2 Maintenance

This chapter describes basic information about the GP's "offline mode" and basic operations.

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2.1 Offline Mode

Off-line mode does system setting and self diagnostic etc. Before operating, it prepares here.

IMPORTANT

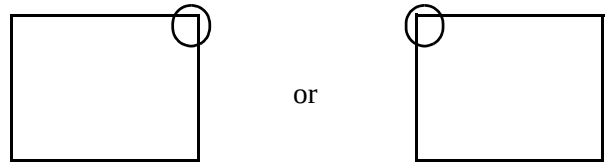
- OFFLINE mode is unavailable in a completely new GP until the necessary GP system data has been transferred from GP screen editor software. To do this, be sure the GP's power cord is plugged in and when transfer screen data from GP screen editor software to the GP, GP's system data will be automatically sent. For more information about data transfer, refer to GP-Pro EX Reference Manual.

2.1.1 Entering OFFLINE Mode

There is offline mode for various setup required at use in GP. There are two ways to enter OFFLINE mode. First, is immediately after plugging in the GP's power cord, and second, by using the Forced Reset feature.

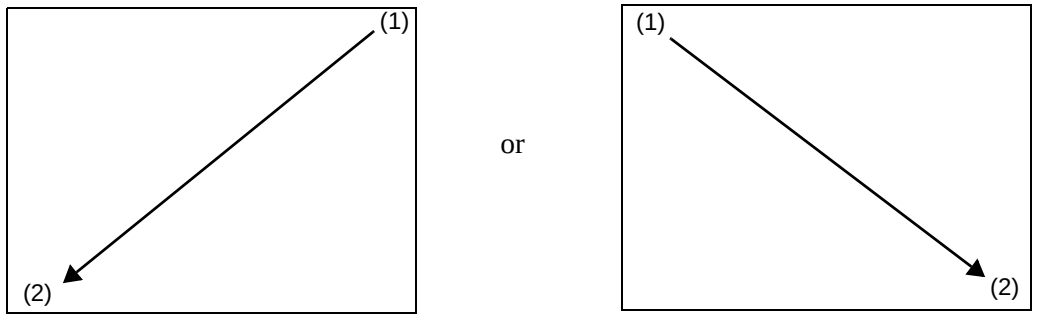
■ After Plugging in the Power Cord

Touch the upper right corner or upper left corner (within 40 pixels of the edges) of the panel for at least 3 seconds soon after the startup screen is displayed.

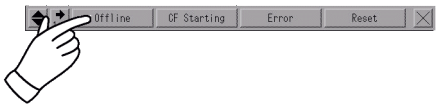


■ When Operating

1 Touch either the upper right and lower left corners, or the upper left and lower right corners (within 40 pixels of the edges) of the panel in this order within 0.5 seconds.



2 System menu is displayed and touch "Offline" button.
For details of the buttons of the system menu, see the following section.
☞ "2.15.12 System Menu" (page 2-171)



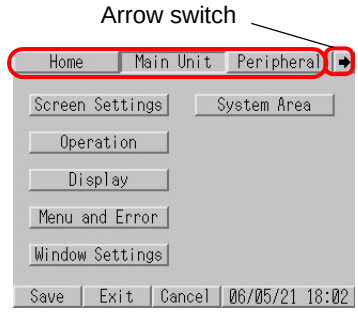
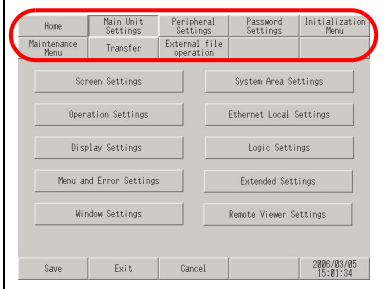
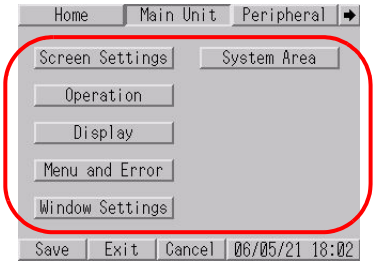
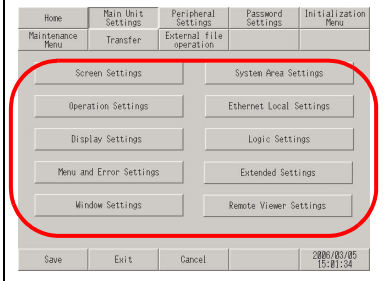
Continued

NOTE

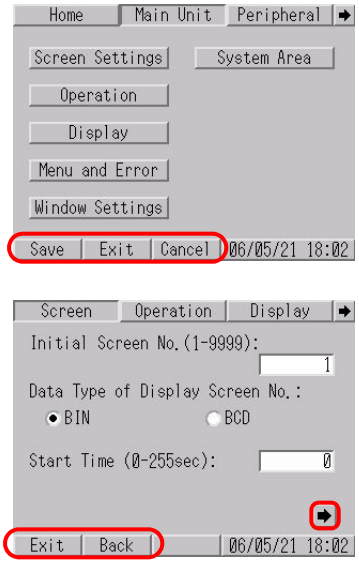
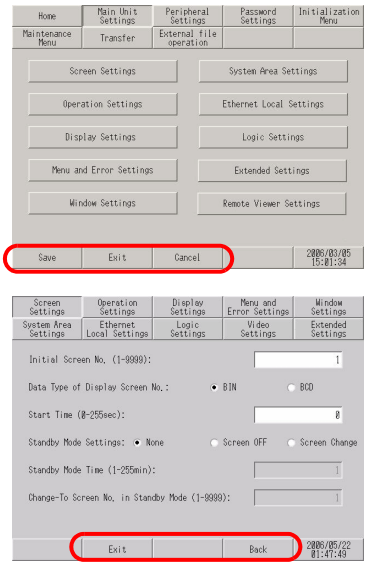
- If the system menu does not appear, [Show System Menu] for GP-Pro EX ([Display Unit] - [Menu and Error Settings]) has been set to [Do Not Display]. Change the setting to show the system menu and then transfer the project file again.
  ☞ GP-Pro EX Reference Manual “5.17.6 [System Settings] Setting Guide • Display Settings” (page 5-150)
- If a Password has been entered in the Password Settings area, before entering the OFFLINE mode, the Password Settings screen appears. Here, enter the password, then touch Set to enter OFFLINE mode.
  ☞ “2.5 Password and license settings” (page 2-27)
  ☞ “2.1.3 Operation in offline mode” (page 2-5)

2.1.2 Common Switches of offline mode

The common switches of offline mode are as follows. The display and the way to show more switches, depend on the size of the screen and the number of pixels the screen contains.

Switch	When the screen pixels is the 320x240 pixels model	When the screen pixels is the 640x480 pixels model
• Item changeover switch The setting item displayed is changed. The arrow switch is displayed on the right end of a switch, when all switches cannot display at once.The remaining switch by touching the arrow switch is displayed.		
• Setting item The necessary item is set up when the using GP. The page changeover switch is displayed on the lower right end of a setting item, when all items cannot display at once. The remaining items by touching the page changeover switch is displayed.		

Continued

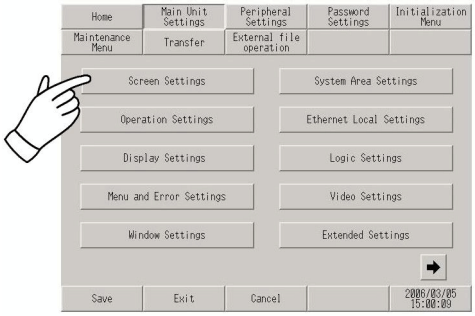
Switch	When the screen pixels is the 320x240 pixels model	When the screen pixels is the 640x480 pixels model
• Control switch This button performs “Save”, “Cancel”, “Exit”, and “Back” in offline mode. Each function is as follows.The buttons are displayed differently depending on the screen size of the GP. Save.....A setup of the changed item is saved. Cancel ..A setup of the changed item is returned to the state where it saved last time. Exit.....Offline mode is ended. Back .....It returns to the screen of hierarchy on one.		

2.1.3 Operation in offline mode

This section describes operations necessary for various settings.

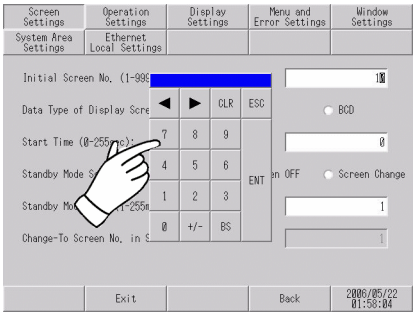
■ Selecting a menu

Touch the menu item.



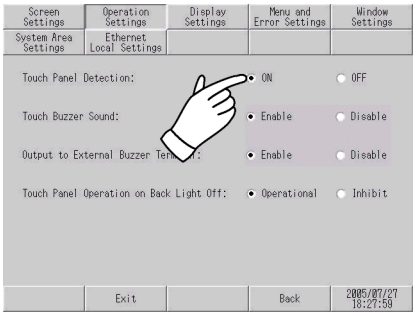
■ Entering numbers

After selecting an input field by touching it, use the numeric touch keys located at the screen to enter numeric values.



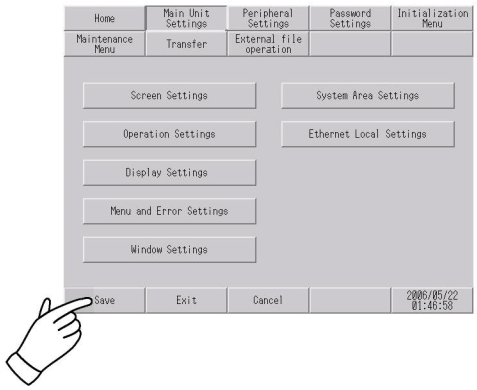
■ Selecting setup conditions

After selecting a menu item and entering that area, touch the option you would like to setup.



■ After all setting data is entered

Touch the lower [Save] button.
If you wish to exit the screen without saving the changes, touch the [Cancel] button.

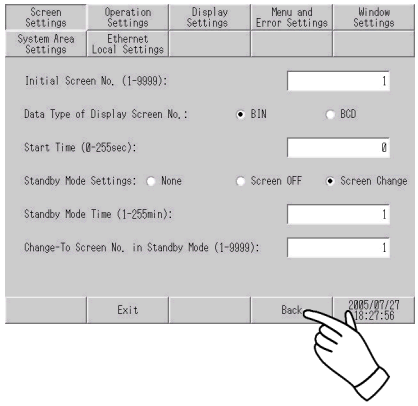


IMPORTANT

- Touch the [Save] button to write the setup conditions onto the internal FEPROM.
- When saving to the internal FEPROM, it may take some time to return to the main screen after touching the [Save] button. Do not touch the screen until it returns to the menu screen.
- Do not turn off the GP while a setup of the changed item is being saved. The setup conditions may have a damage.
- Touch the [Cancel] button to return a setup of the changed item to the state where it saved last time.

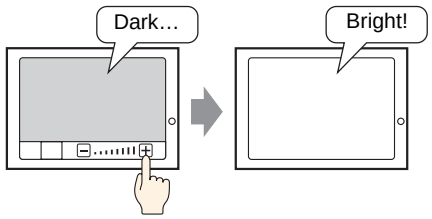
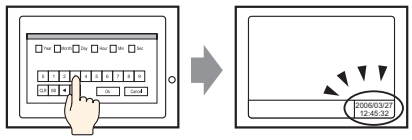
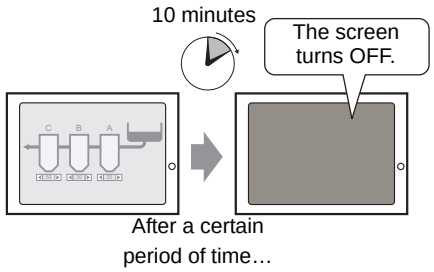
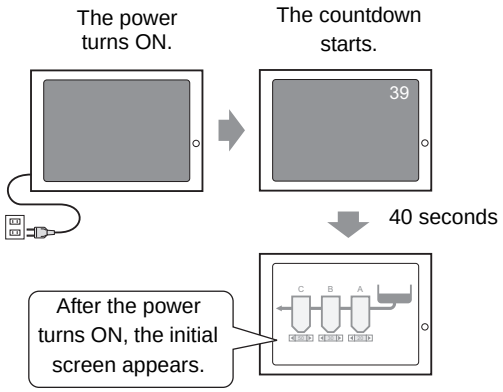
■ Return to the hierarchy on one

Touch the [Back] button.

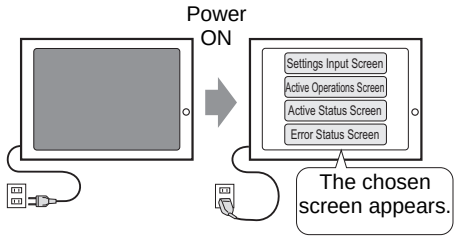
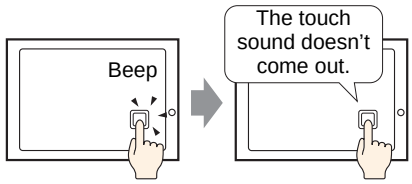
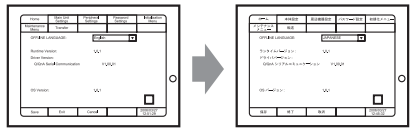
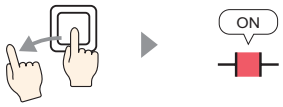


2.2 Display screen settings

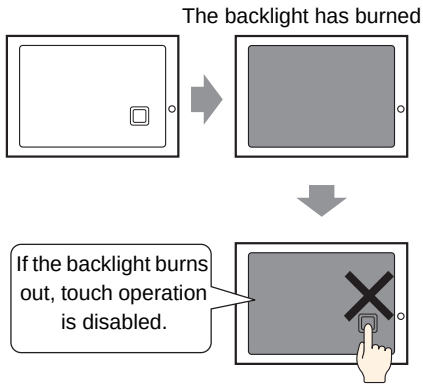
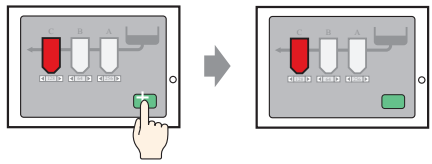
You can adjust the settings for the screen and operations of the Display.

What you can do	Section describing the setting procedure
• Adjusting the brightness/contrast of the Display 	☞ "2.2.1 Adjusting the brightness/contrast" (page 2-10)
• Setting the clock on the Display 	☞ "2.2.2 Adjusting the clock on the Display" (page 2-11)
• Setting the standby mode 	☞ "2.2.3 Turning OFF the screen after a certain period of time (standby mode)" (page 2-12)
• Setting the startup delay of the Display 	☞ "2.2.4 Setting the delay between power-on and Display start-up" (page 2-13)

Continued

What you can do	Section describing the setting procedure
• Setting the screen that is initially displayed on the Display 	☞ "2.2.5 Setting the screen No. of the screen that is initially displayed after the power is turned ON" (page 2-14)
• Activating/deactivating the touch sound 	☞ "2.2.6 Deactivating the touch sound" (page 2-15)
• Setting the offline mode menu to be displayed in Japanese Switch to the Japanese menu. 	☞ "2.2.7 Changing the language used for the system menu and offline mode menu to Japanese" (page 2-16)
• Setting the touch recognition timing Touching the button turns the bit ON. Releasing the button turns the bit ON. 	☞ "2.2.8 Changing the timing to recognize touches" (page 2-17)

Continued

What you can do	Section describing the setting procedure
• Setting the malfunction prevention when the back-light burns out 	☞ "2.2.9 Preventing malfunctions when the backlight burns out" (page 2-18)
• Deleting a touched position (when the GP3200 series is used) 	☞ "2.2.10 Deleting the touched position (When the GP3200 series is used)" (page 2-19)

2.2.1 Adjusting the brightness/contrast

You can adjust the brightness and contrast of the GP.

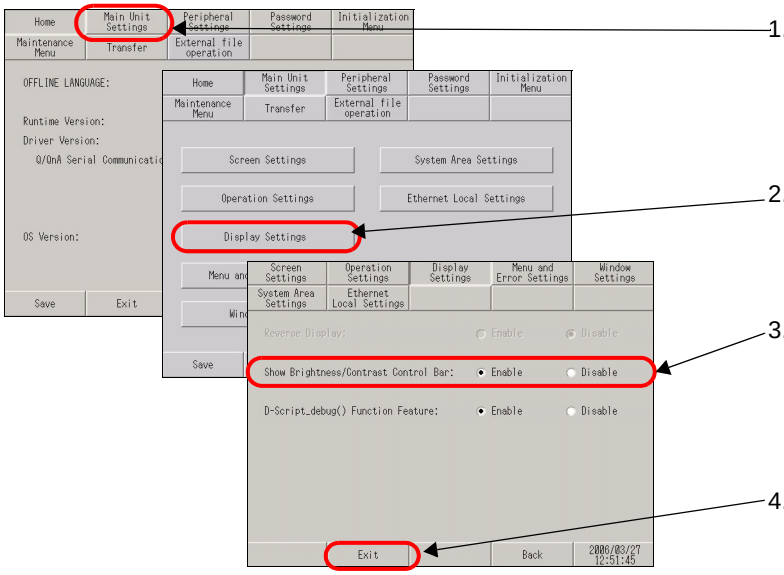
NOTE

- For more details, refer to the settings guide.

"2.15.1 Settings common to all Display models ◆ Display Settings" (page 2-80)

■ Setting in offline mode

Set whether to display a control bar that is used to adjust the brightness and contrast of the GP.



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Display Settings].
3. When the [Display Settings] screen opens, select [Enable] for [Show Brightness/Contrast Control Bar].
4. Touch [Exit] to exit offline mode.

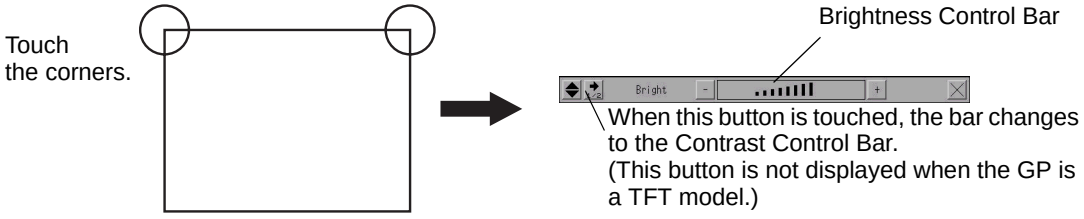
■ Show Brightness/Contrast Control Bar

To display the Brightness/Contrast Control Bar on the GP screen, in offline mode, set [Show Brightness/Contrast Control Bar] on the [Display Settings] screen to [Enable].

IMPORTANT

- This mode cannot be entered while waiting for GP to start up. Enter this mode after the RUN screen is displayed.
- This operation can be made even in the middle of RUN mode (during communication with the connected device)

Touch either the upper right and upper left corners, or the upper left and upper right corners (within 40 pixels of every direction) of the panel in this order within 0.5 second.

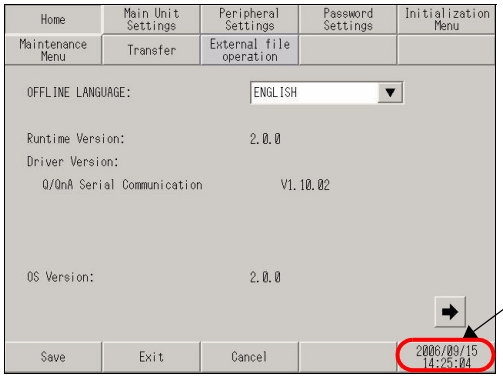


Touching [+] and [-] of Brightness/Contrast Control Bar and the strength is adjusted. Touch [x] to end the adjustment. TFT color LCD model (AGP-3500T etc.) can set only Brightness.

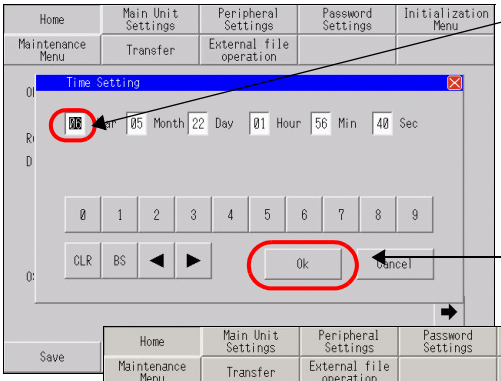
To end Brightness/Contrast Control mode
Touch the [x] of Brightness/Contrast Control Bar.

2.2.2 Adjusting the clock on the Display

You can set the date and time displayed on the GP screen.

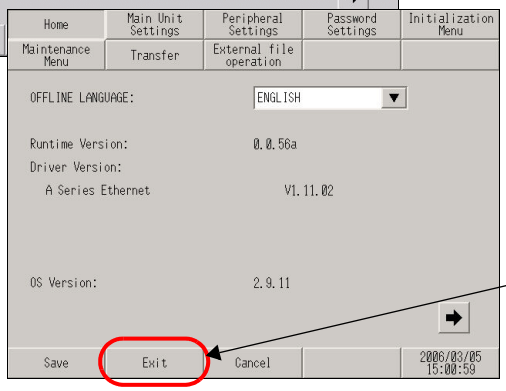


1. Enter offline mode, and touch the time display area in the control switches to display the [Time Setting] dialog box.



2. Touch the unit for the date or time to be changed. When the value is high-lighted in black, enter a value using the numeric touch keys below.

3. Once all values are input, touch [OK] and close the [Time Setting] dialog box.



4. On the [Home] screen, touch [Exit] to complete the setting.

IMPORTANT

- The GP's internal clock has a slight error. At normal operating temperatures and conditions, with the GP operating from its lithium battery, the degree of error is 65 seconds per month. Variations in operating conditions and battery life can cause this error to vary from +90 to -380 seconds per month. For systems where this degree of error will be a problem, the user should be sure to monitor this error and make adjustments when required.
- When the message [RAAA051 Low battery] appears, supply power to the GP and fully charge the battery. The battery requires 24 hours of charging to reach a level that allows backup operation, and about 96 hours (4 days) to be fully charged.

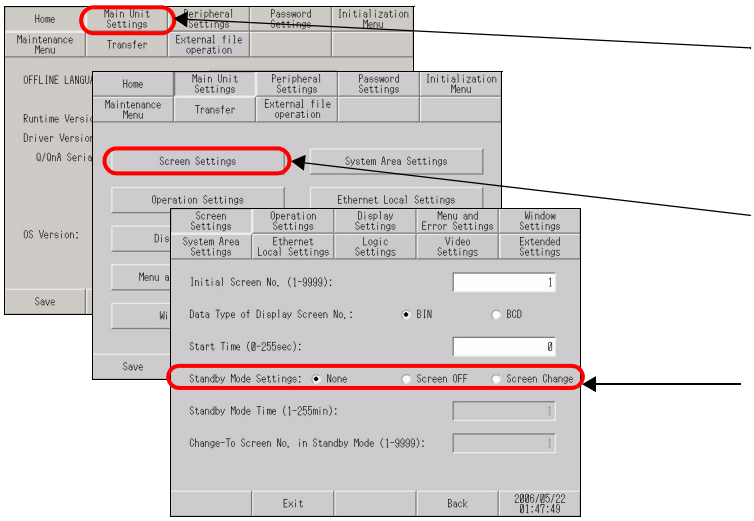
2.2.3 Turning OFF the screen after a certain period of time (standby mode)

To extend the life of the GP's backlight, the GP is equipped with a screen saver function that automatically turns the unit's backlight (s) OFF when no operations have occurred for a designated period of time. To set the standby mode, open the [Screen Settings] screen using the following procedure.

NOTE

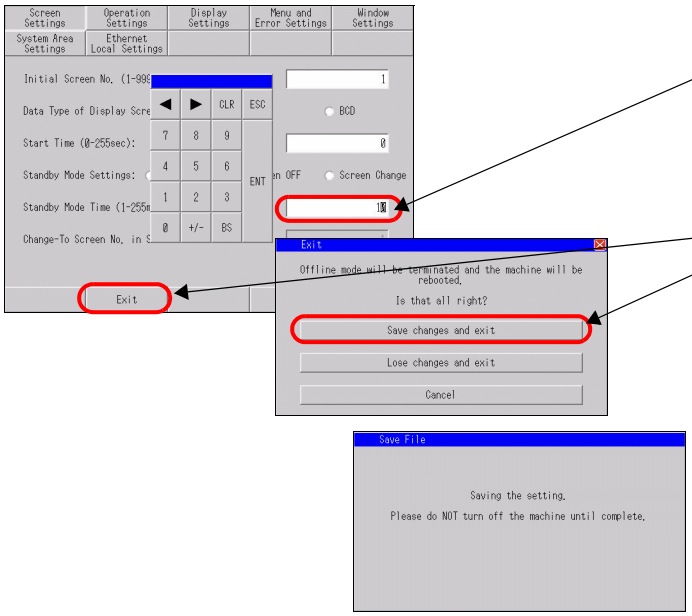
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Screen Settings" (page 2-78)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Screen Settings].
3. When the [Screen Settings] screen opens, touch [Screen OFF] for [Standby Mode Settings].

To turn OFF the screen after a certain period of time (Example: 10 minutes), adjust the settings as follows:



4. Touch the input field of [Standby Mode Time], type "10" using the displayed numeric touch keys, and touch the [ENT] key.
5. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].
6. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

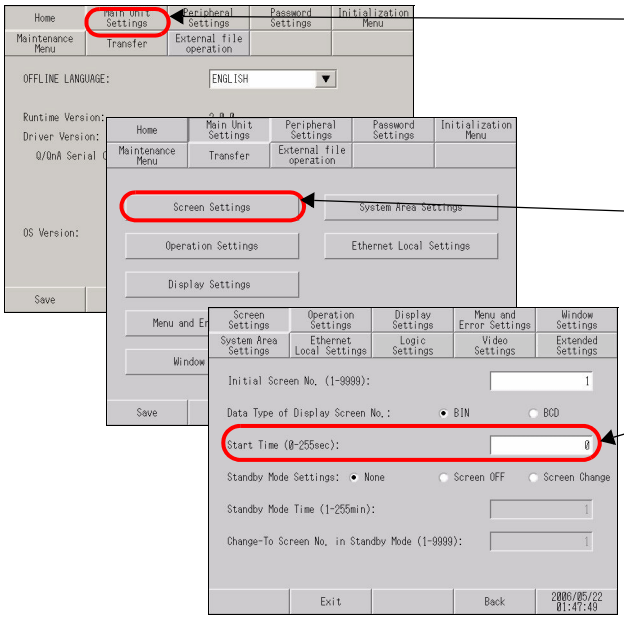
2.2.4 Setting the delay between power-on and Display start-up

This setup determines the start-up time of the GP. Use this setup to adjust the power up sequence so that the GP starts up after the PLC.

NOTE

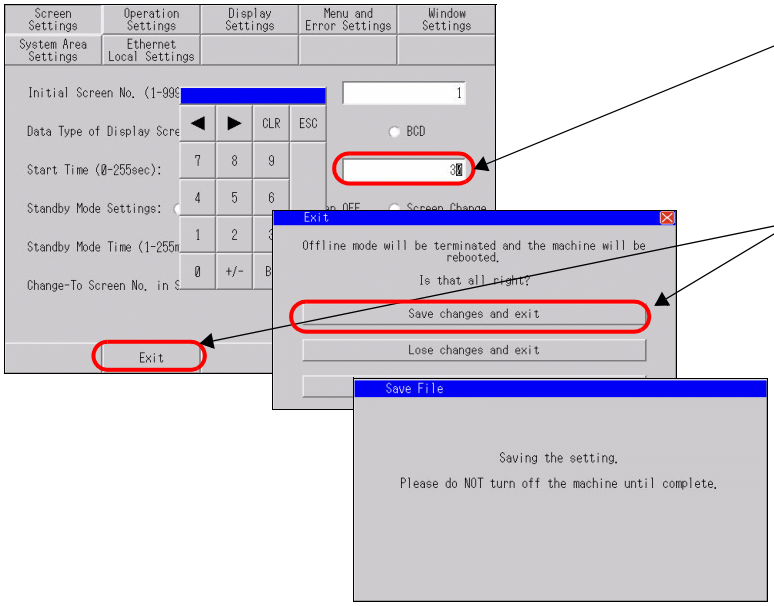
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Display Settings" (page 2-80)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Screen Settings].
3. When the [Screen Settings] screen opens, touch the input field of [Start Time (0-255sec)].

To display the initial screen 30 seconds after turning ON the power, adjust the settings as follows:



4. Touch the input field, type "30" using the displayed numeric touch keys, and touch the [ENT] key.
5. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].
6. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

When the GP restarts, the startup delay time (in seconds) specified in step 4 is shown in the upper right corner of the screen and counts down until the initial screen appears.

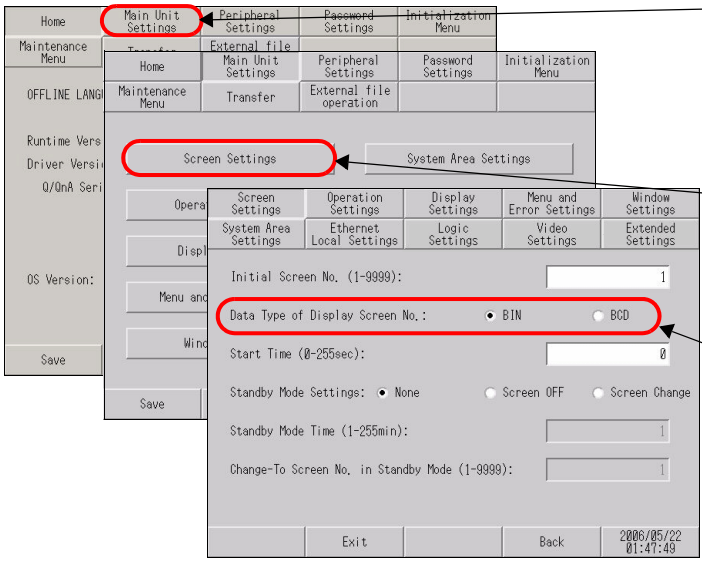
2.2.5 Setting the screen No. of the screen that is initially displayed after the power is turned ON

You can change the screen No. of the screen that is initially displayed after the power is turned ON.

NOTE

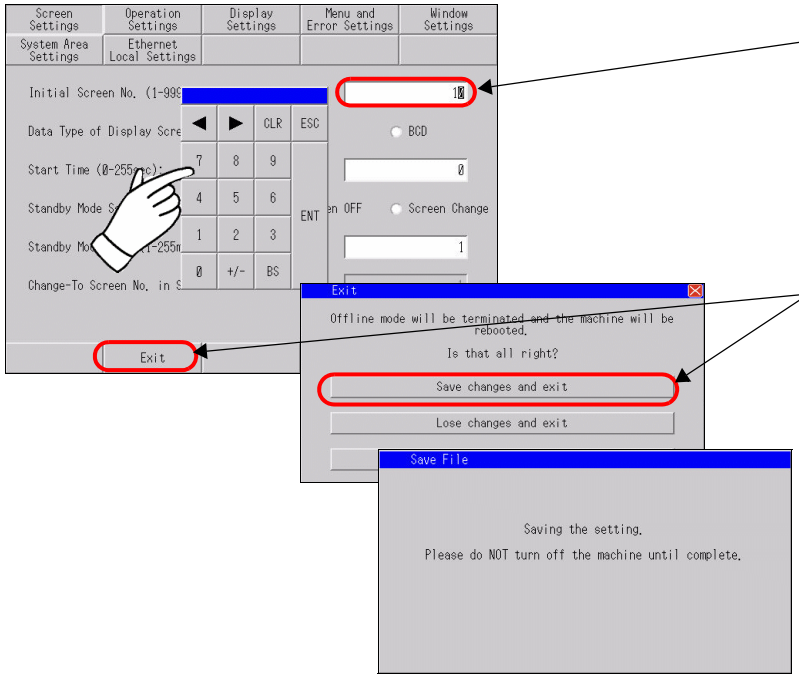
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Display Settings" (page 2-80)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Screen Settings].
3. When the [Screen Settings] screen opens, select the data type of the initial screen from [BIN] and [BCD] at [Data Type of Display Screen No.].

To change the screen that is initially displayed after the GP is turned ON (Example: Data format of the screen No. is BIN, Base screen 10), adjust the settings as follows:



4. Touch the input field of [Initial Screen No. (1-9999)], type "10" using the displayed numeric touch keys, and touch the [ENT] key.
5. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].
6. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

2.2.6 Deactivating the touch sound

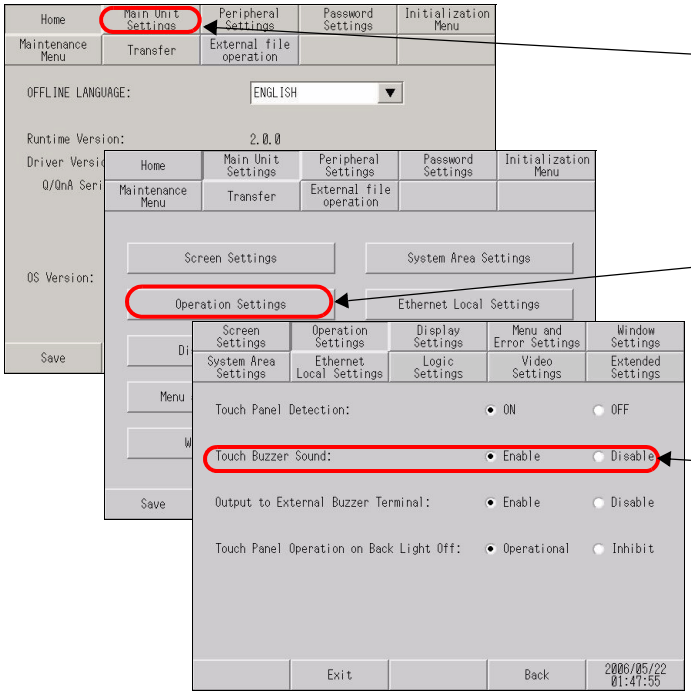
You can set whether to activate or deactivate the internal buzzer when the screen is touched.

NOTE

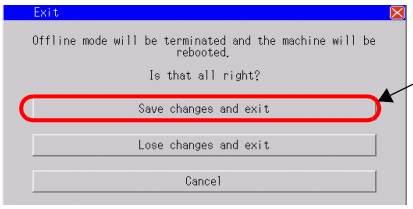
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Operation Settings" (page 2-79)

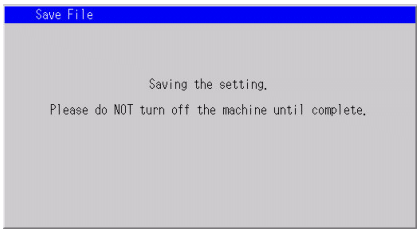
■ Activating/deactivating the touch sound



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Operation Settings].
3. When the [Operation Settings] screen opens, select [Disable] for [Touch Buzzer Sound].



4. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].



5. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

2.2.7 Changing the language used for the system menu and offline mode menu to Japanese

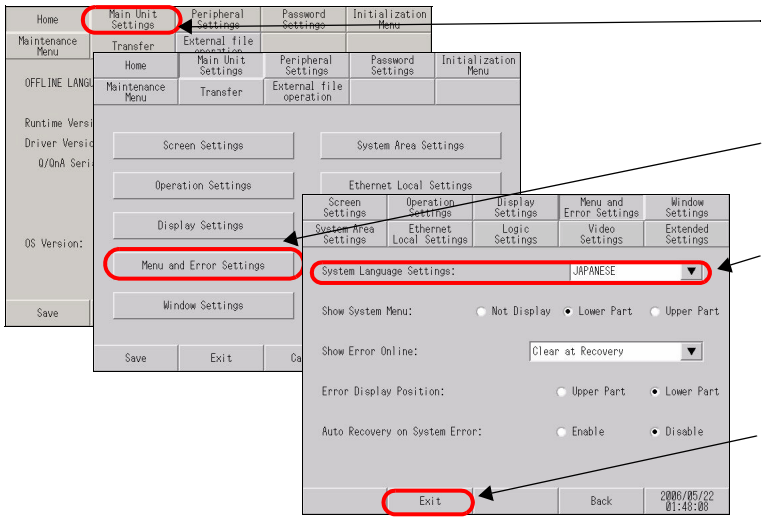
NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Menu and Error Settings" (page 2-80)
☞ "2.15.1 Settings common to all Display models ■ [Home] Settings Guide" (page 2-76)

■ System menu and error messages

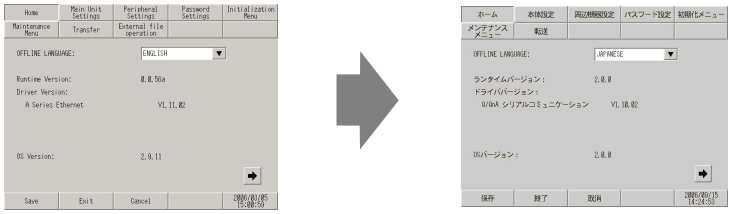
You can set the language used to display the system menu and error messages.

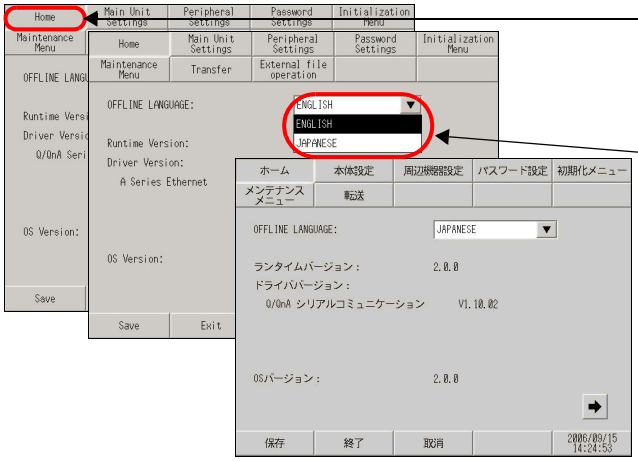


1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Menu and Error Settings].
3. When the [Menu and Error Settings] screen opens, touch ▼ at [System Language Settings] and select [JAPANESE].
4. Touch [Exit] and save the change. The GP restarts automatically.

■ Offline mode menu

Set the language used to display the text of the offline mode menu.





1. Enter offline mode and confirm that [Home] is displayed.
2. Touch ▼ at [OFFLINE LANGUAGE] and select [JAPANESE].
3. The offline menu changes to display Japanese.

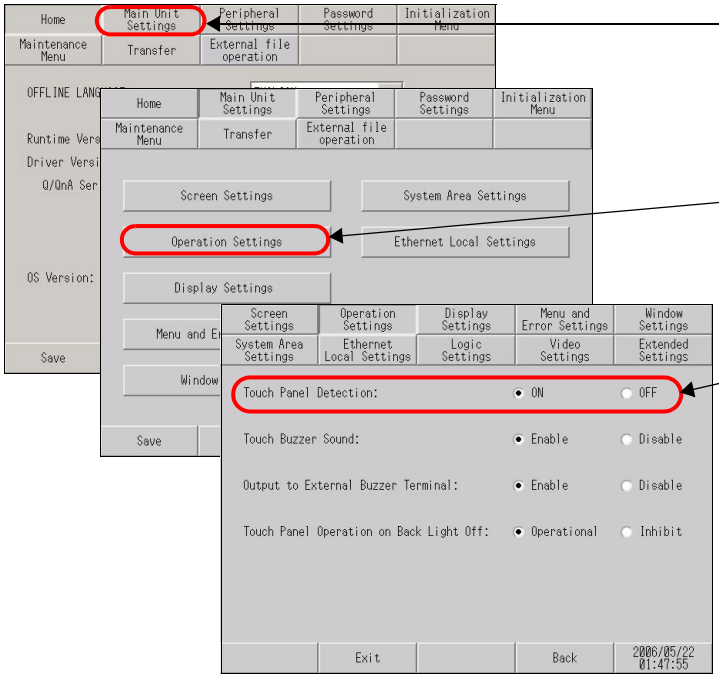
2.2.8 Changing the timing to recognize touches

Setup the touch detect timing.

NOTE

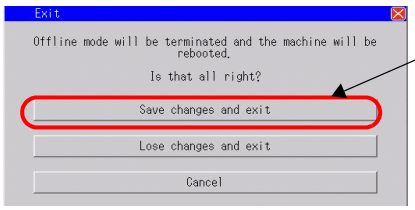
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Operation Settings" (page 2-79)

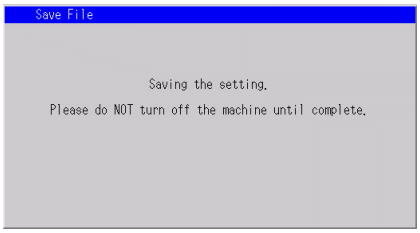


1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Operation Settings].
3. When the [Operation Settings] screen opens, select [ON] or [OFF] for [Touch Panel Detection].

ON : Touch is detected when a touch is pushed.
OFF : Touch is detected when the finger leaves from the screen.
In momentary operation, it is detected when touched regardless of a Touch Panel Detection setting. In repeat operation, Touch Panel Detection setting becomes invalid.



4. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].



5. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

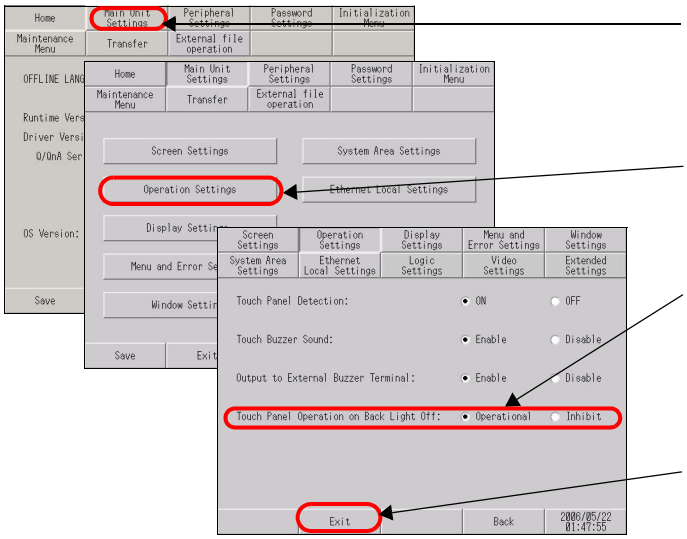
2.2.9 Preventing malfunctions when the backlight burns out

This option designates whether touch-operation is disabled or not when the backlight burns out. If this selection is set to “Inhibit”, touch-operation will be disabled when the backlight burns out, which prevents the GP from sending input signals to the PLC.

NOTE

- For more details, refer to the settings guide.

☞ “2.15.1 Settings common to all Display models ◆ Operation Settings” (page 2-79)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover switches.
2. When the [Main Unit Settings] screen opens, touch [Operation Settings].
3. When the [Operation Settings] screen opens, select [Operational] or [Inhibit] for [Touch Panel Operation on Back Light Off].
4. Touch [Exit] and save the change. The GP restarts automatically.

Operational : Touch operation is accepted even when the backlight burns out.
Inhibit : Touch operation is not accepted when the backlight burns out. This prevents malfunctions.

NOTE

- When the backlight burns out, the Status LED’s orange light turns ON.
- The GP3000 series models use two backlights (CCFL). The GP detects backlight burnout when one of the two backlights burns out, and disables touch operations.
- When the backlight burns out, the System Data Area’s “Status” bit 10*a will turn ON.
- If the “Show System Menu” option is set to “Lower Part” or “Upper Part“, “System Menu” can still be performed by touch-operation in case of backlight burnout and the screen remains black.
- If the backlight burns out when the GP is OFFLINE, touch-panel operation is enabled, regardless of these settings.

*a Bit +6 (when using the Direct Access method), and bit +11 (when using the Memory Link method), will turn ON

IMPORTANT

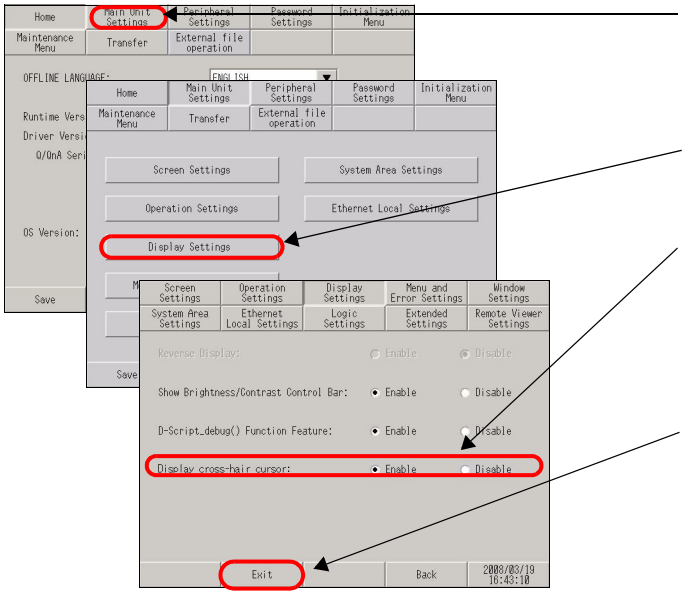
- Normally, the GP unit detects a backlight burnout by monitoring the backlight’s current flow, however, the GP may fail to detect this condition, depending on the type of backlight problem, and also the GP may detect the condition before the backlight burns out.

2.2.10 Deleting the touched position (When the GP3200 series is used)

The “+” (cross) cursor appears at the touched position on the screen. You can check for a touch calibration error based on the difference between the “+” cursor position and the drawing position.

If you wish to hide the cross cursor, perform the following setup procedure to hide the cursor. For details on the setting screen, refer to the setting guide.

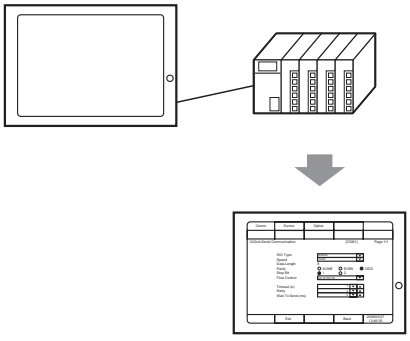
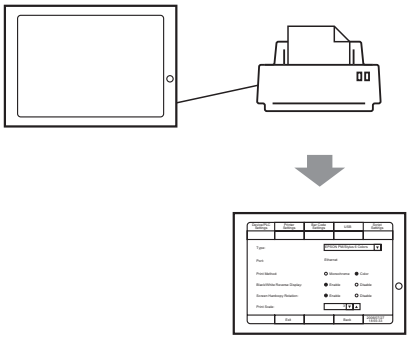
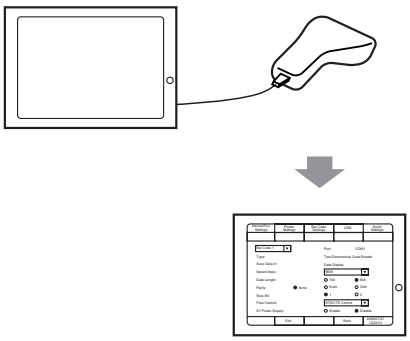
☞ “2.15.10 When GP-32** Series is used ◆ [Display Settings]” (page 2-167)



1. Go to offline mode and touch [Main Unit Settings] on the item changeover switch.
2. After the [Main Unit Settings] window opens, touch [Display Settings].
3. After the [Display Settings] window opens, select [Disable] for “Display cross-hair cursor”.
4. Touch [Exit] to use offline mode.

2.3 Peripheral device settings

You can adjust and check the settings for the peripheral devices.

What you can do	Section describing the setting procedure
• Specifying/checking the communication settings for the connected device 	☞ "2.3.1 Checking the communication settings for the connected device" (page 2-21)
• Changing/checking the printing method for the connected printer 	☞ "2.3.2 Checking the printer settings" (page 2-23)
• Specifying/checking the communication settings for the connected bar code reader 	☞ "2.3.3 Checking the bar code reader settings" (page 2-24)

2.3.1 Checking the communication settings for the connected device

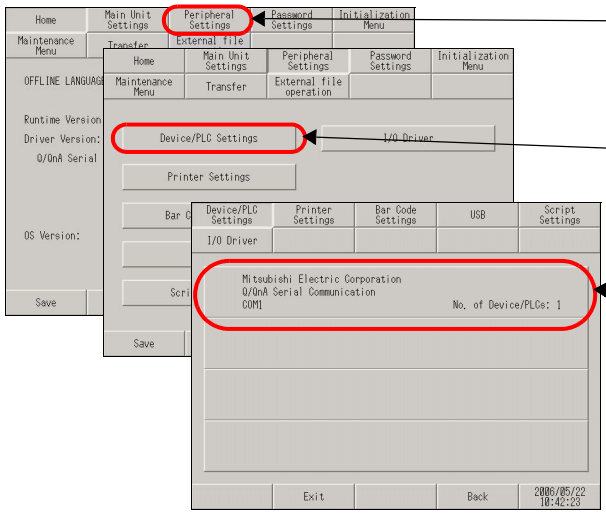
You can adjust or check the communication settings for the connected device. The communication settings must be the same as those of the connected device. The items to be selected vary depending on the device being connected.

