

Easy! Smooth!
GP2000 Series
Replacement Booklet



Preface

This manual introduces the procedures to replace the unit in the GP2000 series (GP-2600T, GP-2601T, GP-2500T, GP-2500S, GP-2501S, GP-2400T, GP-2300T/L) with the GP3000 series (GP-3600T, GP-3500T, GP-3500S, GP-3400T, GP-3300T/L). The recommended replacement models are as follows.

GP-2600T	GP-3600T
GP-2601T	
GP-2500T	GP-3500T
GP-2500S	GP-3500S
GP-2501S	
GP-2400T	GP-3400T
GP-2300L	GP-3300T
GP-2300L	GP-3300L

- ▶ For the replacement of GP-2601T, GP-2501S, please refer to this manual.



Table of Contents

<u>PREFACE</u>	2
<u>CHAPTER 1. SPECIFICATION COMPARISON</u>	5
1.1 SPECIFICATIONS OF GP-2600T AND GP-3600T	5
1.2 SPECIFICATIONS OF GP-2601T AND GP-3600T	6
1.3 SPECIFICATIONS OF GP-2500T AND GP-3500T	7
1.4 SPECIFICATIONS OF GP-2500S AND GP-3500S.....	8
1.5 SPECIFICATIONS OF GP-2501S AND GP-3500S.....	9
1.6 SPECIFICATIONS OF GP-2400T AND GP-3400T	10
1.7 SPECIFICATIONS OF GP-2300T/2300L AND GP-3300T/3300L.....	11
<u>CHAPTER 2. COMPATIBILITY OF HARDWARE</u>	12
2.1 LOCATIONS OF CONNECTORS	12
2.2 ABOUT PANEL CUT DIMENSIONS.....	14
2.3 TOUCH PANEL SPECIFICATIONS.....	14
2.4 ABOUT TRANSFER CABLE.....	14
2.5 ABOUT INTERFACES.....	14
2.6 PERIPHERAL UNITS AND OPTION UNITS.....	15
2.6.1 BARCODE READER CONNECTION.....	15
2.6.2 PRINTER CONNECTION.....	15
2.6.3 AMPLIFIER CONNECTION	15
2.6.4 EXPANSION UNIT.....	15
2.6.5 FRONT MAINTENANCE UNIT.....	15
2.6.4 ABOUT ISOLATION UNIT	15
2.7 ABOUT BODY MATERIAL AND COLOR	15
2.8 ABOUT POWER CONNECTOR.....	16
2.9 ABOUT POWER CONSUMPTION.....	16



<u>CHAPTER 3. REPLACEMENT PROCEDURE</u>	<u>17</u>
3.1 WORK FLOW	17
3.2 PREPARATION	19
3.3 RECEIVE SCREEN DATA FROM THE GP2000 SERIES.....	20
3.4 CONVERT SCREEN DATA WITH THE PROJECT CONVERTER	23
3.5 TRANSFER SCREEN DATA TO THE GP3000 SERIES	29
3.6 DIFFERENCES OF SOFTWARE AFTER CONVERSION	33
<u>CHAPTER 4. COMMUNICATION WITH DEVICE/PLC.....</u>	<u>35</u>
4.1 DRIVER LIST	35
4.2 SHAPES OF COM PORTS	39
4.2.1 SIGNALS ON COM1.....	40
4.2.2 SIGNALS ON COM2.....	42
4.3 MULTILINK CONNECTION	43

Chapter 1. Specification Comparison



1.1 Specifications of GP-2600T and GP-3600T

		GP-2600T	GP-3600T
			
Display Type		TFT color LCD	
Display Colors		256 colors	UP! 65536 colors
Display Resolution		SVGA (800 × 600 pixels)	
Panel Cut Dimensions (mm)		301.5 (W) × 227.5 (H)	
External Dimensions (mm)		317 (W) × 243 (H) × 58(D)	313 (W) × 239 (H) × 56(D)
Touch Panel Type		Matrix	Resistive Film (Analog) NEW! → See 2.3
Serial Interface	COM1	D-Sub 25 pin (female) RS-232C/422	NEW! D-Sub 9 pin (male) RS-232C/485 (422) Compatible
	COM2	D-Sub 9 pin (male) RS-232C	NEW! D-Sub 9 pin (female) RS-485 (422) Compatible
Memory	Application	4MB	UP! 8MB
	SRAM	256KB	UP! 320KB
Ethernet Interface		10BASE-T	UP! 10BASE-T/ 100BASE-TX
CF Card Interface		✓	
Printer Interface		Compliant with Centronics (parallel)	NEW! USB
USB Host Interface		-	NEW! ✓



1.2 Specifications of GP-2601T and GP-3600T

		GP-2601T	GP-3600T
			
Display Type		TFT color LCD	
Display Colors		256 colors	UP! 65536 colors
Display Resolution		SVGA (800 × 600 pixels)	
Panel Cut Dimensions (mm)		301.5 (W) × 227.5 (H)	
External Dimensions (mm)		317 (W) × 243 (H) × 58(D)	313 (W) × 239 (H) × 56(D)
Touch Panel Type		Matrix	Resistive Film (Analog) NEW! → See 2.3
Serial Interface	COM1	D-Sub 25 pin (female) RS-232C/422	NEW! D-Sub 9 pin (male) RS-232C/485 (422) Compatible
	COM2	-	NEW! D-Sub 9 pin (female) RS-485 (422) Compatible
Memory	Application	4MB	UP! 8MB
	SRAM	128KB	UP! 320KB
Ethernet Interface		-	UP! 10BASE-T/ 100BASE-TX
CF Card Interface		✓	
Printer Interface		Compliant with Centronics (parallel)	NEW! USB
USB Host Interface		-	NEW! ✓



1.3 Specifications of GP-2500T and GP-3500T

		GP-2500T	GP-3500T
			
Display Type		TFT color LCD	
Display Colors		256 colors	UPI! 65536 colors
Display Resolution		VGA (640 × 480 pixels)	
Panel Cut Dimensions (mm)		301.5 (W) × 227.5 (H)	
External Dimensions (mm)		317 (W) × 243 (H)×58(D)	270.5 (W) × 212.5 (H)×57(D) NEW! → See 2.2
Touch Panel Type		Matrix	Resistive Film (Analog) NEW! → See 2.3
Serial Interface	COM1	D-Sub 25 pin (female) RS-232C/422	NEW! D-Sub 9 pin (male) RS-232C/485 (422) Compatible
	COM2	D-Sub 9 pin (male) RS-232C	NEW! D-Sub 9 pin (female) RS-485 (422) Compatible
Memory	Application	4MB	UPI! 8MB
	SRAM	256KB	UPI! 320KB
Ethernet Interface		10BASE-T	UPI! 10BASE-T/ 100BASE-TX
CF Card Interface		✓	
Printer Interface		Compliant with Centronics (parallel)	NEW! USB
USB Host Interface		-	NEW! ✓



1.4 Specifications of GP-2500S and GP-3500S

		GP-2500S	GP-3500S
			
Display Type		STN color LCD	
Display Colors		64colors	UPI 4096 colors
Display Resolution		VGA (640 × 480 pixels)	
Panel Cut Dimensions (mm)		301.5 (W) × 227.5 (H)	
External Dimensions (mm)		317 (W) × 243 (H) × 58(D)	313 (W) × 239 (H) × 56(D)
Touch Panel Type		Matrix	Resistive Film (Analog) NEW! → See 2.3
Serial Interface	COM1	D-Sub 25 pin (female) RS-232C/422	NEW! D-Sub 9 pin (male) RS-232C/485 (422) Compatible
	COM2	D-Sub 9 pin (male) RS-232C	NEW! D-Sub 9 pin (female) RS-485 (422) Compatible
Memory	Application	4MB	UPI 8MB
	SRAM	256KB	UPI 320KB
Ethernet Interface		10BASE-T	UPI 10BASE-T/ 100BASE-TX
CF Card Interface		✓	
Printer Interface		Compliant with Centronics (parallel)	NEW! USB
USB Host Interface		-	NEW! ✓



1.5 Specifications of GP-2501S and GP-3500S

		GP-2501S	GP-3500S
			
Display Type		STNcolor LCD	
Display Colors		64 colors	UP! 4096 colors
Display Resolution		VGA (640 × 480 pixels)	
Panel Cut Dimensions (mm)		301.5 (W) × 227.5 (H)	
External Dimensions (mm)		317 (W) × 243 (H) × 58(D)	313 (W) × 239 (H) × 56(D)
Touch Panel Type		Matrix	Resistive Film (Analog) NEW! → See 2.3
Serial Interface	COM1	D-Sub 25 pin (female) RS-232C/422	NEW! D-Sub 9 pin (male) RS-232C/485 (422) Compatible
	COM2	-	NEW! D-Sub 9 pin (female) RS-485 (422) Compatible
Memory	Application	2MB	UP! 8MB
	SRAM	128KB	UP! 320KB
Ethernet Interface		-	UP! 10BASE-T/ 100BASE-TX
CF Card Interface		✓	
Printer Interface		Compliant with Centronics (parallel)	NEW! USB
USB Host Interface		-	NEW! ✓

1.6 Specifications of GP-2400T and GP-3400T

		GP-2400T	GP-3400T
			
Display Type		TFT color LCD	
Display Colors		256 colors	UP! 65536 colors
Display Resolution		VGA (640 × 480 pixels)	
Panel Cut Dimensions (mm)		204.5 (W) × 159.5 (H)	
External Dimensions (mm)		215 (W) × 170 (H) × 60 (D)	
Touch Panel Type		Matrix	Resistive Film (Analog) NEW! → See 2.3
Serial Interface	COM1	D-Sub 25 pin (female) RS-232C/422	NEW! D-Sub 9 pin (male) RS-232C/485 (422) Compatible
	COM2	D-Sub 9 pin (male) RS-232C	NEW! D-Sub 9 pin (female) RS-485 (422) Compatible
Memory	Application	4MB	UP! 8MB
	SRAM	256KB	UP! 320KB
Ethernet Interface		10BASE-T	10BASE-T/ UP! 100BASE-TX
CF Card Interface		✓	
Printer Interface		Compliant with Centronics (parallel)	NEW! USB
USB Host Interface		-	NEW! ✓

