

Easy! Smooth!

LT Type B/B+/C → GP-3300T/L

Replacement Guidebook

Preface

This manual introduces the procedures to replace a unit of LT Type B/B+/C with a unit in GP3000 series.

Model in use	Replacement model
LT Type B+ (Color) (GLC150-SC41-XY32KF-24V)	GP-3300T (Color) (AGP3300-T1-D24-FN1M)
LT Type B (GLC150-BG41-FLEX-24V)	GP-3300L (Monochrome) (AGP3300-L1-D24-FN1M)
LT Type B+ (Monochrome) (GLC150-BG41-XY32KF-24V)	
LT Type C (GLC150-BG41-RSFL-24V)	

Safety Information

HAZARD OF OPERATOR INJURY, OR UNINTENDED EQUIPMENT DAMAGE

Before operating any of these products, be sure to read all related manuals thoroughly.

Failure to follow these instructions can result in death, serious injury or unintended equipment damage.

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Chapter 1 Specification Comparison

Specifications of LT Type B/B+/C and GP-3300T/L

Functional specifications/General specifications

		LT Type B/B+/C	GP-3300T/L
			
Display Type	Color	STN Color LCD	UP! TFT Color LCD
	Monochrome	Blue-mode monochrome LCD	Monochrome LCD
Display Colors	Color	64 Colors	UP! 65,536 Colors (without blink) 16,384 Colors (with blink)
	Monochrome	Blue mode 8 levels (3-speed blink)	UP! Monochrome 16 levels (3-speed blink)
Display Resolution		QVGA (320X240 pixels)	
Backlight		CCFL	White LED
Panel Cutout Dimensions (mm)		W191.5×H141.5	W156×H123.5 →See 2.3
External Dimensions (mm)		207W×157H×75.8D	W167.5×H135×D78
Touch Panel Type		Matrix	NEW! Resistive film Analog →See 2.2
Memory	Application	1MB	UP! 6MB
	SRAM	96KB	UP! 320KB
Control Memory	Program	128KB	UP! 132KB
	SRAM	32KB	UP! 64KB
Serial Interface (COM1)	LT Type B	-	RS-232C/422/485
	LT Type B+	-	
	LT Type C	RS-232C/422/485	
Serial Interface (COM2)		-	NEW! RS-422/485
Ethernet Interface		-	NEW! 10BASE-T/100BASE-TX
FLEX NETWORK Interface		✓	
DIO Interface	LT Type B	-	- →See 2.5.2
	LT Type B+	DIO 32 points (Sink/Source Input: 16 points/ Sink Output: 16 points)	
	LT Type C	-	
CF Card Interface		-	NEW! ✓
USB Host Interface		-	NEW! ✓ (Type A) →See 2.4
Printer Interface		Tool Connector	NEW! USB →See 2.6.2
Alarm Output		✓	- →See 2.5.1

FLEX NETWORK Interface Specifications

	LT Type B/B+/C	GP-3300T/L
Communication Configuration	1: N	
Connection Method	Multi-Drop Connection	
Max. Distance	200m/channel at 6Mbps, 100m/channel at 12Mbps	
Communication Method	During cyclic period, distributed transmission, Half-duplex	
Communication Speed	6Mbps/12Mbps (selectable)	
Communication I/F	Differential Method, pulse transfer resistance	
Error Check	Format, bit, or CRC-12 verification	
Max. Number of Nodes	63 (max) 1008 I/O points (depending on type of units used)	63 nodes max. Bit variable input: 512 points*1 Bit variable output: 512 points*1 Integer variable input: 128 points*2 Integer variable output: 128 points*2 (depending on type of units used)

*1: When using GP-Pro EX under Ver.2.50, Bit variable enables to input/output 256 points.

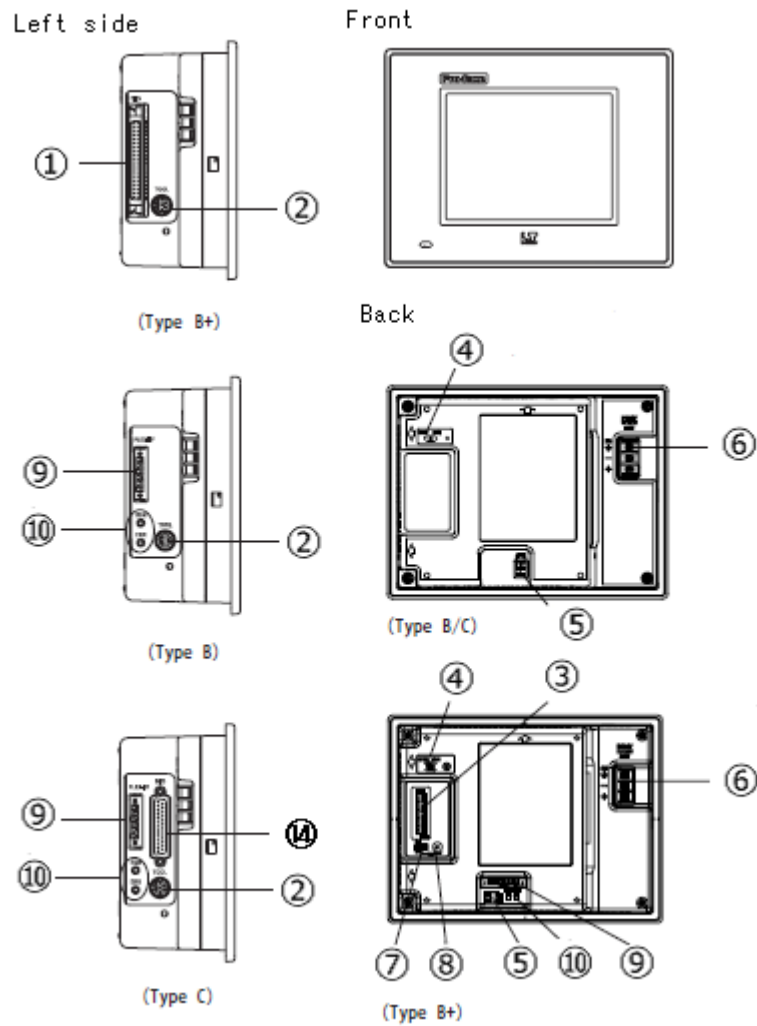
*2: When using GP-Pro EX under Ver.2.50, Integer variable enables to input/output 64 points.

