

**Pro-face®**

Maintenance/Troubleshooting

## Preface

Thank you for purchasing Pro-face's GP3000 Series Programmable Operator Interface (Hereafter referred to as the "GP unit") and the GP Screen Editor Software, "GP-Pro EX Ver.1.0".

Please read this manual carefully in order to use these products properly, and be sure to keep this manual handy for future reference.

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Term used in this manual	Formal Trade Name or Trademark
Windows 98	Microsoft® Windows® 98 Operating System
Windows Me	Microsoft® Windows® Me Operating System
Windows 2000	Microsoft® Windows® 2000 Operating System
Windows XP	Microsoft® Windows® XP Operating System

## Manual Symbols and Terminology

### ■ Safety Symbols and Terms



This manual uses the following symbols and terms to identify important information related to the correct and safe operation of GP and GP-Pro EX.

The symbols and the descriptions are as follows.

Symbol	Description
 DANGER	Indicates a hazardous situation that could result in serious injury or death.
 WARNING	Indicates a potentially hazardous situation that could result in serious injury or death.
 CAUTION	Indicates a potentially hazardous situation that could result in minor injury or equipment damage.
	Indicates instructions or procedures that must NOT be performed to ensure correct product use.
	Indicates instructions or procedures that MUST be performed to ensure correct product use.
	Indicates a potentially damaging action or dangerous situation that could result in abnormal equipment operation or data loss.

### ■ General Information Symbols and Terms

This manual uses the following symbols and terms for general information.


Symbol	Description
	Provides hints on correct product use, or supplementary information.
*	Indicates an item with an explanatory footnote.
	Indicates an item's related information.
1, 2 (1),(2)	Indicates an operation procedure. Operate according to the numbers.

## Precautions

This manual describes safety symbols and terms for the correct and safe operation of GP-Pro EX. Read carefully this manual and the related manual to understand the correct operation and features of GP and GP-Pro EX.

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### DANGER


-  Touch panel switches should NOT be used to make a switch that could result in human injury or equipment damage. Trouble with the GP main unit, units, and cables which keeps the output ON or OFF could result in a serious accident. An output signal that could result in a serious accident must be equipped with a monitoring circuit such as a limiter. Also, the system must be designed for important actions to be conducted from a device other than the GP main unit, to prevent an accident due to false output or malfunction.

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### WARNING

## System Design

-  Touch panel switches should NOT be used for a device's Emergency Stop Switch. Minister of Health, Labor and Welfare speaking, all industrial machinery/systems must be equipped with a mechanical, manually operated emergency stop switch. Also, for other kinds of systems, similar mechanical switches must be provided to ensure safe operation of those systems.
-  Be sure to design your GP control system so that, in the event of a main power supply failure or a GP accident, the user system's overall safety integrity will be maintained. If this is not done, incorrect output signals or a GP malfunction may cause an accident.
  - 1) Interlock and other circuits designed to interrupt or oppose normal machine movement (such as Emergency Stop, General Protection, and forward and reverse rotation), as well as those designed to prevent machine damage (such as upper, lower, and traverse movement limit positioning) should all be designed to be located outside of the GP.
  - 2) When the GP generates a "Watchdog Timer Error," GP operation will halt. Also, when Errors occur in Input/Output control areas that the GP cannot detect, unexpected movement may occur in those areas. Therefore, and to prevent unsafe machine movement, a "Failsafe Circuit" should be created which is completely external to the GP.

For a failsafe circuit, refer to GP3000 Series Hardware Manual "7.2.5 Installation Precautions"(page-7-16).
  - 3) If a problem arises with an external unit's relay or transistor, causing an output (coil) to remain either ON or OFF, a major accident can occur. To prevent this, be sure to set up external watchdog circuits that will monitor vital output signals.
-  Design a circuit that will supply power to the GP unit's I/O before starting up the GP. If the GP unit's internal program enters RUN mode prior to the I/O unit's load control power turning ON, an incorrect output (signal) or malfunction could cause an accident.

## Precautions

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- ❗ Design a user program that ensures the safety of the user's system, in the event of a GP display or control error, or either a data transmission error or power failure between the GP and a connected unit. These types of problems can lead to an incorrect output (signal) or malfunction, resulting in an accident.
- ⊘ Do not create GP touch panel switches to control machine safety operations, such as an emergency stop switch. Install these switches as separate hardware switches, otherwise severe bodily injury or equipment damage can occur.
- ❗ Be sure to design your system so that a communication fault between the GP and its host controller will not cause equipment to malfunction. This is to prevent any possibility of bodily injury or equipment damage.
- ⊘ Do not use the GP as a warning device for critical alarms that can cause serious operator injury, machine damage or can halt system operation. Critical alarm indicators and their control/activator units must be designed using stand-alone hardware and/or mechanical interlocks.
- ⊘ Do not use the GP with aircraft control devices, aerospace equipment, central trunk data transmission (communication) devices, nuclear power control devices, or medical life support equipment, due to these devices' inherent requirements of extremely high levels of safety and reliability.
- ❗ Be sure to design your system so that a communication fault between the GP and its host controller will not cause equipment to malfunction. This is to prevent any possibility of bodily injury or equipment damage.
- ⊘ After the GP unit's backlight burns out the touch panel is still active, unlike the GP unit's "Standby Mode". If the operator fails to notice that the backlight is burned out and touches the panel, a potentially dangerous machine operation error can occur. Therefore, do not create GP unit touch panel switches that may cause injury and/or equipment damage. If your GP unit's backlight suddenly turns OFF, use the following steps to determine if the backlight is actually burned out.
  - 1) If the GP unit's "Backlight Control" is not set and the screen has gone blank, your backlight is burned out.
  - 2) If the GP unit's "Backlight Control" is set to Standby Mode and the screen has gone blank, and touching the screen or performing another input operation does not cause the display to reappear, your backlight is burned out.

## Handling

- ⊘ The GP-Pro EX install disk is a CD-ROM. Never play the CD-ROM on an audio CD player. Unexpected volume can cause hearing problems or speaker damage.
- ⊘ Do not disassemble or modify the GP unit. Doing so may cause a fire or an electric shock.
- ⊘ Do not operate the GP in an environment where flammable gases are present, since it may cause an explosion.

## Wiring

- ❗ To prevent electrical shock or equipment damage, unplug the GP unit's power cord from the power supply prior to installing or wiring the GP.
- ❗ After completing any GP wiring work, be sure the terminal block's protective plastic cover is reattached. If this cover is not reattached, an electrical shock could easily occur.

## Precautions

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- ❗ To prevent an electric shock be sure to disconnect your GP unit's power cord from the power supply before wiring the GP.
- ⊘ Do not use voltage beyond the GP unit's specified range. Doing so may cause a fire or an electric shock.
- ❗ The cables connected to the GP should be secured by cable clamps to prevent weight or tension of the cables added to the connectors or terminals.
- ❗ The GP unit's wiring should be checked to confirm that both the operating voltage and wiring terminal locations are correct. If either the voltage or the wiring terminal location is incorrect, it can cause a fire or accident.

## Maintenance

- ⊘ NEVER touch a live power terminal. Doing so could cause an electrical shock or a machine malfunction.
- ⊘ To prevent an electrical shock, unplug the GP unit's power cord before either cleaning the GP or attaching/detaching the power terminal attachment screws.
- ⊘ When replacing the GP unit's backlight, be sure to unplug the unit's power cord to prevent an electrical shock, and wear safety gloves to prevent burns.
- ⊘ Do not connect or disconnect Host and GP unit communication cables while the GP is turned ON.
- ⊘ Do not replace the GP unit's battery yourself. The GP uses a lithium battery for backing up its internal clock data and the battery may explode if it is replaced incorrectly. When replacement is required, please contact your local GP distributor.

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## ⚠ CAUTION

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## Wiring Layout Precautions

- ⊘ Do not turn off your personal computer's power switch during the execution of a program. It might destroy the project files.
- ⊘ Do not change the contents of GP-Pro EX's project files using the Text Editor software. It might destroy the project files.
- ❗ To prevent a GP unit malfunction due to excessive noise, isolate all GP input/output signal lines from all power wiring or power cables via a separate wiring duct.

## Installation

- ❗ Be sure all cable connectors are securely attached to the GP unit. A loose connection may cause incorrect input or output signals.

## Wiring

- ❗ Be sure to ground the GP unit's FG wire separately from other equipment FG lines. Also, be sure to use a grounding resistance of 100. or less and a 2mm<sup>2</sup> [0.0062inch<sup>2</sup>] or thicker wire, or your country's applicable standard. Otherwise, electric shock or malfunctions may result.
- ❗ Be sure to use only the designated torque to tighten the GP unit's terminal block screws. If these screws are not tightened firmly, it may cause a short-circuit, fire or incorrect unit operation.

## Precautions

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- ⚠ Be sure that metal particles and wiring debris do not fall inside the GP unit. They can cause a fire, malfunction or incorrect unit operation.

## Maintenance

- ⚠ Be sure to read the GP unit's manual carefully before performing program changes, entering forced output, or using the RUN, STOP, or PAUSE commands while the GP is operating. Mistakes made when using these items can cause machine accidents or damage.
- ⚠ Be sure the electricity is turned OFF before attaching or detaching an I/O unit. If the electricity is ON when an I/O unit is attached or detached, damage or malfunction to the I/O unit may occur.
- ⊘ Be sure to turn the GP unit's CF Card ACCESS switch OFF and confirm that the ACCESS lamp is not lit prior to inserting or removing a CF Card. Otherwise, CF Card internal data may be damaged or lost.
- ⊘ Do not reset or turn the GP OFF, or insert or remove the CF Card while the GP unit's CF Card is being accessed. Create special application screens to perform operations like turning power OFF, resetting the GP or inserting or removing the CF Card.

## Unit Disposal

- ⚠ When the product is disposed of, it should be done so according to your country's regulations for similar types of industrial waste.

## General Safety Precautions

- ⊘ Do not press on the GP unit's display with excessive force or with a hard object, since it can damage the display. Also, do not press on the touch panel with a pointed object, such as the tip of a mechanical pencil or a screwdriver, since doing so can damage the touch panel.
- ⊘ Do not install the GP where the ambient temperature exceeds the specified range. Doing so may cause a unit malfunction.
- ⊘ To prevent abnormally high temperatures from occurring inside the GP, do not restrict or block the GP unit's rear-face ventilation slots.
- ⊘ Do not operate the GP in areas where large, sudden temperature changes can occur. These changes can cause condensation to form inside the GP, possibly causing it to malfunction.
- ⊘ Do not allow water, liquids or metal fragments to enter inside the GP unit's case, since they can cause either a malfunction or an electric shock. The allowable pollution degree is 2.
- ⊘ Do not operate or store the GP in locations where it can be exposed to direct sunlight, high temperatures, excessive dust, moisture or vibration.
- ⊘ Do not operate or store the GP where chemicals evaporate, or where chemicals are present in the air.  
Corrosive chemicals: Acids, alkalines, liquids containing salt  
Flammable chemicals: Organic Solvents
- ⊘ Do not use paint thinner or organic solvents to remove dirt or oil from the GP unit's surface. Instead, use a soft cloth moistened with a diluted neutral detergent.
- ⊘ Do not use or store the GP in areas with direct sunlight, since the sun's ultraviolet rays may cause the LCD's quality to deteriorate.



- ❗ Do not store the GP in an area where the temperature is lower than that recommended in the GP unit's specifications. Doing so may cause the LCD display's liquid to congeal, which can damage the LCD. Also, if the storage area's temperature becomes higher than the specified level, the LCD's liquid may become isotropic, causing irreversible damage to the LCD. Therefore, only store the GP in areas where temperatures are within the GP unit's specifications.
- ❗ After turning OFF the GP, be sure to wait a few seconds before turning it ON again. The GP may not operate correctly if it is restarted too quickly.
- ❗ Be sure to back up the GP screen data and logic programs in case they are lost accidentally.

### LCD Panel Usage Precautions

- The LCD panel's liquid contains an irritant. If the panel is damaged and any of this liquid contacts your skin, immediately rinse the area with running water for at least 15 minutes. If the liquid gets in your eyes, immediately rinse your eyes with running water for at least 15 minutes and consult a doctor.
- The GP unit's LCD screen may show unevenness in the brightness of certain images or at some contrast settings. This is an LCD characteristic and not a product defect.
- The GP unit's LCD screen pixels may contain minute black and white-colored spots. This is an LCD characteristic and not a product defect.
- The color displayed on the GP unit's LCD screen may appear different when seen from outside the specified viewing angle. This is an LCD characteristic and not a product defect.
- When the same image is displayed on the GP unit's screen for a long period, an afterimage may appear when the image is changed. If this happens, turn off the GP, wait 10 seconds and then restart the unit. This is an LCD characteristic and not a product defect.
- To prevent an afterimage:
  - \* Set the GP unit's display OFF feature when you plan to display the same screen image for a long period of time.
  - \* Change the screen image periodically and try to not display the same image for a long period of time.

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# 1 | Troubleshooting

This chapter describes solutions for problems you may encounter while using the GP3000 series. Read the section describing the problem you are encountering.

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# 1.1 Identifying the problem

Once you have identified the problem, find the problem in the table below and read the section offering the solution. When an error message/code is displayed and you want to know the handling method, see the following section.

☞ “1.6 When an error message is displayed (Error code list)” (page 1-62)

When?	Problem	Reference page for solution
Operating software (GP-Pro EX) on a PC	Software (GP-Pro EX) cannot be installed.	☞ “1.2.1 GP-Pro EX cannot be installed” (page 1-3)
	Software (GP-Pro EX) does not start or terminates abnormally.	☞ “1.2.2 GP-Pro EX does not start or terminates abnormally” (page 1-9)
	Project files cannot be transferred through the use of the USB cable, Ethernet cable, CF card, or modem.	☞ “1.2.3 Project files cannot be transferred” (page 1-12)
	Online update fails.	☞ “1.2.4 Online update fails” (page 1-31)
Operating the Display	The touch panel (switch) for the Display does not respond. The Display freezes.	☞ “1.3.1 The touch panel (switch) does not respond” (page 1-34)
	The touch panel (switch) for the Display does not respond to touch but another area responds instead. The panel responds when nothing is touched.	☞ “1.3.2 The touch panel (switch) of the Display does not respond to touch but another area responds instead (The panel responds when nothing is touched)” (page 1-36)
	The Display does not turn ON. The initial screen is not displayed. The screen remains black.	☞ “1.3.3 The Display does not turn ON (The initial screen is not displayed. The screen remains black.)” (page 1-38)
	The buzzer sounds continuously.	☞ “1.3.4 An alarm sounds continuously” (page 1-41)
	Lines or streaks appear on the Display screen. The screen turns white.	☞ “1.3.5 Lines (streaks) appear on the screen. The screen turns white.” (page 1-43)
Communicating with a connected device	Communication fails on all screens.	☞ “1.4.1 Communication fails on all screens” (page 1-45)
	Communication fails on specific screens.	☞ “1.4.2 Communication fails on specific screens” (page 1-50)
	Communication is slow.	☞ “1.4.3 Communication is slow” (page 1-52)
	Communication stops intermittently.	☞ “1.4.4 Communication stops intermittently” (page 1-55)
Using the expansion options	The devices connected to the DIO interface do not turn ON/OFF.	☞ “1.5.1 The device connected to the DIO interface does not turn ON/OFF” (page 1-58)
	The FLEX NETWORK unit, PROFIBUS (Slave) unit, or VM unit does not operate properly. In such cases, you need to refer to the manual for the respective unit. The section in this chapter lists the names of the manuals.	☞ “1.5.2 Communication fails with the FLEX NETWORK unit, PROFIBUS (Slave) unit, or VM unit cannot operate properly” (page 1-61)

# 1.2 Problems with PC operation

## 1.2.1 GP-Pro EX cannot be installed

### Does your PC meet the operating environment of GP-Pro EX?

GP-Pro EX must be installed on a PC which meets the following operating environment.

PC	Required Specifications
OS	Windows <sup>®</sup> 2000 (Service Pack 3 or later)/ XP (Home Edition/Professional)
CPU	Pentium <sup>®</sup> III (800MHz or more) Pentium <sup>®</sup> 4 1.3GHz or above is recommended.
Memory	512 MB or more (1GB or above is recommended.)
Hard Disk Space	420 MB or more (Enough free space to install GP-Pro EX)

\* Since GP-Pro EX operates through the use of the .NET Framework, only the operating systems shown in the table are supported.

### Did you log in to Windows<sup>®</sup> using an account with administrator authority before the installation?

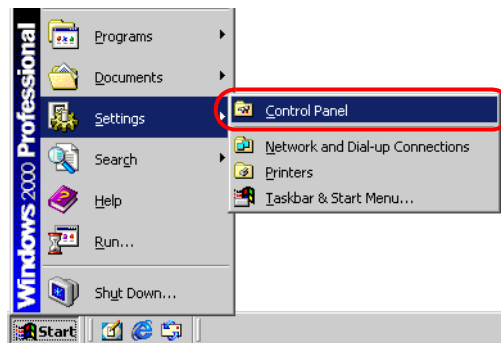
#### ◆Cause

If you did not log in with administrator authority, you may not be able to access folders which are required for the installation.

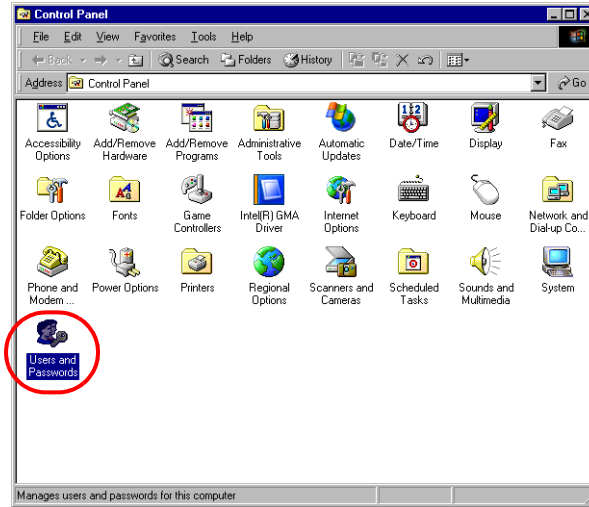
#### ◆Solution

Log in using an account with administrator authority and then install the software.

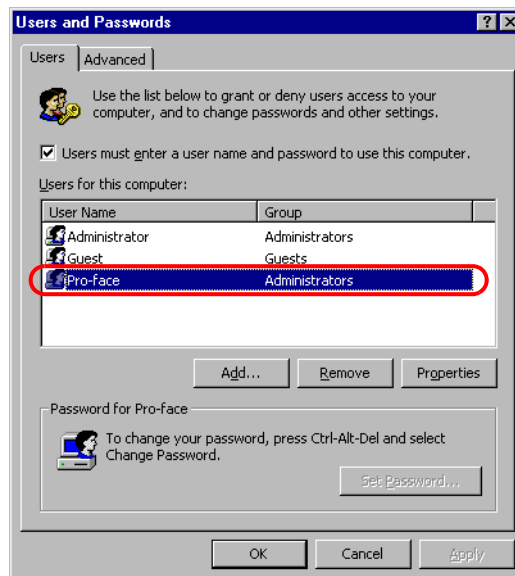
- Checking the account (when Windows<sup>®</sup> 2000 is used)
  - (1) Click the Start button, select [Settings], and click [Control Panel].



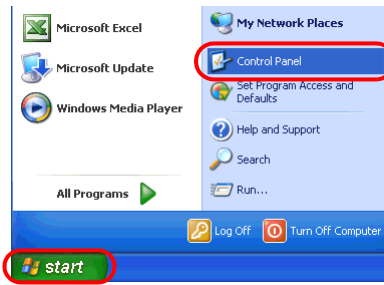
- (2) When [Control Panel] opens, double-click [Users and Passwords].



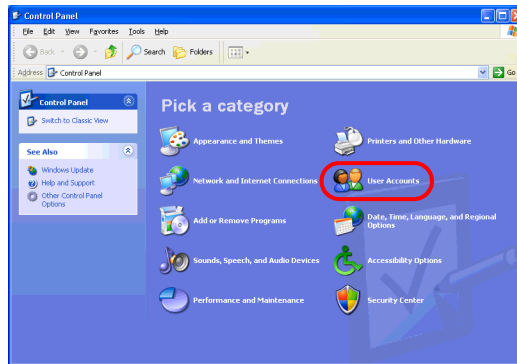
- (3) The following dialog box appears. When the current logon account has administrator authority, [Administrators] is shown under [Group] for [User Name] of the account. When [Guests] is shown, you need to use another account to log in to the system.



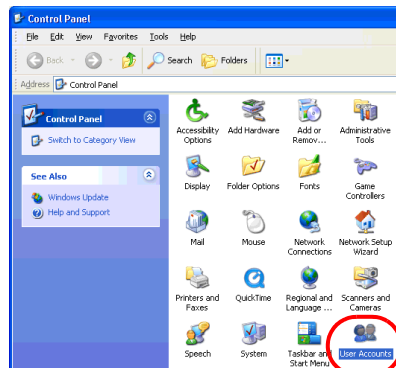
- Checking the account (when Windows® XP is used)
  - (1) Click the Start button and click [Control Panel].



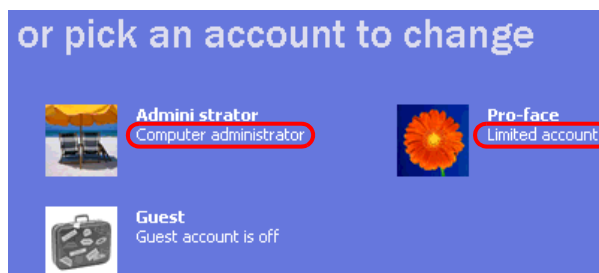
- (2) When [Control Panel] opens, select [User Accounts].



**NOTE** • When [Classic View] is selected for displaying [Control Panel], [Control Panel] is displayed as a window similar to the one below.



- (3) When the current logon account has administrator authority, [Computer administrator] is shown under the account name. When only accounts with [Limited account] are displayed, you need to use another account to log in to the system.





## Has “Multilingual Manager” been activated when “RAKURAKU CHUGOKUGO” (V2, V2 + translation, V3) or “RAKURAKU KANKOKUGO” (V1.5, V2) is installed on the PC?



### ◆Cause

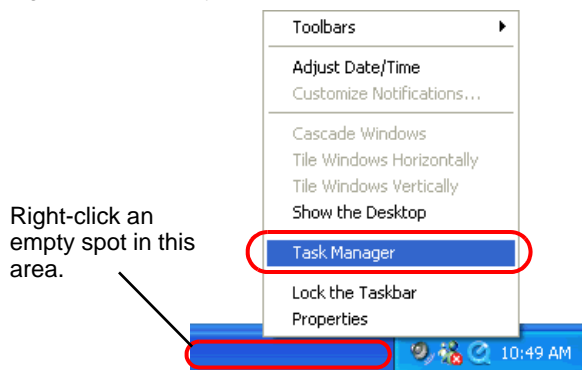
Multilingual Manager is an application program supplied with the translation software “RAKURAKU CHUGOKUGO” and “RAKURAKU KANKOKUGO” provided from OMRON SOFTWARE CO., Ltd. This program is installed during the installation of “RAKURAKU CHUGOKUGO” or “RAKURAKU KANKOKUGO”, and registered as a startup program by default. When the icon shown above is displayed in the Task Tray, Multilingual Manager has been activated. When Multilingual Manager has been activated, the GP-Pro EX installer waits for a response, and the installation halts and appears to stop.

### ◆Solution

Download the software patch for Multilingual Manager from the homepage of OMRON SOFTWARE (URL: <http://www.omronsoft.co.jp/SP/support/win/raku2ck/cyuu.html>), and execute the patch. Then try installing GP-Pro EX again.

If you start installing GP-Pro EX when Multilingual Manager is activated, stop the installation using the following procedure and then download the software patch mentioned above.

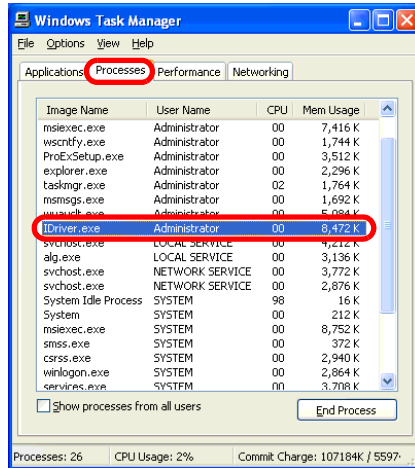
- When the installer halts while showing the installation in progress dialog box or completion dialog box
  - (1) Right-click an empty spot in the Taskbar. Click [Task Manager] in the displayed context menu.



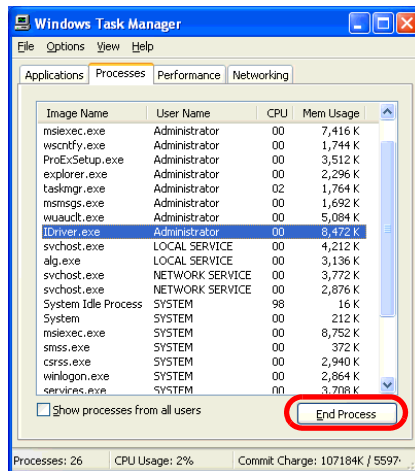
### NOTE

- Although the figure above shows the Taskbar for Windows<sup>®</sup> XP, the procedure for Windows<sup>®</sup> 2000 is the same.

- (2) When [Windows Task Manager] opens, click the [Processes] tab and select IDriver.exe.



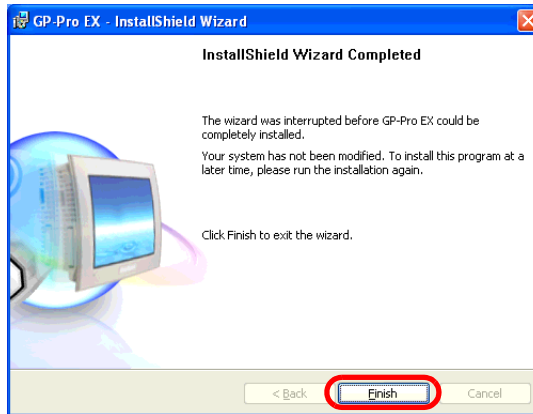
- (3) Click the [End Process] button to force termination of IDriver.exe.



- (4) When IDriver.exe is terminated, the remaining installation process resumes and finishes.

Continued

- When the completion dialog appears immediately the installer starts  
When the installer is forced to terminate during installation, IDriver.exe or Windows® Installer remains running. If an attempt is made to start the installer again, an internal error occurs, leading to abnormal completion with the following dialog.



- (1) Exit the installer, restart the PC, and then install the software again.

---

**NOTE**

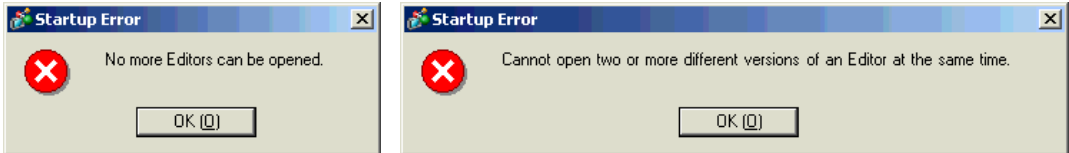
- Before starting install-related operations (installation, repair installation, uninstallation), be sure to exit from all application programs including Multilingual Manager.
-

## 1.2.2 GP-Pro EX does not start or terminates abnormally

### Is an error message displayed?

#### ◆Cause

When the following error message is displayed, two or more Editors or different versions of an Editor cannot be started at one time.



#### ◆Solution

It is only up to two Editors can be opened at the same time. Also It is unable to open two or more different version of a Editor at a time. Please open the same version of an Editor as the running Editor.

- NOTE**
- For details about the error messages, refer to the following page.  
☞ “1.6.1 Software (GP-Pro EX)-related errors u Startup” (page 1-63)

### Is it specific project file that you cannot start?

#### ◆Cause

If you cannot open the specific project file but other project files, then that file may have a problem.

#### ◆Solution

The project file that didn't open properly may have a problem. Copy the data and transfer the copied project file again. For the copy procedure, see the following section.

- ☞ GP-Pro EX Reference Manual “5.8 Copying a Screen from another Project” (page 5-40)

- NOTE**
- The contents which can be copied with [Copy from another Project] are the contents of the base screen and window screen only. Since other contents cannot be copied, you need to set them again.

### Is the GP-Pro EX terminates abnormally when you open the specific file?

#### ◆Cause

If you cannot operate the specific screen data but other screen data, then that screen data may have a problem.

#### ◆Solution

The screen data may have a problem. Create a new screen data.

## Does your PC meet the operating environment of GP-Pro EX?

### ◆Cause

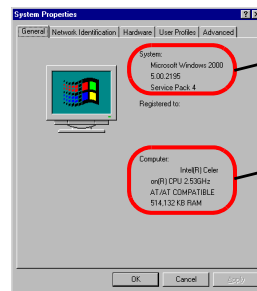
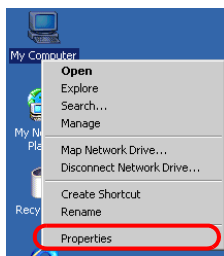
GP-Pro EX must be installed on a PC which meets the following operating environment.

### ◆Solution

Check that the OS of your PC, the specification of the CPU, the memory capacity, and the hard disk capacity satisfy the requirements.

#### NOTE

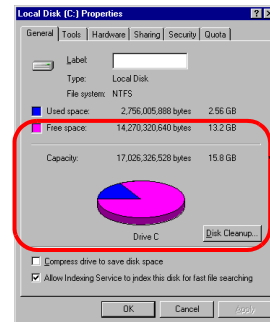
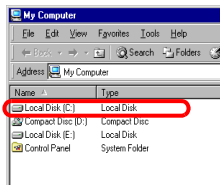
- Right-click the [My Computer] icon on the Desktop and select [Properties] from the displayed context menu. When [System Properties] is displayed, check that the information for your PC meets the recommended operating environment. To check the hard disk capacity, open [My Computer], right-click the drive on which GP-Pro EX is installed, and select [Properties] from the displayed context menu.



Specifications of the OS

Specifications of the CPU and memory capacity

Example: When GP-Pro EX is installed on drive C



Free space in the hard disk

- The recommended operating environment for GP-Pro EX is as follows:

PC	Required Specifications
OS	Windows® 2000 (Service Pack 3 or later)/ XP (Home Edition/Professional)
CPU	Pentium® III (800MHz or more) Pentium® 4 1.3GHz or above is recommended.
Memory	512 MB or more (1GB or above is recommended.)
Hard Disk Space	420 MB or more (Enough free space to install GP-Pro EX)

---

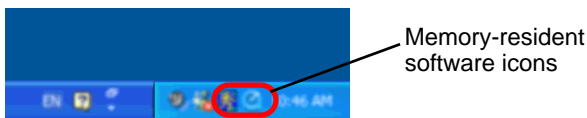
## Is memory-resident software installed?

---

### ◆Cause

If any memory-resident software is installed, GP-Pro EX may be terminated forcefully.

- NOTE**
- “Memory-resident software” is an application program for which the icon is displayed on the Taskbar and which is activated all the time.



---

### ◆Solution

Follow the procedure below and try starting GP-Pro EX again.

- (1) If any memory-resident software is installed, right-click its icon to show a context menu, terminate the software, and then try starting GP-Pro EX again.
- (2) If GP-Pro EX does not start or terminates abnormally even after step (1), exit from all running applications and try starting GP-Pro EX again.
- (3) If GP-Pro EX does not start or terminates abnormally even after steps (1) and (2), uninstall GP-Pro EX once and then reinstall it.

- NOTE**
- Before starting install-related operations (installation, repair installation, uninstallation), be sure to exit from all application programs.
-

## 1.2.3 Project files cannot be transferred

### ■ Transfer fails when a USB transfer cable is used.

**Did you use the USB transfer cable which is provided by Pro-face as an option (Model: CA3-USBCB-01)?**

#### ◆Cause

An unsuitable USB cable may have been used to transfer project files.

#### ◆Solution

To transfer project files with a USB cable, use the USB transfer cable which is provided by Pro-face as an option (CA3-USBCB-01).

**Has the driver for the USB cable been installed?**

#### ◆Cause

The driver for the USB cable may not have been installed properly.

#### ◆Solution

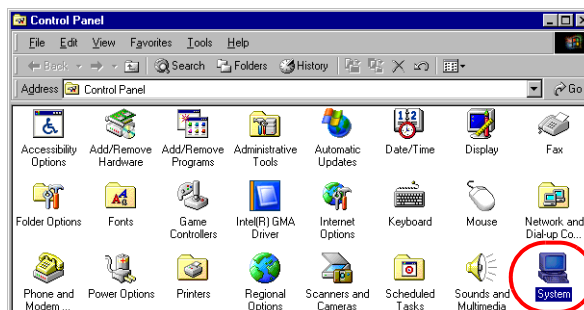
Follow the procedure below to check if the driver has been installed.

- Checking the installation of the driver

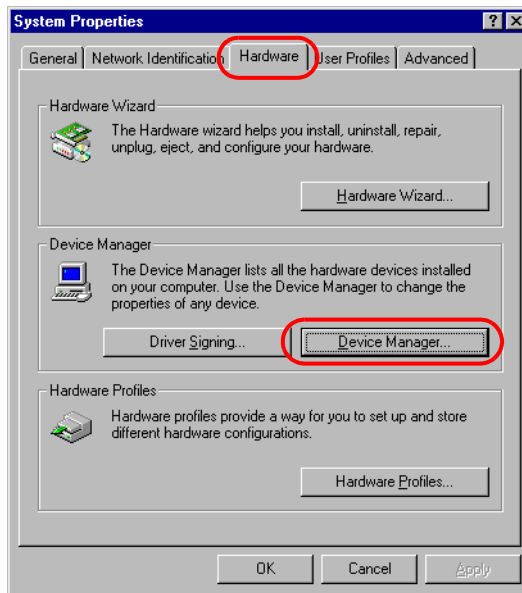
- (1) Click the Start button and click [Control Panel].




- (2) When [Control Panel] opens, double-click [System].

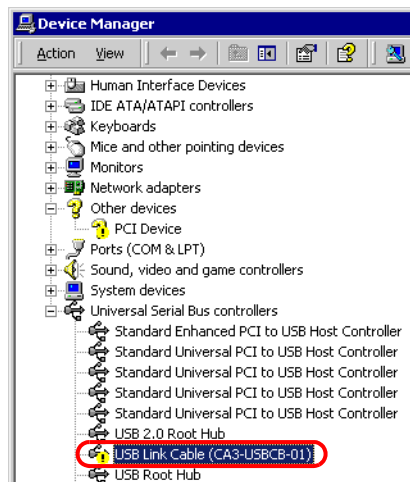


- (3) When [System Properties] opens, click the [Hardware] tab and click the [Device Manager] button.



- (4) When [Device Manager] opens, click the [+] mark on the left of [Universal Serial Bus controllers]. If [USB Link Cable (CA3-USBCB-01)] is displayed in the displayed list, the driver is installed properly.

- NOTE** • When the  mark is displayed to the left of [USB Link Cable (CA3-USBCB-01)] as shown below, disconnect the USB cable from the PC once, connect it again, and install the driver. For the driver installation procedure, see the next page.



Continued



- Installing the driver

If the driver has not been installed properly, reinstall it using the following procedure.

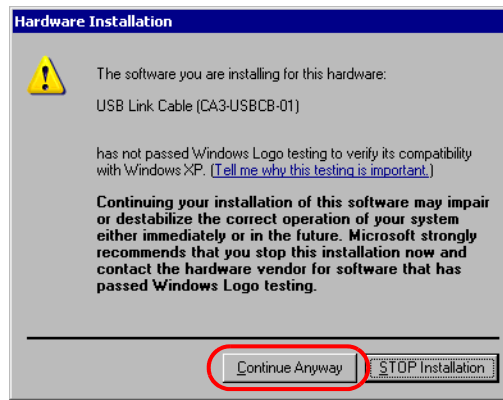
Connect the PC and GP using the optional USB transfer cable set.

A dialog box will appear if the USB cable's drivers are not installed. Please install them as directed.

---

**NOTE**

- Depending on Windows® XP's security level, the following [Hardware Installation] dialog box will be displayed while installing the USB drivers. Click [Continue Anyway] and the driver installation for CA3-USBCB-01 will begin. When the installation finishes, click [Complete].



---

## Password entry is required during operation. (Have you set a password?)

---

### ◆Cause

A password has been set for the transfer operation.

### ◆Solution

- If you forget the transfer password  
Even if you forget the transfer password, you cannot cancel the password setting. You need to delete the password information.

Set the GP offline and initialize the memory.

☞ “2.13.1 Settings common to all Display models u Initialize User Memory” (page 2-78)

- 
- |                  |   |
|------------------|---|
| <b>IMPORTANT</b> | <ul style="list-style-type: none"><li>• When you forget the reception password<br/>When you forget the reception password, you cannot receive files. Check if any backup files are saved in a location other than the GP.</li></ul> |
|------------------|---|
- 

---

## Can you send a new project file?

---

### ◆Cause

If you can send a new project file to the GP, the data in the project file you tried to send may have a problem.

### ◆Solution

Follow the procedure below to check if you can transfer a new project file.

- (1) Create a new project file.

☞ GP-Pro EX Reference Manual “5.2.2 Setup Procedure ■ Creating/Saving” (page 5-11)

- (2) If you can send a new project file, the data in the project file you tried to send may have a problem. Copy the data for the file to a new project file and transfer it. For the copy procedure, see the following section.

☞ GP-Pro EX Reference Manual “5.8 Copying a Screen from another Project” (page 5-40)

- 
- |             |  |
|-------------|--|
| <b>NOTE</b> | <ul style="list-style-type: none"><li>• The contents which can be copied with [Copy from another Project] are the contents of the base screen and window screen only. Since other contents cannot be copied, you need to set them again.</li></ul> |
|-------------|--|
-

---

## Can you force a transfer by setting DIP switch 2 of the Display to ON?

---

### ◆Cause

The system of the GP may have a problem, causing the GP to freeze. If the project file can be forced to transfer, there is not a problem with the GP.

### ◆Forcing transfer of project files

There are two methods to force the transfer of project files. For the procedure, see the section below.

☞ “2.12.3 Forcing the transfer of project files” (page 2-62)

---

## Can you transfer the file from a different PC?

---

### ◆Cause

If the file can be transferred from a different PC, the PC itself may have a problem.

### ◆Solution

- If the file can be transferred from a different PC
  - (1) The PC that you tried to transfer the project file from first, may have a problem. Uninstall the USB cable's drivers once and then reinstall it. Also uninstall GP-Pro EX once and then reinstall it.
- If the file cannot be transferred from a different PC
  - (1) The USB cable may have a problem. Transfer the project file using LAN or CF card.
    - ☞ GP-Pro EX Reference Manual “32.3 Transferring Project Files via Ethernet (LAN)” (page 32-12)
    - ☞ GP-Pro EX Reference Manual “32.7 Downloading using the CF card” (page 32-36)

## ■ Transfer fails when an Ethernet cable is used.

### Has the IP address been set for the Display on its offline screen?

#### ◆Cause

To transfer project files with an Ethernet cable, you need to set the IP address for the GP.

#### ◆Solution

Set the IP address for the GP.

☞ “2.5.1 Assigning an IP address to the Display” (page 2-34)

### Has the IP address been set for the PC?

#### ◆Cause

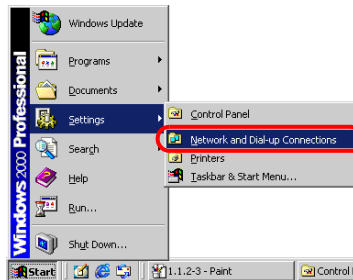
To transfer project files with an Ethernet cable, you need to set the IP address for the PC.

#### ◆Solution

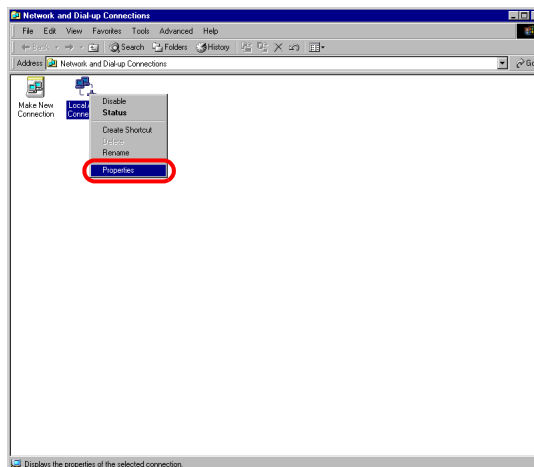
Set the IP address for the PC.

- Setting the IP address for the PC

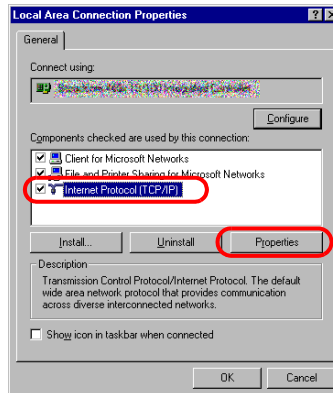
(1) Click the Start button, select [Settings], and click [Network and Dial-up Connections].



(2) [Network and Dial-up Connections] opens. Right-click the [Local Area Connection] icon and select [Properties] from the displayed context menu.

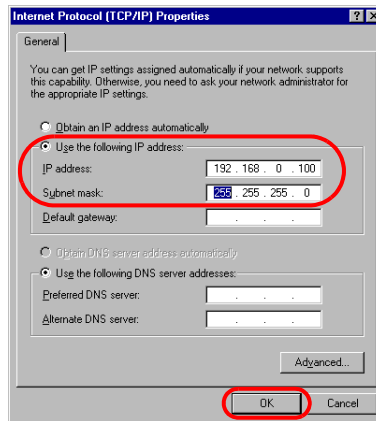


- (3) When [Local Area Connection Properties] appears, select [Internet Protocol (TCP/IP)] and click the [Properties] button.

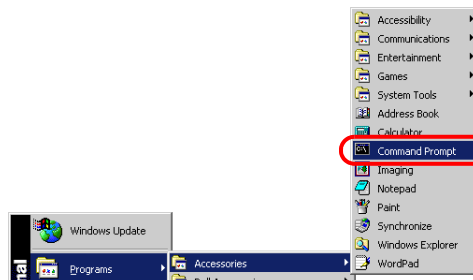


- (4) Select [Use the following IP address] and specify the IP address and subnet mask (Example: 192.168.0.100, 255.255.255.0). Click the [OK] button to complete the setting.

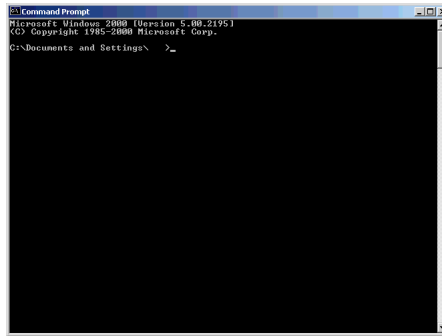
**NOTE** • For details about the IP address setting, ask your network administrator.



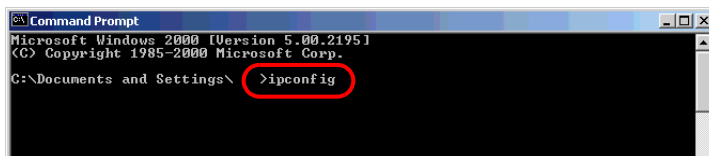
- Checking whether the IP address is set properly for the PC  
Execute the IPCONFIG command at the command prompt.  
(1) Click the Start button, select [Programs], and click [Accessories].



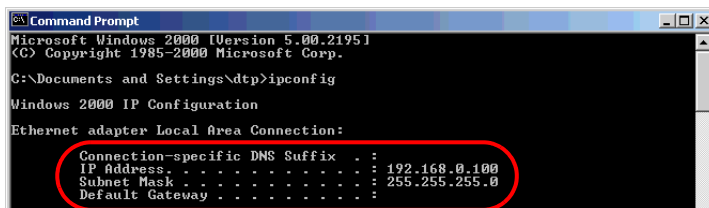
- (2) Select [Command Prompt] from [Accessories], and the following screen is displayed.



- (3) Type "ipconfig" after "C:\Documents and Settings\ (Your computer name)" is displayed on the screen and press the Enter key.



- (4) The result of the command execution is displayed. Check whether the displayed IP address and subnet mask are the same as those set for the GP. If they are different, restart the computer.



Continued

---

## Is the Ethernet cable a straight type or a cross type?

---

### ◆Cause

The cable connection method varies depending on the type of cable.

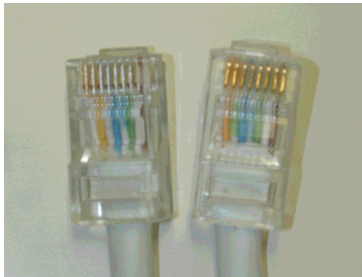
### ◆Solution

When a straight cable is used, you need to provide a hub between the GP and PC. When a cross cable is used, you can connect the GP and PC directly with the cable.

- Distinguishing between a straight cable and cross cable

Compare the connectors at the both ends of the cable. When the color-coded signal cables are arranged in the same orders from the left in the connectors, it is a straight cable. When they are arranged differently, it is a cross cable. The color-coded of the signal cables depend on the cable is used. The following pictures are examples.

Straight cable



The color-coded signal cables are arranged in the same orders from the left of them, "White-Yellow-White-Blue-White-Green-White", "White-Yellow-White-Blue-White-Green-White"

Cross cable



The color-coded signal cables are not arranged in the same orders from left of them, "Black-Orange-Blue-White-Green-Black", "Black-Green-White-Blue-Orange-Black"

---

## Can you receive the IP address of the Display by executing the PING command at the command prompt?

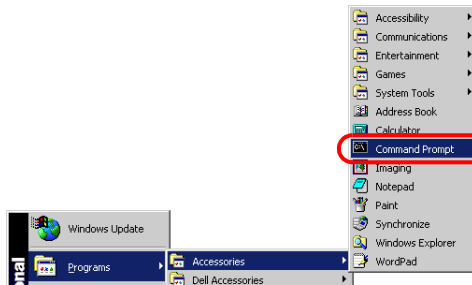
---

### ◆Cause

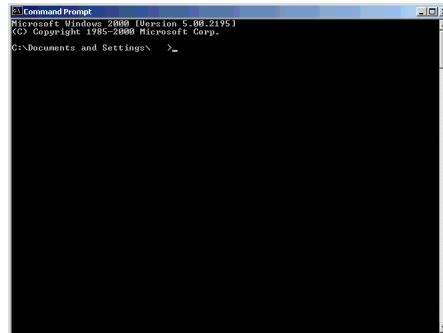
If you cannot receive the IP address, the GP may not be on the network because the Ethernet cable is not connected or the GP does not recognize the connection at the Ethernet cable connecting port.

### ◆Solution

- Execute the PING command at the command prompt.
  - (1) Click the Start button, select [Programs], [Accessories], and [Command Prompt].

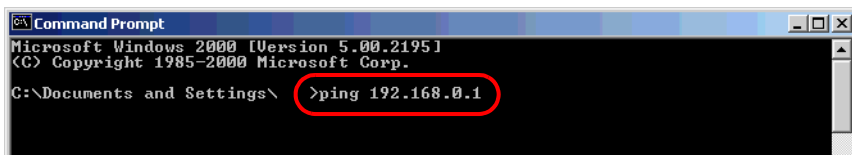


- (2) When [Command Prompt] is selected from [Accessories], the following screen is displayed.