1.7 Specifications of GP-2300T/2300L and GP-3300T/3300L

		GP-2300T/2300L	GP-3300T/3300L
			
Display Type	2300T	TFT color LCD	
	2300L	Monochrome LCD	
Display Colors	2300T	256 colors	UP! 65536 colors
	2300L	Monochrome 2 levels Monochrome 8 levels	UP! Monochrome 16 levels
Display Resolution		QVGA (320 × 240 pixels)	
Panel Cut Dimensions (mm)		156 (W) × 123.5 (H)	
External Dimensions (mm)		171 (W) × 138 (H) × 60 (D)	167.5 (W) × 135 (H) × 59.5 (D)
Touch Panel Type		Matrix	Resistive Film (Analog) NEW! → See 2.3
Serial Interface	COM1	D-Sub 25 pin (female) RS-232C/422	NEW! D-Sub 9 pin (male) RS-232C/485 (422) Compatible
	COM2	D-Sub 9 pin (male) RS-232C	NEW! D-Sub 9 pin (female) RS-485 (422) Compatible
Memory	Application	2MB	UP! 6MB
	SRAM	256KB	UP! 320KB
Ethernet Interface		10BASE-T	10BASE-T/ UP! 100BASE-TX
CF Card Interface		✓	
Printer Interface		Compliant with Centronics (parallel)	NEW! USB
USB Host Interface		-	NEW! ✓

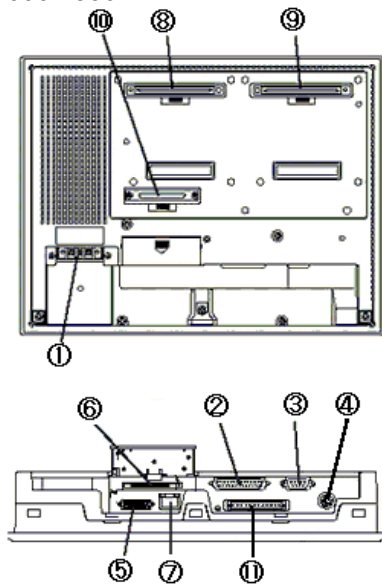
Chapter 2. Compatibility of Hardware

2.1 Locations of connectors

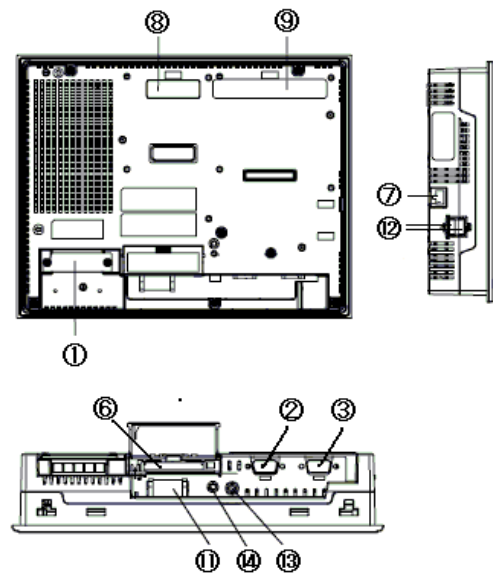
Connector locations on the GP2000 series and the GP3000 series are as follows.

[Rear of GP-2600/2500 and GP-3600/3500] *

GP-2600/2500



GP-3600/3500

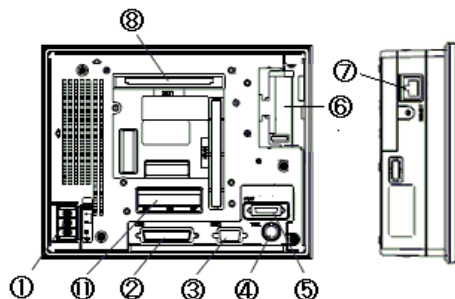


* GP-2601T and GP-2501S doesn't have 3, 7, 9 and 10.

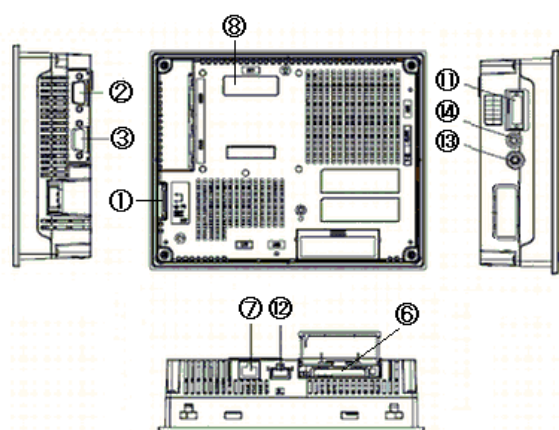
* GP-2500S doesn't have 9.

[Rear of GP2400 and GP3400]

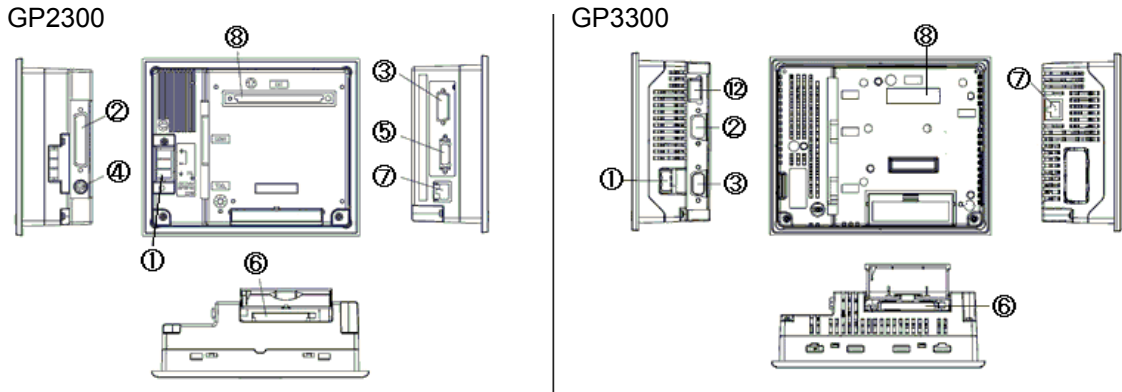
GP2400



GP3400



[Rear of GP2300 and GP3300]



Interface names (applicable to all models)

	GP2000 Series	GP3000 Series
1	Power Input Terminal Block	Power Input Terminal Block (AC type) Power Plug Connector (DC type)
2	Serial Interface (COM1)	
3	Expansion Serial Interface (COM2) *	Serial Interface (COM2) *
4	Tool Connector	-
5	Printer Interface *	-
6	CF Card Interface	
7	Ethernet Interface (*1)	
8	Expansion Unit Interface 1	
9	Expansion Unit Interface 2 (*2)	
10	Expansion CF Card Interface (*3)	-
11	Auxiliary Input/Output Interface (AUX) (*4)	Auxiliary Input/Output (AUX) Voice Output Interface (*5)
12	-	USB Host Interface
13	-	Video Input Interface (M class only)
14	-	Audio Input Interface (M class only)

*1 GP2601T and 2501S doesn't have a ethernet Interface.

*2 GP2601T, 2500S, 2501S, 2400T, 2300T/L, 3400T ,3300T/L don't have an expansion Unit Interface 2.

*3 GP2601T, 2501S, 2400T,2300T/L don't have an expansion CF Card Interface.

*4 GP2300T dosen't have an auxiliary Input/Output Interface (AUX).

*5 GP3300T/L doesn't have an auxiliary Input/Output (AUX) and a voice Output Interface.

2.2 About panel cut dimensions

GP-3500T is designed smaller for space savings. The panel cut dimensions of GP-3500T are different from those of GP-2500T. Please prepare an attachment (model: CA4-ATM10-01) for installation of GP-3500T.

Those of GP-3600T, 3400T, and 3300T/L are the same as those of the GP2000 series.

2.3 Touch panel specifications

The touch panel type for the GP3000 series is “Resistive Film (Analog) Type”. The resistive film (Analog) type doesn’t recognize the touch input even if you touch two points at the same time. Please do not touch two points at the same time. If you applied the two-point touch input on the GP2000 series, we recommend you to change to the one-point touch input using the switch delay function. For the settings, see “Compatibility of Software”.

2.4 About transfer cable

To transfer screen data to the GP3000 series, use a USB transfer cable for the GP3000 series (model: CA3-USBCB-01). Please note that any commercial USB cable cannot be used. The tool port and a transfer cable for the GP2000 series (*1) are used for screen data transfer to the GP2000 series, but they are not available with the GP3000 series.

*1: Models of transfer cable for the GP2000 series: GPW-CB02, GPW-CB03, GP430-CU02-M, etc.

2.5 About interfaces

2.5.1 Serial interface

The COM1 port on the GP3000 series is D-sub 9 pin male and the COM2 port is D-sub 9 pin female. The COM1 port on the GP2000 series is D-sub 25 pin female and the COM2 port is D-sub 9 pin male. The pin assignment and the shape of male/female connector are different from those of the GP3000 series. Check if you can use the cable with the GP3000 series on Otasuke Pro! “Connectable Controllers for GP3000 Series.”

<http://www.pro-face.com/otasuke/qa/gp3000/replace/connect/connect.php?rm=2>

2.5.2 AUX output

The GP3000 series is equipped with AUX (external output), but the shape of the AUX (external output) connector is different from that of GP-2600T, 2601T, 2501S, 2500S, 2500T and 2400T. Please check wiring for the AUX interface before you replace the models.

2.6 Peripheral units and option units

2.6.1 Barcode reader connection

The GP3000 series is not equipped with a tool port. A barcode reader connected from the tool port on the GP2000 series cannot be used. However, the GP3000 series allows you to connect a barcode reader on its USB interface or its serial interface.

2.6.2 Printer connection

The GP3000 series is not equipped with the Centronics (parallel) interface for the printer. Please prepare a conversion cable to convert the USB of the GP3000 series to the Centronics interface if you connect the printer to the GP3000 series, which was connected to the Centronics interface on the GP2000 series. The GP3000 series allows you to connect a printer on its Ethernet port as well as on its USB port.

2.6.3 Amplifier connection

The GP-3000 series doesn't have the line output function. If you connected from the line output on the AUX interface of GP2600T/2500T/2500S/2400T to an amplifier, replace your speaker to one with a built-in amplifier and use the speaker output.

2.6.4 Expansion unit

The expansion bus unit for the GP3000 series is different from the one for the GP2000 series. Please note that the expansion unit used with the GP2000 series cannot be used.

For the details of the expansion bus unit for the GP3000 series, refer to

<http://www.pro-face.com/product/gp/gp3000/option/>

2.6.5 Front maintenance unit

The front maintenance unit (GP077-CFFM10) for the GP2000 series is not available with the GP3000 series. Please use a CF card with the CF cart interface equipped on the GP unit.