Chapter 2 Compatibility of Hardware

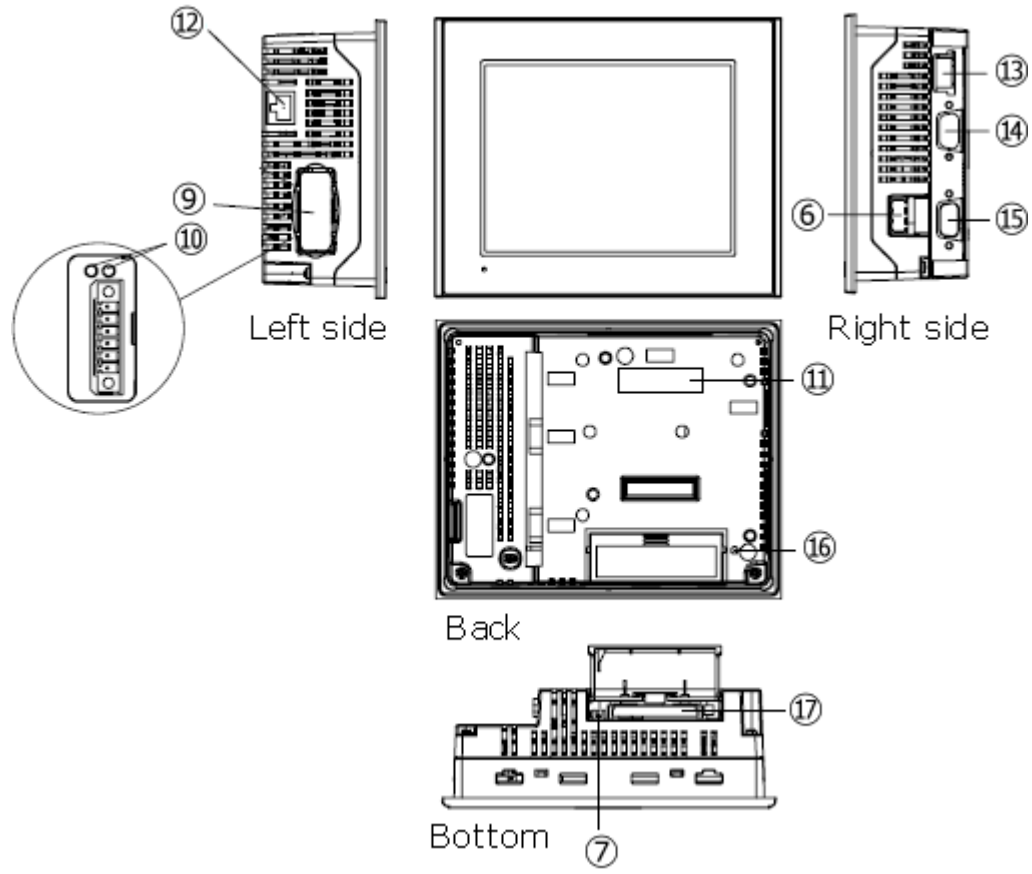
2.1 Locations of connectors

Connector locations on LT Type B/B+/C and GP-3300T/L are as follows;

LT Type B/B+/C



GP-3300T/L



	LT Type B	LT Type B+	LT Type C	GP-3300T/L
1	-	DIO I/F	-	-
2	Tool Connector			-
3	-	DIO Input/Output LED	-	-
4	RUN/STOP Switch (LED lights when RUN)			-
5	Alarm Output			-
6	Power Input Terminal Block			Power Connector
7	-	Dip Switches (Output Hold/Node No. Setup)	-	Dip Switches (CF Card/Forced Transfer Setup)
8	-	Rotary Switch	-	-
9	FLEX NETWORK I/F			
10	FLEX NETWORK LED			FLEX NETWORK Communication Status LED
11	-			Expansion Unit I/F
12	-			Ethernet I/F
13	-			USB I/F (Type A)
14	-	-	Serial I/F (COM1)	Serial I/F (COM1)
15	-			Serial I/F (COM2)
16	-			CF Card Access LED
17	-			CF Card I/F

2.2 Touch Panel Specifications

The touch panel type for GP3000 series is 'Resistive Film (Analog)'.

The resistive film analog type recognizes only the first-touched point and doesn't recognize the second-touched point when two different points are touched at the same time.

If you have applied the two-point touch input on LT Type B/B+/C, we recommend you to change to the one-point touch input using the switch delay function of GP-Pro EX.

2.3 Panel Cutout Dimensions

The size of GP-3300T/L is smaller. The panel cutout dimensions of GP-3300T/L are different from those of LT Type B/B+/C. Attachment (model: CA4-ATM5-01) for installing GP-3300T/L is available and you can use it when replacing LT Type B/B+/C with GP-3300T/L.

2.4 Transfer cable

To transfer screen data to GP-3300T/L, use a USB cable or Ethernet.

Use a transfer cable for GP-3300T/L (model number: CA3-USBCB-01). Commercial USB cables cannot be used. Please note that the cables (model number: GPW-CB02, GPW-CB03, GP430-CU02-M) for LT Type B/B+/C cannot be used for GP-3300T/L.

2.5 Interface

2.5.1 Alarm Output Interface

Alarm Output Function is not supported by GP-3300T/L. Please note that the Alarm Output that is used for LT Type B/B+/C cannot be used.

2.5.2 DIO Interface

GP-3300T/L is not equipped with a DIO interface. When LT Type B+ is replaced with GP-3300T/L, the I/O units that were connected to LT Type B+ via the DIO interface before replacement are connected via a FLEX NETWORK interface. A FLEX NETWORK unit is required. For changing the settings on GP-Pro EX and wiring to a FLEX NETWORK unit, see Chapter 4 Appendix, [\[I/O Connection Setting after project conversion\]](#).

2.6 Peripheral units and options

2.6.1 Barcode reader connection

GP-3300T/L is not equipped with a tool port. The barcode reader that was connected to the tool port on LT Type B/B+/C before replacement cannot be used. But GP-3300T/L allows you to connect a barcode reader on its USB interface (Type A).

For models GP-3300T/L supports, see [Otasuke Pro!]

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

2.6.2 Printer Connection

GP-3300T/L is not equipped with a tool port. The printer that was connected to the tool port on LT Type B/B+/C before replacement cannot be used. But GP-3300T/L allows you to connect a printer on its USB interface (Type A).

For models GP-3300T/L supports, see [Otasuke Pro!]

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

2.7 Power Connector

The power connector on GP-3300T/L is a screw lock type. If you replace LT Type B/B+/C with GP-3300T/L, note that the power supply terminals are different.

2.8 Power Consumption

The power consumption of LT Type B/B+/C is different from that of GP-3300T/L.

