

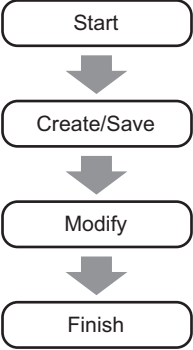
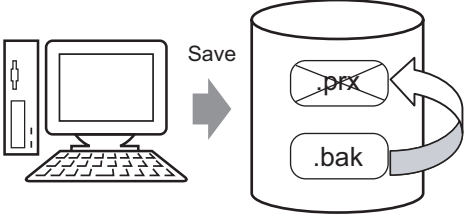
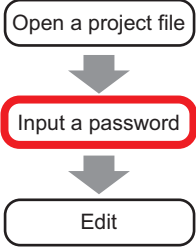
6 | From Start to Finish

This chapter explains about “From Start to Finish” in GP-Pro EX, and the basic operations used to manage project files and change addresses.

Please start by reading “6.1 Settings Menu” (page 6-2) , and then turn to the corresponding page.

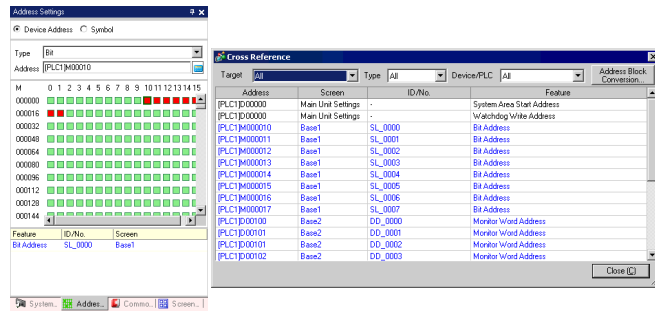
6.1	Settings Menu	6-2
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6.1 Settings Menu

Starting/Creating/Saving/Finishing	
 <pre> graph TD Start([Start]) --> CreateSave([Create/Save]) CreateSave --> Modify([Modify]) Modify --> Finish([Finish]) </pre>	<ul style="list-style-type: none"> ☞ Setup Procedure (page 6-7) ☞ Details (page 6-6)
Backing Up a Project File	
 <p>Can be used with its original extension.</p> <p>If a prx file was destroyed, you can use a bak file.</p>	<ul style="list-style-type: none"> ☞ Setup Procedure (page 6-18) ☞ Details (page 6-17)
Entering a Password in a Project File	
 <pre> graph TD Open([Open a project file]) --> Input([Input a password]) Input --> Edit([Edit]) </pre> <p>Ensures that you cannot edit a project file unless you enter a password.</p>	<ul style="list-style-type: none"> ☞ Setup Procedure (page 6-22) ☞ Details (page 6-21)

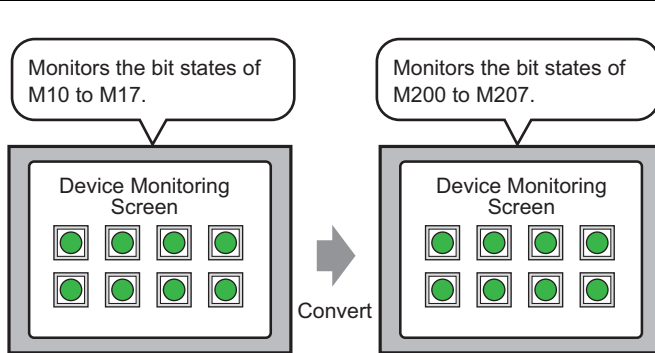
Confirming the List of Addresses being Used in a Project File

You can list the addresses set in a project file in the two following ways.



- ➔ Setup Procedure (page 6-26)
- ➔ Details (page 6-25)

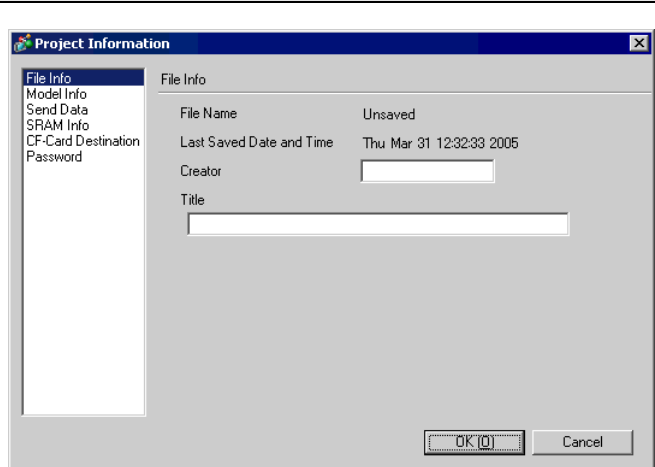
Converting the Addresses in a Project File in Block



You can convert addresses by specifying the start/end addresses before conversion and the start address after conversion.

- ➔ Setup Procedure (page 6-34)
- ➔ Details (page 6-33)

Seeing the Project Information



You can check all information about File, Model, Send Data, and SRAM.

- ➔ Setup Procedure (page 6-37)
- ➔ Details (page 6-36)

Copying a Screen from another Project

Copy from another Project

A.prx Base Screen 10

B.prx Base Screen 20

B10 Setting Input Screen

B20 Setting Input Screen

- ☞ Setup Procedure (page 6-41)
- ☞ Details (page 6-40)

Symbolizing an Address

Name each address.

Address	Symbol Name
D100	Line A Production
D101	Line B Production
D102	Line C Production
D103	Line D Production

➔

You can set addresses with a symbol name.

Monitor Word Address

[PLC1]D0000

Line A Production

Line B Production

Line C Production

Line D Production

Data Type 16 bit Dec

☺

You can name an address freely by registering it as a symbol.

- ☞ Setup Procedure (page 6-45)
- ☞ Details (page 6-44)

Putting a Header/Footer on the Screen

Create a footer.

Setting Input Screen Active Operations Screen Active Monitoring Screen Alarm Screen

↓

B1

Setting Input Screen

Setting Input Screen Active Operations Screen Active Monitoring Screen Alarm Screen

B2

Active Operations Screen

Setting Input Screen Active Operations Screen Active Monitoring Screen Alarm Screen

B3

Active Monitoring Screen

Setting Input Screen Active Operations Screen Active Monitoring Screen Alarm Screen

Even if the screen changes, you can display the same footer.

- ☞ Setup Procedure (page 6-52)
- ☞ Details (page 6-51)

Changing the Screen No./Title/Screen Color

0001 Menu Screen

Change

0100 Main Screen

☞ Setup Procedure (page 6-58)

☞ Details (page 6-57)

You can change the set screen number, screen title and screen color.

Copying/Deleting a Screen

Copy

Screen No.10

Screen No.20

Delete

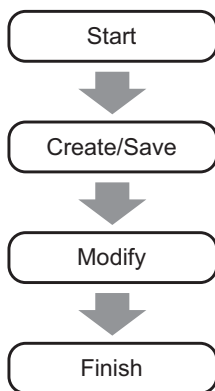
☞ Setup Procedure (page 6-61)

☞ Details (page 6-60)

6.2 Starting/Creating/Saving/Finishing

6.2.1 Details

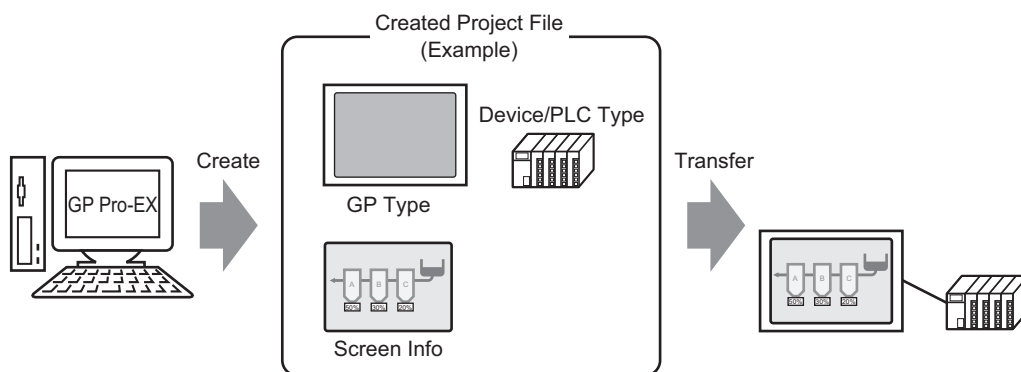
This section explains about the procedure to create/save/edit a project file, after starting GP-Pro EX.



Project Files

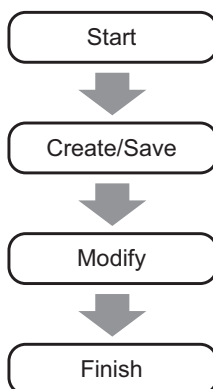
A file created by GP-Pro EX is called a “Project File”.

A project file (*.prx) is a selection of data concerning the created screens, etc. If you transfer a created project file to the GP, you can communicate with a device/PLC and display/operate the project file.




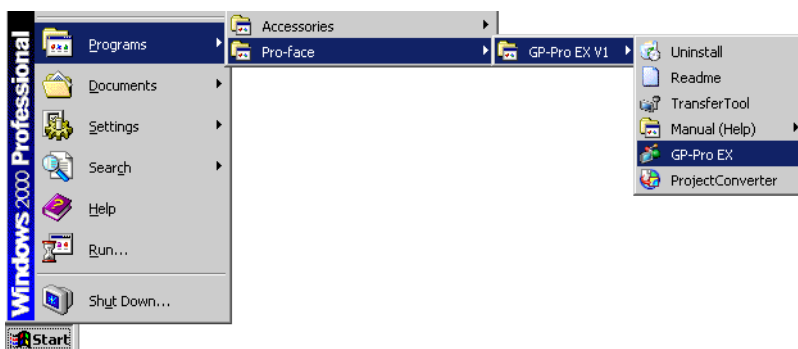
6.2.2 Setup Procedure

- NOTE**
- Please refer to the settings guide for details.
 - ☞ “6.13.2 [New] Settings Guide” (page 6-66)
 - ☞ “6.13.6 [System Settings Window] Setting Guide” (page 6-89)

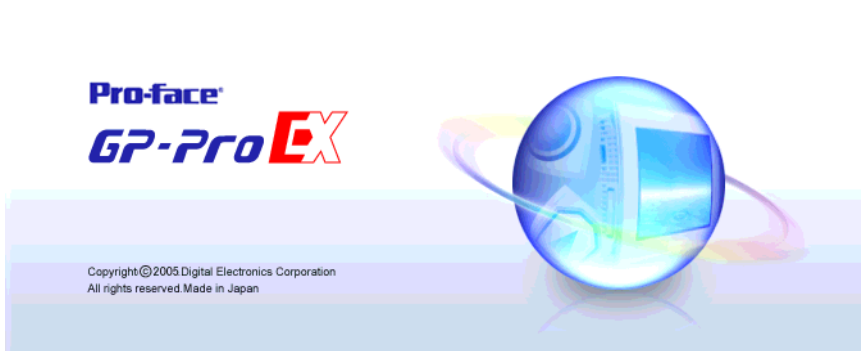


■ Starting

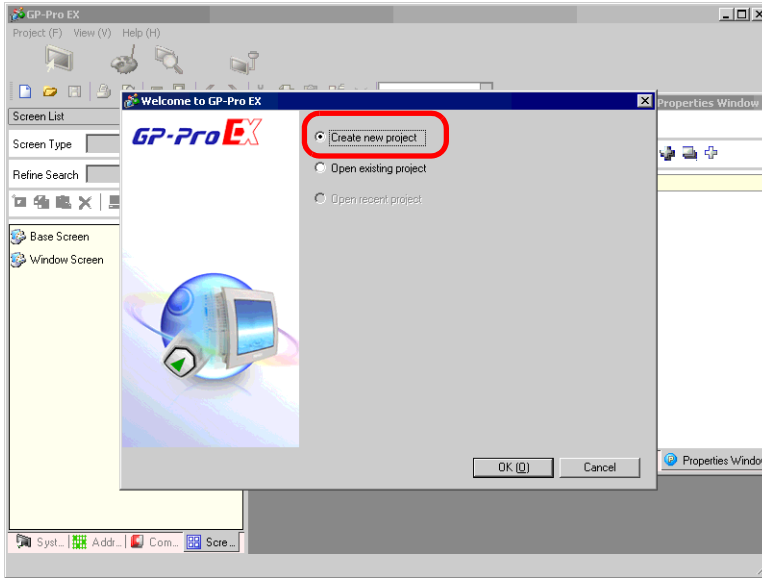
- 1 Double-click the shortcut  on the Desktop screen or click the [Start] menu, select [Programs] - [Pro-face] - [GP-Pro EX V1], and click [GP-Pro EX].




- 2 GP-Pro EX starts up and the following screen is displayed.



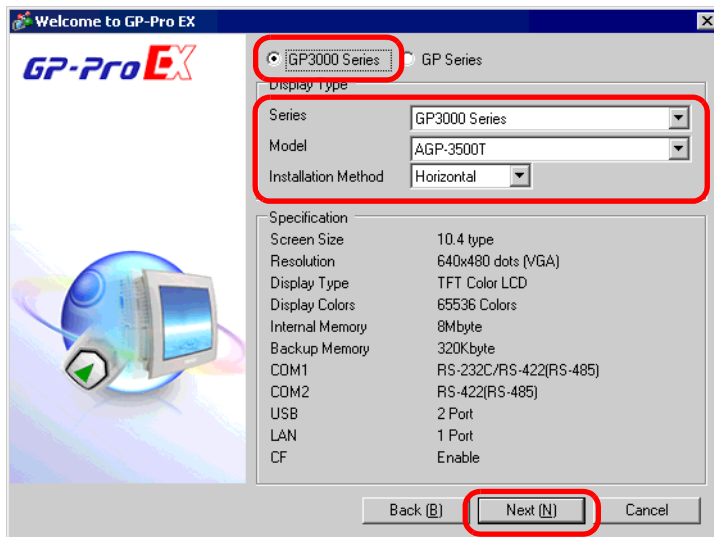
3 The main window and the [Welcome to GP-Pro EX] dialog box appear. Select [Create new project] and click [OK].



NOTE • Select the main window's [Project (F)] menu - [New (N)] command, or click the , to create a new project. The [New Project File] dialog box is displayed.

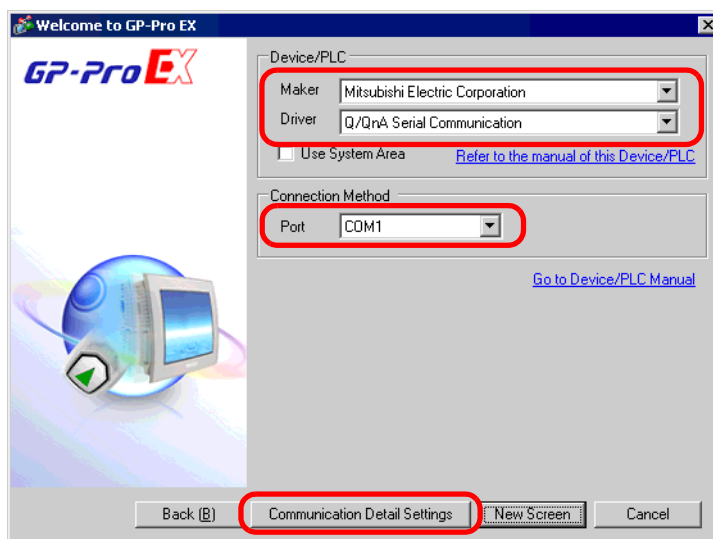
4 The following screen is displayed. Select [GP3000 Series], select [Series], [Model], and [Installation Method], and click [Next].

 "3.3 Supported Model List" (page 3-6)



NOTE • [Specifications] displays detailed specifications of the selected GP model.
 • If you select [GP Series], you can exit GP-Pro EX and start up GP-PRO/PB III for Windows. However, GP-PRO/PB III for Windows will not start up if it is not installed.

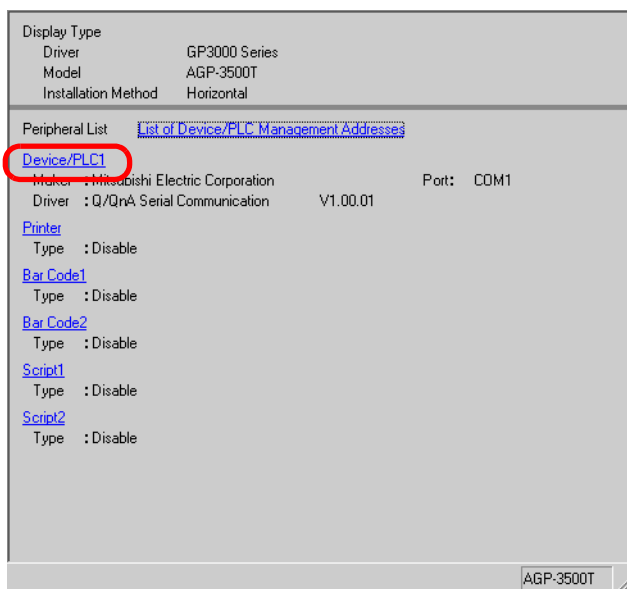
- 5 The following screen will appear. Select the device/PLC's [Maker], [Driver], and [Port] and click [Communication Detail Settings].

**NOTE**

- To create a screen without configuring detail settings for the device/PLC's driver, click [New Screen]. The drawing screen [Base 1] is displayed.
- If you set [Use System Area], you can assign the GP internal system data area to the device/PLC.

☞ “6.13.6 [System Settings Window] Setting Guide ◆ System Area Settings” (page 6-110)

- 6 Close the [Welcome to GP-Pro EX] dialog box, and the [Peripheral List] appears in the main window. Click [Device/PLC1].



7 When [Device/PLC Settings] is displayed, set the communication settings.

Device/PLC Settings [Add Device/PLC](#) [Delete Device/PLC](#)

Device/PLC 1

Summary [Change Device/PLC](#)

Maker Driver Port

Text Data Mode [Change](#)

Communication Settings

SID Type RS232C RS422/485(2wire) RS422/485(4wire)

Speed

Data Length 7 8

Parity NONE EVEN ODD

Stop Bit 1 2

Flow Control NONE ER(DTR/CTS) XON/XOFF

Timeout (sec)

Retry

Wait To Send (ms)

RI / VCC RI VCC

In the case of RS232C, you can select the 9th pin to RI (Input) or VCC (5V Power Supply). If you use the Digital's RS232C Isolation Unit, please select it to VCC.

Device-Specific Settings

Allowable No. of Device/PLCs: 16 Unit(s)

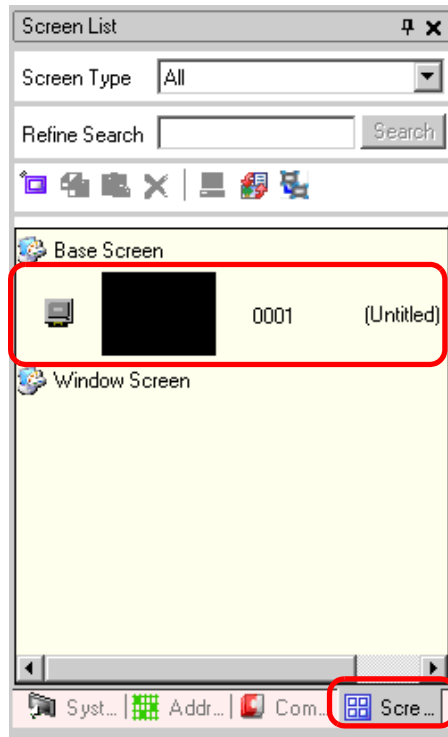
No.	Device Name	Settings
1	PLC1	Station No.=0,Network No.=0,PC No.=255,Request destination module I/O N

NOTE

- The [Communication Settings] description differs depending on each device/PLC series. Please refer to the “GP-Pro EX Device/PLC Connection Manual”. However, [Timeout], [Retry], and [Wait to Send] are recommended to be used with their initial settings.

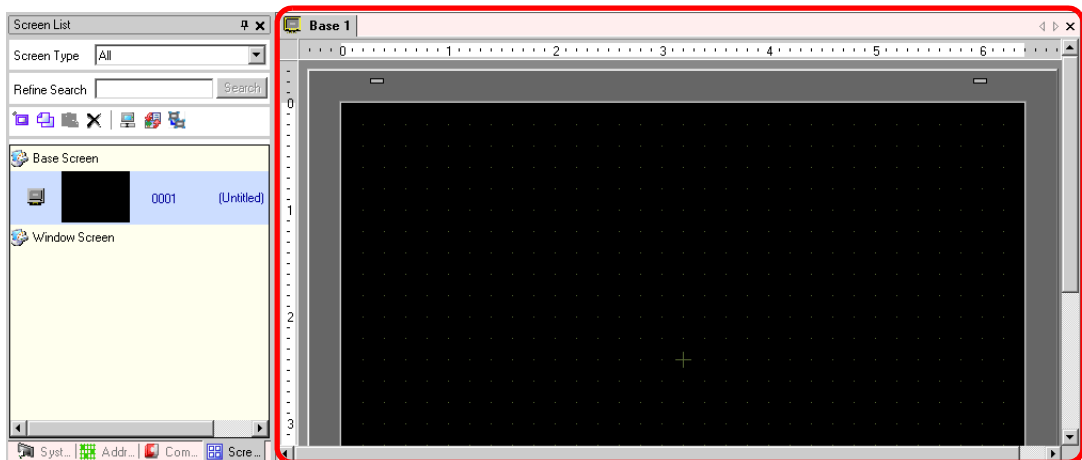
■ Creating/Saving

8 Open the Screen List Window, and double-click the displayed base screen.

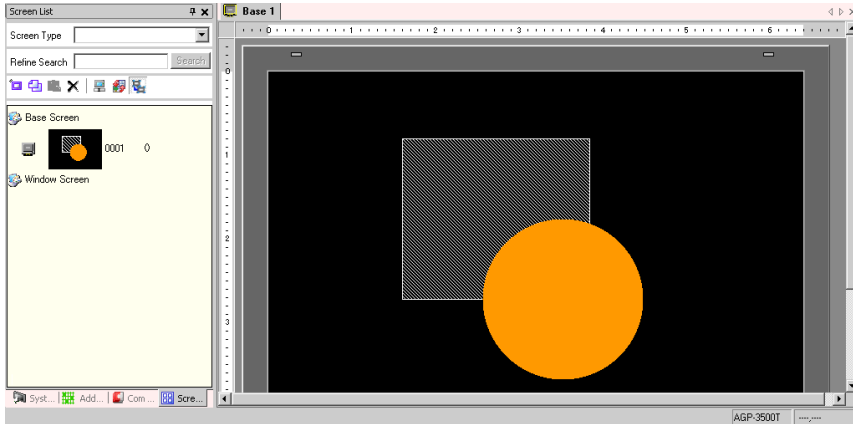


NOTE • If the [Screen List] tab is not displayed in the Work Space, select the [View (V)] menu - [Work Space (W)] option - [Screen List Window (G)] command.


9 The following [Base Screen] is displayed.

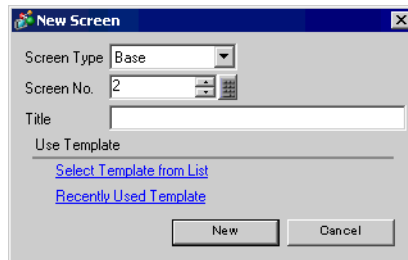


10 Create a screen.

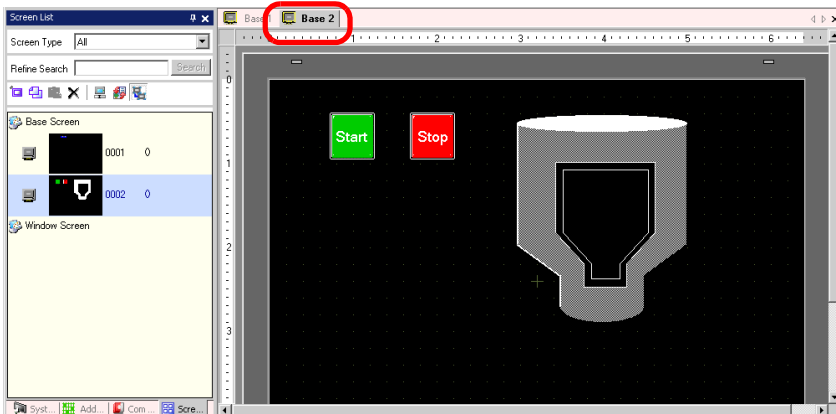



11 Add a new screen.

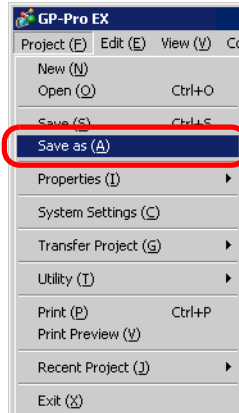
Select the [Screen (S)] menu - [New Screen (N)] command or click , and the following dialog box appears. Select a [Screen Type], set the [Screen No.] and [Title], and click [New].



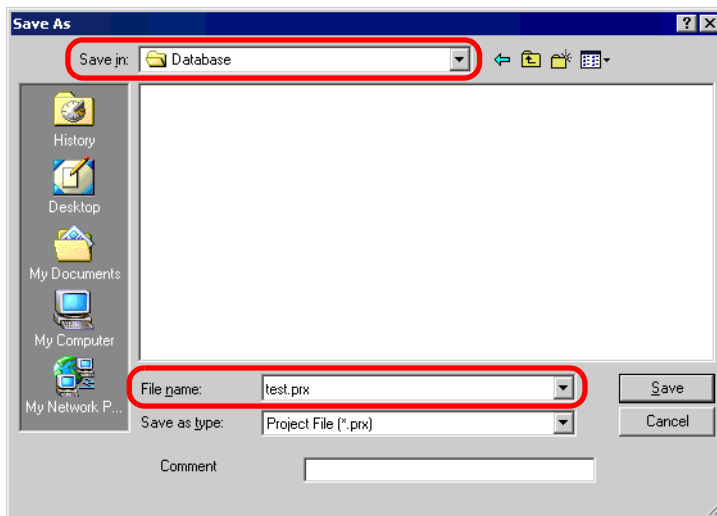
12 The [Base 2] screen is displayed. Create a screen.



13 Select the [Project (F)] menu - [Save as (A)] command or click the  icon.

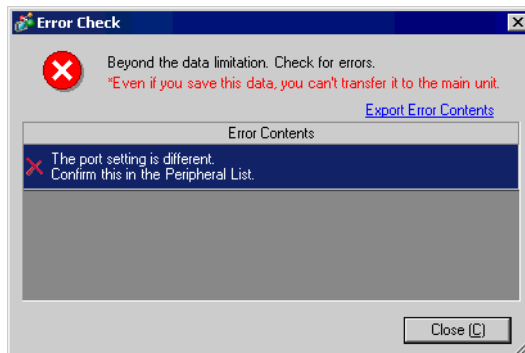


14 The [Save As] dialog box is displayed. Set the the file's storage location and file name and click [Save].



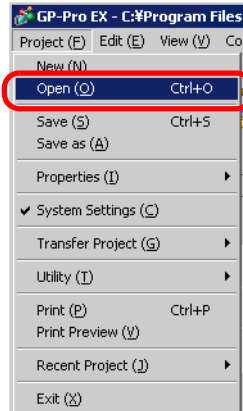
NOTE

- Input a file name with up to 255 single-byte characters including the path and extension.
The initial storage location is \Program Files\Pro-face\GP-Pro EX\Database.
- When there is a problem in saving a file, the following [Error Check] dialog box is displayed. Check the [Error Contents] and close it. Try to draw it correctly and then save the file again.

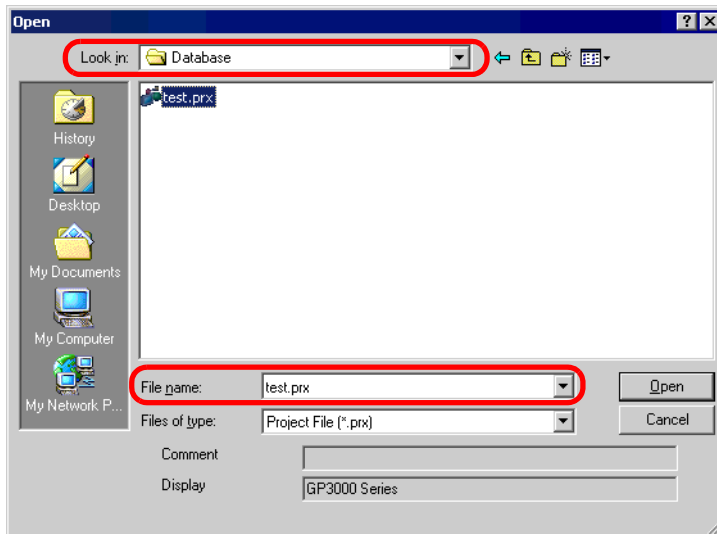


■ Modifying

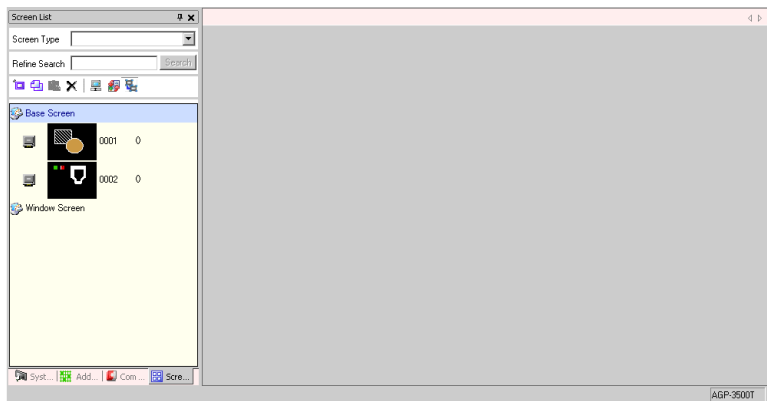
15 Select the [Project (F)] menu - [Open (O)] command or click the  icon.



16 When the [Open] dialog box appears, designate the location where the file is saved, select a project file (*.prx) you want to open, and click [Open].



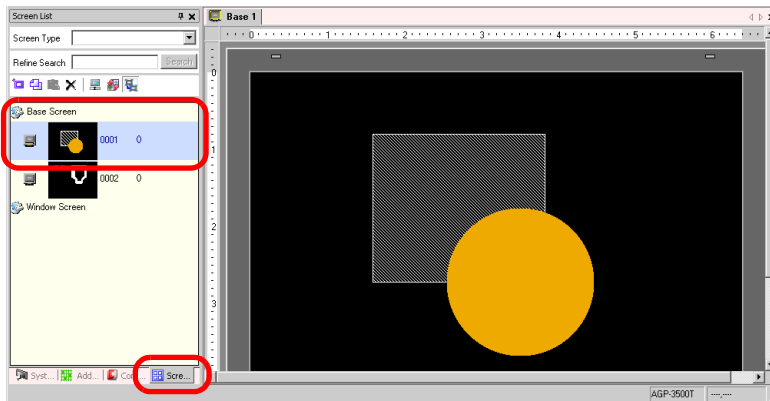
17 The existing project file's main window is displayed.



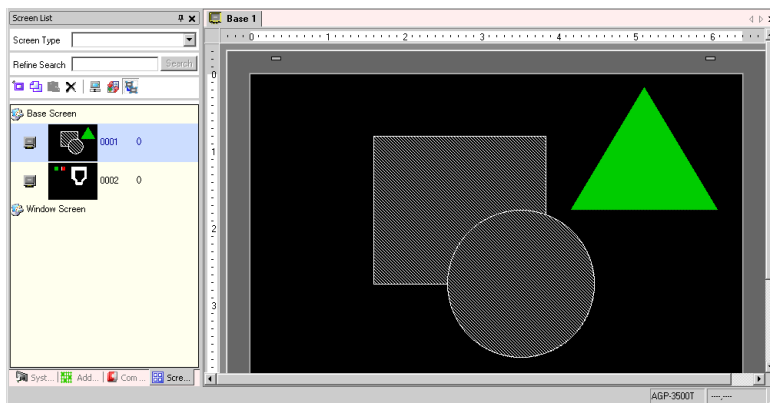
NOTE


- You can also open an existing file easily by directly double-clicking the project file (*.prx).
- You can start two different project files at the same time.

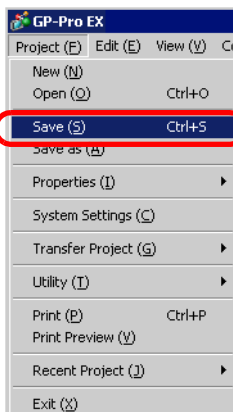
18 Double-click the [Base Screen] to modify from the Screen List in the Screen List Window and the base screen will be displayed in the editing area.



19 Modify the screen.

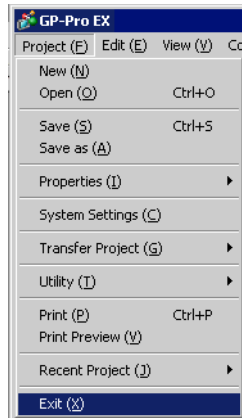


20 Select the [Project (F)] menu - [Save (S)] command or click  to save the modified file.

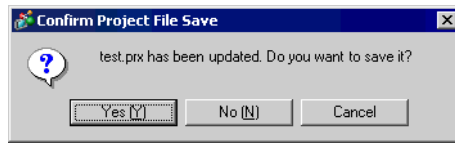


■ Finishing

- 21 Select the [Project (F)] menu - [Exit (X)] command or click the  icon in the top right corner of the screen.



- 22 If you change a project file and try to exit the application without saving it, the [Confirm Project File Save] dialog box is displayed.