2.6.4 About isolation unit

The isolation unit for the GP2000 series (CA2-ISOALL232-01/CA2-ISOALL422-01) cannot be used with the GP3000 series. Prepare an isolation unit for the GP3000 series. (232C type: CA3-ISO232-01, 422 type: CA3-ISO422-01)

2.7 About body material and color

The body material of the GP3000 series is aluminum. That of the GP2000 series is resin. Please note that the material characteristic and the color are different.

2.8 About power connector

The power connector for the DC type on the GP3000 series is a screw lock terminal block. If you replace from the GP2000 series, change the power cable.

The power connector for the AC type is the same as that on the GP2000 series, however, the position of FG has been changed.

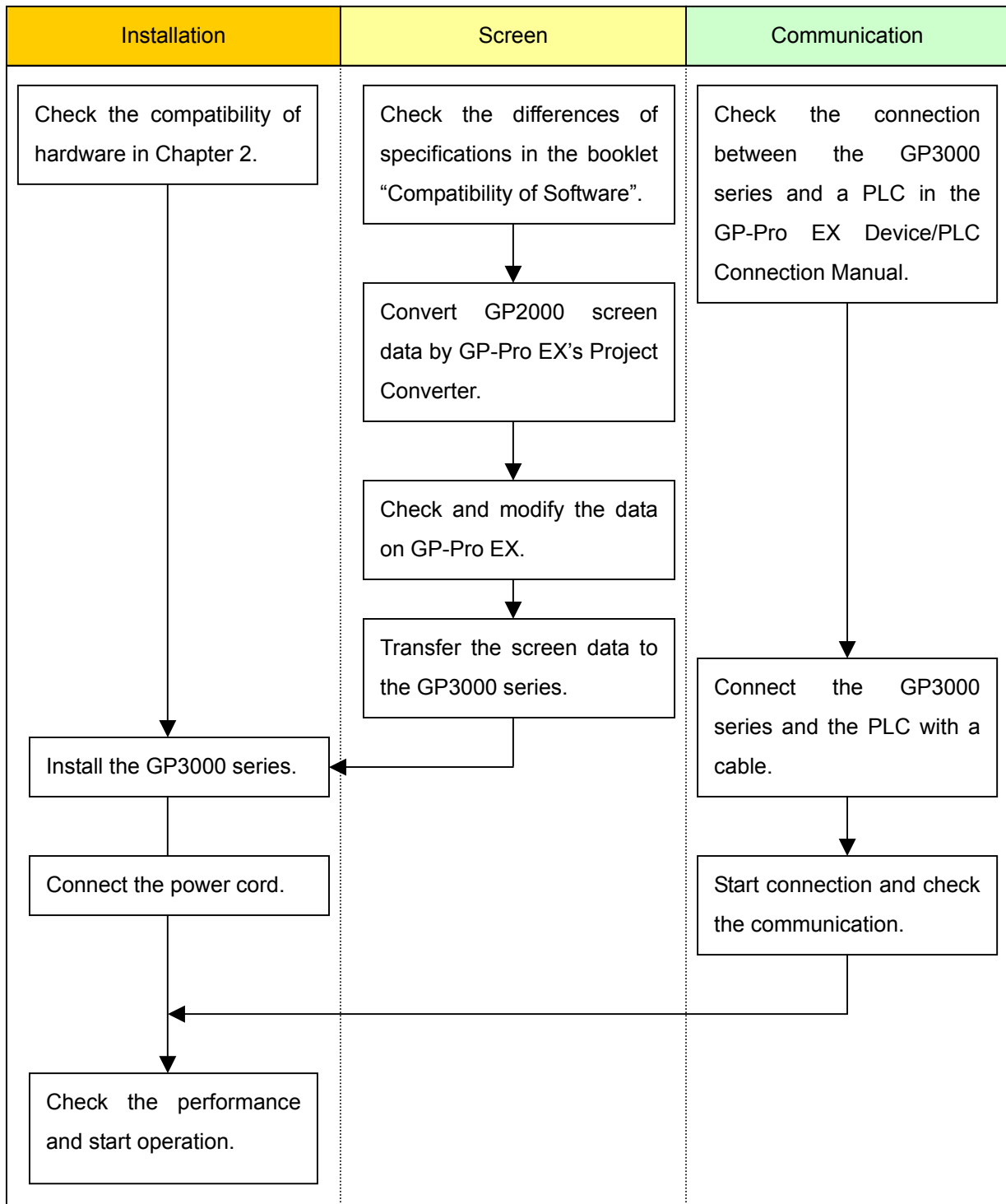
2.9 About power consumption

Only as for the AC type, the power consumption of the GP3000 series and that of the GP2000 series are different. Please check the power supply capacity that is supplied to the main body.

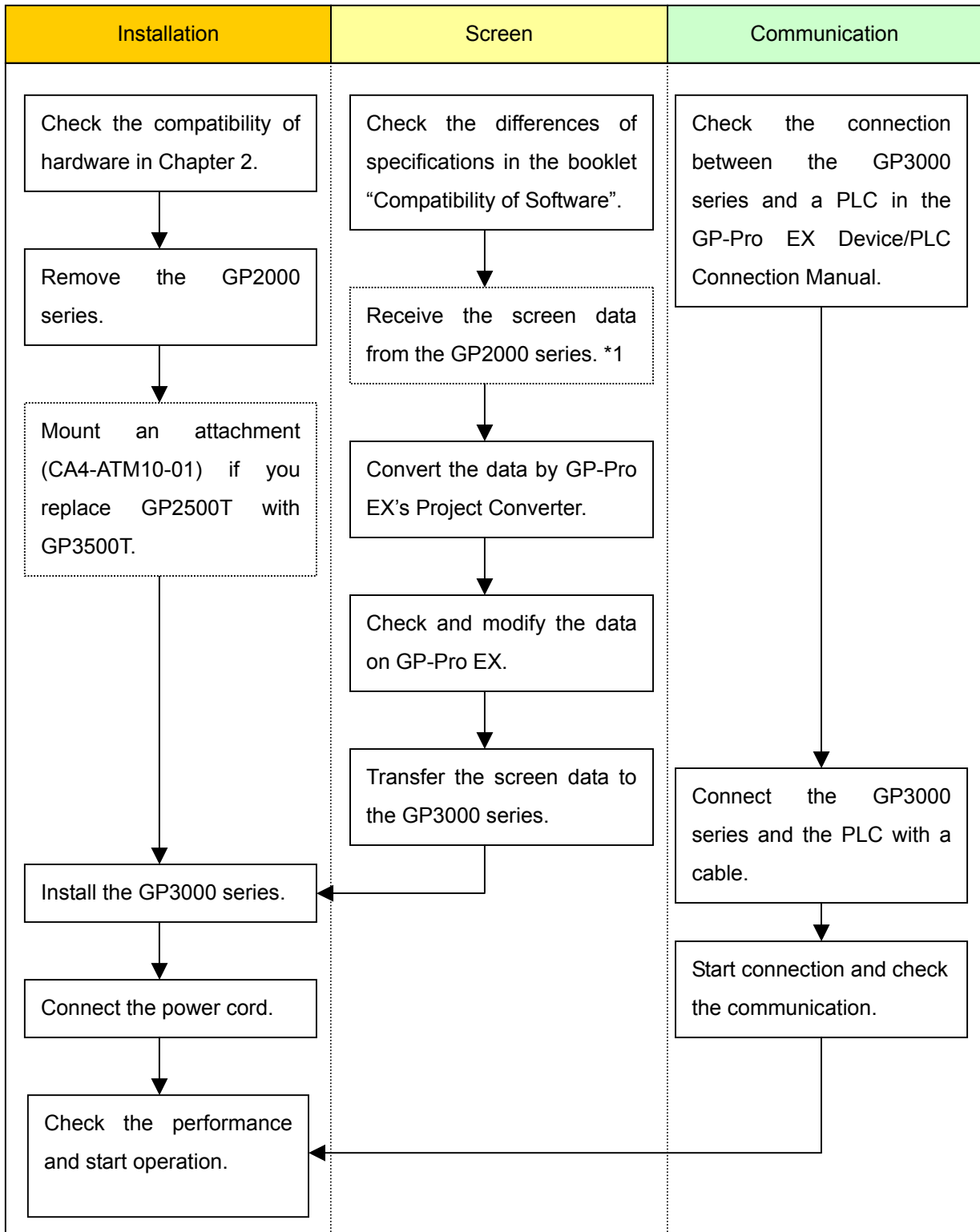
Chapter 3. Replacement Procedure

3.1 Work Flow

► To change the equipment designed for the GP2000 series to the GP3000 series



► To replace the GP2000 series mounted to the equipment to the GP3000 series



*1: This step is required if screen data is saved only in the GP unit, not in any other device.

3.2 Preparation

Requirements for receiving screen data from the GP2000 series (*1)	PC in which the following version or higher of C-package GP-PRO/PB3 is installed (*2)					
	<table border="1"> <tr> <td>2600T, 2500T, 2400T</td> <td>V5.0 or higher</td> </tr> <tr> <td>2300T, 2500S, 2501S</td> <td>V6.0 or higher</td> </tr> <tr> <td>2601T</td> <td>V6.2(SP1) or higher</td> </tr> </table>	2600T, 2500T, 2400T	V5.0 or higher	2300T, 2500S, 2501S	V6.0 or higher	2601T
2600T, 2500T, 2400T	V5.0 or higher					
2300T, 2500S, 2501S	V6.0 or higher					
2601T	V6.2(SP1) or higher					
Requirements for converting screen data of the GP2000 series and transferring to the GP3000 series	<p>Transfer cable (The following three types of cable are available.)</p> <ul style="list-style-type: none"> • GPW-CB02 (D-sub 9-pin to the PC) • GPW-CB03 (USB to the PC) (*3) • GP430-CU02-M or GPW-SET <p>The GP2000 series allows you to transfer screen data via CF card.</p>					
	<p>PC in which GP-Pro EX is installed</p> <p>Transfer cable (model: CA3-USBCB-01)</p> <p>The GP3000 series allows you to transfer screen data via Ethernet, CF card or USB flash drive.</p>					

*1: This step is required if screen data is saved only in the GP unit, not in any other device.

*2: The software version must be the same or higher than the version that you used when creating screen data for the GP2000 series.

We recommend you to upgrade to the latest version, which is C-Package 03 GP-PRO/PB3 for Windows Ver.7.29.

