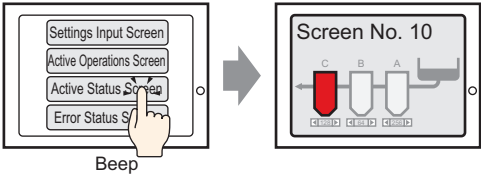
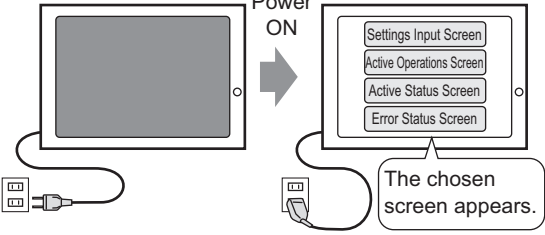
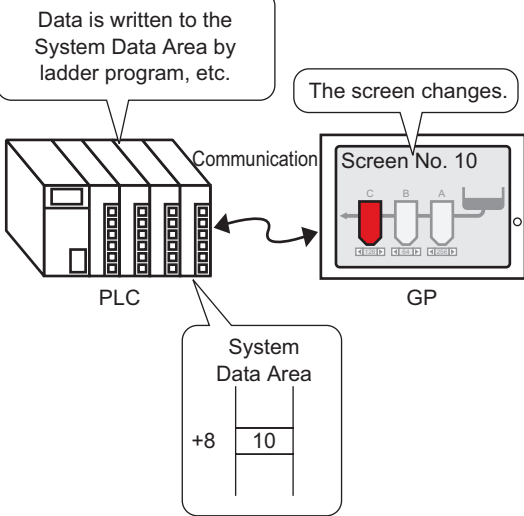


12 Changing and Saving Screens

This chapter describes changing and saving screens in GP-Pro EX, and the basic operations used to change settings. Please start by reading “12.1 Settings Menu” (page 12-2) , and then turn to the corresponding page.

12.1	Settings Menu	12-2
12.2	Changing Screens by Touch	12-4
12.3	Choosing the Screen to Display when the GP Turns on	12-7
12.4	Changing Screens from a Device/PLC	12-9
12.5	Changing the Displayed Screen from both Touch and a Device/PLC	12-12
12.6	Saving the Displayed Screen	12-17
12.7	Changing the Displayed Screen by Hierarchical Structure	12-20
12.8	Restrictions	12-24

12.1 Settings Menu

Changing Screens by Touch	
	➡ Setup Procedure (page 12-4) ➡ Introduction (page 12-4)
Choosing the Screen to Display when the GP Turns on	
	➡ Setup Procedure (page 12-7) ➡ Introduction (page 12-7)
Changing Screens from a Device/PLC	
	➡ Setup Procedure (page 12-10) ➡ Introduction (page 12-9)

Changing the Displayed Screen from both Touch and a Device/PLC

Data is written to the System Data Area by ladder program, etc.

The screen changes.

System Data Area

+8	10
----	----

PLC

Communication

GP

Screen No. 10

C B A

Settings Input Screen

Active Operations Screen

Active Status Screen

Error Status Screen

Beep

Setup Procedure (page 12-13)

Introduction| (page 12-12)

Saving the Displayed Screen

+0 Control

+1 Status

+2 File No.

Turn ON the control address' bit 0 and...

The displayed screen is saved.

Save

CF Card

Setup Procedure (page 12-18)

Introduction (page 12-17)

Changing the Displayed Screen by Hierarchical Structure

Hierarchy Level 1

Screen 1

Hierarchical Screen Change

Hierarchy Level 2

Screen 10

Screen 20

Screen 30

Hierarchy Level 3

Screen 100

Screen 110

Screen 120

Previous Screen change returns to Level 1.

Previous Screen change returns to Level 2.

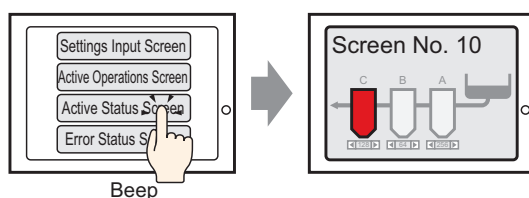
Screen Change

Setup Procedure (page 12-21)

Introduction (page 12-20)

12.2 Changing Screens by Touch

12.2.1 Introduction



Place the switch on the screen, set it to [Screen Change], and you can create a switch which changes to the desired screen.

NOTE

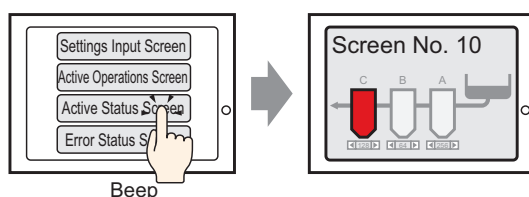
- A password can be set so that only certain people can switch the screen.
 ☞ “ 22.2 Creating Limited Access Screens” (page 22-3)

12.2.2 Setup Procedure

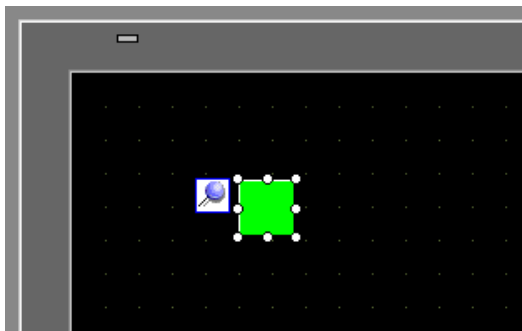
NOTE

- Please refer to the settings guide for details.
 ☞ “11.14.3 Change Screen Switch” (page 11-58)
- For details about placing parts or setting addresses, shapes, colors, and labels, please refer to the "Part Editing Procedure".
 ☞ “9.6.1 Editing Parts” (page 9-38)