- (3) Type "ping 192.168.0.1 (IP address of GP)" after "C:\Documents and Settings\"(Your computer name)" is displayed on the screen and press the Enter key.

**NOTE** • For details about the IP address setting, ask your network administrator.

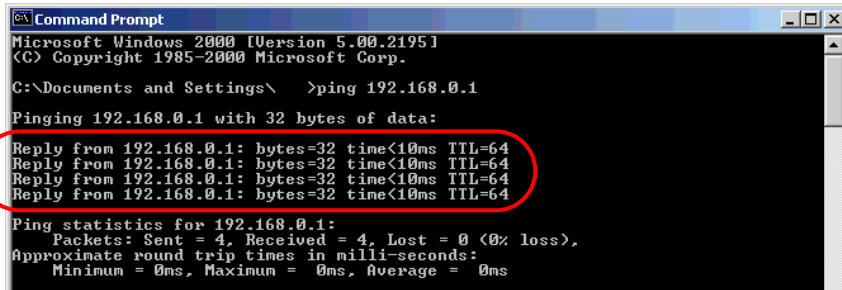


- (4) The result of the command execution is displayed. When a reply from the specified IP address of the GP is received, check if the port number of the GP is set to 8000. If the IP address cannot be received, replace the cable or hub.

Continued



(Screen when replies from the IP address of the GP are received)



```
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\Documents and Settings\ >ping 192.168.0.1

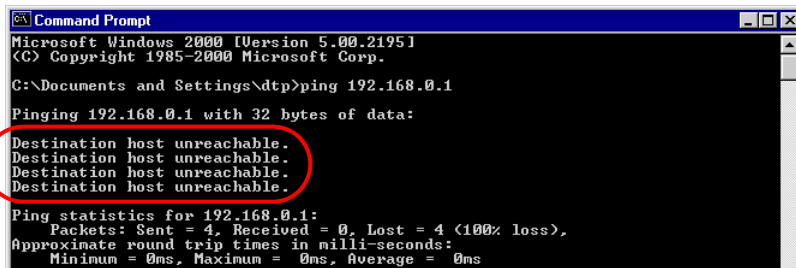
Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time<10ms TTL=64
Reply from 192.168.0.1: bytes=32 time<10ms TTL=64
Reply from 192.168.0.1: bytes=32 time<10ms TTL=64
Reply from 192.168.0.1: bytes=32 time<10ms TTL=64

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

(Screen when a reply from the IP address of the GP is not received)

When the following messages are displayed (The messages displayed depend on the connection status), ask the network administrator about the settings.



```
Microsoft Windows 2000 [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\Documents and Settings\ntp>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Destination host unreachable.
Destination host unreachable.
Destination host unreachable.
Destination host unreachable.

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

---

## Is the firewall feature activated?

---

### ◆Cause

When Microsoft Windows<sup>®</sup> XP Service Pack 2 is used and the Transfer Tool starts, a message appears to show that the operation is blocked by the Windows<sup>®</sup> firewall feature.

### ◆Solution

You can continue the transfer process by canceling the blocking. However, if you transfer data to two or more GP units, you need to select [PASV] for [Communication Port Settings] in the [Transfer Settings] dialog box, or disable the firewall feature.

---

## Are two or more LAN cards used?

---

### ◆Cause

For a PC that is using 2 or more LAN cards, the desired GP may not be acquired even if you automatically acquire the IP addresses. This happens because the OS searches the GP connected to the LAN card that was previously found.

### ◆Solution

Click [Add] on the [Select Main Unit] dialog box and manually set the IP address of the GP you wish to transfer to.

## Is memory-resident software installed?

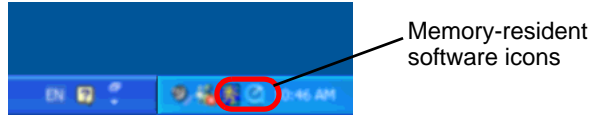
---

### ◆Cause

If any memory-resident software is installed, the transfer of project files may fail.

#### NOTE

- “Memory-resident software” is an application program for which the icon is displayed on the Taskbar and which is activated all the time.



### ◆Solution

If any memory-resident software is installed, right-click its icon to show a context menu, terminate the software, and then try transferring the file again.

Continued

## Does the self-diagnosis of the Display regarding the Ethernet interface indicate an OK result?

### ◆Cause

If there is a problem with the Ethernet connection port, the connection fails.

### ◆Solution

- Conduct the self-diagnosis of the GP to check the Ethernet interface. For the procedure to enter offline mode, see the following section.

☞ “2.2.1 Entering OFFLINE Mode” (page 2-12)

1. Enter offline mode and touch [Maintenance Menu] in the item changeover switches.

2. When the [Maintenance Menu] opens, touch [Check COM1/COM2/LAN].

3. When [Check COM1/COM2/LAN] opens, touch [LAN].

4. When the following confirmation message is displayed, touch [Start].

5. During the check, the following message is displayed.

6. When [OK] is displayed as a result of the check, exit from all security software and memory-resident software on the PC and try transferring the project file again. When [NG] is displayed, the GP may be faulty. Please contact your local GP distributor.

☞ “1.7.2 Contact us!” (page 1-110)

---

## Password entry is required during operation. (Have you set a password?)

---

### ◆Cause

A password has been set for the transfer operation.

### ◆Solution

- If you forget the transfer password

Even if you forget the transfer password, you cannot cancel the password setting. You need to delete the password information.

Set the GP offline and initialize the memory.

☞ “2.13.1 Settings common to all Display models u Initialize User Memory” (page 2-78)

---

**IMPORTANT**

- When you forget the reception password  
When you forget the reception password, you cannot receive files. Check if any backup files are saved in a location other than the GP.
-

## ■ Transfer fails when the CF card is used. (Using the CF memory loader tool)

### Is an error code displayed?

#### ◆Cause

When the CF card has not been inserted in the GP, or when the CF card hatch is open, an error message is displayed and a project file cannot be downloaded. (The error message is “RAAA010 The CF card has not been inserted, or the CF card hatch is open.”)

#### ◆Solution

Check that the CF card has been inserted properly or that the CF card hatch is closed.

- If you still cannot download a project file after checking the above points, confirm that you are using a CF card manufactured by Pro-face (sold separately).

### Was the CF card formatted in NTFS format?

#### ◆Cause

If the CF card is formatted in NTFS format using the PC, the GP cannot recognize the CF card.

#### ◆Solution

Format the CF card again in FAT32 or FAT format using the PC.

### Is the memory loader tool created together with the data in the CF card?

#### ◆Cause

When you cannot upload the project file from GP to PC using CF card, the memory loader tool may not be transferred to the CF card properly.

#### ◆Solution

Select [Create Boot CF-Card] from [Memory Loader]-[Transfer Tool] and create the memory loader tool. Confirm that the memory loader tool is saved in the CF card.

For the procedure to create the backup data, see the following section.

- ☞ GP-Pro EX Reference Manual “32.7.2 Transfer Process ■ Transferring Project Files from GP to PC (or another GP)” (page 32-41)

### Is the backup data created in the CF card?

#### ◆Cause

When you cannot download the project file from PC to GP using CF card, the backup data may not be created in the CF card.

#### ◆Solution

Select [Create Backup File] from [Memory Loader]-[Transfer Tool] and create the backup file. Confirm that all folders and files created for the backup data, saved in the CF card.

For the procedure to create the backup data, see the following section.

- ☞ GP-Pro EX Reference Manual “32.7.2 Transfer Process ■ Transferring Project Files from PC to GP” (page 32-37)

---

## Password entry is required during operation. (Have you set a password?)

---

### ◆Cause

A password has been set for the download operation.

### ◆Solution

- If you forget the download password  
Even if you forget the download password, you cannot cancel the password setting.  
You need to delete the password information.

Set the GP offline and initialize the memory.

- ☞ “2.13.1 Settings common to all Display models u Initialize User Memory” (page 2-78)

---

**IMPORTANT**

- When you forget the upload password  
When you forget the upload password, you cannot upload files. Check if any backup files are saved in a location other than the GP.
-

## ■ Transfer fails when a modem is used.

### Is an error message displayed?

#### ◆Cause


A modem can be used to transfer screen data only. It cannot be used to transfer system data. The project files updated with the following contents cannot be transferred either.

- When the system setting is changed
- When the configuration or setting of the protocol is changed
- When the runtime system and/or protocol version are different between the source and destination
- When the version of the editor which generated the project is different
- When the type of fonts which is registered is different between the source and destination
- When the type or the version of I/O Driver is different between the source and destination

#### ◆Solution

Close the error message dialog box, reset the changes to the previous status, and transfer the project file again or transfer the project file by using USB or LAN.

#### NOTE

- For details about the error messages, refer to the following page.  
 "1.6.1 Software (GP-Pro EX)-related errors u When data is transferred with modem" (page 1-89)

### Is the status of the GP one of the following?

#### ■The GP is in Initial Start Mode.





#### ◆Cause

Since the GP does not have the runtime program, it cannot recognize the modem.

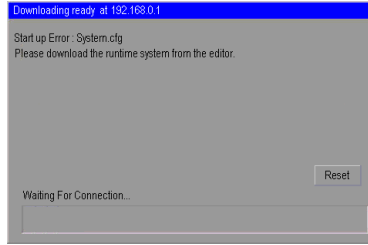
#### ◆Solution

Transfer the project file first by using USB or LAN.

-  GP-Pro EX Reference Manual "32.2 Transferring Project Files via USB Cable" (page 32-5)
-  GP-Pro EX Reference Manual "32.3 Transferring Project Files via Ethernet (LAN)" (page 32-12)

Continued

■The forced transfer screen appears immediately after startup.



◆Cause

Data required for the operation of the runtime program may be lost.

◆Solution

Transfer the project file first by using USB or LAN.

- ☞ GP-Pro EX Reference Manual “32.2 Transferring Project Files via USB Cable” (page 32-5)
- ☞ GP-Pro EX Reference Manual “32.3 Transferring Project Files via Ethernet (LAN)” (page 32-12)

---

**Is a proper modem used?**

---

◆Inapplicable modems

The following types of modems cannot be used:

- A terminal adapter connected to the ISDN line cannot be used on the PC side (GP’s receiving side uses an analog modem.)
- A modem which can be used only after connecting to a specific operation center such as Air’H of Willcom, Inc. (former DDI Pocket, Inc.)

◆Applicable modems

The following types of modems can be used:

- Only a modem which uses RS-232C can be connected to the GP.
- A Windows<sup>®</sup>-supporting modem which can call the modem connected to the GP
- A modem which supports AT commands
- A modem which allows automatic reception on the GP side
- A modem which is capable of hardware-flow control
- A modem which can return strings with result commands

---

**Is the modem connected to the Display properly?**

---

◆Cause

A USB-to-serial conversion cable must be used. The cable may be disconnected from the modem or GP. The modem may not be turned ON.

◆Solution

Check that the modem is properly connected (GP → Serial conversion cable → Modem). Also check that the modem has been turned ON. Pro-face recommends the use of the USB-Serial (232C) Conversion Cable : “CA6-USB232-01”(sold separately) for the connection between GP and modem. The following conversion cable can also be used.

Manufacturer: I-O DATA DEVICE, Inc., Model: USB-RSAQ3



---

## Is the modem set properly on the PC?

---

### ◆Settings of GP-Pro EX

In the [Transfer Settings] dialog box, check that the modem and phone number are set correctly.

### ◆Settings of Windows®

Open [Phone and Modem Options] in [Control Panel] and check that the settings match with those of the modem to be used. For details, see the manual for your modem.

## 1.2.4 Online update fails

### Can you select the [Install] or [Download Only] button after selecting an update item? Is any script error displayed?

#### ◆Online update

This is a function in which the GP-Pro EX automatically connects to the Internet and is updated to the latest version. For the procedure of the online update, see the following section.

☞ GP-Pro EX Reference Manual “2.2.1 Working with Online Update” (page 2-19)

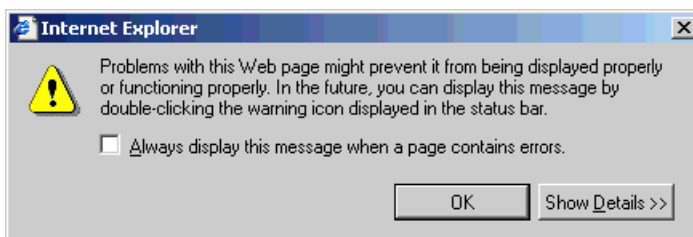
#### ◆Cause

The access to the update service server is blocked by the security setting of Internet Explorer. In such a case, the following phenomenon occurs after the update service screen is displayed, and the update may fail.

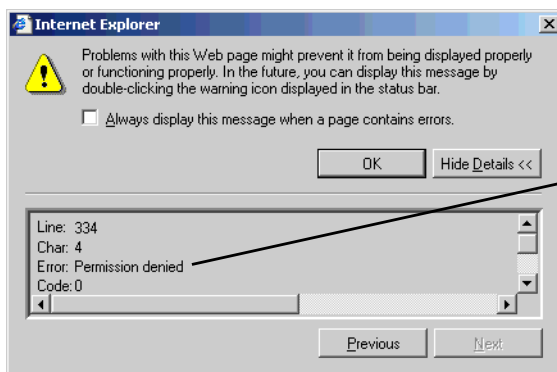
- The update item(s) is displayed; however, you cannot select the [Install] or [Download Only] button even after selecting the item.
- A script error is displayed when the update item(s) is displayed (See Sample screens 1 to 3 below).
- A script error is displayed when the update item(s) is selected (See Sample screens 1 to 3 below).

Sample screens 1 to 3 show errors only as examples. Other errors may be displayed depending on the Internet Explorer setting or the network environment being connected.

Sample screen 1:



Sample screen 2:



The line No. and error description may vary depending on the environment.

Continued

Sample screen 3:

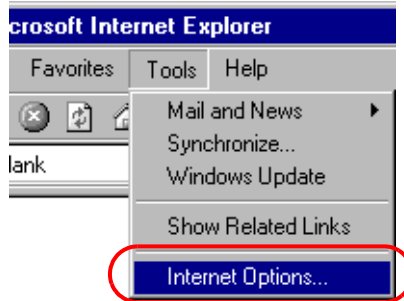


The line No. and error description may vary depending on the environment.

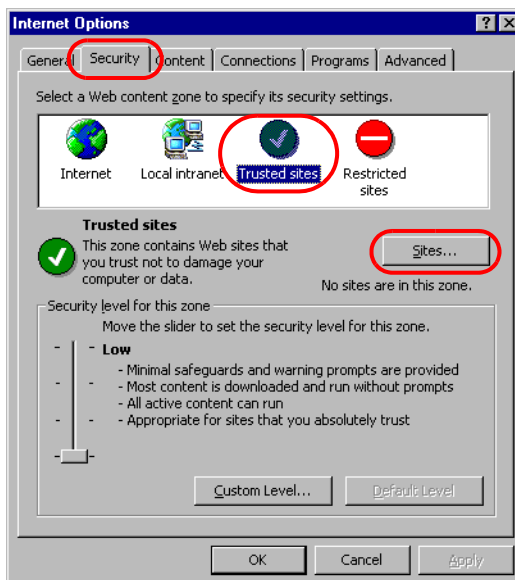
◆ **Solution**

In the Internet Explorer security settings, specify the URL of the update server to [Trusted sites] and enable communication with the server. Then update GP-Pro EX.

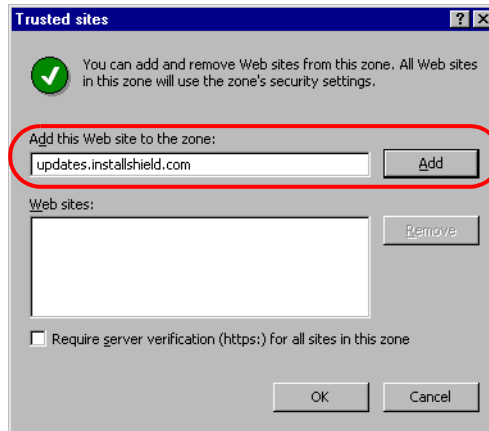
- (1) From the Internet Explorer [Tools] menu, select [Internet Options].



- (2) When the [Internet Options] dialog box opens, click the [Security] tab and select the [Trusted sites] icon. Click the [Sites] button.



- (3) In the [Trusted sites] dialog box, enter the URL of the update service (updates.installshield.com) in the [Add this Web site to the zone] box, and then click the [Add] button.



---

**NOTE** • Clear the [Require server verification (https:) for all sites in this zone] check box.

---

- (4) Click the [OK] buttons to close the [Trusted sites] and [Internet Options] dialog boxes. Then try the online update again.

# 1.3 Problems with Display operation

## 1.3.1 The touch panel (switch) does not respond

---

### Does the status LED illuminate in orange?

---

◆Cause

The backlight burnout detection function is activated because the backlight is nearly burnt out. Or, the power supply voltage supplied to the GP is low.

◆Solution

- When the backlight is nearly burnt out  
Replace the backlight. If the problem continues after the replacement, please contact your local GP distributor. If the status LED illuminates in orange soon after purchase, please contact your local GP distributor.

**IMPORTANT**

- The backlight burnout detection function monitors the current consumed by the GP. Depending on the failure type of the backlight, burnout may not be detected, or may be detected earlier than complete burnout. If this problem occurs soon after purchase, the GP may be faulty. In such a case, please contact your local GP distributor.
- 
- When the power supply voltage supplied to the GP is low  
Measure the power supply voltage of each GP unit and adjust it to the value within the range of “Rated Voltage” specified in the manual. If the problem continues even after the power supply voltage is adjusted, please contact your local GP distributor.  
☞ “1.7.2 Contact us!” (page 1-110)

---

### Does this phenomenon occur with all switches?

---

◆Cause

The problem may be in the switch setting.

◆Solution

- When all switches do not respond  
When the same phenomenon occurs with all switches, try the solution in the next section “Can the GP enter offline mode?”
- When only specific switches do not respond
  - (1) An interlock function may be set for the switches. Check the setting.  
☞ GP-Pro EX Reference Manual “11.7 Preventing Malfunctions (Interlock)” (page 11-19)
  - (2) When the touch is indicated with sound, the switch function is enabled. Find the specified address and check that the address is set to ON or OFF on the connected device side.

---

## Can the GP enter offline mode?

---

### ◆Cause

If the switches do not respond even after self-diagnosis in offline mode, the GP unit may be faulty.

### ◆Solution

- When the GP can enter offline mode  
Conduct the self-diagnosis of the GP unit in offline mode to determine whether the problem is in the GP or not.
  - (1) Perform the analog touch panel correction (calibration). For the setting procedure, see the following section.
    - ☞ “2.8.1 Checking whether the Display is operating properly n Calibration Touch Panel” (page 2-43)
  - (2) Select the [Check Touch Panel] option and check that the touched area lights up properly. For the checking procedure, see the following section.
    - ☞ “2.8.1 Checking whether the Display is operating properly n Touch Panel” (page 2-43)
  - (3) If the phenomenon continues after steps (1) and (2), the GP unit may be faulty. Please contact your local GP distributor.
    - ☞ “1.7.2 Contact us!” (page 1-110)

- When the GP cannot enter offline mode  
When the GP cannot enter offline mode, try the following measures.
  - (1) The system menu used to enter offline mode may be set not to be displayed. If the system menu does not appear, select [Menu and Error Settings] in [Main Unit Settings] with GP-Pro EX and set the option for [Show System Menu] to show the system menu, and then transfer the project file again.
    - ☞ GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide • Menu and Error Settings” (page 5-102)

If the GP can enter offline mode after the project file is transferred, follow the steps for “When the GP can enter offline mode” above.

- (2) Initialize the user memory (FEPROM) of the GP and then transfer the project file again. For the initialization procedure, see the following section.
  - ☞ “2.7.1 Initializing the user memory (FEPROM)” (page 2-39)

---

**IMPORTANT** • When the user memory is initialized, all data other than the system data (OS, runtime, and driver) and the clock setting data is erased. Be sure to back up the data before starting the initialization.

---

- (3) If the GP cannot enter offline mode even after steps (1) and (2), the GP unit may be faulty. Please contact your local GP distributor.
  - ☞ “1.7.2 Contact us!” (page 1-110)

---

## Is the communication between the GP and connected device successful?

---

### ◆Cause

The communication between the GP and connected device may have a problem.

### ◆Solution

If the GP displays an error code, see the following sections for the description and handling method. Also, check for breaks in the communication cable.

- ☞ “1.6.2 Display-related errors” (page 1-91)

## 1.3.2 The touch panel (switch) of the Display does not respond to touch but another area responds instead (The panel responds when nothing is touched)

### Does this phenomenon occur with all switches?

#### ◆Cause

If the switches do not respond properly even after the self-diagnosis in offline mode, the GP unit may be faulty.

#### ◆Solution

- When all switches do not respond properly  
When the same phenomenon occurs with all switches, try the solution for the next section “Can the GP enter offline mode?”
- When only specific switches do not respond properly
  - (1) Select the [Check Touch Panel] option and check that the touched area lights up properly. For the checking procedure, see the following section.
    - ☞ “2.8.1 Checking whether the Display is operating properly n Touch Panel” (page 2-43)
  - (2) Check the settings and address of the problematic switches. If the phenomenon continues after the check, the GP unit may be faulty. Please contact your local GP distributor.
    - ☞ “1.7.2 Contact us!” (page 1-110)

### Can the GP enter offline mode?

#### ◆Cause

If the switches do not respond properly even after the self-diagnosis in offline mode, the GP unit may be faulty.

#### ◆Solution

- When the GP can enter offline mode  
Conduct the self-diagnosis of the GP unit in offline mode to determine whether the problem is in the GP or not.
  - (1) Perform the analog touch panel correction (calibration). For the setting procedure, see the following section.
    - ☞ “2.8.1 Checking whether the Display is operating properly n Calibration Touch Panel” (page 2-43)
  - (2) Select the [Check Touch Panel] option and check that the touched area lights up properly. For the checking procedure, see the following section.
    - ☞ “2.8.1 Checking whether the Display is operating properly n Touch Panel” (page 2-43)
  - (3) If the phenomenon continues after steps (1) and (2), the GP unit may be faulty. Please contact your local GP distributor.
    - ☞ “1.7.2 Contact us!” (page 1-110)

Continued

- When the GP cannot enter offline mode

When the GP cannot enter offline mode, try the following measures.

- (1) The system menu used to enter offline mode may be set not to be displayed. If the system menu does not appear, select [Menu and Error Settings] in [Main Unit Settings] with GP-Pro EX and set the option for [Show System Menu] to show the system menu, and then transfer the project file again.

☞ GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide • Menu and Error Settings” (page 5-102)

If the GP can enter offline mode after the project file is transferred, follow the steps for “When the GP can enter offline mode” above.

- (2) Initialize the user memory (FEPRM) of the GP and then transfer the project file again. For the initialization procedure, see the following section.

☞ “2.7.1 Initializing the user memory (FEPRM)” (page 2-39)

---

**IMPORTANT** • When the user memory is initialized, all data other than the system data (OS, runtime, and driver) and the clock setting data is erased. Be sure to back up the data before starting the initialization.

---

- (3) If the GP cannot enter offline mode even after steps (1) and (2), the GP unit may be faulty. Please contact your local GP distributor.

☞ “1.7.2 Contact us!” (page 1-110)



### 1.3.3 The Display does not turn ON (The initial screen is not displayed. The screen remains black.)

---

#### Is the status LED turned OFF or does it illuminate in orange?

---

##### ◆Cause

The backlight burnout detection function is activated because the backlight is nearly burnt out. Or, the power supply voltage supplied to the GP is low.

##### ◆Solution

- When the status LED is turned OFF  
Measure the power supply voltage of each GP unit and adjust it to the value within the range of “Rated Voltage” specified in the manual. If the problem continues even after the power supply voltage is adjusted, please contact your local GP distributor.  
☞ “1.7.2 Contact us!” (page 1-110)
- When the status LED illuminates in orange  
Replace the backlight. If the problem continues after the replacement, please contact your local GP distributor. If the status LED illuminates in orange soon after purchase, please contact your local GP distributor.

---

**IMPORTANT**

- The backlight burnout detection function monitors the current consumed by the GP. Depending on the failure type of the backlight, burnout may not be detected, or may be detected earlier than complete burnout. If this problem occurs soon after purchase, the GP may be faulty. In such a case, please contact your local GP distributor.
- 

---

#### An error message “RAAA005 The specified initial screen no. does not exist.(xxxx)” was displayed.

---

##### ◆Cause

The screen No. of the screen initially displayed at startup (initial screen) may be wrong and a different screen may be displayed.

##### ◆Solution

Confirm the setting of the initial screen No. For the procedure to change the setting, see the following section.

- ☞ “2.3.5 Setting the screen No. of the screen that is initially displayed after the power is turned ON” (page 2-23)

---

## Can the GP enter offline mode?

---

### ◆Cause

If the switches do not respond properly even after the self-diagnosis in offline mode, the GP unit may be faulty.

### ◆Solution

- When the GP can enter offline mode

Conduct the self-diagnosis of the GP unit in offline mode to determine whether the problem is in the GP or not.

- (1) Perform the analog touch panel correction (calibration). For the setting procedure, see the following section.

☞ “2.8.1 Checking whether the Display is operating properly n Calibration Touch Panel” (page 2-43)

- (2) Select the [Check Touch Panel] option and check that the touched area lights up properly. For the checking procedure, see the following section.

☞ “2.8.1 Checking whether the Display is operating properly n Touch Panel” (page 2-43)

- (3) If the phenomenon continues after steps (1) and (2), the GP unit may be faulty. Please contact your local GP distributor.

☞ “1.7.2 Contact us!” (page 1-110)

- When the GP cannot enter offline mode

When the GP cannot enter offline mode, try the following measures.

- (1) The system menu used to enter offline mode may be set not to be displayed. If the system menu does not appear, select [Menu and Error Settings] in [Main Unit Settings] with GP-Pro EX and set the option for [Show System Menu] to show the system menu, and then transfer the project file again.

☞ GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide • Menu and Error Settings” (page 5-102)

If the GP can enter offline mode after the project file is transferred, follow the steps for “When the GP can enter offline mode” above.

- (2) Initialize the user memory (FEPRM) of the GP and then transfer the project file again. For the initialization procedure, see the following section.

☞ “2.7.1 Initializing the user memory (FEPRM)” (page 2-39)

---

**IMPORTANT**

- When the user memory is initialized, all data other than the system data (OS, runtime, and driver) and the clock setting data is erased. Be sure to back up the data before starting the initialization.
- 

- (3) If the GP cannot enter offline mode even after steps (1) and (2), the GP unit may be faulty. Please contact your local GP distributor.

☞ “1.7.2 Contact us!” (page 1-110)

## Is data to turn OFF the display/backlight written in the address of the system area?

---

### ◆Cause

Data to turn OFF the display or backlight may be written in the address of the system area.

### ◆Solution

Check if data to turn OFF the display<sup>\*1</sup> or backlight<sup>\*2</sup> is written in the address of the system area.

\*1 Data to turn OFF the display: Address +9 when the direct access method is used; and Address 12 when the memory link method is used. Clear the data written in these addresses to 0.

\*2 Data to turn OFF the backlight: Address +14 when the direct access method is used; and Address 11 when the memory link method is used. Clear the data written in these addresses to 0.

## 1.3.4 An alarm sounds continuously

### Is an error code displayed?

#### ◆Cause

The transferred project file may have an error, or the communication with the connected device may have a problem.

#### ◆Solution

Check the error code. See the following sections for the description and handling method of the error code.

☞ “1.6.2 Display-related errors” (page 1-91)

### Did the buzzer start sounding after you changed the screen data setting or the ladder program of the connected device?

#### ◆Cause

The bit which activates the buzzer may have turned on when the screen data setting or the ladder program of the connected device was changed.

#### ◆Solution

In order to isolate the problem, disconnect any cables which connect the GP and other devices, turn off the GP once, and turn it on again. Then try the following solutions in this order.

#### NOTE

- The problem can be easily isolated by disconnecting the cables connecting other devices. If, however, the GP is installed in an environment where disconnecting the cables is difficult, you can try the following solutions without disconnecting the cables.

- When the buzzer stops after the GP is turned OFF once and turned ON again  
You can activate the buzzer of the GP by turning ON Bit 01 of the 14th word from the system area start address.

☞ GP-Pro EX Reference Manual “26.3 Sounding the GP Buzzer from a Device/PLC” (page 26-7)

From the connected device, check whether Bit 01 of the 14th word is turned ON. If the bit is ON, you can stop the buzzer by turning OFF the bit.

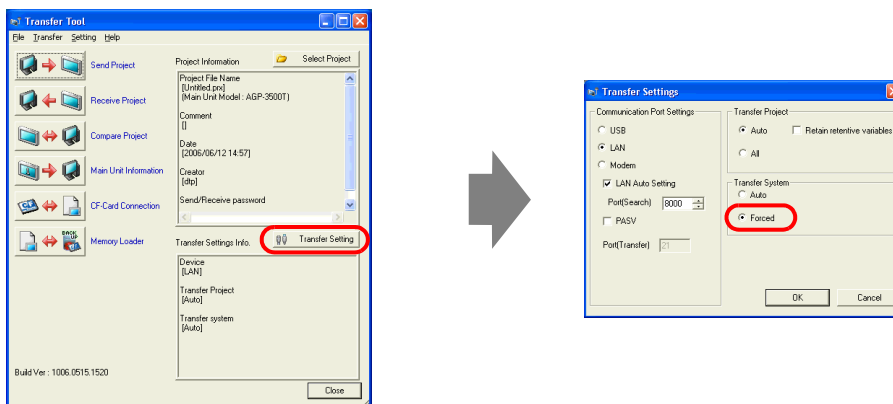
If the range of the system data area overlaps with the range used by the ladder program of the connected device, change the system area start address in offline mode. For the procedure, see the following section.

☞ “2.13.1 Settings common to all Display models u System Area Settings” (page 2-71)

Continued

- When the buzzer continues even after the GP is turned OFF once and turned ON again The screen data may have a problem. Try the forced setup function of GP-Pro EX to transfer the project file again. To force the transfer with GP-Pro EX, click [Transfer Project] and select [Transfer Setting] in the [Transfer Tool] dialog box. When the [Transfer Setting] dialog box opens, select [Forced] under [Transfer System] and click [OK] to start the transfer.

☞ GP-Pro EX Reference Manual “32.10.1 Setting UP [Transfer Settings]” (page 32-57)



- When the buzzer continues even after the forced transfer The GP may be faulty. Please contact your local GP distributor.  
☞ “1.7.2 Contact us!” (page 1-110)

## 1.3.5 Lines (streaks) appear on the screen. The screen turns white.

Does the phenomenon continue when you select [Check Display Pattern] in offline mode?

### ◆Cause

If the position, thickness, and length of the lines remain the same on the screen for [Check Display Pattern] of [Maintenance Menu] in offline mode, the GP may be faulty.

### ◆Solution

To determine whether the problem is in the GP or not, follow the procedure below to check the lines (streaks) on the screen for [Check Display Pattern] in offline mode.

☞ “2.2.1 Entering OFFLINE Mode” (page 2-12)

1. Enter offline mode and touch [Maintenance Menu] in the item changeover switches.

2. When the [Maintenance Menu] opens, touch [Check Display Pattern].

3. The screen for [Check Display Pattern] opens. If the position, thickness, and length of the lines (streaks) remain the same all the time, or if the screen is white, the GP may be faulty. Please contact your local GP distributor.

☞ “1.7.2 Contact us!” (page 1-110)

To exit from [Check Display Pattern], touch anywhere on the screen to return to the [Maintenance Menu] screen, and then touch [Exit].

Continued

## Are cross-talk patterns displayed?

---

### ◆Cause

A color STN panel and a monochrome LCD panel may produce the following phenomena due to the characteristics of liquid crystal panels:

- Screen flickering
- Uneven screen brightness
- Lines appear that do not exist originally, and as they flow, they extend the existing lines (cross-talk).



Cross-talk

### ◆Solution

This problem may be relieved by adjusting the contrast of the GP. Adjust the contrast by following the procedure described in the section below.

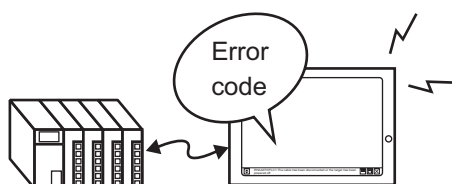
- ☞ “2.3.1 Adjusting the brightness/contrast” (page 2-19)

# 1.4 Problems with communication with connected devices

## 1.4.1 Communication fails on all screens

### Is an error code displayed on the GP?

If communication fails on all screens, first check the error code displayed on the screen.



Typical error No.	Main cause
RHAA006 to RHAA007	Check if any noises are generated. Check the cable connection and connector engagement.
RHAA010 to RHAA012	This error is displayed during Ethernet communication. Check the port No. and network environment.
RHAA033 to RHAA035	This error is caused by the connected device. For details, see the GP-Pro EX Device/PLC Connection Manual.
RHAA036 to RHAA037 <sup>*1</sup>	Address outside of the device range is used.
RHAA038 <sup>*1</sup>	An attempt was made to read data which is write-only.
RHAA039 <sup>*1</sup>	An attempt was made to write to data which is read-only.
RHAA040 to RHAA045	This error is caused by the connected device. For details, see the GP-Pro EX Device/PLC Connection Manual.
RHAA065 to RHAA066 <sup>*1</sup>	This is a typical error displayed when communication using Ethernet fails. Check the communication settings and IP address.
RHAA067 to RHAA070 <sup>*1</sup>	This is a typical error displayed when communication using RS-232C/422/485 fails. Check the communication settings and cable connection.

\*1 This chapter describes these errors only. For other errors, see the following section.

“1.6.2 Display-related errors u Errors displayed when communication fails” (page 1-91)



## Is an error starting with RHAA067 to RHAA070 displayed?

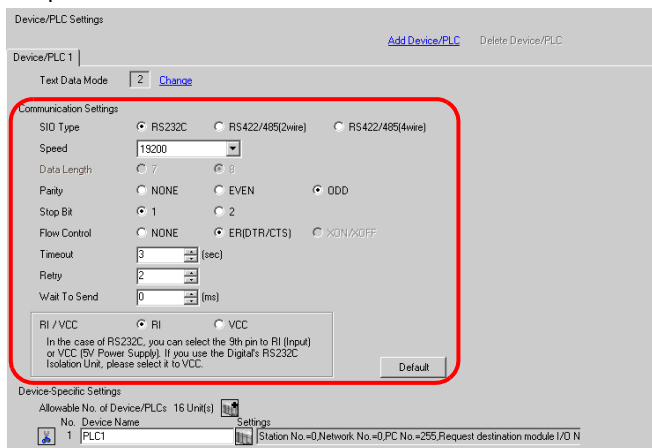
### ◆Cause

Errors starting with RHAA067 to RHAA070 are displayed when there is a problem with the RS-232C/422/485 communication.

### ◆Solution

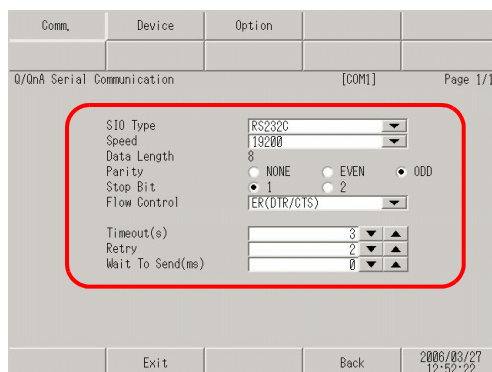
- (1) From [System Settings Window] of GP-Pro EX, select [Peripheral Settings] and then [Device/PLC Settings]. When a screen similar to the following is displayed, check that the communication settings are properly specified by referring to the “GP-Pro EX Device/PLC Connection Manual”.

Example: When Q/QnA Serial communication series manufactured by Mitsubishi Electric corporation is used



- (2) Get the GP in offline mode, select [Device/PLC Settings] of [Peripheral Settings], and also check that the communication settings are properly specified by referring to the “GP-Pro EX Device/PLC Connection Manual” again.

Example: When Q/QnA Serial communication series manufactured by Mitsubishi Electric corporation is used



- (3) Check the communication settings of the connected device by referring to the “GP-Pro EX Device/PLC Connection Manual” or the Device/PLC Connection Manual.
- (4) Check that the cable model and wiring are appropriate referring to the “GP-Pro EX Device/PLC Connection Manual”.

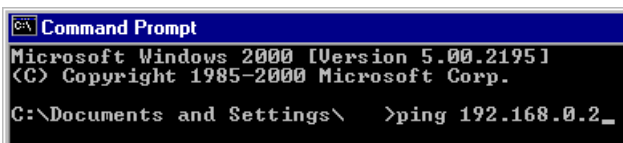
## Is an error starting with RHAA065 and RHAA066 displayed?

### ◆Cause

Errors starting with RHAA065 and RHAA066 are displayed when there is a problem with the Ethernet communication.

### ◆Solution

- (1) If the PC is located in a network, send the PING command to the GP and connected device and check whether they reply. Click the Start button, select [Programs], [Accessories], and [Command Prompt]. When the following screen is displayed, type “ping” followed by a space and the IP address after “C:\Documents and Settings\”. (Example: ping 192.168.0.2)



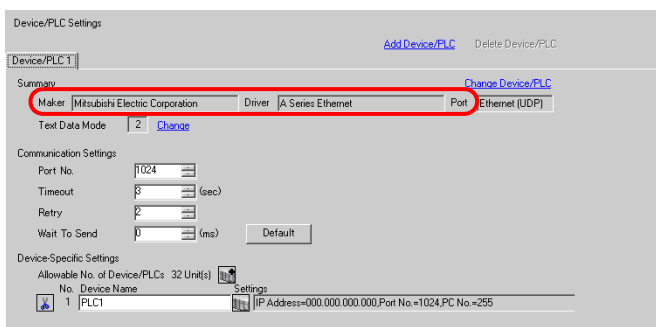
```


C:\Documents and Settings\ >ping 192.168.0.2_

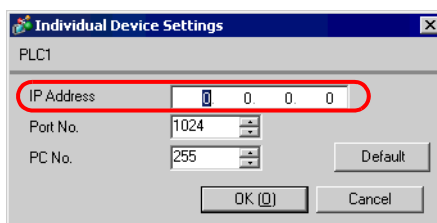
```

- (2) From [System Settings Window] of GP-Pro EX, select [Peripheral Settings] and then [Device/PLC Settings]. When a screen similar to the following is displayed, check that the communication settings are properly specified by referring to the “GP-Pro EX Device/PLC Connection Manual”.

Example: When A series Ethernet manufactured by Mitsubishi Electric corporation is used



Click  on the screen above to display the following dialog box. Check if the IP address of the connected device is set properly.



- NOTE** • For details about the IP address setting, ask your network administrator.

- (3) Set the GP in offline mode, select [Device/PLC Settings] of [Peripheral Settings], and also check that the communication settings are set properly by referring to the “GP-Pro EX Device/PLC Connection Manual” again.

Example: When A series Ethernet manufactured by Mitsubishi Electric corporation is used

Comm.	Device			

A Series Ethernet [UDP] Page 1/1

Port No.  Fixed  Auto  
1024

Timeout(s) 3  
Retry 2  
Wait To Send(ms) 0

Exit Back 2006/05/24 14:46:24

Also, check the IP addresses specified for the connected device and GP by referring to the following sections.

---

**NOTE** • For details about the IP address setting, ask your network administrator.

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- To check the IP address specified for the GP
    - ☞ “2.5.1 Assigning an IP address to the Display” (page 2-34)
  - To check the IP address specified for the connected device
    - ☞ “2.4.1 Checking the communication settings for the connected device in Ethernet connection” (page 2-30)
- (4) Check the communication settings and IP address of the connected device by referring to the “GP-Pro EX Device/PLC Connection Manual” or the Device/PLC Connection Manual
  - (5) Try changing the hub and cable.

## Is an error starting with RHAA036 to RHAA039 displayed?

### ◆Cause

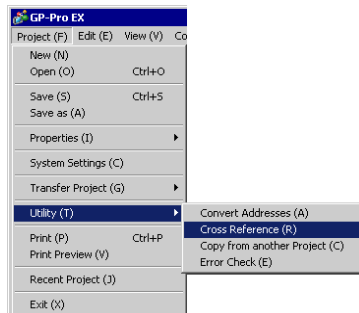
Errors starting with RHAA036 to RHAA039 are displayed when an address outside of the specified range is used.

### ◆Solution

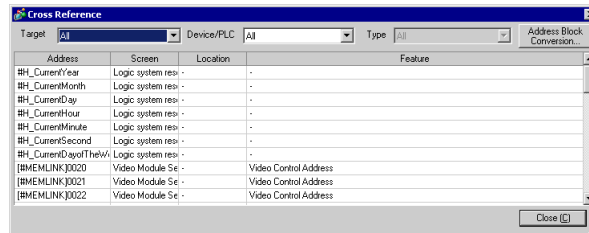
The addresses of an unsupported connected device may be used by the parts on the screen or scripts. These errors may occur on all screens if such unsupported addresses are used by the parts or functions which generate communication on all screens, in particular (Example: System data area, alarm, sampling, global D-script, global window, logic program).

Follow the procedure below to check if any devices use unsupported addresses.

- (1) From the [Project] menu of GP-Pro EX, expand [Utility] and select [Cross Reference].



- (2) When the [Cross Reference] dialog box appears, select [All] from the [Target] drop-down list.



Check if any of the following points are true for the addresses displayed in blue according to the error code.

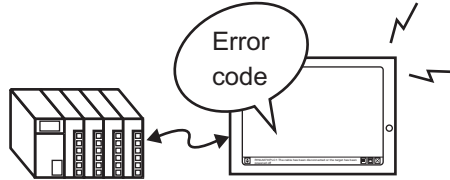
- Error codes RHAA036 and RHAA037  
Check if any addresses outside of the range of the device addresses supported by GP-Pro EX are used.
- Error code RHAA038  
Check if the Data Display or a D-script tries to read a write-only device.
- Error code RHAA039  
Check if a switch or a D-script tries to write to a read-only device.

**NOTE** • For the range of the device addresses supported by GP-Pro EX and write-only/read-only devices, see “Supported Devices” in each driver manual of “GP-Pro EX Device/PLC Connection Manual”.

## 1.4.2 Communication fails on specific screens

### Is an error code displayed on the GP?

If communication fails on specific screens, first check the error code displayed on the screen.



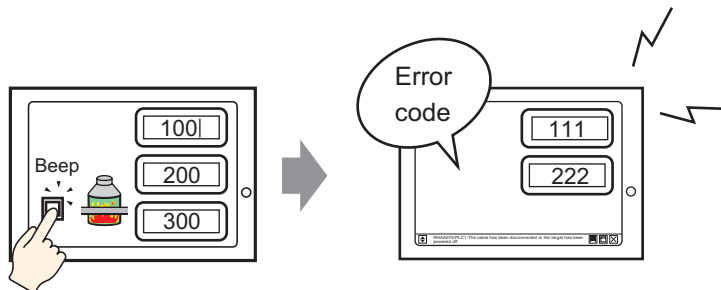
Typical error No.	Main cause
RHAA006 to RHAA007	Check if any noises are generated. Check the cable connection and connector engagement.
RHAA010 to RHAA012	This error is displayed during Ethernet communication. Check the port No. and network environment.
RHAA033 to RHAA035	This error is caused by the connected device. For details, see the GP-Pro EX Device/PLC Connection Manual.
RHAA036 to RHAA037 *1	Address outside of the device range is used.
RHAA038 *1	An attempt was made to read data which is write-only.
RHAA039 *1	An attempt was made to write to data which is read-only.
RHAA040 to RHAA045	This error is caused by the connected device. For details, see the GP-Pro EX Device/PLC Connection Manual.
RHAA065 to RHAA066 *1	This is a typical error displayed when communication using Ethernet fails. Check the communication settings and IP address.
RHAA067 to RHAA070 *1	This is a typical error displayed when communication using RS-232C/422/485 fails. Check the communication settings and cable connection.

\*1 This chapter describes these errors only. For other errors, see the following section.

“1.6.2 Display-related errors u Errors displayed when communication fails” (page 1-91)

#### ◆Cause

If an communication error occurs only when a specific screen is opened, a part or a script may be using the unsupported device addresses used on the base screen where the error occurred.

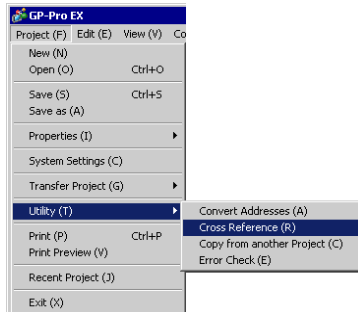


Continued

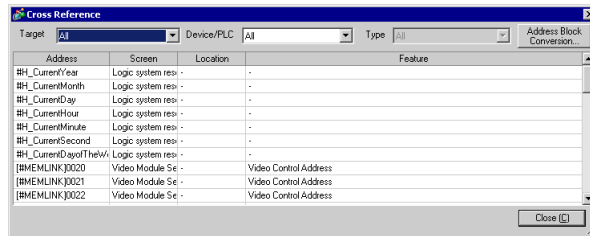
◆ **Solution**

Follow the procedure below to check the addresses used on the screen on which an error occurred.

- (1) With GP-Pro EX, open the screen on which an error starting with RHAA036 to RHAA039 occurred.
- (2) From the [Project] menu of GP-Pro EX, expand [Utility] and select [Cross Reference].



- (3) When the [Cross Reference] dialog box appears, select [All] from the [Target] drop-down list.



- (4) Check if any of the following points are true for the addresses displayed in blue according to the error code.
  - Error codes RHAA036 and RHAA037  
Check if any addresses outside of the range of the device addresses supported by GP-Pro EX are used.
  - Error code RHAA038  
Check if the Data Display or a D-script tries to read a write-only device.
  - Error code RHAA039  
Check if a switch or a D-script tries to write to a read-only device.

**NOTE** • For the range of the device addresses supported by GP-Pro EX and write-only/read-only devices, see “Supported Devices” in the “GP-Pro EX Device/PLC Connection Manual”.

## 1.4.3 Communication is slow

### Is the traffic between the Display and connected device heavy?

#### ◆Cause

When the GP tries to read/write the address data of many connected devices simultaneously, the traffic increases and the communication requires more time. This may result in the slow response of the Display switches or a slow speed when updating the value in the Data Display.

The GP communicates to/from the addresses used on the currently displayed screen. The communication is done on all screens if the address is used by the system data area, alarm, sampling, global D-script, global window, or logic program.

As a result, when the functions above are set to many addresses, the communication may take a longer time.

#### ◆Solution

- (1) Reduce the number of parts placed on each screen to the extent possible. Set the parts which are not used all the time so that they are called only when they are required on a window.
  - ☞ GP-Pro EX Reference Manual “18.3 Displaying Windows” (page 18-7)
- (2) Reduce the number of addresses used by the alarm, sampling, global D-script, or global window to the extent possible.
- (3) Use consecutive addresses for the parts which are placed on the same screen to the extent possible.
- (4) Use the addresses of [LS Area] or [USR Area] in the GP for the data which is not necessarily stored in the connected device.
- (5) Reduce the number of addresses of the connected device to which logic programs are set.

### Is the communication speed between the Display and connected device set to low?

#### ◆Cause

The communication becomes slow when the communication speed between the GP and connected device is set to low.