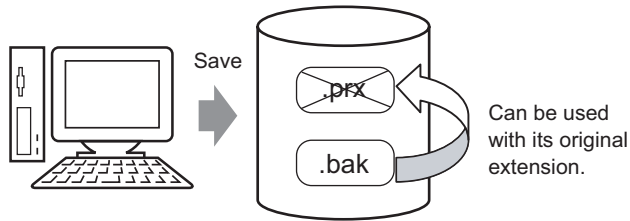
If you click [Yes], the project will be saved in the current state and closed.

If you click [No], the project will be closed with the last saved information.

If you click [Cancel], the project will return to the state before the operation without being closed.

6.3 Backing Up a Project File

6.3.1 Details



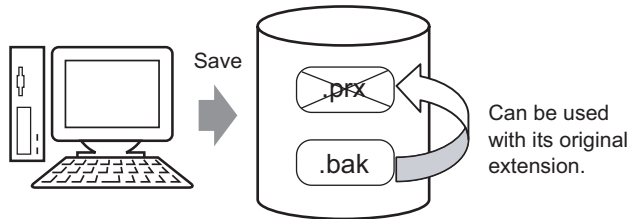
A backup file (*.bak) can be automatically created in case of a project file's destruction or abnormal updates when saving a file. You can use the backup file as a history of the previous data. To recover a project file, change the backup file's extension to “.prx”.

-
- NOTE** • When a project's abnormal termination occurs, a project file is automatically copied in the “backup” folder, which prevents a file loss.
-

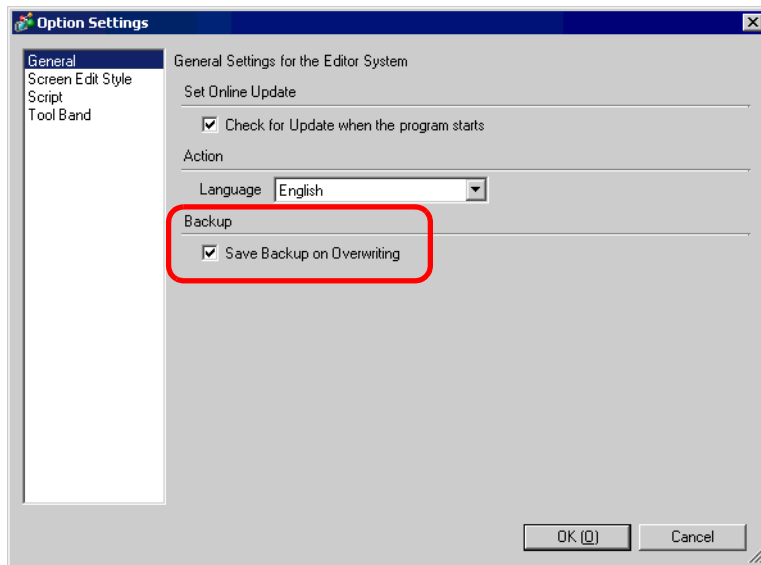
6.3.2 Setup Procedure

■ Backup as a History Procedure

- NOTE** • Please refer to the settings guide for details.
☞ “6.13.7 [Option Settings] Settings Guide ■ General” (page 6-120)



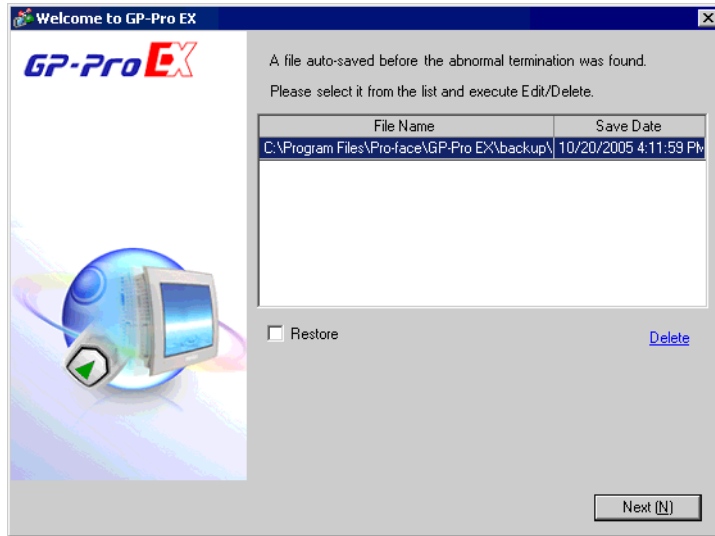
- 1 Select the [View (V)] menu - [Option Settings (O)] command and the following [Option Settings] dialog box is displayed. Put a check mark next to the [Save Backup on Overwriting] box.



- NOTE** • A backup file is saved as “Original Project File Name.bak”.
• A backup file is saved in the same location where the original file exists.

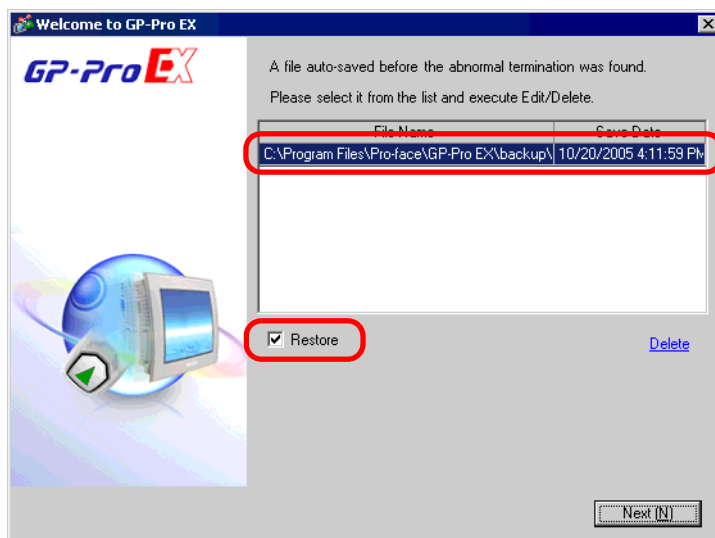
■ Backup on Abnormal Termination and File Startup

When abnormal termination is caused by memory shortage because there were too many processes to execute, a project file is automatically copied (backed up) in the “backup” folder. If there is a file that needs restoring in the “backup” folder, the following dialog box will open when you start up GP-Pro EX again.

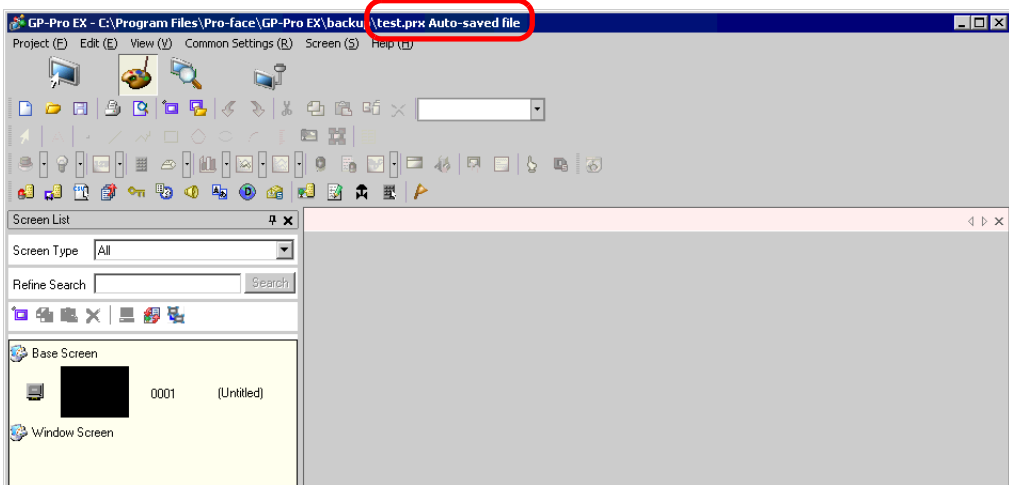


◆ When fixing and re-starting an abnormally terminated project file

- 1 Select the file you want to fix, put a check mark next to the [Restore] option, and click [Next].



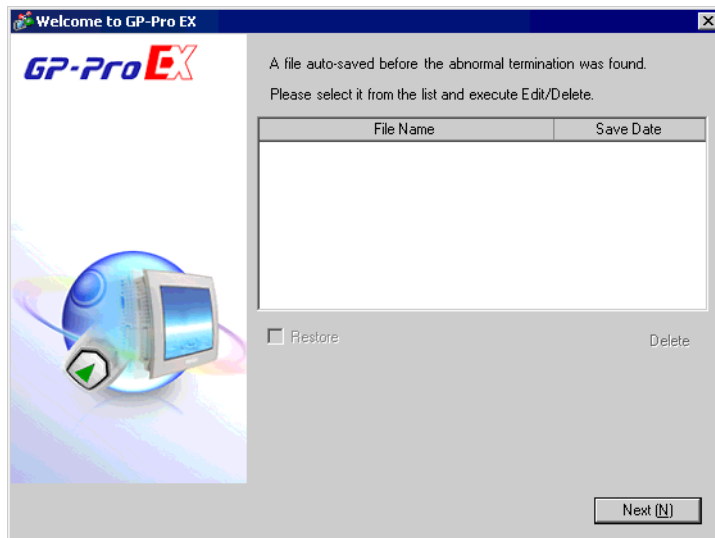
2 The file will be automatically fixed, and will open as a “Auto-saved file”.



3 Overwrite the file used before abnormal termination.

◆ **When starting GP-Pro EX without fixing the abnormally terminated project file**

1 Select the file that does not need to be fixed and click [Delete]. The file automatically saved in the “backup” folder will be deleted.

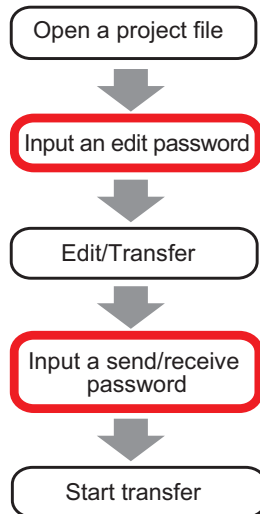


2 Click [Next], and start a project file as usual. The previously abnormally terminated project file opens in its most recently saved state.

NOTE • If you click next without deleting and start GP-Pro EX normally, the next time you start GP-Pro EX the dialog box will appear again.

6.4 Entering a Password in a Project File

6.4.1 Details



You can protect a project file by setting a password for the file's editing or transfer. When you edit or transfer a project file, a window that confirms the password is displayed. If you enter a password and it is confirmed, you can edit or transfer the project file.

NOTE

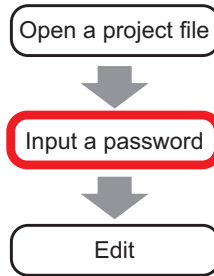
- Be sure to remember your password in order to edit/transfer a project file.
 - For information on setting a transmission password, please refer to the following.
☞ "27.6 Permitting Transfer with Passwords" (page 27-30)
-

6.4.2 Setup Procedure

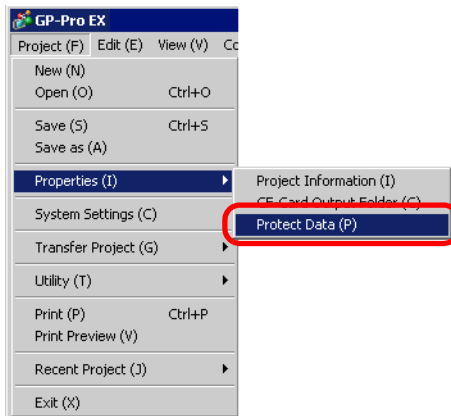
- NOTE** • Please refer to the settings guide for details.
 ☞ “6.13.3 [Properties] Settings Guide ◆ Password” (page 6-73)

■ Settings for an Edit Project File Password

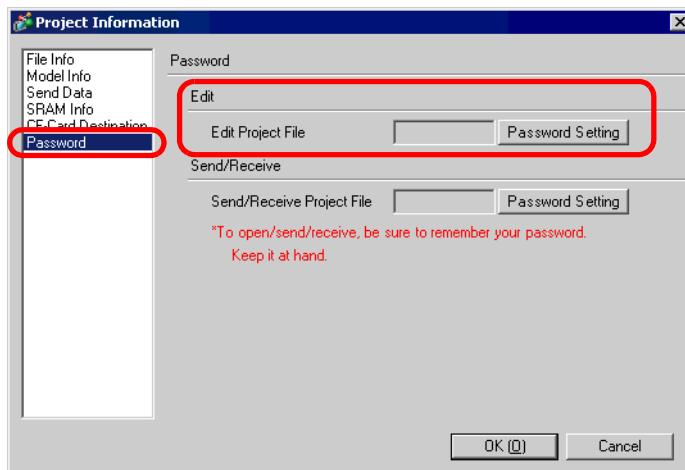
When you are about to open a project file, a dialog box to input a password opens.



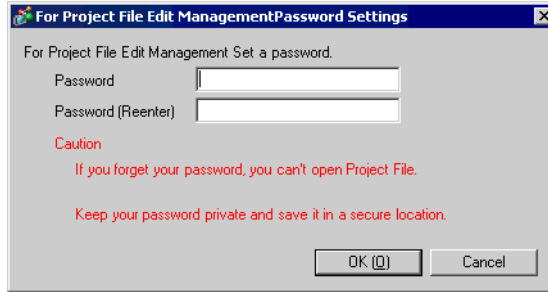
- 1 Select the [Project (F)] menu - [Properties (I)] option - [Protect Data (P)] command.



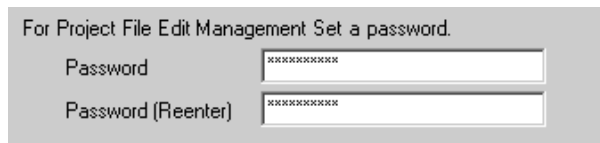
- 2 The [Password] setting screen is displayed on the [Project Information] dialog box.



3 Click Edit's [Password Setting]. The following dialog box will open.

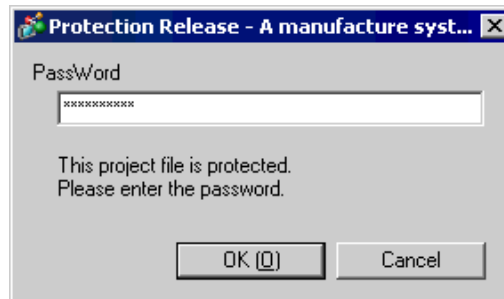


4 Enter a password of up to 10 single-byte alphanumeric characters in [Password]. Confirm the password by entering the same input in [Password (Reenter)].



5 Complete setting the password by clicking [OK].

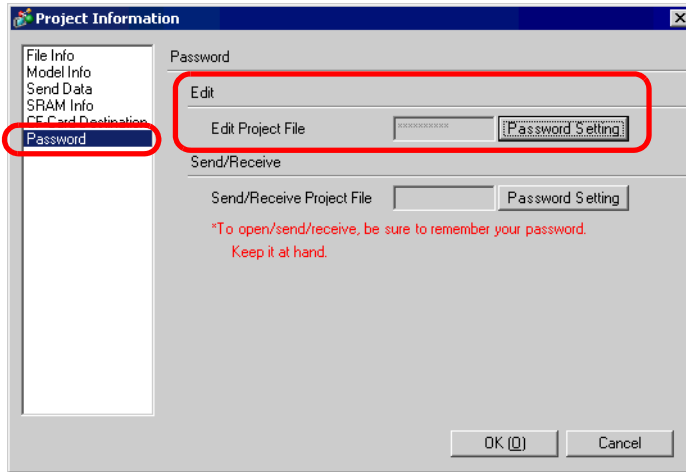
-
- NOTE** • When opening a project file set with a password, the [Protection Release] dialog box is displayed. If you input the set password and click [OK], the protection is released and you can edit the project file.



■ Releasing or Changing the Password for Editing a Project File

Use the [Project Information] dialog box as well to release or change the previously set password.

- 1 Select the [Project (F)] menu - [Properties (I)] option - [Protect Data (P)] command. The [Project Information] dialog box will open up.



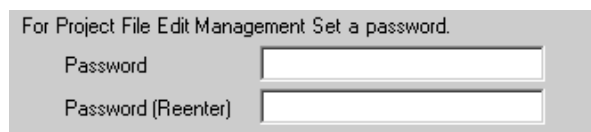
- 2 Click Edit's [Password Setting]. The following dialog box will appear.



- 3 Enter the currently set password.



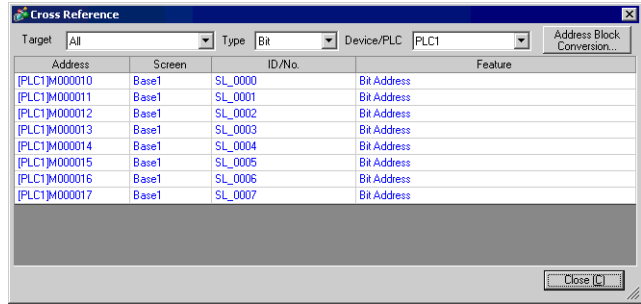
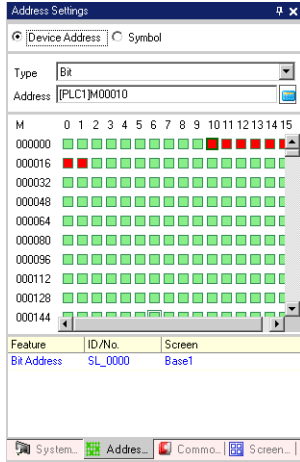
- 4 To change the password, enter a new password with up to 10 single-byte alphanumeric characters, enter the same password in [Password (Reenter)] as well, and click [OK]. To release the password, click [OK] leaving the boxes blank without inputting a new password.



6.5 Confirming the List of Addresses being Used in a Project File

6.5.1 Details

You can check the addresses set in a project file in the two following ways.



6.5.2 Setup Procedure

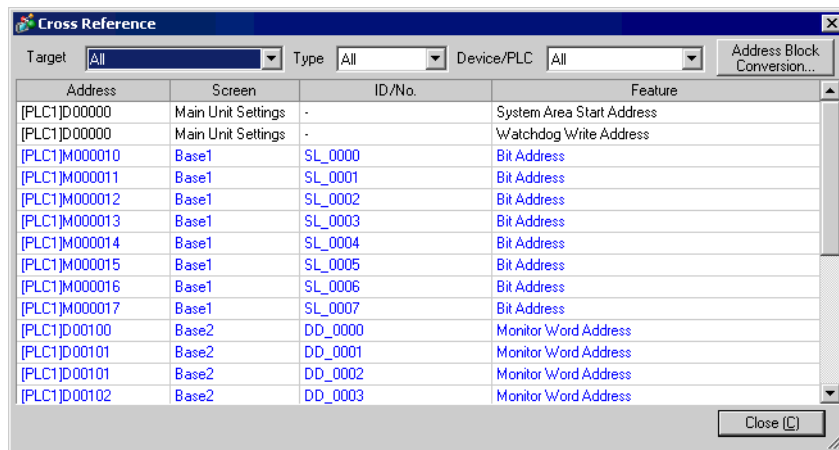
NOTE

- Please refer to the settings guide for details.
 ☞ “6.13.4 [Utility] Settings Guide ■ Cross Reference” (page 6-78)

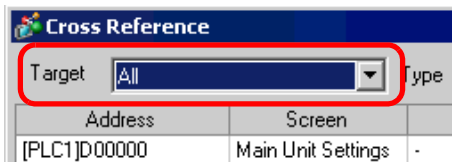
■ Setting Procedure to Display the List of Addresses in Use

Displays a list of the addresses set in a project file.

- 1 Select the [Project (F)] menu - [Utility (T)] option - [Cross Reference (R)] command. The following [Cross Reference] dialog box is displayed.



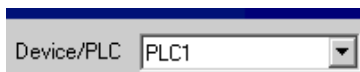
- 2 Select the screen or setting to be displayed from [Target].



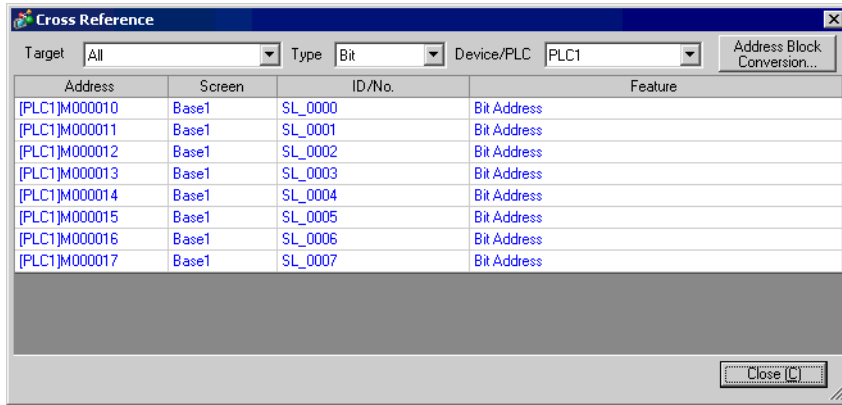
- 3 Select the [Type] of the address to be displayed.



- 4 Select the Device/PLC of the target to be displayed.

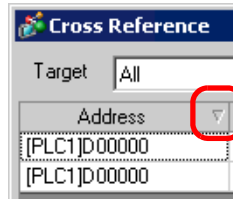


5 The list of addresses in use is displayed.



NOTE

- To switch each item content display between ascending order and descending order, click each item cell to display the arrow. Each time you click the arrow, the display switches between ascending order and descending order.

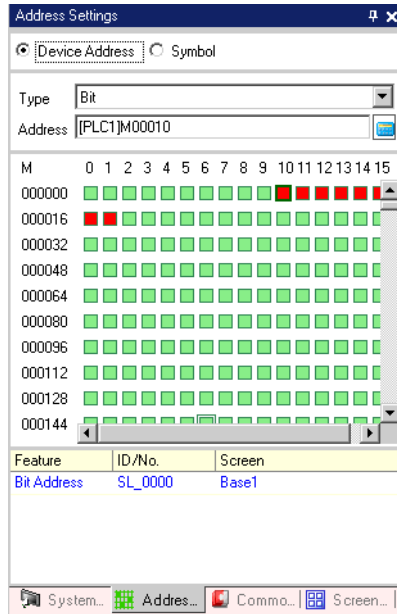


- To convert the listed addresses as a block, click [Address Block Conversion].
 ☞ “6.6 Converting the Addresses in a Project File in Block” (page 6-33)
- If you set [All] to the Cross Reference’s [Target], it may take a long time to get all the screens’ address information and display it.
- For [Base Screen] and [Window Screen], double-click the cell and the screen’s editing area is displayed.

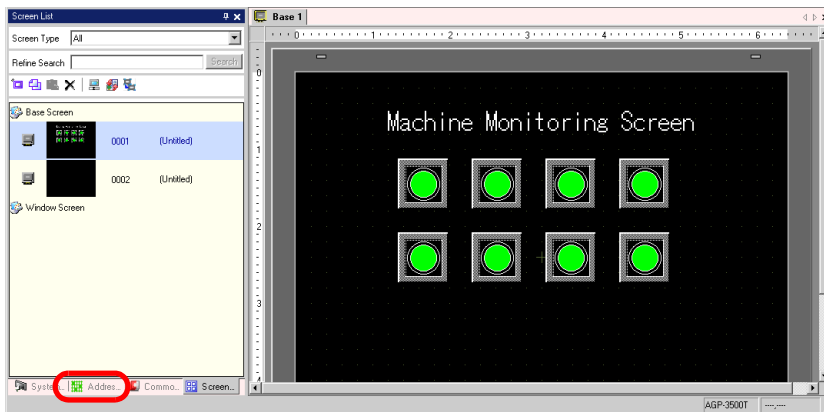
■ Displaying the Addresses in Use with a Map

- NOTE** • Please refer to the settings guide for details.
 ☞ “6.13.5 [Work Space] Settings Guide ■ Address Settings Window” (page 6-82)

Displays the list of the addresses set in a project file with a map.

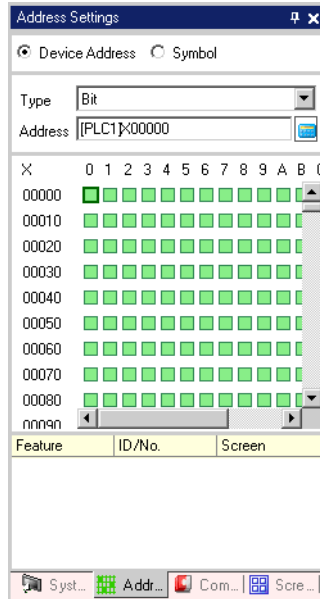


1 Click the [Address Settings] tab in the Work Space.

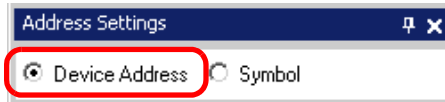


- NOTE** • If the [Address Settings] tab is not displayed in the Work Space, select the [View (V)] menu - [Work Space (W)] option - [Address Settings Window (A)] command.

2 The following [Address Settings] window is displayed.



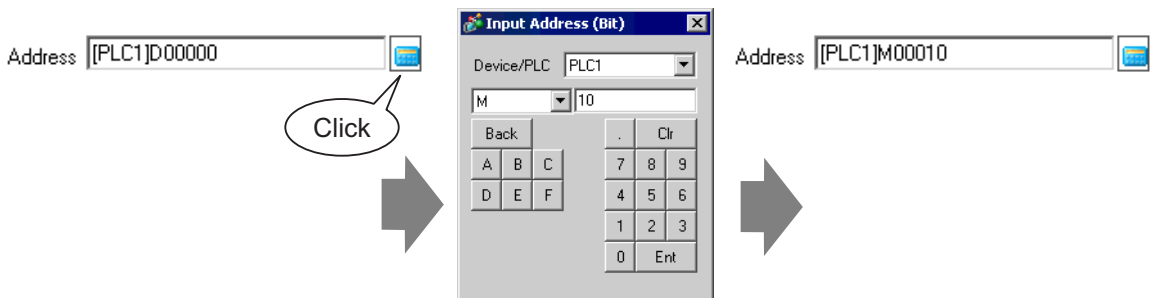
3 Select the target to display from [Device Address] or [Symbol].



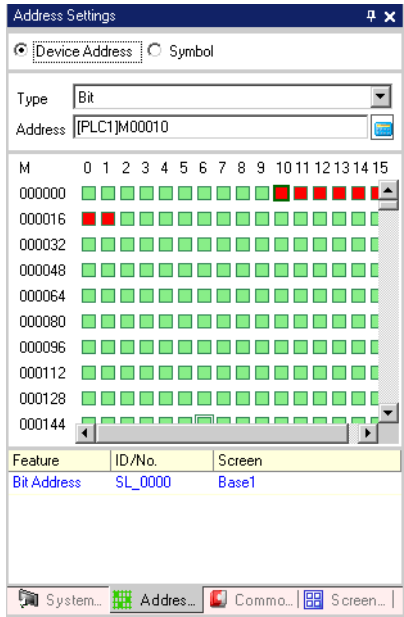
4 In [Type], select the address to display from [Bit] or [Word].



5 Select the address of the target to display. (e.g. M010)

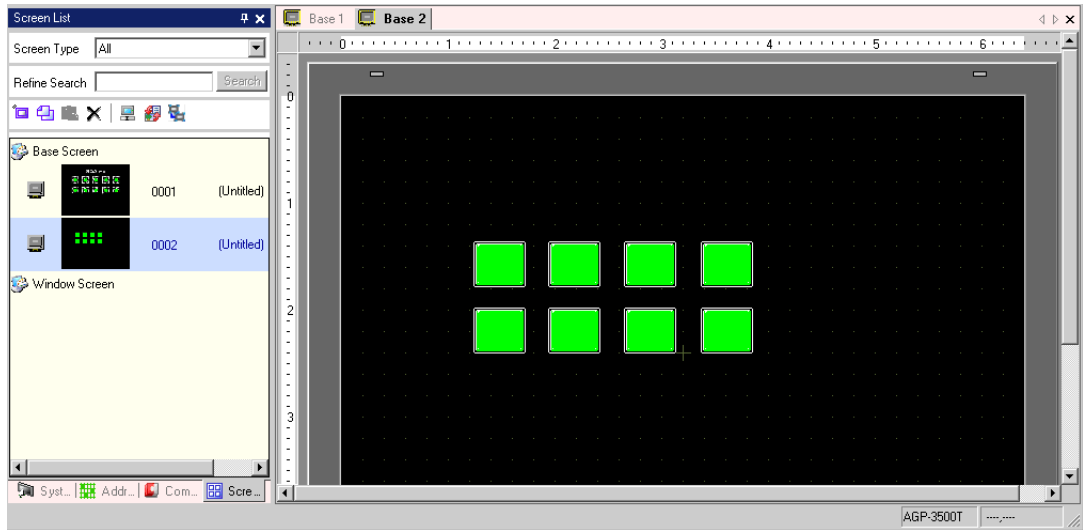


6 You can verify which addresses are used on the address map.

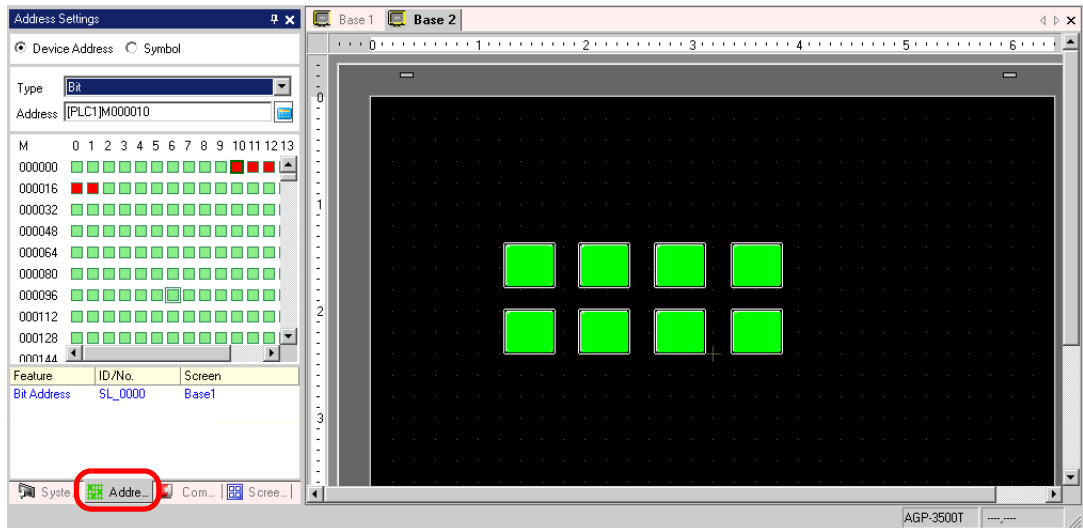


■ Changing the Screen Address of the Edit Part from the Address Map

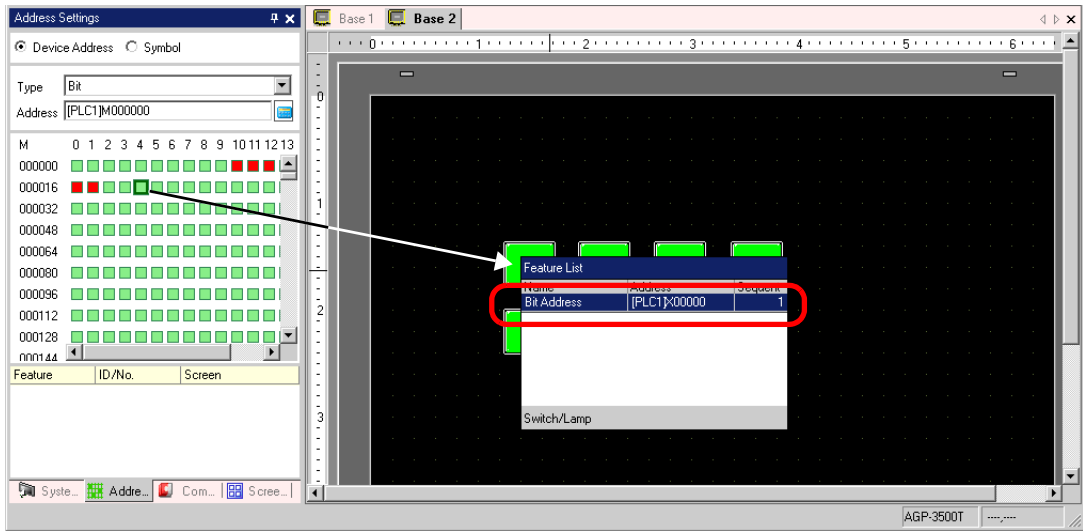
1 Open the screen on which the part whose address you want to change is placed.



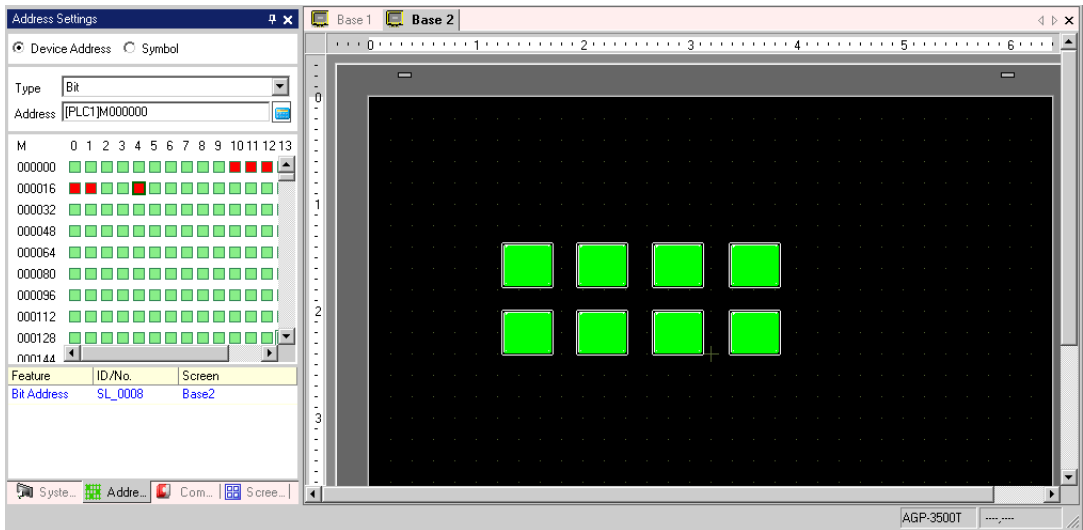
2 Click the Window's [Address Settings] tab and open the address map for reference.