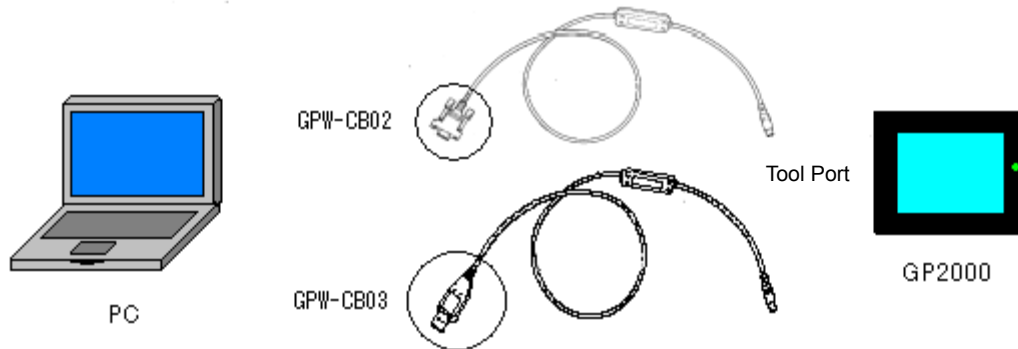
If the version of the software that you currently use is C-Package 03 GP-PRO/PB3 for Windows Ver.7.0, upgrade it on our website Otasuke Pro!

*3: GPW-CB03 is compliant with GP-PRO/PBIII for Windows Ver. 6.23 (C-Package02 SP2) or later. Also, to use it, you may need to [install the driver](#).

3.3 Receive screen data from the GP2000 series

This section explains, as an example, how to receive screen data from the GP unit using a transfer cable GPW-CB02 or GPW-CB03. If you have backed up screen data, this step is unnecessary; skip to the next section “3.4 Convert screen data with the Project Converter.”

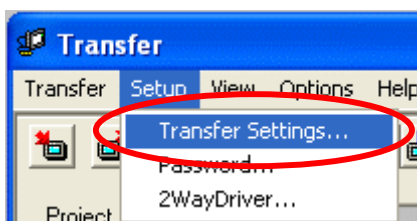
1. Connect a transfer cable to the GP2000 series.



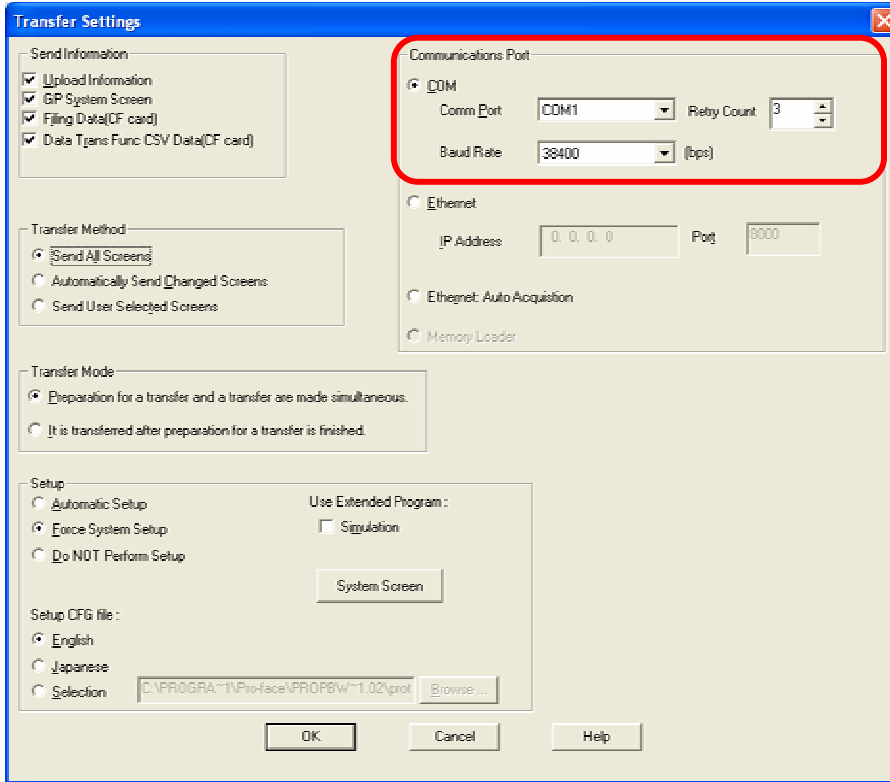
2. Start up GP-Pro/PBIII C-Package and click the [Transfer] icon on the Project Manager. (Specify a desired project file.)



3. On the [Transfer] window, select the [Setup] menu and click [Transfer Settings...].

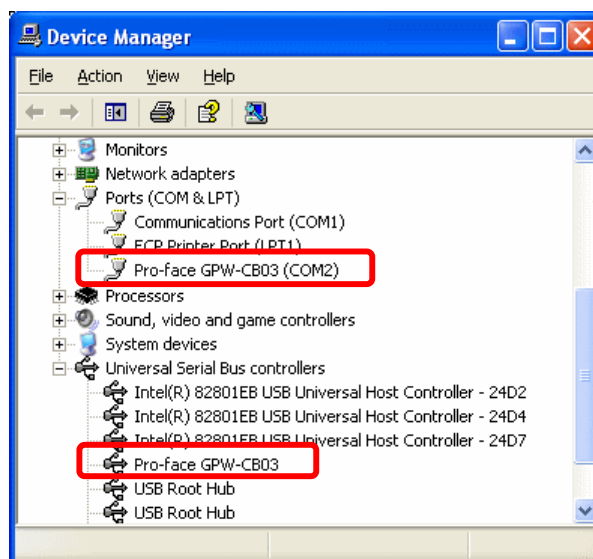


4. In the Communication Port field, select [COM], specify the COM port to which the cable is connected, and click [OK].

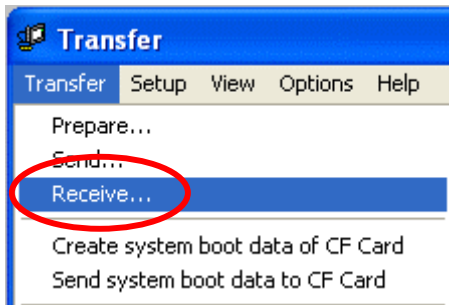


If you use a USB transfer cable (GPW-CB03)...

You can check the COM port for the USB transfer cable (GPW-CB03), which is assigned to the PC with the Device Manager of Windows.



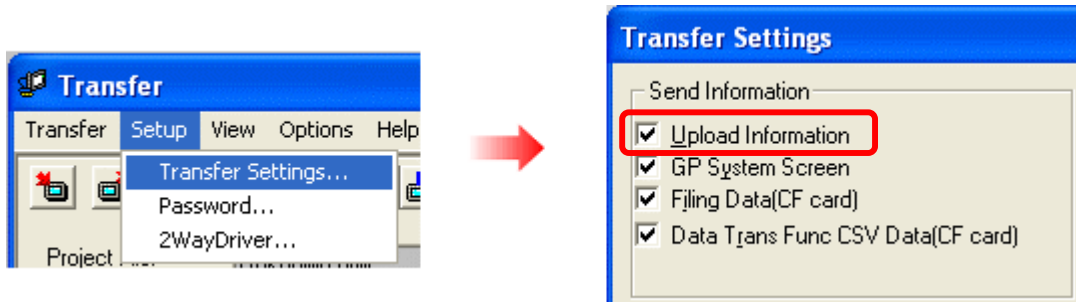
5. Select the [Transfer] menu and click [Receive...].



6. Specify the location to save the received screen data in and the project file name and save.

In case there is no Upload Information...

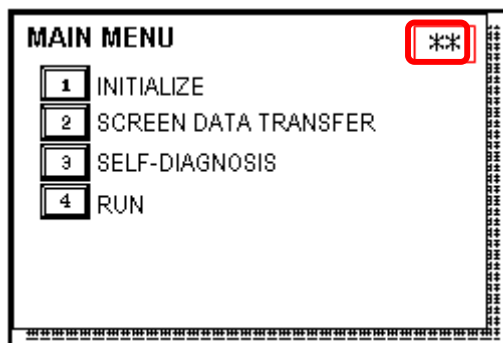
“Upload Information” is the necessary information to receive screen data from the display unit. It needs to be included in screen data when transferring screen data to the display unit beforehand. The Upload Information is sent to the display unit by default, however, you may check off the box of Upload Information to prevent screen reception by a third party.



In this case, a message, which indicates there is no Upload Information,” appears and you cannot receive the data.

You can check if the Upload Information has been sent or not in the following way.

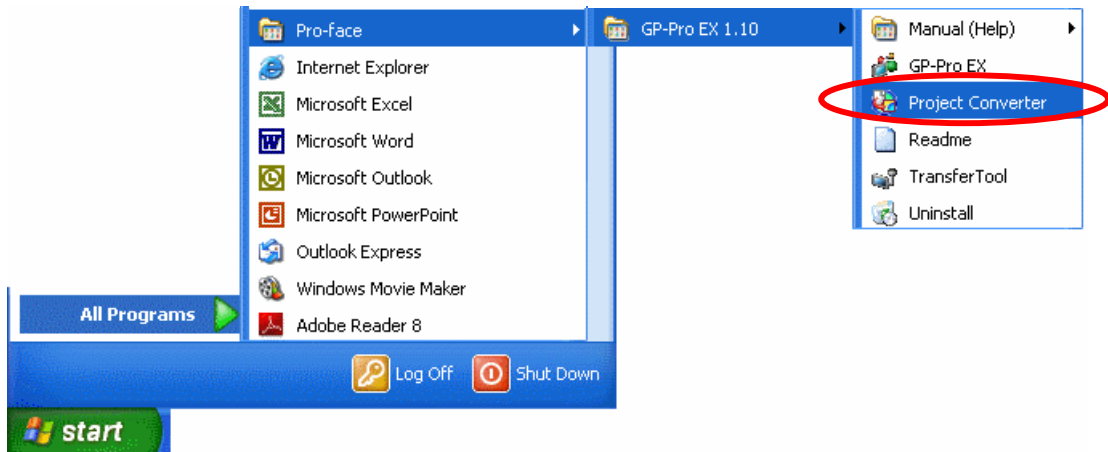
Enter into the GP’s Offline mode. If there are 2 asterisk (*) marks in the Main menu as below, the Upload Information has been sent. If not, there is no Upload Information sent.



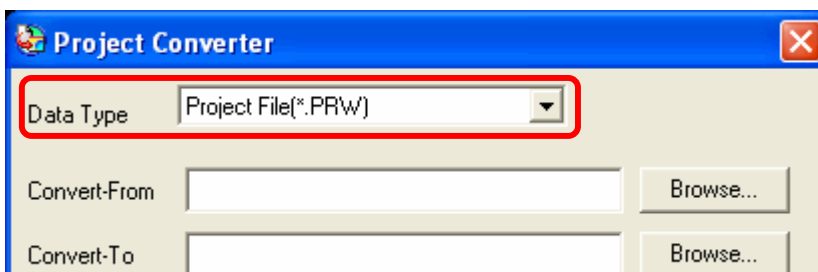
3.4 Convert screen data with the Project Converter

Convert a project file (*.prw) for the GP2000 series with the GP-Pro EX's Project Converter.