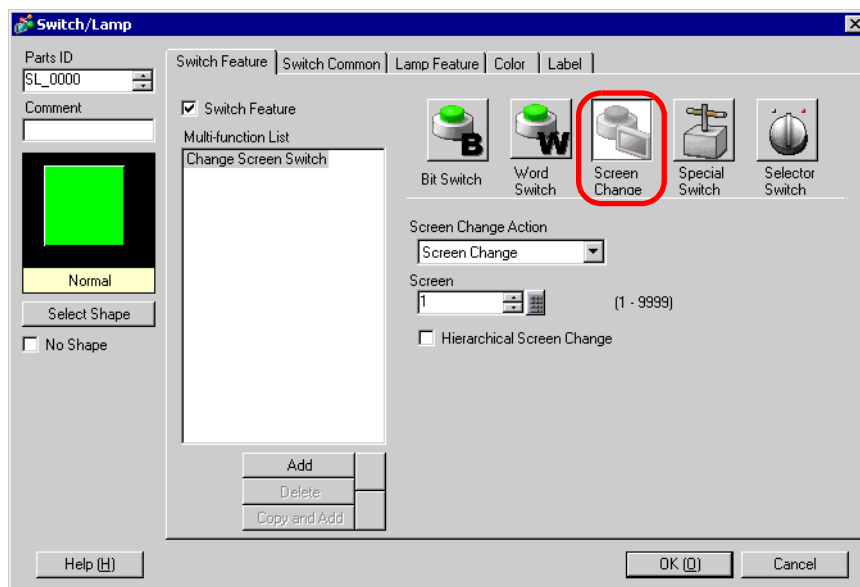
Create a Switch that changes the screen to Base Screen 10 when you touch it.



- 1 From the [Parts (P)] menu, point to [Switch Lamp (C)] and select [Change Screen Switch (C)], or click  from the toolbar, and place the switch on the screen.

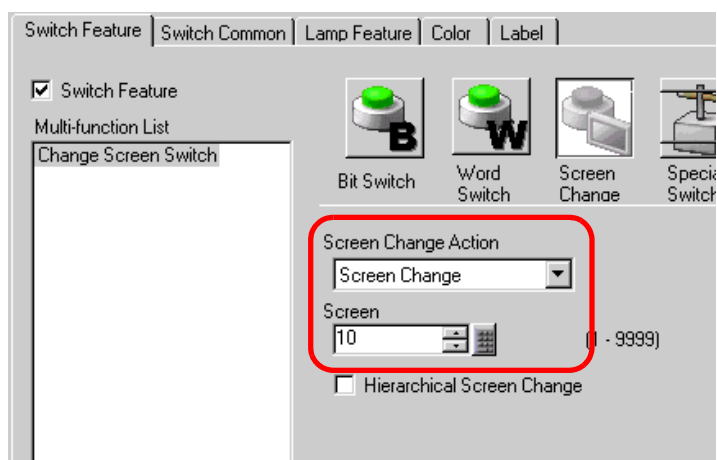


- 2 Click the new switch. The Switch/Lamp dialog box appears.



- 3 Click [Select Shape] and choose the appropriate shape.

- 4 From the [Screen Change Action] drop-down list, select [Screen Change]. Set [Screen] to the destination screen number (for example, 10).



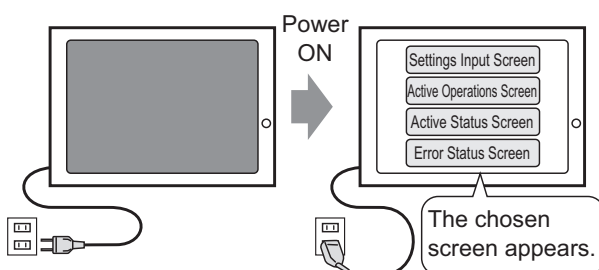
- 5 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

NOTE

- Depending on the switch shape, you may not be able to change the color.

12.3 Choosing the Screen to Display when the GP Turns on

12.3.1 Introduction



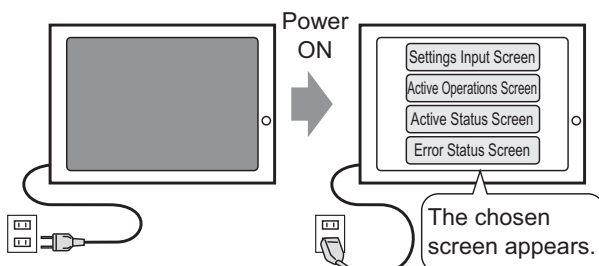
You can specify which screen is displayed when the GP power turns ON.

12.3.2 Setup Procedure

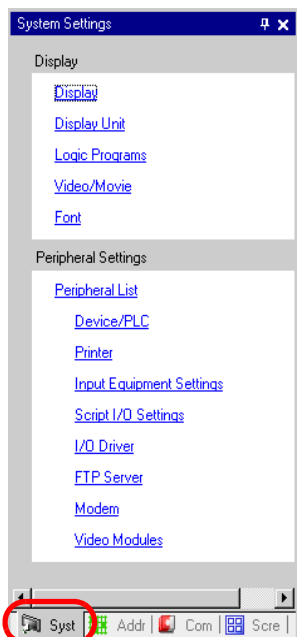
NOTE

- Please refer to the settings guide for details.
 ➞ “5.14.6 [System Settings] Setting Guide ■ [Display Unit] Settings Guide ◆ Display” (page 5-110)

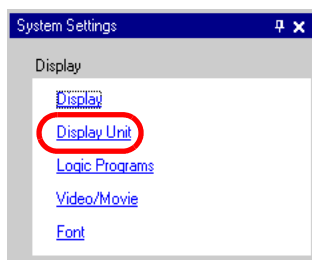
Configure settings to display screen "1" when you turn ON the power.