NOTE

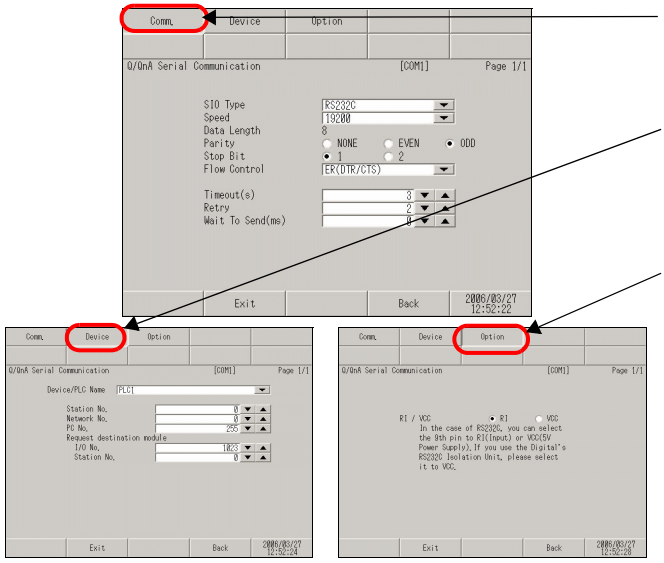
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Device/PLC Settings" (page 2-91)

■ Serial connection



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [Device/PLC Settings].
3. When the [Device/PLC Settings] screen opens, check the setting details. To change the setting, touch the appropriate device.



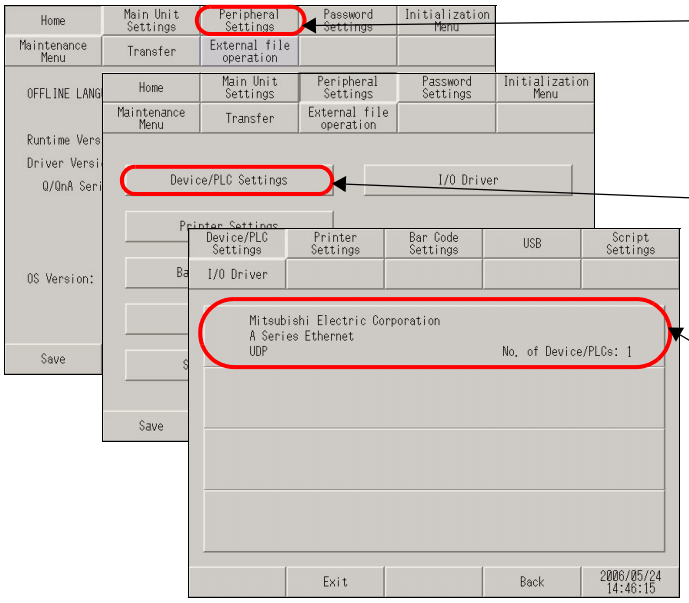
- [Comm.]
  Touch [Comm.] to adjust the parameters for communication.
- [Device]
  Touch [Device] to adjust the parameters according to the connected device.
- [Option]
  When RS-232C is used, the signal for pin No. 9 can be changed.

* After you change the setting, touch [Exit] to save the change. After the change is saved, the GP restarts automatically.

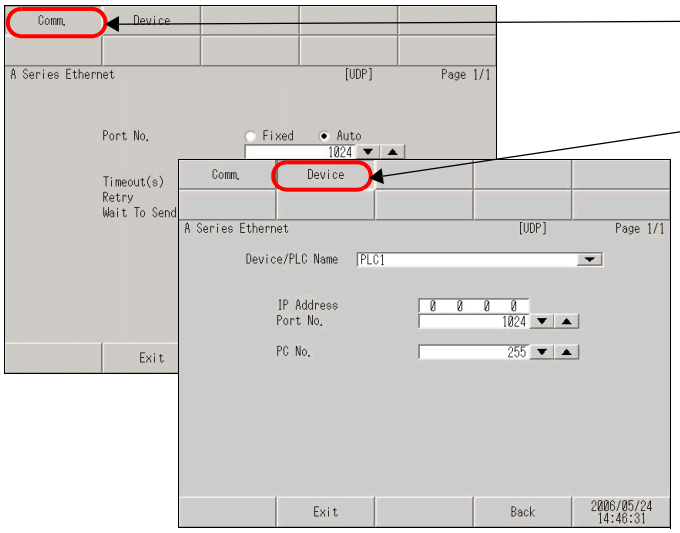
NOTE

- The [Comm.], [Device] and [Option] 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.

■ Ethernet connection



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [Device/PLC Settings].
3. When the [Device/PLC Settings] screen opens, check the setting details. To change the setting, touch the appropriate device.



- [Comm.]
  Touch [Comm.] to specify parameters for communication.
- [Device]
  Touch [Device] to specify parameters according to the connected device.

* After you change the setting, touch [Exit] to save the change. After the change is saved, the GP restarts automatically.

NOTE

- The [Comm.] and [Device] 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.

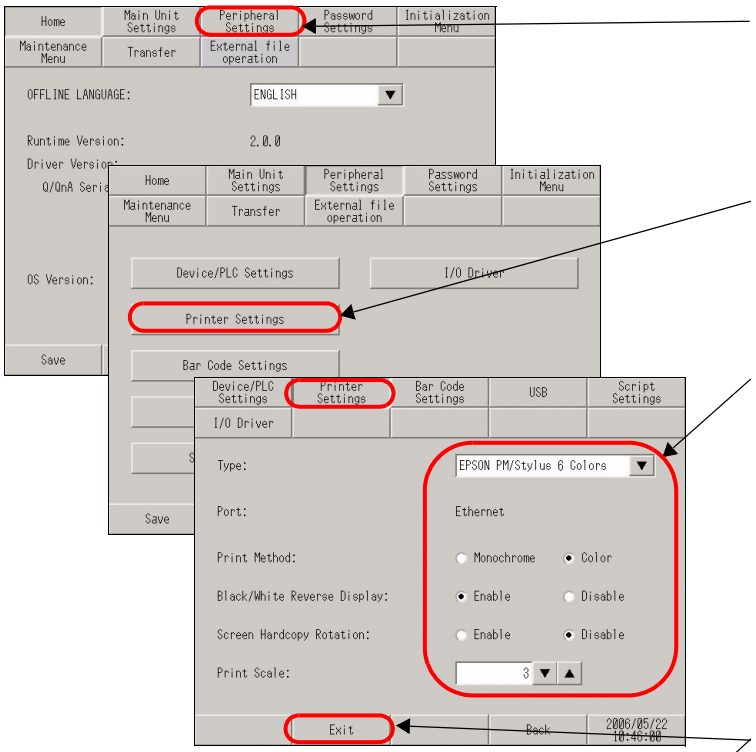
2.3.2 Checking the printer settings

This section describes the procedure to check the settings for the printer.

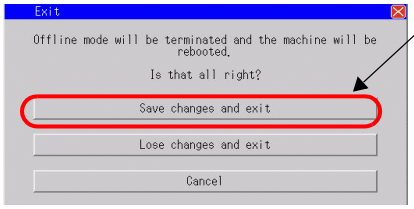
NOTE

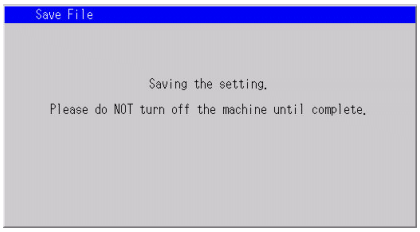
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Printer Settings" (page 2-92)



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [Printer Settings].
3. When the [Printer Settings] screen opens, confirm the settings, or change the setting by touching the item.
4. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].





5. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

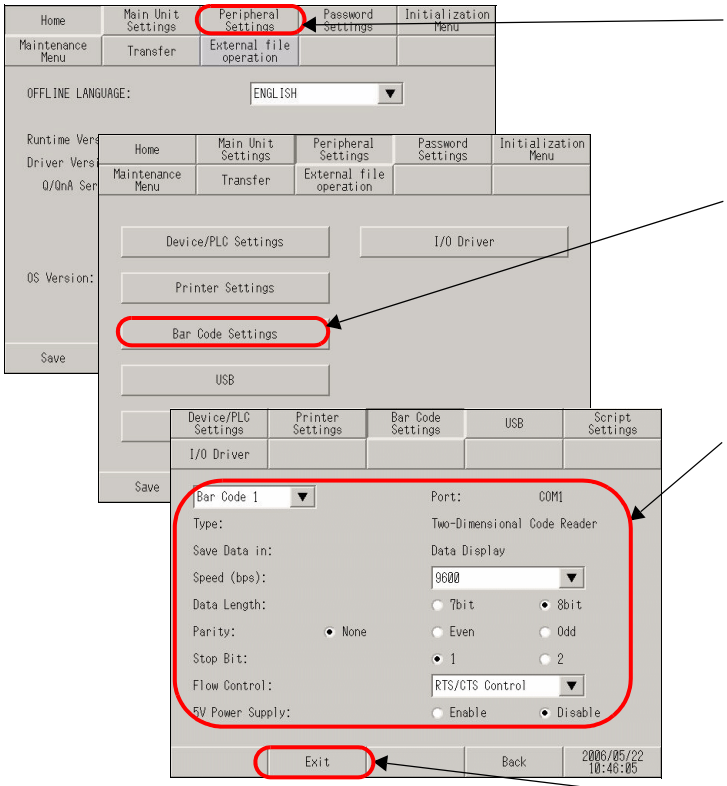
2.3.3 Checking the bar code reader settings

This section describes the procedure to check the settings for the bar code reader.

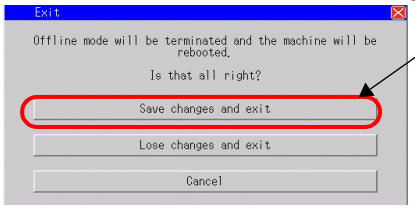
NOTE

- For more details, refer to the settings guide.

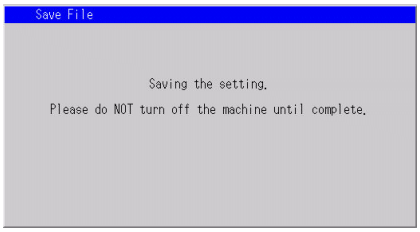
☞ "2.15.1 Settings common to all Display models ◆ Bar Code Settings" (page 2-93)



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [Bar Code Settings].
3. When the [Bar Code Settings] screen opens, confirm the settings, or change the setting by touching the item.



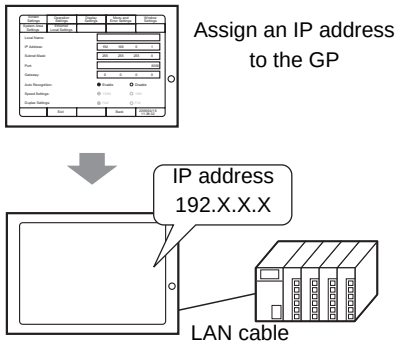
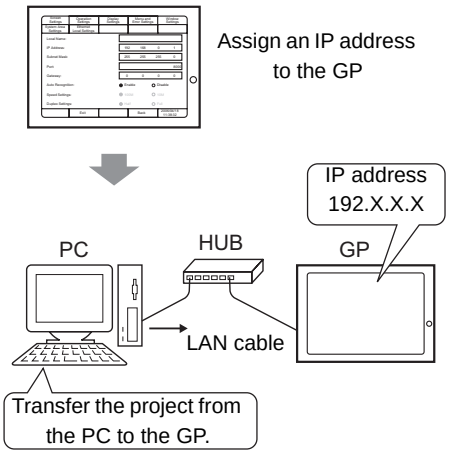
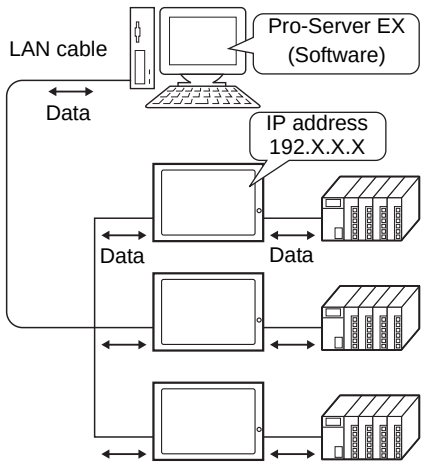
4. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].



5. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

2.4 Ethernet settings

You can assign an IP address to the Display to establish communication for the following purposes.

What you can do	Section describing the setting procedure
• To communicate with the connected device via Ethernet 	
• To transfer project files 	☞ "2.4.1 Assigning an IP address to the Display" (page 2-26)
• To establish communication when Pro-Server EX is used 	

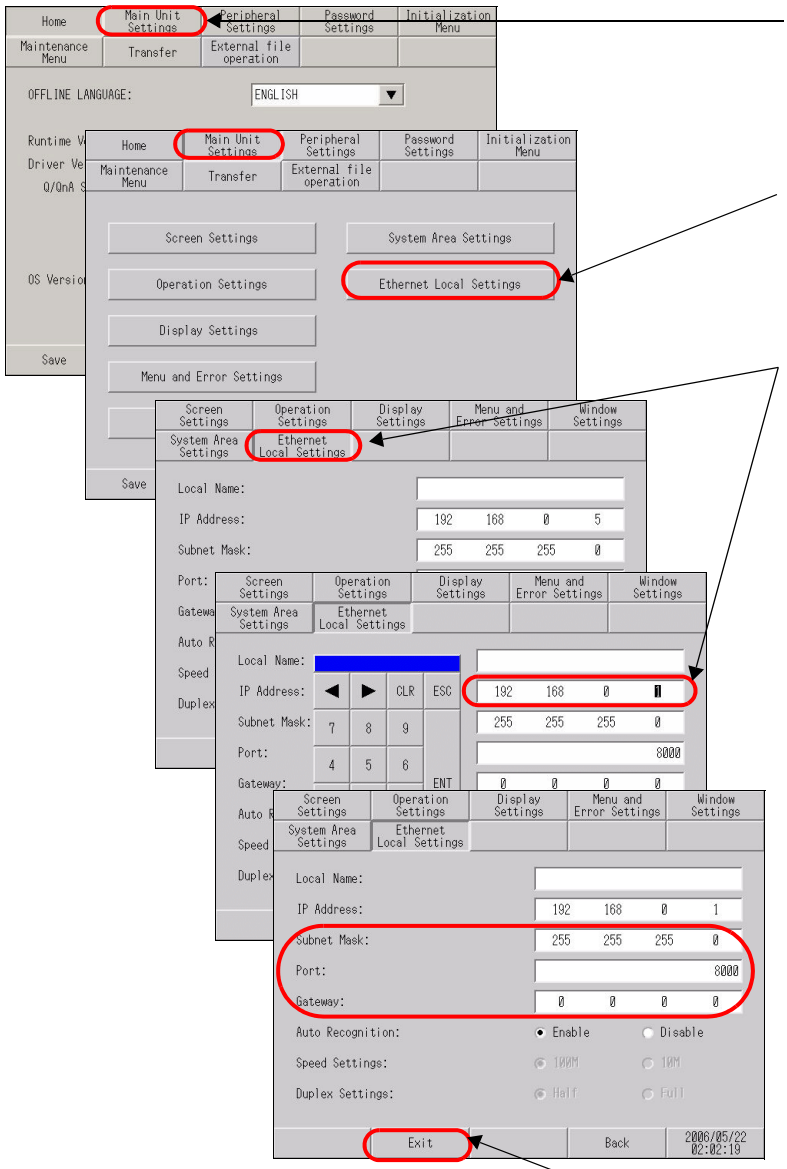
2.4.1 Assigning an IP address to the Display

This menu is for Ethernet settings. This information is used as setting data during GP setup or projectfile transfer, or, if the Pro-Server EX software is used, for the 2-Way Driver.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Ethernet Local Settings" (page 2-85)



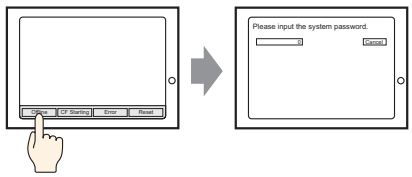
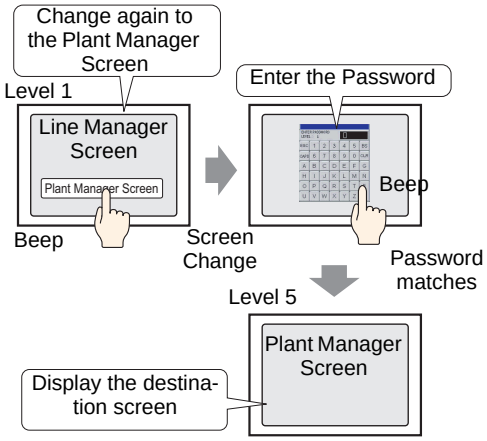
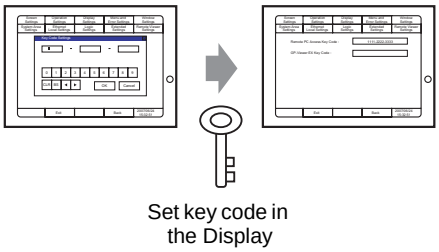
1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Ethernet Local Settings].
3. The [Ethernet Local Settings] screen opens. Touch the IP address input field to display the numeric touch keys and then enter an IP address (Example: 192.168.0.1). For the IP address setting method, consult the network administrator.
4. Specify [Subnet Mask], [Port][*1], and [Gateway] using the same procedure.

*1. The port No. specified here is the one used for setup via Ethernet, for the transfer of project files, and for communication when Pro-Server EX is used. Do not change it from the initial value [8000].

5. Touch [Exit] and save the change. The GP restarts automatically.

2.5 Password and license settings

You can set a password to enter offline mode, initialize the memory/CF card, or perform screen operations.

What you can do	Section describing the setting procedure
• Setting a password for initialization or to enter offline mode 	☞ "2.5.1 Preventing others from changing the offline settings" (page 2-28)
• Granting security rights for screen operations 	☞ "2.5.2 Granting security rights for screen operations" (page 2-29)
• Setting GP-Viewer EX and RPA function licenses 	☞ "2.5.3 GP-Viewer EX and RPA license settings" (page 2-30)

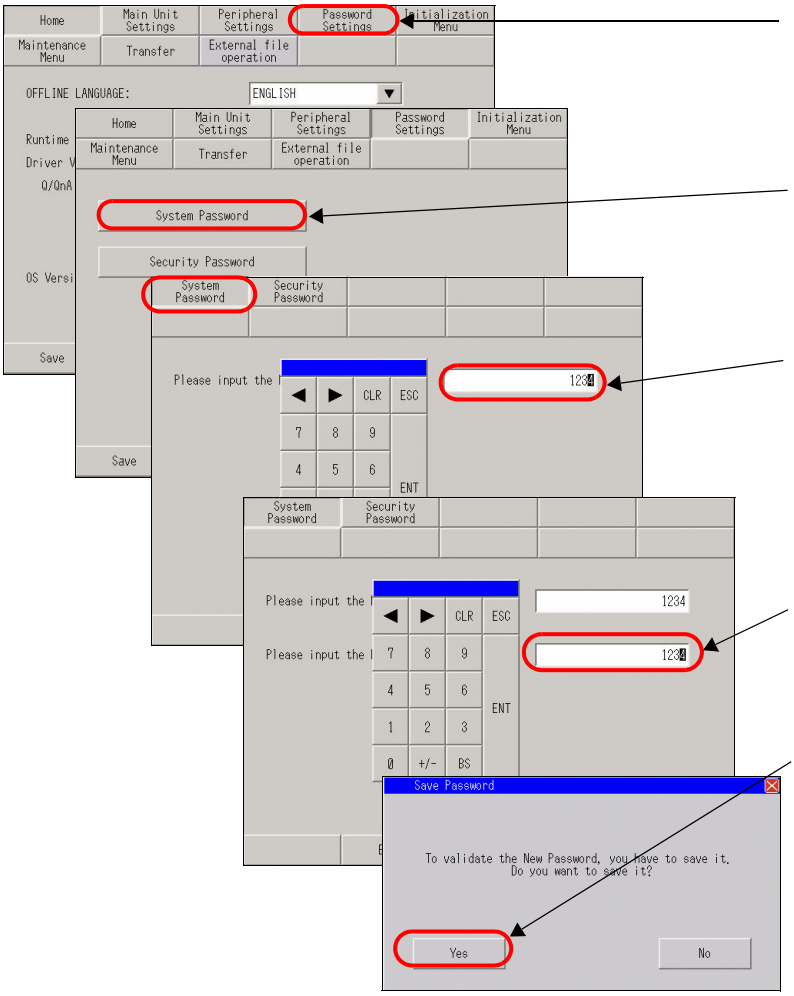
2.5.1 Preventing others from changing the offline settings

The password setting is used when changing to the Initialize Memory or OFFLINE mode Screens.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ System Password" (page 2-96)



1. Enter offline mode and touch [Password Settings] in the item change over buttons.
2. When the [Password Settings] screen opens, touch [System Password].
3. The [System Password] screen opens. Touch the input field and enter a password using the displayed numeric touch keys. (Example: 1234)
4. Enter the password again for confirmation.
5. When the [Save Password] dialog box is displayed, touch [Yes]. The GP restarts automatically and the setting is complete.

2.5.2 Granting security rights for screen operations

If the password of a level 15 is inputted, the password from level 1 to level 15 can be changed. In case the password of each level is changed, after inputting the password set up now is entered.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Security Password" (page 2-96)

IMPORTANT

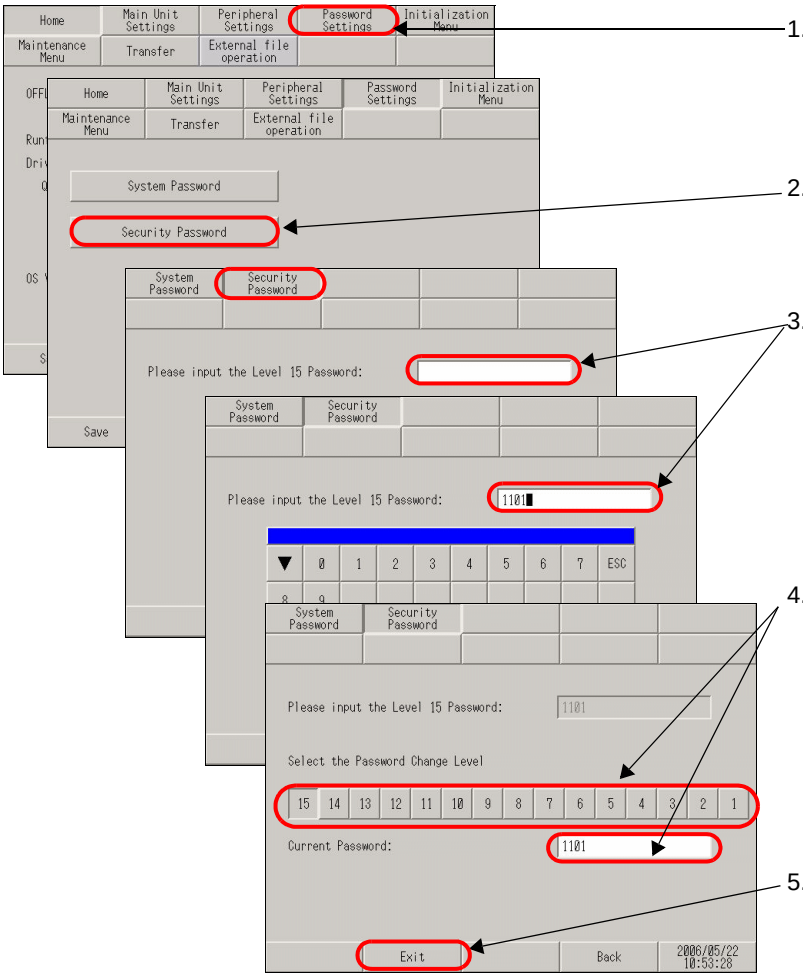
- When the security password of a level 15 is not set up with GP-Pro EX, setting change of a security password cannot be performed in offline mode.

☞ GP-Pro EX Reference Manual "22.3 Limiting Screen Access by Authority" (page 22-8)

■ Setting with GP-Pro EX

1. With GP-Pro EX, select [Security Settings(O)] - [Security Password(P)] from the [Common Settings(R)] menu. When the password setting screen opens, check [Enable Security Function] and specify a password in [Level 15].
2. Transfer the project file specified in step 1 to the GP.

■ Changing settings in offline mode



1. Enter offline mode and touch [Password Settings] in the item change over buttons.
2. When the [Password Settings] screen opens, touch [Security Password].
3. The [Security Password] screen opens. Touch the input field and enter the password set for the GP-Pro EX using the displayed numeric touch keys. (Example: 1101)
4. Under [Select the Password Change Level], touch the level number and change the password. Up to 8 single-byte characters can be used for the password.
5. Touch [Exit] and save the change. The GP restarts automatically.

2.5.3 GP-Viewer EX and RPA license settings

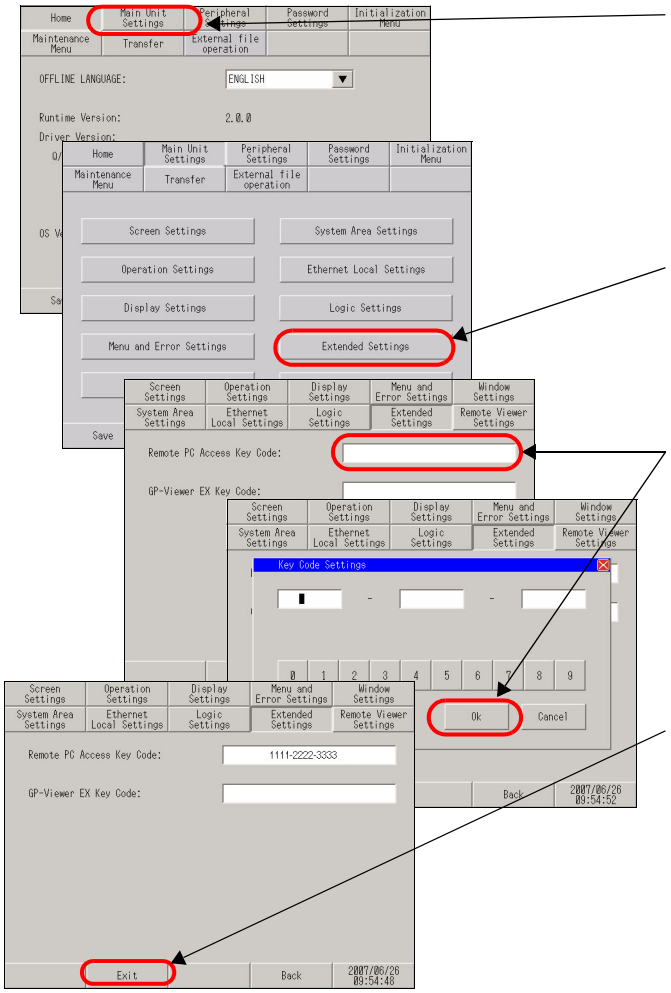
Set the license required to use the RPA and GP-Viewer EX functions.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Extended Settings" (page 2-86)

- To use the RPA function and GP-Viewer EX function, you must purchase RPA dedicated key codes (model: EX-RPA) and GP-Viewer EX dedicated key codes (model: EX-VIEWER-LICENSE) in advance.



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When [Main Unit Settings] opens, touch [Extended Settings].
3. When [Extended Settings] opens, touch the [Remote PC Access Key Code] input frame to display the numeric keypad. When the numeric keypad appears, enter a key code and touch [OK].
   (Example: [Remote PC Access Key Code] 1111-2222-3333)
4. When you touch [Exit] to save the changes, GP is automatically restarted.

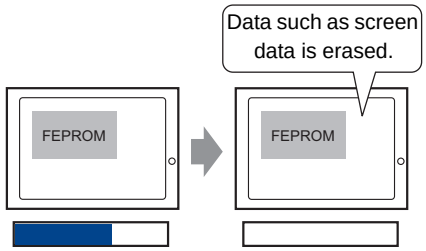
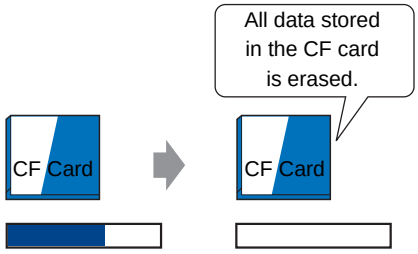
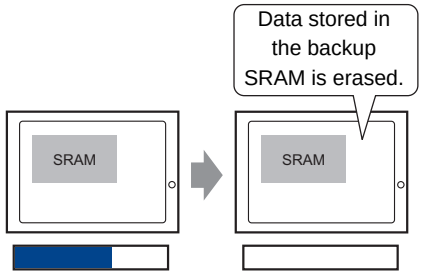
NOTE

- When you have set the GP-Viewer EX and RPA licenses, set each function using GP-Pro EX. For information about the setting procedure and details of each function, refer to the following:

☞ RPA function GP-Pro EX Reference Manual "36.3.2 Setup Procedure" (page 36-6)
☞ GP-Viewer EX function GP-Pro EX Reference Manual "37.4.2 Setup Procedure" (page 37-12)

2.6 Initialization of the memory/CF card

You can initialize the data in the memory or CF card. The following initialization functions are available.

What you can do	Section describing the setting procedure
• Initializing the user memory (FEPROM) 	☞ “2.6.1 Initializing the user memory (FEPROM)” (page 2-32)
• Initializing the CF card 	☞ “2.6.2 Initializing the CF card” (page 2-33)
• Initializing the backup SRAM 	☞ “2.6.3 Initializing the backup SRAM” (page 2-34)

2.6.1 Initializing the user memory (FEPROM)

Deletes all data in GP user memory (FEPROM).

NOTE

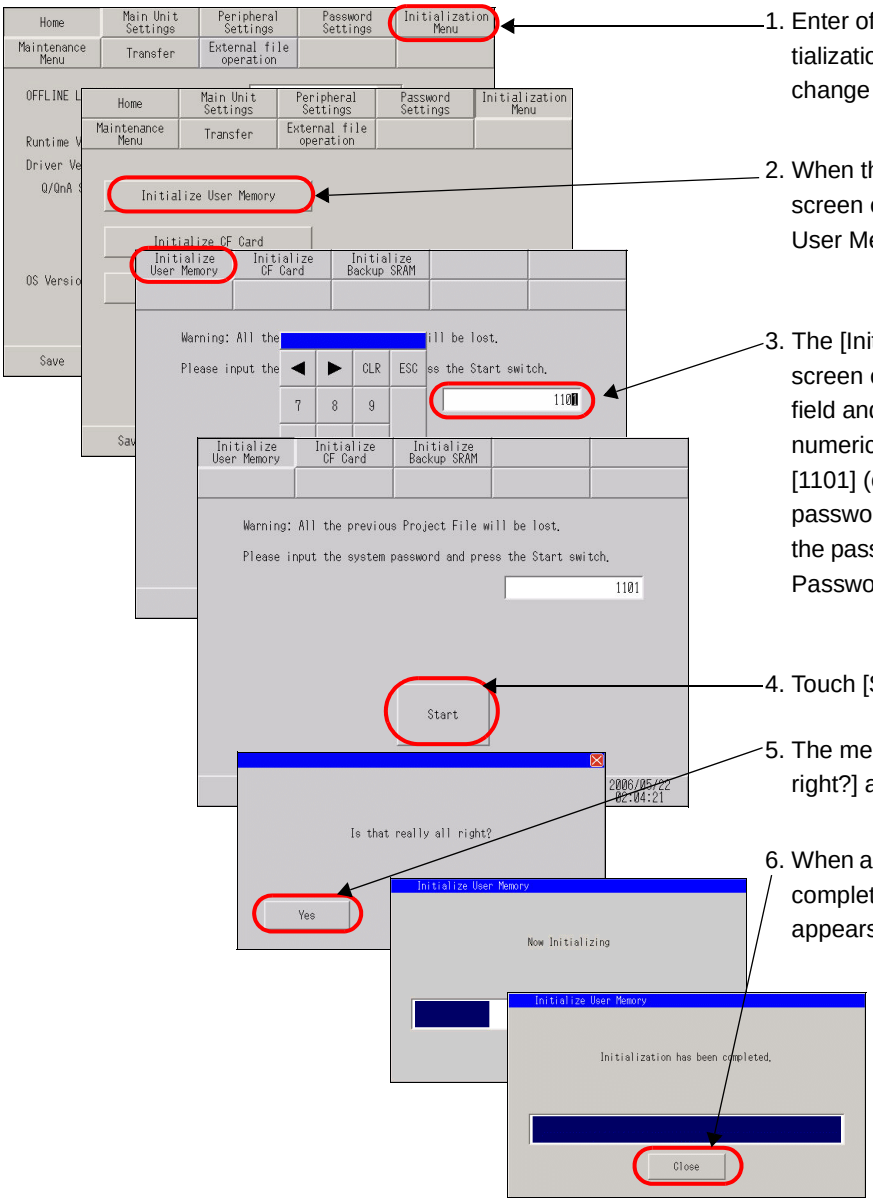
- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Initialize User Memory" (page 2-97)

- The time required for Initialization is between 10 and 20 seconds.

IMPORTANT

- You cannot cancel the Initialization procedure after pressing the [Start] key. Do not turn OFF the power during initialization.
- All backed up data in SRAM is lost.
- Initialization does not erase the SYSTEM SET UP, the SIO protocol, or the internal clock settings.
- All data retained by the logic program is also erased.



1. Enter offline mode and touch [Initialization Menu] in the item change over buttons.
2. When the [Initialization Menu] screen opens, touch [Initialize User Memory].
3. The [Initialize User Memory] screen opens. Touch the input field and use the displayed numeric touch keys to enter [1101] (only when the system password has not been set) or the password set in the [System Password]
4. Touch [Start].
5. The message [Is that really all right?] appears. Touch [Yes].
6. When a message indicating the completion of the initialization appears, touch [Close].

2.6.2 Initializing the CF card

Deletes all data in the CF Card installed in the GP.

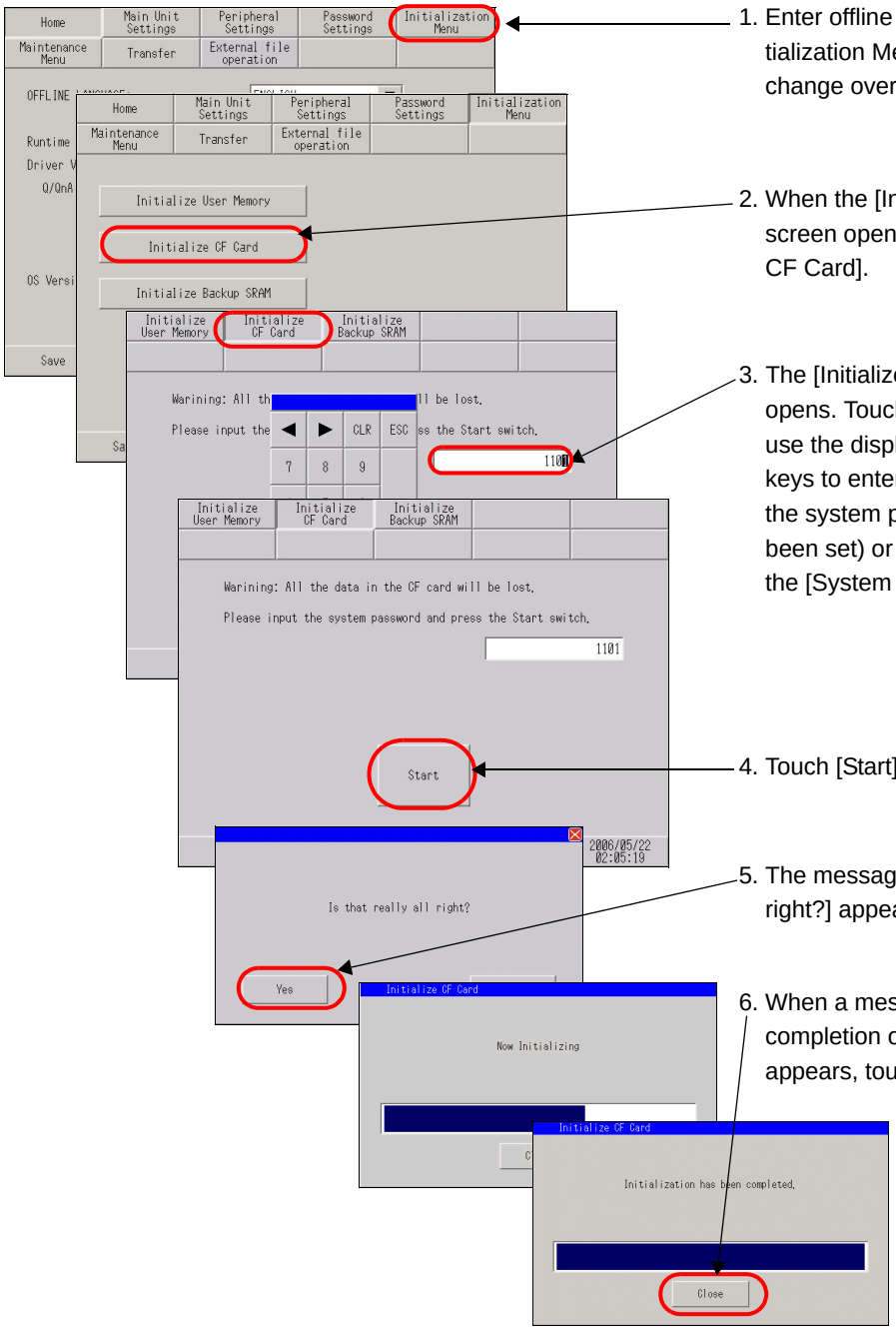
NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Initialize CF Card" (page 2-98)

IMPORTANT

- Initialization cannot be canceled once the [Start] key is touched. Do not turn OFF the power during initialization.



1. Enter offline mode and touch [Initialization Menu] in the item change over buttons.
2. When the [Initialization Menu] screen opens, touch [Initialize CF Card].
3. The [Initialize CF Card] screen opens. Touch the input field and use the displayed numeric touch keys to enter [1101] (only when the system password has not been set) or the password set in the [System Password]
4. Touch [Start].
5. The message [Is that really all right?] appears. Touch [Yes].
6. When a message indicating the completion of the initialization appears, touch [Close].

2.6.3 Initializing the backup SRAM

Deletes all data in GP's backup SRAM.

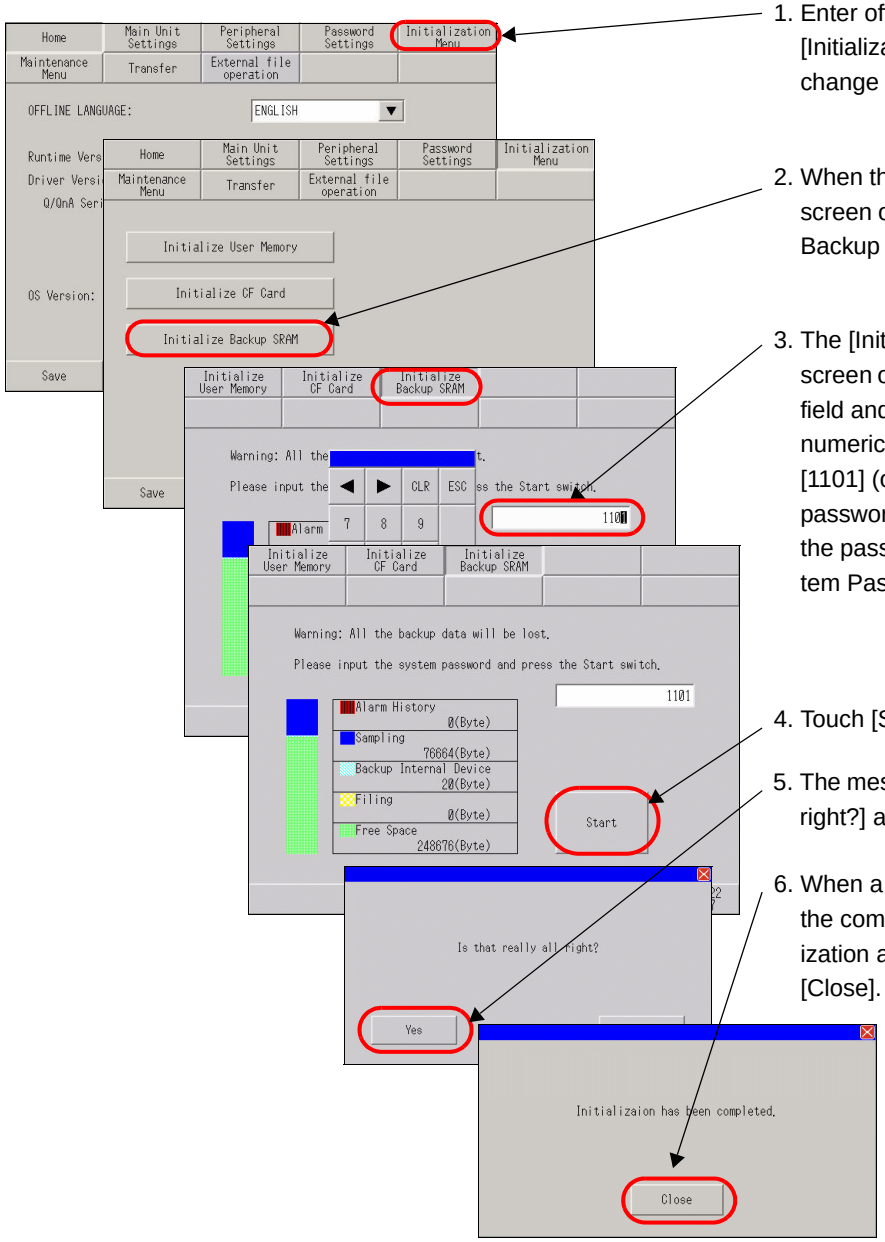
NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Initialize Backup SRAM" (page 2-98)

IMPORTANT

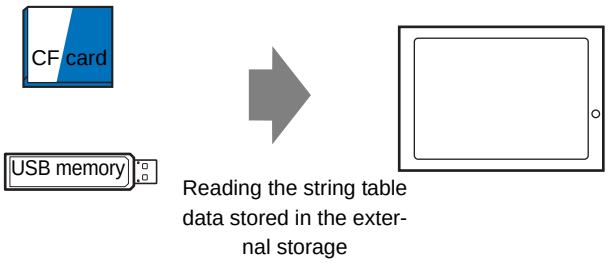
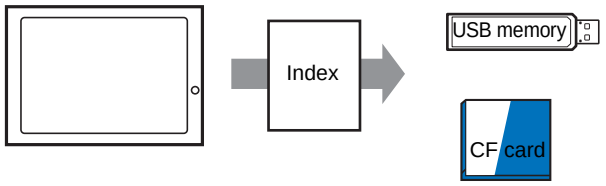
- You cannot cancel the Initialization procedure after pressing the [Start] key. Do not turn OFF the power during initialization.
- All backed up data in SRAM is lost.
- Initialization does not erase the SYSTEM SET UP, the SIO protocol, the internal clock settings or the data retained by the logic program.



1. Enter offline mode and touch [Initialization Menu] in the item change over buttons.
2. When the [Initialization Menu] screen opens, touch [Initialize Backup SRAM].
3. The [Initialize Backup SRAM] screen opens. Touch the input field and use the displayed numeric touch keys to enter [1101] (only when the system password has not been set) or the password set in the [System Password]
4. Touch [Start].
5. The message [Is that really all right?] appears. Touch [Yes].
6. When a message indicating the completion of the initialization appears, touch [Close].

2.7 External file operation

You can retrieve the string table data stored in the external storage, or you can create an index file for the recipe in the external storage.

What you can do	Section describing the setting procedure
 Reading the string table data stored in the external storage	☞ “2.7.1 Reading the string table data stored in the external storage” (page 2-36)
	☞ “2.7.2 Creating an index file for the recipe in the external storage” (page 2-37)

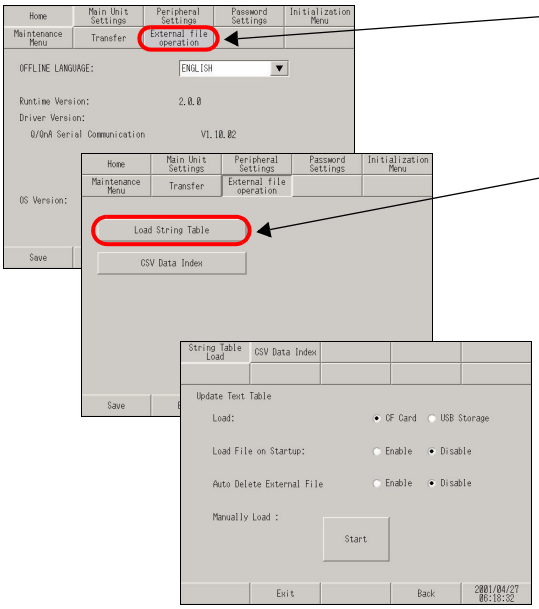
2.7.1 Reading the string table data stored in the external storage

Save the string table data created with GP-Pro EX into the external storage and then read it with the GP. You can change name plate characters or alarm messages without transferring the project file.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ String Table Load" (page 2-106)



1. Enter offline mode and touch [External file operation] in the item changeover buttons.
2. When the [External file operation] screen opens, touch [Load String Table].
3. Specify parameters to read the string table data stored in the external storage.

2.7.2 Creating an index file for the recipe in the external storage

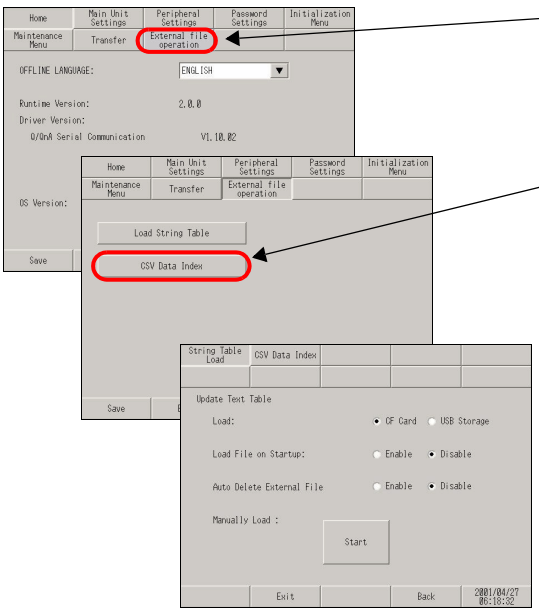
Create an index file for the recipe function and store it in the external storage.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ CSV Data Index" (page 2-107)

- If an index file already exists in the external storage, its data will be overwritten.



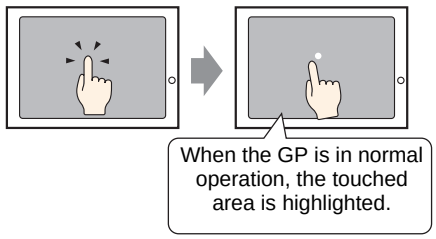
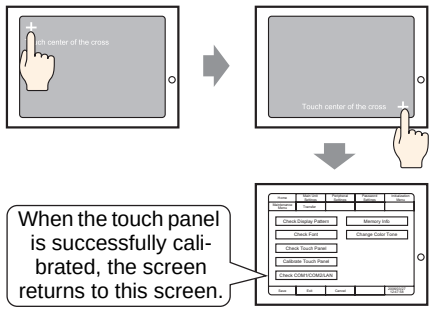
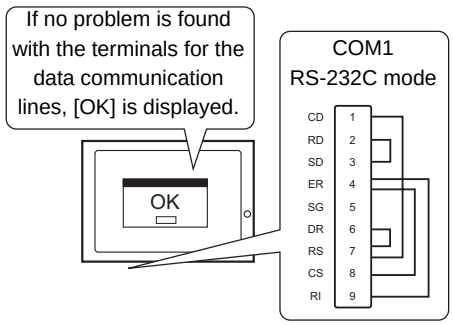
1. Enter offline mode and touch [External file operation] in the item changeover buttons.
2. When the [External file operation] screen opens, touch [CSV Data Index].
3. Select the destination to store the index file and touch [Start].