3 If you drag the address from the address map onto a part in the drawing screen, the [Feature List] window is displayed. Select the address row in the displayed [Feature List].

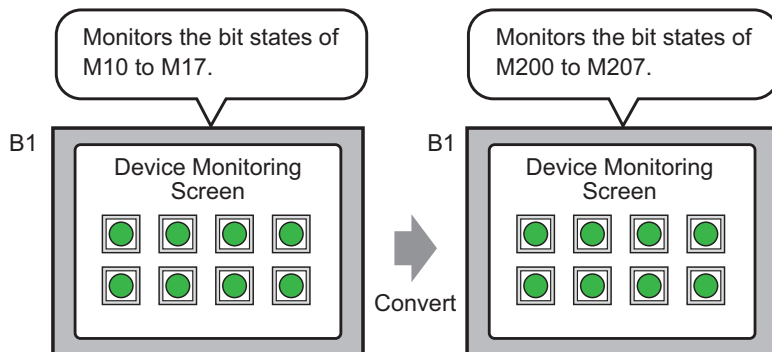


4 Release the drag and the address will be allotted to the part.



6.6 Converting the Addresses in a Project File in Block

6.6.1 Details



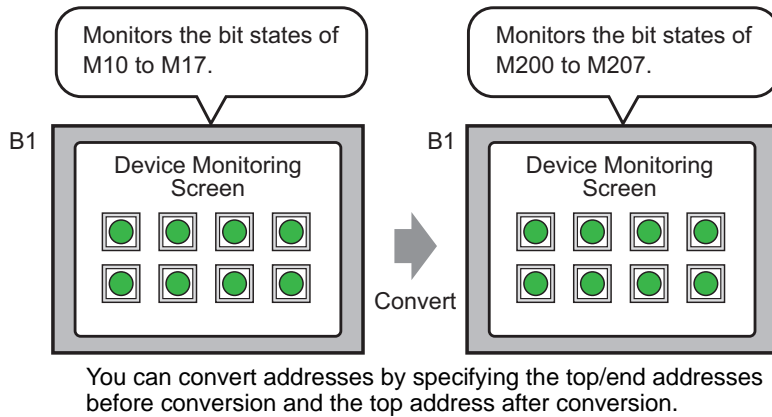
You can convert addresses by specifying the top/end addresses before conversion and the top address after conversion.

Converts the addresses set in a project file to other addresses as a block. There are two conversion methods: [Whole Project], which converts the addresses in the whole project file as a block, and [Individual Settings], which sets and converts the conversion target screens individually.

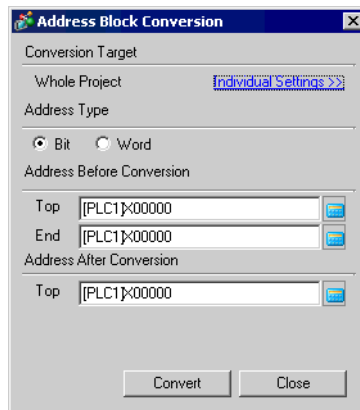
6.6.2 Setup Procedure

- NOTE** • Please refer to the settings guide for details.
 ☞ “6.13.4 [Utility] Settings Guide ■ Address Block Conversion” (page 6-75)

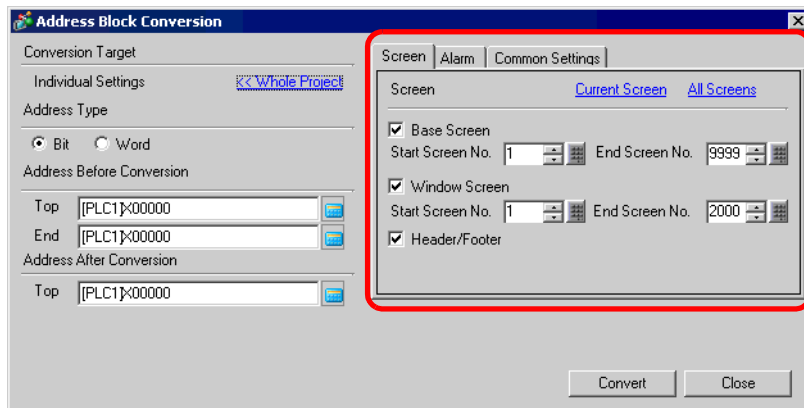
Converts the addresses set on the specified screens as a block.



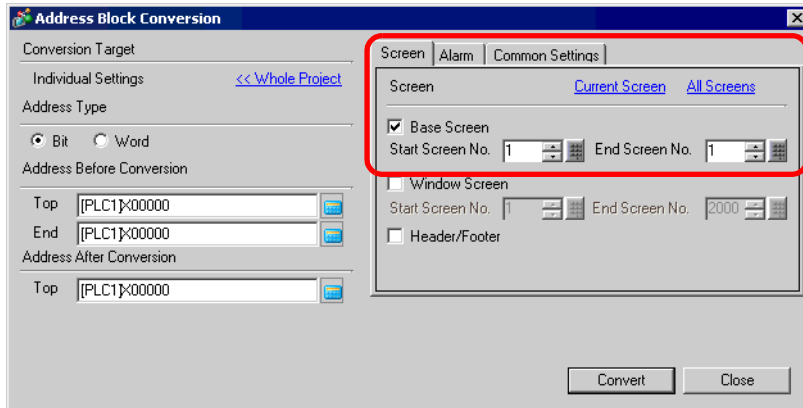
- 1 Select the [Project (F)] menu - [Utility (T)] option - [Convert Addresses (A)] command. The following [Address Block Conversion] dialog box will be displayed.



- 2 Click [Individual Settings] to display the setting items for each conversion target.



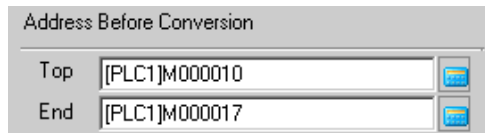
3 Set the screen you want to convert and the screen number or features.



4 Select the [Address Type] from [Bit] or [Word]. (e.g.: Bit)

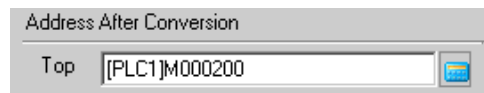


5 Set the [Address Before Conversion]'s [Top] and [End]. (e.g.: Top Address M10, End Address M17)



NOTE • For [Address Before Conversion]'s [Top] and [End], you cannot set a different device address.

6 Set the [Address After Conversion]'s [Top]. (e.g.: Top Address M200)



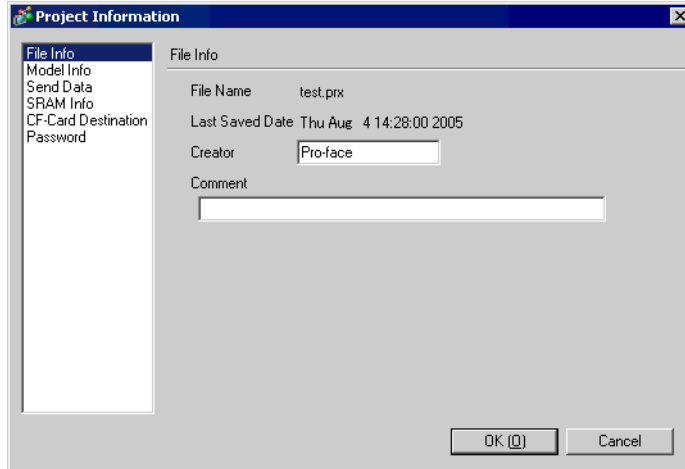
7 Click [Convert]. The [Address Block Conversion] dialog box with the process completion message appears so click [OK].



NOTE • When [Symbol] is used for the addresses, the [Address Block Conversion] does not work properly.
 • If the total number of addresses (End Address – Top Address) before conversion is greater than the total number of addresses (End Address – Top Address) after conversion, the device's last address is assigned to all the unconverted addresses.

6.7 Seeing the Project Information

6.7.1 Details



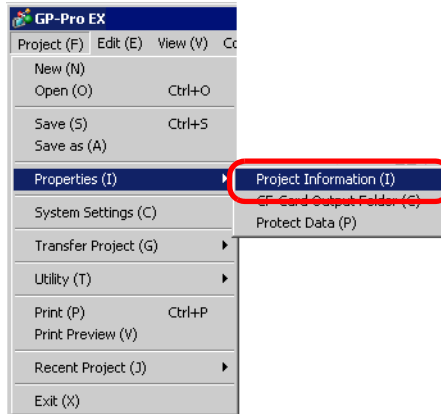
You can check all information about File Creator and Last Saved Data, Model and Device/PLC, the data sent by Project Transfer, backup SRAM's size, etc. You can also set a CF-Card Output Folder and Password.

6.7.2 Setup Procedure

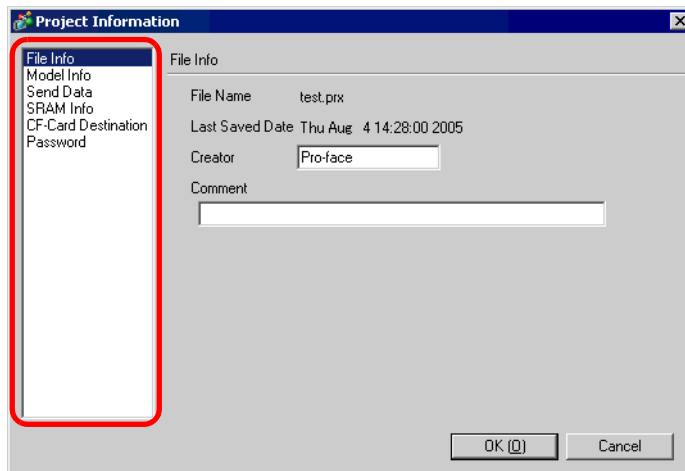
- NOTE** • Please refer to the settings guide for details.
 ☞ “6.13.3 [Properties] Settings Guide ■ Project Information” (page 6-68)

■ Checking [Project Information]

- 1 Select the [Project (F)] menu - [Properties (I)] option - [Project Information (I)] command.



- 2 The [Project Information] dialog box will be displayed. If you click each item in the left window, the displayed information changes.

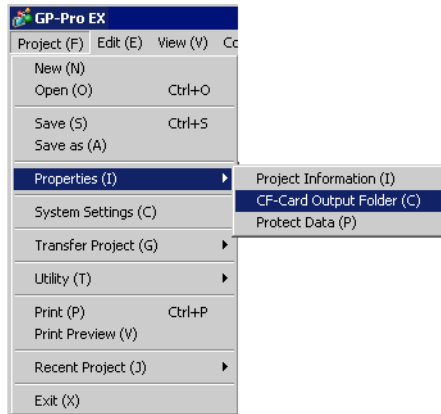


- 3 Confirm it and click [OK] to close the [Project Information] dialog box.

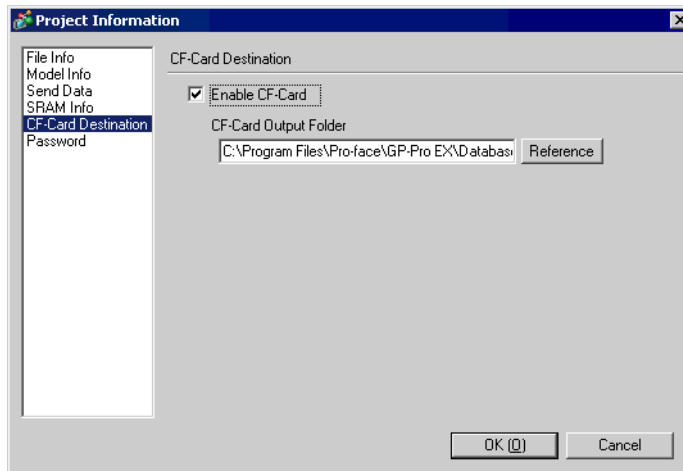
■ CF-Card Output Folder Setting Procedure

Set the location to temporarily store the data to be saved in a CF-card.

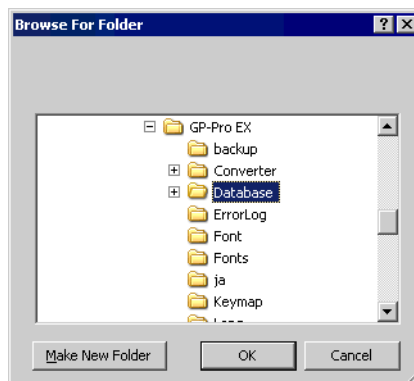
- 1 Select the [Project (F)] menu - [Properties (I)] option - [CF-Card Export Folder (C)] command.



- 2 The [Project Information] dialog box will be displayed. Put a check mark next to the [Enable CF-Card] box.



- 3 Click [Reference] and designate a CF-card output folder.



Click [OK] to return to the [Project Information] dialog box.

NOTE

- The initial settings in \Program Files\Pro-face\GP-Pro EX\Database\ (project file name and folder with the same name) are automatically set as the CF-card Output Folder.
-

- 4 Click [OK]. If a CF-card folder does not exist in the specified output folder (when you set the CF-card output folder for the first time), the following confirmation message is displayed. Click [Yes].

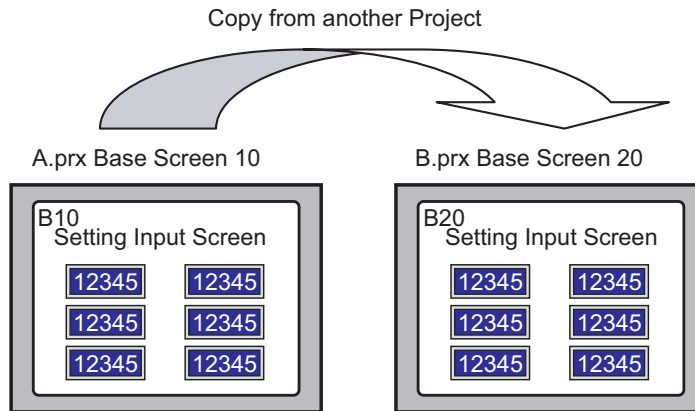


Folders ([data], [file], etc.) that store data to be saved in a CF-card are automatically created.

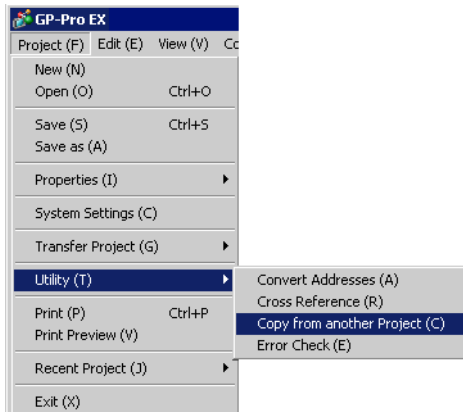
6.8.2 Setup Procedure

- NOTE** • Please refer to the settings guide for details.
 ☞ “6.13.4 [Utility] Settings Guide ◆ Whole Project” (page 6-75)

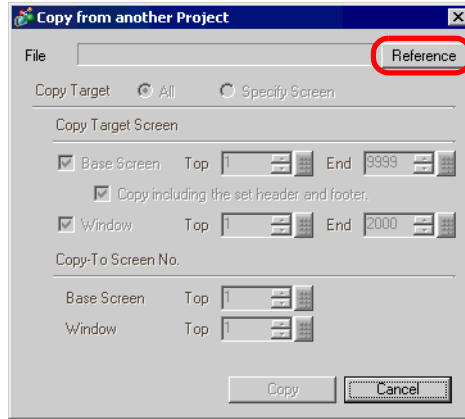
Copy the project “A.prx”’s Base Screen: 10 to the project “B.prx”.



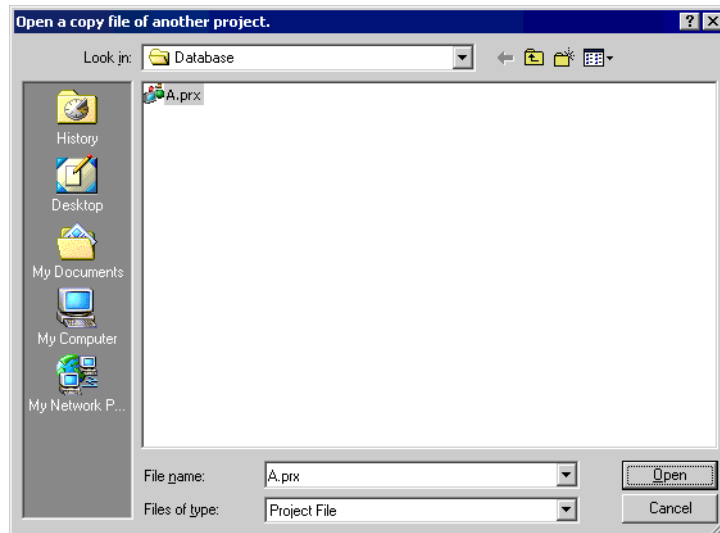
- 1 Open the copy-to project file.
- 2 Select the [Project (F)] menu - [Utility (T)] option - [Copy from another Project (C)] command.



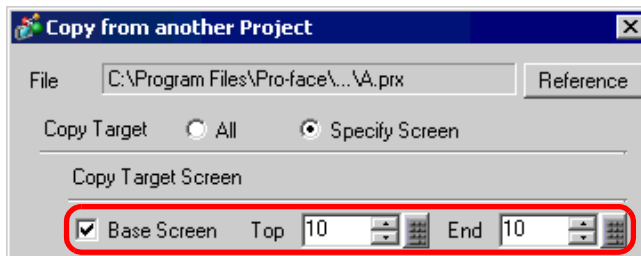
3 When the [Copy from another Project] dialog box is displayed, click [Reference].



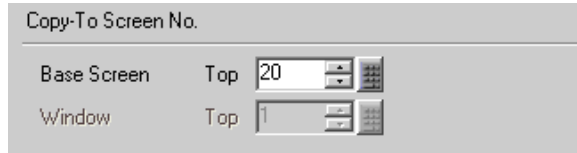
4 When the following dialog box is displayed, set the [Look in] and [File name] and click [Open].



5 Return to the [Copy from another Project] dialog box. Click [Specify Screen] and set the Copy Target Base Screen's [Top] number and [End] number in [Base Screen]. (e.g.: [Top][End]10).

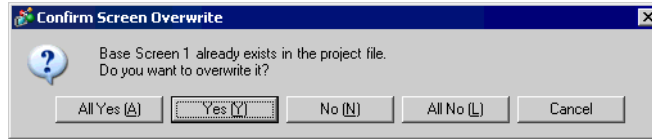


6 In [Copy-To Screen No.], set the copy-to Base Screen's [Top] number.

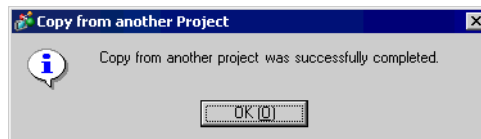


7 Click [Copy].

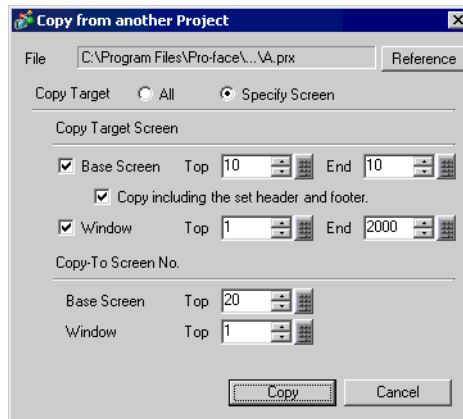
- NOTE** • If a screen of the same number exists in the copy destination, the following confirmation dialog box opens.



8 When the copy is complete, the following message is displayed. Click [OK].



9 When the [Copy from another Project] dialog box is displayed, click **X** to close it.




The copied screen opens.

6.9 Symbolizing an Address

6.9.1 Details

Name each address.

Address	Symbol Name
D100	Line A Production
D101	Line B Production
D102	Line C Production
D103	Line D Production



You can set addresses with a symbol name.

Monitor Word Address

[PLC1]D0000


Line A Production

Line B Production

Line C Production

Line D Production

Data Type 16 bit Dec



Using [Symbol Variable Settings], you can name each address and manage it. You can set a part's address with this name. If you change the address for each name, you can change the addresses in block without setting the parts again.

You can name an address freely by registering it as a symbol.

6.9.2 Setup Procedure

NOTE

- Please refer to the settings guide for details.
 - ☞ “6.13.5 [Work Space] Settings Guide ■ Address Settings Window” (page 6-82)
 - ☞ “6.13.8 [Common Settings] Settings Guide ■ Symbol Variable Settings” (page 6-125)

Name each address.

Address	Symbol Name
D100	Line A Production
D101	Line B Production
D102	Line C Production
D103	Line D Production



You can set addresses with a symbol name.

Monitor Word Address

[PLC1]D0000

Line A Production

Line B Production

Line C Production

Line D Production

Data Type 16 bit Dec

12345

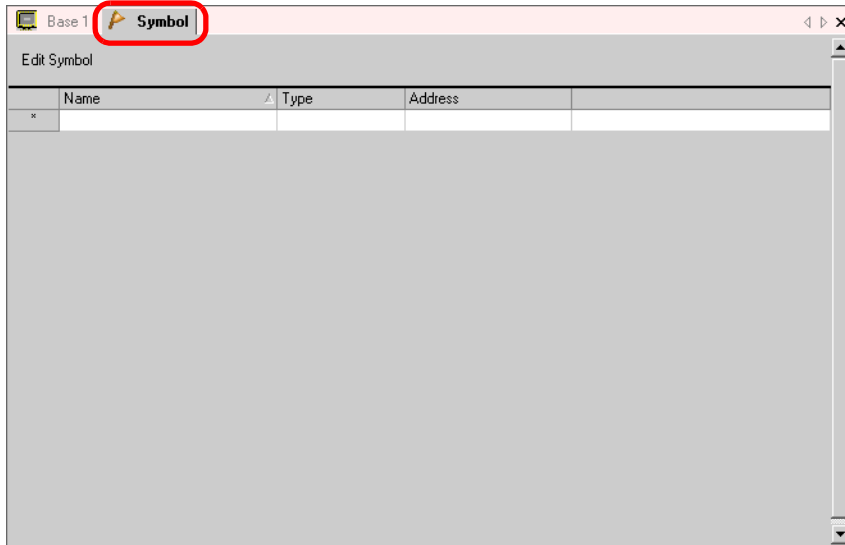
■ Registering the [Symbol Variable Settings]

- 1 Select the [Common Settings (R)] menu - [Symbol Variable Settings (V)] command.

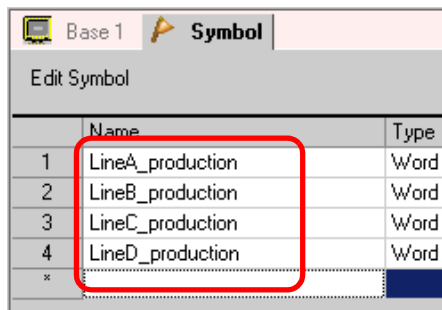
Common Settings (R) Draw (D) P

- Alarm Settings (A)
- Sampling Settings (D)
- Recipe Settings (R)
- Security Settings (Q)
- Time Schedule Settings (F)
- Sound Settings (H)
- Text Table Settings (S)
- Global D-Script Settings (L)
- Extended Script Settings (E)
- Image Registration (I)
- Text Registration (T)
- Mark Registration (M)
- Keypad Registration (K)
- Symbol Variable Settings (V)**

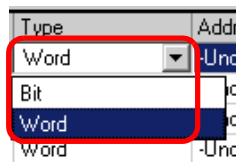
2 The [Symbol Variable Settings] screen is displayed.




3 Click a cell in the [Name] column and set the symbol name.



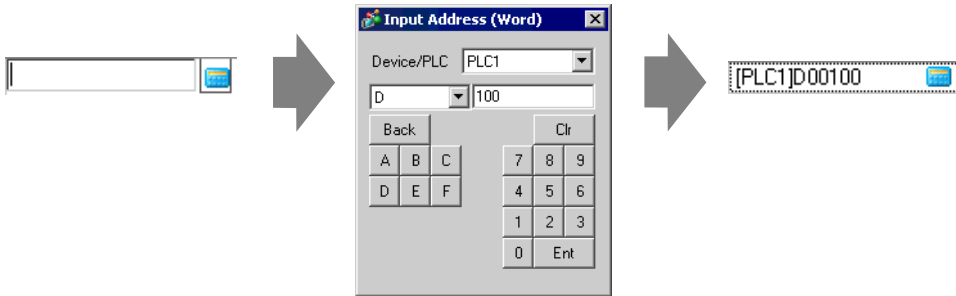
4 Click each cell in the [Type] column and select the symbol's address type from [Bit] or [Word].




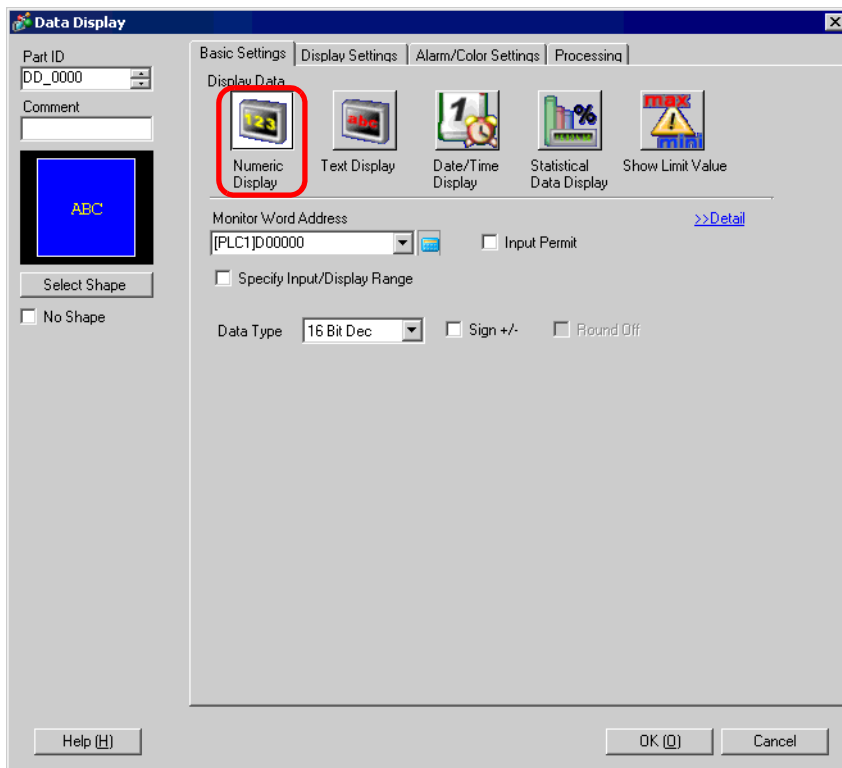
- 5 Click each cell in the [Address] column to display . Set each symbol's address.
 (e.g.: Line A Production: D100, Line B Production: D101, Line C Production: D102.
 Line D Production: D103)

Click the icon and an address input keypad is displayed.

Select device "D", input "100" as the address, and press the "Ent" key.

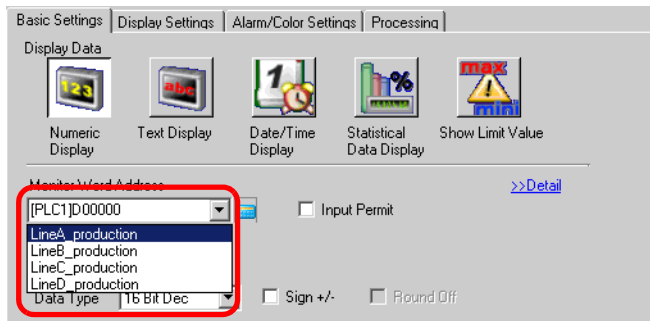


- 6 The settings to register an address as a symbol are complete.
- 7 Set the symbols registered in Data Displays. Select the [Part (P)] menu - [Data Display (D)] option - [Numeric Display (N)] command, or click the  icon, and place it on the screen.
- 8 Double-click the placed Data Display and the settings dialog box opens.

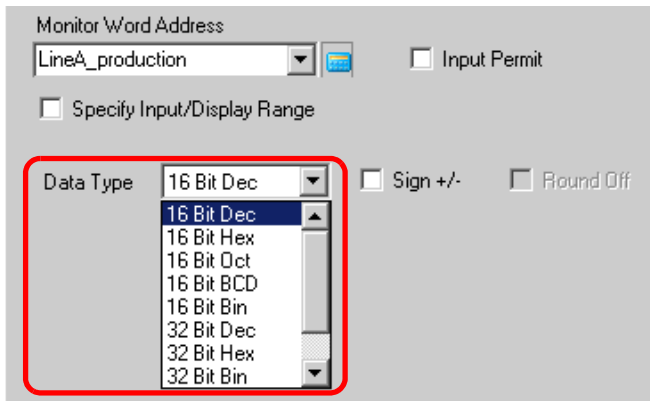


- 9 Select the Data Display shape from [Select Shape].

10 In [Monitor Word Address], set the symbol of the address (e.g.: Line A Production = D100) which will store the value to be displayed.



11 In [Data Type], set the type of data that will be displayed (e.g. “16 Bit Dec”).

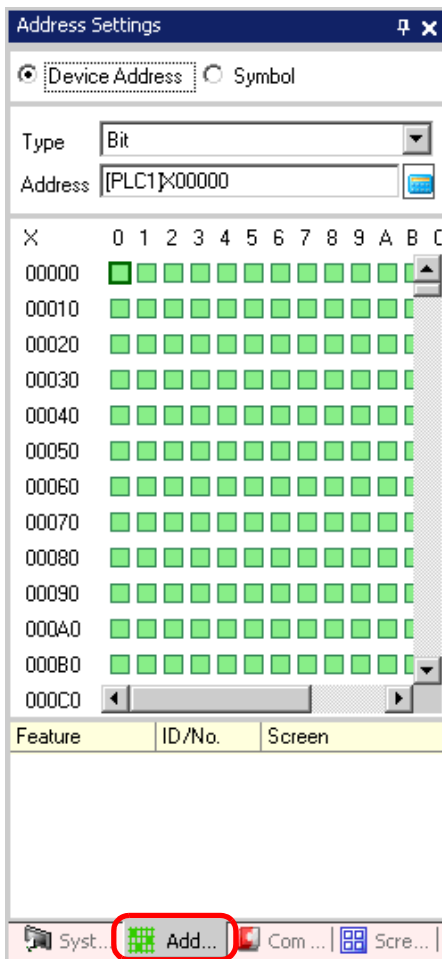


12 As needed, set the Data Display’s color and text on the [Alarm/Color Settings] tab and [Display Settings] tab, and click [OK].

13 Set the Data Displays for the symbols of “Line B Production”, “Line C Production”, and “Line D Production” as well.

■ Setting Procedure to Confirm the Symbol Registration with a List

1 Click the [Address Settings] tab in the Work Space.

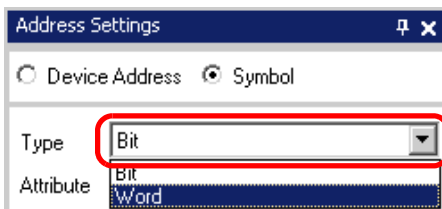


NOTE • If the [Address Settings] tab is not displayed in the Work Space, select the [View (V)] menu - [Work Space (W)] option - [Address Settings Window (A)] command.

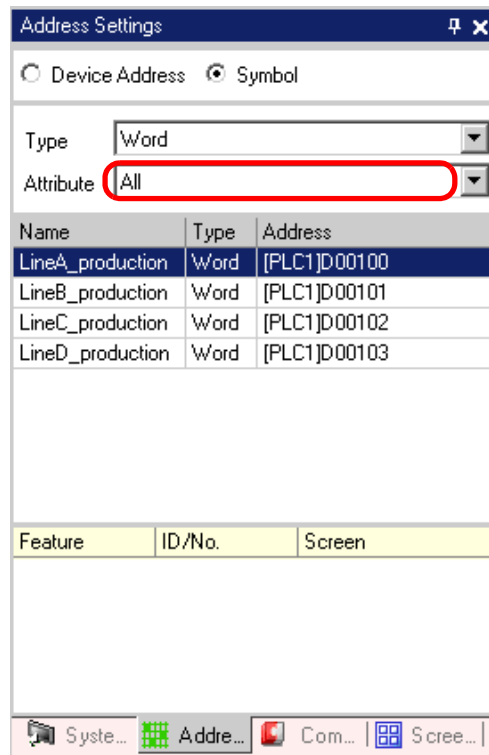
2 Put a check mark next to the [Symbol] box.



3 In [Type], select the address type of the symbol to display from [Bit] or [Word].



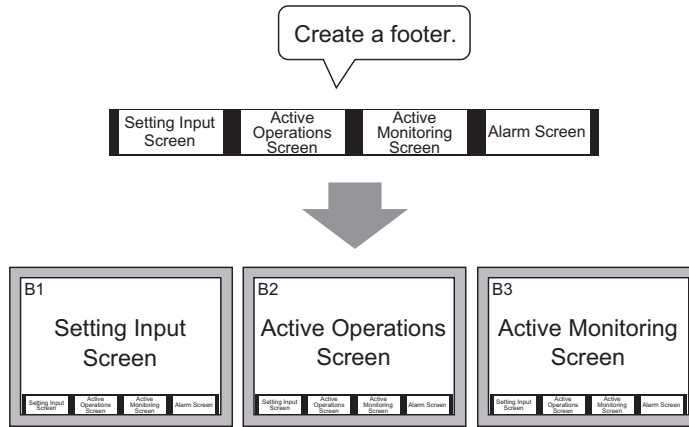
4 In [Attribute], select the device/PLC for the symbol to display. The symbol's address list is displayed.