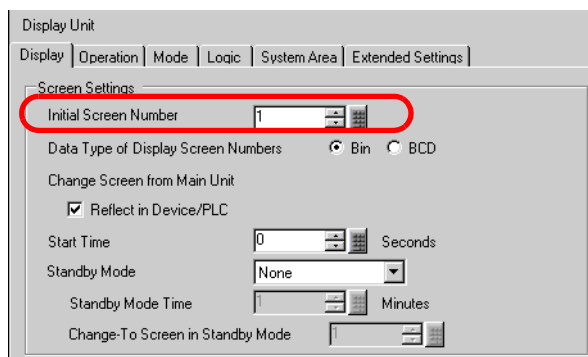
- 1 From the [View (V)] menu, point to [Work Space (W)] and select [System Settings (S)].



- 2 Under [Display], select [Display Unit].

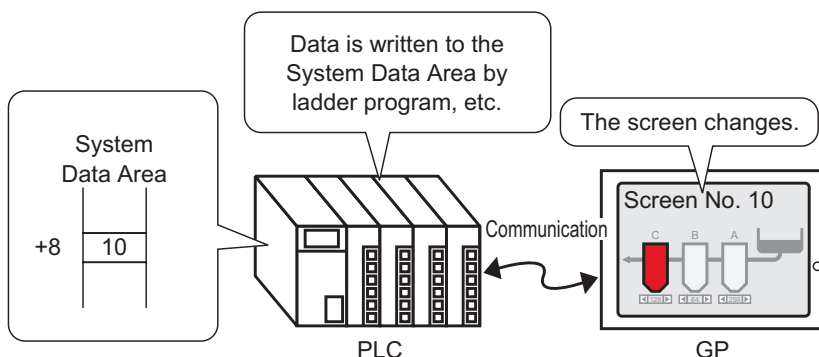


- 3 Under the [Display] tab, set the [Initial Screen Number] to 1 to display this screen when the GP turns ON.



12.4 Changing Screens from a Device/PLC

12.4.1 Introduction



Method for changing the GP screen from a PLC

Usually, the GP communicates with a device/PLC to display the appropriate data. By using a portion of the device/PLC area to place the necessary information for the GP operations, you can check the GP status or change operations from the device/PLC.

NOTE

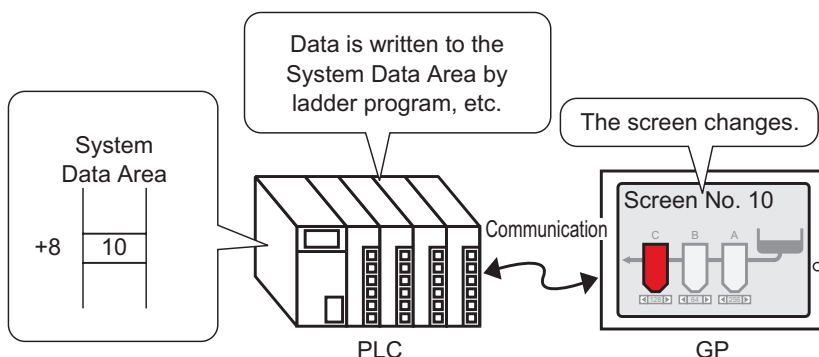
- Refer to the following to change screens using a Logic Program.
 ➞ “28.2 Switching Screens Using a Logic Program” (page 28-4)

12.4.2 Setup Procedure

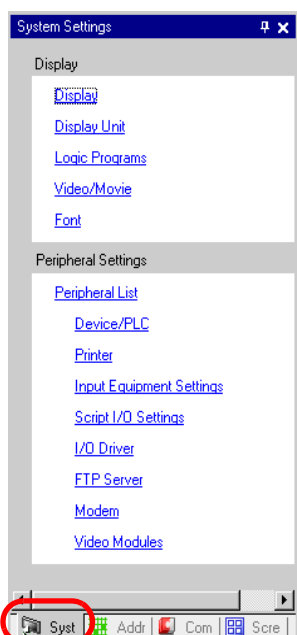
NOTE

- Please refer to the settings guide for details.
 ☞ “5.14.6 [System Settings] Setting Guide ■ [Display Unit] Settings Guide ◆ Display” (page 5-110)
- For more information about the System Data Area, please refer to the following.
 ☞ “A.1.4.2 System Data Area” (page A-11)

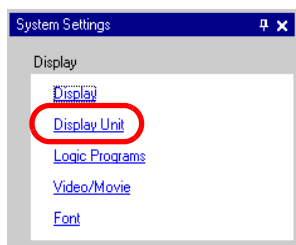
Configure settings to change screens from a device/PLC.



- 1 From the [View (V)] menu, point to [Work Space (W)] and select [System Settings (S)].

