


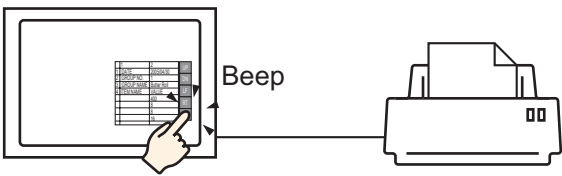
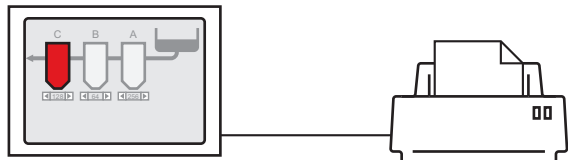
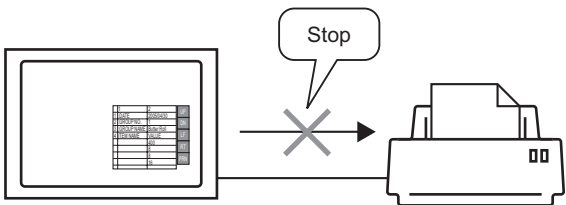
34 | Printing

This chapter explains how to print screens and settings in GP-Pro EX and how to connect a printer to the GP to print the GP data and display screens.

Please start by reading “34.1 Settings Menu” (page 34-2) and then turn to the corresponding page.

34.1	Settings Menu	34-2
34.2	Printing the Project Settings.....	34-3
34.3	Connecting a Printer to GP	34-8
34.4	Printing the Current Screen.....	34-13
34.5	Cancel Printing.....	34-23
34.6	Settings Guide.....	34-33
34.7	Restrictions	34-51

34.1 Settings Menu

Printing the Project Settings	
<p>Use GP-Pro EX to print projects from a PC.</p>  <p>NOTE</p> <ul style="list-style-type: none"> You can output the project settings to a file. 	<ul style="list-style-type: none"> Setup Procedure (page 34-4) Introduction (page 34-3)
Connecting a Printer to GP	
<p>You can print various data (Alarm History data, Sampling data, and so on) by connecting the GP to a printer.</p> 	<ul style="list-style-type: none"> Setup Procedure (page 34-11) Introduction (page 34-8)
Printing the Current Screen	
<p>Prints the displayed screen on the GP as it appears.</p> 	<ul style="list-style-type: none"> Setup Procedure (page 34-16) Introduction (page 34-13)
Cancel Printing	
<p>You can cancel the printing of data and display screens. If you cancel, all the print processes being performed are canceled.</p> 	<ul style="list-style-type: none"> Setup Procedure (page 34-26) Introduction (page 34-23)

34.2 Printing the Project Settings

34.2.1 Introduction

You can print the project settings for a file from GP-Pro EX. This feature is useful for debugging and documenting projects.

Also, you can output them in the rich text file (*.rtf) format.



Print Example

```

Project Setting(Summary)
2005/10/28 11:31 test.prx

Summary
Project Name          test.prx
Last Saved Date and Time  Fri Oct 28 11:24:41 2005
Creator               Pro-face
Title
Send Data Size        75843 Bytes
Model                 AGP-3500T
Device/PLC 1

Printer
Bar Code 1
Bar Code 2
Script 1
Script 2

Common Setting(Sampling)
2005/10/28 11:33 test.prx

Sampling Settings
Language Settings/Font Type      ASCII Standard Font
Sampling Settings (Detail)
Group                             Group
Addressing                        Sequential
Sampling Top Address              [PLC]M00100
No. of Sampling Words             1
Bit Length                         16Bit
Execution Condition               Time Specification
Sampling Permit Bit Address        [PLC]M000100
Start Time                         00:00
End Time                           00:00:00
Sampling Cycle                     00:00:00
No. of Times                       1 Times
Data Full Bit Address             Disable
Data Clear Bit Address            [PLC]M000050
Backup to SRAM                    Enable
Overwrite from the oldest data    Enable
No. of Days                       1
Time Data                         Enable
Data Valid/Invalid Flag          Enable
Display/Save in CSV Settings      Disable
Print Settings                    Disable
Write Data Settings               Disable
    
```


34.2.2 Setup Procedure

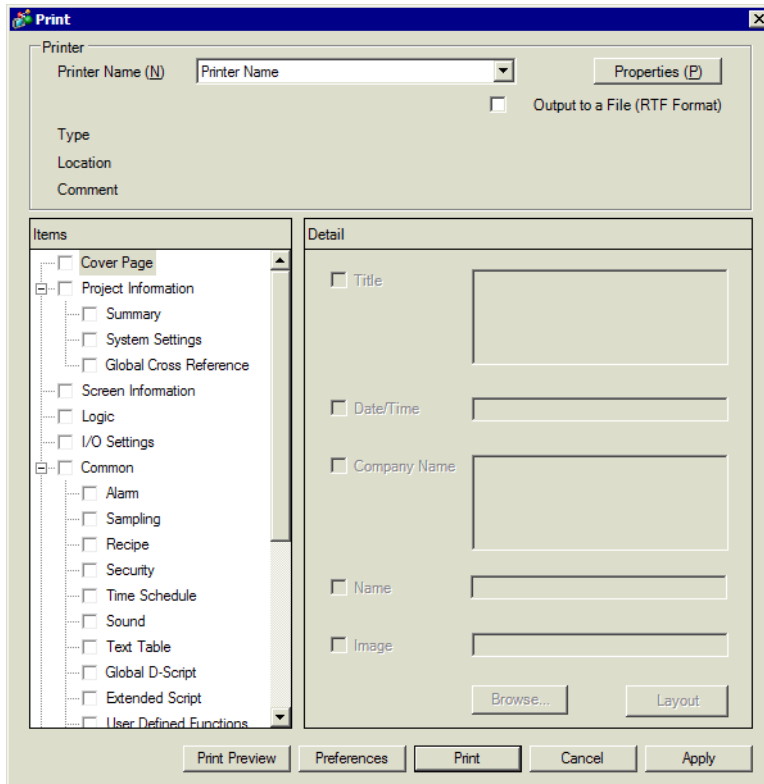
NOTE

- Please refer to the settings guide for details.
☞ “34.6.1 Print Settings Guide” (page 34-33)

Output the Project Information, Alarm Settings, and Sampling Settings from a PC to a printer.

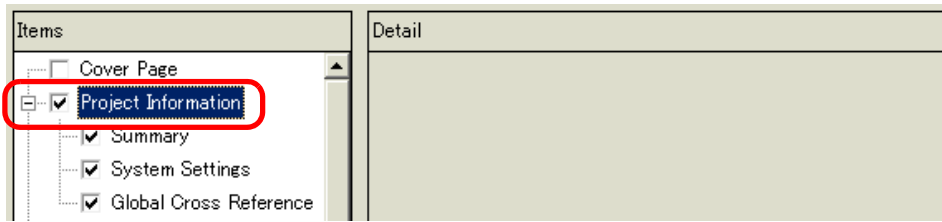


- 1 Select the [Project (F)] menu - [Print (P)] command or click  to open the [Print] dialog box.

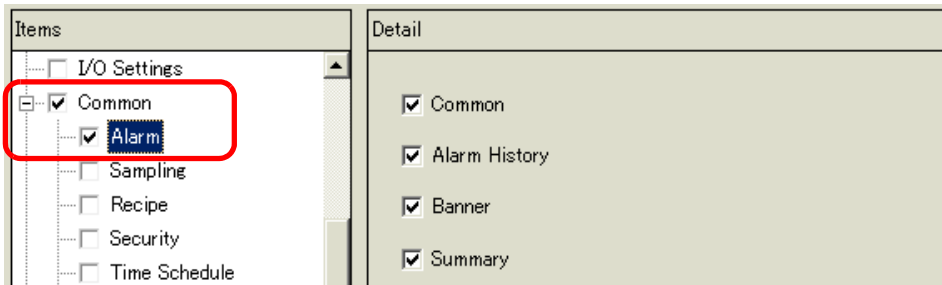


- 2 Select a printer to use in [Printer Name (N)].

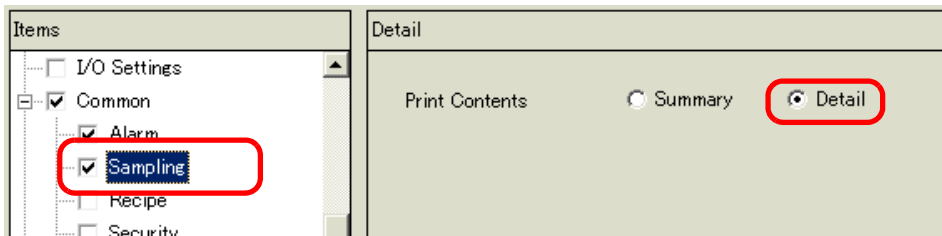
- 3 Select the [Project Information] check box and all the sub items. (For example, [Summary], [System Settings], [Global Cross Reference]) are checked as well.



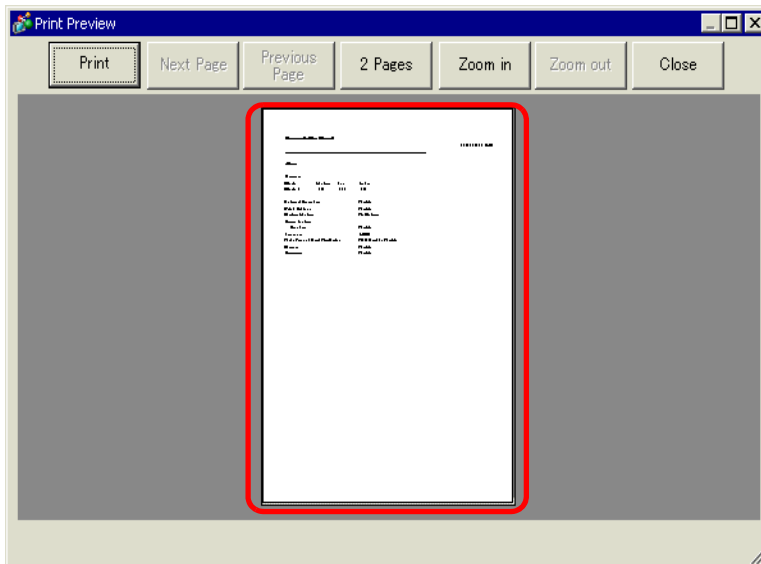
- 4 Under [Common], select the [Alarm] check box. Check all the Alarm boxes to print in [Item]. (For example, [Common], [Alarm History])



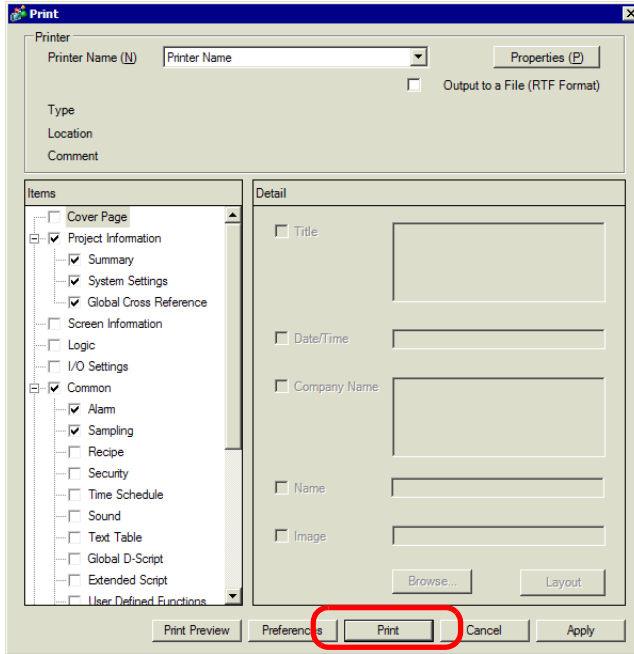
- 5 Under [Common], select the [Sampling] check box. Select [Detail] for the Sampling [Print Contents].



- 6 Click [Print Preview] and check the print status.



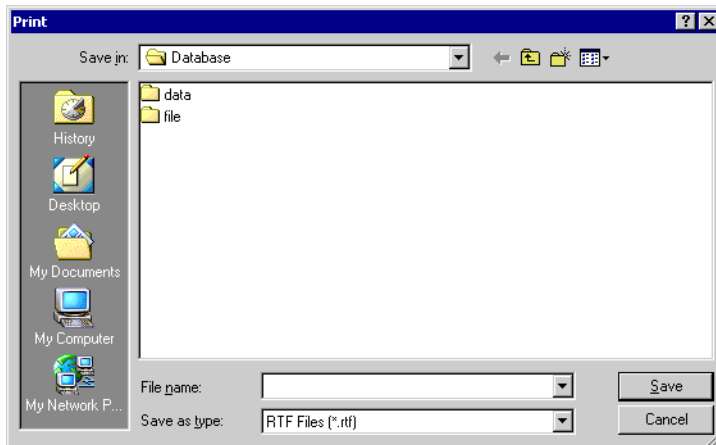
7 Click [Print] and the [Print] dialog box appears. Click [Print] to start printing.



To output to a rich text file without printing, check the [Output to a File (RTF Format)] box.

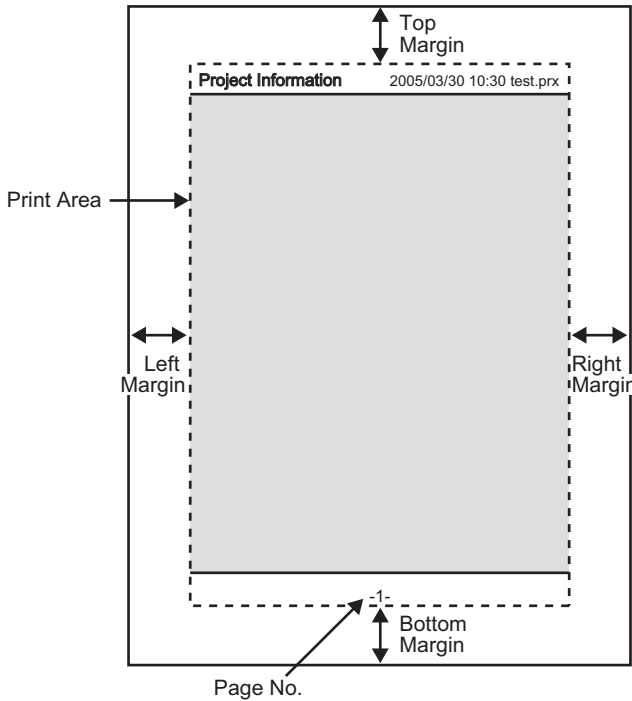


Click [Print] and the following dialog box appears. Select the [Save in] location and [File name] and click [Save].