#### ◆Solution

If the communication speed is set to low, change the setting to improve the speed according to the procedure described in the following sections.

- To change the setting with the GP
  - ☞ “2.4.1 Checking the communication settings for the connected device” (page 2-29)
- To change the setting with GP-Pro EX
  - ☞ GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide ■ [Device Settings] Settings Guide” (page 5-99)

Continued

After the communication speed is changed, the project file must be transferred again. You also need to change the communication speed of the connected devices accordingly.

- NOTE** • The range of the available communication speed varies depending on the connected device. For the communication speed of the connected device, see the GP-Pro EX Device/PLC Connection Manual.

## Is the communication line affected by noises?

### ◆Cause

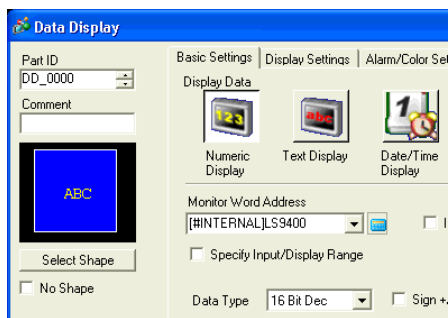
If the communication line is affected by noises, the communication appears to slow down because it is interrupted frequently.

### ◆Solution

Monitor the value of the communication time and check the communication line to confirm whether the communication line is affected by noises.

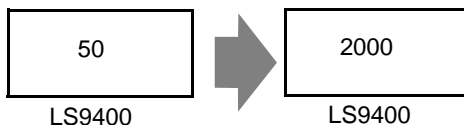
- 1 Monitoring the value of the communication time (communication cycle time)  
Monitor the value of the communication time (communication cycle time) stored in the LS Area in the GP. The communication time (communication cycle time) is stored in LS9400 of the LS Area in the unit of ms.

- (1) Open the project file currently being used, and place the Data Display specifying LS9400 on all screens.



- NOTE** • Since the value of LS9400 cannot be monitored from the connected device, place the Data Display

- (2) Transfer the project file to the GP again.
- (3) Monitor this value on the GP screen. If the value of LS9400 increases at specific occasions, a communication error is occurring due to noises or other causes.



Continued



**NOTE**

- When two or more devices are connected to the GP, the reference time required for the communication between the GP and connected devices (communication cycle time) is stored in LS9400 to LS9527 in the LS Area in the GP in the unit of ms.


LS Area	
LS9400	1st PLC of Driver 1
LS9431	32nd PLC of Driver 1
LS9432	1st PLC of Driver 2
LS9463	32nd PLC of Driver 2
LS9464	1st PLC of Driver 3
LS9495	32nd PLC of Driver 3
LS9496	1st PLC of Driver 4
LS9527	32nd PLC of Driver 4

- The GP3000 series allows the assignment of up to 4 drivers to one GP, and one driver allows the connection of up to 32 devices, which may vary depending on the type of the connected device.

Example: When drivers for Mitsubishi and Omron are assigned to the GP, and one Mitsubishi device and one Omron device are connected, you need to monitor LS9400 and LS9432.

When an Ethernet driver of Mitsubishi is assigned to the GP, and 32 devices are connected to one GP, you need to monitor LS9400 through LS9431.

- The addresses in the LS Area can be viewed by selecting [Peripheral List] and then [List of Device/PLC Management Addresses] from [System Settings Window] of GP-Pro EX.

 GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide ■ [Peripheral List] Settings Guide” (page 5-122)

2 Check the communication line with the line monitor.

## 1.4.4 Communication stops intermittently

### Is the communication line affected by noises?

#### ◆Cause

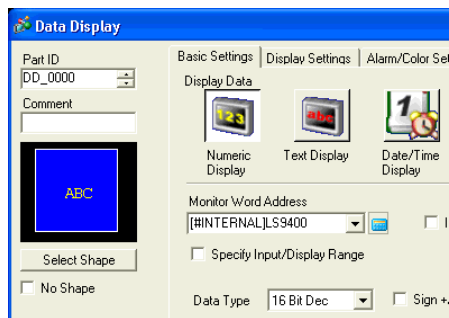
If the communication line is affected by noises, the communication appears to slow down because it is interrupted frequently.

#### ◆Solution

Monitor the value of the communication time and check the communication line to confirm whether the communication line is affected by noises.

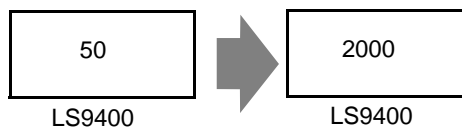
- 1 Monitoring the value of the communication time (communication cycle time)  
Monitor the value of the communication time (communication cycle time) stored in the LS Area in the GP. The communication time (communication cycle time) is stored in LS9400 of the LS Area in the unit of ms.

- (1) Open the project file currently being used, and place the Data Display specifying LS9400 on all screens.



**NOTE** • Since the value of LS9400 cannot be monitored from the connected device, place the Data Display

- (2) Transfer the project file to the GP again.
- (3) Monitor this value on the GP screen. If the value of LS9400 increases at specific occasions, a communication error is occurring due to noises or other causes.



Continued


- NOTE** • When two or more devices are connected to the GP, the reference time required for the communication between the GP and connected devices (communication cycle time) is stored in LS9400 to LS9527 in the LS Area in the GP in the unit of ms.

LS Area	
LS9400	1st PLC of Driver 1
LS9431	32nd PLC of Driver 1
LS9432	1st PLC of Driver 2
LS9463	32nd PLC of Driver 2
LS9464	1st PLC of Driver 3
LS9495	32nd PLC of Driver 3
LS9496	1st PLC of Driver 4
LS9527	32nd PLC of Driver 4

- The GP3000 series allows the assignment of up to 4 drivers to one GP, and one driver allows the connection of up to 32 devices, which may vary depending on the type of the connected device.

Example: When drivers for Mitsubishi and Omron are assigned to the GP, and one Mitsubishi device and one Omron device are connected, you need to monitor LS9400 and LS9432.

When an Ethernet driver of Mitsubishi is assigned to the GP, and 32 devices are connected to one GP, you need to monitor LS9400 through LS9431.

- The addresses in the LS Area can be viewed by selecting [Peripheral List] and then [List of Device/PLC Management Addresses] from [System Settings Window] of GP-Pro EX.
-  GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide ■ [Peripheral List] Settings Guide” (page 5-122)

2 Check the communication line with the line monitor.

## Is the operation of the Display or connected device overloaded?

### ◆Cause

Some functions, such as the D-script, global D-script, saving in the CF card, or hard-copying of the GP screen, may apply a heavy load to the operation of updating the GP screen. To determine the load, delete these functions once and check that the communication is done properly.

When scanning the program of the connected device takes time, the update of the display stops and the communication appears to stop.

### ◆Solution

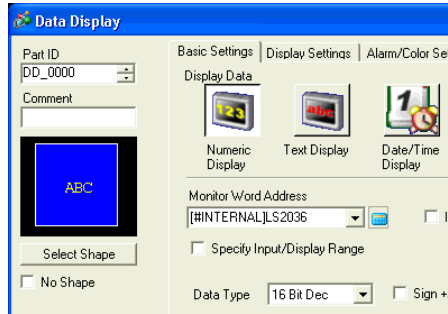
Follow the procedure below to check the load to the screen update operation. Also check the scan time of the connected device.

Continued

- Checking the load to the screen update operation

There are addresses called the LS Area in the GP and LS2036 in the LS Area stores the display scan time (time required for screen update operation; Unit: ms). Monitor the value stored in this address to check whether the load on the screen update operation is heavy.

- (1) Open the project file currently used, and place the Data Display specifying LS2036 on all screens.

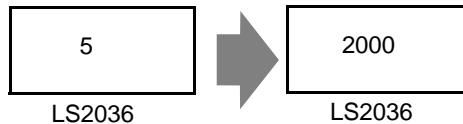


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**NOTE** • Since the value of LS2036 cannot be monitored from the connected device, place the Data Display

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- (2) Transfer the project file to the GP again.
- (3) Monitor this value on the GP screen. If the value of LS2036 increases at specific occasions, a D-script which applies a heavy load is executed at a certain timing, resulting in a longer time required for the GP screen update operation.



In such a case, decrease the number of D-scripts or prevent multiple processes from being executed at the same time.

- Checking the scan time of the connected device

Read the time required to scan the ladder program of the connected device and check if the scan requires a longer time at specific occasions. If the ladder program operation requires a long time, contact the manufacturer of the connected device.

# 1.5 Problems with communication with I/O units

## 1.5.1 The device connected to the DIO interface does not turn ON/OFF

### Do the devices connected to the DIO unit produce input/output properly?

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 or not.

**NOTE**

- For more details, refer to the settings guide.

☞ “2.13.2 When the DIO board type GP3000 series is used u I/O Driver (I/O Monitor)” (page 2-91)

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.

Continued

## Do the internal terminals of the GP operate properly?

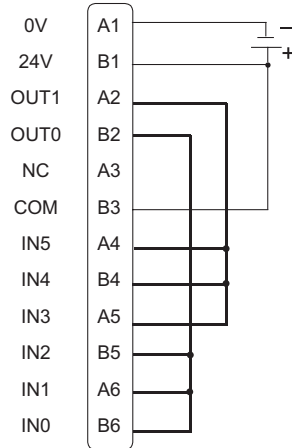
You need to prepare a loopback cable to check the internal terminals. Prepare the loopback cable according to the following instructions.

### ◆Preparing the loopback cable

The wiring of the loopback cable is as follows:

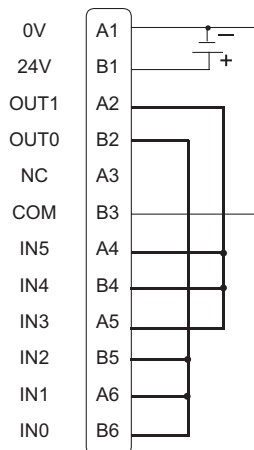
- Sink type

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



- Source type

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



Continued

◆ 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.

☞ “2.13.2 When the DIO board type GP3000 series is used u I/O Driver (I/O Check)” (page 2-90)

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 OK. If [NG] displayed, the GP unit may be faulty. Please contact your local GP distributor.

☞ “1.7.2 Contact us!” (page 1-110)

## 1.5.2 Communication fails with the FLEX NETWORK unit, PROFIBUS (Slave) unit, or VM unit cannot operate properly

**Refer to the manual for the unit.**

If communication fails with the expansion options, such as the FLEX NETWORK unit, PROFIBUS (Slave) unit, and VM unit cannot operate properly, first refer to the chapter of troubleshooting in each manual for the unit.

Expansion option	Manual name
FLEX NETWORK Series	Flex Network Analog Unit User Manual Flex Network Single-Axis Positioning Unit User Manual Flex Network DIO Unit User Manual Flex Network High Speed Counter Unit User Manual Flex Network 2ch Analog Unit User Manual
PROFIBUS(Slave) Unit	PROFIBUS Unit for GP3000 Series User Manual
VM Unit	GP2000 Series VM Unit User Manual



## 1.6 When an error message is displayed (Error code list)

When an error message is displayed, use the following table to find the description and handling method based on where, when and what kind of error is displayed.

Where	When	Error type	Description/Handling method
Software (GP-Pro EX)	Screen data is being created	Message	☞ “1.6.1 Software (GP-Pro EX)-related errors u n Errors displayed during screen creation” (page 1-63)
	During error check of created screen data	Message	☞ “1.6.1 Software (GP-Pro EX)-related errors u When a screen is created” (page 1-71)
	During error check of a created logic program	4-digit number + message	☞ “1.6.1 Software (GP-Pro EX)-related errors u When a logic program is created” (page 1-76)
	A project file is being transferred	Message	☞ “1.6.1 Software (GP-Pro EX)-related errors u Common errors” (page 1-86)
	A project file is being transferred with a connected modem	Message	☞ “1.6.1 Software (GP-Pro EX)-related errors u When data is transferred with modem” (page 1-89)
	A project file is being transferred with the CF memory loader	Message	☞ “1.6.1 Software (GP-Pro EX)-related errors u When the CF memory loader is used” (page 1-90)
	During online monitoring of a logic program	Message	☞ “1.6.1 Software (GP-Pro EX)-related errors u Errors displayed during online monitoring of the logic program” (page 1-90)
GP screen	Communication with the connected device fails	RHxx + 3-digit number	☞ “1.6.2 Display-related errors u Errors displayed when communication fails” (page 1-91)
	During runtime processing	RAAA + 3-digit number	☞ “1.6.2 Display-related errors u Errors starting with RAAA (Application errors)” (page 1-100)
	During communication setting of a runtime program	REAA + 3-digit number	☞ “1.6.2 Display-related errors u Errors starting with REAA” (page 1-106)
	GP is being started	Start up Error: Message	☞ “1.6.2 Display-related errors u Other errors (System errors)” (page 1-106)
	Device connected to the DIO board interface is not operating properly	RGE* + 3-digit number	☞ “1.6.2 Display-related errors u I/O driver errors” (page 1-108)
	A logic program is running	RGAA001	☞ “1.6.2 Display-related errors u Runtime error” (page 1-109)

## 1.6.1 Software (GP-Pro EX)-related errors

### ■ Errors displayed during screen creation

#### ◆Startup

Error Message	Cause and Solution	Reference
Unable to open two or more different versions of a Editor at a time.	Open the same version of an Editor as the running Editor.	—
No more Editor can be opened.	Up to two Editors can be opened at the same time.	

#### ◆New Project File

Error Message	Cause and Solution	Reference
Failed to open because the file you are trying to open isn't a project file of this application.	Confirm that the file extension is (*.prx) and open the file.	—
Failed to open the project file because of a file read error.	Couldn't read because the target file is damaged or it has a different format. Check the read-from file extension and read it again.	
Failed to startup GP-PRO/PB III. If the application has already been installed, specify a file and run it.	Verify whether or not GP-Pro/PB III is installed. To install GP-Pro/PB III, you will need a separate CD.	

#### ◆Project Properties


Error Message	Cause and Solution	Reference
Failed to create a folder.	Check the CF-card Output Folder and the specified drive and folder.	☞ GP-Pro EX Reference Manual "5.7.2 Setup Procedure ■ CF-Card Output Folder Setting Procedure" (page 5-38)

#### ◆Screen Management


Error Message	Cause and Solution	Reference
Failed to read the specified project file. Respecify the file to copy.	Confirm that the link to the file storage location is established and read the file again.	☞ GP-Pro EX Reference Manual "5.8 Copying a Screen from another Project" (page 5-40)
Failed to copy because the specified project was the current one. Specify another project.	To specify the current project file, finish the editing and then specify the file.	

Continued


**◆Address Block Conversion**

Error Message	Cause and Solution	Reference
An error occurred during Address Block Conversion. Conversion is aborted and the original state is restored.	Redo the [Convert Addresses] utility settings. Follow the procedure and do the settings again.	 GP-Pro EX Reference Manual "5.6.2 Setup Procedure" (page 5-34)

**◆Peripheral Settings**


Error Message	Cause and Solution	Reference
Cannot delete item because Device/PLC *** has been used elsewhere in the Project File. The cross reference tool will help you find where it has been used.	You cannot delete a device whose address is used for parts or features. Change the address used for parts or features and delete the device.	 GP-Pro EX Reference Manual "5.5 Confirming the List of Addresses being Used in a Project File" (page 5-25)

**◆Address Block Conversion on Model Change**

Error Message	Cause and Solution	Reference
Failed to import because the target file has a different format.	Couldn't import because the file is damaged or the file has a different format. Check the import-from file and import it again.	 GP-Pro EX Reference Manual "7.4.2 Setup Procedure ■ Designating an address conversion range and converting the PLC type" (page 7-22)
Failed to import because the addresses specified by the target file aren't the ones of currently set Devices/PLCs.	Check the file address and import it again.	
Failed to some of the data because the target file has a different format. Confirm the individual device name and its address.	Check the file's individual device name address and import it again.	
Failed to import the target file.	Couldn't import because the file is damaged or in use. Check the import-from file and import it again.	
Failed to export to the target file.	Verify that the file is not read-only, and check the specified save-to drive and folder.	

Continued



**◆D-Script**

Error Message	Cause and Solution	Reference
Unable to save the user-defined function because of cross reference. Modify the cross reference. *Cross reference means a condition in which a user-defined function A calls a user-defined function B, and the user-defined function B calls the user-defined function A.	User-defined functions cannot call each other. Check the functions to call.	 GP-Pro EX Reference Manual “20.6.3 Setting Procedure for Used-Defined Functions” (page 20-40)

**◆Built-in Function**

Error Message	Cause and Solution	Reference
The device set at the “Start” address must be the same as the one set at the “End” address.	Set the “Start” address and the “End” address to the same device.	—————
The “End” address must not be the same as or lower than the “Start” address. Please set the range correctly.	Set the “End” address to a greater address than the “Start” address.	

**◆Alarm Text**

Error Message	Cause and Solution	Reference
Beyond the address setting range. Allotment exceeding *** is not allowed.	Verify the address’ settings range and run the automatic layout. (*** is the greatest possible address setting)	 GP-Pro EX Reference Manual “19.9.1 Alarm Settings Guide” (page 19-63)
The permitted range from the current location is 1-***. Specify a value within the range.	Verify the address’ settings range and run the automatic layout. (*** is the greatest possible additional number of bits setting)	
The relationship of the upper limit value to the lower limit value is incorrect.	Set an upper value limit that is greater than the lower value limit.	 GP-Pro EX Reference Manual “19.9.1 Alarm Settings Guide ◆ Word Monitoring” (page 19-77)
Cannot insert a row due to an alarm set in the last row. Row insertion is canceled.	Cannot insert an additional alarm row. To insert a row, delete the alarm in the last row and insert a row again.	—————

Continued

◆Recipe Settings

Error Message	Cause and Solution	Reference
Failed to access the filing data (CF-Card) and couldn't convert it. Please confirm the settings.	Verify that the data in the CF-card Output Folder has not become read-only.	☞ GP-Pro EX Reference Manual "5.7.2 Setup Procedure ■ CF-Card Output Folder Setting Procedure" (page 5-38)
Failed to paste a part of information.	The paste range and the range of the data to be pasted may be different. Check the content of the data to be pasted.	_____
Failed to read the target file.	The specified data may be damaged. Check the data in the CF-card Output Folder.	☞ GP-Pro EX Reference Manual "5.7.2 Setup Procedure ■ CF-Card Output Folder Setting Procedure" (page 5-38)
Cannot create an index file because no CSV file has been created.	Try again after creating the CSV file.	☞ GP-Pro EX Reference Manual "25.11.3 About Condition Name Search Feature ◆ What is the Index File?" (page 25-99)
Failed to read a part of data because unwanted data exists in the target file.	The target file has data out of the specification range. Reconfirm the import-from file's data range. (The file is imported with the data out of range deleted.)	☞ GP-Pro EX Reference Manual "25.3 Creating Recipes (CSV Data)" (page 25-9)
Failed to read because the target file has a different format.	Couldn't read because the target file is damaged or it has a different format. Check the read-from file and read it again.	☞ GP-Pro EX Reference Manual "25.3 Creating Recipes (CSV Data)" (page 25-9)
Failed to read the target file.	Couldn't read because the target file is damaged or in use. Check the file and read it again.	
Failed to write to the target file.	Check the export destination file or disk and write to it again.	

◆Security Settings

Error Message	Cause and Solution	Reference
The same password is in use. Change your password.	You cannot specify the same password on multiple levels. Change the password.	☞ GP-Pro EX Reference Manual "22.5 Common Settings Guide (Security Settings)" (page 22-9)
The setting of "Use level 15 password to go offline" is enabled. Set the level 15 password.	Please set the level 15 password.	☞ GP-Pro EX Reference Manual "22.5.1 Password Settings" (page 22-9)

Continued

◆Sound Settings

Error Message	Cause and Solution	Reference
Unable to paste because the paste-to range is incorrect.	Specify the paste-to range with N times (N is 1 or larger integer) the size of the copied range.	—
Beyond the address setting range. Allotment exceeding *** is not allowed.	Specify an address supported by the device/PLC.	
Failed to read the specified file.	Check the target file and read it again.	
Failed to output the specified file after conversion.	Check the target file and output it again.	
Failed to read the specified file because its format was unsupported.	Convert the file into a supported format and read it again.	☞ GP-Pro EX Reference Manual “26.5.1 Common Settings (Sound Settings) Guide” (page 26-13)
Cannot edit (delete/play) the sound data because it does not exist.	Verify that there exists data inside the CF-card Output Folder.	☞ GP-Pro EX Reference Manual “5.7.2 Setup Procedure ■ CF-Card Output Folder Setting Procedure” (page 5-38)

◆Text Table

Error Message	Cause and Solution	Reference
A part beyond the given range of the no. of characters/rows exists. Failed to paste.	Make sure that the no. of characters and the no. of rows in the text to be pasted are within the range.	☞ GP-Pro EX Reference Manual “15.7.3 Text Table Settings Guide” (page 15-48)
Could not delete some cells that contains a message.	Delete the message and then delete the cell.	—
Failed to import because the target file has a different format.	Couldn't import because the file is damaged or the file has a different format. Check the import-from file and import it again.	☞ GP-Pro EX Reference Manual “15.6 Importing/Exporting Registered Text Tables for Use with Different Projects” (page 15-29)
Characters beyond the allowable no. were not imported. [Language No.: Language:Table Name] [Language No.: Language:Table Name]	The specified file has data out of the specification range. The file is imported with the data out of range deleted. [Language No.] 1-16 [Language] Outputted form in export [Table Name] No. of Characters × No. of Rows ≤ 1200	
Failed to import the target file.	Couldn't import because the file is damaged or in use. Check the import-from file and import it again.	

Continued

When an error message is displayed (Error code list)

Error Message	Cause and Solution	Reference
Failed to import because of an unavailable language in the setting.	The language specified in the file's Language Settings is not specified for the currently opened project. Check the import-from file or add the font to use in the Font Settings section of System Settings and import the file again.	☞ GP-Pro EX Reference Manual "6.2 Stroke Font, Standard Font" (page 6-3)
Failed to export to the target file.	Check the export destination file or disk and export to it again.	☞ GP-Pro EX Reference Manual "15.6.2 Setup Procedure ■ Export" (page 15-30)
A part beyond the given range of the no. of characters/rows exists. Failed to import.	Make sure that the no. of characters and the no. of rows in the text to be imported are within the range.	☞ GP-Pro EX Reference Manual "15.6.2 Setup Procedure ■ Import" (page 15-32)

◆Multiple Languages Change


Error Message	Cause and Solution	Reference
Characters may not be normally displayed because the font for the specified language hasn't been installed on Windows®.	The selected table message includes a language font that cannot be displayed on the current OS. Change the OS or add the font.	—

◆Symbol Variable List


Error Message	Cause and Solution	Reference
Unable to delete the target symbol because it is currently in use. You can check its location using cross reference.	Change the symbol registered in parts to another symbol (or address) and then delete the target symbol.	☞ GP-Pro EX Reference Manual "5.9 Registering Addresses with Comprehensive Names" (page 5-44)

Continued

**◆ Image Management**

Error Message	Cause and Solution	Reference
This setting may display the pasted image improperly because the selected color range is different from the one for the display unit, or the drawing target.	The image may be displayed improperly on the display unit due to the color range limit of the unit. Check the color range and convert the image again.	 GP-Pro EX Reference Manual "9.5 Changing Colors, Line Types and Patterns" (page 9-34)
Failed to read the image. Specify another image.	Couldn't import because the file is damaged, in use, or the file has a different format. Check the import-from file and import it again.	_____
Unable to convert the original file because it doesn't exist in [Original File Location].	The convert-from file doesn't exist in the specified location. Specify the file location and convert the file again.	_____


**◆ Images**

Error Message	Cause and Solution	Reference
Failed to read the image. Please specify another image.	The specified image file is damaged, or is not in BMP or JPEG format. Specify the file again.	 GP-Pro EX Reference Manual "9.10 Pasting an Image" (page 9-62)

**◆ Mark**

Error Message	Cause and Solution	Reference
Failed to update the mark library.	Failed to delete the mark. Verify that the specified file is not read-only and check the specified file and folder.	_____
Failed to create a mark library because the specified mark library name is invalid.	Change the mark library name and create a mark library again.	
Failed to rename the mark library because the specified mark library name is invalid.	Change the mark library name and rename the mark library again.	

**◆ Package Window**

Error Message	Cause and Solution	Reference
An user-created part cannot be registered in the *** package. It can be registered only in a user-created package.	Create a new package and register the created part in it.	 GP-Pro EX Reference Manual "9.8.2 Created Pictures in the Package" (page 9-54)

**◆ Template**

Error Message	Cause and Solution	Reference
Failed to read the target template.	Select a different template.	_____

Continued



**◆Duplicate**

Error Message	Cause and Solution	Reference
Failed to create the specified no. of duplicates because the set address range was exceeded. The limit is up to ***.	Delete unnecessary parts, if any, and duplicate the parts again.	GP-Pro EX Reference Manual "5.14.1 Restrictions for Creating Screens ■ No. of Features that can be Placed on a Screen" (page 5-144)
Failed to make the specified no. of duplicates because of exceeding the set address range.	For parts that have multiple addresses, this message displays even if only one address exceeds the range. Specify the address range and duplicate the parts again.	—

**◆Part List**

Error Message	Cause and Solution	Reference
Failed to export to the target file.	Check the export destination file or disk and export to it again.	—

**◆Parts Selection Toolband**

Error Message	Cause and Solution	Reference
Failed to read the target file.	The specified image file is damaged, or is not in BMP or JPEG format. Check the file to read and the drive.	—
Failed to write to the target file.	The file failed to write. Check the file to write and the drive.	

**◆Data Limitation**

Error Message	Cause and Solution	Reference
Beyond the data limitation. Check for errors. *Even if you save this data, you can't transfer it to the main unit.	You can save the data with the error, but you cannot transfer it to the main unit. Check the error contents.	GP-Pro EX Reference Manual "1.6.1 Software (GP-Pro EX)-related errors in Errors displayed during screen creation"

**◆Print**

Error Message	Cause and Solution	Reference
No print target exists because no setting has been established.	The print option is not selected. Check the selected options and print again.	GP-Pro EX Reference Manual "33.6.1 [Print] Settings Guide ■ Common Settings" (page 33-42)

Continued







## ■ Errors displayed during error check

### ◆ When a screen is created

Error No.	Screen ID/No./Line	Error Message	Handling method	Reference
1000	Peripheral Settings	The port setting is different. Confirm this in the Peripheral List.	Confirm the peripheral device with the ! mark in the Port item and change to a port with no overlaps.	☞ GP-Pro EX Reference Manual "7.2.2 Setup Procedure" (page 7-4)
1001	Security Settings	A duplicate security setting password exists. Please change the password.	Please set a different password for each level.	☞ GP-Pro EX Reference Manual "22.5.1 Password Settings" (page 22-9)
1500	Project Information	The send data size exceeds the limit. Confirm the send data size.	Set the User Screen Area within the following memory ranges for each model. GP-3300 Series GP-3400 Series to GP-3700 Series (There is a chance that 90% or more of the memory will cause an error output because of the data structure.)	☞ GP-Pro EX Reference Manual "6.4 [Font Settings] Settings Guide" (page 6-19)
1501	_____	***contains an illegal address. Set a legal address.	Input an address for the specified location address with a keypad. (*** indicates where the problem is located such as the function of the common settings or "Base screen 1" or other screen name.)	☞ GP-Pro EX Reference Manual "14.2.2 Setup Procedure" (page 14-6)
1502	Symbol Variable Settings	A symbol exists which has not been assigned real address. Confirm this in the Symbol Settings.	Delete the parts using a symbol for the address settings or with no address settings, or set the address to parts with no address settings.	☞ GP-Pro EX Reference Manual "5.9.2 Setup Procedure" (page 5-45)
1503	Font Settings	The specified font has not been registered in "Fonts for Projects". Add it, in "Font Settings", or change the font.	Add the font using "Font Settings" in the system settings or change the font.	☞ GP-Pro EX Reference Manual "6.4 [Font Settings] Settings Guide" (page 6-19)
1504	Project Information	Backup SRAM use exceeds the limit. The excess part will not be executed. Confirm this in the Project Information.	Make sure the total capacity of SRAM to use does not exceed approximately 320KB (approximately 120KB only for GP-3202B).	☞ GP-Pro EX Reference Manual "5.7 Seeing the Project information" (page 5-36)

Continued

When an error message is displayed (Error code list)

Error No.	Screen ID/No./Line	Error Message	Handling method	Reference
1505	Sampling Settings	In the Sampling Setting, the group whose "Backup to SRAM" is set to OFF exceeds the data storage area. The excess part will not be executed.	The setting of the group for which "Backup to SRAM" is set to OFF exceeds the range of the data storage area. Reduce the sampling words or the number of sampling times so that the setting remains within the range of the data storage area.	 GP-Pro EX Reference Manual "24.9.1 Summary ◆ DRAM" (page 24-107)
1506	_____	The CF-card feature is enabled.As this model does not support CF-card, this feature will not work.	The GP3202B model supports the CF-card export folder. Change the model or do not set the CF-card output folder.	 GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ■ [Device Settings] Settings Guide" (page 5-99)  GP-Pro EX Reference Manual "5.7 Seeing the Project information" (page 5-36)
1507	Global D-Script	The no. of addresses in use exceeds the limit.The excess code will not be executed.	Make sure the total number of addresses to use in Global D-Scripts (including calling functions) does not exceed 256 by creating multiple scripts with the same trigger conditions and separating instructions.	 GP-Pro EX Reference Manual "20.9.1 D-Script/Global D-Script Restrictions" (page 20-53)
1508	Global D-Script	The total no. of Global D-Scripts and functions exceeds the limit of 32.The excess code will not be executed.	Make sure the total number of Global D-Script and functions does not exceed 32 by uniting multiple scripts with the same trigger conditions.	
1509	Global D-Script	Global D-Script *** has an error. Invalid Expression.	Refer to the comments displayed in the [Message Area], use the Tool Box and the Built-in Functions, and make sure to input the correct format.	 GP-Pro EX Reference Manual "20.8.1 Common Settings Guide for D-Script" (page 20-48)
1510	Extended Script	The Extended Script has an error. Invalid Expression.	Refer to the comments displayed in the [Message Area], use the Tool Box and the Built-in Functions, and make sure to input the correct format.	
1511	_____	The no. of Data Transfer Displays exceeds the limit of 32. The excess displays won't work.	Make sure the total number of displays placed in the whole project does not exceeds 32.	 GP-Pro EX Reference Manual "5.13.9 [Screen] Settings Guide ■ No. of Features that can be Placed on a Screen" (page 5-144)

Continued

When an error message is displayed (Error code list)

Error No.	Screen ID/No./Line	Error Message	Handling method	Reference
1600	*1	D-Script [ID.No] has an invalid expression.	Use the support input functions such as the Tool Box, Built-in Functions, etc., and ensure that the format is inputted correctly and that no errors remain in the [Message Area].	☞ GP-Pro EX Reference Manual "20.8.1 Common Settings Guide for D-Script" (page 20-48)
1601	*1	Up to 8 data block display graphs or historical trend graphs can be placed on a screen.	Up to 8 Data Block Display Graphs and Historical Trend Graphs can function on one Base Screen. For 9 or more parts, separate them on different screens.	☞ GP-Pro EX Reference Manual "5.14.1 Restrictions for Creating Screens ■ No. of Features that can be Placed on a Screen" (page 5-144)
1602	*1	Up to 20 channels of data block display graphs or historical trend graphs can be set.	Make sure the total no. of channels for the Data Block Display Graph and Historical Trend Graph on one screen does not exceed 20.	☞ GP-Pro EX Reference Manual "17.8.2 Restrictions for Historical Trend Graphs" (page 17-69)
1603	*1	The no. of parts exceeds the limit.	Make sure the total no. of parts placed on one screen does not exceed 384.	☞ GP-Pro EX Reference Manual "5.14.1 Restrictions for Creating Screens ■ No. of Features that can be Placed on a Screen" (page 5-144)
1604	*1	The no. of addresses exceeds the limit.	Make sure the total no. of addresses set to parts on one screen does not exceed 1,000.	
1605	*1	Screen data exceeds the maximum limit.	Make sure the data capacity per screen does not exceed 1MB by separating the parts on different screens.	☞ GP-Pro EX Reference Manual "5.14.1 Restrictions for Creating Screens ■ No. of Screens that can be Created" (page 5-143)
1606	*1	The Data Display (with input permit), the Sampling Data Display, and the Special Data Display (displayed in CSV) cannot be placed at the same time.	Make sure to place only one Display.	—
1607	*1	Data Display (with Popup Keypad) is not available on a window screen.	To enter data into the Data Display in the window, uncheck [Enable Popup Keypad] for the Data Display and place the keypad directly in the window screen.	☞ GP-Pro EX Reference Manual "14.11.1 Numeric Display" (page 14-45)
1610	*1	Only 1 alarm summary feature can be placed on a screen.	Make sure to only place 1 Alarm part (Summary) on the screen. For any others, the action may not function correctly.	☞ GP-Pro EX Reference Manual "19.3.2 Setup Procedure" (page 19-14)

Continued

## When an error message is displayed (Error code list)

Error No.	Screen ID/No./Line	Error Message	Handling method	Reference
1611	*1	Only 1 alarm part that uses the sub display can be placed on a screen.	When multiple Alarm parts (History) are placed on the screen, sub displays will not function. Ensure there is only one Alarm part (History).	GP-Pro EX Reference Manual "19.9.3 Setting Up Text Alarm Parts" (page 19-125)
1612	*1	Only 1 CF file display feature of the Picture Display can be used in a screen.	Make sure to only place 1 Picture Display (CF file display feature) on the screen. For any others, the action may not function correctly.	GP-Pro EX Reference Manual "10.6.4 Restrictions for Picture Display (CF Image Display)" (page 10-56)
1613	*1	Up to 512 display positions, whose no. is set in Move Display, can be placed on a screen.	Make sure that the no. of displayed Image Display parts placed on one screen does not exceed 512.	GP-Pro EX Reference Manual "10.6.3 Restrictions for Picture Display (Move Display)" (page 10-54)
1614	*1	Up to 30 move indications (marks) of Picture Display can be placed in a screen.	Please lessen the no. of Image Display parts placed on the screen.	
1615	*1	Only 1 data transfer feature of the Special Data Display can be used on a screen.	Make sure to only place 1 Special Data Display (data transfer feature) on the screen. For any others, the action may not function correctly.	—
1616	*1	Only 1 CSV display feature of the Special Data Display can be used on a screen.	Make sure to only place 1 Special Data Display (CSV display feature) on the screen. For any others, the action may not function correctly.	GP-Pro EX Reference Manual "25.13.2 Restrictions on Displaying/Editing/Printing CSV Data ■ Restrictions on Displaying" (page 25-116)
1618	*1	The edit mode of the CSV display feature of the Special Data Display cannot be placed on a window screen.	Make sure to use the CSV display feature of a Special Data Display placed on a base screen.	
1619	*1	Only 1 File Manager Display (Special Data Display) can be placed on a screen.	Make sure to only place 1 Special Data Display (File Manager feature) on the screen. For any others, the action may not function correctly.	
1620	*1	The File Manager Display feature of the Special Data Display isn't available on the window screen.	Make sure to use the File Manager feature of a Special Data Display placed on a base screen.	
1621	*1	Only 1 Sampling Data Display can be placed on a screen.	Make sure to only place 1 Sampling Data Display on the screen. For any others, the action may not function correctly.	—

Continued

## When an error message is displayed (Error code list)

Error No.	Screen ID/No./Line	Error Message	Handling method	Reference
1623	*1	On a window screen, the data edit function of the sampling data display is not available.	Do not use the data edit function when using the sampling data display in the window screen.	GP-Pro EX Reference Manual "24.8.2 Sampling Data Display Settings Guide ■ Basic Settings" (page 24-100)
1624	*1	Only 1 Historical Data Display Switch can be placed on a screen.	Make sure to only place 1 Switch/Lamp (Historical Data Display feature) on the screen. For any others, the action may not function correctly.	GP-Pro EX Reference Manual "17.8.2 Restrictions for Historical Trend Graphs ■ Restrictions for Display Historical Data" (page 17-71)
1625	*1	Only 1 Historical Trend Graph with the Historical Data Display feature selected can be placed on a screen.	Make sure to only place 1 Historical Trend Graph (Historical Data Display feature) on the screen. For any others, the action may not function correctly.	
1626	*1	Up to 3 windows (up to 2 in the case of global windows) in which continuous read is set can be placed on a screen.	Make sure that the number of Window parts placed on the screen for continuous read settings does not exceed 3 (2 when using Global Windows). Any other Windows will not function, however, up to 3 continuous read Windows and 381 common Windows can be placed on the screen.	GP-Pro EX Reference Manual "18.7.1 Bit Action" (page 18-22)
1627	*1	Only 1 keypad can be called up on a screen.	Make sure to only place 1 keypad (call screen with a registered keypad) on the screen. For any others, the action may not function correctly.	GP-Pro EX Reference Manual "9.10 Pasting an Image" (page 9-62)
1628	*1	Limit of 1 Movie Player per screen.	Only one Movie Player can be placed on the screen. The operation of additional Movie Players cannot be guaranteed.	—
1629	*1	Information in the String Table can only be supported by stroke fonts. To use String Table, you must select Stroke Font.	Some languages selected in [Language Change Settings] in the String Table can be displayed with stroke fonts only. To use [Text Table] for [Text Type], set [Font Type] to [Stroke Font].	GP-Pro EX Reference Manual "15.7.1 Message Display Settings Guide ◆ Display Settings (Text Table)" (page 15-38)
1630	*1	Only 1 Text Alarm can be placed on a screen.	Make sure to only place 1 text alarm on the screen. For any others, the action may not function correctly.	GP-Pro EX Reference Manual "19.10.4 Text Alarm Restrictions on Parts" (page 19-146)

\*1 Base [Number: Comment], Window [Number: Comment], Header [Comment], Footer [Comment], and VM [Number: Comment] are displayed.

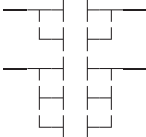
### ◆When a logic program is created

- Instruction operand errors

Error No.	Error Message	Cause and Solution
2000	***Not an array. Delete the reference to the array element, or change*** to an array. (*** indicates a symbol variable.)	An array element is specified in a non-array variable. Delete the reference or change the variable to an array.
2001	***Array element is out of bounds. Use an element within the array boundary, or increase the number of array elements. (*** indicates a symbol variable.)	Array elements are specified in a constant and they exceed the allowable number of array elements. Variable [n]... n = 0 to "Number of elements -1" Set the constant to a value at least one fewer than the number of elements which was set during the symbol variable setting.
2002	***Cannot specify elements in the variable. Delete the reference. (*** indicates a symbol variable.)	Member*1 name(s) is specified in a variable which is not a structure variable (Example: aaa.PT where "aaa" is an integer variable). The types of variables to which members can be specified are: Timer, counter, date, time, and PID. If the type of variable is none of these, delete the member reference.
2003	***The specified element does not exist. Confirm the reference. (*** indicates a symbol variable.)	The referenced member does not exist in a structure variable. Change the member reference.
2004	*** Cannot reference individual bits. Change the object data type to integer, or remove the bit reference.(*** indicates a symbol variable.)	Bit reference is available only for an integer type regardless of whether it is an array or non-array. When bit reference is required, change the object data type to an integer variable. If an integer variable cannot be used, remove the bit reference.
2005	***Cannot reference individual bytes. Change the object data type to integer, or remove the byte reference. (*** indicates a symbol variable.)	Byte reference is available only for an integer type regardless of whether it is an array or non-array. When byte reference is required, change the object data type to an integer variable. If an integer variable cannot be used, remove the byte reference.
2006	***Cannot reference individual words. Change the object data type to integer, or remove the word reference. (*** indicates a symbol variable.)	Word reference is available only for an integer type regardless of whether it is an array or non-array. When word reference is required, change the object data type to an integer variable. If an integer variable cannot be used, remove the word reference.
2500	Logic program is disabled but the project contains logic.	Although logic programs are disabled ([Disable] is set), there is a logic program(s) written in the project. When [Disable] is selected, the logic program written in the project does not run. This does not affect the drawing operation, however, it is recommended to delete the logic program if it is unnecessary.

Continued

\*1 Member: Each element of a structure variable. A structure variable is a collection of variables which have specific uses. Timer, counter, PID, time, and date variables are structure variables. An example of member reference is to specify. PT or ET for a timer variable.

Error No.	Error Message	Cause and Solution
2501	Cannot use a logic program with this model.	When a model is used with which logic programs cannot be used, the logic program(s) does not run even when it is written in the project. With such a model, you cannot use any logic programs regardless of whether logic programs are enabled or disabled ([Enable] or [Disable]). A logic program written in the project does not affect the drawing operation, however, it is recommended to delete the logic program if it is unnecessary.
3000	***Cannot use RET instruction. Change or remove the instruction. (***) indicates the name of a logic screen.)	A RET instruction is used on the INIT or MAIN logic screen. You cannot use a RET instruction on screens other than the SUB-** screen. Remove any RET instruction which is used on the INIT or MAIN logic screen.
3001	*** Cannot use EXIT instruction. Change or remove the instruction. (***) indicates the name of a logic screen.)	An EXIT instruction is used on the INIT or SUB-** logic screen. You cannot use an EXIT instruction on screens other than the MAIN screen. Remove any EXIT instruction which is used on the INIT or SUB-** logic screen.
3002	*** (***) indicates the name of a logic screen.)Logic cannot use instruction ***(***) indicates an instruction name.). Change or remove the instruction.	You cannot use JMP, JSR, and LWA instructions on the INIT logic screen. Remove JMP, JSR, and LWA instructions which are used on the INIT logic screen. JMP, JSR, and LWA instructions can be used only on the MAIN and SUB-*** screens.
3003	*** Logic (***) indicates the name of a logic screen.) cannot use instruction***(***) indicates an instruction name.). Change or remove the instruction.	PBC/PBR instructions are used on the INIT or SUB-** logic screen. You cannot use PBC/PBR instructions on screens other than the MAIN screen. Remove any PBC/PBR instructions which are used on the INIT or SUB-** logic screen.
3004	The number of nested branches exceeds the maximum. Reduce the branching.	<p>The number of branch levels (nested branches) exceeds 25. Reduce the number of branch levels to 25 or fewer.</p>  <p style="text-align: right;">: 1 nested branch</p> <p style="text-align: right;">: 2 nested branches</p>
3005	The number of nested FOR-NEXT instructions exceeds the maximum. Reduce nesting to less than 64.	There are several FOR-NEXT instructions registered in the program where FOR-NEXT is executed, and the number of levels (nestings) exceeds 64. Create a program using 64 or fewer levels.
3200	Instruction is undefined.	There is an instruction which has not been defined. Remove the instruction or use the editor version where the instruction has been defined.