2.8 Operation check of the Display

You can check the following items to ensure proper operation of the Display.

NOTE

- Refer to the following section to check the LCD display, font display, memory information of the GP unit, and color tones in offline mode.
  ☞ "2.15.1 Settings common to all Display models ■ [Maintenance Menu] Settings Guide" (page 2-99)

What you can do	Section describing the setting procedure
• Checking the touch panel 	☞ "2.8.1 Checking whether the Display is operating properly ■ Touch Panel" (page 2-39)
• Correcting the analog touch panel 	☞ "2.8.1 Checking whether the Display is operating properly ■ Calibration Touch Panel" (page 2-39)
• Checking COM1/COM2/LAN  * You need to prepare a loopback cable to check the COM1 and COM2 terminals.	☞ "2.8.1 Checking whether the Display is operating properly ■ COM1/COM2/LAN" (page 2-40)

2.8.1 Checking whether the Display is operating properly

You can check whether the system and interfaces of the GP are operating properly. This section describes the procedures for [Check Touch Panel], [Calibrate Touch Panel], and [Check COM1/COM2/LAN].

NOTE

- Refer to the following section to check the LCD display, font display, memory information of the GP unit, and color tones in offline mode.

☞ "2.15.1 Settings common to all Display models ■ [Maintenance Menu] Settings Guide" (page 2-99)

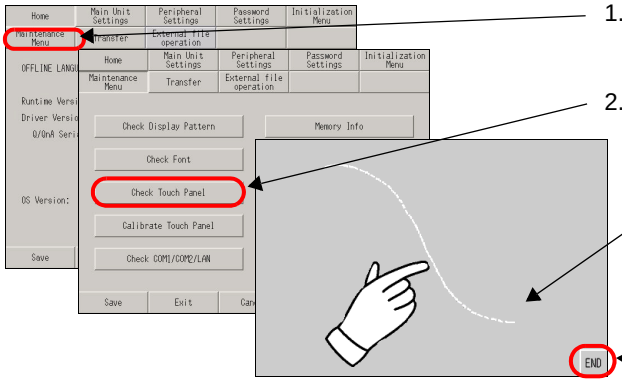
■ Touch Panel

It is the check of touch panel. Check the touched part lights up correctly.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Check Touch Panel" (page 2-101)



1. Enter offline mode and touch [Maintenance Menu] in the item change over buttons.
2. When the [Maintenance Menu] screen opens, touch [Check Touch Panel].
3. When the screen for [Check Touch Panel] opens, touch somewhere on the screen and check that the dots in the touched area light up properly.
4. To finish the check, touch [END].

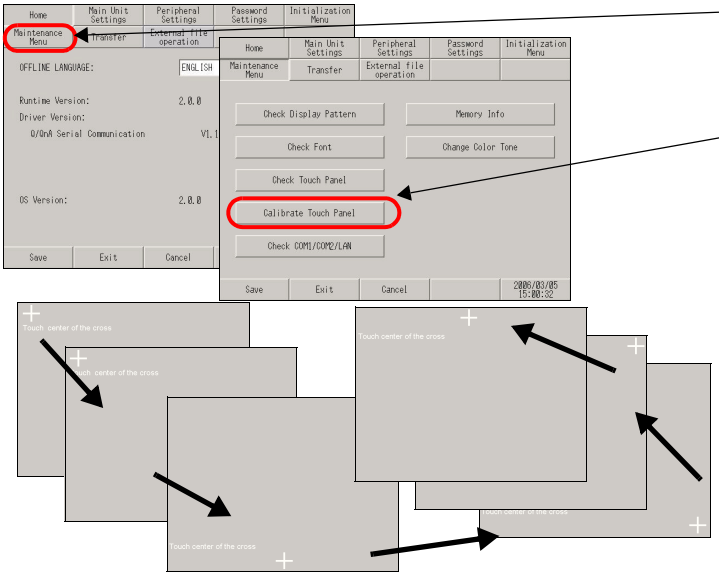
■ Calibration Touch Panel

Correct an analog touch panel. (setup of a calibration)

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Calibrate Touch Panel" (page 2-101)



1. Enter offline mode and touch [Maintenance Menu] in the item change over buttons.
2. When the [Maintenance Menu] screen opens, touch [Calibrate Touch Panel].
3. The screen for [Calibrate Touch Panel] opens and a crosshatch symbol is displayed. Touch and hold the crosshatch continuously until it disappears.
4. When all crosshatches are recognized successfully, the screen returns to the [Maintenance Menu] screen.

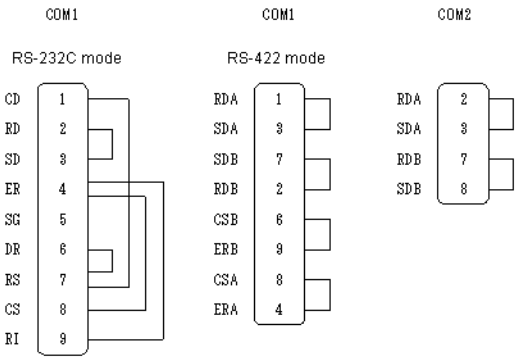
■ COM1/COM2/LAN

Check the sending and receiving line of RS-232C, RS-485 and LAN. Usually when abnormality occurs, it checks. It selects check item from the menu.
When it checks RS-232C and RS-422, connection of the SIO cable is necessary.

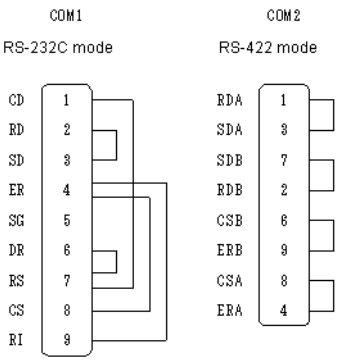
◆ Preparing a loopback cable

You need to prepare a loopback cable to check COM1/COM2/LAN. The wiring of the loopback cable is as follows:

GP3000 series (except for GP-3302B)



GP-3302B



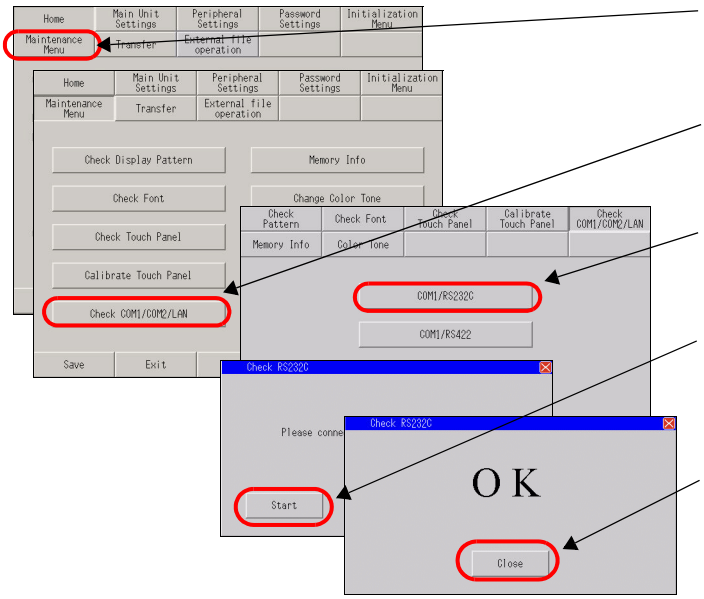
◆ Check

Connect the loopback cable to one of the interfaces and check the operation. When the operation is acceptable, [OK] is displayed. When there is a problem, [NG] is displayed.

NOTE

- For more details, refer to the settings guide.

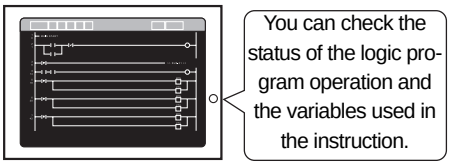
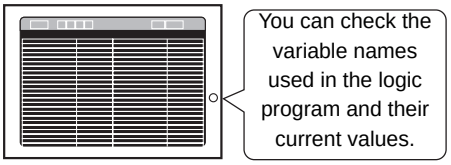
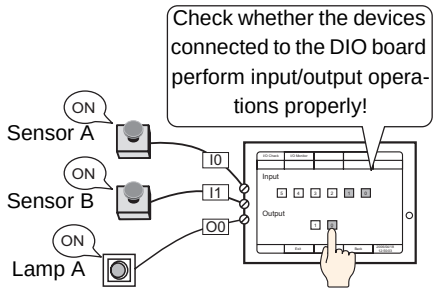
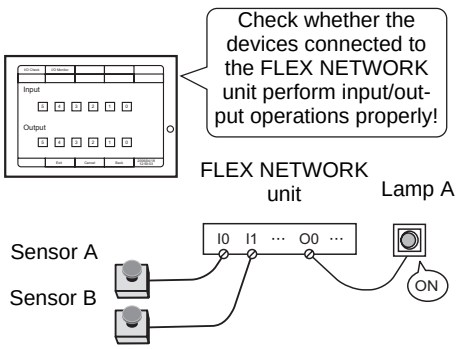
☞ "2.15.1 Settings common to all Display models ◆ Check COM1/COM2/LAN" (page 2-102)



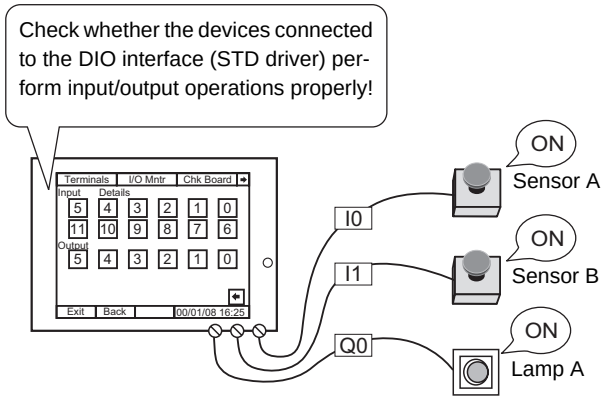
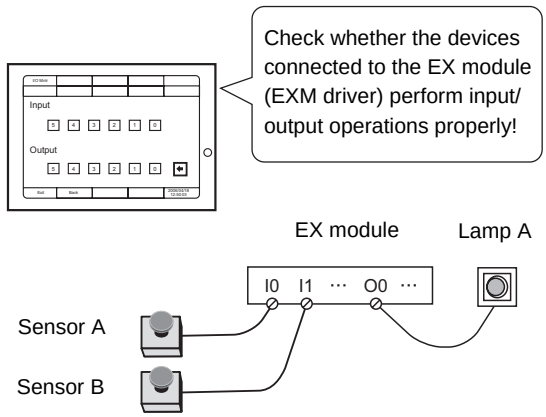
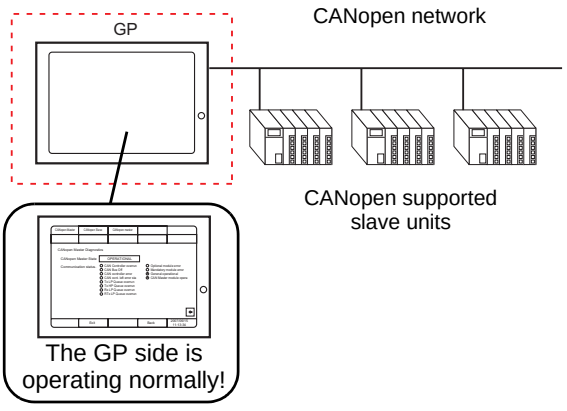
1. Enter offline mode and touch [Maintenance Menu] in the item change over buttons.
2. When the [Maintenance Menu] screen opens, touch [Check COM1/COM2/LAN].
3. The screen for [Check COM1/COM2/LAN] opens. Select the interface to be checked. (Example: COM1/RS232C)
4. When a message similar to the one shown in the figure is displayed, connect the loopback cable and touch [Start].
5. When there is no problem, [OK] is displayed. When an error occurs, [NG] is displayed. Touch [Close] to finish the check.

2.9 Operation (communication) check of the logic functions

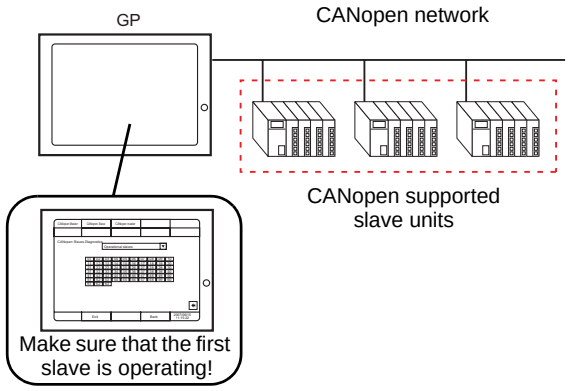
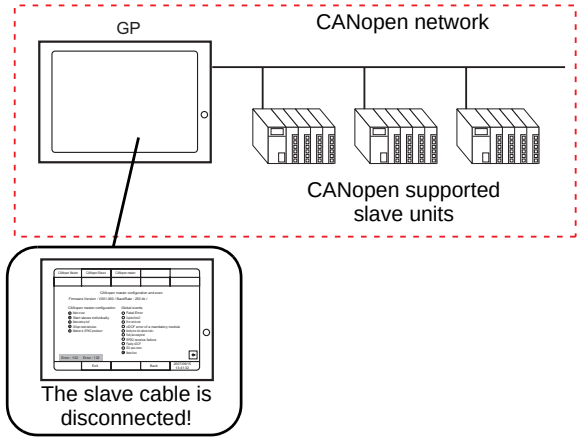
You can check whether the logic program is operating properly, and whether the device connected to the DIO board type GP3000 series or FLEX NETWORK unit is operating properly.

What you can do	Section describing the setting procedure
• Monitoring the logic program 	☞ "2.9.1 Checking whether the logic program is operating properly ■ Logic-Monitor" (page 2-44)
• Monitoring the addresses of the variables used in the logic program 	☞ "2.9.1 Checking whether the logic program is operating properly ■ Address-Monitor" (page 2-45)
• Checking the operation of the device connected to the DIO board type GP3000 series 	☞ "2.9.2 Checking whether the DIO interfaces of the Display turn ON/OFF properly" (page 2-46)
• Checking the operation of the device connected to the FLEX NETWORK unit 	☞ "2.9.3 Checking the communication with the FLEX NETWORK" (page 2-48)

Continued

What you can do	Section describing the setting procedure
• Checking the operation of the device connected to the DIO interface of the LT3000 series 	☞ "2.9.4 Checking the operation of the device connected to the DIO interface of the LT3000 series" (page 2-50)
• Checking if communication with the EX Modules is enabled or not. 	☞ "2.9.5 Checking if communication with the EX modules is enabled" (page 2-52)
• Checking if communication with the GP side (master side) supporting the CANopen master is possible. 	☞ "2.9.6 Checking if communication is possible with the CANopen master supported GP/LT side (master side)." (page 2-54)

Continued

What you can do	Section describing the setting procedure
• Checking the slave unit side (slave side) 	☞ "2.9.7 Checking the slave unit side" (page 2-55)
• Checking the status of the entire network during CANopen communication. 	☞ "2.9.8 Checking the status of the entire network during CANopen communication." (page 2-56)

2.9.1 Checking whether the logic program is operating properly

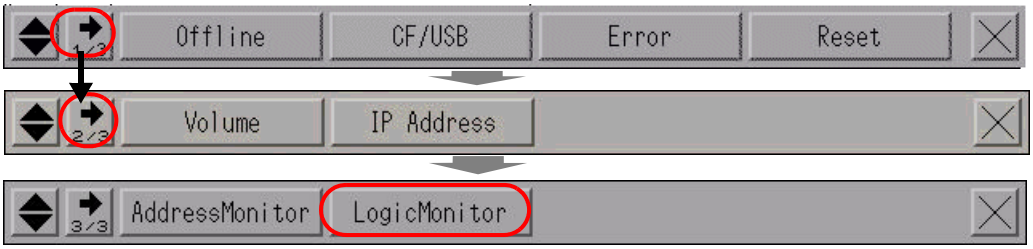
Check whether the logic program is operating properly on the GP, or check the instructions in the logic program. You can also check whether the logic program is operating properly and view a list of the variable names used in the logic program and their current values.

■ LogicMonitor

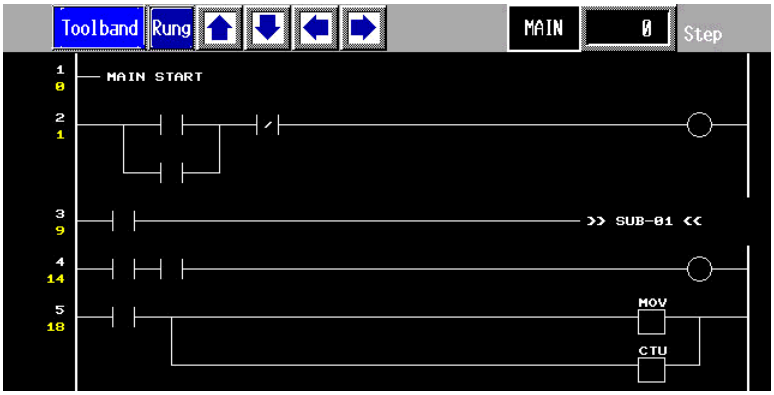
The entire logic program is monitored. You can use Logic Monitor to check the status of the program operation and the variables used in the instruction.

1 Transfer the logic program (project file) to the GP/LT.

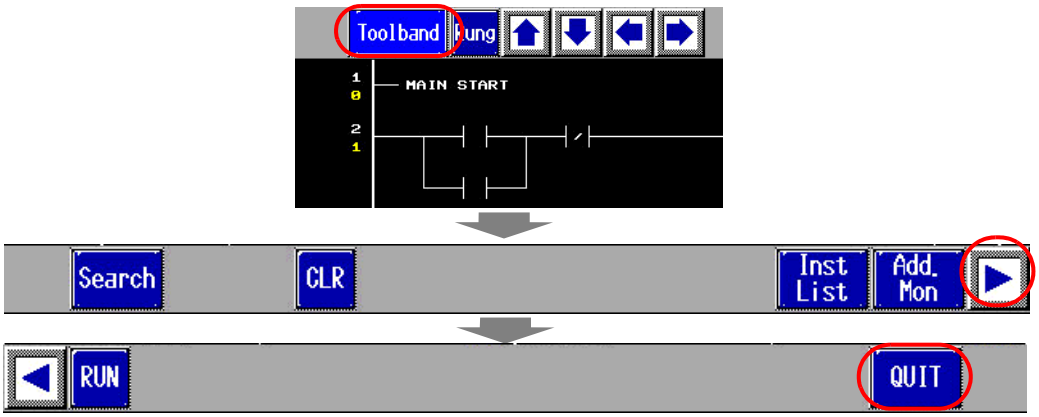
2 Touch either the upper right corner and then the lower left corner, or the upper left corner and then the lower right corner on the panel to display the offline system menu. Touch the [LogicMonitor] switch from the third menu.



3 When the [LogicMonitor] switch is touched, the following screen appears. You can check whether the transferred logic program is operating properly.



4 To exit Logic Monitor, touch [Toolband] and then touch ▶ in the toolband. Touch [QUIT] to return to the RUN screen.



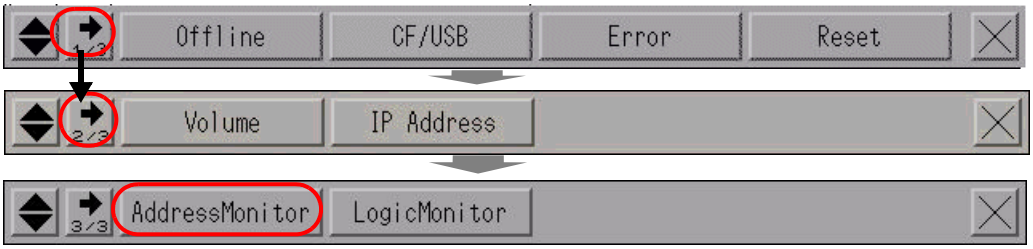
■ AddressMonitor

The variables used in the logic program are monitored. You can check the names and current values of the variables. When [Address Format] is used in the logic program, the addresses and current values can be checked.

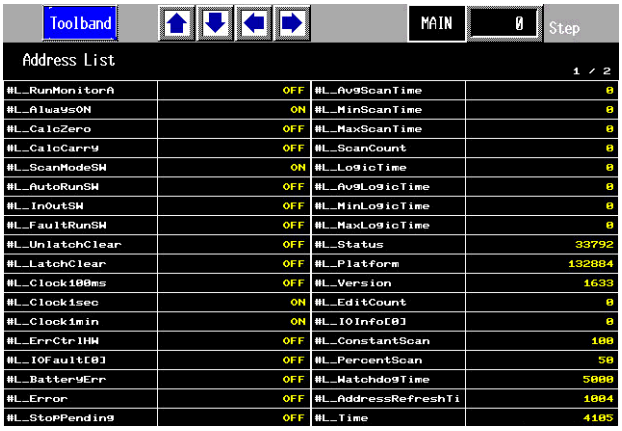
NOTE

- Even when the model does not support a logic program or when a logic program is not used, Address Monitor is available as long as the variables for the symbol variable are registered.

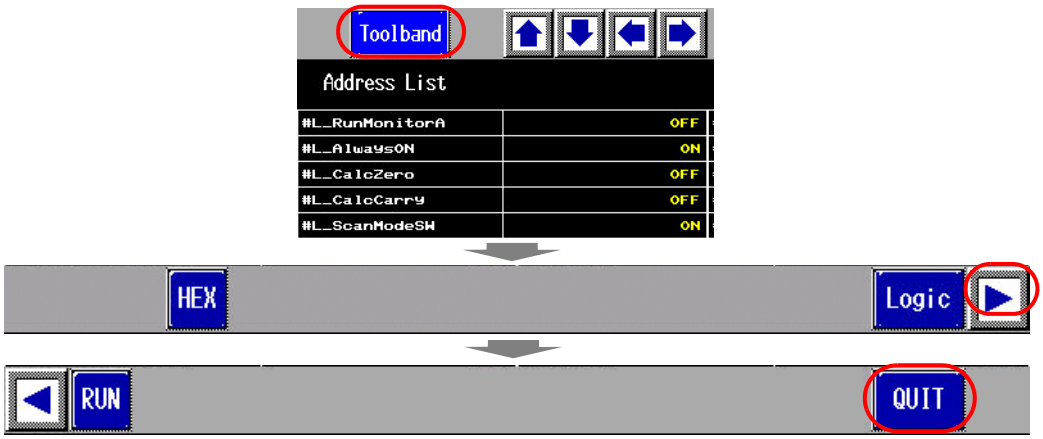
1 Touch either the upper right corner and then the lower left corner, or the upper left corner and then the lower right corner on the panel to display the offline system menu. Touch the [AddressMonitor] switch from the third menu.



2 The following screen appears, showing the names of the variables specified in the transferred project file as well as their current values.



3 To exit Address Monitor, touch [Toolband] and then touch in the toolband. Touch [QUIT] to return to the RUN screen.



2.9.2 Checking whether the DIO interfaces of the Display turn ON/OFF properly

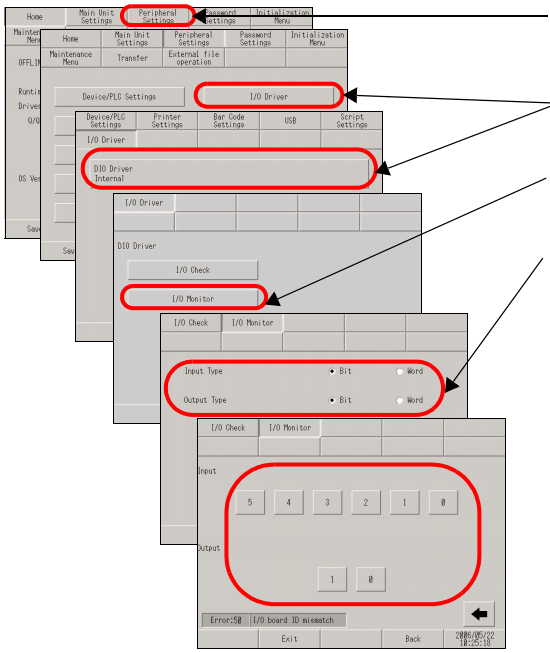
■ Checking proper I/O operation

Check whether the device connected to the DIO board performs input/output operations properly in order to determine whether the problem is in the GP/LT or not.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.2 When the DIO board type GP3000 series is used ◆ I/O Driver (I/O Monitor)" (page 2-113)



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [I/O Driver] and then [DIO Driver].
3. When the [I/O Driver] screen opens, touch [I/O Monitor].
4. Select data type from [Bit] and [Word] for input and output respectively. (Example: To select bit for both input and output)
5. The input/output bit display screen opens. [Input] indicates the current ON/OFF status. At [Output], touching the item toggles the status between ON and OFF. If the device connected to the DIO board performs properly, please check the settings of the project file on GP-Pro EX. If not, please check the cable connection is correct first and continue to check the next item.

■ Checking the internal terminals

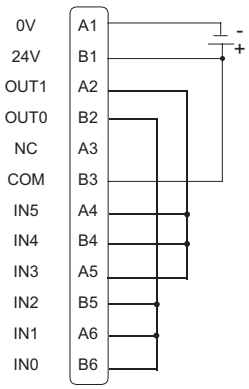
You need to prepare a loopback cable to check the internal terminals. Prepare the loopback cable according to the following instructions.

◆ Preparing the loopback cable

The wiring of the loopback cable is as follows:

- Sink type

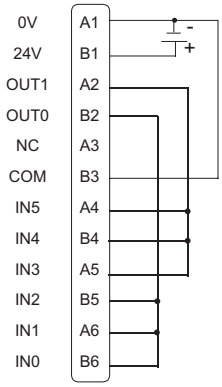
Example: To check three terminals at a time, from OUT0 to IN0 through IN2, and from OUT1 to IN3 through IN5



Continued

- Source type

Example: To check three terminals at a time, from OUT0 to IN0 through IN2, and from OUT1 to IN3 through IN5



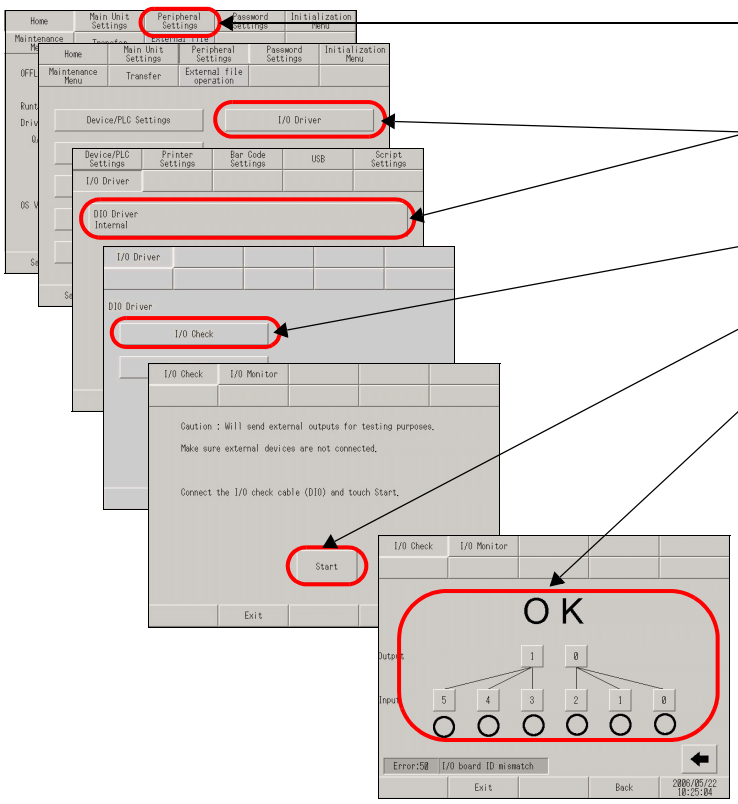
◆ I/O Check

Connect the loopback cable to the DIO board, send data from the two output terminals to the six input terminals, and compare the input and output data. When the data matches with the expected value, [OK] is displayed on the screen. When the data does not match with the expected value, [NG] is displayed. The connection can be checked based on this result.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.2 When the DIO board type GP3000 series is used ◆ I/O Driver (I/O Check)" (page 2-112)



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [I/O Driver].
3. When the [I/O Driver] screen opens, touch [I/O Check].
4. When the [I/O Check] screen opens, touch [Start].
5. The connection check execution screen is displayed. When the connection is valid, [OK] is displayed. When there is a problem, [NG] is displayed. If the result is [OK], please check whether the device connected to the DIO board operate properly or the cable is correct. If [NG] displayed, the GP unit may be faulty. Please contact your local GP distributor.

☞ "1.11.2 Contact us!" (page 1-229)

2.9.3 Checking the communication with the FLEX NETWORK

■ Checking proper I/O operation

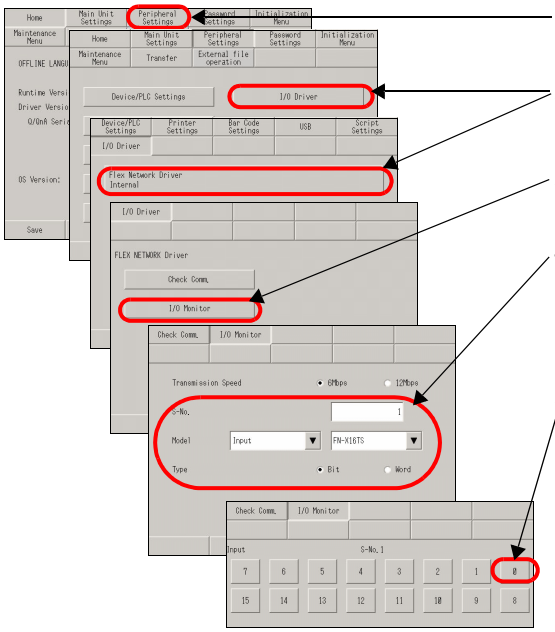
Check whether the device connected to the FLEX NETWORK board performs input/output operations properly in order to determine whether the problem is in the GP or not.

NOTE

- For more details, refer to the settings guide.

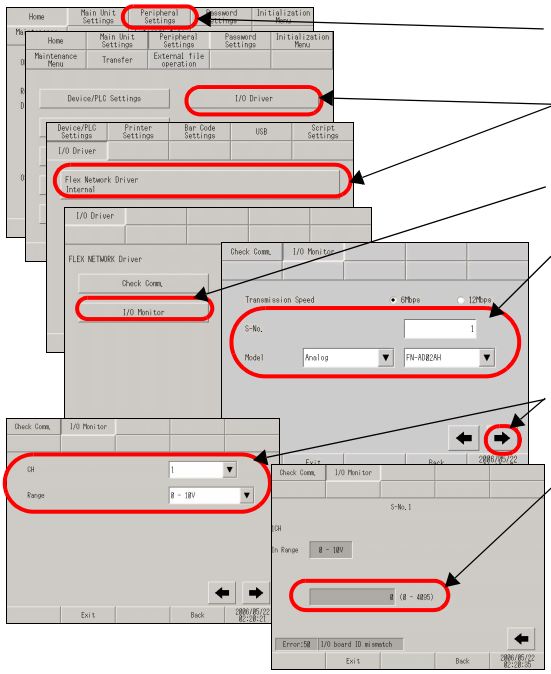
☞ "2.15.3 When the FLEX NETWORK unit is used ◆ I/O Monitor" (page 2-119)

◆ When DIO (Example: FN-X16TS) is used



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [I/O Driver] and then [FLEX NETWORK Driver].
3. When the [I/O Driver] screen opens, touch [I/O Monitor].
4. The [I/O Monitor] screen is displayed. Set [Transmission Speed], [S-No.], [Model], and [Type]. (Example: S-No.: 1, Model: Input FN-X16TS, Transmission Speed: 6Mbps, Type:Bit)
5. The bit monitor screen is displayed, showing the ON/OFF status. A protruded switch indicates OFF and a depressed switch indicates ON. If the device connected to the DIO board performs properly, please check the settings of the project file on GP-Pro EX. If not, please check the cable connection is correct first and continue to check the next item.

◆ When an analog unit (Example: FN-AD02AH) is used



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [I/O Driver] and then [FLEX NETWORK Driver].
3. When the [I/O Driver] screen opens, touch [I/O Monitor].
4. The [I/O Monitor] screen is displayed. Set [Transmission Speed], [S-No.], [Model], and [Type]. (Example: S-No.: 1, Model: Analog FN-AD02AH, Transmission Speed: 6Mbps)
5. Touch this switch to go to the next screen and set [CH] (channel) and [Range].
6. The input monitor screen is displayed. The input status is indicated with an integer value. If the device connected to the DIO board performs properly, please check the settings of the project file on GP-Pro EX. If not, please check the cable connection is correct first and continue to check the next item.

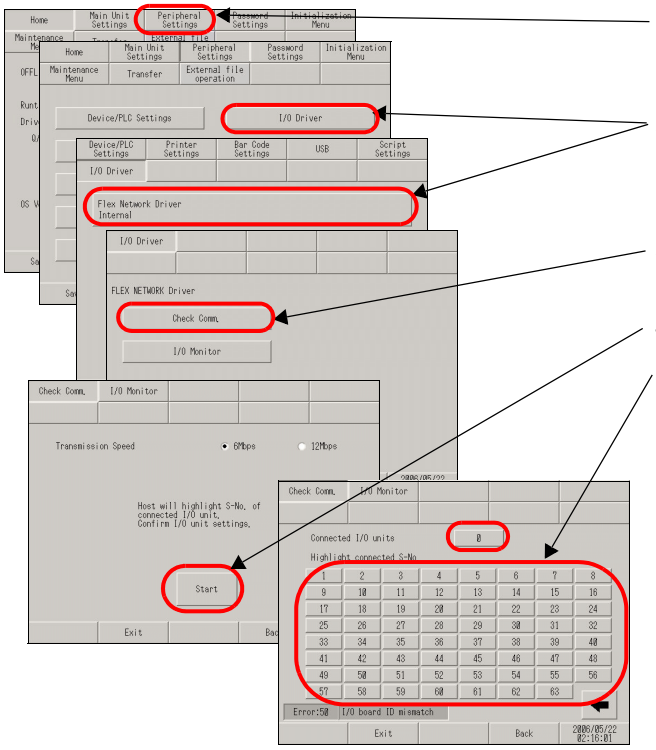
■ Checking communication to ensure proper cable connection

Check whether the FLEX NETWORK unit connected to the FLEX NETWORK board can communicate properly.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.3 When the FLEX NETWORK unit is used ◆ Check Comm." (page 2-118)



1. Enter offline mode and touch [Peripheral Settings] in the item change over buttons.
2. When the [Peripheral Settings] screen opens, touch [I/O Driver] and then [FLEX NETWORK Driver Internal].
3. When the [I/O Driver] screen opens, touch [Check Comm.].
4. Touch [Start].
5. The screen for communication check execution is displayed. When no problem is found with the communication, the total number of units that communicated successfully and the number of S-No. assigned to the units are highlighted. If communication fails, check the communication cable for breaks, the power supply of the unit, and the termination resistor of the unit. If the problem continues, the unit or main unit may be faulty. Please contact your local GP distributor.

☞ "1.11.2 Contact us!" (page 1-229)

* The following list shows the I/O units supported by the communication check. (Example: When setting FN-X16TS(1),1 S-No.1 and FN-XY32SKS (4),1,S-No.2, S-no.1 to 5 are highlighted on the screen above.)

Type	Model	No. of stations to be occupied
DIO	FN-X16TS	1
	FN-X32TS	2
	FN-Y08RL	1
	FN-Y16SK	1
	FN-Y16SC	1
	FN-XY08TS	1
	FN-XY16SK	1
	FN-XY16SC	1
	FN-XY32SKS	4
Analog	FN-AD02AH	1
	FN-AD04AH	4
	FN-DA02AH	1
	FN-DA04AH	4
High Speed Counter Unit	FN-HC10SK	8
Single-Axis Positioning Unit	FN-PC10SK	4

2.9.4 Checking the operation of the device connected to the DIO interface of the LT3000 series

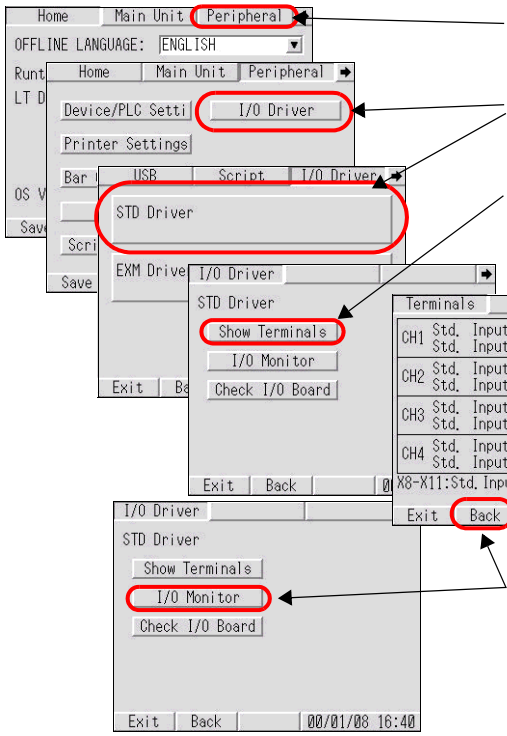
■ Check if the input and output operate normally.

Check the input and output of the LT series DIO interface to judge whether the problem is caused by the settings of the GP-Pro EX or of the LT series.

NOTE

- For details about the setting screen, refer to the setting guide.

☞ "2.15.8 When the LT3000 is used ◆ [I/O Driver] (STD Driver)" (page 2-151)

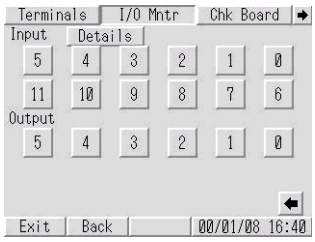


1. Go to offline mode and touch [Peripheral Settings] on the item changeover switch.
2. After the [Peripheral Settings] window opens, touch [I/O Driver] and [STD Driver] in sequence.
3. After the [STD Driver] window opens, touch [Show Terminals] to confirm the current configuration of the input/output terminals.

NOTE

- When the LT33** series is used, it displays the configuration of input terminals X0 to X15 and output terminals Y0 to Y15. The bottom of the screen shows [X8-X15: Std. Input] and [Y4-Y15: Std. Output].

4. Touch [Back] or [←] to return to the previous screen and then touch [I/O Monitor].
5. After the [I/O Monitor] window opens, the corresponding bit number in "Input" is highlighted according to the ON/OFF status of the input from the connected device.
   In "Output", you can confirm the ON/OFF status of each output by touching the corresponding bit number.



NOTE

- If the input filter time has been specified in [Details], an input signal that does not reach the preset time will not work.

☞ "2.15.8 When the LT3000 is used • [I/O Monitor]" (page 2-152)

- With the LT33** series, you can check the status by using inputs and outputs 0 through 15 respectively.

6. If the connected device is operating normally, check the project file settings in GP-Pro EX.
   If the connected device does not operate normally, check the wiring between the LT series and the connected device, and then check the following items.

NOTE

- If an error message appears on the screen, refer to the following description.

☞ "1.7.3 Errors displayed with the LT3000 series" (page 1-199)

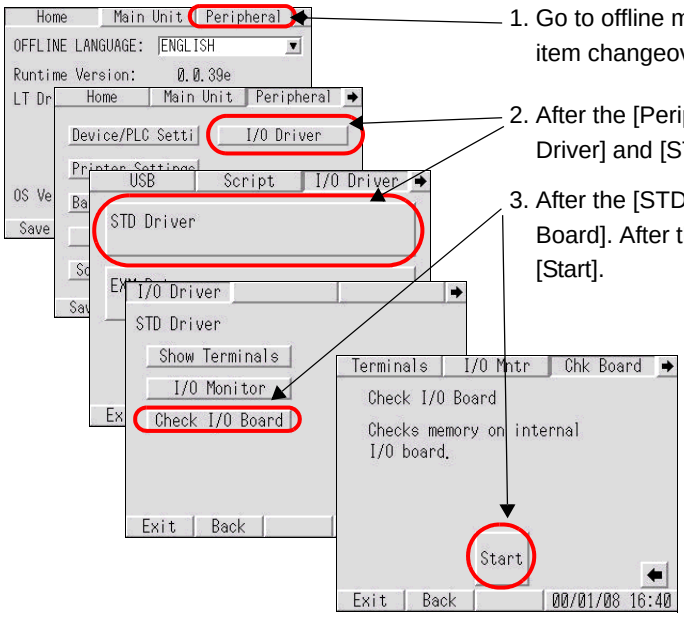
■ Checking the I/O board

Check the I/O board in the LT series to find an abnormality in the main unit.

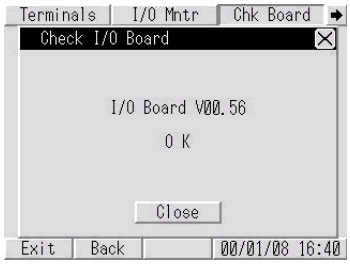
NOTE

- For details about the setting screen, refer to the setting guide.

☞ "2.15.8 When the LT3000 is used • [Check Board]" (page 2-153)



1. Go to offline mode and touch [Peripheral Settings] on the item changeover switch.
2. After the [Peripheral Settings] window opens, touch [I/O Driver] and [STD Driver] in sequence.
3. After the [STD Driver] window opens, touch [Check I/O Board]. After the "Check I/O Board" dialog appears, touch [Start].



4. If there is no abnormality on the I/O board, the "OK" message is displayed. If the I/O board is abnormal, an error message appears.

NOTE

- If an error message appears on the screen, refer to the following description.

☞ "1.7.3 Errors displayed with the LT3000 series" (page 1-199)

2.9.5 Checking if communication with the EX modules is enabled

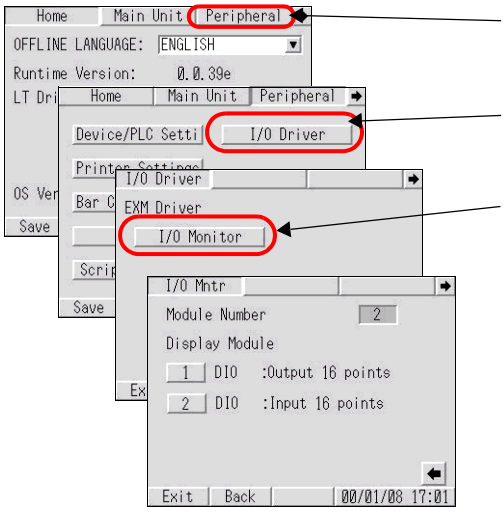
Check if the EX modules are connected normally to the LT series and check if the input and output of the device connected to the EX modules are operating normally, to judge whether the problem is caused by the settings of the GP-Pro EX or of the LT series.

■ When the DIO module is used:

NOTE

- I/O check is enabled only with the EX module that has been specified in GP-Pro EX.
- For details about the setting screen, refer to the setting guide.

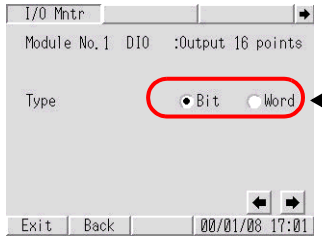
☞ "2.15.8 When the LT3000 is used • [I/O Monitor] (DIO settings)" (page 2-154)



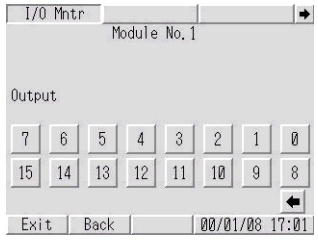
1. Go to offline mode and touch [Peripheral Settings] on the item changeover switch.
2. After the [Peripheral Settings] window opens, touch [I/O Driver] and [EXM Driver] in sequence.
3. After the [EXM Driver] window opens, touch [I/O Monitor]. Then, the number of currently connected modules and the module Nos. are displayed. If the connected module is not displayed, check the wiring between the module and the connected device.

NOTE

- When the LT3200 series is used, up to 2 modules are displayed. When the LT3300 series is used, up to 3 modules are displayed.



4. Touch each module No. After the corresponding screen appears, select the type of input/output data: "Bit" or "Word". (Example: DIO: Output 16 points, Type: Bit)



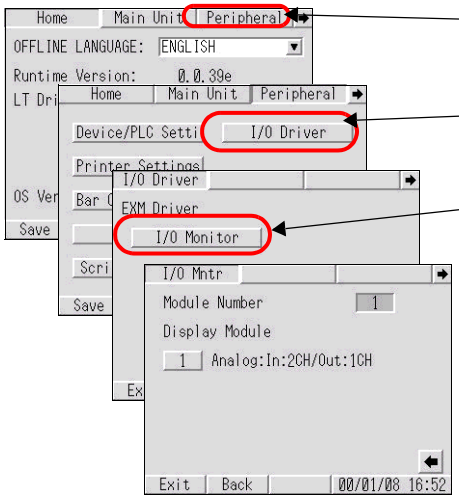
5. If you shift between screens with the ➡ key, the input/output execution screen appears, which displays the input ON/OFF status and allows you to execute the output.
If the connected device is operating normally, check the settings in GP-Pro EX. If the connected device is not operating normally, check the wiring between the EX module and the connected device.

■ When the analog module is used:

NOTE

- I/O check is enabled only with the EX module that has been specified in GP-Pro EX.
- For details about the setting screen, refer to the setting guide.

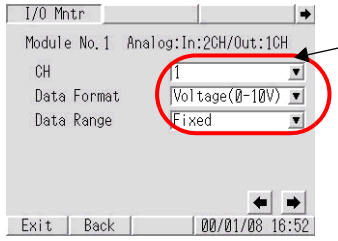
☞ "2.15.8 When the LT3000 is used • [I/O Monitor] (Analog settings)" (page 2-156)



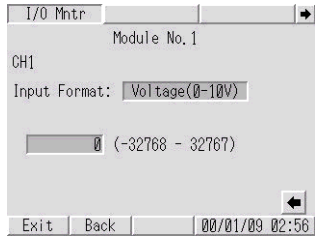
1. Go to offline mode and touch [Peripheral Settings] on the item changeover switch.
2. After the [Peripheral Settings] window opens, touch [I/O Driver] and [EXM Driver] in sequence.
3. After the [EXM Driver] window opens, touch [I/O Monitor]. Then, the number of currently connected modules and the module Nos. are displayed. If the connected module is not displayed, check the wiring between the module and the connected device.

NOTE

- When the LT3200 series is used, up to 2 modules are displayed. When the LT3300 series is used, up to 3 modules are displayed.



4. Touch each module No. After the corresponding screen appears, specify the I/O channel number, data format, and data range. (Example: CH "1", Data Format "Voltage (0-10 V)", Data Range "Fixed")



5. If you shift between screens with the ➡ key, the input/output execution screen appears, which displays the input value and allows you to execute the output.
   If the connected device is operating normally, check the settings in GP-Pro EX. If the connected device is not operating normally, check the wiring between the EX module and the connected device.

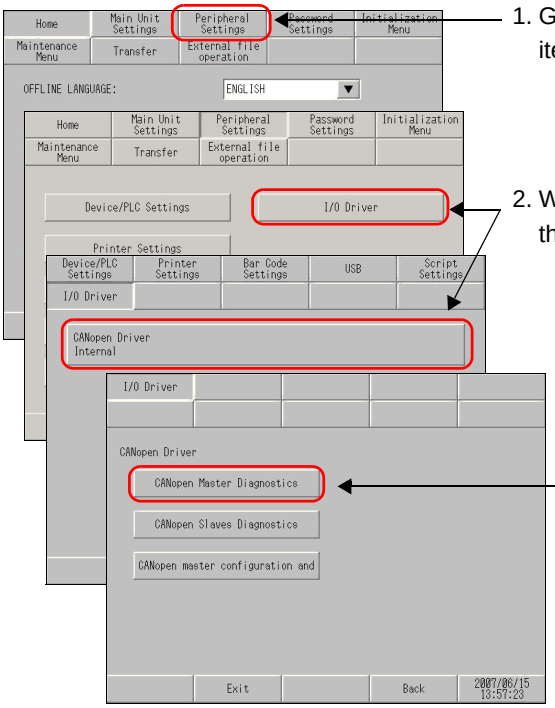
2.9.6 Checking if communication is possible with the CANopen master supported GP/LT side (master side).