-
- NOTE**
- The address selected in the list can be dragged to connect it to a part placed on the drawing screen.
 - By double-clicking the address in the list, you can open the [Edit Symbol] screen.
-

6.10 Putting a Header/Footer on the Screen

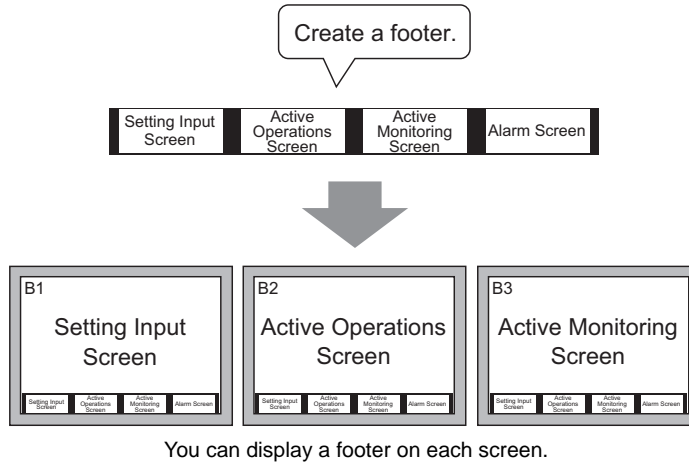
6.10.1 Details




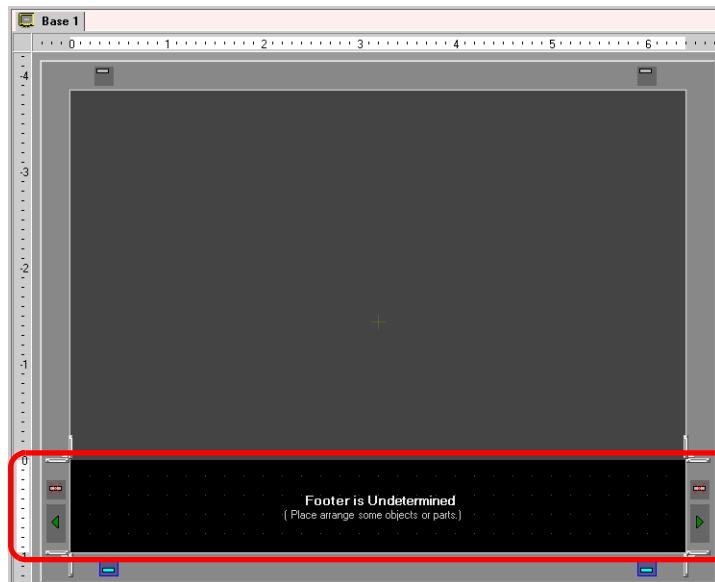
You can display a footer on each screen.


You can display a common header/footer on multiple screens.

6.10.2 Setup Procedure

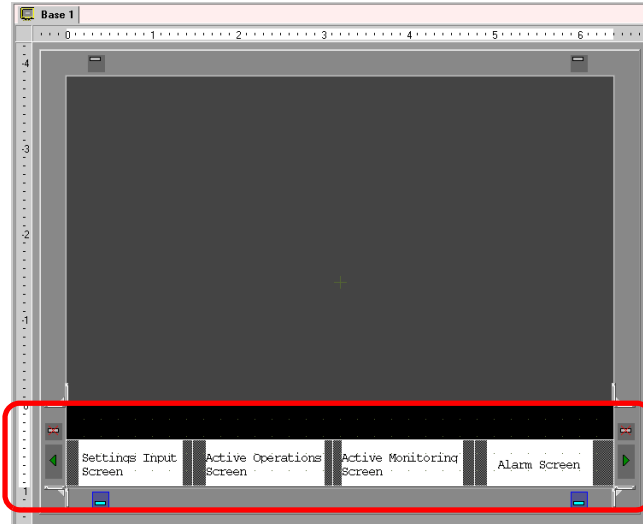


- 1 Select the [View (V)] menu - [Footer (F)] command or click the [Edit Footer] button  at the bottom of the drawing screen to display the footer screen area.






- NOTE**
- To set a Header, select the [View (V)] menu - [Header (H)] command or the [Edit Header] button  at the top of the drawing screen area.

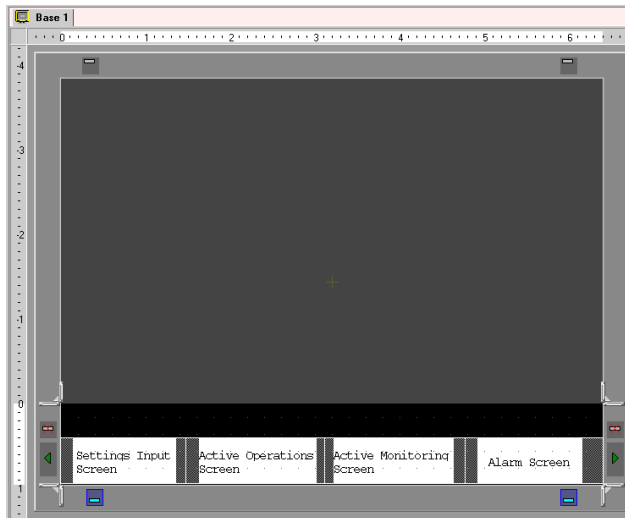
2 Create a screen in the footer editing area.



NOTE

- To delete the created footer area, click .
- To create another footer, click the [Next Footer] button .


3 Click the [disable footer edit] button  in the footer editing area and the footer editing area will be released.

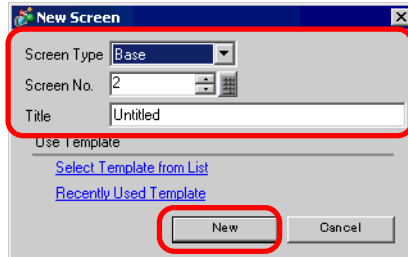



NOTE

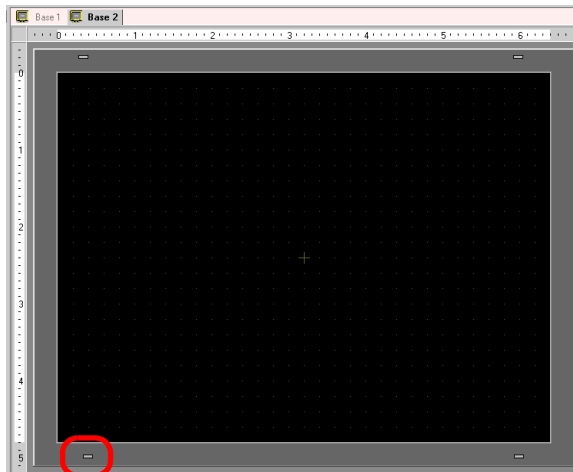
- You can set a comment in each header/footer screen. The comment is displayed in the bottom right corner of a header/footer screen. To set a comment, select the [View (V)] menu - [Work Space (W)] option - [Properties Window (P)] command. When the Properties Window is displayed, set the [Comment].

■ Calling a Header/Footer

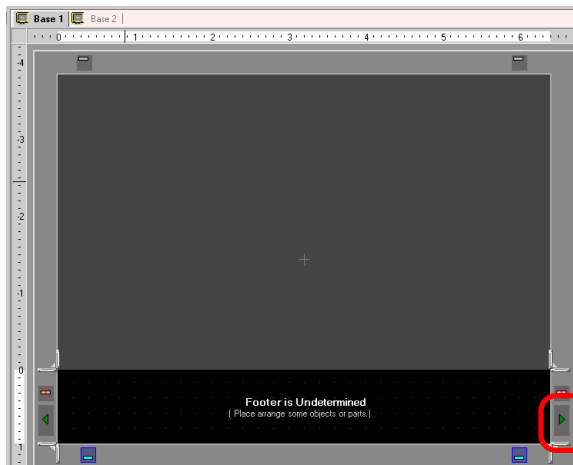
- 1 Select the [Screen (S)] menu - [New Screen] command or click the [New Screen] button .
- 2 When the [New Screen] dialog box is displayed, set [Screen Type], [Screen No.], and [Title] and click [New].




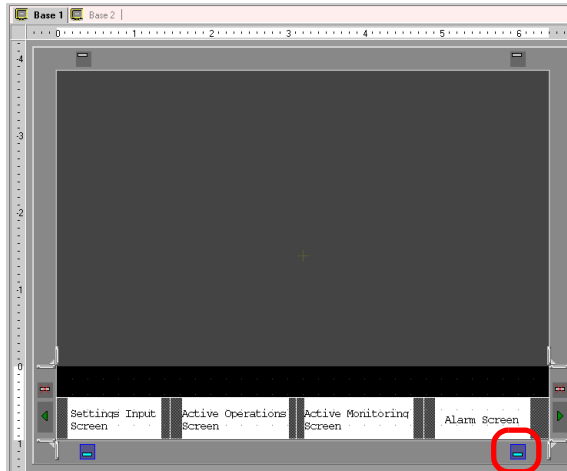
- 3 A new base screen is displayed. Select the [View (V)] menu - [Footer (F)] command or click the [Edit Footer] button  at the bottom of the drawing screen.




- 4 The footer screen editing area is displayed. Click the [Next Footer] button .

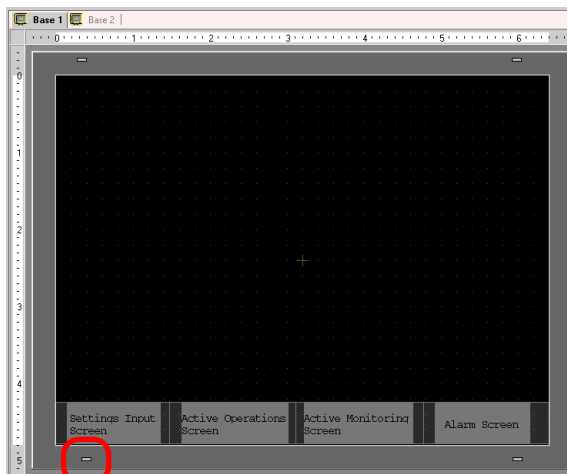


- 5 The footer is displayed. Click the [disable footer edit] button  in the editing area and the editing area will be released.





■ Releasing a Header/Footer

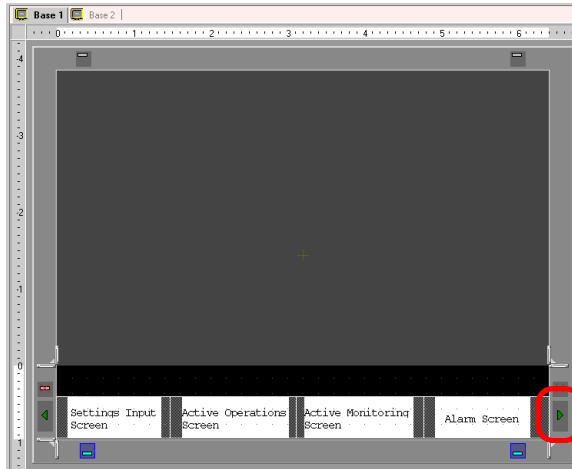
- 1 Display the screen with a footer you want to release and click the [Edit Footer] button .




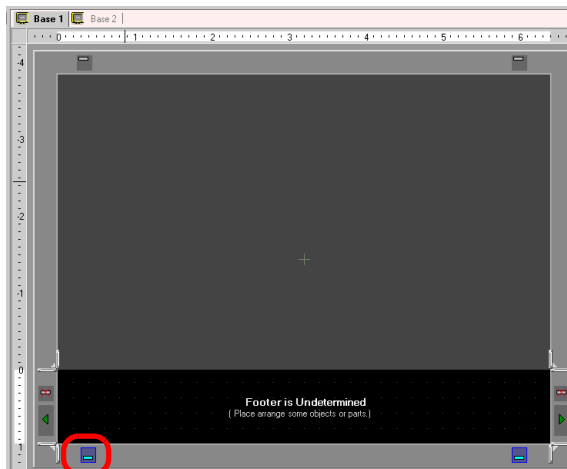
NOTE

- To release a Header, select the [View (V)] menu - [Header (H)] command or the [Edit Header] button  at the top of the drawing screen to display the header screen area.

- 2 When the footer screen area is displayed, click the [Next Footer] button  and set a blank footer.



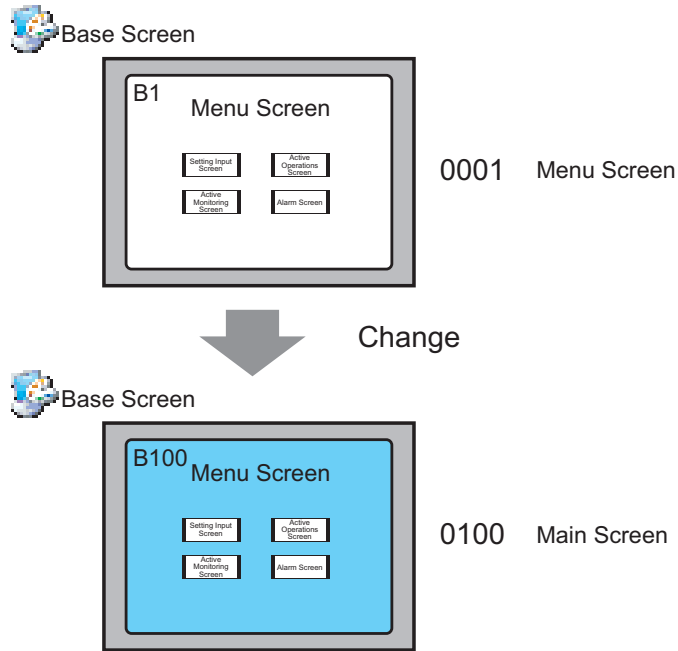
- 3 Click the [disable footer edit] button  in the editing area and the editing area will be released.



- NOTE**
- If you change from a large resolution GP main unit model to a small resolution model, a header/footer that exceeds the range due to the change is not displayed. After changing the GP type, you need to adjust the header/footer's size and position.

6.11 Changing the Screen No./Title/Screen Color

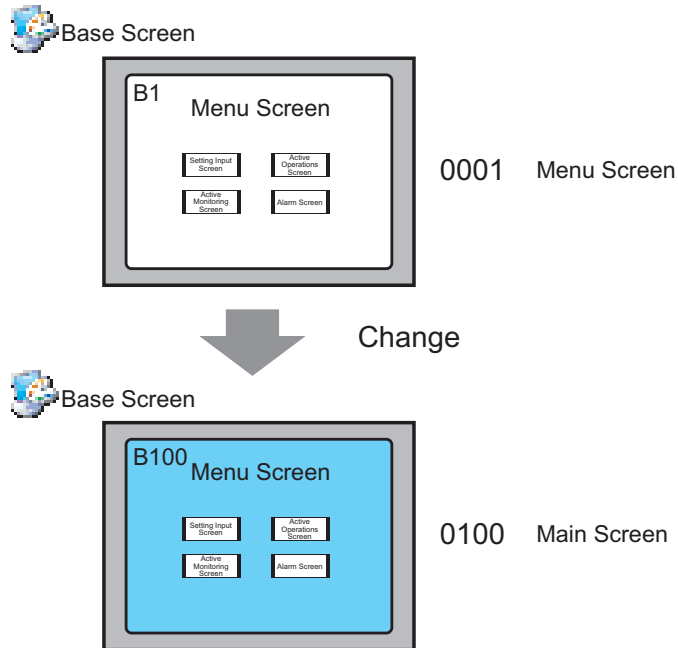
6.11.1 Details




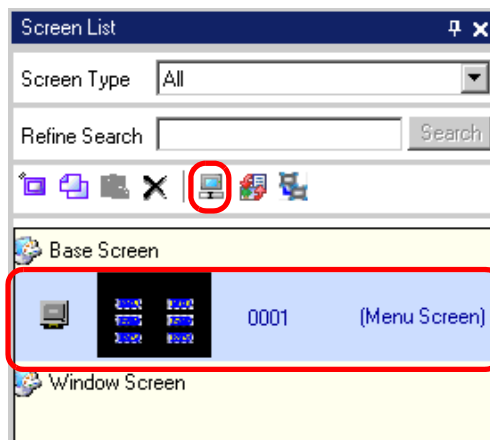
You can change the screen number, screen title, and screen color in a project file.

6.11.2 Setup Procedure

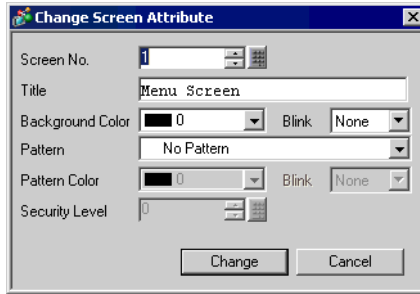
- NOTE** • Please refer to the settings guide for details.
 ☞ “6.13.5 [Work Space] Settings Guide ■ Screen List Window” (page 6-85)



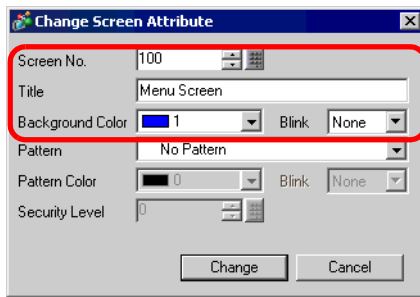
1 Select the screen with the attribute you want to change from [Screen List Window] and click the [Change Attribute] icon .



2 The [Change Screen Attribute] dialog box is displayed.

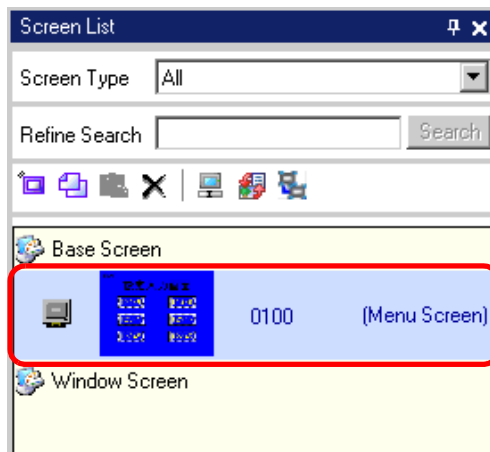


3 Change the [Screen No.], [Title] and [Background Color]. (e.g.: Screen No.: 100, Title: Main Screen)



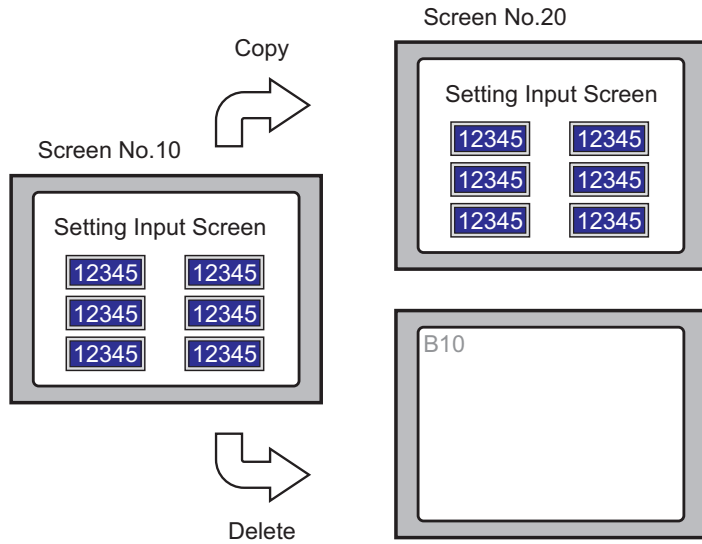
NOTE • To set the [Security Level], refer to the following.
☞ “22.2 Creating Screens that Only Specific People can Use” (page 22-3)

4 The changed screen attribute is displayed.



6.12 Copying/Deleting a Screen

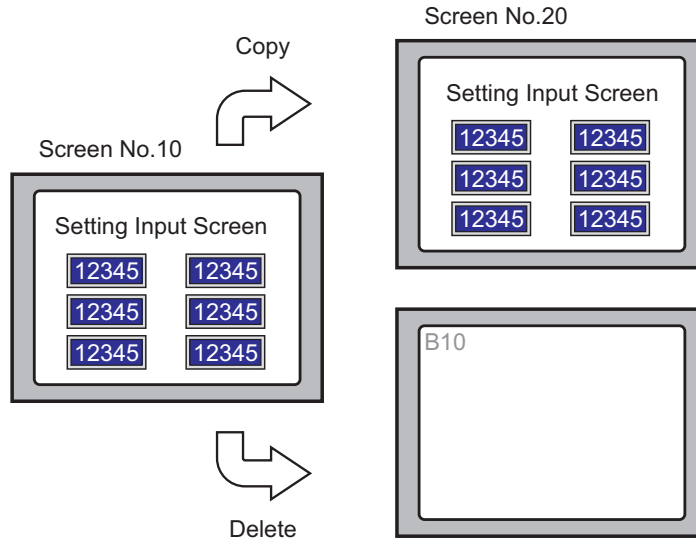
6.12.1 Details



You can copy or delete a screen easily.

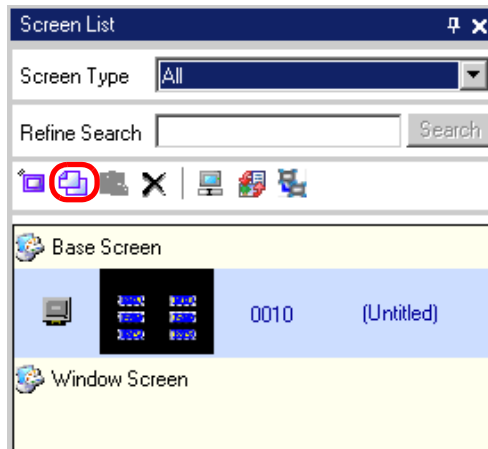
6.12.2 Setup Procedure


- NOTE** • Please refer to the settings guide for details.
 ☞ “6.13.5 [Work Space] Settings Guide ■ Screen List Window” (page 6-85)

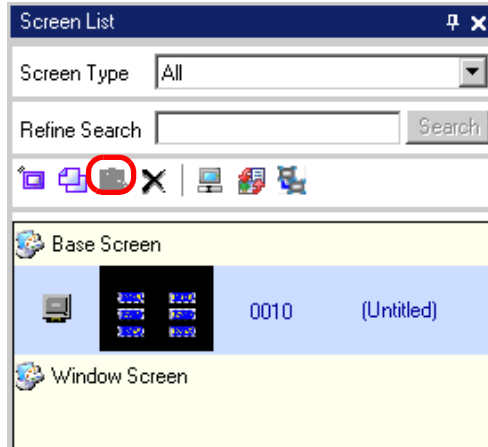


■ Copying a Screen

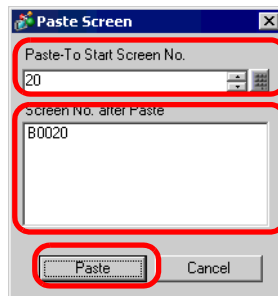
- 1 Select the screen you want to copy from [Screen List Window] and click the [Copy] icon .



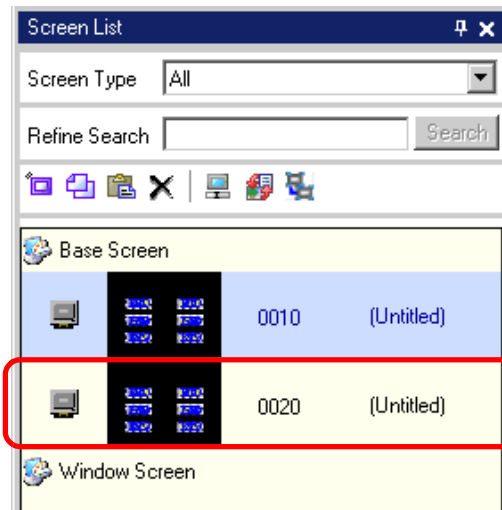
2 Then click the [Paste] icon .



3 When the [Paste Screen] dialog box is displayed, set the [Paste-To Start Screen No.] and [Screen No. after Paste] and click [Paste]. (e.g.: [Paste-To Start Screen No.] 20)



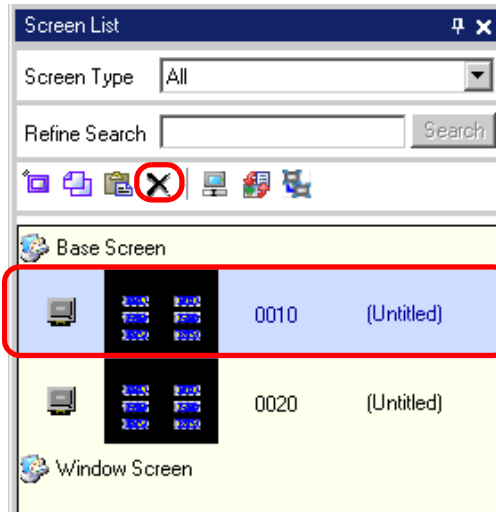
4 The reduced display of the pasted screen is displayed in the [Screen List Window]'s list.



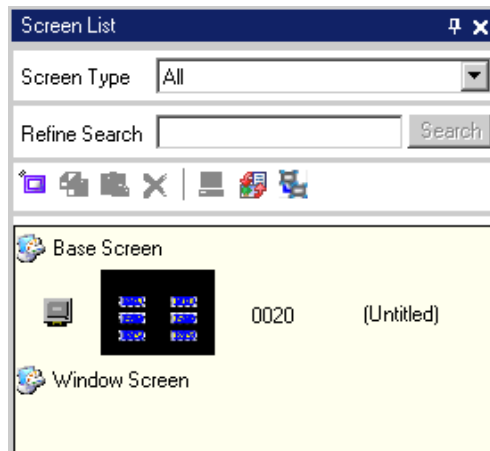
NOTE • To select multiple screens at a time, select the target screen on the [Screen List Window]'s list with the Shift key + click or the Ctrl key + click.

■ Delete a Screen

- 1 Select the reduced screen display of the screen you want to delete from [Screen List Window] and click the [Delete] icon .



- 2 The screen is deleted from the [Screen List Window].

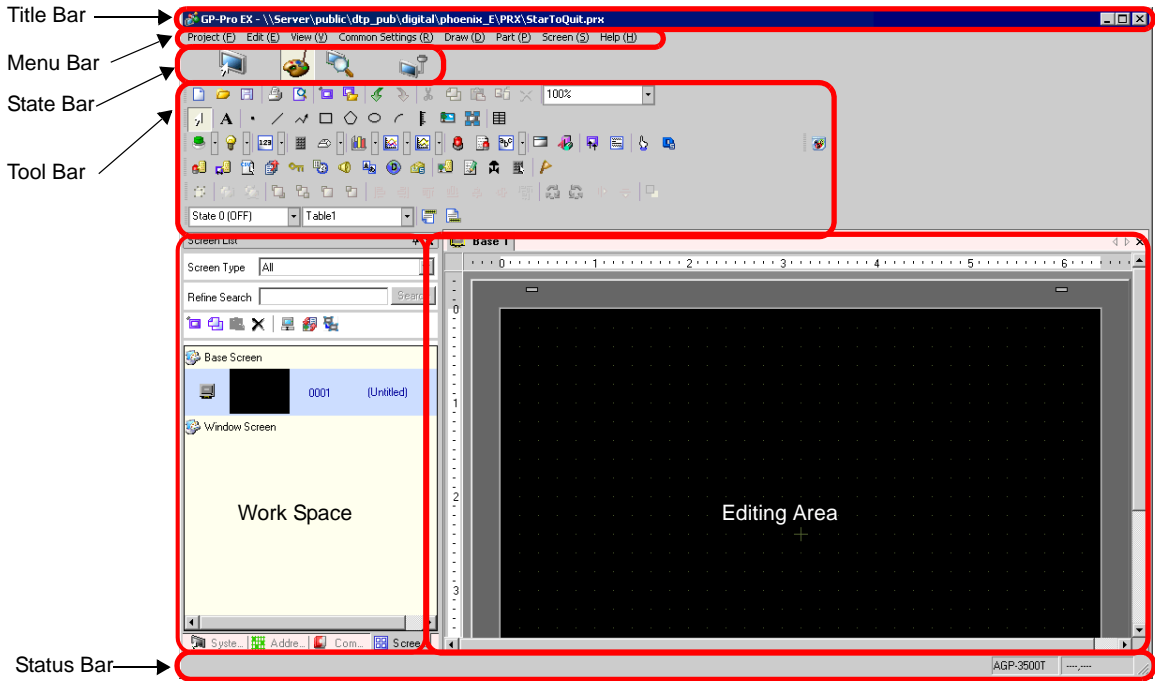


NOTE • To select multiple screens at a time, select the target screen on the [Screen List Window]’s list with the Shift key + click or the Ctrl key + click.

6.13 Settings Guide



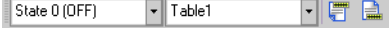





6.13.1 Main Window's Part Names

GP-Pro EX's basic screen part names and functions are as follows.




Setting	Description
Title Bar	Displays a project file name or screen title.
Menu Bar	Displays the menu to operate GP-Pro EX. Select from these to display a pull-down menu.
State Bar	Select the operation state from [System Settings], [Edit], [Preview], or [Transfer Project] to switch to the operation screen.
Tool Bar	Displays command icons, such as Part, Draw or Edit. Click one of these icons with the mouse to execute the operation. The Tool Bar can be switched between Show/Hide by selecting the [View (V)] menu - [Tool Bar (T)] command. Also, the bar can be moved by dragging it and placed in the left, right, top, or bottom of the screen. There are the following types of Tool Bar.

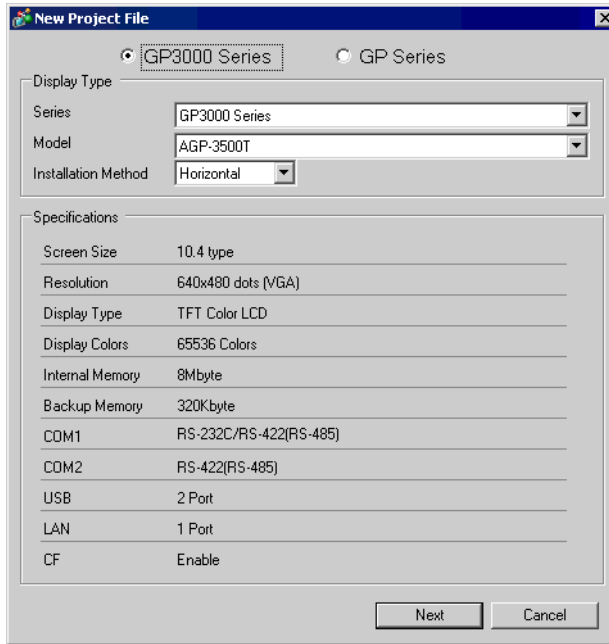
Continued

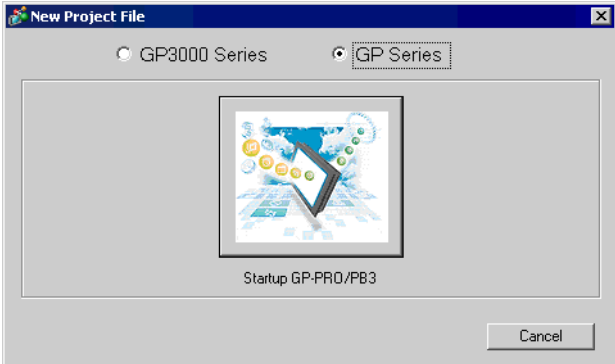
Setting	Description	
Tool Bar	Standard	
	Edit	
	View	
	Draw	
	Part	
	Package	
	Common Settings	
	Screen Block	
Work Space	Displays a Window. By dragging a Window, you can move and place it in the desired position. Displays the following types of Windows.	
System Settings Window/ Address Settings Window/ Common Setting Window/ Screen List Window	<p>Displays the [System Settings Window], [Address Settings Window], [Common Setting Window], or [Screen List Window].</p> <ul style="list-style-type: none"> • System Settings Window ☞ “ ■ System Settings Window” (page 6-81) • Address Settings Window ☞ “ ■ Address Settings Window” (page 6-82) • Common Setting Window ☞ “ ■ Common Setting Window” (page 6-83) • Screen List Window ☞ “ ■ Screen List Window” (page 6-85) 	
Properties Window	<p>Displays the selected part or screen’s attributes to confirm or edit the attributes.</p> <p>☞ “ ■ Properties Window” (page 6-87)</p> <p>NOTE</p> <ul style="list-style-type: none"> • This window is displayed as popup the first time you start up the GP. 	
Screen Data List Window	<p>Displays a list of the Draw and Parts placed on the screen by editing screens and keypads.</p> <p>☞ “ ■ Screen Data List Window” (page 6-88)</p>	
Editing Area	<p>This is an area in which to edit a screen. The editing area mainly displays Base Screens, Window Screens, or the registration of each function’s [Common Settings] and setting screens. You can change the display method of the editing area by selecting the [View (V)] menu - [Screen Block (B)] command. Also, when displaying Base Screens or Window Screens, you can change the display state by using the [View (V)] menu’s [Zoom (Z)] or [Change Language (L)] command.</p>	
Status Bar	<p>Displays the set main unit model and the coordinate position of the mouse pointer in the editing area.</p>	

6.13.2 [New] Settings Guide

Select the [Project (F)] menu - [New (N)] command, or click , and the following dialog box appears. Set the display model.