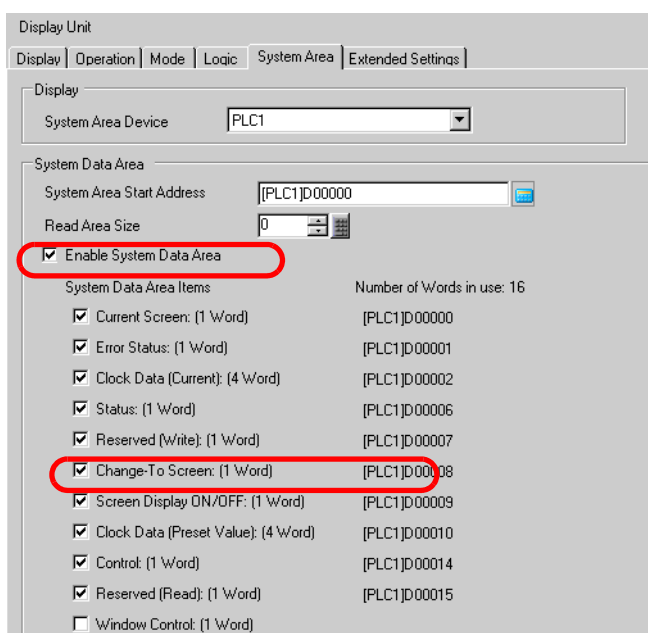


2 Under [Display], select [Display Unit].



3 Click the [System Area] tab and set the [System Area Start Address].

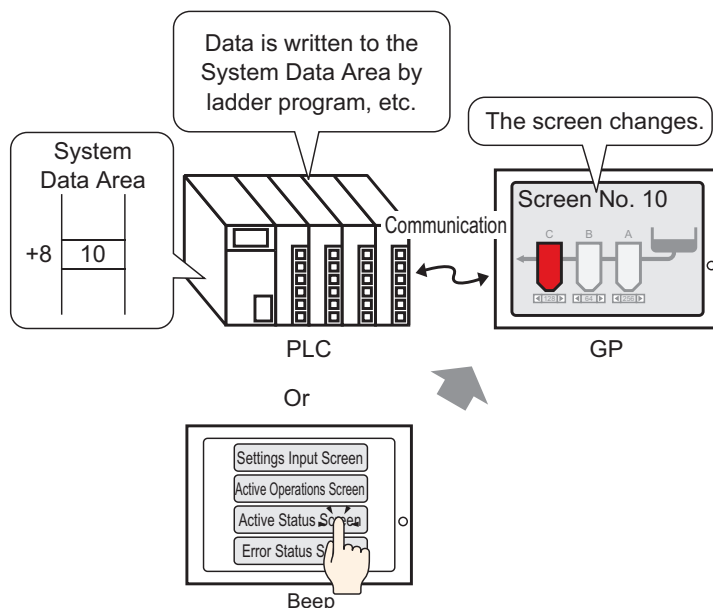
4 Select the [Enable System Data Area] checkbox and confirm that the [Change-To Screen Number: (1 Word)] checkbox is selected.



5 Write a logic program or program console (procon) for the destination screen number to the [Change-To Screen Number: (1 Word)] address (For example [PLC1]D00008). The displayed screen will change to the destination screen.

12.5 Changing the Displayed Screen from both Touch and a Device/PLC

12.5.1 Introduction



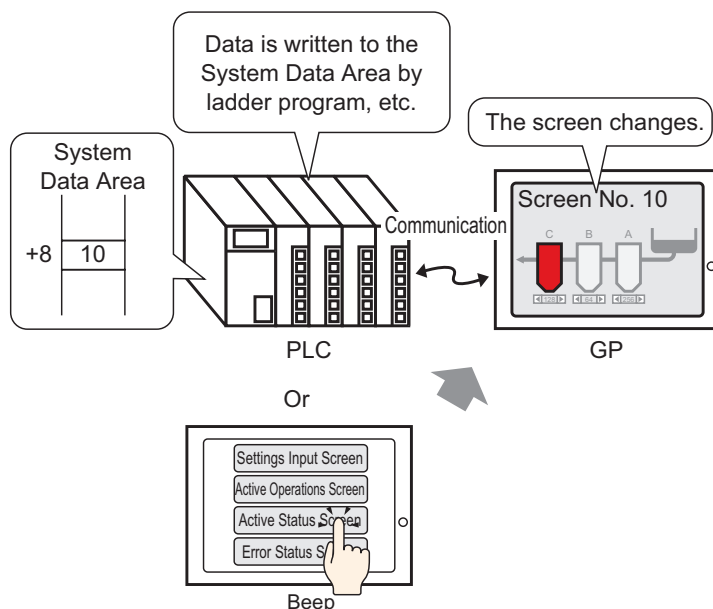
You can change screens either from a Change Screen Switch or the device/PLC.

12.5.2 Setup Procedure

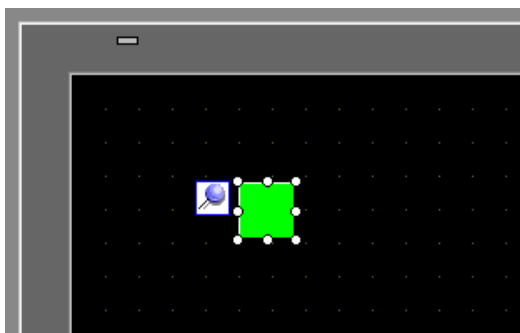
NOTE

- Please refer to the settings guide for details.
 ☞ "11.14.3 Change Screen Switch" (page 11-58)
- For details about placing parts or setting addresses, shapes, colors, and labels, please refer to the "Part Editing Procedure".
 ☞ "9.6.1 Editing Parts" (page 9-38)

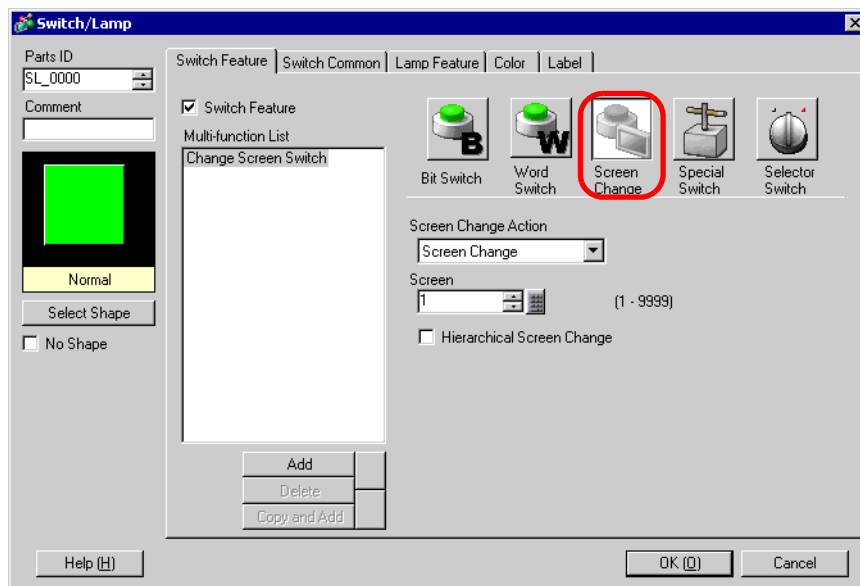
Configure settings to change the displayed screen by both touch and from a device/PLC.
 (For touch, the displayed screen changes to screen "10".)



