampling display part. Selected: Displayed on MONITOUCH. Deselected: Not displayed on MONITOUCH. Parts can be added to the list from [Add parts].	Deselect the [Currently Selected Value Display] checkbox circled in red above.

When an individual part is selected, the properties and design of that part can be changed.



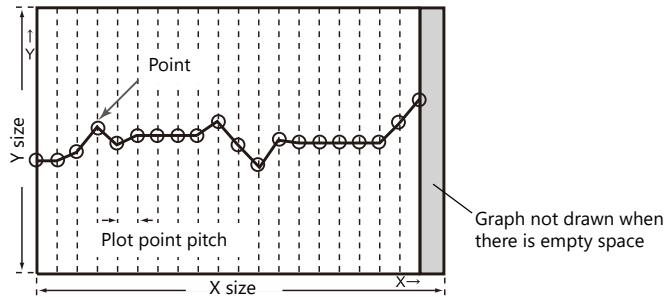
- Moving and changing the size of individual parts

Select a trend sampling display part, display the right-click menu, and select [Link] → [Link Cancel] to select and move individual parts.



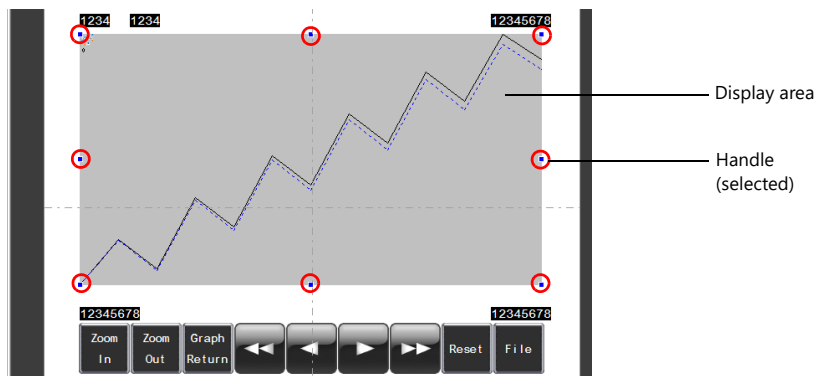
- Adjusting the size of the graph area

The graph area changes to the required display size according to the setting for the number of display points.

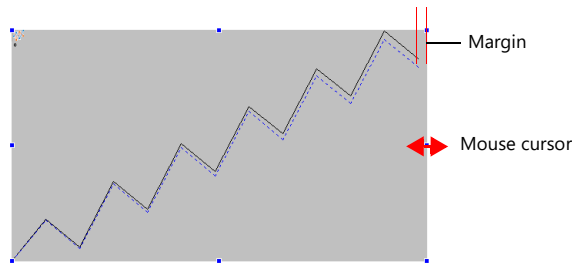


For this reason, size adjustment must be performed according to the following procedure.

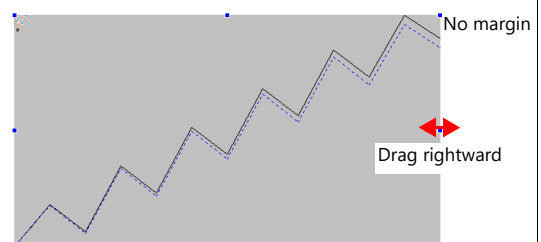
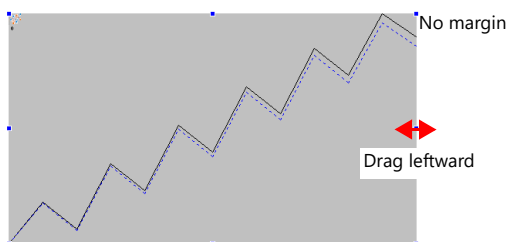
1. Select a trend sampling display part, display the right-click menu, and select [Link] → [Link Cancel].
2. Clear the selected state first and then select the display area individually by clicking on it.



3. Align the mouse cursor over the handle on the margin side to change the mouse cursor to a double-arrow cursor.

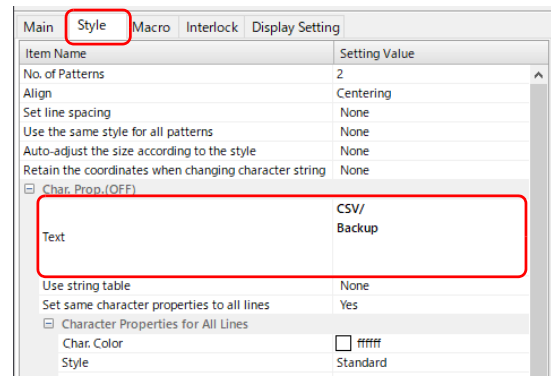
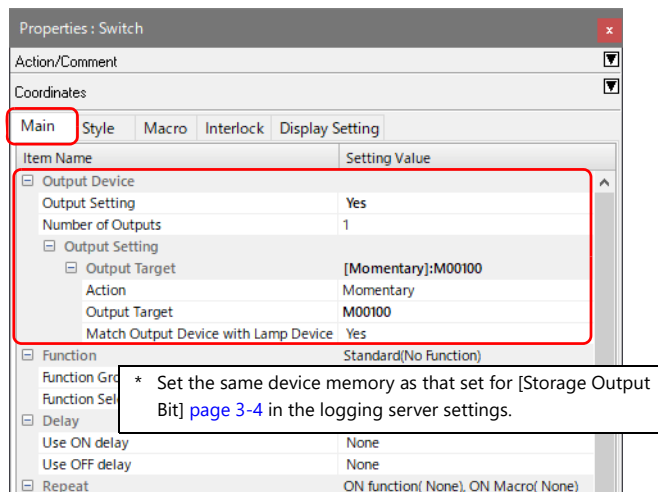


4. Drag with the cursor in the double-arrow state. The size is adjusted automatically.



Placing a Switch (for CSV/Backup File Output)

1. Place a switch from the parts bar → [Switch].
2. Display the [Properties] pane of the switch and configure the following settings.



- Main

	Item	Description	Setting Value
Output Device	Output Setting	Data is output to device memory when the switch is pressed.	Yes
	Number of Outputs	Select the number of outputs. Max. 16 outputs	1
	Action	Set the write operation to perform with respect to the output device memory.	Momentary
	Output Target	Set the output device memory.	M100
	Match Output Device with Lamp Device	Set the same device memory for the output device memory and the lamp device memory.	Yes

- Style

	Item	Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.	CSV/BACKUP

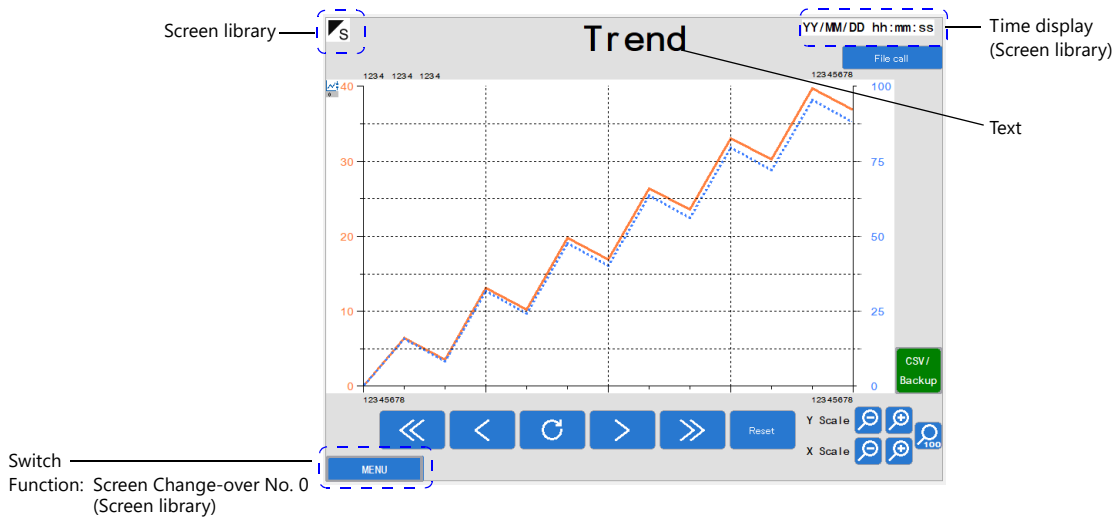
Click [Complete].

This completes the switch creation process.

Other Settings

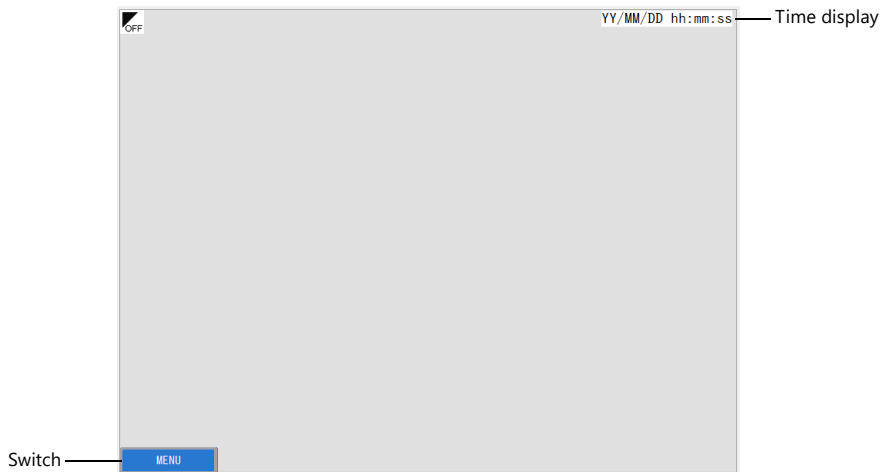
Place text, a time display part, and a switch for returning to the menu screen.

Place the time display part and switch for returning to the menu screen by registering them to the screen library.



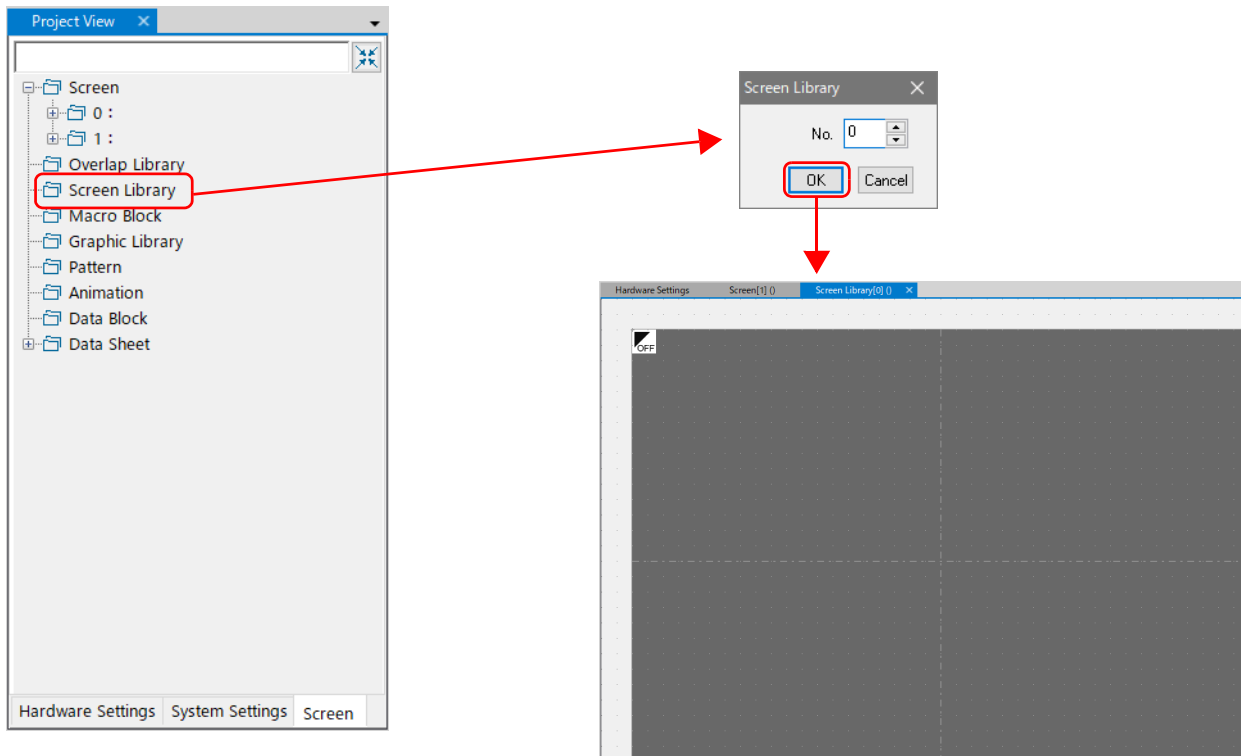
Screen Library Registration

Register the time display part and switch for returning to the menu screen on screen library number 0.



Opening the Screen Library

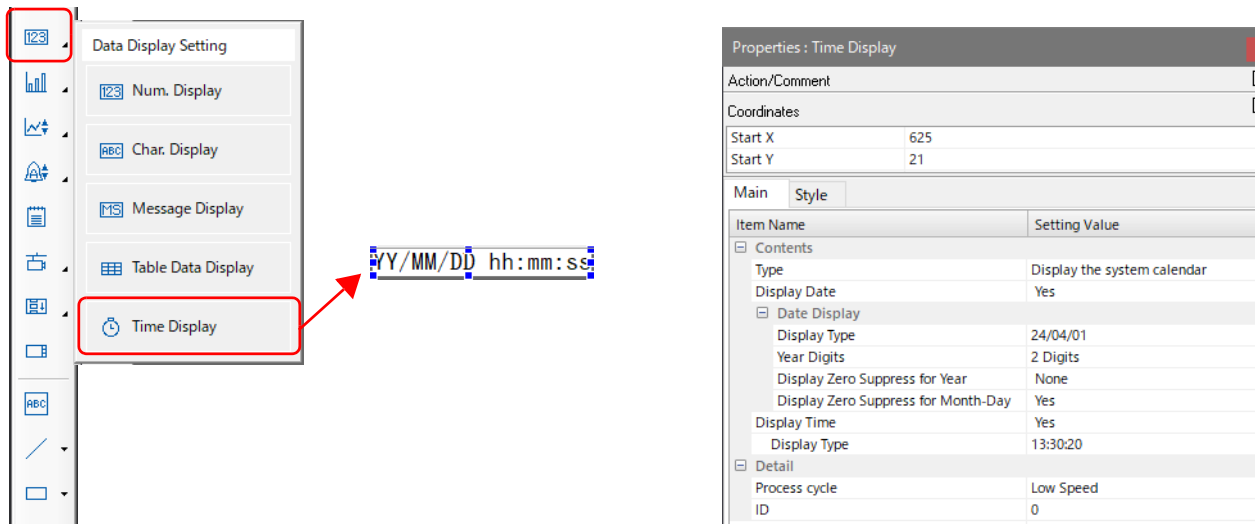
1. Double-click [Screen Library] at the [Project View] pane → [Screen] tab.
2. Select number 0 on the screen library number specification window, and then click [OK] to display the editing window for screen library number 0.



3

Placing a Time Display Part

1. On the parts bar, click and hold the [Data Display] icon, and then click and place a [Time Display] part.
2. Display the [Properties] pane and configure details as shown below.



Item	Description	Setting Value
Type	Select the type of calendar to display. Display the system calendar: The calendar of the V10/V9 series unit or the built-in calendar of the PLC is used. Display the value of the designated device: The values of consecutive device memory addresses are displayed as the calendar.	Display the system calendar
Display Date	Display the date.	Yes
Display Type	Set the date display format.	24/04/01
Year Digits	Select the number of digits to use to display the year. 2 Digits, 4 Digits	2 Digits
Display Time	Display the time.	Yes
Display Type	Set the time display format.	13:30:20

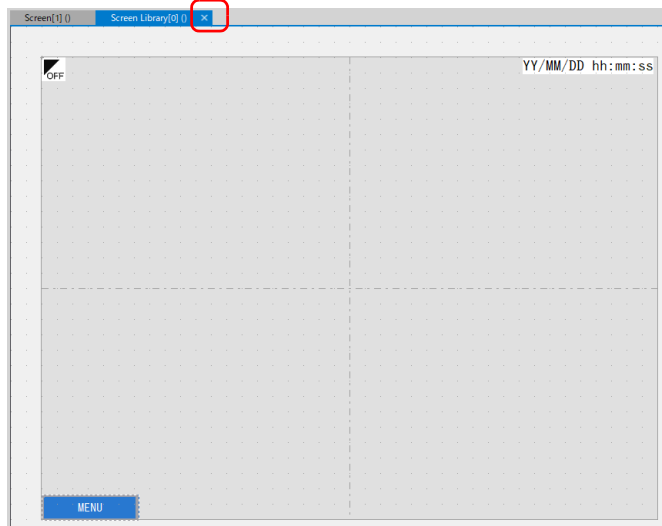
Placing a Switch

Create a switch for returning to the menu screen.

1. Place a switch from the parts bar → [Switch].
2. Display the [Main] tab on the [Properties] pane of the switch, and set [Function Select] to [Screen Change-over] and [Screen No.] to "0".

This completes registration of the screen library.

Click [x] to close the screen library editing window and return to the screen editing window.

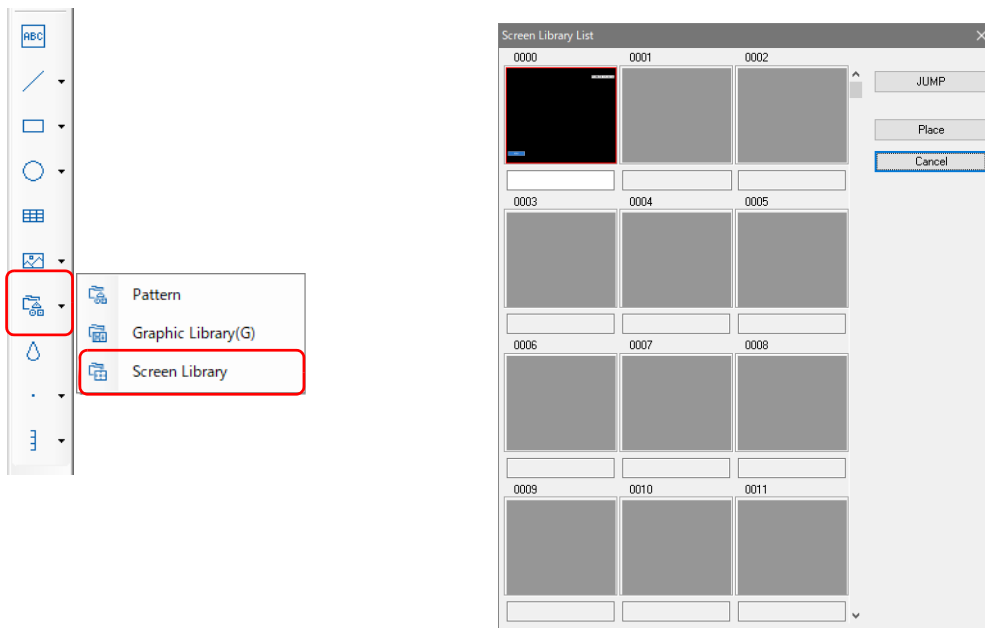


Placing a Screen Library and Text

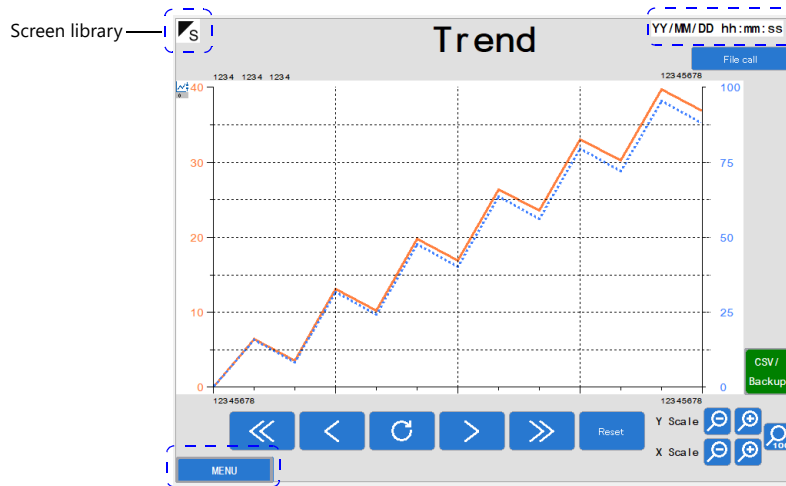
Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.



- Set the icon at the top left corner of the screen.



Text

Create a title for the screen.

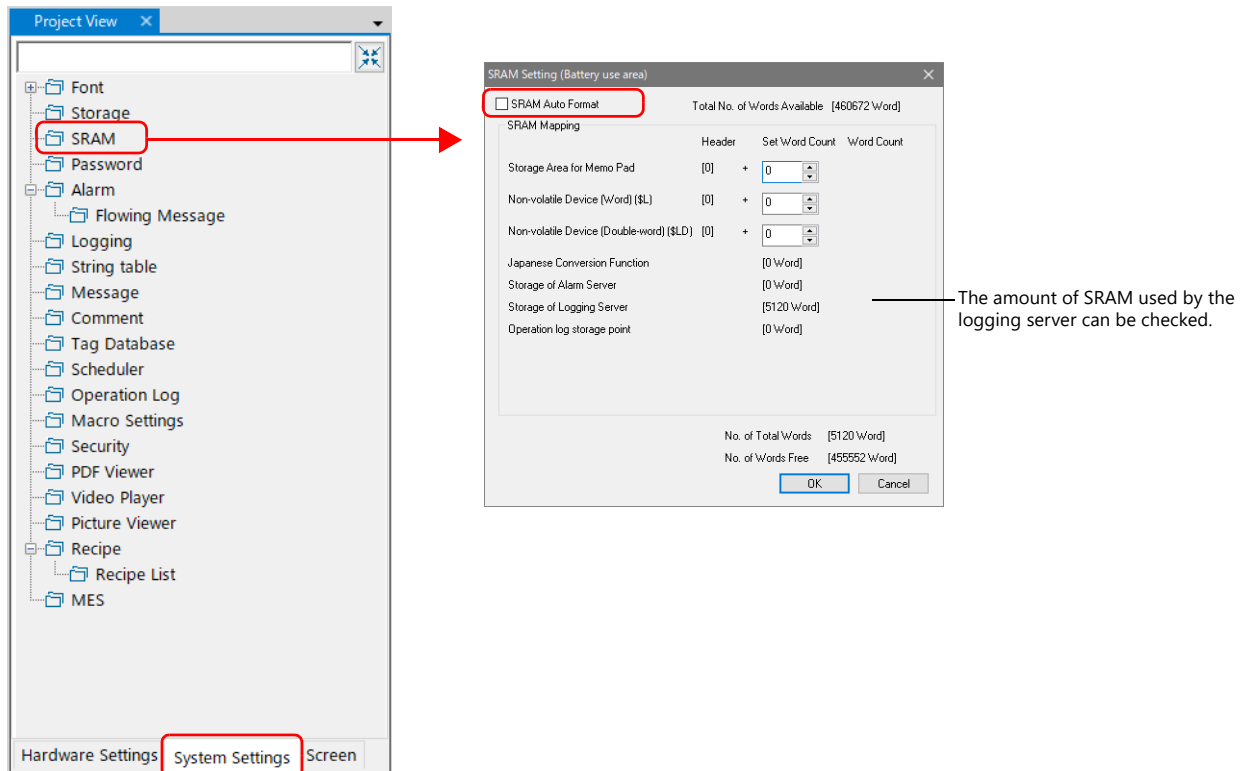
- On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
- Click on the screen. A text frame is displayed.
- Enter text.
- Click a location on the screen other than the text.
- Click the text to display the [Properties] pane. Adjust the text color and size.

This completes the screen creation process.

SRAM Settings

Since SRAM was selected as the save destination of history data for retaining data when the power is turned off, SRAM settings must be configured.

1. On the [Project View] pane → [System Settings] tab, click [SRAM] to display the SRAM settings.
2. Select the [SRAM Auto Format] checkbox.



Item	Description	Setting Value
SRAM Auto Format	<p>Selected The SRAM area is formatted automatically.</p> <p>Deselected The following message is displayed when transferring the screen program. "Error: 161 (SRAM: x)" or "Error: 163 (SRAM: x)"</p> <p>Execute [SRAM Format] in Local mode. For the format procedure, refer to page 3-23.</p>	Selected

This completes the necessary settings.
Transfer the screen program to MONITOUCH and check the operation.

3.4 Checking Operation on MONITOUCH

3.4.1 List of Used Device Memory Addresses


The device memory addresses used in this example are listed below.

Device Memory	Description	Remarks
M10	Trigger bit (control device memory)	
M100	Storage output bit	
D300	Graph No. 0 (logging word No. 0)	
D301	Graph No. 1 (logging word No. 1)	

3.4.2 Storage Device Specifications

The following storage devices can be used with the V10/V9 series.

Type	Capacity	File System	Connection Port	Remarks
SD card	Max. 2 GB	FAT, FAT32	Built-in SD card socket	
SDHC card	4 to 32 GB	FAT32		
SDXC card	64 GB to 2 TB	exFAT		Not supported by the V9 series

 USB flash drives can also be used. For details, refer to "8 Storage Device" in Reference Manual 2.

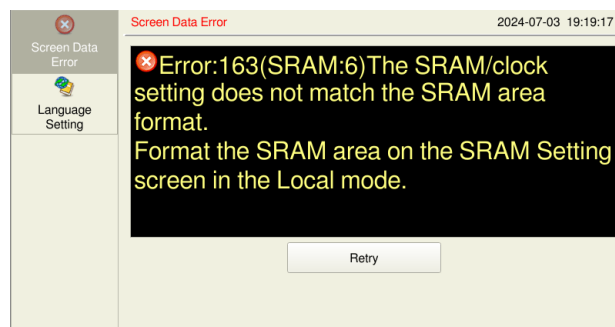
3.4.3 Operation on MONITOUCH

Transfer the screen program to MONITOUCH and check the operation.

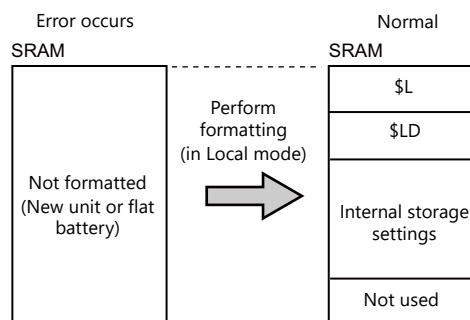
SRAM Formatting and Time Settings

When a screen program is transferred without selecting the [SRAM Auto Format] checkbox on the [SRAM Setting] window, "Error: 163 (SRAM: x)" is displayed. In this case, format the SRAM area in Local mode.

The internal clock settings must also be configured in Local mode.



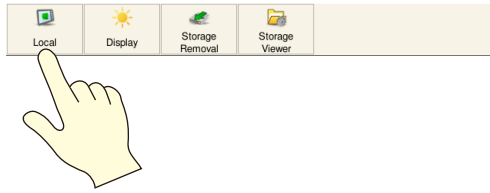
Once the SRAM area of MONITOUCH is formatted, screen program transfers will no longer result in this error. *1
As long as the battery lasts, the SRAM data will be retained regardless of whether the MONITOUCH power is turned on or not. If the power is turned off when the battery is flat, SRAM data will be lost. In this case, reformat the SRAM area.



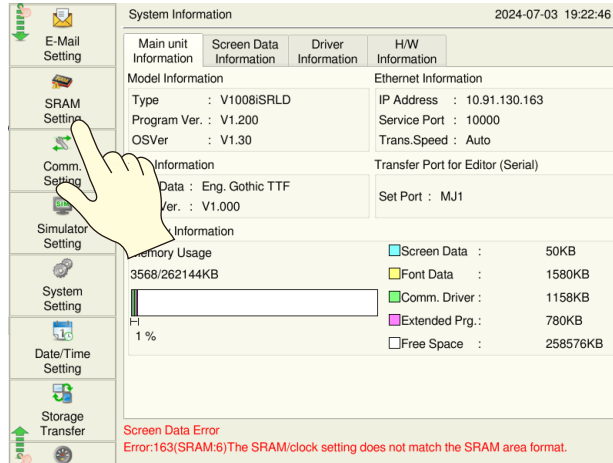
*1 When the [SRAM Auto Format] checkbox is selected on the [SRAM Setting] window.

SRAM Formatting Procedure

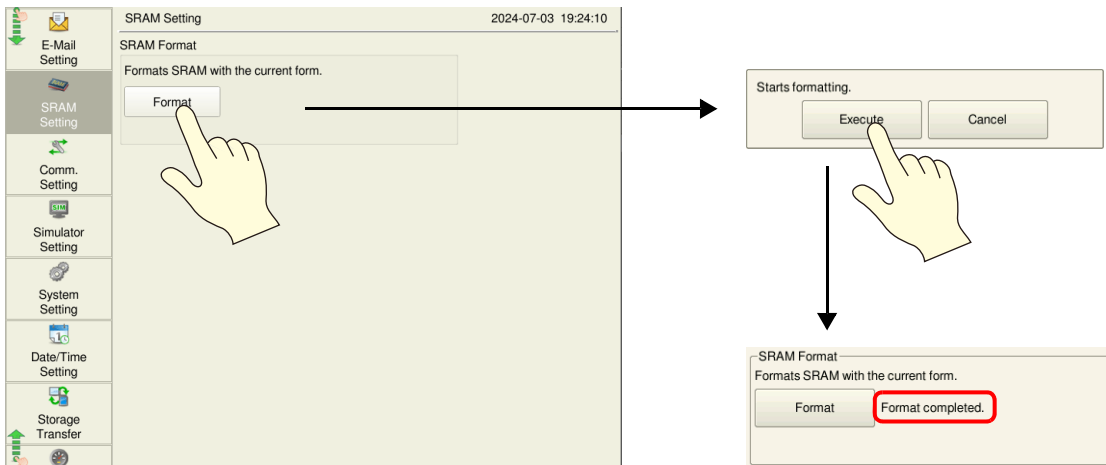
1. Press the [SYSTEM] function switch and press the [Local] switch on the system menu.



2. MONITOUCH switches to Local mode. Press [SRAM Setting] on the left of the screen.



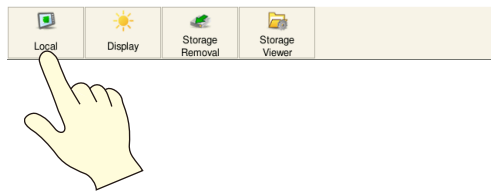
3. The SRAM Setting screen is displayed. Press [Format] and then [Execute].
A message that indicates that formatting is complete is displayed.



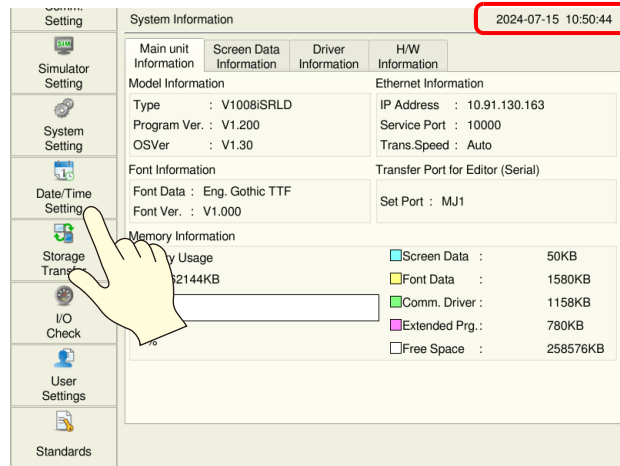
This completes the SRAM formatting process.

Time Settings

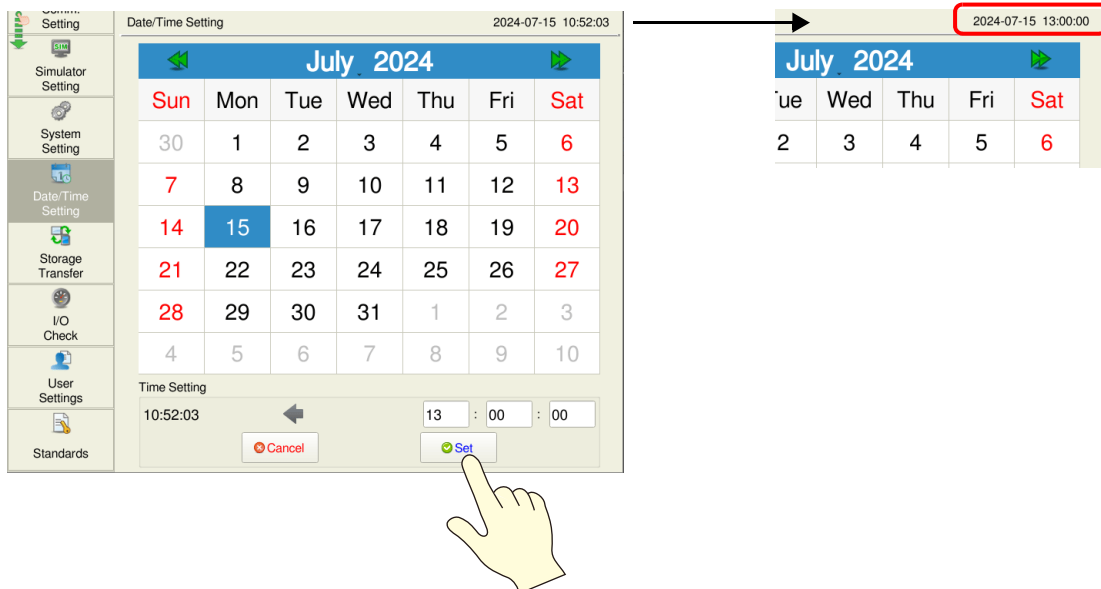
1. Press the [SYSTEM] function switch and press the [Local] switch on the system menu.



2. MONITOUCH switches to Local mode. Press [Date/Time Setting] on the left of the screen.



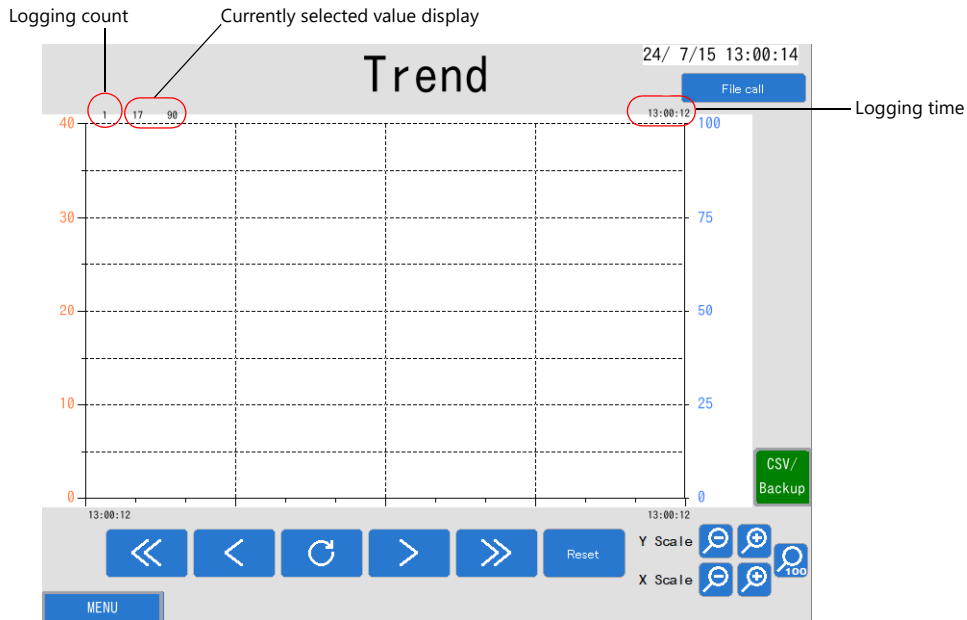
3. The Date/Time Setting screen is displayed. Set the correct date and time and press [Set]. The internal clock is updated and the time at the upper right of the screen is also updated.



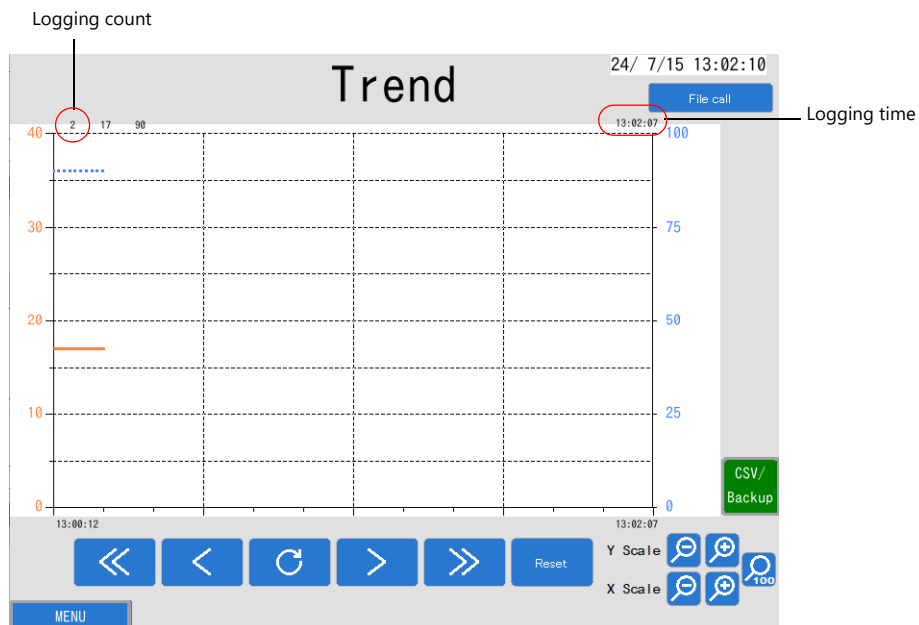
This completes the time settings.
Press [RUN] on the left of the screen and display the trend screen.

Executing Logging

- Enter the following constants for D00300 and D00301.
 - D00300 = 17
 - D00301 = 90
- Turn ON the M00010 trigger bit (0 → 1).
The logging time, currently selected value display, and logging count are displayed as shown in the following figure.



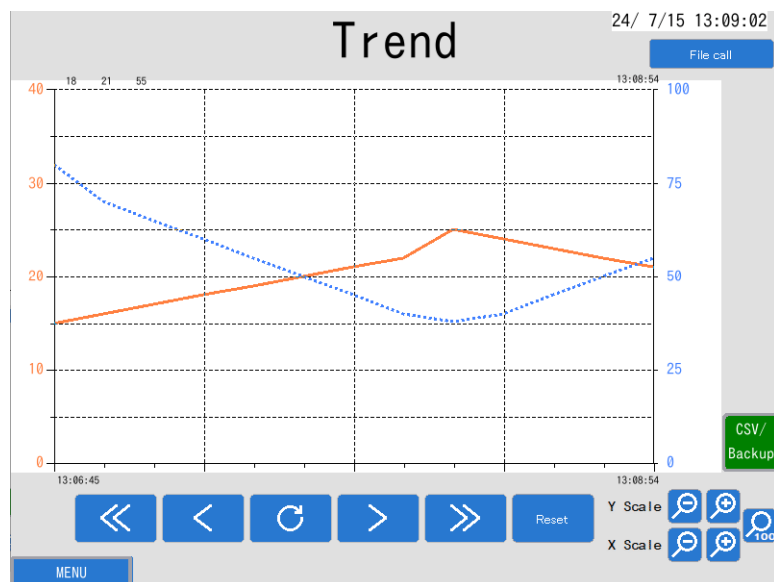
- Turn OFF the M00010 trigger bit (1 → 0).
- Turn ON the M00010 trigger bit (0 → 1) again.
The trend graph is displayed. The logging time is updated as shown in the following figure and the logging count displays "2".



5. Continue to log the following data.

Logging count	Logging data device memory	
	D300	D301
3	16	65
4	16	70
5	15	75
6	15	80
7	16	70
8	17	65
9	18	60
10	19	55
11	20	50
12	21	45
13	22	40
14	25	38
15	24	40
16	23	45
17	22	50
18	21	55

Display example of logging count 18

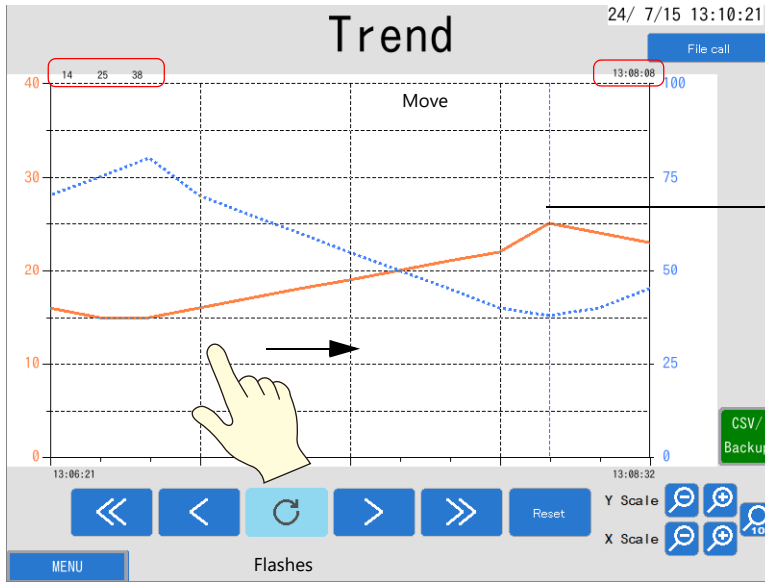


Checking History Data

Check history data according to the following procedure.

Scrolling

1. Tap the display area.
The cursor is displayed at the tapped location and the graph return switch starts flashing at the same time.
2. Scrolling updates the graph.



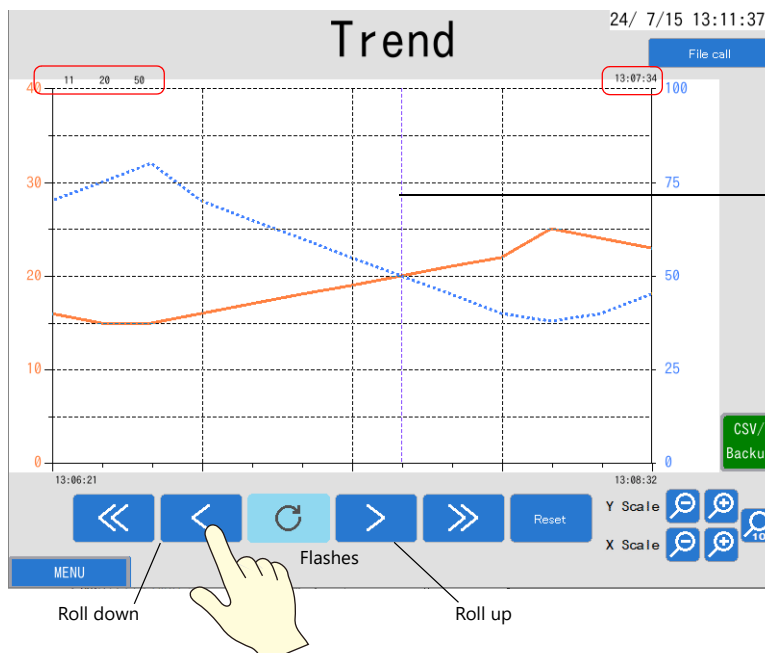
Cursor

The logging count, current value, and logging time selected with the cursor are displayed.

3. Press the graph return switch to hide the cursor and return to the latest display state.

Roll Up and Roll Down Switches

1. Press the roll up or roll down switch.
The cursor is displayed and the graph return switch starts flashing at the same time.



Cursor

The logging count, current value, and logging time selected with the cursor are displayed.

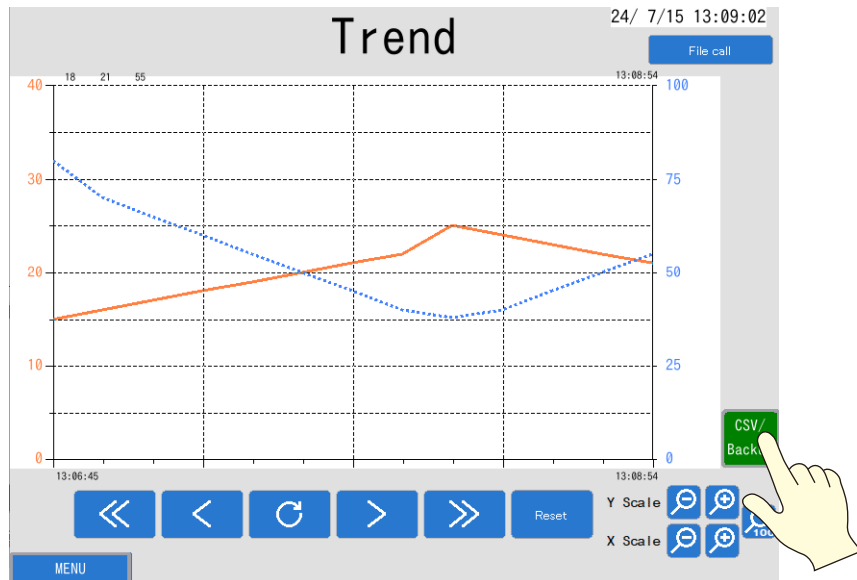
2. Press the roll up or roll down switch again. The cursor moves and the logging count, currently selected value, and logging time are updated.
3. Press the graph return switch to hide the cursor and return to the latest display state.

Checking CSV/Backup Output

Output history data as a CSV/backup file on a storage device.
The output file can be loaded to check past history data.

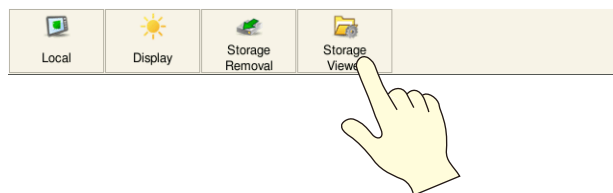
CSV/Backup Output

1. Press the [CSV/Backup] switch.

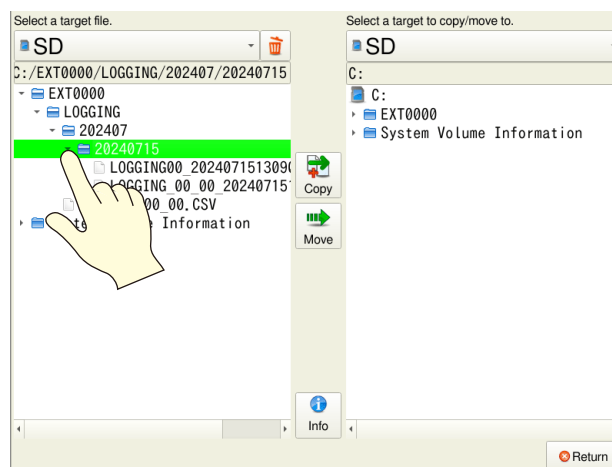


Storage output bit
M100 changes from 0 to 1

2. Press the [SYSTEM] function switch and press the [Storage Viewer] switch on the system menu.



3. The storage viewer is displayed.
Tap the "EXT0000" folder and then tap the "LOGGING" folder.
Check that a CSV and backup folder have been created.

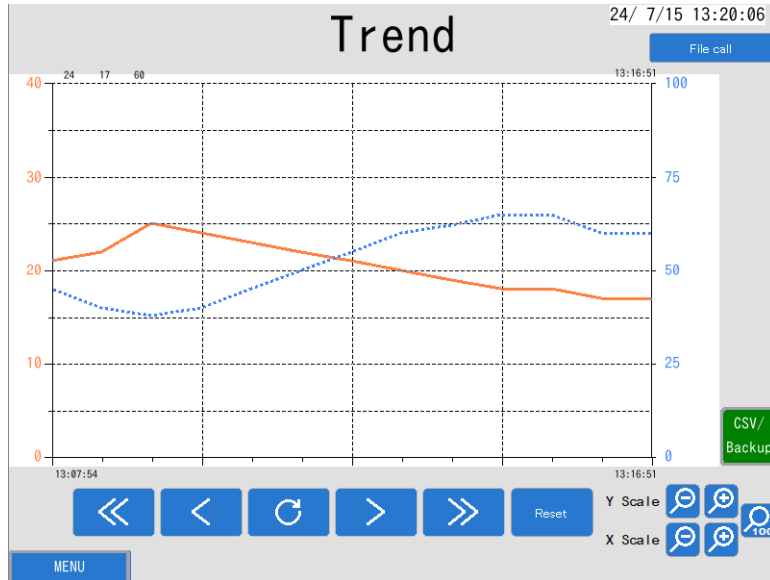


4. Press the [Return] switch.

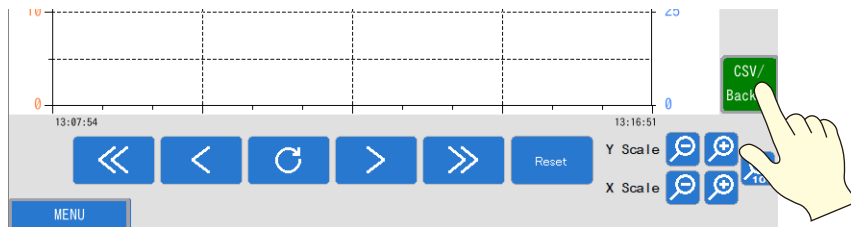
5. Continue on from the current data to logging of the following data. (Turn ON the M0010 trigger bit.)

Logging count	Logging data device memory	
	D300	D301
19	20	60
20	19	62
21	18	65
22	18	65
23	17	60
24	17	60

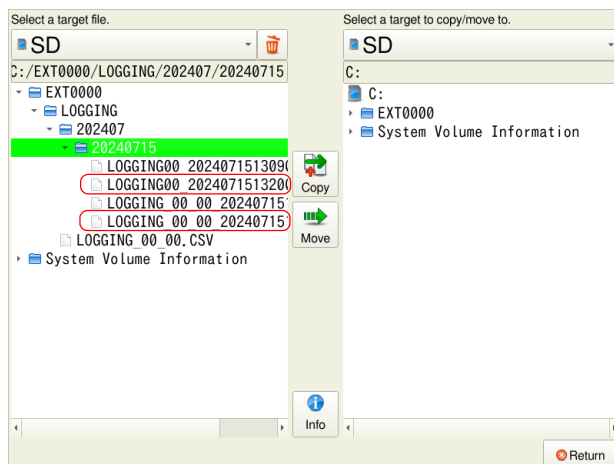
Display example of logging count 24



6. Press the [CSV/Backup] switch again.



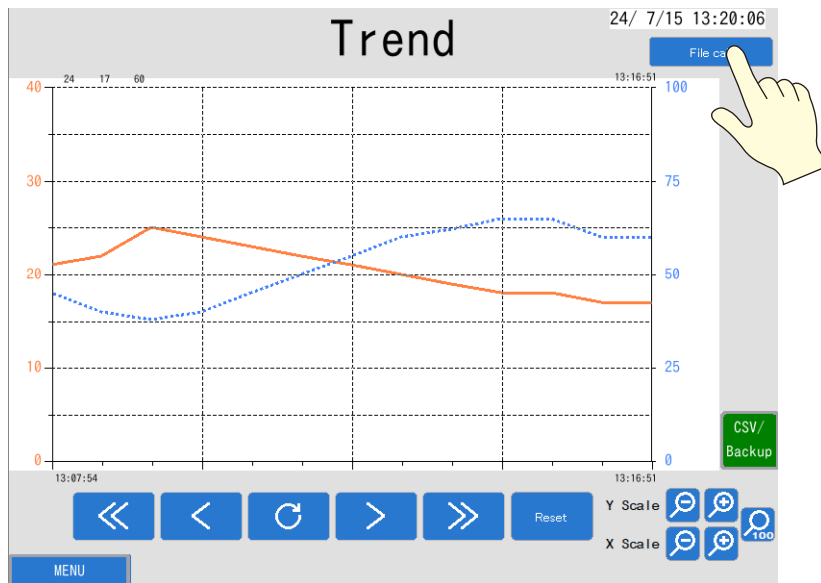
7. Press the [SYSTEM] function switch and press the [Storage Viewer] switch on the system menu. Check that the date of the CSV file is updated and a new backup file has been created.



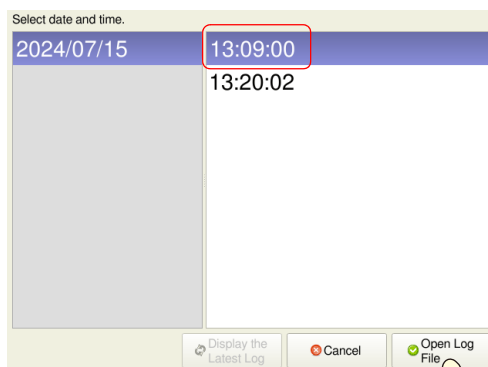
Backup File Graph Display

Select a backup file saved to a storage device for graph display.

1. Press the [File call] switch.

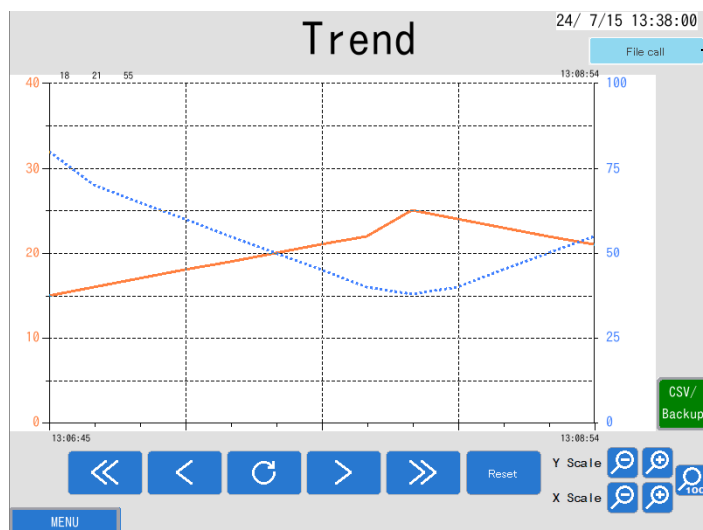


2. Select a time file in the date folder and press the [Open Log File] switch.



Two backup files are on the storage device.

A graph of the selected file is displayed.



Flashes
(indicates that a backup file is currently displayed)

3. To return to the current graph, press the [File call] switch and then press the [Display the Latest Log] switch. The [File call] switch stops flashing and the graph display changes to the latest state.

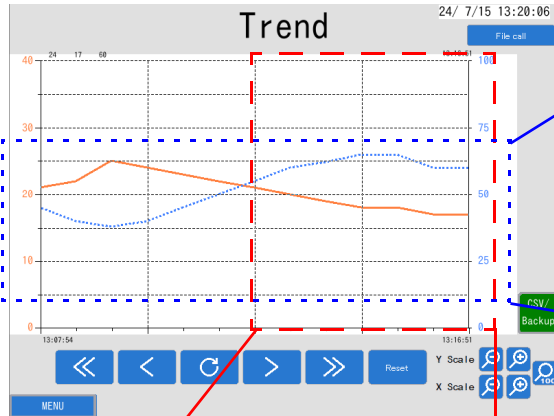
Zooming In and Out

Press the zoom-in switch to enlarge the display of the latest data (end point) by 2 times.

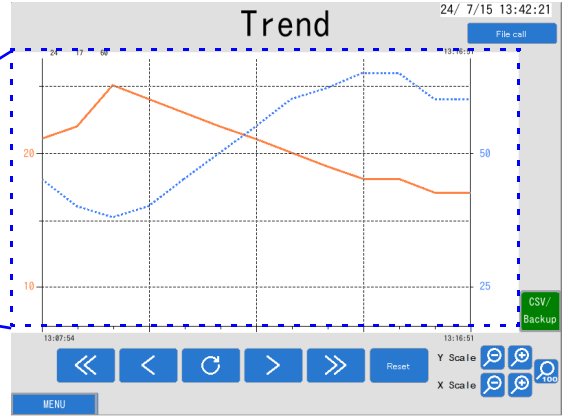
The display is enlarged by 4 times and then 8 times each time the switch is pressed.

Press the zoom-out switch to change the display magnification in the order of 8 times, 4 times, 2 times, actual size, 1/2 times, 1/4 times, and then 1/8 times.

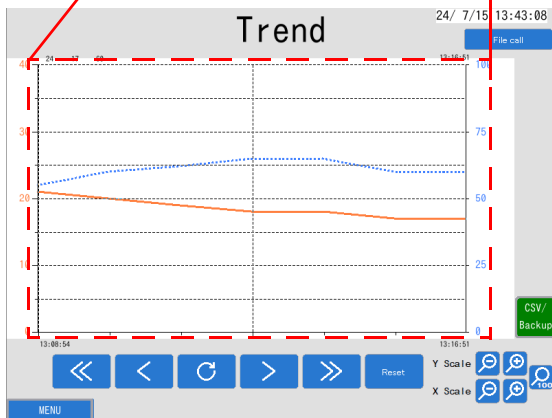
Actual size



Y axis enlarged by 2 times



X axis enlarged by 2 times

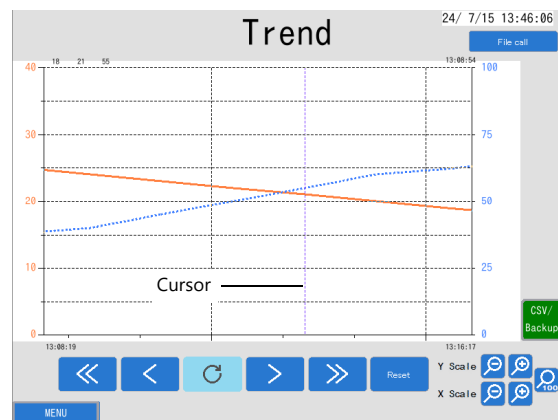
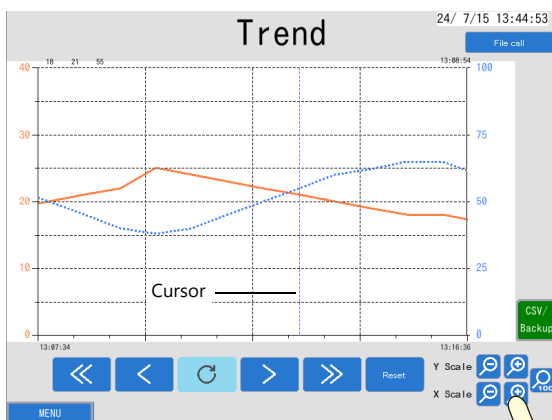


Y axis: Zoom out/in



X axis: Zoom out/in

If the cursor is displayed, magnification centers on the cursor.



The logging count, current value, and logging time selected with the cursor are displayed.



In addition to using switch functions, PLC commands can be used to enlarge and reduce the display.

Refer to "7 Trends" in Reference Manual 1.

In addition to enlarging the graph area, the entire screen can also be enlarged. For details, refer to "12.1 Enlarged Display".

4 Recipes

4.1 Overview

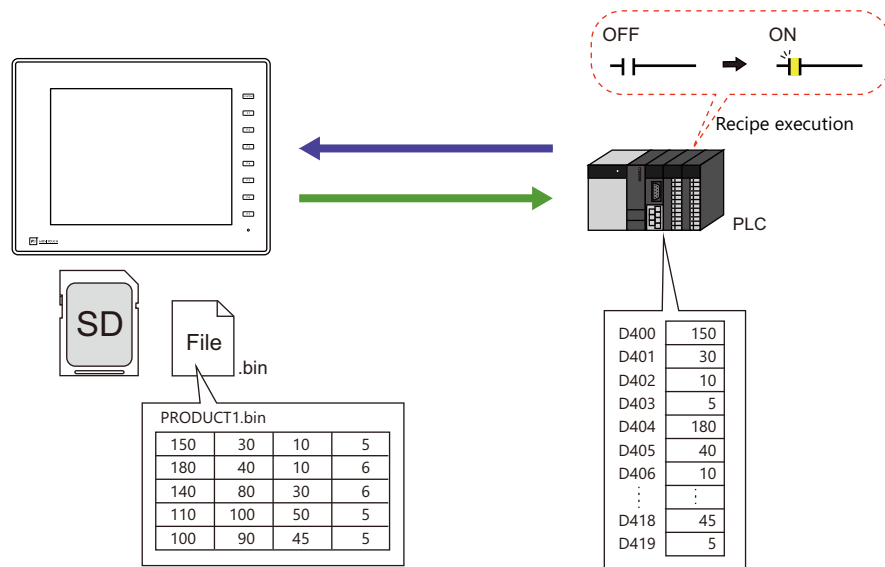
Recipes

Recipes allow product type information and conditions required for manufacturing on the factory floor to be read by a PLC and configured and changed as necessary.

Product type information and conditions (recipe data) are to be stored in a CSV file or BIN file on a storage device in advance.

Multiple files can be stored and the required file can be selected and written to a PLC.

Recipes can be executed by using a switch, as well as by turning a bit ON or OFF.



- Data can also be read in units of records.

	A	B	C		
APPLE	60	110	250	3	
ORANGE	60	110	220	10	Data G
GRAPE	50	85	240	8	4200
LEMON	40	60	220	11	4500
PEACH	80	120	240	15	800
Type D	2200	1500		8	5000
Gross		1100	1200		1000

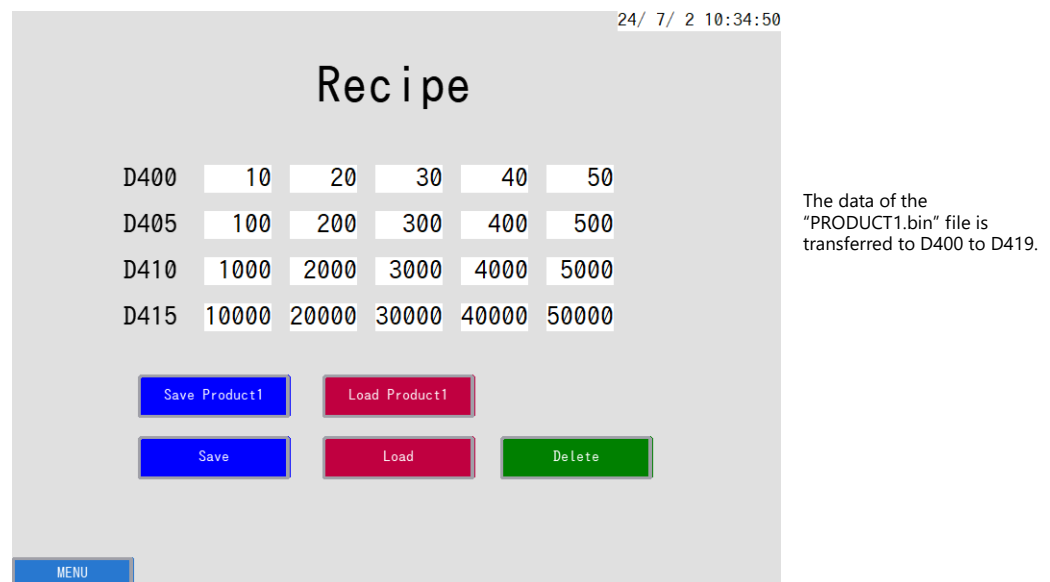
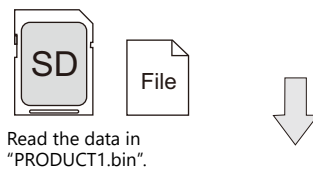
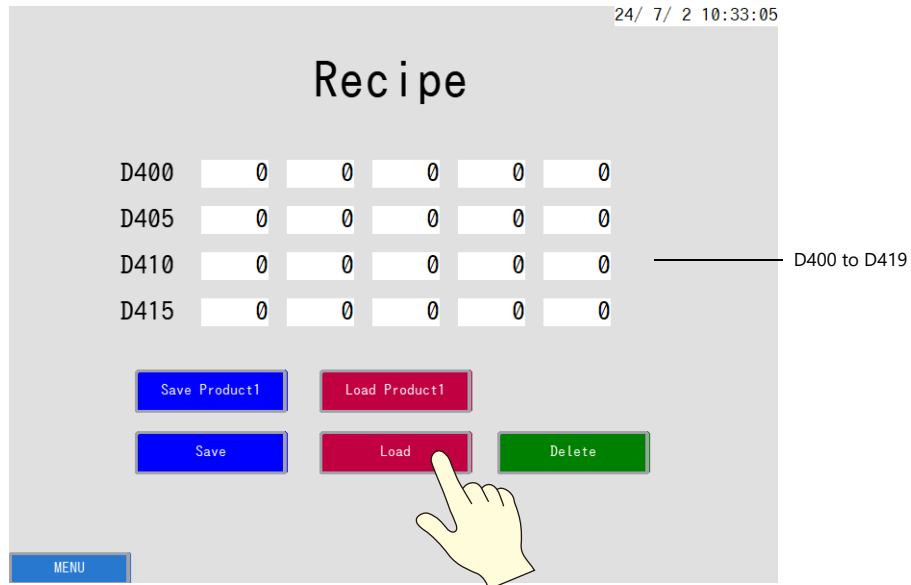
Annotations in the table: 'Five records' points to the first five rows. 'Data titles' points to the columns A, B, C, and Data G.

- CSV and BIN files can be easily created and edited using the screen configuration software.

4.2 Example Screen

This chapter explains how to create a "PRODUCT1.bin" file and a screen that can transfer recipe data between this BIN file on a storage device and addresses D400 to D419.

Screen No. 2

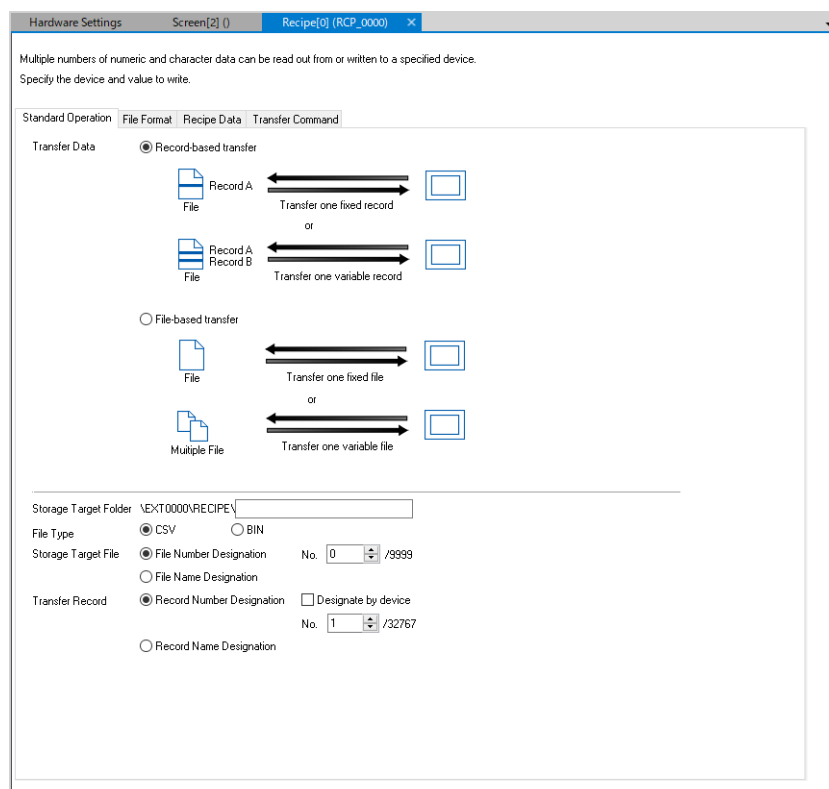
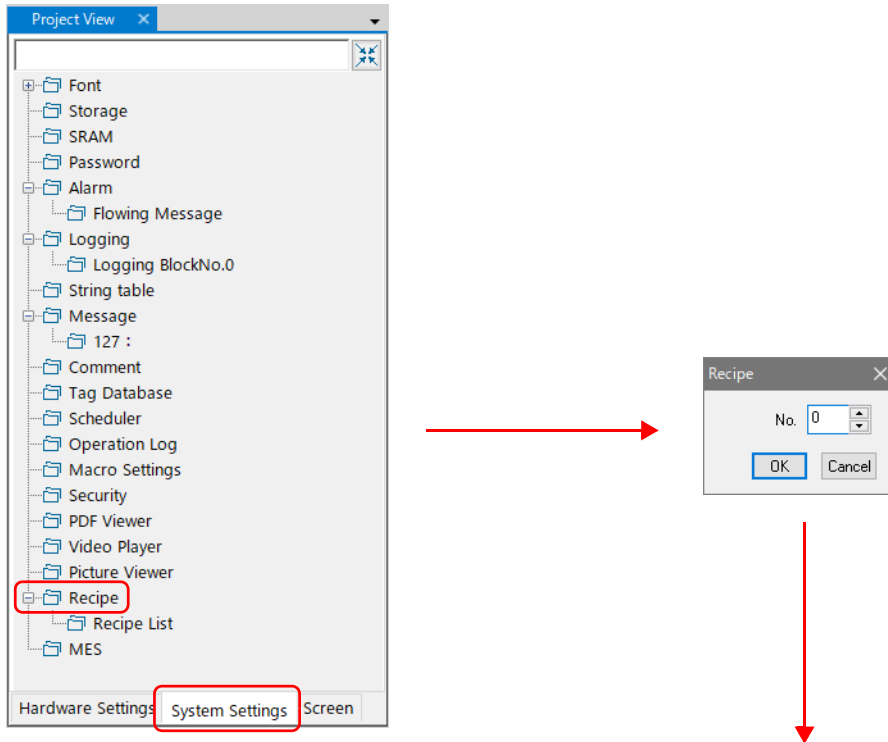


4.3 Screen Creation

4.3.1 Recipe Settings

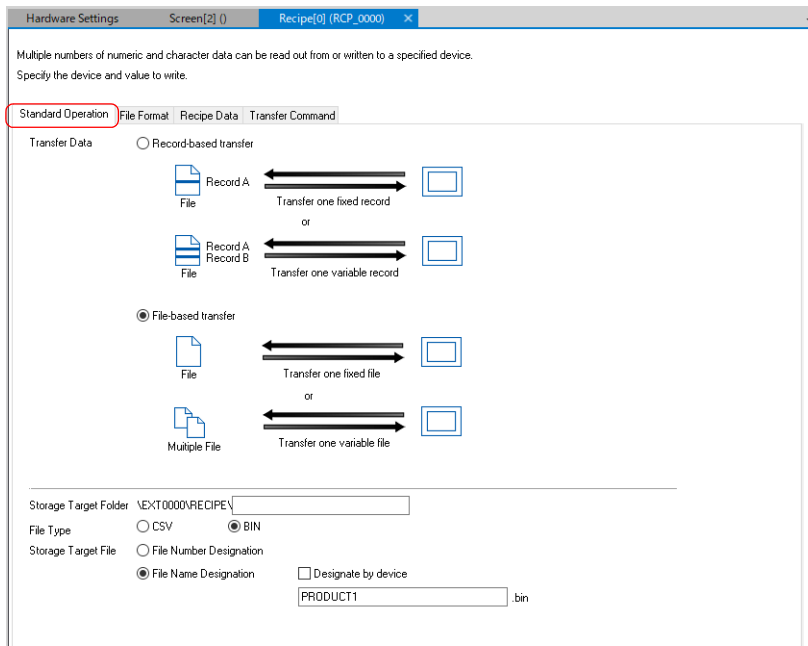
Configure the required recipe settings.

1. Click the [Project View] pane → [System Settings] tab → [Recipe], set [No.] to "0", and click [OK].
The [Recipe [0]] window is displayed.