■ The Display Device Settings



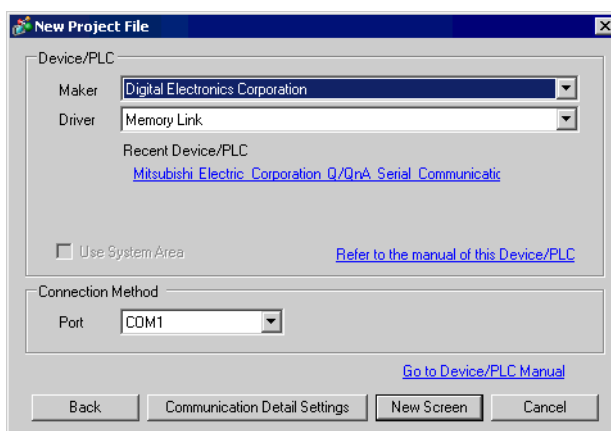
Setting	Description
Select Series	<p>Select the display to use from [GP3000 Series] or [GP Series].</p> <p>NOTE</p> <ul style="list-style-type: none"> If you select [GP Series], the following dialog box is displayed. If you click the icon, GP-Pro EX exits and GP-PRO/PB III starts up. However, GP-PRO/PB III will not start up if it is not installed. 


Continued

Setting	Description
Display Type	Set the Display Type.
Series	Select the Series.
Model	Set the display model that can be set in the selected [Series].
Installation Method	Select the display installation method from [Horizontal] or [Vertical].
Specifications	Displays the specifications of the display set in [Display Type].

■ Device/PLC Driver Settings

Click [Next] after the setting the display device and the following dialog box will be displayed. Select the Device/PLC.



Setting	Description
Device/PLC	Set the device/PLC.
Maker	Select the device/PLC's maker name.
Driver	Select the driver for the device/PLC selected in [Maker].
Recent Device/PLC	Displays the maker name and driver name of up to three devices/PLCs recently set in the [New Project File] dialog box. Click each display to set the [Maker] and [Driver].
Use System Area	Designate whether or not to assign the GP internal system data area to the device/PLC.  "6.13.6 [System Settings Window] Setting Guide ◆ System Area Settings" (page 6-110)
Refer to the manual of this Device/PLC	Displays the page in "GP-Pro EX Device/PLC Connection Manual" explaining about the selected device/PLC.
Connection Method	Set the connection method of the GP and device/PLC.
Port	Select the port to assign to the device/PLC from [COM1], [COM2], [Ethernet (UDP)], or [Ethernet (TCP)].
Go to Device/PLC Manual	Displays the top page of the "GP-Pro EX Device/PLC Connection Manual".

6.13.3 [Properties] Settings Guide

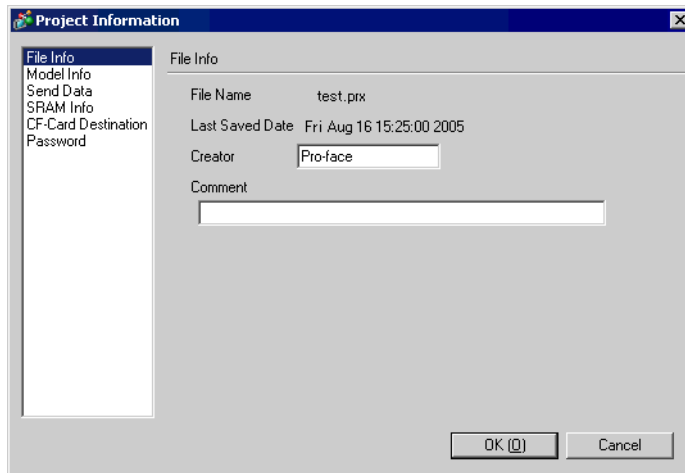
This section explains about each item displayed by selecting the [Project (F)] menu - [Properties (I)] command.

■ Project Information

Displays the screen information to check that there is no problem in sending the project file to the GP.

◆ File Info

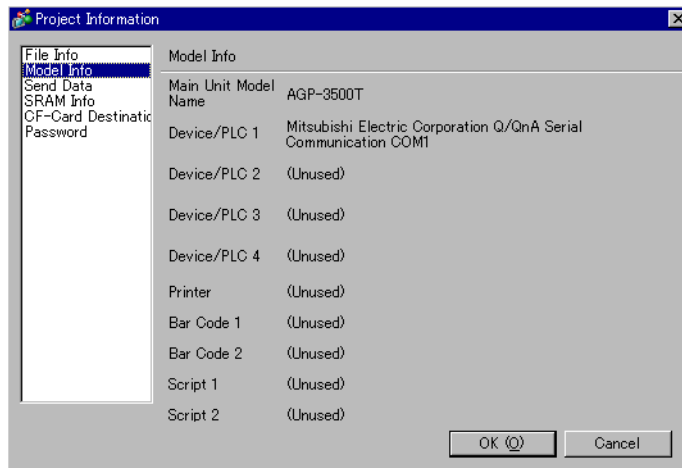
Displays information of a project file.



Setting	Description
File Name	Displays a project file name.
Last Saved Date	Displays the year, date, day of the week, and time when the last project file was saved. The format is [Day of the Week (English abbreviation)], [Month (English abbreviation)], [Date], [Time (hh:mm:ss)], and [Year].
Creator	Set the name of the project file creator. You can input up to 30 characters.
Comment	Set a comment for the project file. You can input up to 60 characters.

◆ Model Info

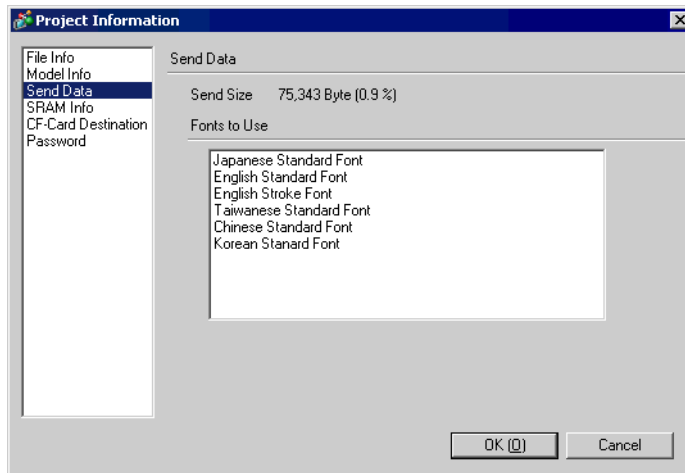
Displays the type or name of the set devices/PLCs and peripheral devices. Displays [Unused] for unused devices.




Setting	Description
Main Unit Model Name	Displays the display model name.
Device/PLC 1	Displays the set device/PLC's driver (type). ☞ "6.13.6 [System Settings Window] Setting Guide ■ [Device/PLC Settings] Settings Guide" (page 6-115)
Device/PLC 2	
Device/PLC 3	
Device/PLC 4	
Printer	Displays the set printer type. ☞ "6.13.6 [System Settings Window] Setting Guide ■ [Printer Settings] Settings Guide" (page 6-117)
Bar Code 1	Displays the set barcode type. ☞ "6.13.6 [System Settings Window] Setting Guide ■ [Bar Code Settings] Settings Guide" (page 6-117)
Bar Code 2	
Script 1	Displays the set script type. ☞ "6.13.6 [System Settings Window] Setting Guide ■ [Script Settings] Settings Guide" (page 6-118)
Script 2	

◆ Send Data

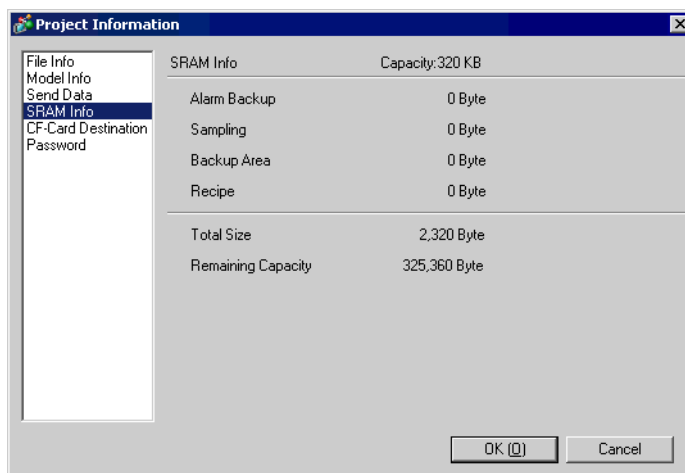
Displays information of the data to transfer to the display.



Setting	Description
Send Size	Displays the total size of the project data to send. The data exceeding the maximum size that the GP can send is displayed with red characters.
Fonts to Use	Displays a list of fonts to send. Designate the fonts for a project in [System Settings]'s [Font Settings].  "6.13.6 [System Settings Window] Setting Guide ■ [Font Settings] Settings Guide" (page 6-112)

◆ SRAM Info

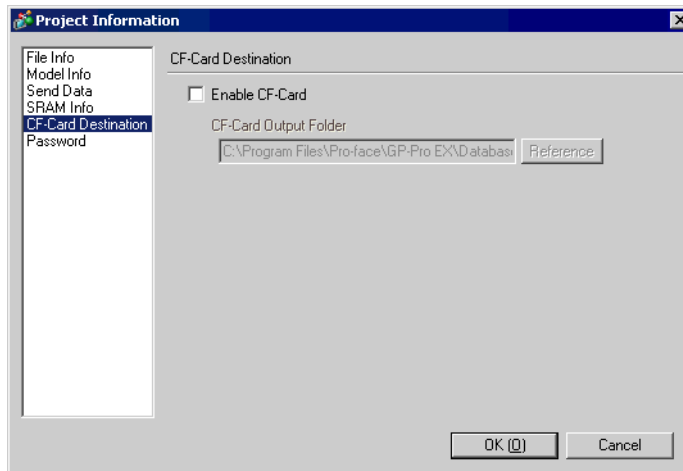
Displays information of GP's backup SRAM capacity.



Setting	Description
Capacity	Displays the set display's backup SRAM's capacity by the Kbyte.
Alarm Backup	Displays the SRAM size used for Alarm History.
Sampling	Displays the SRAM size used for Sampling.
Backup Area	Displays the SRAM size used for the GP internal device's backup.
Recipe	Displays the SRAM size used for Recipe.
Total Size	Displays the total size used for the SRAM by the byte.
Remaining Capacity	Displays the remaining capacity by the byte. If the total size exceeds the usable capacity, the value is displayed with a minus.

◆ CF-Card Destination

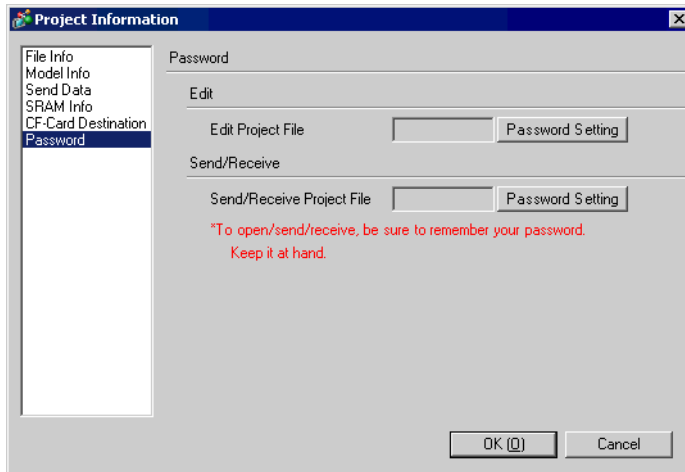
Set the storage location of the data to transfer to a CF-card in the GP.

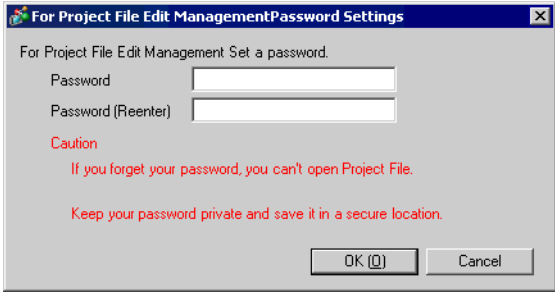
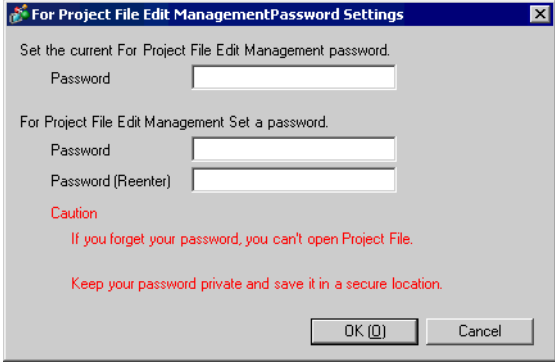


Setting	Description
Enable CF-Card	Select whether or not to use a CF-card in a project.
CF-Card Output Folder	Set the storage location of data to be saved in a CF-card. The initial storage location is \Program Files\Pro-face\GP-Pro EX\Database\ (the project file name and the folder with the same name).


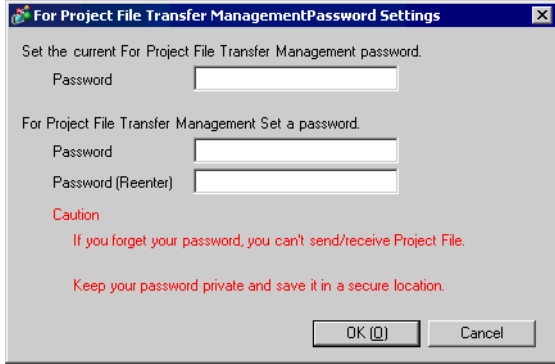
◆ Password

Set a password for editing or transferring a project file.



Setting	Description
Edit	Set a password to permit editing of a project file.
Edit Project File	Displays a password for editing with “*****” if it is set.
Password Setting	<p>Click this button and the following dialog box will be displayed.</p>  <p>If you click [Password Setting] when a password is already set, the following dialog box is displayed. Change or release the password.</p> 
Password	Set a password with up to 10 single-byte alphanumeric characters.

Continued

Setting	Description
Password (Reenter)	Confirm the password by entering the same input. NOTE • If you click [OK] leaving this box blank, the password is released.
Send/Receive	Set a password to permit a project transfer.
Send/Receive Project File	Displays a password for sending/receiving with “*****” if it is set.
Password Setting	Click this button and the following dialog box will be displayed.  If you click [Password Setting] when a password is already set, the following dialog box is displayed. Change or release the password. 
Password	Set a password with up to 24 single-byte alphanumeric characters.
Password (Reenter)	Confirm the password by entering the same input. NOTE • If you click [OK] leaving this box blank, the password is released.

■ **CF-Card Output Folder**

Set the CF-Card Destination.

 “◆ CF-Card Destination” (page 6-72)

■ **Protect Data**

Set a password for editing or transferring a project file.

 “◆ Password” (page 6-73)

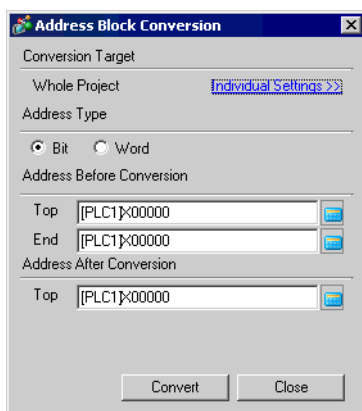
6.13.4 [Utility] Settings Guide

This section explains about each item displayed by selecting the [Project (F)] menu - [Utility (T)] command.

■ Address Block Conversion

Converts the sequential addresses set in a project as a block. There are two conversion methods: [Whole Project], which converts the addresses in the whole project as a block, and [Individual Settings], which specifies and converts the conversion target screens or features.

◆ Whole Project



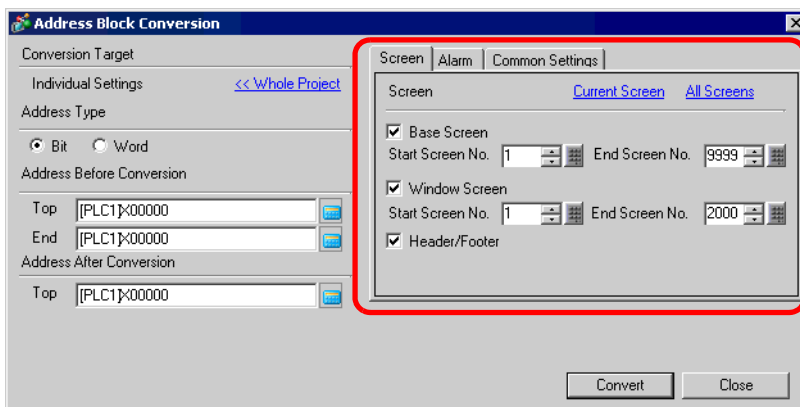
Setting	Description
Conversion Target	Displays the conversion target.
Whole Project	Display this when converting all the addresses in a project file.
Individual Settings	Goes to the mode that sets the conversion target individually. ☞ “◆ Individual Settings” (page 6-76)
Address Type	Select the address type to convert from [Bit] or [Word].
Address Before Conversion	Set the range of sequential addresses to convert.
Top	Set the top address to convert.
End	Set the end address to convert.
Address After Conversion	Set the addresses after conversion.
Top	Set the top address of the convert destination.

NOTE

- For [Address Before Conversion]’s [Top] and [End], you cannot set a different device address.
- If the total number of addresses (End Address – Top Address) before conversion is greater than the total number of addresses (End Address – Top Address) after conversion, the device’s last address is assigned to all the uncovered addresses.

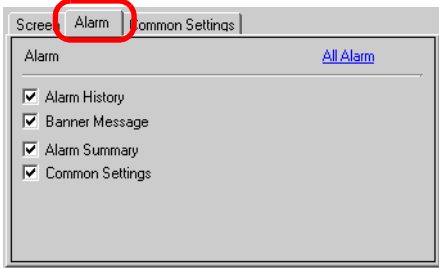
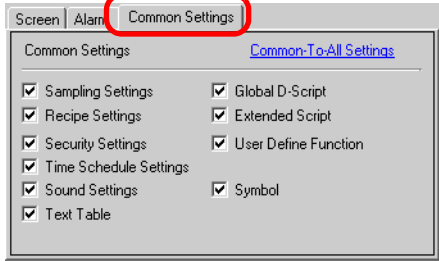
◆ Individual Settings

Sets the address conversion target screens individually and converts them.



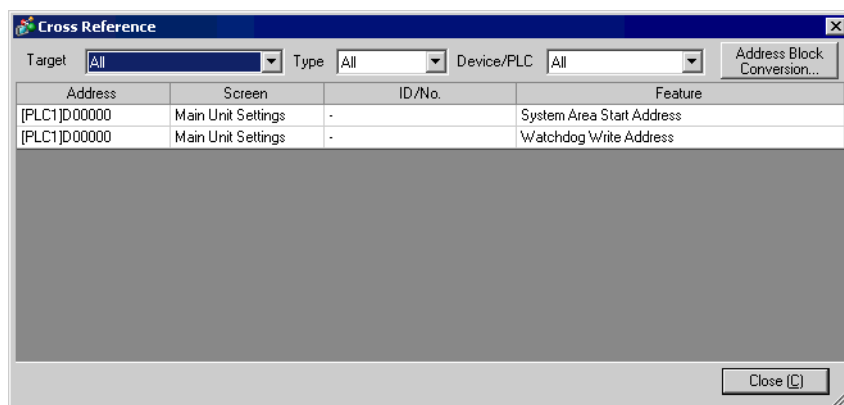
Setting	Description
Screen	Select the block conversion target screens.
Current Screen	Converts addresses as a block only for the screens that are currently being edited.
All Screens	Converts addresses as a block for all screens. Turns ON all the check boxes on the [Screen] tab.
Base Screen	Set whether or not to include Base Screens among the address block conversion targets.
Start Screen No.	Set the start screen number of the address block conversion target Base Screens from 1 to 9,999.
End Screen No.	Set the end screen number of the address block conversion target Base Screens from 1 to 9,999.
Window Screen	Set whether or not to include Window Screens among the address block conversion targets.
Start Screen No.	Set the start screen number of the address block conversion target Window Screens from 1 to 2,000.
End Screen No.	Set the end screen number of the address block conversion target Window Screens from 1 to 2,000.
Header/Footer	Set whether or not to include the addresses set for Headers/Footers among the address block conversion targets.

Continued

Setting	Description
Alarm	<p>Select the block conversion target Alarm Settings.</p> 
Alarm	<p>Select the address block conversion target Alarm features from [Alarm History], [Banner Message], [Alarm Summary], or [Common Settings].</p>
All Alarm	<p>Converts addresses as a block for all Alarm features. Switches ON in all the check boxes placed on the [Alarm] tab.</p>
Common Settings	<p>Select the block conversion target features other than [Alarm Settings] from [Common Settings].</p> 
Common Settings	<p>Select the address block conversion target features from [Sampling Settings], [Recipe Settings], [Security Settings], [Time Schedule Settings], [Sound Settings], [Text Table], [Global D-Script], [Extended Script], [User Defined Function], or [Symbol].</p>
Common-To-All Settings	<p>Converts addresses as a block for all Common Settings except Alarm. Switches ON in all the check boxes placed on the [Common Settings] tab.</p>

■ Cross Reference

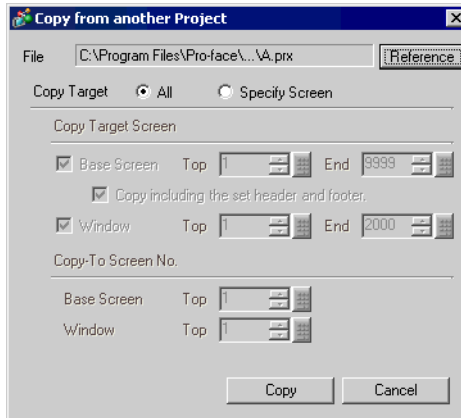
Displays the addresses used by screens and placed parts in a project.

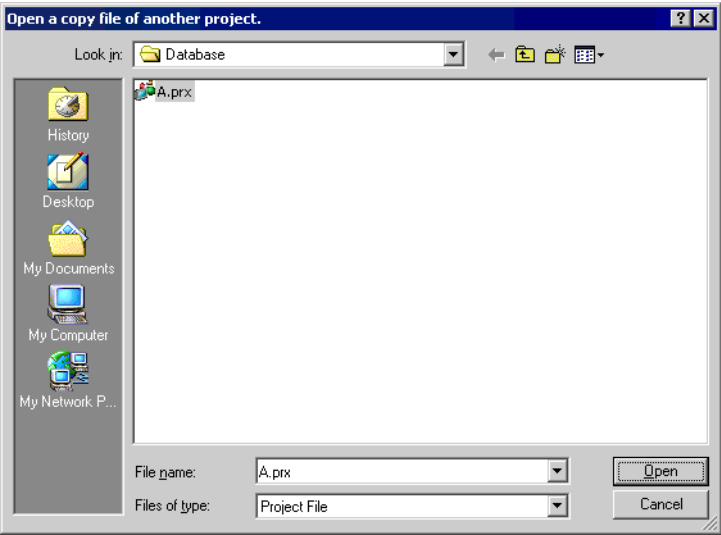


Setting	Description
Target	Select the contents to display on the Cross Reference from [All], [Current Screen], [Base Screen], [Window Screen], [Header/Footer], [Alarm], [Sampling Settings], [Recipe Settings], [Security Settings], [Time Schedule Settings], [Sound Settings], [Text Table], [Global D-Script], [Extended Script], [User Define Function], or [System Settings].
Type	Select the address type to display from [All], [Bit], or [Word].
Device/PLC	Select the contents to display on the Cross Reference from [All], [Symbol], [PLC1] (device/PLC), [#INTERNAL] (internal device address), or [#MEMLINK] (only when using memory link).
Address Block Conversion	Displays the [Address Block Conversion] dialog box. Converts the addresses set in a project as a block. There are two conversion methods: [Whole Project], which converts the addresses in the whole project as a block, and [Individual Settings], which sets and converts the conversion target screens individually. ☞ “ ■ Address Block Conversion” (page 6-75)
Address	Displays the address or symbol name in use.
Screen	Displays the the screen numbers, Alarms, Common Settings’ types, etc. in use.
ID/No.	Displays the part IDs in use or the group or block number an address belongs to.
Feature	Displays the usage of each address.

■ Copy from another Project

Specifies another project file to copy necessary screens.



Setting	Description
File	Displays the copy-from file.
Reference	<p>The following dialog box is displayed. Set the copy-from file's storage location and select a file.</p> 
Copy Target	Select the copy target from [All] or [Specify Screen].

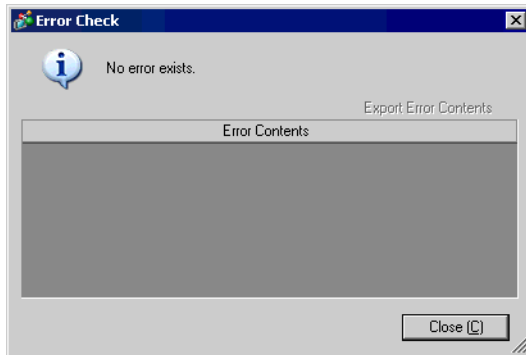
Continued

Setting	Description
Copy Target Screen	Set the target screens when the Copy Target is [Specify Screen].
Base Screen	Copies Base Screens in another project file.
Top	Set the copy-from Base Screen top number from 1 to 9,999.
End	Set the copy-from Base Screen end number from 1 to 9,999.
Copy including the set header and footer.	Set whether or not to copy including the header/footer in another project file.
Window	Copies Window Screens in another project file.
Top	Set the copy-from Window Screen top number from 1 to 2,000.
End	Set the copy-from Window Screen end number from 1 to 2,000.
Copy-To Screen No.	Set the copy-to screen numbers.
Base Screen	Set the copy-to Base Screen top number from 1 to 9,999.
Window	Set the copy-to Window Screen top number from 1 to 1,999.

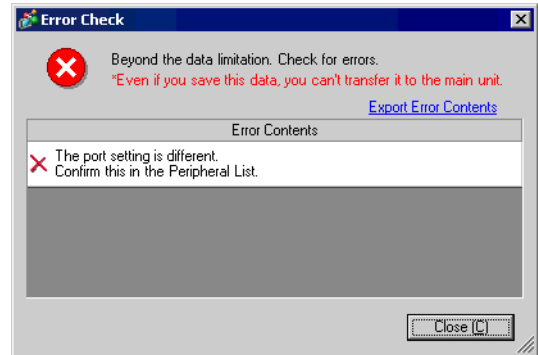
■ Error Check


Checks whether an error exists in the settings in a project.

<No error exists.>



<An error exists.>



Setting	Description
Message	Displays an error message according to a project file's state.
Export Error Contents	Outputs (exports) the contents displayed in the [Error Contents] in a text file. Set the storage location and file name of a file to export.
Error Contents	Displays a list of each error. For more details of Error Contents, refer to the following.  "30.2 Errors Displayed while Error Checking" (page 30-11)

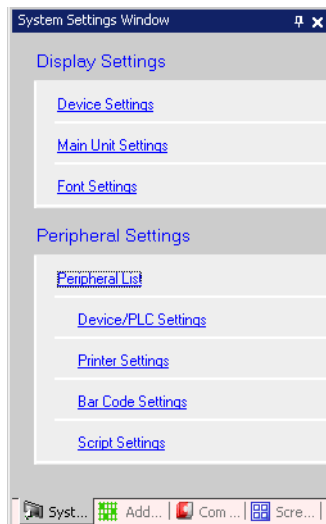
NOTE • Error checks are automatically performed when saving projects.

6.13.5 [Work Space] Settings Guide

This section explains about each window displayed by selecting the [View (V)] menu - [Work Space (W)] command.

■ System Settings Window

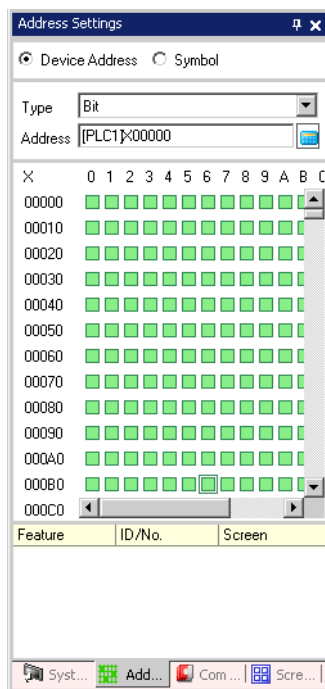
This window is used to configure system settings for a project file.



Setting	Description
Display Settings	Configure settings for the GP.
Device Settings	Displays the GP's device settings and specifications. ☞ “ ■ [Device Settings] Settings Guide” (page 6-89)
Main Unit Settings	Configure detailed settings for the GP main unit. ☞ “ ■ [Main Unit Settings] Settings Guide” (page 6-90)
Font Settings	Set a font to display on the GP. ☞ “ ■ [Font Settings] Settings Guide” (page 6-112)
Peripheral Settings	Configure settings for each peripheral device.
Peripheral List	Displays a list of the set peripheral devices. ☞ “ ■ [Peripheral List] Settings Guide” (page 6-113)
Devices/PLC Settings	Configure settings for a device/PLC. ☞ “ ■ [Device/PLC Settings] Settings Guide” (page 6-115)
Printer Settings	Configure printer settings. ☞ “ ■ [Printer Settings] Settings Guide” (page 6-117)
Bar Code Settings	Configure barcode settings. ☞ “ ■ [Bar Code Settings] Settings Guide” (page 6-117)
Script Settings	Configure script settings. ☞ “ ■ [Script Settings] Settings Guide” (page 6-118)

■ Address Settings Window

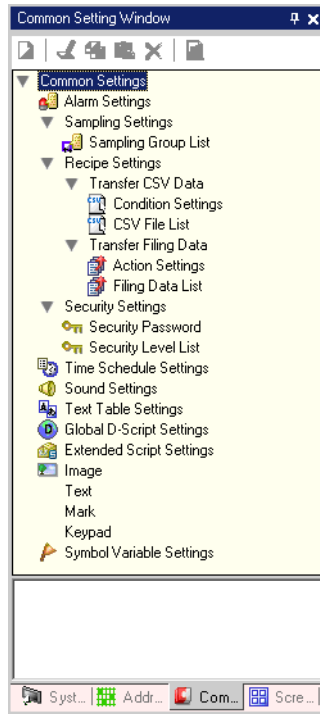
Displays a map of the device/PLC addresses in use or a list of the symbols.



Setting	Description
Select Model	Select the target for a list from [Device Address] or [Symbol].
Device Address	Displays a map of the device/PLC addresses used in a project.
Type	Select the address type to list from [Bit] or [Word].
Address	Select the address of the target to display in the map area.
Map Area	Displays a map of how the addresses are used
Symbol	Displays a list of the symbols used in a project.
Type	Select the address type to list from [Bit] or [Word].
Attribute	Select the attribute of symbols to display from [All], [Symbol], [PLC1] (Device/PLC), or [#INTERNAL] (internal device address).
Display Area	Displays a list of symbols.
Feature	Displays the usage of each address.
ID/No.	Displays the part IDs in use or the group or block number an address belongs to.
Screen	Displays the screen numbers, Common Settings type, etc.

■ Common Setting Window

Calls features common to a project file.



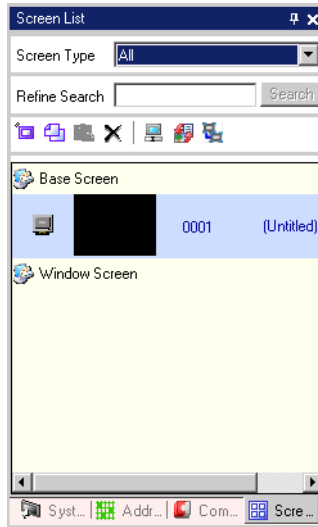
Setting		Description
Alarm Settings		Displays the setting screen to register an alarm message. ☞ "19.9.1 Alarm Settings Guide" (page 19-63)
Sampling Settings	Sampling Group List	Displays a list of each setting content for sampling groups. ☞ "24.8.1 Sampling Settings Guide" (page 24-37)
Recipe Settings	Transfer CSV Data	Condition Settings ☞ "25.10.1 Recipe Settings Guide ■ Transfer CSV Data (Condition Settings)" (page 25-56)
		CSV File List ☞ "25.10.1 Recipe Settings Guide ■ Transfer CSV Data (CSV File List)" (page 25-61)
	Transfer Filing Data	Action Settings ☞ "25.10.1 Recipe Settings Guide ■ Transfer Filing Data (Mode Settings)" (page 25-63)
		Filing Data List ☞ "25.10.1 Recipe Settings Guide ■ Transfer Filing Data (Filing Data List)" (page 25-67)






Continued

Setting		Description
Security Settings	Security Password	Displays the screen to set a security level and password. ☞ “22.5.2 Security Level List” (page 22-11)
	Security Level List	Displays a list of the screens with the security settings and the security level. ☞ “22.5.1 Password Settings” (page 22-9)
Time Schedule Settings		Displays a list of actions with the time schedule settings. ☞ “23.4 Common Settings Guide (Time Schedule Settings)” (page 23-10)
Sound Settings		Displays the screen to register sound. ☞ “26.5 Settings Guide” (page 26-13)
Text Table Settings		Displays the text table to register text. ☞ “15.7.3 Text Table Settings Guide” (page 15-49)
Global D-Script Settings		Displays a list of created global D-scripts. ☞ “20.8.1 Common Settings Guide (D-Script)” (page 20-50)
Extended Script Settings		Displays the screen to program extended scripts. ☞ “20.8.1 Common Settings Guide (D-Script)” (page 20-50)
Image Registration		Displays the [Image] screen to register images. ☞ “10.5.1 Common Settings (Image Registration)” (page 10-23)
Text		Displays the screen to register text. ☞ “15.7.2 Common Settings Guide (Text)” (page 15-48)
Mark		Displays the screen to create marks. ☞ “9.12.2 Common Settings (Mark Registration)” (page 9-77)
Keypad		Displays the screen to edit a keypad. ☞ “16.5.2 Common Settings (Keypad Registration) Settings Guide” (page 16-23)
Symbol Variable Settings		Displays the screen to register symbols. ☞ “6.9.2 Setup Procedure ■ Registering the [Symbol Variable Settings]” (page 6-45)


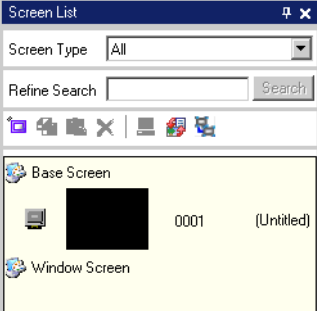
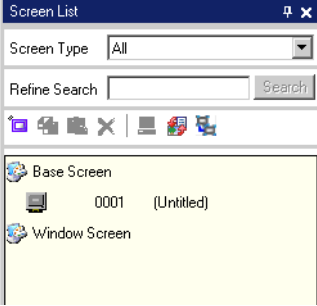

■ Screen List Window

Displays a list of created Base Screens or Window Screens.