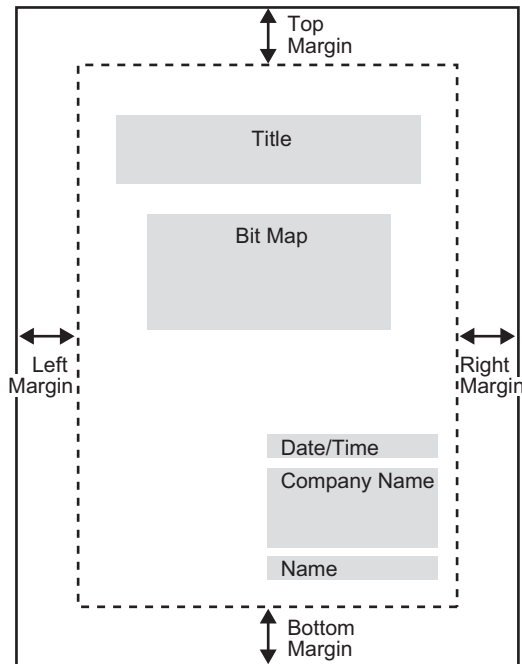
34.2.3 Print Layout

For example, Project Settings



- The print item name is printed on the top left corner, and the printout date/time and the project file name on the top right corner.
- A page number can be set in Preferences.

For example, Cover Page

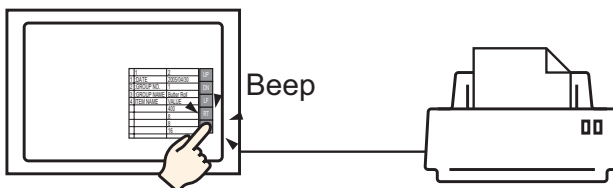


- Image files can be placed from the line after Title to two lines before Date/Time. When printing an image that exceeds this area, the image is automatically reduced to fit into the area.
- Bitmap images can be moved within the print area.

34.3 Connecting a Printer to GP

34.3.1 Introduction

You can print various data (Alarm History data, Sampling data, etc.) by connecting a printer to the GP. Only one printer can be connected to the entire system.



You can print the following data from the GP.

Feature	Print Contents
Screen Hard Copy	Prints the displayed screen on the GP as it appears. ☞ “34.4 Printing the Current Screen” (page 34-13)
Alarm Banner	Prints an alarm message in the displayed language (table) when it triggers or recovers.
Indicates Alarm	<ul style="list-style-type: none"> • Real-time Print Prints when an alarm triggers, is confirmed, or recovers. • Batch Print Prints all the alarm history in a specified format when a specified [Print Word Address] Bit 0 is turned ON.
Sampling	<ul style="list-style-type: none"> • Real-time Print Prints in the print format specified in [Sampling] each time it collects data. • Batch You can print in [Block Unit] when [Overwrite old data after finishing the specified cycles] is not set in [Extended] on the [Sampling] screen's [Mode] tab. Prints the collected data in block unit in a specified print format when a specified [Print Word Address] Bit 0 is turned ON.
CSV Data Print	Prints the displayed CSV data when you touch the print key on a special data display [Show CSV]. You can select whether to print only the displayed portion or to print the whole data. ☞ “25.6 Displaying/Editing CSV Data on the Screen” (page 25-30)
Script Printer Output	Outputs specified data when the printer operation function in the return sentence for D-script, global D-script, and extended script is executed.

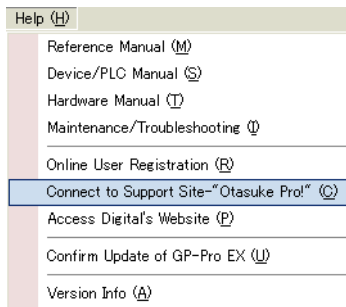
■ Type of Printers That can be Connected to GP

You can use the following printers.

- NEC PC-PR201/PL command compatible
- EPSON ESC/P24-J84 (C) command compatible
- HP Laser Jet PCL 4 command compatible
- Some models of EPSON PM/Stylus (6 Colors) and Stylus (4 Colors)

For supported printer models, refer to the Pro-face support site "Otasuke Pro!" (<http://www.pro-face.com/otasuke/>).

Connect to this site by clicking the [Help (H)] menu - [Connect to Support Site - "Otasuke Pro!" (O)] command.



IMPORTANT

- Supported models may change due to GP upgrades.
- Printing may not work if you use a printer not listed as a supported model. Make sure your printer is compatible before you begin.

NOTE

- You cannot use Windows dedicated printers.
-

■ Printer and Interface


Connect a printer using COM1 (RS-232C), USB, or LAN.

The USB connection supports USB direct and USB-PIO conversion.

The following interface corresponds to each printer.

		Interface			
		COM1	USB Direct	USB-PIO	LAN (LPR/IPP)
Printer	NEC PR Series	Enable	Disable	Enable	Enable
	EPSON ESC/P (High Speed)	Enable	Disable	Enable	Enable
	EPSON ESC/P (High Quality)	Enable	Disable	Enable	Enable
	HP LASERJET Series	Enable	Disable	Enable	Enable
	EPSON PM/Stylus (6 Colors)	Disable	Enable	Enable	Enable
	EPSON Stylus (4 Colors)	Disable	Enable	Enable	Enable
	Text ASCII	Enable	Disable	Enable	Disable

NOTE

- COM2 cannot be used to connect a printer.
- Use a USB/PIO converter to connect a Centronics parallel interface printer. For supported USB-PIO converters, refer to Digital Electronics Corporation support site "Otasuke Pro!" by clicking the [Help (H)] menu - [Connect to Support Site - "Otasuke Pro!" (O)] command.
- For USB direct connection, confirm the supported models. A complex machine with a scanner and storage cannot be used for USB direct print.
 " ■ Type of Printers That can be Connected to GP" (page 34-9)
- When printing with LAN connection, there may be a short delay before the print starts.

◆ Output Port and Print Feature

Print Feature	COM1	USB	LAN Ports
Screen Hard Copy	Enable	Enable	Enable
Alarm (Banner) Print	Enable	Enable	Disable
Alarm (History) Real-time Print	Enable	Enable	Disable
Alarm (History) Batch Print	Enable	Enable	Disable
Sampled Data Real-time Print	Enable	Enable	Disable
Sampled Data Batch	Enable	Enable	Disable
CSV Data Print	Enable	Enable	Disable
Script Printer Output	Enable	Enable ^{*1}	Disable

*1 Script printer output with USB connection supports only USB-PIO conversion.

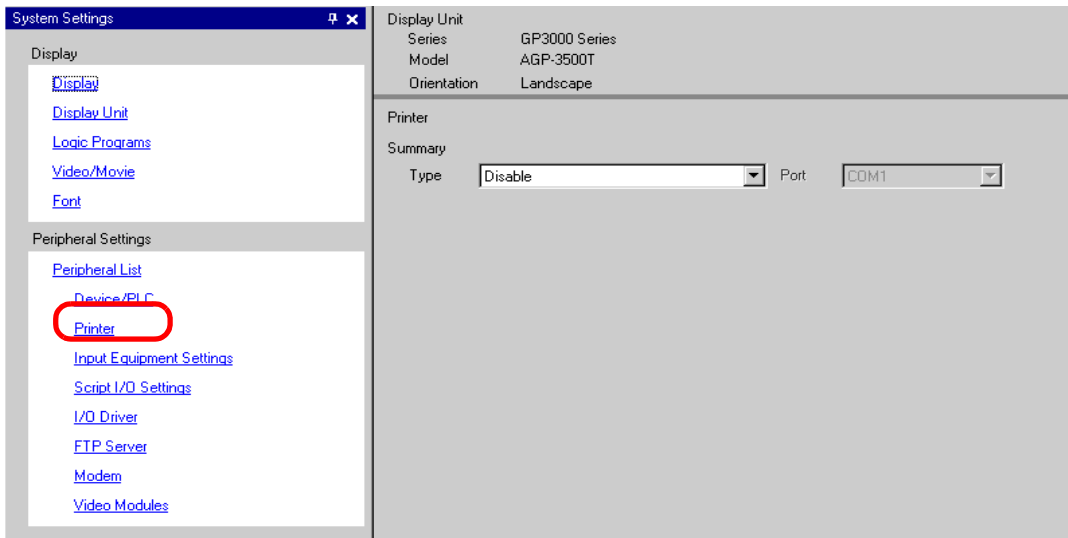
34.3.2 Printer Setup Procedure

NOTE

- Please refer to the settings guide for details.
 ☞ “34.6.2 System Settings [Printer] Settings Guide” (page 34-48)

Configure settings to connect the GP and a printer using a USB-PIO converter.

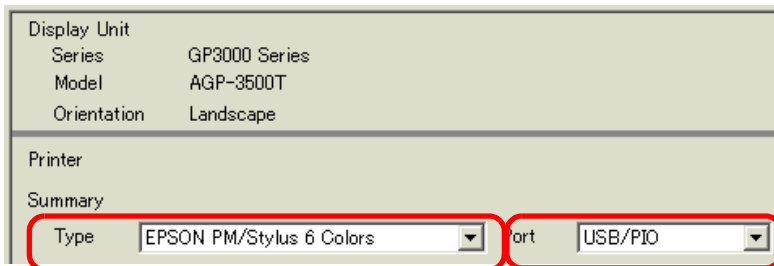
1 Select [Printer] from the System Settings window.




NOTE

- If the [System Settings] tab is not displayed in the Work Space, select the [View (V)] menu - [Work Space (W)] option - [System Settings (S)] command.

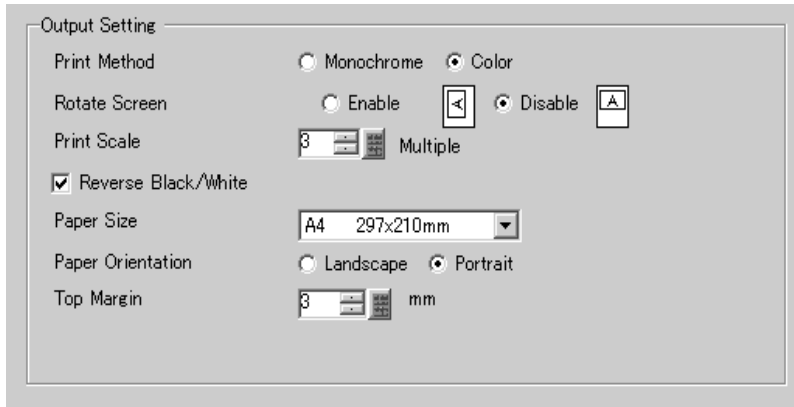
2 Designate the printer type to use and the output port. (For example, [Type] EPSON PM/ Stylus 6 Color, [Port] USB/PIO)



NOTE

- If the port is being used by another device, the  mark is displayed next to the box. Select a port that is not used by another device/PLC.

- 3 Configure the [Print Method], [Screen Hardcopy Rotation], [Print Scale], [Black/White Reverse Display], [Paper Size], [Paper Orientation] [Top Margin] output settings.



The screenshot shows a dialog box titled "Output Setting" with the following configuration:

- Print Method: Monochrome, Color
- Rotate Screen: Enable, Disable
- Print Scale: 3, Multiple
- Reverse Black/White:
- Paper Size: A4 297x210mm
- Paper Orientation: Landscape, Portrait
- Top Margin: 3 mm

The printer connection settings are complete.

Connect the printer to the GP with a specified output port (USB/PIO) and configure print settings for each feature. The print will start.

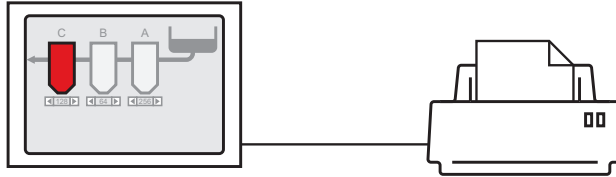
NOTE

- For a monochrome GP model, the print will be monochrome even if [Color] is selected for the [Print Method].
-

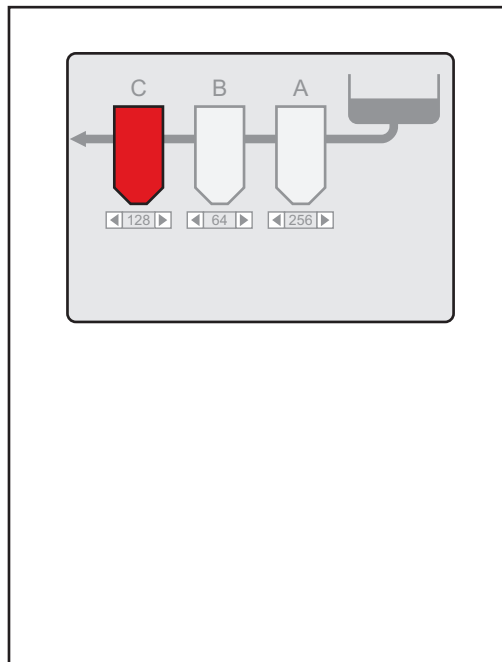
34.4 Printing the Current Screen

34.4.1 Introduction

Prints the GP screen contents as an image.



Print Example



NOTE

- The method of printing the screen display depending on the communication method (direct access or memory link).
 - You can save the currently displayed screen as a JPEG file to a CF Card, USB storage device, or FTP server.
- ☞ “12.6 Saving the Displayed Screen” (page 12-17)

34.4.2 Operation Method

The following methods are used to start printing the displayed screen. The operation method differs depending on the communication method (direct access or memory link).

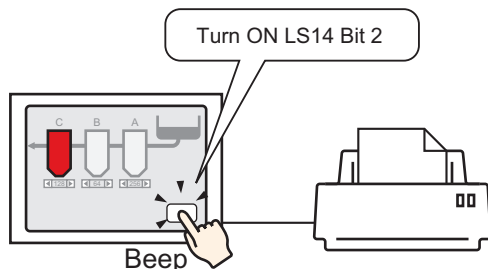
IMPORTANT

- For more details on the communication method, refer to:
 - ☞ “A.1.2 Communicating with a Device/PLC Using the Direct Access Method” (page A-4)
 - ☞ “A.1.3 Using the Memory Link Method with Unsupported Devices/PLCs” (page A-6)

■ Direct Access Method

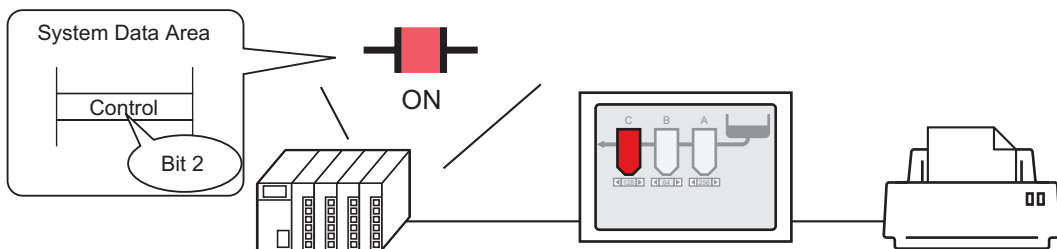
Operating by Screen Touch ☞ “◆ To Trigger Printing the Current Screen by Touch” (page 34-16)

If you turn ON the GP internal device LS14 (control address) Bit 2 (print start bit) using a switch, the displayed screen will print.