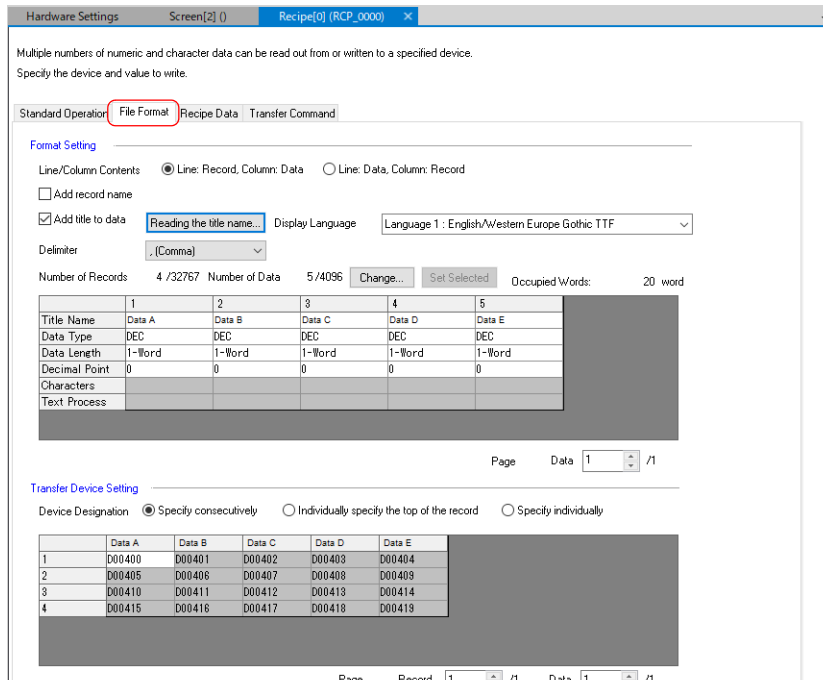
2. Configure settings on the following tab windows in order.

- [Standard Operation] tab window



Item	Description	Setting Value
Transfer Data	Record-based transfer Read and write recipe data in units of records (rows or columns). File-based transfer Read and write recipe data in units of files.	File-based transfer
Storage Target Folder	Set the storage destination of the recipe file. Define one folder per recipe setting. Blank: In the "RECIPE" folder xxxx: In the "xxxx" folder	Blank
File Type (CSV/BIN *)	Select the file type of the recipe.	BIN
Storage Target File	File Number Designation (0 to 9999) * Set the file number of the storage target. Device memory can also be specified. * The filename is either "RECxxxx.csv" or "RECxxxx.bin". (xxxx: 0000 to 9999) File Name Designation Set the filename of the storage target. Device memory can also be specified.	File Name Designation PRODUCT1.bin

- [File Format] tab window



- Format Setting

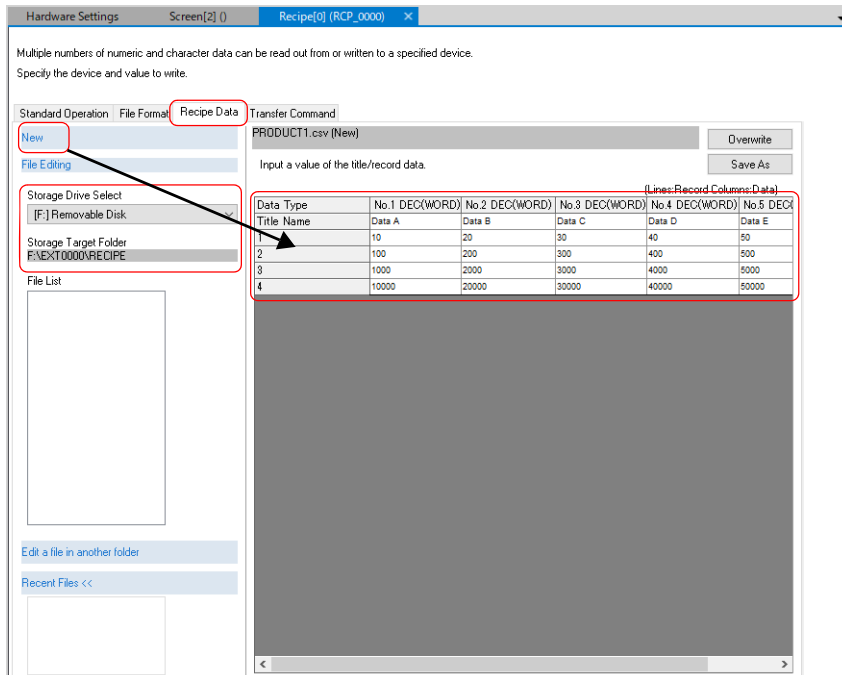
Item	Description	Setting Value																													
Add record name	Add record names to the first column. 2 to 255 characters	Deselected																													
	<table border="1"> <tr><td>APPLE</td><td>60</td><td>110</td><td>250</td><td>80</td><td>220</td></tr> <tr><td>ORANGE</td><td>60</td><td>110</td><td>220</td><td>125</td><td>155</td></tr> <tr><td>GRAPE</td><td>50</td><td>85</td><td>240</td><td>70</td><td>80</td></tr> <tr><td>LEMON</td><td>40</td><td>60</td><td>220</td><td>110</td><td>125</td></tr> </table>	APPLE	60	110	250	80	220	ORANGE	60	110	220	125	155	GRAPE	50	85	240	70	80	LEMON	40	60	220	110	125						
APPLE	60	110	250	80	220																										
ORANGE	60	110	220	125	155																										
GRAPE	50	85	240	70	80																										
LEMON	40	60	220	110	125																										
Add title to data	Add titles to the first row.	Selected																													
Title Name	<table border="1"> <tr><td>Agitation</td><td>Sterilization</td><td>Cooling</td><td>Filling</td><td>Inspection</td></tr> <tr><td>APPLE</td><td>60</td><td>110</td><td>250</td><td>80</td><td>220</td></tr> <tr><td>ORANGE</td><td>60</td><td>110</td><td>220</td><td>125</td><td>155</td></tr> <tr><td>GRAPE</td><td>50</td><td>85</td><td>240</td><td>70</td><td>80</td></tr> <tr><td>LEMON</td><td>40</td><td>60</td><td>220</td><td>110</td><td>125</td></tr> </table>	Agitation	Sterilization	Cooling	Filling	Inspection	APPLE	60	110	250	80	220	ORANGE	60	110	220	125	155	GRAPE	50	85	240	70	80	LEMON	40	60	220	110	125	DataA DataB DataC DataD DataE
Agitation	Sterilization	Cooling	Filling	Inspection																											
APPLE	60	110	250	80	220																										
ORANGE	60	110	220	125	155																										
GRAPE	50	85	240	70	80																										
LEMON	40	60	220	110	125																										
Number of Records	Specify the number of records. The setting can be changed from the [Change] button.	4																													
Number of Data	Specify the number of data to contain in one record. The setting can be changed from the [Change] button.	5																													
Data 1 to 5 Data Type Data Length Decimal Point	Specify the data format.	DEC 1-Word 0																													

- Transfer Device Setting

Item	Description	Setting Value
Device Designation	<p>Specified consecutively Device memory addresses are assigned consecutively from the top address.</p> <p>Individually specify the top of the record (available when [File-based transfer] is selected) Specify the top device memory address of each record and assign subsequent addresses consecutively.</p> <p>Specify individually Specify all device memory addresses individually.</p>	Specified consecutively
Device memory	Specify the device memory address of the transfer destination.	D400 (D400 to D419)



- [Recipe Data] tab window
Click [New]. A new "PRODUCT1.bin" file is opened.
Edit the data in the file.



Item	Description	Setting Value
Storage Drive Select	Select the drive of the SD card or USB flash drive connected to the PC.	Depends on PC used
Storage Target Folder	Displays the storage destination of the recipe file.	(Drive)\EXT0000\RECIPE
Title Name Record name Data value No. 1 to 5	The data in the file can be edited. The title names registered on the [File Format] tab window are set when the file is newly created.	See the following figure.

Data Type	No.1 DEC(WORD)	No.2 DEC(WORD)	No.3 DEC(WORD)	No.4 DEC(WORD)	No.5 DEC(WORD)
Title Name	Data A	Data B	Data C	Data D	Data E
1	10	20	30	40	50
2	100	200	300	400	500
3	1000	2000	3000	4000	5000
4	10000	20000	30000	40000	50000

Data values of No. 1 to 5

After editing, click [Save As] to save "PRODUCT1.bin".
"PRODUCT1.bin" is created in the "(Drive)\EXT0000\RECIPE" folder.

- [Transfer Command] Tab Window
Configure these settings to transfer data by PLC bit ON/OFF operations. These settings are not used in this example.



Record-based transfer

When reading or writing to a PLC using record number or record name specification, configure the following settings.

Example: Read "PRODUCT2.bin" and record numbers using device memory specification

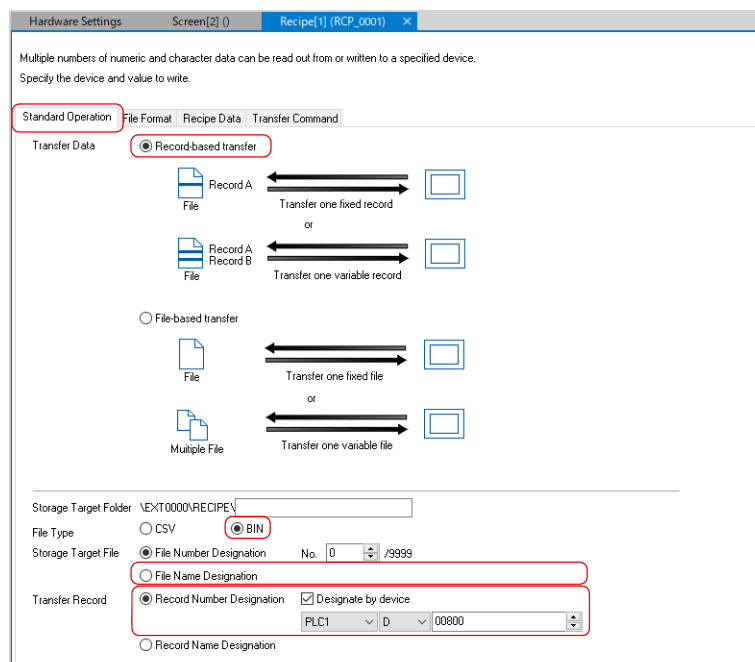
- D800: Record number specification
- D450 to D452: Data read target

PRODUCT2.bin

	Agitation	Sterilization	Cooling	Titles
Record No. 1	APPLE	60	110	250
Record No. 2	ORANGE	60	110	220
Record No. 3	GRAPE	50	85	240
Record No. 4	LEMON	40	60	220
Record No. 5	PEACH	80	120	240

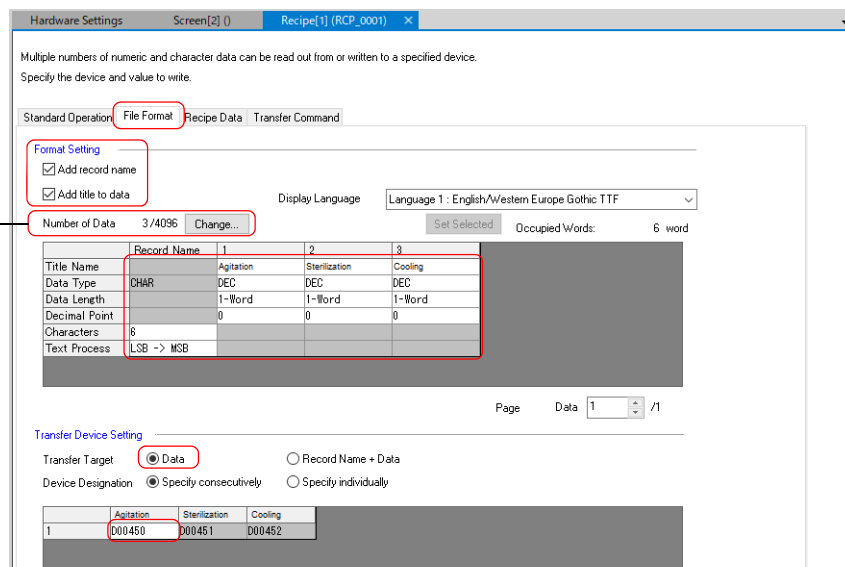
Record names

- [Standard Operation] tab window



- [File Format] tab window

[Number of Data]: 3



Continues on next page →

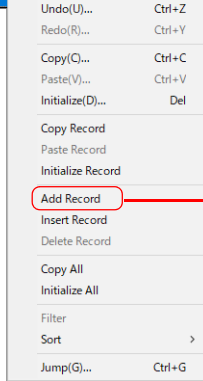


→ Continued from previous page



- [Recipe Data] tab window: Create, edit, and save the "PRODUCT2.bin" file

Data Type	No.1 DEC(WORD)	No.2 DEC(WORD)	No.3 DEC(WORD)
Title Name	Agitation	Sterilization	Cooling
APPLE		10	250



Add Record

Add Number of Record /32765

[Add Number of Record]: 4

Right-click menu → [Add Record]

Data Type	No.1 DEC(WORD)	No.2 DEC(WORD)	No.3 DEC(WORD)
Title Name	Agitation	Sterilization	Cooling
APPLE	60	110	250
ORANGE	80	110	220
GRAPE	60	85	240
LEMON	40	60	220
PEACH	80	120	240

- [Transfer Command] tab window: [MONITOUCH → PLC], M22, Transfer when bit ON

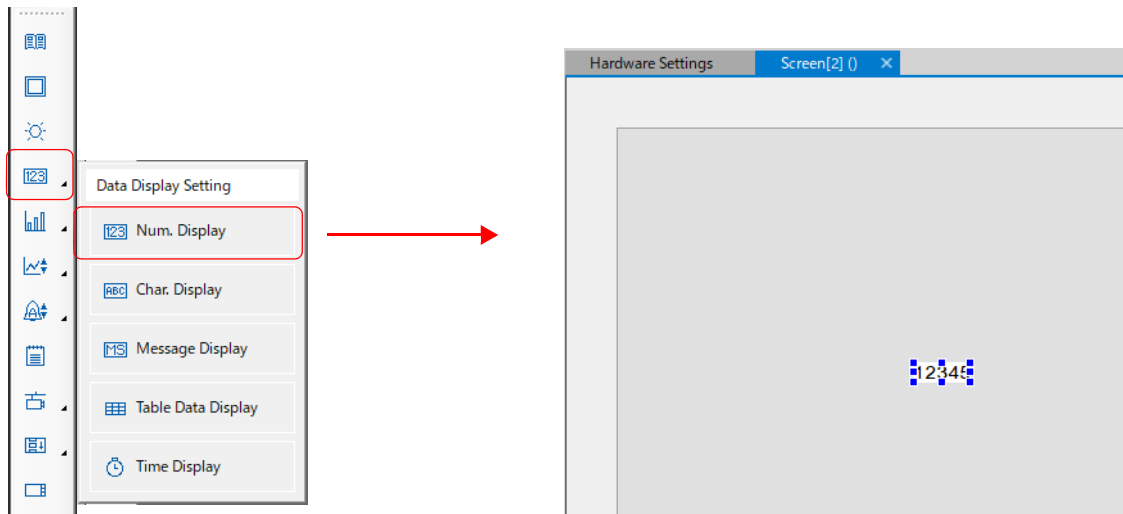
This completes the necessary settings.

When the D800 device memory address (for specifying the record number) is set to 2 and M22 is turned ON, the values of 60, 110, and 220 are transferred to D450, D451, and D452 respectively.

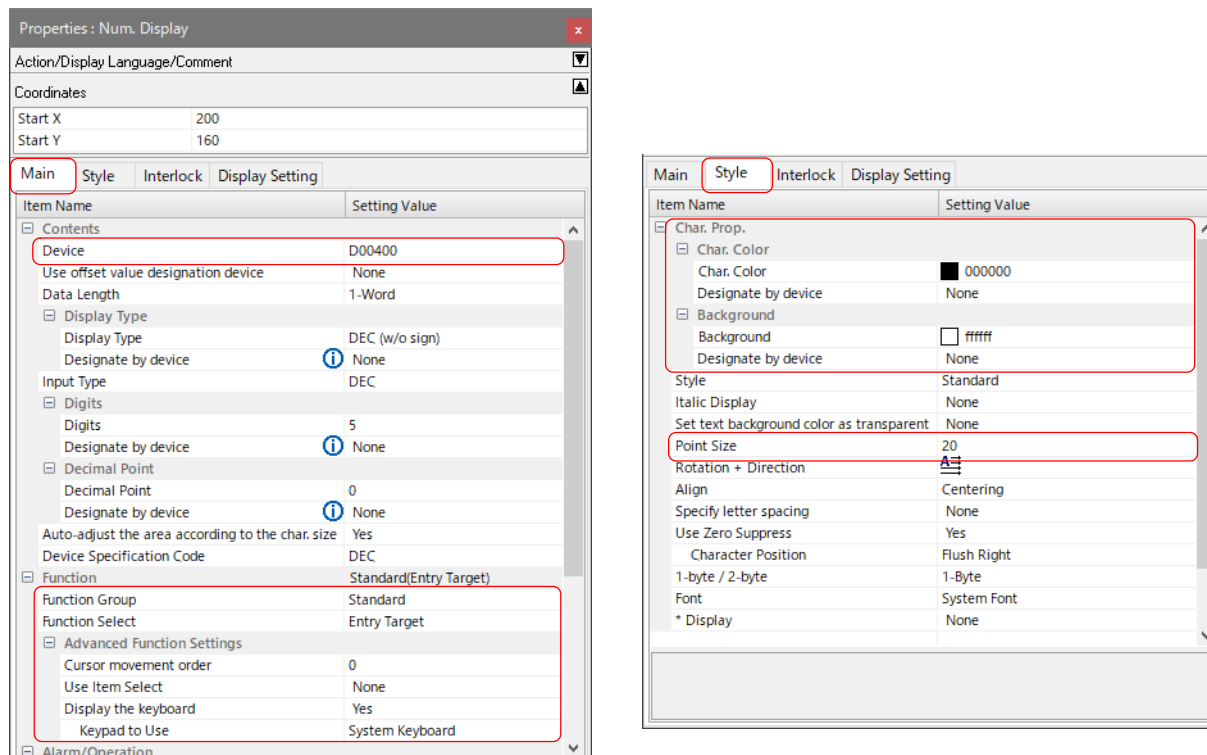
4.3.2 Screen Editing

Placing Numerical Data Display Parts

1. On the parts bar, right-click or click and hold the [Data Display] icon, and then click and place a [Num. Display] part.



2. Display the [Properties] pane of the numerical data display and configure the following settings.



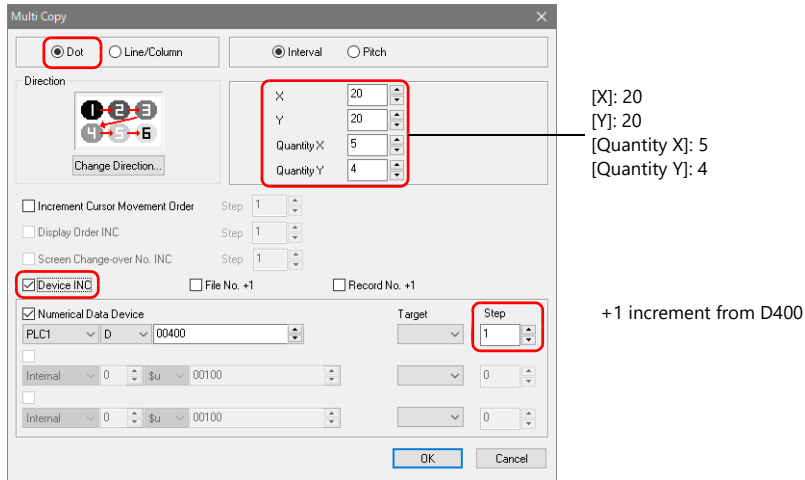
- Main

	Item	Description	Setting Value
Contents	Device	Specify the device memory address for monitoring.	D400
	Function		
Function	Function Group	Specify the function.	Standard
	Function Select		Entry Target
	Cursor movement order	Set the order to move the cursor when the UP/DW keys on the keypad are pressed.	0
	Display the keyboard	This setting is available when [Function Select] is set to [Entry Target]. The keypad calling function is added.	Yes
	Keypad to Use	Select the keypad to use.	System Keyboard

- Style

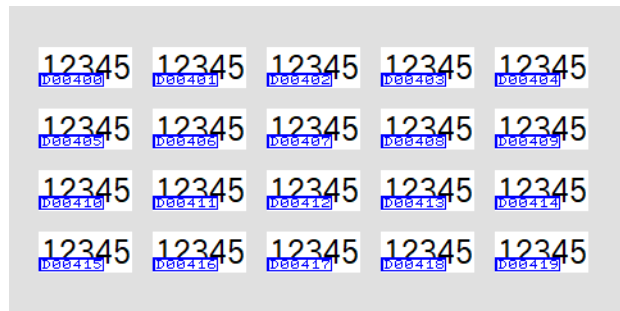
Specify the color and point size.

3. Select the numerical data display and click [Multi Copy] on the right-click menu. The [Multi Copy] window is displayed.
4. Configure the following settings and click [OK].



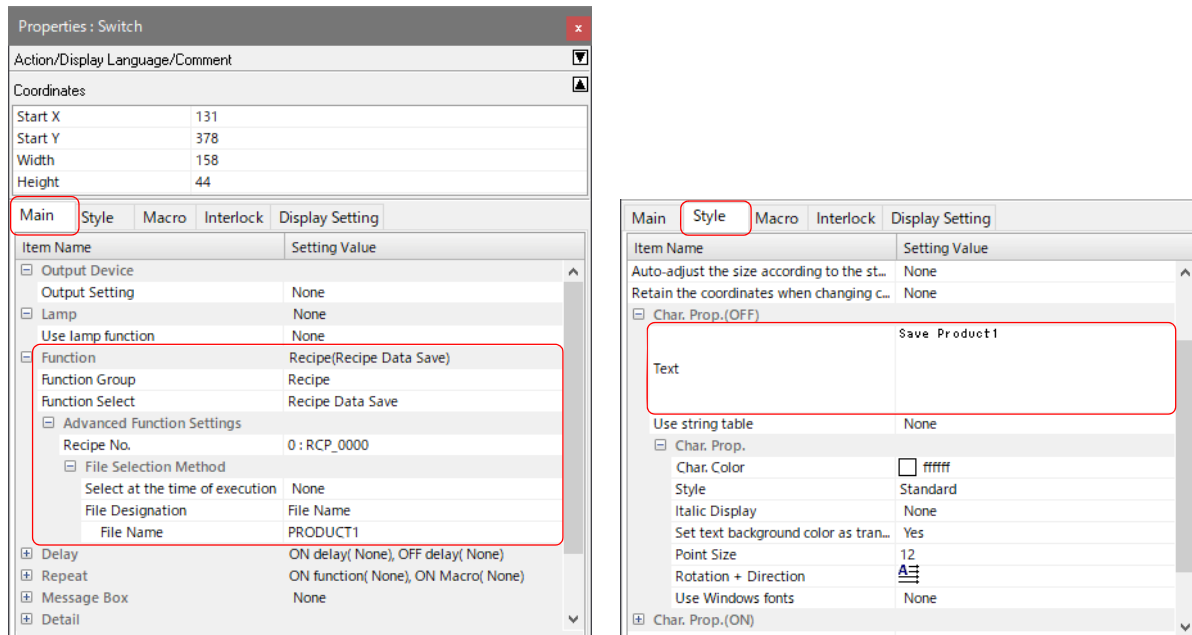
5. The numerical data display is copied, resulting in 20 numerical data displays. Display the right-click menu and select [Customize] → [Device Display] to display the device memory address at the lower left of each numerical data display. Check that D400 to D419 are assigned.

This completes the necessary settings.



Placing Switches

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



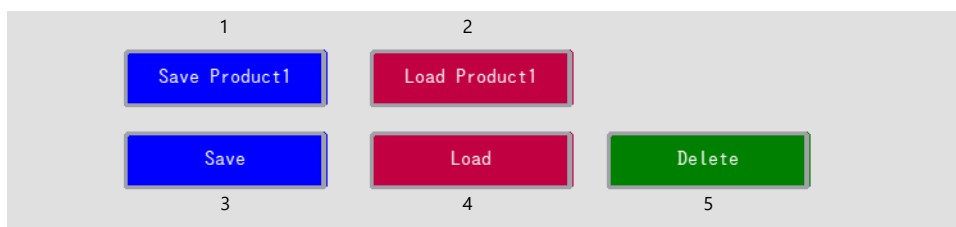
• Main

Item	Description	Setting Value
Function	Function Group	Recipe
	Function Select	Recipe Data Save
	Recipe No.	0: RCP_0000
	Select at the time of execution	None
	File Designation File Name	File Name PRODUCT1

• Style

Item	Description	Setting Value
Char. Prop. (OFF) Text	Set the text to be displayed on the switch.	Save Product1

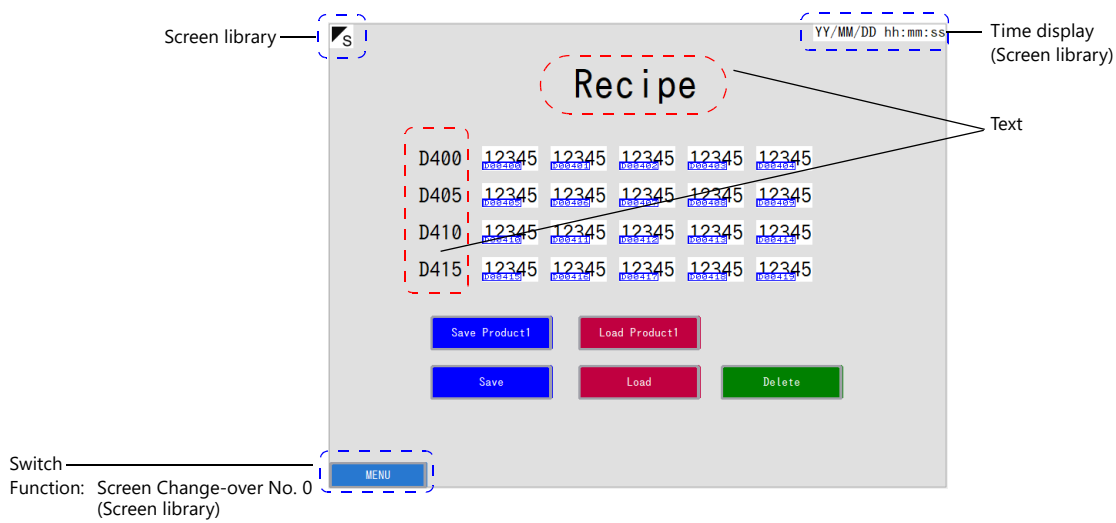
3. Set the design and color on the [Design] properties pane.
4. Select the switch and copy and paste.
5. Configure settings as shown below.



No.	Text	Function	Recipe No.	File Selection Method
1	Save Product1	[Recipe] - [Recipe Data Save]	0: RCP_0000	File Name
2	Load Product1	[Recipe] - [Recipe Data Load]	0: RCP_0000	File Name
3	Save	[Recipe] - [Recipe Data Save]	0: RCP_0000	Select at the time of execution
4	Load	[Recipe] - [Recipe Data Load]	0: RCP_0000	Select at the time of execution
5	Delete	[Recipe] - [Recipe Data Delete]	0: RCP_0000	Select at the time of execution

This completes the necessary settings.

Placing Text and a Screen Library



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

4.4 Checking Operation on MONITOUCH

4.4.1 List of Used Device Memory Addresses

Device Memory	Description	Remarks
D400 to D419	Numerical data display parts	Keypad display enabled

4.4.2 Storage Device Specifications

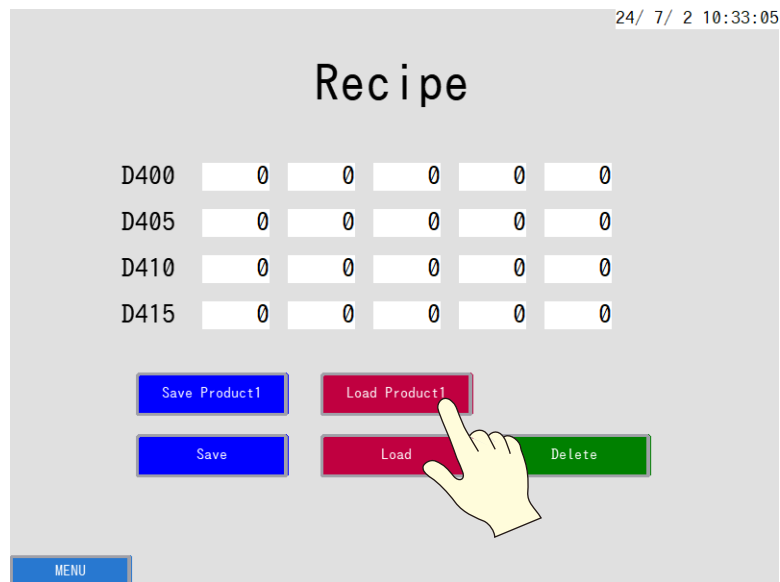
For details, refer to "3.4.2 Storage Device Specifications".

4.4.3 Operation on MONITOUCH

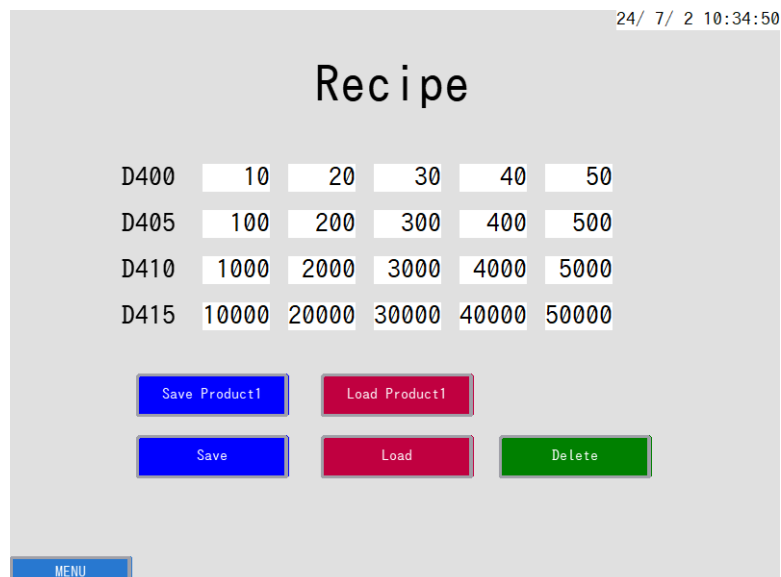
Connect a storage device to MONITOUCH.

Reading Recipe Data (Transfer from Recipe File → PLC)

Press the [Load Product1] switch.



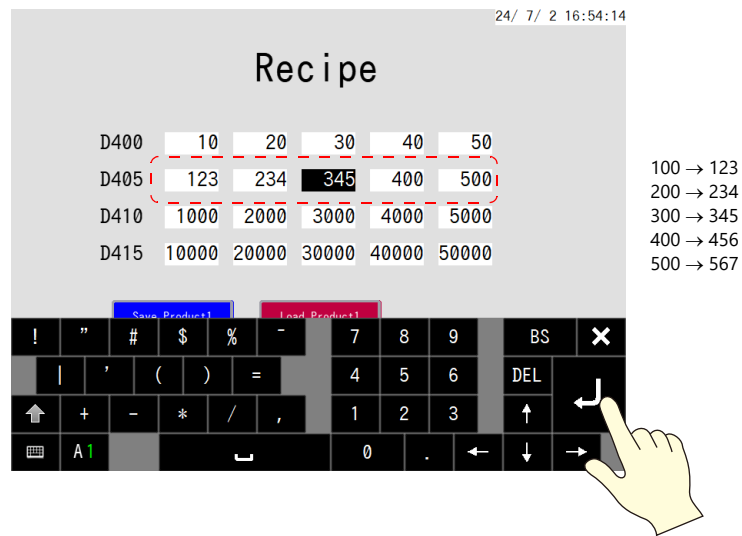
The "PRODUCT1.bin" file data is transferred to addresses D400 to D419.



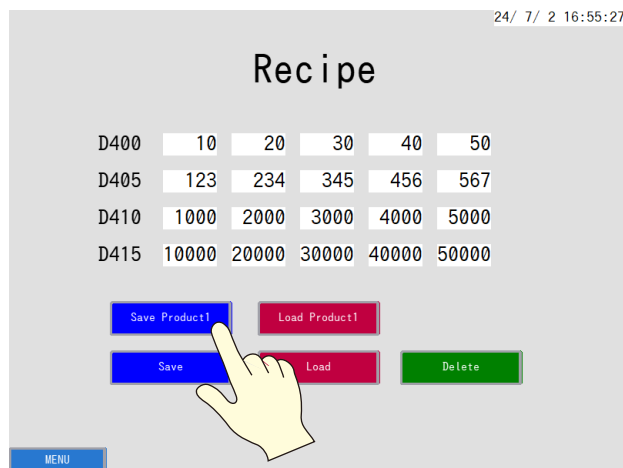
Writing Recipe Data (Transfer from PLC → Recipe File)

Fixed File

1. Change the values of addresses D405 to D409 using the system keyboard.

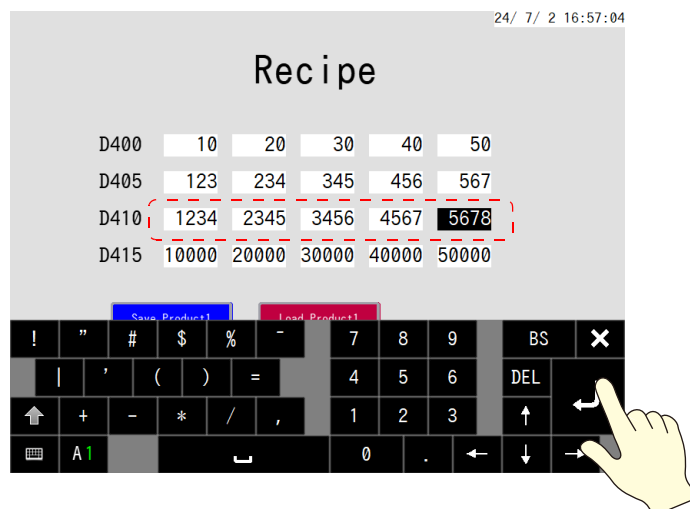


2. Press the [Save Product1] switch. The values of addresses D400 to D419 are written to the "PRODUCT1.bin" recipe file.

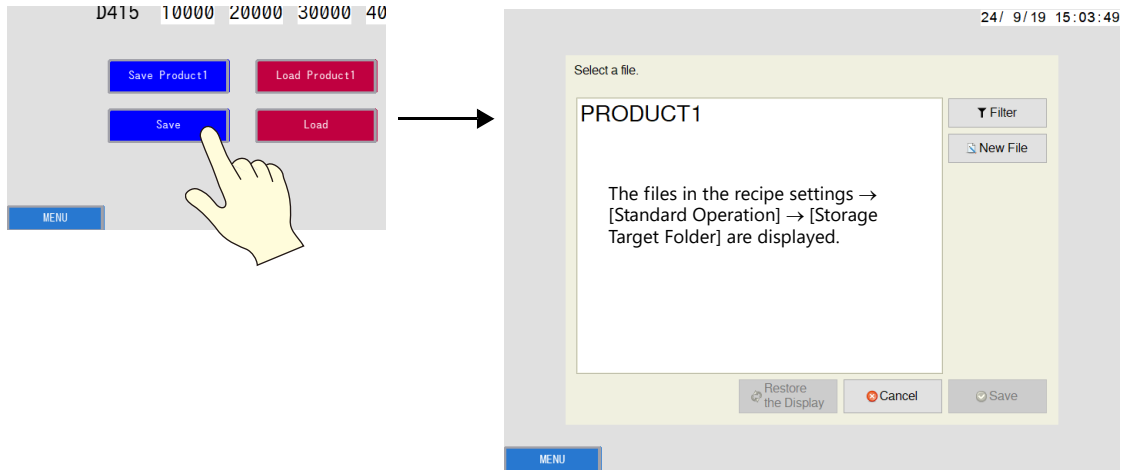


Selection at Execution

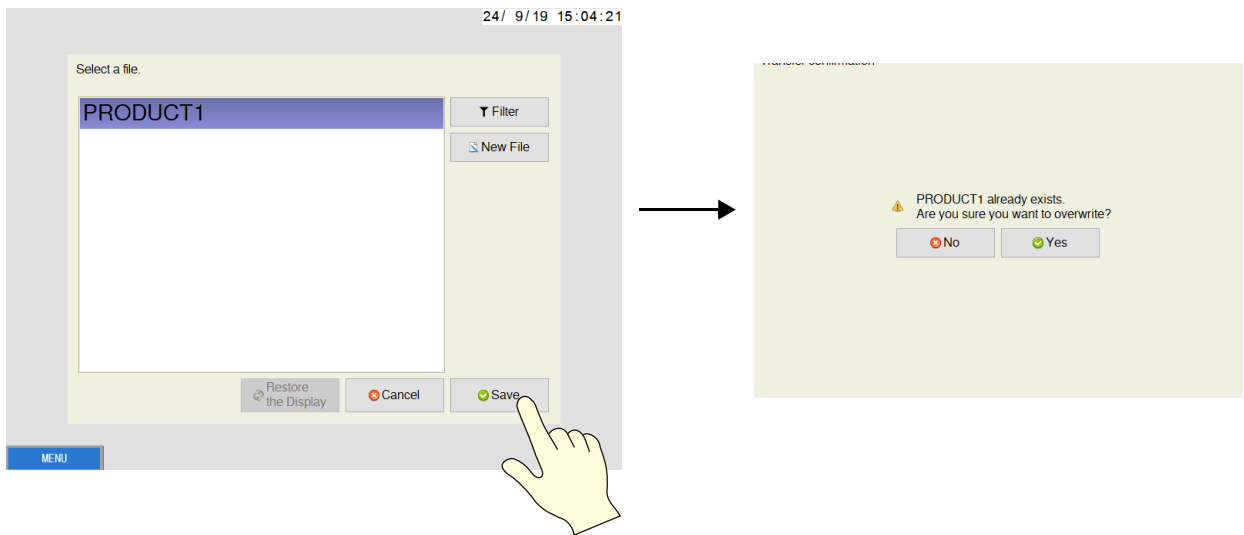
1. Change the values of addresses D410 to D414 using the system keyboard.



2. Press the [Save] switch. The file selection window is displayed.



3. Check that "PRODUCT1" is selected, and press [Save] to overwrite the "PRODUCT1" file.



4

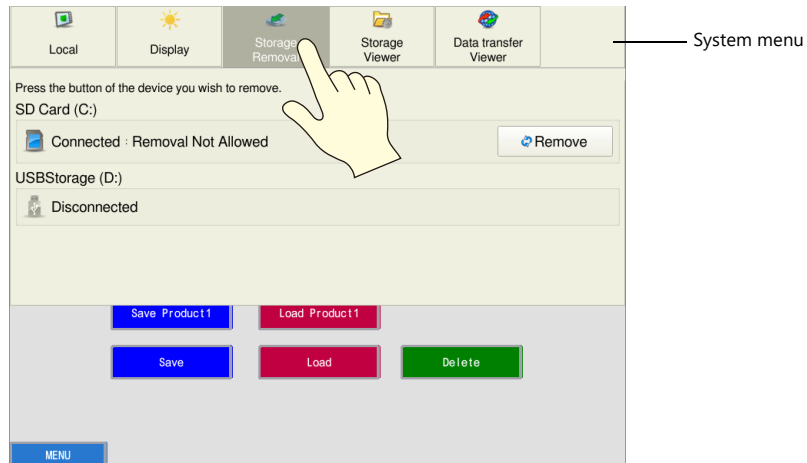
A recipe file can also be newly created by pressing [New File].

Example: Creating a file named "recipeA"

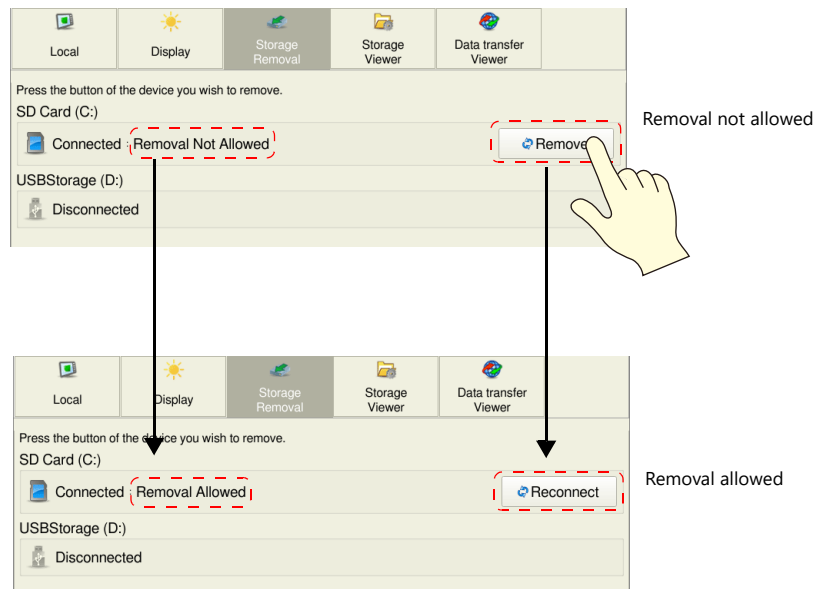
The "recipeA" file can be selected when the file selection window is displayed.

Checking Data in the Recipe File (*.BIN)

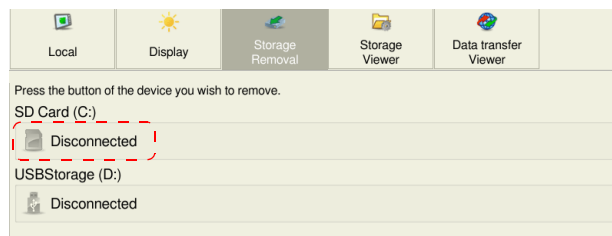
1. Press the [SYSTEM] function switch and press [Storage Removal] on the displayed system menu.



2. Press [Remove] for the device to remove. Once processing is finished, "Removal Allowed" is displayed.

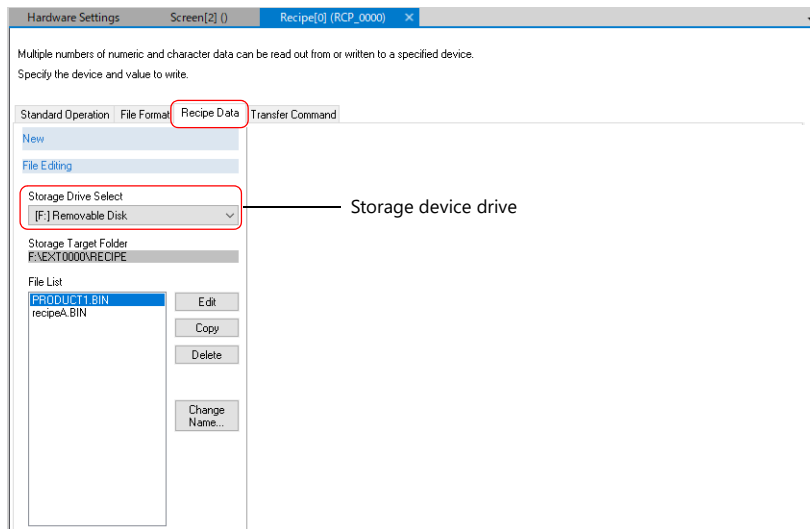


3. Remove the storage device from MONITOUCH and connect it to a PC. The storage viewer displays "Disconnected".

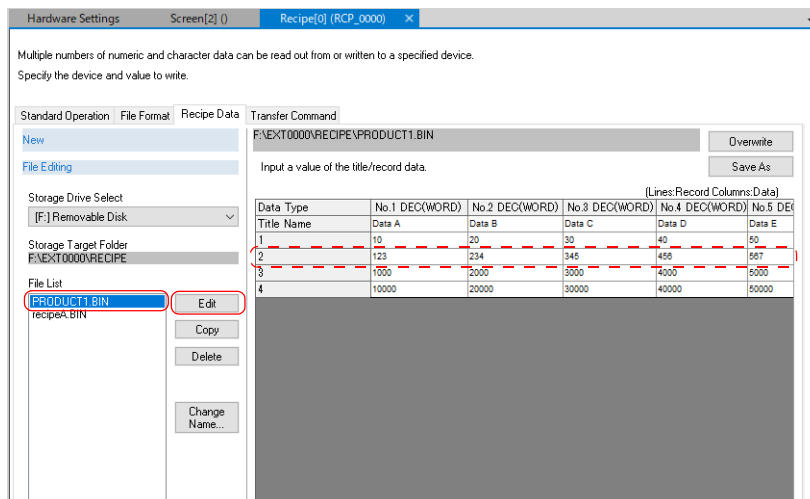


4. Open the screen program created in "4.3 Screen Creation" on the screen configuration software.
5. Click the [Project View] pane → [System Settings] tab → [Recipe], and display the [Recipe [0]] window.

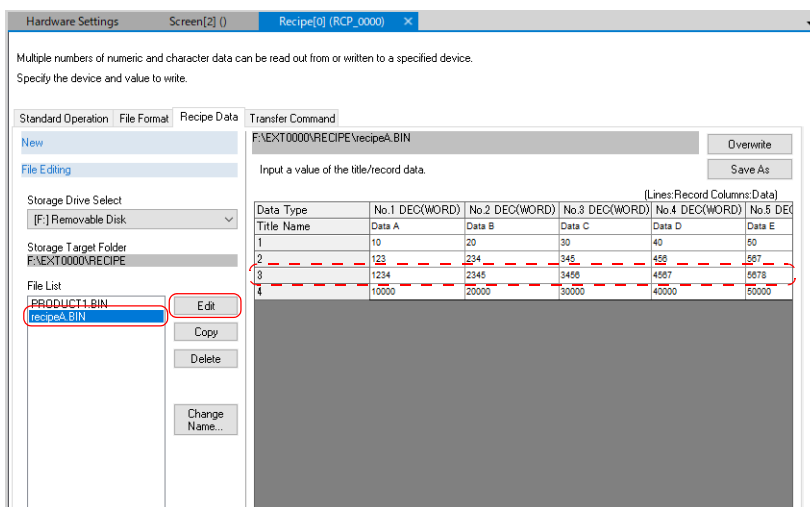
6. Select the storage device drive via [Recipe Data] → [Storage Drive Select].



7. Select "PRODUCT1.BIN" from the file list and click [Edit]. The data of the file is displayed. Check that the values on the second line are changed accordingly.

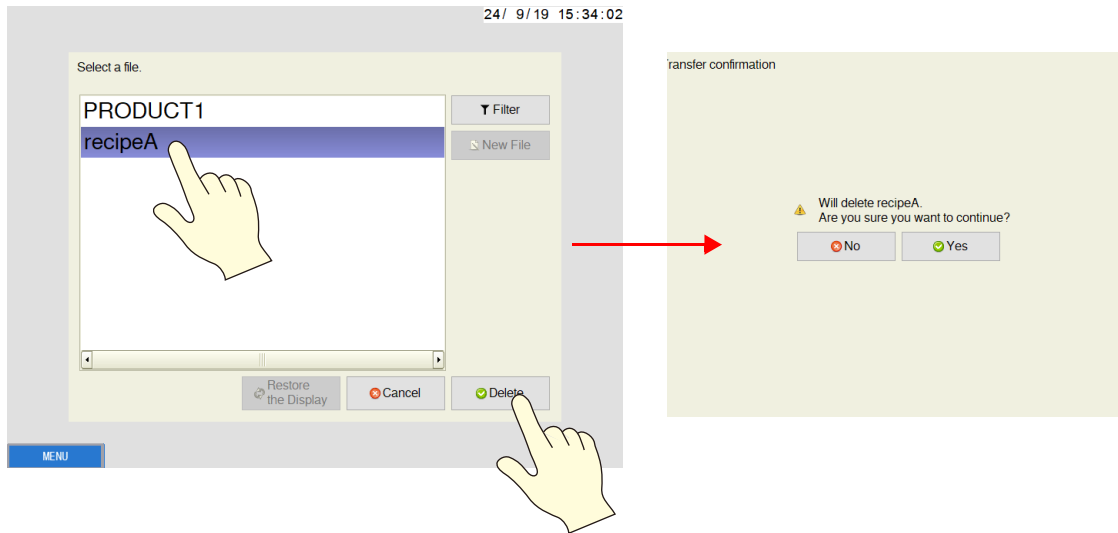


8. Select "recipeA.BIN" from the file list and click [Edit]. The data of the file is displayed. Check that the values on the third line are changed accordingly.



Deleting Recipe Data

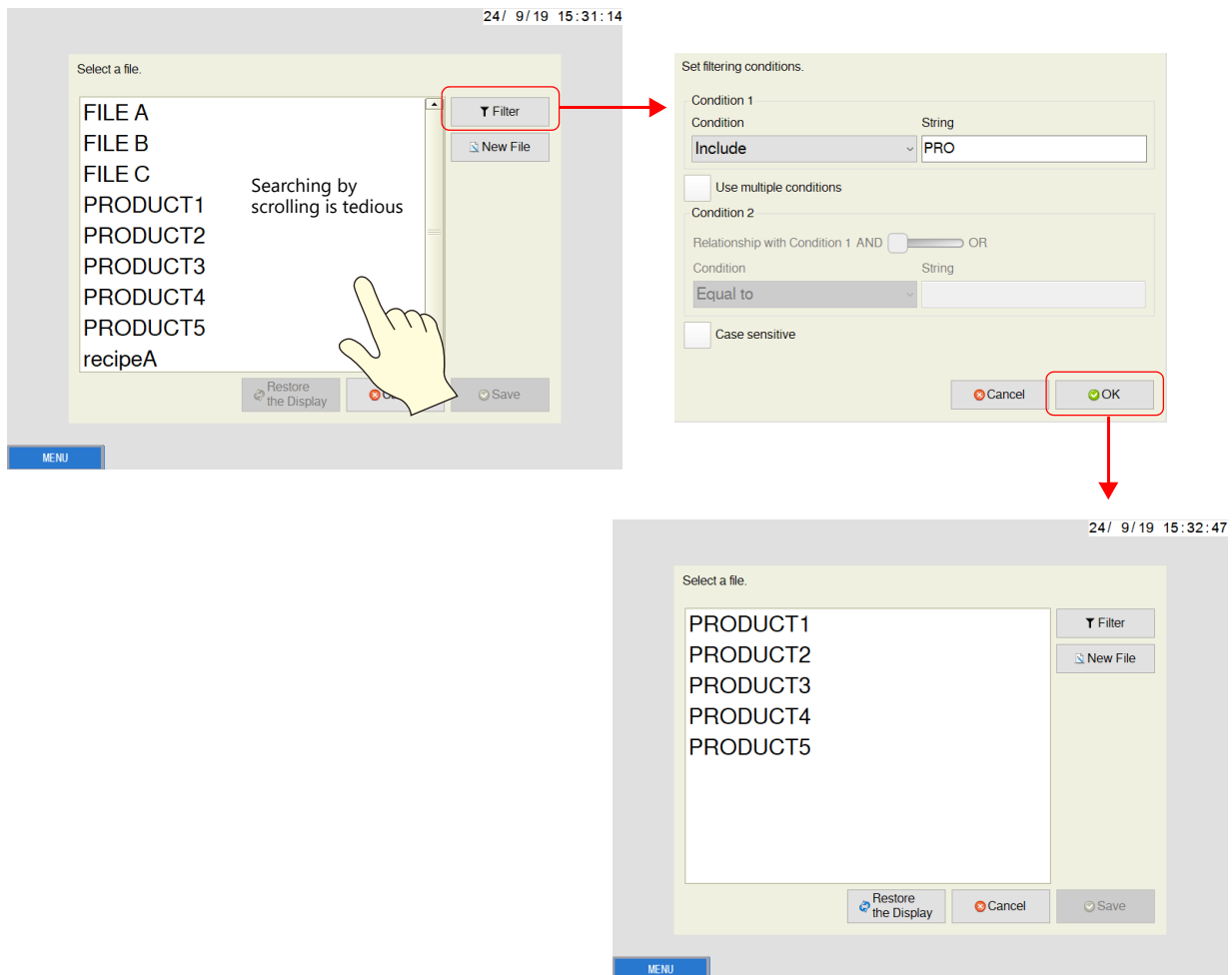
1. Press the [Delete] switch. The file selection window is displayed.
2. Select "recipeA" and press [Delete]. A confirmation window appears.



3. Press [Yes] to delete the file, or press [No] to return to the file selection window.

Filter Function

When there are many recipe files, use the filter function to make selecting files easier.



5 Scheduler

5.1 Overview

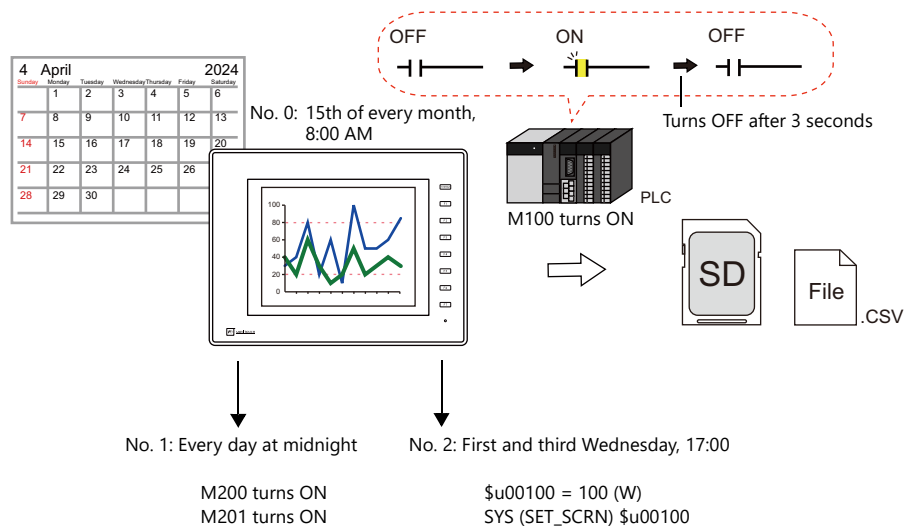
The scheduler function can execute specific operations at the specified times. The execution time and operation are registered in the screen program in advance. Available operations include turning bits ON/OFF, data writing, and macro execution. Registered schedules can be checked in a list.

The specified action is executed at the specified time.

No.	Schedule Name	Trigger	Action(Start)	Action(End)	Other Settings
0	SCHEDULE_00	15:00 8:00:00	Output device Count : 1 Macro : None	None	Yes
1	SCHEDULE_01	Every day 0:00:00	Output device Count : 2 Macro : None	None	Yes
2	SCHEDULE_02	1st/Wednesday 3rd/Wednesday 17:00:00	Macro : Yes	None	Yes

64 maximum

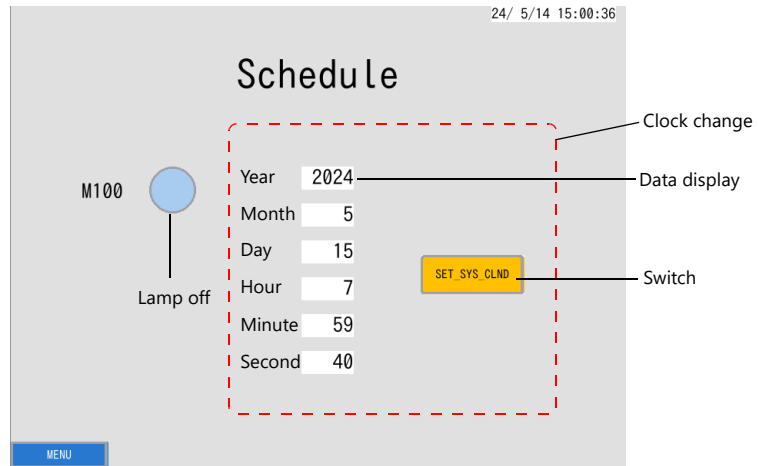
Settings
General Trigger Action Others



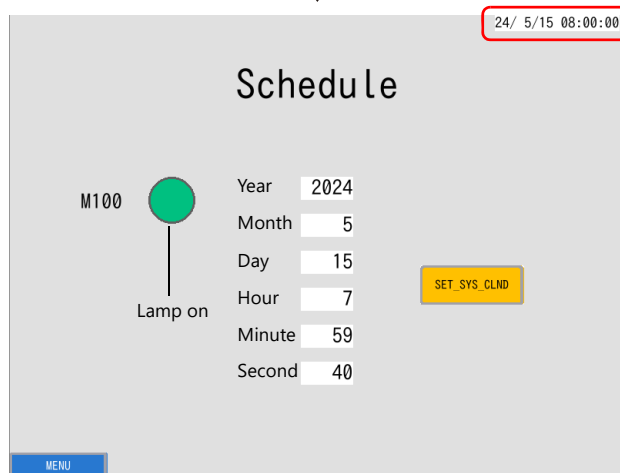
5.2 Example Screen

This chapter explains how to create a scheduler that turns ON the M100 storage output bit set on the screen created in “3 Trend Sampling Display (Logging)” on the 15th of every month at 8:00 AM. A screen for changing the clock to check the operation of the scheduler will also be created.

Screen No. 3



Schedule executed on the 15th at 8:00 AM



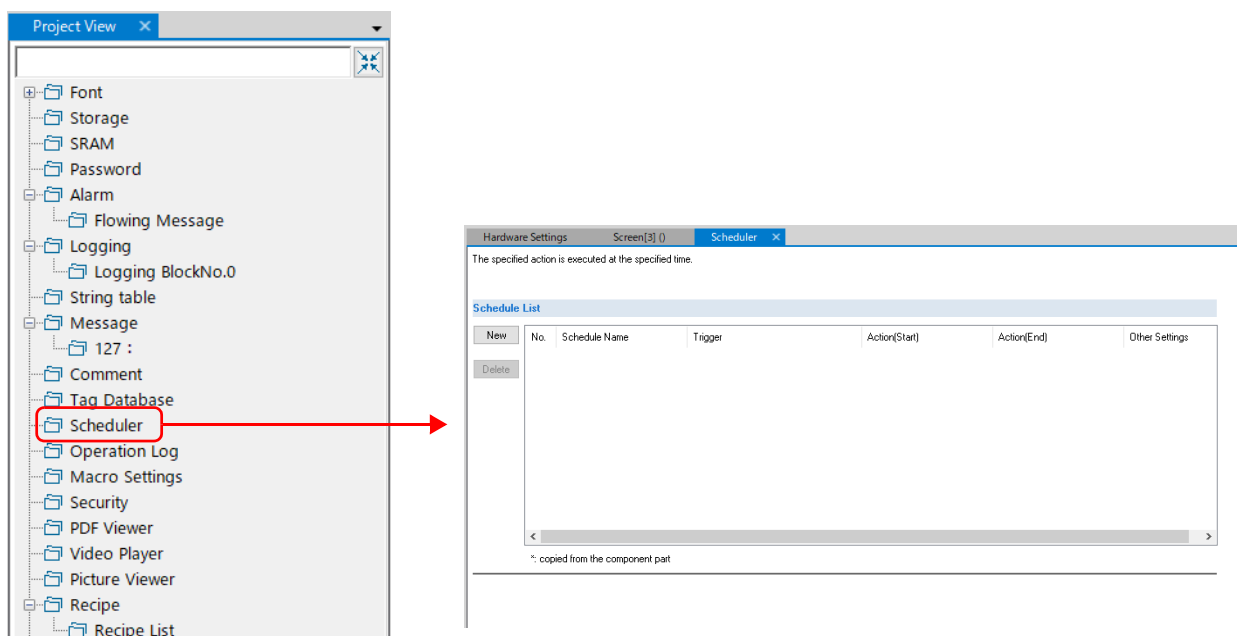
A CSV file is output to the storage device.

5.3 Screen Creation

5.3.1 Scheduler Settings

Configure both the trigger (schedule time) and action (details of operation) settings.

1. Double-click [Scheduler] at the [Project View] pane → [System Settings] tab to display the [Scheduler] window.



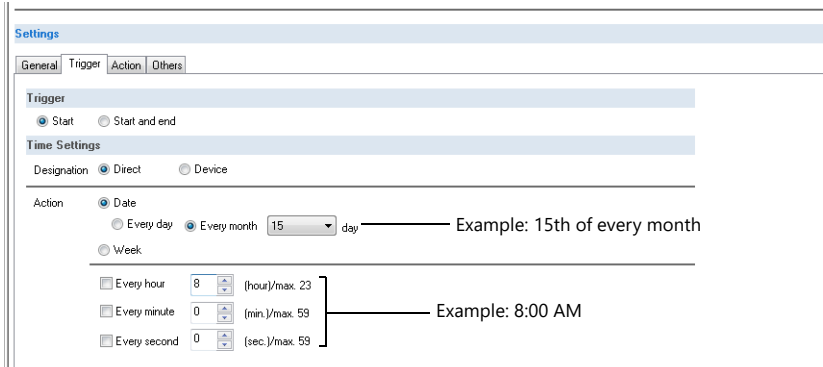
2. Click [New].
3. Configure settings on the following tab windows in order.

- [General] tab window



Item	Description	Setting Value
Schedule Name	Register the schedule name. Within 256 characters	SCHEDULE_00 (default)

- [Trigger] tab window (schedule time)



Item	Description	Setting Value
Trigger	Start Perform operation once at the start time.	Start
	Start and end Perform the start operation at the start time and the end operation at the end time.	
Designation	Direct Set a specific date and time.	Direct
	Device Set the entire date and time using device memory.	
Action	Set the date and time to schedule an operation.	Date 15th of every month 8 (hour), 0 (min.), 0 (sec.)

- [Action] tab window (details of operation)



Item	Description	Setting Value
Number of Outputs	Set the number of bits to output. 1 to 16	1
Output Action	Perform bit output or word writing. Momentary (ON) Momentary (OFF) Set Reset Alternate Writing in Words	Momentary (ON)
Output Target Device	Specify the output device memory address.	M100
Reset Time	Specify when momentary is selected for [Output Action]. Set the time to wait before resetting the bit after the bit is turned ON or OFF.	30 (3 seconds)

- [Others] tab window
Acknowledgment bit and interlock settings for schedule execution can be configured. These settings are not used in this example.

This completes the necessary settings.

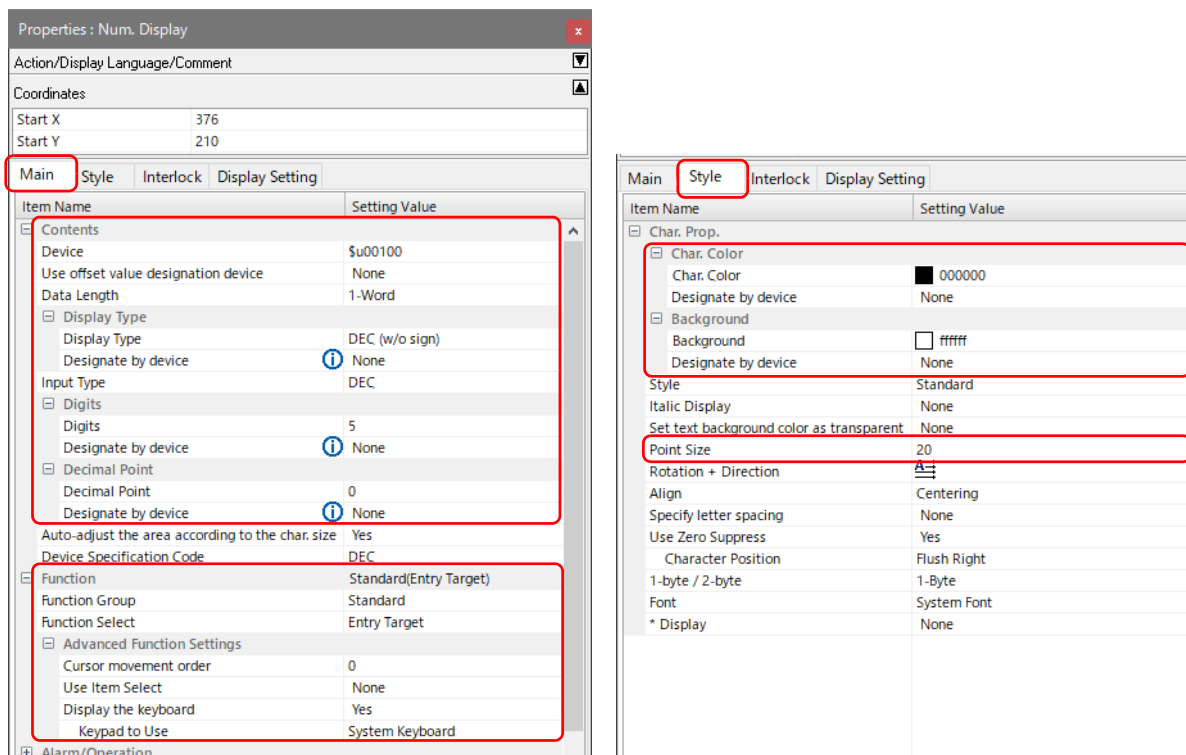
5.3.2 Screen Editing

Clock Changing Screen

In order to forcibly check schedule execution, create a clock changing screen.

Placing Numerical Data Display Parts

1. On the parts bar, right-click or click and hold the [Data Display] icon, and then click and place a [Num. Display] part.
2. Configure the properties of the numerical data display as shown below.



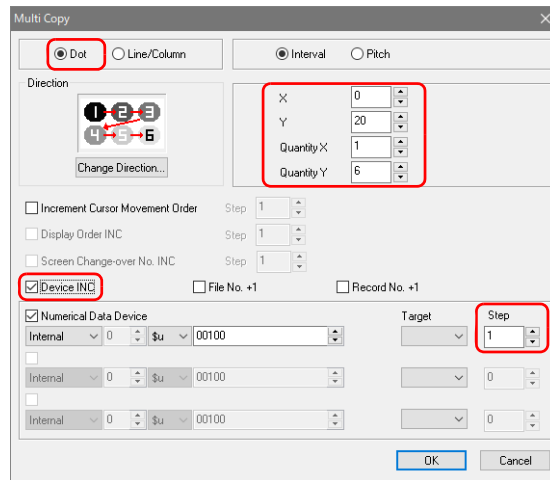
- Main

	Item	Description	Setting Value
Contents	Device	Set the device memory address for writing.	\$u100
	Data Length	Set the properties.	1-Word
	Display Type		DEC (w/o sign)
	Digits		5
	Decimal Point		0
Function	Function Group		Specify the function.
	Function Select		Entry Target
	Cursor movement order	This setting is available when [Function Select] is set to [Entry Target]. The keypad calling function is added.	0
	Display the keyboard	Display a keypad when the numerical data display is pressed.	Yes
	Keypad to Use		System Keyboard

- Style

Specify the text color and point size.

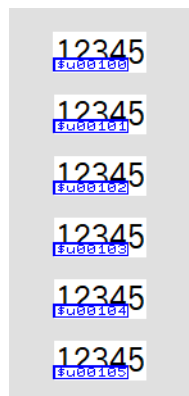
3. Select the numerical data display and click [Multi Copy] on the right-click menu. The [Multi Copy] window is displayed.
4. Configure the following settings and click [OK].



[X]: 0
 [Y]: 20
 [Quantity X]: 1
 [Quantity Y]: 6

+1 increment from \$u100

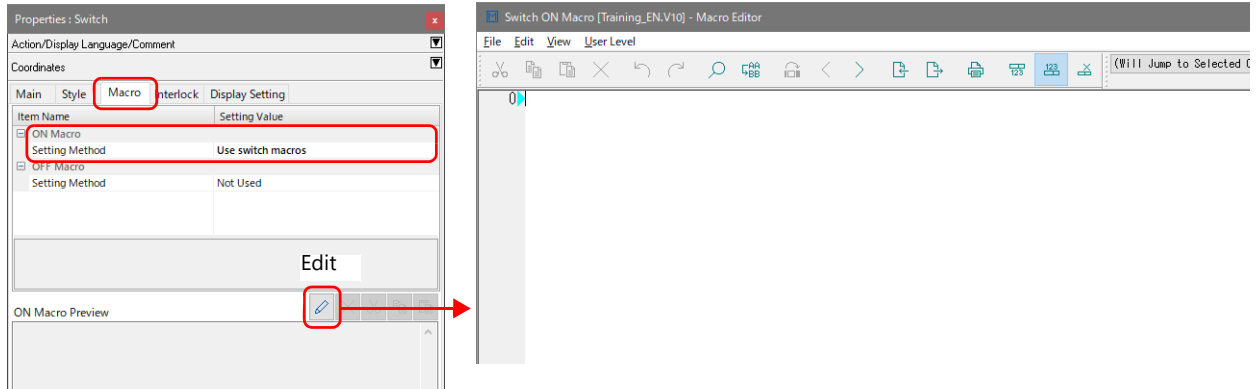
5. The numerical data display is copied, resulting in 6 numerical data displays. Display the right-click menu and select [Customize] → [Device Display] to display the device memory address at the lower left of each numerical data display. Check that \$u100 to \$u105 are assigned.



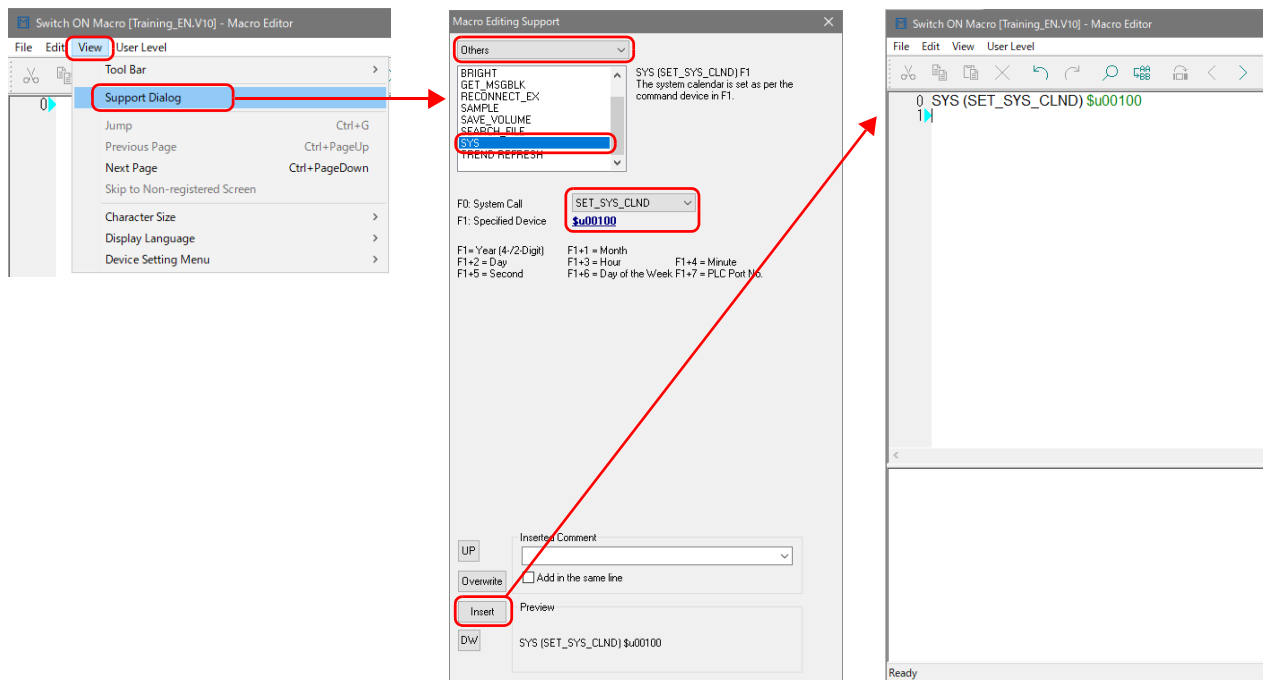
This completes the necessary settings.