Check if the master side can accept communication when the slave is connected to the master.

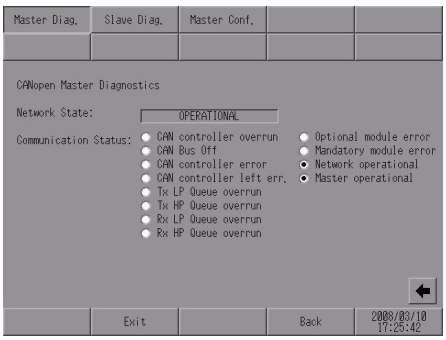
NOTE

- For details about the setting screen, refer to the setting guide.

☞ "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Master Diagnostics" (page 2-162)



1. Go to offline mode and touch [Peripheral Settings] on the item changeover switch.
2. When [Peripheral Settings] opens, touch [I/O Driver] and then [CANopen Driver].
3. When [I/O Driver] opens, Touch [CANopen Master Diagnostics].



4. When [CANopen Master Diagnostics] opens, check [Network State] and [Communication Status].
   (Example: Network State: [OPERATIONAL], Communication Status: [Network operational], [Master operational] indicates that the master is operating normally.)
   For details on [Network State] and [Communication status], refer to the following:

☞ "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Master Diagnostics" (page 2-162)

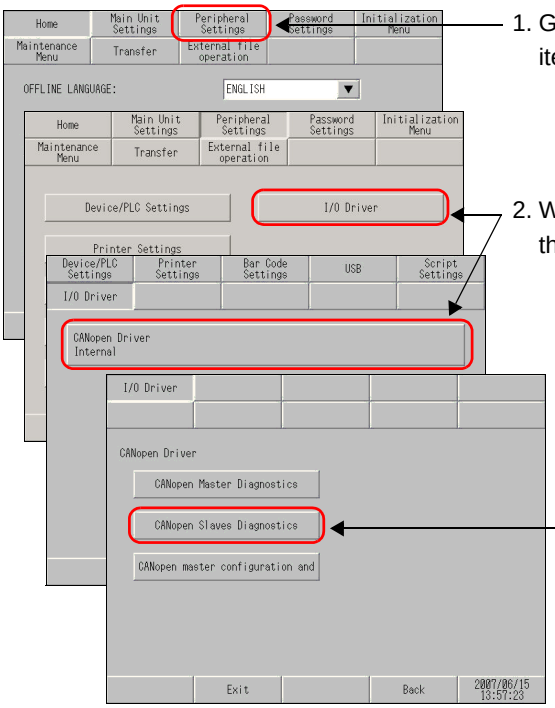
2.9.7 Checking the slave unit side

Check if the slave side can accept communication when the slave is connected to the master.

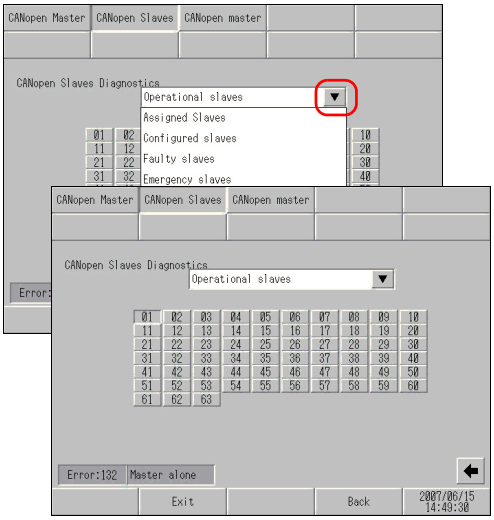
NOTE

- For details about the setting screen, refer to the setting guide.

☞ "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Slave Diagnostics" (page 2-164)



1. Go to offline mode and touch [Peripheral Settings] on the item changeover switch.
2. When [Peripheral Settings] opens, touch [I/O Driver] and then [CANopen Driver].
3. When [I/O Driver] opens, Touch [CANopen Slaves Diagnostics].



4. When [CANopen Slaves] opens, select the slave status you want to check by touching ▼. The numbers of slaves that are in the selected status are displayed in reverse video.
   (Example: One module is operating.)

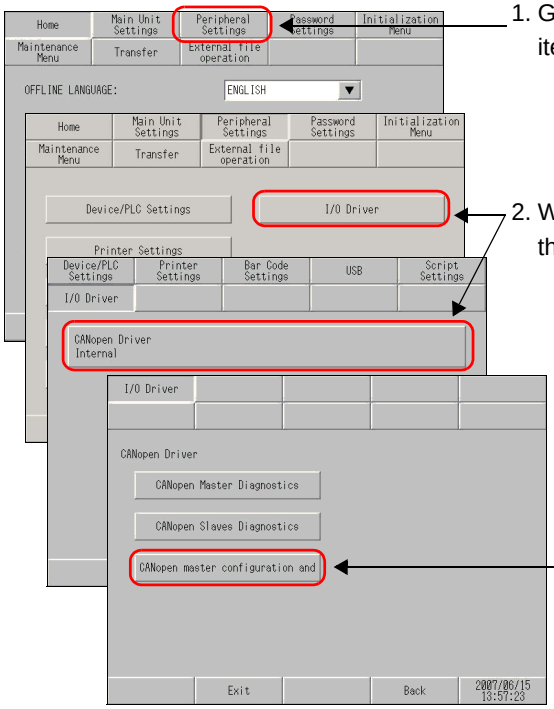
2.9.8 Checking the status of the entire network during CANopen communication.

Check the status of the entire network during CANopen communication.

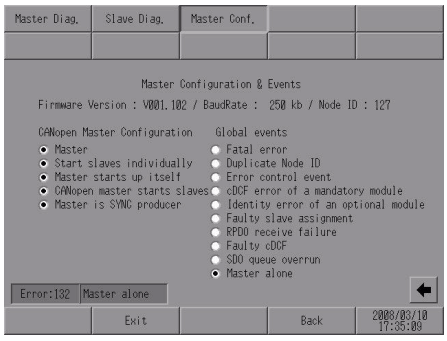
NOTE

- For details about the setting screen, refer to the setting guide.

☞ "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Master configration and events" (page 2-165)



1. Go to offline mode and touch [Peripheral Settings] on the item changeover switch.
2. When [Peripheral Settings] opens, touch [I/O Driver] and then [CANopen Driver].
3. When [I/O Driver] opens, Touch [CANopen master configration and events].

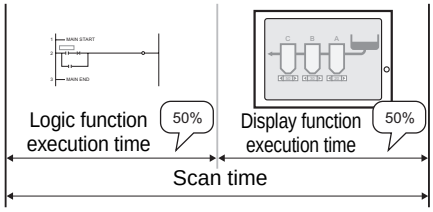
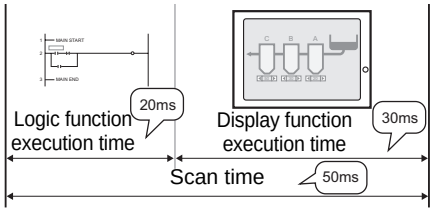


4. When [Master Configration & Events] opens, check [CANopen Master Configuration] and [Global events] of the network using the lamps.
   (Example: CANopen Master Configuration: [Master], [Start slaves individually], [Master starts up itself], [CANopen master starts slaves], and [Master is SYNC producer], Global events: [Master alone] indicates that the slave cable is disconnected.)
   For details on [CANopen Master Configuration] and [Global events], refer to the following:

☞ "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Master configration and events" (page 2-165)

2.10 Controller settings

You can set the execution time of the logic program using either of the following methods.

What you can do	Section describing the setting procedure
• Setting it based on the ratio to the controller function execution time 	☞ "2.10.1 Adjusting the scan time based on the ratio to the execution time of the logic functions (CPU Scan Percentage)" (page 2-58)
• Setting it based on the ratio between the controller function execution time and the display function execution time 	☞ "2.10.2 Adjusting the scan time by setting the execution time of the logic functions and the display function execution time (Fixed Scan Time)" (page 2-59)

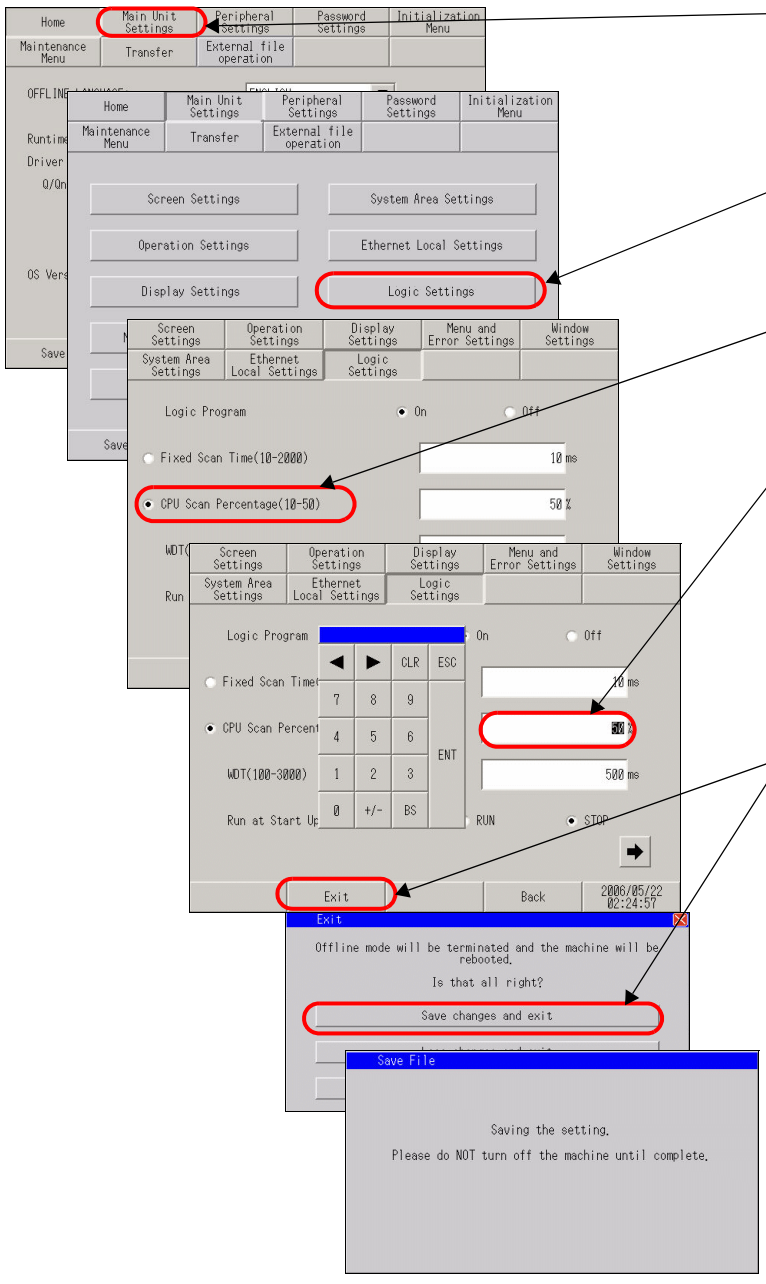
2.10.1 Adjusting the scan time based on the ratio to the execution time of the logic functions (CPU Scan Percentage)

You can execute logic programs by specifying the ratio of the scan time to the execution time of the logic program.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.2 When the DIO board type GP3000 series is used ■ [Main Unit Settings] Settings Guide" (page 2-111)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Logic Settings].
3. When the [Logic Settings] screen opens, touch [CPU Scan Percentage (10-50)].
4. Touch the input field of [CPU Scan Percentage] and use the numeric touch keys to enter the ratio to execute the scan of the logic program.
5. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].
6. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

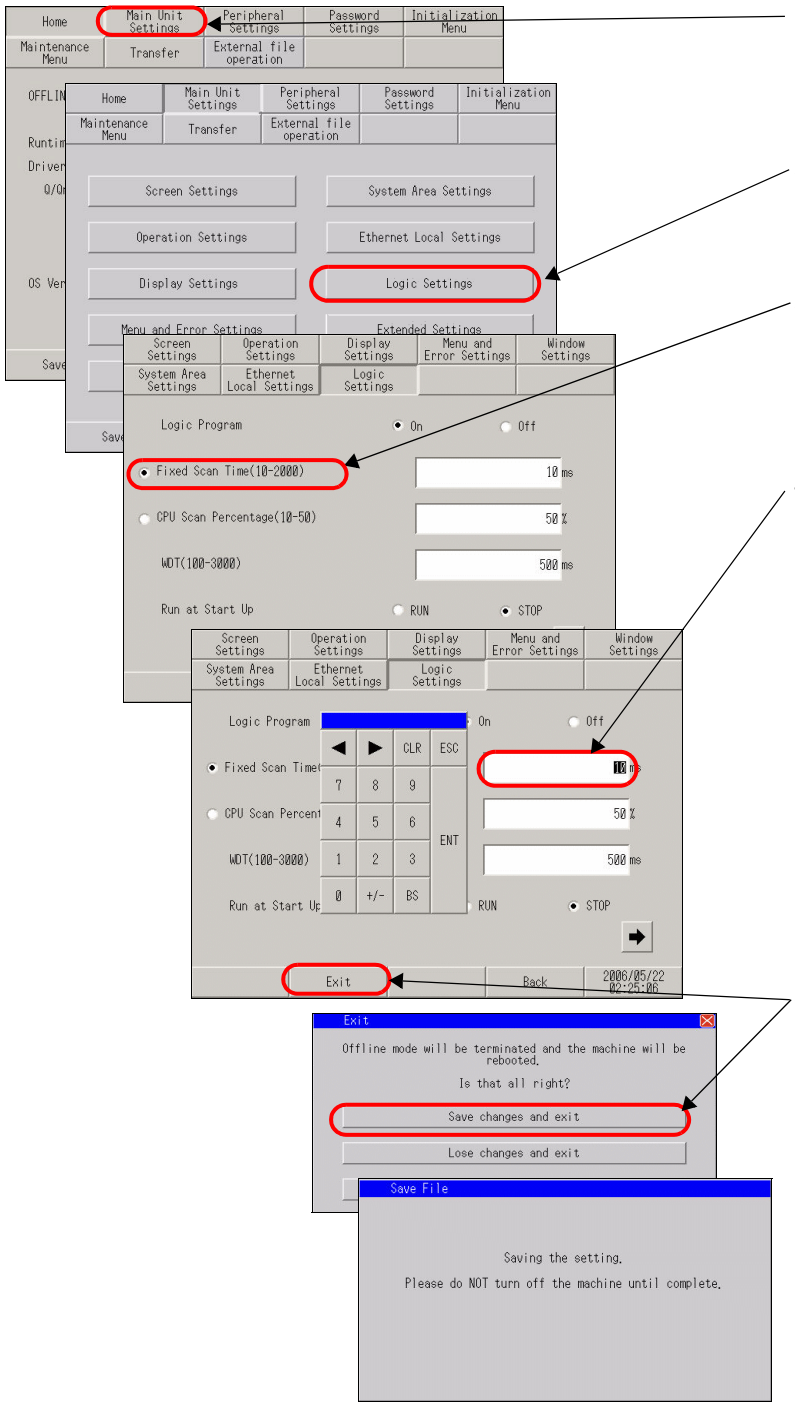
2.10.2 Adjusting the scan time by setting the execution time of the logic functions and the display function execution time (Fixed Scan Time)

You can execute logic programs at specified fixed cycles.

NOTE

- For more details, refer to the settings guide.

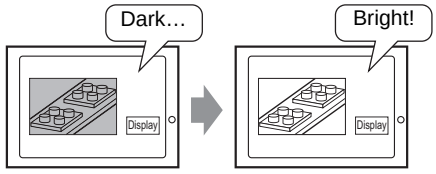
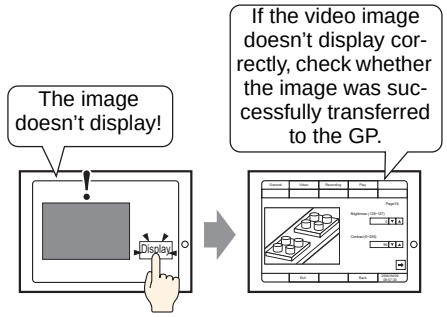
☞ "2.15.2 When the DIO board type GP3000 series is used ■ [Main Unit Settings] Settings Guide" (page 2-111)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Logic Settings].
3. When the [Logic Settings] screen opens, touch [Fixed Scan Time (10-2000)].
4. Touch the input field of [Fixed Scan Time] and use the numeric touch keys to enter the cycle to execute the scan of the logic program.
5. Touch [Exit]. When the [Exit] dialog box shown on the left is displayed, touch [Save changes and exit].
6. The [Save File] dialog box is displayed and then the GP restarts automatically. The setting is complete.

2.11 Video display adjustment/check

You can adjust or check the video display when using the movie function of the GP-3∗50 series or when using the VM unit.

What you can do	Section describing the setting procedure
• Adjusting the image quality for the video display 	☞ "2.11.1 Adjusting the image quality for the video display" (page 2-61)
• Isolating problems when video cannot be displayed 	☞ "2.11.2 Checking whether video signals are being received by the Display when video is not displayed" (page 2-63)

2.11.1 Adjusting the image quality for the video display

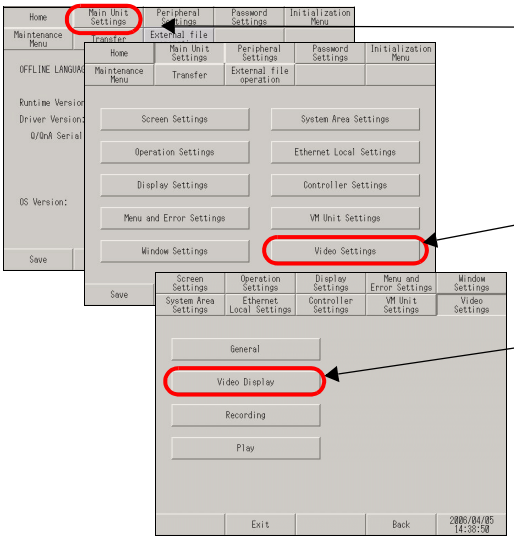
You can adjust the video display when using the movie function of the GP-3∗50 series or when using the VM unit.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.4 When the movie function of the GP-3*50 series is used ◆ Video Settings (Video)" (page 2-128)

■ When using the movie function of the GP-3∗50 series



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Video Settings].
3. When the [Video Settings] screen opens, touch [Video Display].

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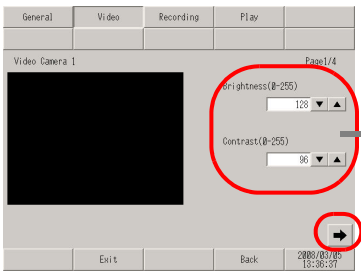
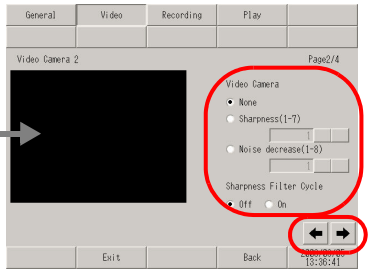
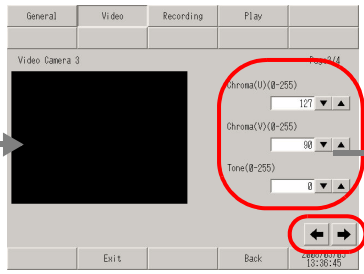


Page 2/4



4. When the screen for [Video Display] opens, check the settings or touch the item that you want to change. To go to the next page, touch the right arrow key on the lower right of the screen.

Page 3/4



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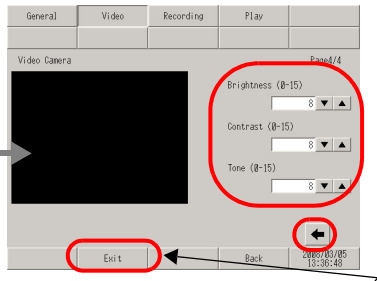
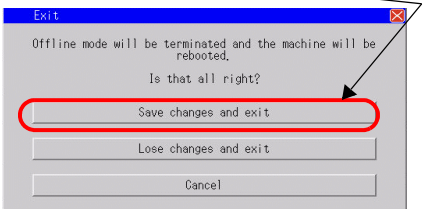


5. Touch [Exit], and when the [Exit] dialog box is displayed, touch [Save changes and exit]. The GP restarts automatically.

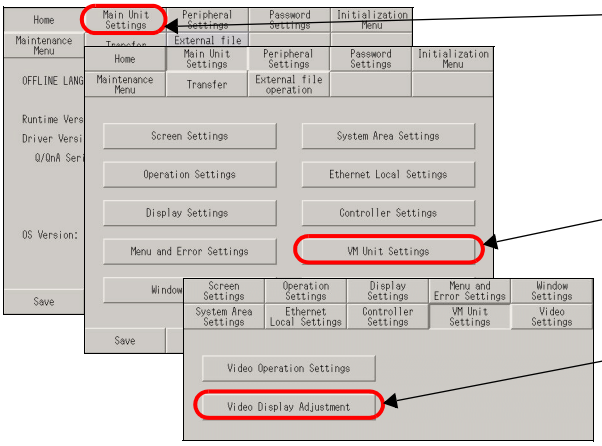


■ When using the VM unit

NOTE

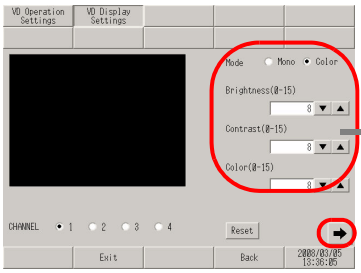
- For more details, refer to the settings guide.

☞ "2.15.5 When using the VM unit ◆ VM Unit Settings (VD Display Settings)" (page 2-134)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [VM Unit Settings].
3. When the [VM Unit Settings] screen opens, touch [Video Display Adjustment].

Page 1/4



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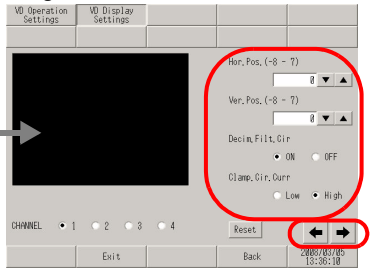
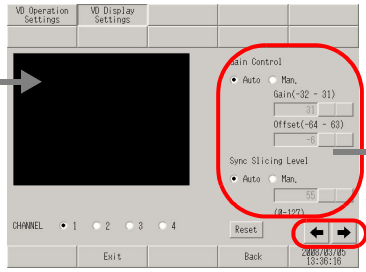
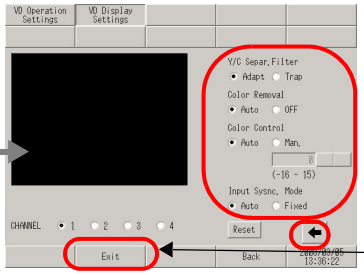


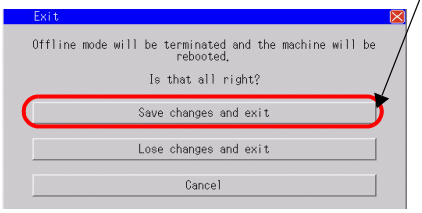
4. When the screen for [VD Display Settings] opens, check the settings or touch the item that you want to change. To go to the next page, touch the right arrow key on the lower right of the screen.

Page 3/4



Page 4/4





5. Touch [Exit], and when the [Exit] dialog box is displayed, touch [Save changes and exit]. The GP restarts automatically.

2.11.2 Checking whether video signals are being received by the Display when video is not displayed

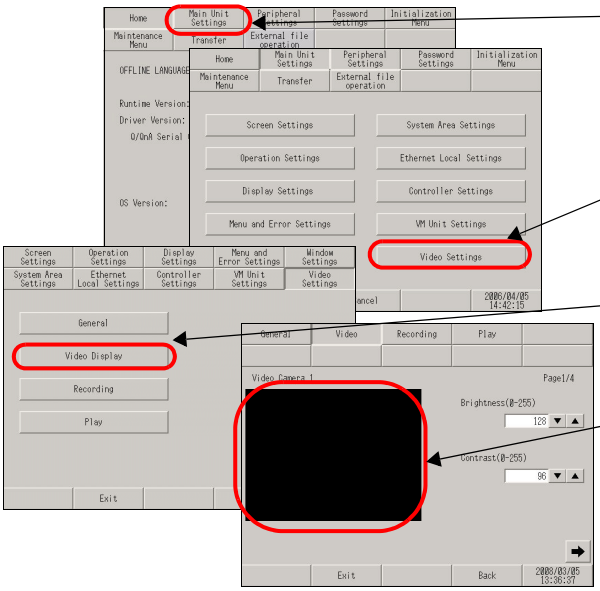
When video is not being displayed properly, you can check whether video signals are being received by the GP.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.4 When the movie function of the GP-3*50 series is used ◆ Video Settings (Video)" (page 2-128)

■ When using the movie function of the GP-3∗50 series



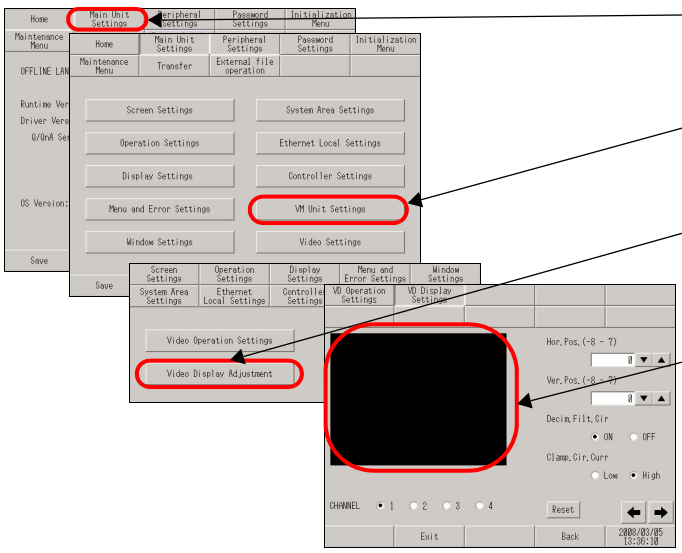
1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [Video Settings].
3. When the [Video Settings] screen opens, touch [Video Display].
4. When a video image is displayed in the area on the left of the [Video] screen, images have reached the GP. If no image is displayed in this area, check the connection of the video device.

■ When using the VM unit

NOTE

- For more details, refer to the settings guide.

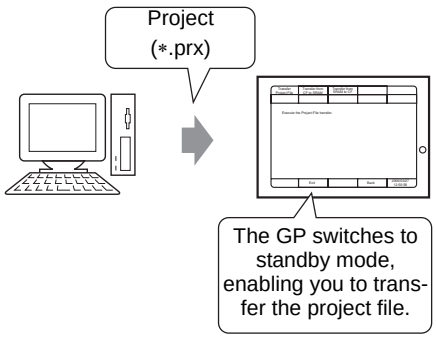
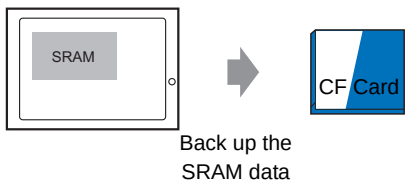
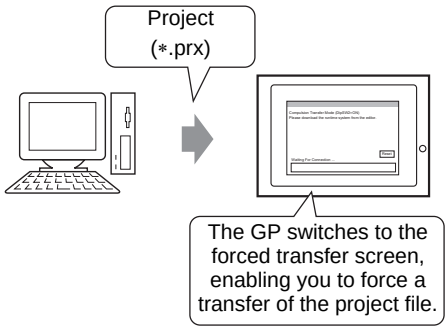
☞ "2.15.5 When using the VM unit ◆ VM Unit Settings (VD Display Settings)" (page 2-134)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When the [Main Unit Settings] screen opens, touch [VM Unit Settings].
3. When the [VM Unit Settings] screen opens, touch [Video Display Adjustment].
4. When a video image is displayed in the area on the left of the [VD Display Settings] screen, images have reached the GP. If no image is displayed in this area, check the connection of the video device.

2.12 Screen transfer from GP-Pro EX

When project files cannot be transferred, the following alternative methods can be used.

What you can do	Section describing the setting procedure
• Transfer in offline mode 	☞ "2.12.1 Opening the transfer screen manually when project files cannot be transferred" (page 2-65)
• Backing up the SRAM data onto the CF card 	☞ "2.12.2 Backing up the SRAM data onto the CF card before transferring a new project file" (page 2-66)
• Forced transfer 	☞ "2.12.3 Forcing the transfer of project files" (page 2-67)

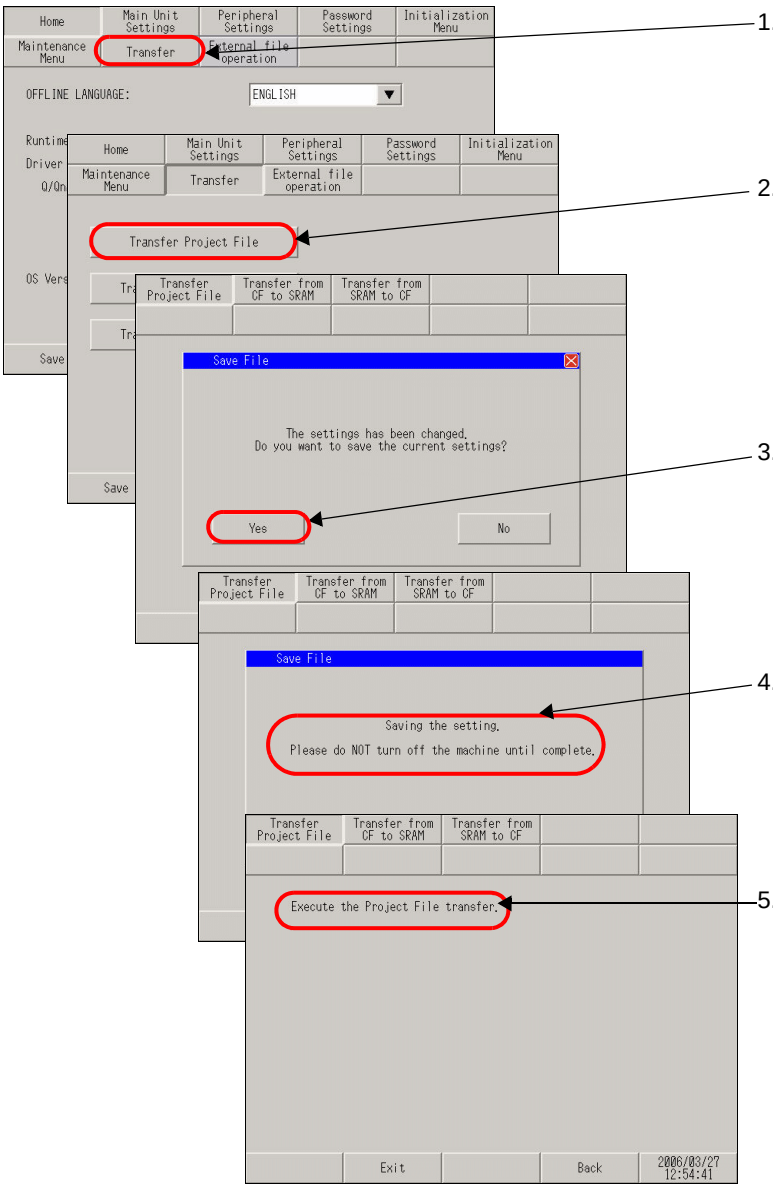
2.12.1 Opening the transfer screen manually when project files cannot be transferred

When project files cannot be transferred, you can transfer the files manually in offline mode. To do this, you need to set the GP to waiting status.

NOTE

- For more details, refer to the settings guide.

☞ "2.15.1 Settings common to all Display models ◆ Transfer Project File" (page 2-104)



1. Enter offline mode and touch [Transfer] in the item change over buttons.
2. When the [Transfer] screen opens, touch [Transfer Project File].
3. When the [Save File] dialog box opens, touch [Yes].
4. The message [Saving the setting] is displayed in the dialog box.
5. When [Execute the Project File transfer] is displayed, transfer the project file from the GP-Pro EX.

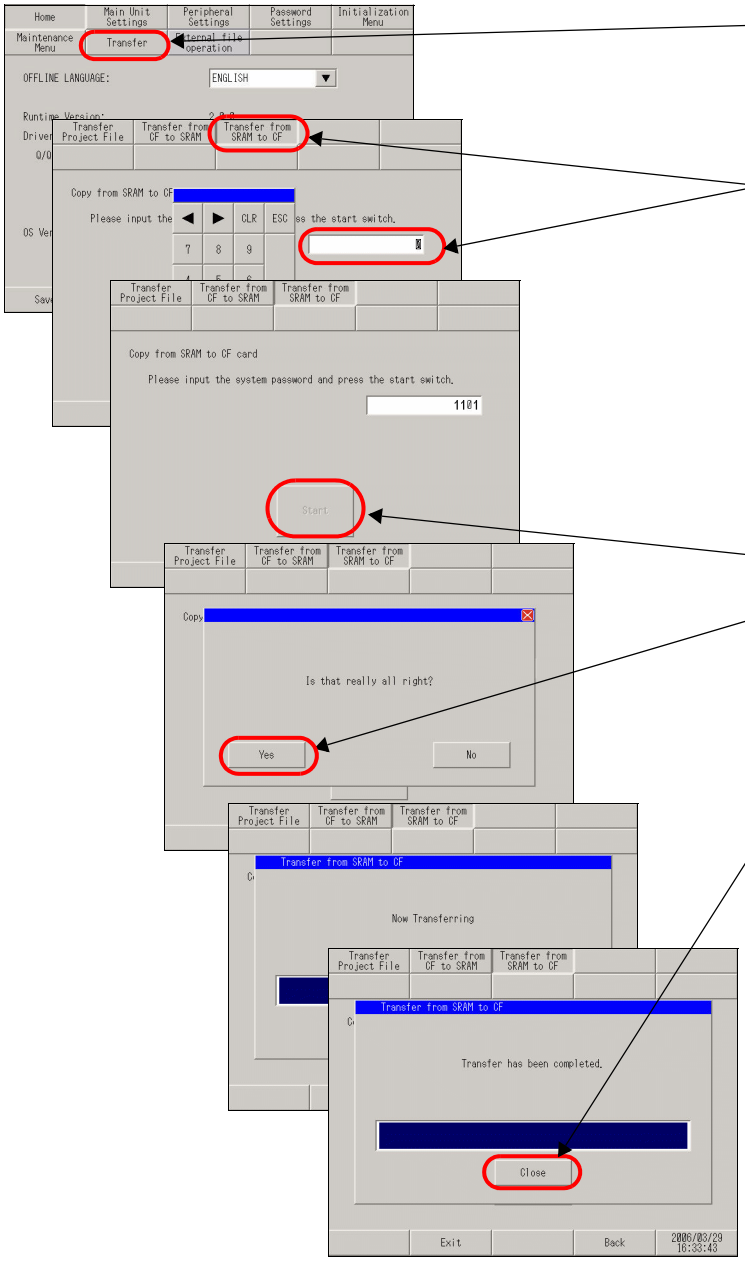
2.12.2 Backing up the SRAM data onto the CF card before transferring a new project file

The data of internal memory (SRAM) is transferred to the CF card.
The data of CF card is eliminated and the data of internal memory is overwritten.

NOTE

- For more details, refer to the settings guide.

“2.15.1 Settings common to all Display models ◆ Transfer from SRAM to CF” (page 2-105)



1. Enter offline mode and touch [Transfer] in the item change over buttons.
2. When the [Transfer] screen opens, touch [Transfer from SRAM to CF]. Touch the input field and enter “1101” (only when the system password has not been set) or the password specified in the system password setting using the displayed numeric touch keys.
3. Touch [Start].
4. When the confirmation message shown in the figure is displayed, touch [Yes].
5. When the data transfer is complete, the message shown in the figure is displayed. Touch [Close].
6. Please make sure that a file with a name of \SRAM\Z000001BIN is created on the CF card.

NOTE

- To transfer the SRAM data backed up on the CF card, touch [Transfer from CF to SRAM] on the [Transfer] screen and then follow the same steps as above.

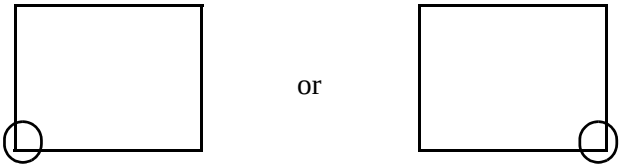
2.12.3 Forcing the transfer of project files

When project files cannot be transferred, you can force the transfer of the files. There are two methods for the forced transfer.

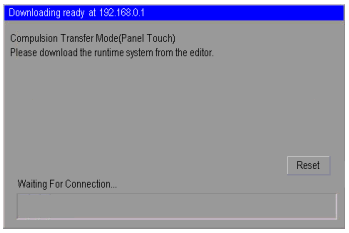
■ Forced transfer by touching the screen

The forced transfer can be conducted by touching the screen.

1 When turning ON the GP, touch and hold the lower left or lower right corner of the screen (within the area of 40 x 40 dots).



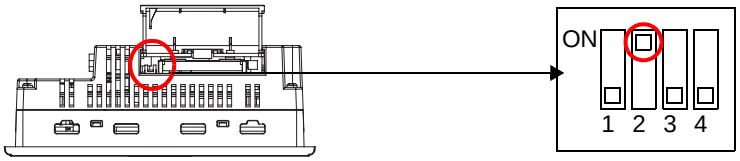
2 When the following dialog box appears, transfer the project file from the GP-Pro EX. After the forced transfer is complete, the GP restarts automatically and the screen of the transferred project file is displayed.



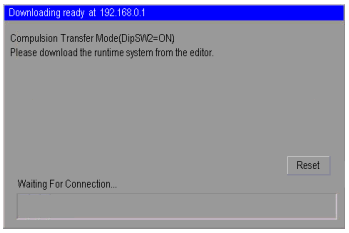
■ Forced transfer by setting the DIP switch

Set DIP switch 2 to ON to force the transfer of the project file.for situations in which access to the DIP switch is difficult due to the installation location or when a model without DIP switches (such as the GP-3302B) is used.

1 Ensure that the GP is turned OFF and then open the CF card cover at the bottom. Locate the CF card interface and DIP switches inside the cover and set DIP switch 2 to the ON position.



2 When the GP is turned ON and the following dialog box appears, transfer the project file from the GP-Pro EX. After the forced transfer is complete, the GP restarts automatically and the screen for forced transfer shown below is displayed again.

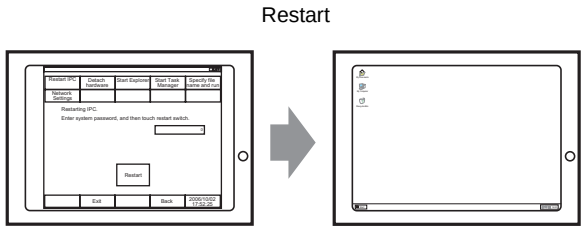
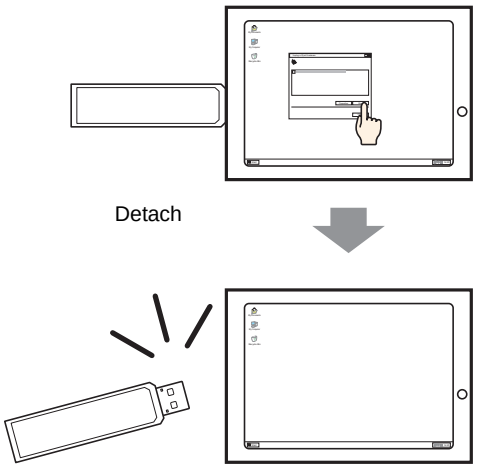


3 Turn OFF the GP and then set DIP switch 2 to OFF. When you turn ON the GP again, the above screen is displayed. On this screen, touch the [Reset] button. Always use the GP with DIP switch 2 set to OFF except when forcing the transfer of project files.

2.13 Restarting the IPC unit and detaching a device (Only when the panel computer is used)

NOTE

- This function can be set up with the IPC series only.

What you can do	Section describing the setting procedure
• Restarting the IPC unit 	☞ “2.13.1 Restarting the IPC unit” (page 2-69)
• Detaching a device connected to the IPC unit 	☞ “2.13.2 Detaching the device connected to the IPC unit” (page 2-71)

2.13.1 Restarting the IPC unit

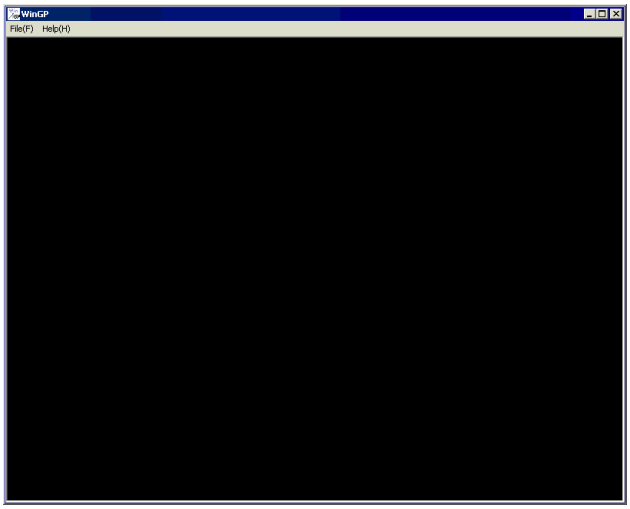
To restart the IPC unit, perform the following setting procedure.

NOTE

- This function can be set up with the IPC series only.
- For details about the setting screen, refer to the setting guide.

☞ "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Restart IPC]" (page 2-141)

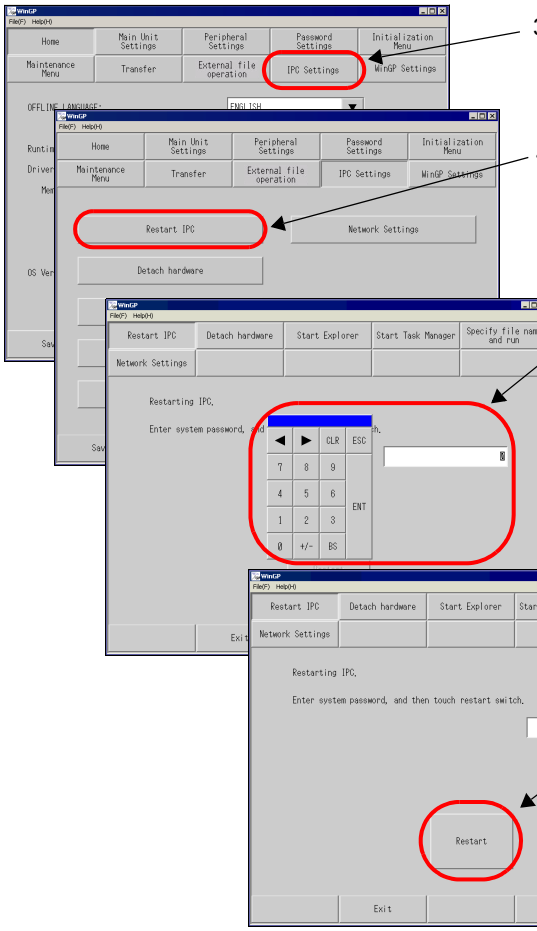
1 If you start WinGP by selecting [Programs] - [Pro-face] - [WinGP] - [WinGP] - [WinGP] from the Start menu, the following screen appears. Then, touch or click the upper right and lower left corners of the screen, or the upper left and lower right corners of the screen (within 40 dots (V x H)) in sequence, within 0.5 seconds.



2 After the system menu appears, select [Offline].

NOTE

- Alternately, you can go to offline mode by selecting [Offline] in the menu displayed by right-clicking on the above screen.

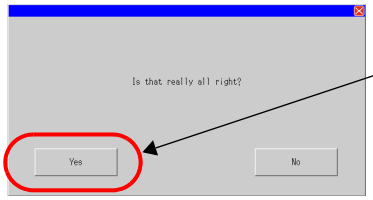


3. After the offline mode screen is displayed, select [IPC Settings] on the item changeover switch.

4. After the [IPC Settings] window opens, select [Restart IPC].

5. After the [Restart IPC] window opens, touch the entry field and enter “1101” (only when the system password has not been set), or enter the password that you specified in “System Password”.

6. Touch [Restart].



7. The system displays a confirmation message, “Is that really all right?”. Then, select “Yes”.

8 The IPC unit will restart.

2.13.2 Detaching the device connected to the IPC unit

Detach the device connected to the IPC unit.

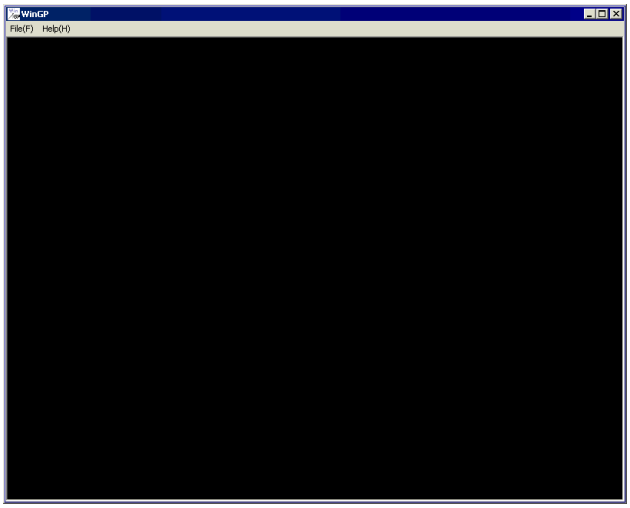
NOTE

- This function can be set up with the IPC series only.
- For details about the setting screen, refer to the setting guide.

☞ "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Detach hardware]" (page 2-142)

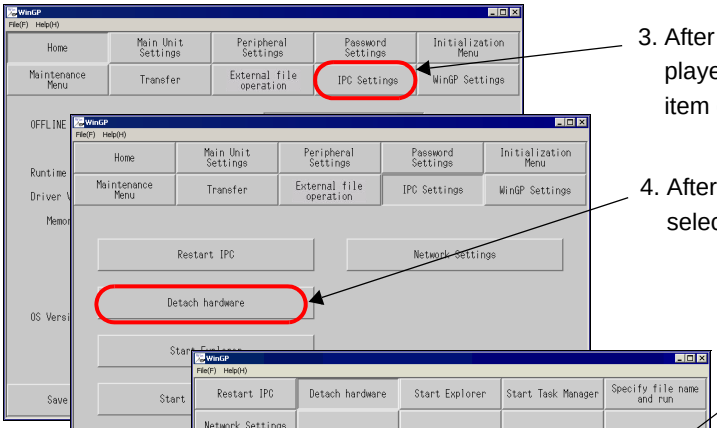
1 If you start WinGP by selecting [Programs] - [Pro-face] - [WinGP] - [WinGP] - [WinGP] from the Start menu, the following screen appears. Then, touch or click the upper right and lower left corners of the screen, or the upper left and lower right corners of the screen (within 40 dots (V x H)) in sequence, within 0.5 second.

2 After the system menu appears, select [Offline].



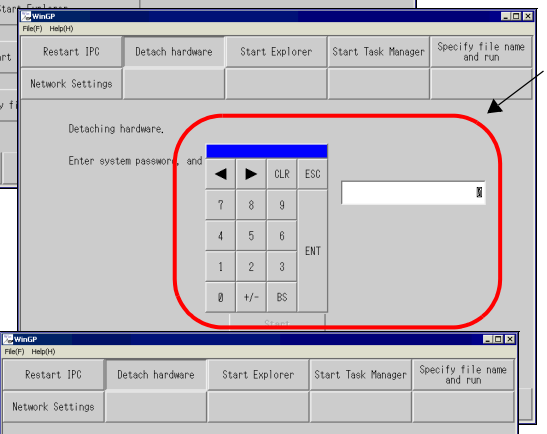
NOTE

- Alternately, you can go to offline mode by selecting [Offline] in the menu displayed by right-clicking on the above screen.