Operating from a Device/PLC ☞ “◆ To Trigger Printing the Current Screen from a Device/PLC” (page 34-18)

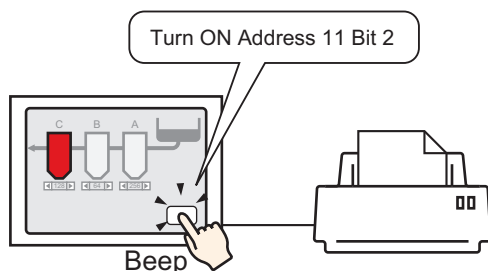
If you turn ON control address Bit 2 in the system data area allocated to a device/PLC, the displayed screen will print.



■ Memory Link Method

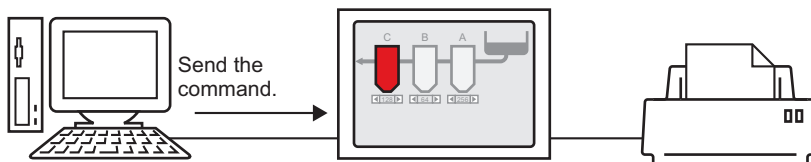
Operating by Screen Touch ☞ “ ◆ To Trigger Printing the Current Screen by Touch”
(page 34-20)

If you turn ON '0011' (control address) Bit 2 (print start bit) in the GP internal device (#MEMLINK) using a switch, the displayed screen will print.



Operating from a Host (PC) ☞ “ ◆ To Trigger Printing the Current Screen from a PC Host” (page 34-22)

If you send the command to write '0004h' to '0011' (control address) from a host (PC), the displayed screen will print.



34.4.3 Setup Procedure

■ Direct Access Method

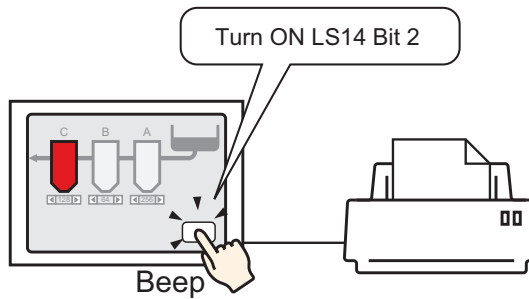
◆ To Trigger Printing the Current Screen by Touch

NOTE

- For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".


☞ "9.6.1 Editing Parts" (page 9-38)

Create a switch to operate the internal device LS14 bit 2.

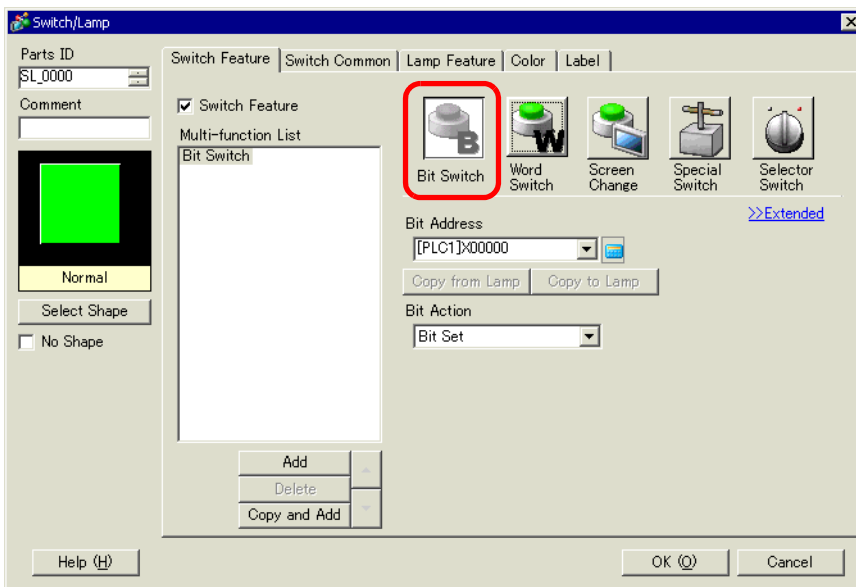


1 Configure connection settings for the printer.

☞ "34.3.2 Printer Setup Procedure" (page 34-11)

2 Select the [Parts (P)] menu, [Switch Lamp (C)] option - [Bit Switch (B)] command, or click , and place the Switch Part on the screen.

3 Double-click the placed Switch and the settings dialog box appears.

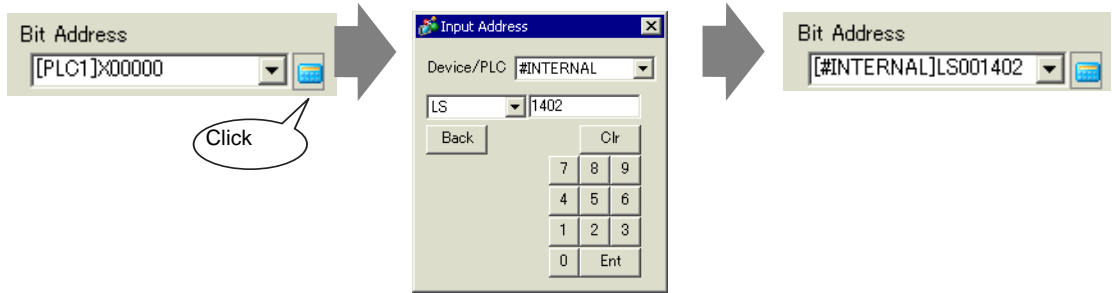


4 Select the Switch shape from [Select Shape].

5 [Designate the GP internal device LS14 Bit 2 (print start bit) in [Bit Address]].

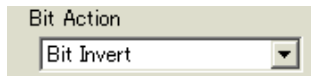
Click the icon to display an address input keypad.

Select #INTERNAL from the device/PLC, select the "LS" device, input "1402" for the address, and then click "ENT."



-
- NOTE**
- Alternatively, select the variable #H_Control_HardcopyPrint from the [Bit Address] pull-down menu to create the same operation switch.
-

6 Choose [Bit Invert] from [Bit Action].

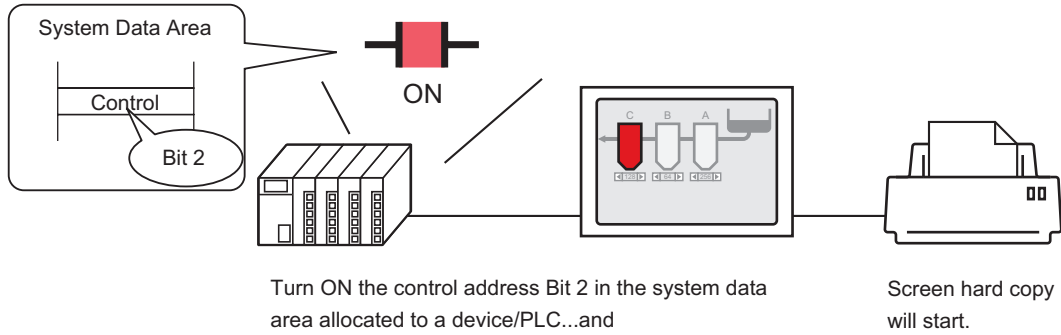


7 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

A switch used to start screen hard copy has been created.

-
- NOTE**
- While printing the displayed screen, LS6 (status address) Bit 2 (printing bit) in the GP internal device is ON. After printing, this bit automatically turns OFF. Confirm this bit OFF and then turn OFF LS14 Bit 2 (print start bit).
-

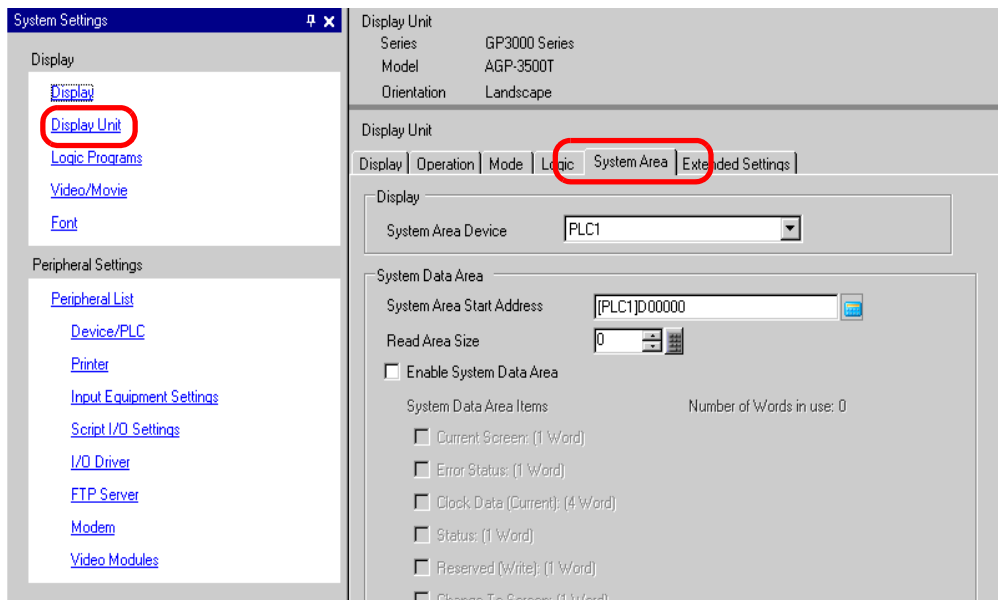
◆ To Trigger Printing the Current Screen from a Device/PLC



1 Configure connection settings for the printer.

☞ “34.3.2 Printer Setup Procedure” (page 34-11)

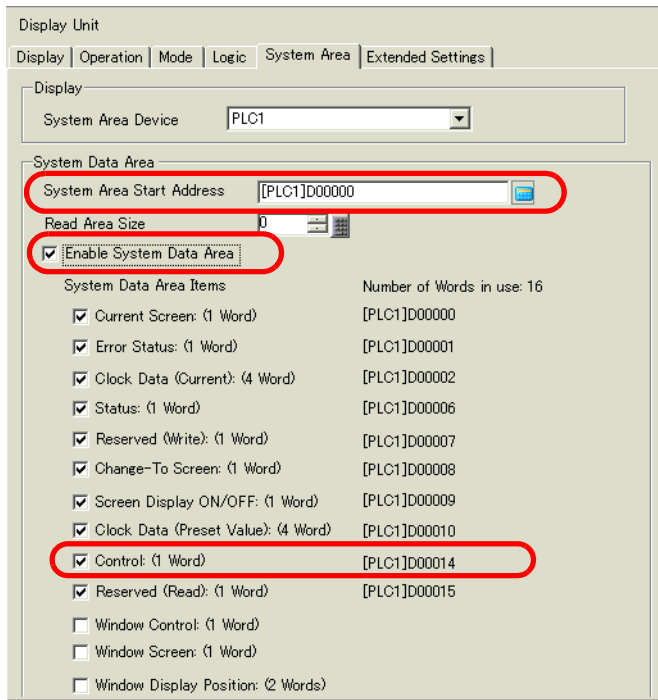
2 Click the System Settings window [Display Unit] to open the [System Area] tab.



NOTE • If the [System Settings] tab is not displayed in the Work Space, select the [View (V)] menu - [Work Space (W)] option - [System Settings (S)] command.

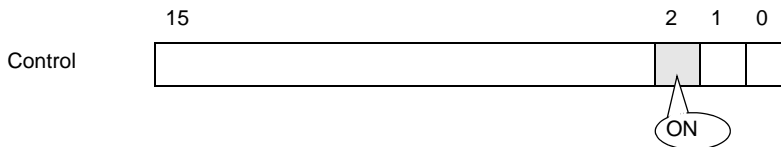
3 Select which device/PLC to allocate the system data area in [System Area Device]. The system data area can only be set to one device/PLC.

4 Designate the start address of the system area in [System Area Start Address] and select the [Enable System Data Area] check box. (For example, D00000)



5 Select the [Control: (1 Word)] check box.

If you turn ON Bit 2 in the address displayed on the right side ('D00014' in the above example), the displayed screen will print.



NOTE

- When a [Status] address ("[Status: (1 Word)] D00006" in the above example) is allocated to the device/PLC, bit 2 of this address (printing bit) is ON while printing the displayed screen. After printing, this bit automatically turns OFF. Create the [Script] to turn OFF the control address ([Control: (1 Word)] D00014) bit 2 after making sure this bit has turned OFF.

■ Memory Link Method

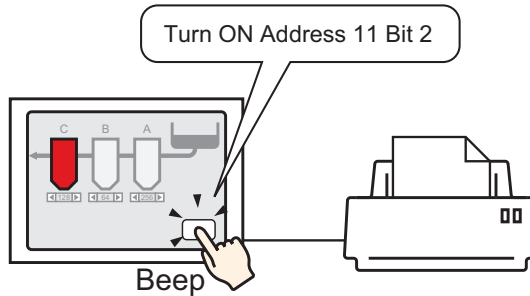
◆ To Trigger Printing the Current Screen by Touch

NOTE

- For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".

☞ "9.6.1 Editing Parts" (page 9-38)

Create a switch to operate the internal device address '0011' Bit 2.



1 Configure connection settings for the printer.

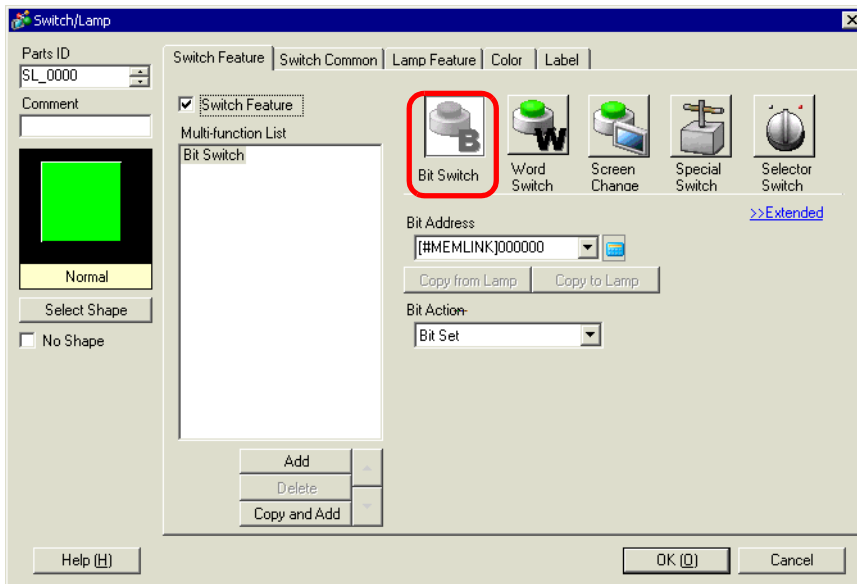
☞ "34.3.2 Printer Setup Procedure" (page 34-11)

2 Select the [Parts (P)] menu - [Switch Lamp (C)] option - [Bit Switch (B)] command, or click



, and place the Switch Part on the screen.