Placing a Switch (SET_SYS_CLND)

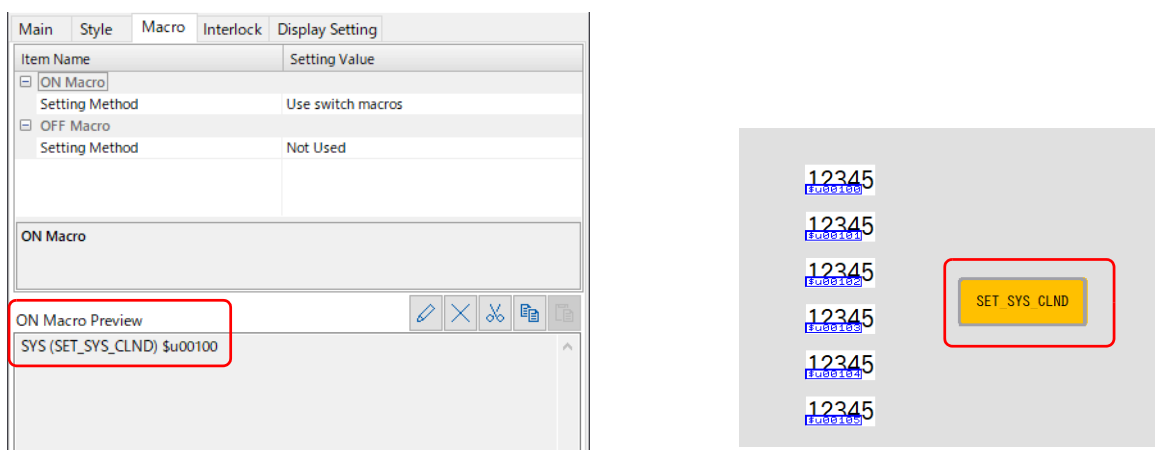
1. Place a switch from the parts bar → [Switch].
2. To change the design of the switch, use the [Design] properties pane.
3. Select the switch and set text (SET_SYS_CLND) on the [Properties] pane → [Style].
4. Set the [Properties] pane → [Macro] → [ON Macro] → [Setting Method] to [Use switch macros], and then display the macro editing window (Macro Editor) from the [Edit] icon of the preview.



5. Click [View] → [Support Dialog] on the Macro Editor to display the [Macro Editing Support] window, and then register a macro as shown below.



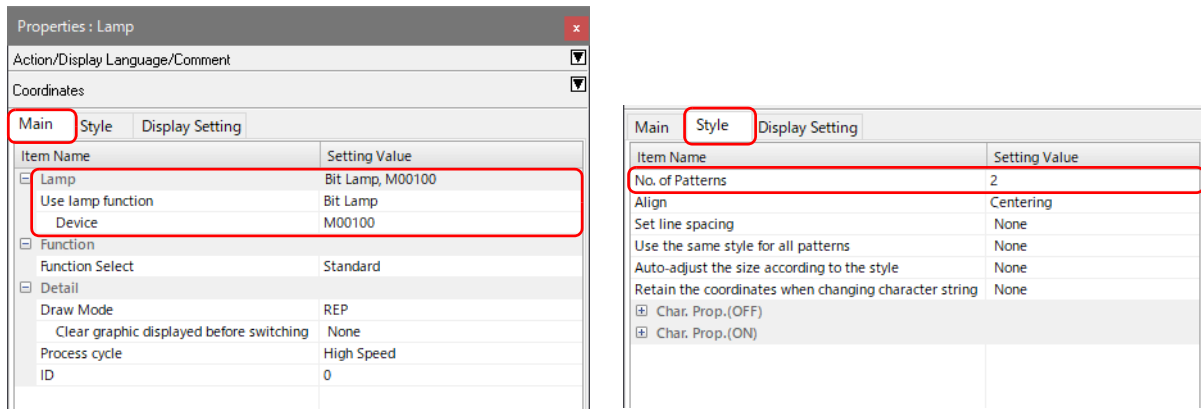
6. Close the Macro Editor by clicking [x], and check that the registered macro is displayed in the preview.



This completes the necessary settings.

Placing a Lamp

1. Place a lamp from the parts bar → [Lamp].
2. Configure the properties of the lamp as shown below.



• Main

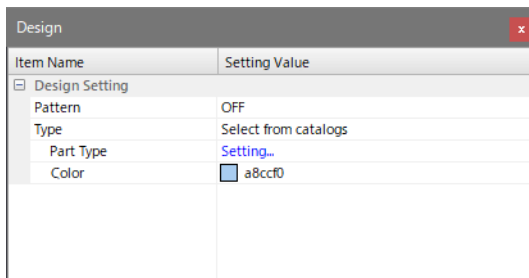
Item	Description	Setting Value
Use lamp function	<p>Bit The lamp display is changed by setting (ON) and resetting (OFF) bits. Bits are assigned consecutively to added patterns.</p> <p>Word The lamp display is changed by writing a word to the device memory.</p> <p>N-state lamp Set multiple conditions and change the lamp display when the conditions are satisfied.</p>	Bit Lamp
Device	Specify the device memory address to monitor as a lamp.	M100

• Style

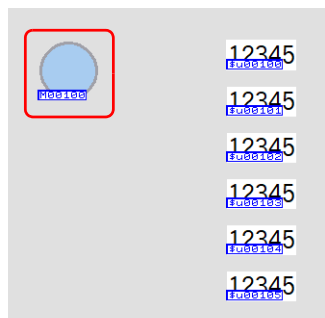
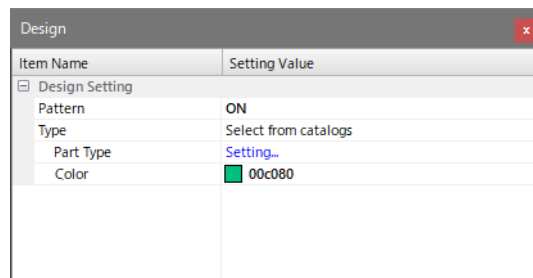
Item	Description	Setting Value
No. of Patterns	Set the number of patterns that the lamp can display.	2

3. Set the color and design on the [Design] properties pane.

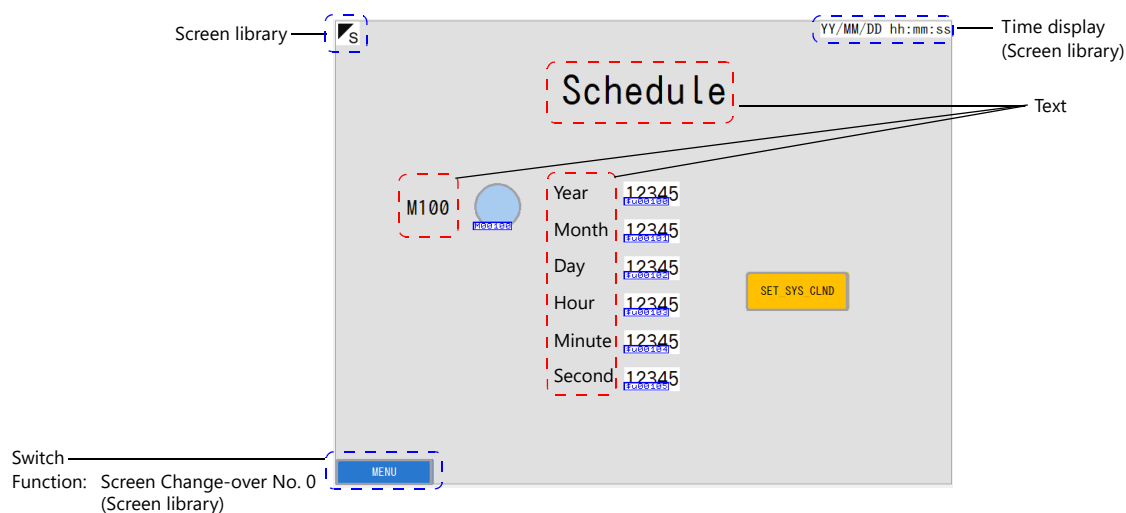
• OFF: Light blue



• ON: Green



Placing Text and a Screen Library



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

5.4 Checking Operation on MONITOUCH

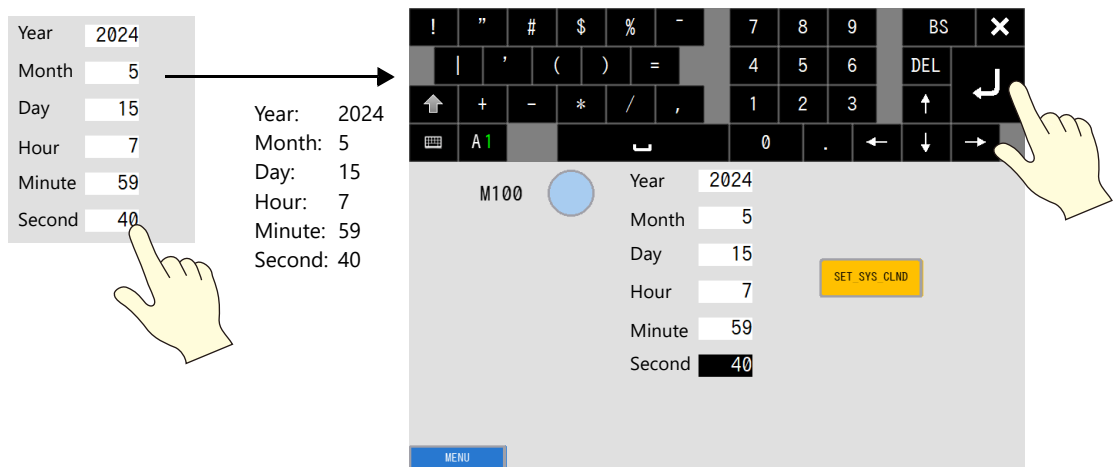
5.4.1 List of Used Device Memory Addresses

Device Memory	Description	Remarks
\$u100 to \$u105	Numerical data display parts	Keypad display enabled
M100	Lamp device memory and storage output bit of the logging server No. 0 (page 3-4)	

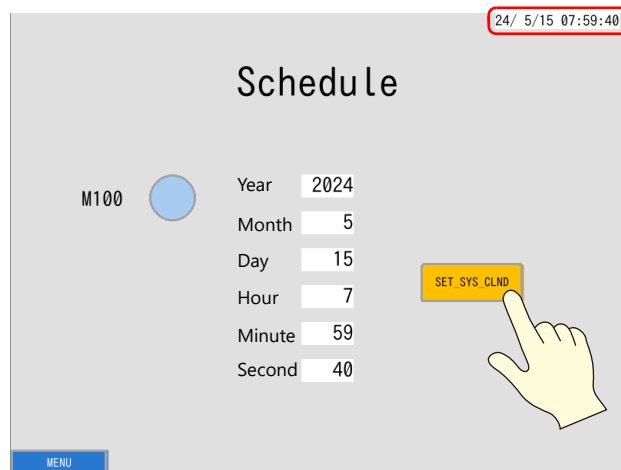
5.4.2 Operation on MONITOUCH

Change the clock to forcibly execute the schedule, and check the operation result.

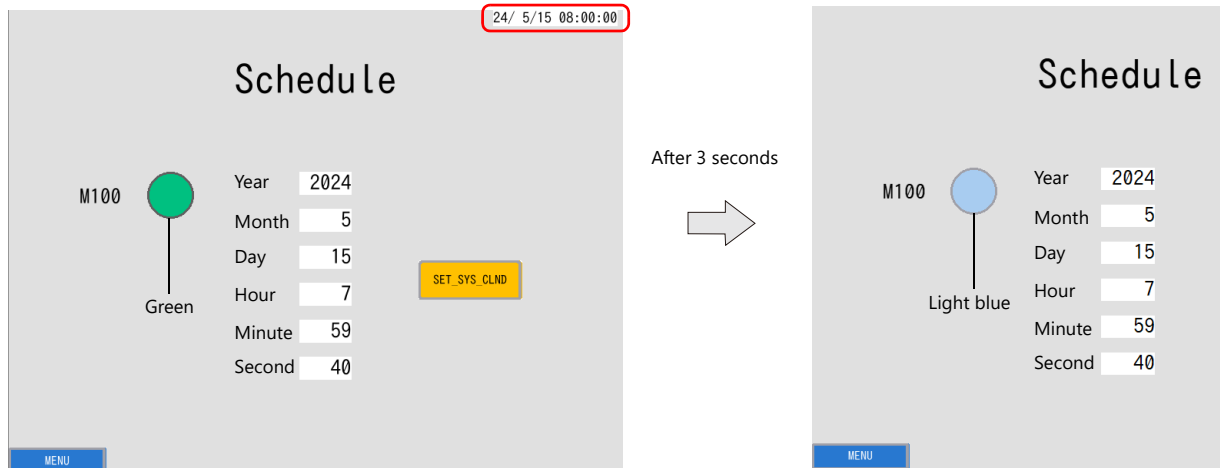
1. Tap the numerical value displays and set the values of [Year], [Month], [Day], [Hour], [Minute], and [Second] in order using the system keyboard.



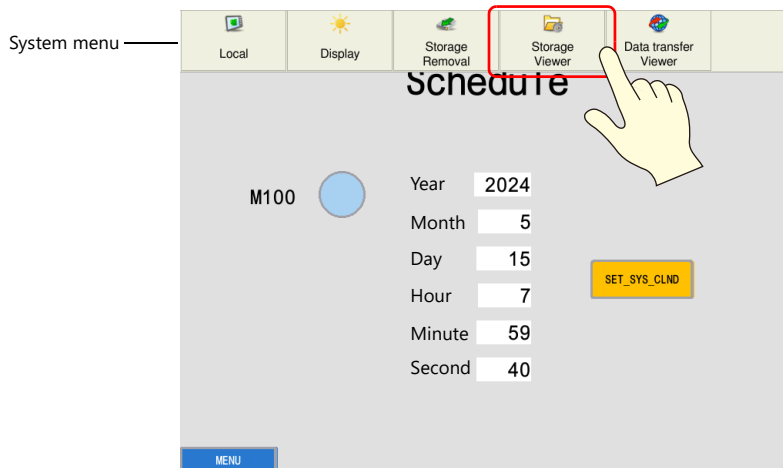
2. Press the switch. The internal clock of MONITOUCH is updated and 24/5/15 07:59:40 is displayed at the upper right.



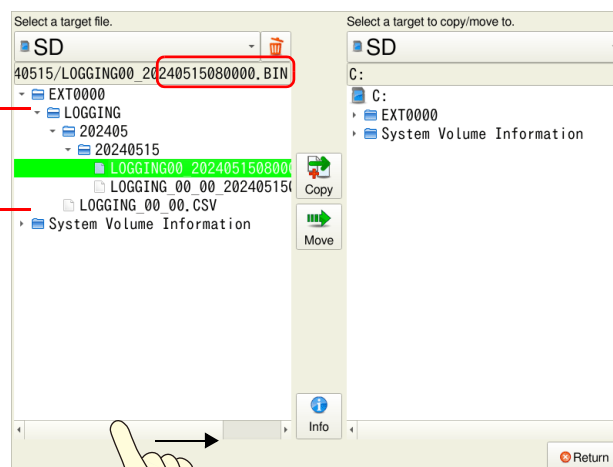
At 24/5/15 08:00:00, the lamp will change from light blue to green (M100 turns ON).
 After three seconds, the lamp will return from green to light blue (M100 turns OFF).



3. Press the [SYSTEM] function switch and press the [Storage Viewer] switch on the system menu.



Check that CSV and backup files have been created in the LOGGING folder.




Example: Filename_20240515080000.BIN
 Year, month, day, hours, minutes, and seconds

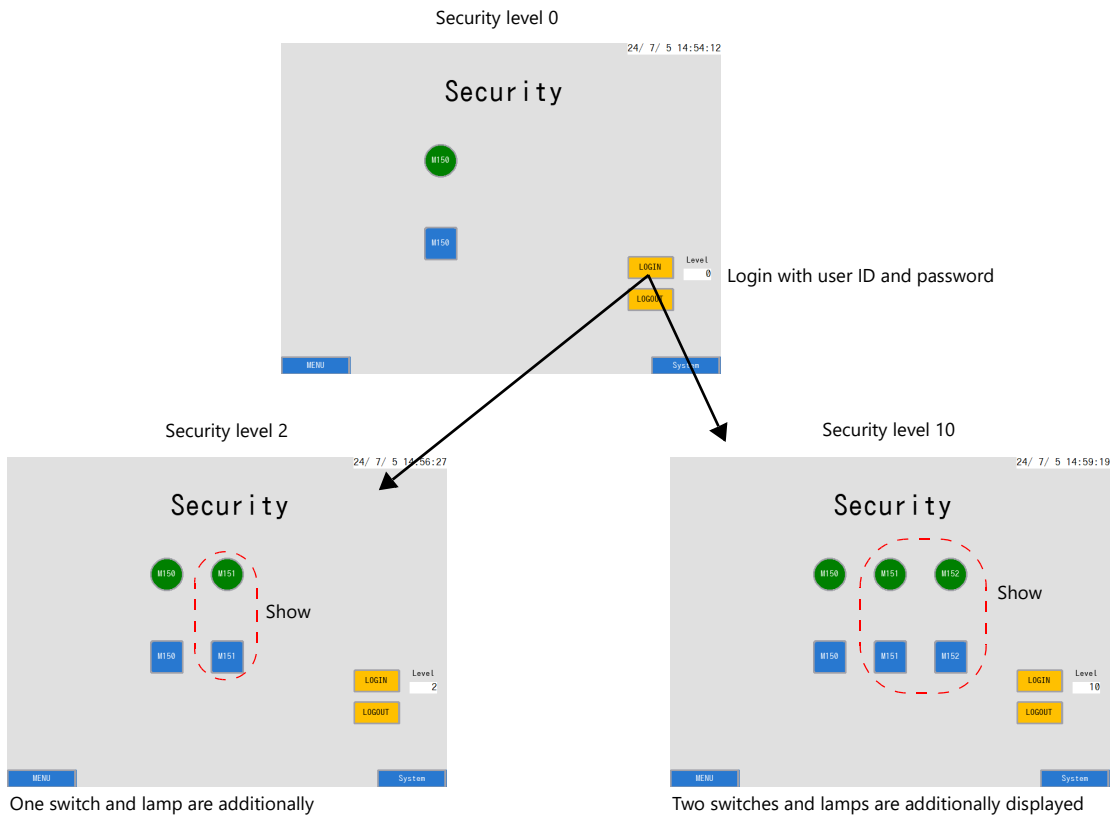
6 Security

6.1 Overview

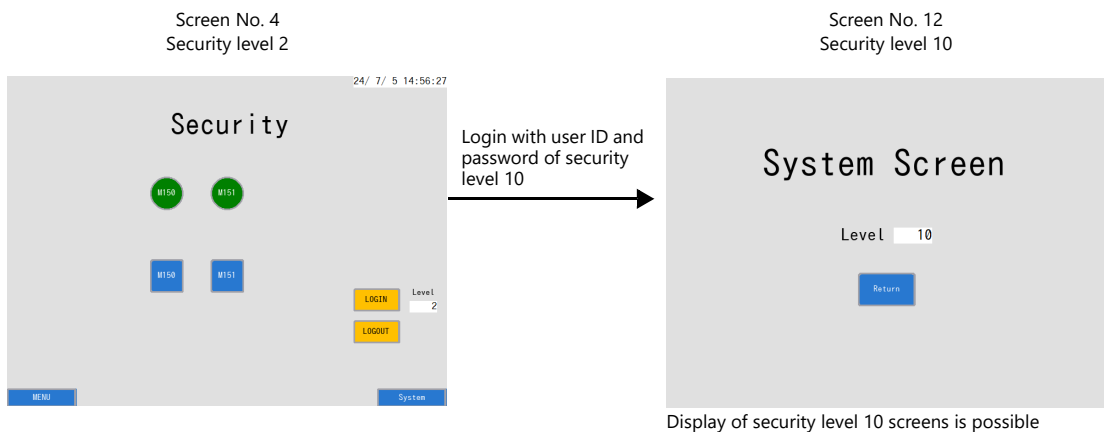
By registering user IDs and passwords at the required security levels in advance, the number of items displayed on the screen can be changed and switching of screens can be restricted according to the security level of the user. Security levels are set on a scale from 0 to 15.

Security level	Priority	Description
0	Low  High	Screen display and operation permitted at level 0 (no security)
1		Screen display and operation permitted at levels 0 and 1
:		:
15		Screen display and operation permitted at all levels from 0 through 15

- Item security levels
The items for display can be changed according to level.



- Screen security levels
Screen switching can be permitted/prohibited according to level.

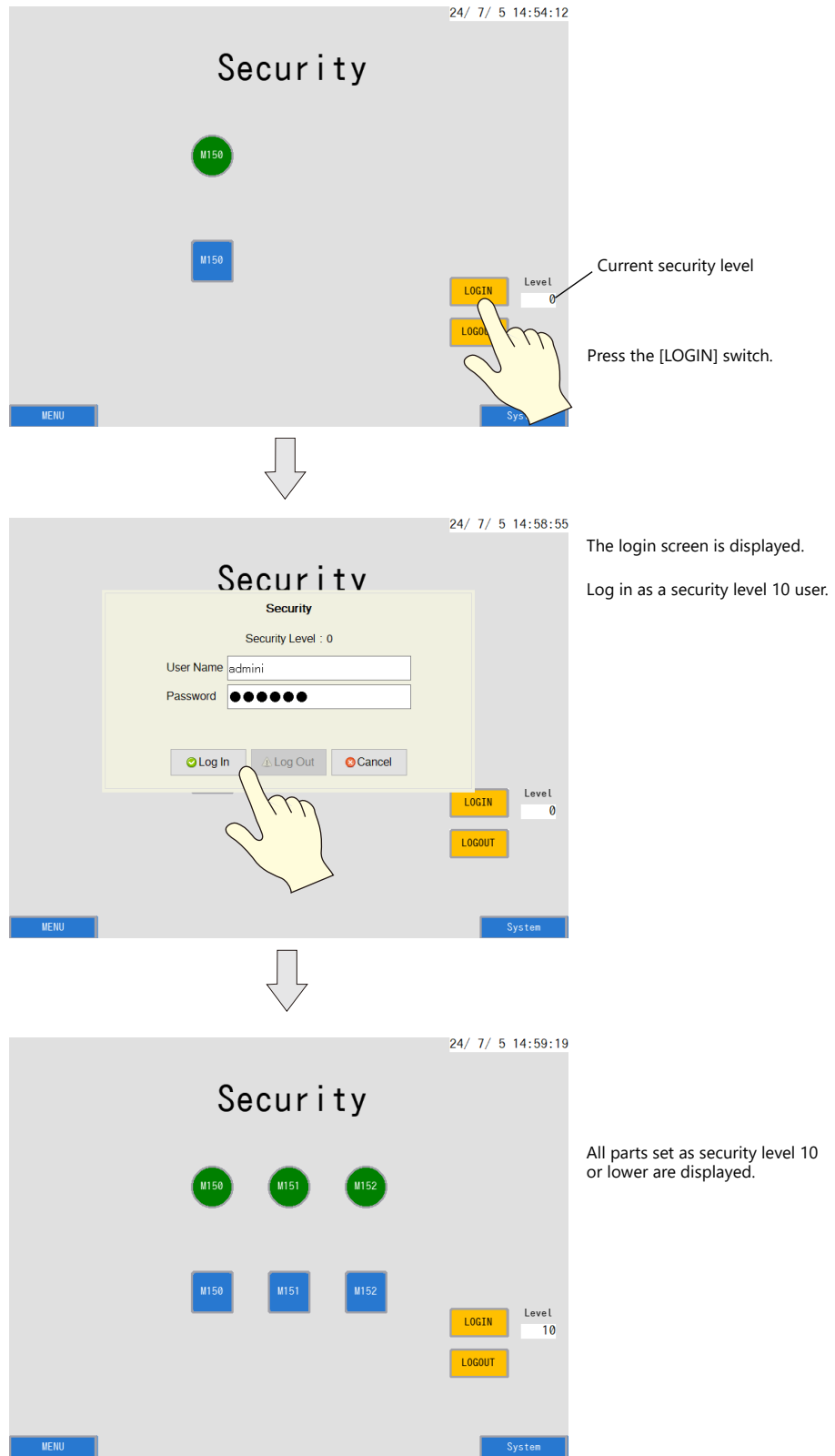


6.2 Example Screen

This chapter explains how to create a screen that operates as follows.

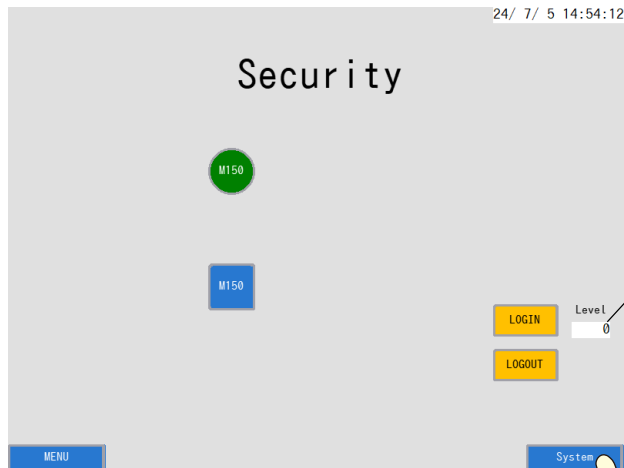
Example Screen 1 (Item Security Level)

Screen No. 4



Example Screen 2 (Screen Security Level)

Screen No. 4



Current security level

Changeover the screen.

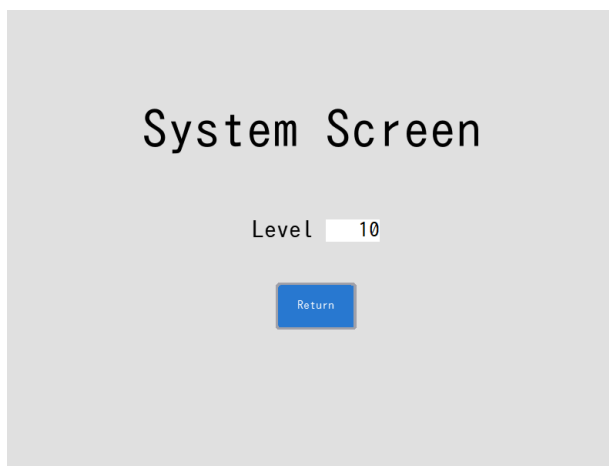


The login screen is displayed.

Log in as a security level 10 user.



Screen No. 12



Current security level

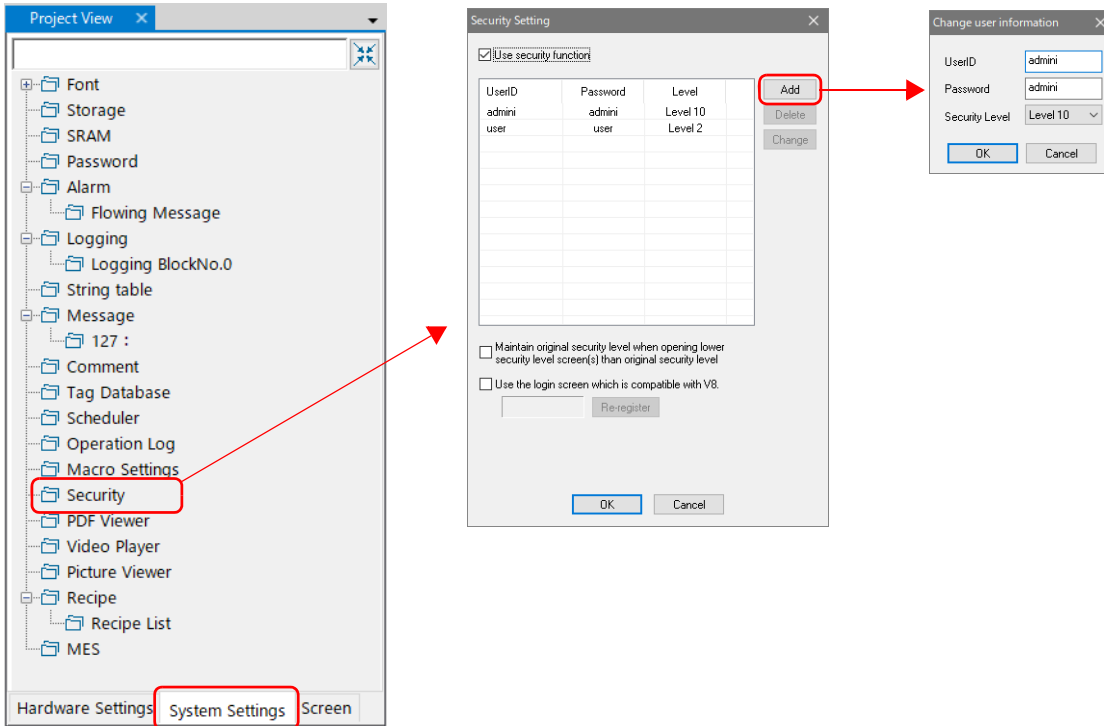
The screen changes over.

6.3 Screen Creation

6.3.1 Security Settings

Set user IDs, passwords, and corresponding security levels.

1. Double-click [Security] at the [Project View] pane → [System Settings] tab to display the [Security Setting] window.
2. Select the [Use security function] checkbox and set each item.



Item	Description	Setting Value
User ID Password Level	Register user IDs, passwords, and security levels using the [Add], [Delete], and [Change] buttons. Maximum of 64 entries, maximum of 8 one-byte alphanumeric characters (case sensitive) * The same user ID cannot be registered more than once. (All users registered to the screen program are granted administrator privileges.)	First user: [User ID]: admini [Password]: admini [Level]: 10 Second user: [User ID]: user [Password]: user [Level]: 2
Maintain original security level when opening lower security level screen(s) than original security level	Select the operation to perform when a screen change occurs. Deselected When switching to a screen with a lower security level, the currently valid security level is also lowered to the level of the target screen. When switching to a higher-security screen next, the operator is prompted to enter a password. Selected The same security level is maintained until the level is changed when another user logs in with a different security level or when the user logs out.	Deselected

3. Click [OK] to close the window.

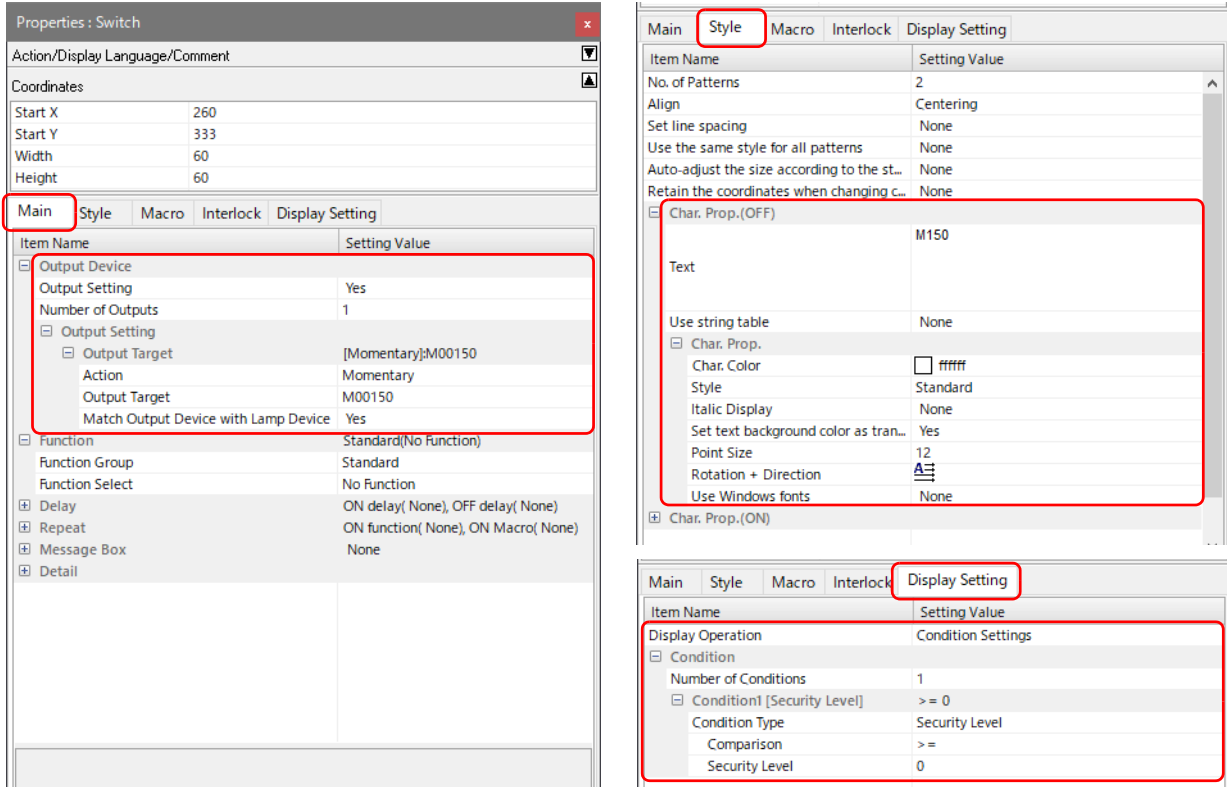
This completes the necessary settings.

6.3.2 Screen Editing (Example Screen 1)

Create a screen that changes the displayed items according to security level.

Placing Switches

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



• Main

Item	Description	Setting Value
Output Device	Output Setting	Data is output to device memory when the switch is pressed.
	Number of Outputs	Select the number of outputs. Max. 16 outputs
	Action	Set the write operation to perform with respect to the output device memory.
	Output Target	Set the output device memory.
	Match Output Device with Lamp Device	Set the same device memory for the output device memory and the lamp device memory.

• Style

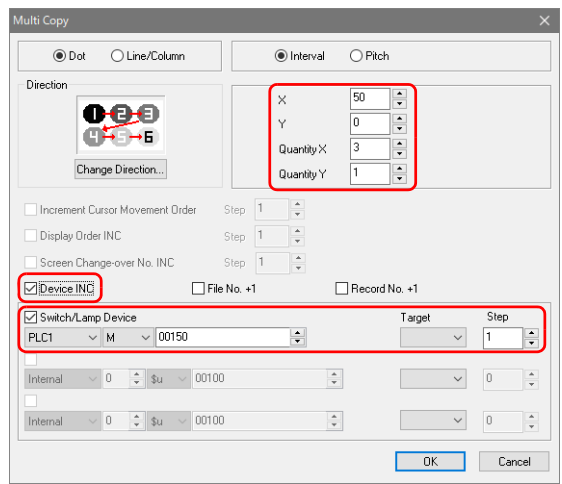
Item	Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.
	Char. Prop.	Set properties including text color, style, and size.

[Char. Color]: White (ffffff)
[Point Size]: 12

• Display Setting

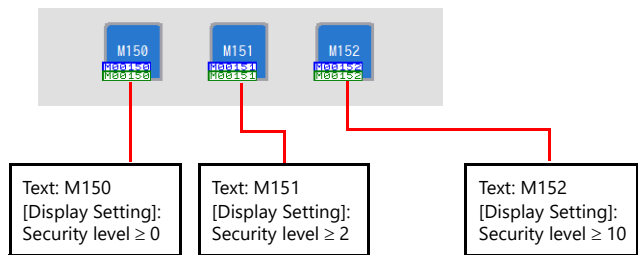
Item	Description	Setting Value
Display Operation	Set the display state for RUN mode. Always Show / Hide / Condition Settings	Condition Settings
Number of Conditions	Set the number of conditions. Max. 5	1
Condition 1	Condition Type	Security Level
	Comparison	≥
	Security Level	0

3. Select the switch and click [Multi Copy] on the right-click menu. The [Multi Copy] window is displayed.
4. Configure the following settings and click [OK].



[X]: 50
 [Y]: 0
 [Quantity X]: 3
 [Quantity Y]: 1

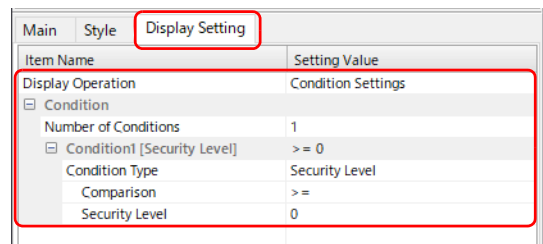
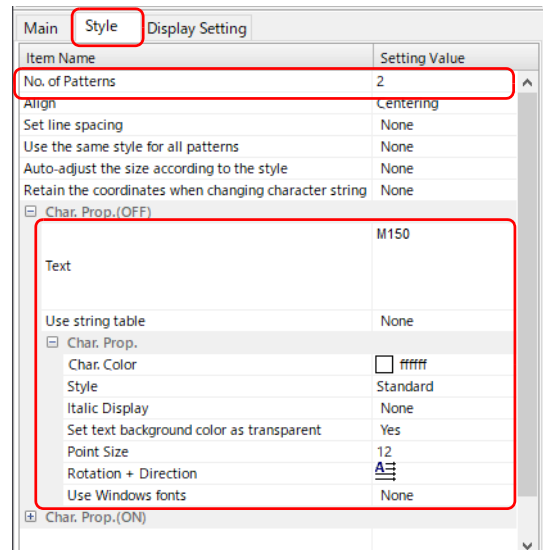
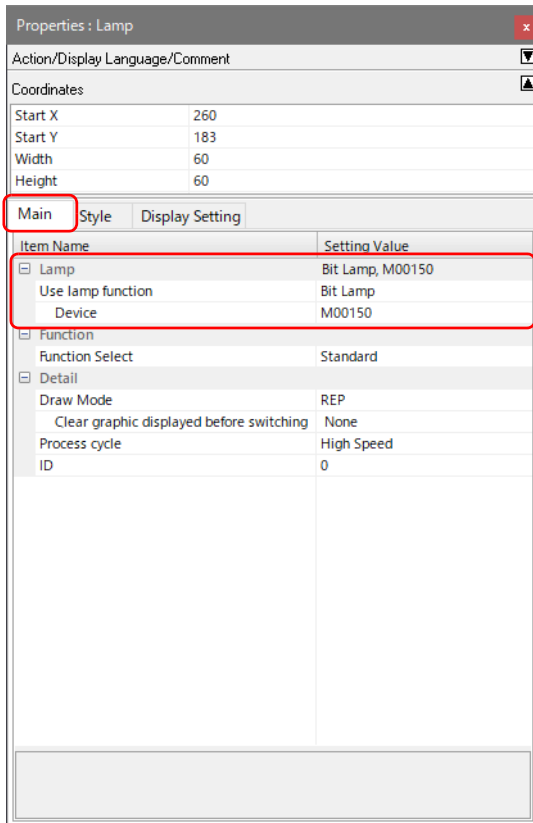
5. The switch is copied, resulting in 3 switches. Display the right-click menu and select [Customize] → [Device Display] to display the device memory address at the lower left of each switch.
6. Change the text and security level in the same manner for the remaining two switches.



This completes the switch creation process.

Placing Lamps

1. Place a lamp from the parts bar → [Lamp].
2. Configure the properties of the lamp as shown below.



- Main

Item	Description	Setting Value
Use lamp function	<p>Bit</p> <p>The lamp display is changed by setting (ON) and resetting (OFF) bits. Bits are assigned consecutively to added patterns.</p> <p>Word</p> <p>The lamp display is changed by writing a word to the device memory.</p> <p>N-state lamp</p> <p>Set multiple conditions and change the lamp display when the conditions are satisfied.</p>	Bit
Device	Specify the device memory address to monitor as a lamp.	M150

- Style

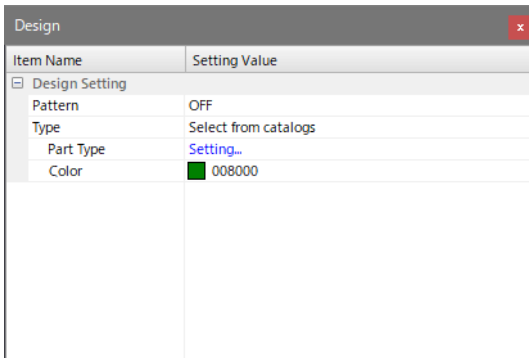
Item	Description	Setting Value
No. of Patterns	Set the number of patterns that the lamp can display.	2
Char. Prop. (OFF)	Text	M150
	Char. Prop.	[Char. Color]: White (ffffff) [Point Size]: 12

• Display Setting

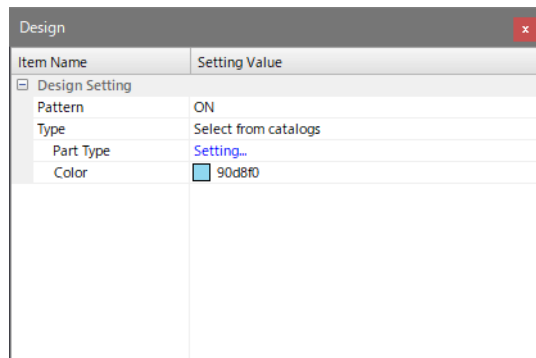
Item	Description	Setting Value
Display Operation	Set the display state for RUN mode. Always Show / Hide / Condition Settings	Condition Settings
Number of Conditions	Set the number of conditions. Max. 5	1
Condition 1	Condition Type	Set the condition type. Bit Device Show if the bit device memory condition is satisfied and hide if the condition is not satisfied. Word Device Show when the condition expression is satisfied by the word device memory, and hide when not satisfied. Security Level Show when the condition expression of the login level is satisfied, and hide when not satisfied.
	Comparison	Set the condition.
	Security Level	≥ 0

3. Set the color and design on the [Design] properties pane.

• OFF: Green

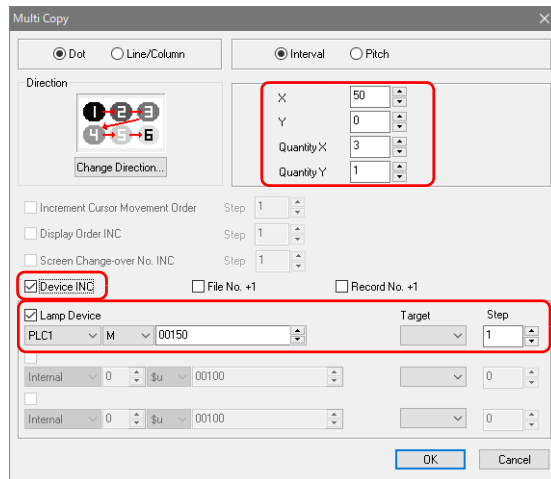


• ON: Light blue



4. Select the lamp and click [Multi Copy] on the right-click menu. The [Multi Copy] window is displayed.

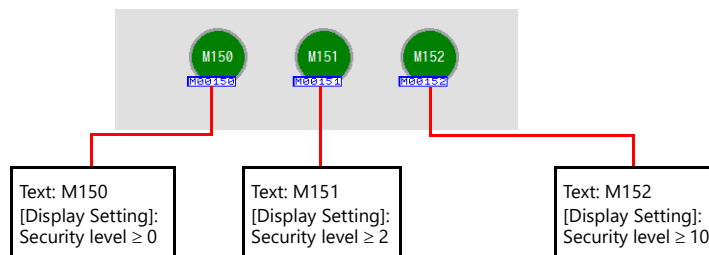
5. Configure the following settings and click [OK].



[X]: 50
[Y]: 0
[Quantity X]: 3
[Quantity Y]: 1

6. Multiple copies of the lamp are made.

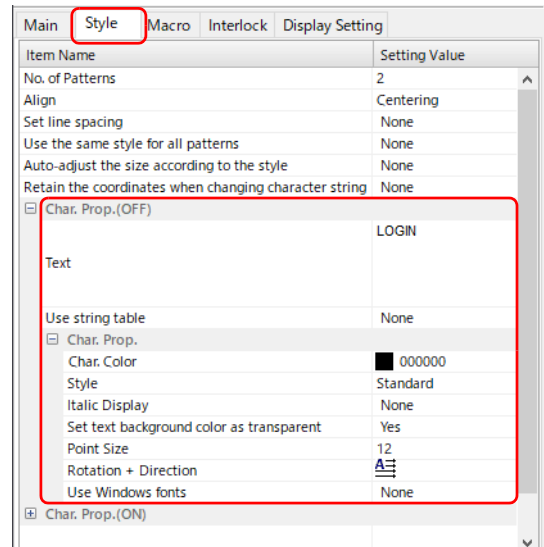
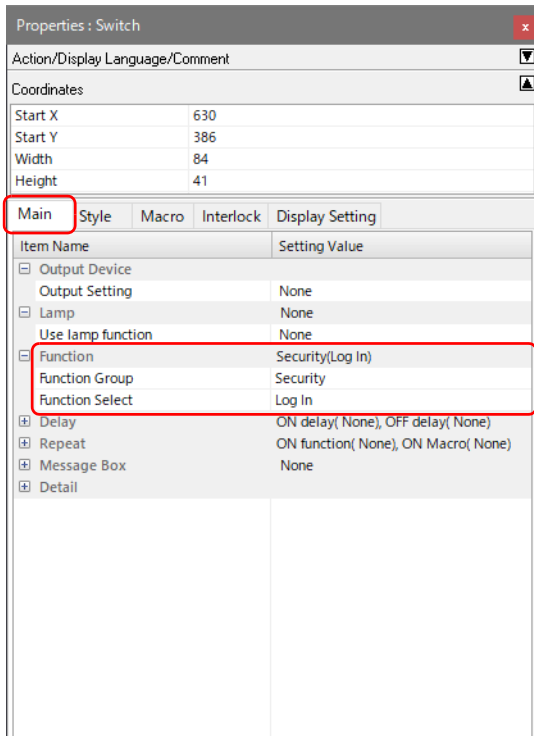
7. Change the text and security level in the same manner for the remaining two lamps.



This completes the lamp creation process.

Placing Login/Logout Switches

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



• Main

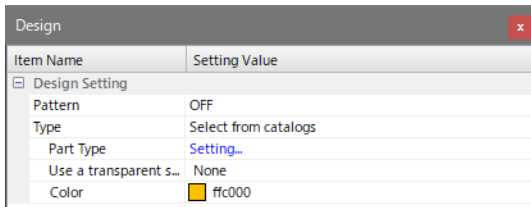
Item	Description	Setting Value
Function	Function Group	Set the operation to perform when the switch is pressed.
	Function Select	Log In Displays the login screen. Log Out Changes the security level to zero (0).
		Security
		Log In

• Style

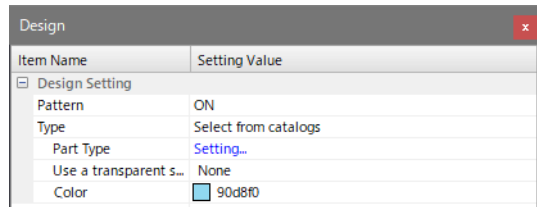
Item	Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.
	Char. Prop.	Set properties including text color, style, and size.
		LOGIN
		[Char. Color]: Black (000000) [Point Size]: 12

3. Set the color and design on the [Design] properties pane.

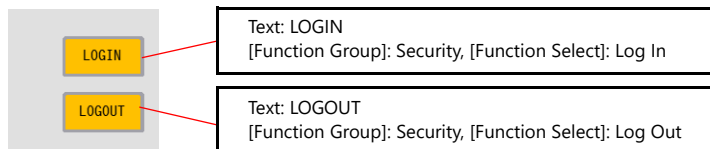
• OFF: Yellow



• ON: Light blue



4. Select the [LOGIN] switch and copy and paste.
5. Change the text and function of the copy.

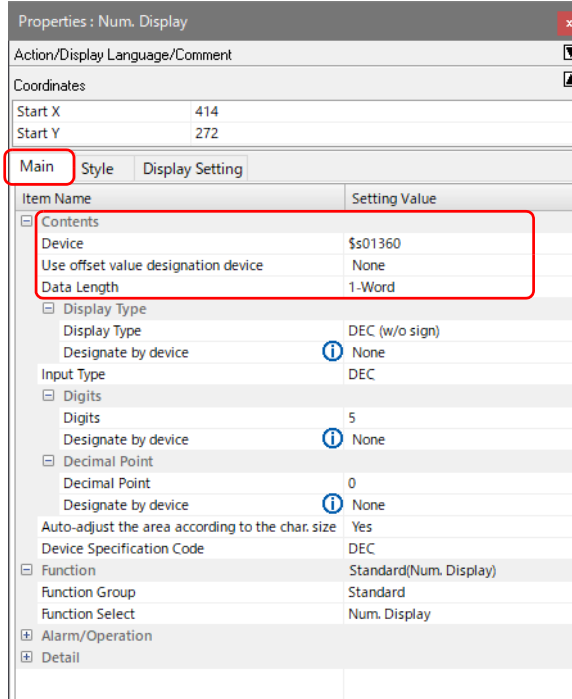


This completes the switch creation process.

Placing a Numerical Value Display Part (For Checking the Current Security Level)

Create a numerical value display for checking the security level when logged in.

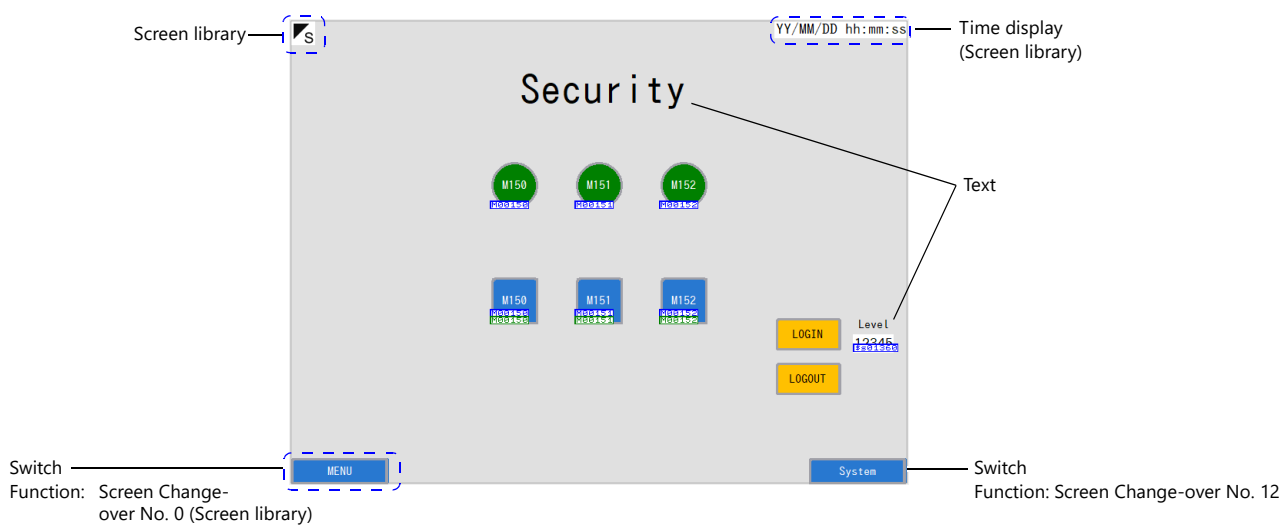
1. On the parts bar, right-click or click and hold the [Data Display] icon, and then click and place a [Num. Display] part.
2. Configure the properties of the numerical data display as shown below.



- Main

Item		Description	Setting Value
Contents	Device	Specify the device memory to monitor.	Internal \$\$s1360

Placing Text and a Screen Library



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

Switch

Create a switch for changing to screen number 12 (example screen 2).

1. Place a switch from the parts bar → [Switch].
2. Display the [Main] tab on the [Properties] pane of the switch, and set [Function Select] to [Screen Change-over] and [Screen No.] to "12".

This completes the screen creation process.

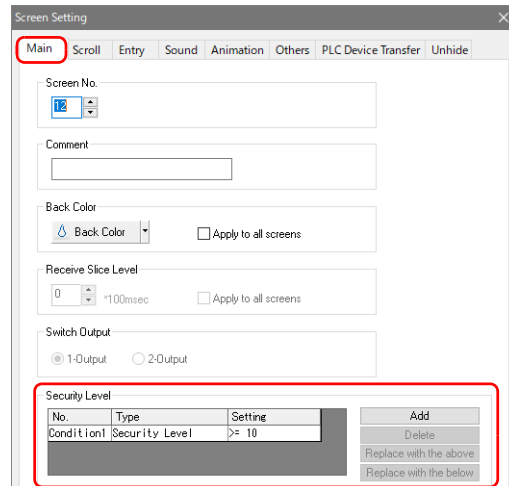
Proceed to "6.3.3 Screen Editing (Example Screen 2)". To check operation of only example screen 1, transfer the screen program to MONITOUCH and check that it works.

6.3.3 Screen Editing (Example Screen 2)

Create a screen for controlling the permitting or prohibiting of screen changeover by using security levels.

Screen Settings (Screen No. 12)

1. Display screen number 12.
At the [Project View] pane → [Screen] tab → [Screen] → [12], double-click [Screen Settings].
2. Set the [Security Level] on the [Main] tab window.



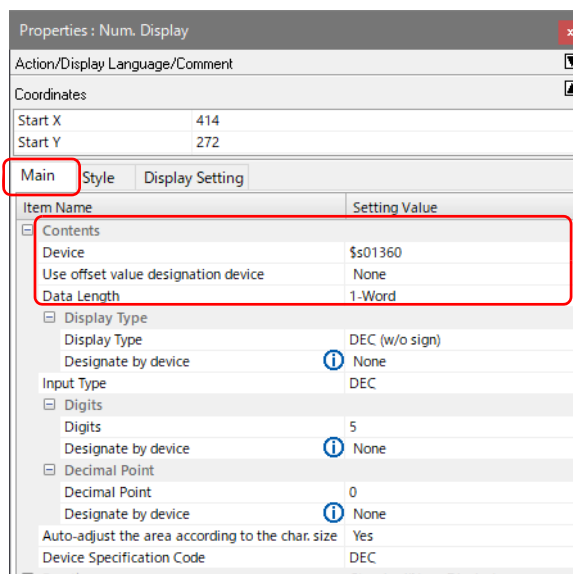
Item	Description	Setting Value
Security Level	Specify the security level of the screen.	Level ≥ 10

3. Click [OK].

Placing a Numerical Value Display Part (For Checking the Current Security Level)

Create a numerical value display for checking the security level when logged in.

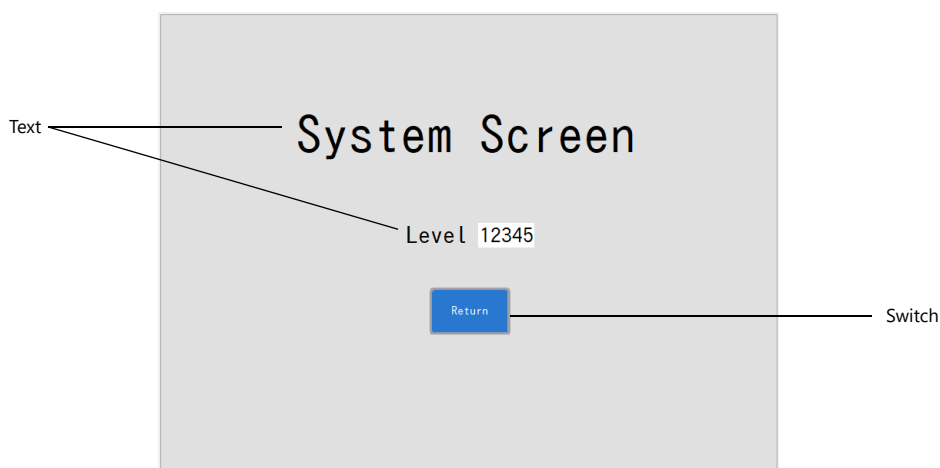
1. On the parts bar, right-click or click and hold the [Data Display] icon, and then click and place a [Num. Display] part.
2. Configure the properties of the numerical data display as shown below.



- Main

Item	Description	Setting Value
Contents	Device	Specify the device memory to monitor.
		Internal \$s1360

Placing Text and a Return Switch



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Switch

Create a switch for returning to the security screen (screen No. 4).

1. Place a switch from the parts bar → [Switch].
2. Display the [Main] tab on the [Properties] pane of the switch, and set [Function Select] to [Screen Change-over] and [Screen No.] to "4".

This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

6.4 Checking Operation on MONITOUCH

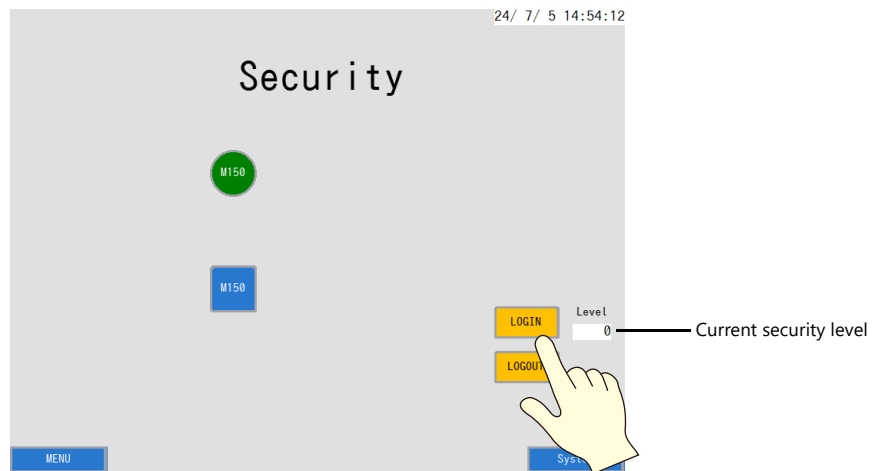
6.4.1 List of Used Device Memory Addresses

Device Memory	Description	Remarks
M150	Switch: Output device memory, lamp device memory Lamp: Lamp device memory	
M151	Switch: Output device memory, lamp device memory Lamp: Lamp device memory	
M152	Switch: Output device memory, lamp device memory Lamp: Lamp device memory	

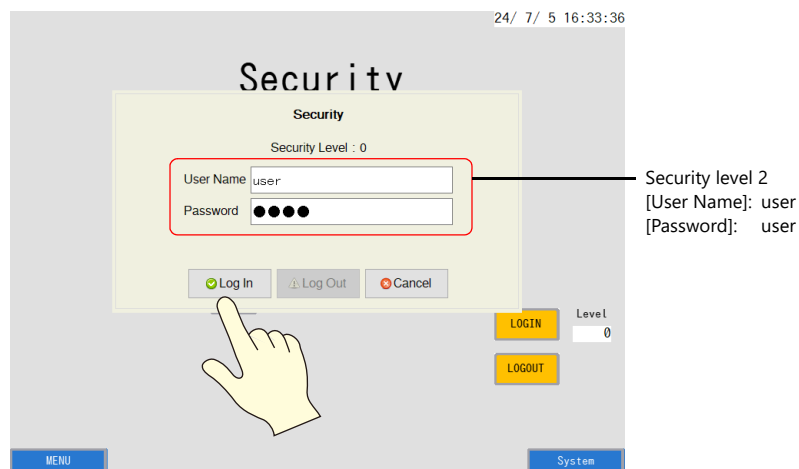
6.4.2 Operation on MONITOUCH

Item Security Level (Example Screen 1)

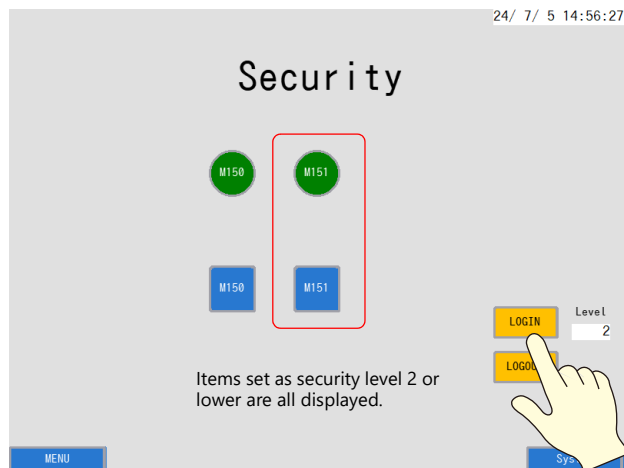
1. Press the [LOGIN] switch.



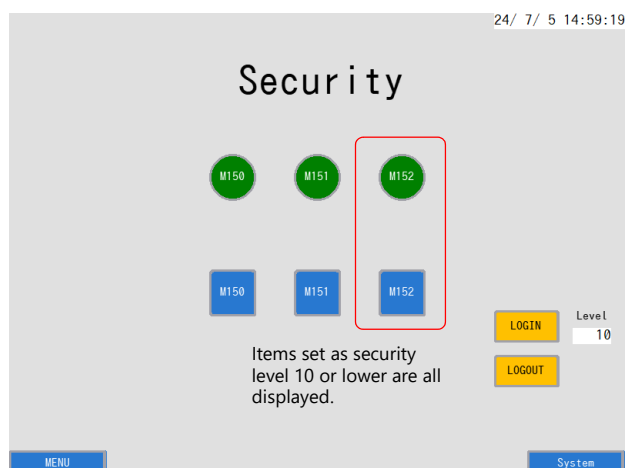
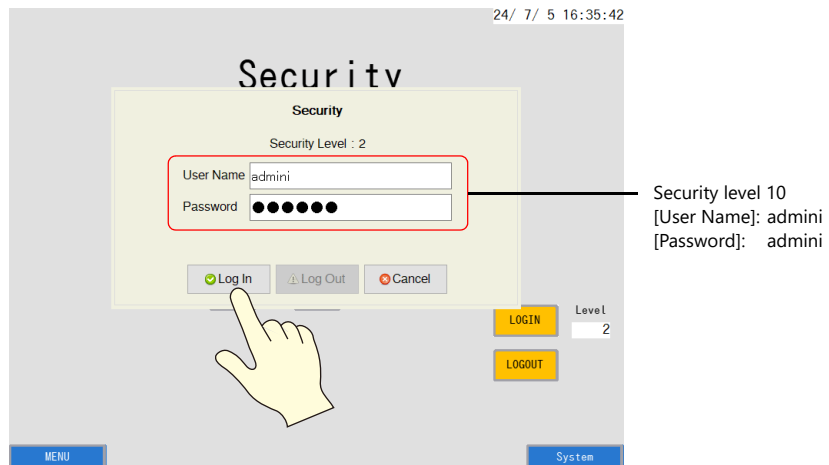
2. The login screen is displayed.
Enter "user" for the user name and "user" for the password and press [Log In].



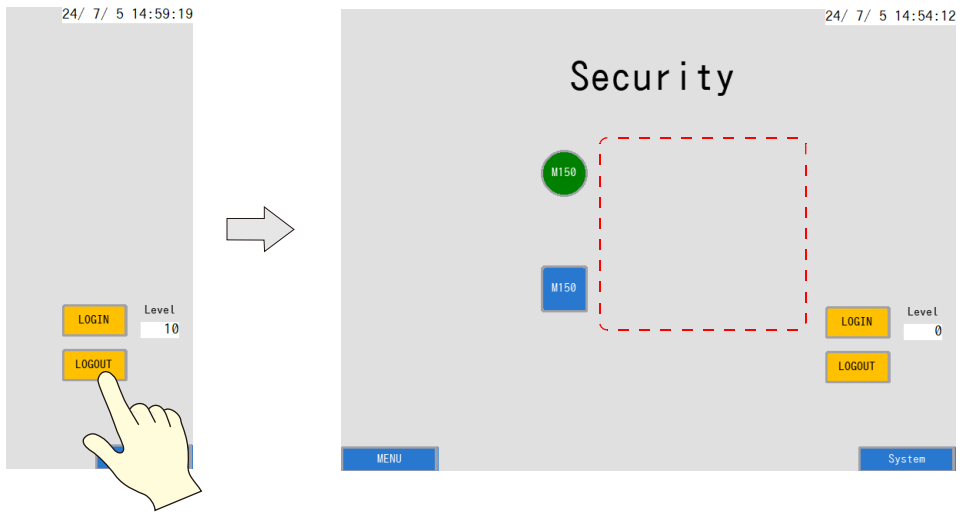
3. The security level changes to 2.
Items set as security level 2 or lower are displayed. Press the [LOGIN] switch again.



4. The login screen is displayed.
Enter "admini" for the user name and "admini" for the password and press [Log In].

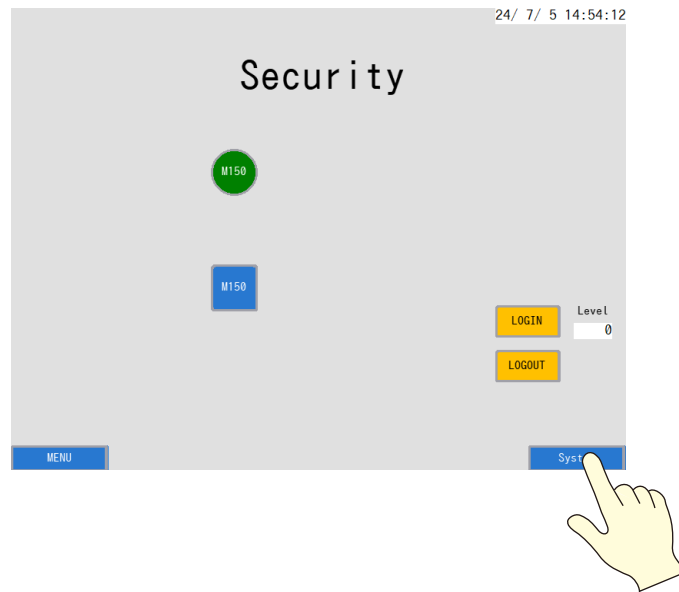


5. Press the [LOGOUT] switch.
The security level returns to 0. Items set as security level 1 or higher are all hidden.



Screen Security Level (Example Screen 2)

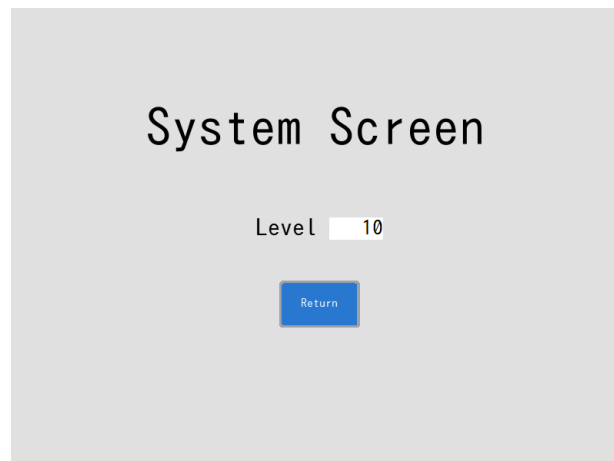
1. Press the screen changeover switch.



2. Enter "admini" for the user name and "admini" for the password and press [Log In].



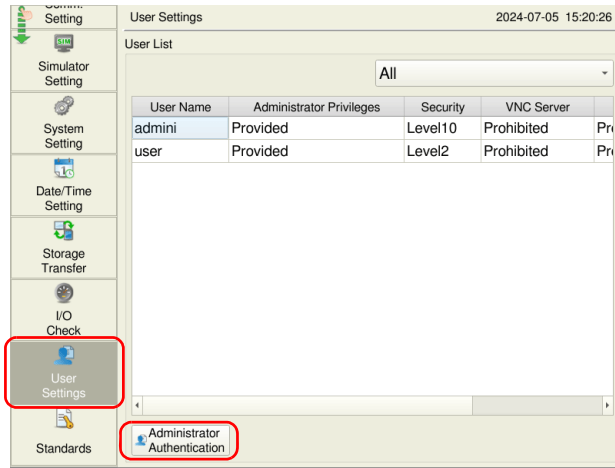
The security level changes to 10 and the screen changes over.



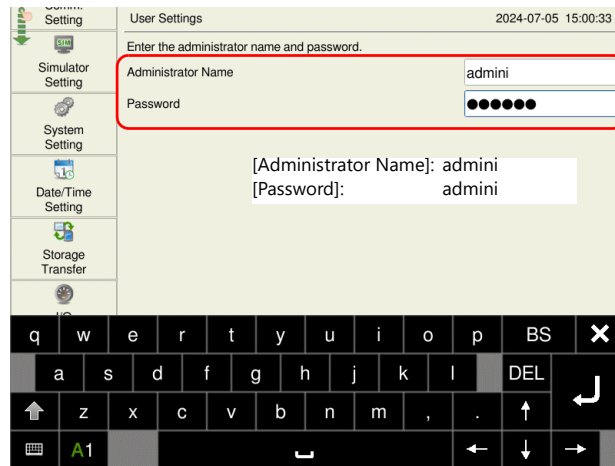
Registering Additional User IDs and Passwords

In addition to registering to screen programs, user IDs and passwords can be newly registered via the system menu (or Local mode). Only users with administrator privileges can newly register, edit, and delete user accounts.

1. Switch to Local mode.
2. Press [Administrator Authentication] on the [User Settings] menu.

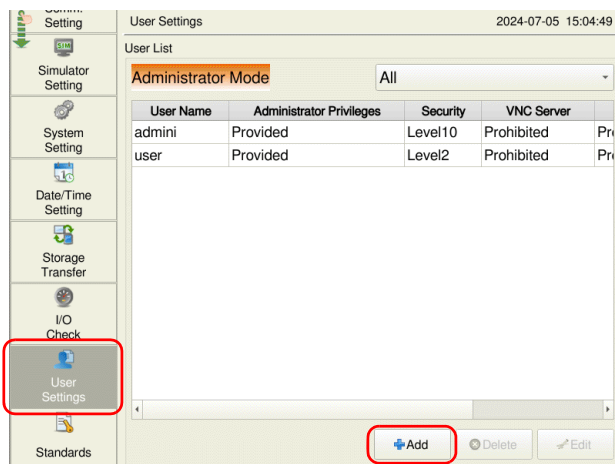


3. Input an [Administrator Name] and [Password].

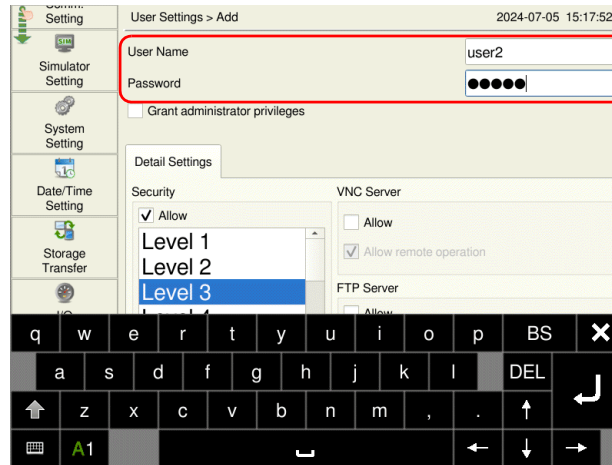


* All users registered to the screen program are granted administrator privileges.

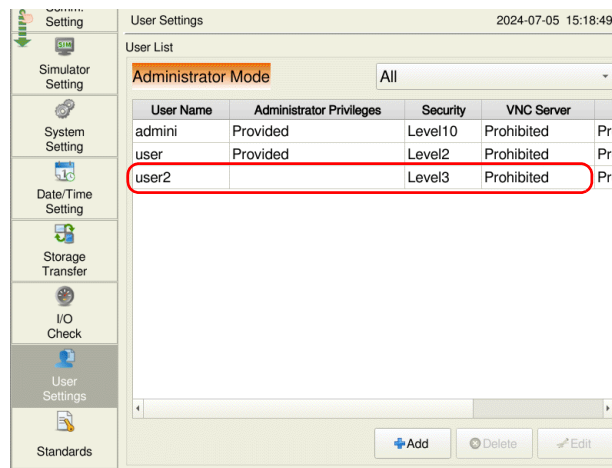
4. The display changes to administrator mode. Press [Add].