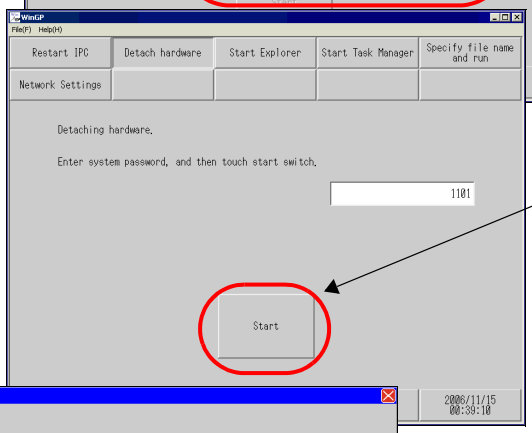


3. After the offline mode screen is displayed, select [IPC Settings] on the item changeover switch.

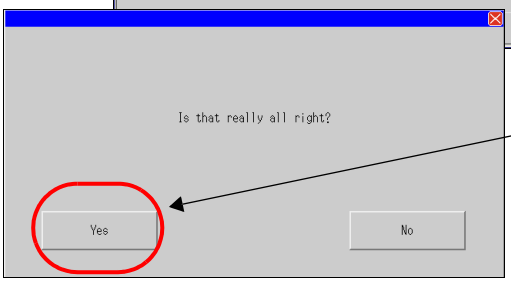
4. After the [IPC Settings] window opens, select [Detach hardware].



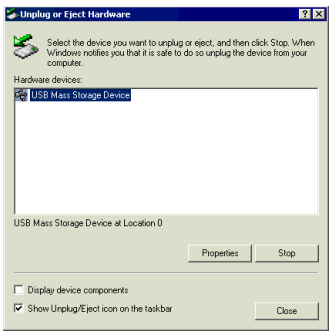
5. After the [Detach hardware] window opens, touch the entry field, and enter “1101” (only when the system password has not been set), or enter the password that you specified in “System Password”.



6. Touch [Start].

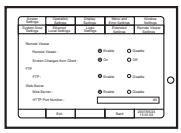
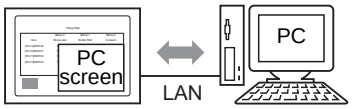
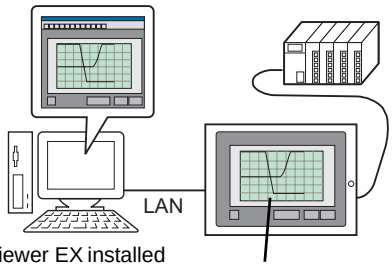


7. The system displays a confirmation message, “Is that really all right?”. Then, select “Yes”.



8. The following dialog box appears and the hardware connected to the IPC unit can be safely detached.

2.14 Remote Viewer settings

What you can do	Section describing the setting procedure
• Setting GP-Viewer EX and Web Server functions  Settings for enabling the GP-Viewer EX and Web Server functions   GP-Viewer EX installed in a personal computer allows a PC screen to display GP screens Project file created by GP-Pro EX	☞ "2.14.1 Setting the remote viewer function (GP-Viewer EX, Web Server)" (page 2-74)

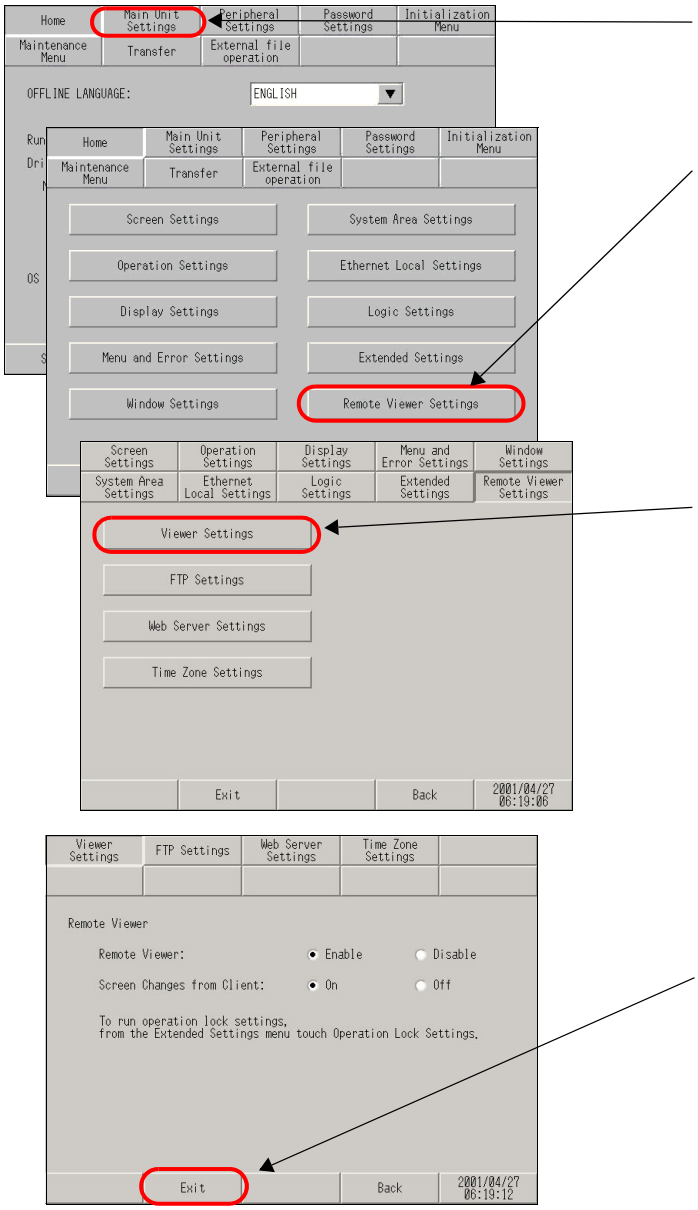
2.14.1 Setting the remote viewer function (GP-Viewer EX, Web Server)

Set the GP-Viewer EX and Web Server functions.

NOTE

- For more details, refer to the setting guide.

☞ "2.15.1 Settings common to all Display models ◆ Remote Viewer Settings" (page 2-88)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.
2. When [Main Unit Settings] opens, touch [Remote Viewer Settings].
3. The [Remote Viewer Settings] screen opens.
4. To use GP-Viewer EX, touch [Viewer Settings] and select [Enable] for [Remote Viewer]. To use the Web Server function, touch [Web Server Settings] and select [Enable] for [Web Server].

5. When you touch [Exit] to save the changes, GP is automatically restarted.

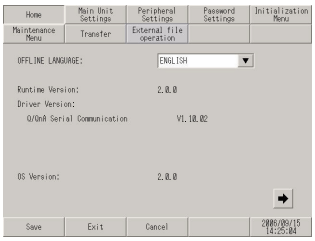
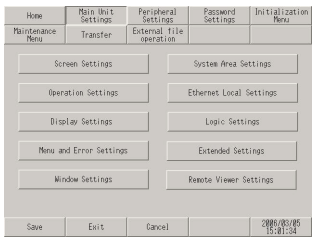
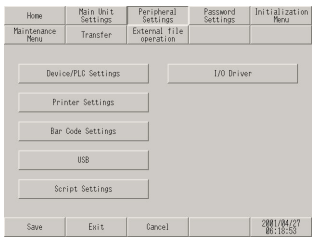
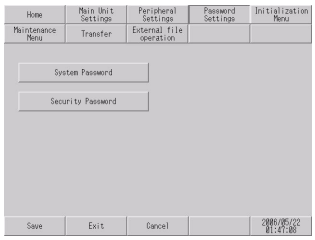
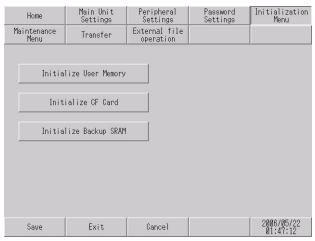
NOTE

- You can also set [Remote Viewer Settings] from the GP-Viewer EX System Settings window. For details, refer to the following page.

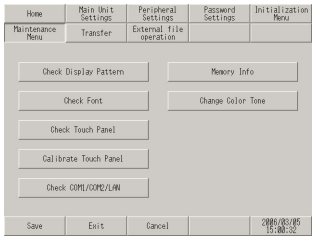
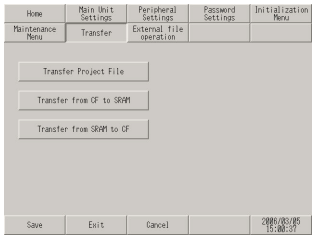
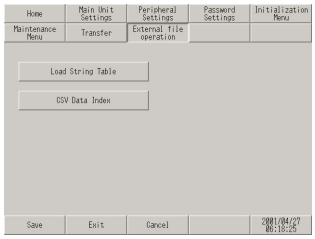
☞ GP-Pro EX Reference Manual "37.15.2 System Settings [Display Unit] - [Remote Viewer] Settings Guide" (page 37-80)

2.15 Offline settings guide

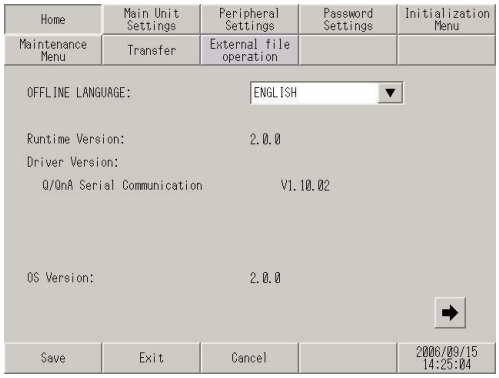
2.15.1 Settings common to all Display models

Menu	Description
	"2.15.1 Settings common to all Display models ■ [Home] Settings Guide" (page 2-76)
	"2.15.1 Settings common to all Display models ■ [Main Unit Settings] Settings Guide" (page 2-78) "2.15.1 Settings common to all Display models ◆ Screen Settings" (page 2-78) "2.15.1 Settings common to all Display models ◆ Operation Settings" (page 2-79) "2.15.1 Settings common to all Display models ◆ Display Settings" (page 2-80) "2.15.1 Settings common to all Display models ◆ Menu and Error Settings" (page 2-80) "2.15.1 Settings common to all Display models ◆ Window Settings" (page 2-81) "2.15.1 Settings common to all Display models ◆ System Area Settings" (page 2-84) "2.15.1 Settings common to all Display models ◆ Ethernet Local Settings" (page 2-85) "2.15.1 Settings common to all Display models ◆ Extended Settings" (page 2-86) "2.15.1 Settings common to all Display models ◆ Remote Viewer Settings" (page 2-88)
	"2.15.1 Settings common to all Display models ■ Peripheral Settings" (page 2-91) "2.15.1 Settings common to all Display models ◆ Device/PLC Settings" (page 2-91) "2.15.1 Settings common to all Display models ◆ Printer Settings" (page 2-92) "2.15.1 Settings common to all Display models ◆ Bar Code Settings" (page 2-93) "2.15.1 Settings common to all Display models ◆ USB" (page 2-94) "2.15.1 Settings common to all Display models ◆ Script Settings" (page 2-95)
	"2.15.1 Settings common to all Display models ■ [Password] Settings Guide" (page 2-96) "2.15.1 Settings common to all Display models ◆ System Password" (page 2-96) "2.15.1 Settings common to all Display models ◆ Security Password" (page 2-96)
	"2.15.1 Settings common to all Display models ■ [Initialization Menu] Settings Guide" (page 2-97) "2.15.1 Settings common to all Display models ◆ Initialize User Memory" (page 2-97) "2.15.1 Settings common to all Display models ◆ Initialize CF Card" (page 2-98) "2.15.1 Settings common to all Display models ◆ Initialize Backup SRAM" (page 2-98)

Continued

Menu	Description
	"2.15.1 Settings common to all Display models ■ [Maintenance Menu] Settings Guide" (page 2-99) "2.15.1 Settings common to all Display models ◆ Check Pattern" (page 2-99) "2.15.1 Settings common to all Display models ◆ Check Font" (page 2-100) "2.15.1 Settings common to all Display models ◆ Check Touch Panel" (page 2-101) "2.15.1 Settings common to all Display models ◆ Calibrate Touch Panel" (page 2-101) "2.15.1 Settings common to all Display models ◆ Check COM1/COM2/LAN" (page 2-102) "2.15.1 Settings common to all Display models ◆ Memory Info" (page 2-102) "2.15.1 Settings common to all Display models ◆ Color Tone" (page 2-103)
	"2.15.1 Settings common to all Display models ■ Transfer" (page 2-104) "2.15.1 Settings common to all Display models ◆ Transfer Project File" (page 2-104) "2.15.1 Settings common to all Display models ◆ Transfer from CF to SRAM" (page 2-104) "2.15.1 Settings common to all Display models ◆ Transfer from SRAM to CF" (page 2-105)
	"2.15.1 Settings common to all Display models ■ External file operation setting guide" (page 2-106) "2.15.1 Settings common to all Display models ◆ String Table Load" (page 2-106) "2.15.1 Settings common to all Display models ◆ CSV Data Index" (page 2-107)

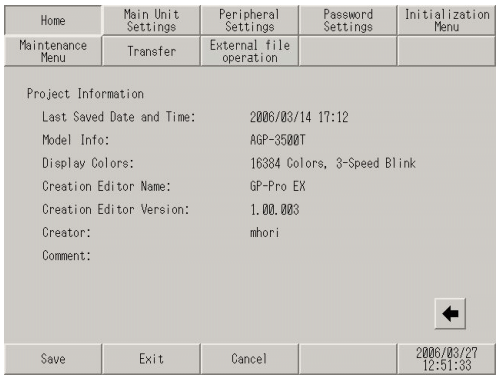
■ [Home] Settings Guide



Setting	Description
OFFLINE LANGUAGE	Select the language used for the offline menu from [JAPANESE] and [ENGLISH].
Runtime Version	Display the runtime version.
Driver Version	Display the protocol driver version. 4 drivers of active maximum amount are displayed. In case of the GP-3300 series 2 drivers of active maximum amount are displayed.
OS Version	Display the OS version.

Continued

Setting	Description
Device Monitor Version	 Only when [Device Monitor] is selected in the [Main Unit Settings]-[Extended Settings] tab in the System Settings window, Device Monitor Version is displayed.

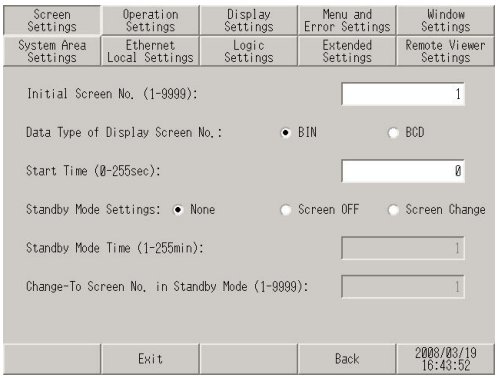


Setting	Description
Last Saved Date and Time	Display the last saving day and time of project.
Model Info	Display the setting GP model.
Display Colors	Display the setting colors.
Creation Editor Name	Display the editor name which created the project.
Creation Editor Version	Display the editor version which created the project.
Creator	Display the creator name of project.
Comment	Display the comment of project.

■ [Main Unit Settings] Settings Guide

◆ Screen Settings

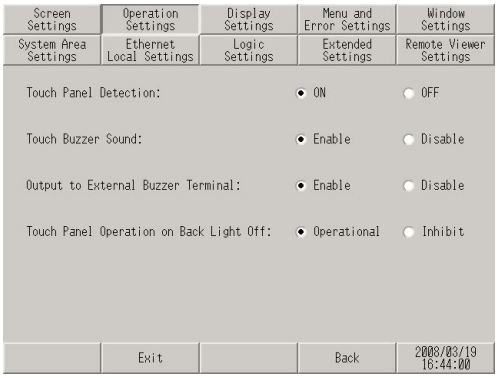
The initial screen display upon powering up and standby mode are setup here.



Setting	Description
Initial Screen No.	Set the number of the screen that will display at startup. ☞ GP-Pro EX Reference Manual “11.3 Choosing the Screen to Display when the GP Turns On” (page 11-7) **NOTE** • 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].
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	Select the standby mode from [None], [Screen OFF], or [Screen Change]. • [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.
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** • 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].

◆ Operation Settings

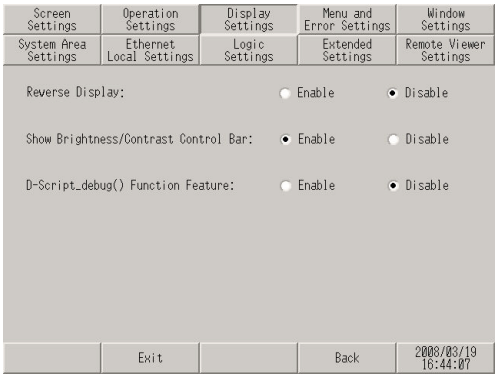
The settings concerning touch operation are set up here.



Setting	Description
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].

◆ Display Settings

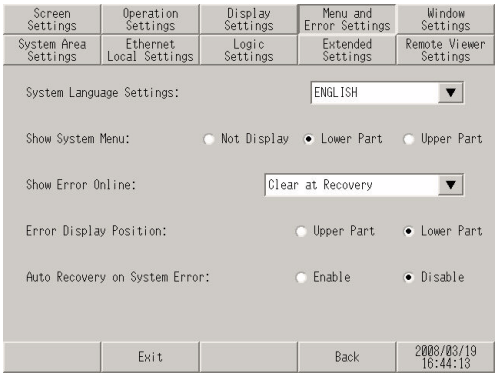
The settings concerning panel display are set up here.



Setting	Description
Reverse Display	Set whether to reverse the screen display from black to white or vice versa. **NOTE** • This item can be set only when monochrome type GP has been selected.
Show Brightness/ Contrast Control Bar	Set whether to display the Brightness/Contrast Control Bar that controls brightness and contrast by touch-operation.
D-Script_debug () Function Feature	Set whether to execute the _debug() function data described in D-script. ☞ GP-Pro EX Reference Manual “21.9.1 D-Script/Common [Global D-Script] Settings Guide” (page 21-54)

◆ Menu and Error Settings

Set the system menu details and the display position of error messages.



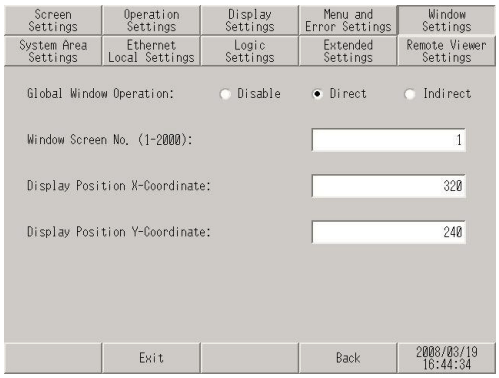
Setting	Description
System Language Settings	Set the language used for the “system menu”, “brightness/contrast adjustment”, “error messages” (both single-line and detailed messages), and “File Manager” from [JAPANESE] and [ENGLISH].
Show System Menu	Select the position to display the system menu from [Not Display], [Lower Part] and [Upper Part].

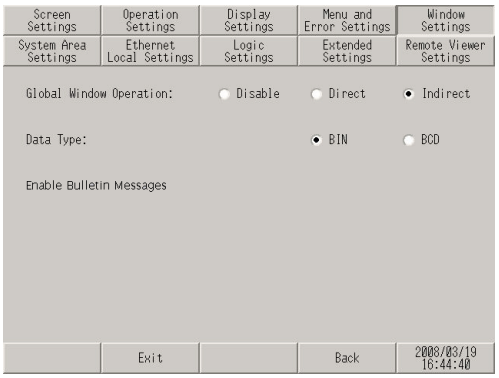
Continued

Setting	Description
Show Error Online	Select the timing to clear the error display in online mode from [None], [Clear at Recovery], and [Clear on Screen Change]. IMPORTANT • If an error message is displayed because writing to the connected device (PLC, etc.) failed due to a communication error or other reason, the message will not be cleared even when [Clear at Recovery] is selected. To clear such an error message, change the screen.
Error Display Position	Select the position to display an error from [Upper Part] and [Lower Part].
Auto Recovery on System Error	Set whether to perform automatic recovery when a system error occurs. When [Enable] is selected, GP will restart about 20 seconds after an error occurs.

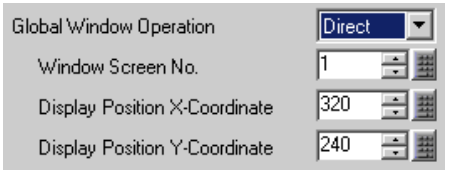
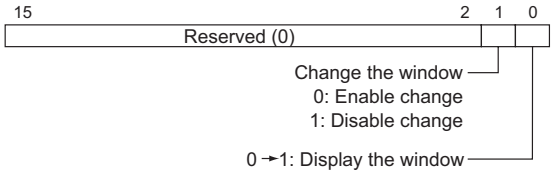
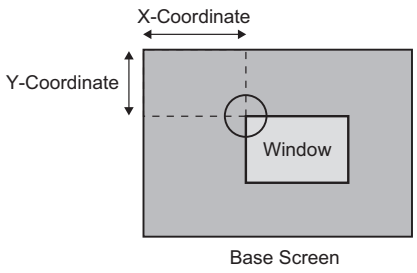
◆ Window Settings

Set the Global Window's display settings.





Continued

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	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. <Setting Screen> <Internal Device Addresses to Use>  LS0016 Control Address LS0017 (Reserved) LS0018 (Reserved) LS0019 (Reserved) • Control Address Controls the display of a Global Window. If you turn ON Bit 0, a Window is displayed.  **NOTE** • To use a system data area on the device/PLC, set this using four sequential words of the assigned address. ☞ "2.15.1 Settings common to all Display models ◆ System Area Settings" (page 2-84)
Window Screen No.	Set the Global Window's screen number from 1 to 2,000.
Display Position X-Coordinate/ Y-Coordinate	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.  **NOTE** • 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.

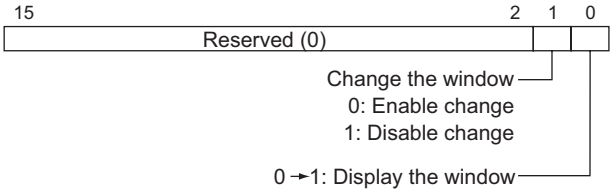
Continued

<table>
<tr><th colspan="2">Setting</th><th>Description</th></tr>
<tr><td rowspan="3">Global Window Operation</td><td>Indirect</td><td>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.

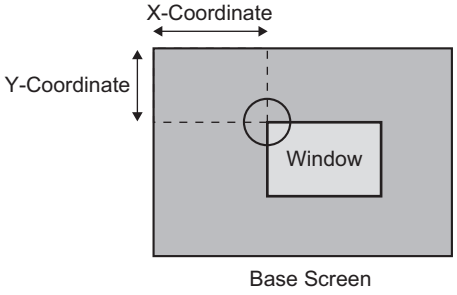
<Setting Screen> <Internal Device Addresses to Use>

LS0016 Control Address
LS0017 Window Screen No.
LS0018 Display Position (X-Coordinate)
LS0019 Display Position (Y-Coordinate)

• Control Address
Controls the display of a Global Window. If you turn ON Bit 0, a Window is displayed.

• Window Screen No.
Specify the number of the Window Screen you want to display from 1 to 2,000.
• 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.

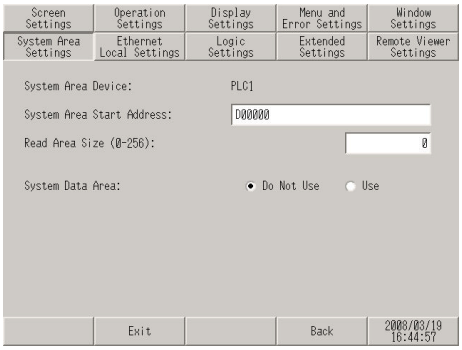
 

NOTE
• To use a system data area on the device/PLC, set this using four sequential words of the assigned address.
☞ "2.15.1 Settings common to all Display models ◆ System Area Settings" (page 2-84)</td></tr>
<tr><td>Data Type</td><td>Select the type of data to store in the address from [Bin] or [BCD].</td></tr>
<tr><td colspan="2">Enable Bulletin Messages</td><td>This option is displayed when Bulletin Message is enabled. The settings cannot be changed from here.</td></tr>
</table>

Continued

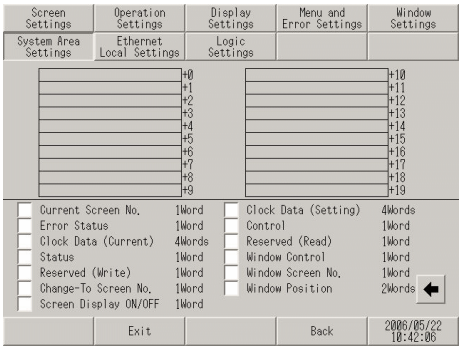
◆ System Area Settings

Set the items to synchronize the internal memory of GP (system data area) with the device (memory) of the connected device.



Setting	Description
System Area Device	Select the device to set the system data area.
System Area Start Address	Specify the start address of the system data area.
Read Area Size (0-256)	Set the number of words for “Read Area” in which the data used on all screens in common and the simultaneous display data for line graphs are stored, within the range of 0 to 256. **NOTE** • This setting is disabled when the device is connected using the memory link method.
System Data Area	Set whether to use the system data area.

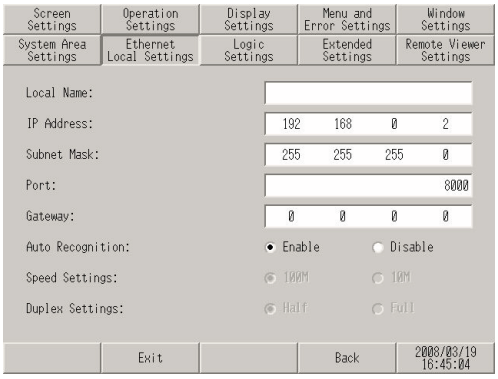
When [Use] is selected for [System Data Area], the following screen appears.



Setting	Description
System data area items	When the system data area item to be used is touched, a chicanery appears indicating that the item is selected.
Total number of words	Display the number of words that the selected system area item will use. **NOTE** • When the display resolution of the screen is 320 x 240, touching the [Show] key displays [Screen for checking the System Area settings], in which you can confirm the selected items. • This setting is effective only when the direct access method is used. • “System Area” displayed on the screen refers to the system data area.

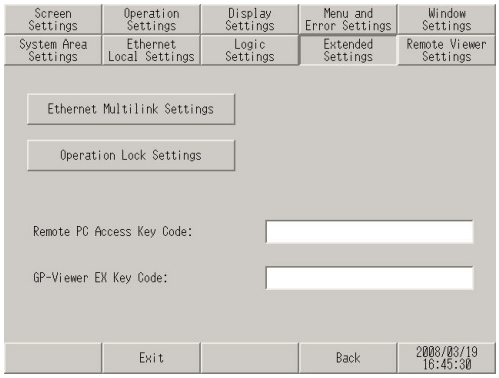
◆ Ethernet Local Settings

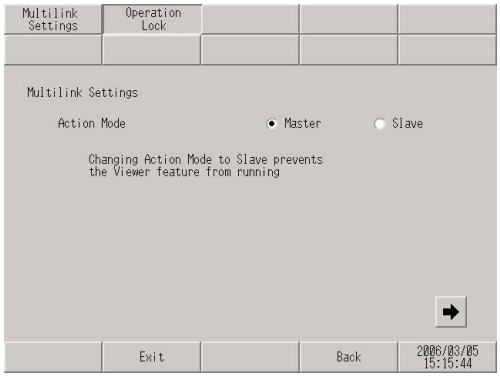
Adjust the settings for the Ethernet connection.

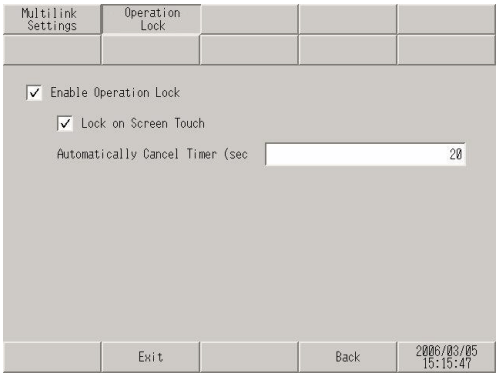


Setting	Description
Local Name	The name used on a network is inputted in the half width of less than 32 characters.
IP Address	Sets up the GP's IP address. The IP address is 32 bits and designated in four 8-bit units, entered in decimal.
Subnet Mask	Sets the subnet mask. If you are not using a subnet mask, designate[0].
Port	Specify the port number (5001 to 65516). Ten consecutive port numbers starting from the specified port number are used. However, when the forced transfer screen is displayed on the GP unit, the port number setting is fixed at "8000". **NOTE** • To execute an automatic search via LAN when transferring a project file, specify the same port number as the number specified in [Transfer Tool] - [Transfer Setting] - [Communication Port Settings] - [Port (Search)].
Gateway	Sets up the gateway's IP address. Only a single gateway can be set up. If you are not using a gateway, enter "0"
Auto Recognition	It sets up whether network automatic recognition is confirmed. When not performing automatic recognition, "Speed Settings" and "a Duplex Settings" are set up manually.
Speed Settings	A network speed is selected from "100M" and "10M."
Duplex Settings	A network communication system is selected from "Half" and "Full."

◆ Extended Settings

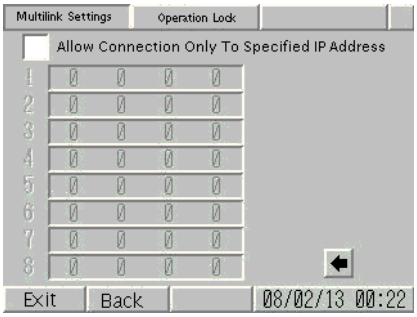






Setting	Description
Remote PC Access Key Code	Set an RPA function key code.
GP-Viewer EX Key Code	Set a GP-Viewer EX function key code.

Continued

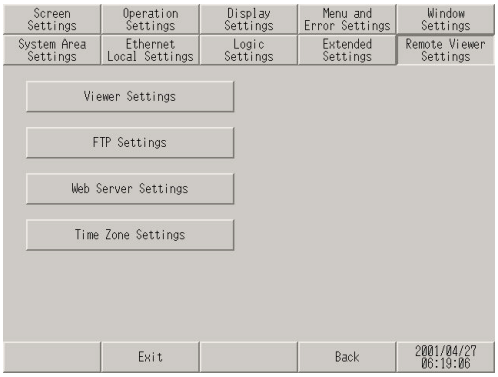
Setting		Description
Ethernet Multilink Settings		Set the GP's operation mode to use the Ethernet Multilink function. Select from [Master] or [Slave]. After selecting [Master], go to the next screen by touching the arrow button displayed at the lower right of the screen. Check [Allow Connection Only To Specified IP Address] and touch the address section. When the keypad appears, enter the address that connection will be allowed.  After selecting [Slave], touch the arrow button and specify the IP address of the master to be connected. **NOTE** • Do not enter the IP address of this display unit as the master's IP address.
Operation Lock Settings		Set the operation lock function.
	Enable Operation Lock	Check this option to lock the touch operation of other GPs while one GP is operating.
	Lock on Screen Touch	Check this option to lock the touch operation of other GPs by touching the screen of one GP.
	Automatically Cancel Timer (Sec.)	Set the period in seconds until the operation lock is reset automatically when touching stops on the GP which activated the lock.

IMPORTANT

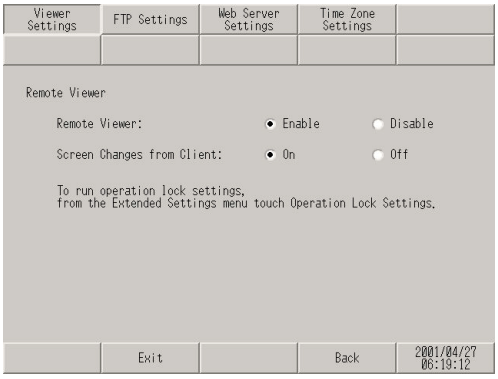
- Some devices have limited use of the above extended functions. Check if your device supports these functions before setting them.

☞ GP-Pro EX Reference Manual "1.3 Supported Features" (page 1-5)

◆ Remote Viewer Settings

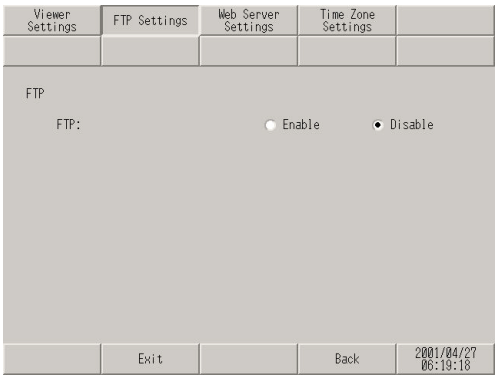


- Viewer Settings



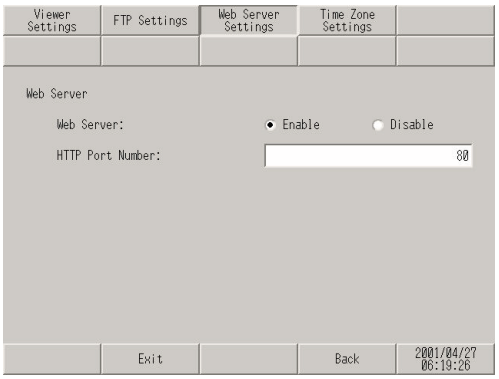
Setting		Description
Remote Viewer		Set the GP-Viewer EX function.
	Enable	Set whether to enable the GP-Viewer EX function.
	Enable screen changes from client	Set whether to enable GP screen switching from GP-Viewer EX. **NOTE** • If this item is not selected, even users with read/write permission in Security Settings cannot switch the screen from the GP-Viewer EX side.

• FTP Settings



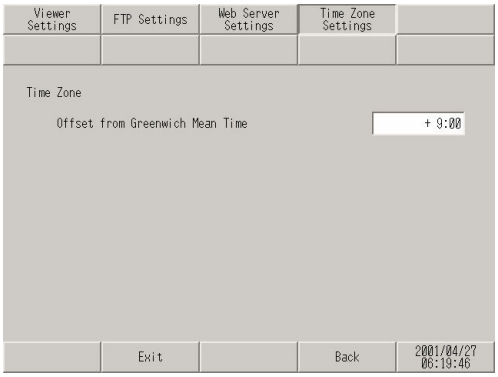
Setting	Description
Enable FTP	Set whether to enable the FTP function.

• Web Server Settings



Setting		Description
Web Server		Set the Web Server function.
	Enable Web Server	Set whether to enable the Web Server function.
	HTTP Port Number	Set the port number used by the Web Server function with a value from 1 to 65535. **NOTE** • We recommend that you use port number 80. However, if port number 80 cannot be used because of an existing firewall, you must change the port number. • For information about usable port numbers, refer to the Firewall Settings because usable port numbers depend on Firewall Settings.

• Time Zone Settings



Setting		Description
Time Zone	Offset from Greenwich Mean Time	Set the standard time of the location of the PC by specifying the difference from the Greenwich Mean Time.

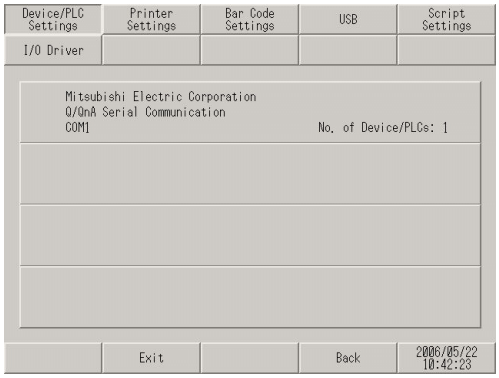
■ Peripheral Settings

◆ Device/PLC Settings

Select this item to set the options for communication with the connected device (PLC or host). Set these options so that they match with the communication settings of the connected device.

NOTE

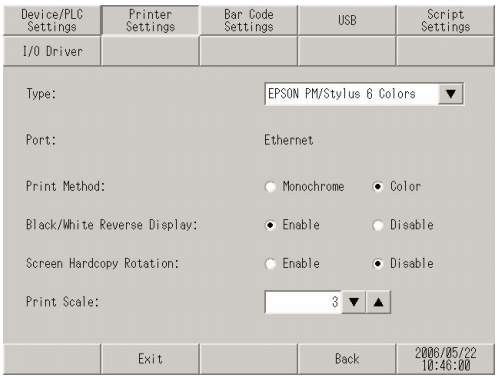
- The setting items for [Device/PLC Settings] may vary depending on the connected device. For details about the individual connected devices, refer to the "GP-Pro EX Device/PLC Connection Manual".



Setting	Description
Maker	Displays the maker of the currently set device/PLC.
Series	Displays the series of the currently set PLC.
Port	Displays the ports that can be connected to a device/PLC.
No. of Devices/PLCs	Displays the set device/PLC driver numbers.

◆ Printer Settings

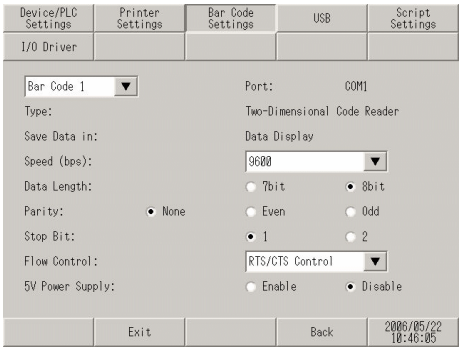
Set the model of the printer connected to the GP and the print method.



Setting	Description
Type	Select the printer type to connect from [Do Not Use], [NEC PR201], [EPSON ESC/P High Speed], [EPSON ESC/P High Quality], [HP Laser Jet], [EPSON PM/Stylus 6 Colors], [EPSON Stylus 4 Colors] or [Text ASCII]. **NOTE** • For [Text ASCII], the text's shape may be different, because the print method is different.
Port	The port to which the printer is connected is displayed.
Print Method	Select the print method from [Monochrome] or [Color]. **NOTE** • For a monochrome GP model, the print will be monochrome even if [Color] is selected for the [Print Method].
Black/White Reverse Display	Select whether or not to print with black and white reversed.
Screen Hardcopy Rotation	Select the print direction for screen hard copy from [Horizontal] or [Vertical].
Print Scale	Set the print scale to 1-4 only if the [Type] is [EPSON PM/Stylus 6 Colors] or [EPSON Stylus 4 Colors].

◆ Bar Code Settings

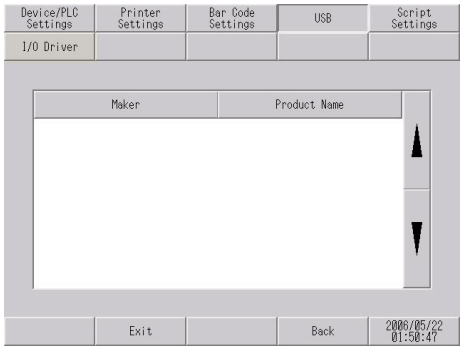
Set the options used for the communication with the bar code reader connected to the GP.



Setting	Description
Port	Displays the port to connect from [COM1] or [USB].
Type	The bar code to set up is selected from “Bar Code 1” and “Bar Code 2.”
Save Data in	Display the read code data storage location from [Data Display] or [Internal Device].
Speed (bps)	The transmission speed between connection equipment and GP is selected from [2400], [4800], [9600], [19200], [38400], [57600], and [115200].
Data Length	The length (bit) of the data which communicates is selected from “7” and “8.”
Parity	The method of a parity check is selected from “Non”, “Even”, and “Odd.”
Stop Bit	The length (bit) of a stop bit is selected from “1” and “2.”
Flow Control	The system of the communication control which prevents overflow of transmission data and which is performed for accumulating is chosen from “nothing”, “ER (DTR/CTS) control”, and “RTS/CTS control.” **NOTE** • When the port is set to USB/SIO, [None] is set.
5V Power Supply	It select from GP whether 5V power supply is supplied.

◆ USB

The information (a manufacture name and product name) on the USB device linked to GP is displayed.



Setting	Description
Maker	Displays the manufacture name of the USB device linked to GP.
Product Name	Displays the product name of the USB device linked to GP.

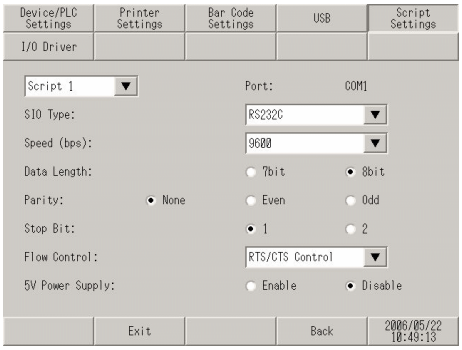
NOTE

- Several USB devices of the same category in the following table cannot be simultaneously used. Even if several USB devices of the same category are connected to the GP, only one USB device that the GP has recognized first can be used.

Category	USB device
1	Printer, USB-PIO converter
2	Keyboard, Numeric keys, Barcode reader
3	Mouse
4	USB storage (USB memory, CF card reader, etc.)
5	USB transfer cable
6	USB - serial (RS-232C) conversion cable

◆ Script Settings

A communication setup of the connection equipment used with a script is performed.

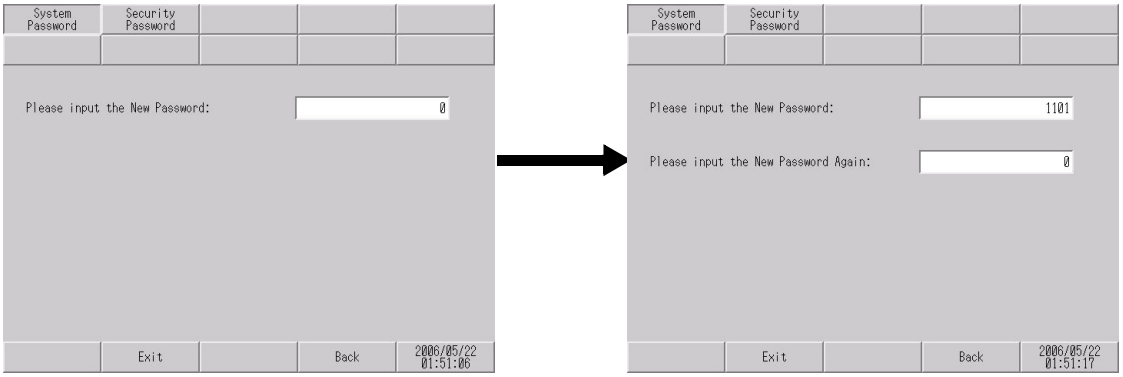


Setting	Description
Port	The port used for a script will be displayed.
SIO Type	The communication system which communicates with connection equipment is selected from “RS232C”, “RS422/485 (2 line type)”, and “RS422/485 (4 line type).”
Speed (bps)	The communication speed is selected from [2400], [4800], [9600], [19200], [38400], [57600], and [115200].
Data Length	The length (bit) of the data which communicates is selected from “7” and “8.”
Parity	The method of a parity check is selected from “Non”, “Even”, and “Odd.”
Stop Bit	The length (bit) of a stop bit is selected from “1” and “2.”
Flow Control	The system of the communication control which prevents overflow of transmission data and which is performed for accumulating is chosen from “nothing”, “ER (DTR/CTS) control”, and “RTS/CTS control.” **NOTE** • When the port is set to USB/SIO, [None] is set.
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. **NOTE** • When [USB/SIO] is selected for [Port], [Disable] is set.

■ [Password] Settings Guide

◆ System Password

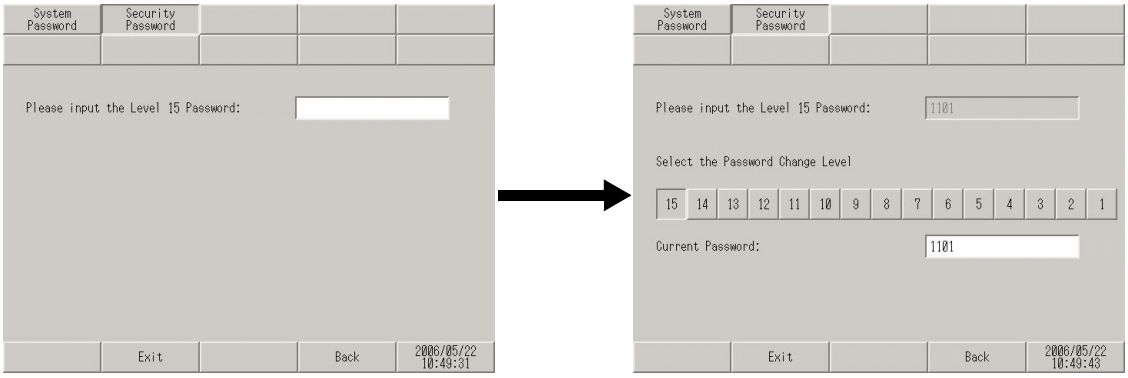
The password setting is used when changing to the Initialize Memory or OFFLINE mode Screens.



Setting	Description
Please input the New Password	Set the system password used for the initial setting or to enter offline mode within the range of 0 to 99999999. Specify [0] if the system password is unnecessary.
Please input the New Password Again	Enter the password again for confirmation.

◆ Security Password

If the password of a level 15 is inputted, the password from level 1 to level 15 can be changed.



Setting	Description
Please input the Level 15 Password	Enter the level 15 password to change the security password. **NOTE** • When the security password of a level 15 is not set up with screen creation software, setting change of a security password cannot be performed in offline mode. Set up the security password in a project file and transfer the file to the GP.
Select the Password Change Level	Select the password level to be changed from 1 to 15.
Current Password	Enter the current password.

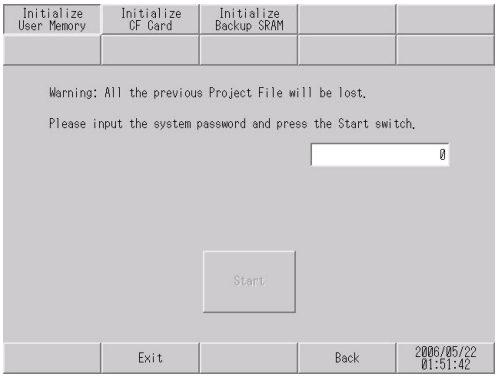
■ [Initialization Menu] Settings Guide

◆ Initialize User Memory

Deletes all data in GP user memory.

IMPORTANT
- [You cannot cancel the Initialization procedure after pressing the [Start] key. Do not turn OFF the power during initialization.
- All backed up data in SRAM is lost.
- Initialization does not erase the SYSTEM SET UP, the SIO protocol, or the internal clock settings.

NOTE
- The time required for Initialization is between 10 and 20 seconds.



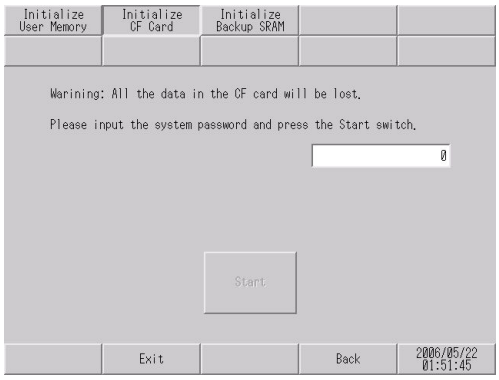
Setting	Description
Please input the system password and press the Start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the initialization of the user memory.

◆ Initialize CF Card

Deletes all data in the CF Card installed in the GP.

IMPORTANT

- Initialization cannot be canceled once the [Start] key is touched. Do not turn OFF the power during initialization.



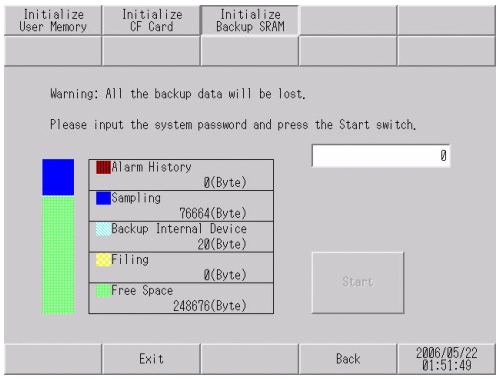
Setting	Description
Please input the system password and press the Start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the initialization of the CF card.

◆ Initialize Backup SRAM

Deletes all data in GP's backup SRAM.