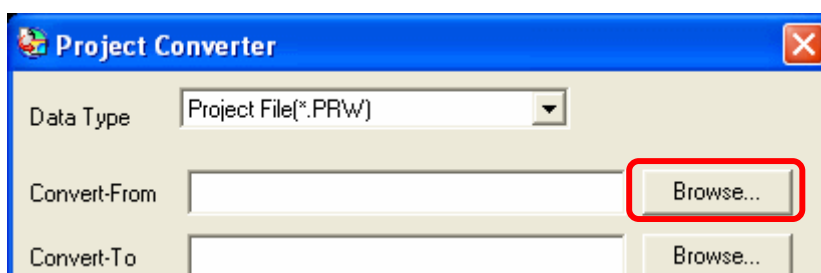
1. Click the [Start] button, select the [All Programs] ([Programs] on Windows® 2000 menu → [Pro-face] → [GP-Pro EX*.**]). (The version of the software you use will be shown in *.*.)

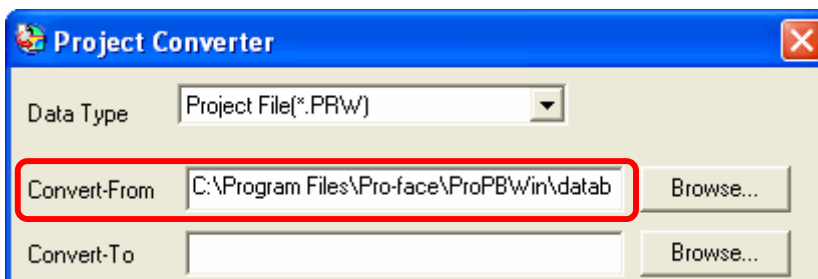
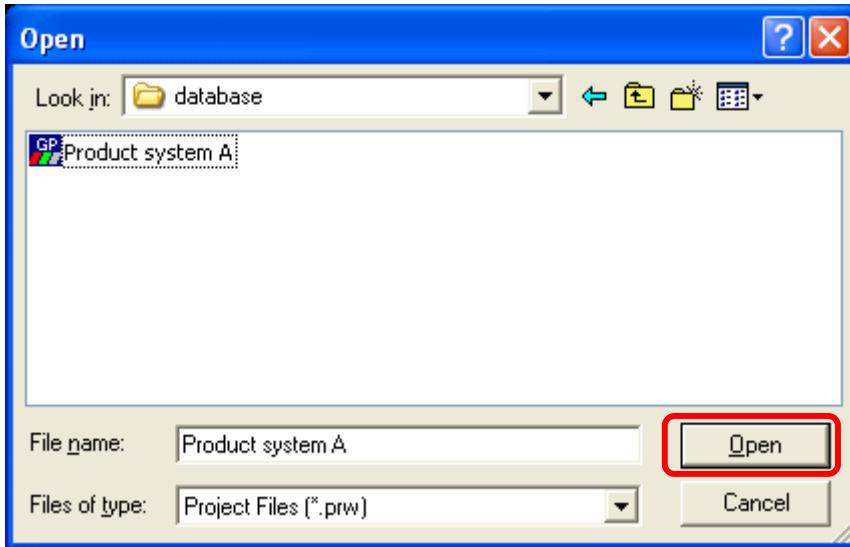


2. The Project Converter starts up and the [Project Converter] dialog box opens. Select [Project File (*.PRW)] in the [Data Type].

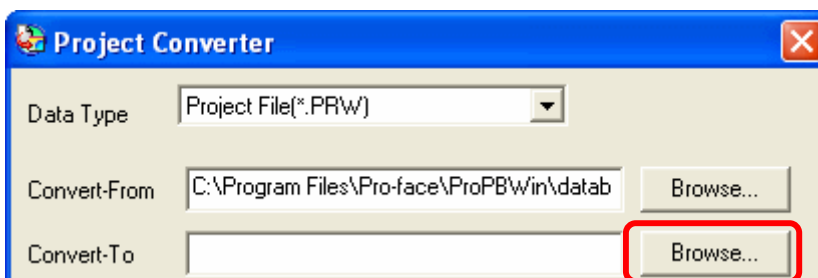


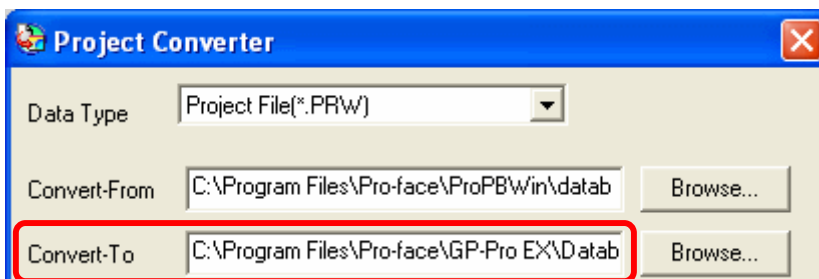
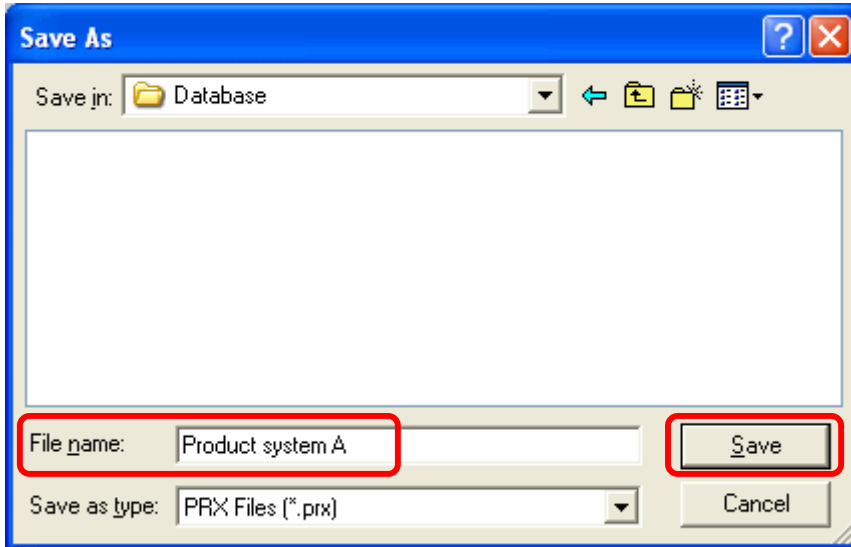
3. Designate a GP-PRO/PBIII for Windows' project file (*.prw) in [Convert-From]. Click the [Browse...] button and select a project file (e.g.: "Project system A.prw"). Click [Open], and the file will be set in [Convert-From].





4. In [Convert-To], designate a GP-Pro EX's project file (*.prx). Click the [Browse...] button and enter a new [File Name] (e.g.: "Product system A.prx"). Click [Save], and a new project file will be set to [Convert-To].





NOTE

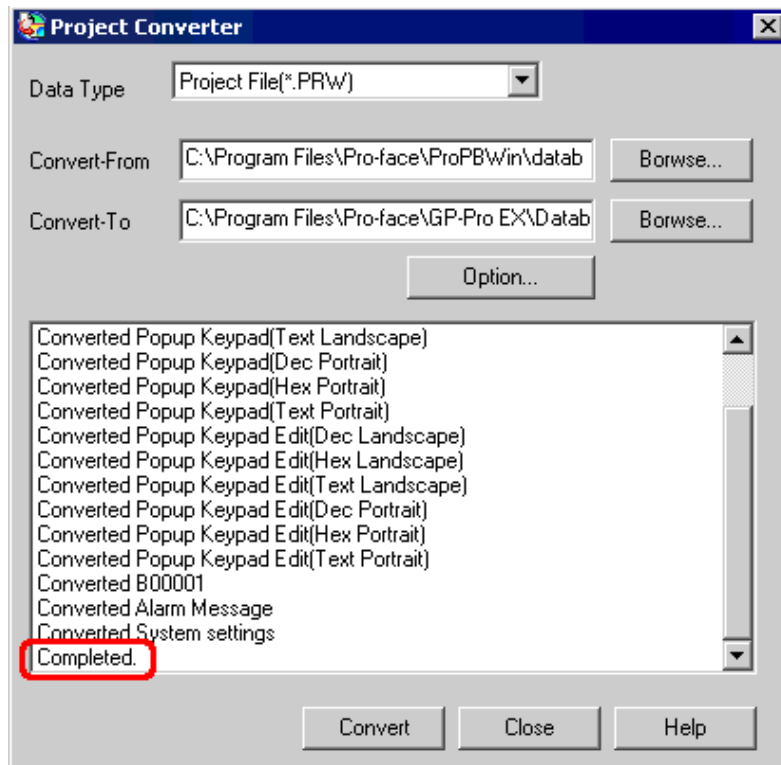
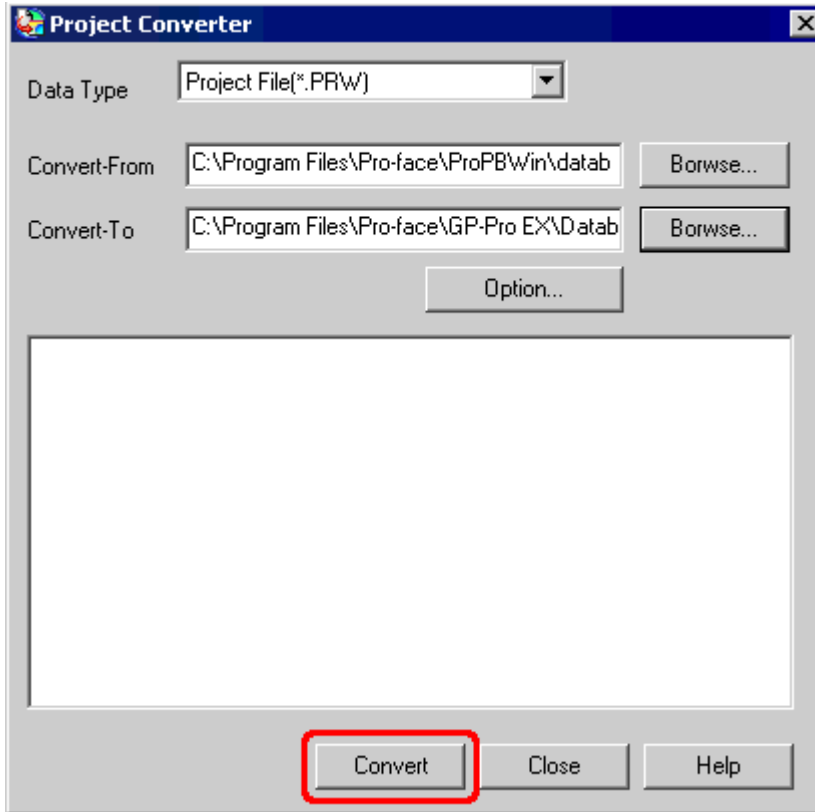
- Depending on the model you are converting from, the [Convert-From Type] dialog box may display where you can select the type and the model.
- When a convert-to file exists, the window that confirms whether or not to overwrite the file is displayed.