3 Double-click the placed Switch and the settings dialog box appears.

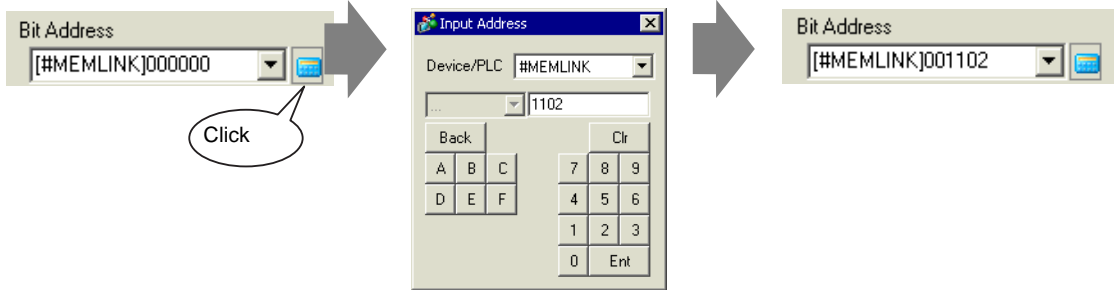


4 Select the Switch shape from [Select Shape].

5 Designate the GP internal device address '0011' Bit 2 (print start bit) in [Bit Address].

Click the icon to display an address input keypad.

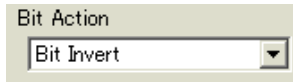
Select #MEMLINK from Device/PLC, input "1102" as the address, and click the "ENTER" key.



NOTE

- Alternatively, select the variable #H_Control_HardcopyPrint from the [Bit Address] pull-down menu to create the same operation switch.

6 Choose [Bit Invert] from [Bit Action].



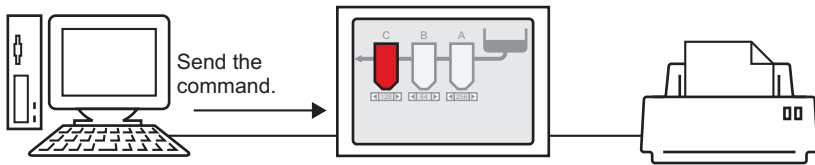
7 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

A switch used to start screen hard copy has been created.

NOTE

- While printing the displayed screen, "0001" (status address) Bit 2 (printing bit) in the GP internal device (#MEMLINK) is ON. After printing, this bit automatically turns OFF. Confirm this bit OFF and then turn OFF the address "0011" Bit 2 (print start bit).

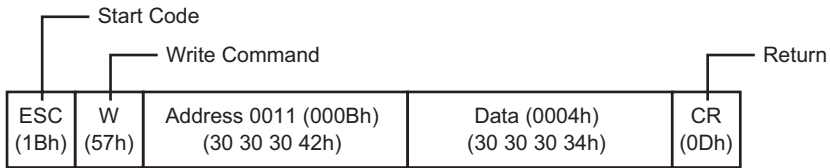
◆ To Trigger Printing the Current Screen from a PC Host



1 Configure connection settings for the printer.

☞ "34.3.2 Printer Setup Procedure" (page 34-11)

2 Send the write command to turn ON the internal device address "0011" Bit 2 (print start bit). For all inputs, use the ASCII code.



NOTE

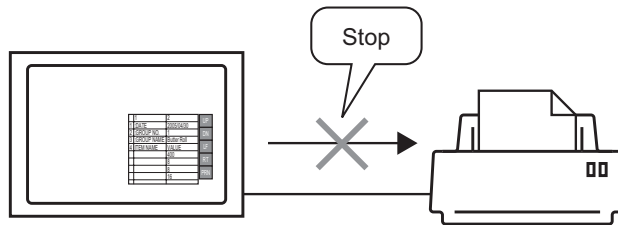
- If you write the above commands, all bits except Bit 2 in the address "0011" will turn OFF. To turn ON only Bit 2 without changing the other bits, read out the address "0011" data with the read-out command and then send the write command to change only Bit 2 of the read-out data.
- If write commands are sent continuously without intervals, GP may not update displays.
- While printing the displayed screen, "0001" (status address) Bit 2 (printing bit) in the GP internal device (#MEMLINK) is ON. After printing, this bit automatically turns OFF. Create the [Script] to turn OFF the address "0011" Bit 2 after making sure this bit has turned OFF.

34.5 Cancel Printing

34.5.1 Introduction

You can cancel data or screen print jobs.

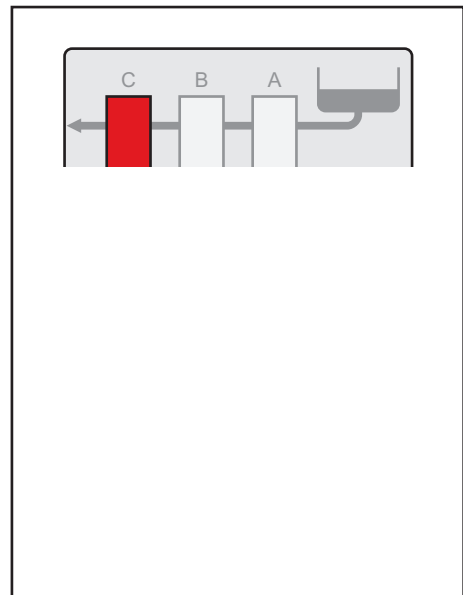
If you cancel, the print processes for all features that have been set will be canceled.



For example, 1) Canceling the (CSV data) printout

DATE	GROUP No.	GROUP NAME	ITEM NAME	VALUE
30.04.05 10:30:00	0	Bread		
				150
				230
				300

For example, 2) Canceling the screen display printout



NOTE

- The method of canceling print differs depending on the communication method (direct access or memory link).

34.5.2 How to Cancel Printing

The following methods are used to cancel printing. The operation method differs depending on the communication method (direct access or memory link).

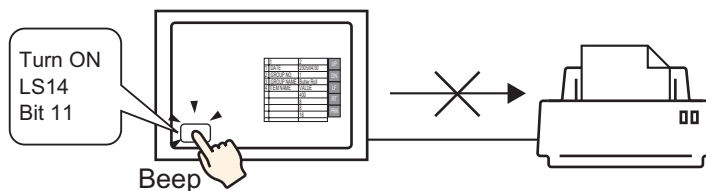
IMPORTANT

- For more details on the communication method, refer to:
 - ☞ “A.1.2 Communicating with a Device/PLC Using the Direct Access Method” (page A-4)
 - ☞ “A.1.3 Using the Memory Link Method with Unsupported Devices/PLCs” (page A-6)

■ Direct Access Method

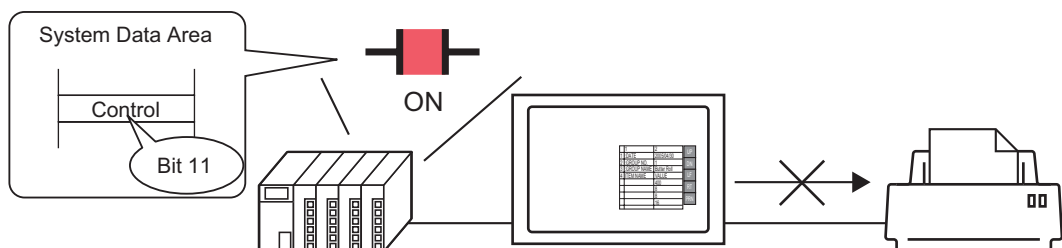
Operating by Screen Touch ☞ “◆ To Cancel Printing by Touch” (page 34-26)

If you turn ON LS14 (control address) Bit 11 (print cancel bit) in the GP internal device using a switch, printing will be canceled.



Operating from a Device/PLC ☞ “◆ To Cancel Printing from a Device/PLC” (page 34-28)

If you turn ON the [Control] address Bit 11 in the system data area allocated to a device/PLC, printing will be canceled.



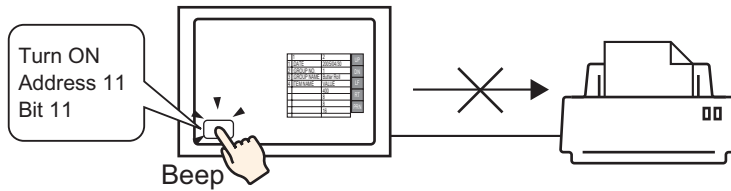
NOTE

- The internal device LS14 or the device/PLC (control address) Bit 11 does not automatically turn OFF. While Bit 11 is ON, none of the print features will operate. Be sure to turn it OFF after canceling the print.

■ Memory Link Method

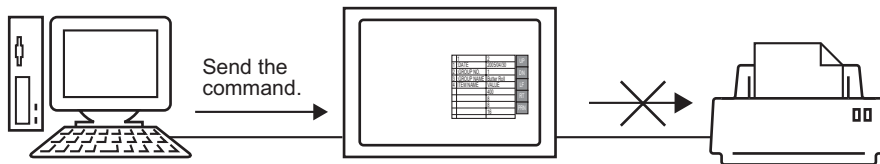
Operating by Touch on the Screen “◆ To Cancel Printing by Touch” (page 34-30)

If you turn ON Address 11 (control address) Bit 11 (print cancel bit) in the GP internal device (#MEMLINK) using a switch, printing will be canceled.



Operating from a Host (PC) “◆ To Cancel Printing from a PC Host” (page 34-32)

If you send the command to write '0800h' to Address 11 (control address) from a host (PC), printing will be canceled.

**NOTE**

- "0011" (control address) bit 11 in the GP internal device (#MEMLINK) does not automatically turn OFF. While Bit 11 is ON, none of the print features will operate. Be sure to turn it OFF after canceling the print.

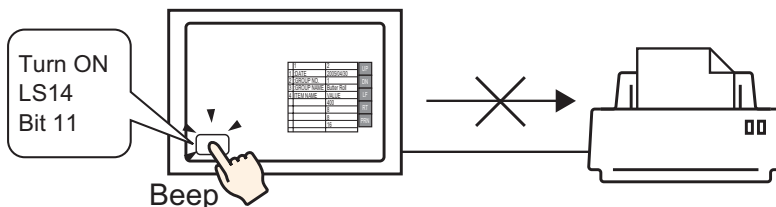
34.5.3 Setup Procedure


■ Direct Access Method

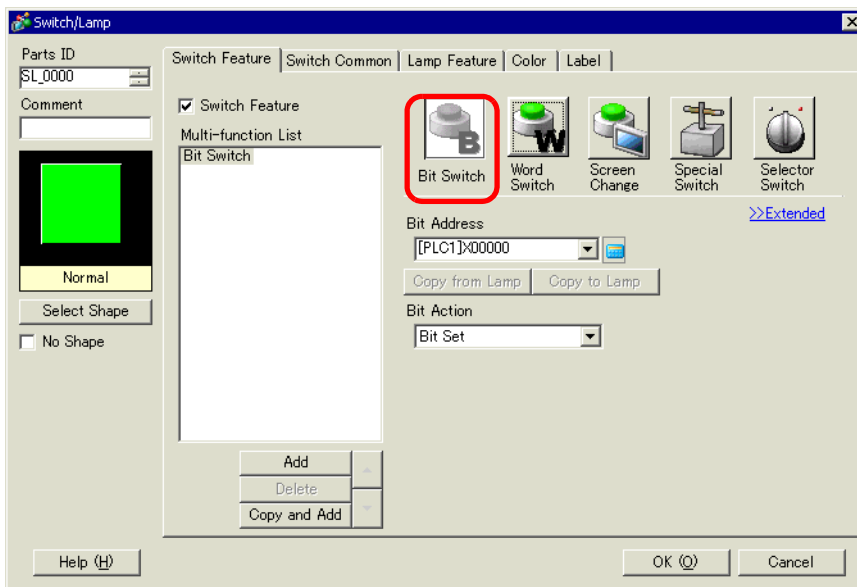
◆ To Cancel Printing by Touch

- NOTE**
- For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".
- ☞ "9.6.1 Editing Parts" (page 9-38)

Create a switch to turn ON the internal device LS14 Bit 11.



- 1 Select the [Parts (P)] menu - [Switch Lamp (C)] option - [Bit Switch (B)] command, or click , and place the Switch Part on the screen.
- 2 Double-click the placed Switch and the settings dialog box appears.

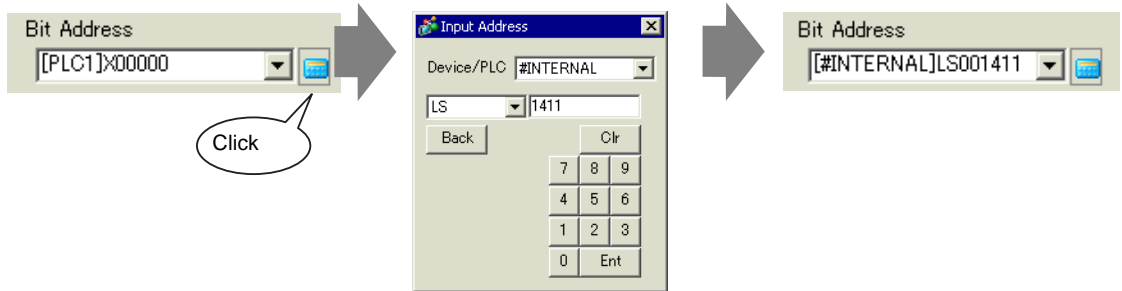


- 3 Select the Switch shape from [Select Shape].

4 Designate the GP internal device LS14 Bit 11 (print cancel bit) in [Bit Address].

Click the icon to display an address input keypad.

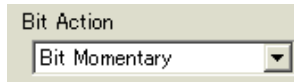
Select #INTERNAL from the Device/PLC, select the "LS" device, input "1411" for the address, and then click "ENTER."



NOTE

- Alternatively, select the variable #H_Control_PrintCancel from the [Bit Address] pull-down menu to create the same operation switch.

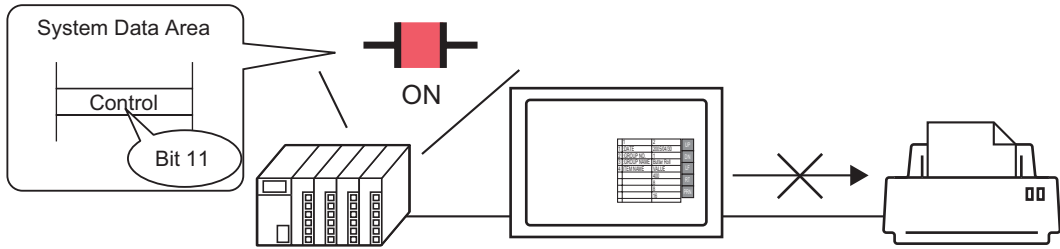
5 Choose [Bit Momentary] from [Bit Action].