IMPORTANT

- You cannot cancel the Initialization procedure after pressing the [Start] key. Do not turn OFF the power during initialization.
- All backed up data in SRAM is lost.
- Initialization does not erase the SYSTEM SET UP, the SIO protocol, or the internal clock settings.

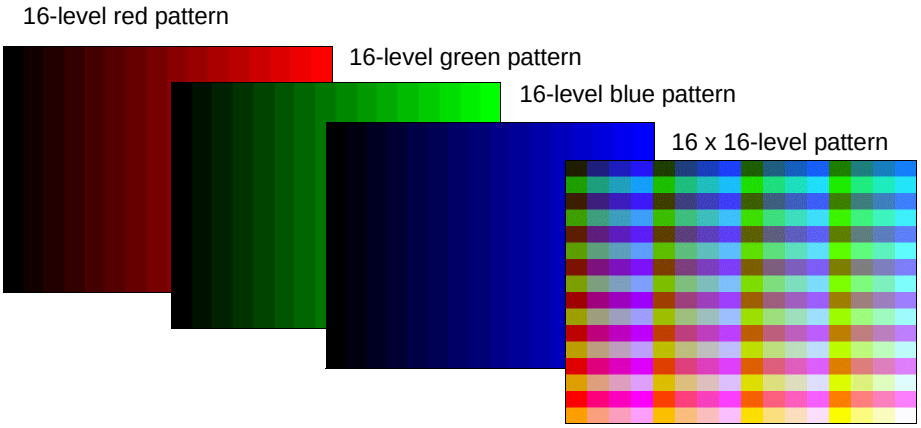


Setting	Description
Please input the system password and press the Start switch.	To initializes the GP's backup SRAM, enter the common password "1101" or the password you designated in the "System Password" screen.
Start	Start the initialization of the GP's backup SRAM.

■ [Maintenance Menu] Settings Guide

◆ Check Pattern

It is the check of a drawing function. It is confirmed whether a liquid crystal display is displayed correctly. When the screen is touched, the selected display pattern is displayed.



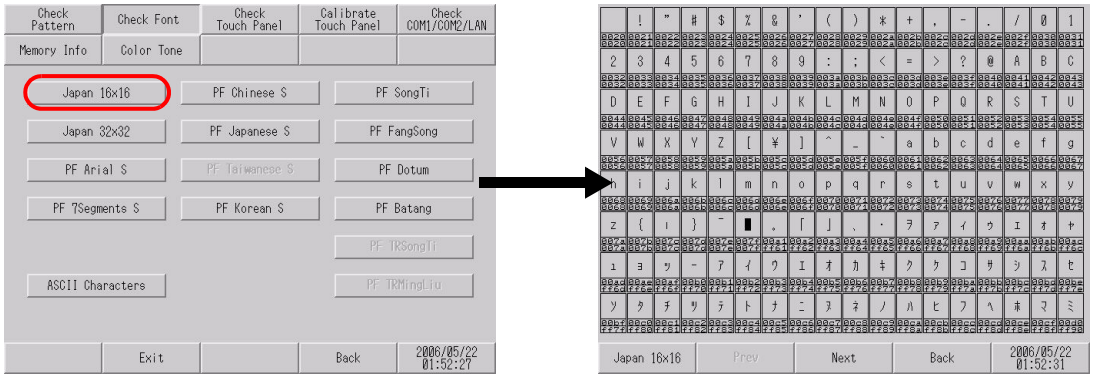
Setting	Description
16-level red pattern	Display the 16-level red pattern.
16-level green pattern	Display the 16-level green pattern.
16-level blue pattern	Display the 16-level blue pattern.
16 x 16-level pattern	Display the 16 x 16-level pattern.

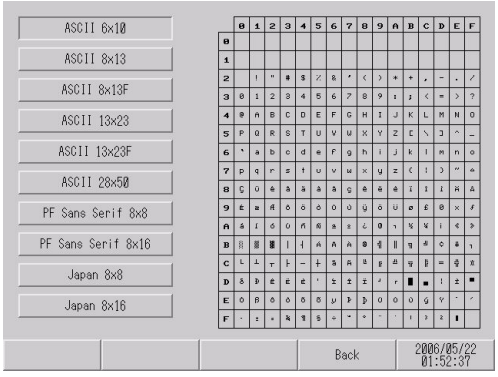
NOTE

- With the monochrome model, only the 16-level pattern or 8-level pattern is displayed.

◆ Check Font

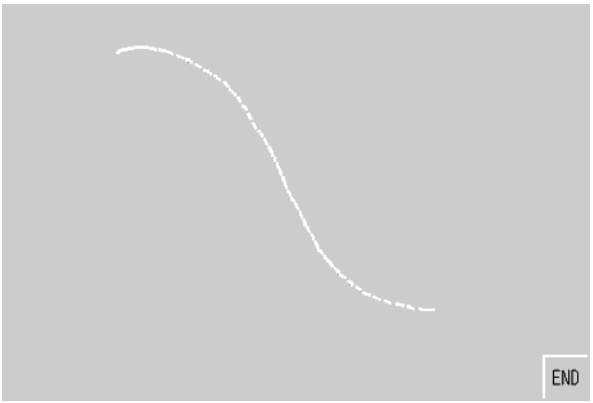
This item is used to display the font patterns of the installed fonts. You can check the character pattern of each font (Japanese, European and U.S., Chinese (traditional), Chinese (simplified), Korean, Cyrillic, and Thai) as well as the font image of each language. For Chinese (traditional), Chinese (simplified), Korean, Cyrillic, and Thai, only the fonts downloaded by the user can be checked.



Setting	Description
Font List	Select the font to check the image from [Japan16 x 16], [Japan32 x 32], [PF Arial S], [PF 7Segments S], [PF Russian S], [ASCII Characters], [PF Chinese S], [PF Japanese S], [PF Taiwanese S], [PF Korean S], [PF Thai S], [PF SongTi], [PF FangSong], [PF Dotum], [PF Batang], [PF TRSongTi], and [PF TRMingLiu]. When a font name is touched, the pattern display check screen for the font is displayed. **NOTE** • Only the ASCII font group displays items in other screens. 

◆ Check Touch Panel

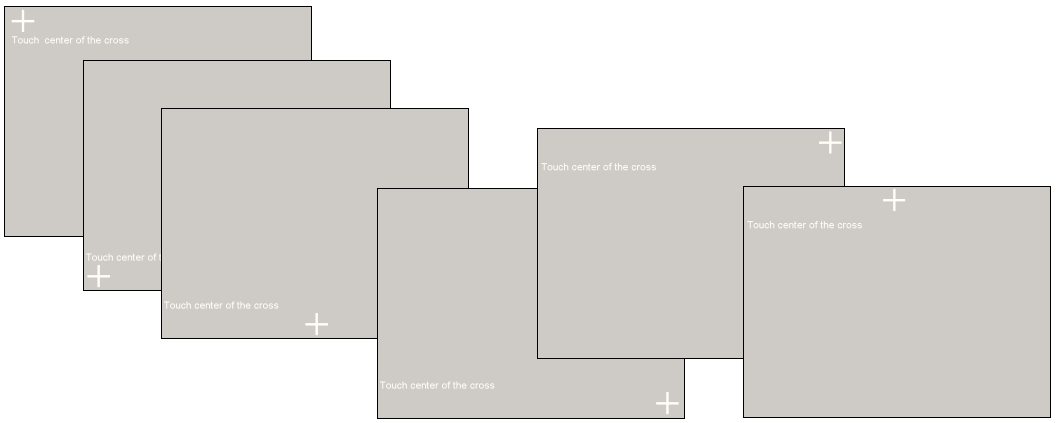
It is the check of touch panel. Check the touched part lights up correctly.



Setting	Description
Touch Panel Check	Touch anywhere on the panel and the dots at the touched coordinates light up. You can visually check the highlight display of the touched part. **NOTE** • The color of the dot can be changed by touching any of the upper right (yellow), upper left (blue), or lower left (red) corners of the screen.
END	Return to the menu screen.

◆ Calibrate Touch Panel

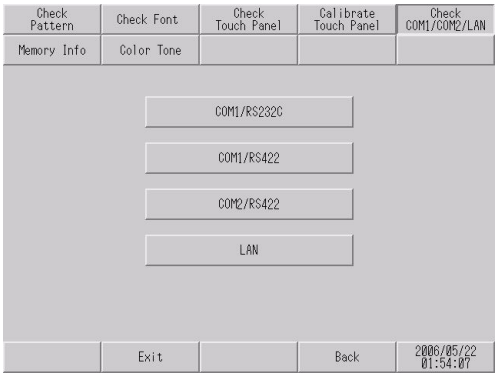
Correct an analog touch panel. (setup of a calibration)



Setting	Description
Touch Center of the Cross	Continue touching until the crosshatch moves or disappears. **NOTE** • When a place other than the crosshatch is touched, the input is recognized as an error and the calibration mode does not finish successfully.

◆ Check COM1/COM2/LAN

Check the sending and receiving line of RS-232C, RS-422 and LAN.
Usually when abnormality occurs, it checks. It selects check item from the menu.
When it checks RS-232C and RS-422, connection of the SIO cable is necessary.



Setting	Description
COM1/RS232C	Check whether the COM1 terminal (RS-232C) of the GP is operating properly.
COM1/RS422	Check whether the COM1 terminal (RS-422) of the GP is operating properly.
COM2/RS422	Check whether the COM2 terminal of the GP is operating properly.
LAN	Check the internal loopback and the MAC address. **NOTE** • This item is not displayed when the GP does not have a LAN interface.

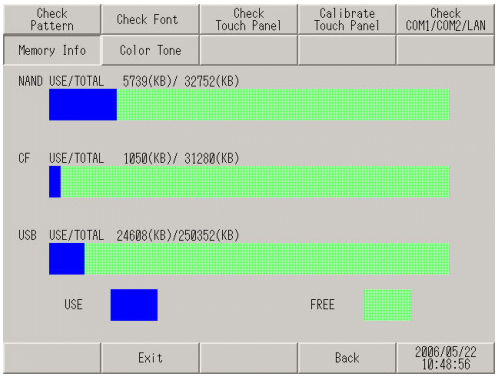
NOTE

- To check the COM1 and COM2 ports, preparation of a loopback cable is required. For details, refer to the following page.

☞ "2.8.1 Checking whether the Display is operating properly ◆ Preparing a loopback cable" (page 2-40)

◆ Memory Info

The memory total and memory usage of GP are displayed.



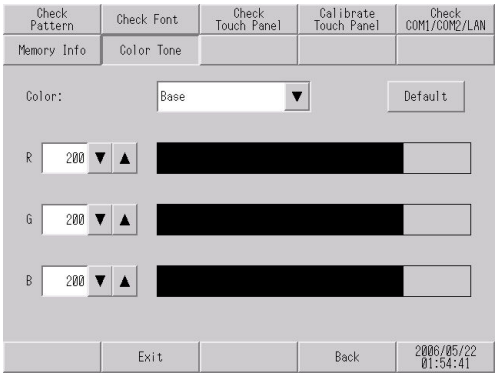
Setting	Description
NAND USE/TOTAL	Display the total capacity and used amount of the memory of NAND (area in which the screen data is stored). The histogram shows the used amount in blue and free space in green.

Continued

Setting	Description
CF USE/TOTAL	Display the total capacity and used amount of the memory of the CF card. The histogram shows the used amount in blue and free space in green.
USB USE/TOTAL	Display the total capacity and used amount of the USB memory. The histogram shows the used amount in blue and free space in green. **NOTE** • The maximum capacity displayed for each device is 2,097,151 KB (2,147,483,647 bytes or approximately 2 GB). Even if the total capacity or free space is more than the maximum capacity, it is displayed as 2,097,151 KB. • This histogram is not displayed when USB memory is not attached.

◆ Color Tone

The color tone in offline mode can be changed.

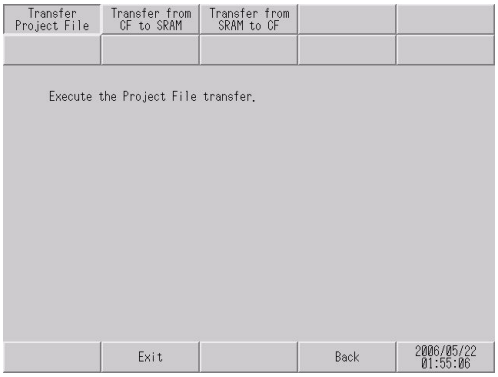


Setting	Description
Color	The change part of a color tone select from “Base”, “Text”, and “Back-Ground.”
Default	Returns to an initial condition.
RGB	The color tone for the part specified in [Color] is changed. Enter the setting values for R, G, and B within the range of 0 to 255. The values can be entered using the following three methods: • Inputs numerically Touch the numerical value, and value of each element is input with the displayed keyboard. • Input drum button Numerical value is modified with the drum button ▼ of numeric field side. It changes +5 or -5 each. • Input directly Touch the histogram of each element directly, it modifies numerical value.

■ Transfer

◆ Transfer Project File

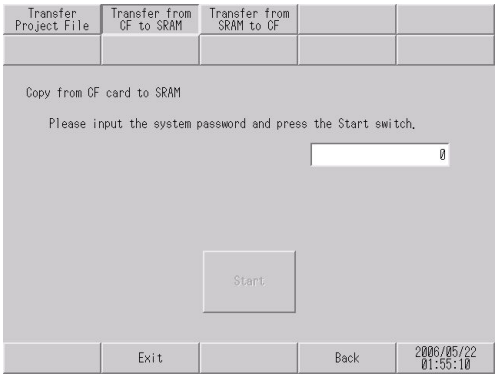
Set this item to transfer a project file in offline mode.



Setting	Description
Execute the Project File transfer.	To transfer a project file in offline mode, you need to use the screen above to set the GP to the transfer waiting status. When a message [Execute the Project File transfer] is displayed, use the GP-Pro EX to transfer the project file. **NOTE** • After the project file is transferred, the GP is restarted automatically. • When the setting is changed in offline mode but is not saved, the [Save File] dialog box is displayed.

◆ Transfer from CF to SRAM

You can transfer the SRAM backup data stored in the CF card (the data transferred with [Transfer from SRAM to CF]) to the internal memory (SRAM).



Setting	Description
Please input the system password and press the Start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the transfer of the backup SRAM data stored in the CF card to the GP.

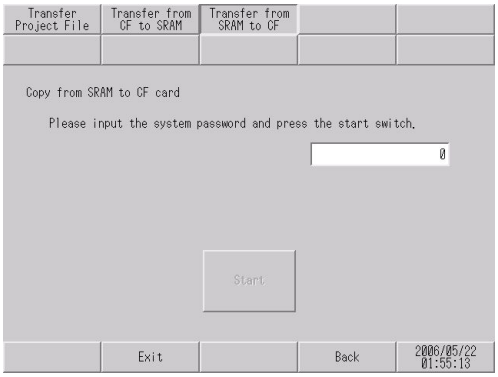
◆ Transfer from SRAM to CF

The data of internal memory (SRAM) is transferred to the CF card.

NOTE

- The data of SRAM can be transferred to the CF card via functions which operate on GP-Pro EX. For the details, refer to the following page.

☞ GP-Pro EX Reference Manual “5.17.6 [System Settings] Setting Guide • Memory Card Settings” (page 5-166)



Setting	Description
Please input the system password and press the start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the transfer of the backup SRAM data in the GP to the CF card. A file with a name of \SRAM\Z000001BIN will be created on the CF card.

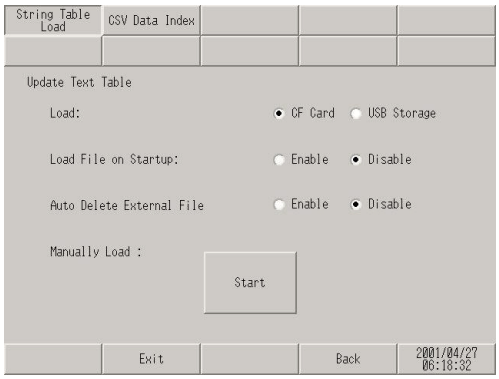
IMPORTANT

- Ensure that the available space in the CF card is always larger than the size of the backup SRAM.
- Only one file in the backup SRAM can be saved in the CF card.
- When [Initialize CF card] is executed in offline mode, an SRAM folder is created.
- When a transfer from the CF card to the backup SRAM is executed in offline mode, all the previously stored data (logging data, etc.) is erased and replaced with the transferred data.
- Even when the transfer from the CF card to the backup SRAM is executed in offline mode, the setting values for [Bright], [Contrast], and [Volume] do not change. Note, however, that when the GP enters RUN mode or the GP is once turned OFF and turned ON again, the transferred data will be used for operation.
- When the transfer from the CF card to the backup SRAM is executed in offline mode, and if VGA or SVGA display is used, the adjusted VGA/SVGA display may be changed.
- When the transfer from the CF card to the backup SRAM is executed in offline mode, the previously stored information learned with Japanese FEP is overwritten. Consequently, the priority in the conversion list of Japanese FEP may change.

■ External file operation setting guide

◆ String Table Load

Set parameters to rewrite the data in the string table offline.



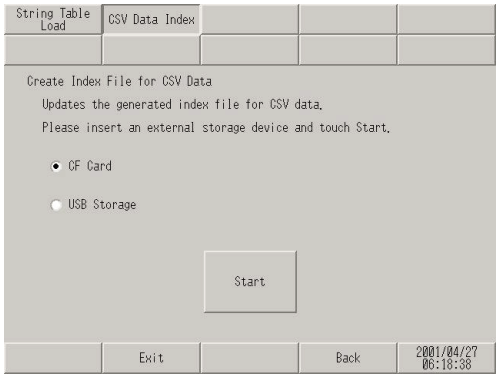
Setting	Description
Load	Select the location where the external file is stored from [CF Card] or [USB Storage].
Load File on Startup	Set whether to read the file in the external storage when the GP starts. **NOTE** • When [Enable] is selected, the time required to start the GP may become longer.
Auto Delete External File	Set whether to automatically delete the data of the string table in the external storage after it is automatically read. **NOTE** • Even when [Enable] is selected, the external file will not be deleted by manual reading.
Manually Load	Touch the [Start] button to start reading of the file stored in the external storage.

◆ CSV Data Index

Create an index file of the registered recipe data in CSV format.

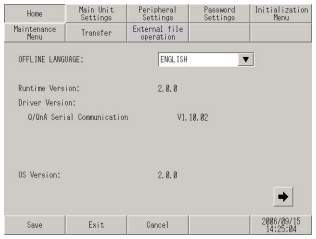
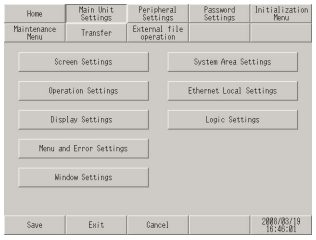
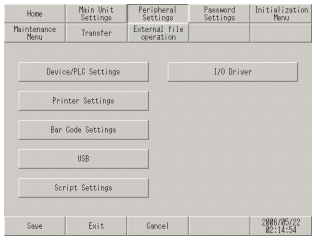
NOTE

- If an index file already exists in the external storage, its data will be overwritten.

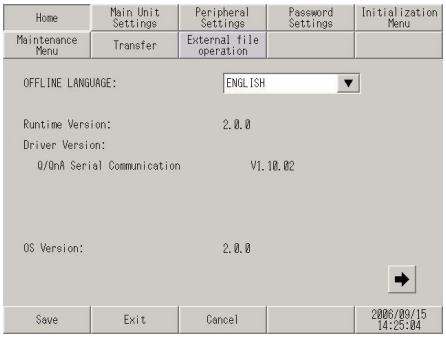


Setting	Description
CF Card	Create an index file in the CF card.
USB Storage	Create an index file in the USB storage.
Start	Start creating an index file.

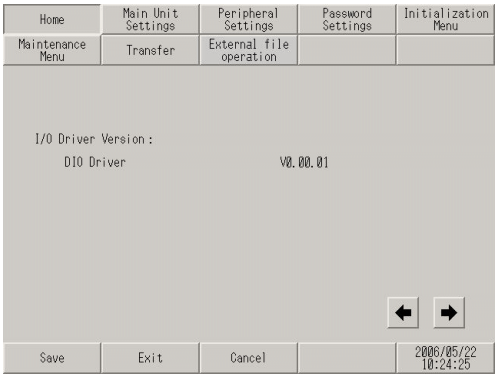
2.15.2 When the DIO board type GP3000 series is used

Menu	Description
	"2.15.2 When the DIO board type GP3000 series is used ■ [Home] Settings Guide" (page 2-109)
	"2.15.2 When the DIO board type GP3000 series is used ■ [Main Unit Settings] Settings Guide ◆ Logic Settings" (page 2-111)
	"2.15.2 When the DIO board type GP3000 series is used ■ [Peripheral Settings] Settings Guide" (page 2-112) "2.15.2 When the DIO board type GP3000 series is used ◆ I/O Driver (I/O Check)" (page 2-112) "2.15.2 When the DIO board type GP3000 series is used • I/O Check → Connection check execution screen" (page 2-112) "2.15.2 When the DIO board type GP3000 series is used ◆ I/O Driver (I/O Monitor)" (page 2-113) "2.15.2 When the DIO board type GP3000 series is used • Input Type (Bit), Output Type (Bit)" (page 2-113) "2.15.2 When the DIO board type GP3000 series is used • Input Type (Bit), Output Type (Word)" (page 2-113) "2.15.2 When the DIO board type GP3000 series is used • Input Type (Word), Output Type (Bit)" (page 2-114) "2.15.2 When the DIO board type GP3000 series is used • Input Type (Word), Output Type (Word)" (page 2-114)

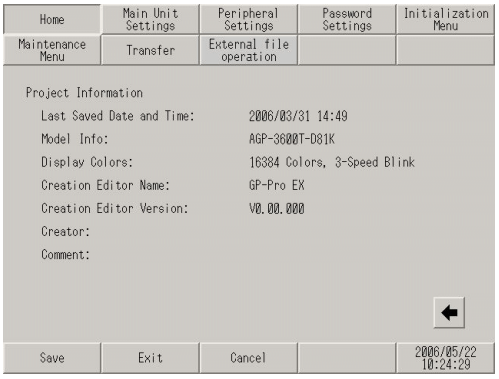
■ [Home] Settings Guide



Setting	Description
OFFLINE LANGUAGE	Select the language used for the offline menu from [JAPANESE] and [ENGLISH]. **NOTE** • When you use the GP-3200 series and the ST-3000 series, and if you select [System Settings] - [Font] - [Font Used in Project] and uncheck [Japanese Standard Font] with the GP-Pro EX, you cannot select “JAPANESE”, which could have been selected as the top item for “OFFLINE LANGUAGE”, and also cannot select other languages from the combo box. The combo box is disabled and does not accept touch.
Runtime Version	Display the runtime version.
Driver Version	Display the protocol driver version. 4 drivers of active maximum amount are displayed. In case of the GP-3300 series 2 drivers of active maximum amount are displayed.
OS Version	Display the OS version.
Device Monitor Version	 Only when [Device Monitor] is selected in the [Main Unit Settings]-[Extended Settings] tab in the System Settings window, Device Monitor Version is displayed.



Setting	Description
I/O Driver Version	Display the name and runtime version of the I/O driver.

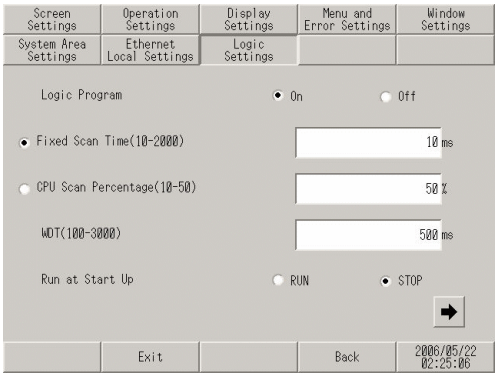


Setting	Description
Last Saved Date and Time	Display the last saving day and time of project.
Model Info	Display the setting GP model.
Display Colors	Display the setting colors.
Creation Editor Name	Display the editor name which created the project.
Creation Editor Version	Display the editor version which created the project.
Creator	Display the creator name of project.
Comment	Display the comment of project.

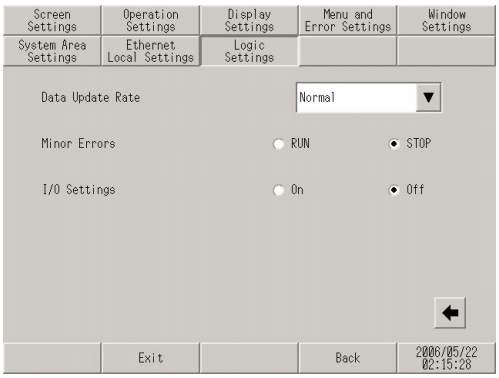
■ [Main Unit Settings] Settings Guide

◆ Logic Settings

Adjust the settings for the logic program.



Setting	Description
Logic Program	When [On] is selected, all of the following items can be set. When [Off] is selected, none of them can be set.
Fixed Scan Time	Set the execution time of the logic function to a value within the range of 10 to 2,000 ms.
CPU Scan Percentage	Set the ratio of the execution time of the logic function to a value within the range of 10% to 50%.
WDT	Set the watch dog timer to a value between 100 and 3,000 ms.
Run a Start Up	Select the logic operation when the GP unit is turned ON from [RUN] and [STOP].



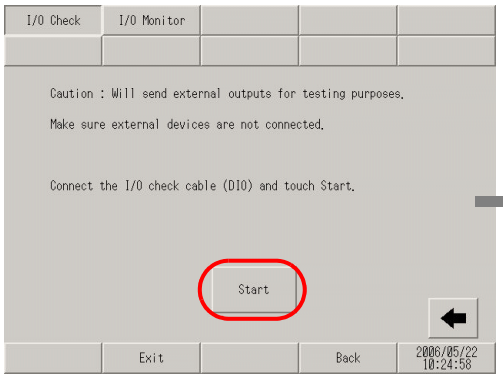
Setting	Description
Data Update Rate	Select the speed to update the value of the connected device or internal device address assigned to the logic program from [Fastest], [Normal], and [Slowest].
Minor Errors	Select the controller operation when an error continues from [RUN] and [STOP].
I/O Settings	Select [On] to use I/O operation. Select [Off] to stop I/O operation.

■ [Peripheral Settings] Settings Guide

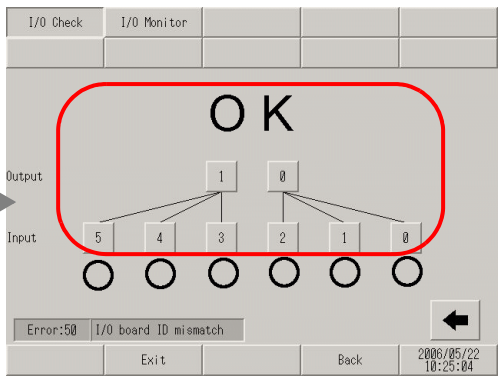
◆ I/O Driver (I/O Check)

- I/O Check → Connection check execution screen

I/O Check



Connection check execution screen

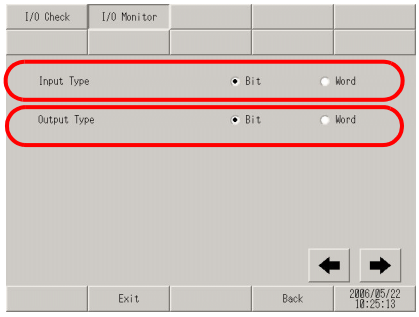


Setting		Description
I/O Check		This screen is used to start the I/O check.
	Start	Display the connection check execution screen and start the I/O check. **NOTE** • To start the I/O check, a loopback cable must be connected. The wiring of the loopback cable is different depending on the type of DIO board: Sink type and source type. Refer to the following section for the wiring. ☞ "2.9.2 Checking whether the DIO interfaces of the Display turn ON/OFF properly ■ Checking the internal terminals" (page 2-46)
Connection check execution screen		This screen is used to execute the connection check.
	Connection check execution screen	Connect the loopback cable to the DIO board, send data from the two output terminals to the six input terminals, and compare the input and output data. When the data matches with the expected value, the operation is judged as correct and [OK] is displayed on the screen. When the data does not match with the expected value, [NG] is displayed.

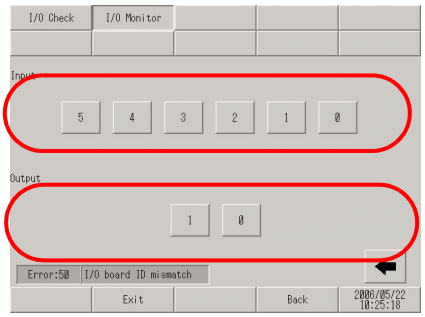
◆ I/O Driver (I/O Monitor)

- Input Type (Bit), Output Type (Bit)

Bit/Word selection screen



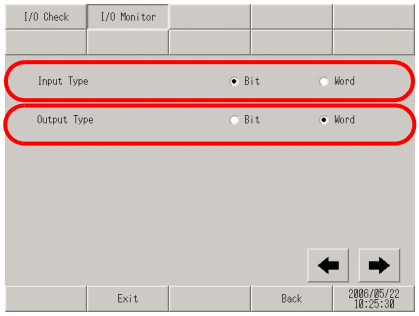
Input/Output display screen



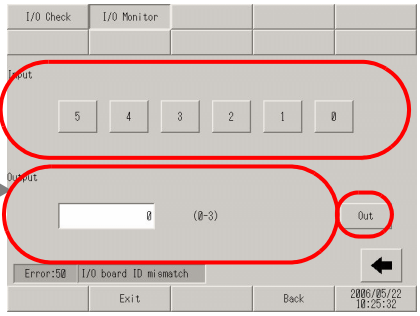
Setting		Description
Bit/Word selection screen		This screen is used to select whether to display the I/O status in bits or words.
	Input Type	Select the type of the input value from [Bit] and [Word].
	Output Type	Select the type of the output value from [Bit] and [Word].
Input/Output display screen		This screen displays the I/O status in bits.
	Input	Display the current ON/OFF status of input bits 0 to 5 of DIO.
	Output[1]	Touching the item toggles output bit 1 of DIO ON/OFF.
	Output[0]	Touching the item toggles output bit 0 of DIO ON/OFF.

- Input Type (Bit), Output Type (Word)

Bit/Word selection screen



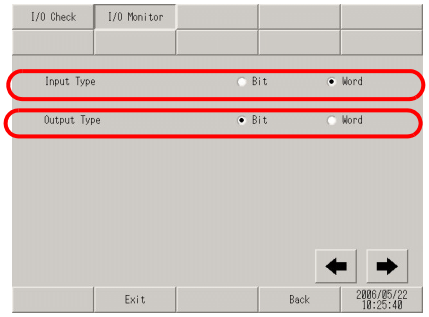
Input/Output display screen



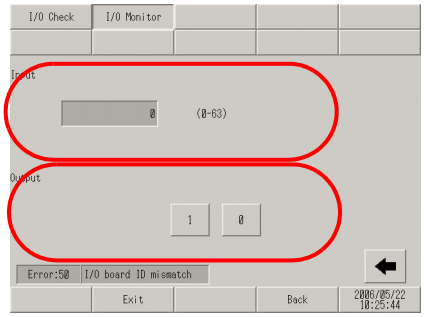
Setting		Description
Bit/Word selection screen		This screen is used to select whether to display the I/O status in bits or words.
	Input Type	Select the type of the input value from [Bit] and [Word].
	Output Type	Select the type of the output value from [Bit] and [Word].
Input/Output display screen		This screen displays the input status in bits, and output status in words.
	Input	Display the current ON/OFF status of input bits 0 to 5 of DIO.
	Output	Touch this item to display numeric touch keys. Set the output value between 0 and 3.
	Output	Output the value set using the numeric touch keys displayed when the input field is touched.

- Input Type (Word), Output Type (Bit)

Bit/Word selection screen



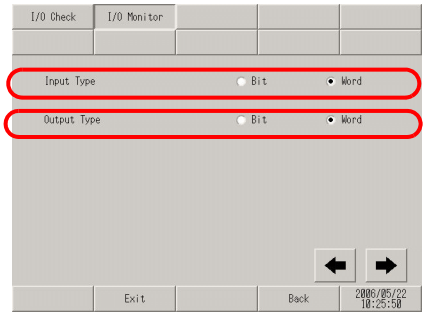
Input/Output display screen



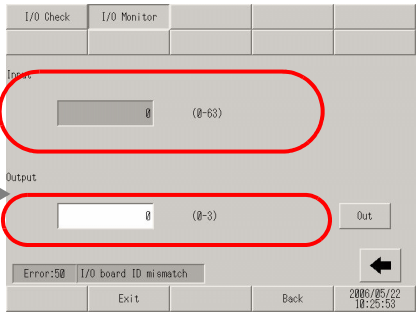
Setting		Description
Bit/Word selection screen		This screen is used to select whether to display the I/O status in bits or words.
	Input Type	Select the type of the input value from [Bit] and [Word].
	Output Type	Select the type of the output value from [Bit] and [Word].
Input/Output display screen		This screen displays the input status in words, and output status in bits.
	Input	Display the current input value of DIN with a value between 0 and 63.
	Output[1]	Touching the item toggles output bit 1 of DIO ON/OFF.
	Output[0]	Touching the item toggles output bit 0 of DIO ON/OFF.

- Input Type (Word), Output Type (Word)

Bit/Word selection screen

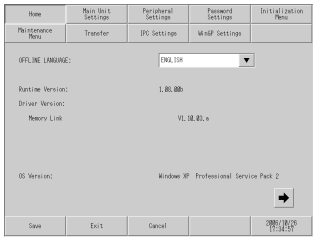
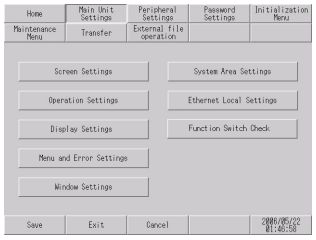
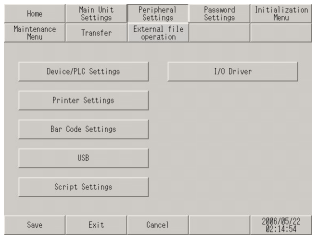


Input/Output display screen

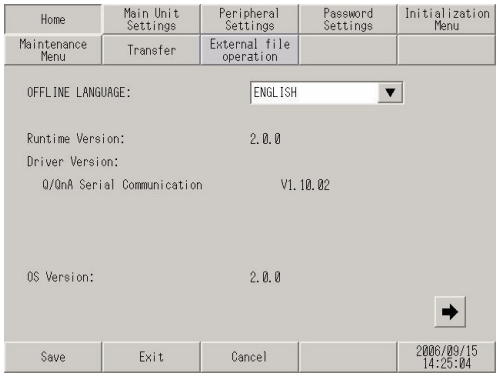


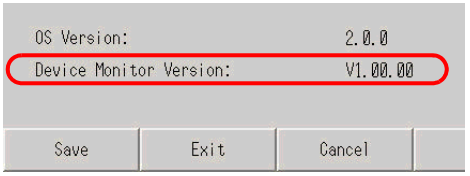
Setting		Description
Bit/Word selection screen		This screen is used to select whether to display the I/O status in bits or words.
	Input Type	Select the type of the input value from [Bit] and [Word].
	Output Type	Select the type of the output value from [Bit] and [Word].
Input/Output display screen		This screen displays the input/output status in words.
	Input	Display the current input value of DIN with a value between 0 and 63.
	Output	Touch this item to display numeric touch keys. Set the output value between 0 and 3.
	Output	Output the value set using the numeric touch keys displayed when the input field is touched.

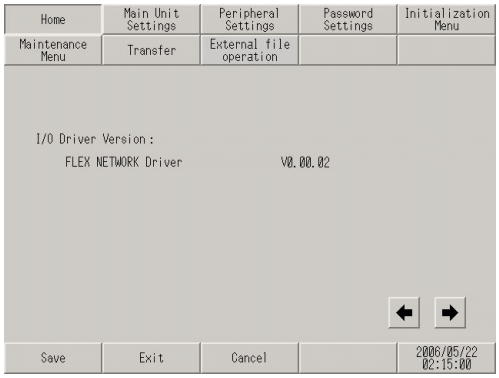
2.15.3 When the FLEX NETWORK unit is used

Menu	Description
	"2.15.3 When the FLEX NETWORK unit is used ■ [Home] Settings Guide" (page 2-116)
	"2.15.3 When the FLEX NETWORK unit is used ■ [Main Unit Settings] Settings Guide ◆ Logic Settings" (page 2-117)
	"2.15.3 When the FLEX NETWORK unit is used ■ [Peripheral Settings] Settings Guide" (page 2-118) "2.15.3 When the FLEX NETWORK unit is used ◆ Check Comm." (page 2-118) "2.15.3 When the FLEX NETWORK unit is used • Check Comm. → Communication check execution screen" (page 2-118) "2.15.3 When the FLEX NETWORK unit is used ◆ I/O Monitor" (page 2-119) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Input, FN-X16TS is used" (page 2-119) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Input, FN-X32TS is used" (page 2-119) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Output, FN-Y08L is used" (page 2-120) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Output, FN-Y16SK is used" (page 2-120) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Output, FN-Y16SC is used" (page 2-121) "2.15.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY08TS is used" (page 2-121) "2.15.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY16SK is used" (page 2-122) "2.15.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY16SC is used" (page 2-122) "2.15.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY32SKS is used" (page 2-123) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-AD02AH is used" (page 2-123) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-DA02AH is used" (page 2-124) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-AD04AH is used" (page 2-125) "2.15.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-DA04AH is used" (page 2-126)

■ [Home] Settings Guide

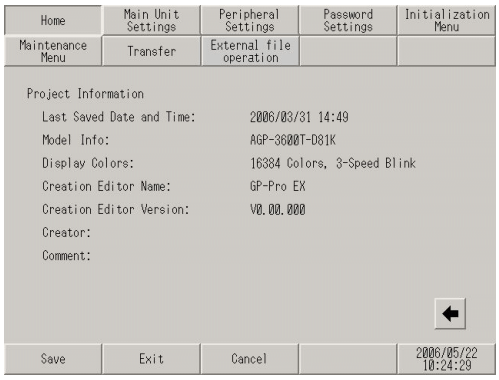


Setting	Description
OFFLINE LANGUAGE	Select the language used for the offline menu from [JAPANESE] and [ENGLISH].
Runtime Version	Display the runtime version.
Driver Version	Display the protocol driver version. 4 drivers of active maximum amount are displayed. In case of the GP-3300 series 2 drivers of active maximum amount are displayed.
OS Version	Display the OS version.
Device Monitor Version	 Only when [Device Monitor] is selected in the [Main Unit Settings]-[Extended Settings] tab in the System Settings window, Device Monitor Version is displayed.



Setting	Description
I/O Driver Version	Display the name and runtime version of the I/O driver.

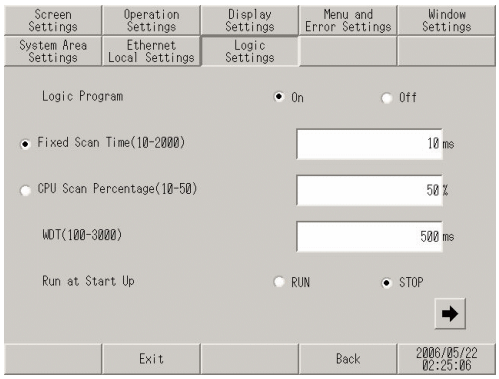
Continued



Setting	Description
Last Saved Date and Time	Display the last saving day and time of project.
Model Info	Display the setting GP model.
Display Colors	Display the setting colors.
Creation Editor Name	Display the editor name which created the project.
Creation Editor Version	Display the editor version which created the project.
Creator	Display the creator name of project.
Comment	Display the comment of project.

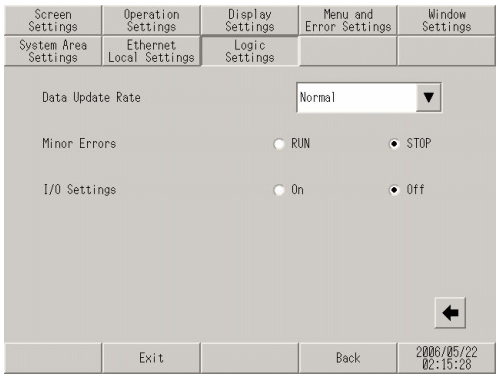
■ [Main Unit Settings] Settings Guide

◆ Logic Settings



Setting	Description
Logic Program	When [On] is selected, all of the following items can be set. When [Off] is selected, none of them can be set.
Fixed Scan Time	Set the execution time of the logic function to a value within the range of 10 to 2,000 ms.
CPU Scan Percentage	Set the ratio of the execution time of the logic function to a value within the range of 10% to 50%.
WDT	Set the watch dog timer to a value between 100 and 3,000 ms.
Run at Start Up	Select the logic operation when the GP unit is turned ON from [RUN] and [STOP].

Continued



Setting	Description
Data Update Rate	Select the speed to update the value of the connected device or internal device address assigned to the logic program from [Fastest], [Normal], and [Slowest].
Minor Errors	Select the controller operation when an error continues from [RUN] and [STOP].
I/O Settings	Select [On] to use I/O operation. Select [Off] to stop I/O operation.

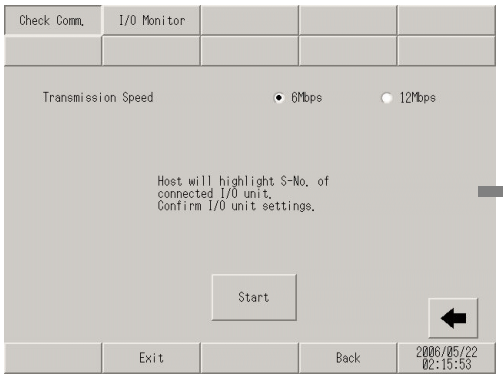
■ [Peripheral Settings] Settings Guide

◆ Check Comm.

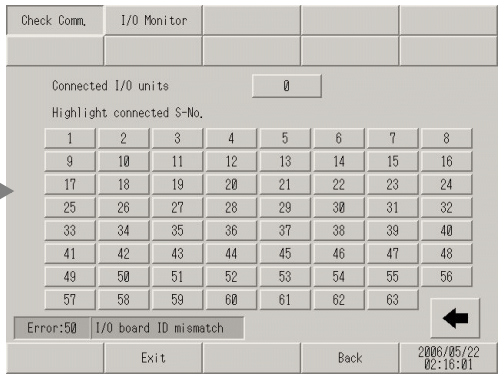
Perform Check Comm. to display the check result.

- Check Comm. → Communication check execution screen

Check Comm.



Communication check execution screen

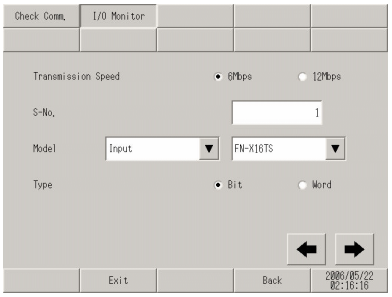


Setting		Description
Check Comm.		This is the screen to start the communication check.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	Start	Display the communication check execution screen and start the communication check.
Communication check execution screen		The communication check is executed on this screen.
	Connected I/O units	Display the total number of units with which communication was successful.
	Highlight connected S-No.	Highlight the S-No. of the unit with which communication was successful.

◆ I/O Monitor

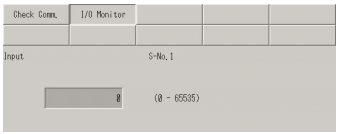
- When [Model] Input, FN-X16TS is used

Unit setting screen



Bit monitor screen

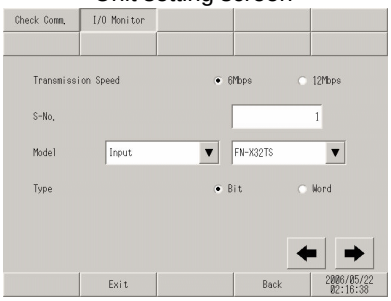
Word monitor screen



Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting input status of the I/O monitor in bits.
Word monitor screen		Display the resulting input status of the I/O monitor in words.

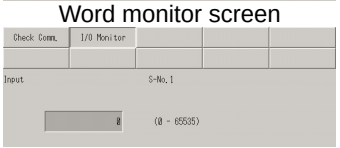
- When [Model] Input, FN-X32TS is used

Unit setting screen



Bit monitor screen

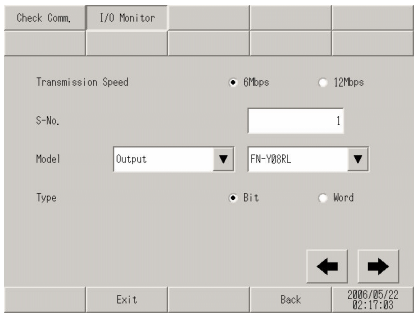
Word monitor screen



Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 62.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting input status of the I/O monitor in bits. **NOTE** • A group of 16 bits can be monitored simultaneously. To monitor inputs 16 to 31, return to the previous screen once, increment the value of [S-No.] by 1, and then start monitoring.
Word monitor screen		Display the resulting input status of the I/O monitor in words.

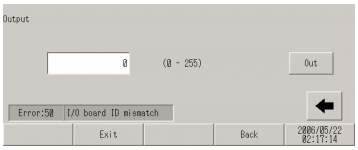
- When [Model] Output, FN-Y08L is used

Unit setting screen



Bit monitor screen

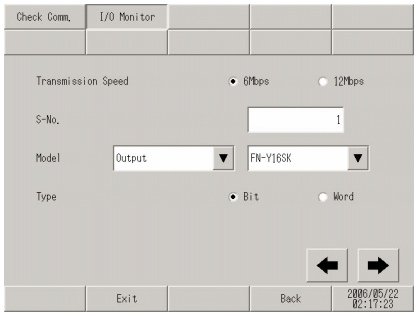
Word monitor screen



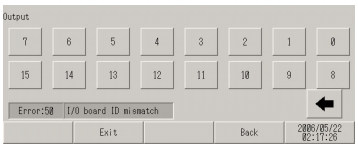
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting output status of the I/O monitor in bits.
Word monitor screen		Display the resulting output status of the I/O monitor in words.

- When [Model] Output, FN-Y16SK is used

Unit setting screen



Bit monitor screen

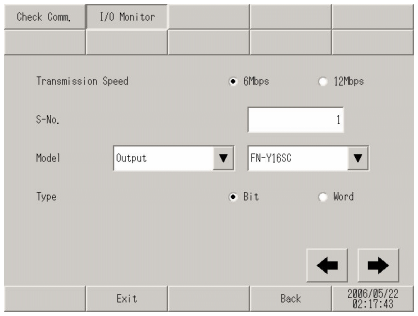


Word monitor screen

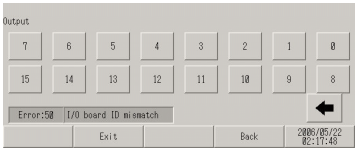
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting output status of the I/O monitor in bits.
Word monitor screen		Display the resulting output status of the I/O monitor in words.

- When [Model] Output, FN-Y16SC is used

Unit setting screen



Bit monitor screen

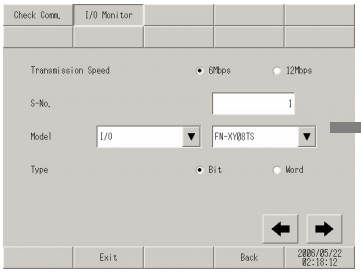


Word monitor screen

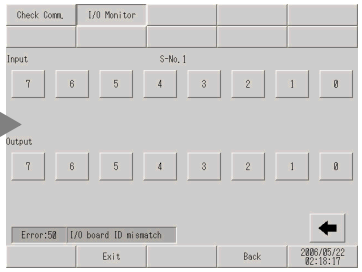
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting output status of the I/O monitor in bits.
Word monitor screen		Display the resulting output status of the I/O monitor in words.