Save As

C:\Program Files\Pro-face\GP-Pro EX\Database\AManufacturingSystem.prx already exists. Do you want to replace it?

Yes No

5. Click [convert] and start the conversion.

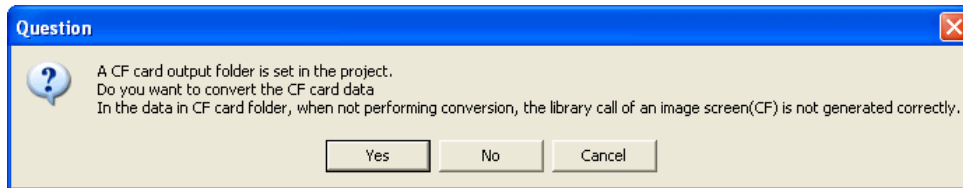


NOTE

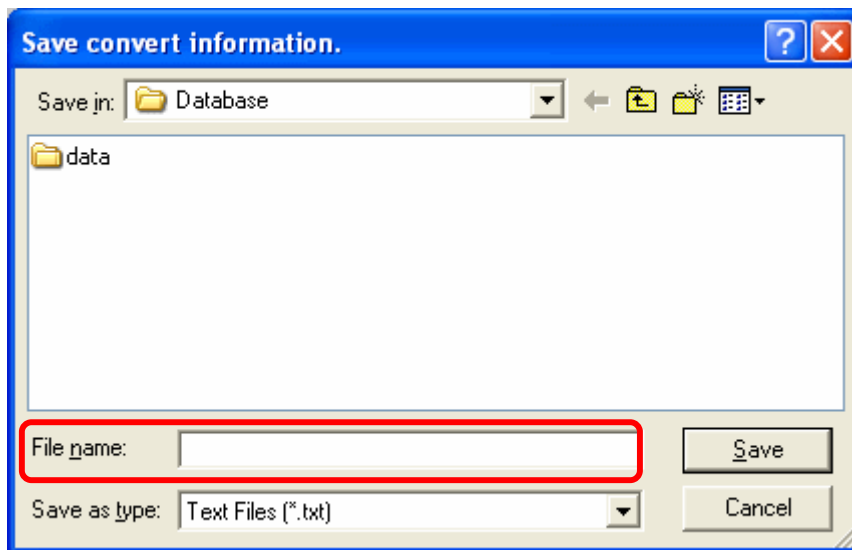
- Depending on the model you are converting from, the [Convert Destination] dialog box may appear and you can select the type and the model.
- If the following dialog box appears, set a CF card output folder.

→ [See the next page](#)

- ◆ [Convert GP-PRO/PBIII for Windows' "Destination CF Card Folder"](#)



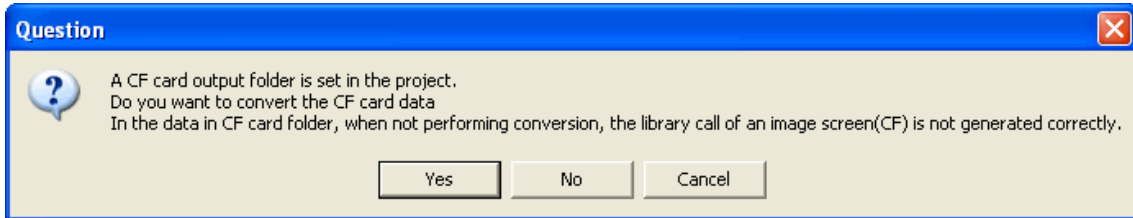
6. After conversion, the [Save convert information] dialog box appears. If you click [Save], you can save the conversion information in a text file.



7. Click [Close] to close the [Project Converter] dialog box.

◆ **Convert GP-PRO/PBIII for Windows' "Destination CF Card Folder"**

If you convert a project file (*.prw) with a destination CF card folder designated in the step 5, the Question dialog box whether or not to designate the destination CF card folder for the convert destination appears again.



Select a folder (e.g.: "Database") and click [OK].

If you click the [Make New Folder] button, you can create a new folder at any location.



IMPORTANT

In the [Question] dialog box, be sure to select [Yes] and specify the destination folder. If you select [No], images will not be called correctly.

3.5 Transfer screen data to the GP3000 series

Transfer the converted project file to the GP3000 series. You can transfer data to the GP3000 series via USB transfer cable, Ethernet cable, CF card or USB flash drive. Here, this section explains, as an example, how to transfer screen data by USB transfer cable (model: CA3-USBCB-01).



PC



CA3-USBCB-01

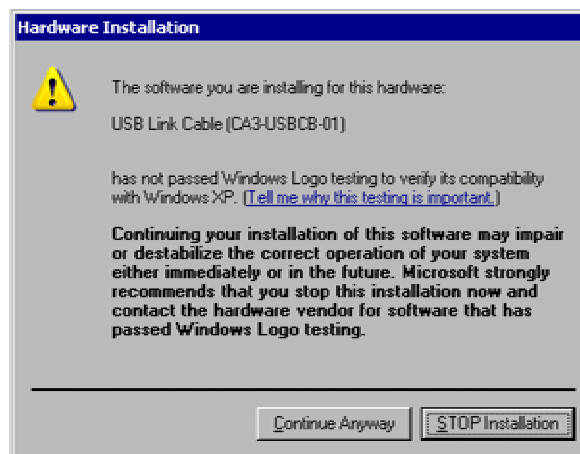


GP3000

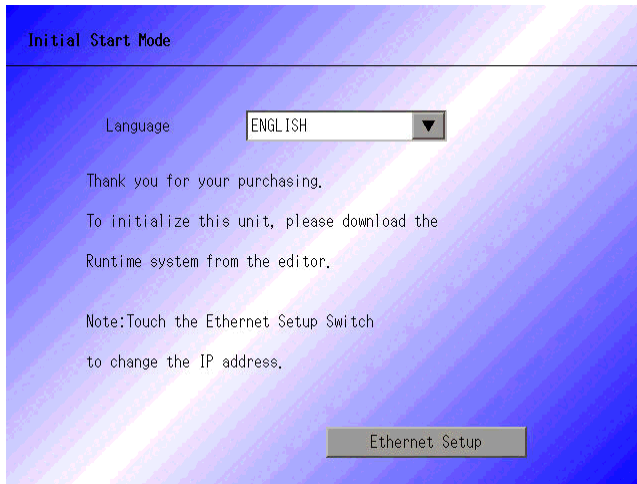
1. Connect your PC and the GP3000 series with a USB transfer cable. If the driver of the cable has not been installed on your PC, a dialog box will appear. Please follow the instructions.

NOTE

The “Hardware Installation” dialog box as follows may appear during installing the driver of a USB depending on the security level of Windows XP. Click [Continue Anyway] to start installing the driver for CA3-USBCB-01. When installation is completed, click [Finish].

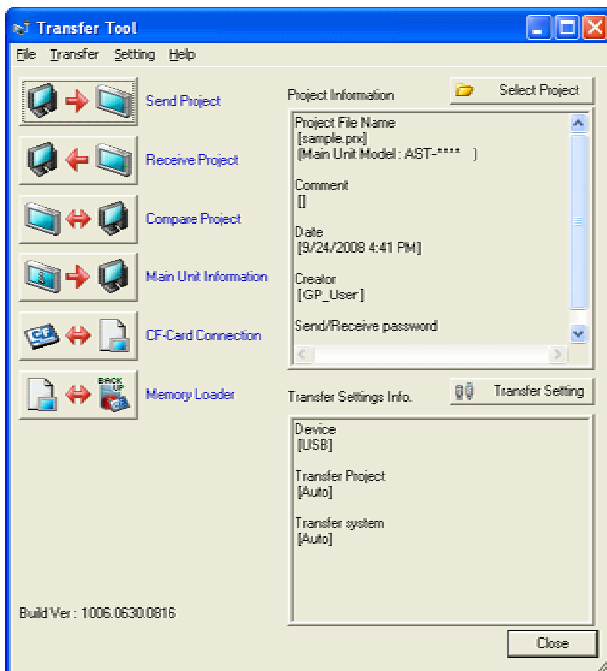


2. Turn on the display unit's power. The "Initial Start Mode" screen will appear on the display unit.



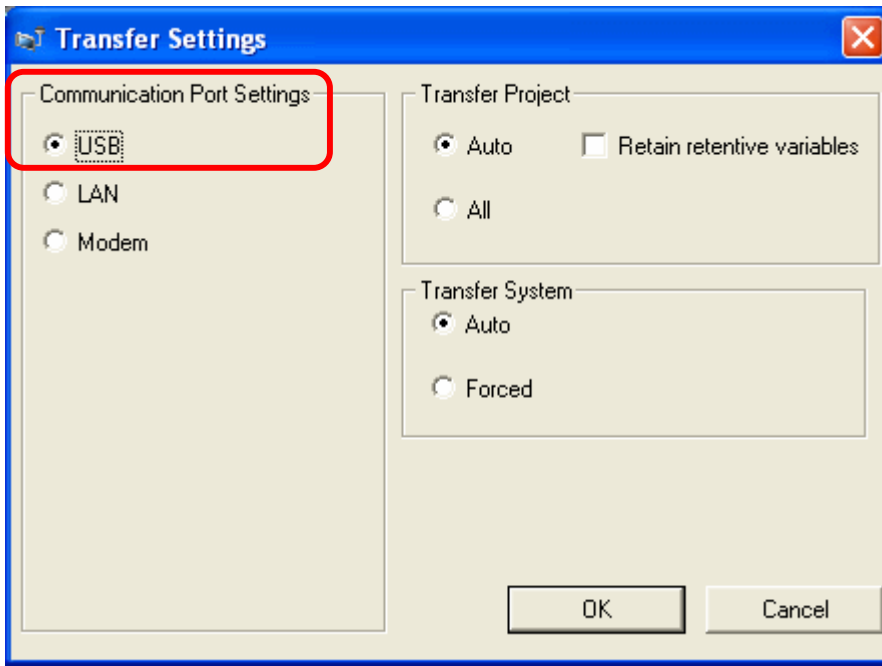
This screen will appear when you first connect the display unit's power code. After transferring a project file once, this screen will not appear again.