5. Enter "User2" for the user name and "user2" for the password and set security level 3.

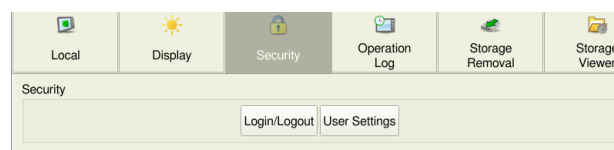


6. Press [OK] to complete the additional registration.



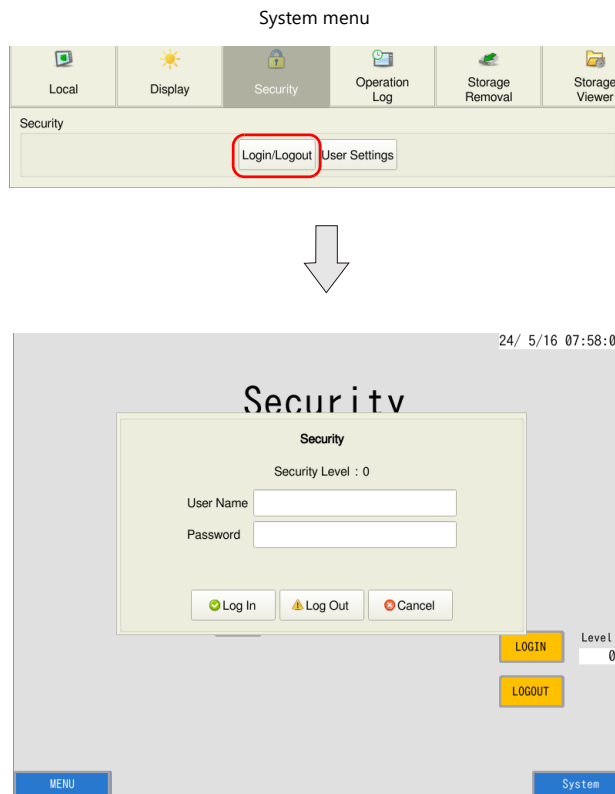
New registrations can be performed by administrators after logging in from [Security] → [User Settings] via the system menu. The procedure is the same as for Local mode.

System menu



Login/Logout

In addition to switches, changes to the security level by logging in/out can also be performed via the system menu.



7 Operation Logs

7.1 Overview

Operation logs capture the history of operations performed on screens, such as switch operations and data updates done using keypad inputs.

The captured history data is saved to the SRAM area and output to an SD card when the SRAM area becomes full. History data can be checked in a list using the operation log viewer.

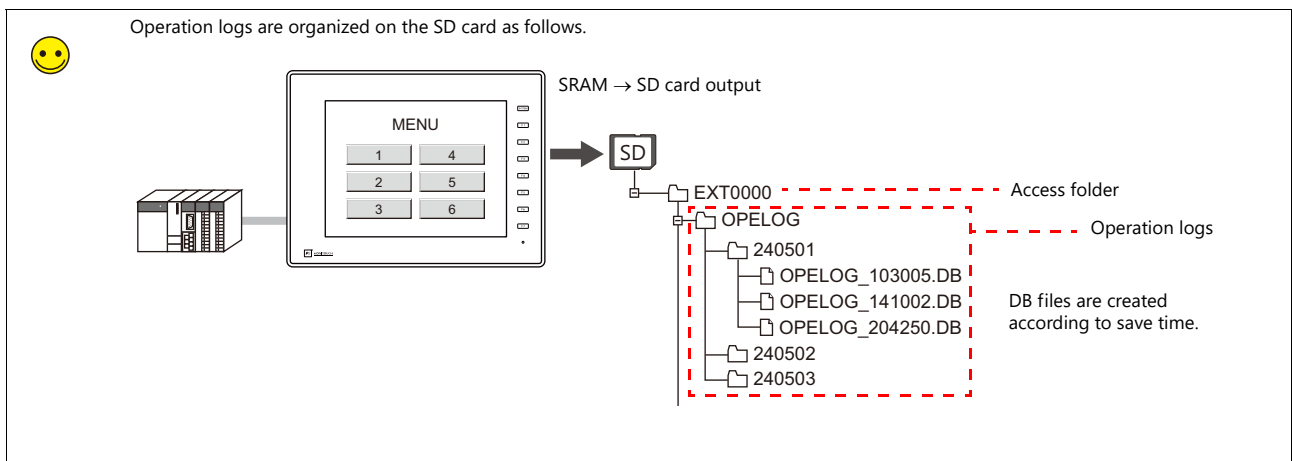
Operation logs are useful for cause analysis when problems occur as well as reference data for the daily reports of workers.

Operation log viewer

The diagram illustrates the operation log viewer interface and the process of changing backup data on the SD card for display. It shows two screenshots of the 'Operation Logs' screen. The top screenshot shows a hand pointing at the 'M200' button, which is linked to the 'Operation log viewer' window. The bottom screenshot shows a hand pointing at the 'M201' button, which is linked to the 'Change the backup data on the SD card for display' instruction. The 'Operation log viewer' window displays a table of log entries:

	Date / Time	Screen No.	User ID	Security Level	Action
1	2024/07/05 16:04	0		0	Switch Action
2	2024/07/05 16:04	5			Bit Mom
3	2024/07/05 16:04	5		0	Bit Alter
4	2024/07/05 16:10	5		0	DataChg

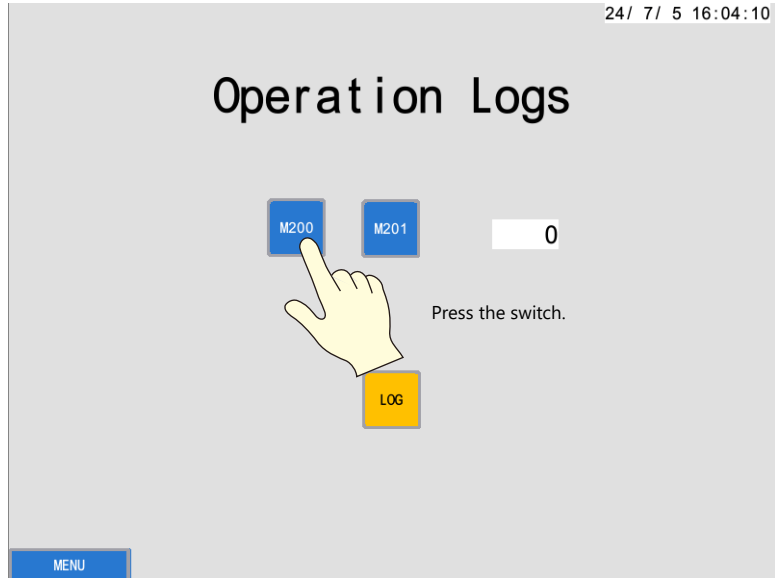
The bottom screenshot shows a hand pointing at the 'M201' button, which is linked to the 'Change the backup data on the SD card for display' instruction. The 'Operation log viewer' window also shows a '1 / 1' indicator and a 'Set' button.



7.2 Example Screen

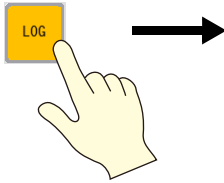
This chapter explains how to create the following screen.
Acquire logs of when a switch is pressed and when a numerical data is updated using a keypad.

Screen No. 5



Display the operation log viewer and check the operation history.

Press the switch that displays the operation log viewer.



Date / Time	Screen No.	User ID	Security Level	VNC User	MAC Address	Transfer
1 2024/07/05 16:04	0		0			
2 2024/07/05 16:04	5		0			
3 2024/07/05 16:04	5		0			
4 2024/07/05 16:10	5		0			

MAC Address	Transfer method	Action	Function	Comment
1		Switch Action	Screen	SW_00000
2		Bit Mom		M200
3		Bit Alter		M201
4		DataChg	Numerical Data	D200

Scroll

1 / 1

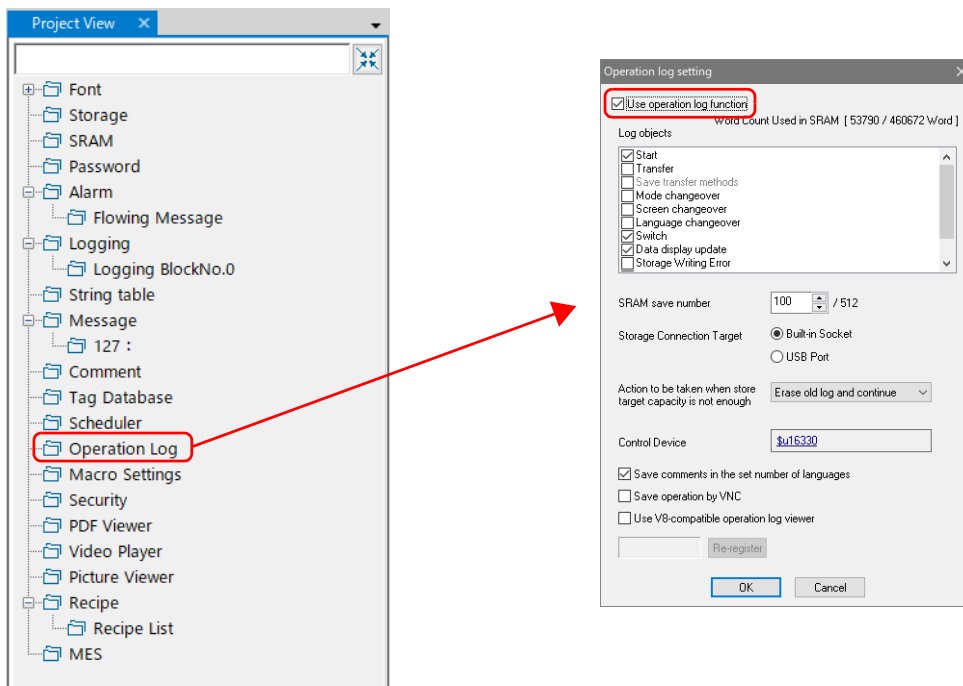
Default Set Close

7.3 Screen Creation

7.3.1 Operation Log Settings

Configure settings to use operation logs.

1. Double-click [Operation Log] at the [Project View] pane → [System Settings] tab to display the [Operation log setting] window.
2. Select the [Use operation log function] checkbox and set the following items.



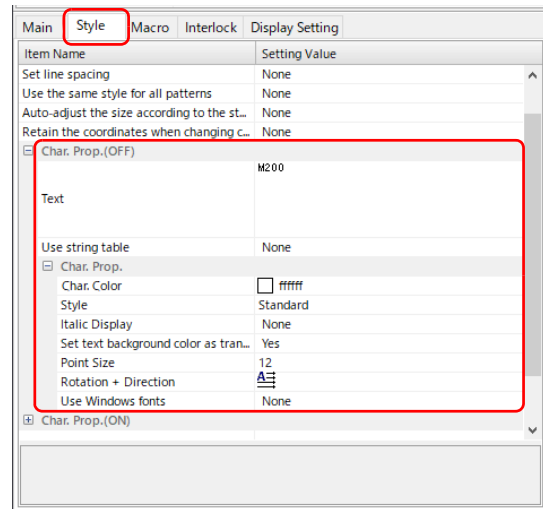
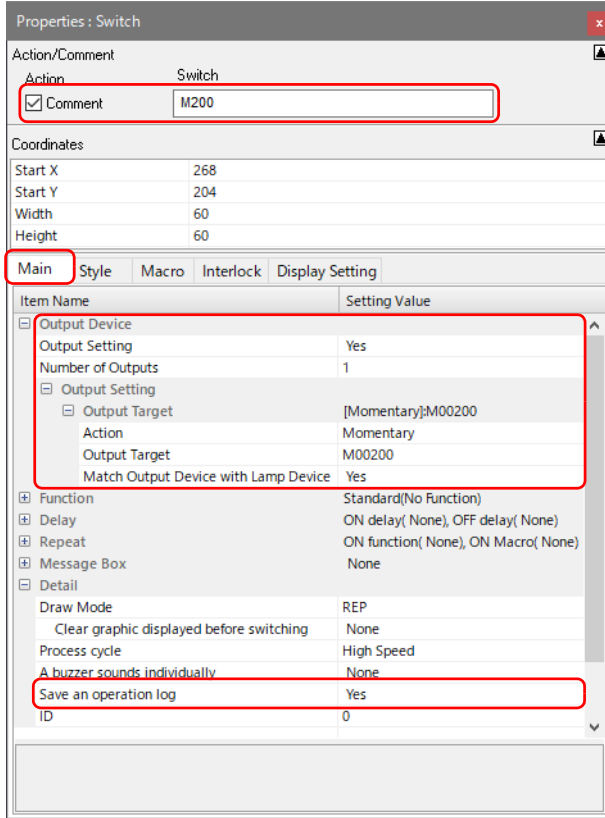
Item	Description	Setting Value
Log objects	Select the checkboxes of the items to save to operation logs. For details on each item, refer to "4 Operation Log" in Reference Manual 2.	Start Switch Data display update
SRAM save number	Set the number of logs to be stored in the SRAM area.	100
Storage Connection Target	Select how to connect the SD card, to which operation logs will be output.	Built-in Socket
Action to be taken when store target capacity is not enough	Select the action to take when the SD card is full.	Erase old log and continue
Control Device	Set the device memory for outputting log data to the SD card.	\$u16330
Save comments in the set number of languages	This setting is available when using the multi-language function and saving items displayed under [Log objects] that support comments. When selected, comments are saved to logs even in multi-language mode (when displaying a language other than the primary language).	Selected
Use V8-compatible operation log viewer	This checkbox is selected automatically when converting from a V8 series screen program.	Deselected

3. Click [OK].

7.3.2 Screen Editing

Placing Switches

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



• Comment

Item	Description	Setting Value
Comment	Register a comment for the item. The registered comment is saved to the log. This can be changed collectively to the device memory notation of the output settings. Refer to page 7-7 .	Selected M200

• Main

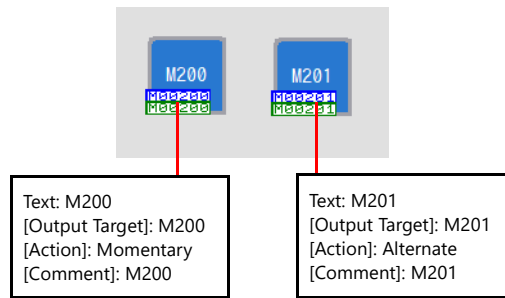
Item	Description	Setting Value	
Output Device	Output Setting	Data is output to device memory when the switch is pressed.	Yes
	Number of Outputs	Select the number of outputs. Max. 16 outputs	1
	Action	Set the write operation to perform with respect to the output device memory.	Momentary
	Output Target	Set the output device memory.	M200
	Match Output Device with Lamp Device	Set the same device memory for the output device memory and the lamp device memory.	Yes
Detail	Save an operation log	Save switch operations to logs.	Yes

• Style

Item	Description	Setting Value	
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.	M200
	Char. Prop.	Set properties including text color, style, and size.	[Char. Color]: White (ffffff) [Point Size]: 12

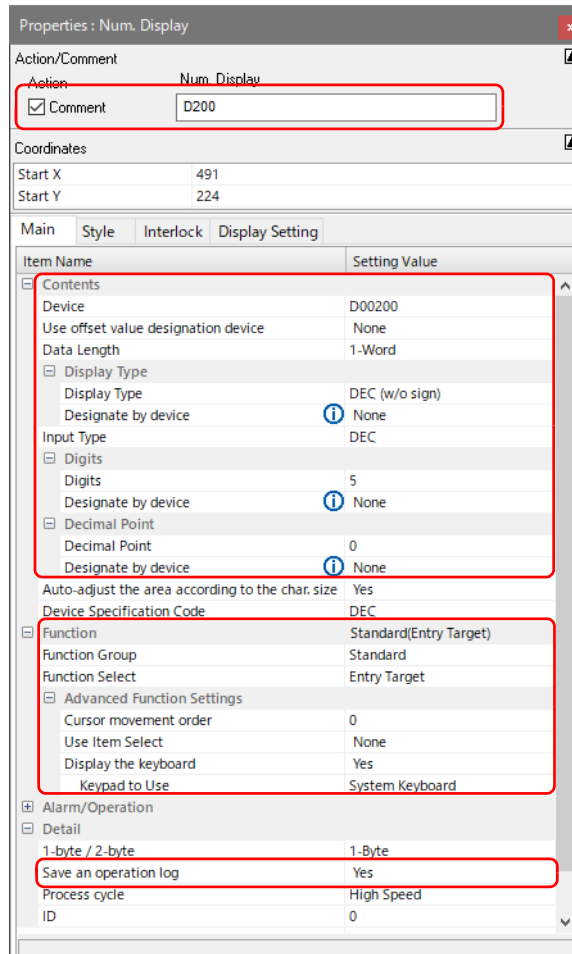
3. Create another switch by selecting the current switch and performing a copy and paste.

4. Display the right-click menu and select [Customize] → [Device Display] to display the device memory address at the lower left of each switch.
5. Change the switch text, output device memory, output action, and comment as follows.



Placing Numerical Data Display Parts

1. On the parts bar, right-click or click and hold the [Data Display] icon, and then click and place a [Num. Display] part.
2. Configure the properties of the numerical data display as shown below.



- Comment

Item	Description	Setting Value
Comment	Register a comment for the item. The registered comment is saved to the log. This can be changed collectively to the device memory notation of the output settings. Refer to page 7-7 .	Selected D200

- Main

Item	Description	Setting Value	
Contents	Device	Specify device memory for display and writing.	D200
	Data Length	Set the data length of the device memory. 1-Word, 2-Word	1-Word
	Display Type	Set the format of values to be displayed on the screen.	DEC (w/o sign)
	Digits	Set the number of digits. 1 to 32	5
	Decimal Point	Specify the decimal place. 0: No decimal place, 1 to 10: decimal place positioned at 1st to 10th place respectively	0
Function	Function Select	Specify the function.	Entry Target
	Cursor movement order	Set the order to move the cursor when the UP/DW keys on the keypad are pressed.	0
	Display the keyboard	This setting is available when [Function Select] is set to [Entry Target]. The keypad calling function is added.	Yes
	Keypad to Use	Select the keypad to use.	System Keyboard
Detail	Save an operation log	Save a log of a data update operation on the numerical data display (input from a keypad).	Yes

This completes the necessary settings.

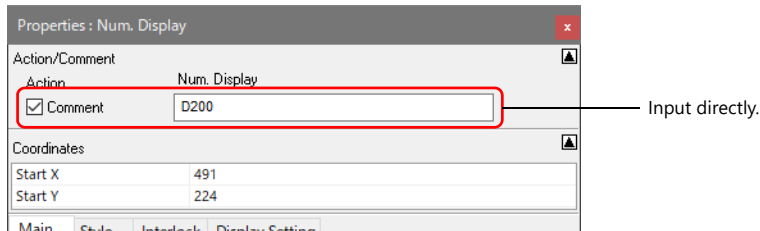


Batch changing comments

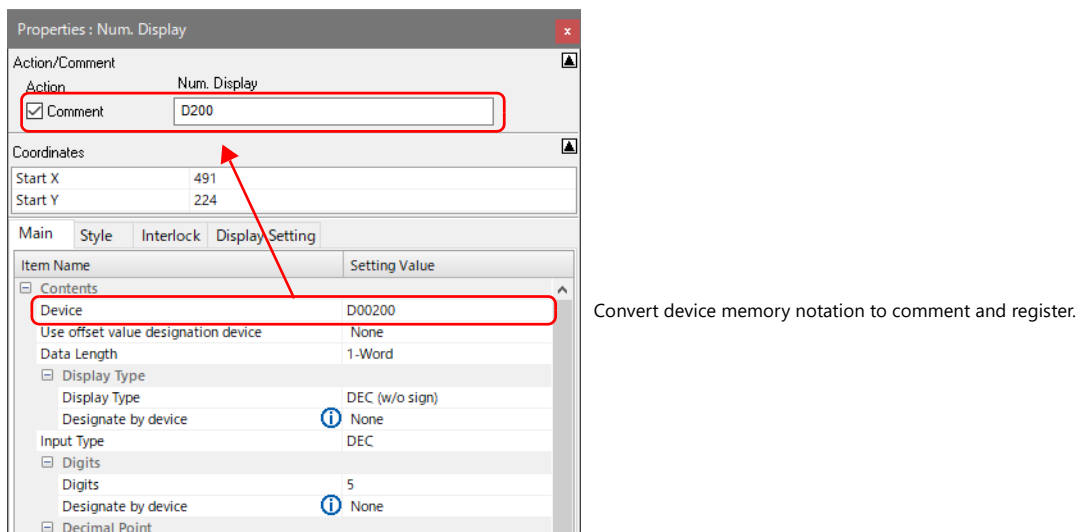
The comments registered to switches and data displays are saved to logs.

Comments can be set individually from the settings pane of each item, or the device memory notation can be set collectively.

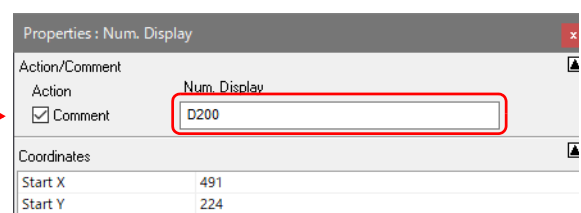
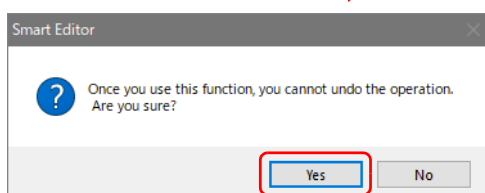
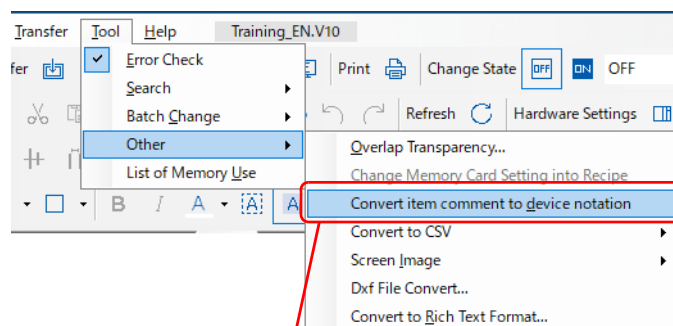
Method 1: Registering individually



Method 2: Setting the device notation collectively



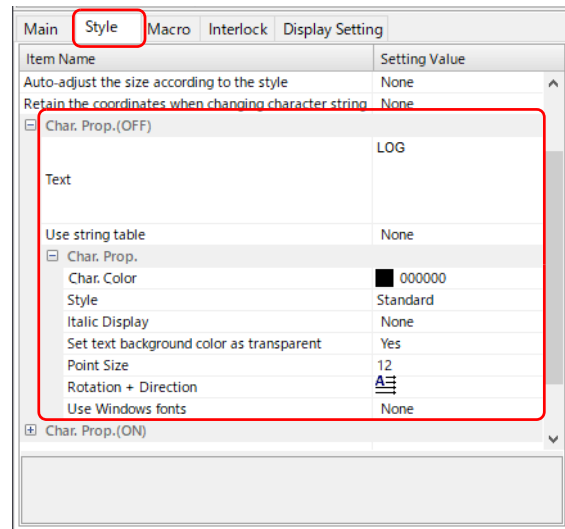
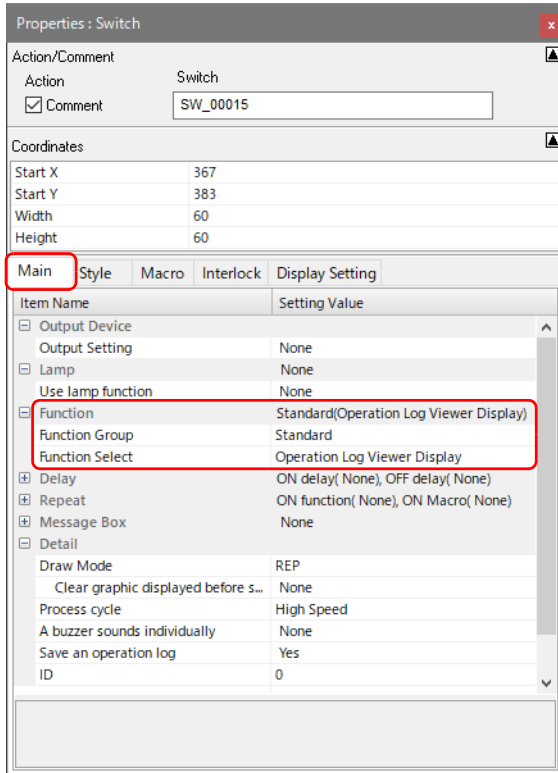
1. Click [Tool] → [Other] → [Convert item comment to device notation]. A confirmation window is displayed.
2. Click [Yes]. Comments are changed to the device memory notation.



Placing a Switch for Calling the Operation Log Viewer

Create a switch for displaying the operation log viewer.

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



• Main

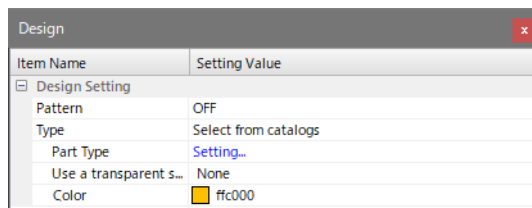
Item	Description	Setting Value
Function	Function Group	Specify the function.
	Function Select	Standard
		Operation Log Viewer Display

• Style

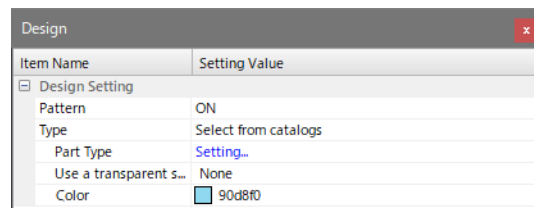
Item	Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.
	Char. Prop.	Set properties including text color, style, and size.
		[Char. Color]: Black (000000) [Point Size]: 12

3. Set the color and design on the [Design] properties pane.

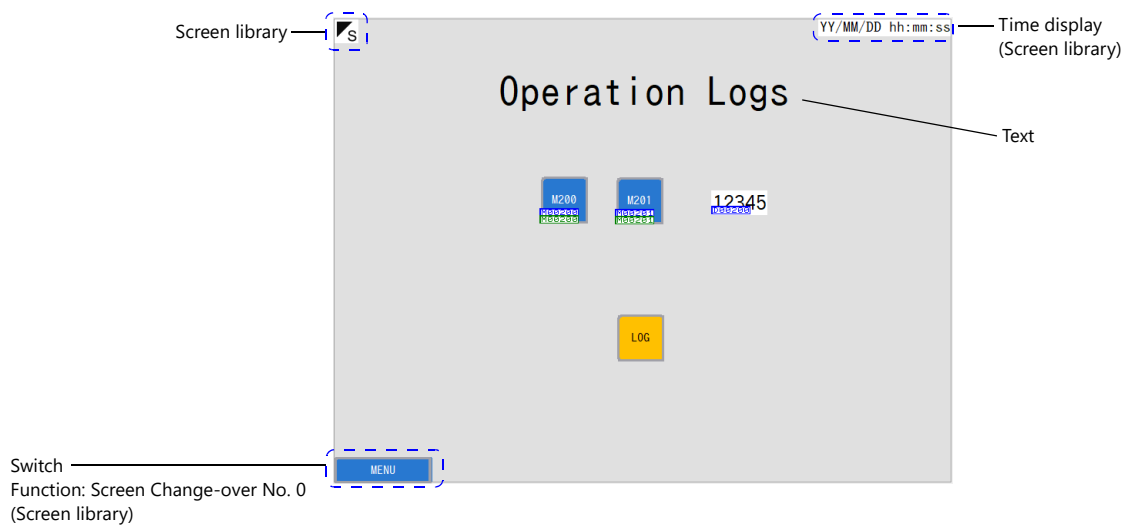
• OFF: Yellow



• ON: Light blue



Placing Text and a Screen Library



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

7.4 Checking Operation on MONITOUCH

7.4.1 List of Used Device Memory Addresses

Device Memory	Description	Remarks
M200	Switch: Output device memory (momentary), lamp device memory	
M201	Switch: Output device memory (alternate), lamp device memory	
D200	Numerical data display: Function: Entry Target	Keypad display enabled

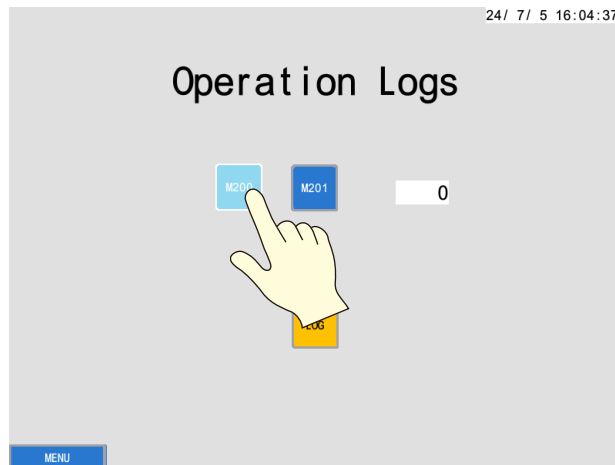
7.4.2 Storage Device Specifications

For details, refer to "3.4.2 Storage Device Specifications".

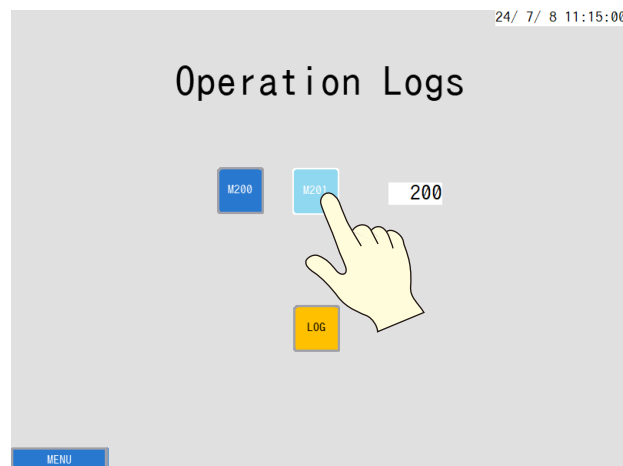
7.4.3 Operation on MONITOUCH

Checking the Switch Operation Log

1. Press the M200 (momentary) switch.

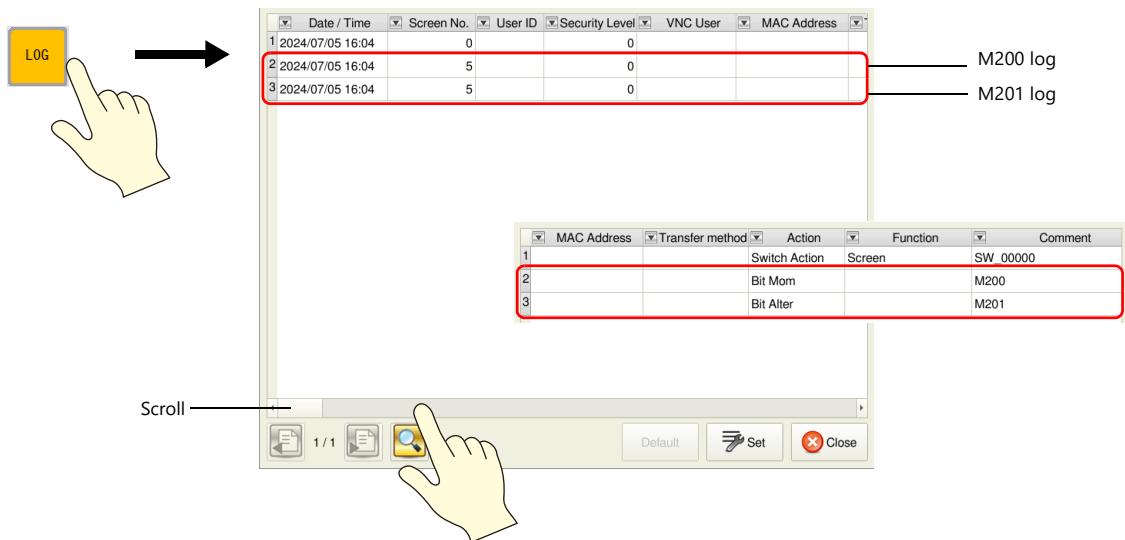


2. Press the M201 (alternate) switch.



Because M201 is set to alternate, it stays lit up.

- Press the switch that displays the operation log viewer.
Scroll and check that log entries for switches M200 and M201 exist.

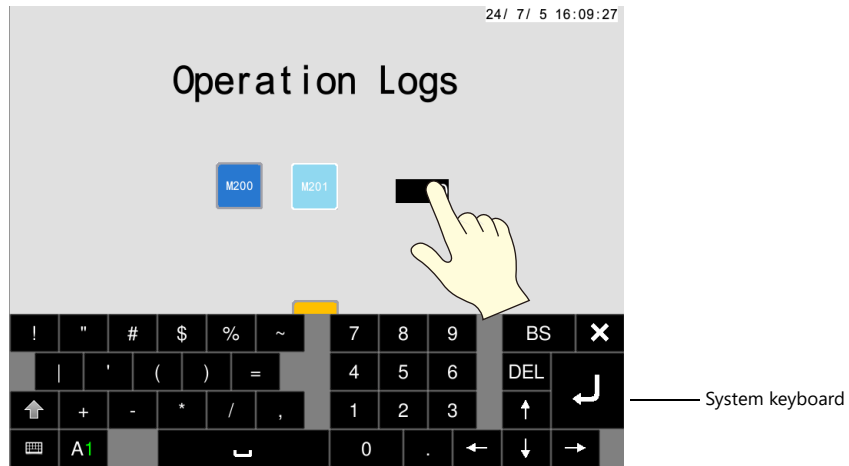


- Press the [Close] switch.

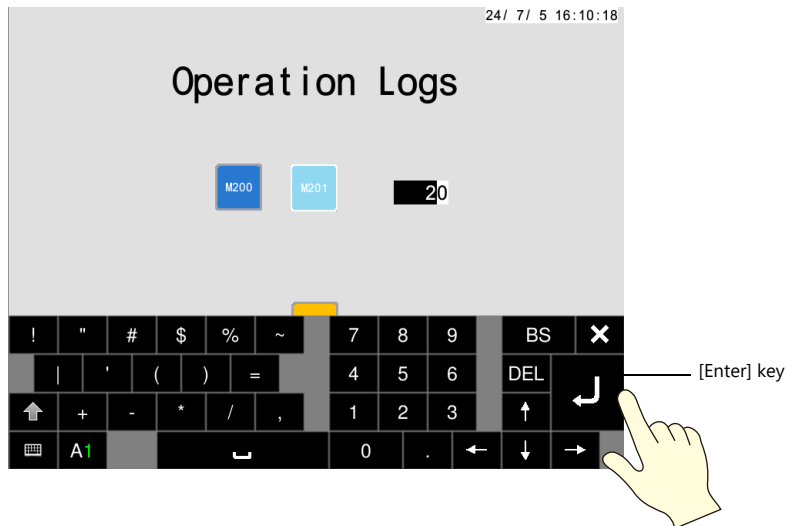
☺ The operation log viewer can also be displayed from the system menu.
Press the [Operation Log] switch on the system menu. Display is also possible in Local mode.

Checking the Data Update Log

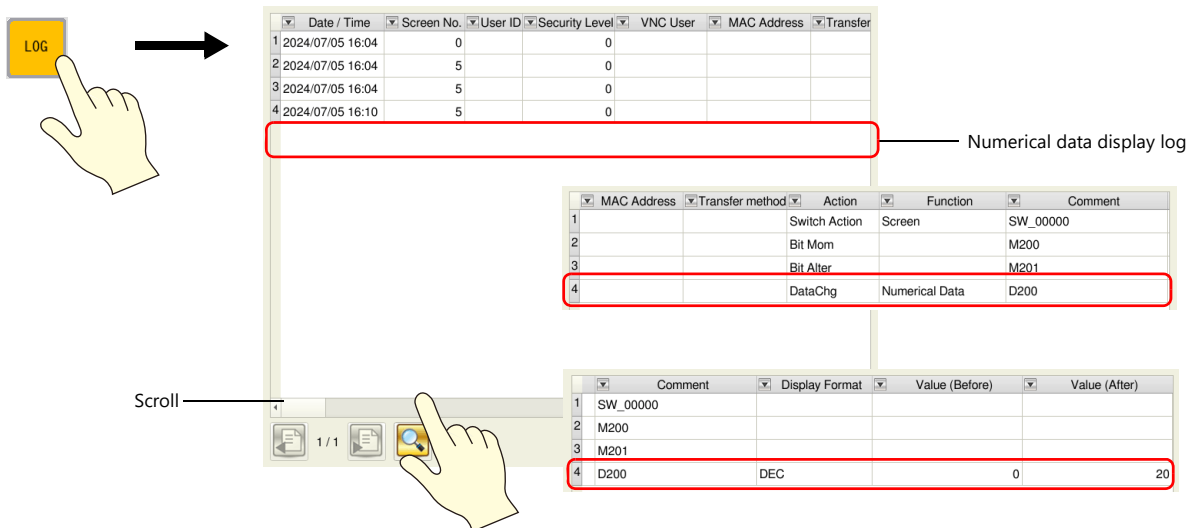
1. Press the numerical data display (D200). This displays the system keyboard and highlights the value.



2. Enter "20" with the system keyboard and write the value by pressing the [Enter] key.



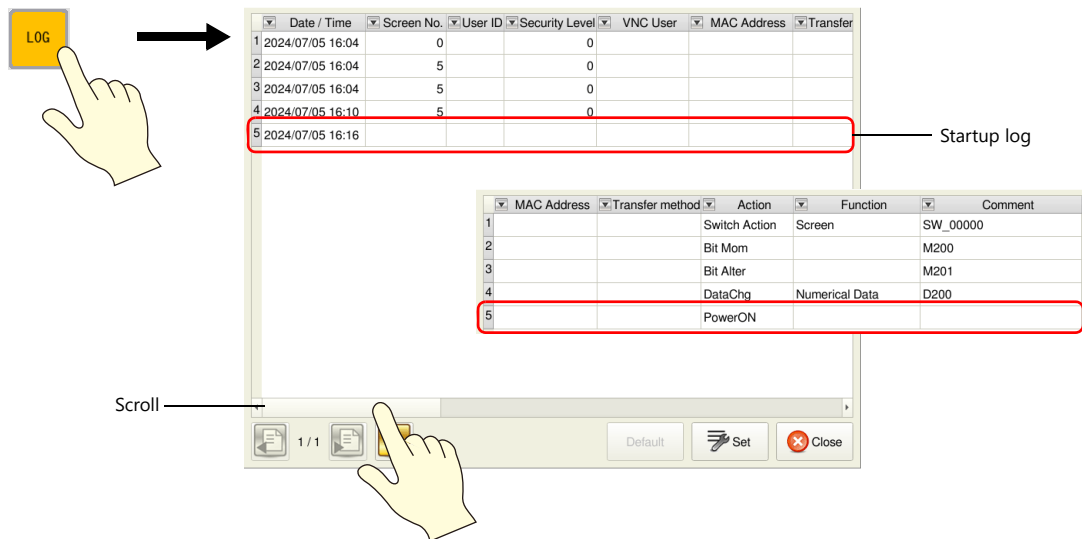
3. The system keyboard disappears and "20" appears on the numerical data display.
4. Press the switch that displays the operation log viewer. Scroll and check that a log of the data value before and after update exists.



5. Press the [Close] switch.

Checking the Startup Log

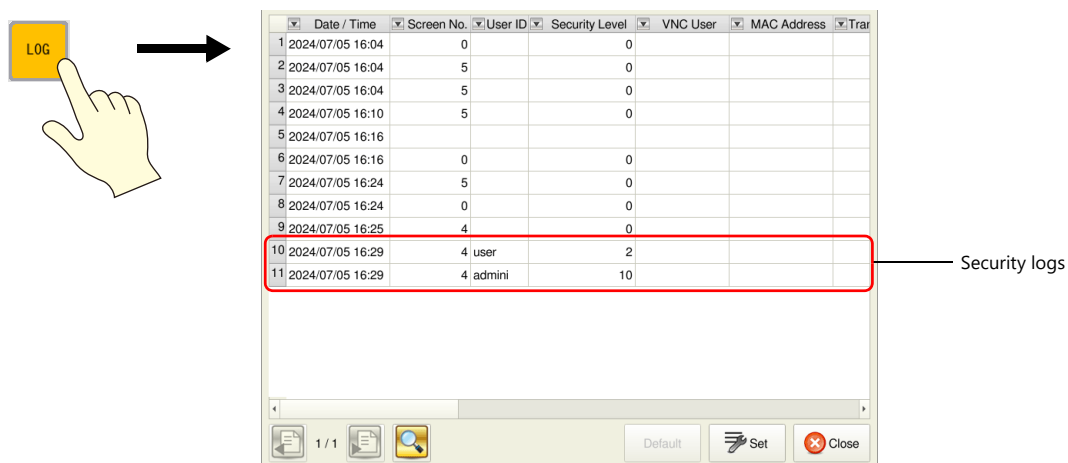
1. Turn OFF power to MONITOUCH and then turn it ON again.
2. Press the switch that displays the operation log viewer.
Check that a power ON log entry exists.



3. Press the [Close] switch.

Checking the Security Log

1. Changeover to the security screen (screen No. 4).
2. Log in with "user" and "admini" and press switches M150, M151, and M152.
3. Return to the operation log screen.
4. Press the switch that displays the operation log viewer.
Check that log entries for each user ID and security level exist.

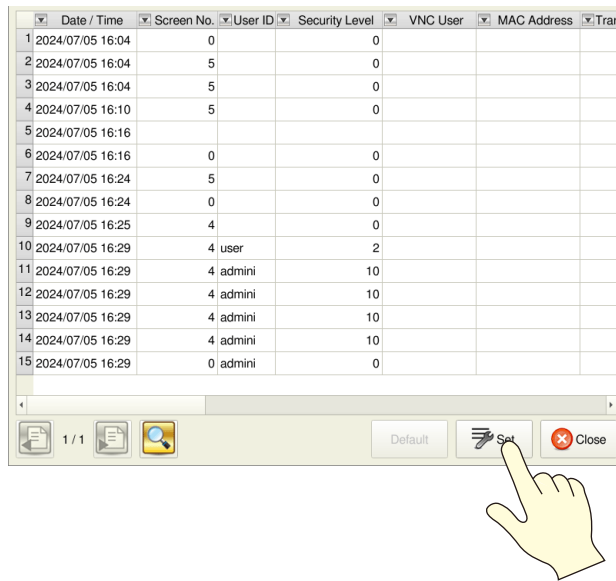


5. Press the [Close] switch.

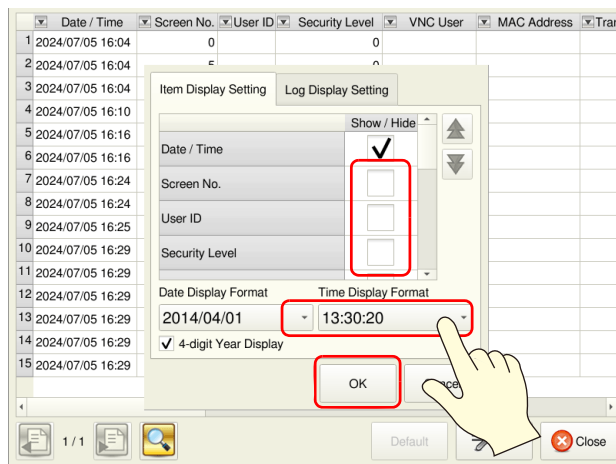
Showing/Hiding Items

The items to be displayed in the operation log viewer can be selected.

1. Press the [Set] button in the operation log viewer. A setting window is displayed.

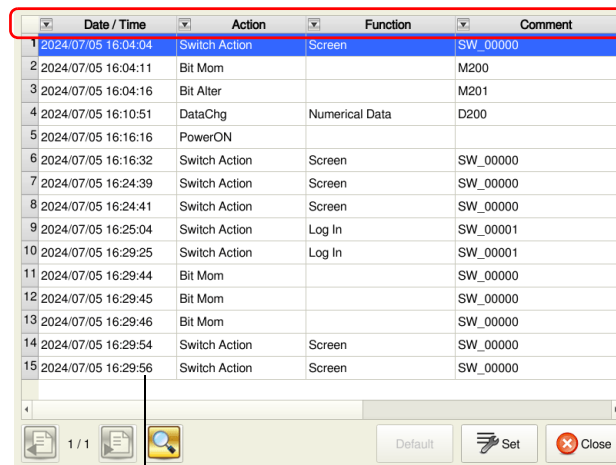


2. On the [Item Display Setting] tab, deselect the items to be hidden, change the date and time display formats, and press [OK].



Selected: Show
Blank: Hide

3. The operation log viewer display changes accordingly.



The following are hidden:

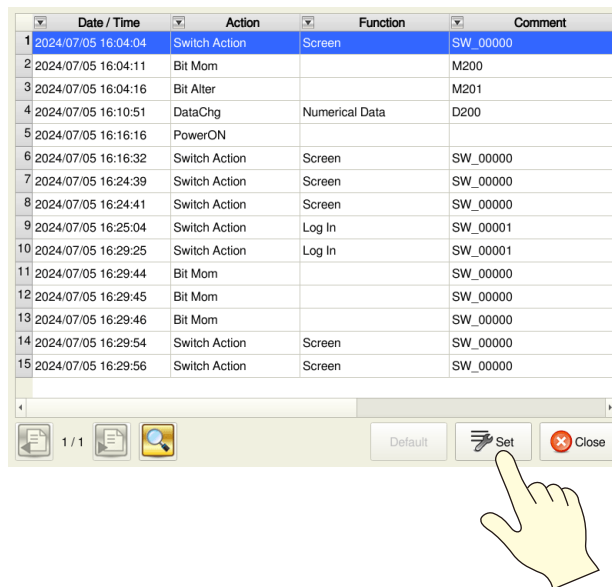
- Screen No.
- User ID
- Security Level
- VNC User
- MAC Address
- Transfer Method

Displayed down to seconds

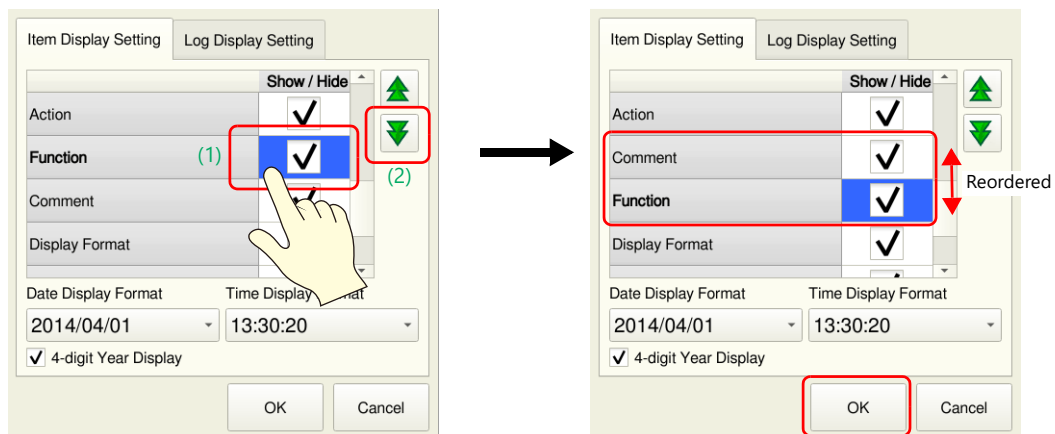
Changing Order of Display

The order of display in the operation log viewer can be set.

1. Press the [Set] button in the operation log viewer. A setting window is displayed.



2. Select an item on the [Item Display Setting] tab (1) and press the [↑] or [↓] switch (2). After reordering item positions, press [OK].



3. The operation log viewer display changes accordingly.

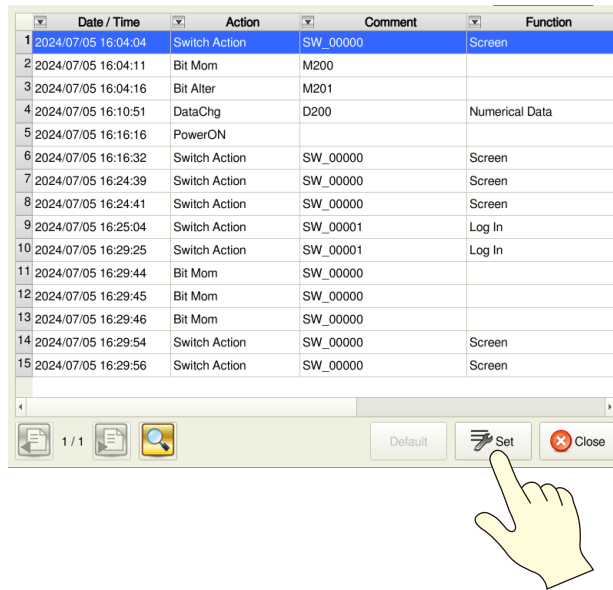
	Date / Time	Action	Comment	Function
1	2024/07/05 16:04:04	Switch Action	SW_00000	Screen
2	2024/07/05 16:04:11	Bit Mom	M200	
3	2024/07/05 16:04:16	Bit Alter	M201	
4	2024/07/05 16:10:51	DataChg	D200	Numerical Data
5	2024/07/05 16:16:16	PowerON		
6	2024/07/05 16:16:32	Switch Action	SW_00000	Screen
7	2024/07/05 16:24:39	Switch Action	SW_00000	Screen
8	2024/07/05 16:24:41	Switch Action	SW_00000	Screen
9	2024/07/05 16:25:04	Switch Action	SW_00001	Log In
10	2024/07/05 16:29:25	Switch Action	SW_00001	Log In
11	2024/07/05 16:29:44	Bit Mom	SW_00000	
12	2024/07/05 16:29:45	Bit Mom	SW_00000	
13	2024/07/05 16:29:46	Bit Mom	SW_00000	
14	2024/07/05 16:29:54	Switch Action	SW_00000	Screen
15	2024/07/05 16:29:56	Switch Action	SW_00000	Screen

[Comment] and [Function] positions are reordered.

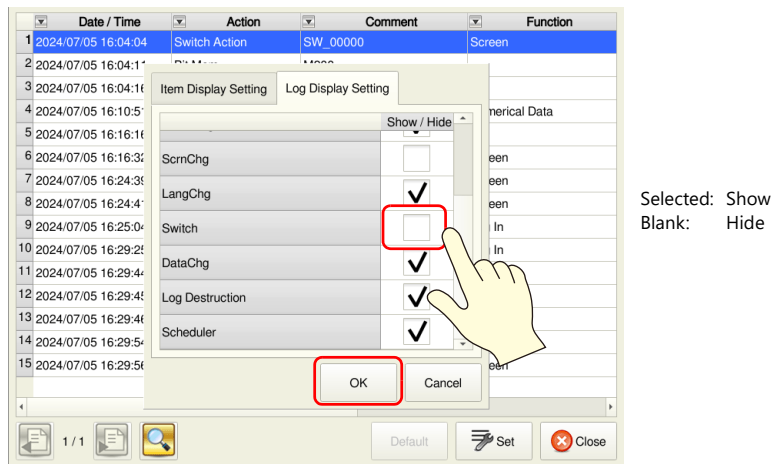
Log Display Settings

The logging targets for display in the operation log viewer can be selected.

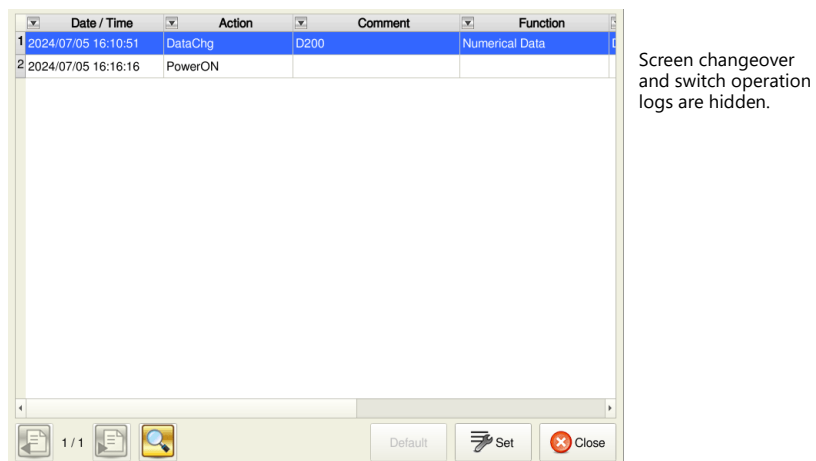
1. Press the [Set] button in the operation log viewer. A setting window is displayed.



2. On the [Log Display Setting] tab, deselect logs to be hidden and press [OK].



3. The operation log viewer display changes accordingly.



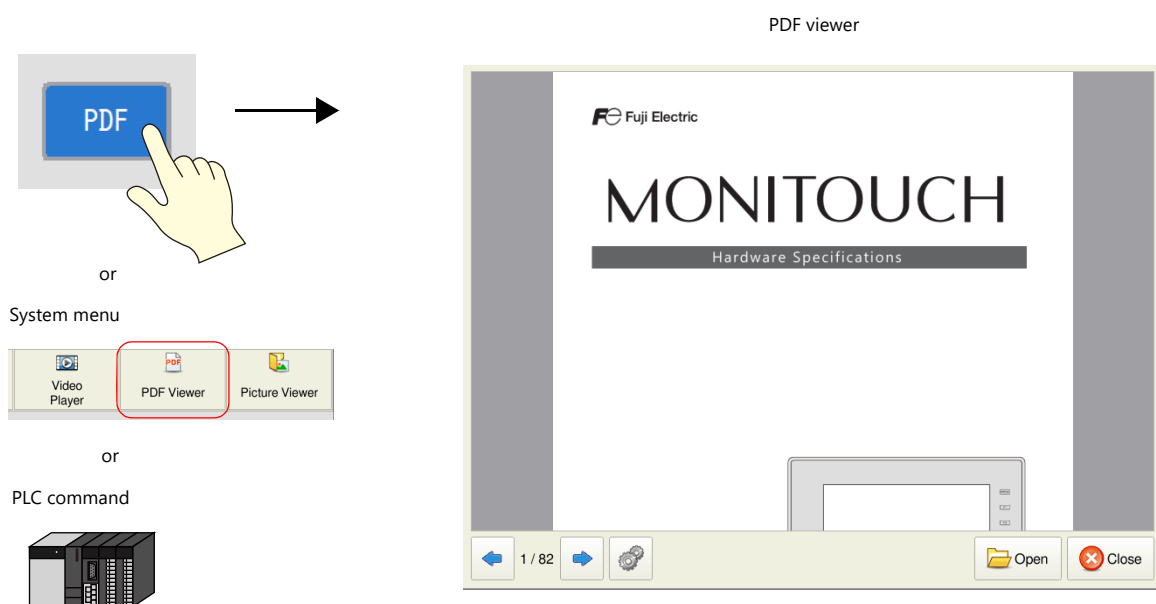
8 Viewer Functions

8.1 Overview

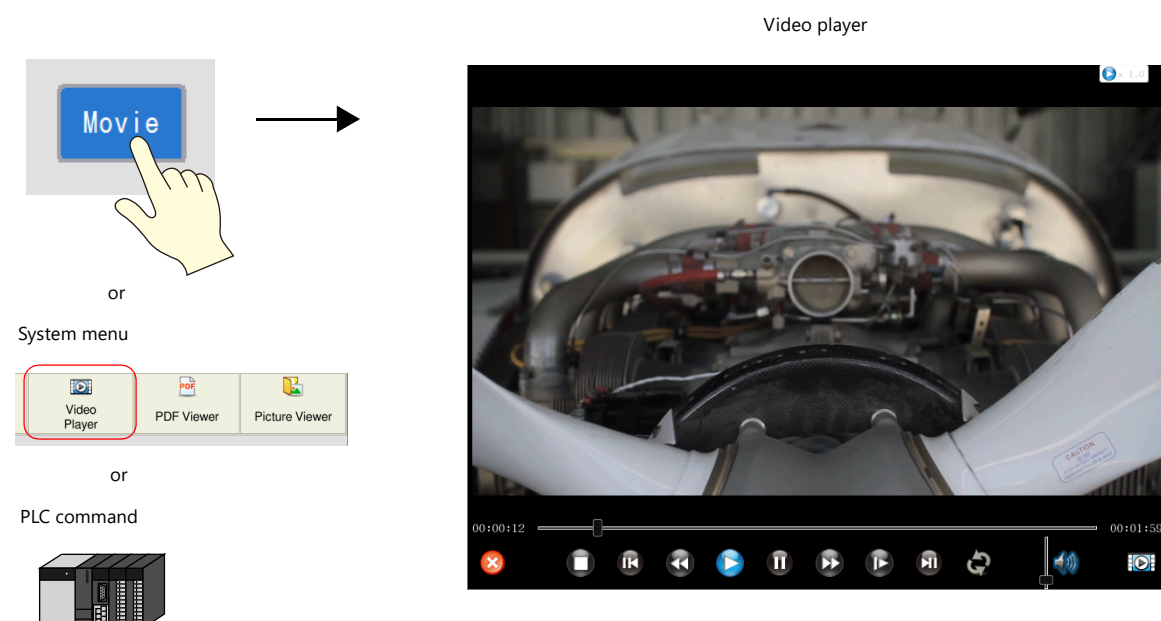
There are six viewer functions.

Function	Description
PDF viewer	Displays PDF files saved to a storage device (SD card or USB flash drive).
Video player	Displays video files (*.mp4) saved to a storage device (SD card or USB flash drive).
Picture viewer	Displays image files (*.JPG/*.PNG/*.bmp) saved to a storage device (SD card or USB flash drive).
Storage viewer	Used to move, copy, and delete files saved to a storage device (SD card or USB flash drive).
Operation log viewer	Displays operation logs of MONITOUCH. For details, refer to "7 Operation Logs" page 7-1 .
Data transfer viewer	This is used with the data transfer service function. It can access a server over Ethernet from a client MONITOUCH to upload (PUT) files and folders from the storage device connected to MONITOUCH, and download (GET) files from a server. This is not used in this manual. For details, refer to "6.11 Data Transfer Service" in Reference Manual 2.

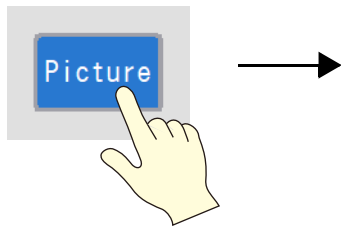
- PDF viewer



- Video player

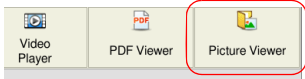


• Picture viewer



or

System menu

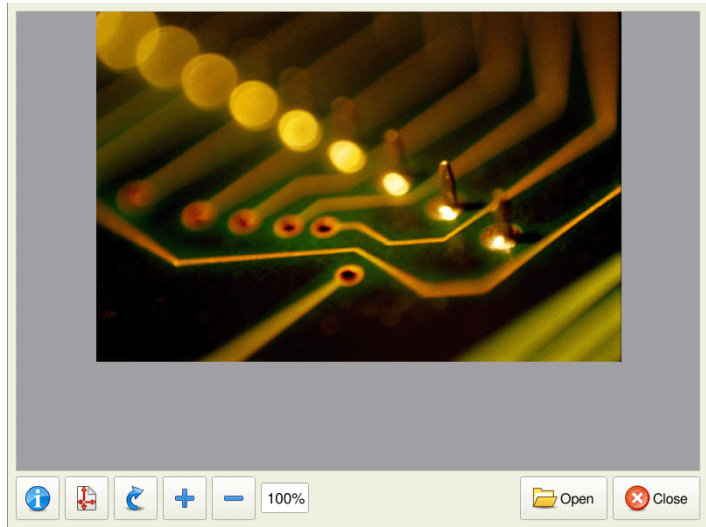


or

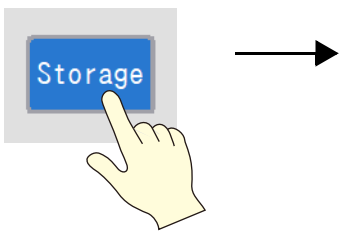
PLC command



Picture viewer

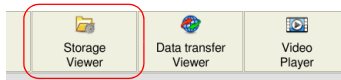


• Storage viewer

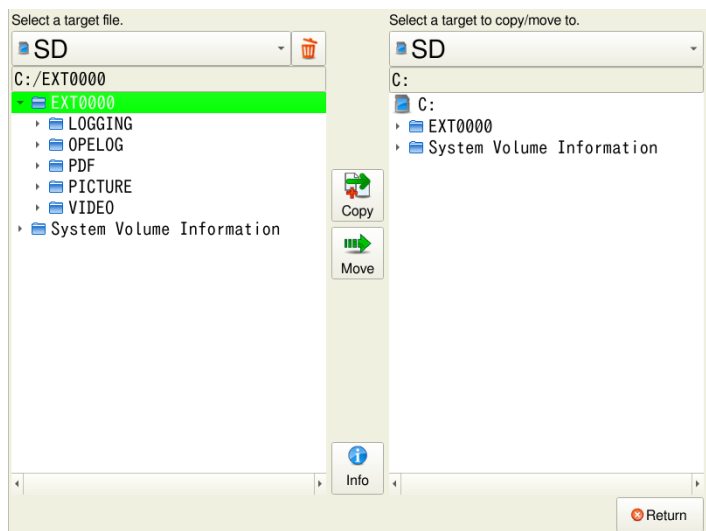


or

System menu



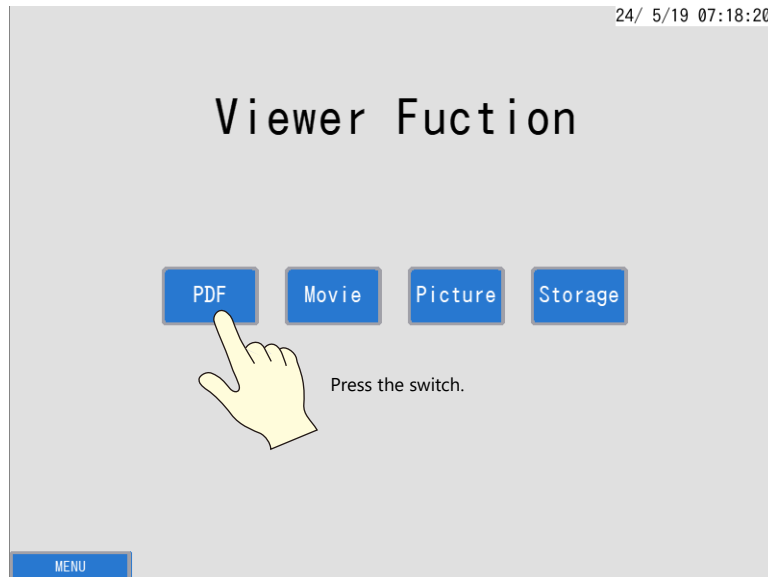
Storage viewer



8.2 Example Screen

This chapter explains how to create the following screen.
Each viewer screen can be displayed by pressing the respective switch.

Screen No. 6



Example: PDF viewer



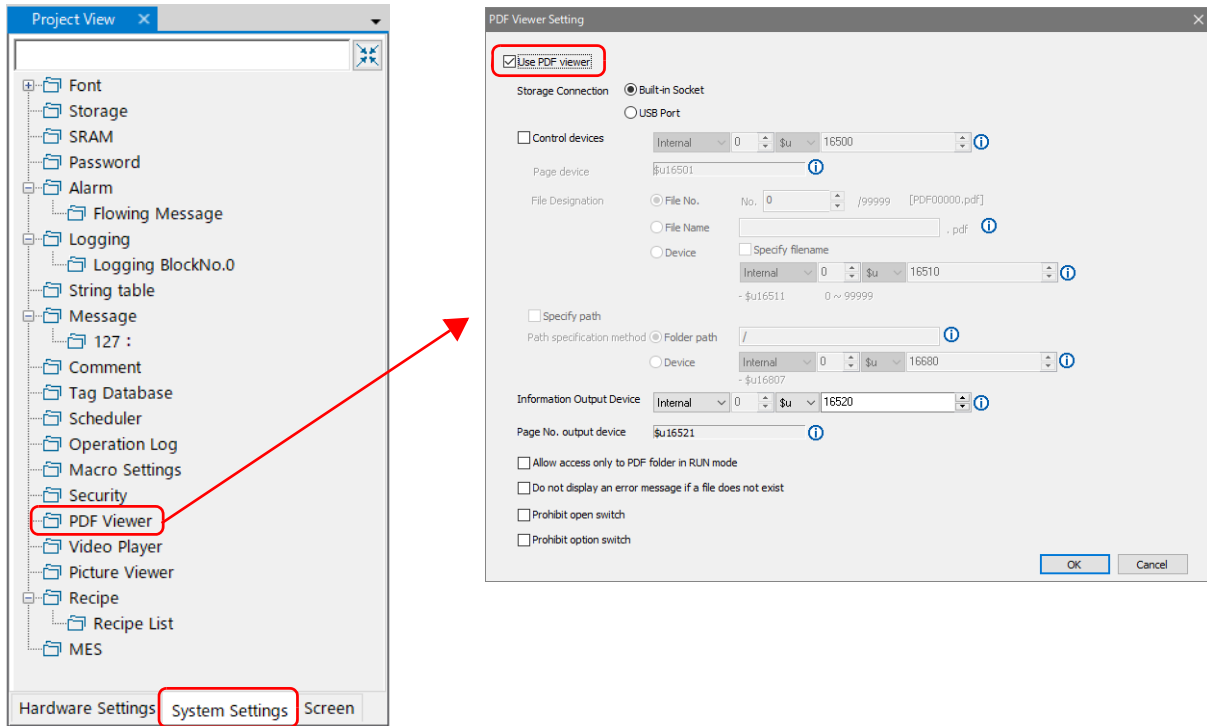
8.3 Screen Creation

8.3.1 PDF Viewer

PDF Viewer Settings

Configure settings for using the PDF viewer.

Double-click [PDF Viewer] at the [Project View] pane → [System Settings] tab, and configure settings on the [PDF Viewer Setting] window.



Item	Description	Setting Value
Use PDF viewer	Select this checkbox to use the PDF viewer.	Selected
Storage Connection	Select the storage device where PDF files are stored. This can be changed on the PDF viewer as necessary.	Built-in Socket
Control devices	Showing and hiding is performed according to bit operation. *1 Bit 0 OFF → ON: Show Bit 0 ON → OFF: Hide	Deselected
Page device	Specify the page number to display initially. No.: 1 to 65535 *2	-
File Designation *3	Specify the method for specifying files.	-
	File No. 0 to 99999 (Filename: PDF00000.pdf to PDF99999.pdf)	
	File Name Maximum of 64 one-byte characters, or 32 two-byte characters	
	Device Set the device memory address for specifying the file. The operation differs depending on whether the [Specify filename] checkbox is selected or not.	
	Specify filename: Deselected Specify a file number. 0 to 99999 (Filename: PDF00000.pdf to PDF99999.pdf) (Two words are used.)	
	Specify filename: Selected Specify a filename. Maximum of 64 one-byte characters, or 32 two-byte characters (32 words are used.) *4 * The extension does not need to be specified.	

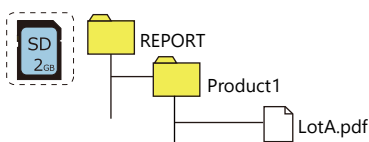
Item	Description	Setting Value						
Specify path *3	<p>Select this checkbox to specify a folder as the storage location of PDF files.</p> <p>Storage location: Deselected: (Access folder)\PDF Selected: Folder path specified</p> <table border="1"> <tr> <td>Path specification method</td> <td>Select the method for specifying the path of the folder where PDF files are stored.</td> </tr> <tr> <td>Folder path</td> <td>Enter the desired path directly. The slash "/" at the beginning of the field is required.</td> </tr> <tr> <td>Device</td> <td>Specify the device memory address for specifying the path. *4 This is to be NULL (0) terminated.</td> </tr> </table> <ul style="list-style-type: none"> • Limitations <ul style="list-style-type: none"> - To be specified within 256 one-byte alphanumeric characters. Two-byte characters are prohibited. - Slashes "/" are used as the delimiter. The backslash "\" cannot be used. - A slash "/" is not necessary at the end of the path. 	Path specification method	Select the method for specifying the path of the folder where PDF files are stored.	Folder path	Enter the desired path directly. The slash "/" at the beginning of the field is required.	Device	Specify the device memory address for specifying the path. *4 This is to be NULL (0) terminated.	-
Path specification method	Select the method for specifying the path of the folder where PDF files are stored.							
Folder path	Enter the desired path directly. The slash "/" at the beginning of the field is required.							
Device	Specify the device memory address for specifying the path. *4 This is to be NULL (0) terminated.							
Information Output Device	The state of the PDF viewer is output. Bit 0: PDF viewer status (0: hide, 1: show) Bit 1: 1: PDF file does not exist Bit 2: 1: Page number does not exist	\$u16520						
Page No. output device	The page number that is currently displayed is output. No.: 1 to 65535	\$u16521						
Allow access only to PDF folder in RUN mode	Specify the location to access when the [Open] switch is pressed on the PDF viewer screen in RUN mode. <ul style="list-style-type: none"> • Deselected: All folders of the storage device (SD/USB) can be accessed from the [Open] switch. • Selected: Only the contents of the PDF folder in the access folder set for [Storage Connection] are displayed. The storage device and folder can be selected in Local mode. 	Deselected						
Do not display an error message if a file does not exist	Set the action to take when a PDF file does not exist on the storage device. <ul style="list-style-type: none"> • Deselected: An error message "The specified file was not found." is displayed. • Selected: An error message is not displayed. 	Deselected						
Prohibit open switch *5	Select this checkbox to invalidate the [Open] switch on the PDF viewer.	Deselected						
Prohibit option switch *5	Select this checkbox to invalidate the option switch on the PDF viewer.	Deselected						

*1 If the display bit is ON when entering RUN mode, the PDF viewer is displayed.
 When the PDF viewer is displayed by turning the display bit ON but the PDF viewer is then closed using the [Close] switch, the display bit stays ON.
 Turn the display bit OFF by using bit 0 of the information output device memory (0: hide).

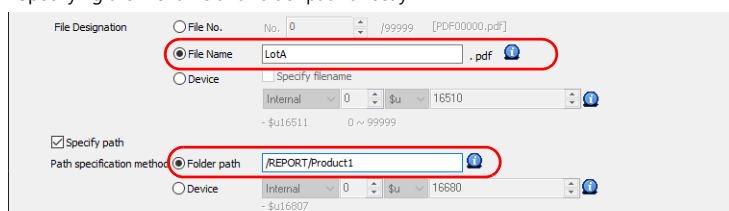
*2 If a page number that does not exist is specified and the PDF viewer is displayed, the first page of the PDF file is displayed.

*3 Setting examples

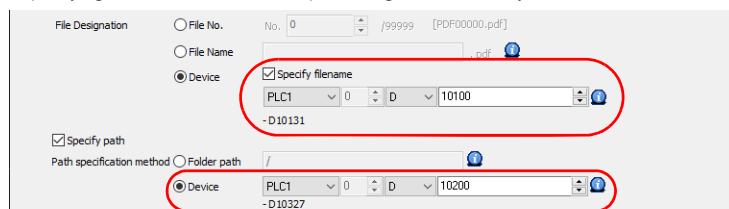
When displaying the following file



• Specifying the filename and folder path directly



• Specifying the filename and folder path using device memory



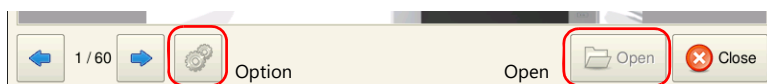
Specifying the filename and folder path using PLC commands
 D10100 ... : LotA
 D10200 ... : /REPORT/Product1

*4 Text processing

Internal device memory: Fixed to LSB → MSB

PLC device memory: The setting at the [Project View] pane → [Hardware Settings] tab → [Connection Device] → [8 Way Comm] → [PLCx] → [Properties] pane → [Text Process] is effective.