Setting		Description
Screen Type		Select the screens to list from [All], [Base Screen], or [Window Screen].
Refine Search		Set up to 128 single-byte characters for the search target text.
Operation Button	New Screen 	Displays the [New Screen] dialog box.
	Copy 	Copies the selected screen.
	Paste 	Pastes the copied screen on the Screen List.
	Delete 	Deletes the selected screen from the project.
	Change Attribute 	The following dialog box is displayed. You can change the screen number, title, and color. <div data-bbox="610 1139 1029 1429" style="border: 1px solid gray; padding: 5px; margin: 10px auto; width: fit-content;"> </div>


Continued

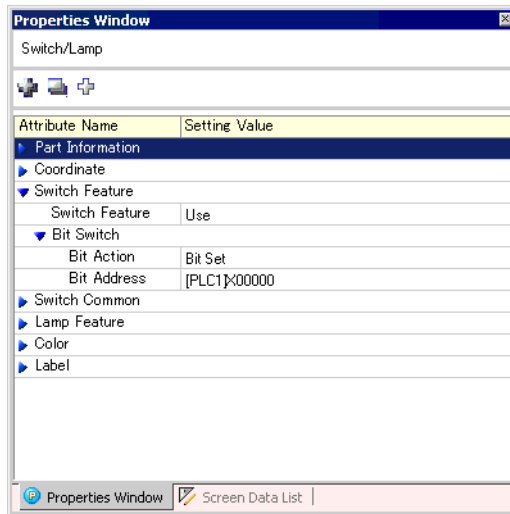
Setting		Description
Operation Button	Change Display Mode 	Changes the display mode of the [Screen List]. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p><Reduced Screen Display></p>  </div> <div style="font-size: 2em; font-weight: bold;">↔</div> <div style="text-align: center;"> <p><Text Display></p>  </div> </div>
	Nesting 	Displays screens hierarchically.
Screen List		Displays a list of screens registered in a project. Double-click the screen row you want to open and the screen is displayed in the right editing area. You can select a screen and copy or delete it easily, for example.




■ Properties Window

Displays the selected part or screen's attributes/settings. Using this window, you can check the attributes or change the settings easily.

NOTE

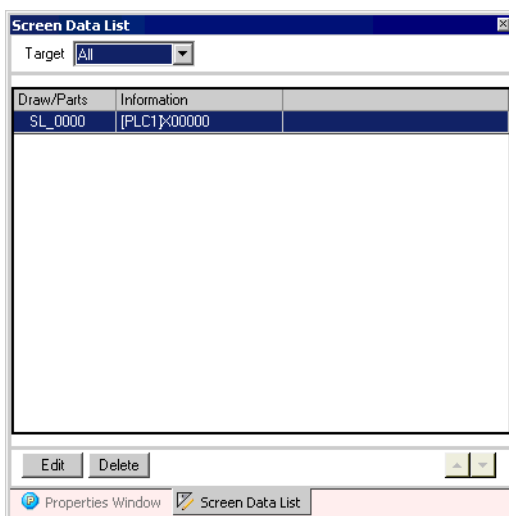
- Not all of the setting information for the selected part will be displayed in this window.
- Attributes and setting information for parts whose placement position and setting information is fixed with fixed pins will not be displayed. For more details on the fixed pins, refer to:
 "9.6.3 Fixing/Releasing Objects" (page 9-47)




Setting	Description
Part Name Display Area	The name of the selected part or screen is displayed. If multiple parts are selected, the number of selected parts is displayed.
Button Area	Opens and closes the category display on the window.
Expand All 	Expands and displays all categories.
Collapse All 	Reduces and hides all categories.
Expand to 1st Level 	Expands and displays only top level categories.
Attribute Display/Setting Area	Displays the setting content for each attribute. You can change the settings in this area.

■ Screen Data List Window

Displays a list of the Parts and Draw items placed on the screen.



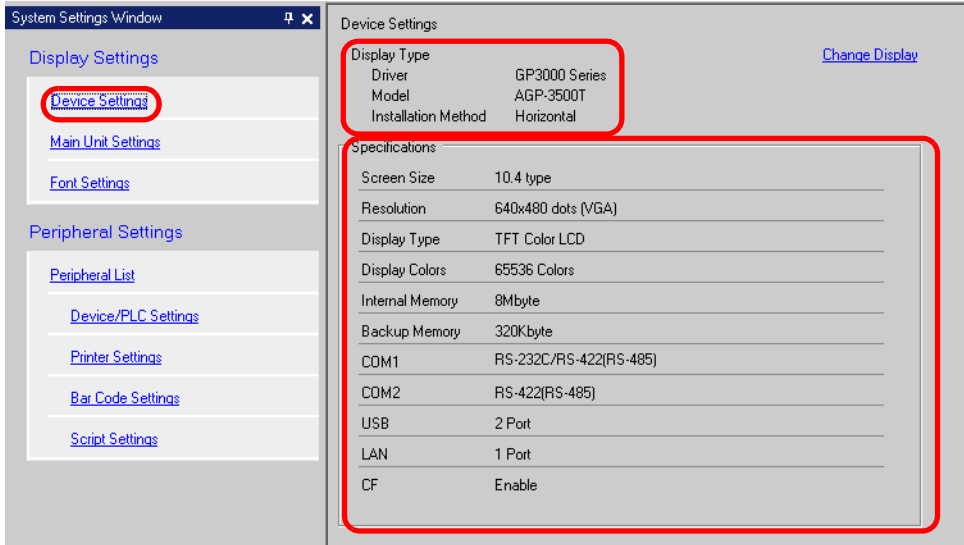
Setting	Description
Target	Select the targets to display on the display list from [All], [Draw], or [Part].
Target Assistance	Select the targets to display on the display list when the [Target] is [Draw] or [Part].
Display List	Displays a list of the Parts and Draw placed on the screen. Double-click a row and each setting dialog box opens for editing.
Draw/Parts	Displays the Draw type when the [Target] is [Draw] and the Part ID number when the [Target] is [Part]. Displays “Group Object” for a grouped target. And displays “D-Script” when [D-Script] is selected.
Information	Displays the coordinate when the [Target] is [Draw] and all the Part’s addresses when the [Target] is [Part]. Displays the ID number and comment when [D-Script] is selected, and the coordinate and all the addresses in a group when Group Object is selected.
Show Fixed Pins	You can confirm whether or not the part or drawing is fixed. For more details on the fixed pins, refer to:  “9.6.3 Fixing/Releasing Objects” (page 9-47)
Edit	Displays the setting dialog box for the Part/Draw selected on the display list.
Delete	Deletes the Part/Draw selected on the display list.
Order (Top)	Moves the item selected on the display list to the top.
Order (Bottom)	Moves the item selected on the display list to the bottom.

6.13.6 [System Settings Window] Setting Guide

This section explains about the screens called from each item displayed in the [System Settings Window].

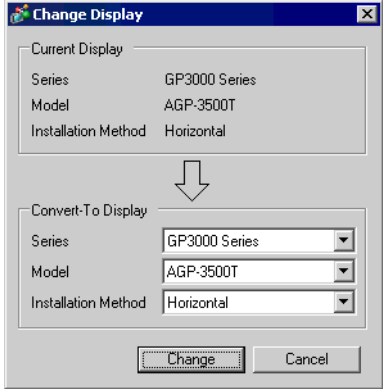
■ [Device Settings] Settings Guide

Displays the set display's specifications.



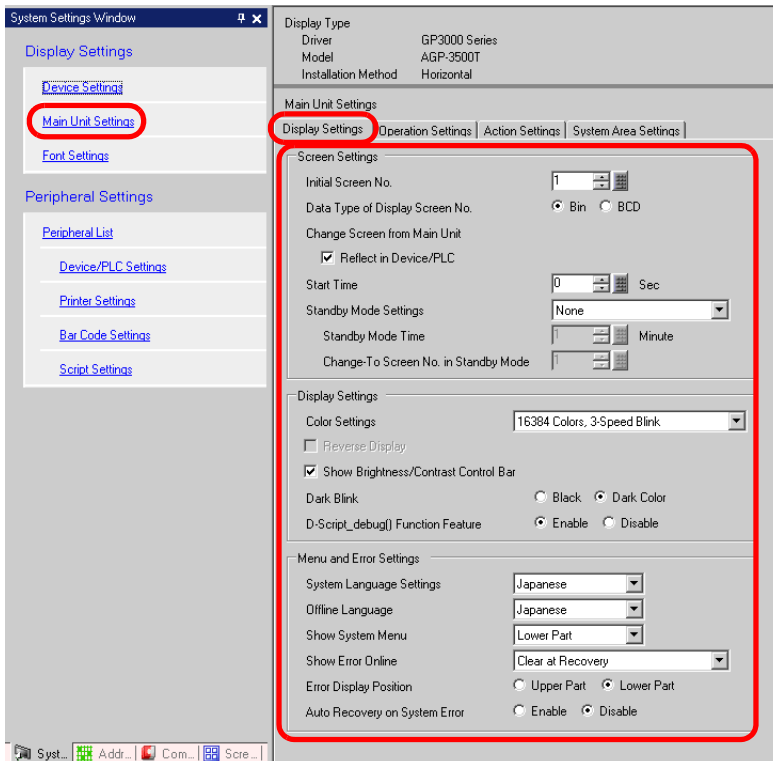
Setting	Description	
Display Type	Displays the display's model. NOTE <ul style="list-style-type: none"> Commonly displayed on all the screens called from the System Settings Window. 	
	Series	Displays the series name of a display.
	Model	Displays the model name that supports the display series.
	Installation Method	Displays the display installation method with [Horizontal] or [Vertical].
Specifications	Displays the specifications of the display set in [Display Type].	

Continued

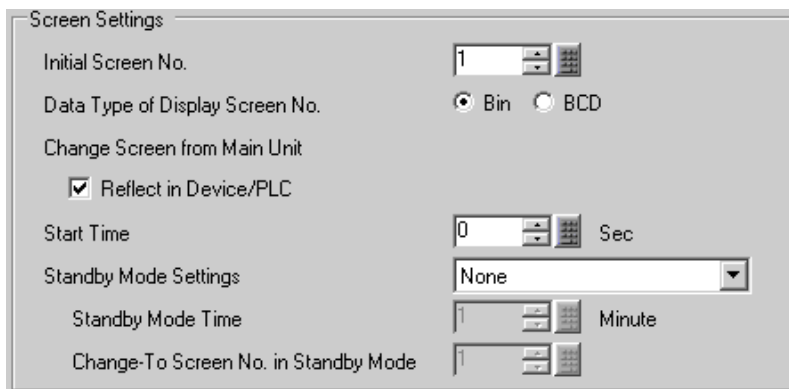
Setting	Description
Change Display	<p>The [Change Display] dialog box will appear. Change the display model to be used for the project file.</p> 
Current Display	Displays the series name, model name and installation method of the currently set display.
Convert-To Display	Set the [Series], [Model], and [Installation Method] of the change-to display.

■ [Main Unit Settings] Settings Guide

◆ Display Settings



- Screen Settings

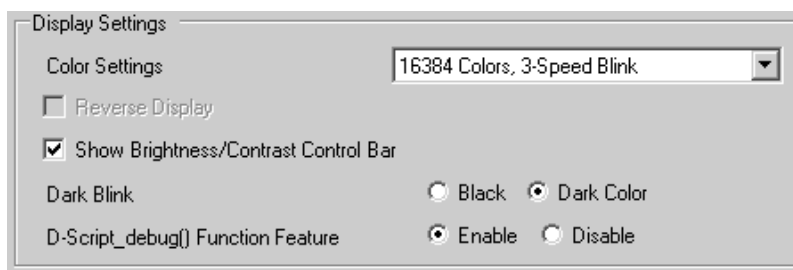


Setting	Description
Initial Screen No.	<p>Set the number of the screen that will display at startup. ☞ “12.3 Choosing the Screen that will Display when the GP Turns ON” (page 12-7)</p> <p>NOTE</p> <ul style="list-style-type: none"> • Set the screen number from 1 to 9,999 when the [Data Type of Display Screen No.] is [Bin], and from 1 to 7,999 for [BCD].
Data Type of Display Screen No.	Select the data type of the screen number specified when changing screens from [Bin] or [BCD].
Change Screen from Main Unit	Set whether or not to reflect the settings in the device/PLC when the screen is changed from the main unit.
Reflect in Device/PLC	<p>The updated screen number (the currently displayed screen number) is written into the connected device’s [System Data Area Top Address] + 8 address. This must be set to change screens from a Screen Change switch and connected device. ☞ “12.5 Changing the Displayed Screen from both Touch and a Device/PLC” (page 12-13)</p>
Start Time	Set the time it takes for the display to start up after the power turns ON from 0 to 255 seconds.
Standby Mode Settings	<p>Select the standby mode from [None], [Screen OFF], or [Screen Change].</p> <ul style="list-style-type: none"> • [None] The screen does not change to the standby mode. • [Screen OFF] Clears the screen if there is no screen touch, screen change or alarm message display after the time set in [Standby Mode Time] passes. • [Screen Change] Changes to the screen set in [Change-To Screen No. in Standby Mode] if there is no screen touch, screen change or alarm message display after the time set in [Standby Mode Time] passes.

Continued

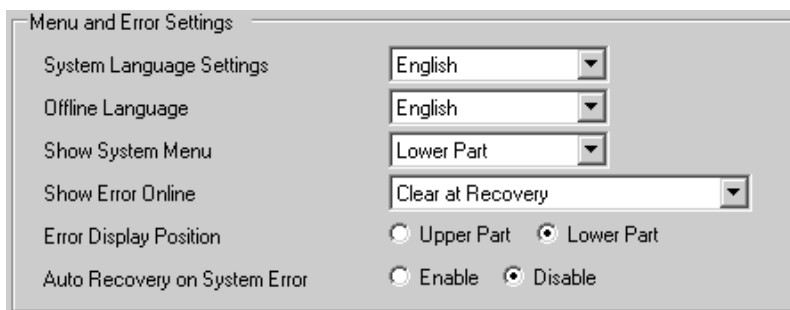
Setting		Description
Standby Mode Settings	Standby Mode Time	Set the time to automatically clear the screen to protect the display from 1 to 255 minutes. Automatically clears the screen display or changes to the set screen when the set time passes without any display operations.
	Change-To Screen No. in Standby Mode	Set the screen number to change to after the [Standby Mode Time] passes when the [Standby Mode Settings] is [Screen Change]. NOTE <ul style="list-style-type: none"> Set the screen number from 1 to 9,999 when the [Data Type of Display Screen No.] is [Bin], and from 1 to 7,999 for [BCD].

- Display Settings



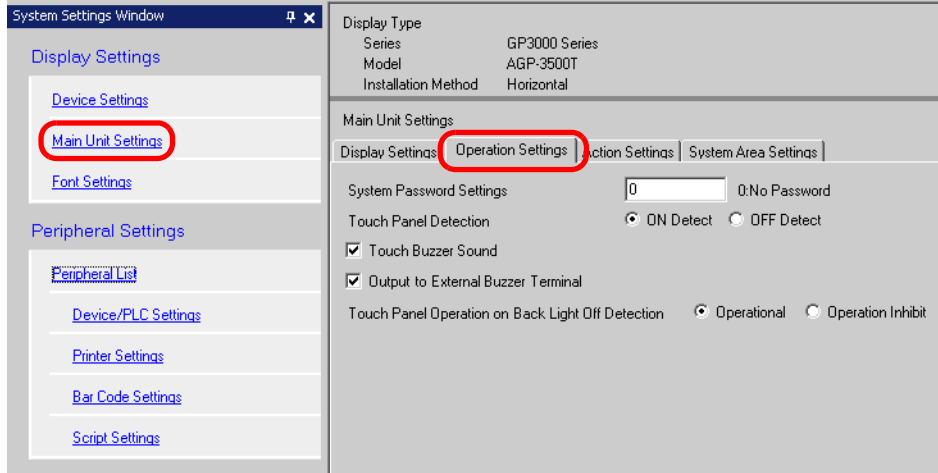
Setting	Description								
Color Settings	Set the color for the display.								
	<table border="1"> <thead> <tr> <th>Type</th> <th>Color Setting Range</th> </tr> </thead> <tbody> <tr> <td>TFT Display</td> <td>65,536 Colors, No Blink and 16,384 Colors, 3-Speed Blink</td> </tr> <tr> <td>STN Display</td> <td>4,096 Colors, 3-Speed Blink</td> </tr> <tr> <td>Monochrome Display</td> <td>Monochrome 16 Levels 3-Speed Blink</td> </tr> </tbody> </table>	Type	Color Setting Range	TFT Display	65,536 Colors, No Blink and 16,384 Colors, 3-Speed Blink	STN Display	4,096 Colors, 3-Speed Blink	Monochrome Display	Monochrome 16 Levels 3-Speed Blink
	Type	Color Setting Range							
	TFT Display	65,536 Colors, No Blink and 16,384 Colors, 3-Speed Blink							
STN Display	4,096 Colors, 3-Speed Blink								
Monochrome Display	Monochrome 16 Levels 3-Speed Blink								
Reverse Display	Set whether or not to display the screen with black/white reversed. NOTE <ul style="list-style-type: none"> This can be set only when a monochrome display is selected. 								
Show Brightness/Contrast Control Bar	Set whether or not to show the [Brightness/Contrast Control Bar] to control the brightness and contrast by touch input.								
Dark Blink	Select the reverse-to color of a part or picture with blink from [Black] or [Dark Color]. If you select [Dark Color], the blink is reversed to the dark color of the color set to the part or picture.								
D-Script_debug () Function Feature	Set whether or not to execute the debug() function data described in D-script. ☞ “21.7.1 Debug Function” (page 21-65)								

- Menu and Error Settings
Configure menu and error settings.



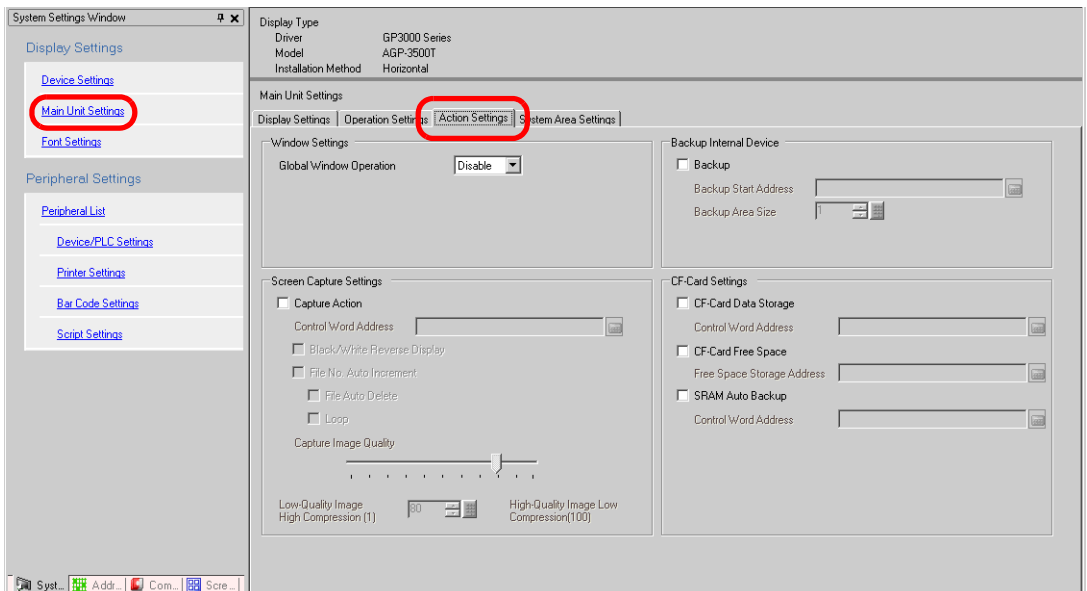
Setting	Description
System Language Settings	Set the language of “System Menu”, “Brightness/Contrast Control”, and “Error Message” (a one-line message and detail message) displayed on the GP from [Japanese] or [English].
Offline Language	Select the offline menu’s display language from [Japanese] or [English].
Show System Menu	Select the system menu position from [Do Not Display], [Upper Part], or [Lower Part].
Show Error Online	Select the timing for clearing online error displays from [None], [Clear at Recovery], or [Clear on Screen Change]. IMPORTANT <ul style="list-style-type: none"> • The error message that occurs when the device/PLC cannot be written to due to a communication error will not be deleted from the GP screen, even if [Clear at Recovery] is set. You can delete this error message by initiating a screen change.
Error Display Position	Select the error display position from [Upper Part] or [Lower Part].
Auto Recovery on System Error	Set whether or not to perform auto recovery on system errors.

◆ Operation Settings

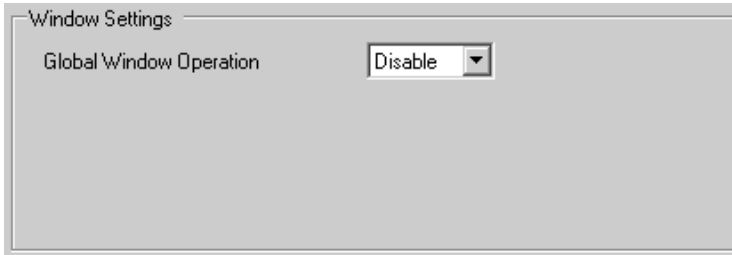


Setting	Description
System Password Settings	Set the system password for the initial settings or to go offline from 0 to 99,999,999. Set “0” when a system password is unnecessary.
Touch Panel Detection	Select the detection timing from [ON Detect] (when touching the touch panel) or [OFF Detect] (when taking your finger off the touch panel).
Touch Buzzer Sound	Set whether or not to sound the built-in buzzer when touching the screen.
Output to External Buzzer Terminal	Set whether or not to output the touch panel buzzer to the external buzzer terminal.
Touch Panel Operation on Back Light Off Detection	Set whether or not to enable the touch panel operation on back light off detection. Select from [Operational] or [Operation Inhibit].

◆ Action Settings

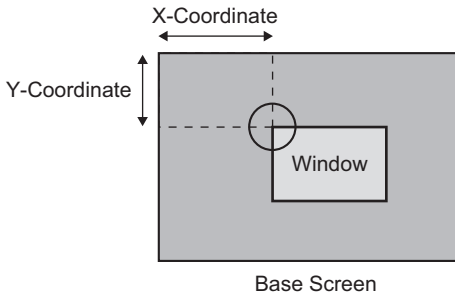

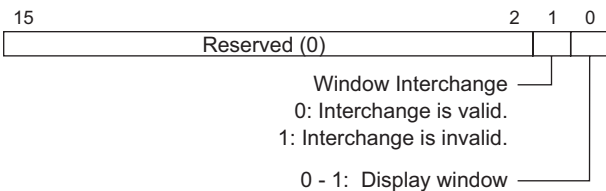


- Window Settings
Set the Global Window's display settings

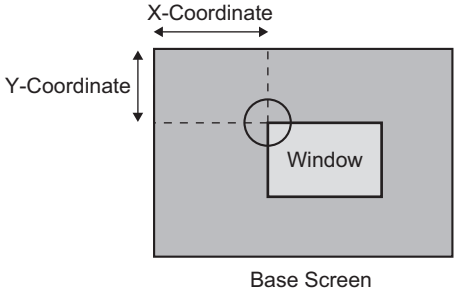


Setting	Description								
Global Window Operation	Select the action of the Global Window commonly displayed on all screens from [Disable], [Direct], or [Indirect].								
Disable	Does not set a Global Window.								
Direct	<p>Displays the Window Screen number to display and its position in a fixed state. Control the display by operating the address (LS16) in the GP internal device or the device/PLC to which the system data area is assigned.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><Setting Screen></p> </div> <div style="text-align: center;"> <p><Internal Device Addresses to Use></p> <table border="1"> <tr><td>LS0016</td><td>Control Address</td></tr> <tr><td>LS0017</td><td>(Reserved)</td></tr> <tr><td>LS0018</td><td>(Reserved)</td></tr> <tr><td>LS0019</td><td>(Reserved)</td></tr> </table> </div> </div> <ul style="list-style-type: none"> • Control Address Controls the display of a Global Window. If you turn ON Bit 0, a Window is displayed. <div style="text-align: center;"> </div> <p>NOTE</p> <ul style="list-style-type: none"> • To use a system data area on the device/PLC, set this using four sequential words of the assigned address. ☞ “◆ System Area Settings” (page 6-110) 	LS0016	Control Address	LS0017	(Reserved)	LS0018	(Reserved)	LS0019	(Reserved)
LS0016	Control Address								
LS0017	(Reserved)								
LS0018	(Reserved)								
LS0019	(Reserved)								
Window Screen No.	Set the Global Window's screen number from 1 to 2,000.								

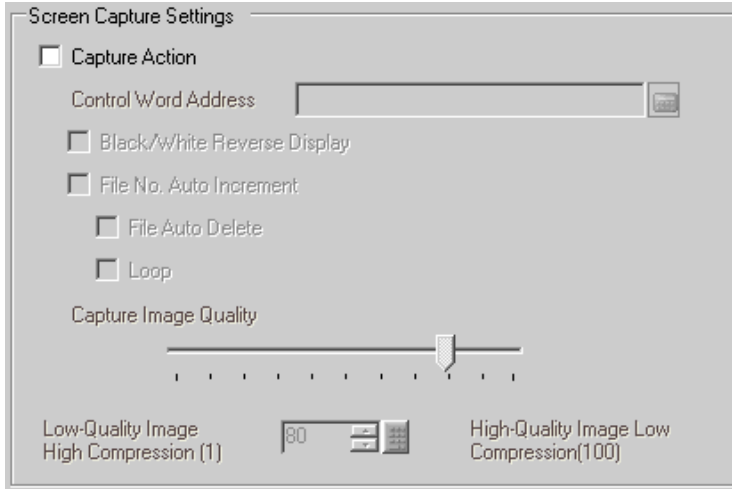
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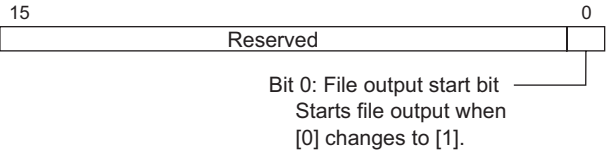
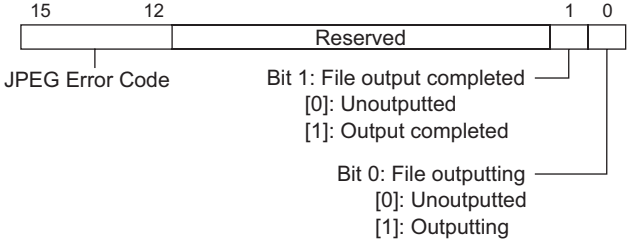
Setting		Description							
Global Window Operation	Direct	<p>Set the Global Window's display position. Even if the screen changes, the Window is displayed in the same position. The coordinate specified here is the top left corner of the Window.</p>  <p style="text-align: center;">Base Screen</p> <p>NOTE</p> <ul style="list-style-type: none"> Set the X-coordinate by 4 dots. If the display position is not set by 4 dots, the position is automatically corrected by 4 dots to the left of the specified coordinate to display the Global Window. 							
	Indirect	<p>Set the Window Screen number to display and its position by storing data in the GP internal device's address (LS16 to LS19). If you assign a system data area to the device/PLC, you can switch Window Screens or change the display position from the device/PLC.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p><Setting Screen></p>  </div> <div style="text-align: center;"> <p><Internal Device Addresses to Use></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>LS0016</td><td>Control Address</td></tr> <tr><td>LS0017</td><td>Window Screen No.</td></tr> <tr><td>LS0018</td><td>Display Position (X-Coordinate)</td></tr> <tr><td>LS0019</td><td>Display Position (Y-Coordinate)</td></tr> </table> </div> </div> <ul style="list-style-type: none"> Control Address Controls the display of a Global Window. If you turn ON Bit 0, a Window is displayed.  <ul style="list-style-type: none"> Window Screen No. Specify the number of the Window Screen you want to display from 1 to 2,000. 	LS0016	Control Address	LS0017	Window Screen No.	LS0018	Display Position (X-Coordinate)	LS0019
LS0016	Control Address								
LS0017	Window Screen No.								
LS0018	Display Position (X-Coordinate)								
LS0019	Display Position (Y-Coordinate)								

Continued

Setting		Description
Global Window Operation	Indirect	<ul style="list-style-type: none"> • Display Position X-Coordinate/Y-Coordinate Set the Global Window's display position. If you change the value to store in the address, you can move the Window. The coordinate specified here is the top left corner of the Window.  <p style="text-align: center;">Base Screen</p> <p>NOTE</p> <ul style="list-style-type: none"> • To use a system data area on the device/PLC, set this using four sequential words of the assigned address. ☞ “◆ System Area Settings” (page 6-110)
	Data Type	Select the type of data to store in the address from [Bin] or [BCD].

- Screen Capture Settings
Prints hard copy of the GP screen.






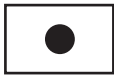



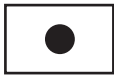









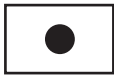



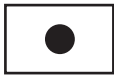









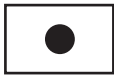



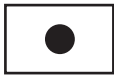






Setting	Description						
Capture Action	Set whether or not to perform a screen capture.						
Control Word Address	<p>Set the control word address to trigger the screen capture. Three words are used starting from the designated [Control Word Address] to check the file number, file output execution, and saving results (status).</p> <ul style="list-style-type: none"> • About Address <table border="1" data-bbox="581 981 985 1083"> <tr> <td>Address +0</td> <td>Control</td> </tr> <tr> <td>Address +1</td> <td>Status</td> </tr> <tr> <td>Address +2</td> <td>Hard Copy File No.</td> </tr> </table> <p>Control</p>  <p>Status</p> 	Address +0	Control	Address +1	Status	Address +2	Hard Copy File No.
Address +0	Control						
Address +1	Status						
Address +2	Hard Copy File No.						

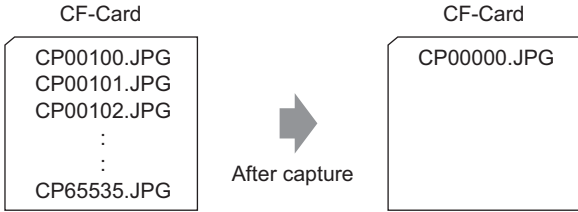
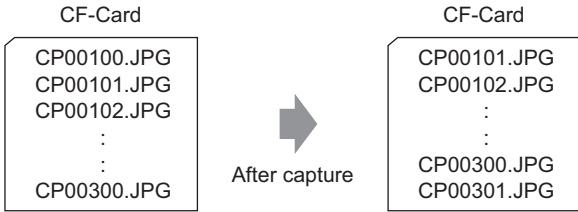
Continued

Setting	Description																																	
Control Word Address	<p>Details of JPEG Error Code</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Bit 12 to 15</th> <th style="text-align: center;">Description</th> <th style="text-align: center;">Details</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0000</td> <td>Completed Successfully</td> <td>When the process was completed successfully.</td> </tr> <tr> <td style="text-align: center;">0001</td> <td>Reserved</td> <td></td> </tr> <tr> <td style="text-align: center;">0010</td> <td>Reserved</td> <td></td> </tr> <tr> <td style="text-align: center;">0011</td> <td>Reserved</td> <td></td> </tr> <tr> <td style="text-align: center;">0100</td> <td>No CF-Card</td> <td>When a CF-card is not inserted or the CF-card hatch is open during screen capture or when JPEG data is displayed.</td> </tr> <tr> <td style="text-align: center;">0101</td> <td>CF Write Error</td> <td>When there is not sufficient free space in the CF-card or the CF-card is removed while the data is written during screen capture.</td> </tr> <tr> <td style="text-align: center;">0110</td> <td>Reserved</td> <td></td> </tr> <tr> <td style="text-align: center;">0111</td> <td>CF-Card Card Error</td> <td>When the CF-card is unformatted.</td> </tr> <tr> <td style="text-align: center;">1000</td> <td>Reserved</td> <td></td> </tr> <tr> <td style="text-align: center;">1001</td> <td>Excess of No. of Auto Increment Files</td> <td>When the file number exceeds 65,535 in the auto increment feature.</td> </tr> </tbody> </table> <p>(Hard Copy File No.) Designates the “*****” portion in a screen capture file’s name “CP*****.jpg”. The value can be from 0 to 65,535. When using the [File No. Auto Increment] function, this address will automatically store the file number.</p> <ul style="list-style-type: none"> <p>Details of Capture Action</p> <p>In the file output completion bit, the status address Bit 1 turns ON when the capture process was completed. After the capture process was completed, confirm that the file output completion bit is ON and then turn OFF the file output bit from the device/PLC. If the file output bit is turned OFF, the GP turns OFF the file output completion bit. The timing of the control and status during capture is as follows.</p> <div style="text-align: center;"> <p style="text-align: center;">○=GP turns OFF. ◆=Turn OFF the bit.</p> </div> <p>NOTE</p> <ul style="list-style-type: none"> If you turn OFF the file output bit (control) before the file output completion bit turns ON, the file output completion bit is automatically turned OFF. If an error occurs while processing screen capture, the status area is not cleared when the control address’ trigger bit is turned OFF. It will be cleared next time the process is completed successfully. 	Bit 12 to 15	Description	Details	0000	Completed Successfully	When the process was completed successfully.	0001	Reserved		0010	Reserved		0011	Reserved		0100	No CF-Card	When a CF-card is not inserted or the CF-card hatch is open during screen capture or when JPEG data is displayed.	0101	CF Write Error	When there is not sufficient free space in the CF-card or the CF-card is removed while the data is written during screen capture.	0110	Reserved		0111	CF-Card Card Error	When the CF-card is unformatted.	1000	Reserved		1001	Excess of No. of Auto Increment Files	When the file number exceeds 65,535 in the auto increment feature.
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Continued

Setting	Description																							
<p>Black/White Reverse Display</p>	<p>Set whether or not to save the screen captured in a CF-card with black and white reversed.</p> <p>NOTE</p> <ul style="list-style-type: none"> On a monochrome or color model of GP, the black/white reverse states are displayed as follows. <table border="1" data-bbox="411 382 1252 952"> <thead> <tr> <th rowspan="2">PC Screen</th> <th rowspan="2">GP Type</th> <th rowspan="2">GP Screen</th> <th colspan="2">Black/White Reverse Display (in CF-Card)</th> </tr> <tr> <th>Enable</th> <th>Disable</th> </tr> </thead> <tbody> <tr> <td rowspan="2">  (White O) </td> <td rowspan="2">Monochrome</td> <td>  (Normal) Black </td> <td>  Black </td> <td>  White </td> </tr> <tr> <td>  (Reverse) White </td> <td>  Black </td> <td>  White </td> </tr> <tr> <td rowspan="2">  (Other Colors) e.g.: Green </td> <td rowspan="2">Color</td> <td>  White </td> <td>  Black </td> <td>  White </td> </tr> <tr> <td>  Green </td> <td>  Green </td> <td>  Green </td> </tr> </tbody> </table> <ul style="list-style-type: none"> You can reverse only black or only white. Color inversion is not available. 	PC Screen	GP Type	GP Screen	Black/White Reverse Display (in CF-Card)		Enable	Disable	 (White O)	Monochrome	 (Normal) Black	 Black	 White	 (Reverse) White	 Black	 White	 (Other Colors) e.g.: Green	Color	 White	 Black	 White	 Green	 Green	 Green
PC Screen	GP Type				GP Screen	Black/White Reverse Display (in CF-Card)																		
		Enable	Disable																					
 (White O)	Monochrome	 (Normal) Black	 Black	 White																				
		 (Reverse) White	 Black	 White																				
 (Other Colors) e.g.: Green	Color	 White	 Black	 White																				
		 Green	 Green	 Green																				
<p>File No. Auto Increment</p>	<p>When a screen is captured, a new file is created with a file name automatically assigned (numbering) by adding 1 to the highest file number of files saved on the CF-card.</p> <p>The automatically numbered file number will be written to designated [Control Word Address] +2.</p> <p>Numbering will occur to a maximum file number of 65535. After that screen capture will not function. To continue, use the [File Auto Delete] function or the [Loop] function.</p> <p>NOTE</p> <ul style="list-style-type: none"> The GP searches for the highest file number upon GP power-up, upon opening/closing of the CF-card cover, and upon insertion/removal of a CF-card. When using this function, file numbers set to the designated [Control Word Address] +2 are ignored. 																							