Continued



When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
3201	***Instruction is misplaced. Put instruction at end of rung. (*** indicates an instruction name.)	An instruction which can be set only at the right end of the connecting line (end of rung) is not set properly. You can set logic control instructions (instructions other than INV) only at the end of the rung. Remove instruction(s) set to the right of a logic control instruction, or set a logic control instruction at the end of the rung.
3202	*** Instruction cannot be used in a FOR-NEXT loop. Remove the *** instruction. (*** indicates an instruction name.)	You cannot use logic control instructions (JMP, JSR, RET, EXIT, PBC, and LWA) in a FOR-NEXT program. Remove the logic control instruction or change the position of the FOR-NEXT loop.
3203	***Corresponding instruction*** cannot be found. Add instruction***. (*** indicates an instruction name.)	A NEXT instruction corresponding to FOR or a FOR instruction corresponding to NEXT cannot be found in the program. Add a corresponding FOR or NEXT instruction, or remove the existing FOR or NEXT instruction.
3204	***Instruction cannot have other instructions on the same rung. Remove all other instructions. (*** indicates an instruction name.)	When any of the FOR, NEXT, and PBR instructions is set on a rung, an instruction or branch cannot be set on the same rung. Remove any instructions other than the FOR, NEXT, or PBR instruction, or remove the FOR, NEXT, or PBR instruction.
3205	PBC corresponding instruction PBR cannot be found. Add instruction PBR.	A PBR instruction corresponding to a PBC instruction cannot be found. Set a PBR instruction corresponding to a PBC instruction below the PBC instruction.
3206	PBR corresponding instruction PBC cannot be found. Add instruction PBC.	A PBC instruction corresponding to a PBR instruction cannot be found. When setting PBC instruction, set one PBR instruction whose operand S1 is set to the higher hierarchical level (than that of the PBC instruction).
3207	*** Instruction cannot be used at the end of the rung. Add other instructions. (*** indicates an instruction name.)	Input instructions cannot be set at the end of a rung. Add an advanced instruction or a coil at the end of the rung.
3208	***There are instructions after this one. Remove the other instructions. (*** indicates an instruction name.)	There is an instruction or instructions after an instruction which can only be set at the end of a rung. Remove the instruction or instructions after this instruction.
3300	***Label specified in the JMP instruction does not exist. Check the label.(*** indicates an instruction name.)	The label name specified in the JMP instruction does not exist. Add the label specified in the JMP instruction or use a valid label name.
3301	***Label specified in the JMP instruction does not exist. Check the label.(*** indicates an instruction name.)	The label name specified in the JMP instruction is used on another logic screen. The JMP instruction can only be used on a single logic screen. Change the label name or remove the JMP instruction.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
3302	***Subroutine defined in the JSR instruction does not exist. Check the subroutine.(*** indicates a subroutine name.)	The subroutine specified in the JSR instruction does not exist. Change the setting of the JSR instruction or create a new subroutine.
3400	Undefined operand is being used.	There is an undefined operand in the instruction. Define the operand.
3401	*** Operand is undefined. Define the operand.(*** indicates an operand name.)	There is an undefined operand in the instruction. Define the operand.
3402	Specify an integer variable or constant for array elements.	To use a variable specified as an array, specify elements in an integer constant or set the type of the integer variable to non-array. The type of the integer variable must be set to non-array and an internal variable must be used.
3403	Use an integer variable or constant when referencing elements.	The element to be specified (bit, byte or word) must be an integer constant or an integer type non-array variable. The attribute of the integer type non-array variable must be internal.
3404	***Variable is used in multiple PID instructions. (*** indicates an instruction name.)	One PID variable is used in multiple PID instructions. One PID variable must be used in a single PID instruction. Remove the excessive PID instructions or add PID variables.
3405	*** Operand data type does not match instruction. Set up an operand with the correct data type. (*** indicates an operand name.)	The data type of operand S1, S2, S3, D1, or HP is incorrect. Available data types have been defined to individual operands, and the specified type is not available for the operand.
3406	*** Cannot use a constant in the operand. Specify different data. (*** indicates an operand name.)	You cannot set a constant in operand D1. Specify data other than a constant type.
3407	*** Cannot specify inputs in the operand. Specify different data. (*** indicates an operand name.)	You cannot set a variable type defined as an input in operand D1. Cancel the definition of input or input another variable type.
3408	***The data type or attribute of the operand does not match other operands. Change the data type or attribute. (*** indicates an operand name.)	There is an operand of a different type in operand S1, S2, S3, or D1 (When array is set for the variable method, the number of elements is also included.). Change the type so that all operands have the same type.
3409	***Operand constant exceeds operand *** bit size. Define a constant that fits in the bit size. (*** indicates an operand name.)	The constant value of the operand exceeds the bit size range of the variable specified in the operand. Set the constant value within the range of the bit size.
3410	Operand S1 is not an integer. Define an integer value.	Only integer constants can be specified for operand S1. Specify an integer constant if any other has been specified.
3411	Operand S1 is out of range. Value must be 0 to 7.	The data type of operand D1 is incorrect. The available type for S1 is a bit data type. Specify a bit data type for operand D1.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
3412	Operand D1 data type is incorrect. Use the bit data type.	The data type of operand D1 is incorrect. The available type for D1 is a bit data type. Specify a bit data type for operand D1.
3413	Operand D1 cannot map external inputs. Change the attribute or operand.	You cannot map a variable set up with the external input attribute to operand D1. Change the input attribute or set a different variable for the operand.
3414	The data type for operands is inconsistent. Use the same data type.	The data types set for the operands are not consistent. Use the same data type for all operands.
3415	*** Operand value exceeds operand D1 bit size. Define a constant value that fits in the bit size. (*** indicates an operand name.)	The integer constant value for operand S1 or S2 exceeds the range of the allowable input bit size of the variable type for operand D1. Set the integer constant value for operand S1 or S2 within the range of the allowable input bit size for operand D1.
3416	Array size between operands is different. Check array sizes.	When operands S1, S2, and D1 are integer arrays, the numbers of array elements differ between the operands. Set all of these operands to have the same number of array elements. If only operand S2 is an integer, however, there is no problem when operands S1 and D1 have a different number of array elements.
3417	Operand S1 and operand D1 data types do not match. Data types must be the same.	The variable types of operands S1 and D1 are different. Change one of the types so that the operands have the same variable type.
3418	***Operand must be an array element. Define an array element. (*** indicates an operand name.)	Operand S1 or D1 has elements other than a bit, integer, float, or real array element or a system variable (integer array element). Set only a bit, integer, float, or real array element or a system variable (integer array element) for operands S1 and D1.
3419	Operand S2 exceeds the number of array elements in operand ***(***) indicates an operand name.)(***(***) indicates an instruction name.)). Increase the number of array elements***(***) indicates an instruction name.) or change the settings in operand ***.	The value of operand S2 exceeds the number of array elements in operand S1. Increase the number of array elements in operand S1 or set the value of operand S2 to fewer than the number of array elements in operand S1.
3420	Operand S2 plus the element number in operand ***(***) indicates an operand name.)(***(***) indicates an instruction name.)) exceeds the number of array elements. Reduce the element number or change the settings in operand S2.	Operand S2 is an integer constant, and the value of “the element number of operand S1 or D1 + the value of operand S2” exceeds the array range for operand S1 or D1. Set the value of operand S2 within the range for operand S1 or D1, or increase the array element for operand S1 or D1.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
3421	***Operand must be an array element. Define an array element. (*** indicates an operand name.)	Operand S1 or D1 has elements other than an integer, float, or real variable array element or a system variable (integer variable). Set an integer, float, or real variable array element or a system variable (integer variable) for operand S1 or D1.
3422	Operand S2 is out of range. Enter a value within the specified range.	Operand S2 is an integer constant and its value is other than " $0 \leq S2 \leq 31$ " or " $0 \leq S2 \leq 32 \times \text{size} - 1$ " (when an array is specified). Set a value within the setting range.
3423	Operand S2 is out of range. Enter a value within the specified range.	Operand S2 for RCL/RCR instructions is an integer constant and its value is other than " $0 \leq S2 \leq 32$ ". Set a value within the setting range.
3424	*** Operand is out of range. Enter a value within the specified range. (*** indicates an operand name.)	Operand S1 for the DECO instruction is an integer constant and its value is other than " $0 \leq S1 \leq 31$ ". Or, Operand S2 for SAL/SAR instructions is an integer constant and its value is other than " $0 \leq S2 \leq 31$ ". Set a value within the setting range.
3425	Operand S1 and operand S2 data types do not match. Data types must be the same.	Operands S1 and S2 have different data types. Set the same data type for operands S1 and S2.
3426	***Operand exceeds the range specified in operand***. Change the value. (*** indicates an operand name.)	The bit size of the integer constant for operands S1 and S2 exceeds the available input range. Set them within the range of the bit size of the variable.
3427	Operand S1 is zero. Enter a value within the specified range.	Operand S1 is an integer constant and its value is 0. Set a constant other than 0.
3428	Operand data types do not match. Data types must be the same.	Operand S2 (or S3, S4, S5) and other operands have different data types. Set the same data type for all operands.
3429	Invalid data type is defined. Check the data type.	An Invalid data type is set for the setting value. Check the data type and delete an invalid one or change it to a valid one.
3430	Operand S2 cannot be a constant. Define a value other than a constant.	You cannot set a constant to operand S2. Set a variable other than a constant.
3431	***Invalid value. Enter a value within the normal range. (*** indicates a set value for special instructions (date or time).)	The value set from the dialog should not be outside of the following ranges. Specify a value within these ranges. Hour : 0 to 23 Minute : 0 to 59 Second : 0 to 59
3432	*** Invalid value. Enter a value within the normal range. (*** indicates a set value for special instructions (date or time).)	The value set from the dialog should not be outside of the following ranges. Specify a value within these ranges. Year : 0 to 99 Month : 1 to 12 Day : 1 to 31

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
3433	Operand S1 is out of range. Value must be 1 to 10.	Operand S1 should not be a value other than a constant between 1 and 10. Set a constant between 1 and 10 for operand S1.
3470	***(***) indicates an operand name.)Operand cannot use the specified array variable ***(***) indicates a symbol variable.).	The entire integer array (system variable) is specified for operands S1, S2, and D1. You cannot specify the entire array for operand S1, S2, and D1. To specify an array, specify array elements.
3471	*** Operand cannot map registers other than M, D, F and R. Set up one of these registers. (***) indicates an operand name.)	Registers other than M, D, F, and R are set to operand S1 or D1. Set registers M, D, F, or R to operands S1 or D1.
3472	Operand S2 exceeds the number of registers in operand***. Reduce the value of S2.(*** indicates an operand name.)	Operand S2 is an integer constant and its value exceeds the range for operand S1 or D1. Set the value of operand S2 within the range.
3473	Operand S2 plus operand *** exceeds the register range in ***. Reduce the value of S2 or change the address of ***. (***) indicates an operand name.)	Operand S2 is an integer constant and the value of operand D1 + S2 exceeds the range for operand D1. Or, the value of operand S1 + S2 exceeds the range for operand S1. Set the value of operand S2 within the range.
3474	*** Operand cannot map registers other than D, F, and R. Set up one of these registers.(*** indicates an operand name.)	Operand D1 or S1 has elements other than an integer, float, or real variable. Set only an integer, float, or real variable for operand D1 or S1.
3600	There are no instructions. Unable to run.	There is a rung with no instructions. This does not affect the operation; however, it is recommended to delete the rung if the rung is unnecessary.
3601	There are no instructions on branch. Confirm the logic.	There is a branch with no instructions. If this is set on purpose, it presents no problem. If there is no specific purpose, it is recommended to delete the branch.
3650	***There is no program description.(*** indicates an operand name.)	There is an empty subroutine program. This does not affect the operation; however, it is recommended to delete the program if there is no specific purpose.
3651	***Subroutine is not used. (***) indicates a subroutine name.)	There is a subroutine program which is not called. This does not affect the operation; however, it is recommended to delete the subroutine program if there is no specific purpose.
3652	Labels are defined consecutively with nothing in between them.	There are labels defined consecutively with nothing in between. This does not affect the operation; however, it is recommended to delete the labels if they are unnecessary.
3700	Rung has only one Coil instruction. This instruction will always run.	Only one coil instruction exists in the rung. This does not affect the operation; however, note that this coil will always turn on.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
3900	*** Variable is used in multiple Coil instructions. (*** indicates a symbol variable.)	One variable is used in two or more coil instructions (double coil). If this is set on purpose, it presents no problem. Under normal conditions, one variable is used in one coil instruction (except for SET/RESET instructions).
3901	*** Variable is used in multiple Timer instructions. (*** indicates a symbol variable.)	One timer variable is used in multiple timer instructions. Since this may cause malfunctions, define one timer variable for one timer instruction.
3902	*** Variable is used in multiple Counter instructions. (*** indicates a symbol variable.)	One counter variable is used in multiple counter instructions. Define one counter variable for one counter instruction.
3903	Operand S1 is out of range. Define a valid value.	The constant of operand S1 is out of range. Set a positive constant value.
3904	Operand S2 value is zero.	When operand S2 is an integer constant and its value is zero, operand S2 is set to zero.
3905	Operand S1 and operand S2 are integer constants.	Both operands S1 and S2 are set to constants. Set either of operand S1 or S2 to a value other than a constant.
3906	PT value is zero.	The value of PT is zero. This presents no problem when the value of PT is specified separately.
3907	PV value is zero.	The value of PV is zero. This presents no problem when the value of PV is specified separately.

- Other errors  
[I/O setting]

Error No.	Error Message	Cause and Solution
4500	Multiple I/O drivers are set up with the Master attribute.	There are multiple I/O drivers which are set up with the Master attribute.

[Variable]

Error No.	Error Message	Cause and Solution
2007	Too many volatile internal bit variables.	The total number of volatile internal bit variables exceeds the number specified for volatile in the retentive/volatile setting.
2008	Too many retentive internal bit variables.	The total number of retentive internal bit variables exceeds 256 devices.
2009	Too many input bit variables.	The total number of bit variables assigned to input I/O exceeds 256 devices.
2010	Too many output bit variables.	The total number of bit variables assigned to output I/O exceeds 256 devices.
2011	Too many volatile internal integer variables.	The total number of volatile internal integer variables exceeds the number specified for volatile in the retentive/volatile setting.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
2012	Too many retentive internal integer variables.	The total number of retentive internal integer variables exceeds the number specified for retentive in the retentive/volatile setting.
2013	Too many input integer variables.	The total number of integer variables assigned to input I/O exceeds 64 devices.
2014	Too many output integer variables.	The total number of integer variables assigned to output I/O exceeds 64 devices.
2015	Too many retentive float variables.	The total number of retentive float variables exceeds the number specified for retentive in the retentive/volatile setting.
2016	Too many volatile float variables.	The total number of volatile float variables exceeds the number specified for volatile in the retentive/volatile setting.
2017	Too many retentive real variables	The total number of retentive real variables exceeds the number specified for retentive in the retentive/volatile setting.
2018	Too many volatile real variables.	The total number of volatile real variables exceeds the number specified for volatile in the retentive/volatile setting.
2019	Too many retentive timer variables	The total number of retentive timer variables exceeds the number specified for retentive in the retentive/volatile setting.
2020	Too many volatile timer variables.	The total number of volatile timer variables exceeds the number specified for volatile in the retentive/volatile setting.
2021	Too many retentive counter variables.	The total number of retentive counter variables exceeds the number specified for retentive in the retentive/volatile setting.
2022	Too many volatile counter variables.	The total number of volatile counter variables exceeds the number specified for volatile in the retentive/volatile setting.
2023	Too many date variables.	The total number of retentive date variables exceeds the number specified for retentive in the retentive/volatile setting.
2024	Too many volatile date variables.	The total number of volatile date variables exceeds the number specified for volatile in the retentive/volatile setting.
2025	Too many retentive time variables.	The total number of retentive time variables exceeds the number specified for retentive in the retentive/volatile setting.
2026	Too many volatile time variables.	The total number of volatile time variables exceeds the number specified for volatile in the retentive/volatile setting.
2027	Too many PID variables.	The number of PID variables exceeds 8.
2028	Too many addresses.	The number of records in the CHMI refresh table exceeds the operation upper limit (256).
2029	Too many addresses.	The word addresses (ED) including the increase by reduction exceed 256.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution
2030	Unassigned symbol *** is used in the logic. Please set its address.	An unassigned symbol is used in the logic.
2502	*** Retentive variable is assigned to I/O.	A retentive variable is assigned to I/O when the variable method is used.
2031	*** Single variable is mapped to multiple I/O.	One variable is mapped to multiple I/Os.
2032	I/O variable is not mapped to a terminal and is in use.	An unassigned I/O variable is used when the address method is used.

[Comment]

Error No.	Error Message	Cause and Solution
3006	Too many variable comments.	The number of variable comments exceeds the upper limit (the number of variable comment blocks x 40 + 210).
3007	Too many rung comments.	The number of line comments exceeds the upper limit (the number of line comment blocks x 10 + 55).

[Memory check]

Error No.	Error Message	Cause and Solution
3008	Logic contains too many steps.	The total number of steps in the logic exceeds the upper limit of the logic (the number of logic blocks x 500).



## ■ Errors displayed during transfer operation

### ◆ Common errors

Error Message	Cause and Solution	Reference
Invalid IP Address	The designated IP address' value is illegal. Input a correct IP address.	_____
The IP Address already exists. Add/Change is disabled.	When adding an IP address, the IP address is already set. Designate an unused IP address.	_____
Failed to receive the folder list. Moved to the root folder.	The folder displayed in the CF-card tool could not display so the display moved to the root folder. The cause can be that the folder has been deleted or that the CF-card has been changed. Confirm whether the folder has been deleted or the CF-card has been taken out.	☞ GP-Pro EX Reference Manual "32.5 Transferring Only Data to a CF-Card" (page 32-28)
The appointed file name already exists. Please specify another name.	This appears when you are trying to rename a file in the CF-card tool and the file name already exists. Designate an unused file name.	_____
Disconnected. The CF-card connection will be terminated.	The connection has been cut because of a removed cable, etc. Make sure that all cables are correctly connected. [LAN] • Make sure that the PC's IP address is correctly set. • Make sure that the type of cable is correct. [USB] • Make sure that the USB cable is made by Pro-face. • Make sure that the driver is installed.	_____
Invalid password	The password that you have entered is incorrect. Enter the correct password.	☞ GP-Pro EX Reference Manual "32.6 Transferring with Password" (page 32-31)
Invalid password. Transmission was canceled.	This appears when you enter the incorrect password 3 times. Enter the correct password.	_____
Failed to open the socket.	The LAN port is not enabled. Check the PC's LAN settings.	_____
Failed to read the project.	Either the file is damaged, or the file you have selected is not a project file. Select the correct project file.	_____





Continued

When an error message is displayed (Error code list)

Error Message	Cause and Solution	Reference
Failed to connect to the main unit.	Either a cable is loose, or you are using an unsupported main unit. Confirm the cable's type and connection, and make sure the USB driver is installed.	☞ GP-Pro EX Reference Manual "32.2 Transferring Project Files via USB Cable" (page 32-5)
Failed to access the file.	You may not have permission to access this file. Check the PC's access privileges.	_____
The above was during communication.	You cannot communicate either because the cable is disconnected, or because of noise. Check the cable's surroundings and make sure that the cable is not severed, and that no noise is occurring. (Do not use a USB extension cable, etc.)	_____
The memory error occurred.	The PC's memory is insufficient. Shut down another application or restart the OS and run the transfer tool again.	_____
Failed to recognize the destination main unit. Please confirm whether the model is supported by GP-Pro EX or the transfer tool.	You are trying to transfer to a device that cannot be recognized by the editor. Confirm whether or not the destination unit is a GP.	_____
Failed to acquire the information.	Either the system is not downloaded, or the model is not supported. Confirm whether the model is supported, and transfer the main unit's system again.	☞ GP-Pro EX Reference Manual "32.1 Settings Menu" (page 32-2)
Invalid password. Transmission was canceled.	The password cannot be checked. The file may be damaged. Please check it again in an area with no electrical noise. (Do not use a USB extension cable, etc.)	_____
Failed to connect because the main unit was in communication with the transfer tool.	It is communicating with another computer. Wait until the communication finishes.	_____
Failed to write data.	The file cannot be accessed and cannot be written to the GP due to damage, etc. After checking the access privileges for the PC's hard drive, force the data to be sent.	☞ GP-Pro EX Reference Manual "32.10.1 Setting UP [Transfer Settings]" (page 32-57)
Failed to receive the project. Please execute it again.	A data error occurred when receiving data. Confirm that there is not a lot of noise occurring. (Do not use a USB extension cable, etc.)	_____

Continued

## When an error message is displayed (Error code list)

Error Message	Cause and Solution	Reference
Not send project.	The project data does not exist on the GP unit. (The unit is showing the default Initial Start Mode screen, etc.) Or the data is damaged. First, transfer the project.	 GP-Pro EX Reference Manual "32.1 Settings Menu" (page 32-2)
Failed to save the CF-card data.	Either the CF-card is not correctly inserted, or it is write-protected. Make sure the CF-card can be used (you may not be able to access CF-cards not made by Pro-face).	————
The project does not agree with the transfer destination main unit.	The transfer source project and the project inside the main unit are different and therefore could not be compared. Only the same project can be compared.	 GP-Pro EX Reference Manual "32.4 Confirming Projects' Changes Prior to Transfer (Comparison)" (page 32-25)
The format went wrong.	The initialization of the main unit device failed. Transfer again in a location where there is not a lot of noise occurring.	————
The transfer destination main unit was not found.	The designated communication device does not exist or cannot be used. Confirm the PC's LAN settings and check if the USB driver is installed.	————
Failed transfer.	An error occurred during communication. Confirm that there is not a lot of noise occurring. (Do not use a USB extension cable, etc.)	————
File access went wrong with the Machine.	The data write to the main unit failed due to a flash malfunction. If there is no improvement even after a forced transfer, contact customer support.	 GP-Pro EX Reference Manual "32.10.1 Setting UP [Transfer Settings]" (page 32-57)
Whether CF card is not inserted or non-supported model.	Confirm whether the CF-card is correctly inserted. (You may not be able to access CF-cards not made by Pro-face.)	————
The appointed file name already exists. Please specify another name.	There is a directory with the same name as the file you are trying to copy. Delete the content of the CF-card and retransmit the file. If an error occurs while you are transmitting the project, force the transfer.	 GP-Pro EX Reference Manual "32.5 Transferring Only Data to a CF-Card" (page 32-28)
Failed to write to the CF-card.	The CF-card may not be correctly inserted, or it may be write-protected. Make sure that the files in the CF-card are not write-protected.	————

Continued

## When an error message is displayed (Error code list)

Error Message	Cause and Solution	Reference
The file required for transferring was not found.	A file needed for transfer is damaged or does not exist on the hard drive. Reinstall the transfer tool.	GP-Pro EX Reference Manual "32.10.5 Installing only Transfer Tool" (page 32-63)
The timeout error occurred.	Confirm that there is not a lot of noise occurring. (Do not use a USB extension cable, etc.)	_____
Exception error.	A module needed for transferring may not be correctly installed. Reinstall the transfer tool.	GP-Pro EX Reference Manual "32.10.5 Installing only Transfer Tool" (page 32-63)
Failed to send the project. The size of the project exceeds the max capacity.	The data size of the project file you are trying to transfer exceeds the GP's screen capacity. Decrease the data size by deleting unnecessary screen data, etc.	GP-Pro EX Reference Manual "5.7 Seeing the Project information" (page 5-36)
This project is the one created with the Trial version of the drawing software. Please save it with the Product version before executing transmission.	Please save the data with the regular version (Product version).	_____

### ◆When data is transferred with modem

Error Message	Cause and Solution	Reference
Cannot transfer by modem so that I/O Driver is different.	Transfer by modem failed because the type or version of the I/O driver did not match. Download a correct I/O driver by using USB or LAN. Download a correct runtime system or protocol by using USB or LAN.	_____
Cannot transfer by modem so that runtime system is different.	Transfer by modem failed because the version of the run time system or protocol did not match, or because the protocol type is different.	_____
Cannot transfer by modem so that font setting is different.	The type of Fonts which is registered did not match. Download a correct runtime system or protocol by using USB or LAN.	_____
Cannot transfer by modem so that project is different or version is different.	The type or the edit version of the project did not match. Download a correct runtime system or protocol by using USB or LAN.	_____

◆When the CF memory loader is used

Error Message	Cause and Solution	Reference
The file to create a boot CF-Card was not found.	The system file for the memory loader is not installed. Install the file again.	GP-Pro EX Reference Manual "32.7.2 Transfer Process ◆ Create Start CF-Card" (page 32-41)
Failed to create the backup file.	The probable causes are that the free space in the CF card is insufficient, the file cannot be accessed, or the project file is corrupt. Check the destination again.	_____
This model is not supported.	The selected project is for a model which does not support the memory loader tool. Check the model of the project file.	GP-Pro EX Reference Manual "1.3 List of Supported Functions by Device" (page 1-4)
Failed to read the backup file.	The probable causes are that the backup file is corrupt, or the file requires certain access rights. Check the access rights for the backup file.	GP-Pro EX Reference Manual "32.6.3 Remove/Change Transfer Password" (page 32-34)
Failed to reserve memory.	The PC memory may be insufficient. Close the other applications that are running.	_____
Invalid backup file.	The selected file is not a backup file. Select a valid file.	_____

◆Errors displayed during online monitoring of the logic program

The following error messages are displayed when a logic program cannot be transferred from the Display for the purpose of monitoring it on the PC side (during online monitoring).

Error Message	Cause and Solution	Reference
Unable to start Monitor.	The cables may not be connected or the communication setting may be wrong. Confirm that the cables are connected properly. Select [Option Settings] from the [View] menu and check [Communication Settings] for [Monitor Step].	GP-Pro EX Reference Manual "5.13.7 [Option Settings] Settings Guide ■ Monitor Step" (page 5-134)

## 1.6.2 Display-related errors

### ■ Common to all Display models

#### ◆Errors displayed when communication fails

The following error messages are displayed when there is a problem in the communication with the connected device (PLC, etc.).

**NOTE** • The following error messages are common to all drivers (device/PLC types). For the specific errors of each device/PLC types, please refer to “GP-Pro EX Device/PLC Connection Manual”.

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx006	(Driver Name):(Port Name) Received data has been parity error	An error occurred due to a lack of receiving data. The cause could be the noise or loose connection.	Please check the noise suppression and connector's insertion. If Memory-Link method is used, please check if the Data Length/Parity Bit of host side and the display side have the same settings.
RHxx007	(Node Name):(Port Name) Received data has been framing error		
RHxx008	(Driver Name): This machine does not have any Ethernet interface	An error occurred when a Ethernet-supporting driver is selected in GP-Pro EX's [Device/PLC Settings] but the data is transferred to the main unit model which cannot use Ethernet connection.	Please check if the main unit model in use supports a Ethernet connection. If it does, please check if the Display Type settings of GP-Pro EX are correct.
RHxx009	(Driver Name):(Port Name) Cannot use the port	An error occurred when two or more driver types are selected to an identical COM port.	Please check the port settings in GP-Pro EX's [Device/PLC Settings].
RHxx010	(Driver Name): TCP port number ***** is overlapped, or it is not completed to close the last TCP connection	TCP port number of the display unit side is overlapped, or the device/PLC is reset during communication.	(1) If TCP port number is overlapped, allocate different port number. (2) Reset the main unit.
RHxx011	(Driver Name): Connection was closed	An error occurred in the connection environment during communication.	Please check if the network environment is normal. Please specify the cause via procedures such as directly connecting PC, GP and device/PLC, and then checking if IP address is recognized via PING command.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx012	(Driver Name): UDP Port number is overlapped	An error occurred when UDP port number of touch panel side is overlapped.	If UDP port number is overlapped, please allocate different port number.
RHxx013	(Driver Name): COM1: The 9th pin has not been set to VCC (5V Power Supply). Please check your cable or connected equipment.	9th pin of COM1 is connected as RI input.(e.g. Set to use Isolation Unit (RS-232C Type))	Please designate [RI] in [RI/DVV] settings of GP-Pro EX's [Device/PLC Settings].
RHxx033	(Node Name): Error has been responded for initial communication command (Error Code: (Decimal)[(Hex)])	Communication settings and wiring are correct.Since the causes depend on the selected driver, please contact your local GP distributor.	
RHxx034	(Node Name): Error has been responded for device read command (Error Code: (Decimal)[(Hex)])		
RHxx035	(Node Name): Error has been responded for device write command (Error Code: (Decimal)[(Hex)])		
RHxx036	(Node Name): Error has been responded for device read command (Error Code: (Decimal)[(Hex)] There are out of range devices)	Device/PLC cannot recognize the Read request of the address set via the display unit side, and return the error code. It might be set to request the address which is out of PLC's address range on the display unit side.	(1)Please check the manual of device/PLC in use for the detail of receiving error codes. (2)Please check if the address set is within the range of device/PLC device address in use.*1
RHxx037	(Node Name): Error has been responded for device write command (Error Code: (Decimal)[(Hex)] There are out of range devices)	Device/PLC cannot recognize the Write request of the address set on the display unit side, and return the error code.It might be set to request the address which is out of PLC's address range on the display unit side.	

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx038	(Node Name): Error has been responded for device read command (Error Code: (Decimal))[(Hex)] There are write only devices)	Device/PLC cannot recognize the Read request of the address set on the display unit side, and return the error code. It might be set to request the write only address of device/PLC on the display unit side.	(1) Please check the manual of device/PLC in use for the detail of receiving error codes. (2) Please check if the address is set to read the write only address. *1 If Parts that perform reading operation such as Lamps and Data Display are used, please set the read address.
RHxx039	(Node Name): Error has been responded for device write command (Error Code: (Decimal))[(Hex)] There are read only devices)	Device/PLC cannot recognize the Write request of the address set on the display unit side, and return the error code. It might be set to request the read only address of device/PLC on the display unit side.	(1) Please check the manual of device/PLC in use for the detail of receiving error codes. (2) Please check if the address is set to write in the read only address. *1 If Parts that perform writing operation such as Switches, Data Display (Input Permit), Trigger Action and D-script are used, please change to readable/writable address.

Continued



When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx040	(Node Name): Illegal response for initial communication command	An error occurred on device/ PLC side	Please check that the communication settings or the connected device settings are specified properly.
RHxx041	(Node Name): Illegal response for device read command		
RHxx042	(Node Name): Illegal response for device write command		
RHxx043	(Node Name): Checksum error response for initial communication command		
RHxx044	(Node Name): Checksum error response for device read command		
RHxx045	(Node Name): Checksum error response for device write command		
RHxx049	(Node Name): Unknown devices exist in read devices	Wrong device and address are created via Indirect Address Designation.	Please check if settings of Indirect Address Designation are within the recognizable address range.
RHxx050	(Node Name): Unknown devices exist in write devices		
RHxx051	(Node Name): Out of range devices exist in read devices (Address: (Device Address))	In the Data Display (Text Display) or D-script's memory or memset, area from the start address to the end address is not within the address range.	Please check if the settings which is across multi-addresses, such as Data Display (Text Display) or D-script, are within the address range. *1
RHxx052	(Node Name): Out of range devices exist in write devices (Address: (Device Address))		

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx053	(Node Name): You cannot read the write only device (Address: (Device Address))	The Protocol driver detected read-out of the read only address, or write-in of the write only address	(1) Please check the manual of device/PLC in use for the detail of receiving error codes. (2) Please check if the address is set to read the write only address. *1 If Parts that perform reading operation such as Lamps and Data Display are used, please set the read address.
RHxx054	(Node Name): You cannot write the read only device (Address: (Device Address))		
RHxx065	(Node Name): TCP connection open error (IP Address: (IP Address))	IP address and port number of device/PLC are not recognized. The cause could be that the power of HUB or device/PLC is not ON, or cable is unplugged.	(1) Please check the settings of IP address and Port number on display unit side and device/PLC side. (2) Please check if the network environment is normal. Please specify the cause via procedures such as directly connecting PC, GP and device/PLC, and then checking if IP address is recognized via PING command.
RHxx066	(Node Name): UDP target not found (IP Address: (IP Address))		



Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx067	(Node Name): Response timed out for initial communi- cation command	The causes could be the fol- lowing: (1) The communication set- tings are not the same between GP unit and PLC. (2) Wiring has problems such as a wrong wire connection or loose connection. (3) Selection of device/PLC is wrong. (4) The power of device/PLC is not ON, or it is reset.	(1) Please check if the com- munication settings of display unit side and device/PLC side are the same. Please refer to “GP-Pro EX Device/PLC Connection Manual” for the details. (2) Please reconfirm the wir- ing. Please check the cable and connector’s inser- tion. About wire connec- tion, please refer to “GP- Pro EX Device/PLC Con- nection Manual” for the details. When using COM 2, please check if Online Adaptor (CA4-ADPONL- 01) is connected. (3) Please reconfirm the GP- Pro EX’s [Device/PLC Settings].
RHxx068	(Node Name): Response timed out for device read com- mand		
RHxx069	(Node Name): Response timed out for device write com- mand		
RHxx070	(Node Name): The cable has been dis- connected or the tar- get has been powered off	The command cannot be sent due to the cause that the device/PLC power is not ON or cable is unplugged, etc.	(1) The Display Type settings of GP-Pro EX do not match the main unit model in use. (2) Please check if the power of device/PLC is ON. (3) Please check if the cable’s wiring is right, and if cable is correctly con- nected.
RHxx071	(Node Name): The extend unit (Unit Name) is not imple- mented	The Expansion Unit is not recognized.	Please check if the Expan- sion Unit is correctly attached.

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx072	(Node Name): Since a buffer was insufficient, the read request was un-receivable	A read request was made through sampling, extended D-script, Pro-Server EX, etc. to the device in off-scan mode.	A read request was made through sampling, extended D-script, Pro-Server EX, etc. to the device for which communication scan has been stopped. Turn OFF the appropriate bit between LS9550 and LS9559 <sup>*2</sup> and start the communication scan of the connected device.  GP-Pro EX Reference Manual "7.3 Disconnecting Some of the Multiple Connected Devices/PLCs" (page 7-10)
RHxx073	(Node Name): Since a buffer was insufficient, the write request was un-receivable	A write request was made through a script, a touch, Pro-Server EX, etc. to the device in off-scan mode.	A write request was made through a switch, D-script, extended D-script, Pro-Server EX, etc. to the device for which communication scan has been stopped. Turn OFF the appropriate bit between LS9550 and LS9559 <sup>*2</sup> and start the communication scan of the connected device.  GP-Pro EX Reference Manual "7.3 Disconnecting Some of the Multiple Connected Devices/PLCs" (page 7-10)
RHxx084	(Node Name): Too many requests to write. The request was ignored.	A write operation was continued at timing which exceeds the processing speed of the communication driver. Example) When a write operation to a connected device set up with a baud rate of 9600 is continued according to the update timing of the tag scan counter.	Check if a D-script or other setting has been specified which continues writing at fast speed. This error may occur when writing to a device which communicates at a low speed such as 9600 bps is continued with a D-script using a bit which turns ON/OFF at fast speed (such as the LS2038 tag scan counter).

Continued

Error No.	Error Message	Cause and Solution	Countermeasure
RHxx085	(Node Name): Too many requests to read. The request was ignored.	A read operation was continued at timing which exceeds the processing speed of the communication driver. Example) When a read operation from a connected device set up with a baud rate of 9600 is continued according to the update timing of the tag scan counter.	Check if a D-script or other setting has been specified which continues reading at fast speed. This error may occur when reading from a device which communicates at a low speed such as 9600 bps is continued with a D-script using a bit which turns ON/OFF at fast speed (such as the LS2038 tag scan counter).

\*1 If the error occurred in all screens, please check the addresses set via functions which operate in all screens, such as System Data Area, Alarm, Global D-script, Global Window and Sampling (Historical Trend Graph). To check the addresses, from [System Settings Window] in GP-Pro EX, select [Peripheral List] and see [List of Device/PLC Management Addresses].

GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ■ [Peripheral List] Settings Guide" (page 5-122)

If the error occurred in specific screens, please check the addresses via functions which operate in specific screens.

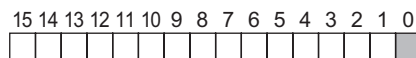
- \*2 The setting range of the bit addresses to control whether to execute or to stop the communication scan is the internal device address' LS9550 to LS9557. Each device/ PLC address starting from Bit 0 is assigned sequentially to each driver's device/PLC starting from the first unit.

LS Area	
LS9550	Driver 1's 1st to 16th units
LS9551	Driver 1's 17th to 32nd units
LS9552	Driver 2's 1st to 16th units
LS9553	Driver 2's 17th to 32nd units
LS9554	Driver 3's 1st to 16th units
LS9555	Driver 3's 17th to 32nd units
LS9556	Driver 4's 1st to 16th units
LS9557	Driver 4's 17th to 32nd units
LS9558	Reserved
LS9559	Reserved

e.g.)

You can set the bit addresses controlling the communication scan of the Driver 1's first to 16th units to LS9550.

[LS9550]



Bit 0: Scans ON/OFF the Driver 1's first PLC.

Stops the scan (scans OFF) of the Driver 1's first PLC by turning ON Bit 0. Turn OFF Bit 0 to resume the scan.

You cannot stop the communication scan of a device specified with the System Area Start Address. However, if you are not using the System Data Area, you can stop the communication scan.

GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ◆ System Area Settings" (page 5-120)

You can set the LS area's addresses with 32 bits on some devices/PLCs. In this case, the lower 16 bits are used for the bit addresses controlling the communication scan.

When you turn OFF the communication scan, the displayed part's data will remain. However, if you change screens and then display the screen again, the part's data will not be displayed.

## ◆Errors starting with RAAA (Application errors)

Error No.	Error Message	Cause and Solution	Reference
RAAA001	No project data exists. (Transfer a project.)	No project file exists. Transfer a project.	<p>☞ GP-Pro EX Reference Manual “32.2.2 Transfer Process ■ Transfer from PC to GP (Send)” (page 32-6)</p> <p>☞ GP-Pro EX Reference Manual “32.3.2 Transfer Process ■ Transfer from PC to GP (Send)” (page 32-13)</p>
RAAA002	The project data size exceeds the capacity.	The project data size exceeds the maximum capacity*. Or, the number of screens exceeds 16,000 files. Reference the “Project Information” in GP-Pro EX, and make sure it does not exceed the general capacity. *The maximum capacity of the project data size varies depending on the Display model. (Example: 8 MB for GP-3500T).	<p>☞ GP-Pro EX Reference Manual “5.7 Seeing the Project information” (page 5-36)</p>
RAAA003	The project data is invalid. (Transfer the project again.)	There is an error in the project file. Transfer the project again.	<p>☞ GP-Pro EX Reference Manual “32.2.2 Transfer Process ■ Transfer from PC to GP (Send)” (page 32-6)</p> <p>☞ GP-Pro EX Reference Manual “32.3.2 Transfer Process ■ Transfer from PC to GP (Send)” (page 32-13)</p>
RAAA004	The system screen is invalid. (Execute forced transfer.)	The system screen does not exist or is invalid. Force a transfer.	<p>☞ GP-Pro EX Reference Manual “32.10.1 Setting UP [Transfer Settings]” (page 32-57)</p>
RAAA005	The specified initial screen no. does not exist. (XXXX)	The screen cannot display because the screen number designated in the Initial Screen Settings does not exist in the project. Change the Initial Screen No. or add the screen. The screen number designated in the parentheses is displayed.	<p>☞ GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide ◆ Display Settings” (page 5-100)</p>

Continued






When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Reference										
RAAA006	The project data contains functions that are not supported by this version.	There are functions that cannot be recognized by the runtime program. The editor's version and runtime's version may not match. Update the runtime's version.	—										
RAAA007	The no. of parts in the screen exceeds the limit. (MAX 384)	There are more than 384 parts set on a single screen. The number of parts exceeds the limit during a screen change or when opening a window. Make sure to set parts within the permitted range.	GP-Pro EX Reference Manual "5.14.1 Restrictions for Creating Screens ■ No. of Screens that can be Created" (page 5-143)										
RAAA008	The font (XXXX) does not exist. (Transfer the font with the project.)	The font you are trying to display does not exist in the system. Download the font into the system. The following table shows the font names. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>English Standard</td></tr> <tr><td>Japanese Standard</td></tr> <tr><td>Korean Standard</td></tr> <tr><td>Chinese Standard</td></tr> <tr><td>Taiwanese Standard</td></tr> <tr><td>English Stroke</td></tr> <tr><td>Japanese Stroke</td></tr> <tr><td>Korean Stroke</td></tr> <tr><td>Chinese Stroke</td></tr> <tr><td>Taiwanese Stroke</td></tr> </table>	English Standard	Japanese Standard	Korean Standard	Chinese Standard	Taiwanese Standard	English Stroke	Japanese Stroke	Korean Stroke	Chinese Stroke	Taiwanese Stroke	GP-Pro EX Reference Manual "6.4 [Font Settings] Settings Guide" (page 6-19)
English Standard													
Japanese Standard													
Korean Standard													
Chinese Standard													
Taiwanese Standard													
English Stroke													
Japanese Stroke													
Korean Stroke													
Chinese Stroke													
Taiwanese Stroke													
RAAA010	The CF card has not been inserted, or the CF card hatch is open.	When trying to display a CF-card file with a Picture Display, the CF-card has not been inserted. Copy the image file or JPEG file to the CF-card and insert the CF-card into the GP3000 Series.	GP3000 Series Hardware Manual										
RAAA011	Failed to start from the CF card.	Regardless of whether DIP SW1 is ON, the necessary file does not exist to start from the CF-card. Or the necessary file may have an error. Copy the startup project to the CF-card again.											
RAAA012	The project data contains functions that are not supported by this model.	The current model includes functions which the runtime program cannot recognize. Change to an applicable model.	—										
RAAA050	Clock Setting Error	When changing the clock data, the data write to the clock IC failed. The IC chip may be broken.											

Continued









When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Reference
RAAA051	Low battery	Due to the low voltage of the backup lithium battery, the backup SRAM's data is erased, and the clock data will not be correctly kept. Supply enough power to the GP and set the clock data again.	 GP3000 Series Hardware Manual
RAAA100	The system start device address is incorrect.	The system device start address is not set correctly or has an error. Set the correct address while offline, or transfer a project.	 GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ◆ System Area Settings" (page 5-120)
RAAA101	Illegal/Undefined Device Address	A device address in the part or function settings is illegal. Make sure to set the correct device address.	_____
RAAA102	Failed to read from the Device/PLC. (XXXX)	Failed to read from the device/PLC. Confirm the connection status, such as whether the communication cable is disconnected, etc. The part name is entered in the parentheses.	 GP3000 Series Hardware Manual
RAAA103	The specified address is incorrect. (XXXX)	The designated address is incorrect. Make sure to set the correct address.	_____
RAAA120	D-Script Error (The specified function does not exist or the function has an error.)	The function called in the D-Script does not exist. Or there is an error in the function. Check the function's format.	 GP-Pro EX Reference Manual "Chapter 21 Program Instructions and Descriptions" (page 21-1)
RAAA121	D-Script Error (These functions are nested to 10 levels or more.)	Functions in the D-Script are nested to 10 levels or more. Reduce the levels in the "if" and "loop" structures. * A nesting level is when function A calls function B, and then again when function B calls function C (function calling level).	 GP-Pro EX Reference Manual "21.8.3 loop - endloop" (page 21-64)
RAAA122	D-Script Error (An expression exists, that is not supported by this version.)	An incompatible function was found in the project data's D-Script. Update the runtime's version.	_____

Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Reference
RAAA123	D-Script Error (The SIO operation function is used in a condition where no Device/PLC has been set.)	SIO Operation functions are used in a D-Script while the device/PLC settings are not set. Configure the device/PLC settings.	 GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ■ [Script Settings] Settings Guide" (page 5-127)
RAAA124	The D-Script has an error.	There is an error in the used D-Script. Check the commands' format.	 GP-Pro EX Reference Manual "Chapter 21 Program Instructions and Descriptions" (page 21-1)
RAAA130	Global D-Script Error. (The Total No. of Global D-Scripts exceeds the maximum of 32.)	The total number of Global D-Scripts exceeds the limit. The maximum number of Global D-Scripts available is 32 (each function also counts as one script).	 GP-Pro EX Reference Manual "20.9.1 D-Script/Global D-Script Restrictions" (page 20-53)
RAAA131	Global D-Script Error. (The total no. of devices exceeds the maximum of 255.)	The total of all devices in the Global D-Script exceeds the limit of 255 devices. Reduce the number of used devices by using the Memory Operation function, etc.	
RAAA132	Global D-Script Error (The specified function does not exist or the function has an error.)	The function called in the Global D-Script does not exist. Or there is an error in the function. Check the function's format.	 GP-Pro EX Reference Manual "Chapter 21 Program Instructions and Descriptions" (page 21-1)
RAAA133	Global D-Script Error (These functions are nested to 10 levels or more.)	Functions in the Global D-Script are nested to 10 levels or more. Reduce the levels in the "if" and "loop" structures. * A nesting level is when function A calls function B, and then again when function B calls function C (function calling level).	 GP-Pro EX Reference Manual "21.8.3 loop - endloop" (page 21-64)
RAAA134	Global D-Script Error (An expression exists, that is not supported by this version.)	An incompatible function was found in the project data's Global D-Script. Update the runtime's version.	—
RAAA135	Global D-Script Error (The SIO operation function is used in a condition where no Device/PLC has been set.)	SIO Operation functions are used in a Global D-Script while the device/PLC settings are not set. Configure the device/PLC settings.	 GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ■ [Script Settings] Settings Guide" (page 5-127)






Continued

When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Reference
RAAA136	The Global D-script has an error.	There is an error in the used Global D-Script. Check the commands' format.	☞ GP-Pro EX Reference Manual "Chapter 21 Program Instructions and Descriptions" (page 21-1)
RAAA140	Extended D-Script Error (The total no. of functions exceeds the max of 255.)	The total number of Extended Scripts exceeds the limit. The maximum number of Extended Scripts is 255. Reduce the number of scripts by combining two scripts into one, etc.	☞ GP-Pro EX Reference Manual "20.9.2 Extended Script Restrictions" (page 20-56)
RAAA141	Extended D-Script Error (The specified function does not exist or the function has an error.)	A function called in the Extended Script does not exist. Or there is an error in the function. Check the function's format.	☞ GP-Pro EX Reference Manual "Chapter 21 Program Instructions and Descriptions" (page 21-1)
RAAA142	Extended D-Script Error (These functions are nested to 10 levels or more.)	Functions in the Extended Script are nested to 10 levels or more. Reduce the levels in the "if" and "loop" structures. * A nesting level is when function A calls function B, and then again when function B calls function C (function calling level).	☞ GP-Pro EX Reference Manual "21.8.3 loop - endloop" (page 21-64)
RAAA143	Extended D-Script Error (An expression exists, that is not supported by this version.)	An incompatible function was found in the project data's Extended Script. Update the runtime's version.	—
RAAA144	Extended D-Script Error (The SIO operation function is used in a condition where no Device/PLC has been set.)	SIO Operation functions are used in a Extended Script while the device/PLC settings are not set. Configure the device/PLC settings.	☞ GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ■ [Script Settings] Settings Guide" (page 5-127)
RAAA145	The Extended D-Script has an error.	There is an error in the used Extended Script. Check the commands' format.	☞ GP-Pro EX Reference Manual "Chapter 21 Program Instructions and Descriptions" (page 21-1)
RAAA150	The provided password is incorrect. Please enter the correct one.	The security feature's password input is incorrect. Confirm that the input is correct (upper-case/lower-case letters, etc.) and enter the password again.	☞ GP-Pro EX Reference Manual "22.4.1 Introducing the Password Input Window" (page 22-7)

Continued

## When an error message is displayed (Error code list)

Error No.	Error Message	Cause and Solution	Reference
RAAA151	Change the screen from the host.	This appears when a screen change occurs from the PLC (host) by the forced screen change method (the traditional method for a screen change), and you cancel the displayed password input. If you want to cancel, make sure to use a cancel notification bit and return to the previous screen from the PLC (host).	—
RAAA152	Cannot use the COM port.	This appears when the COM port you are trying to use is already in use by another feature. Check the settings again.	 GP-Pro EX Reference Manual "7.4 Changing a Device/PLC" (page 7-17)
RAAA153	No dictionary file was found.	The English dictionary file does not exist in internal storage or in the CF-card. Transfer the project data again.	—
RAAA154	The specified filing data cannot be used with this project.	This appears if the designated filing data does not match the project data when transferring filing data from the CF-card to SRAM. Make sure to use filing data that matches the project data.	 GP-Pro EX Reference Manual "24.6 Saving Sampled Data to a CF-Card (Save in CSV)" (page 24-20)
RAAA155	The IP address duplicates that of another device. Please change the address of either this machine or the other. (IP:XXX.XXX.XXX.XX,MAC:XX:XX:XX:XX:XX:XX) <sup>*1</sup>	A machine with the same IP address exists on the network. Change the IP address of this machine or of the other machine.	 GP-Pro EX Reference Manual "32.2.2 Transfer Process ■ Transfer from PC to GP (Send)" (page 32-6)
RAAA156	The 9th pin of the COM port has not been set to VCC (5V Power Supply). Please check your cable or connected equipment.	The COM port's 9-pin could not be set to VCC (5V power supply). Check the COM port's connection cable and the machine it is connected to. Then reset the machine or verify the project's script settings are set to a 5V power supply.	 GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ■ [Script Settings] Settings Guide" (page 5-127)
RAAA157	Cannot put the Device/PLC into off-scan state when the system start device address is assigned to it.	The connected device (main PLC) assigned to the system start device address has been set to off-scan mode. You cannot normally set the main PLC to off-scan mode. However, it can be set by changing the setting to not use the system data area. Otherwise, cancel the off-scan setting.	 GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ◆ System Area Settings" (page 5-120)

\*1 IP addresses are shown as decimal, MAC addresses are shown as hexadecimal.

◆Errors starting with REAA

Error No.	Error Message	Cause and Solution	Reference
REAA016	Could not use the XXX port (No: XXX).	Opening the XXX (UDP or TCP) port No. (XXX) failed. The system port number may have been used already.Please check the system port number and use available one.	_____
REAA017	Attempted to access a write-protect area (XXX)	You cannot write to the write-protected area (LS0000 to LS0019, LS2032 to LS2095, LS9000 to LS9999) using a D-script or across the network.Please do not write data to the write-protected area using a D-script or across the network.	_____
REAA018	Attempted to access a device outside the address range (XXX)	An attempt was made to access a device outside the address range.Be sure to use the address in the device range.	_____
REAA021 REAA022	An invalid ID has (Node, Device, Address) has been specified.	An invalid ID was specified. You are accessing a device which does not exist.Force the transfer of the files or check if the supported devices are used or not.	☞ “2.12.3 Forcing the transfer of project files” (page 2-62)
REAA026 REAA027 REAA028	Illegal/Undefined Device Address	An invalid device was specified. You are accessing a device which does not exist.Force the transfer of the files.	☞ “2.12.3 Forcing the transfer of project files” (page 2-62)

◆Other errors (System errors)

- When the GP’s internal system will not start correctly

When there is a problem with the files related to starting the system, the following error messages will be displayed on the forced transfer screen. Transfer the system data again with the transfer tools.

**NOTE** • For details about the transfer tools, please refer to GP-Pro EX Reference Manual “32.10 Setting Up Transfer Tool” (page 32-55) .

Error Message	Affected Files	Cause
Start up Error : Boot.cfg	BOOT.CFG	Boot.cfg file, needed for startup, is deleted or damaged. Try a forced transfer of the project file.
Start up Error : Default Font	*****.FNT	Default font data is deleted or damaged. Try a forced transfer of the project file.
Start up Error : LanSys.cfg	LANSYS.CFG	LAN settings file is damaged. Try a forced transfer of the project file.