- 1 From the [Parts (P)] menu, point to [Switch Lamp (C)] and select [Change Screen Switch (C)], or click  from the toolbar, and place the switch on the screen.

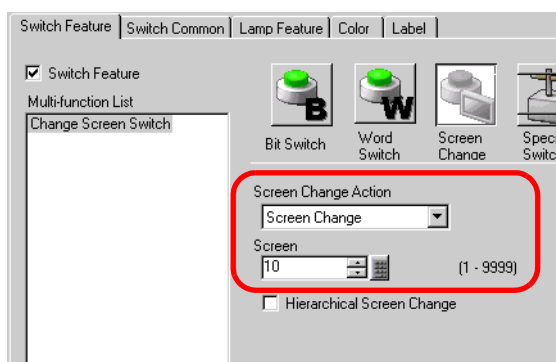


2 Click the new switch. The Switch/Lamp dialog box appears.



3 Click [Select Shape] and choose the appropriate shape.

4 From the [Screen Change Action] drop-down list, select [Screen Change]. In the [Screen] field, set the destination screen number to "10".

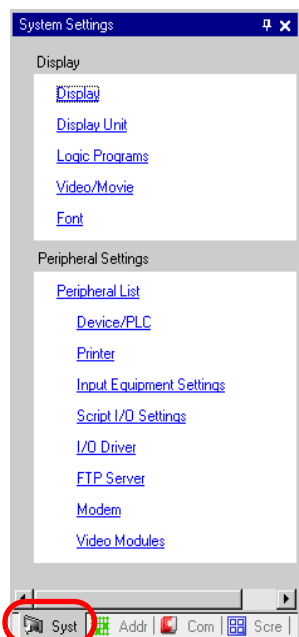


5 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

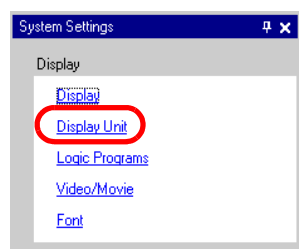
NOTE

- Depending on the switch shape, you may not be able to change the color.

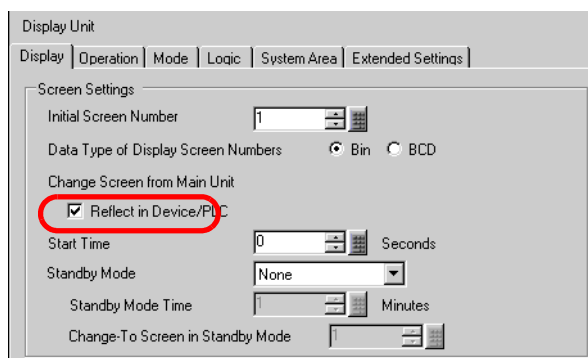
6 From the [View (V)] menu, point to [Work Space (W)] and select [System Settings (S)].



7 Under [Display], select [Display Unit].



8 Click the [Display] tab and select the [Reflect in Device/PLC] check box.



NOTE

- Selecting the [Reflect in Device/PLC] check box enables writing the current screen number to the device/PLC when you change screens using a switch. If this check box is not selected, and you change screens using a switch, not only is the screen number not written to the device/PLC, but there may be instances when the device/PLC cannot initiate a change screen operation.

- 9 Click the [System Area] tab and set the [System Area Start Address].
- 10 Select the [Enable System Data Area] check box and confirm that the [Change-To Screen Number: (1 Word)] check box is selected.

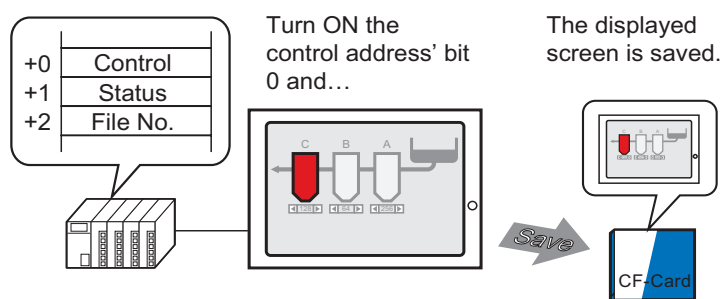
The screenshot shows the 'Display Unit' configuration window with the 'System Area' tab selected. The 'System Area Device' is set to 'PLC1'. The 'System Area Start Address' is '[PLC1]D00000'. The 'Read Area Size' is '0'. The 'Enable System Data Area' checkbox is checked and highlighted with a red circle. Below this, a table lists 'System Data Area Items' with their corresponding addresses. The 'Change-To Screen: (1 Word)' item is also checked and highlighted with a red circle.

System Data Area Items	Number of Words in use: 16
☒ Current Screen: (1 Word)	[PLC1]D00000
☒ Error Status: (1 Word)	[PLC1]D00001
☒ Clock Data (Current): (4 Word)	[PLC1]D00002
☒ Status: (1 Word)	[PLC1]D00006
☒ Reserved (Write): (1 Word)	[PLC1]D00007
☒ Change-To Screen: (1 Word)	[PLC1]D00008
☒ Screen Display ON/OFF: (1 Word)	[PLC1]D00009
☒ Clock Data (Preset Value): (4 Word)	[PLC1]D00010
☒ Control: (1 Word)	[PLC1]D00014
☒ Reserved (Read): (1 Word)	[PLC1]D00015
☐ Window Control: (1 Word)	

- 11 To change the displayed screen by touch, use the [Change Screen Switch]. To change the displayed screen from the device/PLC, write the destination screen number to the [Change-To Screen Number: (1 Word)] address. You can now change the displayed screen either by touch or from the device/PLC.