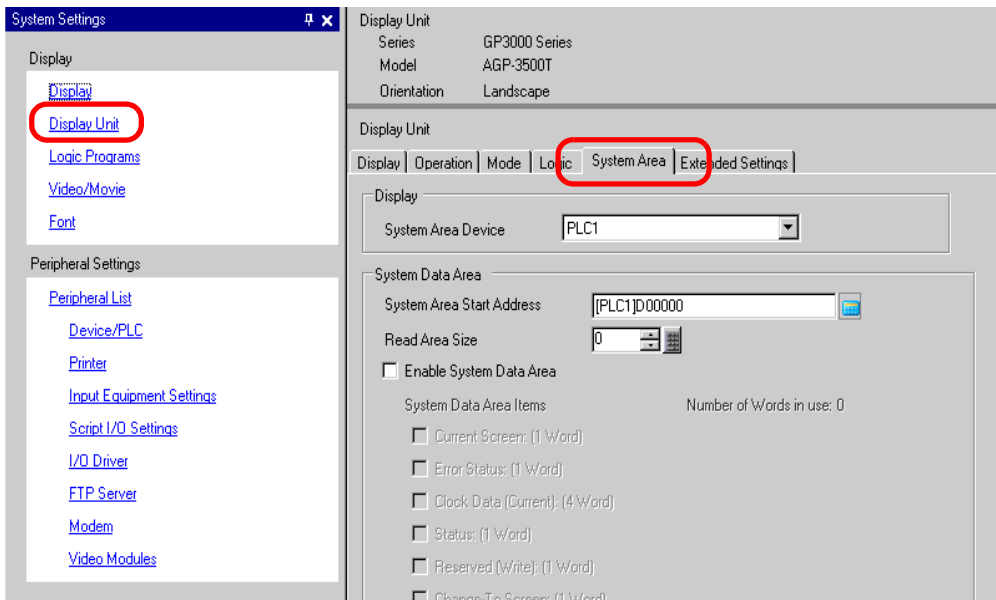
6 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

A momentary switch to cancel the print has been created.

◆ To Cancel Printing from a Device/PLC



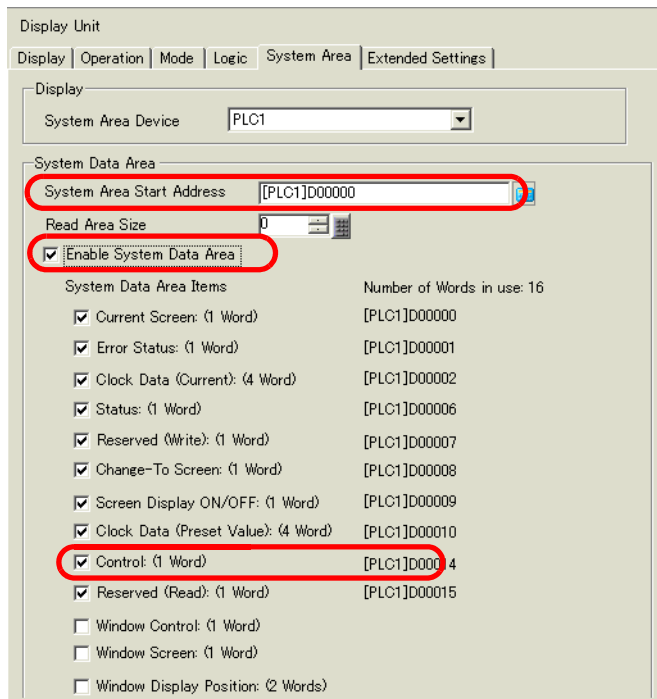
1 Click the System Settings window [Display Unit] to open the [System Area] tab.



NOTE • If the [System Settings] tab is not displayed in the Work Space, select the [View (V)] menu - [Work Space (W)] option - [System Settings (S)] command.

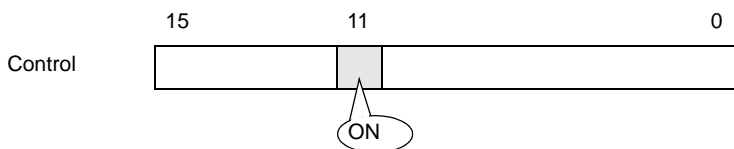
2 Select which device/PLC to allocate the system data area in [System Area Device]. The system data area can only be set to one device/PLC.

3 Designate the start address of the system area in [System Area Start Address] and select the [Enable System Data Area] check box. (For example, D00000)



4 Select the [Control: (1 Word)] check box.

If you turn ON Bit 11 in the address displayed on the right side ('D00014' in the above example), printing will be canceled.



NOTE

- [Control: (1 Word)] address Bit 11 does not automatically turn OFF. While Bit 11 is ON, none of the print features will operate. Be sure to turn it OFF after canceling the print.

■ Memory Link Method

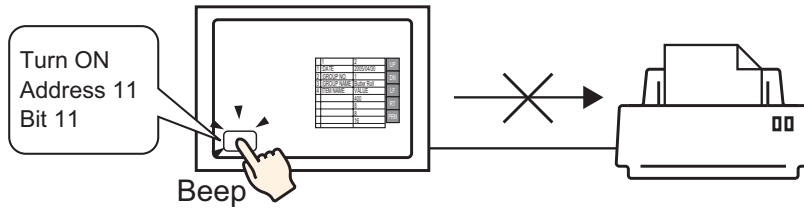
◆ To Cancel Printing by Touch


NOTE

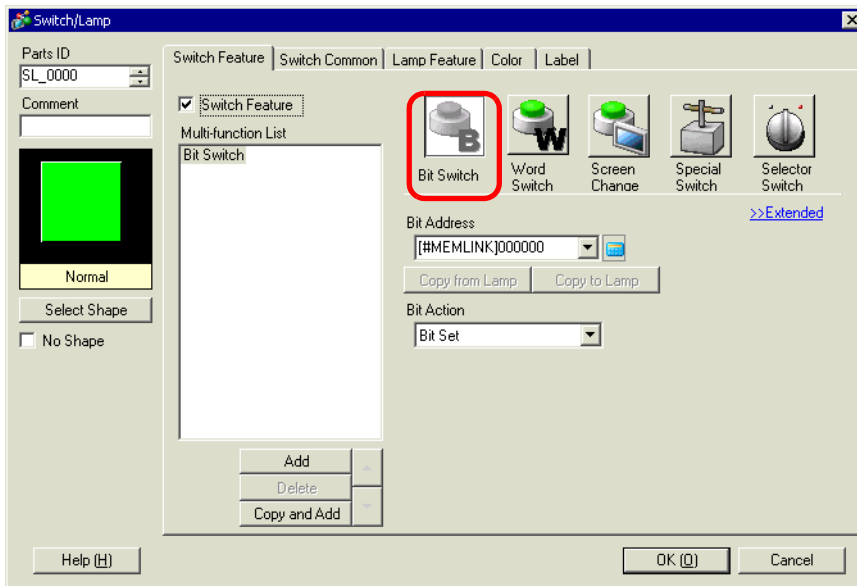
- For details of the part placement method and the address, shape, color, and label setting method, refer to the "Part Editing Procedure".

☞ "9.6.1 Editing Parts" (page 9-38)

Create a switch to turn ON the internal device address '0011' Bit 11.



- 1 Select the [Parts (P)] menu - [Switch Lamp (C)] option - [Bit Switch (B)] command, or click , and place the Switch Part on the screen.
- 2 Double-click the placed Switch and the settings dialog box appears.

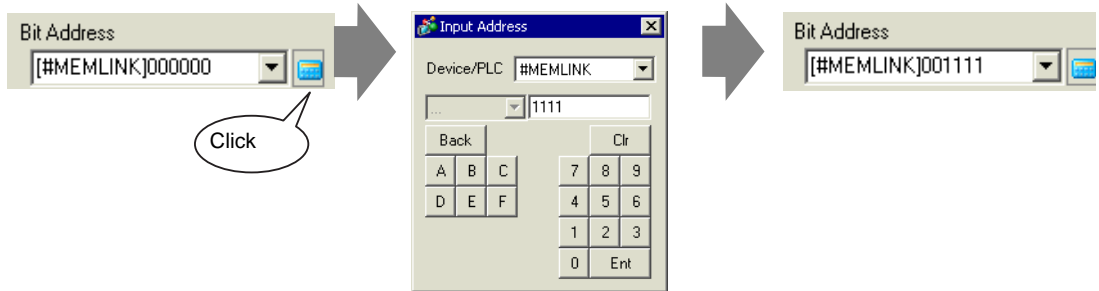


- 3 Select the Switch shape from [Select Shape].

4 Designate the GP internal device '0011' Bit 11 (print cancel bit) in [Bit Address].

Click the icon to display an address input keypad.

Select "#MEMLINK" from Device/PLC, input "1111" as the address, and click the "ENTER" key.



NOTE

- Alternatively, select the variable #H_Control_PrintCancel from the [Bit Address] pull-down menu to create the same operation switch.

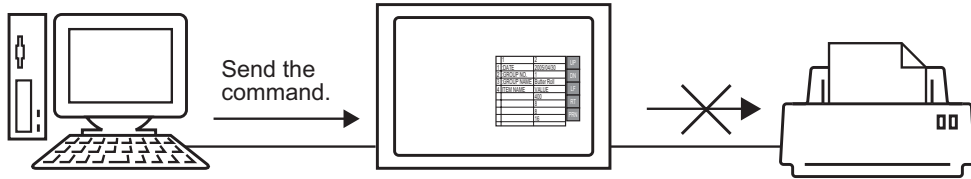
5 Choose [Bit Momentary] from [Bit Action].



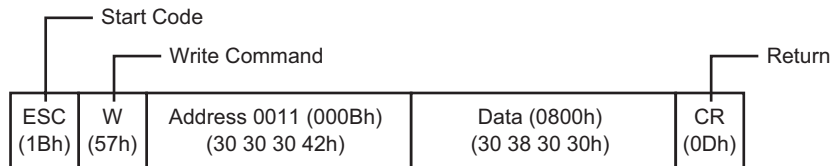
6 As needed, set the Switch color and display text on the [Color] tab and [Label] tab, and click [OK].

A momentary switch to cancel the print has been created.

◆ To Cancel Printing from a PC Host



- 1 Send the write command to turn ON the internal device address "0011" Bit 11 (print cancel bit). For all inputs, use the ASCII code.



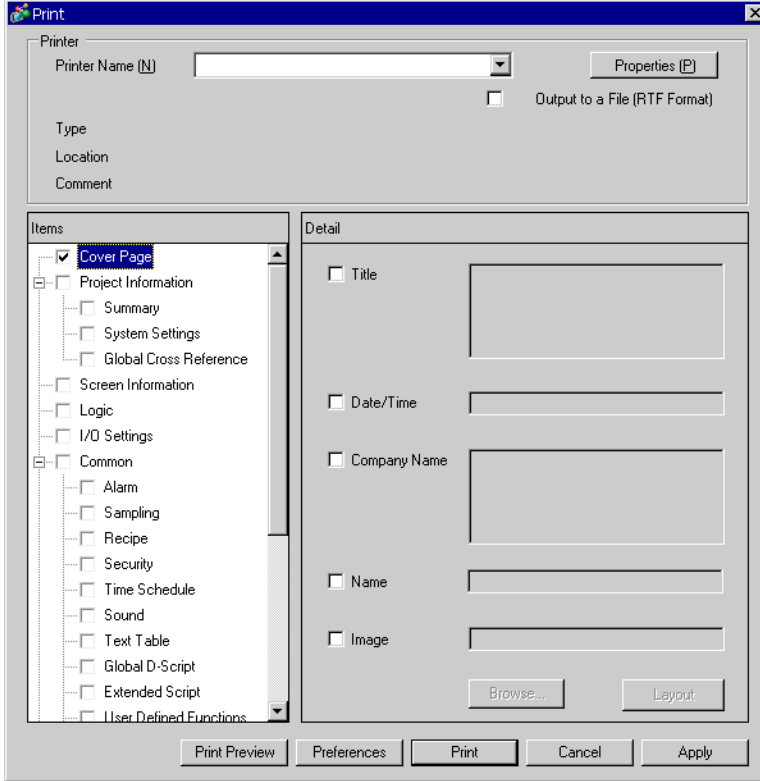
NOTE

- If you write the above commands, all bits except Bit 11 in the address "0011" will turn OFF. To turn ON only Bit 11 without changing the other bits, read out the address "0011" data with the read-out command and then send the write command to change only Bit 11 of the read-out data.
- If write commands are sent continuously without intervals, GP may not update displays.
- The address "0011" Bit 11 does not automatically turn OFF. While Bit 11 is ON, none of the print features will operate. Be sure to turn it OFF after canceling the print.

34.6 Settings Guide

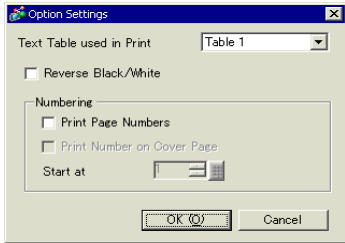
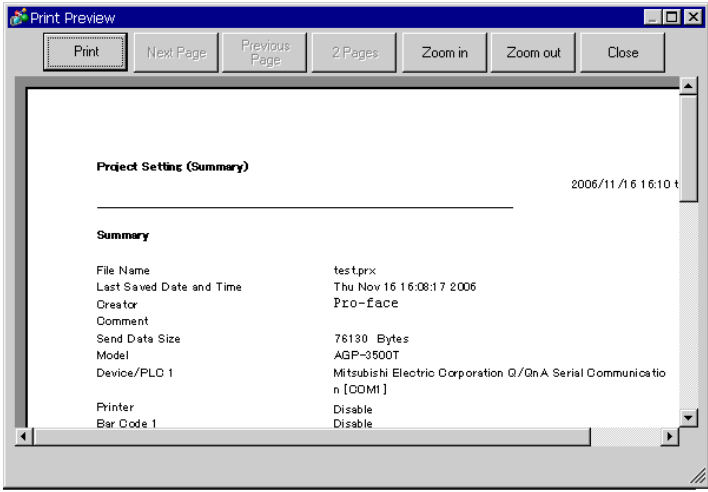
34.6.1 Print Settings Guide

Prints the settings for the currently open project file in GP-Pro EX.