Continued

Error Message	Affected Files	Cause
Start up Error : System.cfg	SYSTEM.CFG	Files needed to start the GP system (system settings files) do not exist. Try a forced transfer of the project file.
Start up Error : CF memory loader	BOOT.CFG	Abnormal Boot.cfg file data in the CF-card during startup. Try loading again by changing the CF card or by another method.
Start up Error : CF MOUNT Error	_____	CF-card read failed during startup.CF
Start up Error : Runtime Load NG	BOOT.SYS LDMODULE.SYS STARTUP.SYS RUN****.SYS	GP internal system data is deleted or damaged
Start up Error : Runtime Start NG	_____	Errors occurred during the GP system's startup: <ul style="list-style-type: none"> <li>• Default font load error</li> <li>• User font load error. Try a forced transfer of the project file.</li> </ul>
Compulsion Transfer Mode (DipSW2=ON)		Forced transfer display due to dipswitch 2 = ON* <sup>1</sup>
Compulsion Transfer Mode (Panel Touch)		Compulsion transfer display forced by continuously touching the right or left bottom of the screen during startup. * <sup>1</sup>

\*1 This item does not indicate an error

- When an abnormal file is detected during the GP's startup  
When there is a problem with the files needed after the system starts up, the following error messages will be displayed on the normal transfer screen. After fixing the problem, transfer the files again with the transfer tools.

**NOTE** • For details about the transfer tools, please refer to GP-Pro EX Reference Manual "32.10 Setting Up Transfer Tool" (page 32-55) .

Error Message	Cause and Solution	Reference
An illegal or undetermined Device Address exists (****). Please check the settings and transfer the project data again.	Appears when the device address used by a part or function's settings is invalid. The part or function name using the invalid address is displayed in the brackets. However, sometimes the brackets are not displayed.	_____
Cannot read the file (****) required for startup. Please transfer the project data again.	A file needed for startup could not be read. Transfer again and restore the system. The file name displayed inside the brackets is either abnormal or does not exist.	

Continued

Error Message	Cause and Solution	Reference
The no. of Devices/PLCs exceeds the limit. Please check the settings and transfer the project data again.	The no. of devices/PLCs exceeds the maximum setting. (Large-scale units: 4, medium-scale units: 2). Reconfirm the project settings and transfer it again.	GP-Pro EX Reference Manual "5.13.6 [System Settings Window] Settings Guide ■ [Peripheral List] Settings Guide" (page 5-122)

■ When the DIO board type GP3000 series is used

◆ I/O driver errors

Error No.	Error Message	Cause and Solution
RGE*002	Illegal Parameter	The data type of the symbol variable assigned to the I/O is illegal. The I/O setting value is illegal. When this error occurs, transfer the program again.
RGE*003	Device offset beyond limit.	The address of the symbol variable assigned to the I/O is out of range. When this error occurs, transfer the program again.
RGE*004	Terminal config overlapped.	The number of I/O terminals exceeds the limit (6 bit inputs and 2 bit outputs). When this error occurs, transfer the program again.
RGE*005	Illegal terminal sequence.	The I/O terminal numbers are not specified in ascending order. When this error occurs, transfer the program again.
RGE*006	Insufficient terminals.	The number of I/O terminals is not appropriate (insufficient). When this error occurs, transfer the program again.
RGE*009	Driver config overlapped.	The driver has been registered twice. When this error occurs, transfer the program again.
RGE*011	Unmatched bit/word term.	The variable type specified in the I/O is incorrect. Transfer the project data again.
RGE*012	Illegal level number	Something is wrong with the I/O driver. Transfer the project data again.
RGE*013	Illegal data address gotten.	The I/O driver information is incorrect. Transfer the project data again. The controller information is incorrect. Transfer the project data again.
RGE*014	Driver/Units not registered.	The I/O driver or I/O is not registered. Transfer the project data again.
RGE*050	Different ID unit connected.	The I/O board being connected is different from the I/O board in the project. Transfer the project data again.

Continued

Error No.	Error Message	Cause and Solution
RGE*100	DIO read data chattering	Chattering occurred during the input from the DIO board. This may be caused by noise or GP unit failure. If this error occurs frequently, the unit may be faulty and require repair.
RGE*101	DIO write data error	Although data was output to the DIO board, it was not output when the output result was fed back. This may be caused by noise or GP unit failure. If this error occurs frequently, the unit may be faulty and require repair.

◆**Runtime error**

The following error messages are displayed while the logic program is running.

Error No.	Error Message	Cause and Solution
RGAA001	Watchdog error	The possible causes are that the operation has entered an endless loop in the program, or that the program uses many instructions which wait for logic programs. With GP-Pro EX, select [Main Unit Settings] in [System Settings Window], open the [Logic Settings] tab, and set the time for [WDT (Watchdog Timer) Settings] longer.



## 1.7 If the problem still continues...

If you cannot solve the problem after reading this manual or other references, you can find a solution using the following steps.

### 1.7.1 Visit our Website!

If you cannot solve the problem after reading this manual or other references, you can access our homepage to find a solution.



This site offers support for GP-Pro EX products.

<http://www.pro-face.com/otasuke/>

The site contains the following content:

Frequently Asked Questions (FAQ)

Sample screens for downloading

The latest manual for downloading

The site is updated periodically with useful content to save you time and effort.

### 1.7.2 Contact us!

If you cannot solve the problem even after reading this manual or other references and after accessing our homepage, you can contact us for assistance.

Contact information

This site will help you contact the closest Pro-face office. Feel free to contact us by email or by phone.

<http://www.pro-face.com/select.htm>

# 2

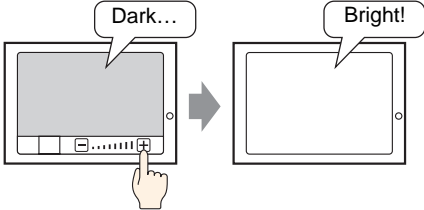
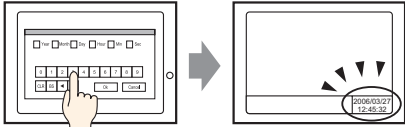
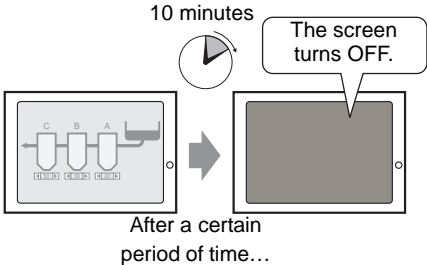
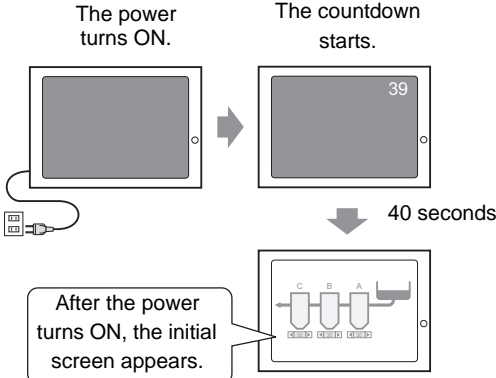
# Maintenance

This chapter describes basic information about the GP's "offline mode" and basic operations. First, read "2.1 Operations possible in offline mode" (page 2-2) and then go to the page with the information you require.

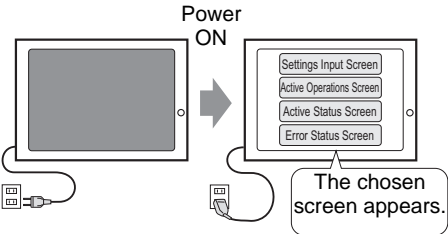
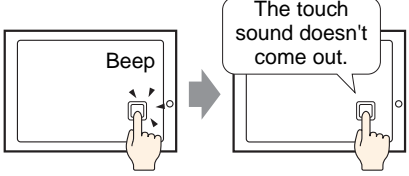
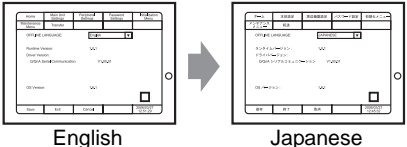

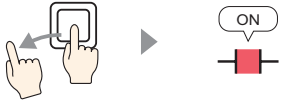
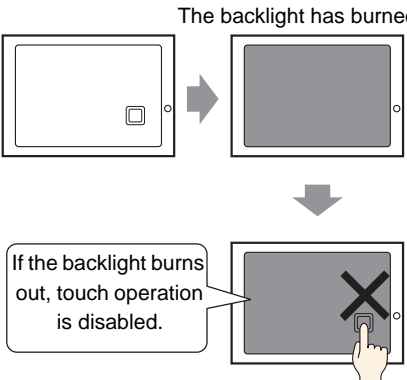
2.1	Operations possible in offline mode .....	2-2
2.2	Offline Mode .....	2-12
2.3	Setting the Display screen .....	2-17
2.4	Peripheral device settings .....	2-28
2.5	Ethernet settings .....	2-33
2.6	Password settings .....	2-35
2.7	Initialization of the memory/CF card.....	2-38
2.8	Operation check of the Display .....	2-42
2.9	Operation (communication) check of the logic functions.....	2-45
2.10	Controller settings .....	2-52
2.11	Video display adjustment/check.....	2-55
2.12	Screen transfer from GP-Pro EX.....	2-59
2.13	Offline settings guide.....	2-63

## 2.1 Operations possible in offline mode

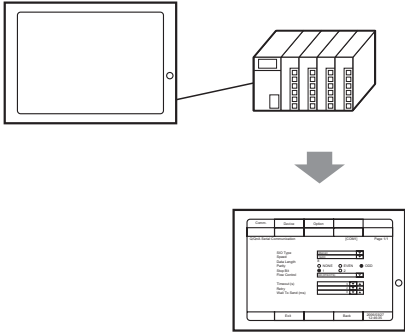
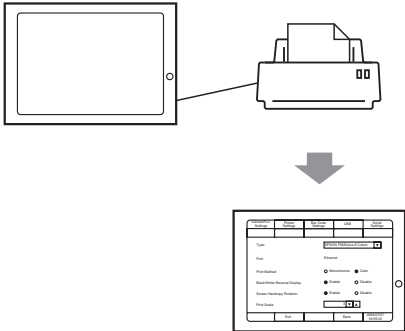
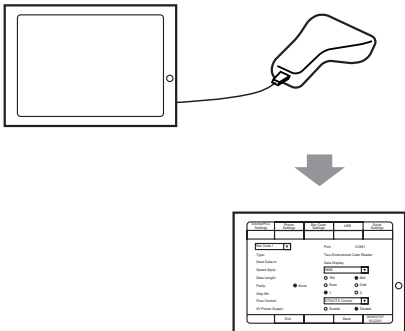
When the Display is in offline mode, the following settings are available:

What you can do	Section describing the setting procedure
<p>You can adjust the settings for the screen and operations of the Display.</p> <ul style="list-style-type: none"> <li>Adjusting the brightness/contrast of the Display                      </li> <li>Setting the clock on the Display                      </li> <li>Setting the standby mode                      </li> <li>Setting the startup delay of the Display                      </li> </ul>	<p>☞ “2.3 Setting the Display screen” (page 2-17)</p>

Continued

What you can do	Section describing the setting procedure
<ul style="list-style-type: none"> <li> <b>Setting the screen that is initially displayed on the Display</b>  </li> <li> <b>Activating/deactivating the touch sound</b>  </li> <li> <b>Setting the offline mode menu to be displayed in Japanese</b> <p style="text-align: center;">Switch to the Japanese menu.</p>  </li> <li> <b>Setting the touch recognition timing</b> <p>Touching the button turns the bit ON.</p>  <p>Releasing the button turns the bit ON.</p>  </li> <li> <b>Setting the malfunction prevention when the backlight burns out</b> <p style="text-align: center;">The backlight has burned out!</p>  </li> </ul>	<p>☞ “2.3 Setting the Display screen” (page 2-17)</p>

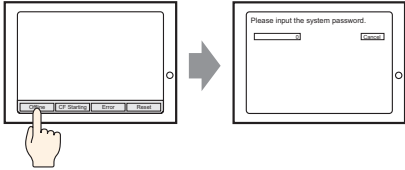
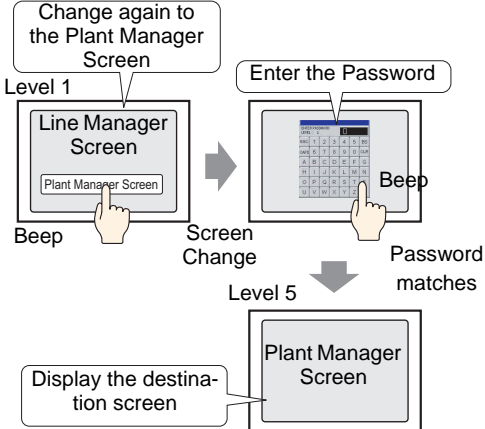
Continued

What you can do	Section describing the setting procedure
<p>You can adjust and check the settings for the peripheral devices.</p> <ul style="list-style-type: none"> <li>• Specifying/checking the communication settings for the connected device</li> </ul>  <ul style="list-style-type: none"> <li>• Changing/checking the printing method for the connected printer</li> </ul>  <ul style="list-style-type: none"> <li>• Specifying/checking the communication settings for the connected bar code reader</li> </ul> 	<p>☞ “2.4 Peripheral device settings” (page 2-28)</p>

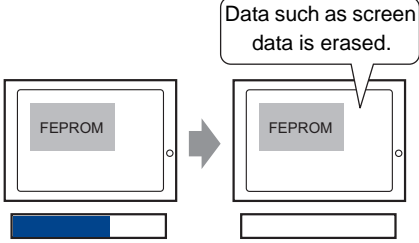
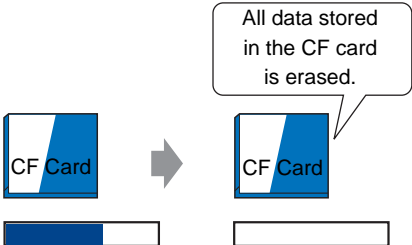
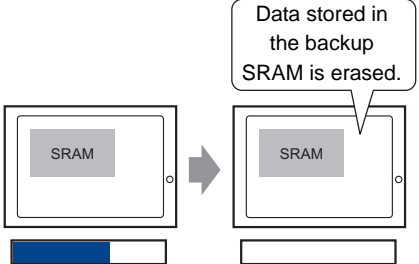
Continued

What you can do	Section describing the setting procedure
<p>You can assign an IP address to the Display to establish communication for the following purposes.</p> <ul style="list-style-type: none"> <li>• To communicate with the connected device via Ethernet                     <div data-bbox="244 334 636 672"> </div> </li> <li>• To transfer project files                     <div data-bbox="220 774 662 1213"> </div> </li> <li>• To establish communication when Pro-Server EX is used                     <div data-bbox="257 1321 673 1773"> </div> </li> </ul>	<p>☞ “2.5 Ethernet settings” (page 2-33)</p>

Continued

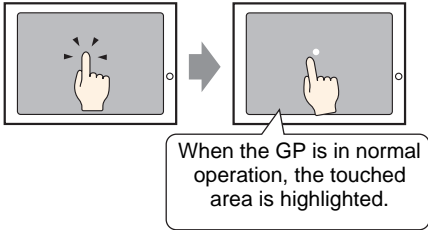
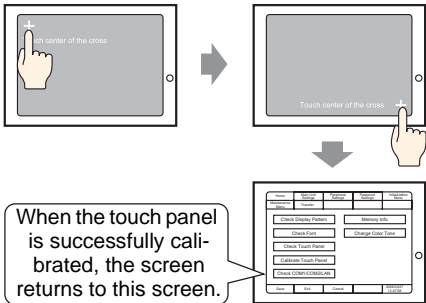
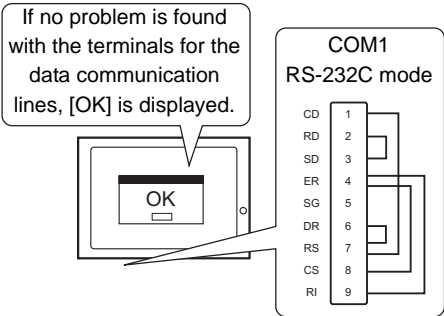
What you can do	Section describing the setting procedure
<p>You can set a password to enter offline mode, initialize the memory/CF card, or perform screen operations.</p> <ul style="list-style-type: none"> <li>• Setting a password for initialization or to enter offline mode</li> </ul>  <ul style="list-style-type: none"> <li>• Granting security rights for screen operations</li> </ul> 	<p>☞ “2.6 Password settings” (page 2-35)</p>

Continued

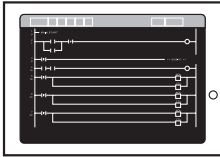
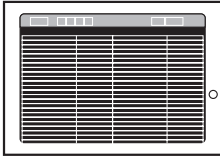
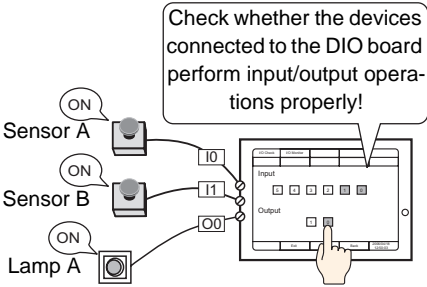
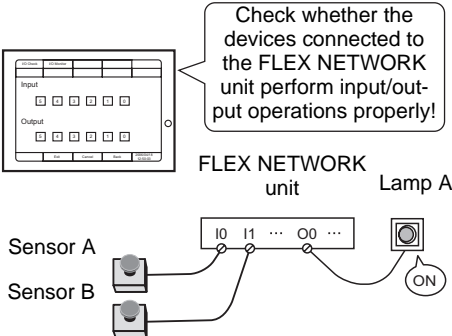
What you can do	Section describing the setting procedure
<p>You can initialize the data in the memory or CF card. The following initialization functions are available.</p> <ul style="list-style-type: none"> <li> <b>Initializing data in the user memory (FEPRM)</b>  </li> <li> <b>Initializing data in the CF card</b>  </li> <li> <b>Initializing data in the backup SRAM</b>  </li> </ul>	<p>☞ “2.7 Initialization of the memory/CF card” (page 2-38)</p>

Continued

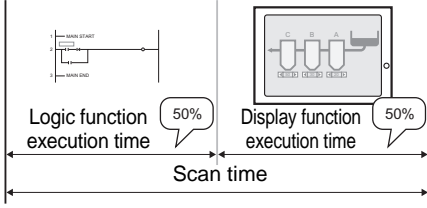
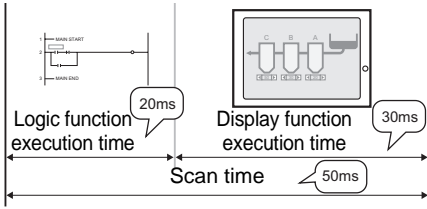
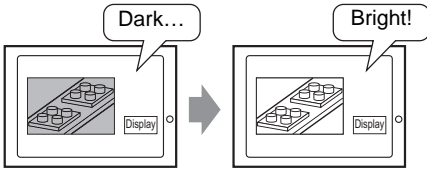
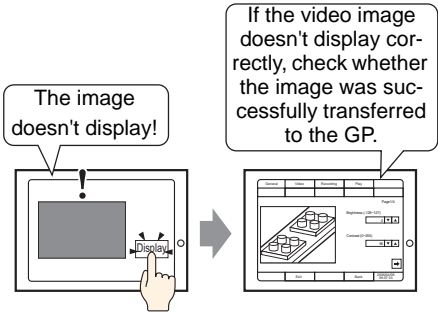


What you can do	Section describing the setting procedure
<p>You can check the following items to ensure proper operation of the Display.</p> <ul style="list-style-type: none"> <li>• Checking the touch panel                     <div data-bbox="244 330 670 558">  </div> </li> <li>• Correcting the analog touch panel                     <div data-bbox="234 633 658 933">  </div> </li> <li>• Checking COM1/COM2/LAN                     <div data-bbox="226 1025 668 1338">  </div> </li> </ul> <p>* You need to prepare a loopback cable to check the COM1 and COM2 terminals.</p>	<p>“2.8 Operation check of the Display” (page 2-42)</p>

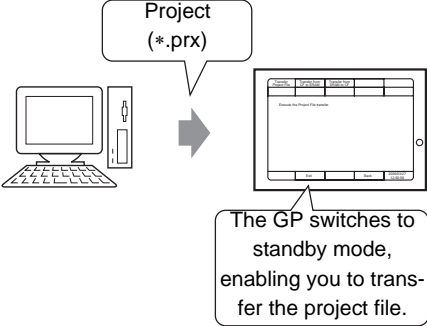
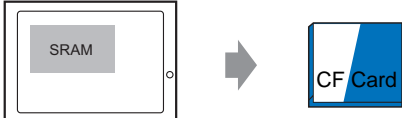
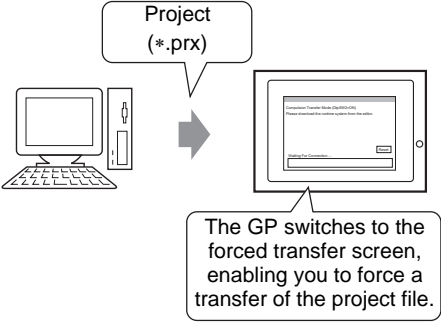
Continued

What you can do	Section describing the setting procedure
<p>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.</p> <ul style="list-style-type: none"> <li>Monitoring the logic program                     <div data-bbox="227 401 669 556">  <p>You can check the status of the logic program operation and the variables used in the instruction.</p> </div> </li> <li>Monitoring the addresses of the variables used in the logic program                     <div data-bbox="227 678 669 832">  <p>You can check the variable names used in the logic program and their current values.</p> </div> </li> <li>Checking the operation of the device connected to the DIO board type GP3000 series                     <div data-bbox="237 948 662 1232">  <p>Check whether the devices connected to the DIO board perform input/output operations properly!</p> </div> </li> <li>Checking the operation of the device connected to the FLEX NETWORK unit                     <div data-bbox="227 1363 677 1696">  <p>Check whether the devices connected to the FLEX NETWORK unit perform input/output operations properly!</p> </div> </li> </ul>	<p>☞ “2.9 Operation (communication) check of the logic functions” (page 2-45)</p>

Continued

What you can do	Section describing the setting procedure
<p>You can set the execution time of the logic program using either of the following methods.</p> <ul style="list-style-type: none"> <li>Setting it based on the ratio to the controller function execution time</li> </ul>  <p>The diagram shows a scan cycle from MAIN START to MAIN END. The logic function execution time is 50% of the scan time, and the display function execution time is also 50% of the scan time. A control panel icon with buttons C, B, and A is shown to the right.</p> <ul style="list-style-type: none"> <li>Setting it based on the controller function execution time and the display function execution time</li> </ul>  <p>The diagram shows a scan cycle from MAIN START to MAIN END. The logic function execution time is 20ms, the display function execution time is 30ms, and the total scan time is 50ms. A control panel icon with buttons C, B, and A is shown to the right.</p>	<p>☞ “2.10 Controller settings” (page 2-52)</p>
<p>You can adjust or check the video display when using the movie function of the GP-3*50 series or using the VM unit.</p> <ul style="list-style-type: none"> <li>Adjusting the image quality for the video display</li> </ul>  <p>The diagram shows two control panels. The first is labeled 'Dark...' and the second is labeled 'Bright!'. Both show a video image of a circuit board on the 'Display' screen.</p> <ul style="list-style-type: none"> <li>Checking the video image that doesn't display</li> </ul>  <p>The diagram shows a control panel with a dark screen and a hand pointing to the 'Display' button. A speech bubble says 'The image doesn't display!'. An arrow points to another control panel showing a video image and a settings menu. A speech bubble says 'If the video image doesn't display correctly, check whether the image was successfully transferred to the GP.'</p>	<p>☞ “2.11 Video display adjustment/check” (page 2-55)</p>

Continued

What you can do	Section describing the setting procedure
<p>When project files cannot be transferred, the following alternative methods can be used.</p> <ul style="list-style-type: none"> <li> <b>Transfer in offline mode</b>                      If the GP doesn't automatically switch to transfer mode, perform the transfer in offline mode.                 </li> </ul>  <ul style="list-style-type: none"> <li> <b>Backing up the SRAM data onto the CF card</b> </li> </ul>  <p style="text-align: center;">Back up the SRAM data</p> <ul style="list-style-type: none"> <li> <b>Forced transfer</b>                      If the GP doesn't automatically switch to transfer mode and you cannot switch the GP to offline mode, perform the transfer in forced transfer mode.                 </li> </ul> 	<p>☞ “2.12 Screen transfer from GP-Pro EX” (page 2-59)</p>

## 2.2 Offline Mode

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

**IMPORTANT**

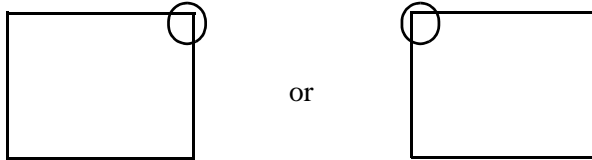
- OFFLINE mode is unavailable in a completely new GP until the necessary GP system data has been transferred from GP screen editor software. To do this, be sure the GP's power cord is plugged in and when transfer screen data from GP screen editor software to the GP, GP's system data will be automatically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

### 2.2.1 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.

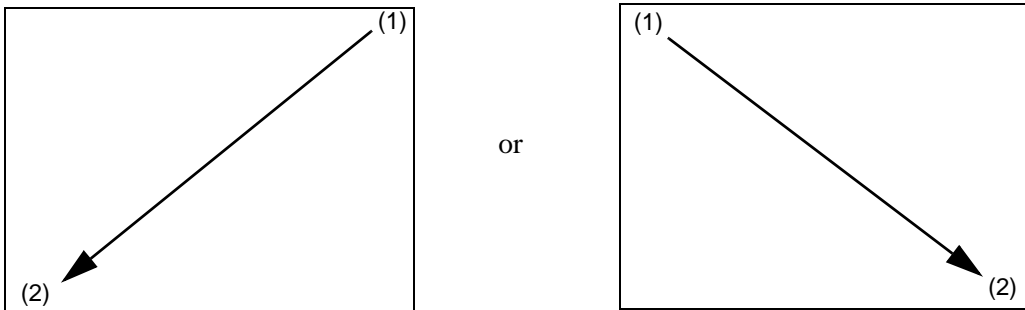
■ **After Plugging in the Power Cord**

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.

☞ "2.13.6 System Menu" (page 2-116)



Continued

**NOTE**

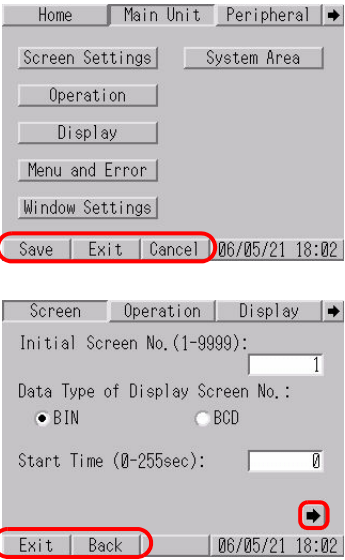
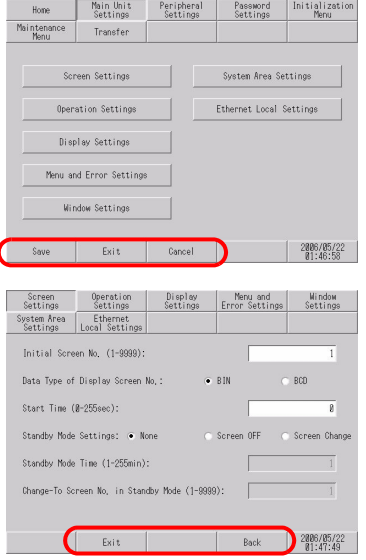
- If the system menu does not appear, [Show System Menu] for GP-Pro EX ([Main Unit Settings] - [Menu and Error Settings]) has been set to [Do Not Display]. Change the setting to show the system menu and then transfer the project file again.
  - ☞ GP-Pro EX Reference Manual “5.13.6 [System Settings Window] Settings Guide • Menu and Error Settings” (page 5-102)
- 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.
  - ☞ “2.6 Password settings” (page 2-35)
  - ☞ “2.2.3 Operation in offline mode” (page 2-15)

### 2.2.2 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
<p>• Item changeover switch</p> <p>The setting item displayed is changed.</p> <p>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.</p>	<p>Arrow switch</p>	
<p>• Setting item</p> <p>The necessary item is set up when the using GP.</p> <p>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.</p>		

Continued

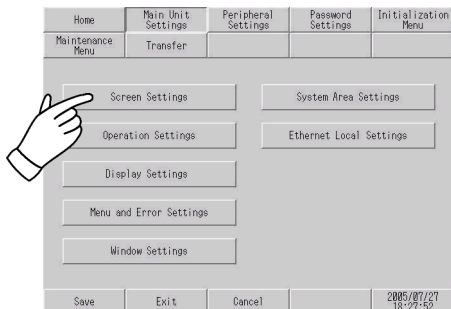
Switch	When the screen pixels is the 320x240 pixels model	When the screen pixels is the 640x480 pixels model
<p>• Control switch</p> <p>This button performs “Save”, “Cancel”, “Exit”, and “Back” in offline mode. Each function is as follows. The buttons are displayed differently depending on the screen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

## 2.2.3 Operation in offline mode

This section describes operations necessary for various settings.

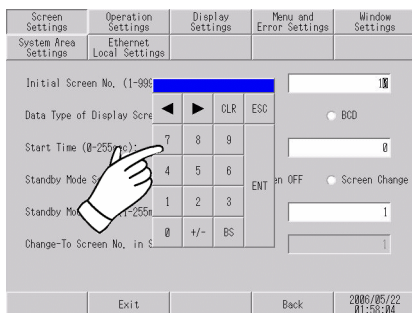
### ■ Selecting a menu

Touch the menu item.



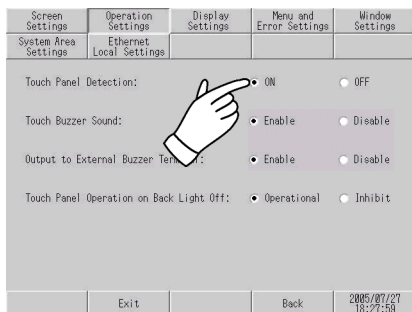
### ■ Entering numbers

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.

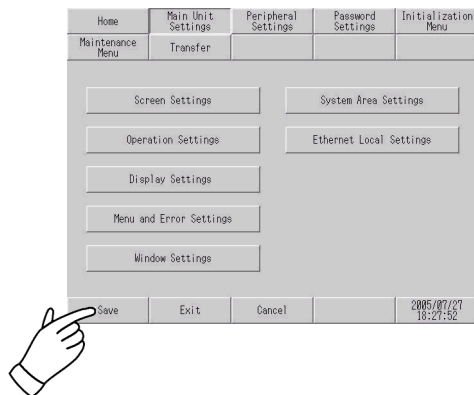




## ■ After all setting data is entered

Touch the lower [Save] button.

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

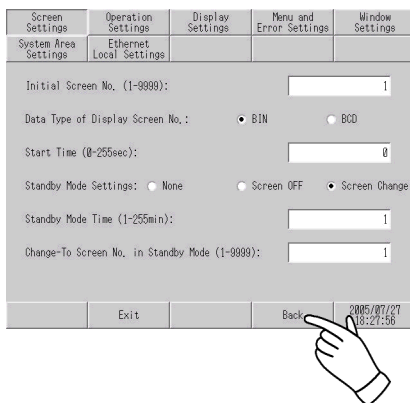


### IMPORTANT

- 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.

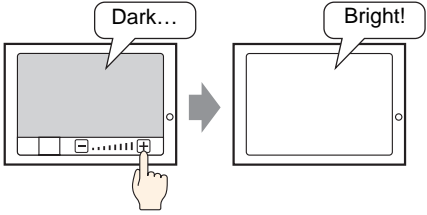
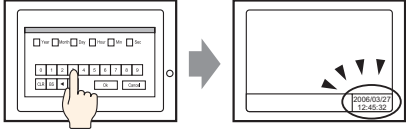
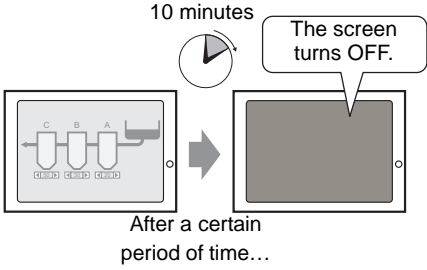
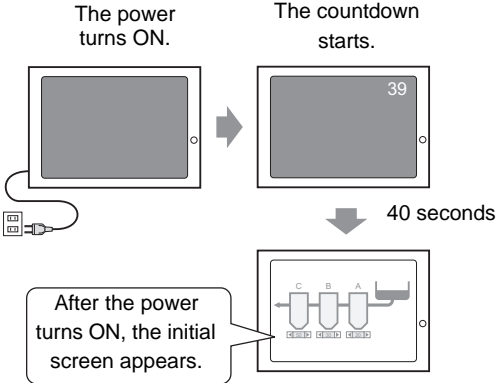
## ■ Return to the hierarchy on one

Touch the [Back] button.



## 2.3 Setting the Display screen

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

What you can do	Section describing the setting procedure
<ul style="list-style-type: none"> <li>Adjusting the brightness/contrast of the Display</li> </ul> 	<p>☞ “2.3.1 Adjusting the brightness/contrast” (page 2-19)</p>
<ul style="list-style-type: none"> <li>Setting the clock on the Display</li> </ul> 	<p>☞ “2.3.2 Adjusting the clock on the Display” (page 2-20)</p>
<ul style="list-style-type: none"> <li>Setting the standby mode</li> </ul> 	<p>☞ “2.3.3 Turning OFF the screen after a certain period of time (standby mode)” (page 2-21)</p>
<ul style="list-style-type: none"> <li>Setting the startup delay of the Display</li> </ul> 	<p>☞ “2.3.4 Setting the delay between power-on and Display start-up” (page 2-22)</p>

Continued

What you can do	Section describing the setting procedure
<ul style="list-style-type: none"> <li>Setting the screen that is initially displayed on the Display</li> </ul>	<p>☞ “2.3.5 Setting the screen No. of the screen that is initially displayed after the power is turned ON” (page 2-23)</p>
<ul style="list-style-type: none"> <li>Activating/deactivating the touch sound</li> </ul>	<p>☞ “2.3.6 Deactivating the touch sound” (page 2-24)</p>
<ul style="list-style-type: none"> <li>Setting the offline mode menu to be displayed in Japanese</li> </ul> <p style="text-align: center;">Switch to the Japanese menu.</p>	<p>☞ “2.3.7 Changing the language used for the system menu and offline mode menu to Japanese” (page 2-25)</p>
<ul style="list-style-type: none"> <li>Setting the touch recognition timing</li> </ul> <p>Touching the button turns the bit ON.</p> <p>Releasing the button turns the bit ON.</p>	<p>☞ “2.3.8 Changing the timing to recognize touches” (page 2-26)</p>
<ul style="list-style-type: none"> <li>Setting the malfunction prevention when the backlight burns out</li> </ul> <p style="text-align: center;">The backlight has burned out!</p>	<p>☞ “2.3.9 Preventing malfunctions when the backlight burns out” (page 2-27)</p>

### 2.3.1 Adjusting the brightness/contrast

You can adjust the brightness and contrast of the GP.

- NOTE** • For more details, refer to the settings guide.  
 ☞ “2.13.1 Settings common to all Display models u Display Settings” (page 2-67)

#### ■ 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.

Touch the corners.

Brightness Control Bar

When this button is touched, the bar changes to the Contrast Control Bar. (This button is not displayed when the GP is a TFT model.)

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

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

### 2.3.2 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 highlighted 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.

### 2.3.3 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.
- ☞ “2.13.1 Settings common to all Display models u Screen Settings” (page 2-66)

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.

### 2.3.4 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.  
 ☞ “2.13.1 Settings common to all Display models u Display Settings” (page 2-67)

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.

### 2.3.5 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.  
 ☞ “2.13.1 Settings common to all Display models u Display Settings” (page 2-67)

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.



### 2.3.6 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.  
 ☞ “2.13.1 Settings common to all Display models u Operation Settings” (page 2-67)

#### ■ Activating/deactivating the touch sound

The screenshot shows a multi-level menu system. At the top, 'Main Unit Settings' is highlighted with a red circle. Below it, the 'Operation Settings' option is also circled in red. In the 'Operation Settings' sub-menu, the 'Touch Buzzer Sound' option is circled in red, with the 'Disable' radio button selected. Arrows from the numbered instructions point to these specific elements.

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].

The 'Exit' dialog box has a blue title bar and a close button. The text inside reads: 'Offline mode will be terminated and the machine will be rebooted. Is that all right?'. Below the text are three buttons: 'Save changes and exit' (circled in red), 'Lose changes and exit', and 'Cancel'.

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

The 'Save File' dialog box has a blue title bar. The text inside reads: 'Saving the setting. Please do NOT turn off the machine until complete.'.

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

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

**NOTE**

- For more details, refer to the settings guide.
- ☞ “2.13.1 Settings common to all Display models u Menu and Error Settings” (page 2-68)
- ☞ “2.13.1 Settings common to all Display models n [Home] Settings Guide” (page 2-65)

### ■ 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

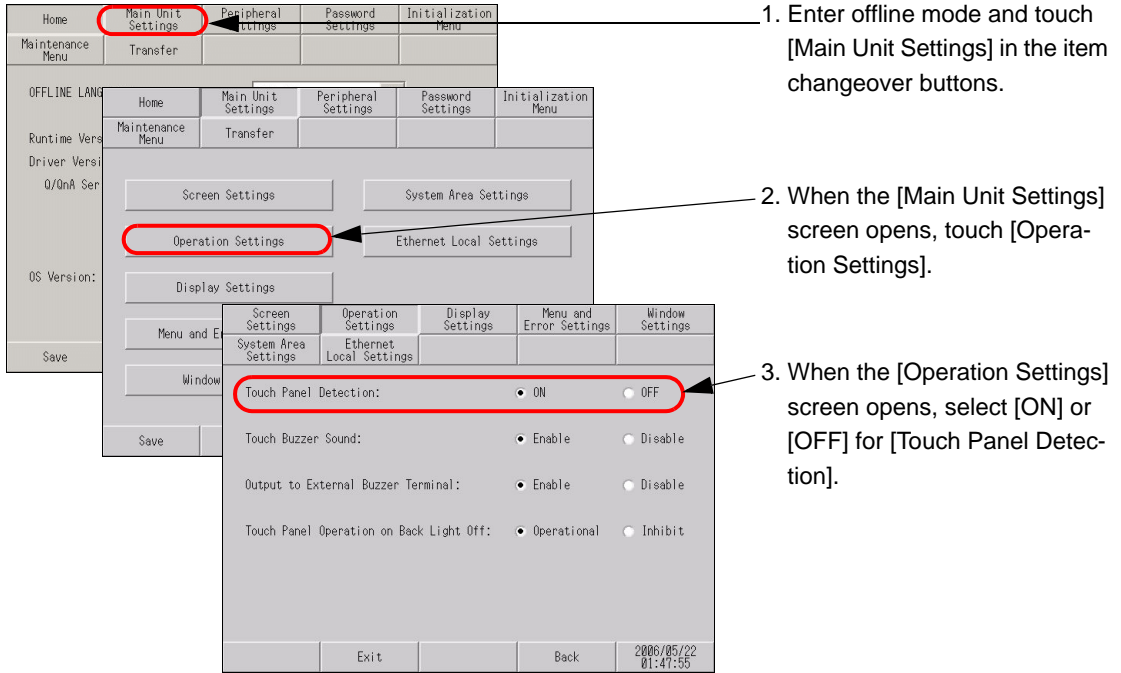
Set the language used to display the text of the offline mode menu.

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.

### 2.3.8 Changing the timing to recognize touches

Setup the touch detect timing.

**NOTE** • For more details, refer to the settings guide.  
 ☞ “2.13.1 Settings common to all Display models u Operation Settings” (page 2-67)



1. Enter offline mode and touch [Main Unit Settings] in the item changeover buttons.

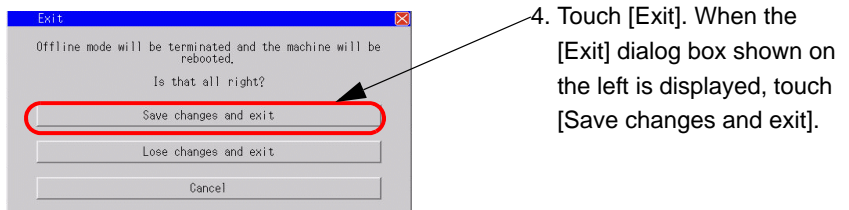
2. When the [Main Unit Settings] screen opens, touch [Operation Settings].

3. When the [Operation Settings] screen opens, select [ON] or [OFF] for [Touch Panel Detection].

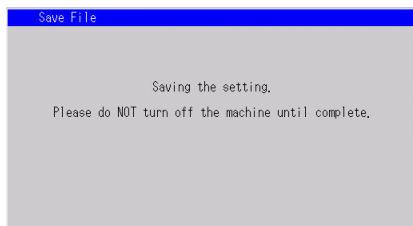
**ON** : Touch is detected when a touch is pushed.

**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.

### 2.3.9 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.
- ☞ “2.13.1 Settings common to all Display models u Operation Settings” (page 2-67)

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.

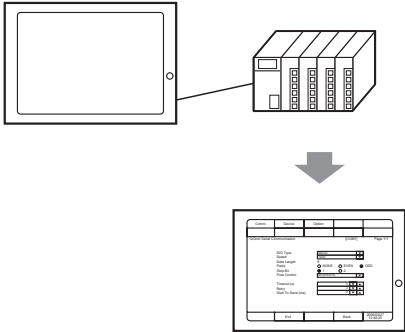
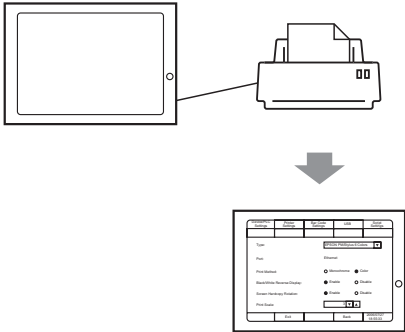
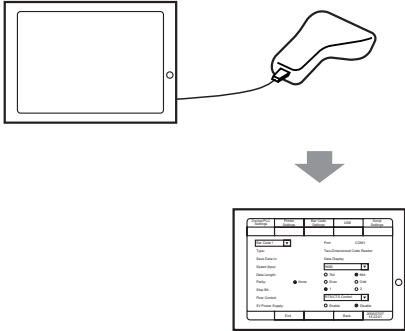
- NOTE**
- When the backlight burns out, the Status LED’s orange light turns ON.
  - The GP3000 series models use two backlights (CCFL). The GP detects backlight burnout when one of the two backlights burns out, and disables touch operations.
  - When the backlight burns out, the System Data Area’s “Status” bit 10<sup>\*a</sup> 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.

## 2.4 Peripheral device settings


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

What you can do	Section describing the setting procedure
<ul style="list-style-type: none"> <li>Specifying/checking the communication settings for the connected device</li> </ul> 	<p>☞ “2.4.1 Checking the communication settings for the connected device” (page 2-29)</p>
<ul style="list-style-type: none"> <li>Changing/checking the printing method for the connected printer</li> </ul> 	<p>☞ “2.4.2 Checking the printer settings” (page 2-31)</p>
<ul style="list-style-type: none"> <li>Specifying/checking the communication settings for the connected bar code reader</li> </ul> 	<p>☞ “2.4.3 Checking the bar code reader settings” (page 2-32)</p>

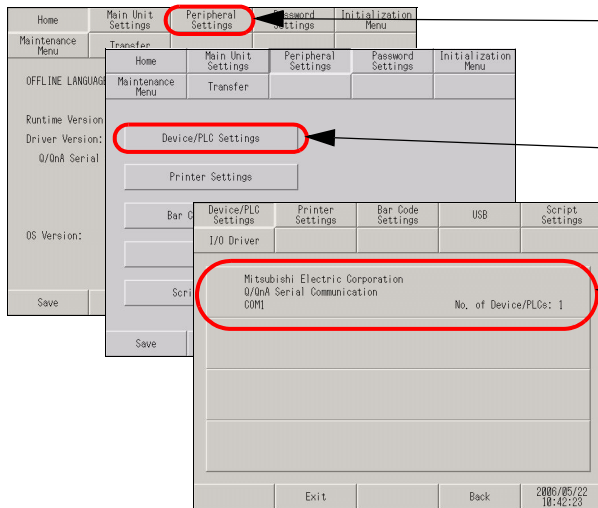
## 2.4.1 Checking the communication settings for the connected device

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.

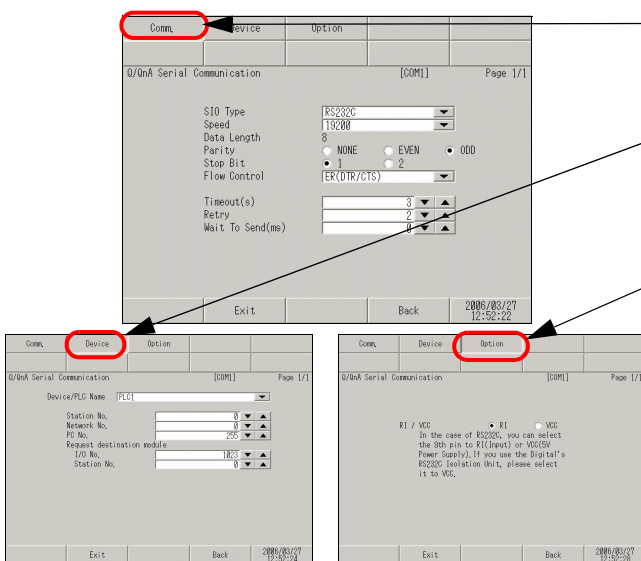
### NOTE

- For more details, refer to the settings guide.  
 “2.13.1 Settings common to all Display models u Device/PLC Settings” (page 2-73)

### 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**

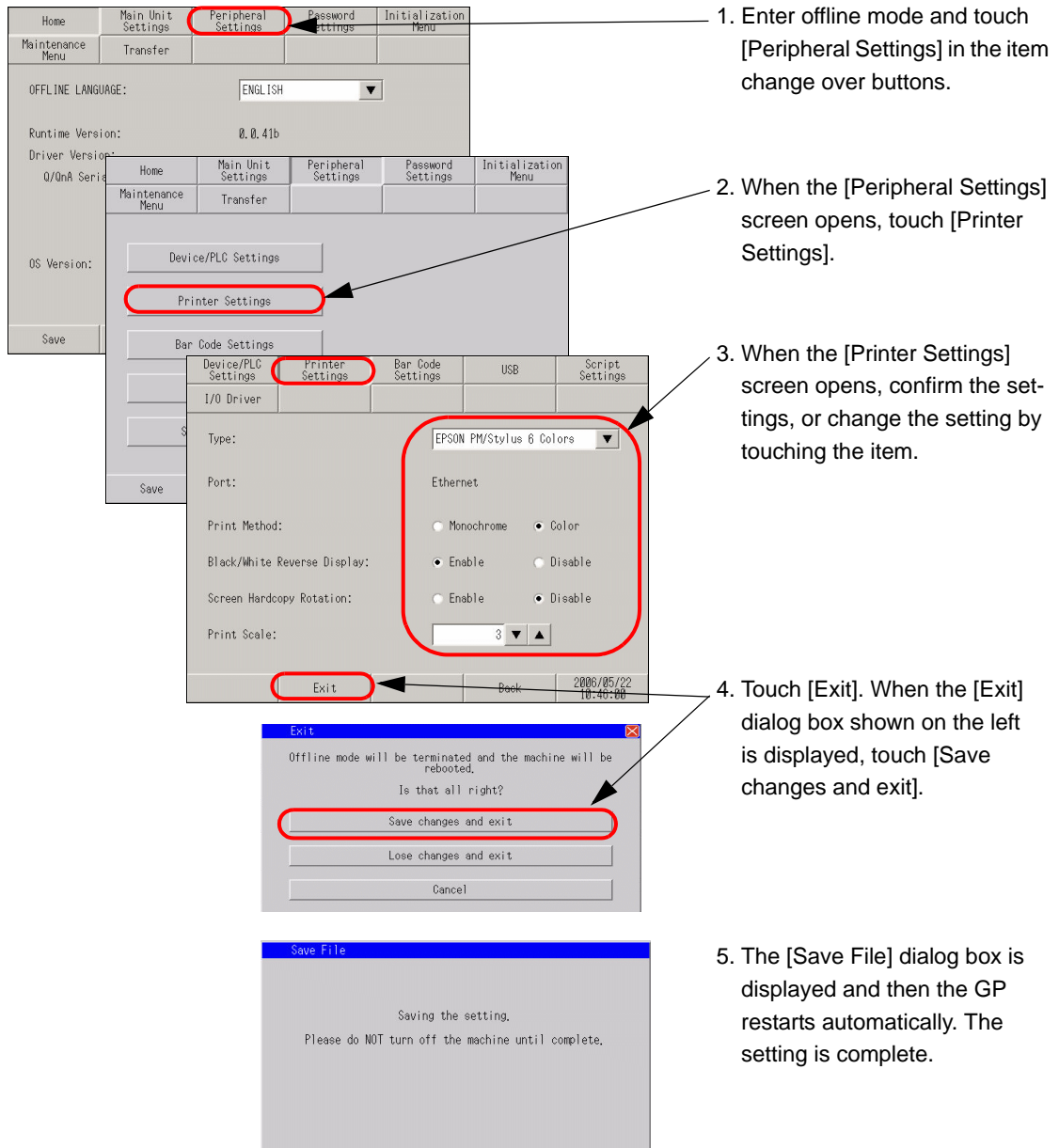
- The [Comm.] and [Device] description differs depending on each device/PLC series. Please refer to the “GP-Pro EX Device/PLC Connection Manual”. However, [Timeout], [Retry], and [Wait to Send] are recommended to be used with their initial settings.