12.6 Saving the Displayed Screen

12.6.1 Introduction



You can capture the screen displayed on the GP to a CF card. (screen capture). The screen capture is saved as a JPEG file (*.jpg).

NOTE

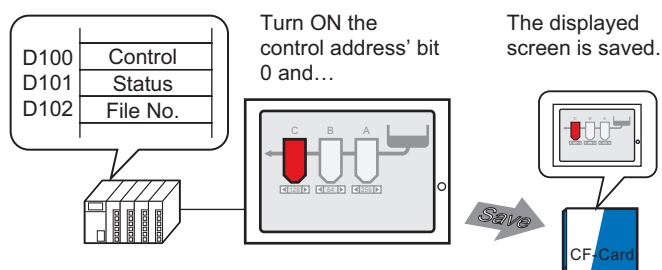
- You can save to a CF Card, USB storage device, or FTP Server.

12.6.2 Setup Procedure

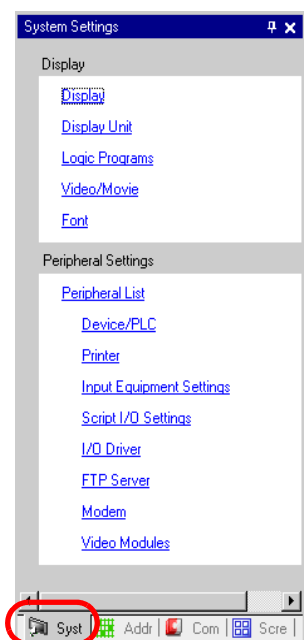
NOTE

- Please refer to the settings guide for details.
 ☞ “5.14.6 [System Settings] Setting Guide ■ [Display Unit] Settings Guide ◆
 Mode” (page 5-114)

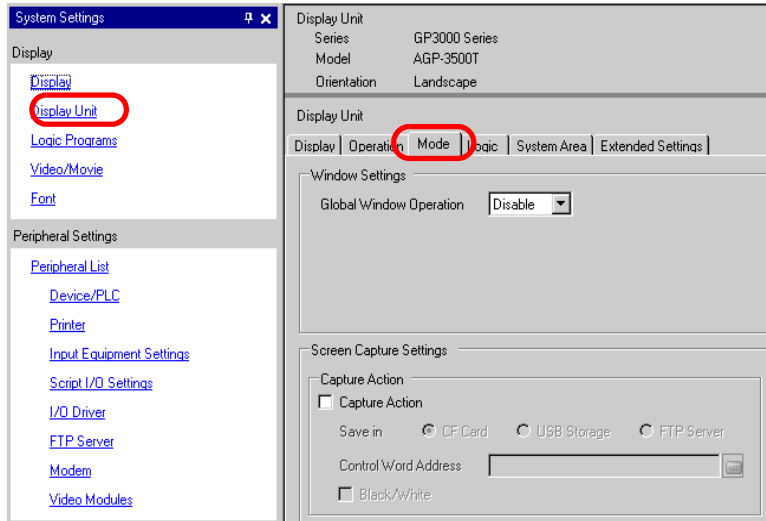
Configure settings to capture the displayed screen in the GP (Use "D100" as the control address for the capture).



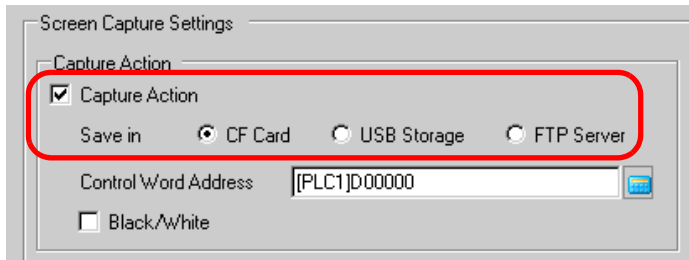
1 From the [View (V)] menu, point to [Work Space (W)] and select [System Settings (S)].



2 In the [Display] section, select [Display Unit]. Click the Mode tab.



3 Under [Screen Capture Settings], enable the [Capture Action] checkbox and save to a CF Card.



- NOTE

- You can save the data on a USB storage device and FTP server as well as on a CF Card. Please confirm the following as all models do not have this feature.
 - “1.3 List of Supported Functions by Device” (page 1-5)
 - Open [System Setting] to register a FTP Server in [FTP server registration].

4 Specify the address (D100) in [Control Word Address].



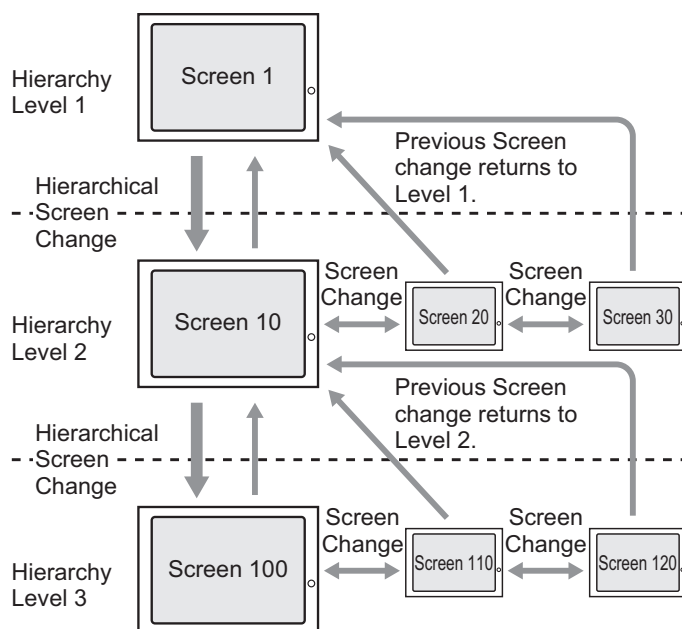
5 A screen capture occurs when the bottom bit in the [Control Word Address] --D100 bit zero- turns ON. In the file name [CP*****.jpg], the asterisks represent the file number defined by [Control Word Address]+2.