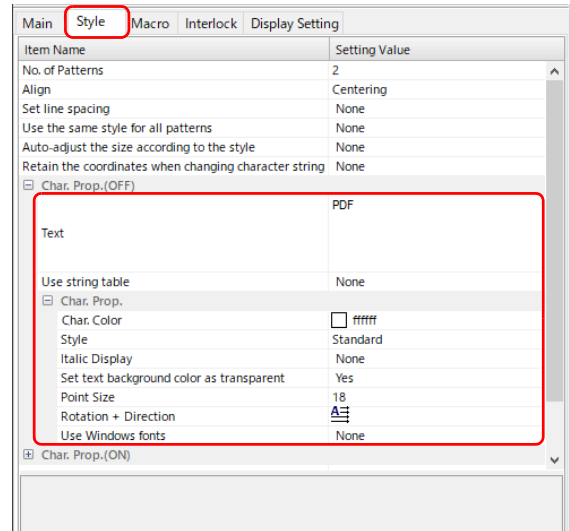
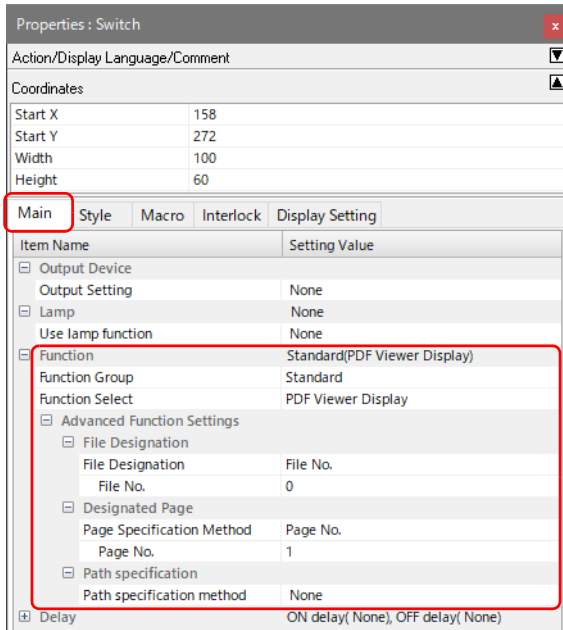
*5 The switch on the PDF viewer is grayed out and inoperable.



Placing a Switch for Calling the PDF Viewer

Create a switch for displaying the PDF viewer.

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



• Main

Item	Description	Setting Value
Function		Standard
Function Group	Specify the function.	PDF Viewer Display
Function Select		
File Designation	Specify the method for specifying files. File No. 0 to 99999 (Filename: PDF00000.pdf to PDF99999.pdf) File Name Maximum of 64 one-byte characters, or 32 two-byte characters *1 The extension does not need to be specified. Device Specify File Name: None Specify a file number. 0 to 99999 (Filename: PDF00000.pdf to PDF99999.pdf) (Two words are used.) Specify File Name: Yes Specify a filename. Maximum of 64 one-byte characters, or 32 two-byte characters (32 words are used.) *1 The extension does not need to be specified.	File No. 0
Designated Page *2	Specify the method for specifying the page number. Page No.: 0 to 65535 Device: Set the device memory address for specifying the page number (No. 1 to 65535)	Page No. 1
Path specification	Select the method for specifying the path of the folder where PDF files are stored. None: (Access folder)\PDF Folder Path: Enter the desired path directly. The slash "/" at the beginning of the field is required. Device: Specify the device memory address for specifying the path. This is to be NULL (0) terminated. *1 • Limitations - To be specified within 256 one-byte alphanumeric characters. Two-byte characters are prohibited. - Slashes "/" are used as the delimiter. The backslash "\" cannot be used. - A slash "/" is not necessary at the end of the path. - If specifying a root directory, enter only the first slash "/".	None

*1 Text processing

Internal device memory: Fixed to LSB → MSB

PLC device memory: The setting at the [Project View] pane → [Hardware Settings] tab → [Connection Device] → [8 Way Comm] → [PLCx] → [Properties] pane → [Text Process] is effective.

*2 If a page number that does not exist is specified and the PDF viewer is displayed, the first page of the PDF file is displayed.

• Style

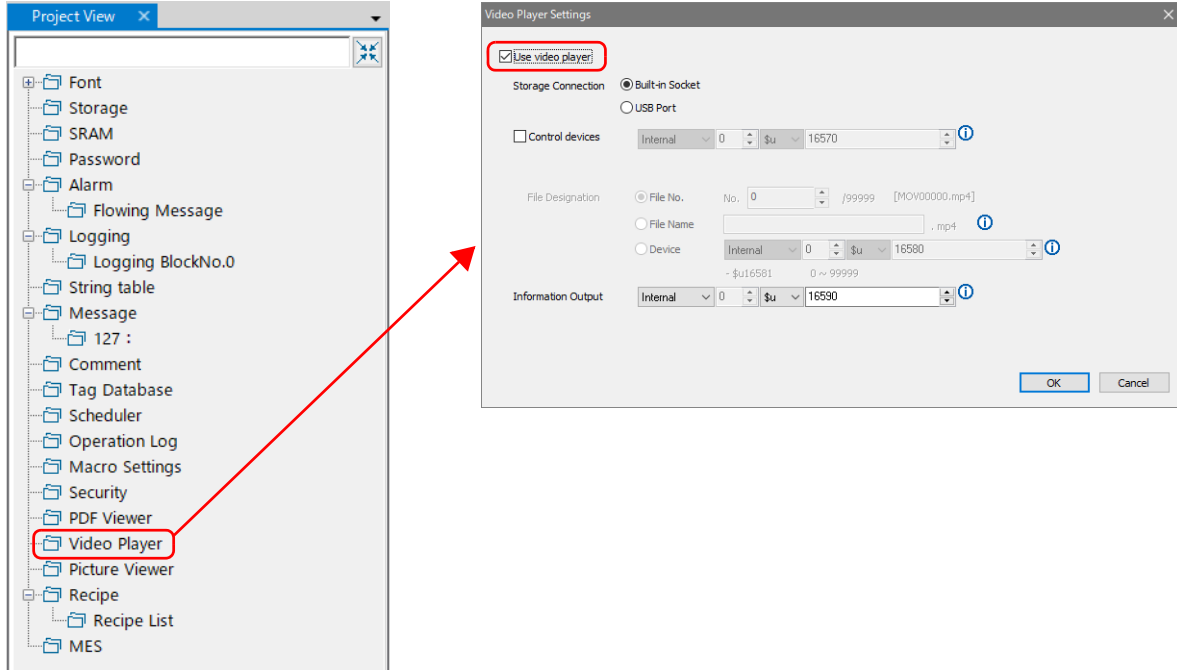
Item		Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.	PDF
	Char. Prop.	Set properties including text color, style, and size.	[Char. Color]: White (000000) [Point Size]: 18

8.3.2 Video Player

Video Player Settings

Configure settings for using the video player.

Double-click [Video Player] at the [Project View] pane → [System Settings] tab, and configure settings on the [Video Player Settings] window.



Item	Description	Setting Value																																
Use video player	Select this checkbox to use the video player.	Selected																																
Storage Connection	Select the storage device to refer to for video files. This can be changed on the video player as necessary.	Built-in Socket																																
Control devices	Control the video player using bits. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td><td></td> </tr> </table> <p style="margin-left: 40px;">Reserved for system</p> <p style="margin-left: 100px;">Operation buttons 0: Show 1: Hide *3</p> <p style="margin-left: 100px;">Repeat playback *2 0: No repeat 1: Repeat</p> <p style="margin-left: 150px;">Video player *1 1 → 0 (edge): Hide 0 → 1 (edge): Show</p>	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Deselected
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																			
0	0	0	0	0	0	0	0	0	0	0	0	0	0																					
File Designation	Specify the method for specifying files. File No.: 0 to 99999 (Filename: MOV00000.mp4 to MOV99999.mp4) File Name: Maximum of 64 one-byte characters, or 32 two-byte characters Device: Set the device memory address for specifying file numbers 0 to 99999. (Two words are used.)	-																																

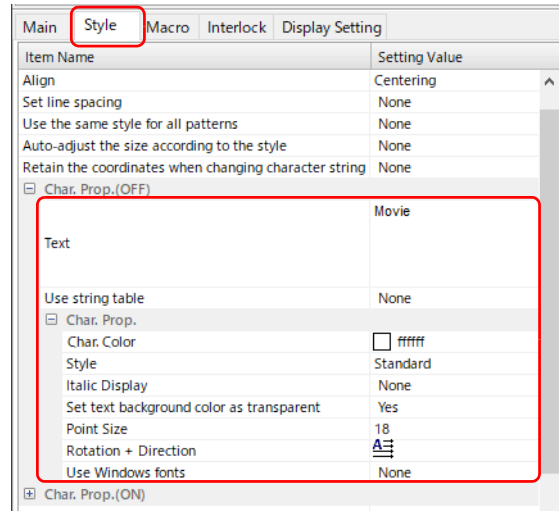
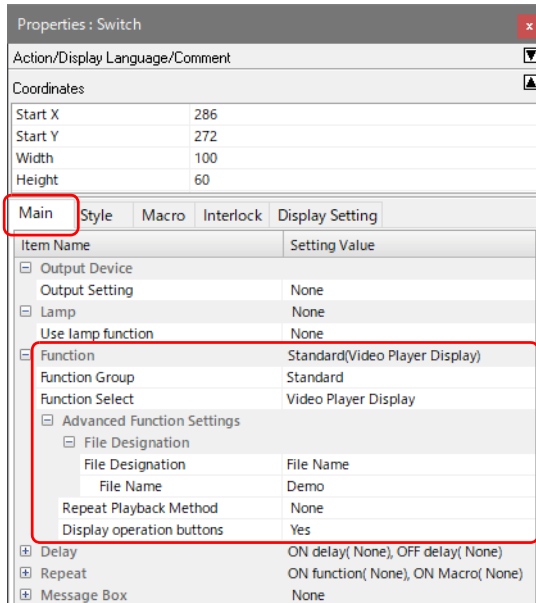
Item	Description	Setting Value																																
Information Output Device	Use four consecutive words to store the following information.	\$u16590																																
n	<p>The state of the video viewer is output.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td><td></td> </tr> </table> <p style="margin-left: 40px;"> Reserved for system Error 0: None 1: Occurring 1: Operation buttons are hidden 1: Repeated playback is valid Video player 0: Hide 1: Show *4 </p>	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0					\$u16590
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																			
0	0	0	0	0	0	0	0	0	0	0	0																							
n+1	The file number of the currently playing file is output. No. 0 to 99999	\$u16591																																
n+2																																		
n+3	Error code 0: No errors 1: The specified file does not exist.	\$u16593																																

- *1 If the display bit is ON when entering RUN mode, the video player is displayed. When the video player is displayed by turning the display bit ON but the video player is then closed using the [Close] switch, the display bit stays ON. Turn the display bit OFF by using bit 0 of the information output device memory (0: hide).
- *2 If performing repeated playback with [File Designation] set to [Device], the file number that is stored in the specified device memory is acquired when the file currently in playback ends, and playback starts again.
- *3 If operation buttons are hidden, the "quit" button is displayed when playback of the video file ends. When displaying the video player using the system menu, this bit is set to "1" when the File List screen is displayed.

Placing a Switch for Calling the Video Player

Create a switch for displaying the video player.

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



• Main

Item		Description	Setting Value
Function	Function Group	Specify the function.	Standard
	Function Select		Video Player Display
File Designation	File Designation	Specify the method for specifying files. File No.: 0 to 99999 (Filename: MOV00000.mp4 to MOV99999.mp4) File Name: Maximum of 64 one-byte characters, or 32 two-byte characters (The extension does not need to be specified.) Device: Set the device memory address for specifying file numbers 0 to 99999. (Two words are used.)	File Name Demo
	Repeat Playback Method		Repeat playback of a specified file. None: Repeated playback is not performed. Fixed: Playback is repeated while the video player is displayed. Device: Control repeated playback. 0: Repeated playback is not performed. 1: Repeated playback is performed.
Display operation buttons	Display operation buttons	Display operation buttons at the bottom of the video player. When set to [None], the "quit" button is displayed when playback of the video file ends.	Yes

• Style

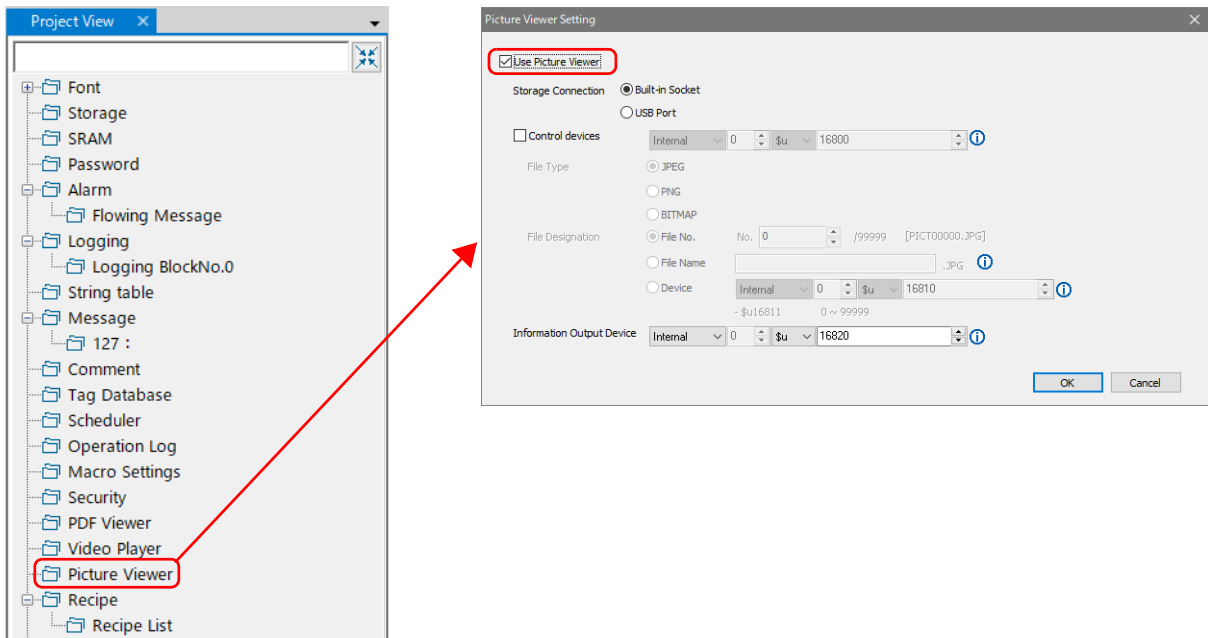
Item		Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.	Movie
	Char. Prop.	Set properties including text color, style, and size.	[Char. Color]: White (000000) [Point Size]: 18

8.3.3 Picture Viewer

Picture Viewer Settings

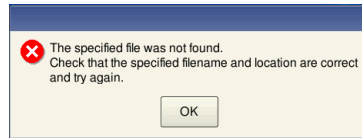
Configure settings for using the picture viewer.

Double-click [Picture Viewer] at the [Project View] pane → [System Settings] tab, and configure settings on the [Picture Viewer Setting] window.



Item	Description	Setting Value																																
Use Picture Viewer	Select this checkbox to use the picture viewer.	Selected																																
Storage Connection *1	Select the storage device to refer to for image files. This can be changed on the picture viewer as necessary.	Built-in Socket																																
Control devices	Showing and hiding is performed according to bit operation. *2 <table border="1" style="margin: 10px auto;"> <tr> <td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td> </tr> </table> <p style="text-align: center;">Reserved for system Picture viewer</p> <p style="text-align: right;">1 → 0 (edge): Hide 0 → 1 (edge): Show</p>	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Deselected
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																			
File Type	Select an image file type. JPEG (.JPG) PNG (.PNG) BITMAP (.bmp)	-																																
File Designation	Specify the method for specifying files. File No.: 0 to 99999 (Filename: PICT00000 to PICT99999) File Name: Maximum of 64 one-byte characters, or 32 two-byte characters Device: Set the device memory address for specifying file numbers 0 to 99999. (Two words are used.)	-																																
Information Output Device	The state of the picture viewer is output. <table border="1" style="margin: 10px auto;"> <tr> <td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td> </tr> </table> <p style="text-align: center;">Reserved for system</p> <p style="text-align: center;">1: The specified image file is not found.</p> <p style="text-align: right;">Status of picture viewer 0: Hide 1: Show</p>	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$u16820
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0																			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																			

*1 If the specified file is not found on the storage device, an error is indicated when the picture viewer is displayed.

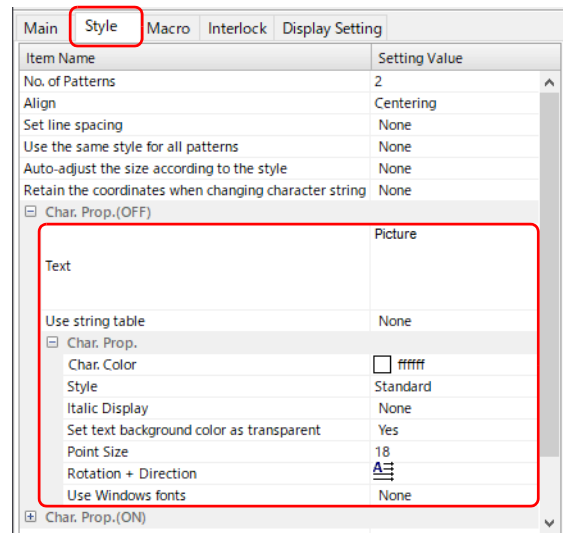
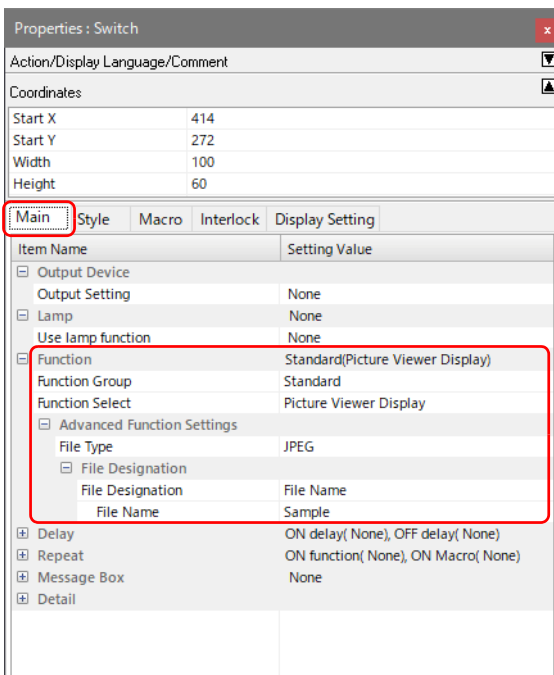


*2 If the display bit is ON when entering RUN mode, the picture viewer is displayed.
 When the picture viewer is displayed by turning the display bit ON but the picture viewer is then closed using the [Close] switch, the display bit stays ON.
 Turn the display bit OFF by using bit 0 of the information output device memory (0: hide).

Placing a Switch for Calling the Picture Viewer

Create a switch for displaying the picture viewer.

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



• Main

Item		Description	Setting Value
Function	Function Group	Specify the function.	Standard
	Function Select		Picture Viewer Display
	File Type	Select an image file type. JPEG (.JPG) PNG (.PNG) BITMAP (.bmp)	JPEG
	File Designation	Specify the method for specifying files. File No.: 0 to 99999 (Filename: PICT00000 to PICT99999) File Name: Maximum of 64 one-byte characters, or 32 two-byte characters (The extension does not need to be specified.) Device: Set the device memory address for specifying file numbers 0 to 99999. (Two words are used.)	File Name Sample

• Style

Item		Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.	Picture
	Char. Prop.	Set properties including text color, style, and size.	[Char. Color]: White (000000) [Point Size]: 18

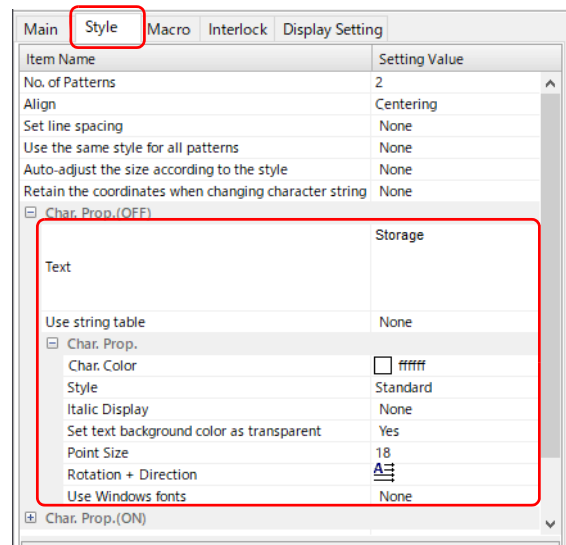
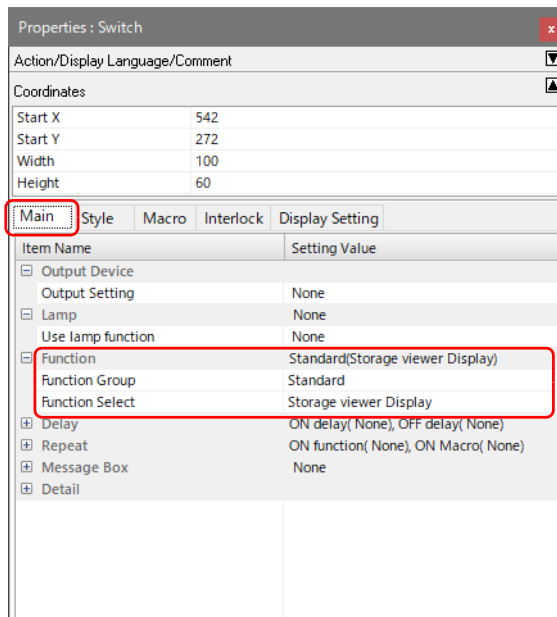
8.3.4 Storage Viewer

There are no viewer settings.

Placing a Switch for Calling the Storage Viewer

Create a switch for displaying the storage viewer.

1. Place a switch from the parts bar → [Switch].
2. Configure the properties of the switch as shown below.



- Main

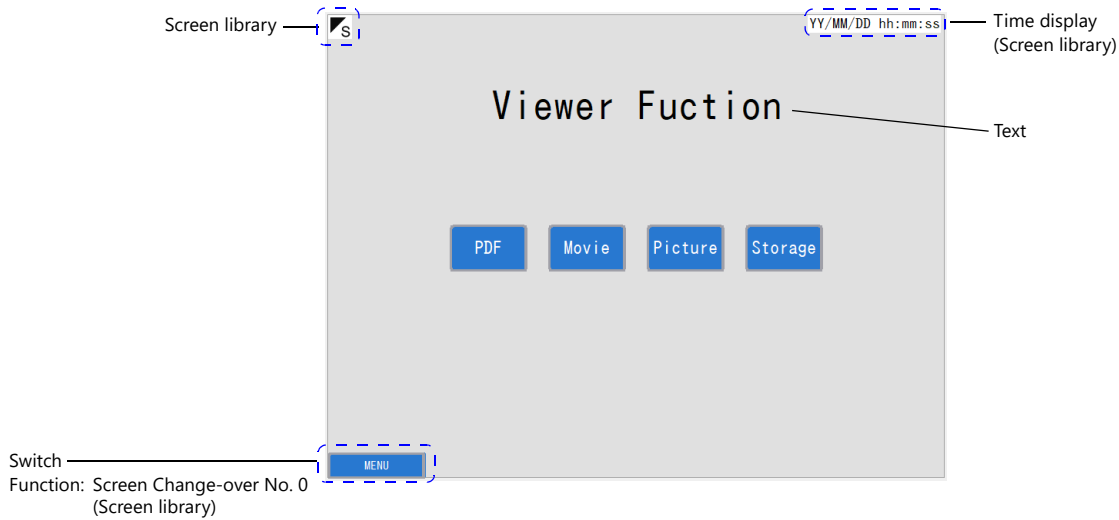
Item		Description	Setting Value
Function	Function Group	Specify the function.	Standard
	Function Select		Storage viewer Display

- Style

Item		Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch.	Storage
	Char. Prop.	Set properties including text color, style, and size.	[Char. Color]: White (000000) [Point Size]: 18

8.3.5 Configuration of Other Parts

Placing Text and a Screen Library



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

8.4 Checking Operation on MONITOUCH

8.4.1 Storage Device Specifications

For details, refer to "3.4.2 Storage Device Specifications".

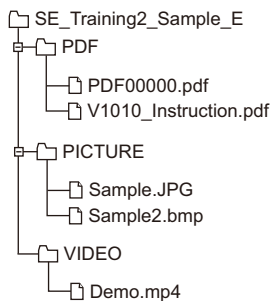
8.4.2 Preparation

Downloading Files to Use

In this section, PDF, video, and image files are to be saved to an SD card for use. Download the sample files from the following link.

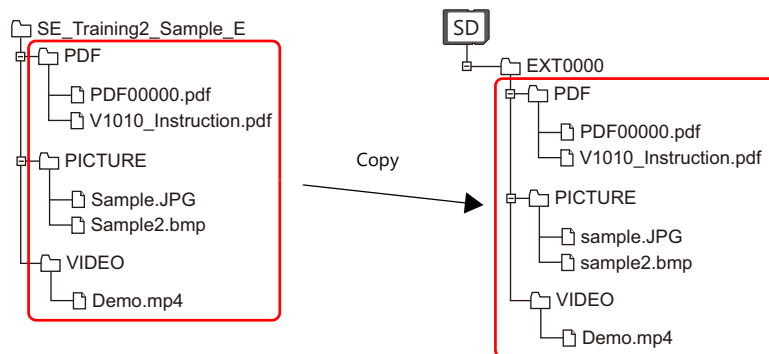
Download [here \(Fe Library\)](#).

Extract the contents of the downloaded file. The structure will be as follows.



Preparing the Storage Device

1. Copy the "PDF", "PICTURE", and "VIDEO" folders to the "EXT0000" folder on the SD card.



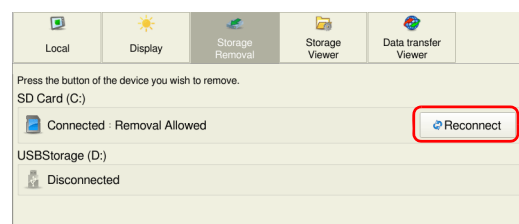
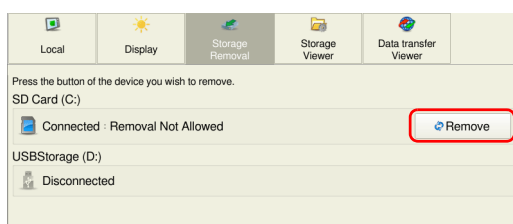
2. Connect the SD card to MONITOUCH.



Removing/connecting a storage device from/to MONITOUCH

Use the [Storage Removal] switch on the system menu to remove the SD card.

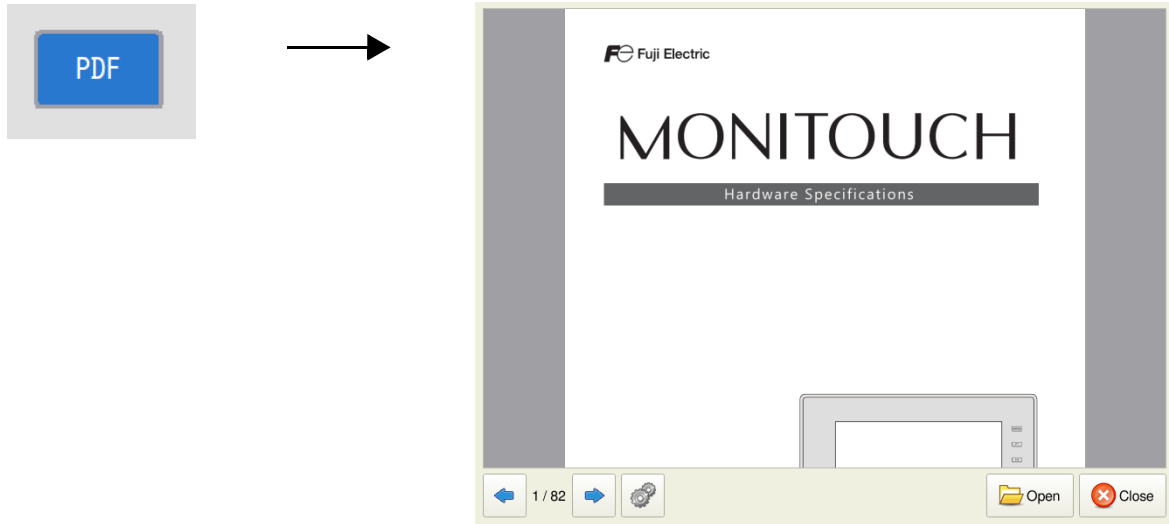
- **Removal**
Press [Remove] for the device to remove.
The device can be removed when "Removal Allowed" is displayed.
- **Reconnection**
Press [Reconnect] for the drive to connect.
When reconnected, "Removal Not Allowed" is indicated.



8.4.3 Operation on MONITOUCH

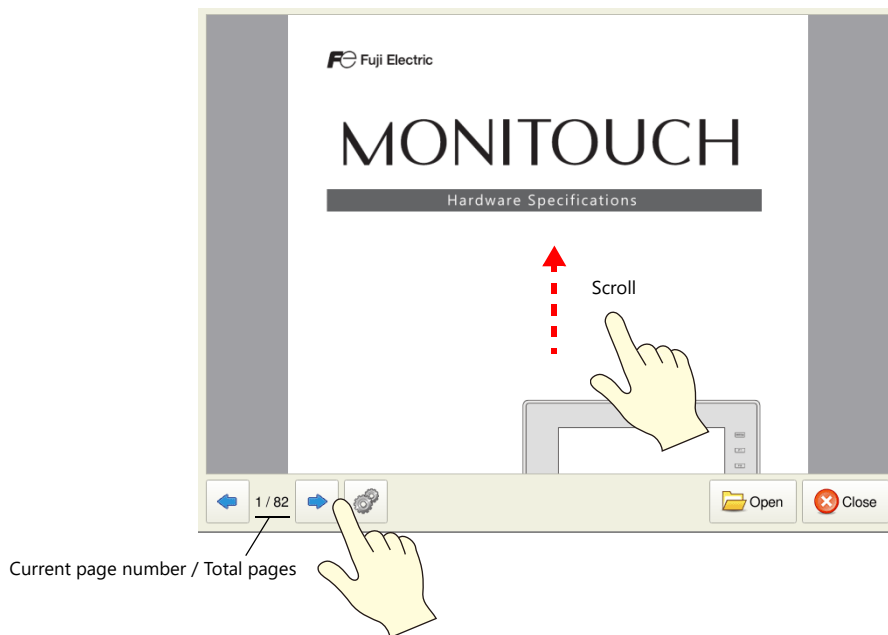
Checking the PDF Viewer

Press the switch that displays the PDF viewer.
The "PDF00000.pdf" file is displayed.



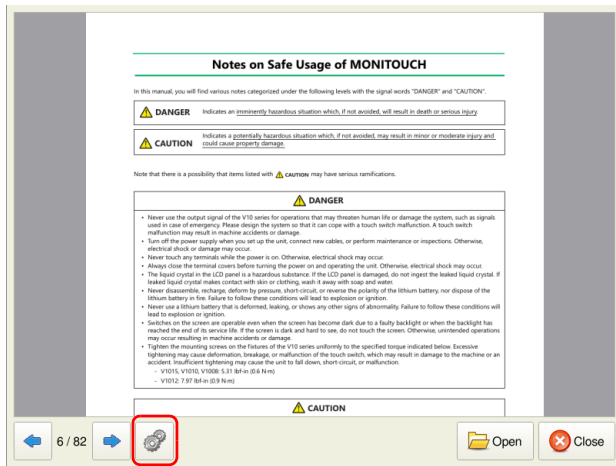
Changing the Display Page

Change the page by either pressing the [←] and [→] switches or by scrolling.

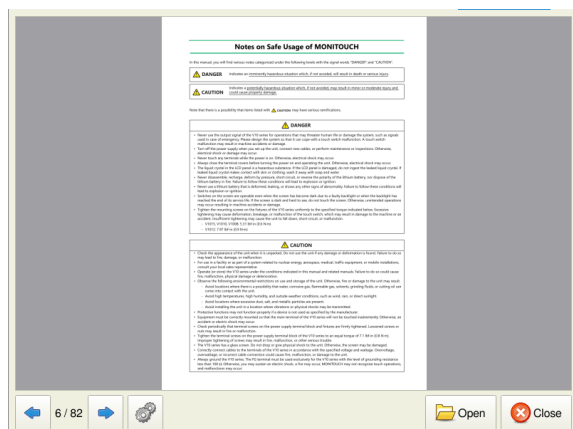
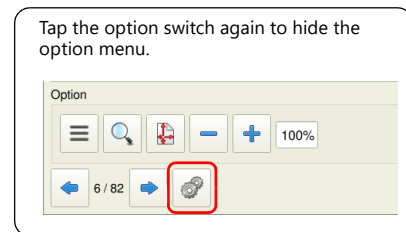
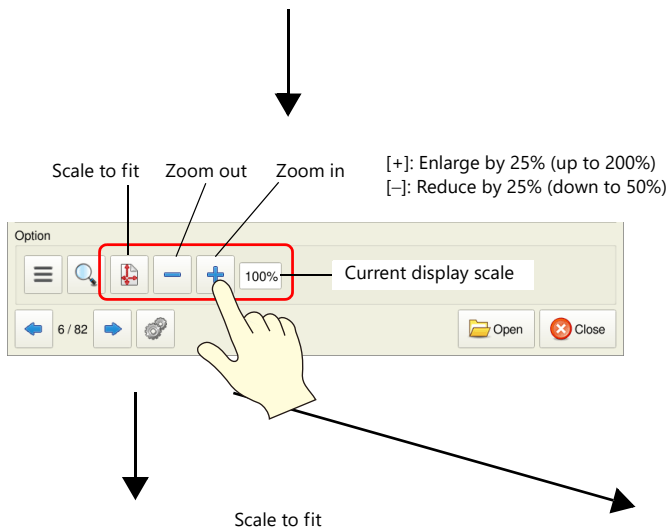


Zooming In/Out and Changing the Display Scale

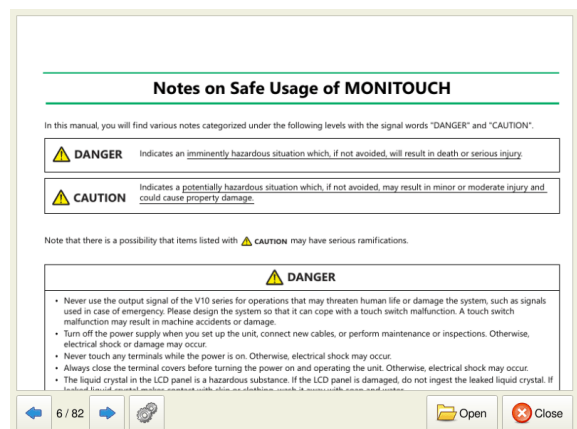
1. Tap the option switch to display the menu shown below.
2. Tap the [+] (zoom in) or [-] (zoom out) switch to change the display scale.
3. Press the scale-to-fit switch to display an entire page on the screen.



Option



Scale to fit

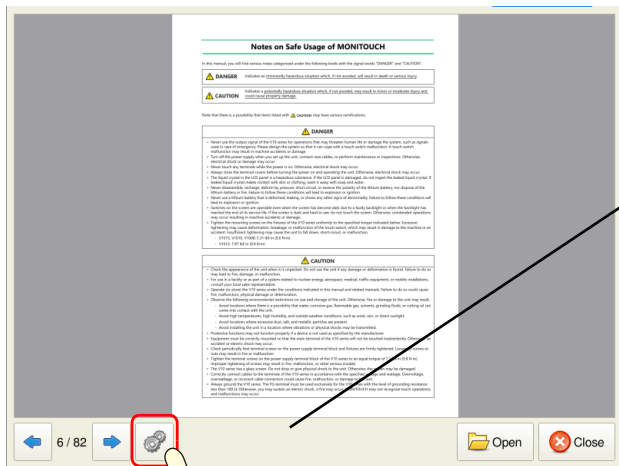


150% display

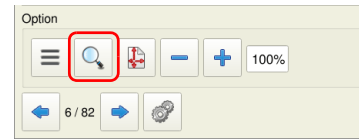
* On V9 Advanced models (capacitive type), pinch-to-zoom gestures can be used for zooming in and out (50 to 200%).

Searching Text

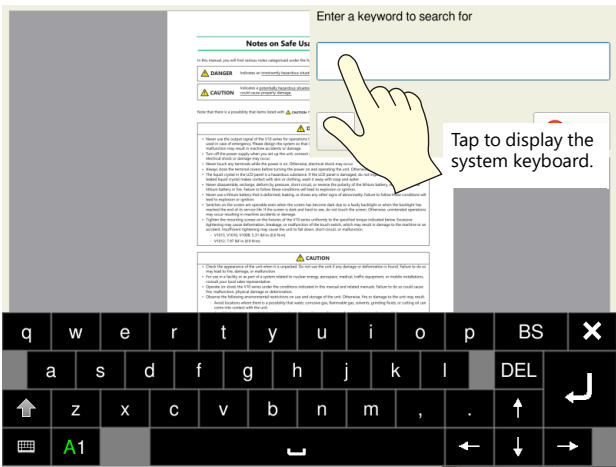
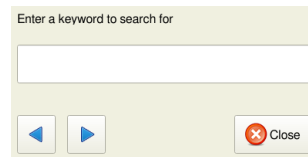
1. Tap the option switch → search switch to display the search window.
2. Enter the text to search for in the keyword field.
3. Tap the [→] switch to start the search. The cursor moves to text that matches the search.



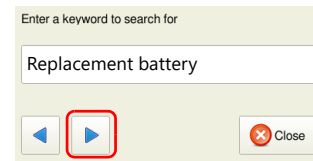
Tap the option switch.



Tap the search switch.

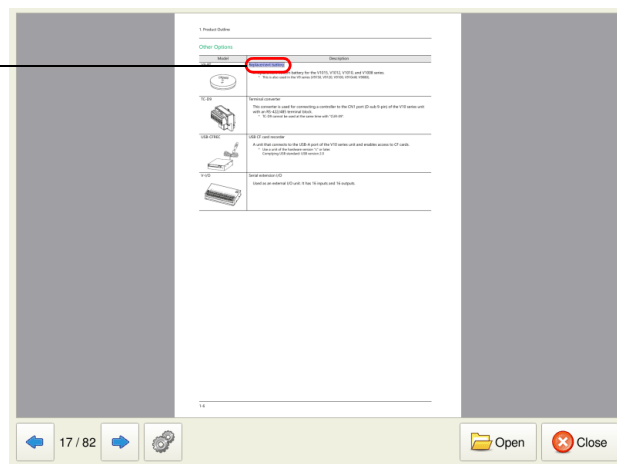


Tap to display the system keyboard.



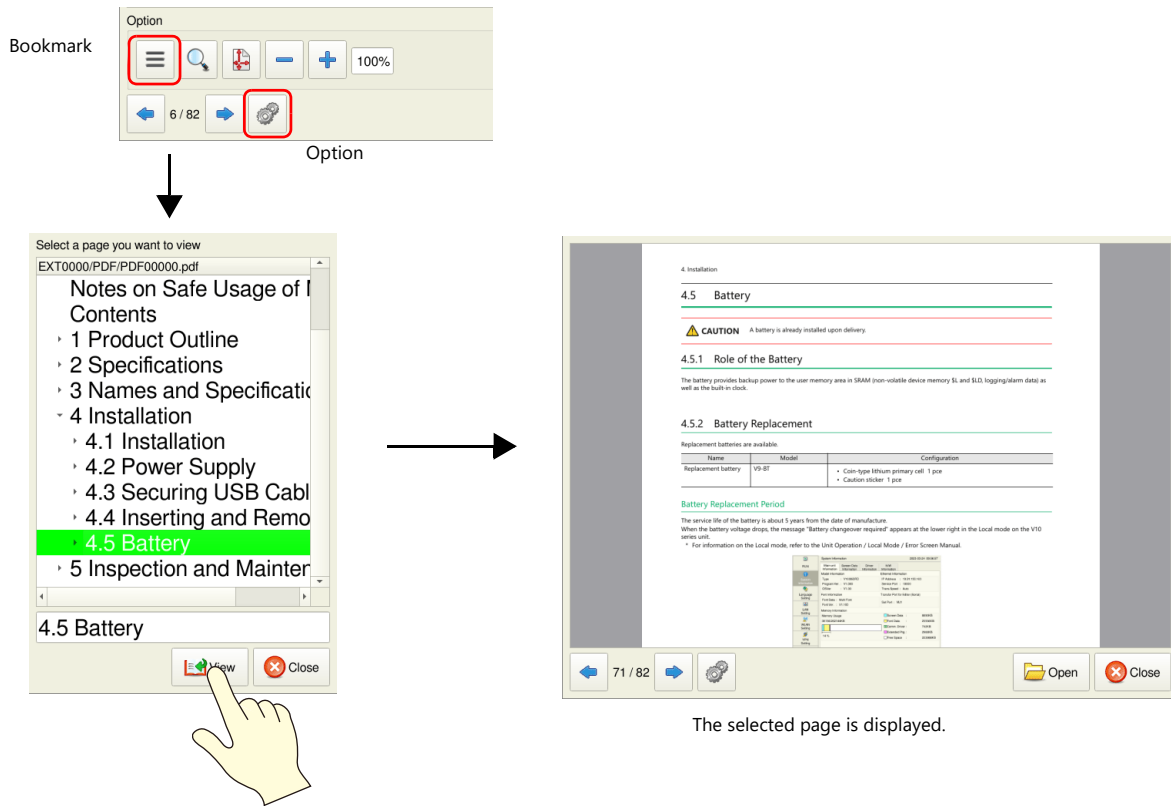
Tap the [→] switch.

The cursor moves to text that matches the search.



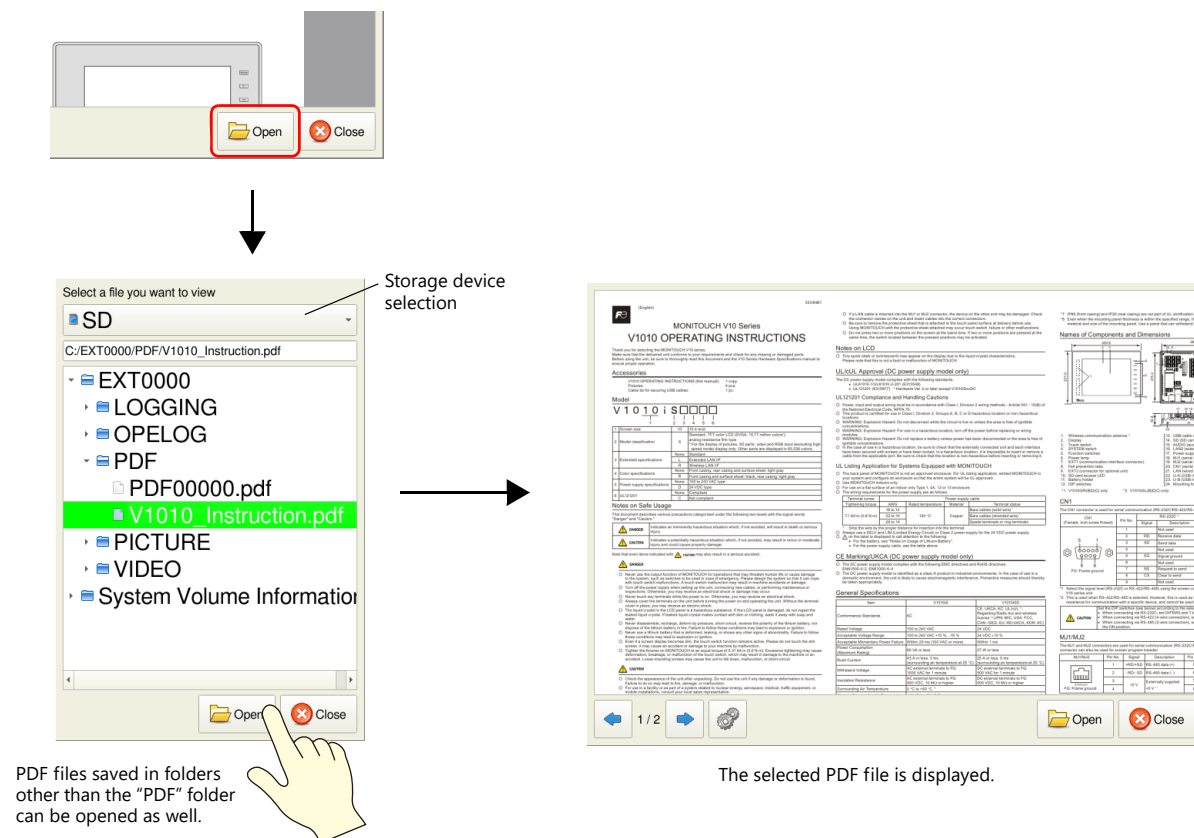
Bookmarks

1. Tap the option switch → bookmark switch to display the bookmarks.
2. Select a bookmark and tap the [View] switch. The selected page is displayed.



Changing the Displayed PDF File

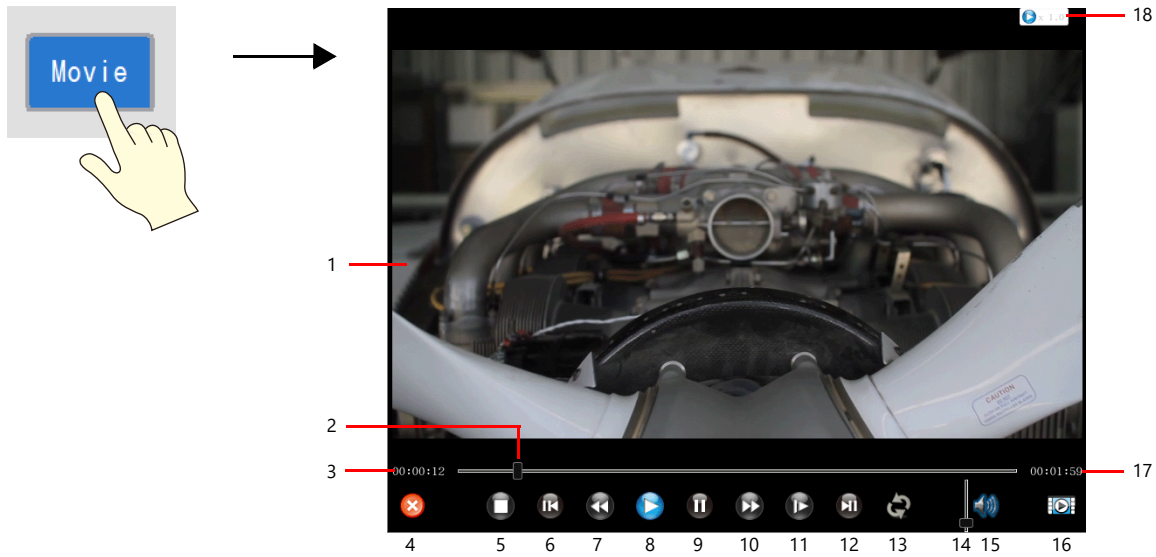
Tap the [Open] switch, select the PDF to display, and then tap the [Open] switch again.



PDF files saved in folders other than the "PDF" folder can be opened as well.

Checking the Video Player

Press the switch that displays the video player.
The video player is displayed and the "Demo.mp4" file is played.



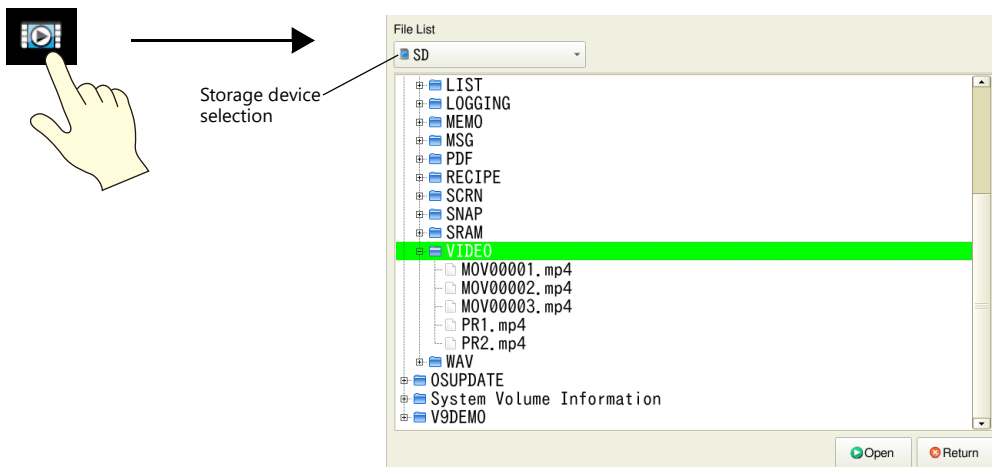
No.	Item	Details
1	Playback screen	Images are displayed in full-screen without changing the aspect ratio.
2	Seekbar	Operable from 0 to 100
3	Playing time	
4	Quit	Returns to RUN or Local mode.
5	Stop	
6	Previous frame *	Goes back by 2 seconds This is available only when the video is paused. * Invalid 3 seconds before end of video
7	Rewind	2.0x, 4.0x 8.0x, 1.0x
8	Play	
9	Pause	

No.	Item	Details
10	Fast forward	2.0x, 4.0x, 8.0x, 1.0x
11	Slow playback	0.8x, 0.4x, 0.2x 1.0x
12	Next frame *	Goes forward by 2 seconds This is available only when the video is paused.
13	Repeat	Turn on/off repeat
14	Volume slider	Volume changeable from 0 to 10
15	Speaker	Turn on/off audio
16	File select	Displays the File List screen
17	Total time	
18	Playback speed	Displays the current speed of rewind, fast forward, or slow playback

* Supported on the V9 series when the OS version is 4.80 or later and the system program version is 2.800 or later.

Changing the Displayed Video File

Tap the file select switch, select the video file to play, and then tap [Open].

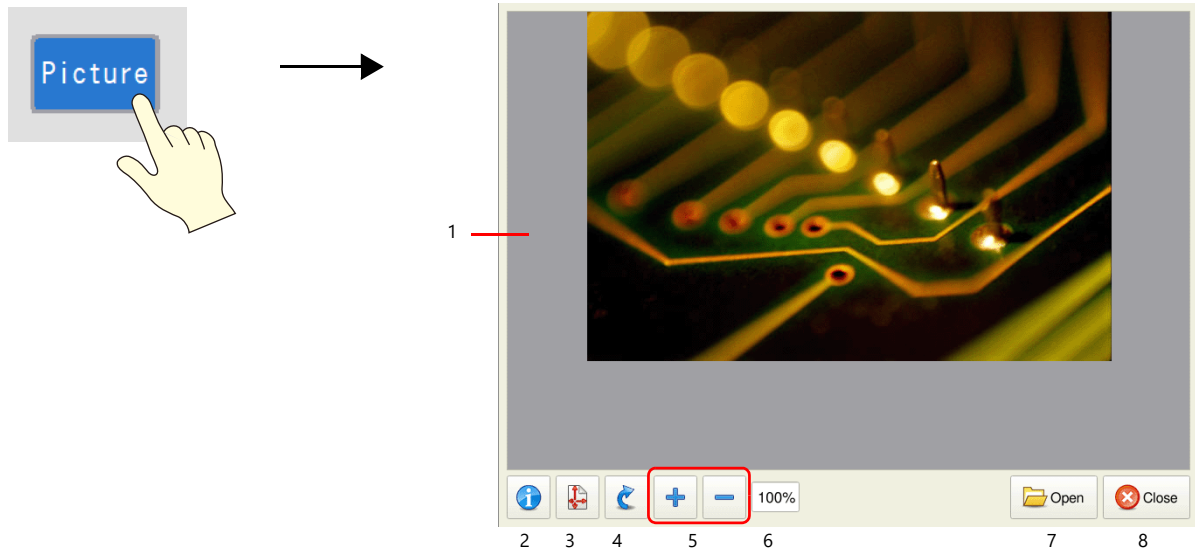


* By default, the content of the video folder located in the access folder specified in the screen program is displayed.

Checking the Picture Viewer

Press the switch that displays the picture viewer.

The picture viewer is displayed and the "Sample.png" file is displayed.



No.	Item	Details
1	Display area	Images are displayed in full-screen without changing the aspect ratio.
2	File information	Displays information of the currently displayed file. *
3	Scale to fit	Scales the image to fit the display area.
4	Rotate	Rotates the image clockwise by 90°.

No.	Item	Details
5	Zoom in/out	Changes the display scale within 200% to 50%. [+]: Enlarge by 25% [-]: Reduce by 25%
6	Display scale	Shows the current display scale (100% = Actual size).
7	Open	Displays the file selection window.
8	Close	Returns to RUN or Local mode.

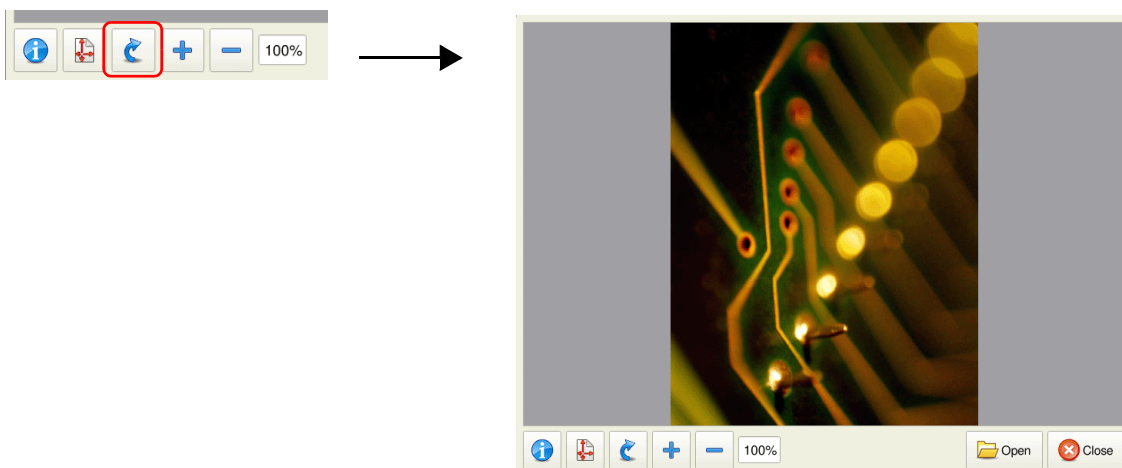
Zooming In/Out and Changing the Display Scale

1. Tap the [+] (zoom in) or [-] (zoom out) switch to change the display scale.
2. Press the scale-to-fit switch to display the entire image on the screen.



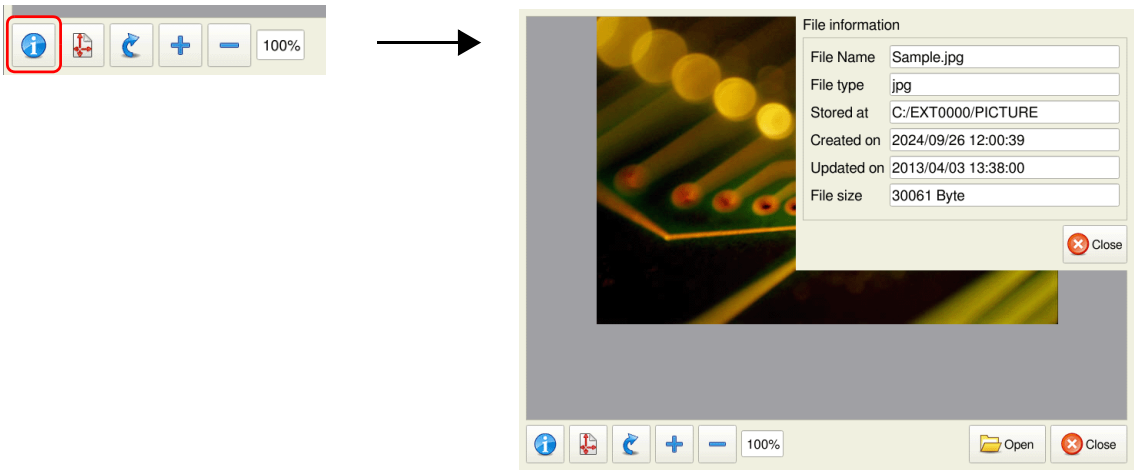
Rotating the Image

Tap the rotate switch to turn the image clockwise.



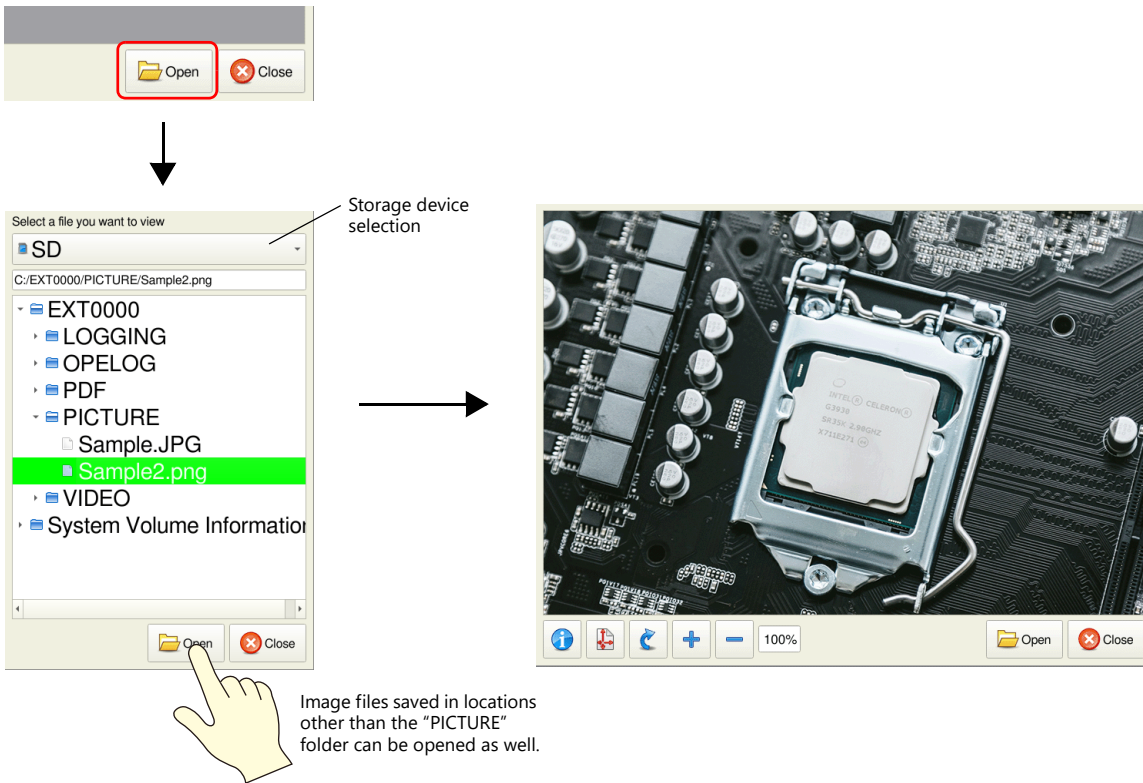
File information

Tap the file information switch to display detailed information of the file.



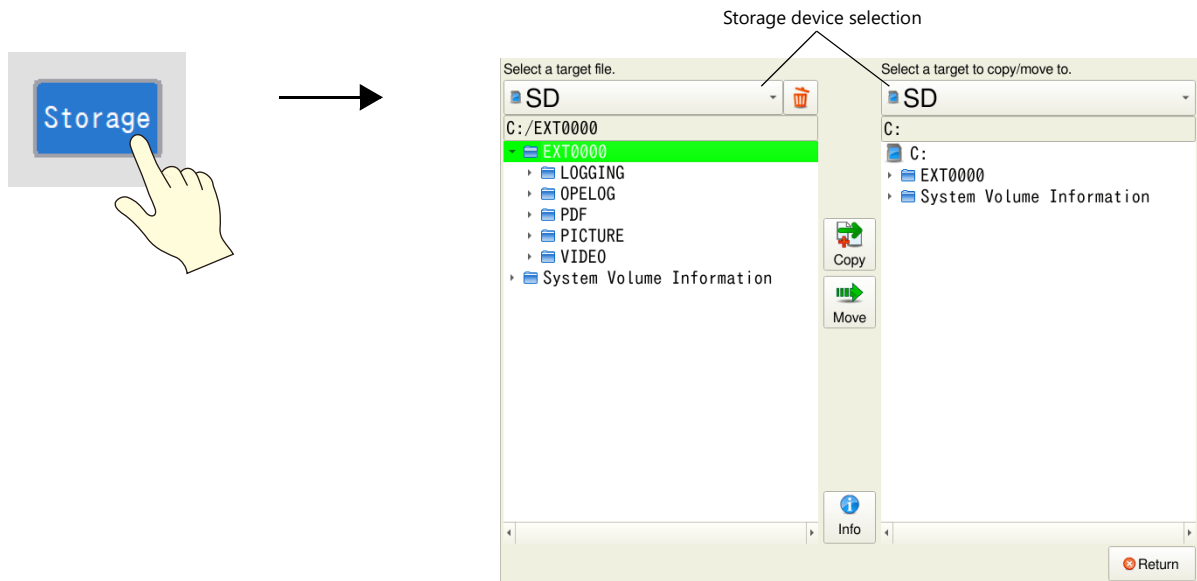
Changing the Displayed Image File

Tap the [Open] switch, select the image to display, and then tap the [Open] switch again.



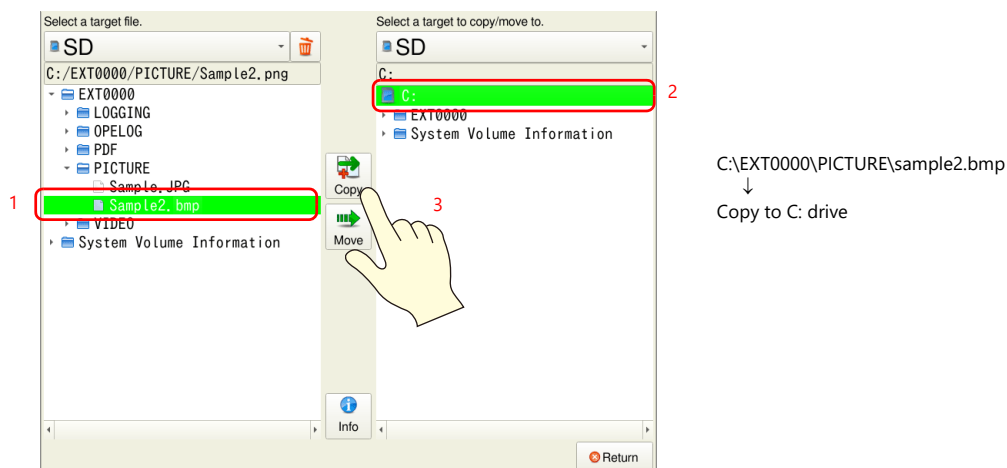
Checking the Storage Viewer

Press the switch that displays the storage viewer.
The storage viewer is displayed.

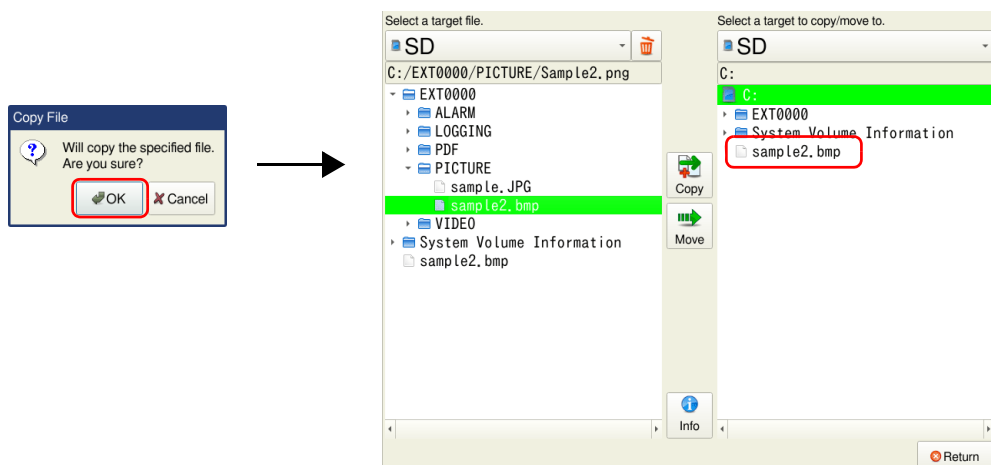


Copying/Moving Files

1. Select a file to copy/move as well as its destination, and press the [Copy]/[Move] switch.

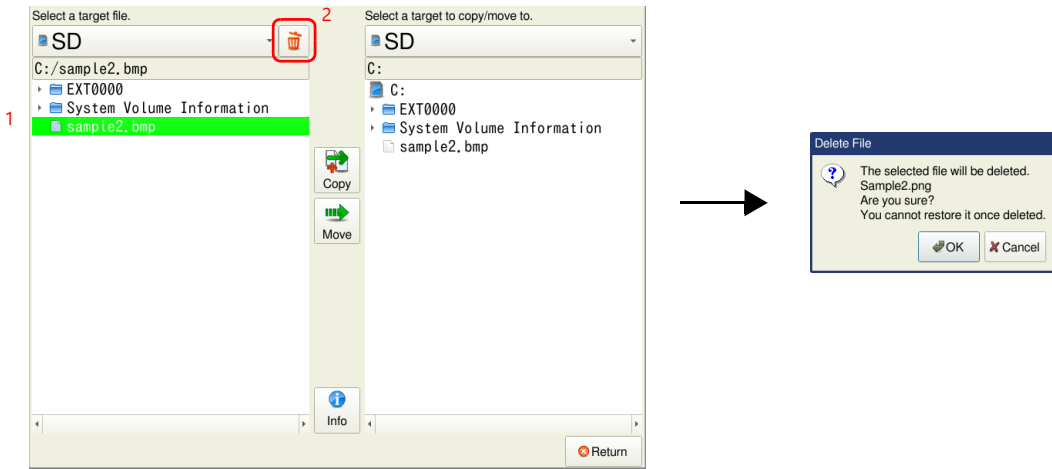


2. The following confirmation message appears. Tap [OK].



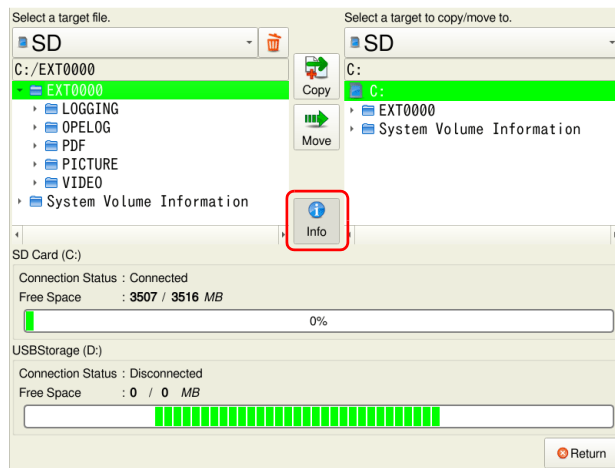
Deleting a File

1. Select a file to delete and press the delete (trash can) switch.
2. A confirmation message appears. Tap [OK].

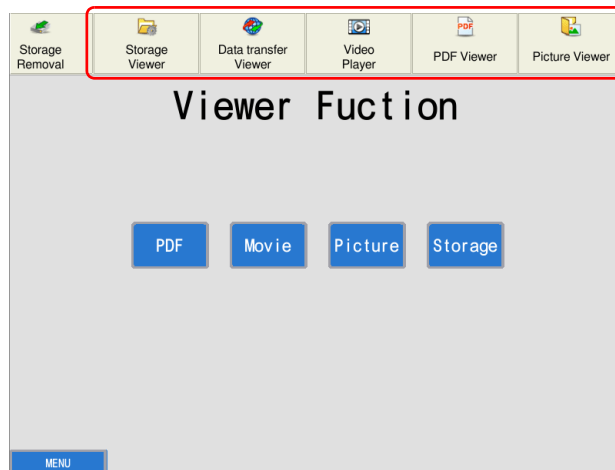


Checking the Amount of Free Space on a Storage Device

Press the [Info] switch to check the connection status or the amount of free space on the storage device.



Each viewer can also be displayed from the system menu.

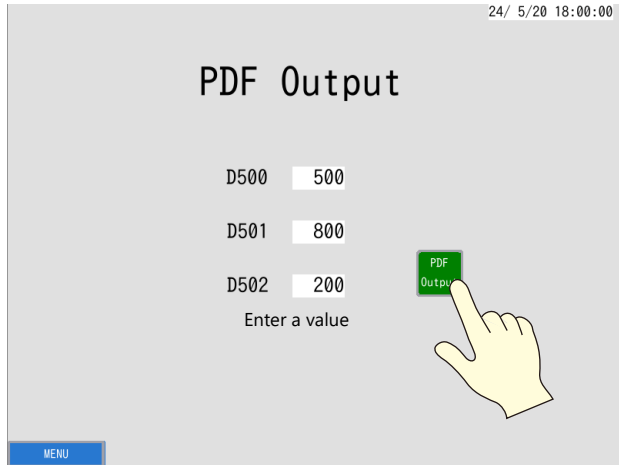


9.2 Example Screen

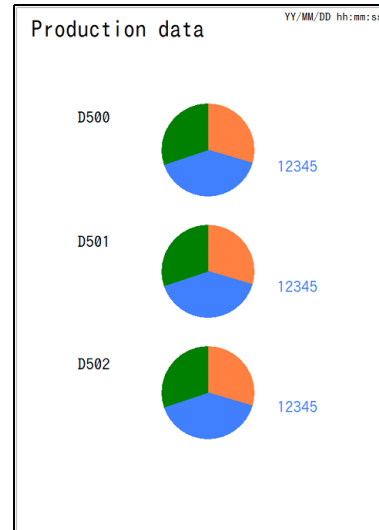
This chapter explains how to create the following screen.

The status of numerical data displays placed on a screen can be output in the format of graphs and numerical data as registered in the data sheet.