LT Type B/B+/C	20W or less
GP-3300T/L	26W or less

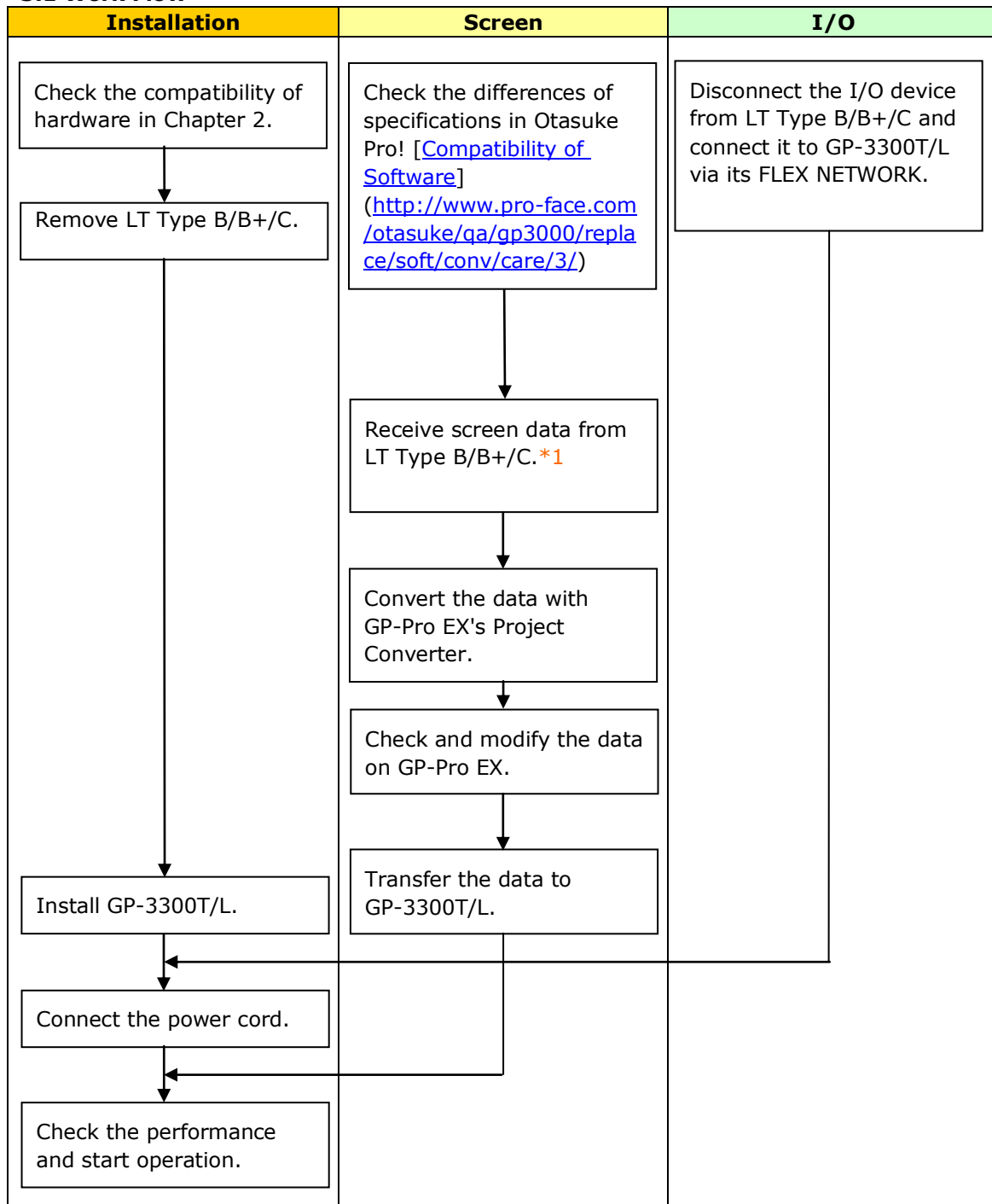
For the detailed electric specifications, see the hardware manual.

2.9 Materials/Colors of the body

The body material of GP-3300T/L is aluminum die-cast. Since the body material of LT Type B/B+/C is resin, the material texture and the color are different.

Chapter 3 Replacement Procedure

3.1 Work Flow



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

Checking the I/O setting and re-setting after conversion

GP-3300T/L is not equipped with a DIO interface. When LT Type B+ is replaced with GP-3300T/L, the I/O units that were connected to LT Type B+ via the DIO interface before replacement are connected via a FLEX NETWORK interface. A FLEX NETWORK unit is required. For changing the settings on GP-Pro EX and wiring to a FLEX NETWORK unit, see Chapter 4 Appendix, [\[I/O Connection Setting after project conversion\]](#).

3.2 Preparation

Requirements for receiving screen data from LT Type B/B+/C *1	PC in which GP-PRO/PBIII for Windows C-Package03 V7.0 or later is installed *2
	Transfer cables (the following three types of cables are available.) - GPW-CB02 (D-sub 9-pin to the PC) - GPW-CB03 (USB to the PC) *3 - GP430-CU02-M or GPW-SET (D-sub 25-pin to the PC)
Requirements for converting screen data of LT Type B/B+/C and transferring the converted data to GP-3300T/L	PC in which GP-Pro EX Ver.2.1 or later is installed
	USB transfer cable (model: CA3-USBCB-01) *Also possible to send/receive screen data via a USB storage unit, a CF card (for GP-3300T/L only), or Ethernet.

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

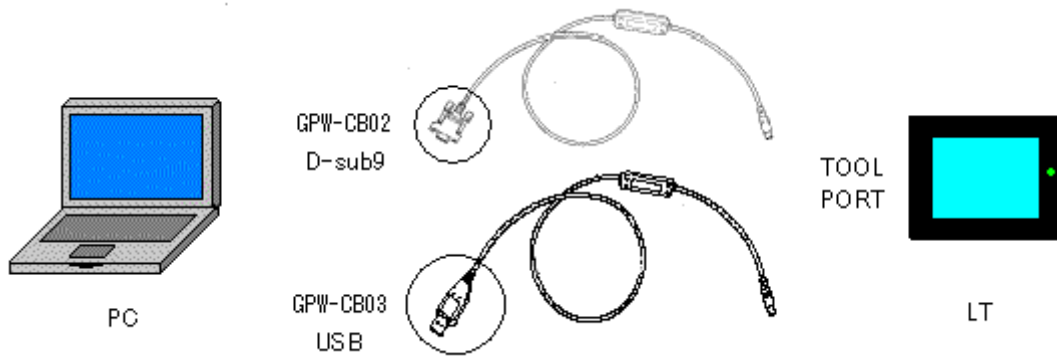
*2: Please use the same version or later as or than that of the software used during creating screens on LT Type B/B+/C. If you don't know the version, we recommend you to use the newest version. The newest version is GP-PRO/PBIII for Windows C-Package03 (SP2) V7.29. Those who have GP-PRO/PBIII for Windows C-Package03 V7.0 or later can download it from our web site called [Otasuke Pro!] (<http://www.pro-face.com/otasuke/>).

*3: GPW-CB03 is supported by GP-PRO/PBIII for Windows C-Package02 (SP2) V6.23 or later. You need to install a driver from [Download] on our Web site called [Otasuke Pro!] (<http://www.pro-face.com/otasuke/>)

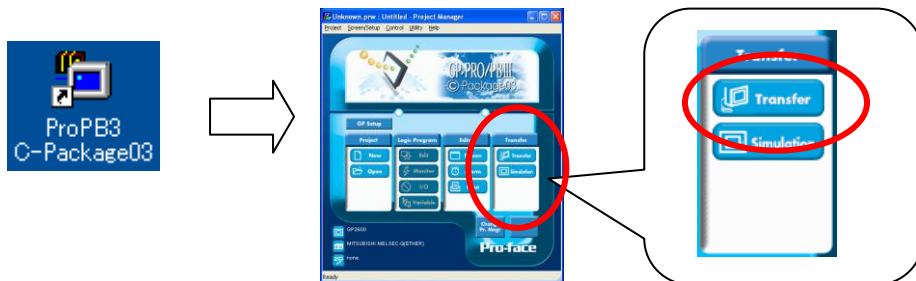
3.3 Receive screen data from LT Type B/B+/C

This section explains, as an example, how to receive screen data from LT Type B/B+/C 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 [\[3.4 Convert screen data with the Project Converter\]](#).

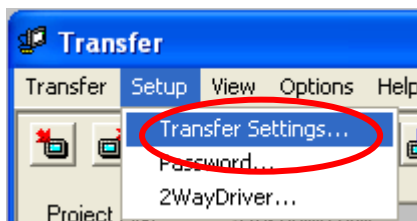
1. Connect a transfer cable to LT Type B/B+/C.