- When [Model] I/O, FN-XY08TS is used

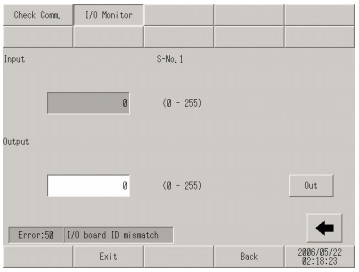
Unit setting screen



Bit monitor screen



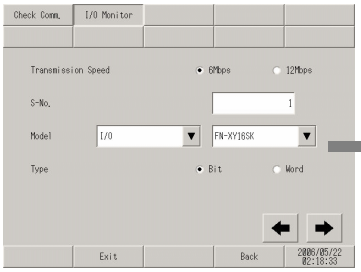
Word monitor screen



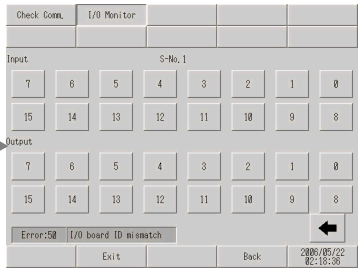
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting input/output status of the I/O monitor in bits.
Word monitor screen		Display the resulting input/output status of the I/O monitor in words.

- When [Model] I/O, FN-XY16SK is used

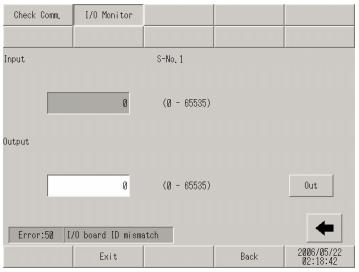
Unit setting screen



Bit monitor screen



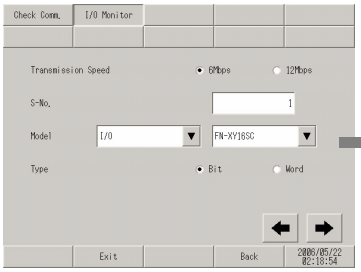
Word monitor screen



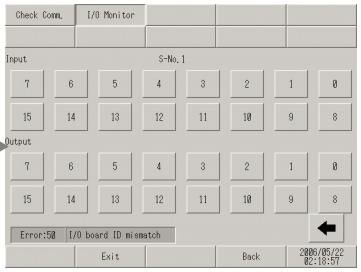
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting input/output status of the I/O monitor in bits.
Word monitor screen		Display the resulting input/output status of the I/O monitor in words.

- When [Model] I/O, FN-XY16SC is used

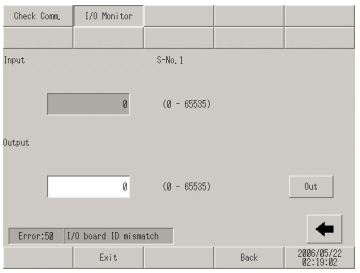
Unit setting screen



Bit monitor screen



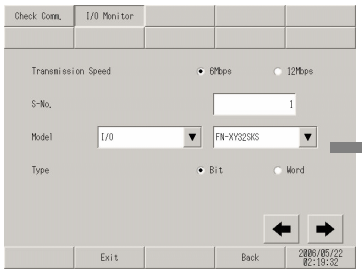
Word monitor screen



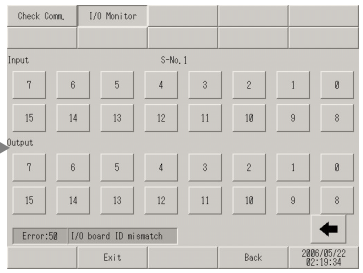
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting input/output status of the I/O monitor in bits.
Word monitor screen		Display the resulting input/output status of the I/O monitor in words.

- When [Model] I/O, FN-XY32SKS is used

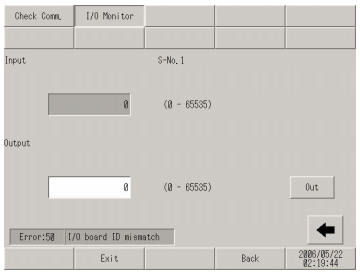
Unit setting screen



Bit monitor screen



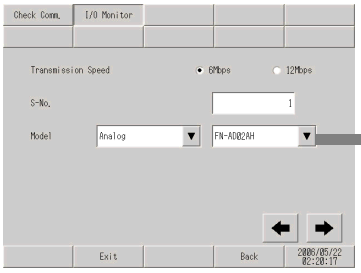
Word monitor screen



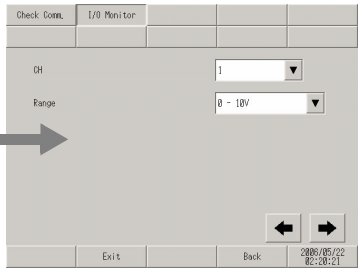
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 60.
	Model	Select the model of the unit to which the I/O monitor is applied.
	Type	Select the type of the I/O data from [Bit] and [Word].
Bit monitor screen		Display the resulting input/output status of the I/O monitor in bits. **NOTE** • A group of 16 bits can be monitored simultaneously. To monitor inputs 16 to 31, return to the previous screen once, increment the value of [S-No.] by 1, and then start monitoring.
Word monitor screen		Display the resulting input/output status of the I/O monitor in words.

- When [Model] Analog, FN-AD02AH is used

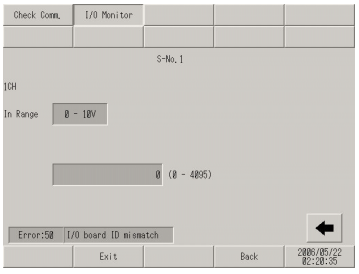
Unit setting screen



Analog monitor setting screen



Analog input monitor screen



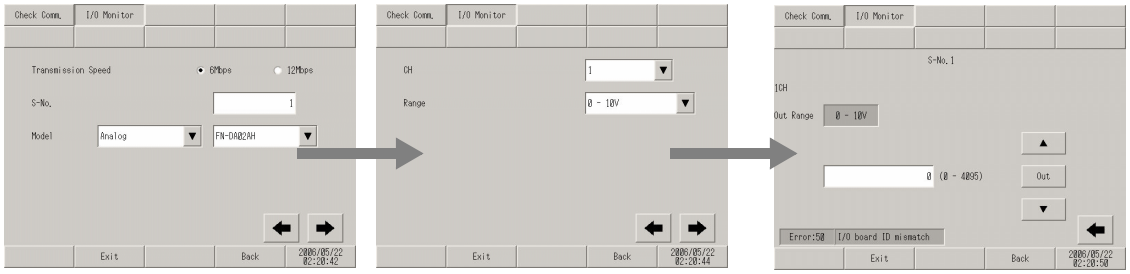
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.

Continued

Setting		Description
Analog monitor setting screen		Set the channel and range to be checked.
	CH	Select the channel to be checked from 1 or 2.
	Range	Select the range to be checked from [0 - 10V], [0 - 20mA], and [4 - 20mA].
Analog input monitor screen		Display the resulting input status of the I/O monitor in words.
	S-No.	Display the S-No. assigned to the AD unit.
	In Range	Display the range selected on the analog monitor setting screen.
	Input value display	Display the 12-bit AD value read from the unit.

- When [Model] Analog, FN-DA02AH is used

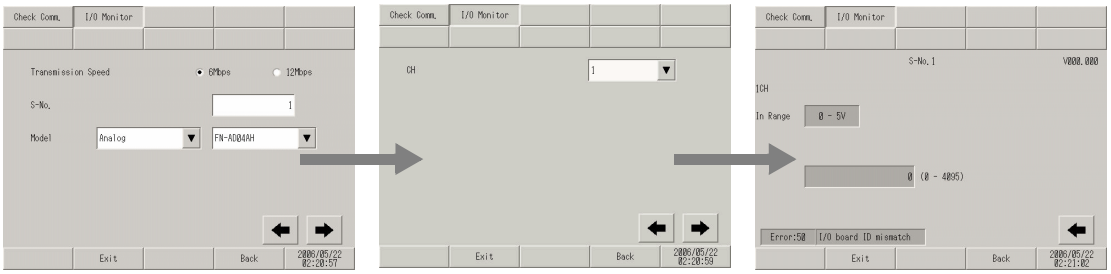
Unit setting screen　　Analog monitor setting screen　　Analog output monitor screen



Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
	Model	Select the model of the unit to which the I/O monitor is applied.
Analog monitor setting screen		Set the channel and range to be checked.
	CH	Select the channel to be checked from 1 or 2.
	Range	Select the range to be checked from [0 - 10V], [0 - 20mA], and [4 - 20mA].
Analog output monitor screen		Display the resulting output status of the I/O monitor in words.
	S-No.	Display the S-No. assigned to the DA unit.
	Out Range	Display the range selected on the analog monitor setting screen.
	Numerical value input field	Specify the 12-bit DA value to be output to the unit.
	Out	Output the specified DA value to the unit.
	↑↓	These switches are used to increment/decrement the DA value to be output by ±1.

- When [Model] Analog, FN-AD04AH is used

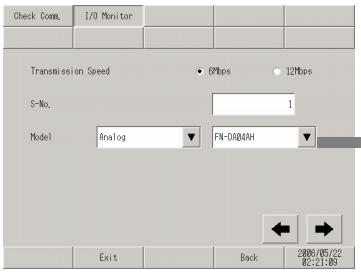
Unit setting screen　　Analog monitor setting screen　　Analog input monitor screen



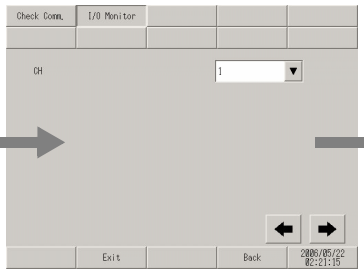
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 60.
	Model	Select the model of the unit to which the I/O monitor is applied.
Analog monitor setting screen		Set the channel and range to be checked.
	CH	Select the channel to be checked from 1 to 4.
Analog input monitor screen		Display the resulting input status of the I/O monitor in words.
	S-No.	Display the S-No. assigned to the AD unit.
	Version	Display the version of the unit.
	In Range	Displays the range set for the unit.
	Input value display	Display the 12-bit AD value read from the unit.

- When [Model] Analog, FN-DA04AH is used

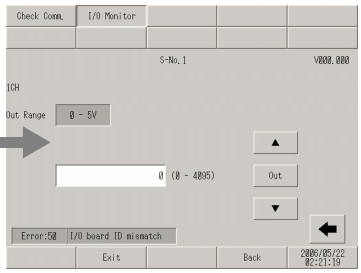
Unit setting screen



Analog monitor setting screen

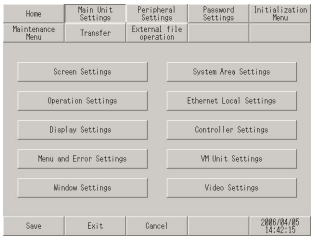


Analog output monitor screen



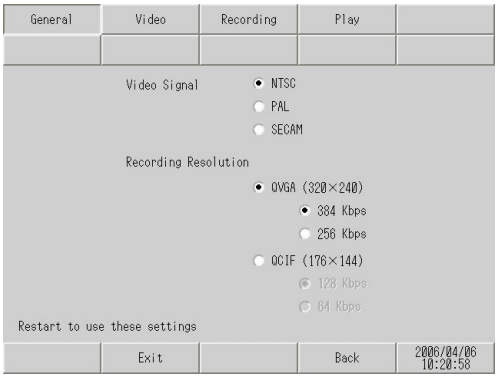
Setting		Description
Unit setting screen		Select the station number and model of the unit to which the I/O monitor is applied.
	Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
	S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 60.
	Model	Select the model of the unit to which the I/O monitor is applied.
Analog monitor setting screen		Set the channel and range to be checked.
	CH	Select the channel to be checked from 1 to 4.
Analog output monitor screen		Display the resulting output status of the I/O monitor in words.
	S-No.	Display the S-No. assigned to the DA unit.
	Version	Display the version of the unit.
	Out Range	Displays the range set for the unit.
	Numerical value input field	Specify the 12-bit DA value to be output to the unit.
	Out	Output the specified DA value to the unit.
	↑↓	These switches are used to increment/decrement the DA value to be output by ±1.

2.15.4 When the movie function of the GP-3∗50 series is used

Menu	Description
	"2.15.4 When the movie function of the GP-3*50 series is used ■ [Main Unit Settings] Settings Guide" (page 2-127) "2.15.4 When the movie function of the GP-3*50 series is used ◆ Video Settings (General)" (page 2-127) "2.15.4 When the movie function of the GP-3*50 series is used ◆ Video Settings (Video)" (page 2-128) "2.15.4 When the movie function of the GP-3*50 series is used ◆ Video Settings (Recording)" (page 2-130) "2.15.4 When the movie function of the GP-3*50 series is used ◆ Video Settings (Play)" (page 2-132)

■ [Main Unit Settings] Settings Guide

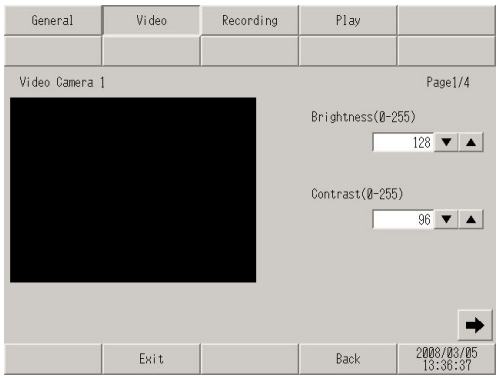
◆ Video Settings (General)



Setting	Description
Video Signal	Select the input video signal. • NTSC: 640 x 480 dots • PAL: 768 x 576 dots • SECAM: 768 x 576 dots
Recording Resolution	Select the recording resolution. • QVGA(384kbps): 320 x 240 dots • QVGA(256kbps): 320 x 240 dots • QCIF(128kbps): 176 x 144 dots • QCIF(64kbps): 176 x 144 dots

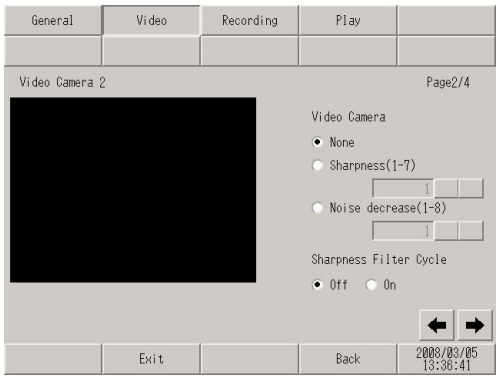
◆ Video Settings (Video)

(1/4)



Setting	Description
Brightness	Set the brightness of the video camera. The available range is between 0 and 255.
Contrast	Set the contrast of the video camera. The available range is between 0 and 255.

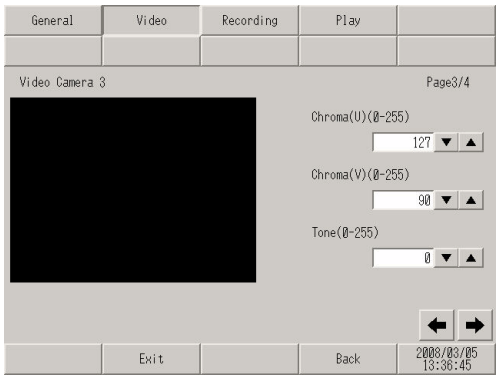
(2/4)



Setting	Description
Video Camera	Select the adjustment type of the video camera from [None], [Sharpness], and [Noise decrease]. Although [Sharpness] displays subjects more clearly, it may also display noise more clearly. [Noise decrease] decreases contrast to blur noise. When selecting [Sharpness], specify the effect from 1 (weak) to 7 (strong).
Sharpness Filter Cycle	Set whether to emphasize the outline of the brightness signal. This allows a clearer representation of the details of the image.

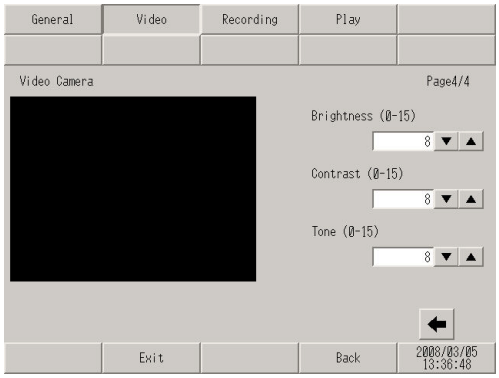
Continued

(3/4)



Setting	Description
Chroma(U)	To represent colors using three types of information: brightness signals (Y); the difference between brightness signals and blue components (U); and the difference between brightness signals and red components (V) (i.e. YUV representation), set the difference between brightness signals and blue components to a value between 0 and 255. When human eyes are used to adjust this value, more data can be assigned to the brightness information, resulting in a high data compression ratio with less degradation in image quality.
Chroma(V)	To represent colors using three types of information: brightness signals (Y); the difference between brightness signals and blue components (U); and the difference between brightness signals and red components (V) (i.e. YUV representation), set the difference between brightness signals and red components to a value between 0 and 255. When human eyes are used to adjust this value, more data can be assigned to the brightness information, resulting in a high data compression ratio with less degradation in image quality.
Tone	Set the color tone of the video camera screen. The available range is between 0 and 255.

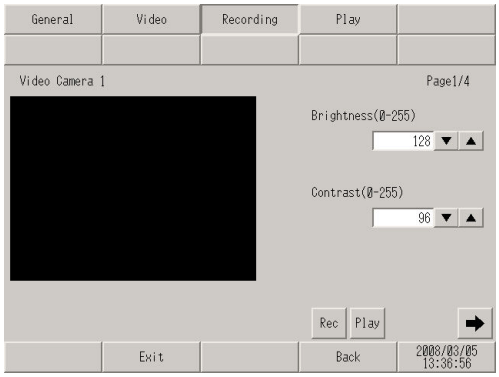
(4/4)



Setting	Description
Brightness	Set the brightness of the screen. The available range is between 0 and 15.
Contrast	Set the contrast of the screen. The available range is between 0 and 15.
Tone	Set the color tone of the screen. The available range is between 0 and 15.

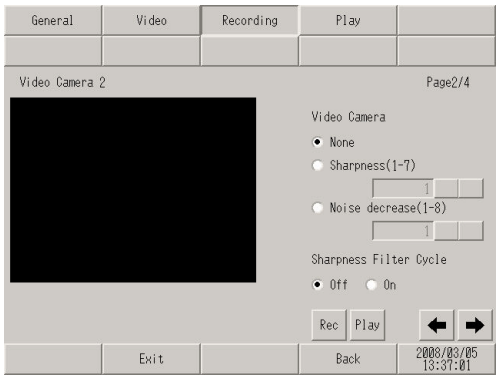
◆ Video Settings (Recording)

(1/4)



Setting	Description
Brightness	Set the brightness of the video camera. The available range is between 0 and 255.
Contrast	Set the contrast of the video camera. The available range is between 0 and 255.

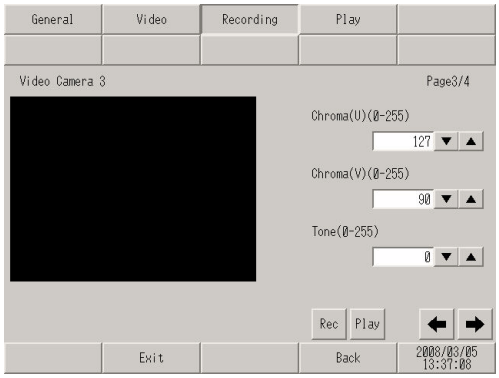
(2/4)



Setting	Description
Video Camera	Select the adjustment type of the video camera from [None], [Sharpness], and [Noise decrease]. Although [Sharpness] displays subjects more clearly, it may also display noise more clearly. [Noise decrease] decreases contrast to blur noise. When selecting [Sharpness], specify the effect from 1 (weak) to 7 (strong).
Sharpness Filter Cycle	Set whether to emphasize the outline of the brightness signal. This allows a clearer representation of the details of the image.

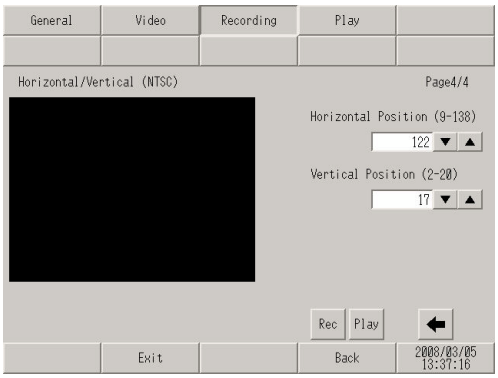
Continued

(3/4)



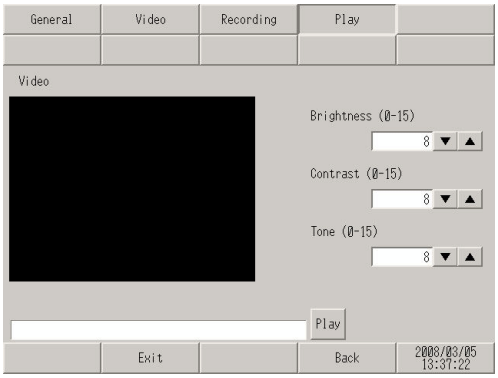
Setting	Description
Chroma(U)	To represent colors using three types of information: brightness signals (Y); the difference between brightness signals and blue components (U); and the difference between brightness signals and red components (V) (i.e. YUV representation), set the difference between brightness signals and blue components to a value between 0 and 255. When human eyes are used to adjust this value, more data can be assigned to the brightness information, resulting in a high data compression ratio with less degradation in image quality.
Chroma(V)	To represent colors using three types of information: brightness signals (Y); the difference between brightness signals and blue components (U); and the difference between brightness signals and red components (V) (i.e. YUV representation), set the difference between brightness signals and red components to a value between 0 and 255. When human eyes are used to adjust this value, more data can be assigned to the brightness information, resulting in a high data compression ratio with less degradation in image quality.
Tone	Set the color tone of the video camera screen. The available range is between 0 and 255.

(4/4)



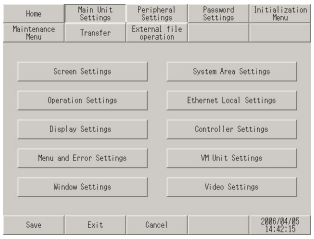
Setting	Description
Horizontal Position	Select the horizontal position of the video input signal. The available range varies depending on the video signal of the camera to be used. • When the signal is NTSC Set the horizontal position within the range of 9 to 138. • When the signal is PAL Set the horizontal position within the range of 9 to 144. • When the signal is SECAM Set the horizontal position within the range of 9 to 144.
Vertical Position	Select the vertical position of the video input signal. The available range varies depending on the video signal of the camera to be used. • When the signal is NTSC Set the horizontal position within the range of 2 to 20. • When the signal is PAL Set the horizontal position within the range of 2 to 22. • When the signal is SECAM Set the horizontal position within the range of 2 to 22.

◆ Video Settings (Play)



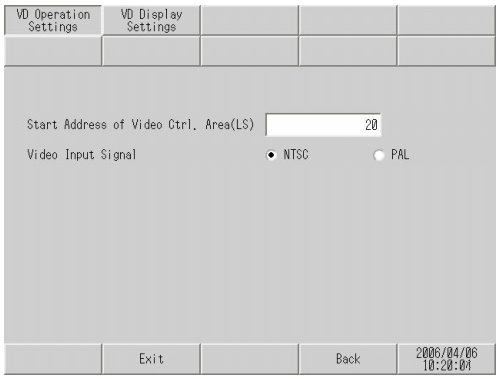
Setting	Description
Brightness	Set the brightness of the screen. The available range is between 0 and 15.
Contrast	Set the contrast of the screen. The available range is between 0 and 15.
Color	Set the color tone of the screen. The available range is between 0 and 15.

2.15.5 When using the VM unit

Menu	Description
	"2.15.5 When using the VM unit ■ [Main Unit Settings] Settings Guide" (page 2-133) "2.15.5 When using the VM unit ◆ VM Unit Settings (VD Operation Settings)" (page 2-133) "2.15.5 When using the VM unit ◆ VM Unit Settings (VD Display Settings)" (page 2-134)

■ [Main Unit Settings] Settings Guide

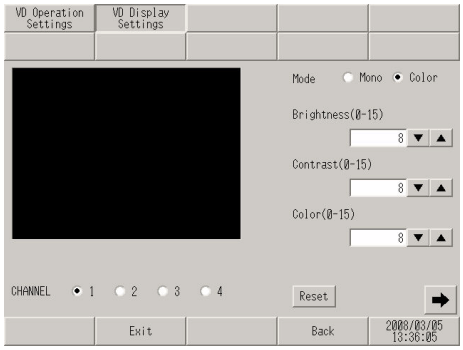
◆ VM Unit Settings (VD Operation Settings)



Setting	Description
Start Address of Video Ctrl.Area(LS)	In the LS area of the GP, the areas from LS0020 to LS1989 and from LS2096 to LS8957 can be specified as the start address of the video control area. The video control area is assigned to 43 consecutive words from the start address.
Video Input Signal	Select the video input signal. • NTSC: 640 x 480 dots • PAL: 768 x 576 dots

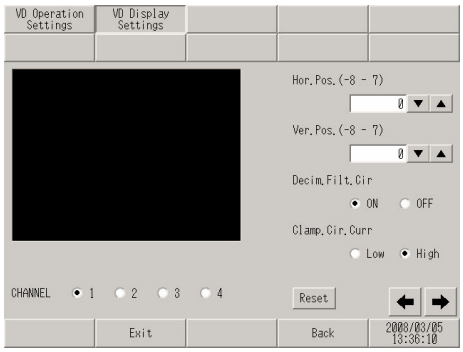
◆ VM Unit Settings (VD Display Settings)

(1/4)



Setting	Description
CHANNEL	Select the channel set in the video window from 1 to 4.
Mode	Select the video input mode from [Color] and [Mono].
Brightness	Set the brightness of the screen. The available range is between 0 and 15.
Contrast	Set the contrast of the screen. The available range is between 0 and 15.
Color	Set the color tone of the screen. The available range is between 0 and 15.
Reset	Reset the settings of the selected channel to the initial values.

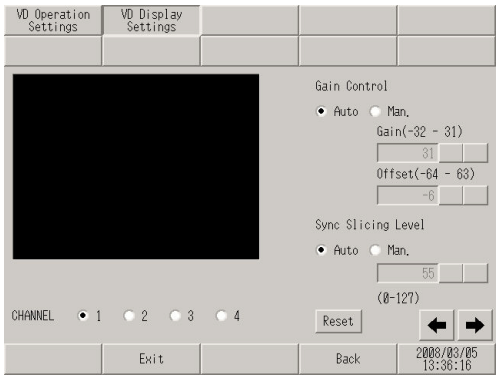
(2/4)



Setting	Description
CHANNEL	Select the channel set in the video window from 1 to 4.
Hor.Pos.	Set the horizontal position of the video input signals within the range of -128 to 128.
Ver.Pos.	Set the vertical position of the video input signals within the range of -16 to 16.
Decim.Filt.Cir	Turn ON/OFF the decimeter circuit included in the decoder. When monochrome signals are used, the image quality may be better when the signal processing filter (decimeter) is not activated. Under normal conditions, leaving this option set to [ON] presents no problem.
Clamp.Cir.Curr	Select the current setting for the clamp circuit from [Low] and [High]. If the video input signal is outside of the specifications, the synchronization signal or the black level cannot be detected, resulting in an unstable screen display. In such a case, changing the internal current for the clamp circuit may improve the screen.
Reset	Reset the settings of the selected channel to the initial values.

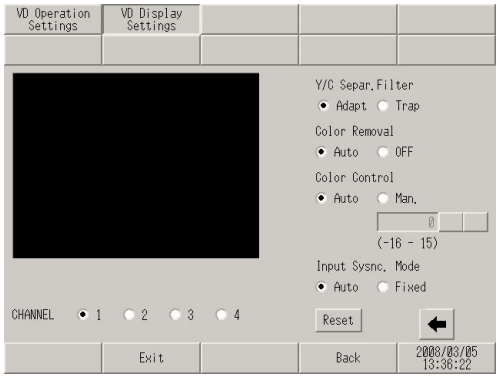
Continued

(3/4)



Setting		Description
CHANNEL		Select the channel set in the video window from 1 to 4.
Gain Control		Set the gain control of the digital amplifier circuit. This setting is common to all channels.
	Gain	When the gain control is set to [Man.] (Manual), set [Gain] (amplification factor) within the range of -32 to 31.
	Offset	When the gain control is set to [Man.] (Manual), set [Offset] (black level) within the range of -64 to 63.
Sync Slicing Level		Select the synchronization slicing level from [Auto] or [Man.] (Manual).
	Input field	When [Sync. Slicing Level] is set to [Man.] (Manual), set the level within the range of 0 to 127.
	Reset	Reset the settings of the selected channel to the initial values.

(4/4)

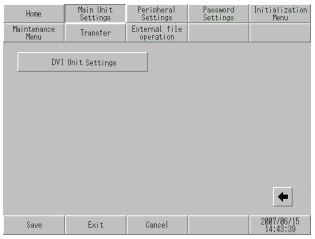


Setting	Description
CHANNEL	Select the input channel to which the video device is connected from 1 to 4.
Y/C Separ.Filter	Select the input Y/C separation filter. When a vivid image is displayed and noise from color signals is conspicuous, selecting [Trap] may decrease the noise. This setting is common to all channels.

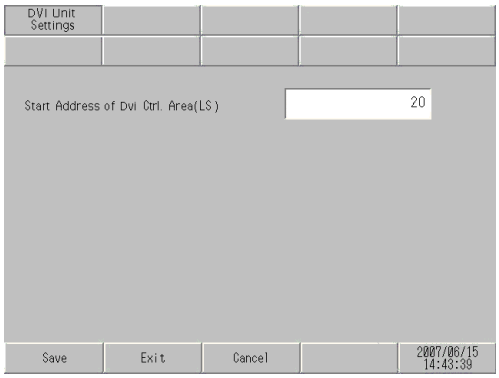
Continued

Setting	Description
Color Removal	Select whether to turn ON/OFF the color removal function automatically or to turn it OFF forcefully. When the amplitude level of color burst signals is small, the screen may be switched automatically to show monochrome images. When this option is set to [OFF], color images are displayed all the time. This setting is common to all channels.
Color Control	Change the amplification factor of chroma signals. If the amplitude value of chroma signals (including color burst signals) is outside of the specifications and the adjustment functions have no effect on the ability to obtain optimal images, setting this item manually may be effective. This setting is common to all channels.
Input Sysnc.Mode	Set the depth level to detect synchronization signals. If the depth of the synchronization signals of the video input is not as deep as the specifications or if the signals fluctuate, the synchronization signals are not detected, resulting in a screen which does not lock vertically or horizontally. When this occurs, adjusting the detection level may stabilize the screen. Under normal conditions, leaving this option set to [Auto] presents no problem. This setting is common to all channels.
Reset	Reset the settings of the selected channel to the initial values.

2.15.6 When using the DVI unit

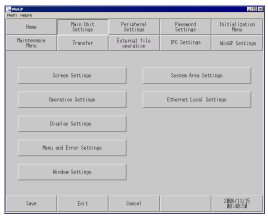
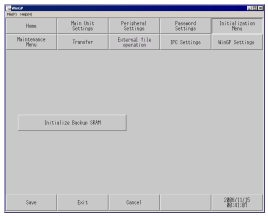
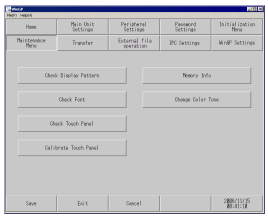
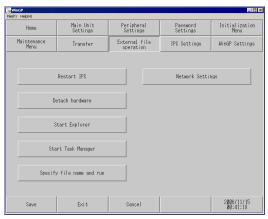
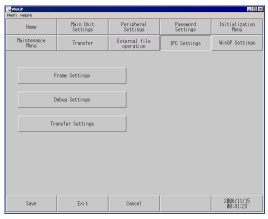
Menu	Description
	"2.15.6 When using the DVI unit ◆ DVI Unit Settings" (page 2-137)

◆ DVI Unit Settings



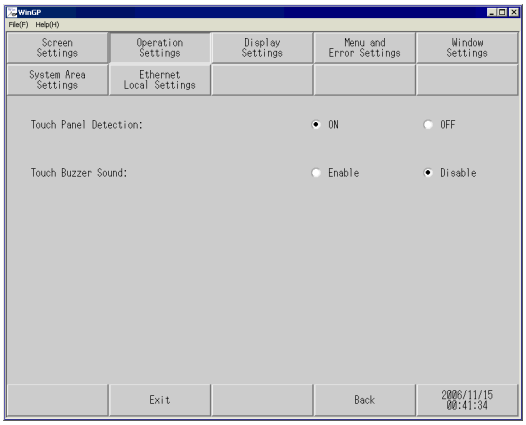
Setting	Description
Start Address of Dvi Ctrl. Area(LS)	Change the value of the DVI control start address within the ranges of LS20 - 2026 and 2096 - 8894. **NOTE** • If a value outside of the ranges is specified, all the DVI functions are disabled.

2.15.7 When WinGP is used with IPC (Only when the panel computer is used)

Menu	Description
	"2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ■ [Main Unit Settings] Setting Guide" (page 2-139) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Operation Settings] setting guide" (page 2-139) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Ethernet Local Settings] setting guide" (page 2-139)
	"2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ■ [Initialization Menu] Setting Guide" (page 2-140)
	"2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ■ [Maintenance Menu] Setting Guide" (page 2-141)
	"2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ■ [IPC Settings] Setting Guide" (page 2-141) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Restart IPC]" (page 2-141) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Detach hardware]" (page 2-142) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Start Explorer]" (page 2-142) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Start Task Manager]" (page 2-143) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Specify file name and run]" (page 2-143) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Network Settings]" (page 2-144)
	"2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ■ [WinGP Settings] Setting Guide" (page 2-145) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Network Settings]" (page 2-144) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Debug Settings]" (page 2-146) "2.15.7 When WinGP is used with IPC (Only when the panel computer is used) ◆ [Transfer Settings]" (page 2-146)

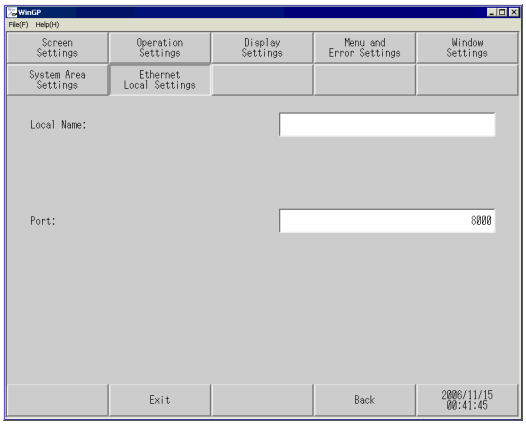
■ [Main Unit Settings] Setting Guide

◆ [Operation Settings] setting guide



Setting item	Description
Touch Panel Detection	Select the touch panel detection mode. For detection upon a touch on the touch panel, select [ON]. For detection upon release from the touch panel, select [OFF].
Touch Buzzer Sound	Specify whether to sound the built-in buzzer upon a touch on the touch panel. **NOTE** • "Touch Buzzer Sound" is the setting for the touch buzzer sound of WinGP. It is different from the setting for the touch buzzer sound of IPC. If both IPC and WinGP touch buzzer sound settings are "Enable", you hear the buzzer sound twice when you touch the WinGP screen. In this case, set the WinGP touch buzzer sound to "Disable".

◆ [Ethernet Local Settings] setting guide



Setting item	Description
Local Name	To specify the node name used for the network, enter up to 32 half-size characters.

Continued

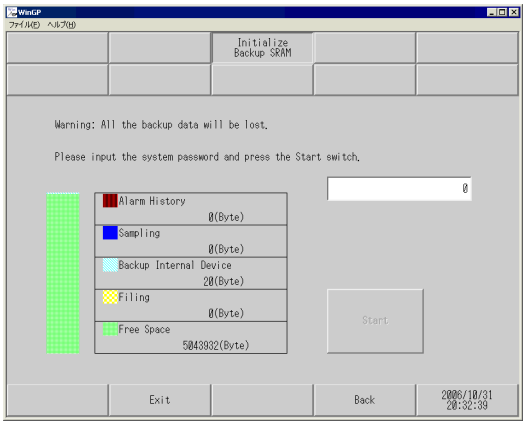
Setting item	Description
Port	Specify the port number (5001 to 65516). Ten consecutive port numbers starting from the specified port number are used. However, when the forced transfer screen is displayed on the GP unit, the port number setting is fixed at “8000”. **NOTE** • To execute an automatic search via LAN when transferring a project file, specify the same port number as the number specified in [Transfer Tool] - [Transfer Setting] - [Communication Port Settings] - [Port (Search)].

■ [Initialization Menu] Setting Guide

◆ [Initialize Backup SRAM]

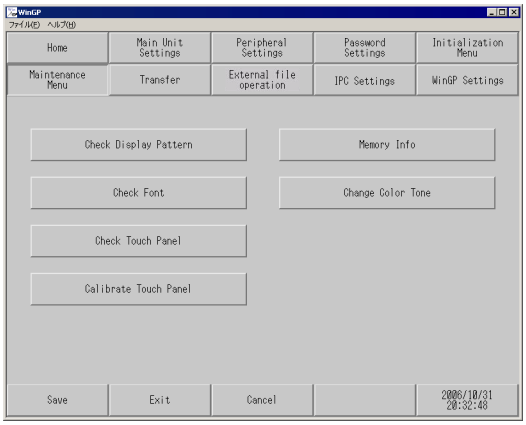
All the data stored in the backup SRAM of the GP are cleared.

IMPORTANT
- Once the [Start] switch is pressed, initialization cannot be cancelled. Do not turn OFF the power switch while initialization is in progress.
- Backup data will be cleared by initialization.
- Even if initialization is executed, system data, communication protocol data, time setup data and logic program data will not be cleared.



Setting item	Description
Please input the system password and press the Start switch.	Touch the system password entry field and enter the system password. If you have not specified a system password, enter “1101” (standard password).
Start	Starts initialization of the backup SRAM.

■ [Maintenance Menu] Setting Guide



For the settings in [Maintenance Menu], refer to the following description.

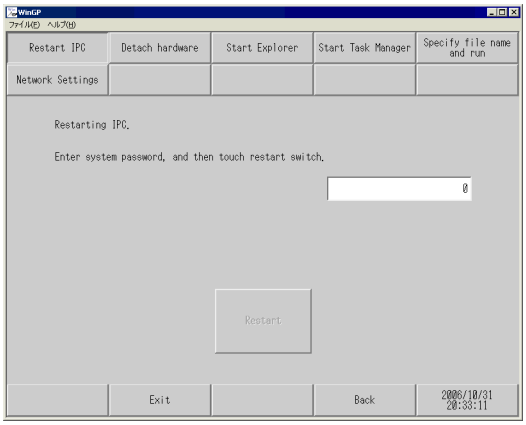
☞ "2.15.1 Settings common to all Display models ■ [Maintenance Menu] Settings Guide" (page 2-99)

NOTE

- When WinGP is used with IPC, the COM ports and LAN ports cannot be checked.

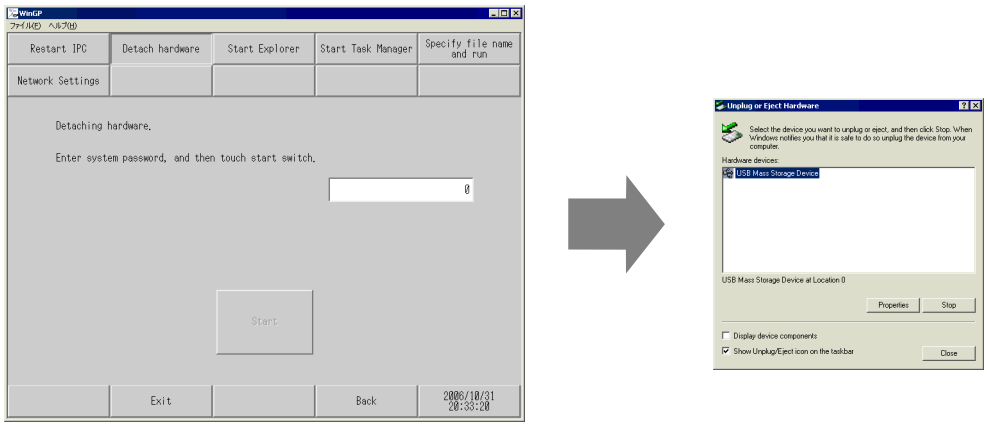
■ [IPC Settings] Setting Guide

◆ [Restart IPC]



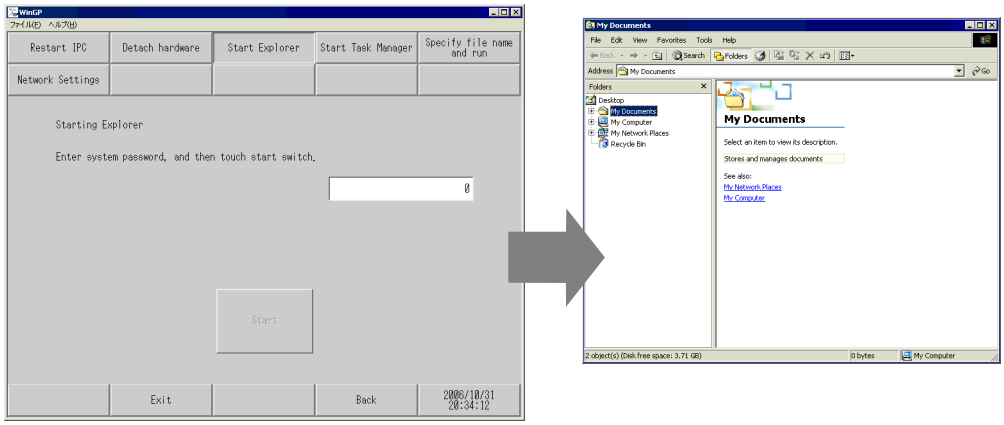
Setting item	Description
Enter system password, and then touch restart switch.	Touch the system password entry field and enter the system password. If you have not specified a system password, enter "1101" (standard password).
Restart	Restarts the IPC unit.

◆ [Detach hardware]



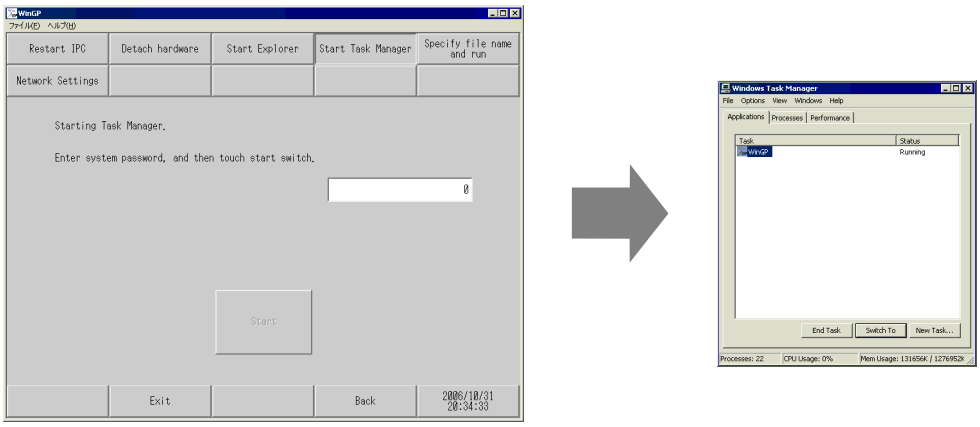
Setting item	Description
Enter system password, and then touch start switch.	Touch the system password entry field and enter the system password. If you have not specified a system password, enter “1101” (standard password).
Start	Starts [Detach Hardware Safely].

◆ [Start Explorer]



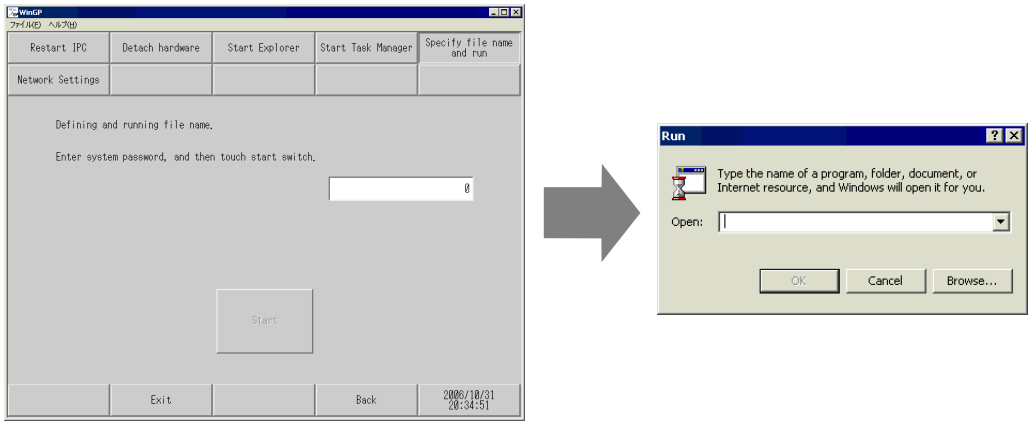
Setting item	Description
Enter system password, and then touch start switch.	Touch the system password entry field and enter the system password. If you have not specified a system password, enter “1101” (standard password).
Start	Starts [Explorer].

◆ [Start Task Manager]



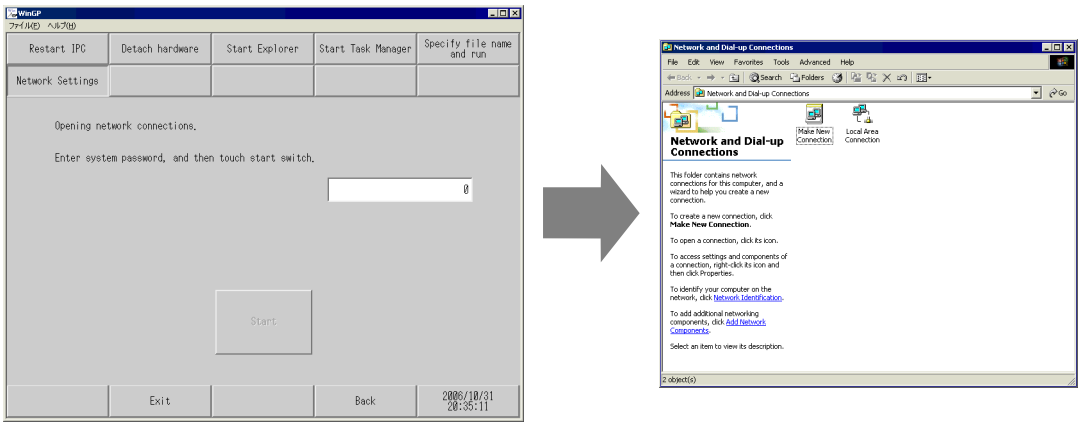
Setting item	Description
Enter system password, and then touch start switch.	Touch the system password entry field and enter the system password. If you have not specified a system password, enter “1101” (standard password).
Start	Starts [Windows Task Manager].

◆ [Specify file name and run]



Setting item	Description
Enter system password, and then touch start switch.	Touch the system password entry field and enter the system password. If you have not specified a system password, enter “1101” (standard password).
Start	Starts [Specify file name and run].

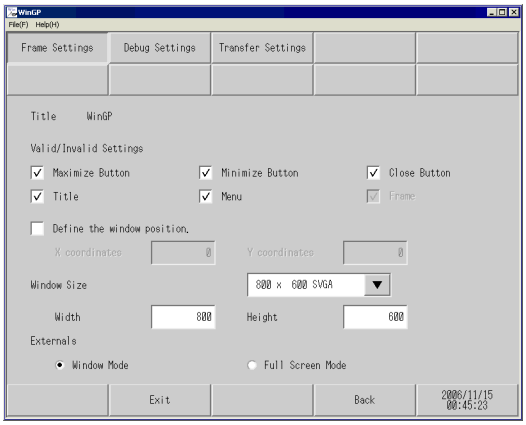
◆ [Network Settings]



Setting item	Description
Enter system password, and then touch start switch.	Touch the system password entry field and enter the system password. If you have not specified a system password, enter “1101” (standard password).
Start	Starts [Network and Dialup Connections]. **NOTE** • With Windows® XP, [Network Connections] will start.