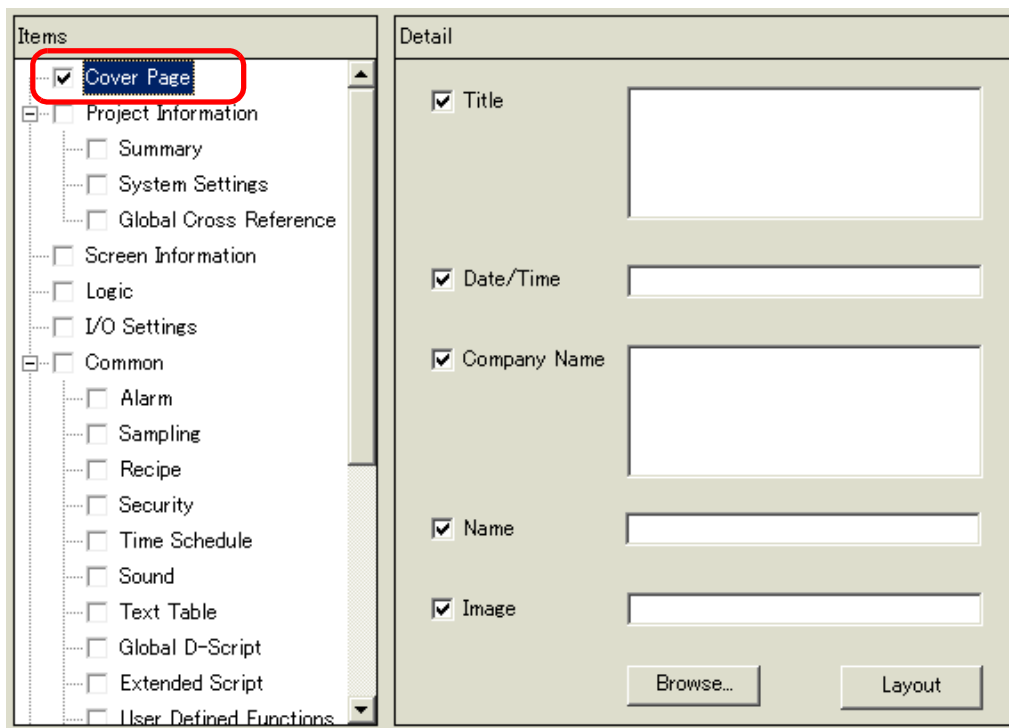


Setting	Description
Printer Name	Select the printer to use.
Properties	The print setting dialog box appears for the printer selected in [Printer Name]. Configure settings for the paper size, direction, layout etc.
Output to a File (RTF format)	Put a check mark here for direct output to a file (*.rtf), not to a printer. The file output is in the same layout as for printing. NOTE <ul style="list-style-type: none"> Reduced bitmap images are outputted.
Item	Select the items to print. Check the boxes for all the items you want to print in [Cover Page], [Project Information], [Screen Info], [Common] and [Comment]. [Project Information] and [Common] have sub menu items for print settings.
Details	Detailed printing of the print contents selected in [Details].
Apply	Saves the settings.
Cancel	Closes the [Print] dialog box.

Continued

Setting	Description
Printing	Starts the print. Starts the file output when [Output to a File (RTF Format)] is designated.
Preferences	<p>The [Preferences] dialog box appears and you can set the page number, margin, black/white reverse display and other settings.</p>  <p>The image shows the 'Option Settings' dialog box. It has a title bar with a close button. Inside, there is a dropdown menu for 'Text Table used in Print' set to 'Table 1'. Below that is a checkbox for 'Reverse Black/White'. A section titled 'Numbering' contains two checkboxes: 'Print Page Numbers' and 'Print Number on Cover Page'. At the bottom left is a 'Start at' field with a spinner control. At the bottom right are 'OK' and 'Cancel' buttons.</p>
Text Table used in Print	Designate the text table used for printing.
Black/White Reverse Display	Check the box to print the screen display colors with black and white reversed.
Print Page Numbers	Check the box to print the page number.
Print Page Number on Cover Page	Check the box to print the page number on the cover page. Otherwise the page number starts with "1" sequentially from the page following the cover page.
Start At	Designate the number for the first page of the printout. The setting range is from 1 to 65,535.
Print Preview	<p>Opens the preview screen.</p>  <p>The image shows the 'Print Preview' window. It has a title bar with standard window controls. Below the title bar is a toolbar with buttons for 'Print', 'Next Page', 'Previous Page', '2 Pages', 'Zoom in', 'Zoom out', and 'Close'. The main area displays a preview of a document titled 'Project Setting (Summary)'. The document content includes a date '2006/11/16 16:10 t', a 'Summary' section, and a list of fields: File Name (test.prx), Last Saved Date and Time (Thu Nov 16 16:08:17 2006), Creator (Pro-face), Comment, Send Data Size (76130 Bytes), Model (AGP-3500T), Device/PLC 1 (Mitsubishi Electric Corporation Q/OnA Serial Communication [COM1]), Printer (Disable), and Bar Code 1 (Disable).</p>
Printing	Returns to the [Print] dialog box.
Next Page	Previews the page following the currently displayed page.
Previous Page	Previews the page preceding the currently displayed page.
2 Page	Previews 2 pages per screen.
Enlarge/Reduce	Enlarges or reduces the display.
Close	Closes the preview screen.

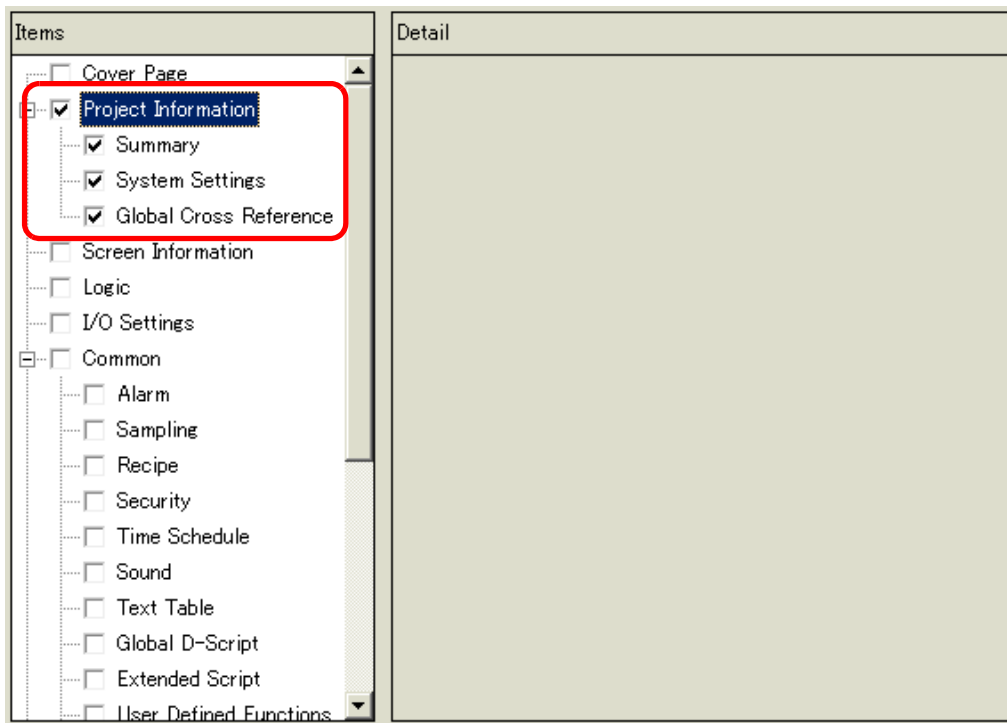
■ Cover Page




Setting	Description
Comment	Check the box to print the Title. Then input the title with up to 60 single-byte or double-byte characters.
Date/Time	Check the box to print the Date/Time. The date and time is displayed in the "yyyy/mm/dd hh:mm" form. You can change the form by inputting up to 40 single-byte or 20 double-byte characters if necessary.
Company Name	Check the box to print the Company Name. Then input the company name with up to 60 single-byte or 30 double-byte characters.
Name	Check the box to print the Name. Then the project file creator's name is displayed. You can change the form by inputting up to 30 single-byte or double-byte characters if necessary.
Image (Main Unit)	Check the box to print an image file on the cover page. The storage location and name of the file selected in [Browse] will be displayed.
Reference	The [Open File] dialog box appears. Select the image file you want to print. You can use two types of files: [Bitmap (*.bmp)] and [JPEG (*.jpg,*.jpeg)].
Layout	The [Cover Page Bit Map Layout] dialog appears. You can change the layout alignment with the mouse.

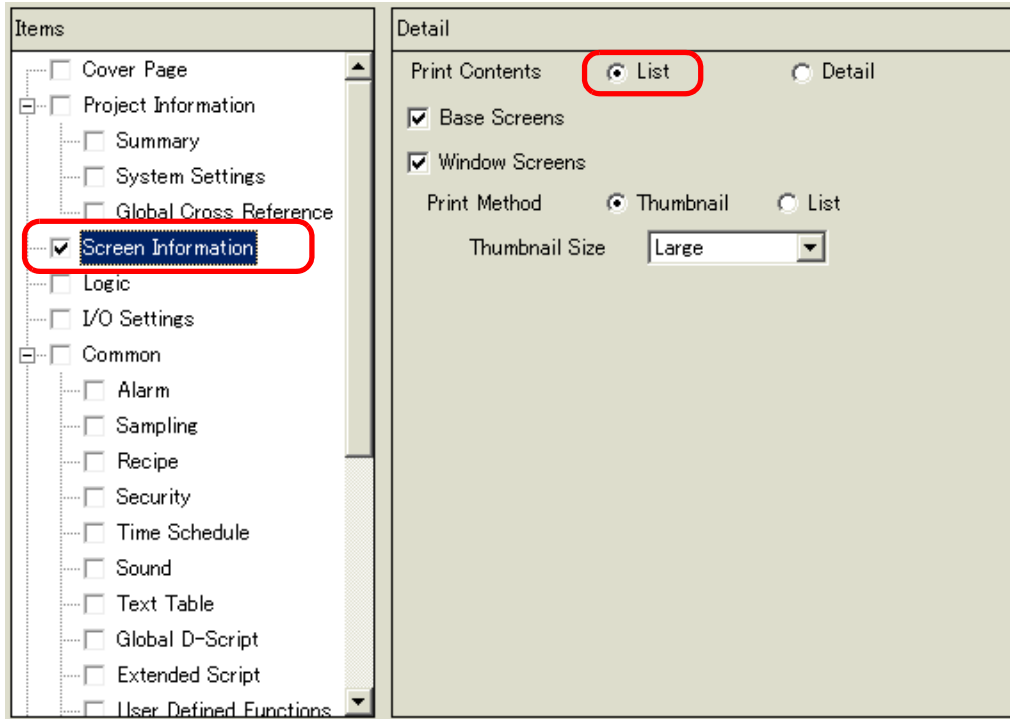
■ Project Information

Put a check mark next to the items you want to print: [Summary], [System Settings], and [Global Cross Reference].



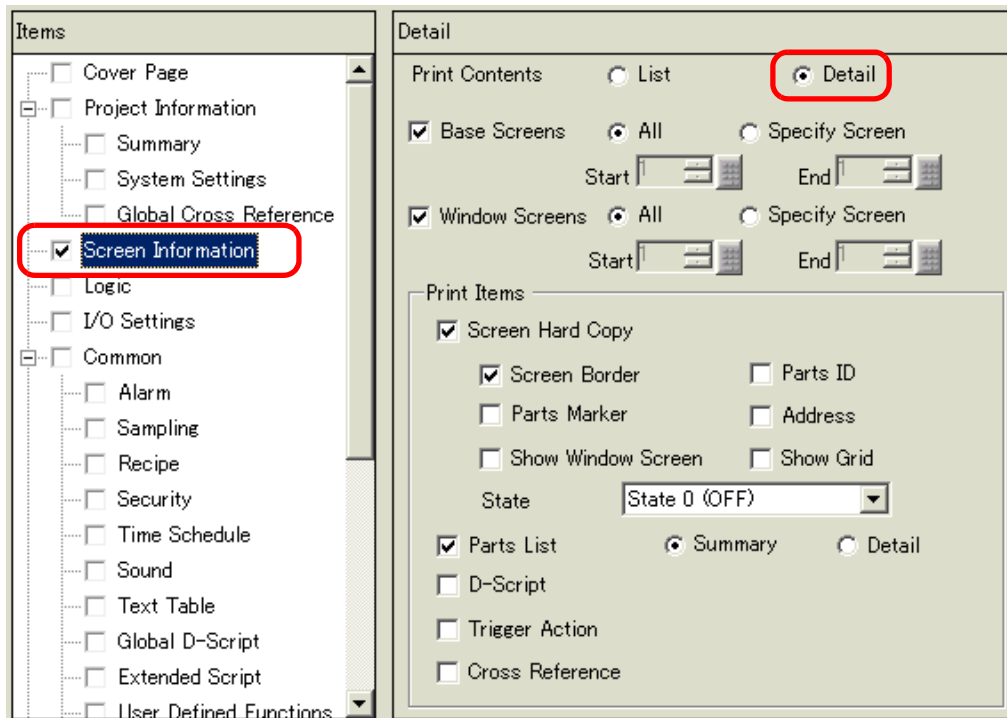
Setting	Description
Summary	Prints the project information, such as a project file name, last saved date and time, main unit model name, device/PLC, etc.
System Settings	Prints the contents of the [Display Unit] and [Font] in the [System Settings] Window.  "5.14.6 [System Settings] Setting Guide" (page 5-109)
Global Cross Reference	Prints the addressing for the whole project. The addressing for all the screens is printed.

■ Screen Information (List)



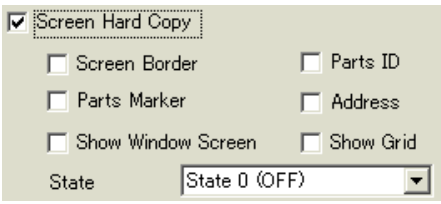
Setting	Description
Print Contents	Select the Print Contents from [List] or [Details].
Base Screens	Check the box to print all the [Base Screen] information set for the project file.
Window Screens	Check the box to print all the [Window Screen] information set for the project file.
Print Method	Select the Print Method. <ul style="list-style-type: none"> Thumbnail Prints multiple screens in reduced images. List Prints the screen information list in text.
Thumbnail Size	For [Thumbnail] in [Print Method], select the size from [Large], [Medium] or [Small]. Large: Prints 6 reduced screen images per A4 sheet. Medium: Prints 12 reduced screen images per A4 sheet. Small: Prints 20 reduced screen images per A4 sheet.