Continued

Setting	Description
<p>File Auto Delete</p>	<p>Deletes existing files and allows new files to be saved even when the CF-Card does not have sufficient free space or the file number exceeds 65535.</p> <p><When a file with the highest file number exists> When a file exists in the CF-card with the highest file number (65535), all existing files are deleted and new files are created starting from file number 0. e.g.) When “CP65535.JPG” exists in the CF-card</p> <div style="text-align: center;">  <p>The diagram shows two boxes representing CF-Cards. The left box, labeled 'CF-Card', contains a list of files: CP00100.JPG, CP00101.JPG, CP00102.JPG, followed by vertical dots, and CP65535.JPG. An arrow labeled 'After capture' points to the right box, also labeled 'CF-Card', which contains only CP00000.JPG.</p> </div> <p>All screen capture files in the CF-card “CP*****.JPG” are deleted and “CP00000.JPG” is saved.</p> <p>NOTE</p> <ul style="list-style-type: none"> • It can take from a few seconds to a few minutes to delete all files. <p><If no free space is available on the CF-card> This feature deletes the file with the lowest file number and creates a file with the highest file number + 1. e.g.) Files with file numbers CP00100.JPG to CP00300.JPG are saved on the CF-Card.</p> <div style="text-align: center;">  <p>The diagram shows two boxes representing CF-Cards. The left box, labeled 'CF-Card', contains a list of files: CP00100.JPG, CP00101.JPG, CP00102.JPG, followed by vertical dots, and CP00300.JPG. An arrow labeled 'After capture' points to the right box, also labeled 'CF-Card', which contains a list of files: CP00101.JPG, CP00102.JPG, followed by vertical dots, CP00300.JPG, and CP00301.JPG.</p> </div> <p>The file with the smallest number, “CP00100.JPG”, is deleted and the new file “CP00301.JPG” is created.</p>

Continued

Setting	Description																																														
<p>Loop</p>	<p>During screen capture, a new file is created with the file number assigned by adding 1 to the file number with the most recent time stamp among file numbers in the CF-card. When files with file Nos. 00000 through 65535 exist on the CF-card, the files will be overwritten sequentially from file No. 00000 and the screen captures will continue.</p> <p>NOTE</p> <ul style="list-style-type: none"> File timestamps are checked each time a file is created. <p><The latest file has the highest file number> When the latest file number is 65535, a new file is created with file No. 00000. e.g.) Files with file numbers “CP65531.JPG” to “CP65535.JPG” are saved on the CF-Card.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> CF-Card <table border="1" style="font-size: small;"> <tr><td>CP65531.JPG</td><td>9:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> </div> <div style="font-size: 2em; margin: 0 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> CF-Card <table border="1" style="font-size: small;"> <tr><td>CP00000.JPG</td><td>14:00</td></tr> <tr><td>CP65531.JPG</td><td>9:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> </div> </div> <p>A new file, “CP00000.JPG”, is created.</p> <p><If no free space is available on the CF-card> During screen capture, the oldest file is deleted and the new file is saved with a file number 1 larger than the latest file. e.g.) When the latest file is “CP00000.JPG”</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;"> CF-Card <table border="1" style="font-size: small;"> <tr><td>CP00000.JPG</td><td>14:00</td></tr> <tr><td>CP65531.JPG</td><td>9:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> </div> <div style="font-size: 2em; margin: 0 20px;">➔</div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> CF-Card <table border="1" style="font-size: small;"> <tr><td>CP00000.JPG</td><td>14:00</td></tr> <tr><td>CP00001.JPG</td><td>15:00</td></tr> <tr><td>CP65532.JPG</td><td>10:00</td></tr> <tr><td>CP65533.JPG</td><td>11:00</td></tr> <tr><td>CP65534.JPG</td><td>12:00</td></tr> <tr><td>CP65535.JPG</td><td>13:00</td></tr> </table> </div> </div> <p>The oldest file, “CP65531.JPG”, is deleted and the new file “CP00001.JPG” is created.</p> <p>NOTE</p> <ul style="list-style-type: none"> When a file is deleted due to insufficient free space, the oldest file is deleted in order to create a new file. In such a case, it may take twice as long to save a file compared to saving when there is sufficient free space. 	CP65531.JPG	9:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00	CP00000.JPG	14:00	CP65531.JPG	9:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00	CP00000.JPG	14:00	CP65531.JPG	9:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00	CP00000.JPG	14:00	CP00001.JPG	15:00	CP65532.JPG	10:00	CP65533.JPG	11:00	CP65534.JPG	12:00	CP65535.JPG	13:00
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<p>Capture Image Quality</p>	<p>Set the capture image quality from 1 to 100. You can also set by directly inputting numeric values.</p> <p>1 — Low-Quality Image, High Compression 100 — High Quality Image, Low Compression</p>																																														

- Backup Internal Device

Copies data stored in the internal device address's user area to the backup SRAM. If you set the Backup Internal Device, the GP will start up maintaining the data stored in the internal device address when you turn ON the GP again.

IMPORTANT

- The data stored in the GP internal device is cleared when turning OFF the GP or when the GP goes offline. You can use this function to back up the data in the user area.

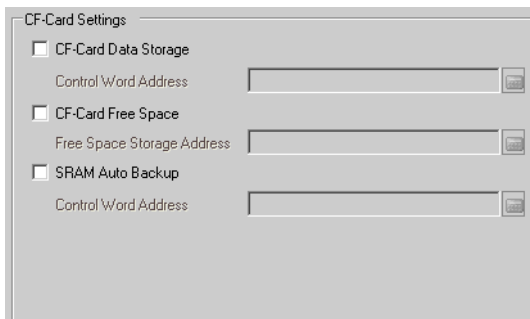


Setting	Description																							
Backup	Set whether or not to backup the GP internal device.																							
	<p>NOTE</p> <ul style="list-style-type: none"> Backs up the data stored in sequential addresses in the user area. Select the user area range from LS or USR (system area or USR for the memory link method). You cannot back up multiple ranges. If you select the LS area in the direct access method, only one of the two user areas (red frame portion) is backed up. This holds true for selecting the system area in the memory link method. <table border="0" style="width: 100%; text-align: center;"> <tr> <td style="width: 30%;"></td> <td style="width: 35%;">Direct Access Method LS Area</td> <td style="width: 35%;">Memory Link Method System Area</td> </tr> <tr> <td>LS0000</td> <td>System Data Area</td> <td>System Data Area 0000</td> </tr> <tr> <td>LS0020</td> <td style="border: 2px solid red;">Read Area</td> <td style="border: 2px solid red;">User Area 0020</td> </tr> <tr> <td>(LS0276)</td> <td style="border: 2px solid red;">User Area</td> <td></td> </tr> <tr> <td>LS2032</td> <td>Special Relay Area</td> <td>Special Relay Area 2032</td> </tr> <tr> <td>LS2048</td> <td>Reserved Area</td> <td>Reserved Area 2048</td> </tr> <tr> <td>LS2096</td> <td style="border: 2px solid red;">User Area</td> <td style="border: 2px solid red;">User Area 2096</td> </tr> <tr> <td>LS8999</td> <td></td> <td>8999</td> </tr> </table>		Direct Access Method LS Area	Memory Link Method System Area	LS0000	System Data Area	System Data Area 0000	LS0020	Read Area	User Area 0020	(LS0276)	User Area		LS2032	Special Relay Area	Special Relay Area 2032	LS2048	Reserved Area	Reserved Area 2048	LS2096	User Area	User Area 2096	LS8999	
	Direct Access Method LS Area	Memory Link Method System Area																						
LS0000	System Data Area	System Data Area 0000																						
LS0020	Read Area	User Area 0020																						
(LS0276)	User Area																							
LS2032	Special Relay Area	Special Relay Area 2032																						
LS2048	Reserved Area	Reserved Area 2048																						
LS2096	User Area	User Area 2096																						
LS8999		8999																						

Continued

Setting	Description						
Backup Start Address	<p>Set the start address of the internal device to back up. Set the start address within the range to ensure the [Backup Area Size].</p> <p>For direct access method, the start address should be set within the range of LS20 to LS2031, LS2096 to LS8999, or USR0 to USR29999.</p> <p>For memory link method, the start address should be set within the range of 20 to 2031, 2096 to 8999, or USR0 to USR29999.</p>						
Backup Area Size	<p>Set the internal device size to back up.</p> <p>IMPORTANT</p> <ul style="list-style-type: none"> If the [Backup Start Address] + [Backup Area Size] exceeds the valid range of the internal device's backup, the backup function will not work. <p>NOTE</p> <ul style="list-style-type: none"> For the LS area or MtoM device (memory link), set from 1 to 6,096. For the USR area, set from 1 to 30,000. The internal device's backup size depends on the backup area size. <p><Calculation> $16 + (4^{*1} \times \text{Backup Area Size})$ e.g.)</p> <table border="1" data-bbox="415 838 1071 942"> <thead> <tr> <th>Setting</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Backup Start Address</td> <td>LS2096</td> </tr> <tr> <td>Backup Area</td> <td>6096</td> </tr> </tbody> </table> <p><Calculation Result> $(16) + (4 \times 6096) = 24,400$ bytes (approximately 24Kbytes)</p> <p>*1 The value is 4 for the LS device address and the memory link. The value is 2 for the USR device address. If the Backup Area Size is an odd number, add 1 to the value.</p>	Setting	Description	Backup Start Address	LS2096	Backup Area	6096
Setting	Description						
Backup Start Address	LS2096						
Backup Area	6096						

- CF-Card Settings
Configure settings to save data in a CF-card.



Setting	Description																																															
CF-Card Data Storage	Set whether or not to save the data stored in the backup SRAM when the GP is active, such as filing data or CSV files (Alarm, Sampling, etc.), in a CF-card. ☞ "6.14.2 Restrictions for CF-Card" (page 6-135)																																															
Control Word Address	<p>This address controls the writing of data to the CF-card. Writes a command to the address after designating a file number.</p> <p style="text-align: center;">Control Word Address <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>Command/Status</td></tr><tr><td>+1 File No.</td></tr></table></p> <p><Command/Status> Write the command and the data is written to the CF-card. The operation result (status) is reflected in the address.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Mode</th> <th>Word Data</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td rowspan="14">Command</td> <td>0001h</td> <td>Filing Data</td> </tr> <tr> <td>0002h</td> <td>GP-PRO/PB III for Windows Logging data (compatible)</td> </tr> <tr> <td>0003h</td> <td>GP-PRO/PB III for Windows Line Chart data (compatible)</td> </tr> <tr> <td>0004h</td> <td>GP-PRO/PB III for Windows Sampling data (compatible)</td> </tr> <tr> <td>0005h</td> <td>Block 1's Alarm History data</td> </tr> <tr> <td>0006h</td> <td>Block 2's Alarm History data</td> </tr> <tr> <td>0007h</td> <td>Block 3's Alarm History data</td> </tr> <tr> <td>0008h</td> <td>Block 4's Alarm History data</td> </tr> <tr> <td>0009h</td> <td>Block 5's Alarm History data</td> </tr> <tr> <td>000ah</td> <td>Block 6's Alarm History data</td> </tr> <tr> <td>000bh</td> <td>Block 7's Alarm History data</td> </tr> <tr> <td>000ch</td> <td>Block 8's Alarm History data</td> </tr> <tr> <td>0020h</td> <td>GP-PRO/PB III for Windows Logging loop auto-save start (compatible)</td> </tr> <tr> <td>0021h</td> <td>GP-PRO/PB III for Windows Logging loop auto-save completion (compatible)</td> </tr> <tr> <td rowspan="6">Status</td> <td>0000h</td> <td>Completed Successfully</td> </tr> <tr> <td>0100h</td> <td>Write Error</td> </tr> <tr> <td>0200h</td> <td>No CF-card is inserted, or the cover is open.</td> </tr> <tr> <td>0300h</td> <td>No data to be loaded (when no data is specified)</td> </tr> <tr> <td>0400h</td> <td>File No. Error (File number is outside of range)</td> </tr> <tr> <td>2000h</td> <td>GP-PRO/PB III for Windows Logging loop auto-save responding correctly (compatible) While the Control Address has this value, the auto-save mode continues. When the value is changed, the auto-save mode finishes.</td> </tr> </tbody> </table>	Command/Status	+1 File No.	Mode	Word Data	Description	Command	0001h	Filing Data	0002h	GP-PRO/PB III for Windows Logging data (compatible)	0003h	GP-PRO/PB III for Windows Line Chart data (compatible)	0004h	GP-PRO/PB III for Windows Sampling data (compatible)	0005h	Block 1's Alarm History data	0006h	Block 2's Alarm History data	0007h	Block 3's Alarm History data	0008h	Block 4's Alarm History data	0009h	Block 5's Alarm History data	000ah	Block 6's Alarm History data	000bh	Block 7's Alarm History data	000ch	Block 8's Alarm History data	0020h	GP-PRO/PB III for Windows Logging loop auto-save start (compatible)	0021h	GP-PRO/PB III for Windows Logging loop auto-save completion (compatible)	Status	0000h	Completed Successfully	0100h	Write Error	0200h	No CF-card is inserted, or the cover is open.	0300h	No data to be loaded (when no data is specified)	0400h	File No. Error (File number is outside of range)	2000h	GP-PRO/PB III for Windows Logging loop auto-save responding correctly (compatible) While the Control Address has this value, the auto-save mode continues. When the value is changed, the auto-save mode finishes.
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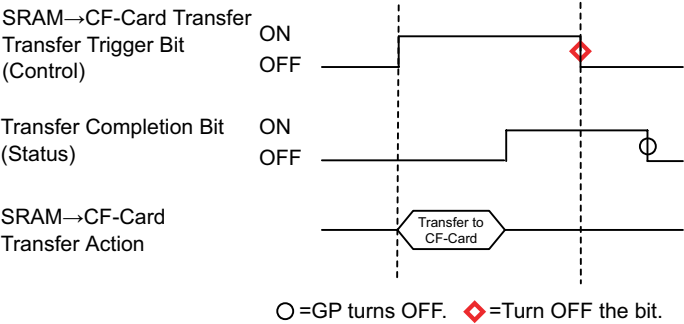
Continued

Setting	Description
Free Space Storage Address	<p>Set the address to store CF-card free space. For direct access method, the start address should be set within the range of LS20 to LS2031, LS2096 to LS8999, or USR0 to USR29999. For direct access method, the start address should be set within the range of 20 to 2031, 2096 to 8999, or USR0 to USR29999. Stores the value within the range of 0 to 65,535 (FFFFh) in the set address. The unit of a value to be stored is the Kbyte.</p> <p>NOTE</p> <ul style="list-style-type: none">• When a CF-card is not inserted, the GP cannot check the free space successfully and displays it as 0 Kbyte.• Use the stored CF-card free space only as a guide. There is a case where you cannot save data of that size.• If free space exceeds 65,535 (FFFFh) Kbytes, the value of the LS area is 65,535 (FFFFh).
SRAM Auto Backup	Set whether or not to automatically transfer all the backup SRAM data to a CF-card.

Continued

Setting	Description																					
Control Word Address	<p>Backs up the SRAM data to a CF-card in the operating mode. Set the control address to trigger the backup. Check whether or not the data was successfully transferred to the set control address +1 as a status area.</p> <ul style="list-style-type: none"> • About Address <table border="1" style="margin-left: 40px;"> <tr> <td style="text-align: center;">+0</td> <td style="text-align: center;">Control</td> <td>Transfer backup SRAM to the CF-card</td> </tr> <tr> <td style="text-align: center;">+1</td> <td style="text-align: center;">Status</td> <td>Error Status</td> </tr> </table> • Control <div style="margin-left: 40px;"> </div> • Status <div style="margin-left: 40px;"> <p>Error Status *1 [0000]: Completed Successfully [0100]: No CF-Card [0101]: CF-Card Write Error [0111]: CF-Card Error</p> </div> <p>*1 The details of error codes are as follows.</p> <table border="1" style="margin-left: 40px;"> <thead> <tr> <th>Error Code</th> <th>Error Name</th> <th>Details</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0000</td> <td>Completed Successfully</td> <td>When the backup process was completed successfully.</td> </tr> <tr> <td style="text-align: center;">0100</td> <td>No CF-Card</td> <td>When a CF-card is not inserted at backups or the CF-card hatch is open.</td> </tr> <tr> <td style="text-align: center;">0101</td> <td>CF-Card Write Error</td> <td>When there is no sufficient free space in the CF-card at backups or the CF-card is removed while the data is written.</td> </tr> <tr> <td style="text-align: center;">0111</td> <td>CF-Card Error</td> <td>When the CF-card is unformatted.</td> </tr> </tbody> </table>	+0	Control	Transfer backup SRAM to the CF-card	+1	Status	Error Status	Error Code	Error Name	Details	0000	Completed Successfully	When the backup process was completed successfully.	0100	No CF-Card	When a CF-card is not inserted at backups or the CF-card hatch is open.	0101	CF-Card Write Error	When there is no sufficient free space in the CF-card at backups or the CF-card is removed while the data is written.	0111	CF-Card Error	When the CF-card is unformatted.
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0111	CF-Card Error	When the CF-card is unformatted.																				

Continued

Setting	Description
Control Word Address	<ul style="list-style-type: none"> Details of transfer actions <p>If the control's Bit 0 [Transfer Trigger Bit] is turned ON, the transfer to the CF-card starts. When the data is successfully transferred to the CF-card, the status' Bit 0 [Transfer Completion Bit] turns ON. If the transfer failed due to an error during transfer, the Transfer Completion Bit does not turn ON. After completing transfer, confirm that the [Transfer Completion Bit] is ON and then turn OFF the [Transfer Trigger Bit] from the device/PLC. If the [Transfer Trigger Bit] is turned OFF, the GP turns OFF the [Transfer Completion Bit]. The timing during transfer is as follows.</p>  <p>○ = GP turns OFF. ◆ = Turn OFF the bit.</p> <p>NOTE</p> <ul style="list-style-type: none"> After confirming that the data is not being saved in the CF-card by another feature and that the [Transfer Completion Bit] is OFF, transfer SRAM data to the CF-card. When transferring SRAM data to the CF-card, make sure the [Transfer Trigger Bit] and [Transfer Completion Bit] are OFF at the start of operation in case the power is turned OFF during transfer. Maintain the [Transfer Trigger Bit]'s ON or OFF for a longer time than [Communication Cycle Time]*1 or [Display Scan Time]*2.

*1 The communication cycle time is the time it takes to request and take in data from the GP to the device/PLC. It is stored in the internal device's LS2037 as binary data. The unit is 10 ms.

*2 The display scan time is the time it takes to display/calculate one screen. It is stored in the internal device's LS2036 as binary data. The unit is milliseconds (ms).

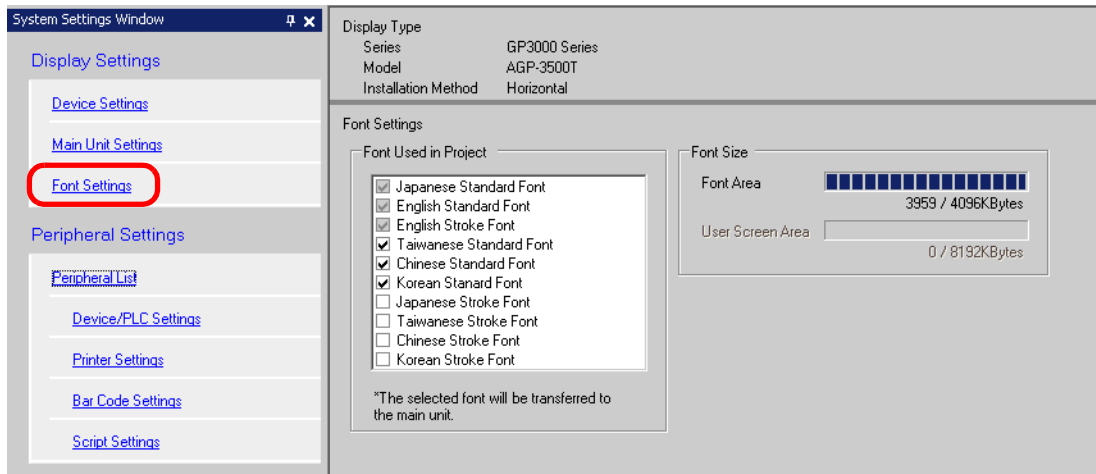
◆ System Area Settings

Setting	Description
Device Settings	Specify a device/PLC.
System Area Device	Select the device/PLC to set the system data area.
System Data Area	Set the system data area.
System Area Start Address	Designate the start address used for the system area.
Read Area Size	Set the number of words in the [Read Area] that stores the data used commonly on all screens or the line chart block display data from 0 to 256. NOTE • Cannot be set when a device/PLC is connected with the memory link method.
Enable System Data Area	Set whether or not to enable the system data area.
Select System Data Area Item	Set the system data area items to use. For details of each item, refer to “A.1.4.2 System Data Area” (page A-10) for the direct access method, and “A.1.5.2 System Data Area” (page A-23) for the memory link method.
No. of Words to Use	Displays the total number of words for the items set to the system data area.

Continued

Setting	Description
Watchdog Settings	Monitors the communication state of the GP and the PLC. The GP writes “00FF” to the PLC’s word address at every setting time. The PLC confirms at every setting time that “00FF” has been written and that communication is performed.
Watchdog Timer Settings	Set the watchdog’s monitoring cycle time from 0 to 65,535.
Watchdog Write Address	Set the write address for the watchdog.

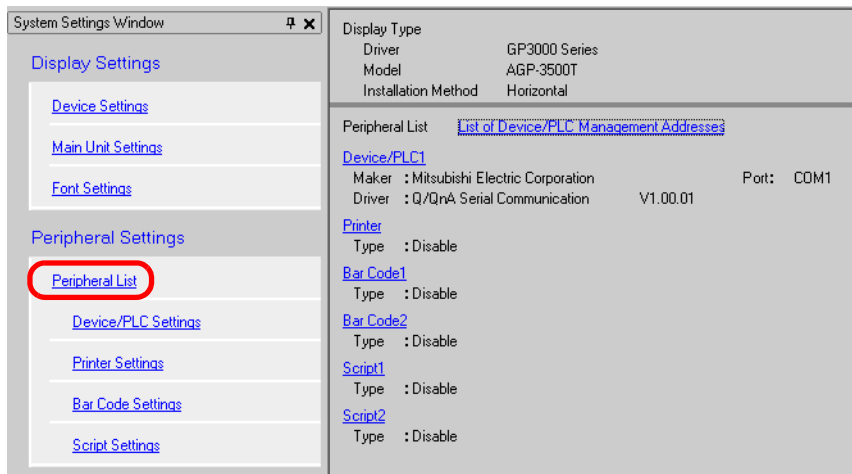
■ [Font Settings] Settings Guide

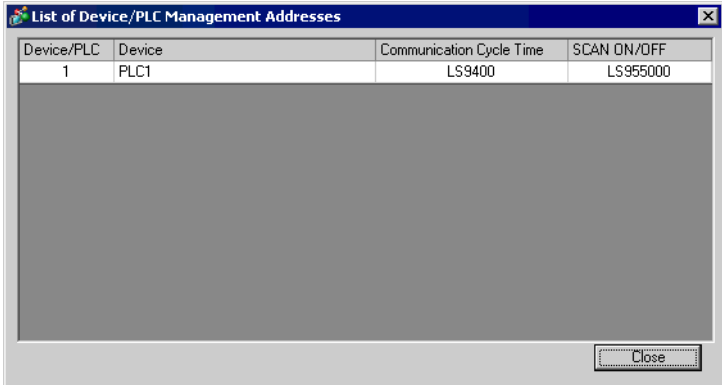


Setting	Description
Font Settings	Configure font settings.
Font Used in Project	<p>Select the fonts used in project files.</p> <p>NOTE</p> <ul style="list-style-type: none"> You cannot release [Japanese Standard Font], [English Standard Font], or [English Stroke Font] because they are standard-supplied fonts.
Font Size	Displays the memory size of the font.
Font Area	Displays the memory size being used in the font area from 0/4,096 Kbytes to 4,096/4,096 Kbytes.
User Screen Area	<p>Displays the memory size of the font being used in the user screen area. The user screen area capacity depends on the GP model.</p> <p>☞ "1.3.1 GP-3300/3400 Series" (page 1-4)</p> <p>☞ "1.3.2 GP-3500/3600/3700 Series" (page 1-5)</p>





■ [Peripheral List] Settings Guide

Displays a list of the set peripheral devices.



Setting	Description
List of Device/PLC Management Addresses	<p>Displays a list of the set device/PLC management addresses.</p> 
Device/PLC	Displays the set device/PLC driver numbers.
Device	Displays the set device/PLC names.
Communication Cycle Time	Displays the internal device addresses in which to store the set device/PLC's communication cycle time*1.
SCAN ON/OFF	Displays the internal device addresses storing the bit address that switches ON or OFF the communication scan *2 of the set devices/PLCs.

Continued

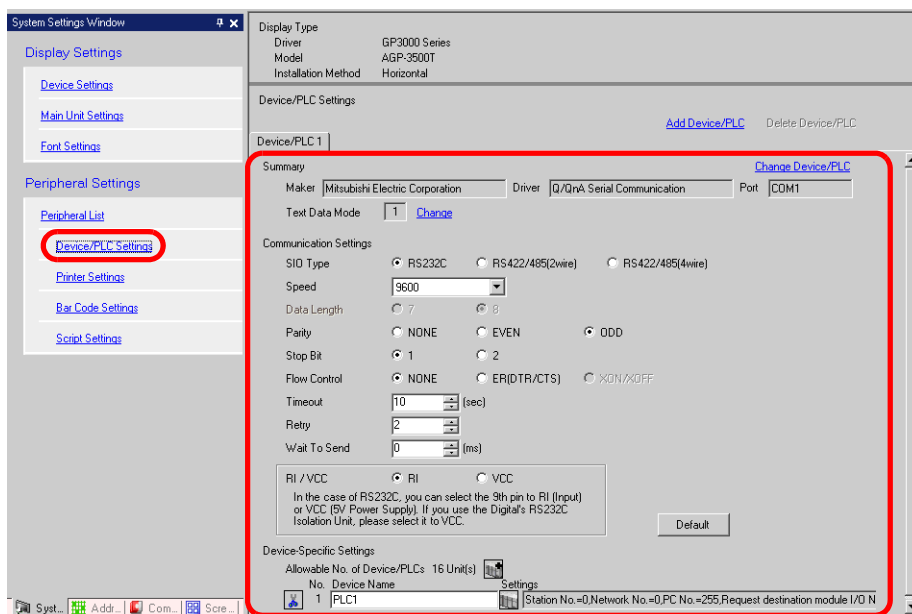
Setting	Description	
Devices/PLCs 1-4	Displays the memory size of the font being used in the user screen area. The user screen area capacity depends on GP models.  "1.3.1 GP-3300/3400 Series" (page 1-4)  "1.3.2 GP-3500/3600/3700 Series" (page 1-5)	
	Maker	Displays the maker of the currently set device/PLC.
	Series	Displays the series of the currently set PLC.
	Version	Displays the device/PLC driver version.
	Port	Displays the ports that can be connected to a device/PLC. NOTE <ul style="list-style-type: none"> If the port is also used for other devices/PLCs,  is displayed to the right of the [Port].
Printer, Bar Code 1, Bar Code 2, Script 1, Script 2	Displays and edits the settings of the set [Printer], [Bar Code 1], [Bar Code 2], [Script 1], and [Script 2].	
	Type	Displays the types of the set peripheral devices.
	Port	Displays the connecting ports of the set peripheral devices. NOTE <ul style="list-style-type: none"> If the port is also used for other devices/PLCs,  is displayed to the right of the [Port].


*1 The communication cycle time is the time it takes to request and take in data from the GP unit to the PLC. It is stored in the internal device's LS2037 as binary data. The unit is 10ms.

*2 The communication scan is the action that transmits the request from the GP unit sequentially to each device/PLC in the running mode.

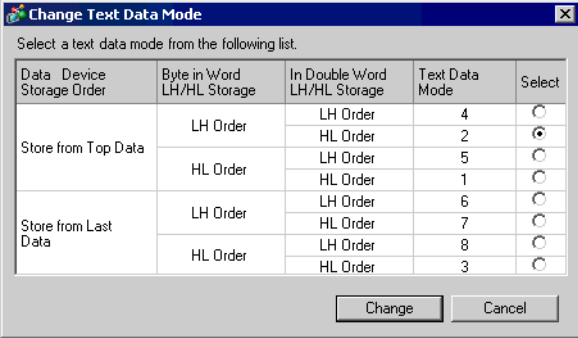
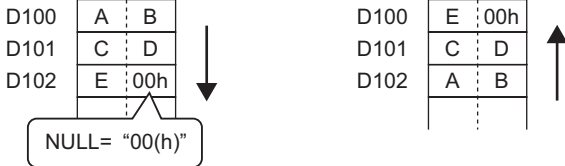
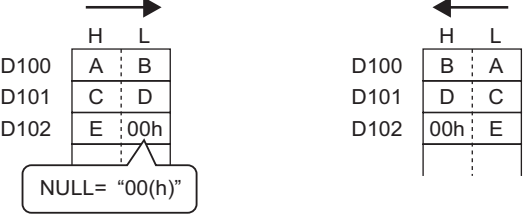
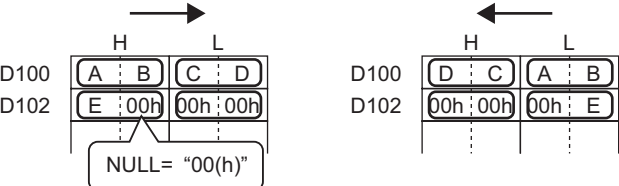
■ [Device/PLC Settings] Settings Guide

Set the details of a device/PLC.






Setting	Description
Add Device/PLC	<p>Add the settings for a device/PLC. Use this setting communicate with multiple devices/PLCs with 1 GP.</p> <p>NOTE</p> <ul style="list-style-type: none"> The number of device/PLC drivers that the GP can communicate with at the same time depends on the type of GP. ☞ “1.3.1 GP-3300/3400 Series” (page 1-4) ☞ “1.3.2 GP-3500/3600/3700 Series” (page 1-5)
Delete Device/PLC	Deletes the set device/PLC.
Change Device/PLC	Changes the settings of the device/PLC.
Summary	Displays the settings of the currently set devices/PLCs.
Maker	Displays the currently set device/PLC’s maker.
Series	Displays the currently set device/PLC series name.
Port	<p>Displays the connection port of the currently set device/PLC.</p> <p>NOTE</p> <ul style="list-style-type: none"> If the port is also used for other devices/PLCs,  is displayed to the right of the [Port].
Text Data Mode	Displays the text data mode of the currently set devices/PLCs.