2. Start up GP-PRO/PBIII for Windows 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].

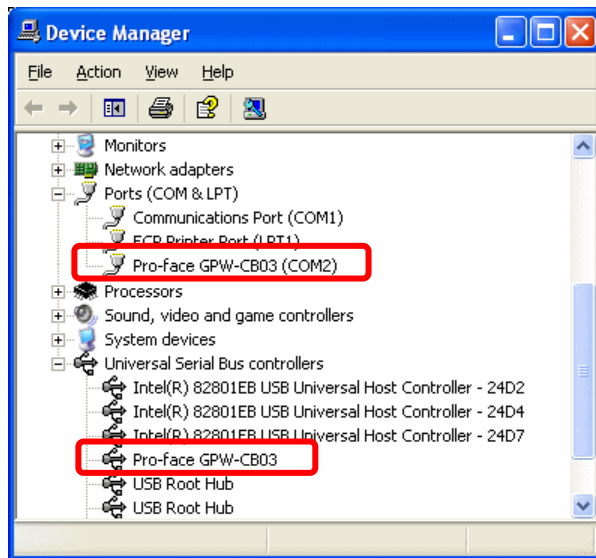
The screenshot shows the 'Transfer Settings' dialog box with the following configuration:

- Send Information:** Upload Information, GP System Screen, Filing Data(CF card), Data Trans Func CSV Data(CF card)
- Transfer Method:** Send All Screens, Automatically Send Changed Screens, Send User Selected Screens
- Transfer Mode:** Preparation for a transfer and a transfer are made simultaneous., It is transferred after preparation for a transfer is finished.
- Setup:** Automatic Setup, Force System Setup, Do NOT Perform Setup. Use Extended Program: Simulation. System Screen button.
- Setup CFG file:** English, Japanese, Selection. Path: C:\PROGRAM1\Pro-face\PROPBW\1.02\prot. Browse... button.
- Communications Port:** COM, Ethernet, Ethernet: Auto Acquisition, Memory Loader. Comm Port: COM1, Retry Count: 3, Baud Rate: 38400 (bps). IP Address: 0. 0. 0. 0, Port: 8000.

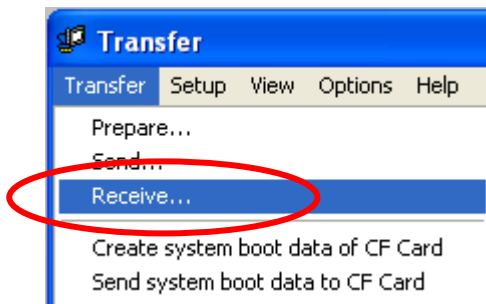
Buttons: OK, Cancel, Help.

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 Unit Manager of Windows.



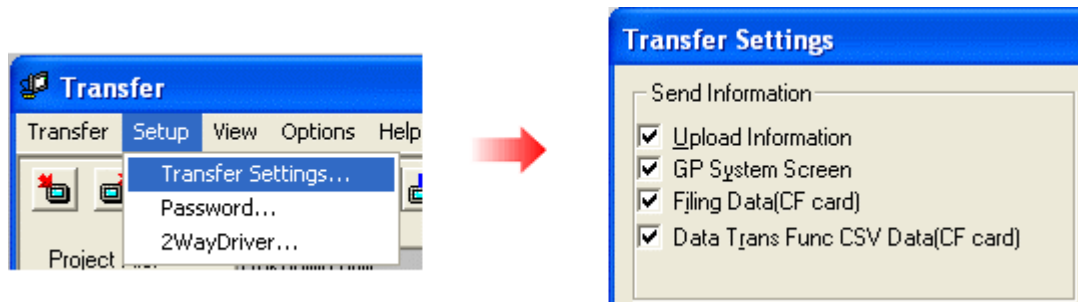
5. Select the [Transfer] menu and click [Receive...].



- Specify the location to save the received screen data at and the project file name and save them.

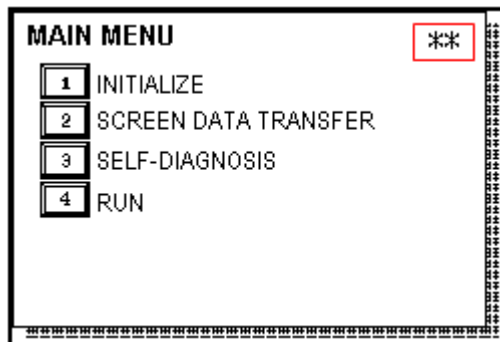
In case there is no Upload Information

"Upload Information" is necessary to receive screen data from LT Type B/B+/C. 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.



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

- Enter into the offline mode on LT Type B/B+/C.
- If there are 2 asterisk (*) marks in the Main menu as shown below, the Upload Information has been sent.

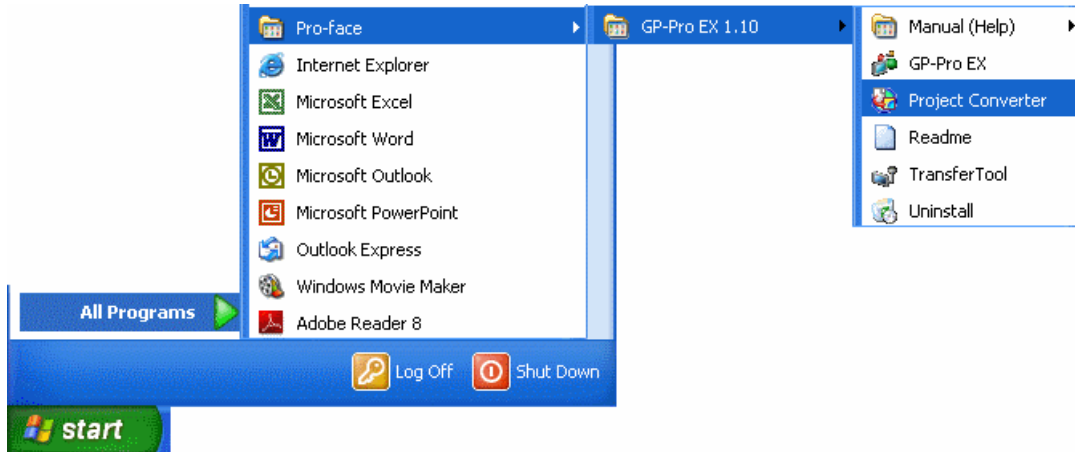


If not, there is no Upload Information sent. In this case, a message, which indicates there is no Upload Information, appears and you cannot receive the data.

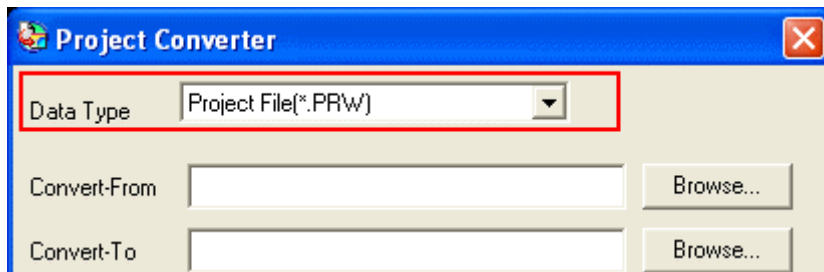
3.4 Convert screen data with the Project Converter

Convert the project file (*.prw) for LT Type B/B+/C with the GP-Pro EX's Project Converter.

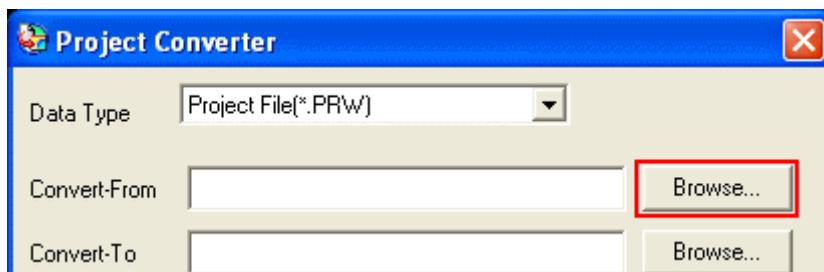
1. Click the [Start] button, select [All Programs] ([Programs]->[Pro-face]->[GP-Pro EX *.*]->[Project Converter]) (For this part, [*.**], the version of the software you use is displayed.)