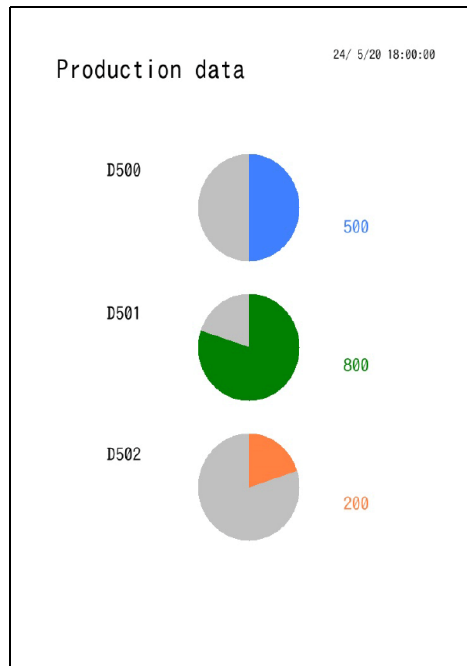
Screen No. 7, Data sheet No. 0



Press the [PDF Output] switch



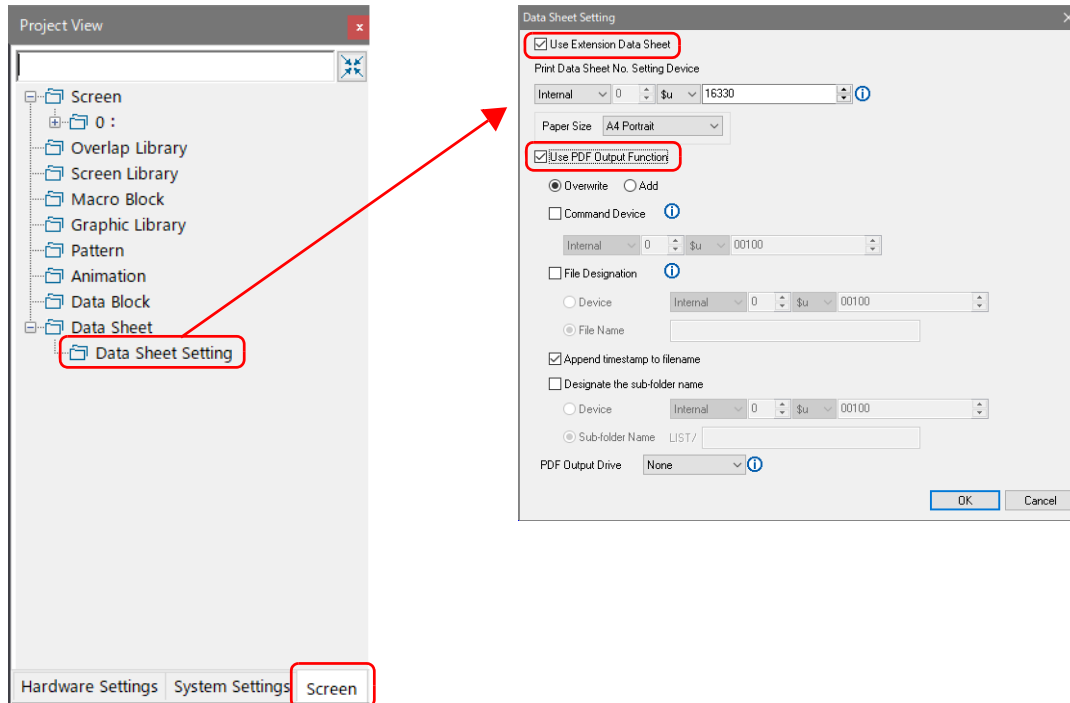
Output as a PDF file to the SD card



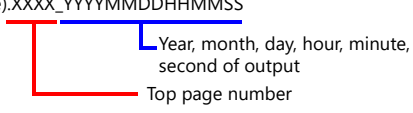
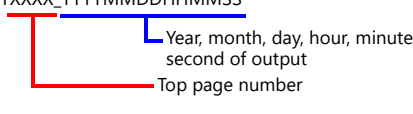
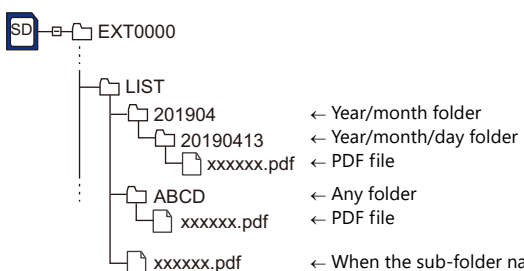
9.3 Screen Creation

9.3.1 Data Sheet Settings

Configure settings as shown below at the [Project View] pane → [Screen] tab → [Data Sheet] → [Data Sheet Setting].



Item	Description	Setting Value																																
Use Extension Data Sheet	Select when using the extended data sheet functions. When using the extended data sheet functions, parts such as lamps, graphs, and time displays can be placed on the data sheet screen.	Selected																																
Print Data Sheet No. Setting Device	Use this setting when printing data sheets using a printer control device memory. This is not used in this manual.	Internal \$u16330 (default)																																
Paper Size	Specify the size of the paper for printing out to. A4 Portrait, A4 Landscape	A4 Portrait																																
Use PDF Output Function	Data sheets are output to the "LIST" folder on the storage device as PDF files.	Selected																																
Overwrite/Add	Select how to output PDF files. If the specified filename does not exist, a new file will be created. Overwrite: Save by overwriting Add: Save by adding after the final page of the file (Max. file size: 50 MB)	Overwrite																																
Command Device	The data sheet output destination and output method can be changed during RUN mode. * When using the "STA_LIST" macro, select the output destination using \$s1656. The setting details are the same. <table border="1" style="margin-left: 40px;"> <tr> <td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>09</td><td>08</td><td>07</td><td>06</td><td>05</td><td>04</td><td>03</td><td>02</td><td>01</td><td>00</td> </tr> <tr> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td><td></td><td></td><td></td> </tr> </table> <p style="margin-left: 40px;">0: Overwrite 1: Add</p> <p style="margin-left: 40px;">0: Sub-folder name not designated 1: Sub-folder name designated</p> <p style="margin-left: 40px;">0: With time stamp 1: Without time stamp</p> <p style="margin-left: 40px;">0: Printer 1: Storage device (PDF output)</p>	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00	0	0	0	0	0	0	0	0	0	0	0	0					Deselected
15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00																			
0	0	0	0	0	0	0	0	0	0	0	0																							

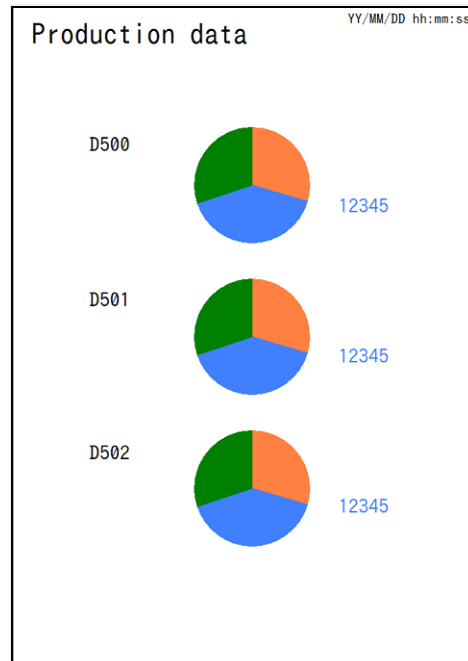
Item	Description	Setting Value
<p>File Designation (Maximum of 64 one-byte alphanumeric characters)</p>	<p>Specify a filename. Selecting a device memory address allows the output filename to be changed when in RUN mode. 32 consecutive words are used from the specified address.</p> <ul style="list-style-type: none"> * Only internal device memory of the V10/V9 series unit can be used. * The top page number is indicated only when [Overwrite] is selected. <p>Example: With time stamp</p> <ul style="list-style-type: none"> • When specifying a filename Filename: (arbitrary filename).XXXX_YYYYMMDDHHMMSS  <ul style="list-style-type: none"> • When not specifying a filename or when the device memory contains "null" Filename: LISTXXXX_YYYYMMDDHHMMSS 	<p>Deselected</p>
<p>Append timestamp to filename *2</p>	<p>Select when appending a timestamp to the PDF filename.</p> <p>Filename:</p> <ul style="list-style-type: none"> • With time stamp (arbitrary filename)xxxx_YYYYMMDDHHMMSS.pdf LISTxxxx_YYYYMMDDHHMMSS.pdf • Without time stamp (arbitrary filename)xxxx.pdf LISTxxxx.pdf 	<p>Selected</p>
<p>Designate the sub-folder name*2</p>	<p>Select this checkbox to specify the storage destination for the PDF file. When using a device memory address, the sub-folder name can be changed during RUN mode. 32 consecutive words are used from the specified address.</p> <ul style="list-style-type: none"> * Only internal device memory of the V10/V9 series unit can be used. <p>Storage location:</p> <ul style="list-style-type: none"> • Sub-folder name not designated (access folder)\LIST\year/month folder\year/month/day folder • Sub-folder name designated \(access folder)\LIST(any folder) 	<p>Deselected</p>
<p>PDF Output Drive (None, SD, USB)</p>	<p>Select the output destination drive for the PDF file. If "None" is specified, the PDF file is output to [Storage Connection Target] in the [Storage Setting].</p>	<p>None</p>

*1 If free space on the storage device falls under 100 MB, operation is performed according to the [Project View] pane → [Hardware Settings] tab → [Unit Settings] → [General Settings] → [Delete folders from the oldest when the remaining storage space is less than 100 Mbytes] setting.

*2 If both [Command Device] and settings for directly specifying the output destination on Smart Editor are selected, the [Command Device] takes precedence. When specifying a sub-folder name, the [Designate the sub-folder name] checkbox must be selected and the folder name needs to be specified on Smart Editor.

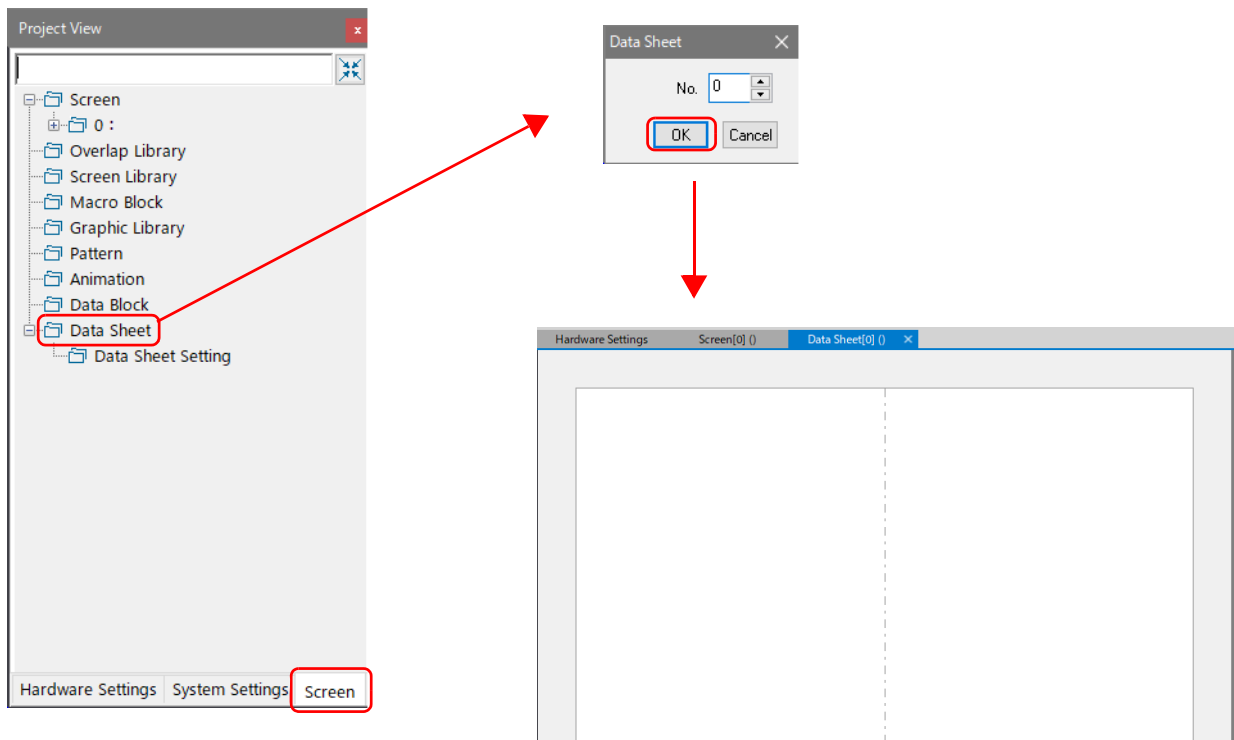
9.3.2 Registration of a Data Sheet Screen

Create a printing format for when outputting to a PDF file.

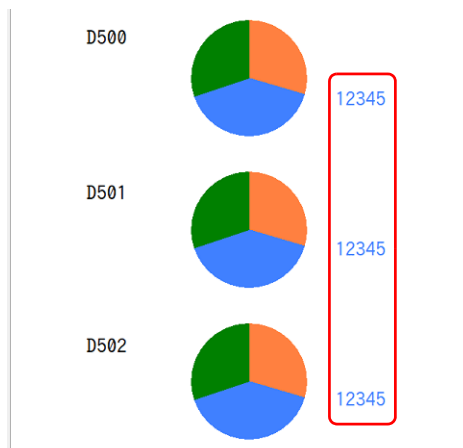


Opening a Data Sheet

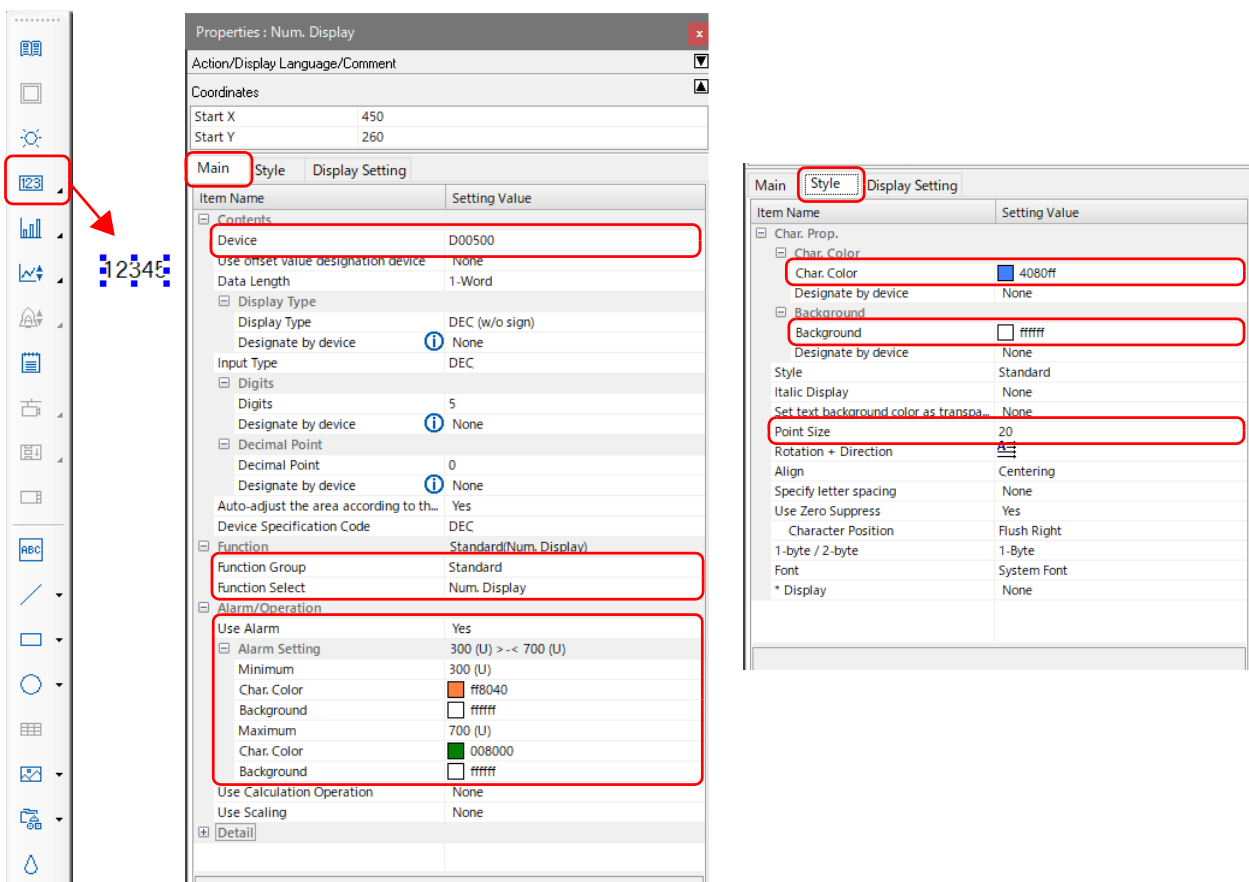
1. Double-click [Data Sheet] at the [Project View] pane → [Screen] tab.
2. Select number 0 on the data sheet number specification window, and then click [OK] to display the editing window for data sheet number 0.



Placing Numerical Data Display Parts



1. Place a numerical data display from the parts bar and configure the properties as shown below.



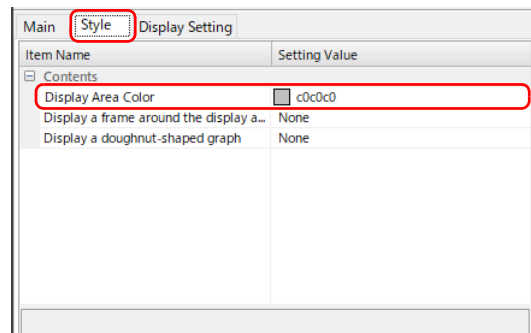
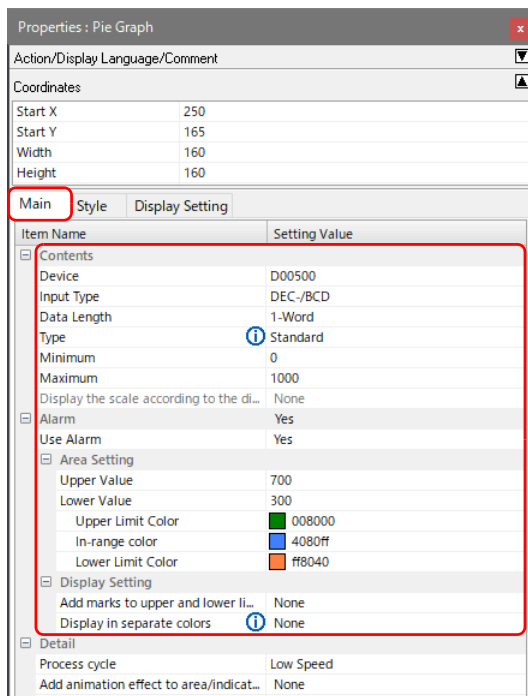
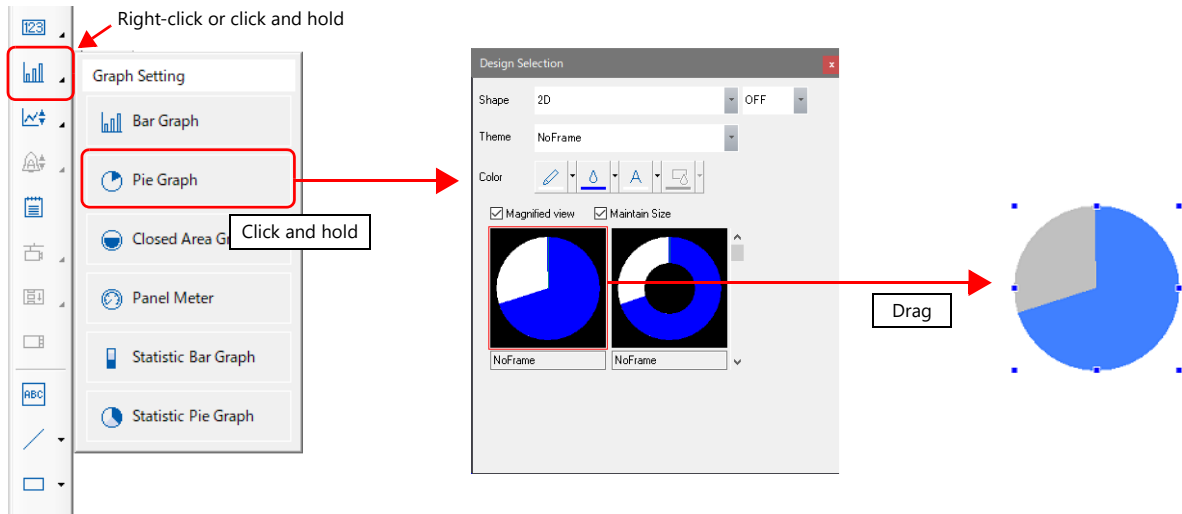
	Item	Description	Setting Value
Main	Contents	Device	Specify the device memory address for monitoring.
		Function Select	Specify the function.
	Alarm/Operation	Use Alarm	Data can be displayed in a different color when it exceeds or falls short of a specific range.
		Minimum	Set the range for alarm display and each corresponding color.
		Char. Color	
		Background	
		Maximum	
		Char. Color	
Background			
Style	Char. Prop.	Char. Color	Set the color.
		Background	When alarm settings are made, values are displayed in this color if in the alarm range.
	Point Size	Specify the point size.	

2. Select the numerical data display placed in step 1 and click [Multi Copy] on the right-click menu.
3. Configure the following settings and click [OK]. This places three numerical data displays with D500 to D502 allocated.

[X]: 0
[Y]: 180
[Quantity X]: 1
[Quantity Y]: 3

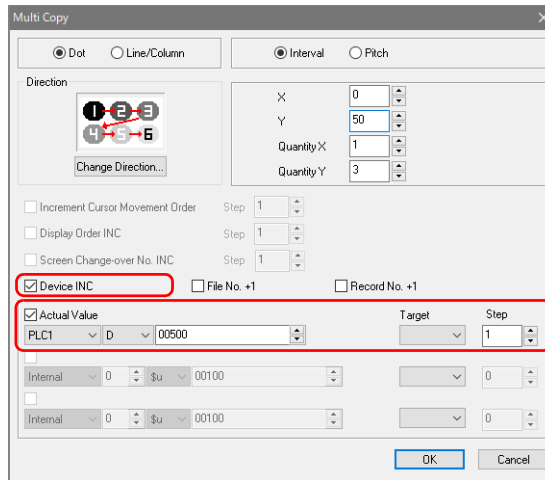
Placing a Pie Graph

1. On the parts bar, right-click or click and hold the [Graph] icon, place a [Pie Graph], and then configure the properties as shown below.



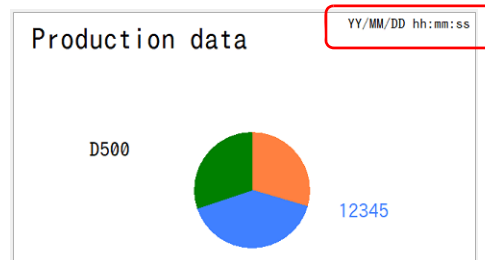
Item		Description	Setting Value	
Main	Contents	Device	Specify the device memory address for monitoring.	D500
		Type	Standard: Display the device memory value between the minimum and maximum values on a graph. Deviation: Set a reference value and display deviation from the reference value to the current value on a graph.	Standard
		Minimum	Specify the graph display area.	0
		Maximum		1000
	Alarm	Use Alarm	Change the colors of the graph according to the device memory value.	Yes
		Upper Value	Set the range for alarm display and each corresponding color.	700
		Lower Value		300
		Upper Limit Color		Green (008000)
In-range color	Blue (4080ff)			
Style	Contents	Display Area Color	Set the color inside the graph area.	Gray (c0c0c0)

2. Select the pie graph placed in step 1 and click [Multi Copy] on the right-click menu.
3. Configure the following settings and click [OK]. This places three pie graphs with D500 to D502 allocated.

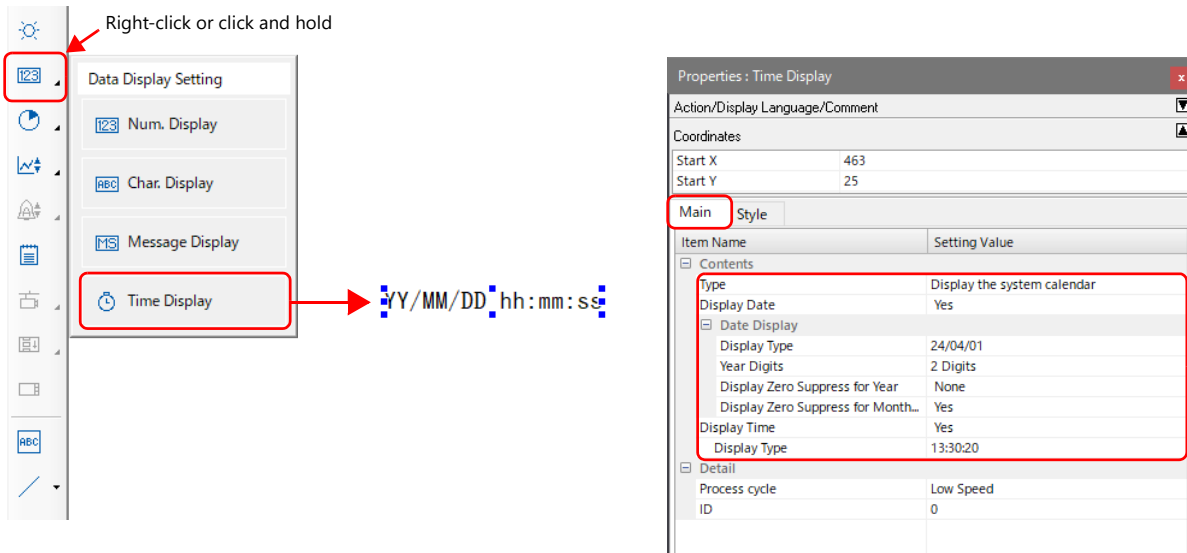


[X]: 0
 [Y]: 50
 [Quantity X]: 1
 [Quantity Y]: 3

Placing a Time Display Part

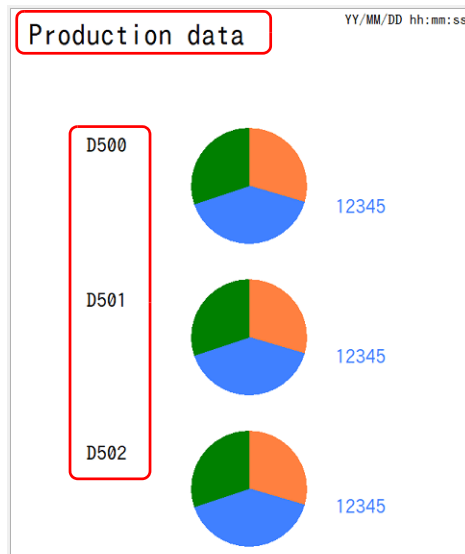


On the parts bar, right-click or click and hold the [Data Display] icon, place a [Time Display], and then configure the properties as shown below.



Item	Description	Setting Value
Type	Select the type of calendar to display.	Display the system calendar
Display Date	Display the date.	Yes
Display Type	Set the date display format.	24/04/01
Year Digits	Select the number of digits to use to display the year. 2 Digits, 4 Digits	2 Digits
Display Time	Display the time.	Yes
Display Type	Set the time display format.	13:30:20

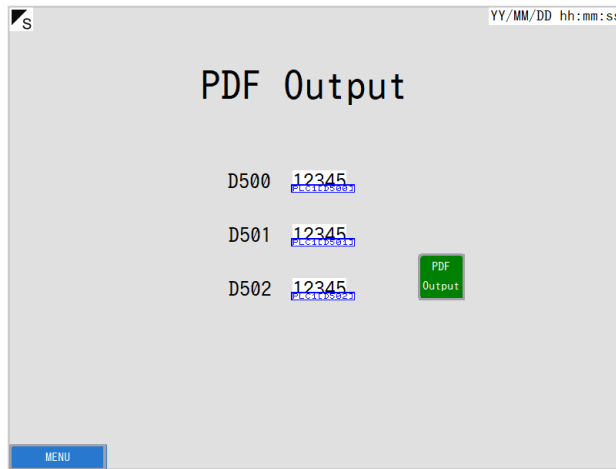
Placing Text



1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

9.3.3 Screen Editing

Edit screen number 7.

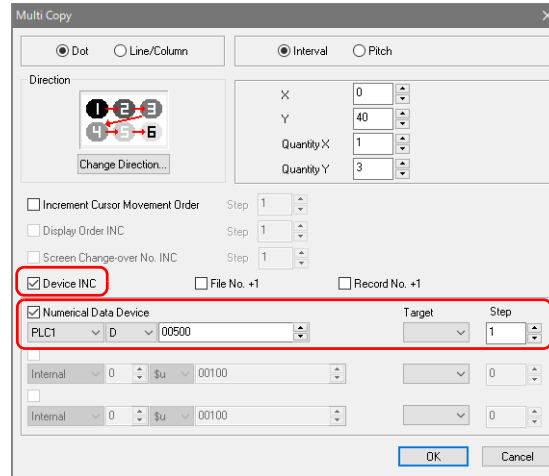


Placing Numerical Data Display Parts

1. Place a numerical data display from the parts bar and configure the properties as shown below.

Item	Description	Setting Value
Contents	Device	Specify the device memory address for monitoring.
		D500
Function	Function Select	Specify the function.
		Entry Target
	Cursor movement order	Set the order to move the cursor when the UP/DW keys on the keypad are pressed.
		0
	Display the keyboard	This setting is available when [Function Select] is set to [Entry Target]. The keypad calling function is added.
		Yes
	Keypad to Use	Select the keypad to use.
		System Keyboard

2. Select the numerical data display and click [Multi Copy] on the right-click menu. Configure the following settings and click [OK].



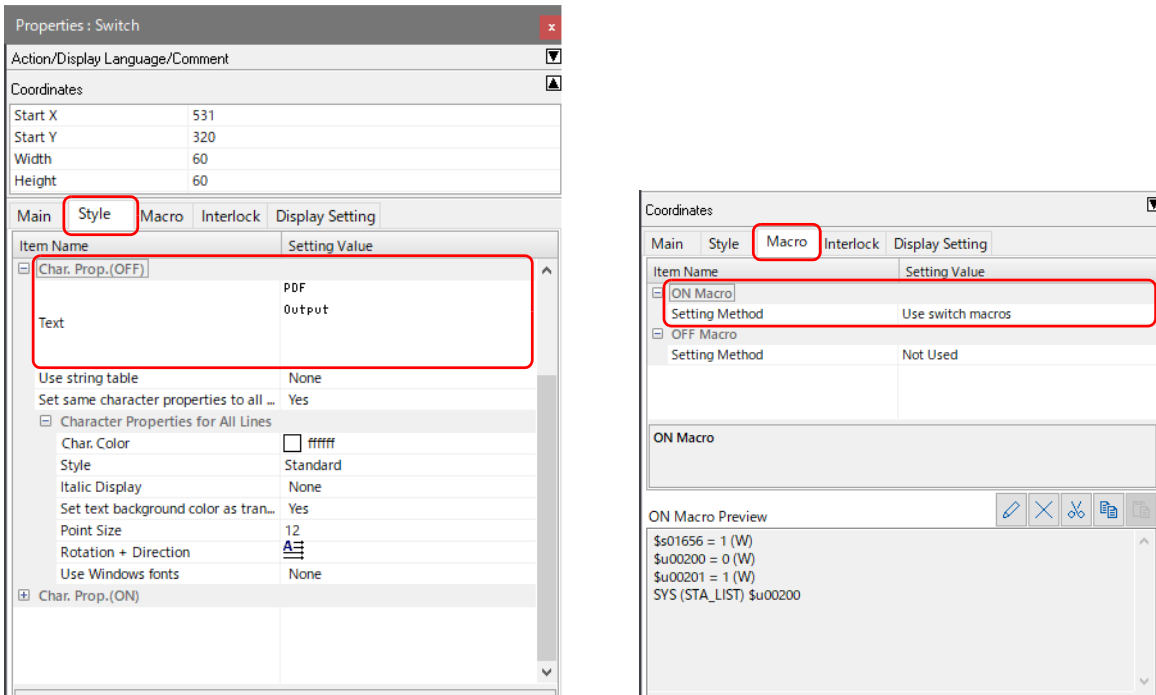
[X]: 0
 [Y]: 40
 [Quantity X]: 1
 [Quantity Y]: 3

The numerical data display is copied, resulting in 3 numerical data displays.

Placing a PDF Output Switch

Place a switch for outputting to a PDF file.

Place a switch from the parts bar and configure the properties as shown below.



- Style

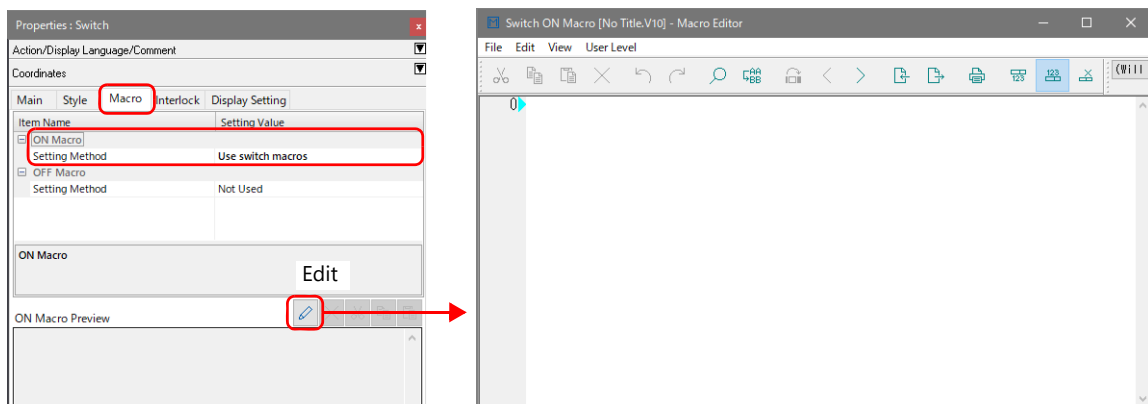
Item	Description	Setting Value
Char. Prop. (OFF)	Text	Set the text to be displayed on the switch. PDF Output

- Macro

Item	Description	Setting Value
ON Macro	Setting Method	Set the location where the macro is registered. Use switch macros

Registering Macros

1. Display the macro editing window (Macro Editor) from the [Properties] pane → [Macro] → [Edit] icon of the preview.



- Click [View] → [Support Dialog] on the Macro Editor to display the [Macro Editing Support] window, and then register a macro as shown below.

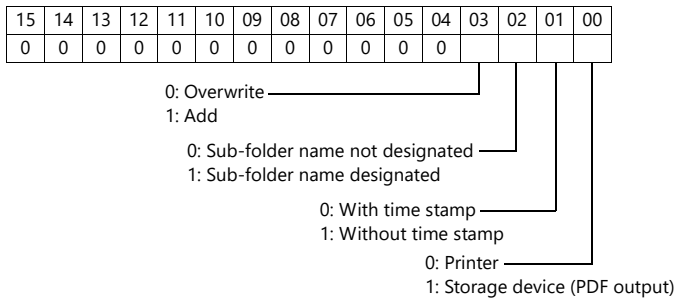
The image shows three screenshots from the Macro Editor:

- Top Left:** The 'View' menu is open, and 'Support Dialog' is highlighted.
- Top Right:** The macro code in the editor:

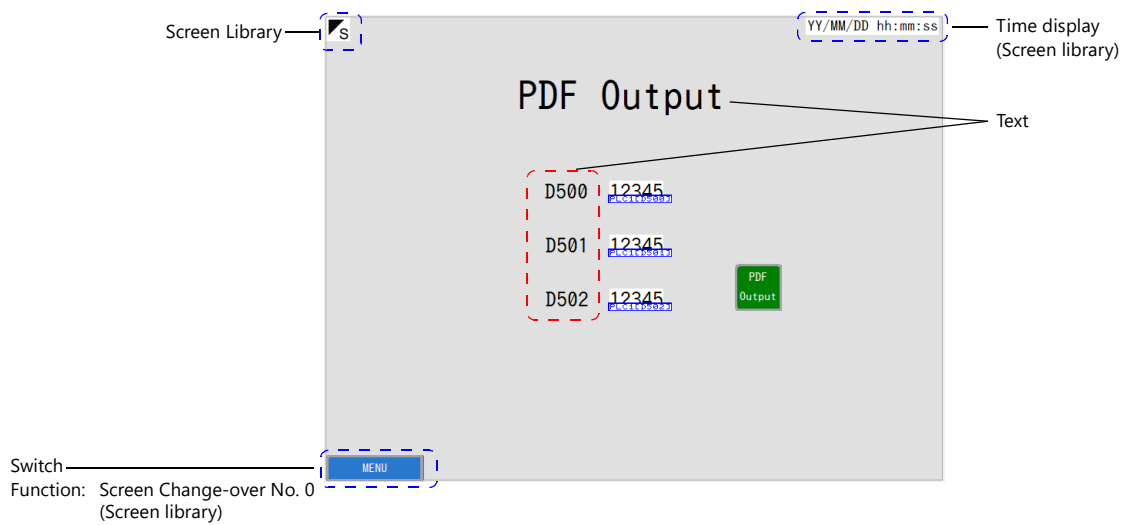

```
0 $s01656 = 1 (W)
1 $u00200 = 0 (W)
2 $u00201 = 1 (W)
3 SYS (STA_LIST) $u00200
```
- Bottom Left:** The 'Macro Editing Support' dialog box. The 'Transfer' list has 'MOV' selected. The 'F0' field contains '\$s01656 = 1'. The 'Insert' button is highlighted. A text box says: 'Insert the following in order. \$s01656 = 1 \$u00200 = 0 \$u00201 = 1'.
- Bottom Center:** Another 'Macro Editing Support' dialog box. The 'Others' list has 'SYS' selected. The 'F0: System Call' field contains 'STA_LIST' and the 'F1: Specified Device' field contains '\$u00200'. The 'Insert' button is highlighted. A text box says: 'Insert in last line (3rd line)'.

- Close the Macro Editor by clicking [X], and check that the registered macro is displayed in the preview.

☹️ **\$s1656**
By using this system device memory, the data sheet output destination and output method can be changed during RUN mode.



Placing Text and a Screen Library



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

9.4 Checking Operation on MONITOUCH

9.4.1 List of Used Device Memory Addresses

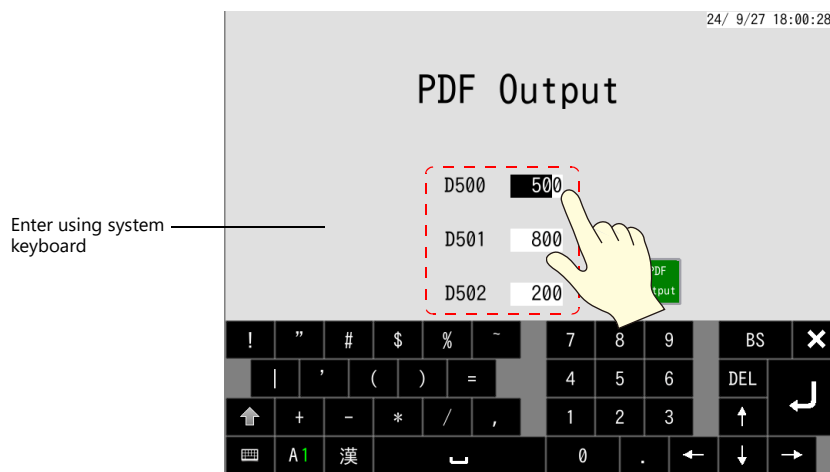
The device memory addresses used in this example are listed below.

Device Memory	Description	Remarks
D500 to D502	Numerical data display parts (data sheet, screen), graphs (data sheet)	
\$u200, 201	Switch ON macro (screen)	

9.4.2 Operation on MONITOUCH

Entering Numerical Values (For Checking Output Data)

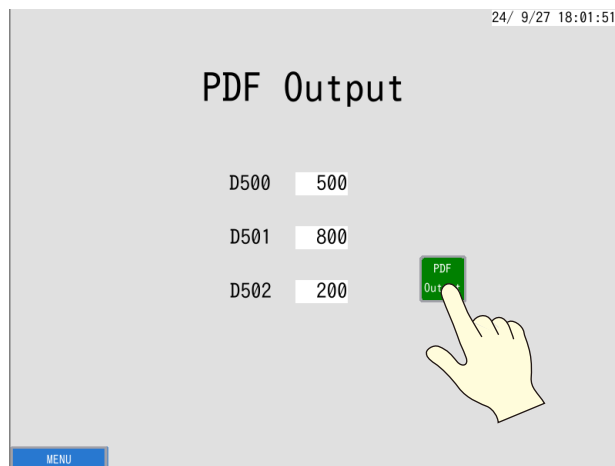
Press the D500 to D502 numerical data displays and enter the following values using the system keyboard.



Device Memory	Entered Value	Remarks
D500	500	
D501	800	
D502	200	

PDF Output Operation

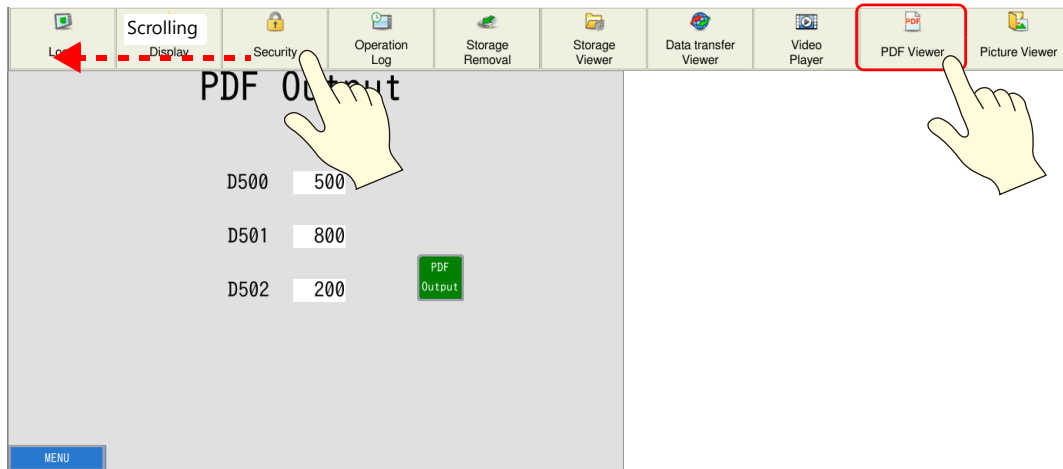
Press the [PDF Output] switch.



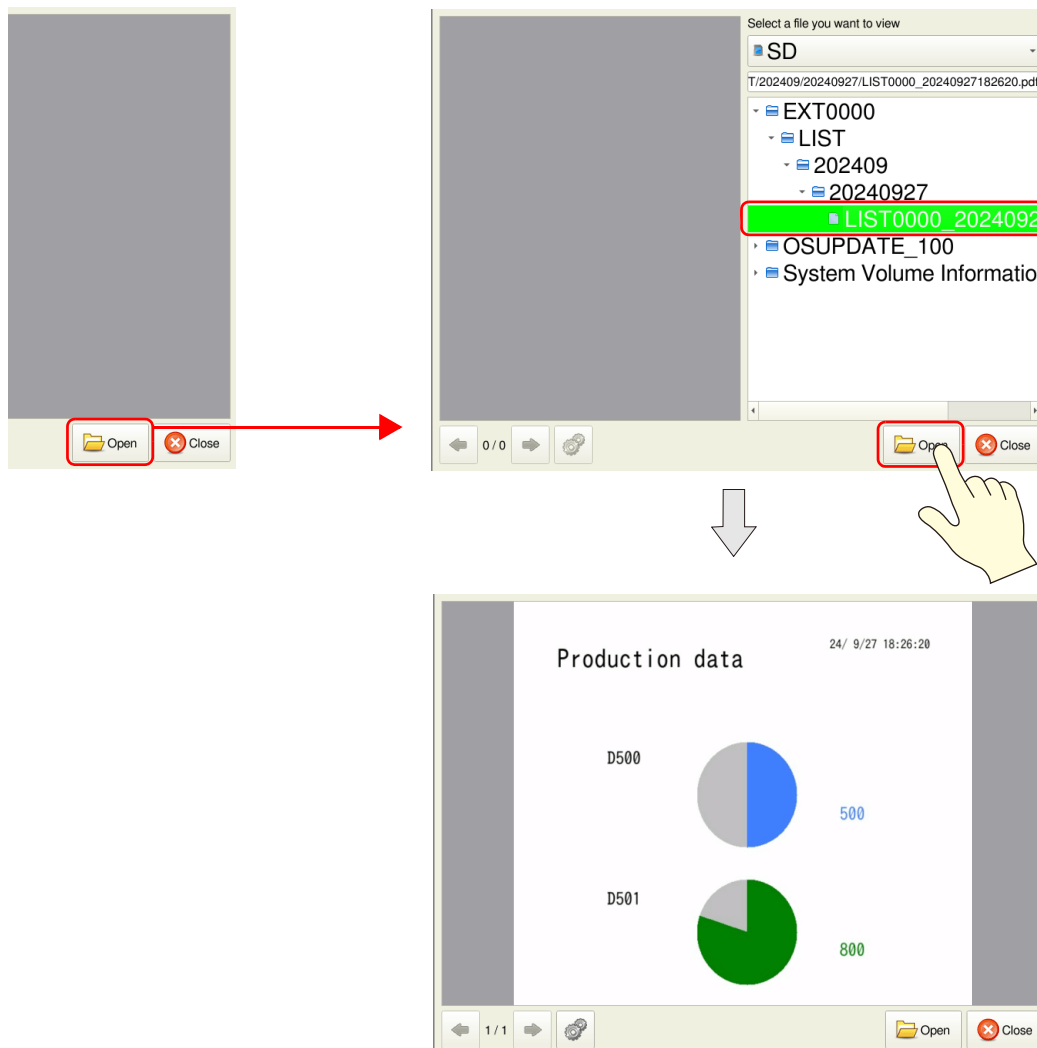
Checking the PDF File

Check the created file using the PDF viewer.

1. Press the [SYSTEM] switch to display the system menu.
2. Scroll the system menu and tap [PDF Viewer].



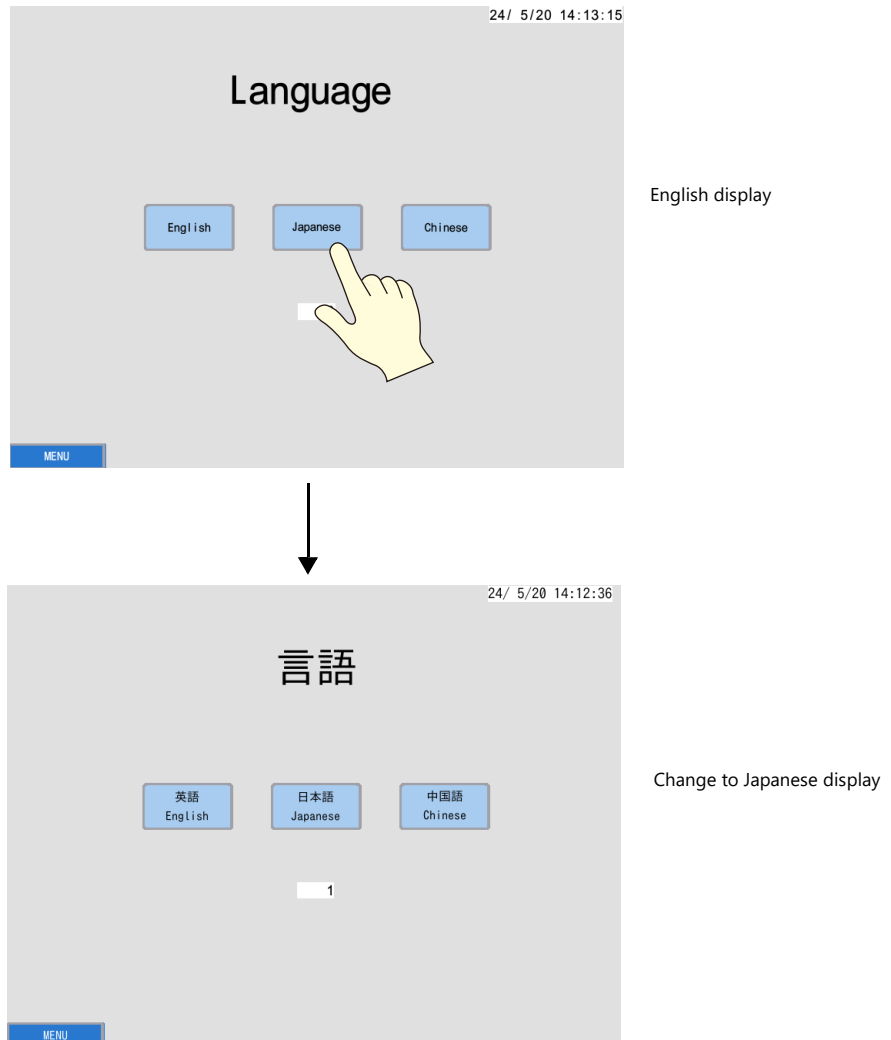
3. Tap the [Open] switch on the PDF viewer.
4. Select the "LIST0000_YYYYMMDDHHMMSS (year, month, day, hour, minute, second).pdf" file from the "C:/EXT0000/LIST" folder in the tree.
Tap [Open] again.
Check the output PDF file.



10 Language Changeover

10.1 Overview

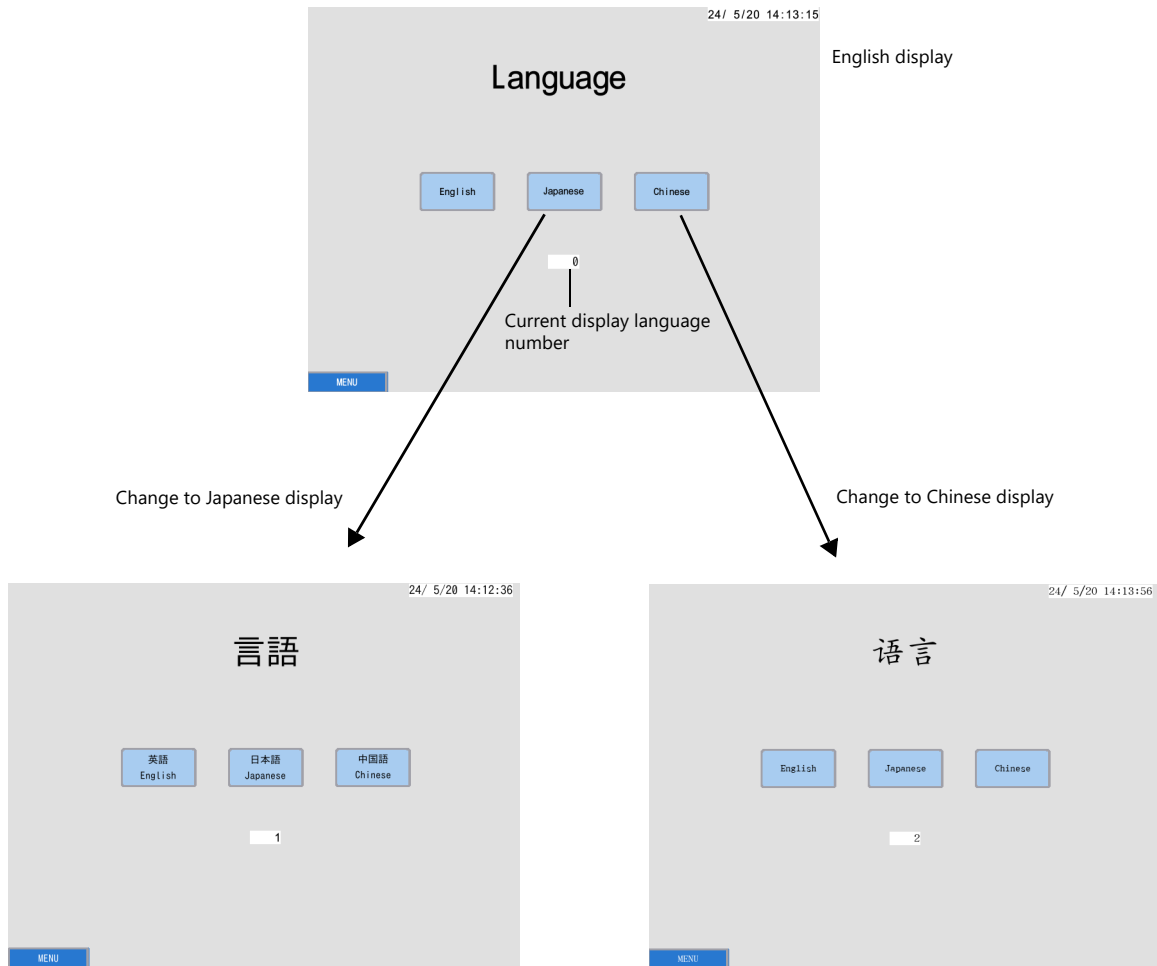
A maximum of 32 languages can be used on the same screen program just by switching the text for display. Because fonts are stored on MONITOUCH in advance, the language for display can be switched to in RUN mode. Select a base language (font) first and then edit the screen program using text that can be displayed in the selected font.



10.2 Example Screen

This chapter explains how to create a language switching screen for Japanese, English, and Chinese (simplified).

Screen No. 8

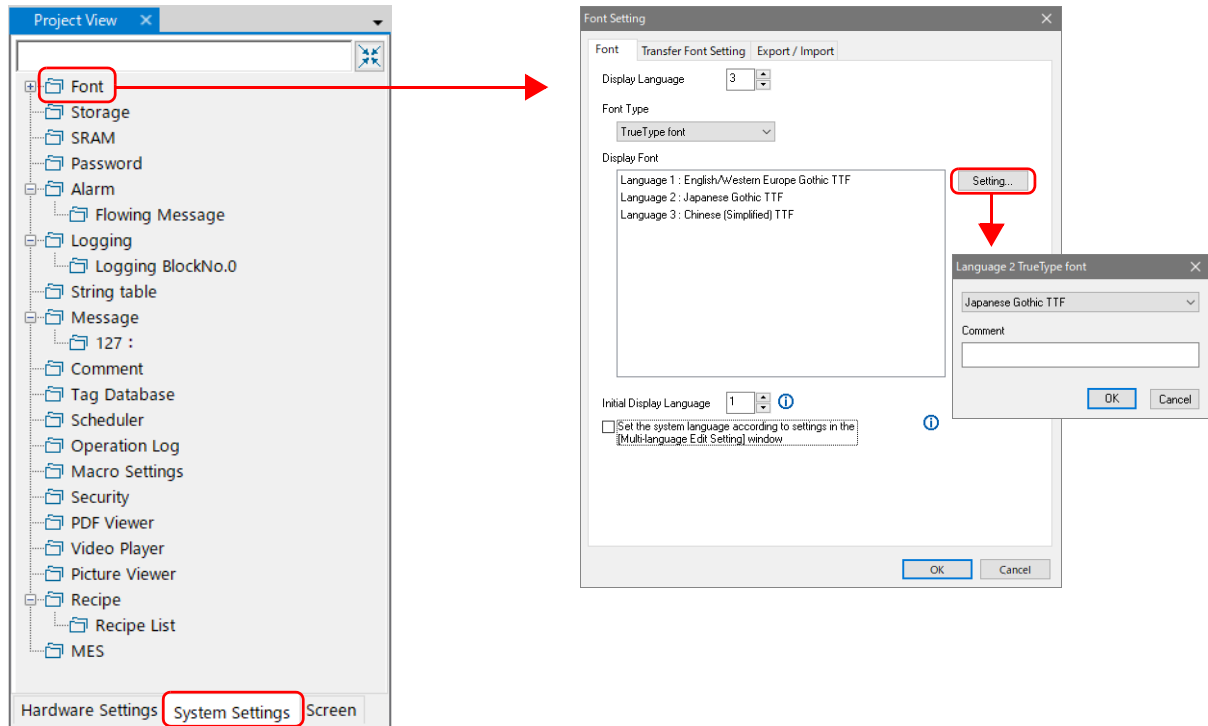


10.3 Screen Creation

10.3.1 Font Settings

Set the font to use on screens.

1. Double-click [Font] at the [Project View] pane → [System Settings] tab.
2. Display the [Font Setting] window and configure the following settings.



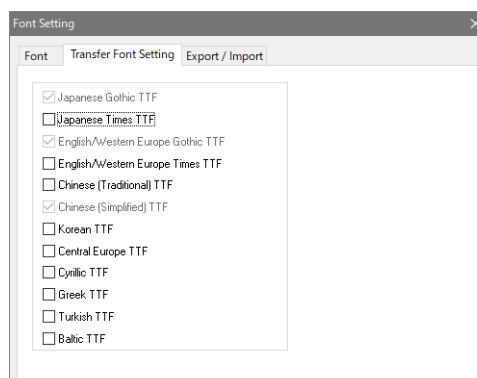
Item	Description	Setting Value
Display Language	Set the number of interface languages. 1 to 32	3
Font Type	Select a font type from [TrueType font], [Bitmap font], [Gothic font], and [Stroke font].	TrueType font
Display Font	Set the display languages via the [Setting] button.	English/Western Europe Gothic TTF Japanese Gothic TTF Chinese (Simplified) TTF
Initial Display Language	Select the language to be displayed immediately after screen program transfer. 1 to 32	1

3. Click the [OK] button to end settings.



Transfer font settings

Select the checkboxes of the fonts required on MONITOUCH. More fonts selected for transfer results in less capacity available for the screen program.
Do not select fonts that are not necessary.



10.3.2 Screen Editing

Before Editing Languages

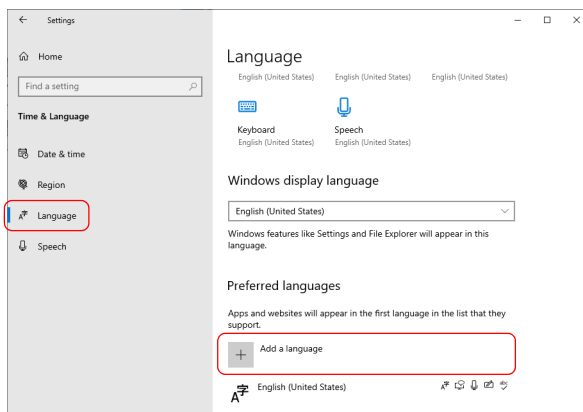
To edit each language on the PC, each input language must be added to the PC.

This section uses Windows 10 to explain the procedure for adding Chinese (simplified) (IME installation).

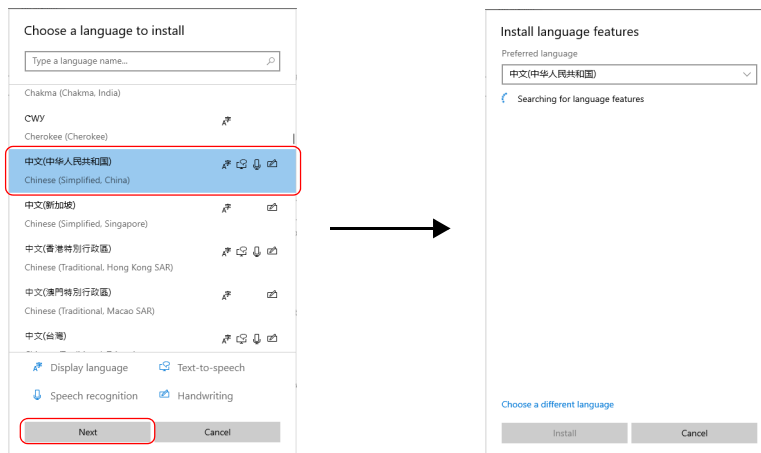
The PC must be connected to the Internet to add input languages.

Connect to the Internet and add languages according to the following procedure.

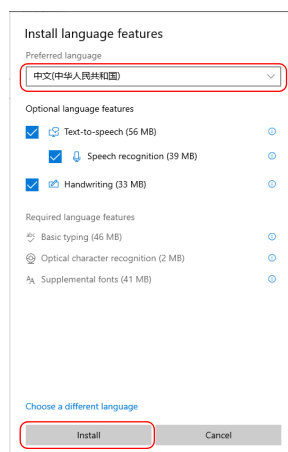
1. Click [Start] → [Settings] on Windows 10.
2. Click [Time & language] → [Language].
3. Click [[+] Add a language] under [Preferred languages] and select the language to install.



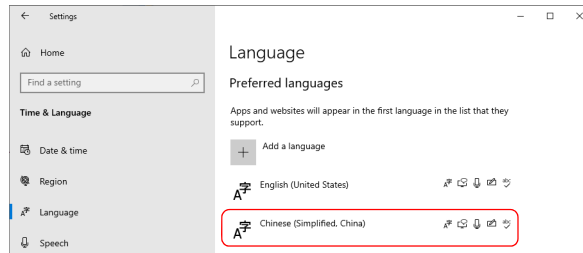
4. Select “中文（中华人民共和国）” and click [Next]. A search for the language function starts.



5. After the search ends, check that “中文（中华人民共和国）” is displayed as the selected language, and then click [Install].



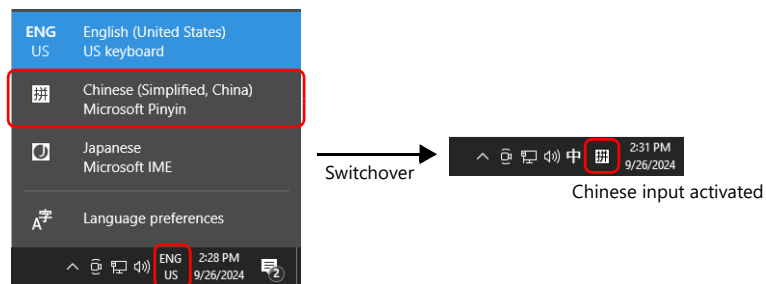
6. "Chinese (Simplified, China)" is added to the language settings.



7. Install Japanese according to steps 1 through 6.

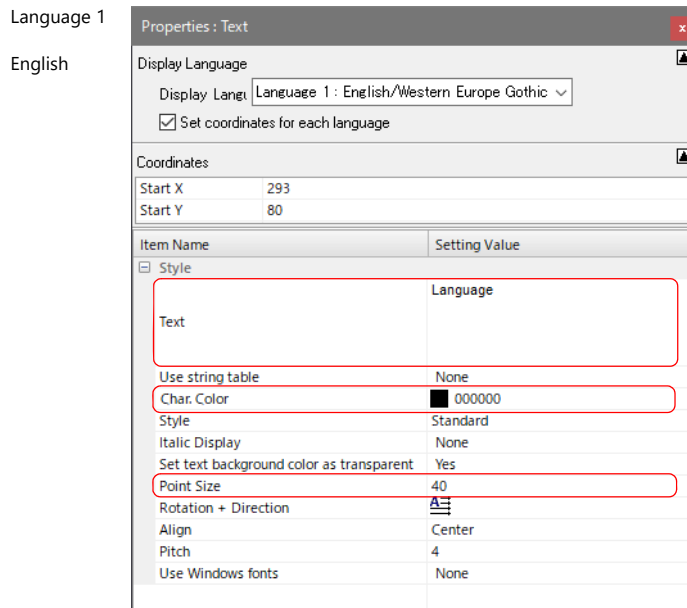
This completes the necessary settings.

Switch the input method to "Chinese (Simplified, China)" from the taskbar of the PC to enable input in Chinese.



Placing Text

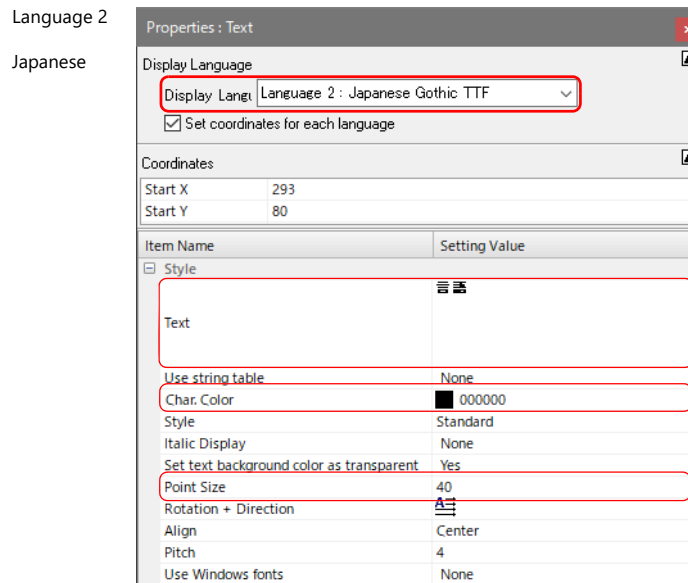
1. Click [Text] on the parts bar and place text.
2. Configure the properties of the text as shown below.



* Character properties (text size and color) can be set for each language.

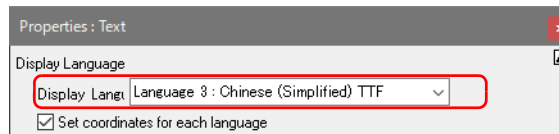
	Item	Description	Setting Value
Display Language	Display Language	Change the language for editing on the screen.	Language 1: English/Western Europe Gothic TTF
	Set coordinates for each language	Set the position of the text frame of each language.	Selected
Style	Text	Register the text to display.	Language
	Use string table	Select whether or not to use the string table.	None
	Char. Color	Set the text color.	Black (000000)
	Style	Set the text style.	Standard
	Italic Display	Select whether or not to display text in italic face.	None
	Set text background color as transparent	Select whether or not to display the background frame.	Yes
	Point Size	Set the text size.	40
	Rotation + Direction	Set the text properties.	A→
	Align		Center
Pitch	4		
Use Windows fonts	None		

- Change the display language to language 2. Switch the input method to Japanese at the bottom right corner of the PC screen.
- Configure the following settings.

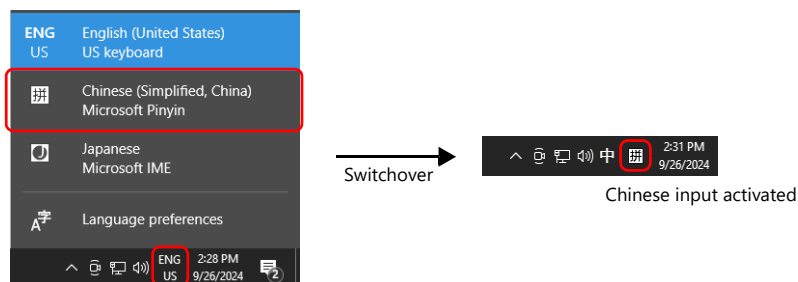


Item (Language 2)	Description	Setting Value
Text	Register the text to display.	言語
Char. Color	Set the text color.	Black (000000)
Point Size	Set the text size.	40

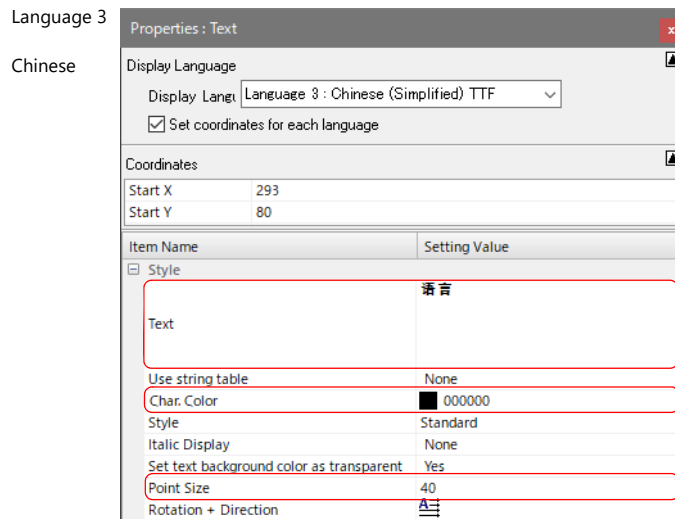
- Change the display language to language 3.



- Switch the input method to "Chinese (Simplified, China)" at the bottom right corner of the PC screen before inputting text.
 - Windows 10

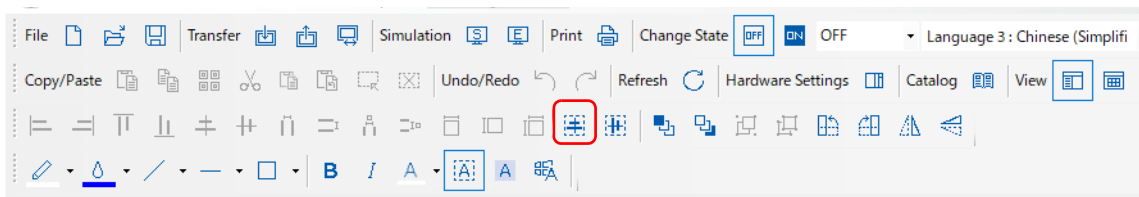


7. Input “yuyan” in the text frame, select “语言”, and press the [Enter] key to confirm. Configure the following settings.

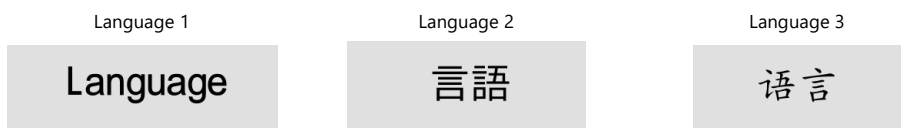


Item (Language 3)	Description	Setting Value
Text	Register the text to display.	语言
Char. Color	Set the text color.	Black (000000)
Point Size	Set the text size.	40

8. Click the text part, and then click the [Align Center in Display Area] icon on the toolbar to adjust the position.

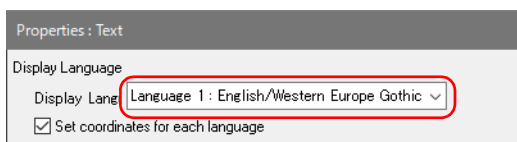


This completes the necessary settings.

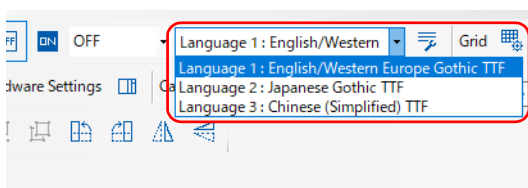


Methods for switching over the display language

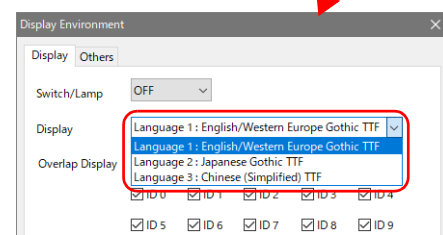
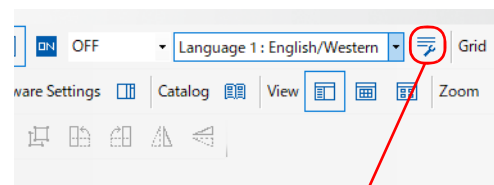
- Text [Properties] pane → [Display Language]



- Toolbar → [Display Language] menu



- Toolbar → [Display Environment]





The following methods are also available for editing multiple languages instead of editing items directly.



For details, refer to “9 Language Changeover” in Reference Manual 2.

- [Multi-language Edit] window
A list is displayed that allows editing while comparing languages. This list can be copied and pasted into Excel.

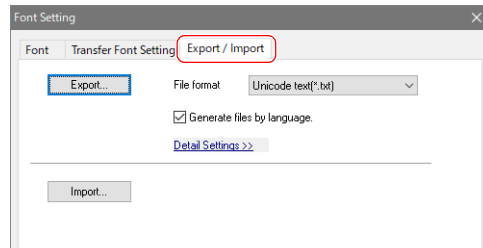
Location of setting: [Project View] pane → [System Settings] tab → [Font] → [Multi-language]

[Multi-language Edit] window

No.	Using Part	1:Japanese	2:English	3:Chinese (Simplified)	4:Korean	5:Chinese (Traditional)
143	Screen[0] Text	[操作イメージ]	[Operation Image]	[操作图像]	[조작 이미지]	[操作圖像]
144	Screen[0] Text	[標準機能]	[Features]	[标准功能]	[표준 기능]	[標準功能]
145	Screen[0] Switch	[ホーム]	[Home]	[主屏幕]	[홈 화면]	[主屏幕]
146	Screen[0] Switch	[拡大縮小]	[Enlarging]	[画面扩大]	[화면 확대]	[畫面擴大]
147	Screen[0] Switch	[データ表示]	[Data Display]	[数据显示]	[데이터 표시]	[數值顯示]
148	Screen[0] Switch	[スイッチ]	[Switch / Lamp]	[开关 / 灯]	[스위치 / 램프]	[開關 / 燈]
149	Screen[0] Switch	[数値入力]	[Numerical] [Data Entr]	[数值输入]	[수치 표시]	[數值輸入]
150	Screen[0] Switch	[グラフ]	[Graph Display]	[图表]	[그래프]	[圖表]
151	Screen[0] Switch	[レシピ]	[Recipes]	[配方]	[레시피]	[配方]
152	Screen[0] Switch	[USBカメラ表示]	[USB Camera] [Display]	[USB摄像头显示]	[USB카메라 표시]	[USB攝影機顯示]

- Export/import
After exporting as a text file, edit each language using Excel. After editing, import the language data.