Continued

Setting	Description
Summary Change	<p>When the [Change Text Data Mode] dialog box is displayed, you can change the text data mode. Normally the text data mode is set according to each device/PLC.</p> 
	<p>Select the data device storage order from [Store from Top Data] or [Store from Last Data]. e.g.) Storing the text “ABCDE” Store from Top Data: Store from Last Data: (When the [Text Data Mode] is “5”) (When the [Text Data Mode] is “8”)</p> 
	<p>Select the data storage order to set in one word (16 bits) from [LH Order] or [HL Order]. e.g.) Storing the text “ABCDE” HL Order LH Order (When the [Text Data Mode] is “5”) (When the [Text Data Mode] is “4”)</p> 
	<p>Select the data storage order to set in two words (32 bits) from [LH Order] or [HL Order]. e.g.) Storing the text “ABCDE” HL Order LH Order (When the [Text Data Mode] is “1”) (When the [Text Data Mode] is “4”)</p> 

Continued

Setting		Description
Summary	Change	
	Text Data Mode	Displays the combination number of the text data mode storage orders.
	Select	Select the text data mode to be used.
Communication Settings		Set this according to each device/PLC. Each device/PLC series has different settings. Please refer to “GP-Pro EX Device/PLC Connection Manual”. However, [Timeout], [Retry], and [Wait To Send] are recommended to be used with their initial settings.
Device-Specific Settings		Set this according to each device/PLC.
	Allowable No. of Devices/PLCs	Displays the allowable number of devices/PLCs for the selected device/PLC type.
	[Add Device Button] 	Each time you click the [Add Device Button], one device/PLC is added. This cannot be added when the [Allowable No. of Devices/PLCs] is one.
	[Delete Device Button] 	Deletes the device/PLC’s settings.
	No.	Displays the set device/PLC’s number.
	Device Name	Set a device/PLC’s name with up to 20 single-byte characters. NOTE • When adding the desired [Device Name], please ensure not to use a repeated name.
	[Device Settings Button] 	Set settings as needed for the device/PLC. Opens the [Individual Device Settings] dialog box. NOTE • The [Individual Device Settings] dialog box settings differ depending on the PLC. For more information on each device/PLC’s settings, please refer to “GP-Pro EX Device/PLC Connection Manual”.

■ [Printer Settings] Settings Guide

Configure settings to communicate with the printer.

☞ “28.6.2 System Settings [Printer Settings] Guide” (page 28-45)

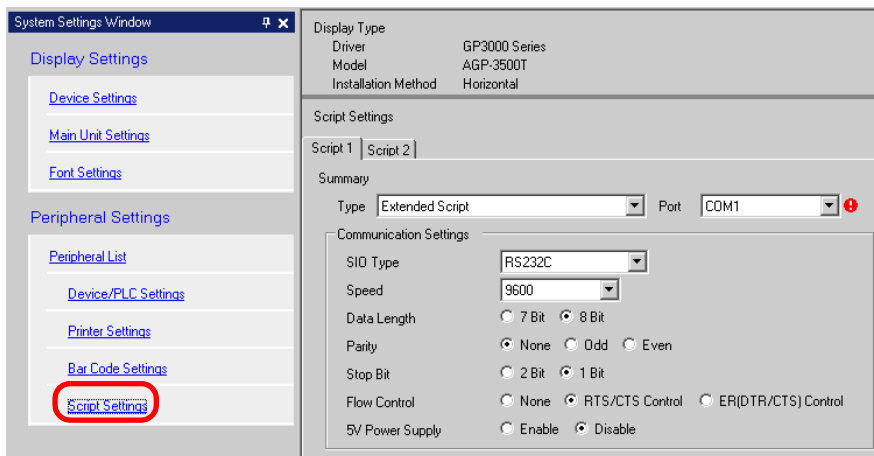
■ [Bar Code Settings] Settings Guide


Configure settings to communicate with the barcode.

☞ “8.4.1 [Bar Code Settings] Settings Guide” (page 8-22)

■ [Script Settings] Settings Guide

Configure settings to communicate with the device/PLC using scripts.



Setting	Description
Type	Select [D-Script/Global D-Script] to use the “SIO Port Operation” function, which communicates using a serial port for D-script or global D-script. Select [Extended Script] to use extended scripts.
Port	Select a port for scripts from [COM1] or [COM2]. NOTE <ul style="list-style-type: none"> If the port is also used for other devices/PLCs,  is displayed to the right of the [Port].
Communication Settings	Configure communication settings. NOTE <ul style="list-style-type: none"> This is not displayed when the [Type] is [Do Not Use]. The [Communication Settings] description differs depending on the set device/PLC. For more information on each device/PLC’s settings, please refer to “GP-Pro EX Device/PLC Connection Manual”.

Continued

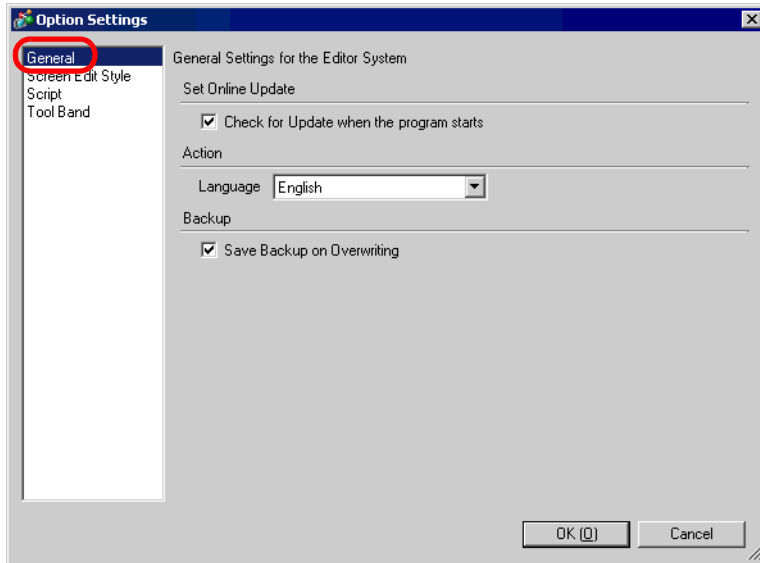
Setting		Description
Communication Settings	SIO Type	Select the communication method from [RS232C], [RS422/485 (4wire)], or [RS422/485 (2wire)].
	Speed	Select a communication speed from [2400], [4800], [9600], [19200], [38400], [57600] or [115200].
	Data Length	Choose the communication data length from [7 bit] or [8 bit].
	Parity	Select the communication parity bit from [None], [Odd], or [Even].
	Stop Bit	Choose the communication stop bit length from [2 bit] or [1 bit].
	Flow Control	If the communication method is [RS232C], select the communication control method from [None], [RTS/CTS Control] or [ER (DTR/CTS) Control].
	5V Power Supply	If the communication method is [RS232C], designate whether or not to set the 5V power supply. Only set it to Enable if the connected device requires a power supply. If a 5V power supply is not needed and you set it to Enable, damage can occur to the connected device or the GP. Confirm the specifications of the connected device and cable when setting this.

6.13.7 [Option Settings] Settings Guide

This section explains about each item on the [Option Settings] dialog box displayed by selecting the [View (V)] menu - [Option Settings (O)] command.

■ General

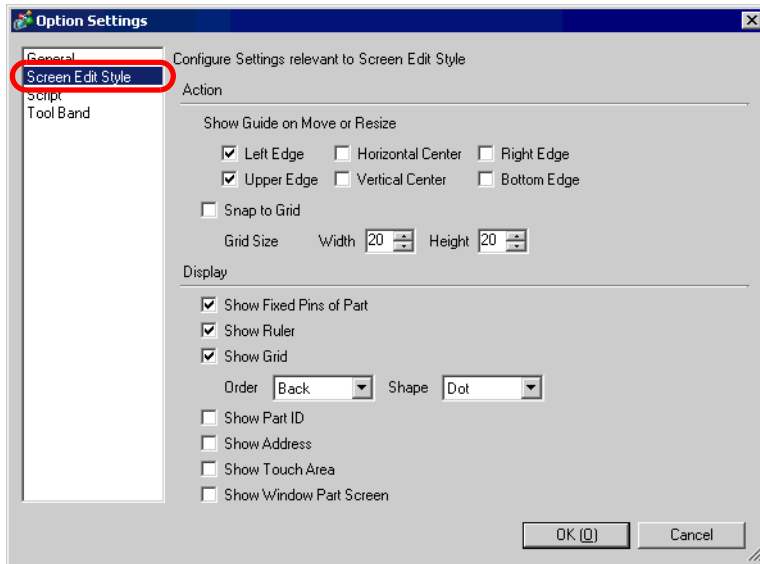
Configure general settings for the editor system.




Setting		Description
Set Online Update	Check for Update when the program starts	Set whether or not to perform an online update when the program starts.
Action	Language	Select the language of menus displayed on GP-Pro EX from [Japanese] or [English]. NOTE • You have to restart GP-Pro EX after setting this.
Backup	Save Backup on Overwriting	Set whether or not to automatically back up the file before overwriting when you overwrite a project file. ☞ “6.3.2 Setup Procedure ■ Backup as a History Procedure” (page 6-18)

■ Screen Edit Style

Configure settings relevant to Screen Edit Style.



Setting	Description
Action	Set the actions for editing screens.
Show Guide on Move or Resize	Shows guides to place pictures or parts in alignment with the placed pictures or parts when moving them.
Left Edge	Displays a guide on move in alignment with the left edge.
Horizontal Center	Displays a guide on move in alignment with the horizontal center.
Right Edge	Displays a guide on move in alignment with the right edge.
Upper Edge	Displays a guide on move in alignment with the upper edge.
Vertical Center	Displays a guide on move in alignment with the vertical center.
Bottom Edge	Displays a guide on move in alignment with the bottom edge.
Snap to Grid	Displays a guide for Pictures/Parts on move in alignment with the grid.
Grid Size	Set the grid size.
Width	Set the grid size in the X-coordinate direction from 4 to 120.
Height	Set the grid size in the Y-coordinate direction from 4 to 120.
Display	Set the display for editing screens.
Show Fixed Pins of Part	Shows fixed pins of a Part.  "6.13.5 [Work Space] Settings Guide ■ Screen List Window" (page 6-85)
Show Ruler	Shows the ruler.
Show Grid	Shows the grid.

Continued

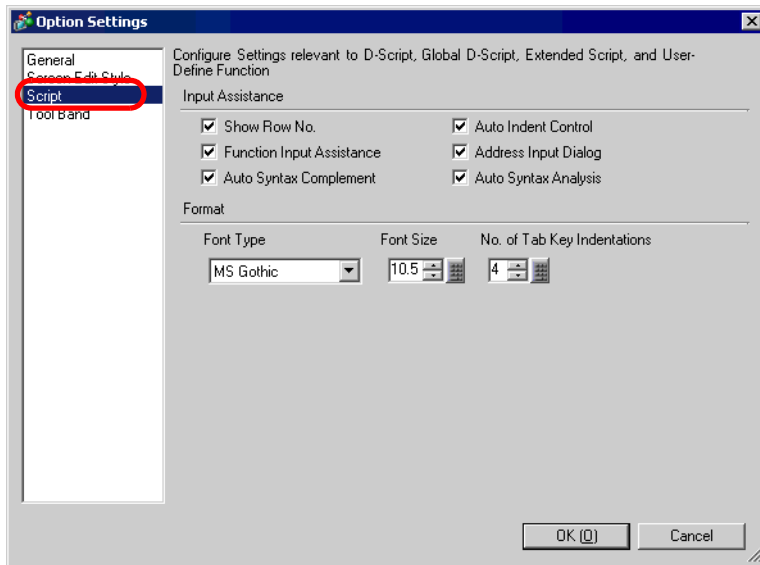
Setting		Description
Display	Order	Select whether to show the grid at the [Front] or the [Back] of the pictures or parts.
	Shape	Set the grid's shape from [Dot] or [Grid].
	Show Part ID	Shows a Picture or Part's label.
	Show Address	Shows the address of a Part with address settings.
	Show Touch Area	Shows the area where you touch touchable Parts in orange.
	Show Window Part Screen	Shows Window Screens that refer to window Parts.

■ Script

Configure settings relevant to D-Script, Global D-Script, Extended Script, and User Define Function.

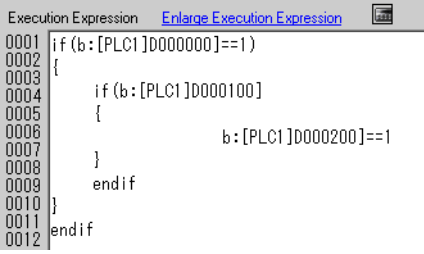
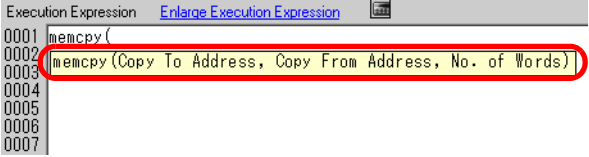
You can also set this in the [Extended Script] and [Global D-Script] dialog boxes.

☞ “20.8.1 Common Settings Guide (D-Script)” (page 20-50)



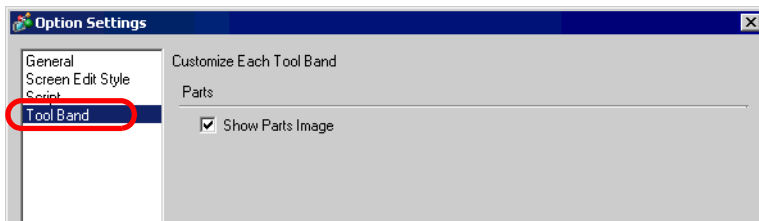
Setting		Description
Input Assistance		Configure settings of input assistance in D-Script, Global D-Script, Extended Script, and User Define Function.
	Show Row No.	Shows the row number to the right of the program.

Continued

Setting		Description
Input Assistance	Auto Indent Control	<p>If you insert line feeds as below, tabs are automatically inserted according to the hierarchy.</p> 
	Function Input Assistance	<p>When the function and the initial bracket “(” are inputted as below, the function’s format is displayed.</p> 
	Address Input Dialog	<p>When creating a script, input a left-hand square bracket ([) and the [Input Address] dialog box will automatically display. You can input addresses in this dialog box.</p>
	Auto Syntax Complement	<p>When “if” or “loop” is inputted from the keypad, the remaining syntax is automatically placed.</p>
	Auto Syntax Analysis	<p>Automatically checks an execution expression being inputted when creating scripts and notifies the [Message Area] of the results if the execution expression has a problem. (e.g.) “Line 1: The expression is incorrect.”</p>
Format	Set the format for scripts.	
Font Type	Select the font type to use.	
Font Size	Set the font size to use from 8 to 72 by the unit of 0.5.	
No. of Tab Key Indentations	Set the number of tab key indentations to use from 1 to 8.	

■ Tool Band


Customize each Tool Band.



Setting		Description
Part	Show Parts Image	Set whether or not to show each tool band’s parts image.

6.13.8 [Common Settings] Settings Guide

■ Alarm Settings

 “19.9.1 Alarm Settings Guide” (page 19-63)

■ Sampling Settings

 “24.8.1 Sampling Settings Guide” (page 24-37)


■ Recipe Settings

 “25.10.1 Recipe Settings Guide” (page 25-56)

■ Security Settings

 “22.5 Common Settings Guide (Security Settings)” (page 22-9)

■ Time Schedule Settings

 “23.4 Common Settings Guide (Time Schedule Settings)” (page 23-10)

■ Sound Settings

 “26.5 Settings Guide” (page 26-13)


■ Text Table Settings

 “15.7.3 Text Table Settings Guide” (page 15-49)


■ Global D-Script Settings

 “20.8.1 Common Settings Guide (D-Script)” (page 20-50)

■ Extended Script Settings

 “20.8.1 Common Settings Guide (D-Script)” (page 20-50)


■ Image Registration

 “10.5.1 Common Settings (Image Registration)” (page 10-23)

■ Text Registration

 “15.7.2 Common Settings Guide (Text)” (page 15-48)

■ Mark Registration

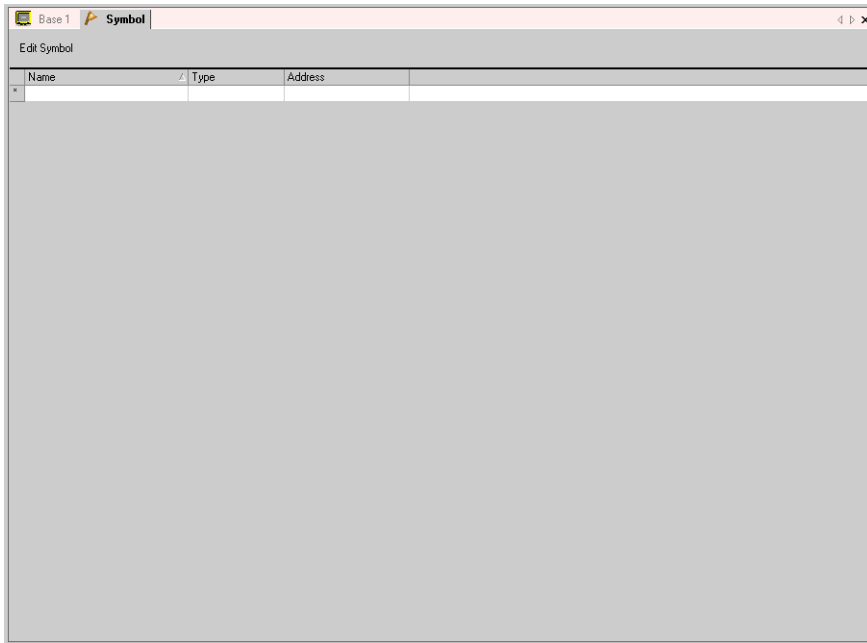
 “9.12.2 Common Settings (Mark Registration)” (page 9-77)

■ Keypad Registration

 “16.5.2 Common Settings (Keypad Registration) Settings Guide” (page 16-23)

■ Symbol Variable Settings

Displays a screen to register a symbol.



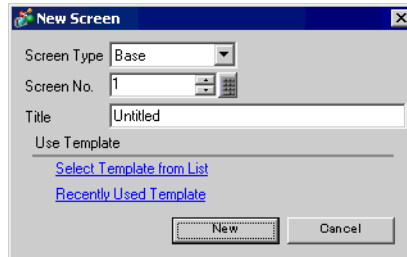
Setting	Description
Name	Set a symbol name with up to 32 characters.
Type	Select the type of an address to register as a symbol from [Bit] or [Word].
Address	Set an address to relate to the symbol.

6.13.9 [Screen] Settings Guide

This section explains about each item displayed by selecting the [Screen (S)] menu.

■ New Screen

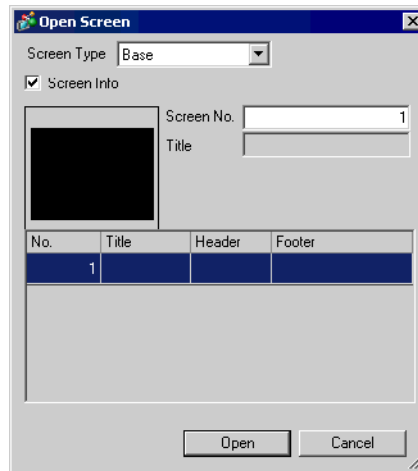
Create a new screen.



Setting	Description
Screen Type	Set the type of a screen to create or a template to use from [Base] or [Window].
Screen No.	Set the screen number to create from 1 to 9,999 when the [Screen Type] is [Base], and from 1 to 2,000 for [Window].
Title	Set the title of a screen to create with up to 30 single-byte characters.
Use Template	Select a template.
Select Template from List	Displays the [Select Template] dialog box to select a template.
Recently Used Template	The names of recently used templates are displayed as popup.

■ Open Screen

Opens a screen.



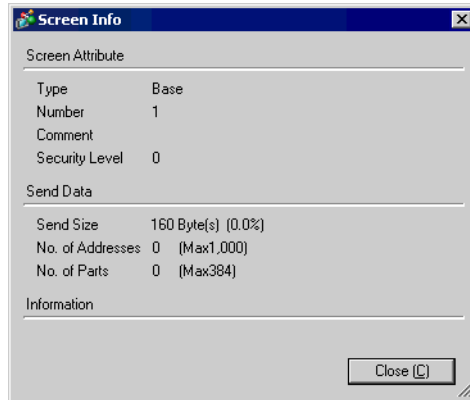
Setting	Description
Screen Type	Select the type of a screen to open from [Base] or [Window].
Screen Info	Set whether or not to display the information and preview of a screen to open.
Screen No.	Displays the screen number selected on the display list. If you rewrite the number, the preview is changed.
Title	Displays the screen title displayed in the preview.
Display List	Displays a list of all the screens in a project file.
No.	Displays the number set to the screen.
Title	Displays the title set to the screen.
Header	When a Header is set, the Header's [Title] is displayed.
Footer	When a Footer is set, the Footer's [Title] is displayed.

■ Close Screen

Closes the drawing screen.

■ Screen Information

Displays the set screen information.



Setting	Description
Screen Attribute	Displays the information set to the screen.
Type	Displays the type of the set screen with [Base] or [Window]. If you open the [Screen Info] when the screen's Header/Footer can be edited, the Type is displayed with [Header] or [Footer].
Number	Displays the number set to the screen.
Comment	Displays the title set to the screen.
Security Level	Displays the security level set to the screen.
Send Data	Displays the summary of data to send to the GP.
Send Size	Displays the data size for one screen by the byte. Displays the usage rate of the screen total size in percentage in ().
No. of Addresses	Displays the total number of addresses used for screens with [No. of Set Addresses (Max No. of Addresses)]. Displayed in red if it exceeds the maximum number of addresses.
No. of Parts	Displays the total number of parts used for screens with [No. of Set Parts (Max No. of Parts)].
Information	Displays supplementary information on the set screen.

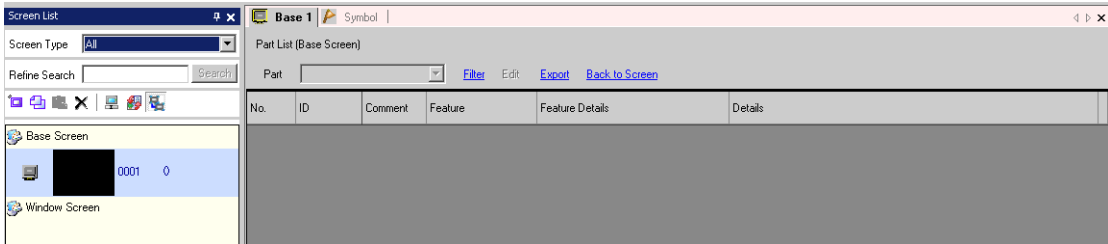
■ Change View

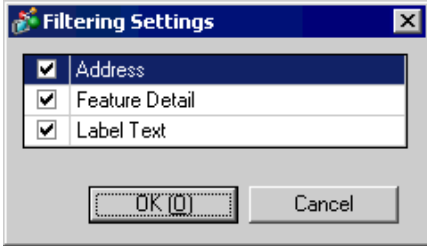
◆ Edit Screen

Changes the view to the drawing screen.

◆ Part List

Displays a list of the attributes of the parts used on the selected screen. Does not display a list of [Draw], [Trigger Action], or [D-Script]. Displays a list of the attributes of the parts used on the selected screen. Does not display a list of [Draw], [Trigger Action], or [D-Script].



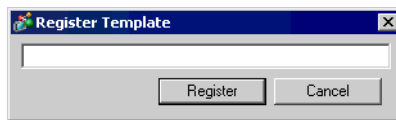
Setting	Description
Part	Select the part type to list from all the parts placed on the screen.
Filter	<p>The [Filtering Settings] dialog box will appear. Set whether or not to display [Address], [Feature Detail], and [Label Text] on the Part List.</p> 
Edit	Displays the setting dialog box for the part selected from the list.
Export	The [Export Parts List] dialog box will appear. Set the location to save the [Parts List] in a CSV file (*.csv).
Back to Screen	Changes the view to the drawing screen.
Display List	Lists the details of parts.
No.	Numbers are sequentially assigned to the placed parts from the oldest, starting from 1.
ID	Displays the part IDs.
Comment	Displays the Comments set to the parts.
Feature	Displays each part's feature names. e.g.) Bit - Comparison

Continued

Setting		Description
Address/ Address 1		Displays the address types and addresses set to the parts.
Feature Details		Displays the detail text for a Part's features.
Label/State 0		Displays the labels set to the parts. If different labels are set to each state of a part, a label is displayed for each state.
Detail		Displays other detailed information such as coordinates where parts are placed. The display contents depend on parts.

■ Template Registration

Register the parts placed on the drawing screen except the header/footer as a template.



Setting	Description
Register Template	Set the title of a template to create with up to 30 single-byte characters.

6.14 Restrictions

6.14.1 Restrictions for Creating Screens

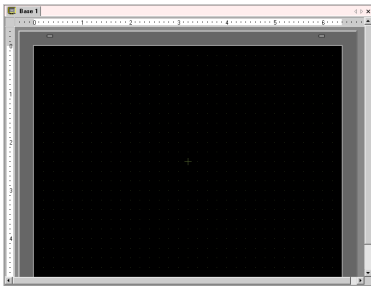
■ Screen Type

This section is about the types of screens created with project files.

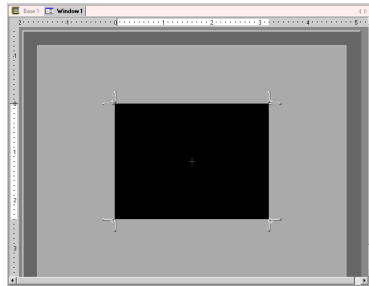
A project file is mainly composed of two screens: a Base Screen and Window Screen. A Base Screen is a screen displayed on the GP. To display a screen on the GP, always use a Base Screen. A Window Screen is a screen called and displayed on a Base Screen. A Window Screen is used to display one screen on top of the other, such as a keypad input.

☞ “18.3 Displaying Windows” (page 18-7)

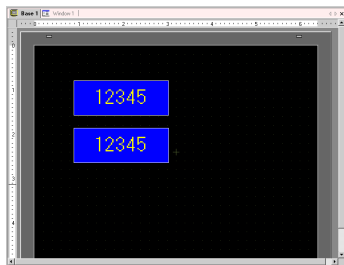
◆ Base Screen



◆ Window Screen

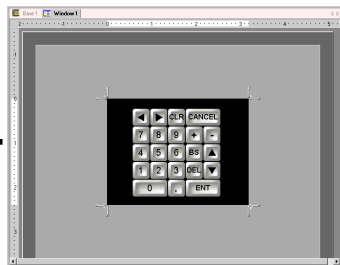


e.g.)



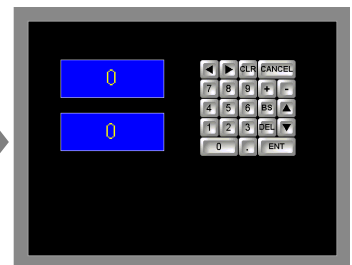
Base Screen

+



Window Screen

➔



Base Screen + Window Screen

GP Screen

■ No. of Screens that can be Created

Screen Type	Allowable Setting No. Range for Screens
Base Screen	1 - 9999
Window Screen	1 - 2000

■ Data Capacity per Screen

The maximum capacity per screen is approximately 1Mbyte.

The maximum capacity of the area that can maintain created screen data ([User Screen Area]) depends on each GP model.

☞ “1.3.1 GP-3300/3400 Series” (page 1-4)

☞ “1.3.2 GP-3500/3600/3700 Series” (page 1-5)

■ No. of Features that can be Placed on a Screen


The maximum allowable number of parts and features placed on a single screen is as follows. Each number is the maximum allowable number of parts on a newly created screen without any settings.

NOTE • The total number of parts that can be placed on a single screen is 384. The maximum number of addresses that can be set is 1,152.

Part	Feature Type	Base Screen	Window Screen*1
Alarm	Summary	1	1
	Show History	384	
Text Alarm	—	1	1
Graph	Normal Graph	384	
	Statistical Graph		
	Meter Graph		
Key Part	—	384	
Data Display	Numeric Display*2	384	
	Text Display*2	384	
	Date/Time Display	384	
	Statistical Data Display	384	
	Show Limit Value	384	
Picture Display	ON/OFF Display	384	
	State Display		
	CF Image Display		
	Move Display (only when Mark is selected)	30	
Switch/Lamp	Bit Switch	384	
	Word Switch		
	Screen Change		
	Special Switch		
	Selector Switch		
	Lamp		
Window*3	Window	384	0
	Global Window		
Message Display	Direct Input	384	
	Text Display		

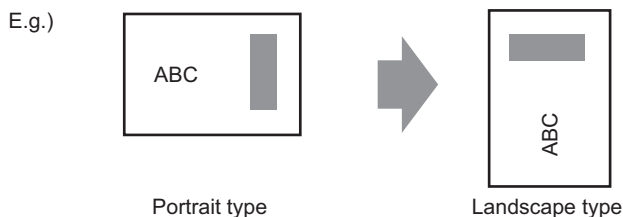
Continued

Part	Feature Type	Base Screen	Window Screen*1
D-Script	—	—*4	
Sampling Data Display*2	—	1	1
Historical Trend Graph*5	—	8	
Data Block Display Graph*5	—		
Special Data Display	Data Transmission	1	1
	Filing	384	
	Show CSV*2	1	1
	File Manager	1	0
Trigger Action	Bit Action	384	
	Word Action		
	Screen Change		
	Draw Action		

- *1 A maximum of 3 Windows can be displayed on the GP screen at the same time. For more details about displaying Windows, please refer to the following:
 "18.8.2 Restrictions for Show Window ■ Displaying multiple Windows on a single screen" (page 18-30)
- *2 A sampling data display and a special display part (Show CSV) cannot be placed at the same time. Also, a special display part (Show CSV) and a data display part with the [Input Permit] option cannot be placed at the same time.
- *3 Up to three window parts with the [Continuous Read] option (two if using Global Windows) can be placed on a single screen. If three [Continuous Read] windows are placed on a screen, any additional windows will not operate.
- *4 The number of D-Scripts setting depends on the number of setting addresses on 1 screen (up to a total of 1,152) and the volume of screen data.
- *5 Up to eight combined [Historical Trend Graph] and [Data Block Display Graph] can be set.

■ Screen Display

- If you change the GP type from vertical to horizontal or from horizontal to vertical, the drawing content is displayed with a 90-degree rotation. Select the [Edit] menu - [Rotate/Flip] command to edit the screen. Be sure to confirm the screen after changing it.



- If you change from a large resolution GP type to a small resolution GP type, the data that exceeds the range due to the change is not displayed. If you change to a large resolution GP type again, the data that exceeded the range is displayed.
The maximum number of display characters on a part in operation differs between a small resolution GP type and a large resolution GP type. If you change an alarm message created with a large resolution GP type to a small resolution GP type, any part that does not fall on the message screen is not displayed.
- When you reduce the screen edit area with the zoom function, some drawings may not display correctly, depending on the magnification.

6.14.2 Restrictions for CF-Card

■ Notes on CF-Card Saving

- While data is being written to the CF-card, changes of parts and screens may slow down.
- It may take several seconds to write data, depending on the amount.
- After the Status data is read out from the GP, before the next command can be written be sure to allow time equal to at least one communication cycle*¹ or one Display Scan Time*² period, whichever is longer.
- Please do not call up screens that use the CF-card when it is not installed in the GP. Otherwise, they will not function properly.
- If a write error occurs, any file that has not finished loading may remain on the CF-Card.
- When overwriting a file by transferring data to the CF-card, the CF-card must have enough free room to allow the data. If the data is larger than the available space, a write error will occur.
- When saving to the CF-card, if the target folder (\ALARM) does not exist, a folder will be automatically created, and the data will be saved there. However, if the CF-card does not reset or the folder can not be created, a read 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).

■ 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. If using another company's CF-card, damage may occur to the CF-card's 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's connectors directly
 - Disassembling or modifying the CF-card

*1 The communication cycle time is the time it takes to request and take in data from the GP unit to the PLC. It is stored in the internal device's LS2037 as binary data. The unit is 10 ms.

*2 Display Scan Time is the time it takes to display/calculate 1 screen. It is stored in the internal device's LS2036 as binary data. The unit is milliseconds (ms).

■ Screen Capture

- It takes five to six seconds to capture a screen, and the file size is approximately 200 KBytes (when the Image Quality is 80).
- The file size and capture time depend on the image quality and screen size.
- Part displays are not updated during capture.
- If you capture a screen with the Blink option, the captured image is displayed with no blink.
- If you create a file with other actions than screen capture while the CF-card is inserted, the file is overwritten with the next [File No. Auto Increment].
- When you use [File Auto Delete], it may take some time to delete many files. All files are deleted so this can take from a few seconds to a few minutes.

■ SRAM Auto Backup

- Make sure the CF-Card free space is larger than the backup SRAM size. Free space is checked before the process execution. If there is no sufficient free space in a CF-card, data is not saved in the CF-card.
- When you use the CF-card storage feature, confirm that the CF-card storage control address has no data. You can save the following data in a CF-card.
Filing Data, Logging Data, Line Chart Data, Sampling Data (Data Sampling's Data), and Alarm Data
- If you execute the backup SRAM's backup while executing the CF-card storage feature, the backup does not start until the CF-card storage feature finishes. During this time the write to the CF-card is interrupted.
- While executing the backup SRAM's backup, the process of CF-card storage feature is interrupted. When automatically writing to the CF-card with the logging feature's loop action, the logging action is also interrupted until the write to the CF-card starts.
- Only one backup file can be saved in a CF-card.
- If you execute the [Initialize Memory]'s [Initialize CF-Card] offline, a SRAM folder is created.
- If you execute CF-Card - SRAM (Restore) offline, all the saved data (such as logging data) is changed into restored data and cleared.
- If you execute CF-Card - SRAM (Restore) offline, the adjusted values of Brightness, Contrast, and Sound Volume are not changed. However, they act with the restored data when you turn ON the power again or when the GP goes into the operation mode.
- If you execute CF-Card - SRAM (Restore) offline, the stored Japanese FEP learning information is overwritten. For this reason, there may be changes in the display order of convert-to characters according to frequency of use.