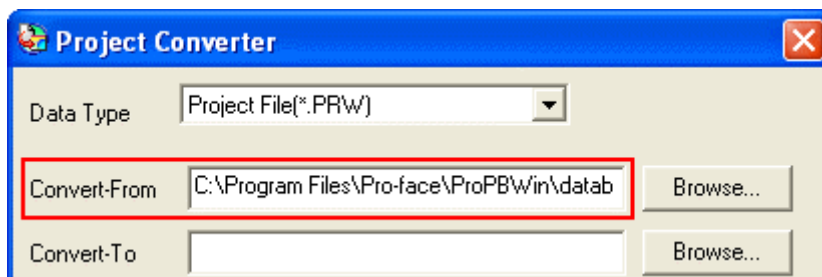
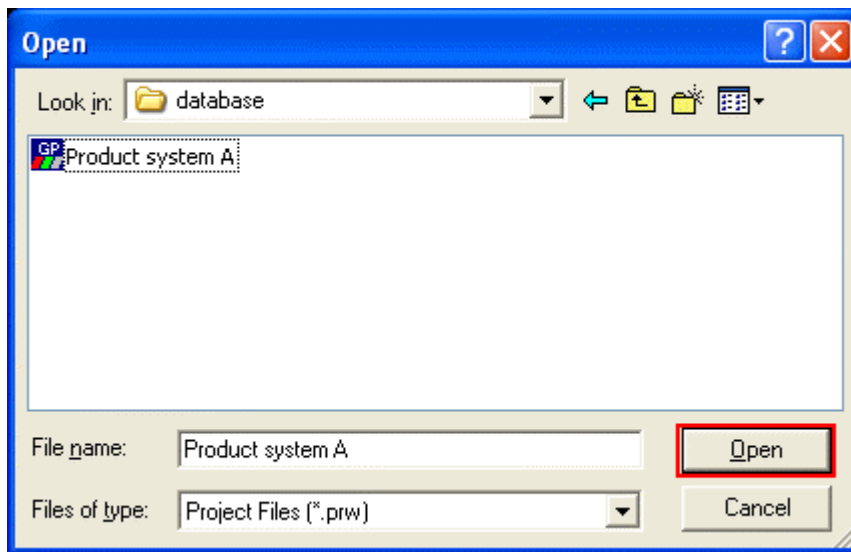


2. The Project Converter starts up and the [Project Converter] dialog box opens. Select [Project File (*.PRW)] in the [Data Type].

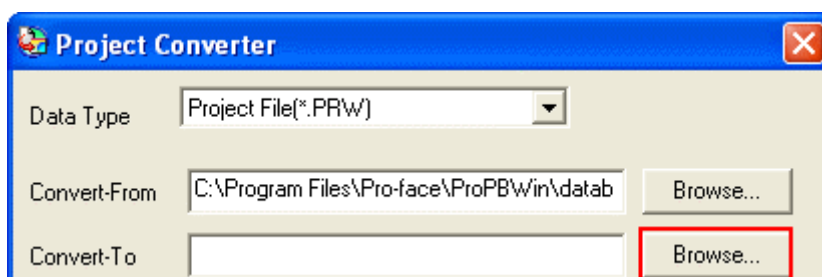


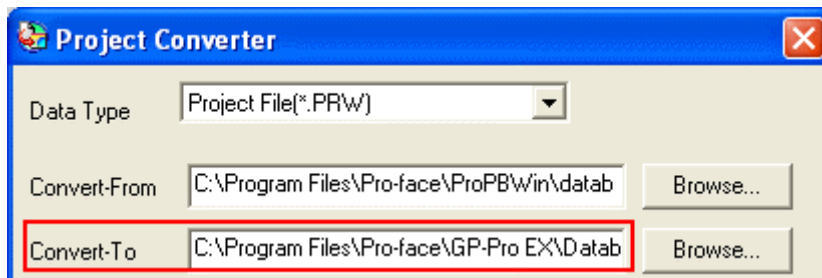
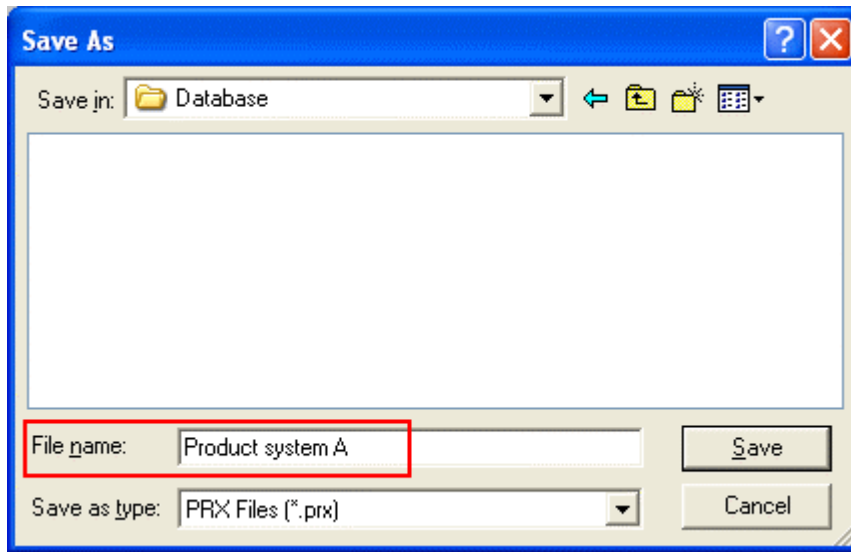
3. Click the [Browse...] button and select a project file (e.g.: "Project system A.prw"). Click [Open], and the file will be set in [Convert-From].





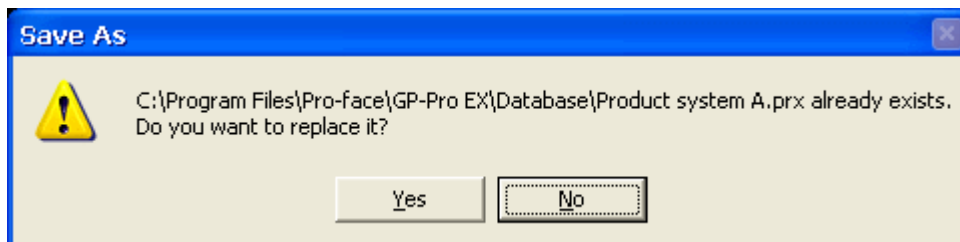
4. In [Convert-To], designate a GP-Pro EX's project file (*.prx). Click the [Browse...] button and enter a new [File Name] (e.g.: "Product system A.prx"). Click [Save], and a new project file will be set to [Convert-To].