## 2.4.2 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.  
 "2.13.1 Settings common to all Display models u Printer Settings" (page 2-74)




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.

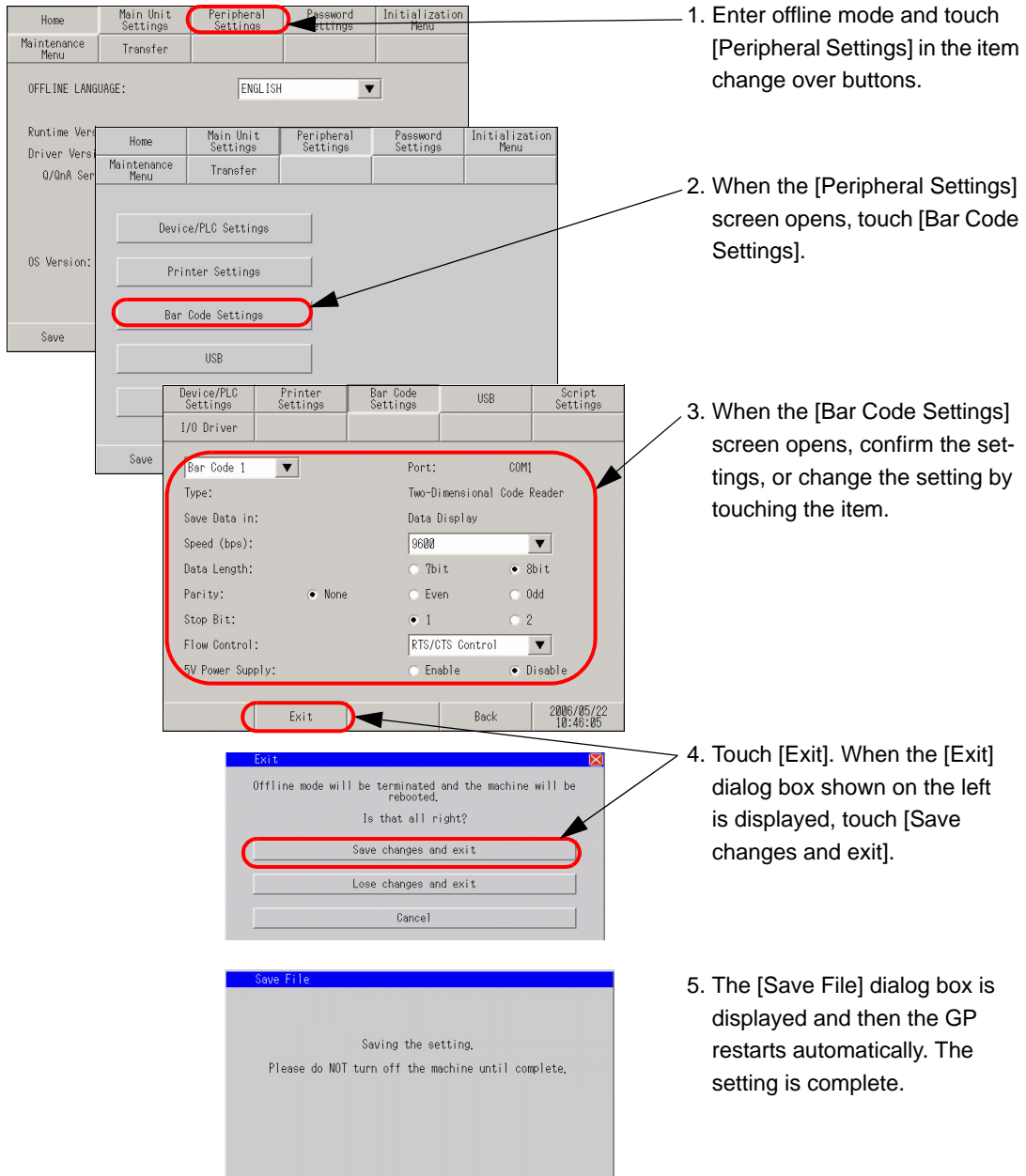


## 2.4.3 Checking the bar code reader settings

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

**NOTE**

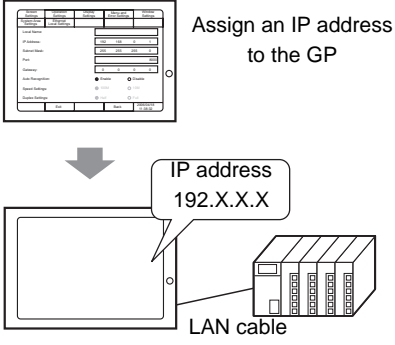
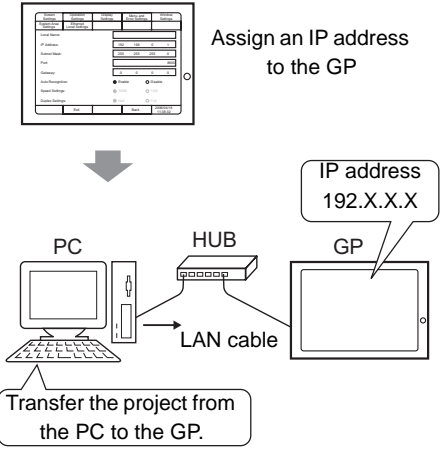
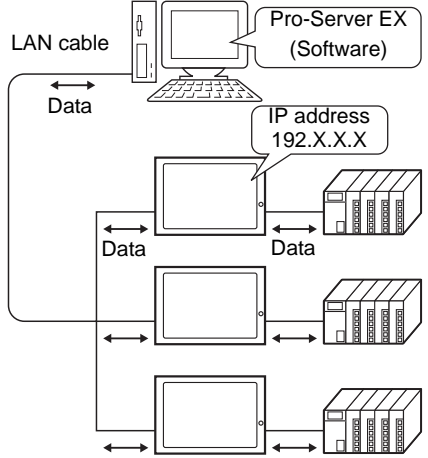
- For more details, refer to the settings guide.  
 "2.13.1 Settings common to all Display models u Bar Code Settings" (page 2-75)



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.

## 2.5 Ethernet settings

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

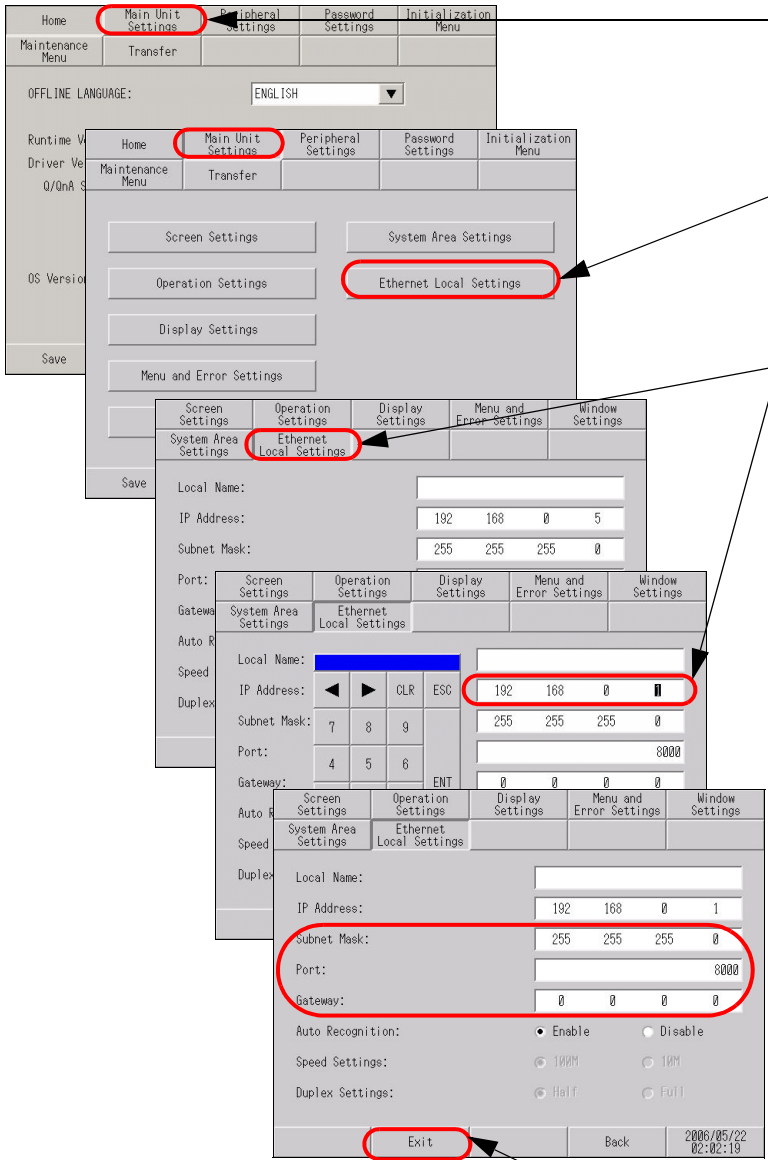
What you can do	Section describing the setting procedure
<ul style="list-style-type: none"> <li data-bbox="130 305 765 334">• To communicate with the connected device via Ethernet</li> </ul>  <p data-bbox="432 376 637 434">Assign an IP address to the GP</p> <p data-bbox="404 511 528 569">IP address 192.X.X.X</p> <p data-bbox="432 666 528 695">LAN cable</p> <ul style="list-style-type: none"> <li data-bbox="130 743 432 772">• To transfer project files</li> </ul>  <p data-bbox="432 821 637 879">Assign an IP address to the GP</p> <p data-bbox="541 956 665 1014">IP address 192.X.X.X</p> <p data-bbox="226 1188 473 1246">Transfer the project from the PC to the GP.</p> <ul style="list-style-type: none"> <li data-bbox="130 1265 734 1333">• To establish communication when Pro-Server EX is used</li> </ul>  <p data-bbox="514 1362 665 1420">Pro-Server EX (Software)</p> <p data-bbox="500 1458 624 1516">IP address 192.X.X.X</p> <p data-bbox="294 1439 349 1468">Data</p> <p data-bbox="349 1564 404 1593">Data</p> <p data-bbox="514 1584 569 1613">Data</p>	<p data-bbox="788 1023 1234 1091">☞ “2.5.1 Assigning an IP address to the Display” (page 2-34)</p>

## 2.5.1 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**

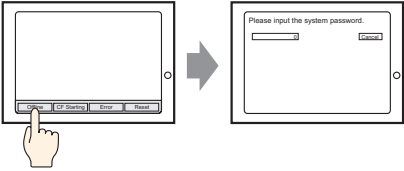
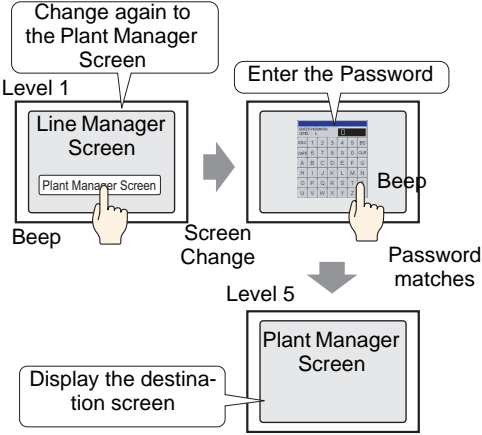
- For more details, refer to the settings guide.
- ☞ “2.13.1 Settings common to all Display models u Ethernet Local Settings” (page 2-72)



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]<sup>\*1</sup>, 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.

## 2.6 Password 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
<ul style="list-style-type: none"> <li>Setting a password for initialization or to enter offline mode</li> </ul> 	<p>☞ “2.6.1 Preventing others from changing the offline settings” (page 2-36)</p>
<ul style="list-style-type: none"> <li>Granting security rights for screen operations</li> </ul> 	<p>☞ “2.6.2 Granting security rights for screen operations” (page 2-37)</p>

## 2.6.1 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.
- ☞ “2.13.1 Settings common to all Display models u System Password” (page 2-77)

1. Enter offline mode and touch [Password Settings] in the item change over buttons.
2. When the [Password Settings] screen opens, touch [System Password Settings].
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.

## 2.6.2 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.  
 ☞ “2.13.1 Settings common to all Display models u Security Password” (page 2-77)

**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 Further Limiting Screens that can be Used According to Authority” (page 22-5)

### ■ Setting with GP-Pro EX

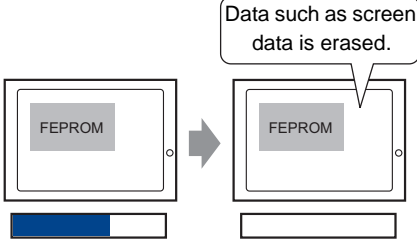
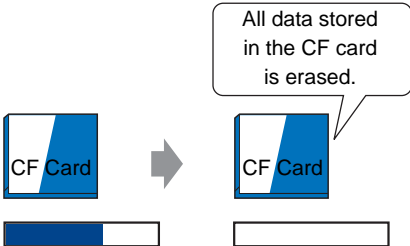
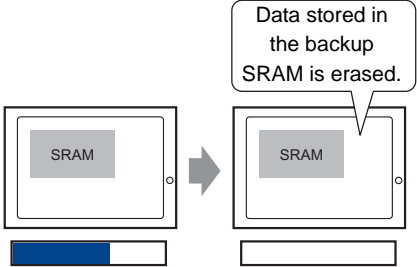
1. With GP-Pro EX, select [Security Settings(O)] - [Security Password(P)] from the [Common Settings(R)] menu. When the password setting screen opens, check [Enable Security Function] and specify a password in [Level 15].
2. Transfer the project file specified in step 1 to the GP.

### ■ 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.

## 2.7 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
<ul style="list-style-type: none"> <li>• Initializing the user memory (FEPRM)</li> </ul> 	<p>☞ “2.7.1 Initializing the user memory (FEPRM)” (page 2-39)</p>
<ul style="list-style-type: none"> <li>• Initializing the CF card</li> </ul> 	<p>☞ “2.7.2 Initializing the CF card” (page 2-40)</p>
<ul style="list-style-type: none"> <li>• Initializing the backup SRAM</li> </ul> 	<p>☞ “2.7.3 Initializing the backup SRAM” (page 2-41)</p>

## 2.7.1 Initializing the user memory (FEPRM)

Deletes all data in GP user memory (FEPRM).

**NOTE**

- For more details, refer to the settings guide.
- ☞ “2.13.1 Settings common to all Display models u Initialize User Memory” (page 2-78)
- 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].



## 2.7.2 Initializing the CF card

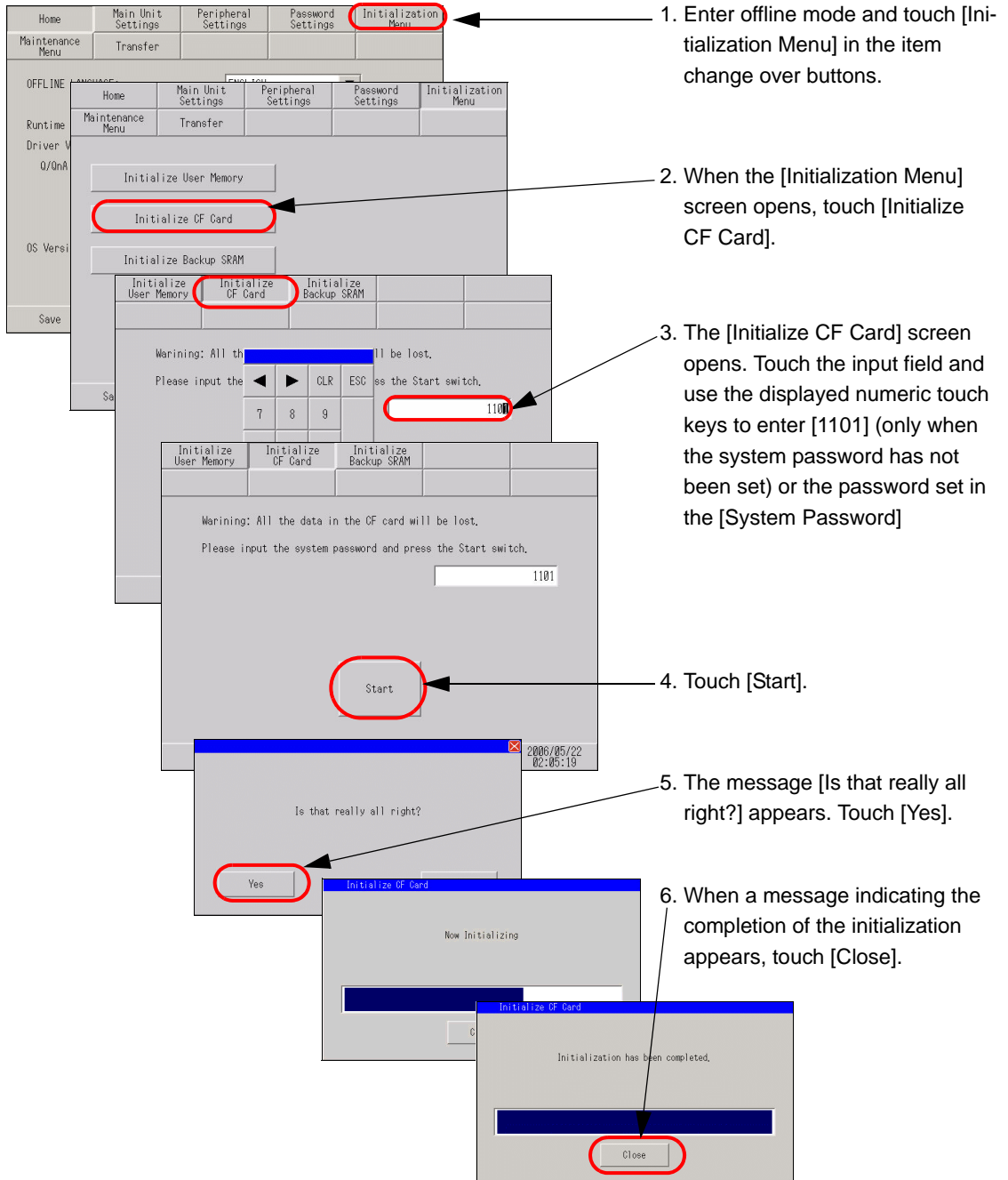
Deletes all data in the CF Card installed in the GP.

**NOTE**

- For more details, refer to the settings guide.  
 "2.13.1 Settings common to all Display models u Initialize CF Card" (page 2-79)

**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].

### 2.7.3 Initializing the backup SRAM

Deletes all data in GP's backup SRAM.

**NOTE**

- For more details, refer to the settings guide.
- ☞ “2.13.1 Settings common to all Display models u Initialize Backup SRAM” (page 2-79)

**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].

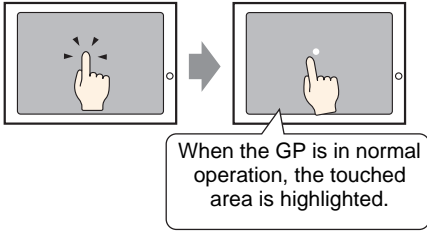
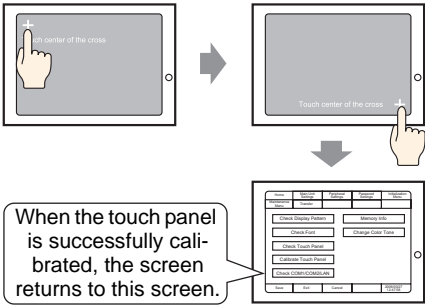
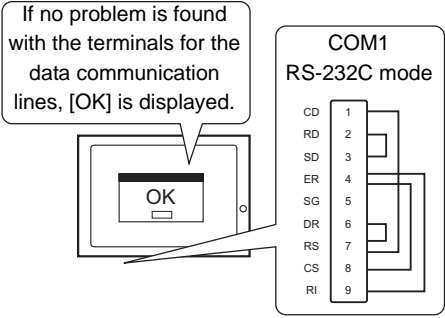
6. When a message indicating the completion of the initialization appears, touch [Close].

## 2.8 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.
  - ☞ “2.13.1 Settings common to all Display models n [Maintenance Menu] Settings Guide” (page 2-80)

What you can do	Section describing the setting procedure
<p>• Checking the touch panel</p> 	<p>☞ “2.8.1 Checking whether the Display is operating properly n Touch Panel” (page 2-43)</p>
<p>• Correcting the analog touch panel</p> 	<p>☞ “2.8.1 Checking whether the Display is operating properly n Calibration Touch Panel” (page 2-43)</p>
<p>• Checking COM1/COM2/LAN</p> <p>If no problem is found with the terminals for the data communication lines, [OK] is displayed.</p>  <p>* You need to prepare a loopback cable to check the COM1 and COM2 terminals.</p>	<p>☞ “2.8.1 Checking whether the Display is operating properly n COM1/COM2/LAN” (page 2-44)</p>

## 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.
    - ☞ “2.13.1 Settings common to all Display models n [Maintenance Menu] Settings Guide” (page 2-80)

### ■ 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.
    - ☞ “2.13.1 Settings common to all Display models u Touch Panel” (page 2-82)

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.
    - ☞ “2.13.1 Settings common to all Display models u Calibration Touch Panel” (page 2-82)

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

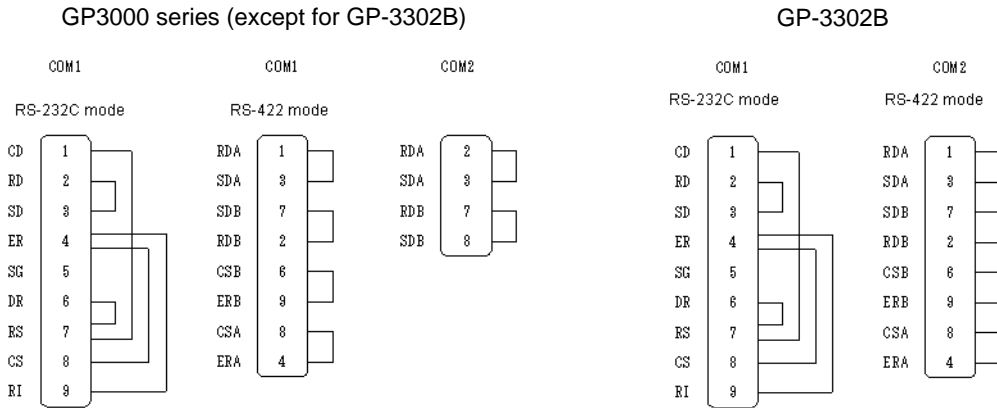
Check the sending and receiving line of RS-232C, RS-485 and LAN.

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:



### ◆ 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**

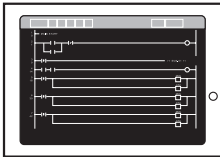
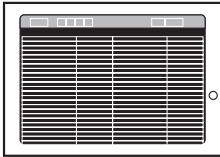
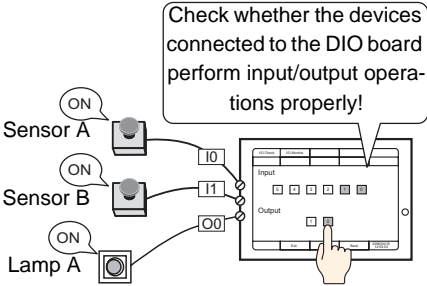
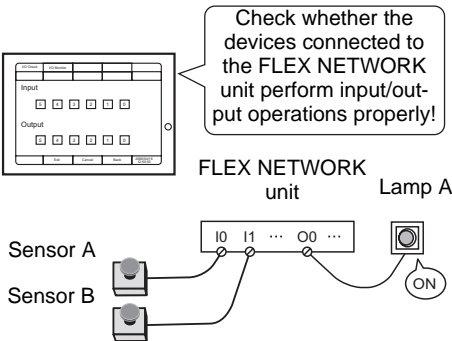
- For more details, refer to the settings guide.

☞ “2.13.1 Settings common to all Display models u Check COM1/COM2/LAN” (page 2-83)

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
<ul style="list-style-type: none"> <li>Monitoring the logic program</li> </ul>  <p>You can check the status of the logic program operation and the variables used in the instruction.</p>	<p>☞ “2.9.1 Checking whether the logic program is operating properly in Logic-Monitor” (page 2-46)</p>
<ul style="list-style-type: none"> <li>Monitoring the addresses of the variables used in the logic program</li> </ul>  <p>You can check the variable names used in the logic program and their current values.</p>	<p>☞ “2.9.1 Checking whether the logic program is operating properly in Address-Monitor” (page 2-47)</p>
<ul style="list-style-type: none"> <li>Checking the operation of the device connected to the DIO board type GP3000 series</li> </ul>  <p>Check whether the devices connected to the DIO board perform input/output operations properly!</p>	<p>☞ “2.9.2 Checking whether the DIO interfaces of the Display turn ON/OFF properly” (page 2-48)</p>
<ul style="list-style-type: none"> <li>Checking the operation of the device connected to the FLEX NETWORK unit</li> </ul>  <p>Check whether the devices connected to the FLEX NETWORK unit perform input/output operations properly!</p>	<p>☞ “2.9.3 Checking the communication to the FLEX NETWORK” (page 2-50)</p>

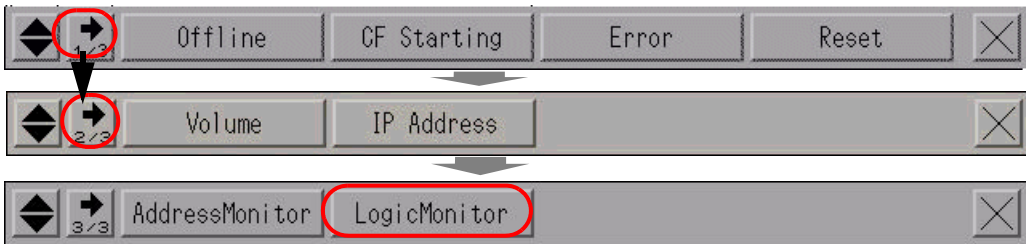
### 2.9.1 Checking whether the logic program is operating properly

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.

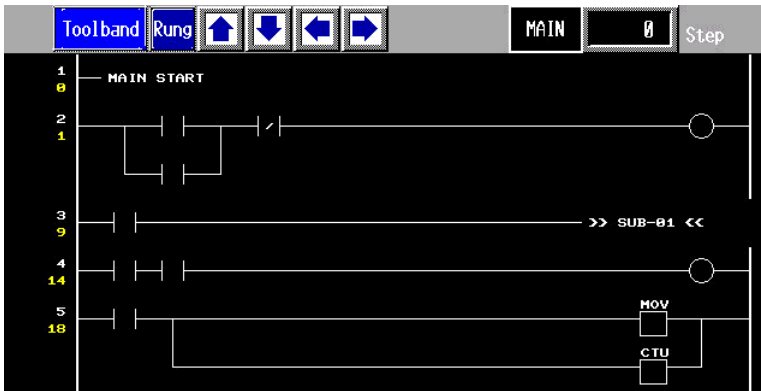
#### ■ LogicMonitor

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.

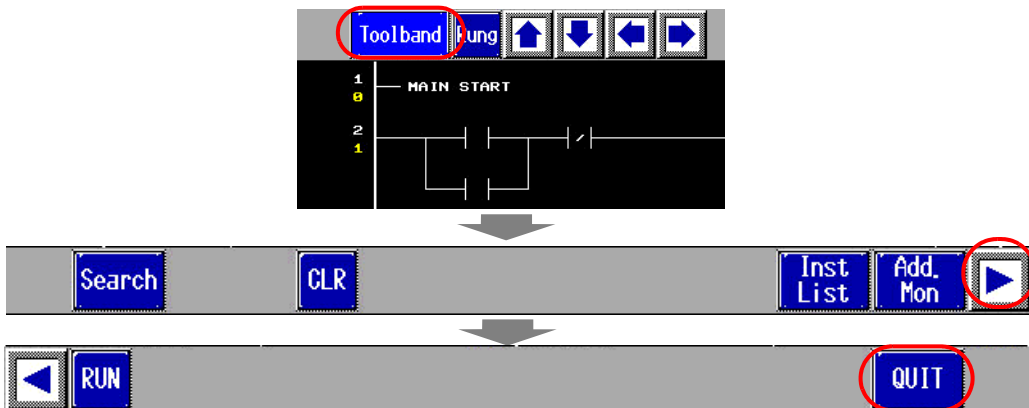
- 1 Transfer the logic program to the GP.
- 2 Touch either the upper right corner and then the lower left corner, or the upper left corner and then the lower right corner on the panel to display the offline system menu. Touch the [LogicMonitor] switch from the third menu.



- 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 [QUIT] in the toolband. Touch [QUIT] to return to the RUN screen.

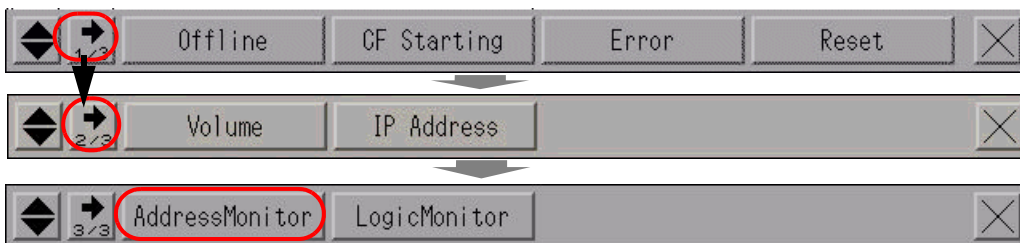


## ■ AddressMonitor

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.

Toolband				MAIN	0	Step
Address List						
1 / 2						
#L_RunMonitorA	OFF	#L_AvgScanTime	0			
#L_AlwaysON	ON	#L_MinScanTime	0			
#L_CalcZero	OFF	#L_MaxScanTime	0			
#L_CalcCarry	OFF	#L_ScanCount	0			
#L_ScanModeSW	ON	#L_LogicTime	0			
#L_AutoRunSW	OFF	#L_AvgLogicTime	0			
#L_InOutSW	OFF	#L_MinLogicTime	0			
#L_FaultRunSW	OFF	#L_MaxLogicTime	0			
#L_UnlatchClear	OFF	#L_Status	33792			
#L_LatchClear	OFF	#L_Platform	132884			
#L_Clock198ms	OFF	#L_Version	1693			
#L_Clock1sec	ON	#L_EditCount	0			
#L_Clock1min	ON	#L_IOInfoE03	0			
#L_ErrCtr1HM	OFF	#L_ConstantScan	100			
#L_IOFaultE03	OFF	#L_PercentScan	50			
#L_BatteryErr	OFF	#L_WatchdogTime	5800			
#L_Error	OFF	#L_AddressRefreshTi	1004			
#L_StopPending	OFF	#L_Time	4105			

- 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 or not.

**NOTE**

- For more details, refer to the settings guide.  
 ☞ “2.13.2 When the DIO board type GP3000 series is used u I/O Driver (I/O Monitor)” (page 2-91)

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

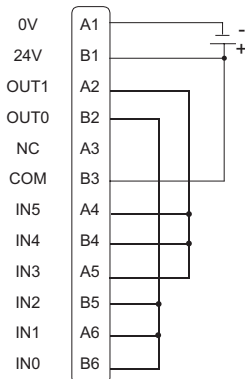
You need to prepare a loopback cable to check the internal terminals. Prepare the loopback cable according to the following instructions.

### ◆ Preparing the loopback cable

The wiring of the loopback cable is as follows:

- Sink type

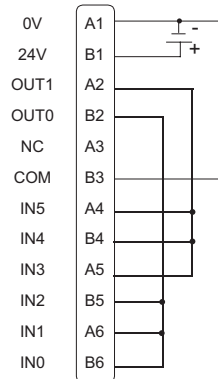
Example: To check three terminals at a time, from OUT0 to IN0 through IN2, and from OUT1 to IN3 through IN5



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.
- ☞ “2.13.2 When the DIO board type GP3000 series is used u I/O Driver (I/O Check)” (page 2-90)

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.

☞ “1.7.2 Contact us!” (page 1-110)

## 2.9.3 Checking the communication to the FLEX NETWORK

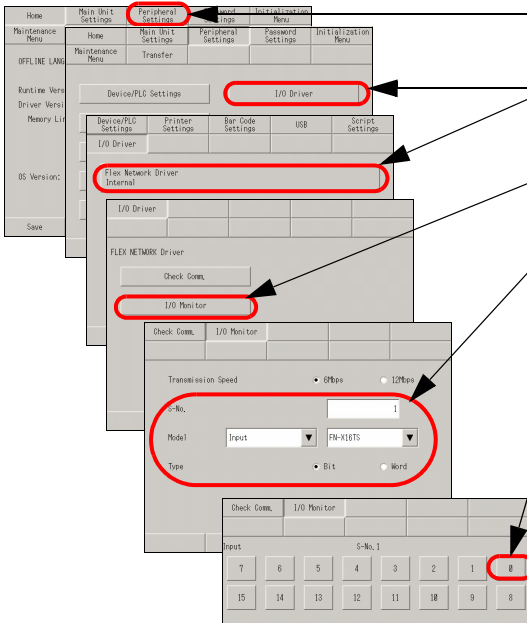
### ■ Checking proper I/O operation

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**

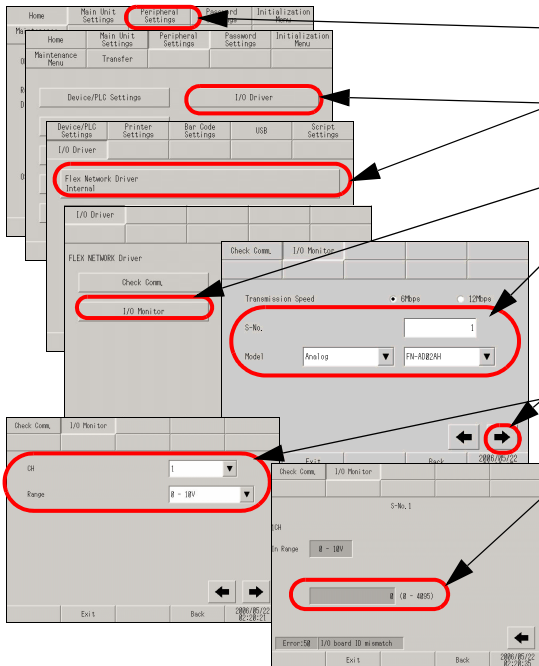
- For more details, refer to the settings guide.
- ☞ “2.13.3 When the FLEX NETWORK unit is used u I/O Monitor” (page 2-97)

#### ◆ 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.
- ☞ “2.13.3 When the FLEX NETWORK unit is used u Check Comm.” (page 2-96)

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 the communication is successful, 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.

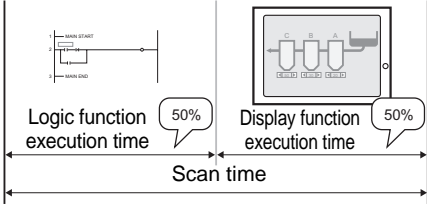
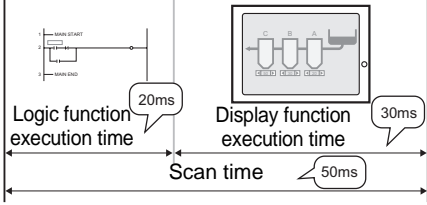
☞ “1.7.2 Contact us!” (page 1-110)

\* 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
	FNDA04AH	4
High Speed Counter Unit	FN-HC10SK	8
Single-Axis Positioning Unit	FN-PC10SK	4

## 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
<ul style="list-style-type: none"> <li>Setting it based on the ratio to the controller function execution time</li> </ul>  <p>The diagram illustrates a scan cycle. On the left, a ladder logic diagram shows a 'MAIN START' signal leading to a 'CPU' block, which then leads to a 'MAIN END' signal. Below this, a horizontal timeline shows the 'Scan time' as a single bar. This bar is divided into two equal segments, each labeled '50%'. The left segment is labeled 'Logic function execution time' and the right segment is labeled 'Display function execution time'. To the right of the timeline is a graphic of a control panel with three buttons labeled 'C', 'B', and 'A'.</p>	<p>☞ “2.10.1 Adjusting the scan time based on the ratio to the execution time of the logic functions (CPU Scan Percentage)” (page 2-53)</p>
<ul style="list-style-type: none"> <li>Setting it based on the ratio between the controller function execution time and the display function execution time</li> </ul>  <p>The diagram illustrates a scan cycle. On the left, a ladder logic diagram shows a 'MAIN START' signal leading to a 'CPU' block, which then leads to a 'MAIN END' signal. Below this, a horizontal timeline shows the 'Scan time' as a single bar. This bar is divided into two segments: a shorter one on the left labeled '20ms' and 'Logic function execution time', and a longer one on the right labeled '30ms' and 'Display function execution time'. A callout bubble below the entire bar indicates the total 'Scan time' is '50ms'. To the right of the timeline is a graphic of a control panel with three buttons labeled 'C', 'B', and 'A'.</p>	<p>☞ “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 2-54)</p>

## 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.
- ☞ “2.13.2 When the DIO board type GP3000 series is used in [Main Unit Settings] Settings Guide” (page 2-89)

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.

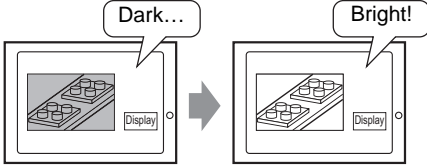
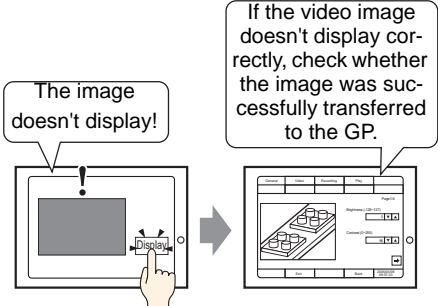
**NOTE**

- For more details, refer to the settings guide.
- ☞ “2.13.2 When the DIO board type GP3000 series is used in [Main Unit Settings] Settings Guide” (page 2-89)

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
<ul style="list-style-type: none"> <li>Adjusting the image quality for the video display</li> </ul> 	<p>☞ “2.11.1 Adjusting the image quality for the video display” (page 2-56)</p>
<ul style="list-style-type: none"> <li>Isolating problems when video cannot be displayed</li> </ul> 	<p>☞ “2.11.2 Checking whether video signals are being received by the Display when video is not displayed” (page 2-58)</p>



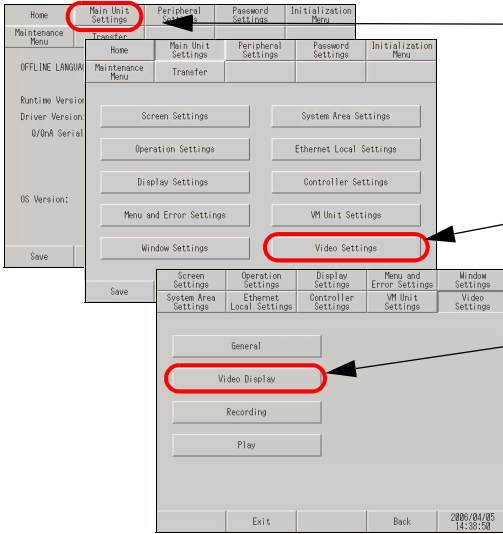
## 2.11.1 Adjusting the image quality for the video display

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

**NOTE**

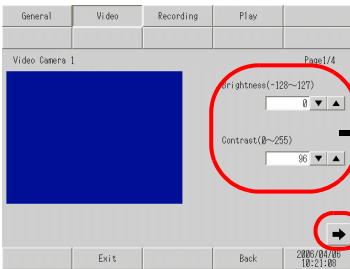
- For more details, refer to the settings guide.
- ☞ “2.13.4 When the movie function of the GP-3\*50 series is used u Video Settings (Video)” (page 2-107)

### ■ 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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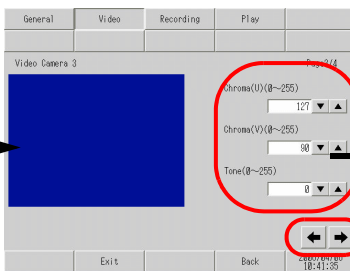


Page 2/4

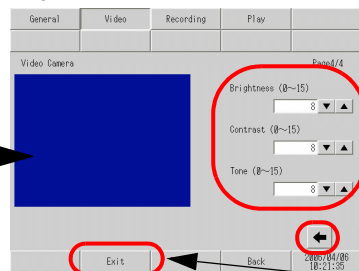


4. When the screen for [Video Display] opens, check the settings or touch the item that you want to change. To go to the next page, touch the right arrow key on the lower right of the screen.

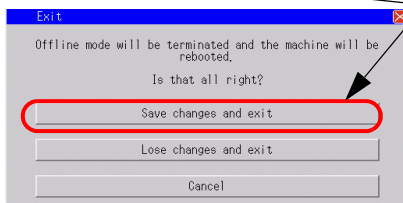
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5. Touch [Exit], and when the [Exit] dialog box is displayed, touch [Save changes and exit]. The GP restarts automatically.



■ When using the VM unit

**NOTE** • For more details, refer to the settings guide.  
 ☞ “2.13.5 When using the VM unit u VM Unit Settings (VD Display Settings)” (page 2-113)

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].

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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.

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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.
- ☞ “2.13.4 When the movie function of the GP-3\*50 series is used u Video Settings (Video)” (page 2-107)

### ■ When using the movie function of the GP-3\*50 series

The image shows two screenshots of the device's settings menu. The first screenshot shows the 'Main Unit Settings' menu with 'Main Unit Settings' highlighted. The second screenshot shows the 'Video Settings' menu with 'Video Display' highlighted. A blue video image is shown in the 'Video Display' area.

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**

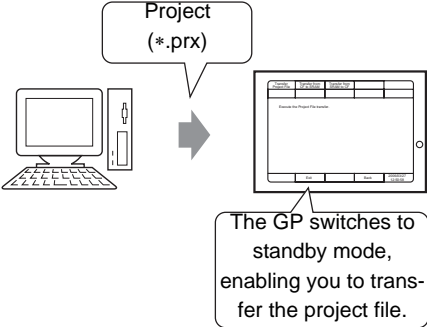
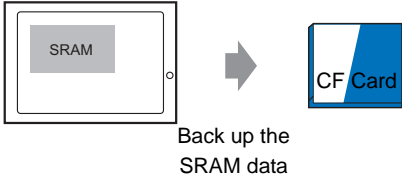
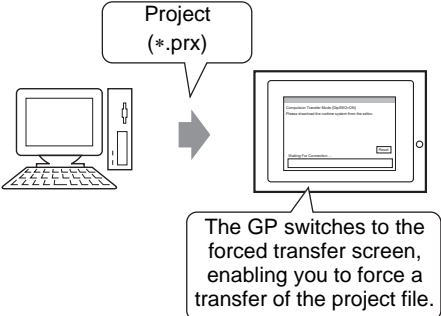
- For more details, refer to the settings guide.
- ☞ “2.13.5 When using the VM unit u VM Unit Settings (VD Display Settings)” (page 2-113)

The image shows two screenshots of the device's settings menu. The first screenshot shows the 'Main Unit Settings' menu with 'Main Unit Settings' highlighted. The second screenshot shows the 'VM Unit Settings' menu with 'Video Display Adjustment' highlighted. A blue video image is shown in the 'Video Display Adjustment' area.

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.