Location of setting: [Project View] pane → [System Settings] tab → [Font] → [Export/Import]

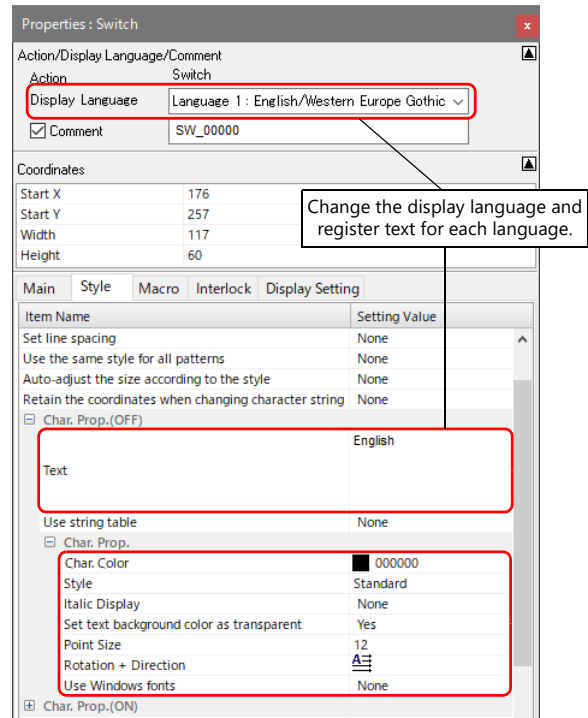
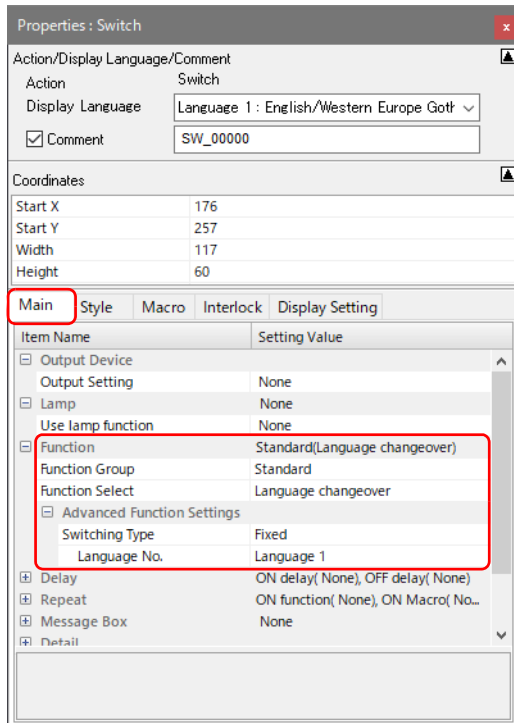


Example of a TXT export file

	A	B	C	D	E
1	<< header start -->>		Language 2	Language 3	Language 4
2	Export Multi Languages Text List				
3	Ver:1.0	Info:0,1,1,1,1			
4	Language:	1:Japanese	2:English	3:Chinese (Simplified)	4:Korean
5	<<-- header end >>				
6	MLJB0000:STR	[確認]	[Confirm]	[确认]	[확인]
7	MLJB0000:STR	[言語を切り替えます。]	[Language will be switche	[转换语言。]	[언어를 바꿉니다.]
8	MLJB0000:STR	[よろしいですか?]	[OK?]	[可以吗?]	[좋습니다 까?]
9	MLJB0000:SW000	[はい]	[Yes]	[可以]	[예]
10	MLJB0000:SW000	[いいえ]	[No]	[不行]	[아니요]
11	MLJB0000:SW000	[日本語]	[日本語]	[日本語]	[한국어]

Placing Switches (Language Changeover)

1. Place a switch from the parts bar → [Switch].
2. Display the [Properties] pane of the switch and configure the following settings.



• Main

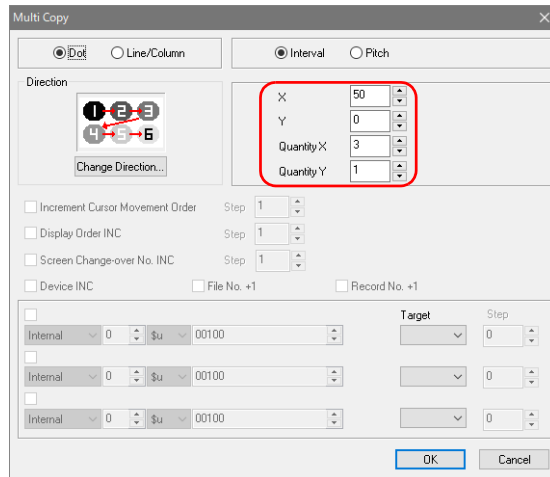
Item	Description	Setting Value
Function Group	Set the operation to perform when the switch is pressed.	Standard
Function Select		Language changeover
Switching Type	Set the language to display when the switch is pressed.	Fixed
Language No.		Language 1

• Style

Item	Description	Setting Value
Char. Prop. (OFF) Text	Set the text to be displayed on the switch. Use the [Display Language] menu and register text for each language.	Language 1 English Language 2 英語 (English) Language 3 English
Char. Color Style Italic Display Set text background color as transparent Point Size Rotation + Direction Use Windows fonts	Set properties including text color, attributes, and text size.	-

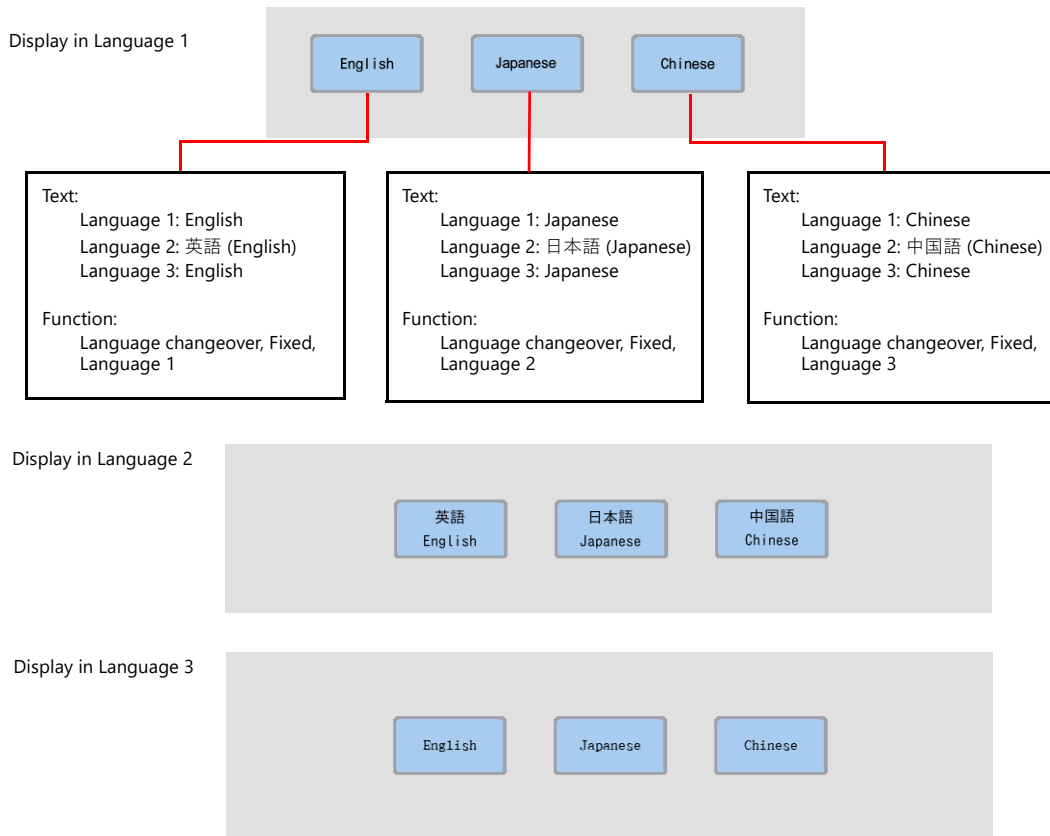
3. Set the design and color of the switch on the [Design] properties pane.

4. Select the switch and click [Multi Copy] on the right-click menu. Then configure settings as shown below and click [OK].



[X]: 50
 [Y]: 0
 [Quantity X]: 3
 [Quantity Y]: 1

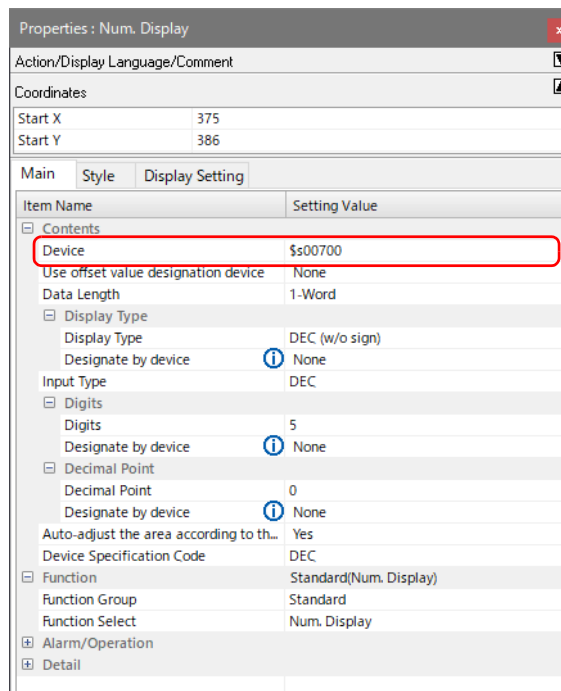
5. Multiple copies of the switch are made. Change the text and function of the copied switches.



This completes the switch creation process.

Placing a Numerical Value Display Part (For Displaying the Current Language No.)

- On the parts bar, click and hold the [Data Display] icon, and then click and place a [Num. Display] part. Configure the properties of the numerical data display as shown below.

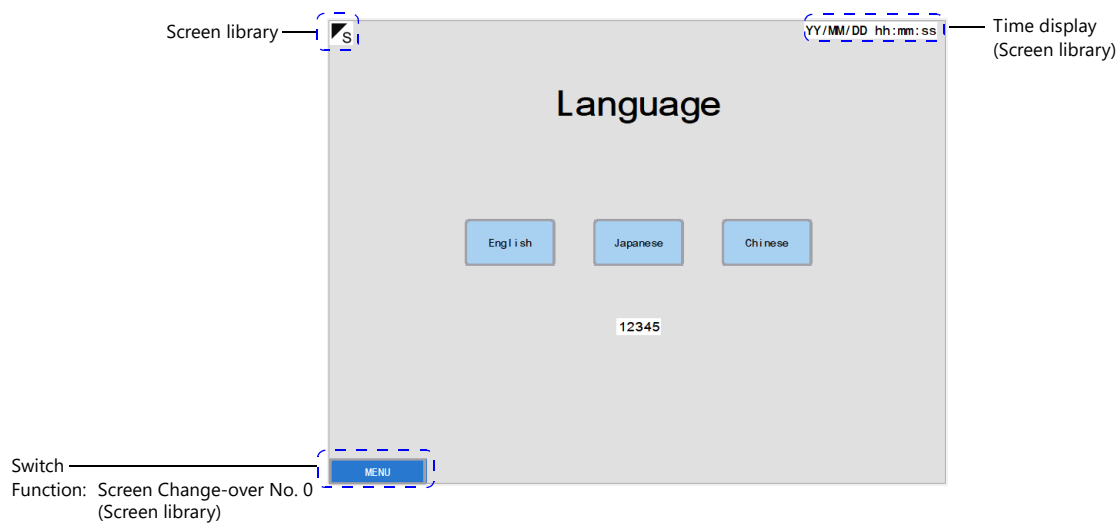


- Main

Item	Description	Setting Value
Contents	Device	Specify the device memory address for monitoring. Internal \$s00700

This completes the numerical data display creation process.

Placing a Screen Library and Editing the Menu Switch (Registering Languages)



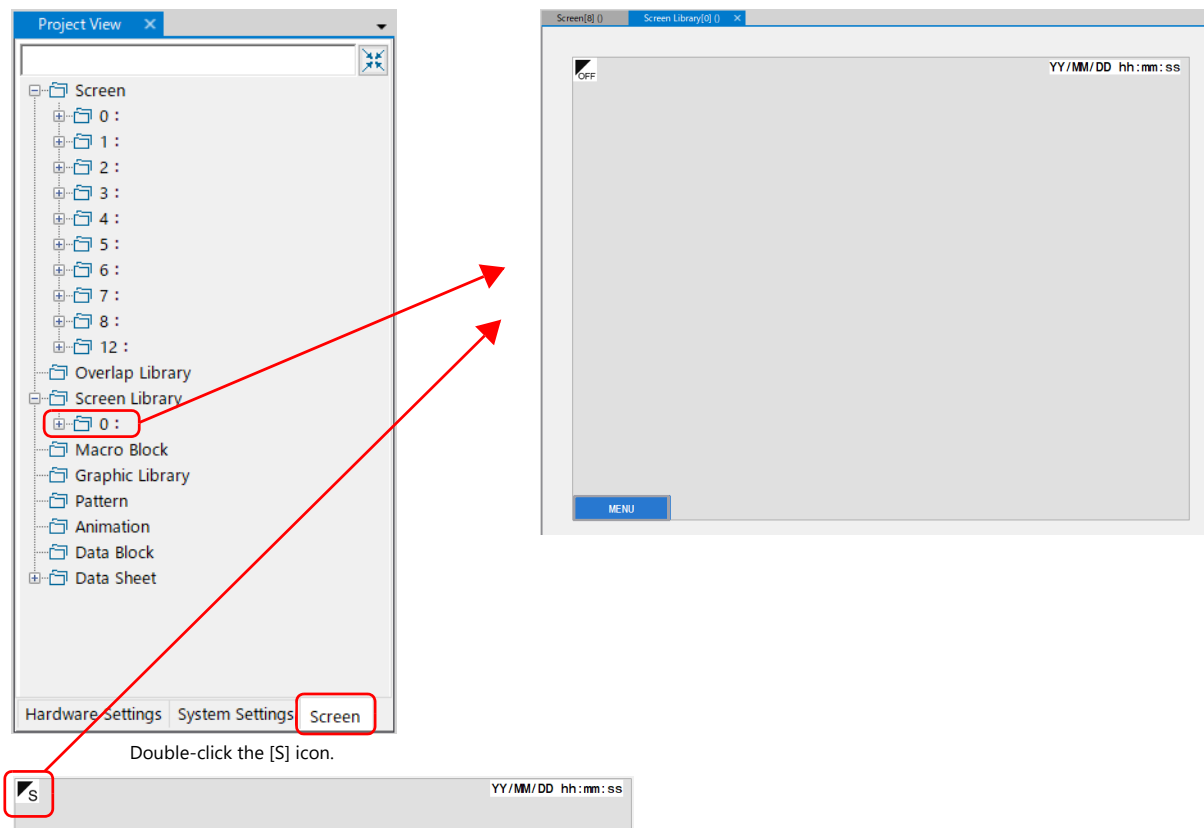
Placing a Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

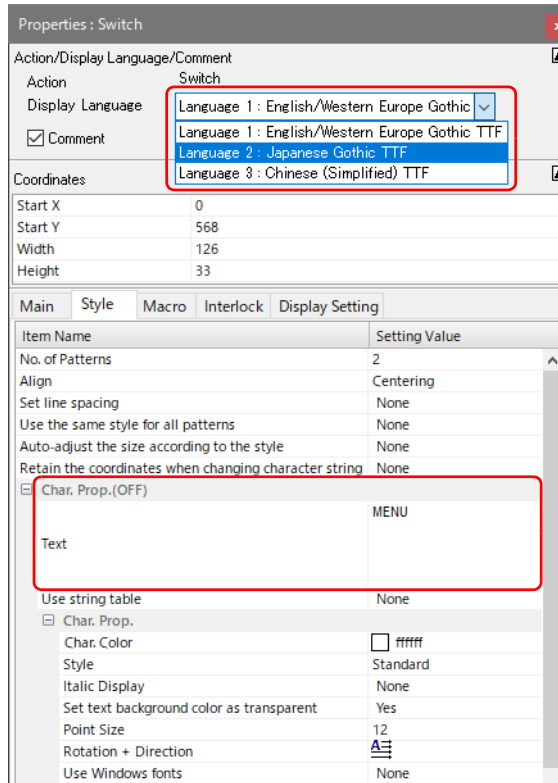
1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

Editing the [MENU] Switch in the Screen Library

1. Double-click number [0000] at the [Project View] pane → [Screen] tab → [Screen Library] to display screen library number 0.
 - * The screen library to be called can also be displayed by double-clicking the [S] icon placed on the screen.



2. Select the [MENU] switch and register languages 2 and 3 from the properties.



Change the display language.

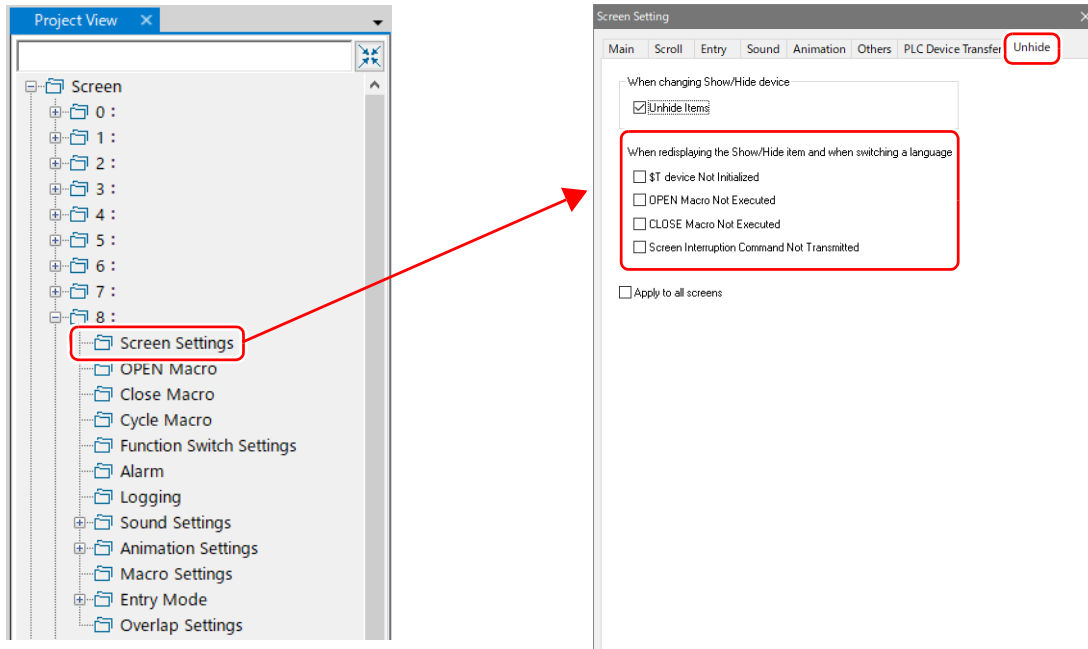
Register text.
Language 2: MENU
Language 3: MENU

The completes the screen editing process.

10.3.3 Redrawing Upon a Language Change

When the interface language is switched, the screen is redrawn. Set the items that are executed when this happens.

1. Double-click [Screen Settings] at the [Project View] pane → [Screen] tab → [Screen (No. 0008)].
2. Configure the following settings on the [Unhide] tab.



Item	Description	Setting Value
When redisplaying the Show/Hide item and when switching a language	Set whether or not to execute the following items when redrawing the screen upon switching the language.	
	Setting	Description
	\$T device Not Initialized	The screen-specific internal device "\$T" is not initialized.
	OPEN Macro Not Executed CLOSE Macro Not Executed	The OPEN and CLOSE macros of screens and overlap libraries (multi, global) are not executed.
	Screen Interruption Command Not Transmitted	The interruption command is not executed when the PLC is connected with a universal serial connection.
		All deselected

3. Click [OK].

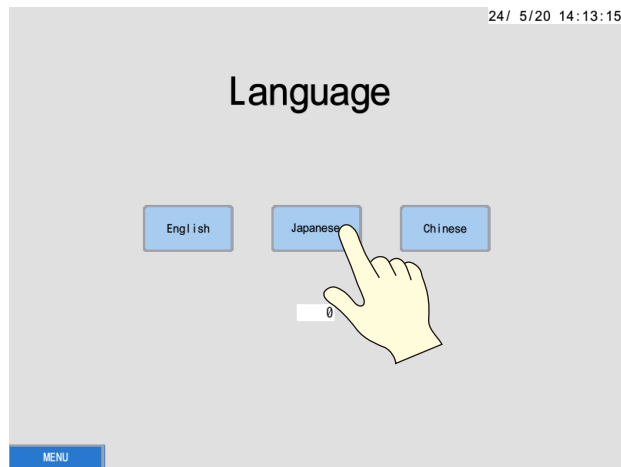
This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

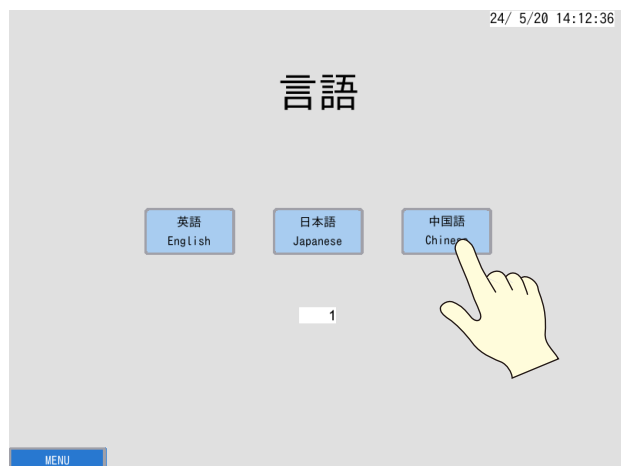
10.4 Checking Operation on MONITOUCH

Press a switch to change the display language.

1. Press the [Japanese] switch. (Display language No. 0)



2. The display language changes to Japanese. (Display language No. 1)
Press the [Chinese] switch.



3. The display language changes to Chinese. (Display language No. 2)



11 Device Memory Map

11.1 Overview

Device Memory Map

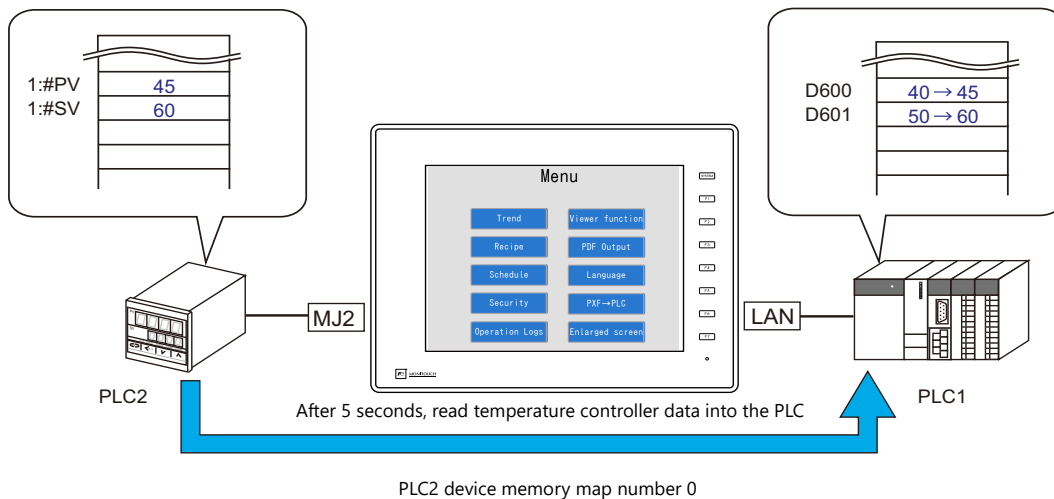
This memory map is used when you need to read and write data between devices connected to MONITOUCH.

This can be easily configured without the need for a sequence program.

Device memory maps are processed in the background so operations occur without affecting the screen processing cycle.

Device memory maps can be executed periodically or by changing a PLC trigger bit from OFF to ON.

Example: Periodic reading every 5 seconds



No.	PLC2 Device	Name	Data Type	>> Target Device 1	>> Target Device 2
0	1:#302001	PV (process value)(Engineering unit)	Word	D00600	
1	1:#402131	Front SV(Engineering unit)	Word	D00601	
2					
3					

Maximum of 128 entries can be registered in a single device memory map.
(Device memory map numbers 0 to 31 (32 total) per logical port)

Types of Device Memory Map Execution

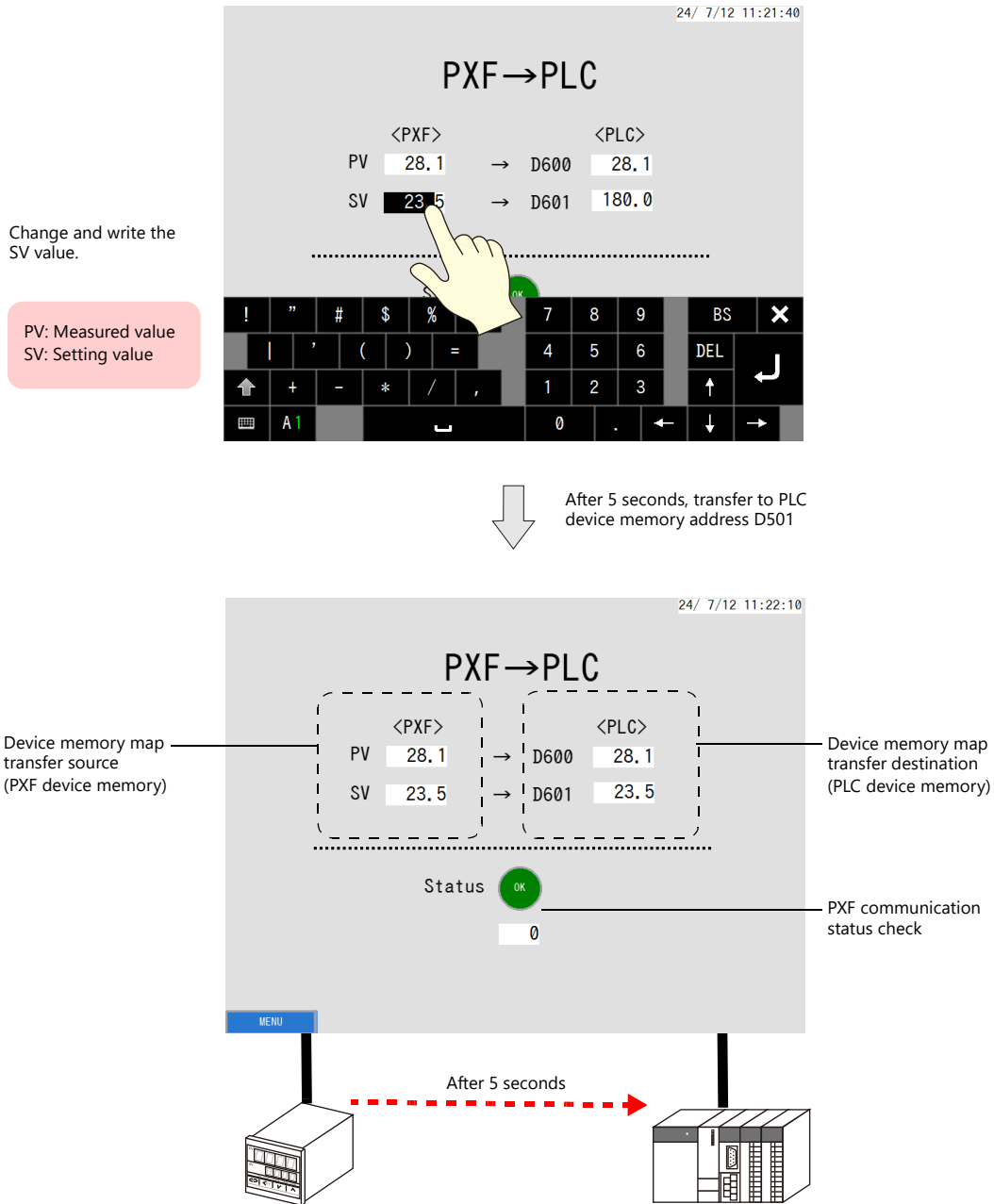
The following types are available.

- Periodical: Execute data reading/writing at a set time
 - Periodical reading
 - Periodical writing
- Synchronized: Execute data reading/writing when the set trigger bit of a control device memory changes from OFF to ON
 - Synchronized reading
 - Synchronized writing
- Macros: Execute data reading/writing using macro commands
 - TBL_READ (reading)
 - TBL_WRITE (writing)

11.2 Example Screen

This chapter explains how to create a screen for transferring data from a Fuji Electric PXF to PLC once every 5 seconds using device memory map number 0.

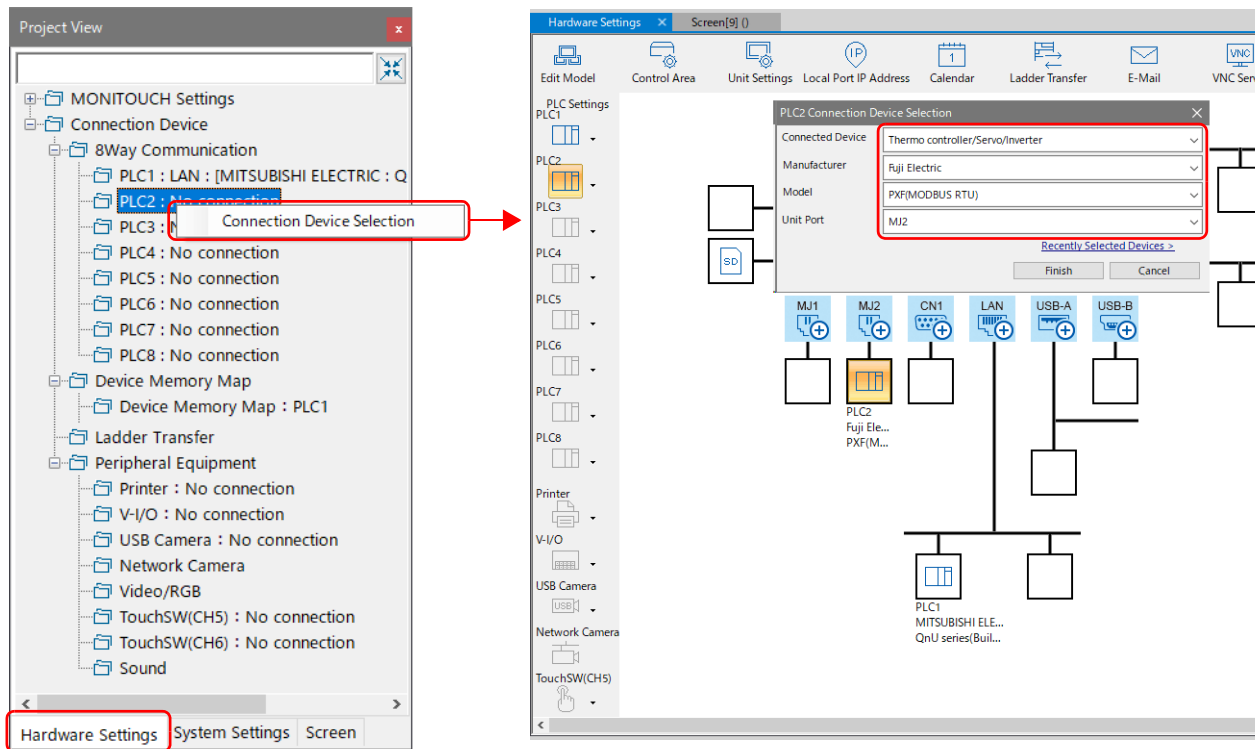
Screen No. 9



11.3 Connection with the Fuji Electric PXF

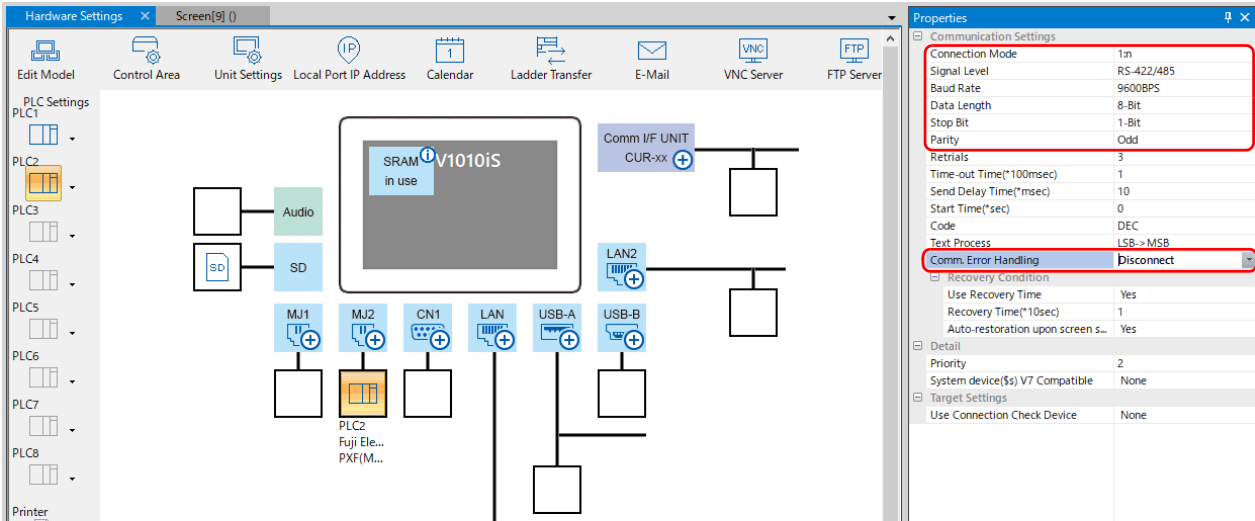
11.3.1 Smart Editor Settings

1. At the [Project View] pane → [Hardware Settings] tab → [Connection Device] → [8Way Communication], right-click [PLC2], and click [Connection Device Selection].
2. Select the following model and connection port and click [Finish] on the [Connection Device Selection] window.



Item	Description	Setting Value
Connected Device	Select the connected device (PLC, temperature controller etc.).	Thermo controller / Servo / Inverter
Manufacturer	Select the manufacturer and model of the connected device.	Fuji Electric
Model		PXF (MODBUS RTU)
Unit Port	Select the connection port on MONITOUCH.	MJ2

3. The PLC2 properties are displayed. Configure the following settings.



Item	Description	Setting Value
Connection Mode	1:1, 1:n, Multi-link2	1:n
Signal Level	RS-422/485	RS-422/485 (fixed)
Baud Rate	9600, 19200, 38400, 38400, 115K bps	9600 bps
Data Length	8-Bit	8-Bit (fixed)
Stop Bit	1-Bit	1-Bit (fixed)
Parity	None, Odd, Even	Odd
Comm. Error Handling	Stop, Continue, Disconnect	Disconnect

This completes the necessary settings.

11.3.2 PXF Settings

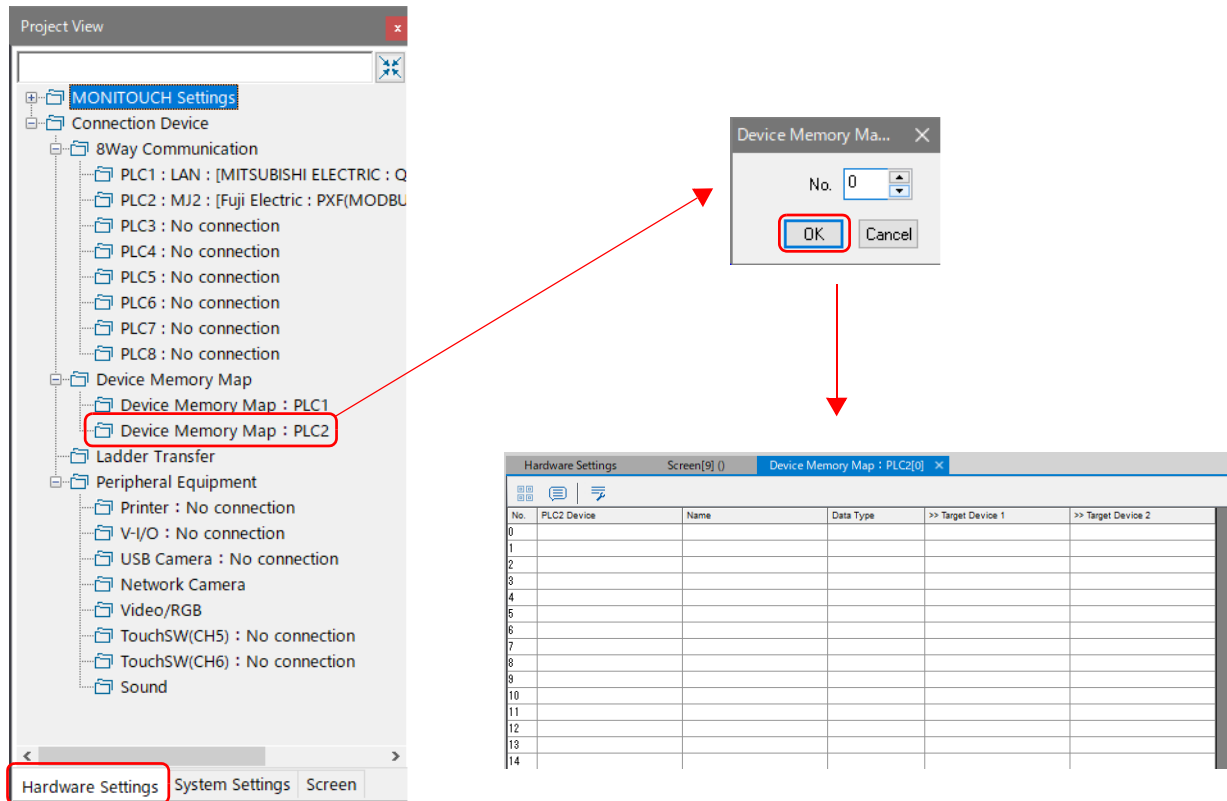
Refer to Connection Manual 1 and the PXF Series Manual for details.

11.4 Screen Creation

11.4.1 Editing Device Memory Maps

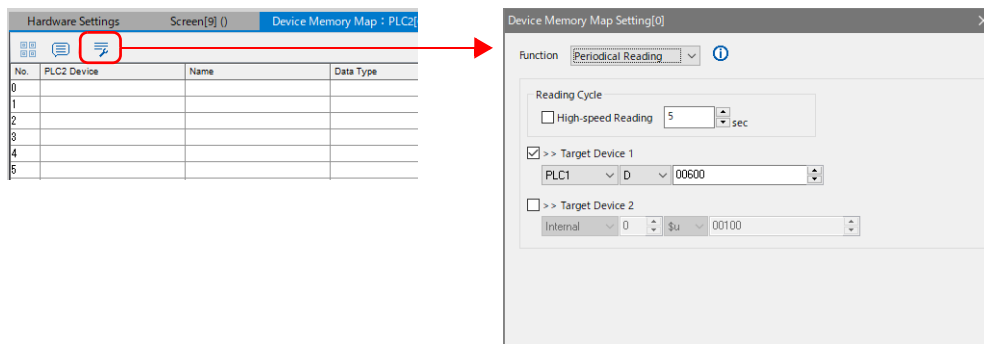
Edit device memory map number 0.

1. Double-click [Device Memory Map: PLC2] at the [Project View] pane → [Hardware Settings] tab → [Connection Device] → [Device Memory Map], select number 0 and click [OK].
[Device Memory Map: PLC2 [0]] is displayed.



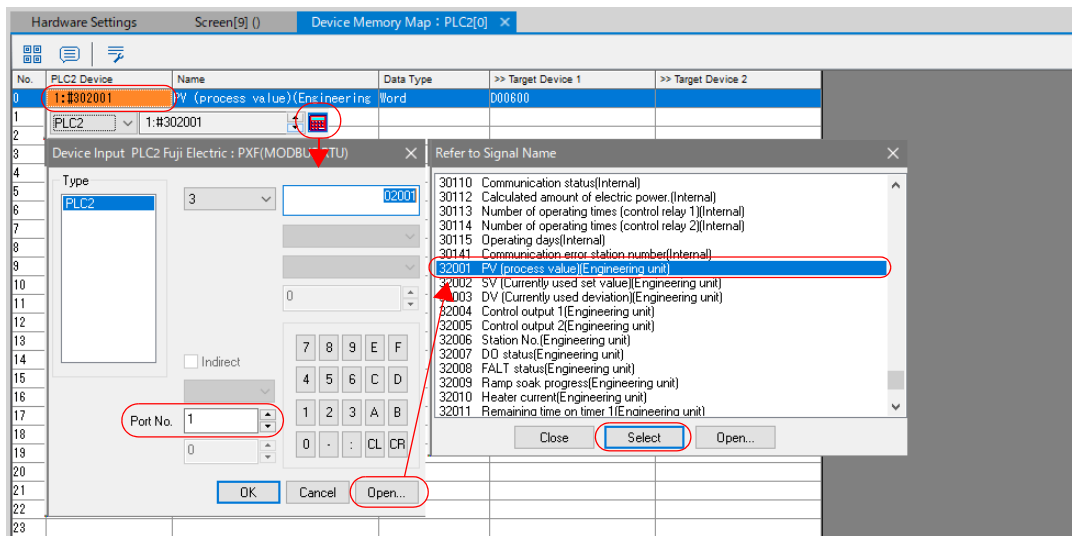
For each logical port, there are 32 device memory maps numbered from 0 to 31, and up to 128 addresses can be registered to each memory map.

2. Click the [Device Memory Map Setting] icon to display the [Device Memory Map Setting [0]] window. Configure the following settings.

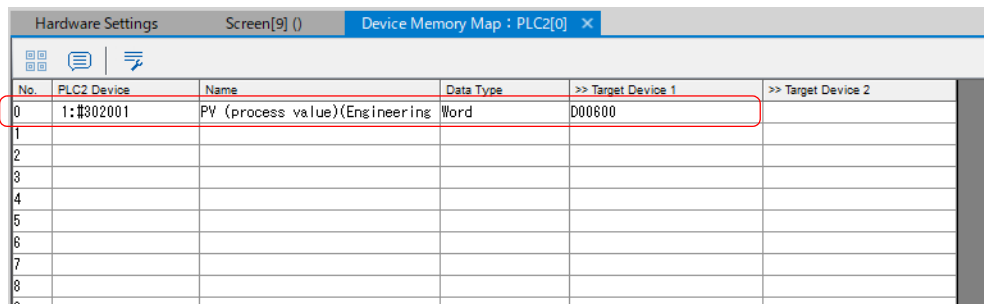


Item	Description	Setting Value
Function	Set the timing and direction of transfer.	Periodical Reading
Reading Cycle	Set this item when "Periodical Reading" or "Periodical Writing" is selected. Set the transfer cycle.	5 sec
Target Device 1	Specify the device memory address of the transfer destination.	Selected D600
Target Device 2	Set this item when transferring to a device memory other than [Target Device 1].	Deselected

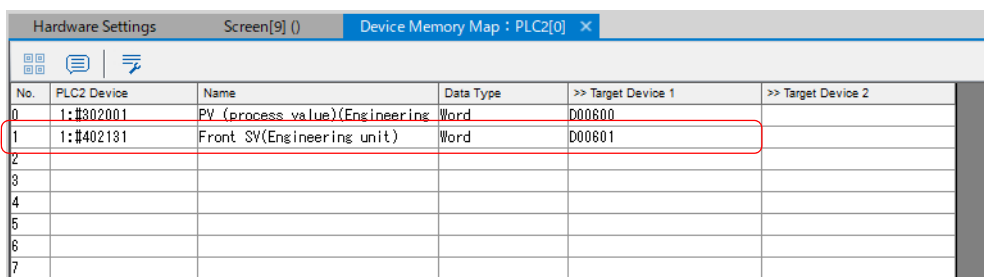
- Click [OK] to close the window.
- Double-click the 0th row cell under [PLC2 Device], click the red calculator icon, and set the device memory address as shown below.
 Port No.: 1
 Press the [Open] button and then select "32001 PV (process value) (Engineering unit)".



- "1: #32001" is registered to the 0th row. (Leave [Data Type] set to "Word".)



- Select "42131 Front SV (Engineering unit)" as in step 4 for row 1.
 "1: #402131 Front SV (Engineering unit)" is registered.



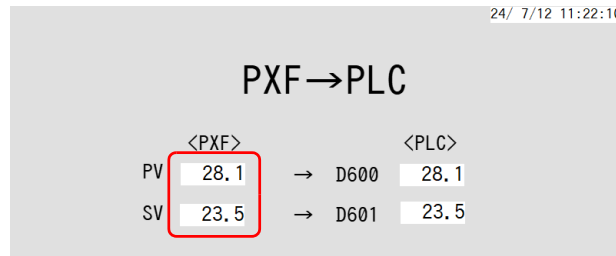
This completes the device memory map settings.

11.4.2 Screen Editing

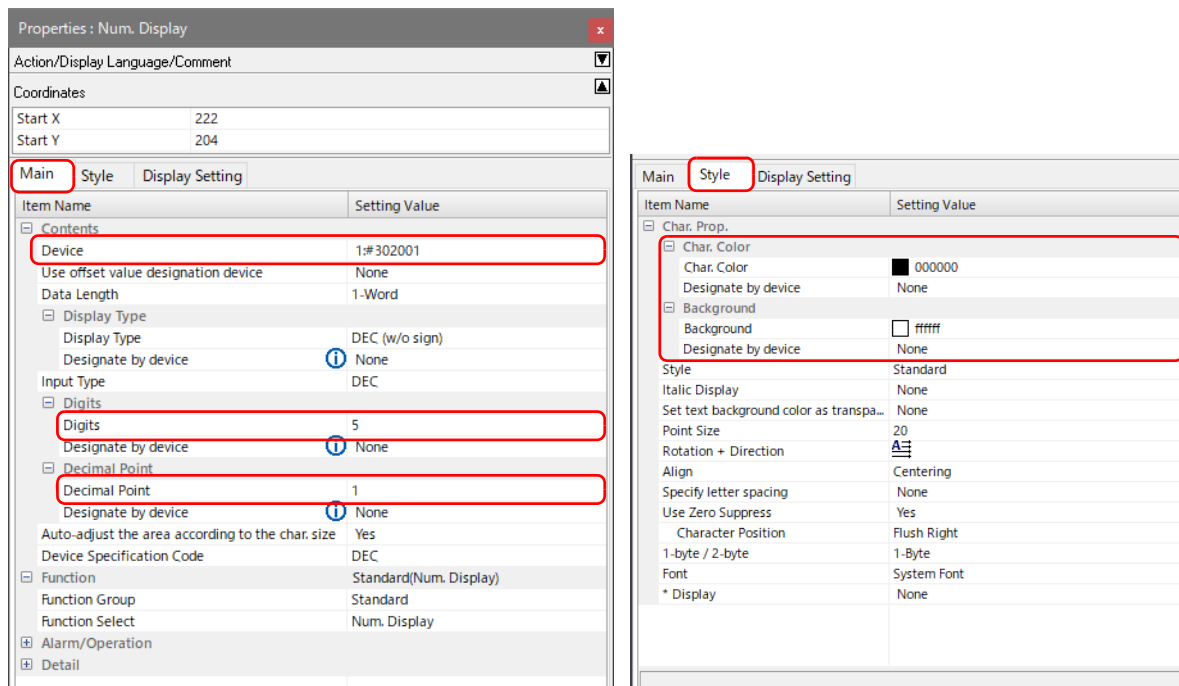
Placing Numerical Data Displays Parts (for Monitoring)

Place numerical data display parts for monitoring each device memory.

PXF Device Memory (Transfer Source)



1. On the parts bar, click and hold the [Data Display] icon, and then click and place a [Num. Display] part.
2. Configure the properties of the numerical data display as shown below.



- Main

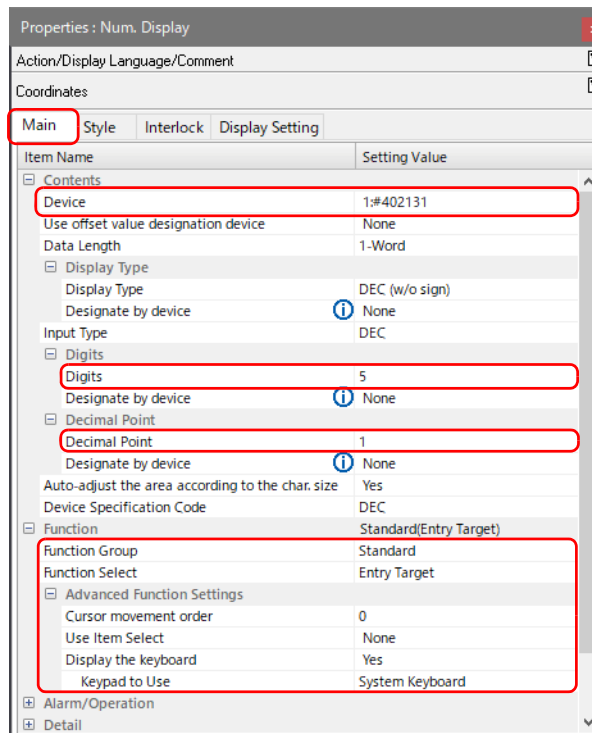
Item	Description	Setting Value
Contents	Device	Specify the device memory address for monitoring. PLC2, 1: #302001 PV (process value) (Engineering unit)
	Digits	Set the number of digits to display. 5
	Decimal Point	Specify the decimal place. 1

- Style

Specify the color and point size.

3. Select the created numerical data display and copy and paste it.

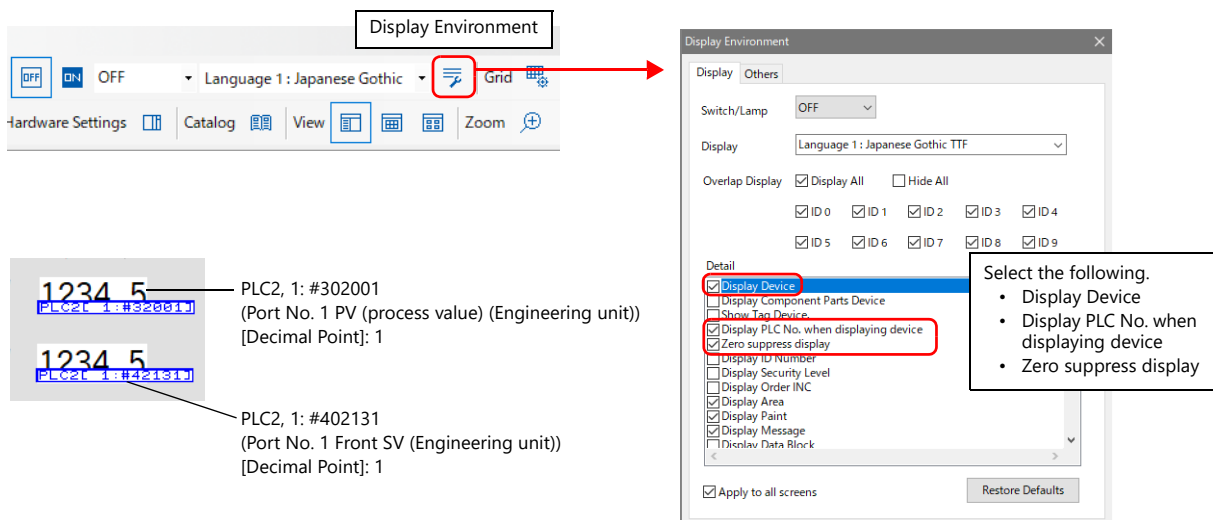
4. Configure the properties of the numerical data display as shown below.



• Main

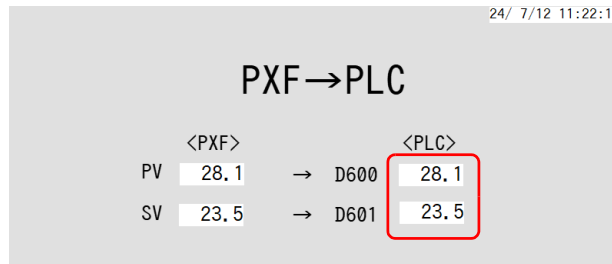
Item		Description	Setting Value
Contents	Device	Specify the device memory address for monitoring.	PLC2, 1: #402131 Front SV (Engineering unit)
	Digits	Set the number of digits to display.	5
	Decimal Point	Specify the decimal place.	1
Function	Function Group	Specify the function.	Standard
	Function Select		Entry Target
	Cursor movement order	Set the order to move the cursor when the UP/DW keys on the keypad are pressed.	0
	Display the keyboard	This setting is available when [Function Select] is set to [Entry Target]. The keypad calling function is added.	Yes
Keypad to Use	System Keyboard		

5. Click the [Display Environment] icon on the toolbar and select the following three checkboxes. Check the device memory address that is displayed at the lower left of each numerical data display part.



This completes the necessary settings.

PLC Device Memory (Transfer Destination)



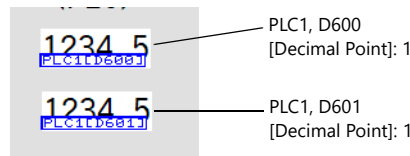
1. On the parts bar, click and hold the [Data Display] icon, and then click and place a [Num. Display] part.
2. Configure the properties of the numerical data display as shown below.

• Main

	Item	Description	Setting Value
Contents	Device	Specify the device memory address for monitoring.	PLC1, D600 PLC1, D601
	Digits	Set the number of digits to display.	5
	Decimal Point	Specify the decimal place.	1

• Style

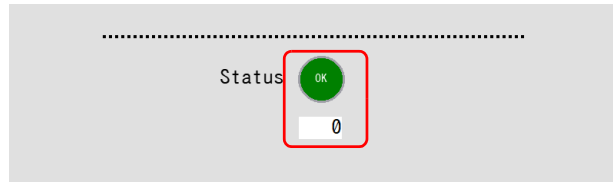
Specify the color and point size.



This completes the necessary settings.

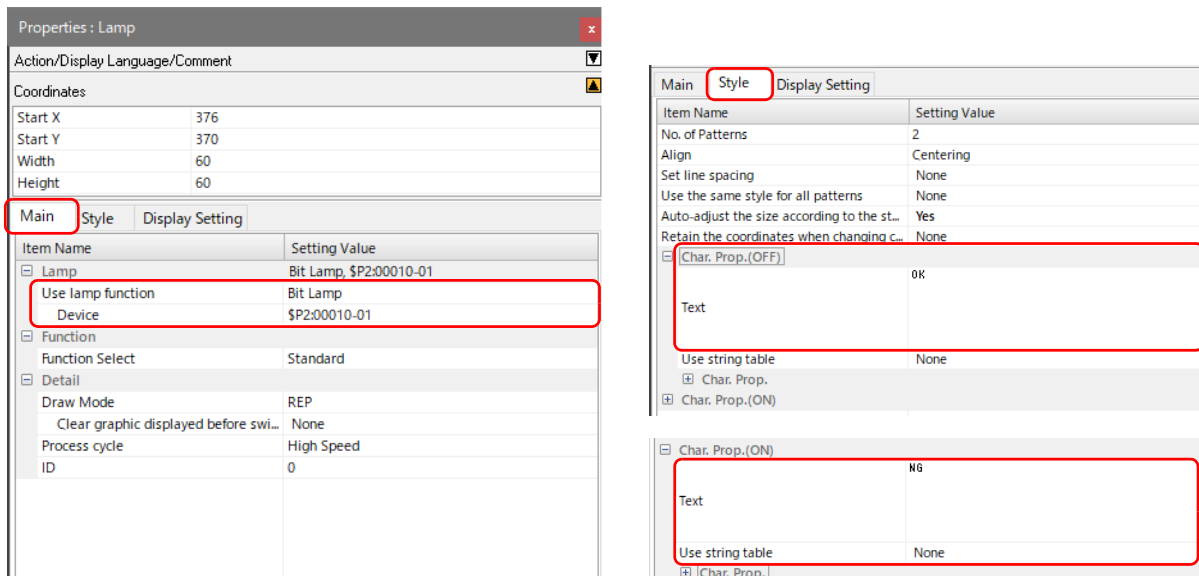
Checking the Communication Status of PXF (PLC2)

The connection statuses of PLC1 to PLC8 are output to system device memory (\$P). Create a lamp for status display and numerical data display on the screen for checking the connection status.



Placing a Lamp

1. Place a lamp from the parts bar → [Lamp].
2. Configure the properties of the lamp as shown below.



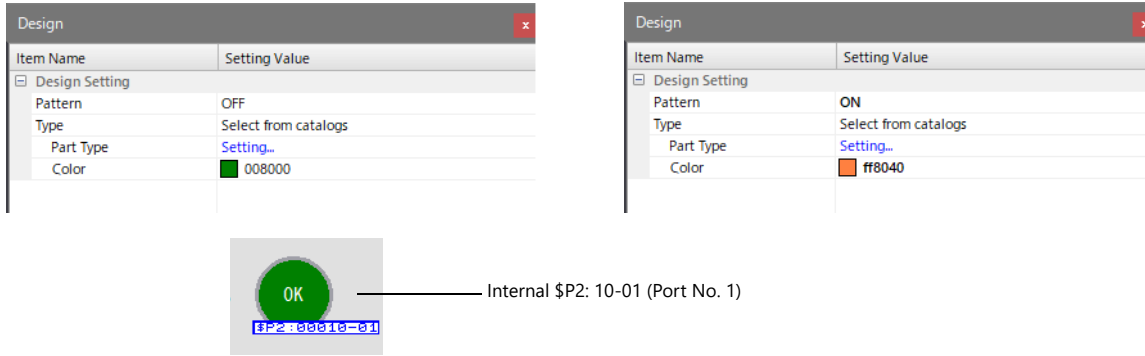
• Main

Item	Description	Setting Value
Use lamp function	Select a function from bit lamp, word lamp, or N-state lamp.	Bit Lamp
Device	Specify the device memory address for monitoring.	Internal \$P2: 10-01 (Port No. 1)

• Style

Item	Description	Setting Value
Char. Prop. (OFF) Text	Set the text to be displayed on the lamp.	OK
Char. Prop. (ON)		NG

3. Set the color of the ON and OFF patterns for the lamp on the [Design] properties pane.



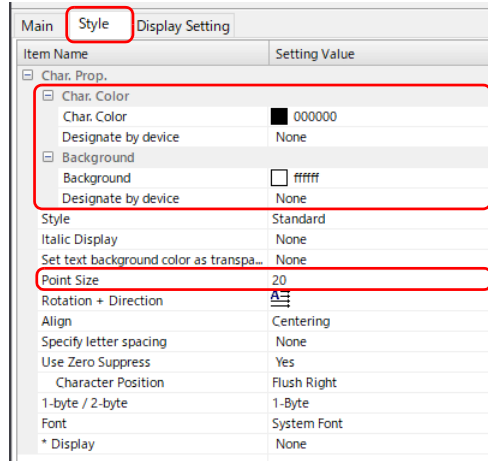
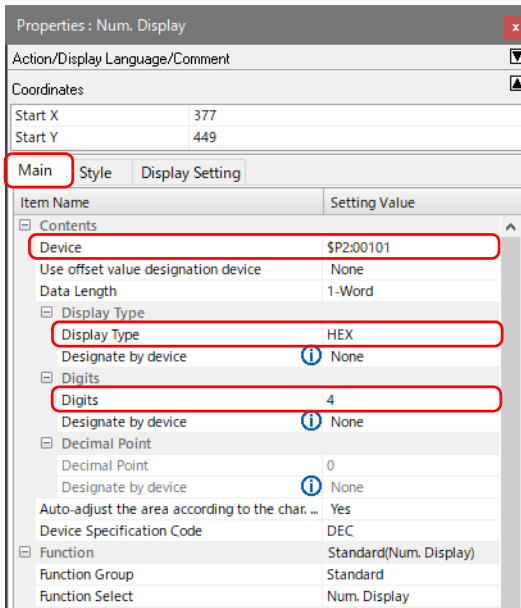
Link down information of PLC2 is stored in system memory at \$P2: 10 to \$P2: 225. 0: Normal, 1: Communication link down

Device Memory	Description
\$P2: 10-00	Link information for port No. 000
\$P2: 10-01	Link information for port No. 001
:	:
\$P2: 25-14	Link information for port No. 254
\$P2: 25-15	Link information for port No. 255

This completes the necessary settings.

Placing a Numerical Data Display Part

1. On the parts bar, click and hold the [Data Display] icon, and then click and place a [Num. Display] part.
2. Configure the properties of the numerical data display as shown below.

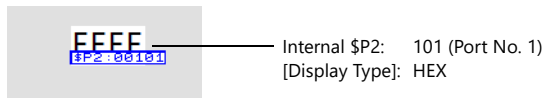


• Main

Item		Description	Setting Value
Contents	Device	Specify the device memory address for monitoring.	Internal \$P2: 101
	Display Type	Set the display format.	HEX
	Digits	Set the number of digits.	4

• Style

Specify the color and point size.



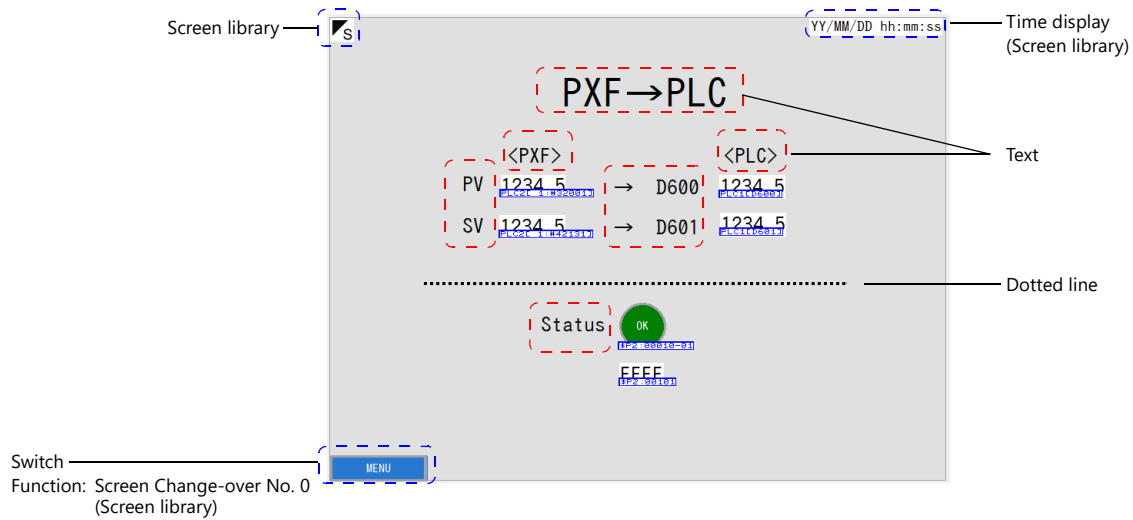
☺ The error status of PLC2 is stored in system memory at \$P2: 100 to \$P2: 335.

- 0000H: Normal
- FFFFH: Timeout
- 8001H: Check code error
- 8002H: Data error
- 800BH: Error code received from PLC2

Device Memory	Description
\$P2: 100	PLC2, Port No. 000 error status
\$P2: 101	PLC2, Port No. 001 error status
:	:
\$P2: 354	PLC2, Port No. 254 error status
\$P2: 355	PLC2, Port No. 255 error status

This completes the necessary settings.

Placing a Dotted Line, Text, and a Screen Library



Dotted Line

1. On the parts bar, click [Line] → [Straight Line]. The mouse cursor changes to a crosshair.
2. Drag horizontally while holding down the [Shift] key on the PC. A straight line is drawn.
3. Right-click or left-click at any position on the screen to return the mouse cursor to a pointer.
4. Select a dotted line for [Line Type] on the [Properties] pane of the straight line.

This completes the procedure.

Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click each text part and adjust the text color and size on the displayed [Properties] pane.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

11.5 Checking Operation on MONITOUCH

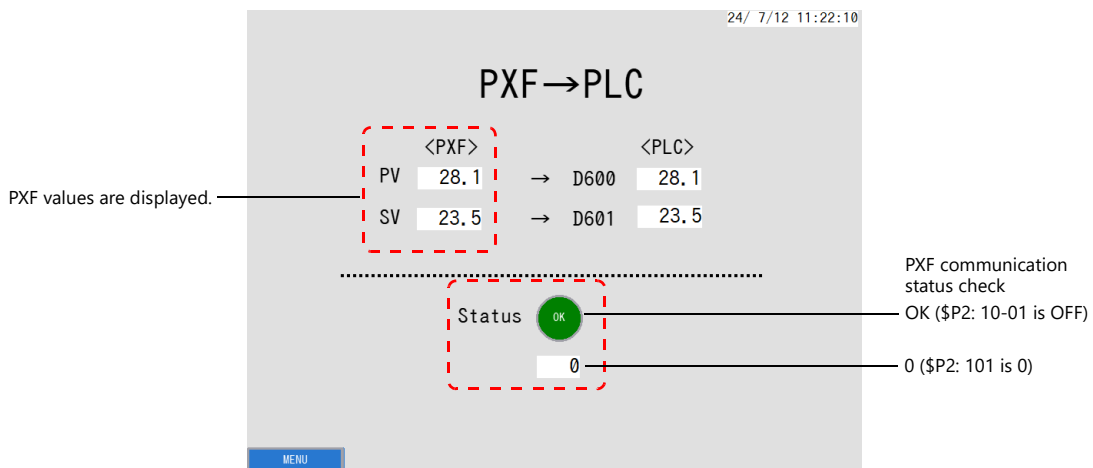
11.5.1 List of Used Device Memory Addresses

Device Memory	Description	Remarks
PLC2, 1: #302001 PLC2, 1: #402131	Numerical data display parts (PXF)	PLC2, 1: #402131 only Keypad display enabled
PLC1 D600 to D601	Numerical data display parts (PLC)	
Internal \$P2: 10-01	Lamp (communication status check)	
Internal \$P2: 101	Numerical data display part (communication status check)	

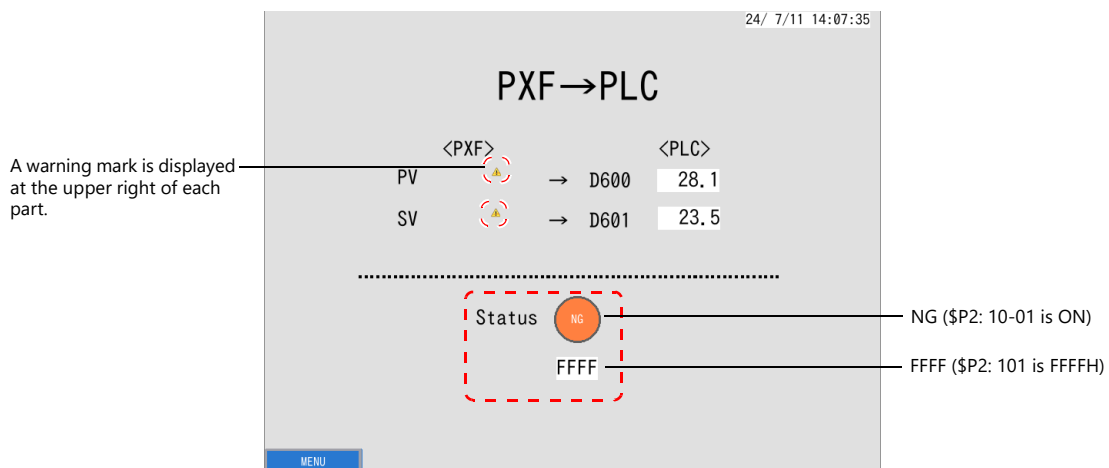
11.5.2 Checking the Communication Status of PXF (PLC2)

Monitor and check the PXF communication status with the lamp and numerical data display.

- Normal

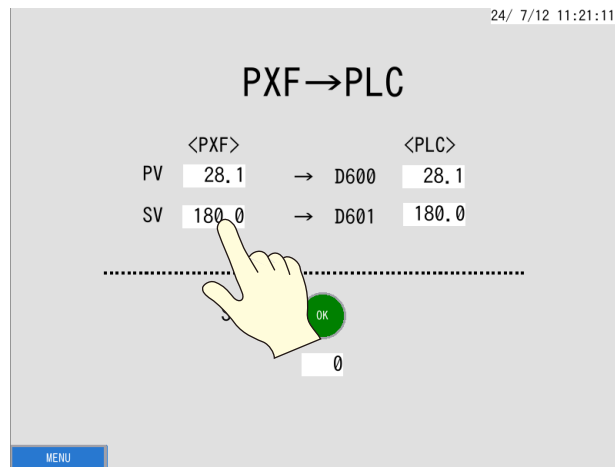


- Communication error



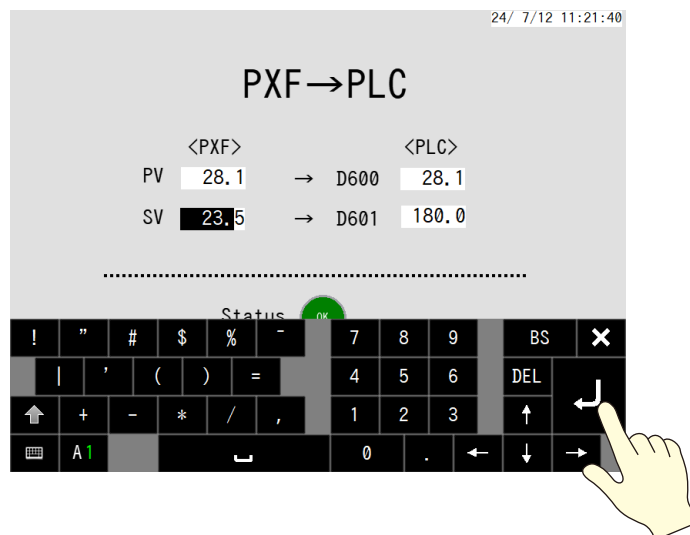
11.5.3 Operation on MONITOUCH

1. Press the [SV] numerical data display of the PXF.

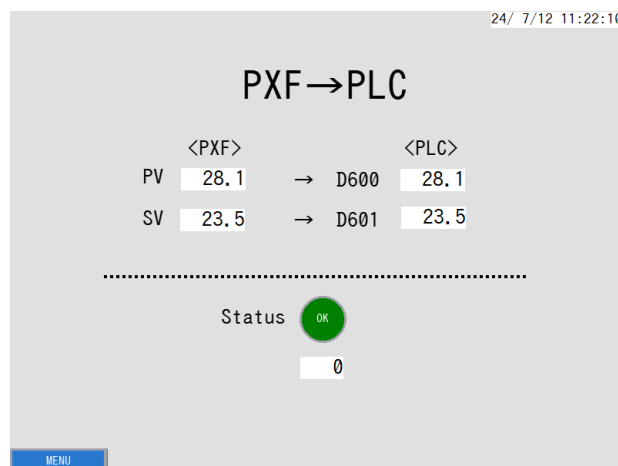


2. The system keyboard is displayed. Input "23.5" and press the [Enter] key.

23.5 is written to SV of the PXF.