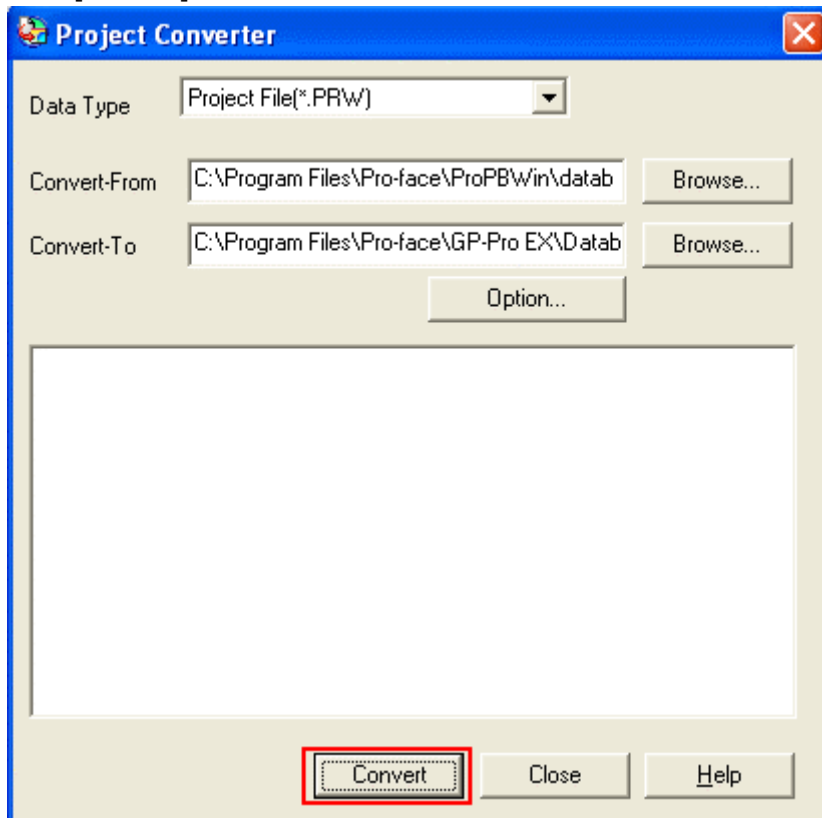


NOTE

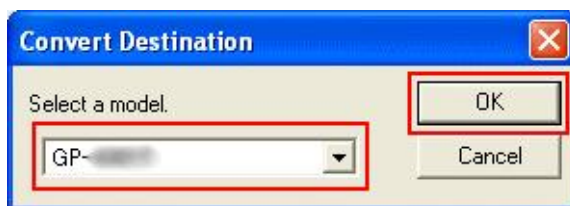
When a convert-to file exists, the window that confirms whether or not to overwrite the file is displayed.

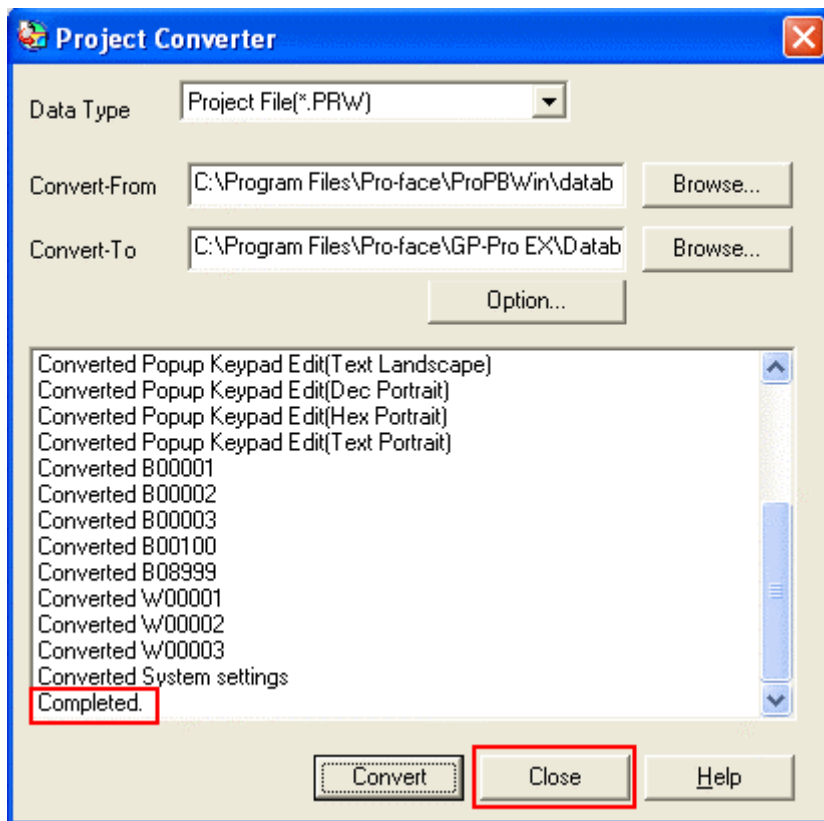


5. Click [Convert] and start the conversion.



6. If you are asked about the [Convert-To] type as shown below, select the replacement model name on the pull-down menu. Click [OK].

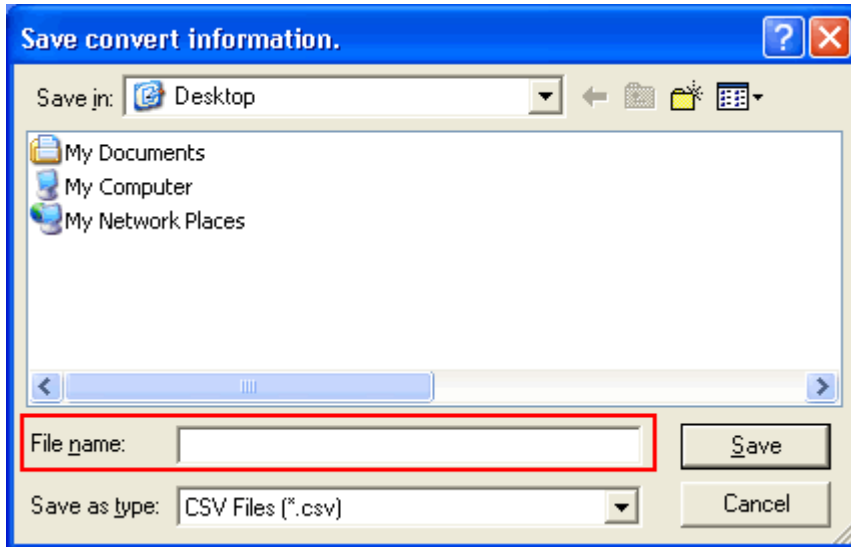




If an error message is displayed during conversion...

If an error message is displayed during conversion, refer to [Project Converter Error Message] (http://www.pro-face.com/otasuke/qa/gp3000/replace/soft/conv/project_converter_error.html) on our Web site called [Otasuke Pro!] for the cause and the solution.

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



NOTE

Because the differences at the time of conversion from GP-Pro/PBIII for Windows are described in the saved file, the project file (*.prx) after conversion can be checked and modified according to the conversion information.

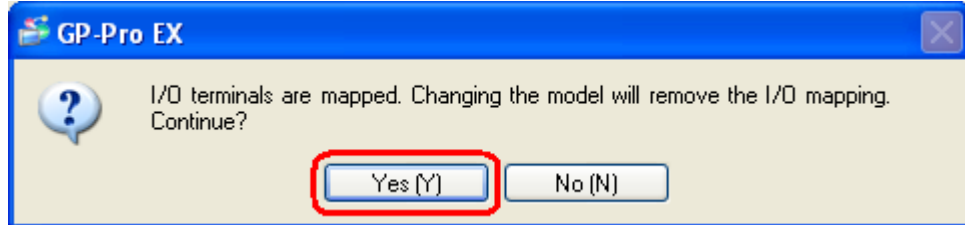
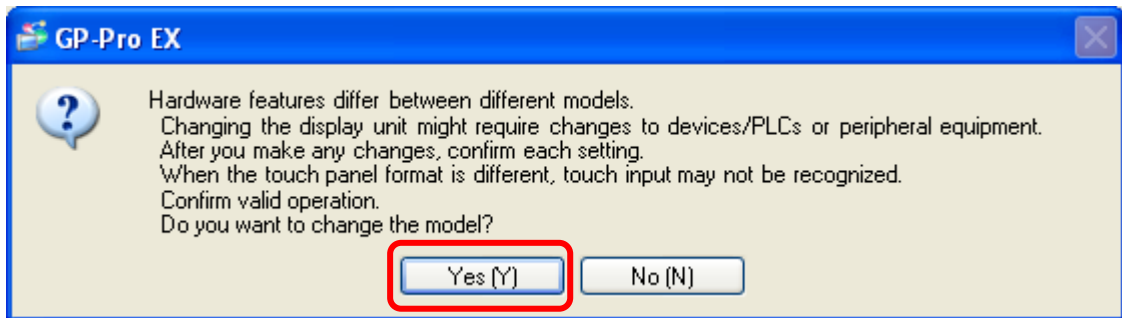
8. Click [Close] to close the [Project Converter] dialog box.
9. If you double click the project file (*.prx) after conversion, GP-Pro EX will start and the file will open.