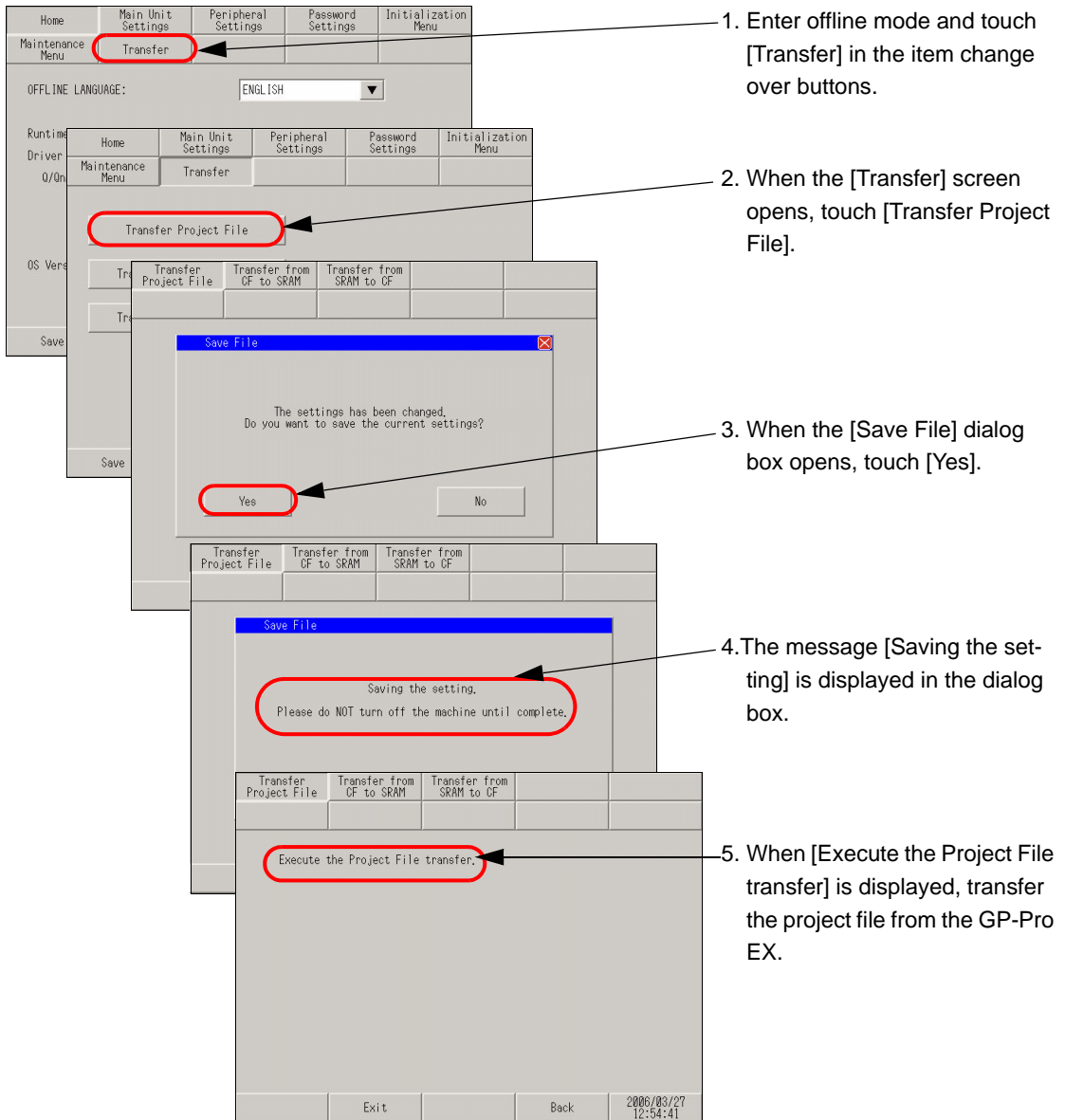
What you can do	Section describing the setting procedure
<ul style="list-style-type: none"> <li>Transfer in offline mode</li> </ul> 	<p>☞ “2.12.1 Opening the transfer screen manually when project files cannot be transferred” (page 2-60)</p>
<ul style="list-style-type: none"> <li>Backing up the SRAM data onto the CF card</li> </ul> 	<p>☞ “2.12.2 Backing up the SRAM data onto the CF card before transferring a new project file” (page 2-61)</p>
<ul style="list-style-type: none"> <li>Forced transfer</li> </ul> 	<p>☞ “2.12.3 Forcing the transfer of project files” (page 2-62)</p>

## 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.  
 "2.13.1 Settings common to all Display models u Transfer Project File" (page 2-85)



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.
- ☞ “2.13.1 Settings common to all Display models u Transfer from SRAM to CF” (page 2-86)

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.

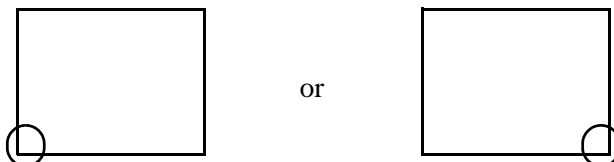
### 2.12.3 Forcing the transfer of project files

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

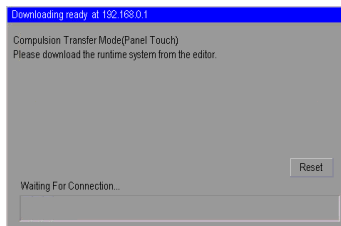
#### ■ Forced transfer by touching the screen

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).



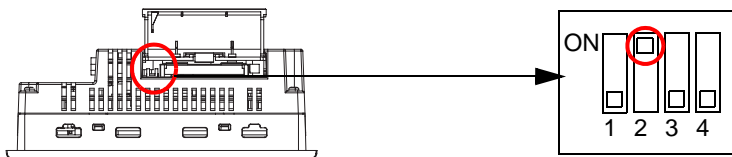
- 2 When the following dialog box appears, transfer the project file from the GP-Pro EX. After the forced transfer is complete, the GP restarts automatically and the screen of the transferred project file is displayed.



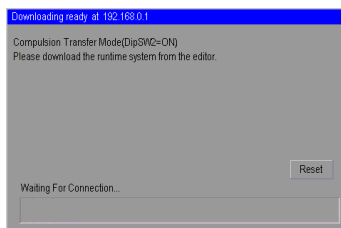
#### ■ Forced transfer by setting the DIP switch

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.



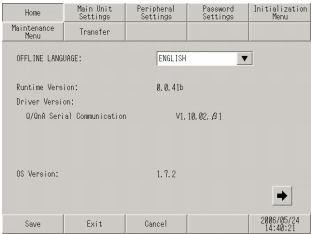
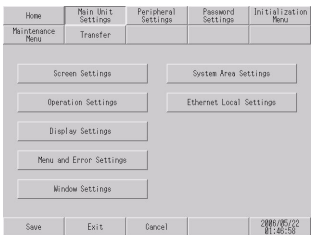
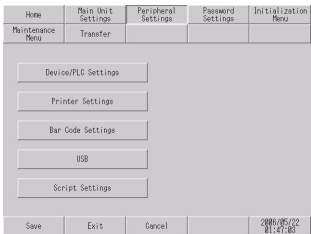
- 2 When the GP is turned ON and the following dialog box appears, transfer the project file from the GP-Pro EX. After the forced transfer is complete, the GP restarts automatically and the screen for forced transfer shown below is displayed again.



- 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.

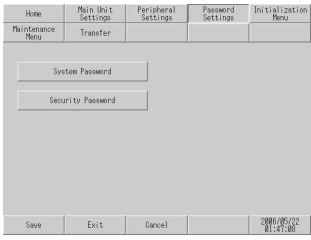
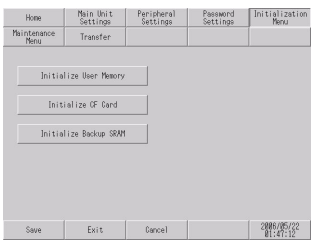
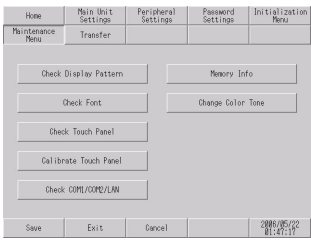
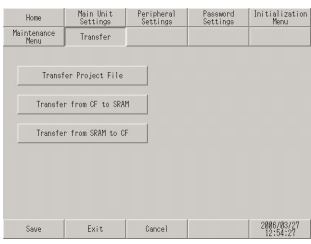
## 2.13 Offline settings guide

### 2.13.1 Settings common to all Display models

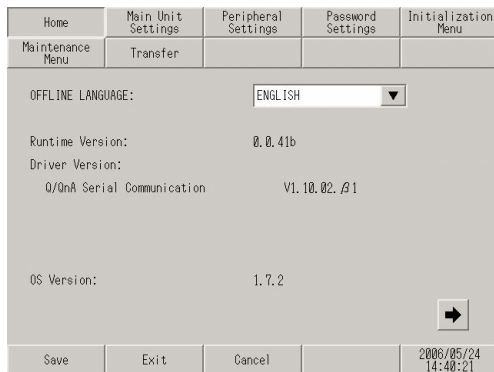
Menu	Description
	<p>“2.13.1 Settings common to all Display models n [Home] Settings Guide” (page 2-65)</p>
	<p>“2.13.1 Settings common to all Display models n [Main Unit Settings] Settings Guide” (page 2-66)</p> <p>“2.13.1 Settings common to all Display models u Screen Settings” (page 2-66)</p> <p>“2.13.1 Settings common to all Display models u Operation Settings” (page 2-67)</p> <p>“2.13.1 Settings common to all Display models u Display Settings” (page 2-67)</p> <p>“2.13.1 Settings common to all Display models u Menu and Error Settings” (page 2-68)</p> <p>“2.13.1 Settings common to all Display models u Window Settings” (page 2-68)</p> <p>“2.13.1 Settings common to all Display models u System Area Settings” (page 2-71)</p> <p>“2.13.1 Settings common to all Display models u Ethernet Local Settings” (page 2-72)</p>
	<p>“2.13.1 Settings common to all Display models n Peripheral Settings” (page 2-73)</p> <p>“2.13.1 Settings common to all Display models u Device/PLC Settings” (page 2-73)</p> <p>“2.13.1 Settings common to all Display models u Printer Settings” (page 2-74)</p> <p>“2.13.1 Settings common to all Display models u Bar Code Settings” (page 2-75)</p> <p>“2.13.1 Settings common to all Display models u USB” (page 2-76)</p> <p>“2.13.1 Settings common to all Display models u Script Settings” (page 2-76)</p>

Continued



Menu	Description
	<p>“2.13.1 Settings common to all Display models n [Password] Settings Guide” (page 2-77)</p> <p>“2.13.1 Settings common to all Display models u System Password” (page 2-77)</p> <p>“2.13.1 Settings common to all Display models u Security Password” (page 2-77)</p>
	<p>“2.13.1 Settings common to all Display models n [Initialization Menu] Settings Guide” (page 2-78)</p> <p>“2.13.1 Settings common to all Display models u Initialize User Memory” (page 2-78)</p> <p>“2.13.1 Settings common to all Display models u Initialize CF Card” (page 2-79)</p> <p>“2.13.1 Settings common to all Display models u Initialize Backup SRAM” (page 2-79)</p>
	<p>“2.13.1 Settings common to all Display models n [Maintenance Menu] Settings Guide” (page 2-80)</p> <p>“2.13.1 Settings common to all Display models u Check Display Pattern” (page 2-80)</p> <p>“2.13.1 Settings common to all Display models u Check Font” (page 2-81)</p> <p>“2.13.1 Settings common to all Display models u Touch Panel” (page 2-82)</p> <p>“2.13.1 Settings common to all Display models u Calibration Touch Panel” (page 2-82)</p> <p>“2.13.1 Settings common to all Display models u Check COM1/COM2/LAN” (page 2-83)</p> <p>“2.13.1 Settings common to all Display models u Memory Info” (page 2-83)</p> <p>“2.13.1 Settings common to all Display models u Check Color Tone” (page 2-84)</p>
	<p>“2.13.1 Settings common to all Display models n Transfer” (page 2-85)</p> <p>“2.13.1 Settings common to all Display models u Transfer Project File” (page 2-85)</p> <p>“2.13.1 Settings common to all Display models u Transfer from CF to SRAM” (page 2-85)</p> <p>“2.13.1 Settings common to all Display models u Transfer from SRAM to CF” (page 2-86)</p>

## ■ [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.




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

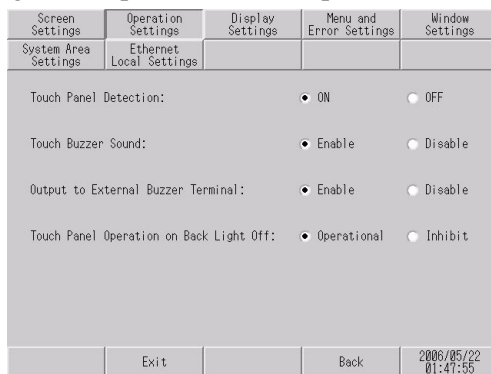
The initial screen display upon powering up and standby mode are setup here.

Screen Settings	Operation Settings	Display Settings	Menu and Error Settings	Window Settings
System Area Settings	Ethernet Local Settings			
Initial Screen No. (1-9999): <input type="text" value="1"/>				
Data Type of Display Screen No. : <input checked="" type="radio"/> BIN <input type="radio"/> BCD				
Start Time (0-255sec): <input type="text" value="0"/>				
Standby Mode Settings: <input checked="" type="radio"/> None <input type="radio"/> Screen OFF <input type="radio"/> Screen Change				
Standby Mode Time (1-255min): <input type="text" value="1"/>				
Change-To Screen No. in Standby Mode (1-9999): <input type="text" value="1"/>				
Exit			Back	2006/05/22 01:47:49

Setting	Description
Initial Screen No.	<p>Set the number of the screen that will display at startup.   GP-Pro EX Reference Manual “12.3 Choosing the Screen that will Display when the GP Turns on” (page 12-7)</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>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].</li> </ul>
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	<p>Select the standby mode from [None], [Screen OFF], or [Screen Change].</p> <ul style="list-style-type: none"> <li>[None] The screen does not change to the standby mode.</li> <li>[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.</li> <li>[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.</li> </ul>
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	<p>Set the screen number to change to after the [Standby Mode Time] passes when the [Standby Mode Settings] is [Screen Change].</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>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].</li> </ul>

### ◆ Operation Settings

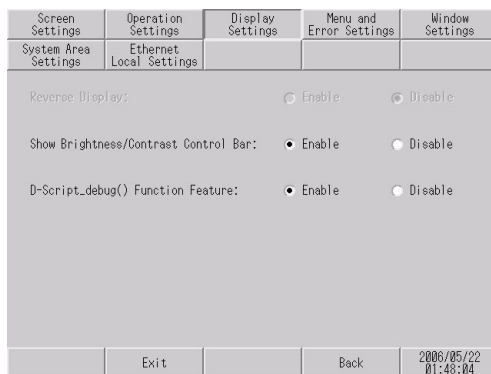
The settings concerning touch operation are set up here.



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

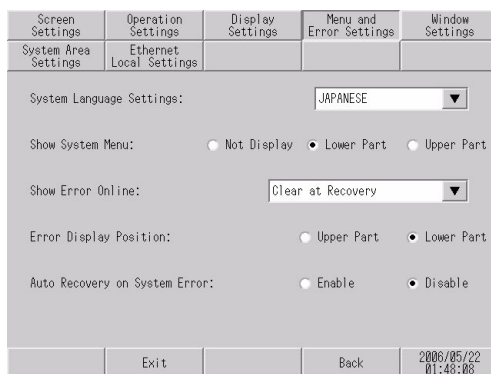
The settings concerning panel display are set up here.



Setting	Description
Reverse Display	Set whether to reverse the screen display from black to white or vice versa. <b>NOTE</b> • 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 “20.8.1 Common Settings Guide for D-Script” (page 20-48)

### ◆ Menu and Error Settings

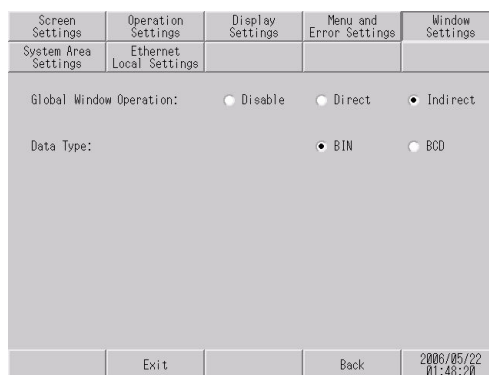
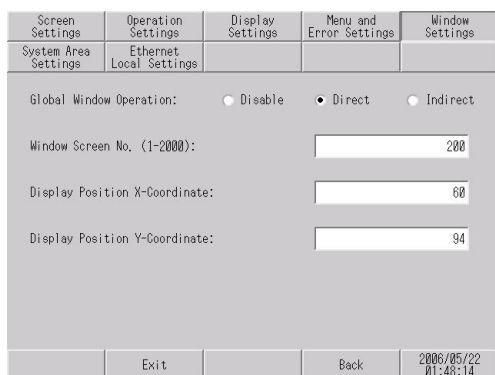
Set the system menu details and the display position of error messages.



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].
Show Error Online	Select the timing to clear the error display in online mode from [None], [Clear at Recovery], and [Clear on Screen Change]. <b>IMPORTANT</b> <ul style="list-style-type: none"> <li>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.</li> </ul>
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

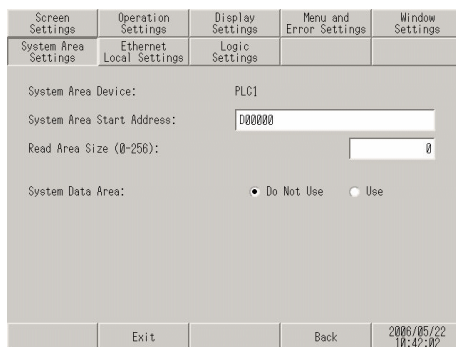


Setting	Description								
<div style="writing-mode: vertical-rl; transform: rotate(180deg);">Global Window Operation</div>	<p>Set the Window Screen number to display and its position by storing data in the GP internal device's address (LS16 to LS19). If you assign a system data area to the device/PLC, you can switch Window Screens or change the display position from the device/PLC.</p> <p style="text-align: center;">&lt;Setting Screen&gt;                      &lt;Internal Device Addresses to Use&gt;</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="border: 1px solid gray; padding: 5px; background-color: #f0f0f0;"> <p>Global Window Operation    Indirect ▾</p> <p>Data Type                    <input checked="" type="radio"/> Bin    <input type="radio"/> BCD</p> </div> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td>LS0016</td><td>Control Address</td></tr> <tr><td>LS0017</td><td>Window Screen No.</td></tr> <tr><td>LS0018</td><td>Display Position (X-Coordinate)</td></tr> <tr><td>LS0019</td><td>Display Position (Y-Coordinate)</td></tr> </table> </div> <ul style="list-style-type: none"> <li> <b>Control Address</b>                      Controls the display of a Global Window. If you turn ON Bit 0, a Window is displayed.                     <div style="text-align: center; margin-top: 10px;"> </div> </li> <li> <b>Window Screen No.</b>                      Specify the number of the Window Screen you want to display from 1 to 2,000.                 </li> <li> <b>Display Position X-Coordinate/Y-Coordinate</b>                      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.                     <div style="text-align: center; margin-top: 10px;"> </div> </li> </ul> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; width: fit-content;"> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>To use a system data area on the device/PLC, set this using four sequential words of the assigned address.</li> </ul> <p>☞ "2.13.1 Settings common to all Display models u System Area Settings" (page 2-71)</p> </div>	LS0016	Control Address	LS0017	Window Screen No.	LS0018	Display Position (X-Coordinate)	LS0019	Display Position (Y-Coordinate)
LS0016	Control Address								
LS0017	Window Screen No.								
LS0018	Display Position (X-Coordinate)								
LS0019	Display Position (Y-Coordinate)								
Data Type	Select the type of data to store in the address from [Bin] or [BCD].								

Continued

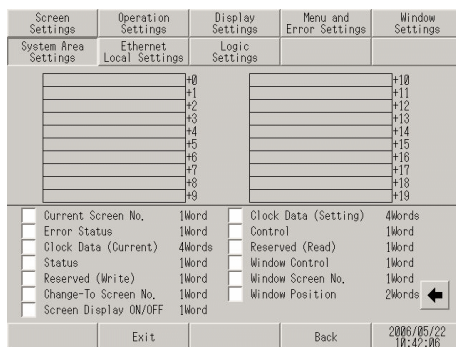
### ◆ System Area Settings

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. <b>NOTE</b> <ul style="list-style-type: none"> <li>This setting is disabled when the device is connected using the memory link method.</li> </ul>
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. <b>NOTE</b> <ul style="list-style-type: none"> <li>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.</li> <li>This setting is effective only when the direct access method is used.</li> <li>“System Area” displayed on the screen refers to the system data area.</li> </ul>



### ◆ Ethernet Local Settings

Adjust the settings for the Ethernet connection.

Screen Settings	Operation Settings	Display Settings	Menu and Error Settings	Window Settings
System Area Settings	Ethernet Local Settings			
Local Name:	<input type="text"/>			
IP Address:	192	168	0	5
Subnet Mask:	255	255	255	0
Port:	<input type="text"/>			8000
Gateway:	0	0	0	0
Auto Recognition:	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable		
Speed Settings:	<input checked="" type="radio"/> 100M	<input type="radio"/> 10M		
Duplex Settings:	<input checked="" type="radio"/> Half	<input type="radio"/> Full		
Exit		Back		2006/05/22 01:43:08

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	They are "8000" fixation at forced transfer. "8000" is specified when performing automatic search by LAN. Local Port No. using a value from 5001 to 65516. Starting from the value entered here, a total of 10 consecutive ports can be used. The default setting is "8000"
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 Setting	A network communication system is selected from "Half" and "Full."

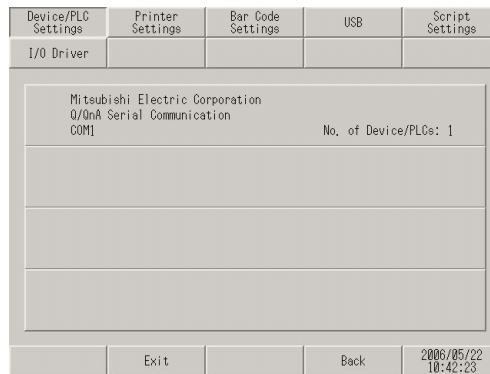
## ■ Peripheral Settings

### ◆ 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

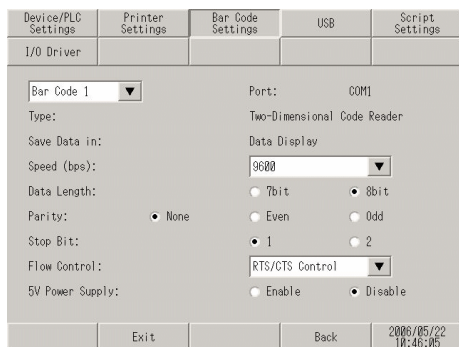
Set the model of the printer connected to the GP and the print method.

Device/PLC Settings	Printer Settings	Bar Code Settings	USB	Script Settings
I/O Driver				
Type:	EPSON PM/Stylus 6 Colors ▼			
Port:	Ethernet			
Print Method:	<input type="radio"/> Monochrome <input checked="" type="radio"/> Color			
Black/White Reverse Display:	<input checked="" type="radio"/> Enable <input type="radio"/> Disable			
Screen Hardcopy Rotation:	<input type="radio"/> Enable <input checked="" type="radio"/> Disable			
Print Scale:	3 ▼ ▲			
	Exit		Back	2006/05/22 10:46:00

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].  <b>NOTE</b> <ul style="list-style-type: none"> <li>For [Text ASCII], the text's shape may be different, because the print method is different.</li> </ul>
Port	The port to which the printer is connected is displayed.
Print Method	Select the print method from [Monochrome] or [Color].  <b>NOTE</b> <ul style="list-style-type: none"> <li>For a monochrome GP model, the print will be monochrome even if [Color] is selected for the [Print Method].</li> </ul>
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**

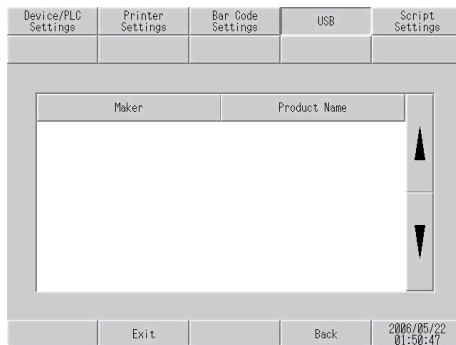
Set the options used for the communication with the bar code reader connected to the GP.



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.”
5V Power Supply	It select from GP whether 5V power supply is supplied.

◆ **USB**

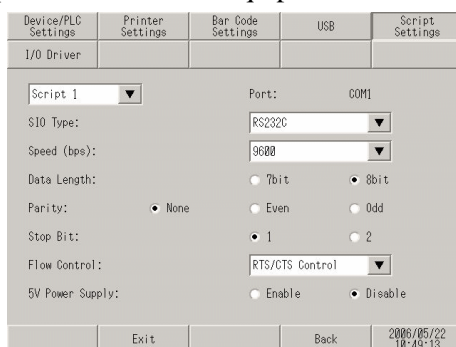
The information (a manufacture name and product name) on the USB device linked to GP is displayed.



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.

◆ **Script Settings**

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

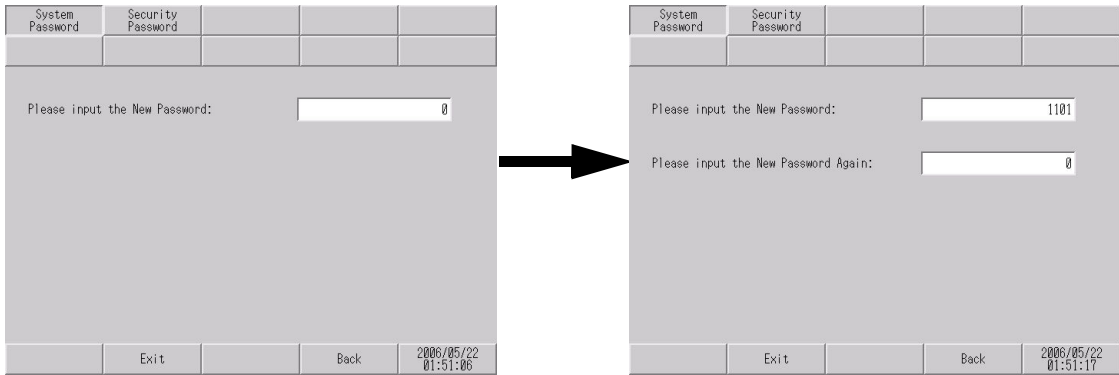


Setting	Description
Port	Displays the port used with a script from [COM1] or [COM2].
SIO Type	The communication system which communicates with connection equipment is selected from “RS232C”, “RS422/485 (2 line type)”, and “RS422/485 (4 line type).”
Speed (bps)	The communication speed is selected from [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.”
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.

## ■ [Password] Settings Guide

### ◆ System Password

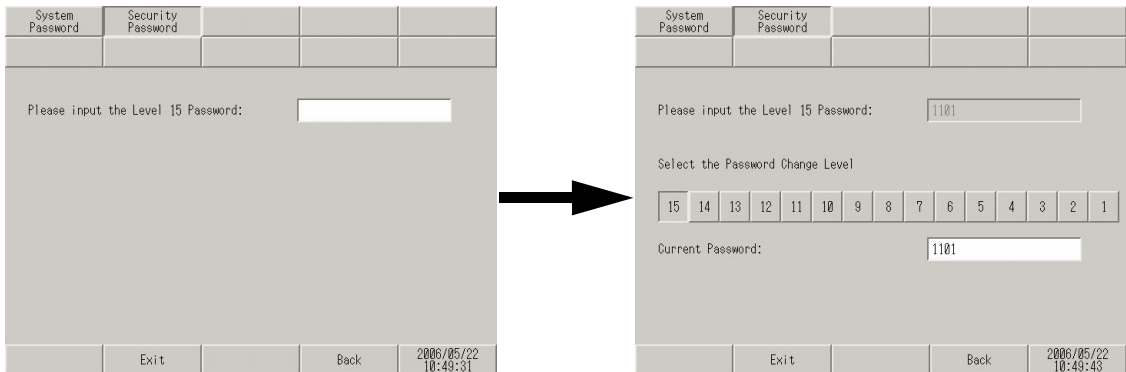
The password setting is used when changing to the Initialize Memory or OFFLINE mode Screens.



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. <b>NOTE</b> • 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.

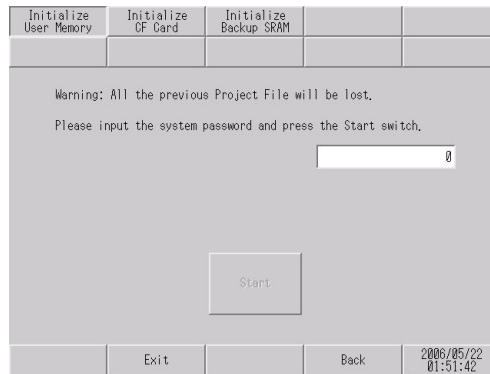
## ■ [Initialization Menu] Settings Guide

### ◆ 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.



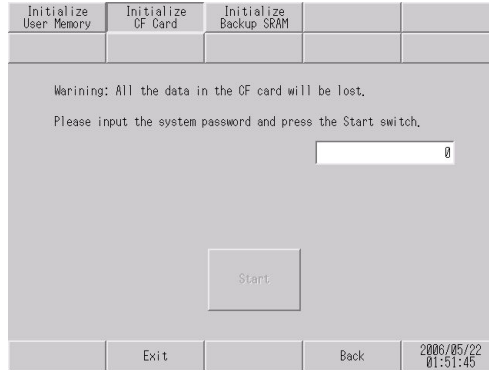
Setting	Description
Please input the system password and press the Start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the initialization of the user memory.

### ◆ 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.



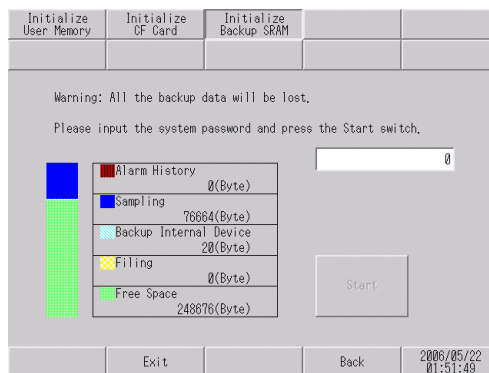
Setting	Description
Please input the system password and press the Start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the initialization of the CF card.

### ◆ 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.



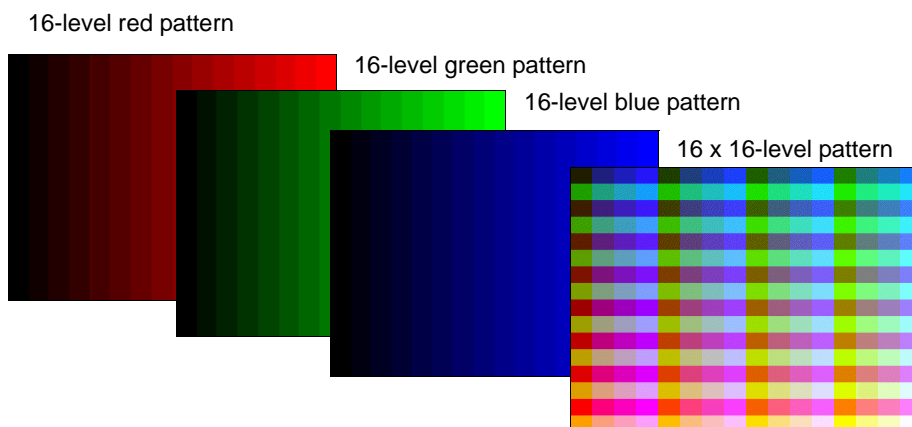
Setting	Description
Please input the system password and press the Start switch.	To initializes the GP's backup SRAM, enter the common password "1101" or the password you designated in the "System Password" screen.
Start	Start the initialization of the GP's backup SRAM.



## ■ [Maintenance Menu] Settings Guide

### ◆ Check Display Pattern

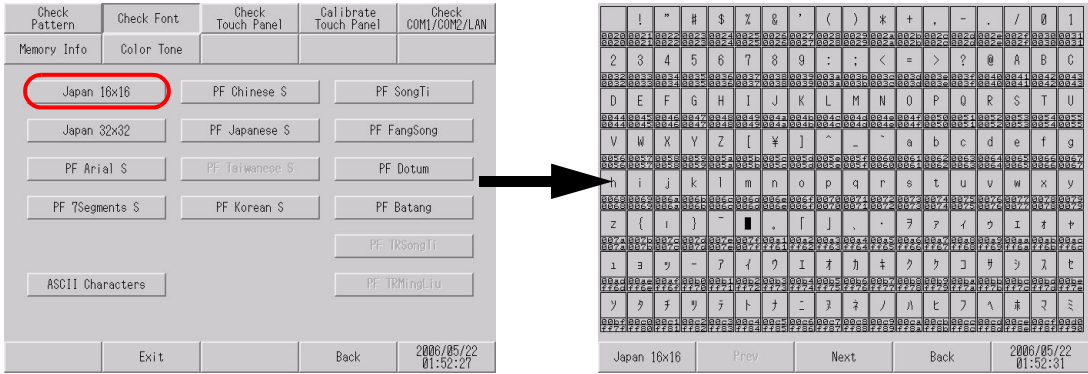
It is the check of a drawing function. It is confirmed whether a liquid crystal display is displayed correctly. When the screen is touched, the selected display pattern is displayed.

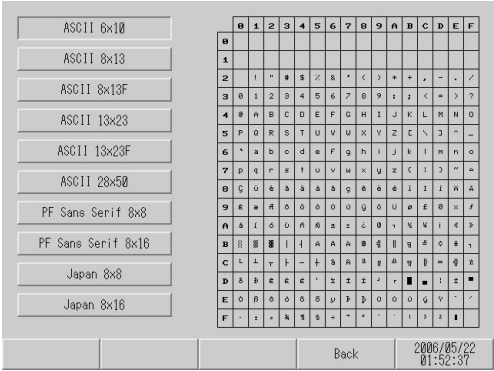


Setting	Description
16-level red pattern	Display the 16-level red pattern. <b>NOTE</b> • With a monochrome GP model, only the 16-level red pattern is displayed.
16-level green pattern	Display the 16-level green pattern.
16-level blue pattern	Display the 16-level blue pattern.
16 x 16-level pattern	Display the 16 x 16-level pattern.

◆ Check Font

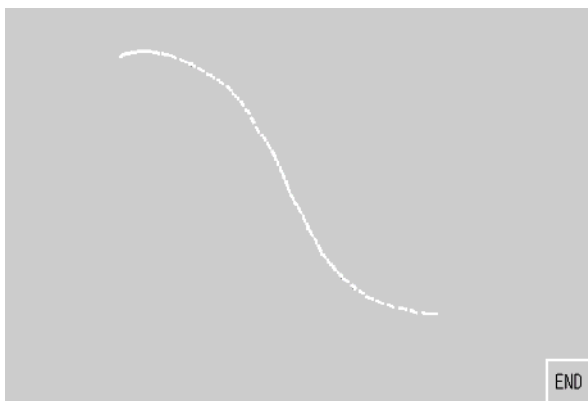
This item is used to display the font patterns of the installed fonts. You can check the character pattern of each font (Japanese, European and U.S., Chinese (traditional), Chinese (simplified), Korean, Cyrillic, and Thai) as well as the font image of each language. For Chinese (traditional), Chinese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



Setting	Description
<p>Font List</p>	<p>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.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Only the ASCII font group displays items in other screens.</li> </ul>  <p>The 'Font List' screenshot shows a list of font options on the left: ASCII 6x10, ASCII 8x13, ASCII 8x13F, ASCII 13x23, ASCII 13x23F, ASCII 28x50, PF Sans Serif 8x8, PF Sans Serif 8x16, Japan 8x8, and Japan 8x16. On the right is a preview window for the selected 'ASCII 6x10' font, showing a grid of characters from '0' to 'F' in both uppercase and lowercase. Navigation buttons at the bottom include 'Back' and a timestamp '2006/05/22 01:52:37'.</p>

◆ **Touch Panel**

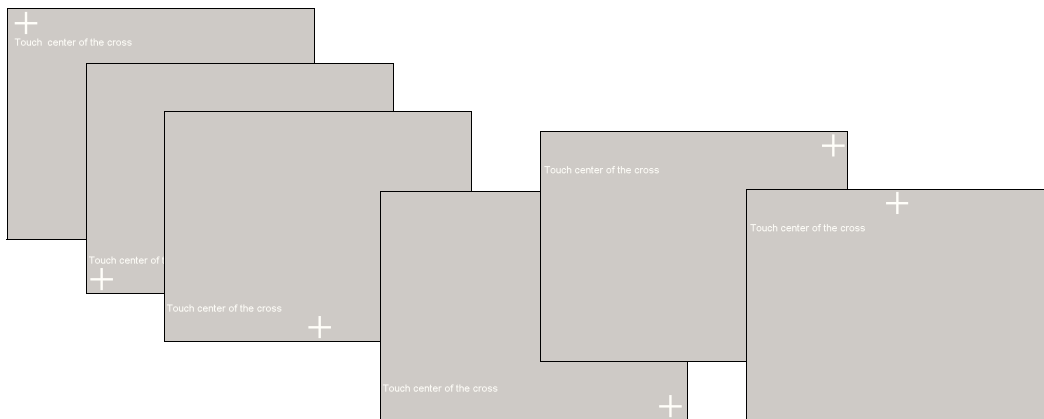
It is the check of touch panel. Check the touched part lights up correctly.



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. <b>NOTE</b> <ul style="list-style-type: none"> <li>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.</li> </ul>
END	Return to the menu screen.

◆ **Calibration Touch Panel**

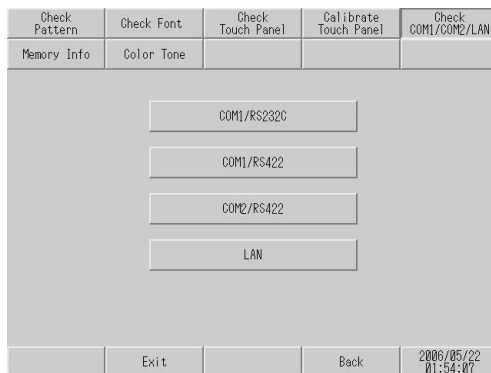
Correct an analog touch panel. (setup of a calibration)



Setting	Description
Touch Center of the Cross	Continue touching until the crosshatch moves or disappears. <b>NOTE</b> <ul style="list-style-type: none"> <li>When a place other than the crosshatch is touched, the input is recognized as an error and the calibration mode does not finish successfully.</li> </ul>

◆ **Check COM1/COM2/LAN**

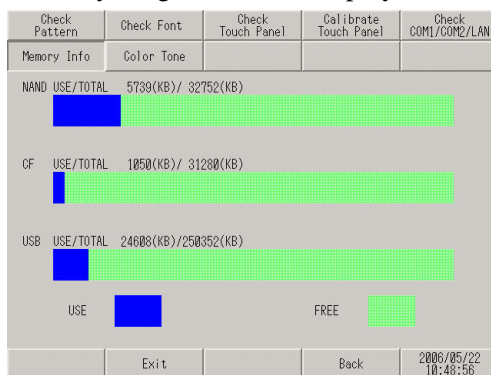
Check the sending and receiving line of RS-232C, RS-422 and LAN.  
 Usually when abnormality occurs, it checks. It selects check item from the menu.  
 When it checks RS-232C and RS-422, connection of the SIO cable is necessary.



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. <div style="border: 1px solid black; padding: 2px; display: inline-block;"><b>NOTE</b></div> <ul style="list-style-type: none"> <li>This item is not displayed when the GP does not have a LAN interface.</li> </ul>

◆ **Memory Info**

The memory total and memory usage of GP are displayed.



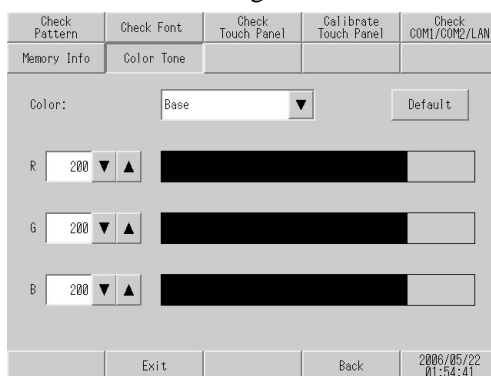
Setting	Description
NAND USE/TOTAL	Display the total capacity and used amount of the memory of NAND (area in which the screen data is stored). The histogram shows the used amount in blue and free space in green.
CF USE/TOTAL	Display the total capacity and used amount of the memory of the CF card. The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


Continued

Setting	Description
USB USE/TOTAL	<p>Display the total capacity and used amount of the USB memory. The histogram shows the used amount in blue and free space in green.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>This histogram is not displayed when USB memory is not attached.</li> </ul>

◆ Check Color Tone

The color tone in offline mode can be changed.

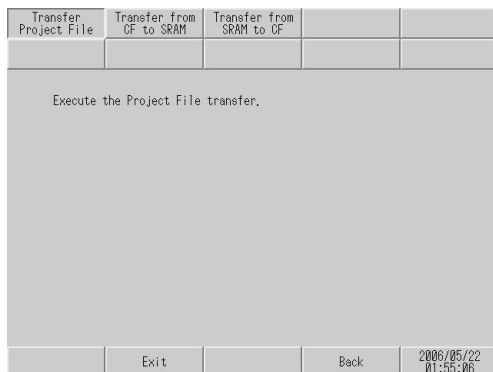


Setting	Description
Color	The change part of a color tone select from “Base”, “Text”, and “Back-Ground.”
Default	Returns to an initial condition.
RGB	<p>The color tone for the part specified in [Color] is changed. Enter the setting values for R, G, and B within the range of 0 to 255. The values can be entered using the following three methods:</p> <ul style="list-style-type: none"> <li>Inputs numerically Touch the numerical value, and value of each element is input with the displayed keyboard.</li> <li>Input drum button Numerical value is modified with the drum button  of numeric field side. It changes +5 or -5 each.</li> <li>Input directly Touch the histogram of each element directly, it modifies numerical value.</li> </ul>

■ **Transfer**

◆ **Transfer Project File**

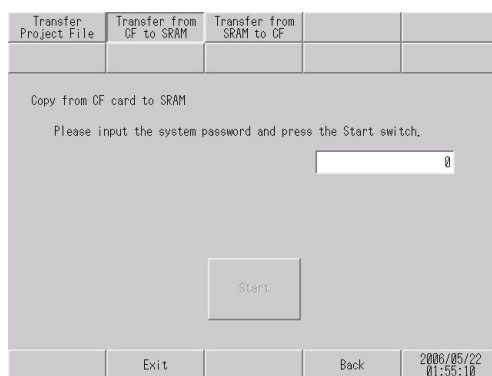
Set this item to transfer a project file in offline mode.



Setting	Description
Execute the Project File transfer.	<p>To transfer a project file in offline mode, you need to use the screen above to set the GP to the transfer waiting status.</p> <p>When a message [Execute the Project File transfer] is displayed, use the GP-Pro EX to transfer the project file.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• After the project file is transferred, the GP is restarted automatically.</li> <li>• When the setting is changed in offline mode but is not saved, the [Save File] dialog box is displayed.</li> </ul>

◆ **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).




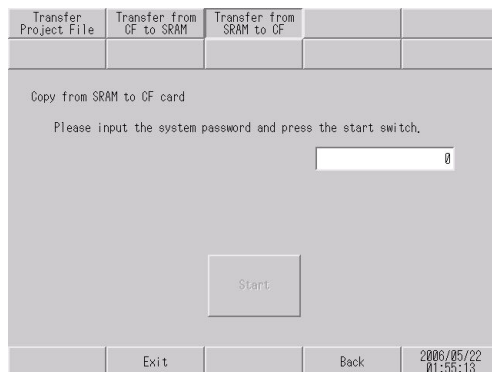
Setting	Description
Please input the system password and press the Start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the transfer of the backup SRAM data stored in the CF card to 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 “5.13.6 [System Settings Window] Settings Guide • Memory Card Settings” (page 5-114)

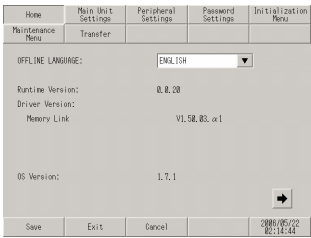
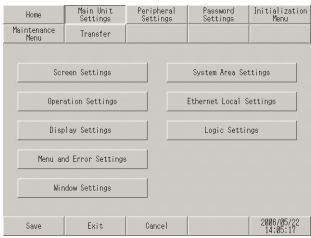
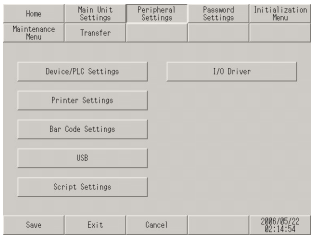


Setting	Description
Please input the system password and press the start switch.	Touch the system password input field and enter the system password. If the system password has not been set, enter the standard password [1101].
Start	Start the transfer of the backup SRAM data in the GP to the CF card.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

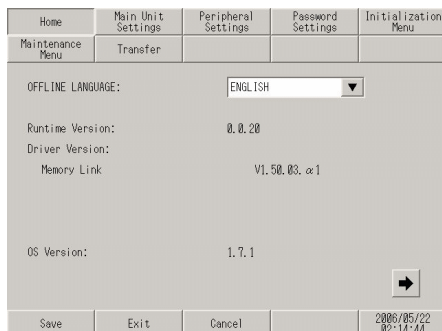
**IMPORTANT**

- 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.

## 2.13.2 When the DIO board type GP3000 series is used

Menu	Description
	<p>“2.13.2 When the DIO board type GP3000 series is used n [Home] Settings Guide” (page 2-87)</p>
	<p>“2.13.2 When the DIO board type GP3000 series is used n [Main Unit Settings] Settings Guide” (page 2-89)</p>
	<p>“2.13.2 When the DIO board type GP3000 series is used n [Peripheral Settings] Settings Guide” (page 2-90)</p> <ul style="list-style-type: none"> <li>“2.13.2 When the DIO board type GP3000 series is used u I/O Driver (I/O Check)” (page 2-90)</li> <li>“2.13.2 When the DIO board type GP3000 series is used • I/O Check Æ Connection check execution screen” (page 2-90)</li> <li>“2.13.2 When the DIO board type GP3000 series is used u I/O Driver (I/O Monitor)” (page 2-91)</li> <li>“2.13.2 When the DIO board type GP3000 series is used • Input Type (Bit), Output Type (Bit)” (page 2-91)</li> <li>“2.13.2 When the DIO board type GP3000 series is used • Input Type (Bit), Output Type (Word)” (page 2-91)</li> <li>“2.13.2 When the DIO board type GP3000 series is used • Input Type (Word), Output Type (Bit)” (page 2-92)</li> <li>“2.13.2 When the DIO board type GP3000 series is used • Input Type (Word), Output Type (Word)” (page 2-92)</li> </ul>

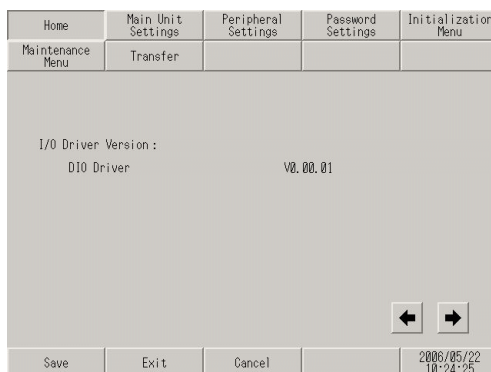
### ■ [Home] Settings Guide



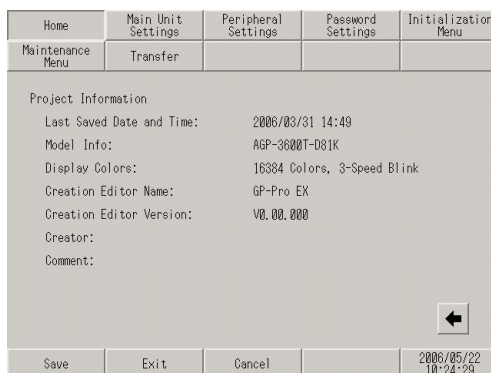
Continued



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.



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

Adjust the settings for the logic program.

Screen Settings	Operation Settings	Display Settings	Menu and Error Settings	Window Settings
System Area Settings	Ethernet Local Settings	Logic Settings		

Logic Program  On  Off

Fixed Scan Time(10-2000)  ms

CPU Scan Percentage(10-50)  %

WDT(100-3000)  ms

Run at Start Up  RUN  STOP

➔

Exit	Back	2006/05/22 02:25:06
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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].