3. On the GP-Pro EX's State Toolbar, click the [Transfer Project] icon to open the Transfer Tool.

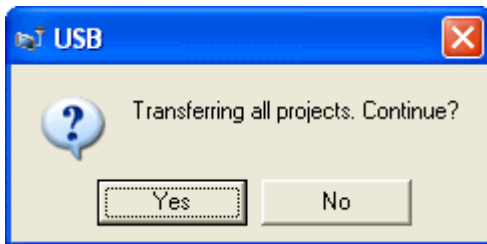


4. Check the project file name and other data to be transferred in the Project Information. To transfer a different project file, click the [Select Project] button and select a project file.

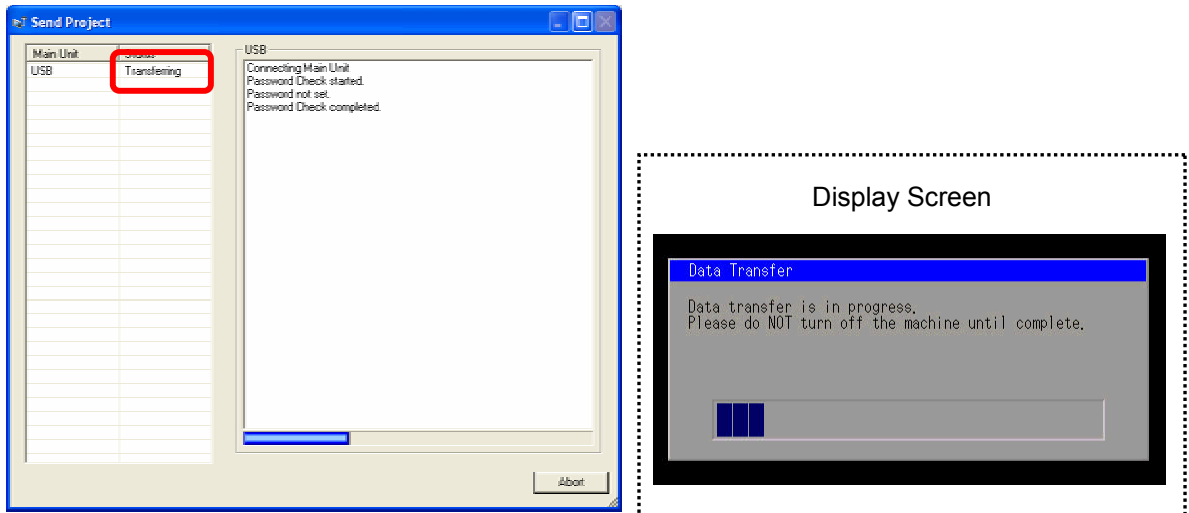
5. Make sure that the [Device] is set to [USB] in the “Transfer Settings Info.” If not, click the [Transfer Setting] button to open the “Transfer Settings” dialog box. Select [USB] in the Communication Port Settings field and click [OK].



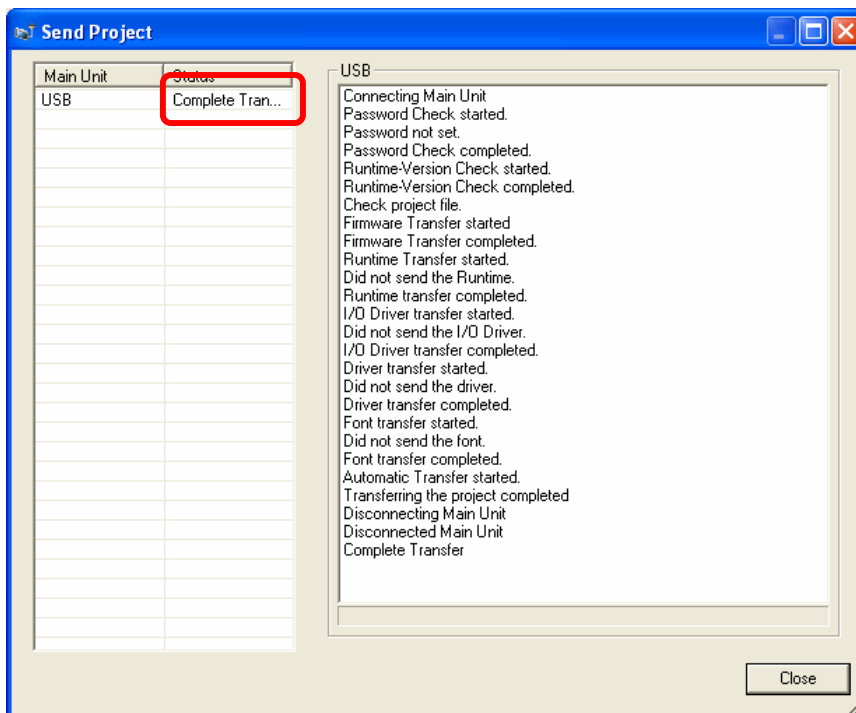
6. Click [Send Project] to start transfer. When the following dialog box appears, click [Yes]. This dialog box doesn't appear when the same project file is sent again.



- The following dialog box appears during transfer and you can check the communication status. (The display unit enters the Transferring mode and communication with the device such as a PLC is terminated.)



- When transfer is completed, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer]. Click [Close] to close the dialog box. (The display unit will be reset and a screen of the transferred project file will be displayed.)



- Close the Transfer Tool.

3.6 Differences of software after conversion

Check the differences of screen data after conversion.

For the details of each item, refer to the booklet “Compatibility of Software” or visit our website

<http://www.pro-face.com/otasuke/qa/gp3000/replace/soft.htm>.

1	Touch Panel Type
2	Compatibility of Bit Switch
3	Compatibility of Trend Graph
4	Compatibility of K Tag (Input Order)
5	Compatibility of K Tag (Difference of Writing)
6	Compatibility of K Tag (Indirect Setting)
7	Compatibility of N Tag
8	About the performance when a window is overlapping on a momentary switch
9	About the performance when display area of the system window is overlapping
10	Change of Tag Process
11	Compatibility of Text
12	Compatibility of Fill
13	Compatibility of CF Card Data
14	Precautions for conversion when filing data is saved in a CF card
15	Precautions for setting “Color Settings” to [256 Colors without blinking]
16	Precautions for loading a part with “L Tag (Library Display)”
17	Compatibility of MRK files and CPW files
18	Compatibility of VM Unit Settings
19	Compatibility of Extended SIO Script
20	Compatibility of Sound Data
21	Compatibility of Device Monitor
22	Compatibility of J Tag and R Tag
23	DOS Screen Data Conversion
24	Compatibility of Standard Fonts
25	Compatibility of D-Script Trigger Conditions (D-Script runs immediately after the screen is changed or the power is turned on)
26	Compatibility of U Tag (Window Screen is positioned in an unexpected area when called)
27	Precaution for Conversion when Screen Level Change is configured

28	Precaution for Use of Project Converter
29	Compatibility of LS Area
30	Compatibility of L Tag

Chapter 4. Communication with Device/PLC

4.1 Driver list

IMPORTANT

The followings are information as of April 2009.
More connectable drivers will be added. Please check our website “Otasuke Pro!” for the latest information.

Manufacturer	Series	PLC	
		GP3000	ST3000
Mitsubishi Electric Corporation	A Series CPU Direct	✓	✓
	A Series Ethernet	✓	-
	A Series Computer Link	✓	✓
	FX Series CPU Direct	✓	✓
	FX Series Computer Link	✓	✓
	Q Series CPU Direct	✓	✓
	Q/QnA Serial Communication	✓	✓
	Q/QnA Series Ethernet	✓	-
	QnA Series CPU Direct	✓	✓
	QUTE Series CPU Direct	✓	✓
	Q Series QnU CPU Ethernet	✓	-
OMRON Corporation	C/CV Series HOST Link	✓	✓
	CS/CJ Series HOST Link	✓	✓
	CS/CJ Series Ethernet	✓	-
YASKAWA Electric Corporation	MEMOBUS SIO	✓	✓
	MEMOBUS Ethernet	✓	-
	MP Series SIO (Extension)	✓	✓
	MP Series Ethernet (Extension)	✓	-
Hitachi IES Co., Ltd.	H Series SIO	✓	✓
	H Series Ethernet	✓	-
Panasonic Electric Works, Ltd. (Formerly Matsushita Electric Works, Ltd.)	FP Series Computer Link SIO	✓	✓
YOKOGAWA Electric Corporation	Personal Computer Link SIO	✓	✓
	Personal Computer Link Ethernet	✓	-

JTEKT Corporation (Formerly Toyoda Machine Works)	TOYOPUC CMP-LINK SIO	✓	✓
	TOYOPUC CMP-LINK Ethernet	✓	-
Fuji Electric Co., Ltd.	MICREX-F Series SIO	✓	✓
	MICREX-SX Series SIO	✓	✓
	MICREX-SX Series Ethernet	✓	-
GE Fanuc Automation	Series 90 Ethernet	✓	-
	Series 90-30/70 SNP	✓	✓
	Series 90-30/70 SNP-X	✓	✓
FUNUC Ltd	Power Mate Series	✓	✓
Siemens AG	SIMATIC S7 MPI Direct	✓	✓
	SIMATIC S7 3964(R)/RK512	✓	✓
	SIMATIC S7 Ethernet	✓	-
	SIMATIC S5 CPU Direct	✓	✓
Rockwell Automation, Inc.	DF1	✓	✓
	EtherNet/IP	✓	-
	DH-485	✓	✓
KEYENCE Corporation	KV-700/1000/3000/5000 CPU Direct	✓	✓
	KV-700/1000/3000/5000 Ethernet	✓	-
	KV Series CPU Direct	✓	✓
	KZ10_80R/Tseries CPU Direct	✓	✓
Schneider Electric Industries	MODBUS SIO Master	✓	✓
	MODBUS TCP Master	✓	-
	Uni-Telway	✓	✓
	MODBUS Slave	✓	✓
SHARP MS Corporation	JW Series Computer Link SIO	✓	✓
	JW Series Computer Link Ethernet	✓	-
LS Industrial System	MASTER-K Series Cnet	✓	✓
	XGT Series FEnet	✓	-
	XGT Series Cnet	✓	✓
Mitsubishi Heavy Industries, Ltd.	DIASYS Netmation MODBUS TCP	✓	-
	MHI STEP3 Ethernet	✓	-
Saia-Burgess Controls Ltd.	SAIA S-Bus SIO	✓	✓
MEIDENSHA Corporation	UNISEQUE Series Ethernet	✓	-
Hitachi, Ltd.	S10V Series Ethernet	✓	-
	S10 Series SIO	✓	✓