■ Screen Information (Detail)

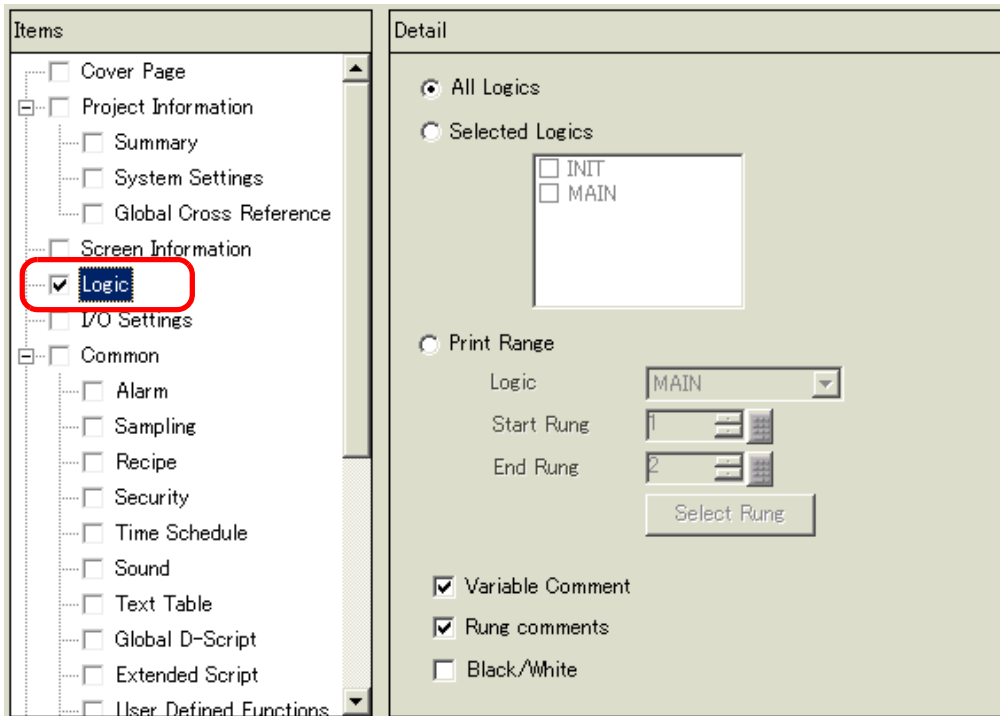


Setting	Description
Print Contents	Select the print contents from [List] or [Details].
Base Screens	Check the box to print the [Base Screen] information in the project file.
All/Specify Ranges	To print base screen information, select [All] or [Specify Ranges]. For [Specify Ranges], specify the print range with screen numbers in [Start] and [End]. The setting range of screen numbers is from 1 to 9,999.
Window Screens	Check the box to print the Window Screen information in the project file.
All/Specify Ranges	To print window screen information, select [All] or [Specify Ranges]. For [Specify Ranges], specify the print range with screen numbers in [Start] and [End]. The setting range of screen numbers is from 1 to 2,000.

Continued

Setting	Description
Print Items	Select the items to print.
Screen Hard Copy	<p>Check the box to print the drawing screen. Then you can check the following boxes.</p> 
Screen Border	Check the box to print the Screen Border.
Part Marker	Check the box to print the Part Marker.
Show Window Screen	Check the box to print the Window Screen.
Part ID	Check the box to print the Part ID.
Address	Check the box to print the setting address.
Show Grid	Check the box to print the Grid.
State	Designate the State of the part to print.
Parts List	Check the box to print the information list of the placed part. Select the Print Contents from [List] or [Details].
D-Script	Check the box to print the settings for D-Script.
Triggered Action	Check the box to print the settings for Triggered Action.
Cross Reference	Check the box to print the addressing for the screen.

■ Logic




Setting	Description
All Logic Screens	Print all logic screens.
Selected Logic Screens	Select the logic screen to print from [INIT] or [MAIN]. If a subroutine program has been created, you can select from [SUB-01]-[SUB-32].
Print Range	Specify the print range. <ul style="list-style-type: none"> • Logic Select the logic screen to print from [INIT] or [MAIN]. If a subroutine program has been created, you can select from [SUB-01]-[SUB-32]. • Start Row Specify the row from which to start printing. • End Row Specify the row at which to end printing. • Select Row In the Logic, select and click a row to specify a row number for the [Start Row] and [End Row].
Variable Comment	Print the comment specified for the variable.
Row Comment	Print the comment specified for the row.
Black/White	Select whether to print background in black and white.

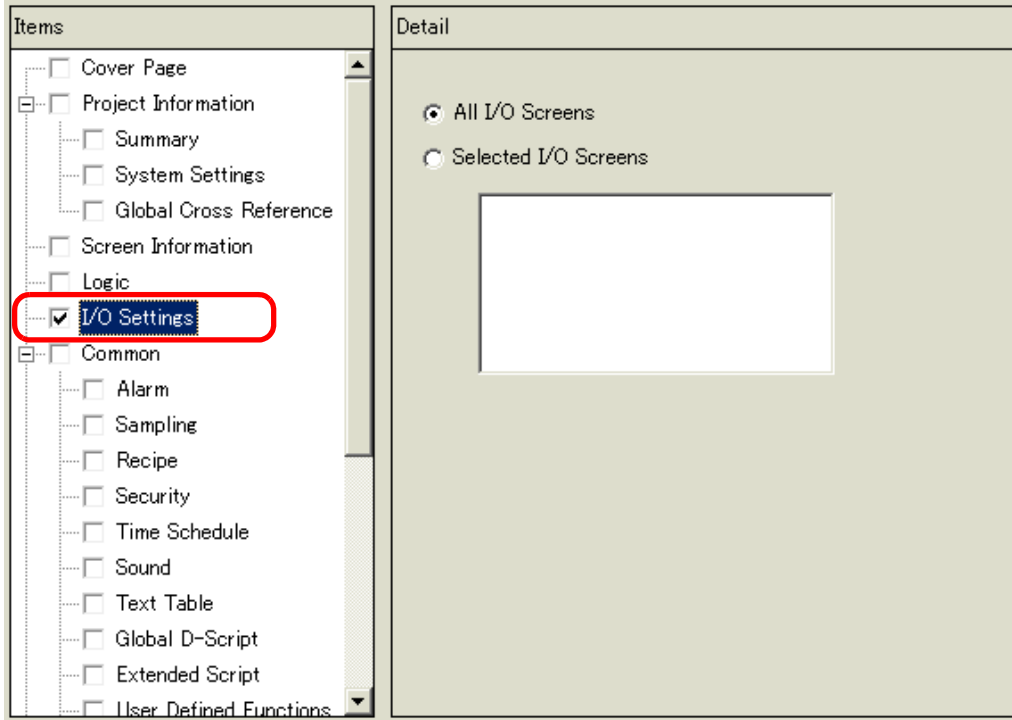
NOTE

- If an instruction on the screen does not fit in the space between the power bars, the size of the rung will be reduced in the printout. Rungs do not wrap in the printout.

■ I/O Settings

NOTE

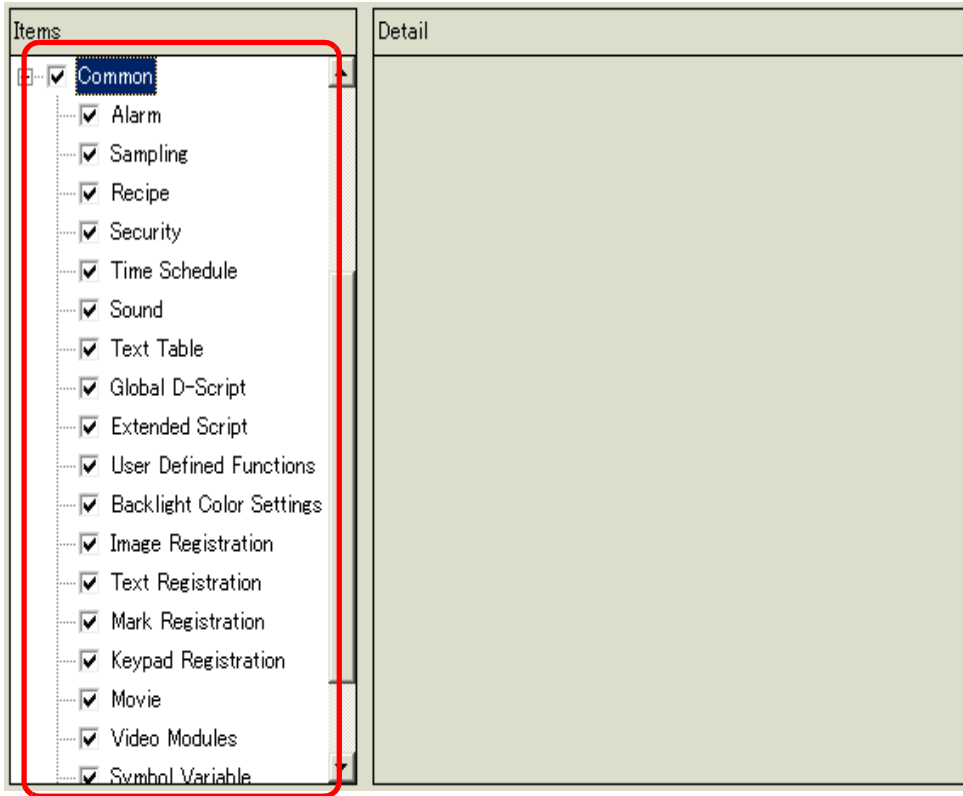
- You can only print the settings on models that support logic functions.
 “1.3 List of Supported Functions by Device” (page 1-5)



Setting	Description
All I/Os	Print all I/Os.
Selected I/Os	Select the I/O screen to print from either [DIO Driver] or [FlexNetwork]. <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-top: 5px;">NOTE</div> <ul style="list-style-type: none"> • You can only print if an I/O Driver is supported.

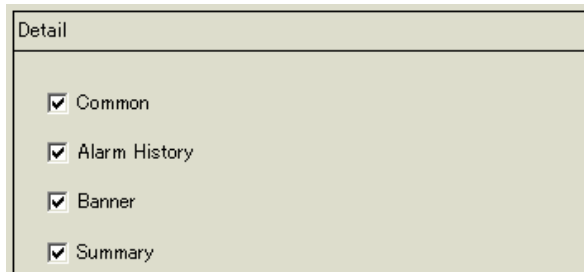
■ **Common**

Select all the items you want to print in the [Common] settings.



◆ **Alarm**

Check the box for all the settings you want to print from [Common], [Alarm History], [Banner], and [Summary].



◆ **Sampling/Recipe**



Setting	Description
Print Contents	Select the print contents from [Summary] or [Details]. For example, For Sampling Summary : Prints a summary list of settings for each group. Detail : Prints the settings for all the items in each group.

◆ Global D-Script/User Defined Function

Detail

Print Contents Summary Detail

Setting	Description
Print Contents	Select the print contents from [List] or [Details]. For example, For Global D-Script List: Prints a list of each [ID], [Comment], [Triggered Condition], and [Debug Function]. Detail: Prints the settings for all the items in each ID.

◆ Image Registration

Detail

Print Method Thumbnail List

Thumbnail Size Large

Print Range All Specify Range

Start End

Setting	Description
Print Method	Select the Print Method. <ul style="list-style-type: none"> • Thumbnail Prints multiple [Image] screens in reduced images. • List Prints a list of each [Image] screen [Number] and [Comment].
Thumbnail Size	For [Thumbnail] in [Print Method], select the size from [Large], [Medium] or [Small]. Large: Prints 6 reduced screen images per A4 sheet. Medium: Prints 12 reduced screen images per A4 sheet. Small: Prints 20 reduced screen images per A4 sheet.
Print Range	For [Thumbnail] in [Print Method], select the Print Range from [All] or [Specify Range]. For [Specify Range], specify the Range with image numbers in [Start] and [End].

◆ Text

Setting	Description
Print Contents	Select the print contents from [List] or [Details]. <ul style="list-style-type: none"> • List Prints a list of each text [Number], [Comment], [Language], [Maximum Chars], [Maximum Rows], etc. • Details Prints the input contents of each text.
Print Range	Select the Print Range from [All] or [Specify Range]. For [Specify Range], specify the Range with text numbers in [Start] and [End].
Table to Print	Select whether to print text with the text table specified in [Preferences] in the [Print] dialog box or with all the text tables.

◆ Mark

Setting	Description
Print Method	Select the Print Method. <ul style="list-style-type: none"> • Thumbnail Prints multiple [Mark] screens in reduced images. • List Prints a list of each [Mark] screen [Number] and [Comment].
Print Range	For [Thumbnail] in [Print Method], select the Print Range from [All] or [Specify Range]. For [Specify Range], specify the Range with mark numbers in [Start] and [End].

◆ Keypad

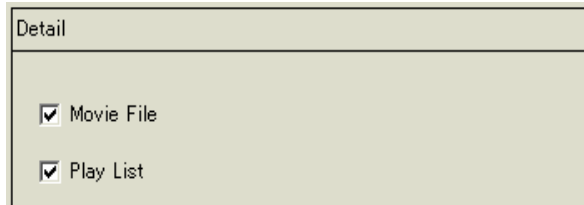
The screenshot shows a 'Detail' dialog box with the following settings:

- Print Contents:** Summary, Detail
- Summary:**
 - Print Method:** Thumbnail, List
 - Thumbnail Size:** Large (dropdown menu)
- Detail:**
 - Screen Hard Copy
 - Parts List
 - All, Specify Range
 - Start:** [Empty field]
 - End:** [Empty field]

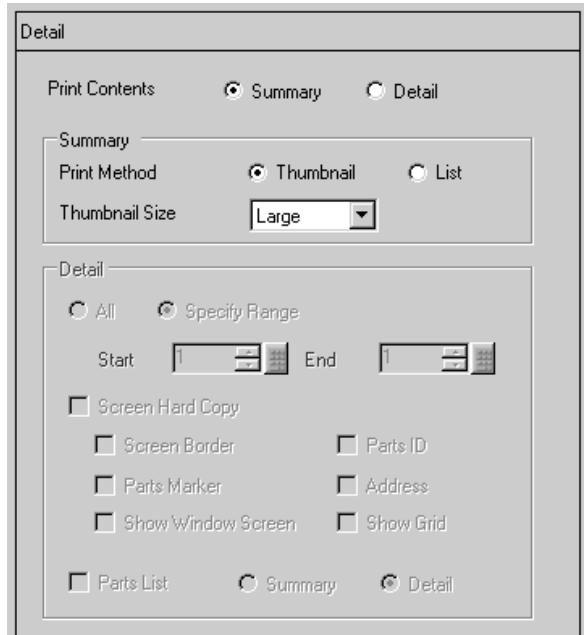
Setting		Description
Print Contents		Select the print contents from [Summary] or [Details].
Summary	Print Method	Select the Print Method. <ul style="list-style-type: none"> • Thumbnail Prints multiple [Keypad] screens in reduced images. • List Prints a list of each [Keypad] screen [Number] and [Comment].
	Thumbnail Size	For [Thumbnail] in [Print Method], select the size from [Large], [Medium] or [Small]. Large: Prints 6 reduced screen images per A4 sheet. Medium: Prints 12 reduced screen images per A4 sheet. Small: Prints 20 reduced screen images per A4 sheet.
Details	Screen Hard Copy	Check the box to print a [Keypad] screen.
	Parts List	Check the box to print a list of parts with keypad settings.
	Print Range	For [Details] in [Print Contents], select the Print Range from [All] or [Specify Range]. For [Specify Range], specify the Range in [Start] and [End]. NOTE <ul style="list-style-type: none"> • This can only be specified when the print range is 'Screen Hard Copy' or 'Parts List' or when both are set.