3.5 Change the Display Unit type

If the project file (*.prx) of LT Type B/B+/C is converted with the Project Converter, the display unit type will be GP-3300T/L. Change the model setting to GP-3300T/L-FN1M on GP-Pro EX.

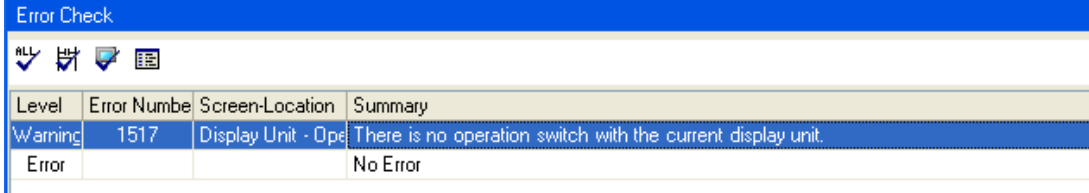
1. Open the project file (*.prx) after conversion on GP-Pro EX.
2. Click [System Settings]->[Display] on GP-Pro EX and change the display type to AGP-3300T/L-FN1M.

The following message appears, but click [Yes] and continue.



NOTE

After changing the display unit type, the following message appears at Error Check.

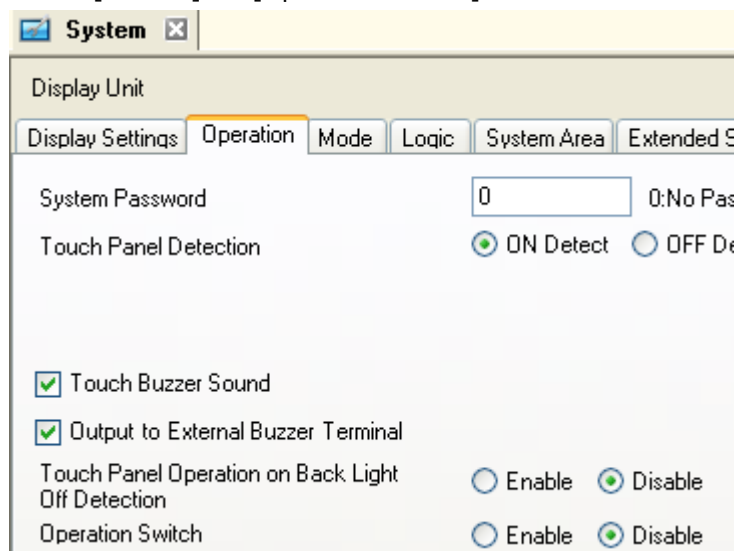


The screenshot shows an 'Error Check' window with a blue header. Below the header are several icons: a checkmark, a printer, a speech bubble, and a document. A table lists error details:

Level	Error Number	Screen-Location	Summary
Warning	1517	Display Unit - Op	There is no operation switch with the current display unit.
Error			No Error

If the message appears, change the setting following the steps below. After changing it, the error will not be displayed.

1. Double click on the displayed message to open the [Operation] tab of [System Settings].
2. Select [Disable] for [Operation Switch].



3. Register the setting of the I/O unit, which was connected to LT Type B/B+/C, in the project data with the display type already changed.

NOTE

When the display unit type is changed to AGP-3300T/L-FN1M, the I/O setting at the time of using LT Type B/B+/C is all cleared. Check the setting of the LT Type B/B+/C project file (*.prw) and allocate I/O to the GP-3300T/L project file again.

For wiring and setup details, see Chapter 4 Appendix [\[I/O connection setting after project conversion\]](#).

3.6 Transfer the project file to GP-3300T/L

Transfer the project file after conversion to GP-3300T/L.

You can transfer data to GP-3300T/L via

- A USB transfer cable (model: CA3-USBCB-01)
- A CF card/A USB storage unit
- Ethernet

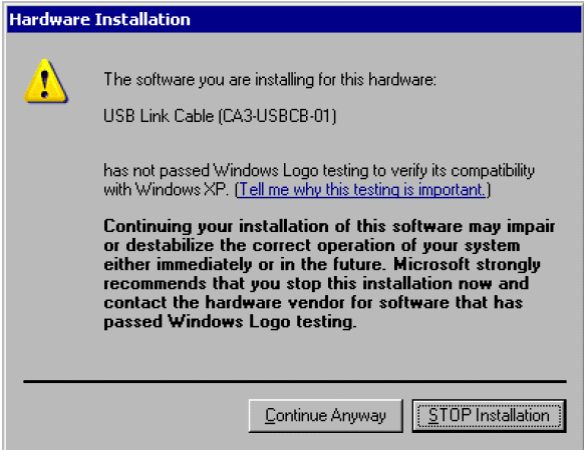
But this section explains, as an example, how to transfer screen data with a USB transfer cable (model: CA3-USBCB-01).



1. Connect your PC and GP-3300T/L with a USB transfer cable (model: CA3-USBCB-01). If the driver of the cable has not been installed on you PC yet, a dialog box will appear. Please follow the instructions.

NOTE

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

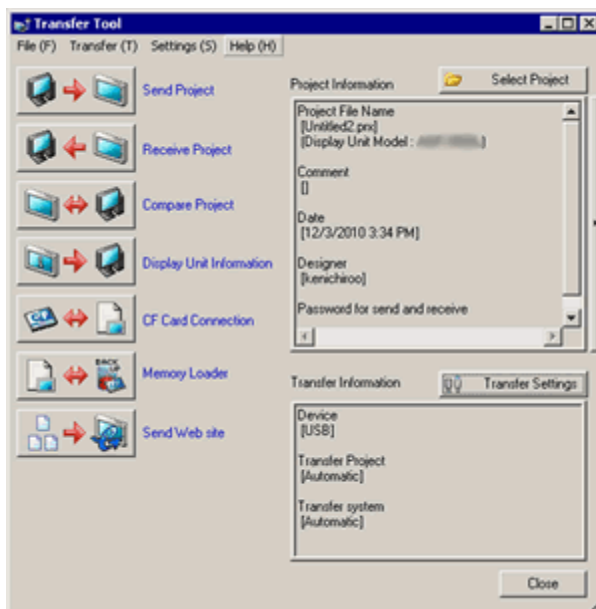


- If the following symptoms appear on Microsoft Windows® 7, go to [updating “USB Data Transfer Driver”] on Otasuke Pro! (<http://www.pro-face.com/otasuke/>) for download.
 - An error occurs when GP-Pro EX or Transfer Tool is installed
 - An error occurs when data is transferred via a USB transfer cable. (model: CA3-USBCB-01)

2. Turn on the power of GP-3300T/L. The "Initial Start Mode" screen will appear on the display unit. 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.