TOSHIBA Machine Co., Ltd.	TCmini/TC200	✓	✓
TOSHIBA Corporation	Computer Link SIO	✓	✓
	Computer Link Ethernet	✓	-
Koyo Electronics Co., Ltd.	KOSTAC/DL Series CCM SIO	✓	✓
	KOSTAC/DL Series MODBUS TCP	✓	-
FATEK AUTOMATION Corporation	FB Series SIO	✓	✓

Temperature Controller			
Manufacturer	Series	GP3000	ST3000
Yamatake Corporation	Digital Controller SIO	✓	✓
RKC Instrument Inc.	Temp. Controller MODBUS SIO	✓	✓
	Temperature Controller	✓	✓
OMRON Corporation	Temp. Controller CompoWay/F	✓	✓
Shinko Technos Co., Ltd.	Controller SIO	✓	✓
YOKOGAWA Electric Corporation	Personal Computer Link SIO	✓	✓
CHINO Corporation	Temp. Controller MODBUS SIO	✓	✓
Fuji Electric Systems Co., Ltd.	Temp. Controller MODBUS SIO	✓	✓

Inverter/Servo			
Manufacturer	Series	GP3000	ST3000
Mitsubishi Electric Corporation	FREQROL Inverter	✓	✓
YASKAWA Electric Corporation	Inverter SIO	✓	✓
Hitachi IES Co., Ltd.	Inverter ASCII SIO	✓	✓
	InverterModbus RTU	✓	✓
Sanmei Electric Co., Ltd.	Si/CutyAxisSeries SIO	✓	✓

Fieldbus			
Manufacturer	Series	GP3000	ST3000
PROFIBUS International	PROFIBUS DP Slave	✓ *1	-
ODVA	DeviceNet Slave	✓ *1	-
CC-Link Partner Association	CC-Link Intelligent Device	✓ *1	-

Industrial Robot			
Manufacturer	Series	GP3000	ST3000
Hyundai Heavy Industries	Hi4 Robot	✓	✓

IAI Corporation	ROBO CYLINDER MODBUS SIO	✓	✓
	X-SEL Controller	✓	✓

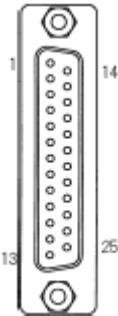
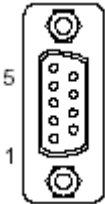
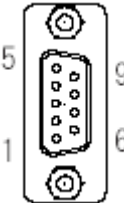
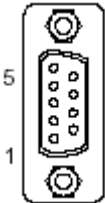
Other Devices			
Manufacturer	Series	GP3000	ST3000
Digital Electronics Corporation	Memory Link *2	✓	✓
	General SIO *3	✓	✓
	General Ethernet *3	✓	-
MODBUS IDA	General Modbus SIO Master	✓	✓
	General Modbus TCP Master	✓	-

*1: The GP3000H doesn't support this driver.

*2: The product doesn't need to choose a host controller like PC, Microcomputer board, etc. It communicates via the storage space built into the main unit

*3: A program driver for the send/receive command process by D-Script.

4.2 Shapes of COM ports

	GP2000 Series	GP3000 Series
COM1	D-Sub 25 pin (female) RS-232C/422	D-Sub 9 pin (male) RS-232C/485 (422) compatible
		
COM2	D-Sub 9 pin (male) RS-232C	D-Sub 9 pin (female) RS-485 (422) compatible
	 * 2601T,2501S don't have COM2.	

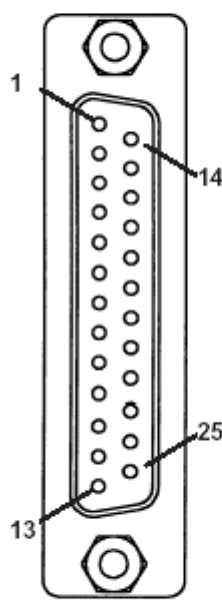
NOTE

The number of pins and signals of Serial Interface differ between GP2000 series and GP3000 Series. A wiring method at the time of replacement varies depending on a used connection device/PLC. Please check with [Connectable Controllers for GP3000 Series] of our support web site, [Otasuke Pro!];

<http://www.pro-face.com/otasuke/qa/gp3000/replace/connect/connect.php?rm=2>

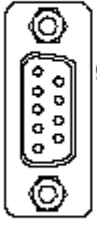
4.2.1 Signals on COM1

► GP2000 series (RS232C or 422)

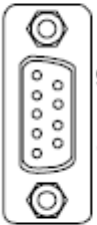
Pin Assignments	Pin #	Signal Name	Condition
<p>(D-Sub 25pin female)</p> <p>SIO</p> 	1	FG	Frame ground
	2	SD	Send data (RS-232C)
	3	RD	Receive data (RS-232C)
	4	RS	Request send (RS-232C)
	5	CS	Clear send (RS-232C)
	6	DR	Data Set Ready (RS-232C)
	7	SG	Signal ground
	8	CD	Carrier detect (RS-232C)
	9	TRMX	Termination (RS-422)
	10	RDA	Receive data A (RS-422)
	11	SDA	Send data A (RS-422)
	12	NC	No connection (Reserved)
	13	NC	No connection (Reserved)
	14	VCC	5V±5% output 0.25A
	15	SDB	Send data B (RS-422)
	16	RDB	Receive data B (RS-422)
	17	RI	Ring Indicate (RS-232C)
	18	CSB	Clear send B (RS-422)
	19	ERB	Enable receive B (RS-422)
	20	ER	Enable receive (RS-232C)
	21	CSA	Clear send A (RS-422)
	22	ERA	Enable receive A (RS-422)
	23	NC	No connection (Reserved)
	24	NC	No connection (Reserved)
	25	NC	No connection (Reserved)

► GP3000 series

RS232C

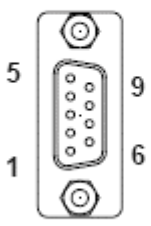
Pin Arrangement	Pin No.	RS232C		
		Signal Name	Direction	Meaning
 <p>(GP unit side)</p>	1	CD	Input	Carrier Detect
	2	RD(RXD)	Input	Receive Data
	3	SD(TXD)	Output	Send Data
	4	ER(DTR)	Output	Data Terminal Ready
	5	SG	-	Signal Ground
	6	DR(DSR)	Input	Data Set Ready
	7	RS(RTS)	Output	Request to Send
	8	CS(CTS)	Input	Send Possible
	9	CI(RI)/VCC	Input/-	Called status display +5V±5% Output 0.25A *2
	Shell	FG	-	Frame Ground (Common with SG)

RS485 (422)

Pin Arrangement	Pin No.	RS422/RS485		
		Signal Name	Direction	Meaning
 <p>(GP unit side)</p>	1	RDA	Input	Receive Data A(+)
	2	RDB	Input	Receive Data B(-)
	3	SDA	Output	Send Data A(+)
	4	ERA	Output	Data Terminal Ready A(+)
	5	SG	-	Signal Ground
	6	CSB	Input	Send Possible B(-)
	7	SDB	Output	Send Data B(-)
	8	CSA	Input	Send Possible A(+)
	9	ERB	Output	Data Terminal Ready B(-)
	Shell	FG	-	Frame Ground (Common with SG)

4.2.2 Signals on COM2

► GP2000 series (RS232C) * 2601T,2501S don't have COM2.

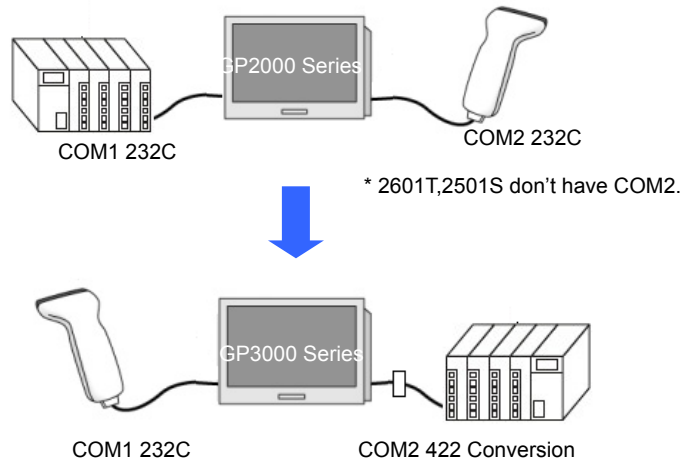
Pin Assignments	Pin No.	Signal Name	Signal Direction	Condition
(D-Sub 9pin male) 	1	CD	Input	Carrier detect (RS-232C)
	2	RD	Input	Receive data (RS-232C)
	3	SD	Output	Send data (RS-232C)
	4	ER	Output	Enable receive (RS-232C)
	5	SG	—	Signal Ground
	6	DR	Input	Data Set Ready (RS-232C)
	7	RS	Output	Request Send (RS-232C)
	8	CS	Input	Clear send (RS-232C)
	9	RI/VCC	Input/Output	Ring Indicate (RS-232C) +5V±5% 0.25A

► GP3000 series (RS485 (422))

Pin Arrangement	Pin No.	RS422/RS485		
		Signal Name	Direction	Meaning
 (GP unit side)	1	TRMRX	-	Termination (Receiver side: 100Ω)
	2	RDA	Input	Receive Data A(+)
	3	SDA	Output	Send Data A(+)
	4	RS(RTS)	Output	Request for Send
	5	SG	-	Signal Ground
	6	VCC	-	+5V±5% Output 0.25A *1
	7	RDB	Input	Receive DataB(-)
	8	SDB	Output	Send Data B(-)
	9	TRMTX	-	Termination (Receiver side: 100Ω)
	Shell	FG	-	Frame Ground (Common with SG)

When connecting 2 devices whose connection interfaces are 232C to the GP2000 series...

If you connected a device/PLC, whose connection interface is RS-232C, to the COM1 port on the GP2000 series and another device such as a barcode reader, whose connection interface is also RS-232C, to the COM2 port, connect the devices to the GP3000 series as below after conversion.



4.3 Multilink Connection

There are some communication drivers that do not support multi-link connection (n:1) with RS-422 in GP3000 Series.

When converting the project file with the communication driver that multi-link connection (n:1) with RS-422 is not supported, it will be automatically converted to (1:1) connection.

[[Which drivers support serial multilink communication?](#)]

(http://www.pro-face.com/otasuke/files/manual/gpproex/new/device/com_mlnk.htm)