After 5 seconds, 23.5 is transferred to D601.

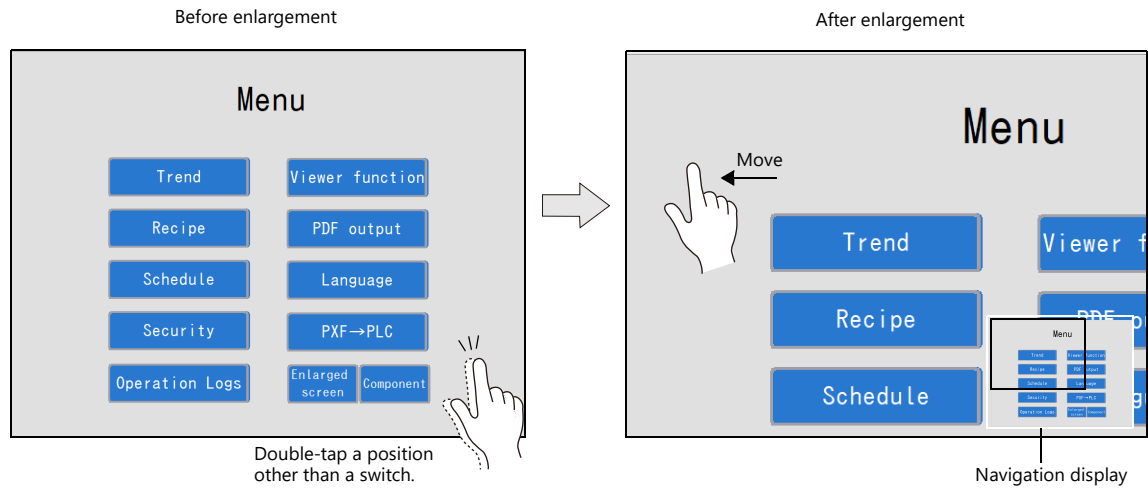


12 Convenient Functions

12.1 Enlarged Display

12.1.1 Overview

The screen can be enlarged by double-tapping. After enlarging the screen, the display can be scrolled to show off-screen content. A navigation display (a miniaturized display of the entire screen) is shown during scrolling to indicate the current display position.



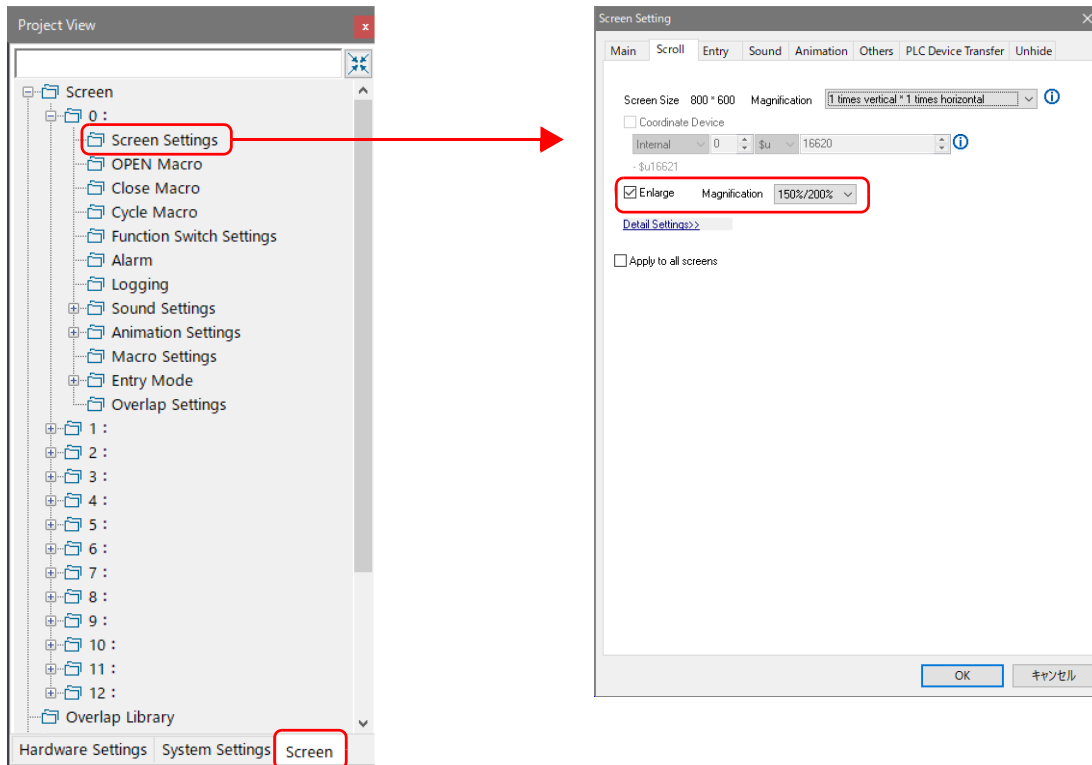
12.1.2 Example Screen

This example uses screen number 0 (menu screen).
Double-tap on the screen to enlarge it.

12.1.3 Enlarged Display Settings

Configure the settings for enlarging the display.

Click the [Project View] pane → [Screen] tab → [Screen] → [0] → [Screen Settings], and then configure settings on the [Scroll] tab as shown below.



Item	Description	Setting Value
Enlarge	The display of the screen can be enlarged by double-tapping. The current magnification is output to \$s1641.	Selected
Magnification	Set the magnification. 150%, 150%/200%	150%/200%

This completes the necessary settings.
Transfer the screen program to MONITOUCH.

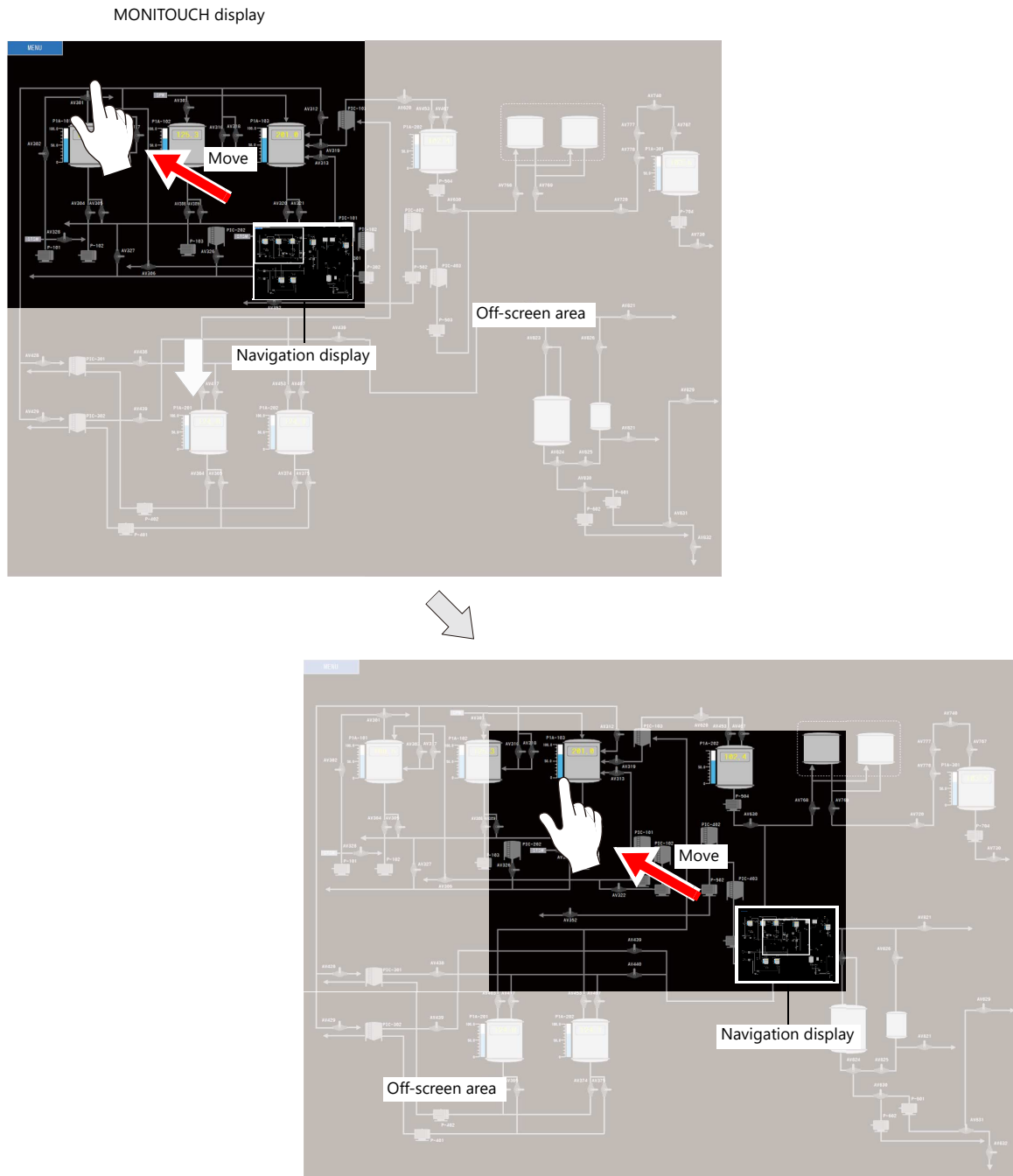
12.1.4 Checking Operation on MONITOUCH

Each time the screen is double-tapped, the display changes through the magnifications of 100% → 150% → 200% → 100% (actual size).

12.2 Expanding the Screen Size

12.2.1 Overview

Screen sizes larger than the display size (resolution) of MONITOUCH can be registered. When a display is partially off-screen, the display can be scrolled to display the off-screen content. A navigation display is shown during movement when scrolling.

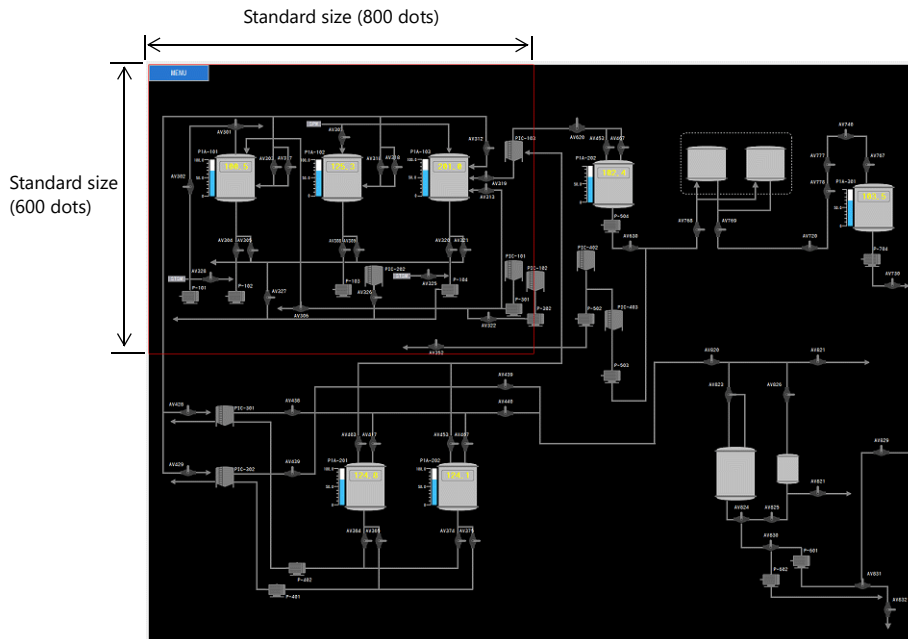


Settable Locations

Screens and overlaps

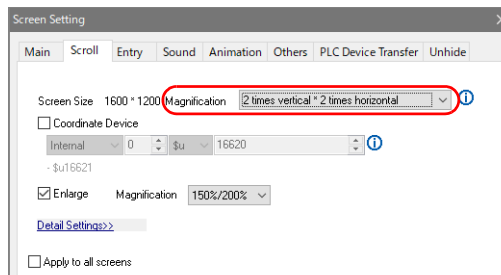
12.2.2 Example Screen

Create a screen that is expanded two times both horizontally and vertically on screen number 10.



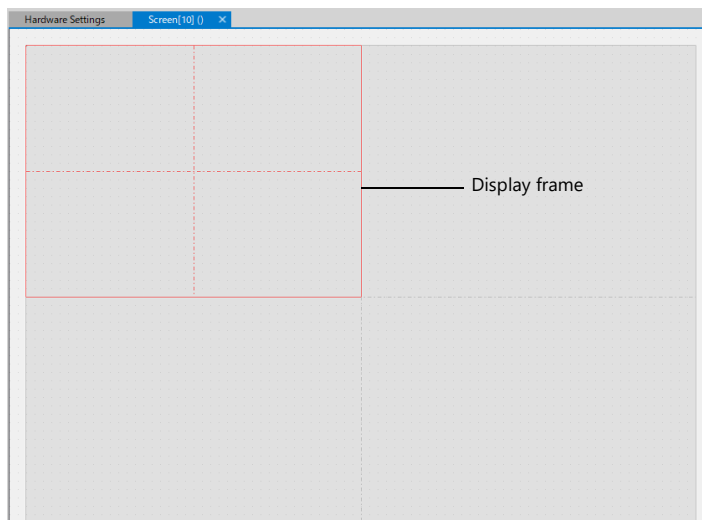
12.2.3 Screen Creation

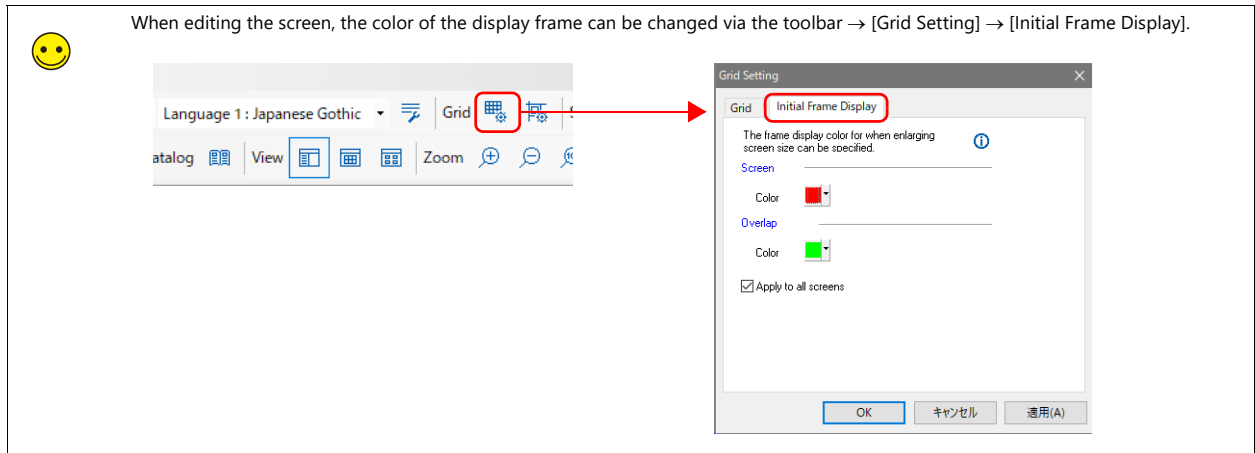
1. Display screen number 10, click the [Project View] pane → [Screen] tab → [Screen] → [10] → [Screen Settings], and then configure settings on the [Scroll] tab as shown below.



Item	Description	Setting Value
Screen Size	Set the screen size.	2 times vertical * 2 times horizontal

2. Click [OK]. The screen size is expanded two times both horizontally and vertically.

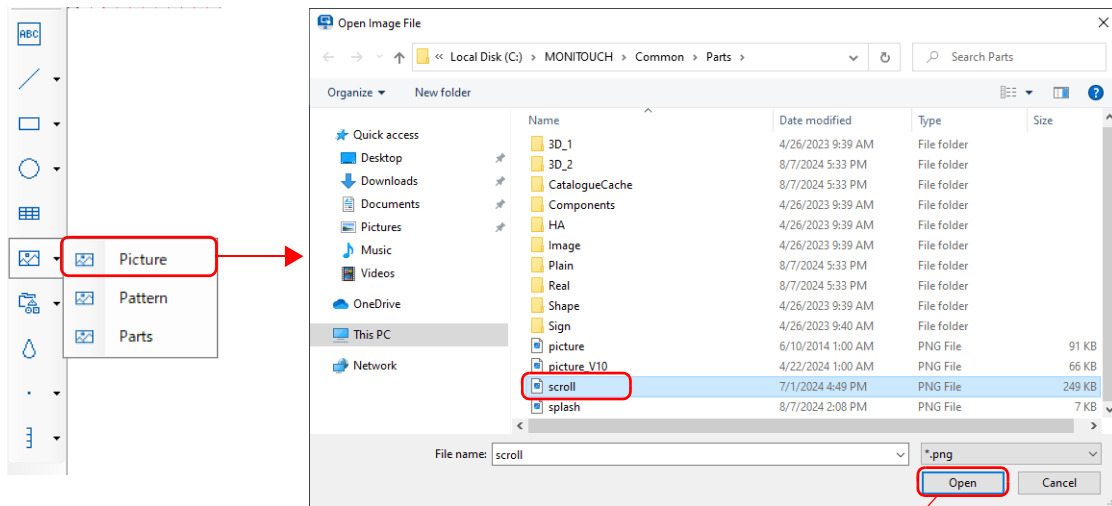




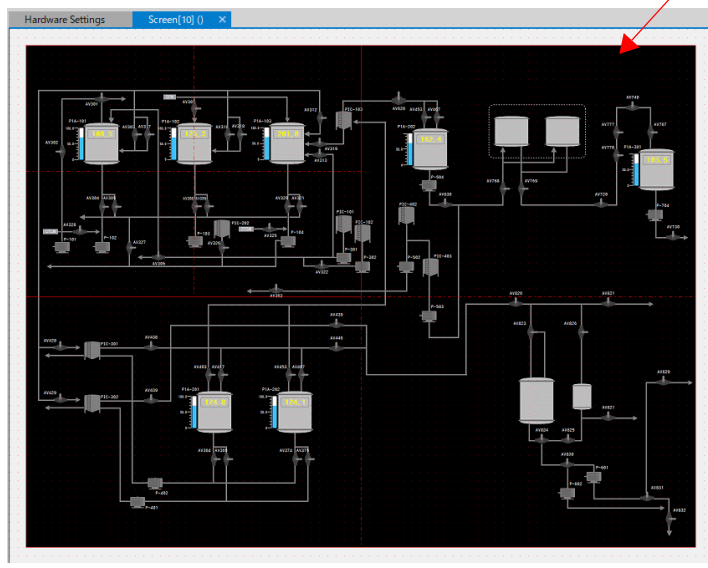
12

3. Click the parts bar → [Image] → [Picture], and then select and place the following file.

File to place: scroll.png (located in "C:\MONITOUCH\Common\Parts")

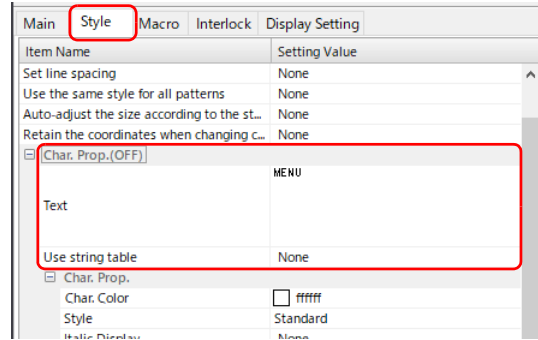
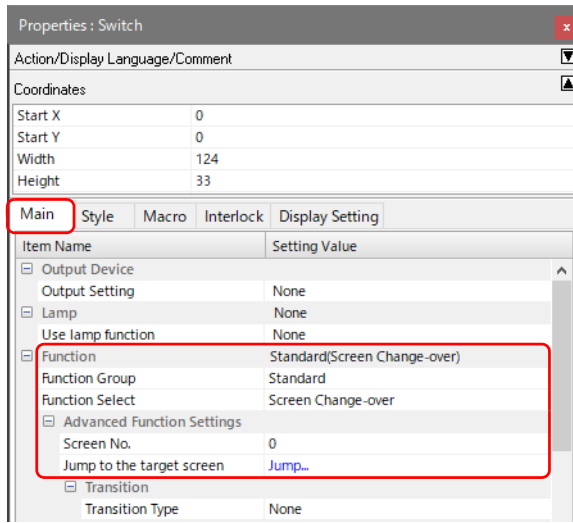


Place on screen



4. Place a [MENU] switch.

Place a switch from the parts bar and configure the properties as shown below.



This completes the necessary settings.
Transfer the screen program to MONITOUCH.


12.2.4 Checking Operation on MONITOUCH

Scroll and check the screen.

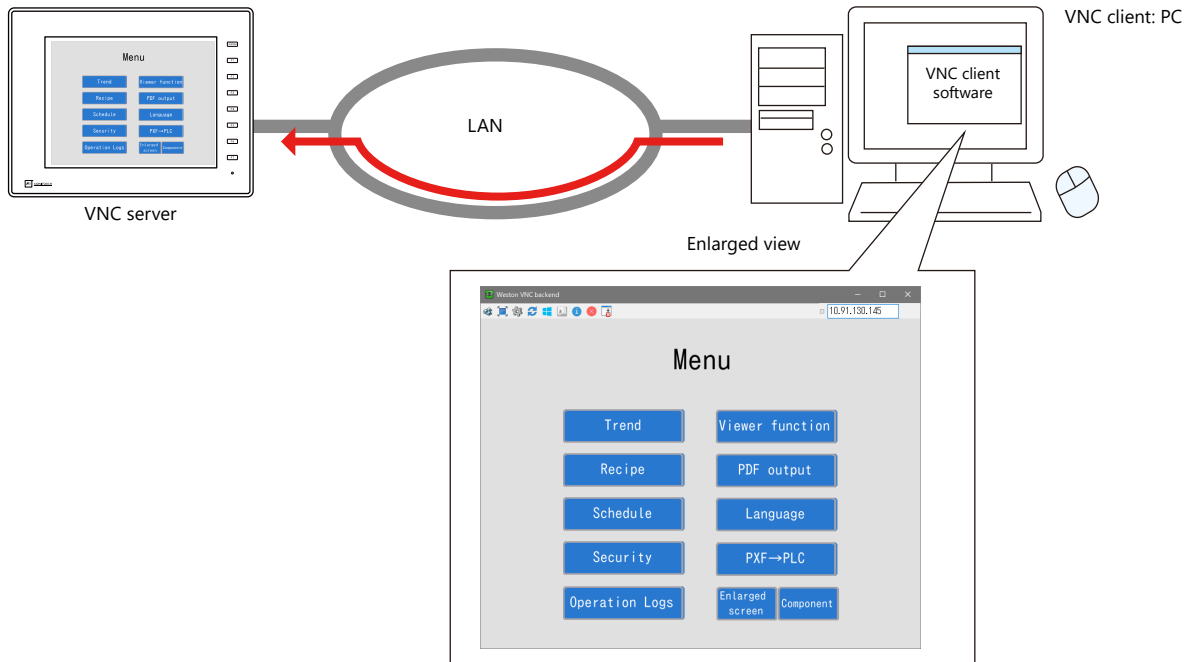
12.3 VNC Server

12.3.1 Overview

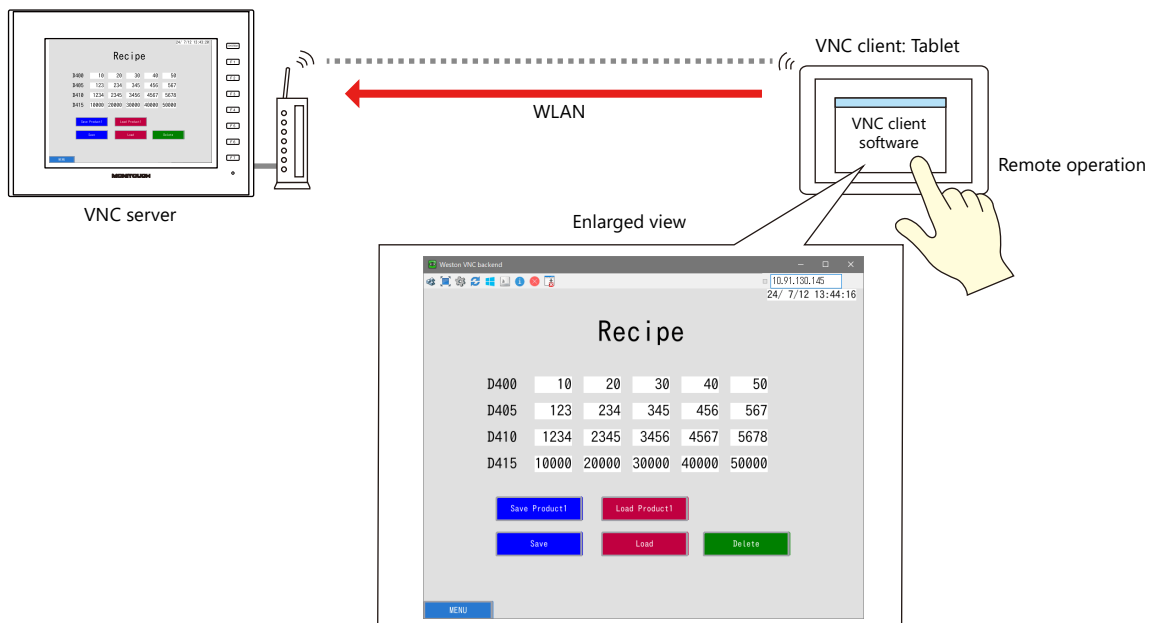
Connecting the V10/V9 series unit to a PC or tablet over a network connection allows remote monitoring and operation of the V10/V9 series unit screen.


 **VNC**
VNC stands for Virtual Network Computing. It is software for remotely operating the screen of other PCs connected to the network.

- Connection with a PC





- Connection with a tablet



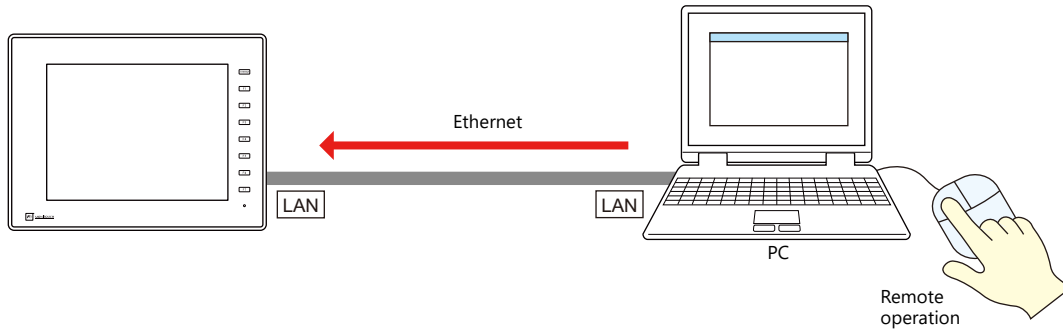
 A VNC client app "Simple Remote" for tablets is available.

- iOS version: Download from App Store
- Android version: Download from Google Play

12.3.2 Operation Example

Connect the PC and the V10/V9 series unit via Ethernet and remotely operate the screen of the V10/V9 series unit.

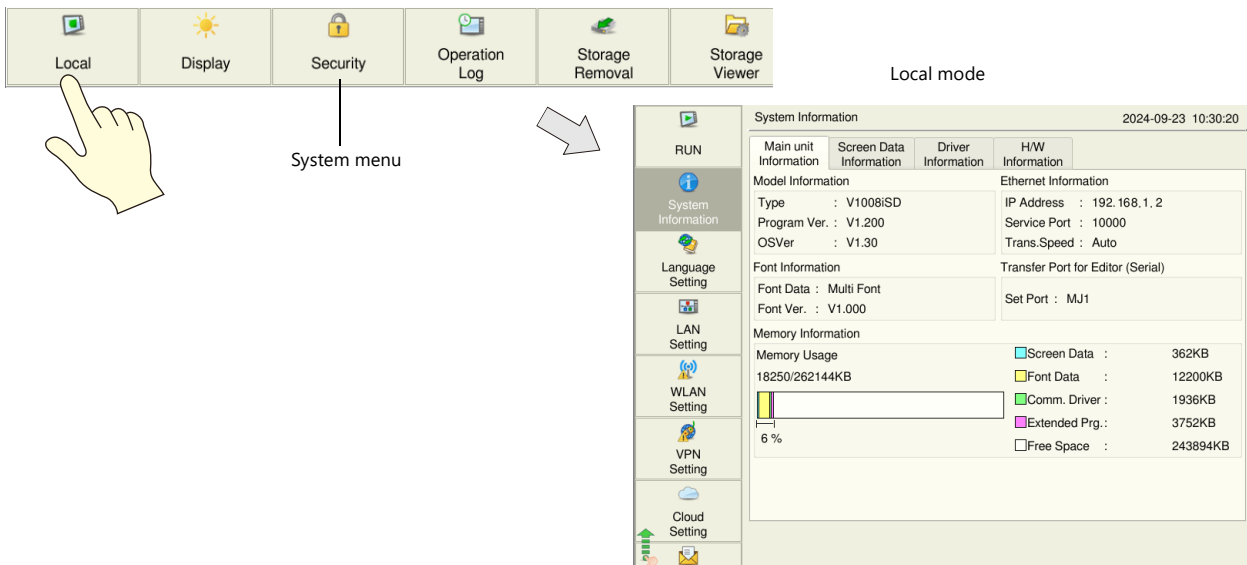


12.3.3 V10/V9 Local Mode Settings

Switch to Local mode on the V10/V9 series unit and configure the required settings for VNC connection. (No settings are required in the screen program.)

Switch to Local mode according to the following procedure.

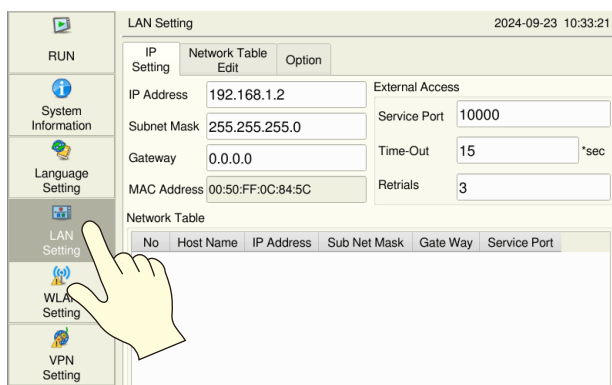
Press the [SYSTEM] switch to display the system menu and then press [Local].



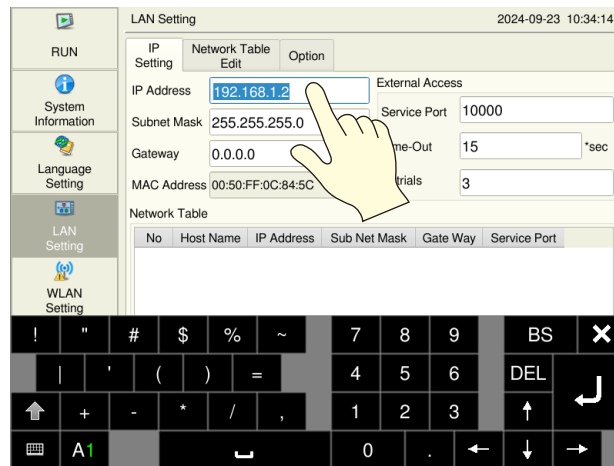
V10/V9 IP Address Settings

Set the IP address of the V10/V9 series unit.

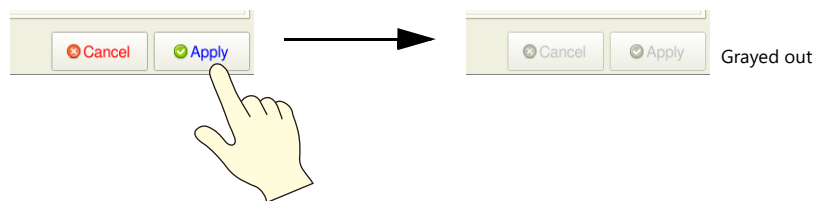
1. Press the [LAN Setting] switch on the left side of the screen in Local mode to display the [LAN Setting] screen.



- Tap each item to change its setting, such as the IP address.

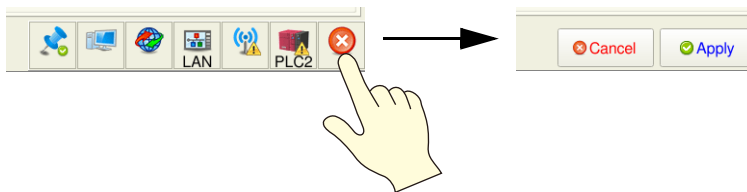


- Press the [Apply] switch at the bottom right of the screen to accept the settings. When the changes are accepted, the [Apply] switch is grayed out.

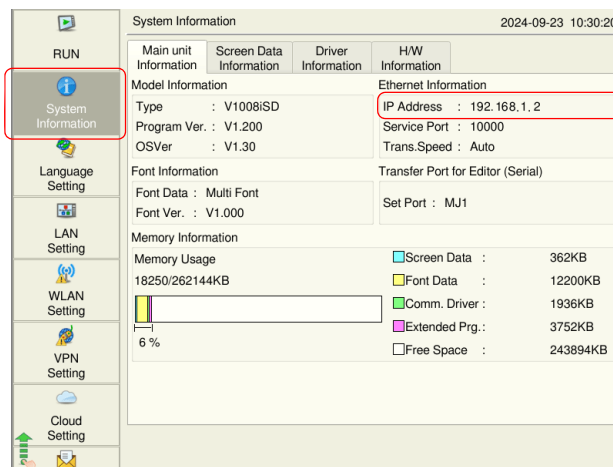


When the status bar is displayed

The [Apply] switch may be hidden behind the status bar.
The status bar can be hidden by pressing the [x] icon at the right end.



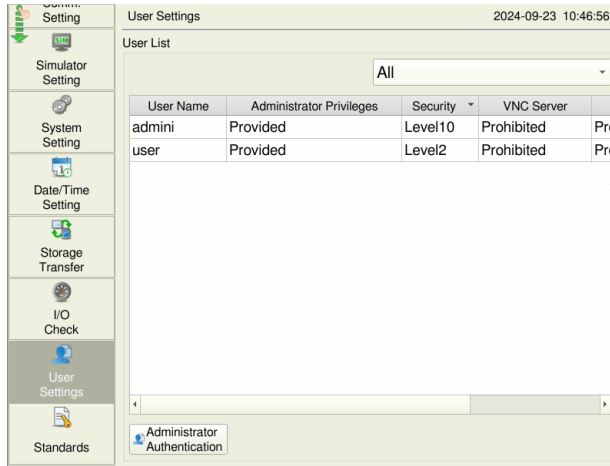
- Press [System Information] on the left of the screen and check the IP address displayed under [Ethernet Information].



User Settings

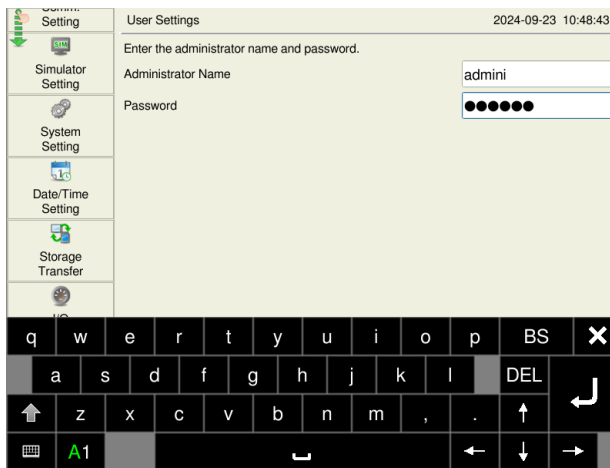
Register the user name and password for accessing the VNC server on the [User Settings] screen in Local mode.

1. Press the [User Settings] switch on the left side of the screen to display the [User Settings] screen. A list of registered users is displayed.



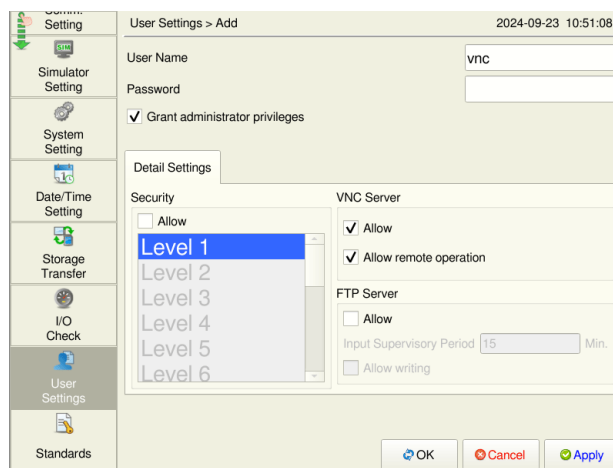
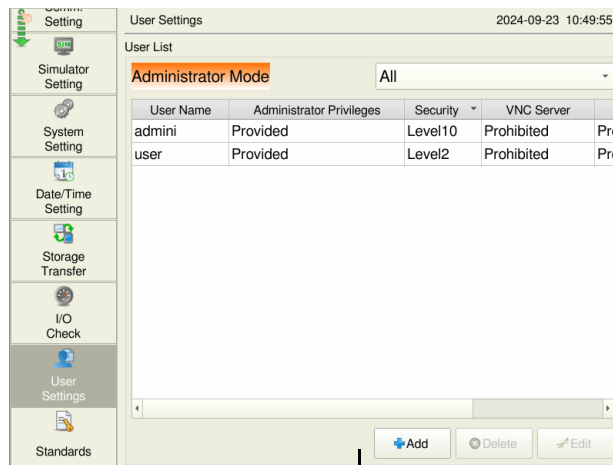
☺ This user settings screen is the same for [Security], [VNC Server], and [FTP Server].

2. Press the [Administrator Authentication] switch.
3. Enter an administrator-level user name and password.
Use the user name registered in the chapter on security.



[Administrator Name]: admini
[Password]: admini

- If the entries are correct, the user list in administrator mode is displayed.
Press the [Add] switch to display the add user screen. Configure the following settings.



Item	Description	Setting Value	
User Name	Register a user name. Up to 16 one-byte alphanumeric characters	vnc	
Password	Register a password. Up to 16 one-byte alphanumeric characters	vnc	
Grant administrator privileges	Select whether or not to grant administrator privileges to the user. With privileges: Users can be added, edited, and deleted in the list. Without privileges: Users cannot be added, edited, or deleted in the list.	Selected	
VNC Server	Allow	Allow access from VNC clients.	Selected
	Allow remote operation	Allow operations from VNC clients. When remote operations are not allowed, only monitoring can be performed.	Selected

- Press [OK] to complete registration. The display returns to the [User List (Administrator Mode)] screen.
- Press [RUN] on the left of the screen and display the screen program.

This completes the necessary settings.

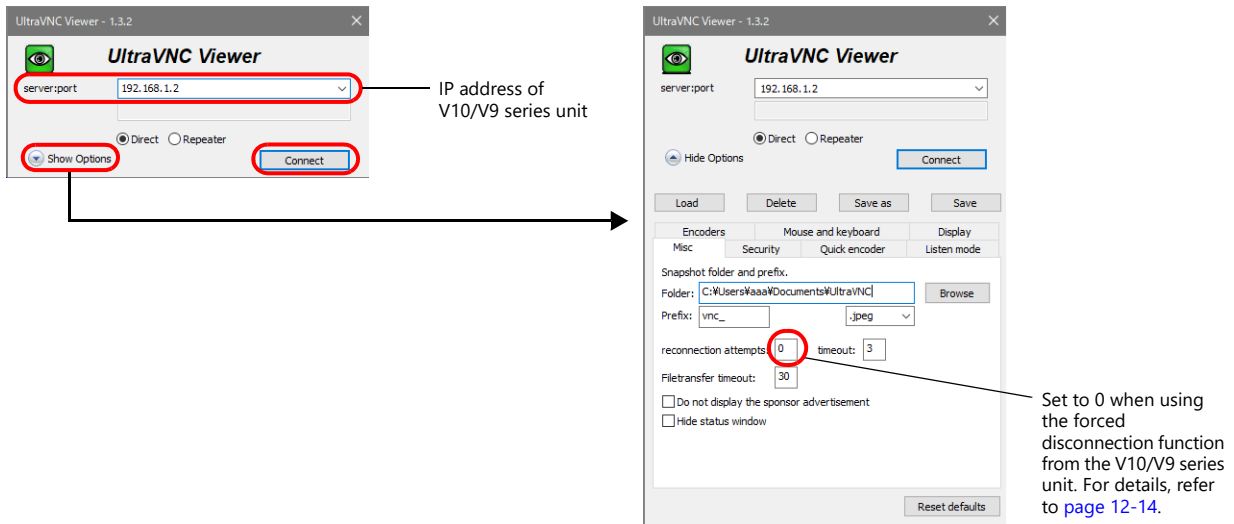
12.3.4 Checking Operation

Before Checking Operation

This chapter explains necessary settings using Ultra VNC as an example. If the Ultra VNC software is not installed on the PC, install it.

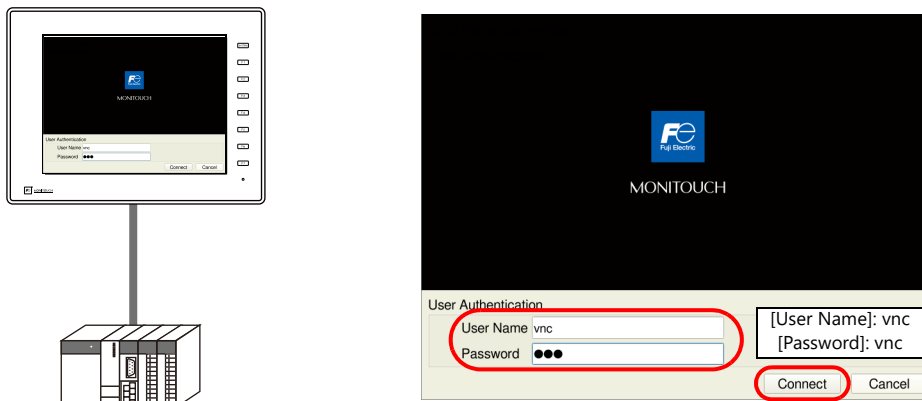
Remote Monitoring and Operation

1. Start the Ultra VNC application on the PC via the Windows Start menu → [UltraVNC] → [UltraVNC Viewer].
2. Enter the IP address of V10/V9 series unit into the [server:port] field and click [Connect].



* The menu varies depending on the version of UltraVNC Viewer.

3. The user authentication screen is displayed. Enter the user name and password added in Local mode on the V10/V9 series unit and click [Connect].

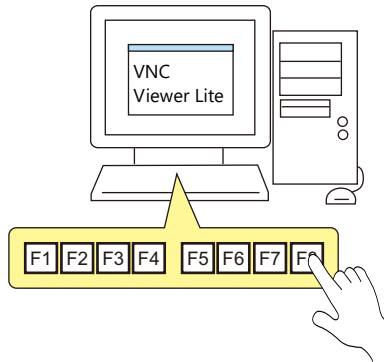


4. The V10/V9 series unit screen is displayed in the VNC Viewer. Operating the VNC viewer screen will change the display on the V10/V9 series unit as well.

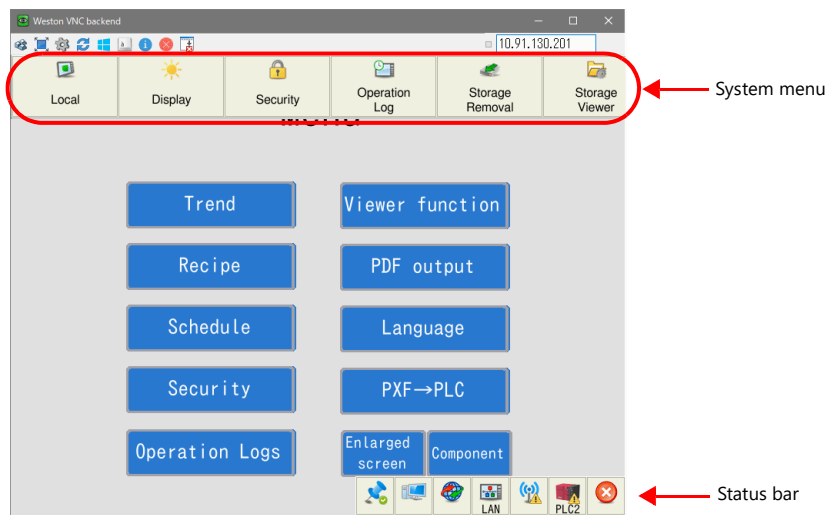


Displaying the System Menu and Status Bar

1. Press [F8] on the keyboard. This is equivalent to pressing the [SYSTEM] switch on the V10/V9 series unit.



2. The system menu at the top of the screen and status bar at the the bottom right of the screen are displayed.



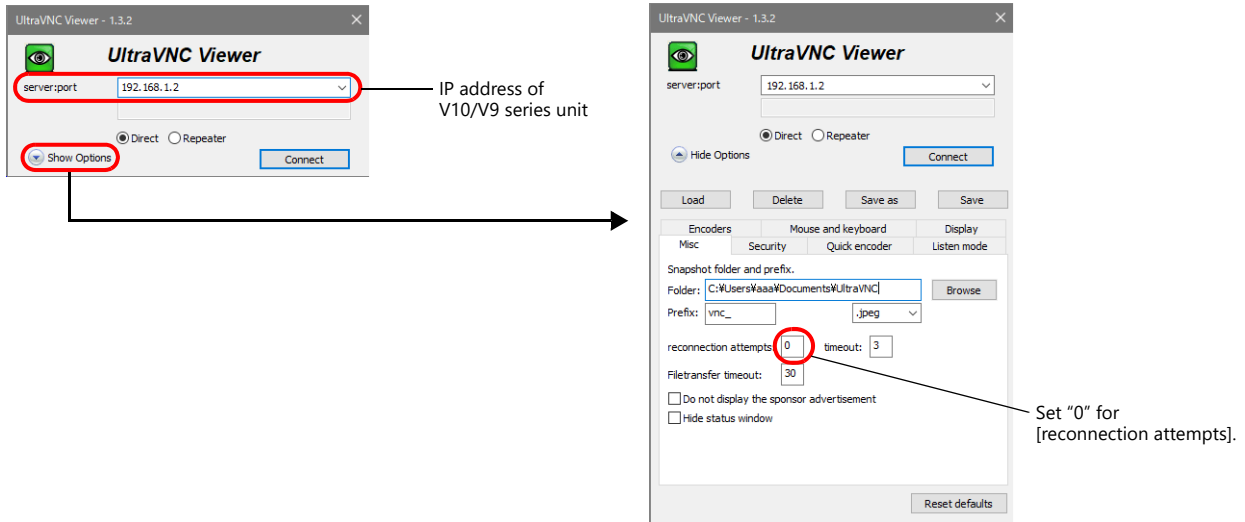
If remote operations are permitted from the VNC client, the following keyboard entry can be performed in addition to operations on the viewer screen.

- Entry screens: Numerical and text entry
- Text boxes: Numerical and text entry
- Function switch operation

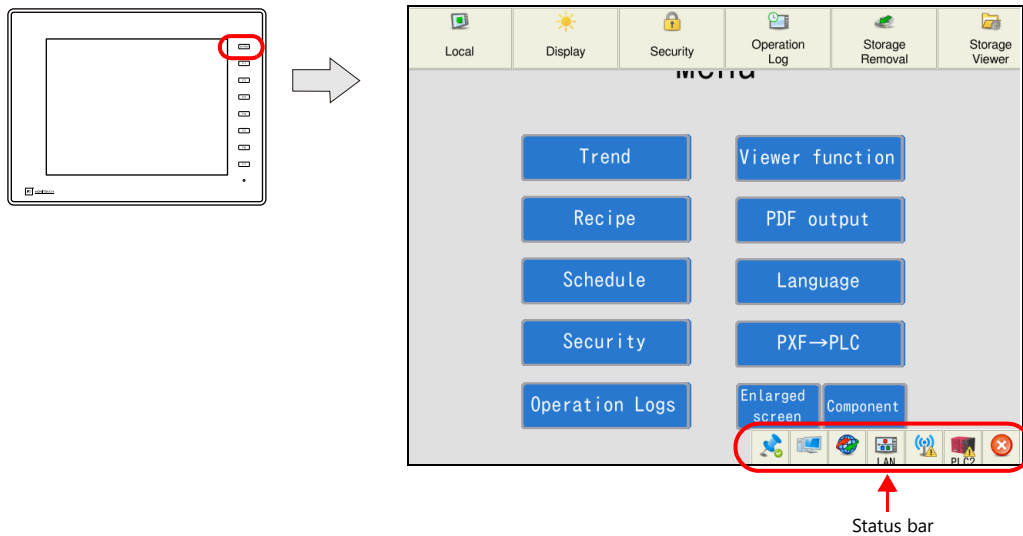
VNC Client Keyboard	V10/V9 Function Switch
F1	F1
F2	F2
F3	F3
F4	F4
F5	F5
F6	F6
F7	F7
F8	SYSTEM

Forcibly Disconnecting the VNC Client from the V10/V9 Series Unit

1. If the VNC Viewer is running on the PC, exit the application.
2. Start the Ultra VNC application on the PC via the Windows Start menu → [UltraVNC] → [UltraVNC Viewer].
3. Enter the IP address of the V10/V9 series unit into the [server:port] field and configure settings via [Show Options] as shown below.



4. Click [Connect] and display the V10/V9 series unit screen in the VNC viewer as described in [“Remote Monitoring and Operation” page 12-12](#).
5. Press the [SYSTEM] function switch on the V10/V9 series unit and display the status bar at the bottom right of the screen.



6. Press the VNC icon on the status bar. The following window appears. Click [OK].



Communication is forcibly disconnected and the VNC viewer running on the PC exits.

* When [reconnection attempts] is set to a value other than “0” in the settings of the VNC Viewer software, even if a forced disconnection is performed by the V10/V9 series unit, the user authentication screen is displayed and cannot be dismissed.

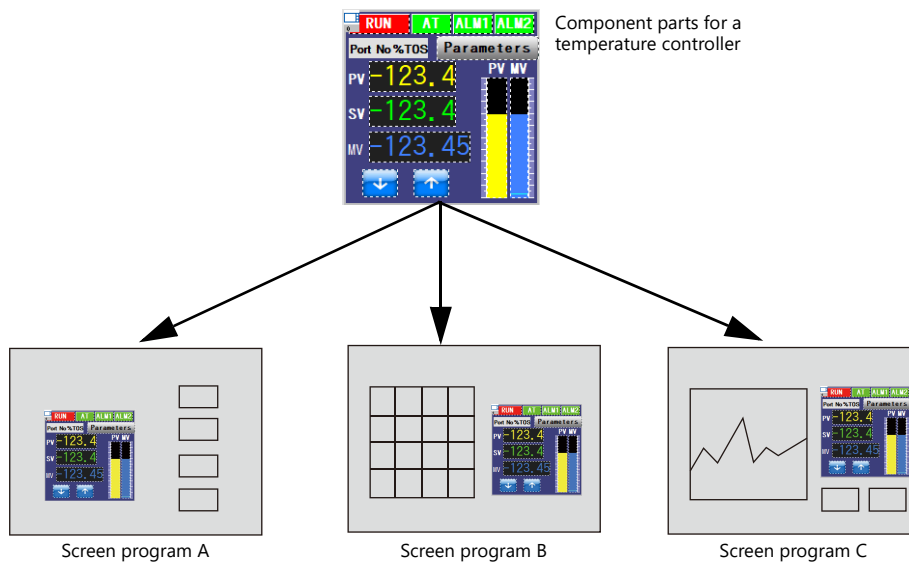
12.4 Component Parts

12.4.1 Overview

Component Parts

Component parts are items that combine multiple parts for operation as a single function.

These parts are created and provided by Hakko Electronics. Screen configuration hours can be reduced greatly by placing component parts according to the desired purpose. Necessary settings and screens are included in component parts, and can therefore be easily used in other screen programs as well.

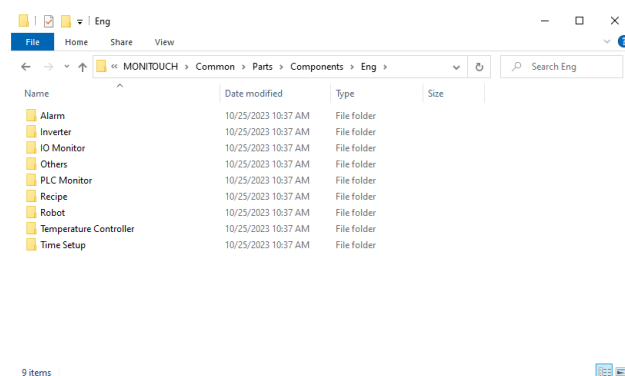


Available Parts

Parts Provided in the Screen Configuration Software

Parts are automatically installed in the following directory when the screen configuration software is installed.

C:\MONITOUCH\Common\Parts\Components\Eng



* Operation manuals compiling the settings required for each of the parts and their operation are also saved in the same directory.

Parts to be Downloaded from Fe Library

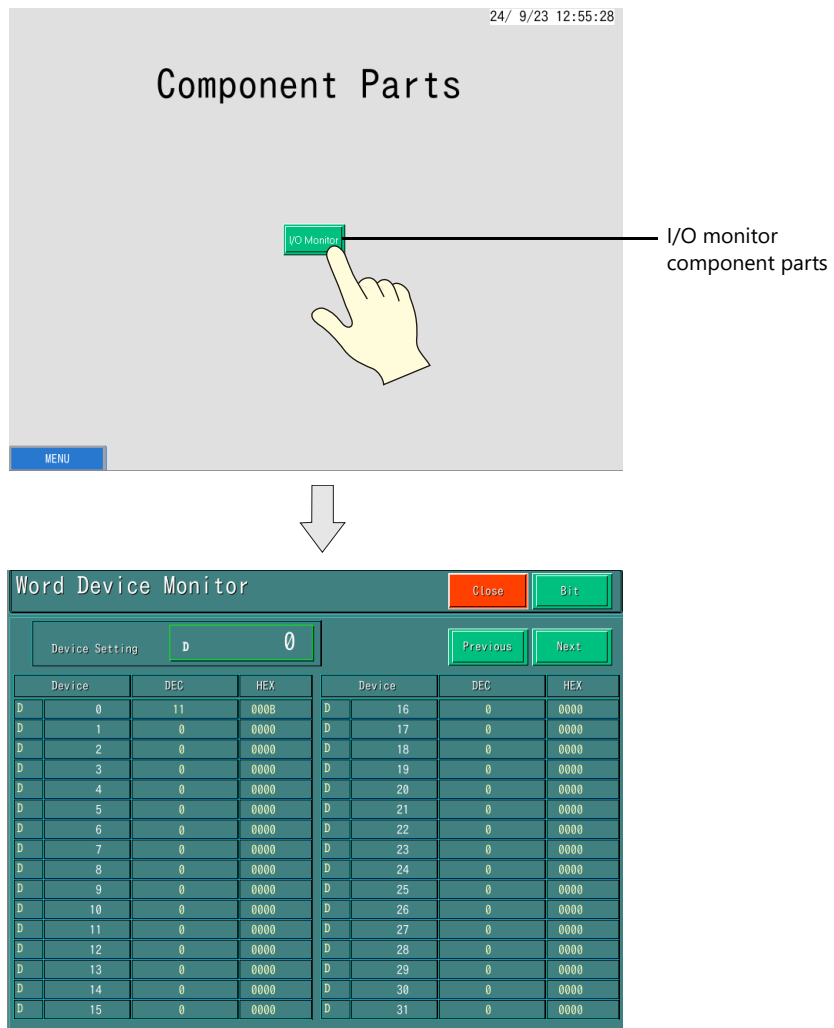
Additional parts can be downloaded and installed from our website (Fe Library).

Parts are available from the following link.

Download [here \(Fe Library\)](#).

12.4.2 Example Screen

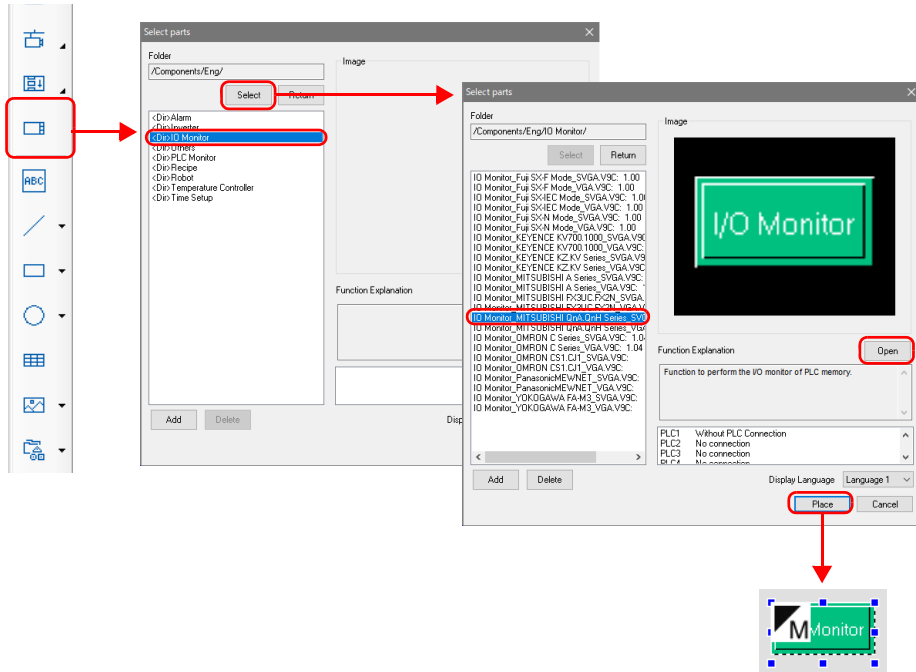
Place component parts with an I/O monitor function on screen number 11.
 Press the [I/O Monitor] switch to monitor I/O signals of the PLC.



12.4.3 Screen Creation

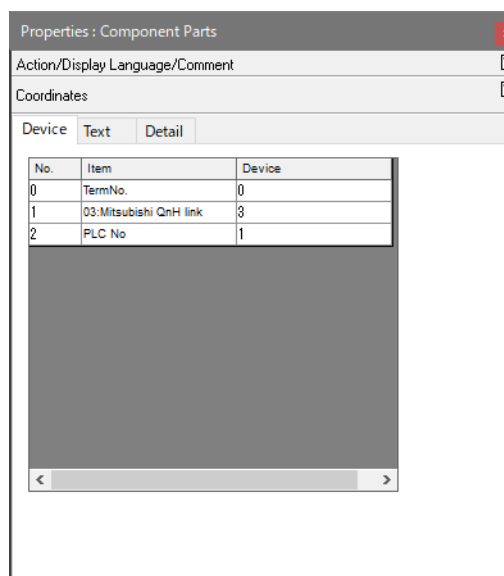
Placing Component Parts

1. Click [Component Parts] on the parts bar to display the [Select parts] window.
2. Select "<Dir> IO Monitor", click [Select], select "IO Monitor_MITSUBISHI QnA.QnH Series.SVGA.V9C", and then click [Place] and place the parts.



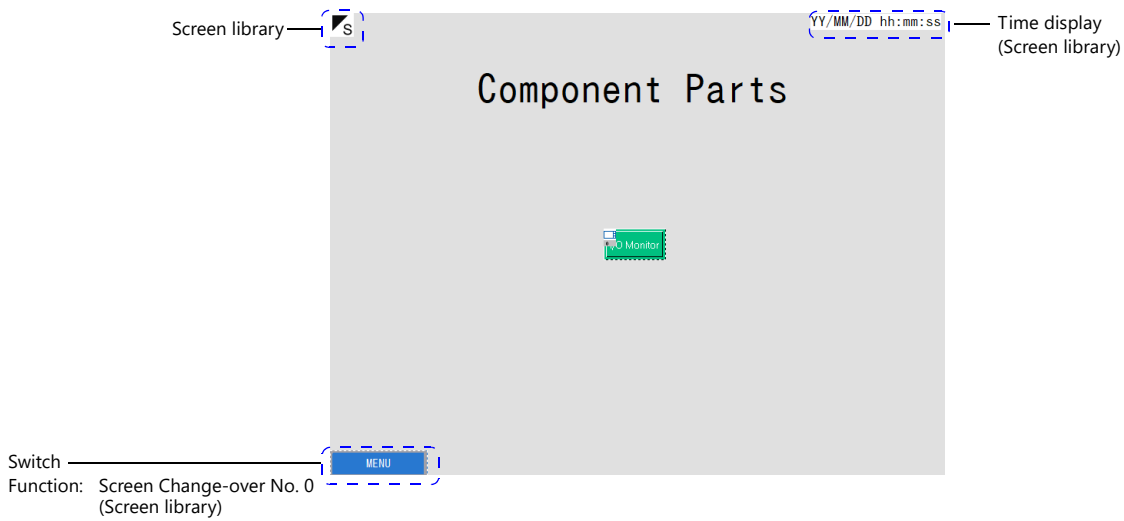
- * Reference the operation manual in the following folder via [Open].
C:\MONITOUCH\Common\Parts\
Components\Eng\IO Monitor

3. Configure the [Device] settings on the [Properties] pane of the component parts as shown below.



Item	Description	Setting Value
Term No.	Specify the port number of the PLC.	0
03: Mitsubishi QnH link	This is the recognition number used to calculate the PLC device memory notation used in component parts. Do not change it.	3
PLC No.	Specify a value from 1 to 8 for the PLC number to which the device to be monitored is registered. This can be checked from the [Project View] pane → [Hardware Settings] tab → [Connection Device] → [8 Way Communication].	1

Placing Text and a Screen Library



Text

Create each text part of the screen.

1. On the parts bar, click [Text]. The mouse cursor changes to a crosshair.
2. Click on the screen. A text frame is displayed.
3. Enter text.
4. Click a location on the screen other than the text.
5. Click the text to display the [Properties] pane. Adjust the text color and size.

Screen Library

Place the screen library to which the time display part and switch for returning to the menu screen are registered.

1. On the parts bar, click the [▼] button of the [Library] icon → [Screen Library] to display the [Screen Library List].
2. Select [0000] and click [Place]. The [S] icon and the registered parts are displayed.
3. Set the icon at the top left corner of the screen.

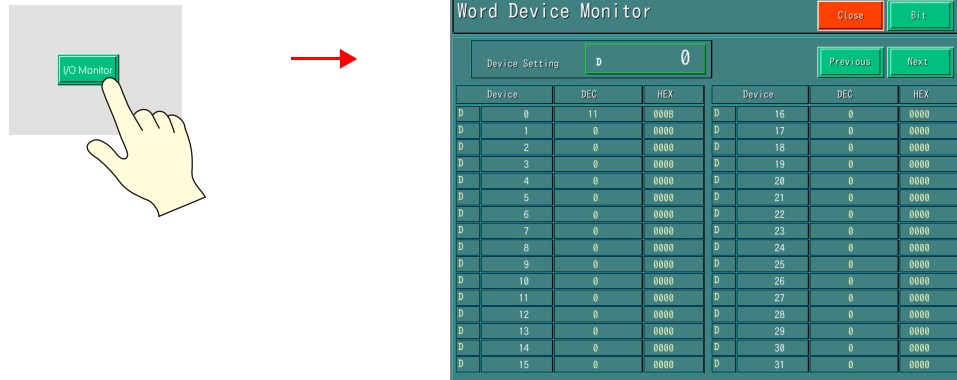
This completes the screen creation process.

Transfer the screen program to MONITOUCH and check the operation.

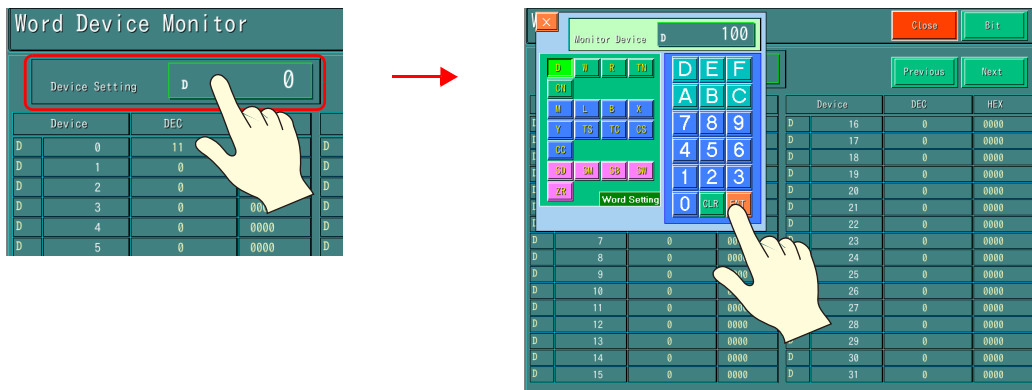
12.4.4 Checking Operation on MONITOUCH

Monitoring Word Device Memory

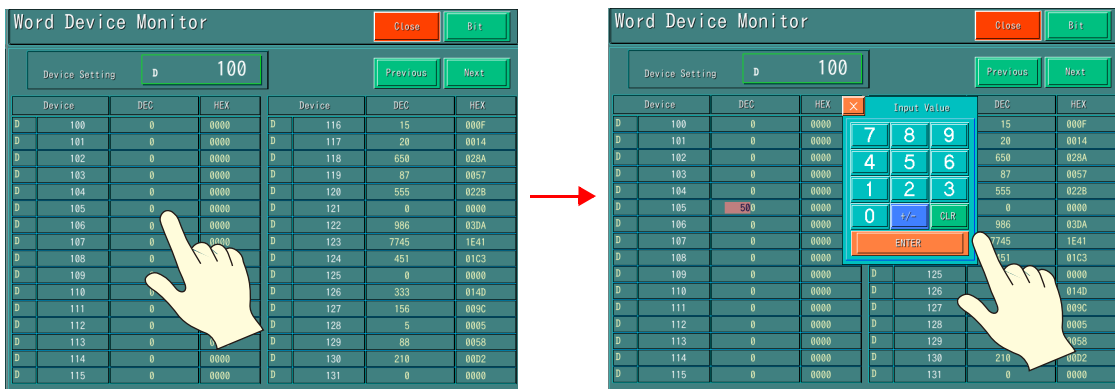
1. Press the [I/O Monitor] switch to display the [Word Device Monitor] screen.



2. Press the [Device Setting] field and specify "D100".

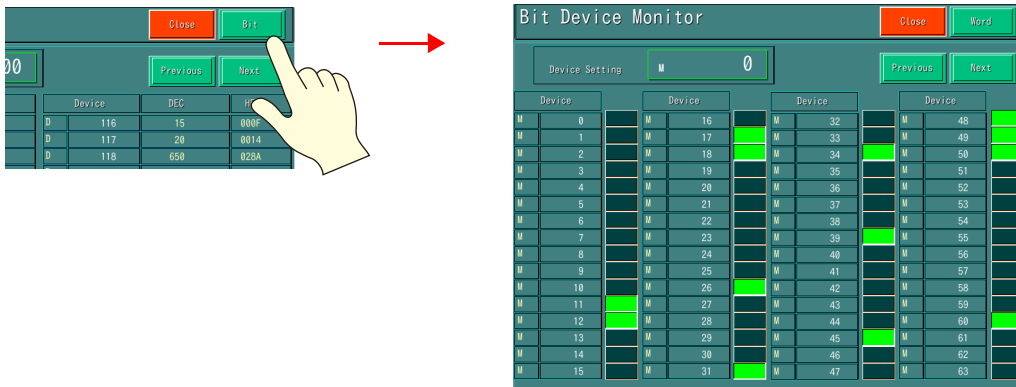


3. Addresses from "D100" and after are monitored. Device memory values can be changed by pressing the [DEC] or [HEX] columns.

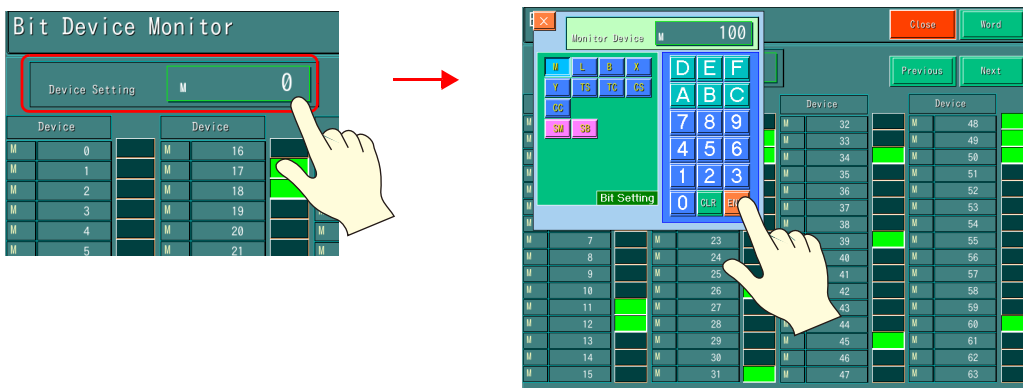


Monitoring Bit Device Memory

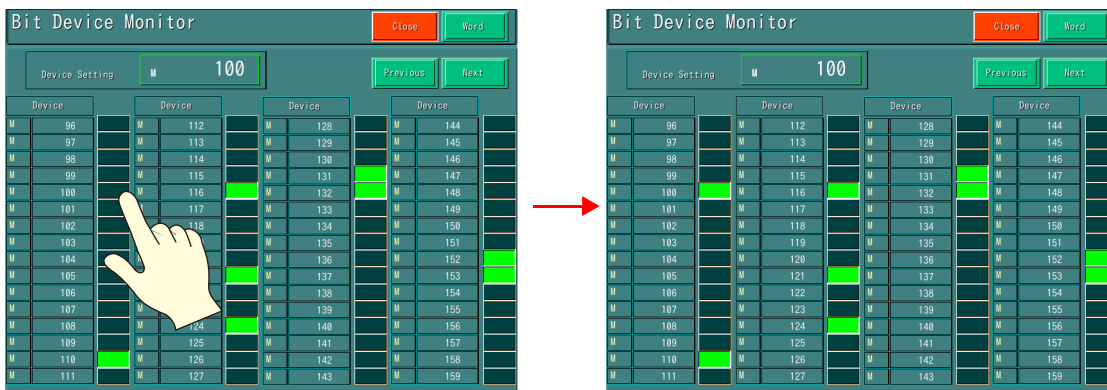
1. Press the [Bit] switch on the [Word Device Monitor] screen to display the [Bit Device Monitor] screen.



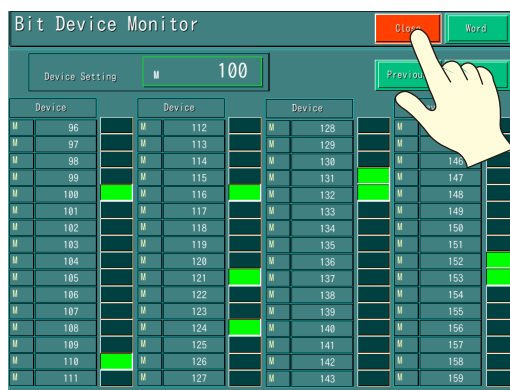
2. Press the [Device Setting] field and specify "M100".



3. Addresses from "M100" and after are monitored. By pressing the switch next to each device memory, the specified bit can be turned ON/OFF.



4. Press the [Close] switch to close the [I/O Monitor] screen.



 **Hakko Electronics Co., Ltd.**
www.monitouch.com

Sales 890-1, Kamikashiwano-machi, Hakusan-shi, Ishikawa,
924-0035 Japan
Tel +81-76-274-2144
E-mail support@hakko-elec.co.jp