Screen Settings	Operation Settings	Display Settings	Menu and Error Settings	Window Settings
System Area Settings	Ethernet Local Settings	Logic Settings		

Data Update Rate  ▼

Minor Errors  RUN  STOP

I/O Settings  On  Off

⬅

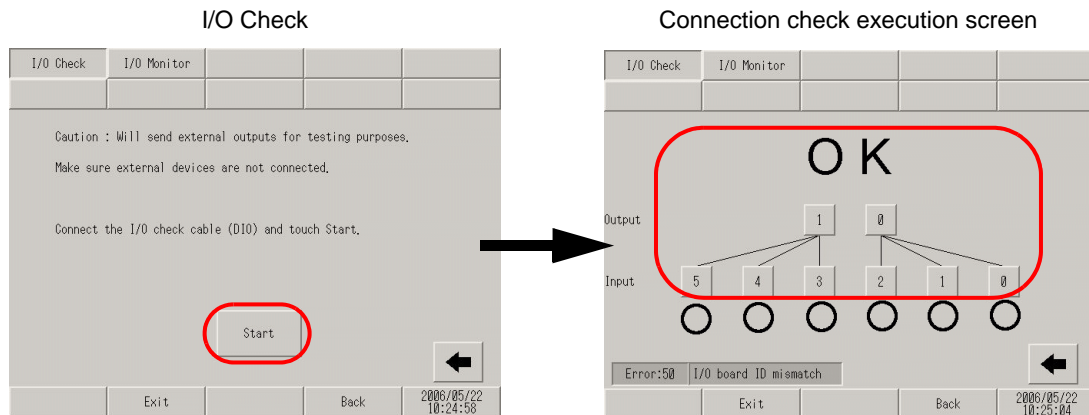
Exit	Back	2006/05/22 02:15:28
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Setting	Description
Data Update Rate	Select the speed to update the value of the connected device or internal device address assigned to the logic program from [Fastest], [Normal], and [Slowest].
Minor Errors	Select the 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)

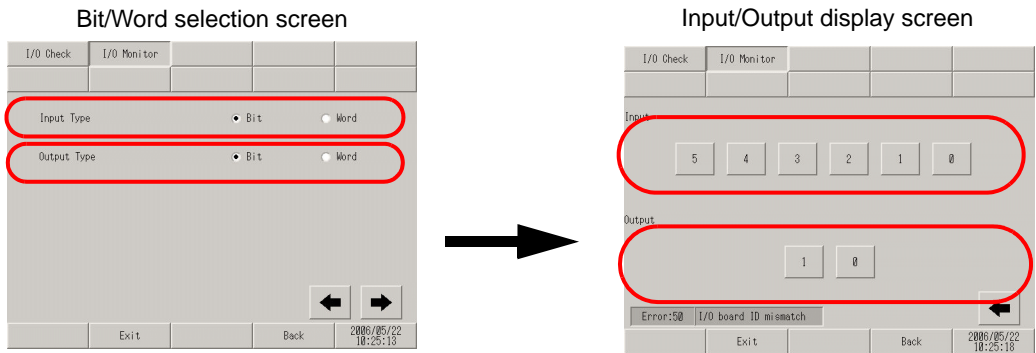
- I/O Check → Connection check execution screen



Setting	Description
I/O Check	This screen is used to start the I/O check.
Start	<p>Display the connection check execution screen and start the I/O check.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul> <p>☞ “2.9.2 Checking whether the DIO interfaces of the Display turn ON/OFF properly n Checking the internal terminals” (page 2-48)</p>
Connection check execution screen	This screen is used to execute the connection check.
Connection check execution screen	<p>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.</p>

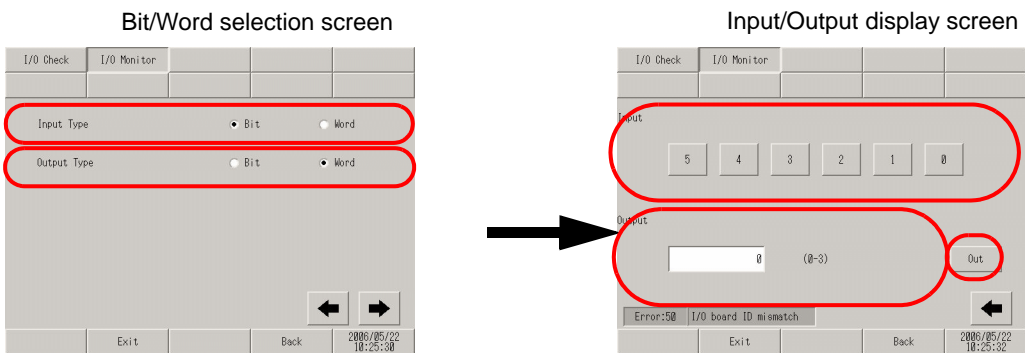
◆ I/O Driver (I/O Monitor)

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



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.

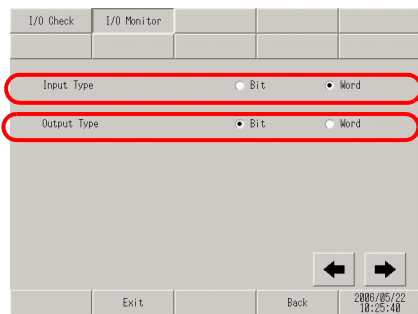
- Input Type (Bit), Output Type (Word)



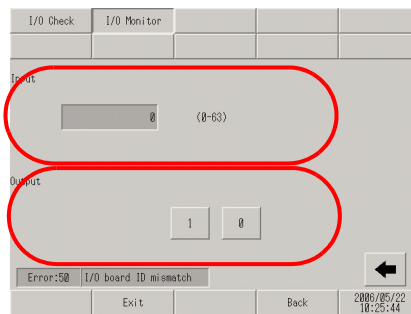
Setting	Description
Bit/Word selection screen	This screen is used to select whether to display the I/O status in bits or words.
Input Type	Select the type of the input value from [Bit] and [Word].
Output Type	Select the type of the output value from [Bit] and [Word].
Input/Output display screen	This 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



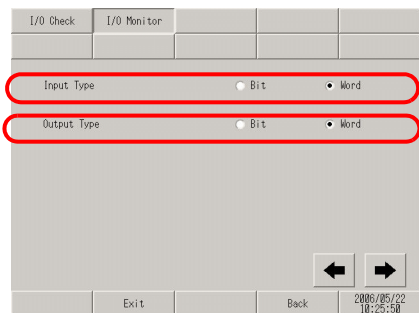
Input/Output display screen



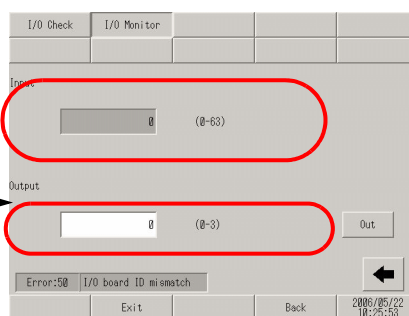
Setting	Description
Bit/Word selection screen	This screen is used to select whether to display the I/O status in bits or words.
Input Type	Select the type of the input value from [Bit] and [Word].
Output Type	Select the type of the output value from [Bit] and [Word].
Input/Output display screen	This 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

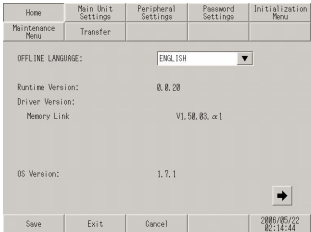
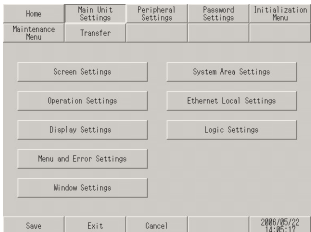
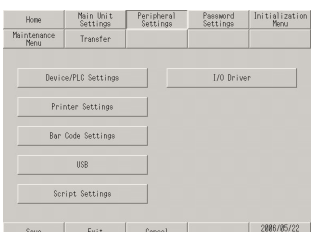


Input/Output display screen



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.

### 2.13.3 When the FLEX NETWORK unit is used

Menu	Description
	<p>“2.13.3 When the FLEX NETWORK unit is used n [Home] Settings Guide” (page 2-94)</p>
	<p>“2.13.3 When the FLEX NETWORK unit is used n [Main Unit Settings] Settings Guide” (page 2-95)</p>
	<p>“2.13.3 When the FLEX NETWORK unit is used n [Peripheral Settings] Settings Guide” (page 2-96)</p> <p>“2.13.3 When the FLEX NETWORK unit is used u Check Comm.” (page 2-96)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • Check Comm. ⌘ Communication check execution screen” (page 2-96)</p> <p>“2.13.3 When the FLEX NETWORK unit is used u I/O Monitor” (page 2-97)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Input, FN-X16TS is used” (page 2-97)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Input, FN-X32TS is used” (page 2-97)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Output, FN-Y08L is used” (page 2-98)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Output, FN-Y16SK is used” (page 2-98)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Output, FN-Y16SC is used” (page 2-99)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY08TS is used” (page 2-99)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY16SK is used” (page 2-100)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY16SC is used” (page 2-100)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] I/O, FN-XY32SKS is used” (page 2-101)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-AD02AH is used” (page 2-102)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-DA02AH is used” (page 2-103)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-AD04AH is used” (page 2-104)</p> <p>“2.13.3 When the FLEX NETWORK unit is used • When [Model] Analog, FN-DA04AH is used” (page 2-105)</p>

## ■ [Home] Settings Guide

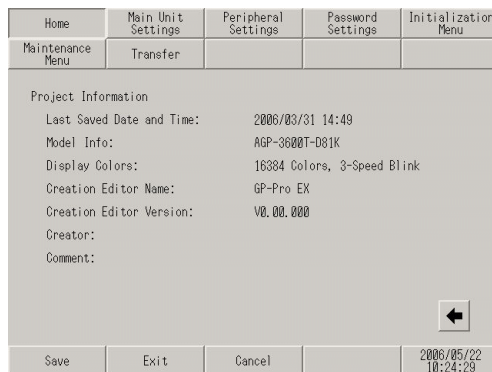
Home	Main Unit Settings	Peripheral Settings	Password Settings	Initialization Menu
Maintenance Menu	Transfer			
OFFLINE LANGUAGE:      ENGLISH ▾  Runtime Version:            0. 0. 20 Driver Version: Memory Link                V1.50.03. α1   OS Version:                    1. 7. 1  <div style="text-align: right;">➡</div>				
Save	Exit	Cancel		2006/05/22 02:14:44

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.

Home	Main Unit Settings	Peripheral Settings	Password Settings	Initialization Menu
Maintenance Menu	Transfer			
I/O Driver Version : FLEX NETWORK Driver            V0. 00. 02   <div style="text-align: right;">⬅ ➡</div>				
Save	Exit	Cancel		2006/05/22 02:15:00

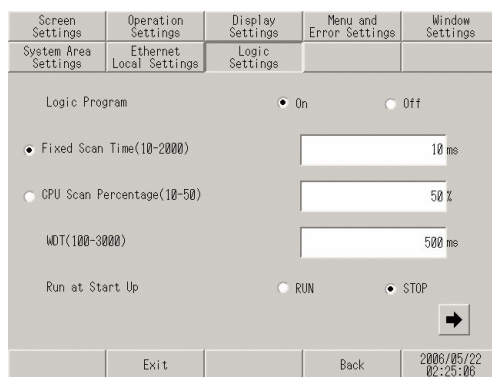
Setting	Description
I/O Driver Version	Display the name and runtime version of the I/O driver.

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.

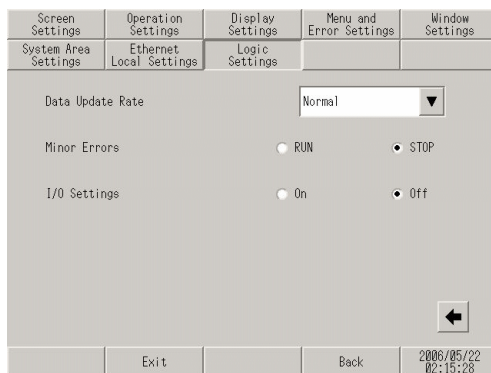
■ [Main Unit Settings] Settings Guide



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



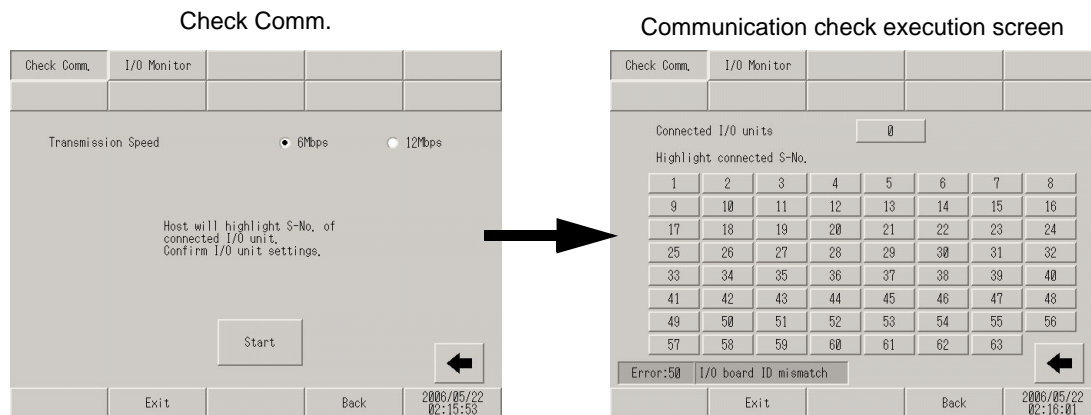


Setting	Description
Data Update Rate	Select the speed to update the value of the connected device or internal device address assigned to the logic program from [Fastest], [Normal], and [Slowest].
Minor Errors	Select the controller operation when an error continues from [RUN] and [STOP].
I/O Settings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

### ■ [Peripheral Settings] Settings Guide

#### ◆ Check Comm.

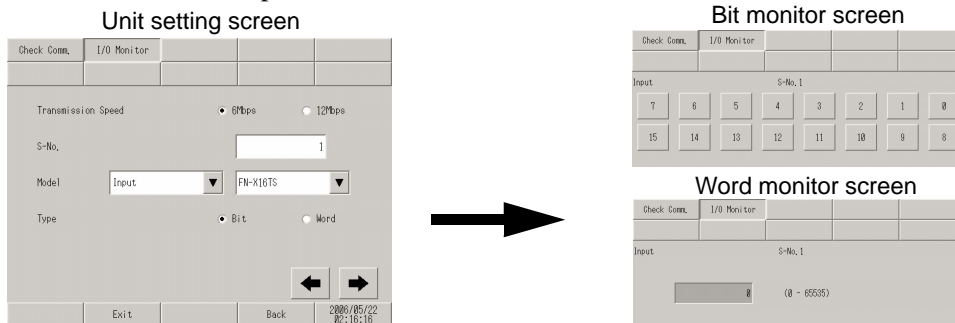
- Check Comm. → Communication check execution screen



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.

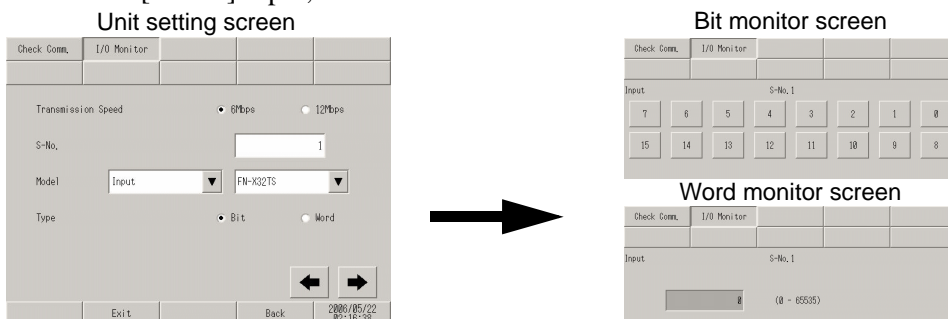
◆ I/O Monitor

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



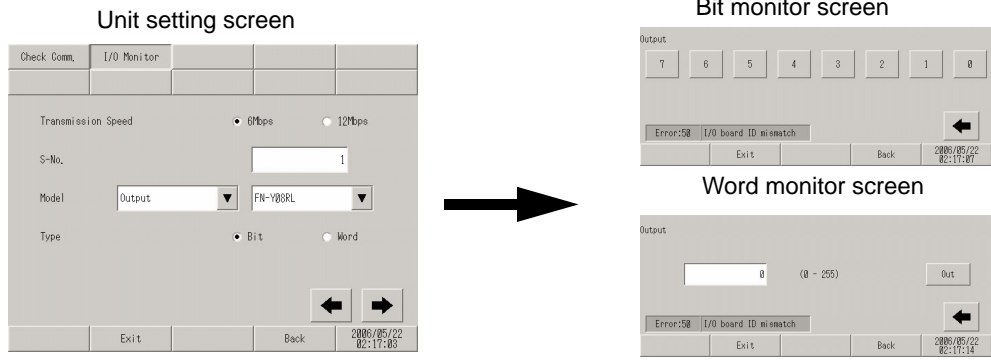
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
Model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



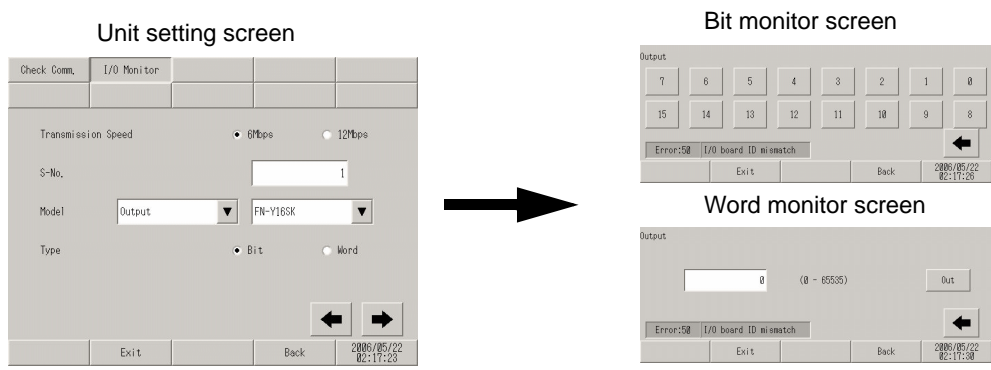
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 62.
Model	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. <b>NOTE</b> <ul style="list-style-type: none"> <li>• 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.</li> </ul>
Word monitor screen	Display the resulting input status of the I/O monitor in words.

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



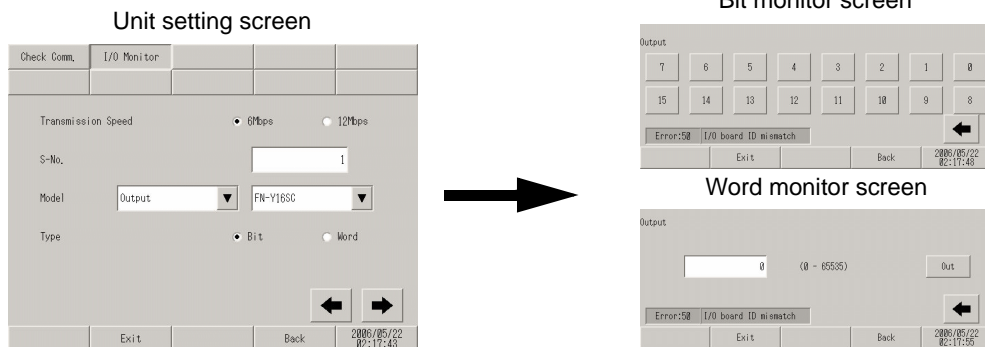
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
Model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



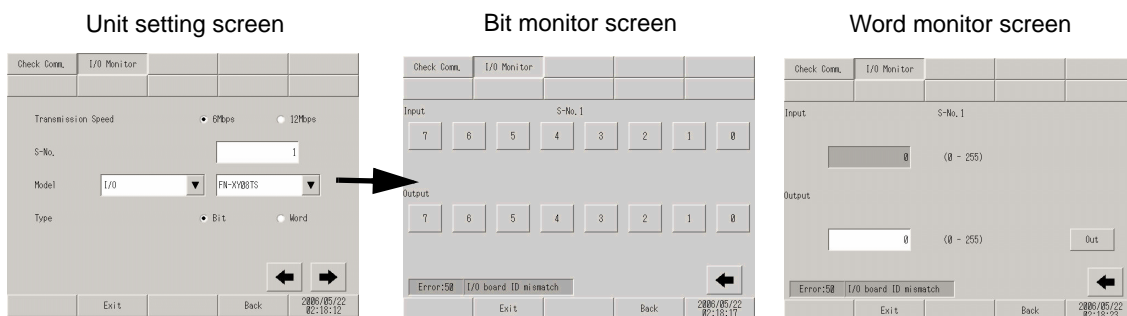
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
Model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



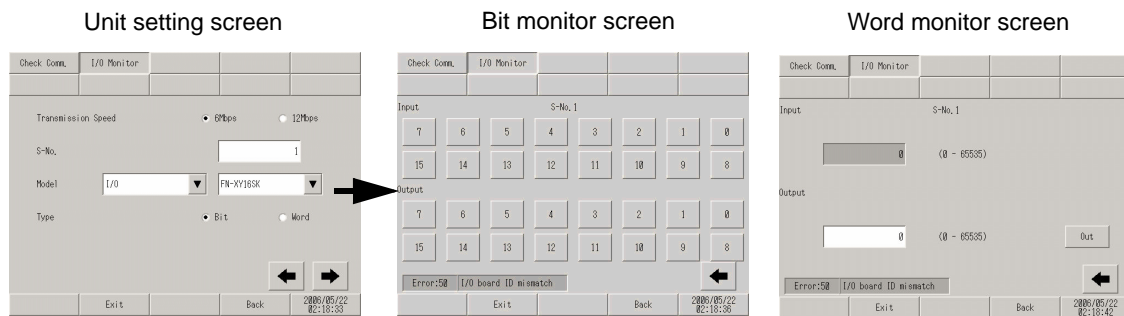
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
Model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



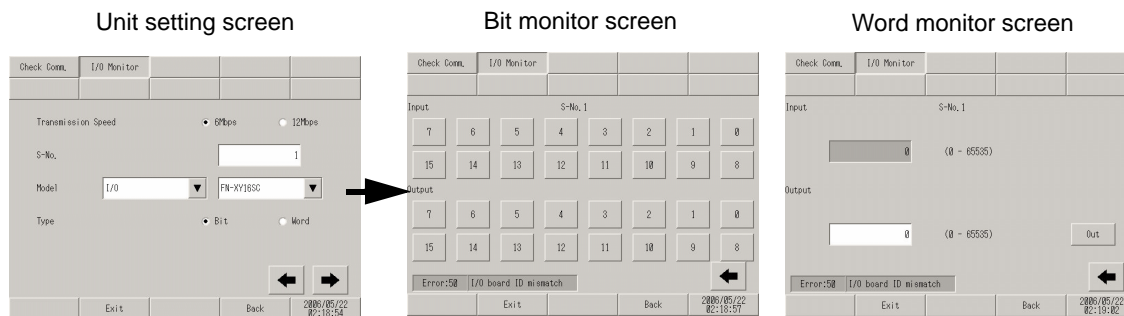
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
Model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



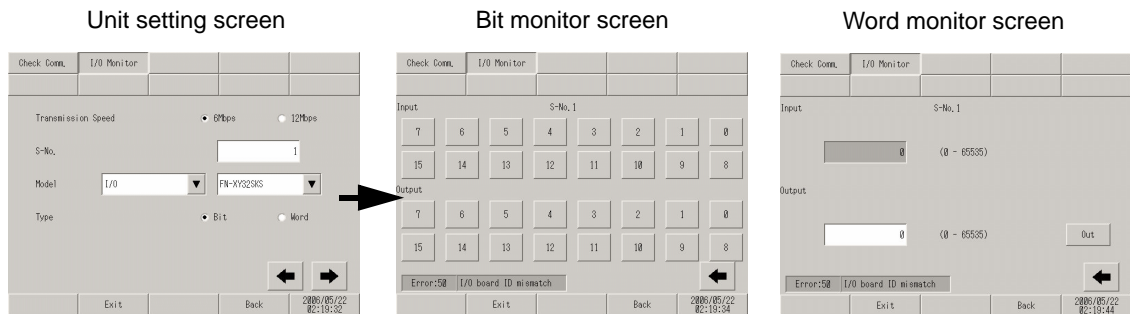
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
Model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



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.

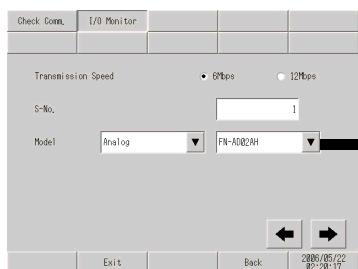
- When [Model] I/O, FN-XY32SKS is used



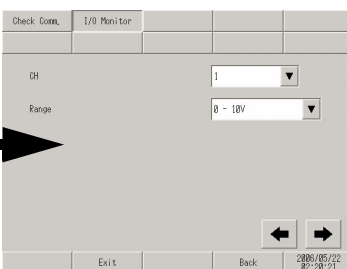
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 60.
Model	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	<p>Display the resulting input/output status of the I/O monitor in bits.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>
Word monitor screen	Display the resulting input/output status of the I/O monitor in words.

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

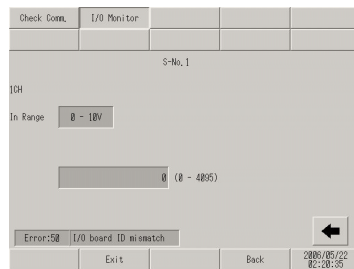
Unit setting screen



Analog monitor setting screen



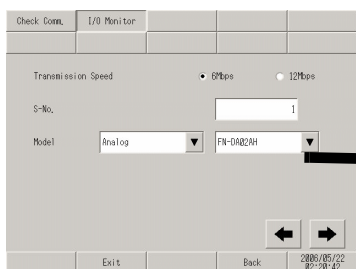
Analog input monitor screen



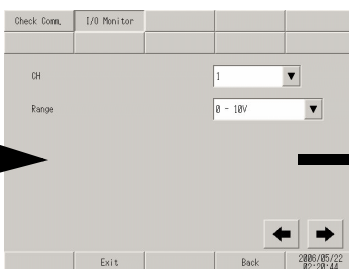
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 63.
Model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

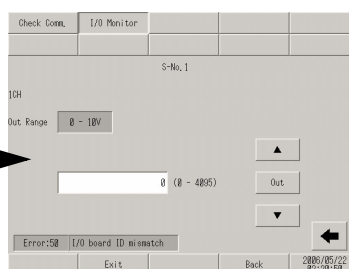
Unit setting screen



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.

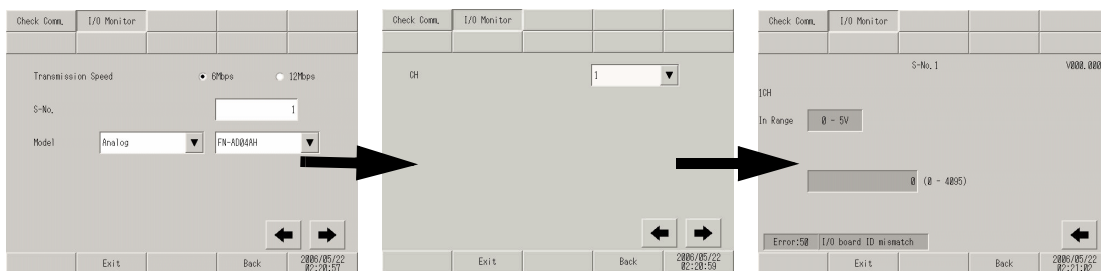


- When [Model] Analog, FN-AD04AH is used

Unit setting screen

Analog monitor setting screen

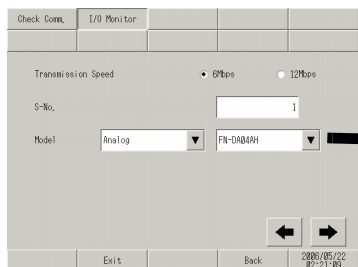
Analog input monitor screen



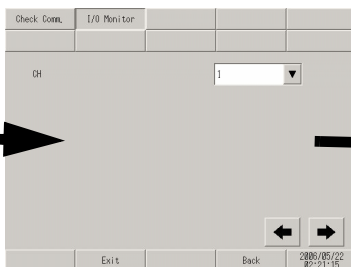
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 60.
Model	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

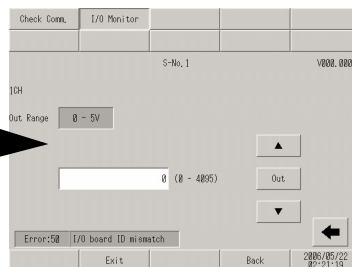
Unit setting screen



Analog monitor setting screen

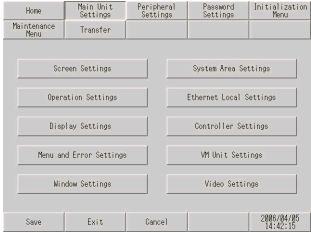


Analog output monitor screen



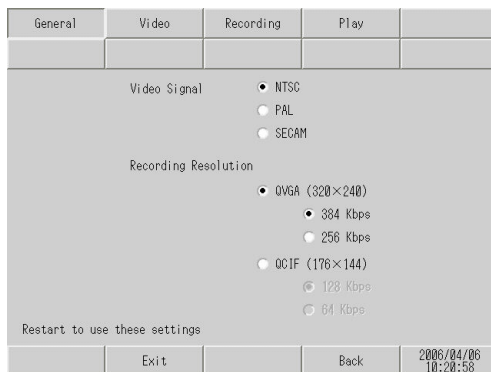
Setting	Description
Unit setting screen	Select the station number and model of the unit to which the I/O monitor is applied.
Transmission Speed	Select the transmission speed from [6Mbps] and [12Mbps].
S-No.	Enter the S-No. of the unit to which the I/O monitor is applied within the range of 1 to 60.
Model	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.

### 2.13.4 When the movie function of the GP-3\*50 series is used

Menu	Description
	<p>“2.13.4 When the movie function of the GP-3*50 series is used n [Main Unit Settings] Settings Guide” (page 2-106)</p> <p>“2.13.4 When the movie function of the GP-3*50 series is used u Video Settings (General)” (page 2-106)</p> <p>“2.13.4 When the movie function of the GP-3*50 series is used u Video Settings (Video)” (page 2-107)</p> <p>“2.13.4 When the movie function of the GP-3*50 series is used u Video Settings (Recording)” (page 2-109)</p> <p>“2.13.4 When the movie function of the GP-3*50 series is used u Video Settings (Play)” (page 2-111)</p>

#### ■ [Main Unit Settings] Settings Guide

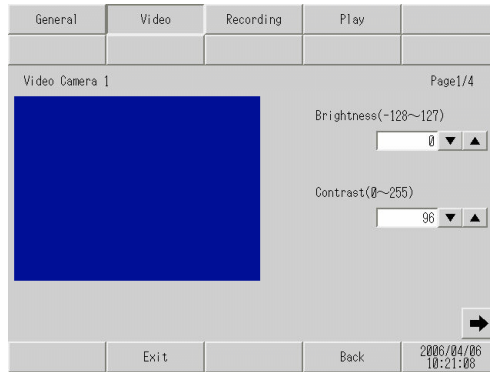
#### ◆ Video Settings (General)



Setting	Description
Video Signal	Select the input video signal. <ul style="list-style-type: none"> <li>• NTSC: 640 x 480 dots</li> <li>• PAL: 768 x 576 dots</li> <li>• SECAM: 768 x 576 dots</li> </ul>
Recording Resolution	Select the recording resolution. <ul style="list-style-type: none"> <li>• QVGA(384kbps): 320 x 240 dots</li> <li>• QVGA(256kbps): 320 x 240 dots</li> <li>• QCIF(128kbps): 176 x 144 dots</li> <li>• QCIF(64kbps): 176 x 144 dots</li> </ul>

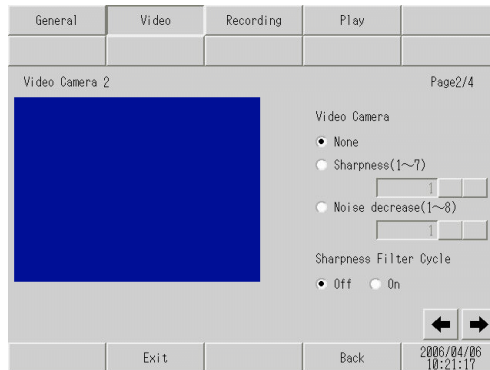
◆ Video Settings (Video)

(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.

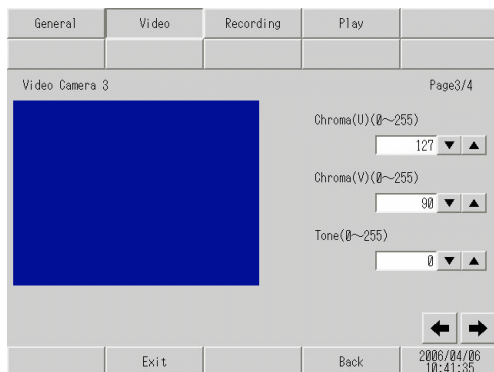
(2/4)



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.

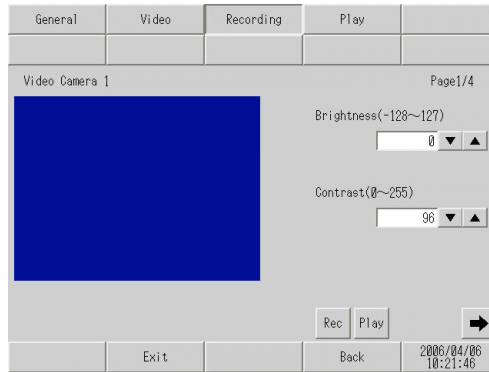
(4/4)



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.

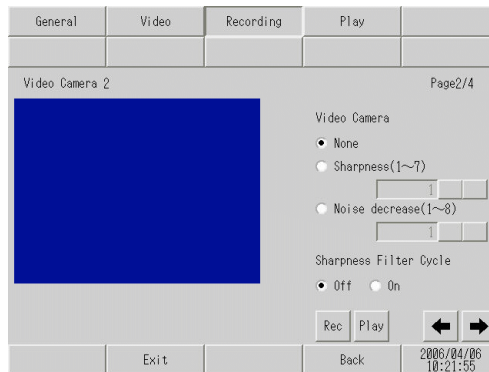
◆ Video Settings (Recording)

(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.

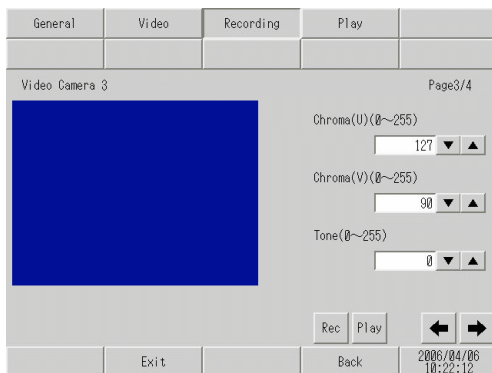
(2/4)



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.

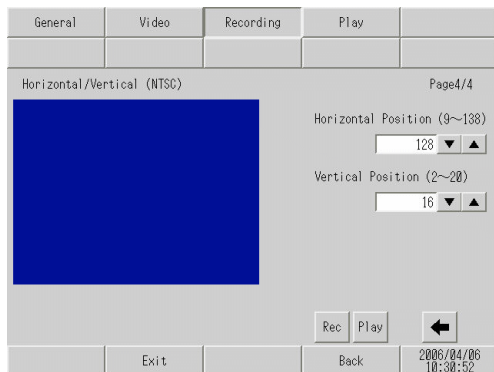
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(3/4)



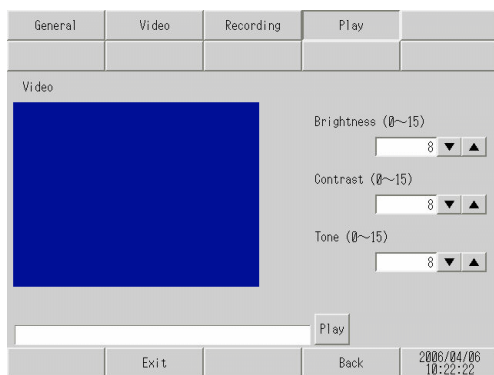
Setting	Description
Chroma(U)	To represent colors using three types of information: brightness signals (Y); the difference between brightness signals and blue components (U); and the difference between brightness signals and red components (V) (i.e. YUV representation), set the difference between brightness 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	<p>Select the horizontal position of the video input signal. The available range varies depending on the video signal of the camera to be used.</p> <ul style="list-style-type: none"> <li>• When the signal is NTSC Set the horizontal position within the range of 9 to 138.</li> <li>• When the signal is PAL Set the horizontal position within the range of 9 to 144.</li> <li>• When the signal is SECAM Set the horizontal position within the range of 9 to 144.</li> </ul>
Vertical Position	<p>Select the vertical position of the video input signal. The available range varies depending on the video signal of the camera to be used.</p> <ul style="list-style-type: none"> <li>• When the signal is NTSC Set the horizontal position within the range of 2 to 20.</li> <li>• When the signal is PAL Set the horizontal position within the range of 2 to 22.</li> <li>• When the signal is SECAM Set the horizontal position within the range of 2 to 22.</li> </ul>

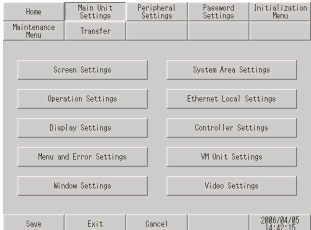
◆ Video Settings (Play)



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.

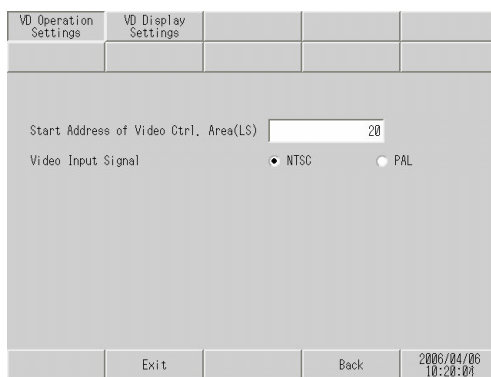


### 2.13.5 When using the VM unit

Menu	Description
	<p>“2.13.5 When using the VM unit n [Main Unit Settings] Settings Guide” (page 2-112)</p> <p>“2.13.5 When using the VM unit u VM Unit Settings (VD Operation Settings)” (page 2-112)</p> <p>“2.13.5 When using the VM unit u VM Unit Settings (VD Display Settings)” (page 2-113)</p>

#### ■ [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. <ul style="list-style-type: none"> <li>• NTSC: 640 x 480 dots</li> <li>• PAL: 768 x 576 dots</li> </ul>

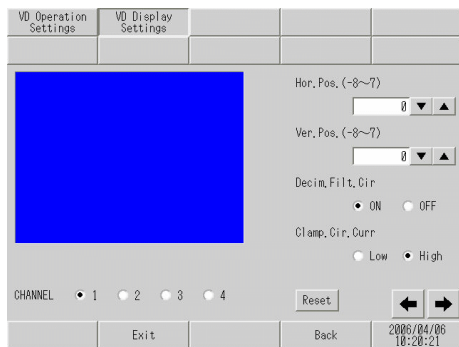
◆ VM Unit Settings (VD Display Settings)

(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.

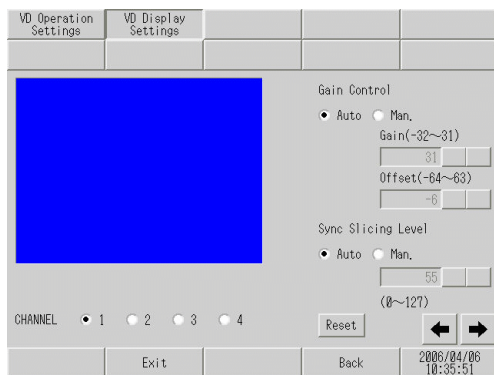
(2/4)



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.

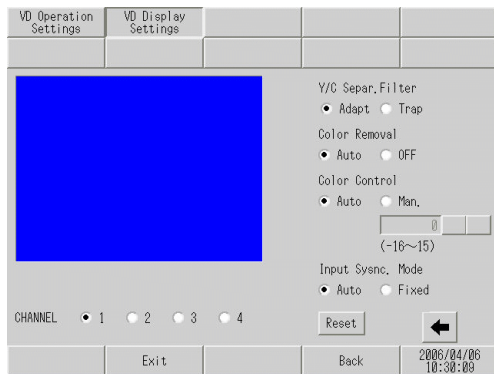
Continued

(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.

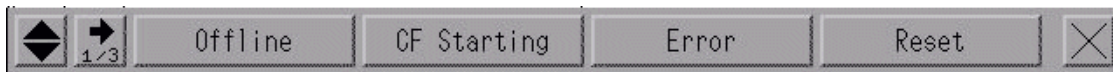
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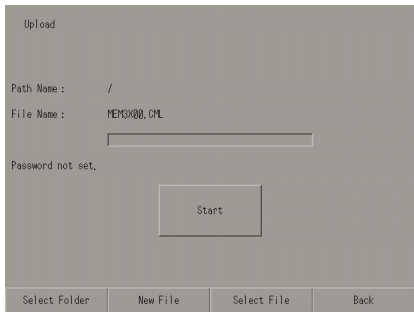
Setting	Description
Color Removal	Select whether to turn ON/OFF the color removal function automatically or to turn it OFF forcefully. When the amplitude level of color burst signals is small, the screen may be switched automatically to show monochrome images. When this option is set to [OFF], color 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.

## 2.13.6 System Menu

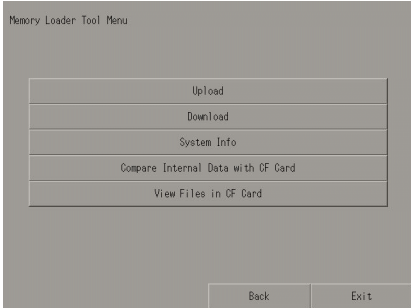
### ■ Offline, CF Starting, Error, Reset

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



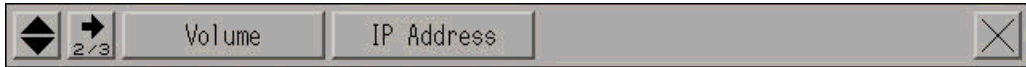
Menu Items	Description
Offline	Touch this switch to enter the offline mode.
CF Starting	<p>Touch this switch to start the CF memory loader program. When the CF memory loader tool is stored in the CF card, it is restarted by touching [CF Starting] and the following screen is displayed.</p>  <p>For the procedure to start the CF card, refer to the following:  <a href="#">GP-Pro EX Reference Manual “32.7 Downloading using the CF card” (page 32-36)</a></p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>This menu is not displayed with GP-3302B.</li> </ul>
Language	Select the display language used for the CF memory loader tool from [Japanese] and [English].
Upload	Move to the upload screen. <a href="#">GP-Pro EX Reference Manual “32.7.2 Transfer Process ■ Transferring Project Files from GP to PC (or another GP)” (page 32-41)</a>
Download	Move to the download screen. <a href="#">GP-Pro EX Reference Manual “32.7.2 Transfer Process ■ Transferring Project Files from PC to GP” (page 32-37)</a>



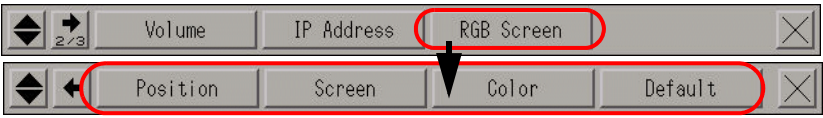
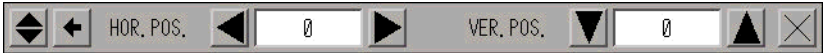

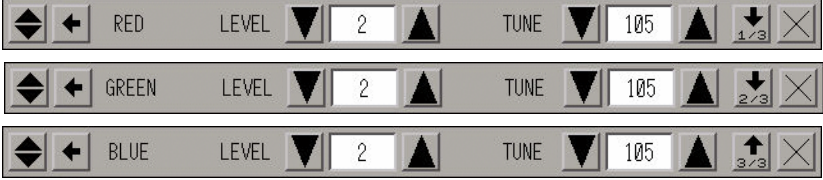

Continued

Menu Items	Description
<p>Memory Loader Tool Menu</p>	<p>The following menu screen is displayed.</p>  <ul style="list-style-type: none"> <li>• Upload Move to the upload screen. ☞ GP-Pro EX Reference Manual “32.7.2 Transfer Process ■ Transferring Project Files from GP to PC (or another GP)” (page 32-41)</li> <li>• Download Move to the download screen. ☞ GP-Pro EX Reference Manual “32.7.2 Transfer Process ■ Transferring Project Files from PC to GP” (page 32-37)</li> <li>• System Info Display the backup data stored on the CF card and the data stored in the GP.</li> <li>• Compare Internal Data with the CF Card Compare all data in the GP with the backup data stored on the CF card.</li> <li>• 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.</li> </ul>
<p>Back</p>	<p>Return to the initial screen.</p>
<p>Exit</p>	<p>Display a confirmation window for exit operation. Touch [Yes] to terminate the CF memory loader tool and reset the GP.</p>
<p>Error</p>	<p>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.</p>
<p>Reset</p>	<p>Touch this option to reset the GP unit.</p>

## ■ Volume, IP Address

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



Menu Items	Description
Volume	 <p>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).</p>
IP Address	 <p>Touch this switch to check the IP address designated for the GP. This switch is displayed only when the model supports Ethernet.</p>
RGB Screen	 <p>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.</p>
Position	 <p>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.</p>
Screen	 <p>Adjust the clock and phase. Available ranges are between -128 and 128 for the clock and between 0 and 63 for the phase.</p>
Color	 <p>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.</p>
Default	 <p>Touch [EXECUTE] to reset the [Position], [Screen], and [Color] settings to the initial values.</p>

Continued

## ■ AddressMonitor, LogicMonitor

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







Menu Items	Description
Logic Monitor	<p>These switches are displayed only when the built-in board type GP3000 series is used. Use these switches to check the operating status and instructions of the logic program.</p> <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>
Address Monitor	<p>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.</p> <p>☞ “2.9.1 Checking whether the logic program is operating properly n Address-Monitor” (page 2-47)</p>
Logic Monitor	<p>Start monitoring the entire logic program. The logic monitor checks the operating status and instruction layout.</p> <p>☞ “2.9.1 Checking whether the logic program is operating properly n LogicMonitor” (page 2-46)</p>

## ■ Brightness and contrast

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

☞ “2.3.1 Adjusting the brightness/contrast” (page 2-19)



Menu Items	Description
Bright	<p>Adjust the brightness of the GP screen.</p>  <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>When the type of GP is TFT, this menu looks as follows because only [Bright] can be adjusted.</li> </ul> 
Contrast	<p>Adjust the contrast of the GP screen. This menu is displayed when the  button is touched.</p>  <p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>When the type of GP is TFT, [Contrast] cannot be adjusted.</li> </ul>



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# *Memo*

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