D100 Control	0	0	~	0	0	1	For the
D101 Status							screen
D102 File No.							capture,

When the screen capture completes normally, the [Control Word Address] +1's address "D101" bit 1 turns ON. Confirm this bit ON and then turn OFF "D100" Bit 0

12.7 Changing the Displayed Screen by Hierarchical Structure

12.7.1 Introduction



You can create a hierarchical structure for the screen changes.

Using a [Hierarchical Screen Change] switch, you can move up or down a level in the screen hierarchy.

Using a Previous Screen switch moves you up a level in the screen hierarchy. Using a Screen Change switch moves you through screens on the same level.

NOTE

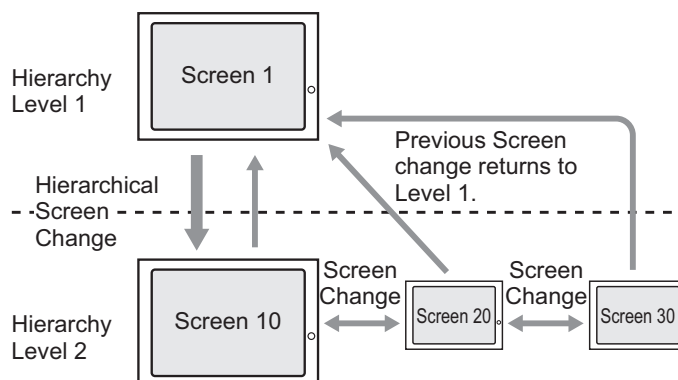
- If [Hierarchical Screen Change] is not selected, the screen changes will be on the same hierarchy level.
- A maximum of 32 levels can be set.
- You cannot force a Hierarchical Screen Change from the device/PLC. You can only change screens within the same hierarchy level.

12.7.2 Setup Procedure

NOTE

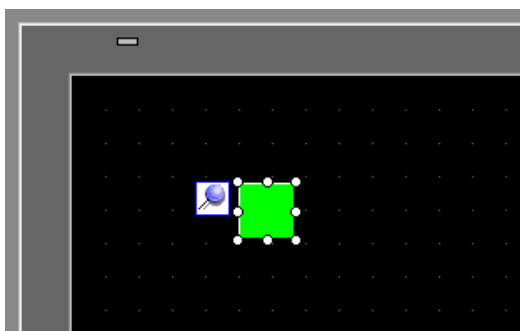
- Please refer to the settings guide for details.
 ➞ "11.14.3 Change Screen Switch" (page 11-58)
- For details about placing parts or setting addresses, shapes, colors, and labels, please refer to the "Part Editing Procedure".
 ➞ "9.6.1 Editing Parts" (page 9-38)

Create a Change Screen Switch to move up or down a level in the screen hierarchy.

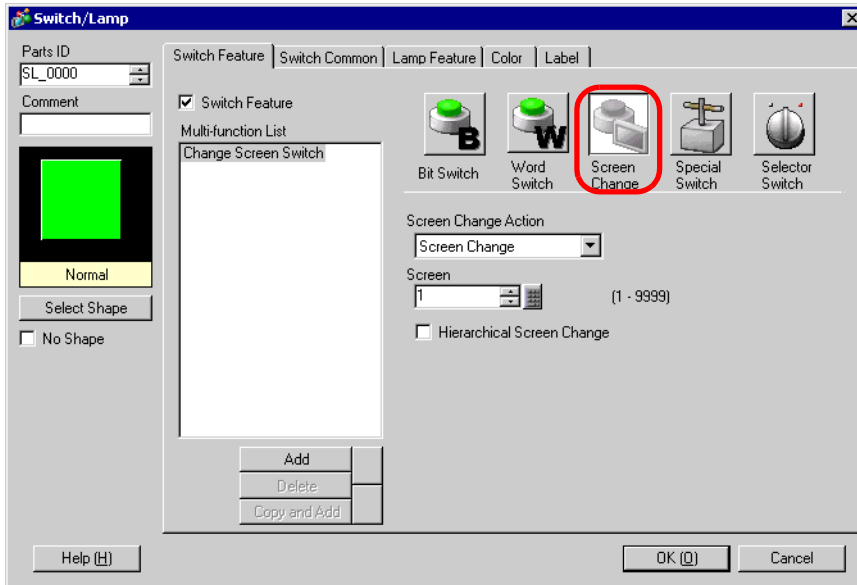


First, place a Switch on Base Screen "1" to change from Hierarchy Level 1 (Screen "1") to Hierarchy Level 2 (Screen "10"). Then place a switch on Screen "10" to move up to Base Screen "1".

- 1 From the [Parts (P)] menu, point to [Switch Lamp (C)] and select [Change Screen Switch (C)] or click  on the toolbar. Place the switch on Base Screen 1.

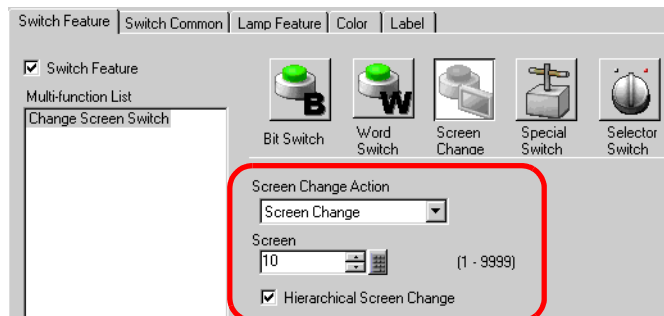


2 Click the new switch. The Switch/Lamp dialog box appears.



3 Click [Select Shape] and choose the appropriate shape.

4 From the [Screen Change Action] drop-down list, select [Screen Change]. In the [Screen] field, set the destination screen number to "10". Select the [Hierarchical Screen Change] check box.



5 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

NOTE

- Depending on the switch shape, you may not be able to change the color.