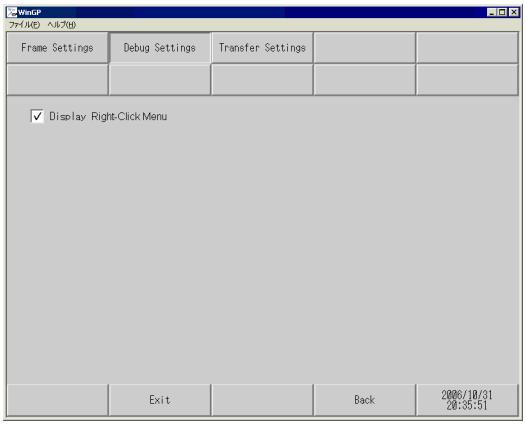
■ [WinGP Settings] Setting Guide

◆ [Frame Settings]



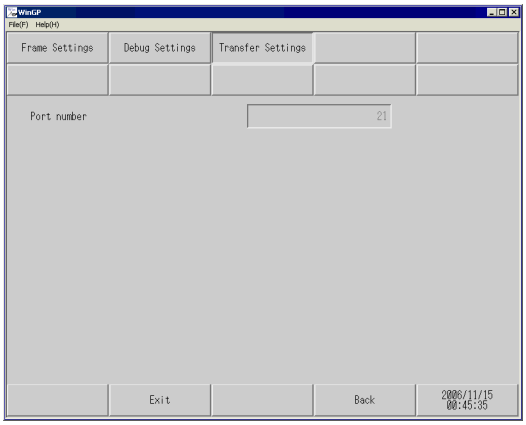
Setting item		Description
Title		Displays the title of the WinGP window.
Enable/Disable settings		When each checkbox is checked, the corresponding setting item is enabled.
	Maximize Button	Changes the window to full screen mode.
	Minimize Button	Hides the window. The window icon is displayed on the Task bar.
	Close Button	Closes WinGP.
	Title	Displays the window title and the Minimize, Maximize, and Close buttons.
	Menu	Displays the [File (F)] and [Help (H)] menus.
	Frame	If you place the cursor on the window frame, and drag and drop the cursor, the window size can be changed. If the window size is reduced from the initial setting, the scroll bar appears, allowing you to scroll up/down the window.
	Define the window position	Specify whether to define the window display position at startup of WinGP. The window display position is defined by the X and Y coordinates. • X coordinate 0 to “Maximum resolution of the selected model (horizontal) –1” • Y coordinate 0 to “Maximum resolution of the selected model (vertical) –1” • Window Size Select a window size: “320 x 240 QVGA”, “640 x 480 VGA”, “800 x 600 SVGA”, “1024 x 768 XGA”. • Width Specify the width of the window size in the range of 0 to the maximum resolution of the selected model. • Height Specify the height of the window size in the range of 0 to the maximum resolution of the selected model.
Externals		Select the window display mode: “Window Mode” or “Full Screen Mode”.

◆ [Debug Settings]



Setting item	Description
Display Right-Click Menu	Right-click the window on the WinGP screen to specify whether to show or hide the debug menu.

◆ [Transfer Settings]



Setting item	Description
Port number	You can check the port number for the transfer tool that has been specified with GP-Pro EX.

IMPORTANT

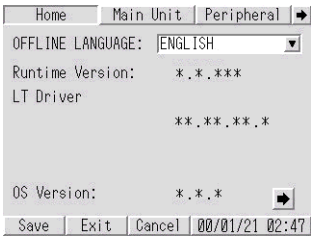
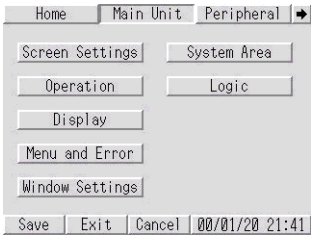
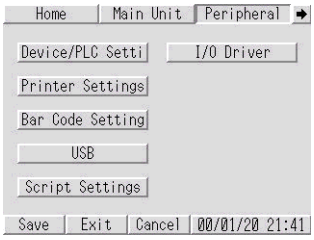
- If you have forgotten the port number used for the transfer tool, you can see it in the above setting window.

2.15.8 When the LT3000 is used

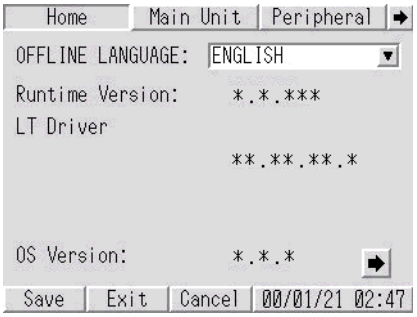
NOTE

- When the LT33** series is used, the settings of [Ethernet Local Settings] and [Check COM1/COM2/LAN] are added to the menu in addition to the settings below.
  For details of these features, refer to the setting guide common to all display units.

☞ "2.15.1 Settings common to all Display models" (page 2-75)

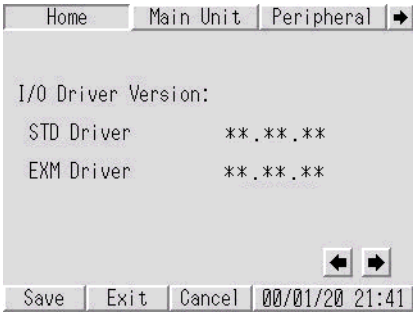
Menu	Description
	"2.15.8 When the LT3000 is used ■ [Home] Setting Guide" (page 2-148)
	"2.15.8 When the LT3000 is used ■ [Main Unit Setting] Setting Guide ◆ Logic Settings" (page 2-150)
	"2.15.8 When the LT3000 is used ■ [Peripheral Settings] Setting Guide" (page 2-151) "2.15.8 When the LT3000 is used ◆ [I/O Driver] (STD Driver)" (page 2-151) "2.15.8 When the LT3000 is used • [Show Terminals]" (page 2-151) "2.15.8 When the LT3000 is used • [I/O Monitor]" (page 2-152) "2.15.8 When the LT3000 is used • [Check Board]" (page 2-153) "2.15.8 When the LT3000 is used ◆ [I/O Driver] (EXM Driver)" (page 2-154) "2.15.8 When the LT3000 is used • [I/O Monitor] (DIO settings)" (page 2-154) "2.15.8 When the LT3000 is used • [I/O Monitor] (Analog settings)" (page 2-156)

■ [Home] Setting Guide



*** indicates the version number.

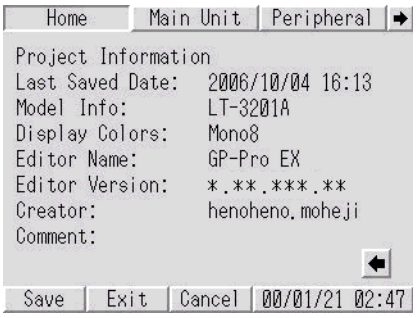
Setting item	Description
OFFLINE LANGUAGE	Select the language used in the offline menu: “JAPANESE” or “ENGLISH”.
Runtime Version	The Runtime version information is displayed.
LT Driver	The LT driver version information is displayed. **NOTE** • With the LT33** series, the protocol driver version information is displayed.
OS Version	The OS version information is displayed.



*** indicates the version number.

Setting item	Description
I/O Driver Version	The I/O driver name and the I/O Driver Runtime version information are displayed.

Continued



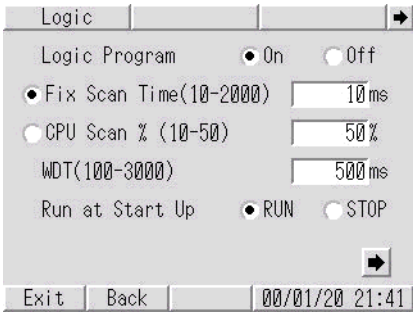
*** indicates the version number.

Setting item	Description
Last Saved Date	Displays the date/time when the project was last saved.
Model Info	Displays the model of the specified LT series.
Display Colors	Displays the display colors available with the LT series.
Editor Name	Displays the name of the Editor software that created the project.
Editor Version	Displays the version of the Editor software that created the project.
Creator	Displays the name of the person who edited or created the project.
Comment	Displays a comment on the project.

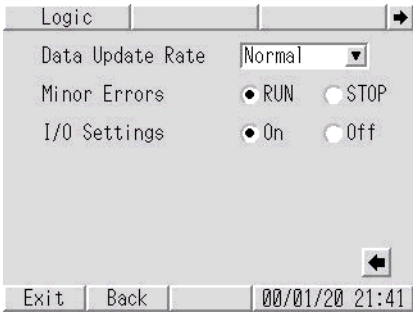
■ [Main Unit Setting] Setting Guide

◆ Logic Settings

Set up the logic program.



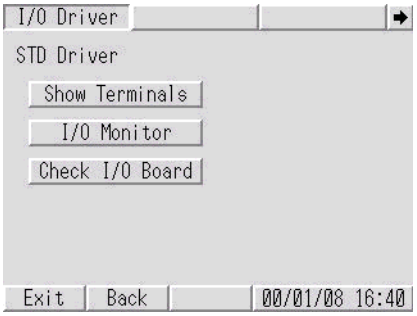
Setting item	Description
Logic Program	If you select “On”, you can set up all of the following items. If you select “Off”, these items cannot be set up.
Fixed Scan Time	Specify the logic function execution time. Setting range: 10 to 2000 ms
CPU Scan %	Specify the percentage of logic function execution time. Setting range: 10 to 50%
WDT (100 to 3000)	Specify the watchdog timer. Setting range: 100 to 3000 ms
Run at Start Up	Select the logic operation at the power supply when the GP unit is turned ON: “RUN” or “STOP”.



Setting item	Description
Data Update Rate	Select the speed for updating the device addresses of the connected devices and internal devices assigned to the logic program: “Fastest”, “Normal”, or “Slowest”.
Minor Errors	Select the logic operation when continuous errors occur: “RUN” or “STOP”.
I/O Settings	To enable input and output, select “On”. To disable input and output, select “Off”.

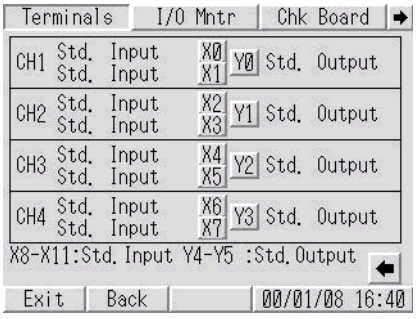
■ [Peripheral Settings] Setting Guide

◆ [I/O Driver] (STD Driver)



Setting item	Description
Show Terminals	The terminal configuration display screen is displayed.
I/O Monitor	The I/O monitor screen is displayed.
Check I/O Board	The I/O board check execution screen is displayed.

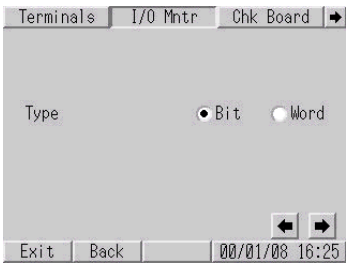
- [Show Terminals]



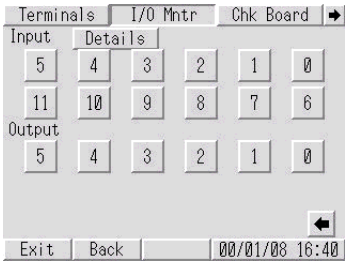
Setting item	Description
Terminals	Configurations of the specified input terminals (X0 to X11) and output terminals (Y0 to Y5) are displayed. **NOTE** • When the LT33** series is used, it displays the configuration of input terminals X0 to X15 and output terminals Y0 to Y15. The bottom of the screen shows [X8-X15: Std. Input] and [Y4-Y15: Std. Output].

- [I/O Monitor]

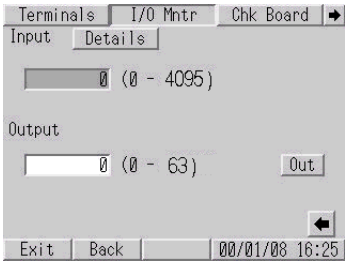
The monitoring results of the standard input and output can be displayed by selecting either bit or integer. The [Word] display cannot be selected when special I/O is used.

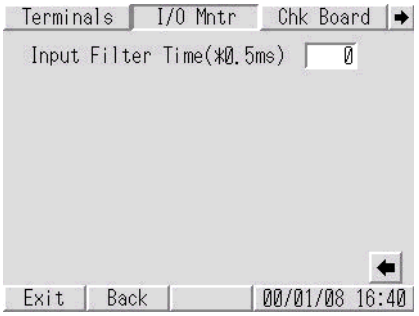
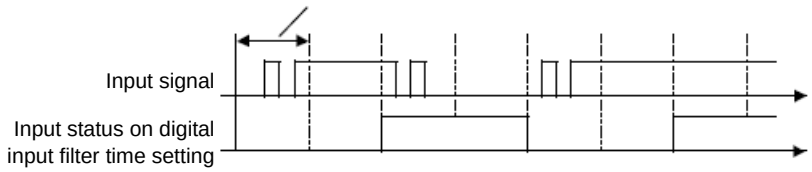


<I/O monitor input/output execution screen (Bit)>



<I/O monitor input/output execution screen (Word)>

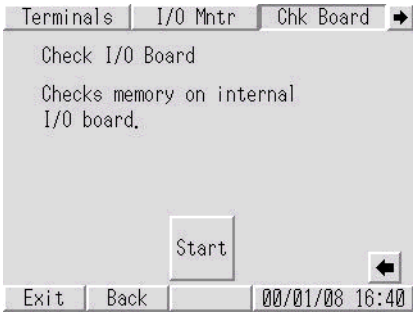


Setting item	Description
Details	The following details setting screen appears.  On the details setting screen, specify an input filter time in the range of 0 to 40. The input filter eliminates noise from an input signal. An input signal that does not reach the time duration specified here will not work. The system samples data at 0.5 ms intervals and stores the data internally, to verify the data by reading the input terminal status before the specified time at an I/O refresh interval of 2 ms. If the input terminal is always in the same state, this state is regarded as the value for the input terminal. If it is not in the same state, the previous value is regarded as the input value. Digital input filter time 

Continued

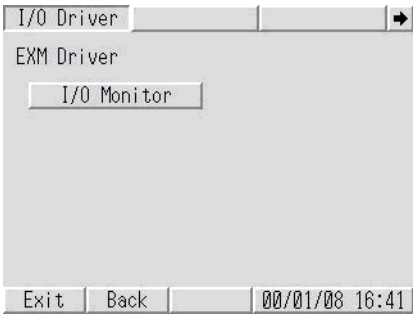
Setting item	Description
Input (0 to 11)	• When [Type] is set to [Bit] The terminal number specified for standard input is displayed. You can check the input value by bit. When the switch is not pressed, the OFF value is displayed. When the switch is pressed, the ON value is displayed. **NOTE** • With the LT33** series, you can check the status by using inputs 0 through 15. • When [Type] is set to [Word] You can check the input value with integers 0 to 4095 when the LT32** series is used, or with integers 0 to 65535 when the LT33** series is used.
Output (0 to 5)	• When [Type] is set to [Bit] The terminal number specified for standard output is displayed. You can check the output value by bit. **NOTE** • With the LT33** series, you can check the status by using outputs 0 through 15. • When [Type] is set to [Word] You can check the output value with integers 0 to 63 when the LT32** series is used, or with integers 0 to 65535 when the LT33** series is used.
Error display	If the I/O driver detects an error, the corresponding error code and error message are displayed. For details about error messages, refer to the following description. ☞ "1.7.3 Errors displayed with the LT3000 series ■ I/O driver errors" (page 1-199)

- [Check Board]



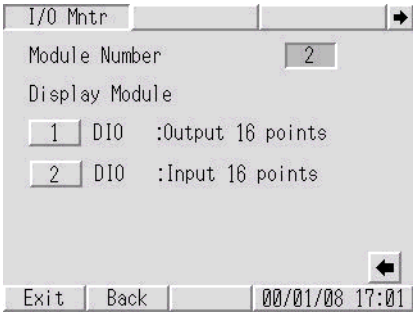
Setting item	Description
Start	The system starts checking if the I/O board is operating normally or not. If the I/O board operation is abnormal, the corresponding error message appears. For details about error messages, refer to the following description. ☞ "1.7.3 Errors displayed with the LT3000 series ■ I/O driver errors" (page 1-199)

◆ [I/O Driver] (EXM Driver)



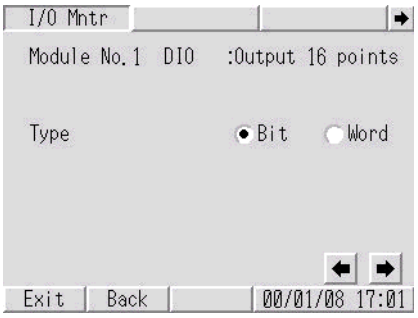
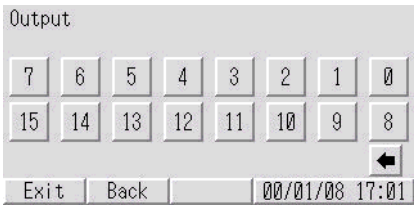
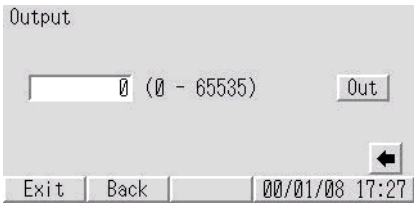
Setting item	Description
I/O Monitor	The I/O monitor connection module information screen is displayed.

- [I/O Monitor] (DIO settings)



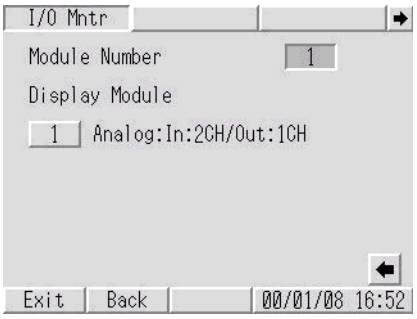
Setting item	Description
Module Number	The number of connected modules is displayed. (0 to 2) **NOTE** • When the LT33** series is used, it displays the number of connected modules with values 0 to 3.
Display Module	The number of connected modules is displayed. Module No. 1 indicates the module directly connected to the LT back panel.

Continued

Setting item	Description
Module No.	The I/O monitor setting screen is displayed. • I/O monitor setting screen Type  • I/O execution screen (Bit) Outputs signals to a destination module on a bit basis. Input status after I/O monitoring appears in a bit representation when selecting the input module.  • I/O execution screen (Word) Sets output values transmitted to a destination module and output values appear. Input values after I/O monitoring appear when selecting the input module. 

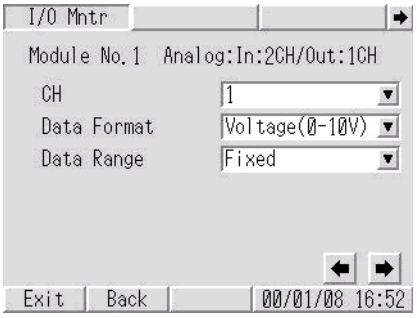
- [I/O Monitor] (Analog settings)

I/O monitor connection module information screen



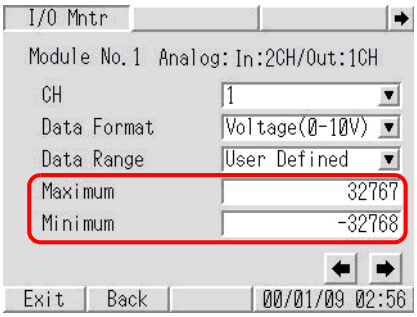
Setting item	Description
Module Number	The number of connected modules is displayed. (0 to 2) **NOTE** • When the LT33** series is used, it displays the number of connected modules with values 0 to 3.
Display Module	The number of connected modules is displayed. Module No. 1 indicates the module directly connected to the LT back panel.
Module No.	The I/O monitor setting screen is displayed.

I/O monitor connection module information screen

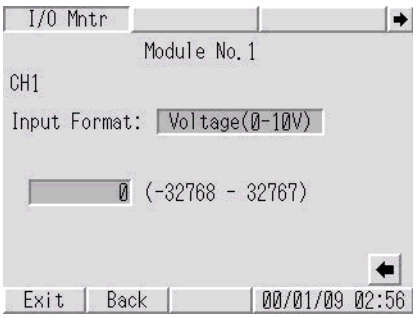


Setting item	Description
CH	Specify the number of channels for execution of the I/O monitor. **NOTE** • If “In: 2CH/Out: 1CH” is selected, the third channel is used for output.
Data Format	Select the data format for execution of the I/O monitor: “Voltage (0 - 10V)”, “Current (4 - 20 mA)”, “Pt100”, “K Thermocouple”, “J Thermocouple” or “T Thermocouple”.
Data Range	Select the data range for execution of the I/O monitor: “Fixed”, “Centigrade”, “Fahrenheit” or “User Defined”.

Continued

Setting item	Description
Maximum / Minimum	Specify the upper and lower limit values for execution of the I/O monitor. These parameters can be specified only when “User Defined” is selected for “Data Range”. 

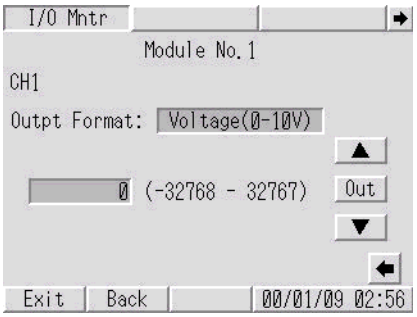
I/O monitor analog input execution screen



Setting item	Description
Input Format	Displays the “Data Format” specified on the I/O monitor setting screen.
Input value	Displays the input value.
Input data range	Displays the “Data Range” specified on the I/O monitor setting screen.

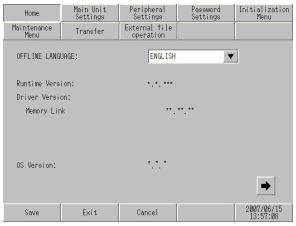
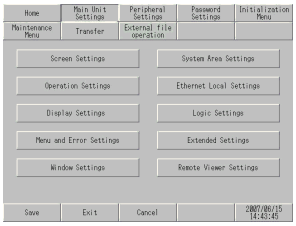
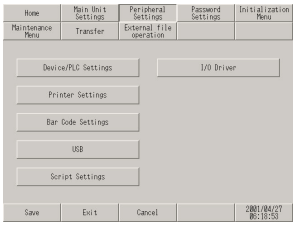
Continued

I/O monitor analog output execution screen

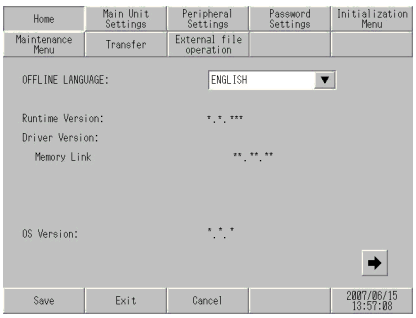


Setting item	Description
Output Format	Displays the “Data Format” specified on the I/O monitor setting screen.
Output value	Displays the output value. Touching the entry field displays numeric keys, allowing you to specify an output value.
Output Range	Displays the “Data Range” specified on the I/O monitor setting screen.
▲▼	Increases or decreases the output value.
Output	Outputs the value specified in “Output value”.

2.15.9 When the GP/LT supporting the CANopen master is used

Menu	Description
	"2.15.9 When the GP/LT supporting the CANopen master is used ■ [Home] setting guide" (page 2-159)
	"2.15.9 When the GP/LT supporting the CANopen master is used ■ [Main Unit Settings] setting guide ◆ Logic Settings" (page 2-161)
	"2.15.9 When the GP/LT supporting the CANopen master is used ■ [Peripheral Settings] setting guide" (page 2-162) "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Master Diagnostics" (page 2-162) "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Slave Diagnostics" (page 2-164) "2.15.9 When the GP/LT supporting the CANopen master is used ◆ Master configration and events" (page 2-165)

■ [Home] setting guide

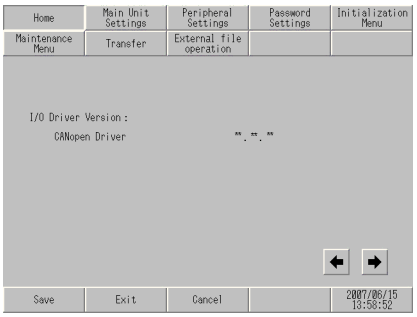


The version is displayed in ***.

Setting item	Description
OFFLINE LANGUAGE	Select the language used for the offline menu from [JAPANESE] and [ENGLISH].
Runtime Version	Display the runtime version.
Driver Version	Display the protocol driver version. 4 drivers of active maximum amount are displayed. In case of the GP-3300 series 2 drivers of active maximum amount are displayed.
OS Version	Display the OS version.

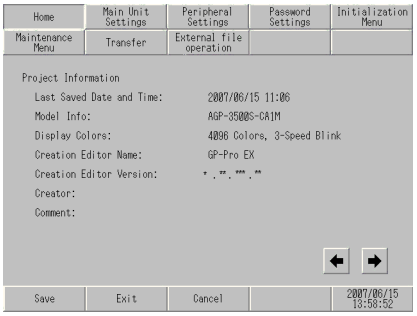
Continued

Setting item	Description
Device Monitor Version	 Only when [Device Monitor] is selected in the [Main Unit Settings]-[Extended Settings] tab in the System Settings window, Device Monitor Version is displayed.



The version is displayed in ***.

Setting item	Description
I/O Driver Version	Display the name and runtime version of the I/O driver.



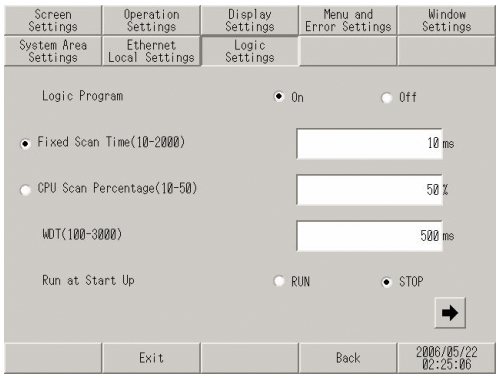
The version is displayed in ***.

Setting item	Description
Last Saved Date and Time	Display the last saving day and time of project.
Model Info	Display the setting GP/LT model.
Display Colors	Display the setting colors.
Creation Editor Name	Display the editor name which created the project.
Creation Editor Version	Display the editor version which created the project.
Creator	Display the creator name of project.
Comment	Display the comment of project.

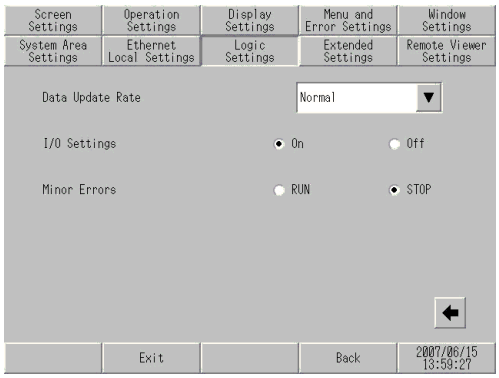
■ [Main Unit Settings] setting guide

◆ Logic Settings

Set the logic program.



Setting item	Description
Logic Program	When [On] is selected, all of the following items can be set. When [Off] is selected, none of them can be set.
Fixed Scan Time	Set the execution time of the logic function to a value within the range of 10 to 2,000 ms.
CPU Scan Percentage	Set the ratio of the execution time of the logic function to a value within the range of 10% to 50%.
WDT(100-3000)	Set the watch dog timer to a value between 100 and 3,000 ms.
Run at Start Up	Select the logic operation when the GP/LT unit is turned ON from [RUN] and [STOP].



Setting item	Description
Data Update Rate	Select the speed to update the value of the connected device or internal device address assigned to the logic program from [Fastest], [Normal], and [Slowest].
I/O Settings	Select [On] to use I/O operation. Select [Off] to stop I/O operation.
Minor Errors	Select the controller operation when an error continues from [RUN] and [STOP].

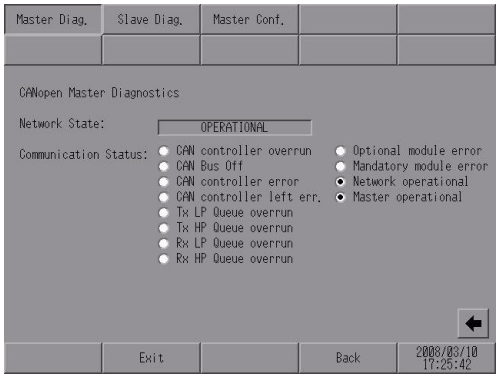
■ [Peripheral Settings] setting guide

◆ Master Diagnostics

The master side is checked to see if it can accept communication when the slave is connected and the check result is displayed.

NOTE

- It may take some time to display the check result.



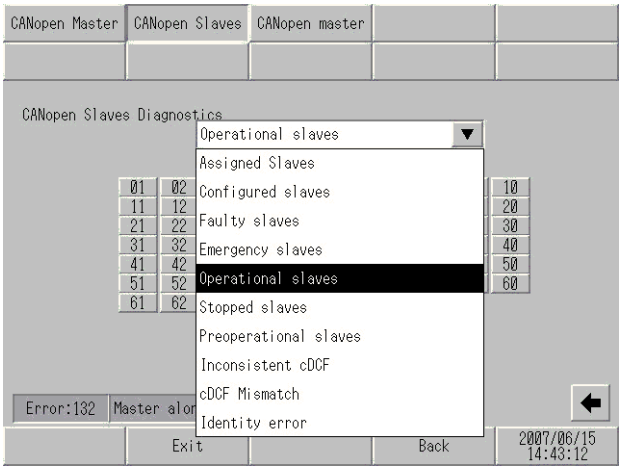
Setting item		Description
CANopen Master State		Current state of the CANopen master supported GP/LT board will be displayed.
	INIT	CANopen module is not initialized yet.
	RESET	CANopen module is performing a reset.
	PREPARE NET INIT	CANopen module carries out a check of the slave assignments.
	NETWORK RESET	The CANopen network is reset by NMT command Reset all communication slaves.
	NETWORK WAIT	The CANopen module waits for a certain time so that the modules can execute that Reset communication command.
	BOOTING UP	The CANopen module initializes the individual slaves on the network.
	CLEAR	CANopen network is scanned. The CANopen module can be started.
	OPERATIONAL	The CANopen network is operational.
	PREOPERATIONAL	The CANopen network is preoperational.
	FATAL ERROR	A fatal error has occurred on the network. The CANopen module will get reset. A fatal error occurred in an error code. Check the error details displayed in the lower left of the screen and take the appropriate action according to the following: ☞ "1.8.6 Errors displayed when CANopen is used" (page 1-216)
	MISSING MAND. SLAVE	A mandatory module in the CANopen network has a failure.

Continued

Setting item		Description
Communication status.		The different radio buttons shows the communication status of CANopen Master.
	CAN controller overrun	CAN controller overrun has occurred.
	CAN Bus off	BUS OFF detected by CAN Controller.
	CAN controller error	CAN controller is in error state. Check the connection devices (e.g. connector and cable) and then reset the CANopen module.
	CAN ctrl. Left error state	CAN controller has left the error state.
	Tx LP Queue overrun	An overrun of the low priority transmit queue has occurred. Low priority transmit queue is for heartbeat, node guarding and SDO transfer.
	Tx HP Queue overrun	An overrun of the high priority transmit queue has occurred. High priority transmit queue is for TPDOs, NMT, commands, SYNC, and EMCY messages.
	Rx LP Queue overrun	An overrun of the low priority receive queue has occurred. Low priority receive queue is for heartbeat, node guarding and SDO transfer.
	Rx HP Queue overrun	An overrun of the high priority receive queue has occurred. High priority receive queue is for RPDOs, NMT, commands, SYNC and EMCY messages.
	Optional module error	At least one optional or unexpected module does not correspond to the expected network configuration. Reset the network. If this error reoccurs despite the network reset, review the project settings and slave configuration.
	Mandatory module error	At least one mandatory module does not match the network configuration. Review the project settings and slave configuration.
	Network operational	At least one module (besides the GP/LT) is operational.
	Master operational	The CANopen master module (GP/LT) is operational.
Error Message		An I/O driver error message is displayed. For details on the errors to be displayed, refer to the following: ☞ "1.8.6 Errors displayed when CANopen is used" (page 1-216)

◆ Slave Diagnostics

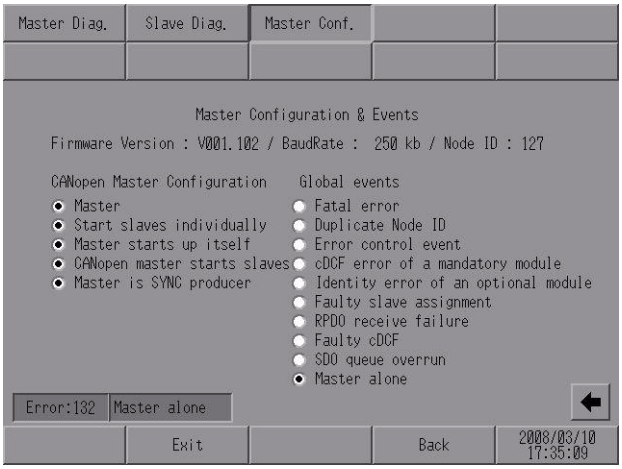
Check if the slave side can accept communication when the slave is connected to the master.



Setting item		Description
Slave diagnostic status list		Each slave diagnosis status list is displayed.
	Assigned Slaves	The used (Assigned) slaves in the GP-Pro EX Project are displayed.
	Configured Slaves	Displays which slaves in the network are configured by CANopen Master.
	Faulty Slaves	Slaves that did not send heartbeat in time, not yet initialized and has a faulty cDCF file are displayed.
	Emergency Slaves	Slaves that have sent an emergency message will be diplayed. The details of an emergency message can be read from OBJECT 0x2018, Node ID as Sub-Index.
	Operational Slaves	Slaves which are in Operational State will be displayed.
	Stopped Slaves	Currently stopped slaves are displayed.
	Preoperational Slaves	Slaves which are in “Pre-Operational” mode are displayed.
	cDCF Mismatch	There is a format error in the project.
	Inconsistent cDCF	There is an error in the project settings.
	Identity error	Slaves which have identity error will be displayed. Identity error can be one of the following: • Device ID Error [OBJECT - 0x1F84] • Device type [OBJECT - 0x1000] • Identity Object [OBJECT - 0x1018] • Vendor ID Error [OBJECT - 0x1F85] • Product Code Error [OBJECT - 0x1F86] • Revision # Error [OBJECT - 0x1F87]
Error Message		An I/O driver error message is displayed. For details on the errors to be displayed, refer to the following: ☞ “1.8.6 Errors displayed when CANopen is used” (page 1-216)

◆ Master configration and events

Check the status of the entire network during CANopen communication.



Setting item		Description
Firmware Version		The version number of firmware in the CANopen master module is displayed.
BaudRate		The configured baud rate is displayed.
Node ID		The node ID of the GP/LT supporting the CANopen master is displayed.
CANopen Master Configuration	Master	Status of the Firmware Operation Mode. Checked - GP is running as Master. Unchecked - GP is running as Slave.
	Start slaves individually	The slave where the CANopen master module is configured is started.
	Master starts up itself	When Checked the CANopen master module will start itself.
	CANopen master starts the slaves	The CANopen master module will start the slaves.
	Master is SYNC producer	The CANopen master will broadcast SYNC messages.

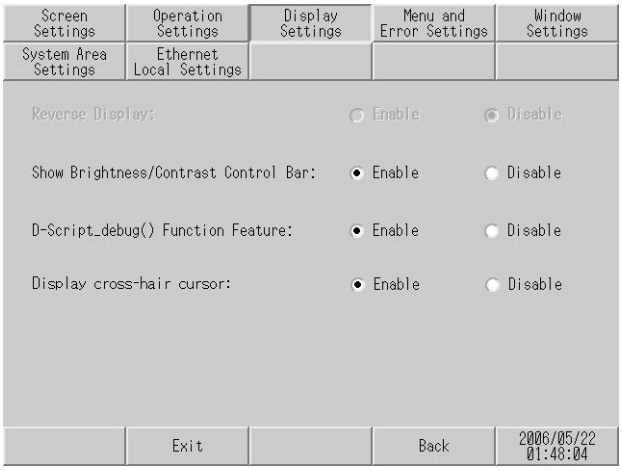
Continued

Setting item		Description
Global events	Fatal error	A fatal error has occurred. The CANopen master module will be reset.
	Dupplicate Node ID	A node in the network has the same slave ID as the GP.
	Error control event	Error control event of the mandatory module. The behavior of the master depends on the operation when an error occurs in the mandatory slave set in the master settings of the I/O driver settings.
	cDCF error of a mandatory module	There is a format error in the project.
	Identity error of an optional module	One of the slaves in the newtok has one of the following errors: • Device ID error (object 0x1F84) • Device type (object - 0x1000) • Identity Object (object - 0x1018) • Vendor ID error (object 0x1F85) • Product code error (object 0x1F86) • Revision number error (object 0x1F87) • Serial number error (object 0x1F88) The applicable slave is in stop mode
	Faulty slave assignment	A slave in the network contains features that are not supported by the CANopen master module
	RPDO receive failure	The CANopen master module received an RPDO of incorrect size.
	Faulty cDCF	There is an error in the project settings.
	SDO queue overrun	Overrun of the SDO queue
	Master alone	The slave is not connected.
Error Message		An I/O driver error message is displayed. For details on the errors to be displayed, refer to the following: ☞ “1.8.6 Errors displayed when CANopen is used” (page 1-216)

2.15.10 When GP-32** Series is used

■ [Main Unit Settings]

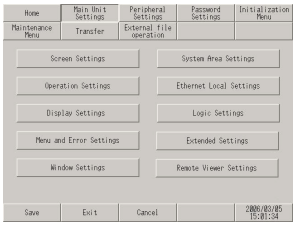
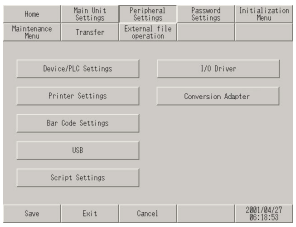
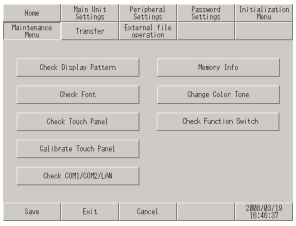
◆ [Display Settings]



Setting item	Description
Reverse Display	Specify whether to enable or disable the highlight (reverse) display. **NOTE** • This item can be specified only when the monochrome GP model is selected.
Show Brightness / Contrast Control Bar	Specify whether to show the Brightness/Contrast Control Bar to adjust brightness and contrast.
D-Script_debug ( ) Function Feature	Specify whether to execute the _debug ( ) function described in D-Script. ☞ GP-Pro EX Reference Manual “21.9.1 D-Script/Common [Global D-Script] Settings Guide” (page 21-54)
Display cross-hair cursor	Specify whether to display the cross cursor. When the cross cursor display is enabled, the “+” (cross) cursor appears at the touched position on the screen. You can check for a touch calibration error based on the difference between the “+” cursor position and the drawing position. **NOTE** • This option can also be set for the ST-3000 series.

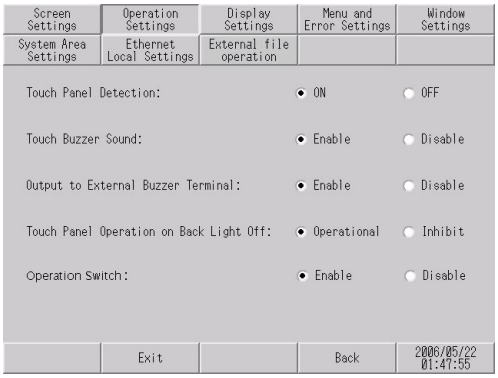
2.15.11 Using the handheld type GP

This section describes the setting screens displayed only for the handheld type GP.

Menu	Description
	"2.15.11 Using the handheld type GP ◆ [Operation Settings]" (page 2-169)
	"2.15.11 Using the handheld type GP ◆ [Conversion Adapter]" (page 2-169)
	"2.15.11 Using the handheld type GP ◆ [Check Function Switch]" (page 2-170)

■ [Main Unit Settings]

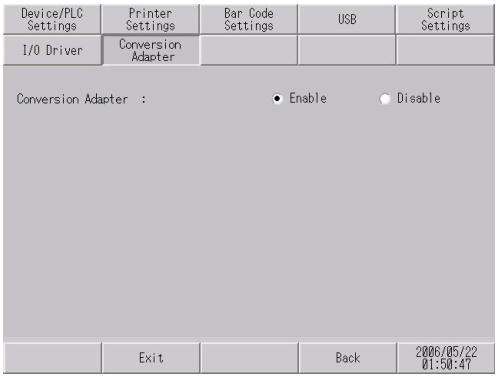
◆ [Operation Settings]



Setting item	Description
Operation Switch	Select the operation switch setting of the handheld GP type from [Enable] or [Disable].

■ [Peripheral Settings]

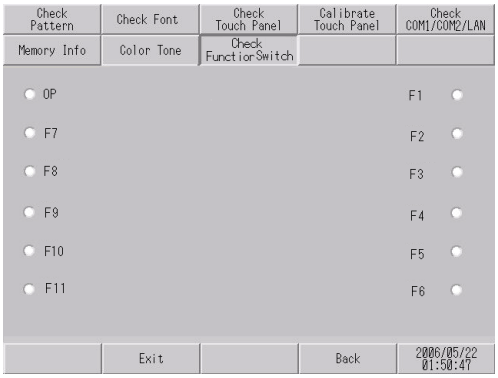
◆ [Conversion Adapter]



Setting item	Description
Conversion Adapter	When the handheld type GP is used, select whether to use a conversion adapter from [Enable] or [Disable].

■ [Maintenance Menu]

◆ [Check Function Switch]

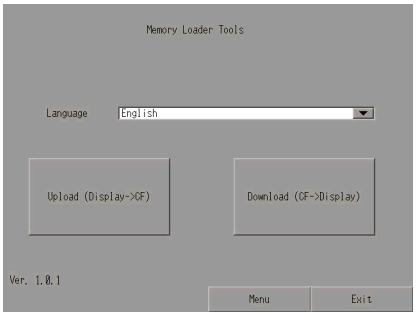


Setting item	Description
OP, F∗ (∗ Indicates a function switch number.)	Touch the function switch to activate a specified function.

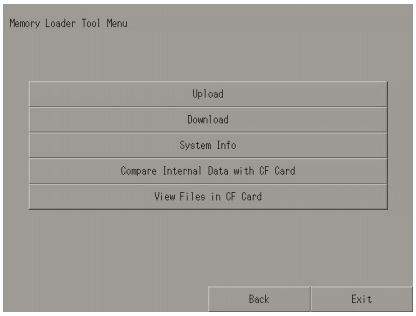
2.15.12 System Menu

■ Offline, CF Starting, Error, Reset

This section describes the menu items that are displayed in the first menu of the system menu.

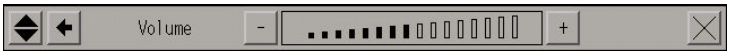
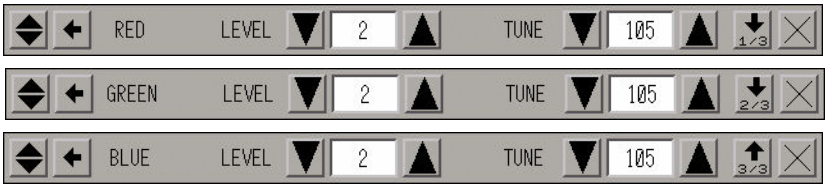
Menu Items		Description
Offline		Touch this switch to enter the offline mode.
CF/USB		 Touch this switch to start the CF memory loader program. To restart the CF memory loader program, touch [CF_Starting] (if the CF memory loader tool is stored in the CF card) or touch [USB_Starting] (if the CF memory loader tool is stored in the USB storage). The following screen then appears.  For the CF card and USB storage operating procedure, refer to the following description. ☞ GP-Pro EX Reference Manual “33.7 Transferring Project Files Using a CF Card or USB Storage” (page 33-37) **NOTE** • This menu is not displayed with GP-3302B. • When the LT3*** series is used, only the USB memory loader can be started.
	Language	Select the display language used for the CF memory loader tool from [Japanese] and [English].
	Upload	Move to the upload screen. ☞ GP-Pro EX Reference Manual “33.7.2 Transfer Process ■ Transferring Project Files from GP to PC (or to Another GP)” (page 33-44)
	Download	Move to the download screen. ☞ GP-Pro EX Reference Manual “33.7.2 Transfer Process ■ Transferring Project Files from PC to GP” (page 33-38)

Continued

Menu Items		Description
	Memory Loader Tool Menu	The following menu screen is displayed.  • Upload Move to the upload screen. ☞ GP-Pro EX Reference Manual “33.7.2 Transfer Process ■ Transferring Project Files from GP to PC (or to Another GP)” (page 33-44) • Download Move to the download screen. ☞ GP-Pro EX Reference Manual “33.7.2 Transfer Process ■ Transferring Project Files from PC to GP” (page 33-38) • System Info Display the backup data stored on the CF card and the data stored in the GP. • Compare Internal Data with the CF Card Compare all data in the GP with the backup data stored on the CF card. • View Files in the CF Card List all files in the CF card. You can display the details of a selected file, or can copy, delete, or rename a file.
	Back	Return to the initial screen.
	Exit	Display a confirmation window for exit operation. Touch [Yes] to terminate the CF memory loader tool and reset the GP.
Error		Always display the latest error message in a single line. If the message is longer than one line, only the amount that can display in a single line is displayed.
Reset		Touch this option to reset the GP unit.

■ Volume, IP Address

This section describes the menu items that are displayed in the second menu of the system menu.

Menu Items	Description
Volume	 Adjust the volume of the external speaker connected to the AUX terminal. This switch is displayed only when the model supports sound output (AUX output).
IP Address	Touch this switch to check the IP address designated for the GP. This switch is displayed only when the model supports Ethernet.
RGB Screen	This switch is displayed only when the VM unit is used. Touching this switch displays the menu to move to the [Position], [Screen], [Color], and [Default] setting screens.
Position	Adjust the horizontal and vertical positions of the screen. Available ranges are between -128 and 128 for the horizontal position, and between -16 and 16 for the vertical position.
Screen	Adjust the clock and phase. Available ranges are between -128 and 128 for the clock and between 0 and 63 for the phase.
Color	 Set the level for red, green, and blue or perform fine tuning. The levels can be set within the range of 0 to 3, and fine tuning is available within the range of 0 to 255.
Default	Touch [EXECUTE] to reset the [Position], [Screen], and [Color] settings to the initial values.

Continued

■ AddressMonitor, LogicMonitor

This section describes the menu items that are displayed in the third menu of the system menu.

Touch these menu items when monitoring the address or checking the operating status and instructions of the logic program.

NOTE

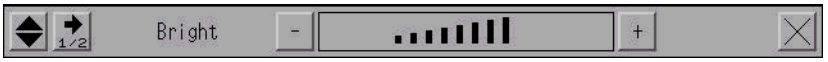
- The [AddressMonitor] switch is displayed on all models in the GP-3000 series, but the [LogicMonitor] switch will only display on models which can use the logic program. Touching the [LogicMonitor] switch when the logic function is set to [Disabled] will display the [AddressMonitor] screen.
- When a slave unit of Ethernet Multilink is used, the ladder monitor and device monitor are disabled.

Menu Items	Description
Address Monitor	Start monitoring the variables used in the logic. The name and current value of the variable can be checked. When the address format is used, the control address is monitored. ☞ "2.9.1 Checking whether the logic program is operating properly ■ AddressMonitor" (page 2-45)
Logic Monitor	Start monitoring the entire logic program. The logic monitor checks the operating status and instruction layout. ☞ "2.9.1 Checking whether the logic program is operating properly ■ LogicMonitor" (page 2-44)
Ladder Monitor	The monitor reads a ladder program from a PLC (Q Series manufactured by Mitsubishi Electric Corporation), allowing you to monitor it on the display screen. You can monitor the ladder program online without stopping other functions. ☞ Mitsubishi Electric Q Series PLC Ladder Monitor Operation Manual
Device Monitor	You can monitor a device with the specified connection equipment, or change an arbitrary address value on the GP screen. ☞ GP-Pro EX Reference Manual "A.2 Monitoring the Value of Device Addresses (Device Monitor)" (page A-46)

■ Brightness and contrast

For the procedure for displaying this menu, see the following section.

☞ "2.2.1 Adjusting the brightness/contrast" (page 2-10)

Menu Items	Description
Bright	Adjust the brightness of the GP screen.  **NOTE** • When the type of GP is TFT, this menu looks as follows because only [Bright] can be adjusted. • The GP-3200 series enables brightness adjustment in 16 steps.
Contrast	Adjust the contrast of the GP screen. This menu is displayed when the 2/2 button is touched. **NOTE** • When the type of GP is TFT, [Contrast] cannot be adjusted.