◆ **Movie**

Select the [Movie File] or [Play List] with the list you want to print.



◆ **Video Module Window**



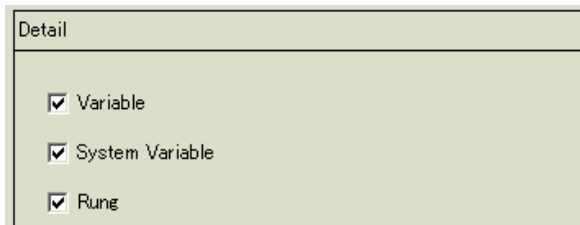
Setting		Description
Print Contents		Select the print contents from [Summary] or [Details].
Summary	Print Method	Select the Print Method. <ul style="list-style-type: none"> • Thumbnail Print the multiple [Video Module] screens in a reduced size image. • List Print a list of the [Numbers] and [Comments] for the [Video Module] screens.
	Thumbnail Size	For [Thumbnail] in [Print Method], select the size from [Large], [Medium] or [Small]. Large: Prints 6 reduced screen images per A4 sheet. Medium: Prints 12 reduced screen images per A4 sheet. Small: Prints 20 reduced screen images per A4 sheet.

Continued

Setting		Description
Detail	All Specifications/ Specification Number	Specify whether to print all the [VM Unit Window] screens or only print the screen Number's specified by [Start] and [End].
	Screen Hard Copy	Display [Screen Border], [Part ID], [Part Marker], [Address], [Show Window Screen], and [Show Grid] and specify whether to print a hardcopy of the screen.
	Parts List	Specify whether to print the list of parts specified in the Video Module Settings in [Summary] or [Details].

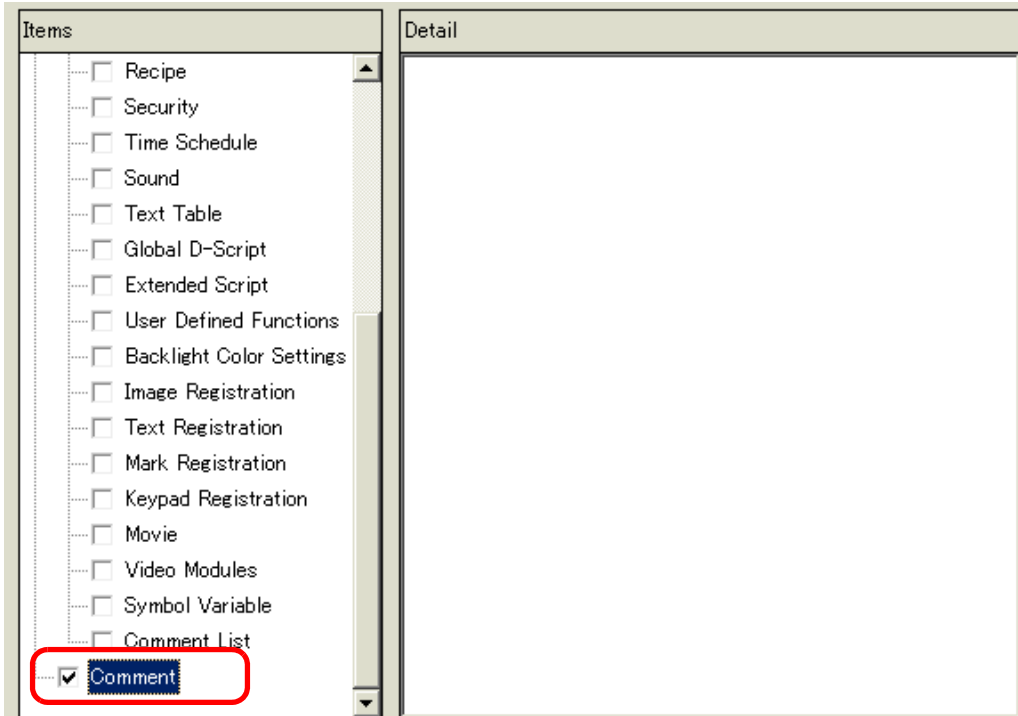
◆ **Comments List**

Specify the [Variable], [System Variable] and [Row] that you wish to print.



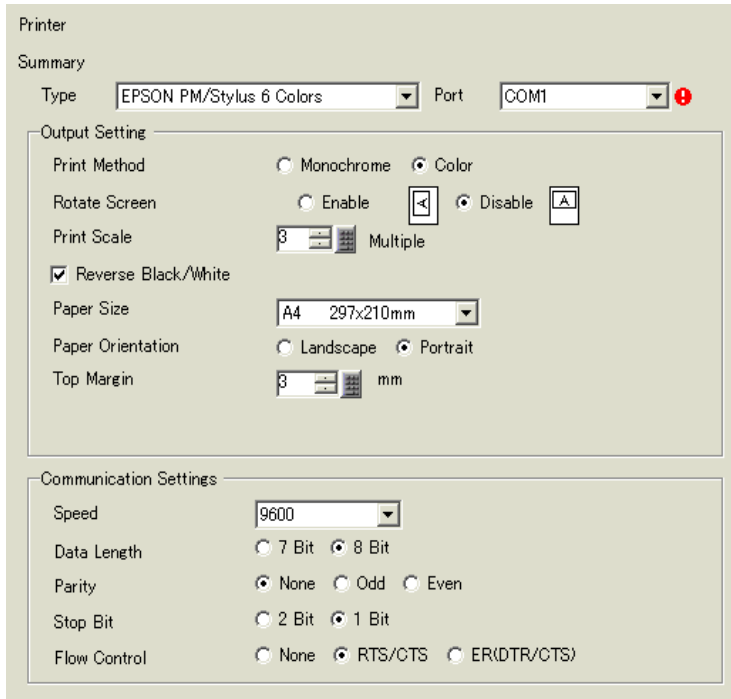
■ **Comment**


Input a comment for the print contents. The comment can be up to 80 single-byte characters (40 double-byte characters) x 40 rows.



34.6.2 System Settings [Printer] Settings Guide

Set up a printer connected to the display.

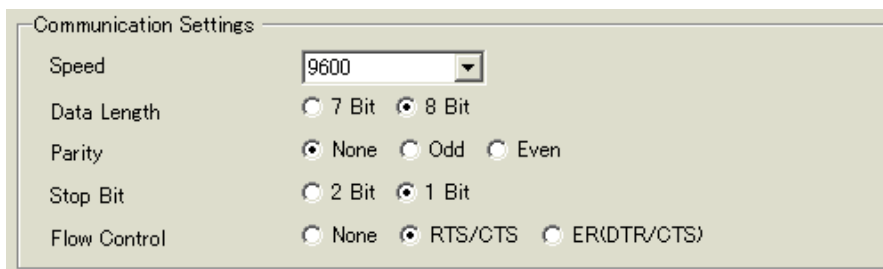


Setting	Description
Type	Select the printer type to connect from [Do Not Use], [NEC PR201], [EPSON ESC/P High Speed], [EPSON ESC/P High Quality], [HP Laser Jet], [EPSON PM/Stylus 6 Colors], NOTE <ul style="list-style-type: none"> [EPSON PM/Stylus 4 Colors] or [Text ASCII]. For [Text ASCII], the text's shape may be different, because the print method is different.
Port	Select the output port of the printer to connect from [COM1], [Ethernet], [USB], or [USB/PIO]. NOTE <ul style="list-style-type: none"> If the port is being used by another device, the  mark is displayed next to the box.
Output Settings	Print Method Select the print method from [Monochrome] or [Color]. NOTE <ul style="list-style-type: none"> For a monochrome display model, the output will be monochrome even if [Color] is selected for the [Print Method]. Normally, these settings are only applied to Screen Hard Copy. When HP Laser Jet printer prints the alarm history, however, this setting is applied. For example, if you select [Color] for HP Laser Jet color printer model, it prints in color. If you select [Color] for a monochrome model, it cannot print properly.

Continued

Setting		Description
Output Settings	Screen Hardcopy Rotation	Select the direction for printing the screen.
	Print Scale	Set the print scale to 1-4 only if the [Type] is [EPSON PM/Stylus 6 Colors] or [EPSON PM/Stylus 4 Colors].
	Reverse Black/White	Select whether or not to print the background in black or white.
	Connection Method	Select the LAN printer connection method from [LPR] or [IPP] only if the [Port] is [Ethernet].
	Paper Size	Select the paper size from [A3], [A4], [B4], [B5], or [Letter] only if the [Type] is [EPSON PM/Stylus 6 Colors] or [EPSON Stylus 4 Colors].
	Paper Orientation	Select the output paper orientation from [Landscape] or [Portrait] only if the [Type] is [EPSON PM/Stylus 6 Colors] or [EPSON Stylus 4 Colors].
	Top Margin	Specify the top margin from 3-20 only if the [Type] is [EPSON PM/Stylus 6 Colors] or [EPSON PM/Stylus 4 Colors]. <div style="border: 1px solid black; padding: 2px; display: inline-block;">NOTE</div> <ul style="list-style-type: none"> When you use PM-G700, PM-G720, or PM-G730, specify the top margin as 3mm for the screen display form these models to print correctly.

Communication Settings (for COM1)



Setting	Description
Speed	Select a communication speed to the printer from [2400], [4800], [9600], [19200], [38400], [57600] or [115200].
Data Length	Choose the communication data length to the printer from [7 Bit] or [8 Bit].
Parity	Select the communication parity bit to the printer from [None], [Odd], or [Even].
Stop Bit	Choose the communication stop bit length to the printer from [2 Bit] or [1 Bit].
Flow Control	Select the communication control method to the printer from [None], [RTS/CTS Control], or [ER (DTR/CTS) Control].

NOTE

- Confirm all settings are compatible with the selected printer.

Communication Settings (for Ethernet)

Communication Settings

IP Address: 0 . 0 . 0 . 0

Port: 1024

Timeout: 90

User Name: noname

Printer Name: noname

Setting	Description
IP Address	Designate the printer server IP address.
Port	Designate the printer server port number from 0 to 65,535.
Timeout	Set the output timeout from 0 to 300 milliseconds.
User Name	Input the name of the user who requests a printing job only if the [Connection Method] is [LPR]. The name specified here will be displayed in the owner field on the queue display. (For example, "Guest")
Printer Name	[Set the shared name of the printer server only if the [Connection Method] is [LPR]. (For example, "EPSONStyC61")
Printer URI	This item is displayed only if the [Connection Method] is [IPP]. Set part of the printer's network name. (For example, "/printers/StyC61/.printer")

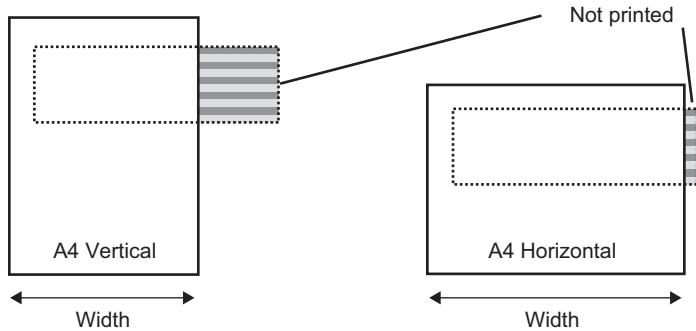
NOTE

- When printing with LAN connection, there may be a short delay before the print starts.

34.7 Restrictions

34.7.1 Restrictions for Printing from the GP

- Only one printer can be connected to the GP.
- The print is canceled if you switch to the offline screen or transfer screens during printing.
- Parts exceeding the paper width will not be printed or automatically line-fed.



- For Screen Hard Copy on a display with a screen size larger than SVGA, see below as to whether the data fits the paper. (VGA and QVGA fit both A4 and A3 papers.)

NEC PR201, EPSON ESC/P (High Speed), EPSON ESC/P (High Quality), HP LaserJet

Screen Size	Screen Hardcopy Rotation	Paper Size	
		A4	A3
SVGA	Enable	Enable	Enable
	None	Disable	Enable
XGA	Enable	Disable	Enable
	None	Disable	Disable

Enable: Fits the paper, Disable: Does not fit the paper

EPSON PM/Stylus 6 Colors, EPSON PM/4 Colors

Screen Size	Screen Hardcopy Rotation	Paper Size							
		A4				A3			
		Magnification ratio				Magnification ratio			
		x 1	x 2	x 3	x 4	x 1	x 2	x 3	x 4
SVGA	Enable	Enable	Enable	Enable	Enable	Enable	Enable	Enable	Enable
	None	Enable	Enable	Enable	Disable	Enable	Enable	Enable	Enable
XGA	Enable	Enable	Enable	Enable	Disable	Enable	Enable	Enable	Enable
	None	Enable	Enable	Disable	Disable	Enable	Enable	Enable	Disable

Enable: Fits the paper, Disable: Does not fit the paper

- Because the printer is processing a large amount of data, especially in printing with PM/Stylus (6 Colors) or Stylus (4 colors), GP screen updates (parts and screen switching processing) will become slower.
- When printing the displayed screen in monochrome tone, the print results differ between PM/Stylus (6 Colors) or Stylus (4 Colors) and with other printers (such as NEC PC-PR201). This is because the color data is identified not by its density but as levels of shading.
- If the printer type is [Text ASCII], the text shape may be different, because the print method is different.
- If you cancel, all the print processing features that have been set will be canceled.
- When the communication method is direct access, use the system data area (the area that links to the system data area in the GP internal device) to control printing the displayed screen or print canceling from a device/PLC. If multiple devices/PLCs are connected, the system data area can be set to only one device/PLC.
- When the communication method is memory link, if write commands are sent continuously without intervals, GP may not update displays.
- When printing with LAN connection, there may be a short delay before the print starts.
- If you print from the GP when the printer is not connected to the GP with a cable or when the printer is OFF, the GP temporarily saves the print data. When the connection with the printer recovers or when the printer turns ON, the GP outputs the temporarily saved print data to the printer.
- LAN connection (network printer) does not support Alarm (Banner) Print, Alarm (History) Real-time Print, Alarm (History) Batch Print, Sampled Data Real-time Print, Sampled Data Batch, CSV Data Print, or Script Printer Output.
- For a monochrome GP model, the print will be monochrome even if [Color] is selected for the [Print Method] in the [System Settings]'s [Printer].
- Regardless of whether [Printer] - [Print Method] is set with monochrome or color settings, an Alarm History is printed out in color. However, if you have selected the printer [Type] as HP Laser Jet, an Alarm History will print out in monochrome if you select [Monochrome] for the [Print Method].