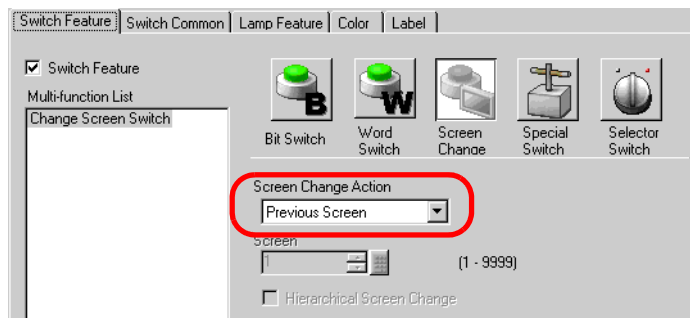
Next, place a Switch on each screen to return from Hierarchy Level 2 (Screen "10", Screen "20", Screen "30") back to Hierarchy Level 1 (Screen "1").

6 Open Screen 10. From the [Parts (P)] menu, point to [Switch Lamp (C)] and select [Change Screen Switch (C)] or click  on the toolbar. Place the switch on Screen 10.

7 Click the new switch. The Switch/Lamp dialog box appears.

8 Click [Select Shape] and choose the appropriate shape.

- 9 In the [Screen Change Action] drop-down list, select [Previous Screen].



- 10 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

NOTE

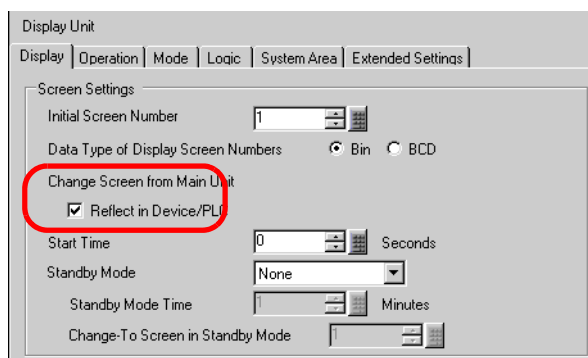
- Depending on the switch shape, you may not be able to change the color.

- 11 Place an identical switch on Base Screen "20" and "30". When you touch the Switch placed on any screen on Hierarchy Level 2 (Screen "10", "20", "30") it returns to Base Screen 1 in hierarchical level 1.

12.8 Restrictions

12.8.1 Restrictions for Screen Change

- When a screen number that does not exist is set, a screen change will not function.
- LS8 viewed by direct access method and address 15 viewed by memory link method are internally the same. However, if [Reflect in Device/PLC] is not selected in the system settings, LS8 will change from communication in direct access mode immediately after writing with memory link mode, therefore a screen change using true memory link mode becomes impossible.


NOTE

- For more information about the System Data Area, please refer to the following.
 "A.1.4.2 System Data Area" (page A-11)

12.8.2 Restrictions for Screen Capture

- The time taken for a screen capture depends on the image quality and screen size. The file size for a screen quality of 80 will be around 200 KB and the capture will take about 5-6 seconds.
- The screen display (Parts, screen change, etc.) will not update during a screen capture.
- When capturing a screen set with Blink, the blinking is not captured.
- When the [Auto Increment File Number] feature is set but neither the [Auto Delete File] feature nor the [Loop] feature are used and when the CF Card or USB storage device have no free space or the largest file number (65,535) exists, the Snapshot will not occur even when bit 0 of the [Control Address] is turned on.
- When the [Auto Delete File] feature is set, the file cannot be deleted if it is a read-only file or if the file is currently open. Therefore, screen capture will not execute and a write error will occur.
- The more JPG files exist, the more time it takes for the [Auto Delete File]. It may take several minutes to complete the capture.
- When the [Loop] feature is set, screen capture will not execute if the file to be overwritten is a read-only file or if the file is currently open. A write error will occur.
- When overwriting a file, the CF Card or USB storage device must have enough free space for the data. If the data is larger than the available space, a write error will occur.

- If a write error occurs, any file that has not finished loading may remain on the CF Card or USB storage device.
- When saving data on a CF Card or USB storage device, if the target folder (\CAPTURE) does not exist, a folder will be automatically created and the data will be saved there. However, if the CF Card is not reset or any other case occurs where the folder cannot be created, a CF Card error will occur.
- There is a limit to the frequency that data can be written to the CF Card (500 KB of data can be rewritten around 100,000 times).
- When saving to the FTP Server, the automatic file number computation function is not available. A folder (\CAPTURE) will be created in the root directory for logging in. The file name will be the time stamp of the save operation.
- The FTP Server timeout is 75 seconds. An error will occur if connection to the FTP Server does not occur within the timeout period.

■ CF Card Usage Warnings

- When removing the CF Card, please verify that the access lamp is switched off. There is a chance that CF Card data can be lost or damaged.
- While accessing the CF Card, do not turn the GP unit off, reset the GP, or remove the CF Card. Create a preset verification screen for information about CF Card access. Turn off power, reset, open the CF Card cover, or remove the CF Card only after verifying that screen.
- When inserting the CF Card in the GP unit, please make sure you have the correct side up and the correct location for the CF Card connector. If installed incorrectly, damage can occur to the data or to the CF Card/GP unit.
- Please use a CF Card made by Digital Electronics Corporation of Japan. If using another company's CF Card, damage may occur to the CF card data.
- Please make sure to back up all CF card data.
- Please refrain from doing the following, as it can result in damage to data and equipment:
 - Bending the CF Card
 - Dropping the CF Card
 - Spilling water on the card
 - Touching the CF Card connectors directly
 - Disassembling or modifying the CF Card

■ USB storage handling instructions

- Do not reset the GP or remove the USB storage device when accessing the device.
- Please make sure to backup the data on the USB storage device.
- GP does not initialize the USB storage device. Please format as FAT on a computer.
- When more than one USB storage device is connected, only the USB storage device that is first recognized will work.