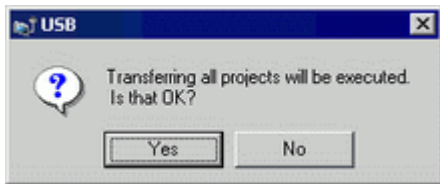


To transfer a different project file, click the [Select Project] button and select a project file.

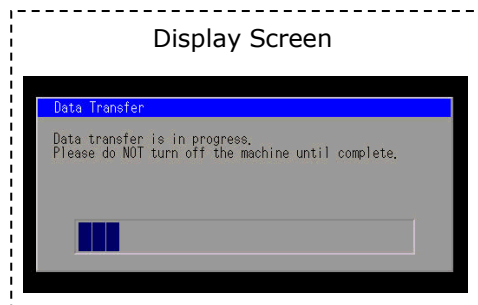
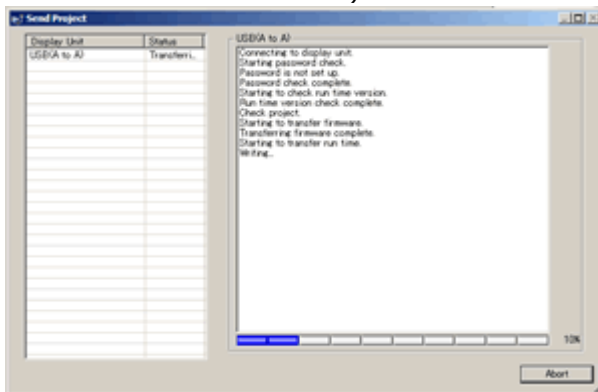
- Make sure that the [unit] in the "Transfer Settings Information" is set to [USB]. If not, click the [Transfer Setting] button to open the "Transfer Setting" dialog box. Select [USB] in the Communication Port Settings field and click [OK].



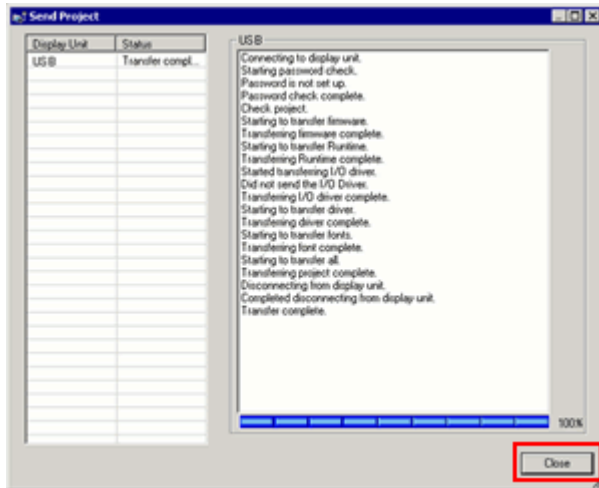
- Click [Send Project] to start transfer. When the following dialog box appears, click [Yes]. This dialog box doesn't appear when the same project file is sent again.



- 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 unit 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.
- Click the [X] mark on top right of the screen or [Project]->[Exit] to close GP-Pro EX.

3.7 Differences of software

3.7.1 Differences after conversion

Check the differences of screen data after conversion from GP-PRO/PBIII to GP-Pro EX. For the details of each item, refer to our website.

<http://www.pro-face.com/otasuke/ga/gp3000/replace/soft/conv/care/3/>

Differences of software

Differences of screen data

1	Touch Panel Type
2	Compatibility of Bit Switch
3	Compatibility of Alarm
4	Compatibility of Trend Graph
5	Compatibility of K Tag (Input Order)
6	Compatibility of K Tag (Difference of Writing)
7	Compatibility of K Tag (Indirect Setting)
8	Compatibility of N Tag
9	Precautions for using the switch for [History Data Display] of Trend Graph on the window
10	About window display on a momentary switch during momentary operation
11	About the performance when a display area of the system window is overlapping
12	Change of Tag Process
13	About the display when a fixed Draw is placed on a Part
14	Compatibility of Text
15	Compatibility of Fill
16	Compatibility of CF Card Data
17	Precautions for conversion when filing data is saved in a CF card
18	Precautions for setting "Color Settings" to [256 Colors without blinking]
19	Precautions for loading a part with "L Tag (Library Display)"
20	Compatibility of MRK files and CPW files
21	Compatibility of V Tag/v tag and Video Screen
22	Compatibility of Extended SIO Script
23	Compatibility of Sound Data
24	Compatibility of unit Monitor
25	Compatibility of Ladder Monitor
26	Compatibility of J Tag and R Tag
27	Converting Screen Data of DOS
28	Compatibility of Standard Font
29	D Script starts right after screen change or power on.(Compatibility of D Script Trigger Condition)
30	The position shifts when loading a window screen (Compatibility of U Tag)
31	Precautions for using Screen Level Change
32	Compatibility of Symbol
33	Compatibility of H Tag

Compatibility of H Tag

1	Restriction Comparison	
	1-1	Comparison of Performance Specifications
2	Differences of Settings	
	2-1	Differences of Constant Scan Setting
	2-2	Controller Auto Start Setting
	2-3	Order of storing character string data
	2-4	Types of symbol variables to be used in a command
3	Setting Changes	
	3-1	Ladder Monitor Screen
	3-2	Conversion when a logic program error occurs
	3-3	Converting a logic file (*.WLL)
	3-4	DIO Drivers
	3-5	Differences for Bit Set of integer variables
	3-6	Setting an initial value of a variable
	3-7	Conversion of variables to be undefined addresses
	3-8	Restriction of array elements
	3-9	Assigning array variables via Configure I/O
	3-10	No drivers assigned
	3-11	The system variable '#Screen' for switching screens
	3-12	For Integer Array, when accessing a bit
	3-13	Differences of LS variables
4	Variable/Instruction Conversion	
	4-1	Differences of Fix Variable Mode
	4-2	Differences of LS variables
	4-3	Temporary variables
	4-4	Control block variables of the PID instruction
	4-5	Differences of system variables
	4-6	Instruction Conversion
	4-7	If the second operand of the PID instruction is an integer constant,
	4-8	Values of variables 'LS' and 'LSS'
5	Comment/Label Conversion	
	5-1	Program Comment
	5-2	The number of characters in a rung comment Rung comments including [START], [END], [SUBSTART**], or [SUBEND**] Capacity of a rung comment
	5-3	The number of characters in a variable comment Capacity of a variable comment Comments of reference variables
	5-4	In case that a variable name and a comment are same, the comment (variable name. x [0], variable array name [0], etc.) will be disposed.
	5-5	User Label
	5-6	Subroutine
	5-7	Converting the project including comments entered on the OS in another language

Chapter 4 Appendix

4.1 I/O connection setting after project conversion

- After the display unit type is changed to [AGP-3300T-FN1M] or [AGP-3300L-FN1M], all the I/O settings made on LT Type B/B+/C will be cleared. It's necessary to re-allocate I/O on GP-Pro EX.
- GP-3300T/L is not equipped with a DIO interface. The I/O unit that was connected to LT Type B/B+/C via the DIO interface before conversion is connected to GP-3300T/L via a FLEX NETWORK unit.

This section explains the setting to connect an I/O unit to GP-3300T/L via a FLEX NETWORK unit.

Prepare the following items for this setting.

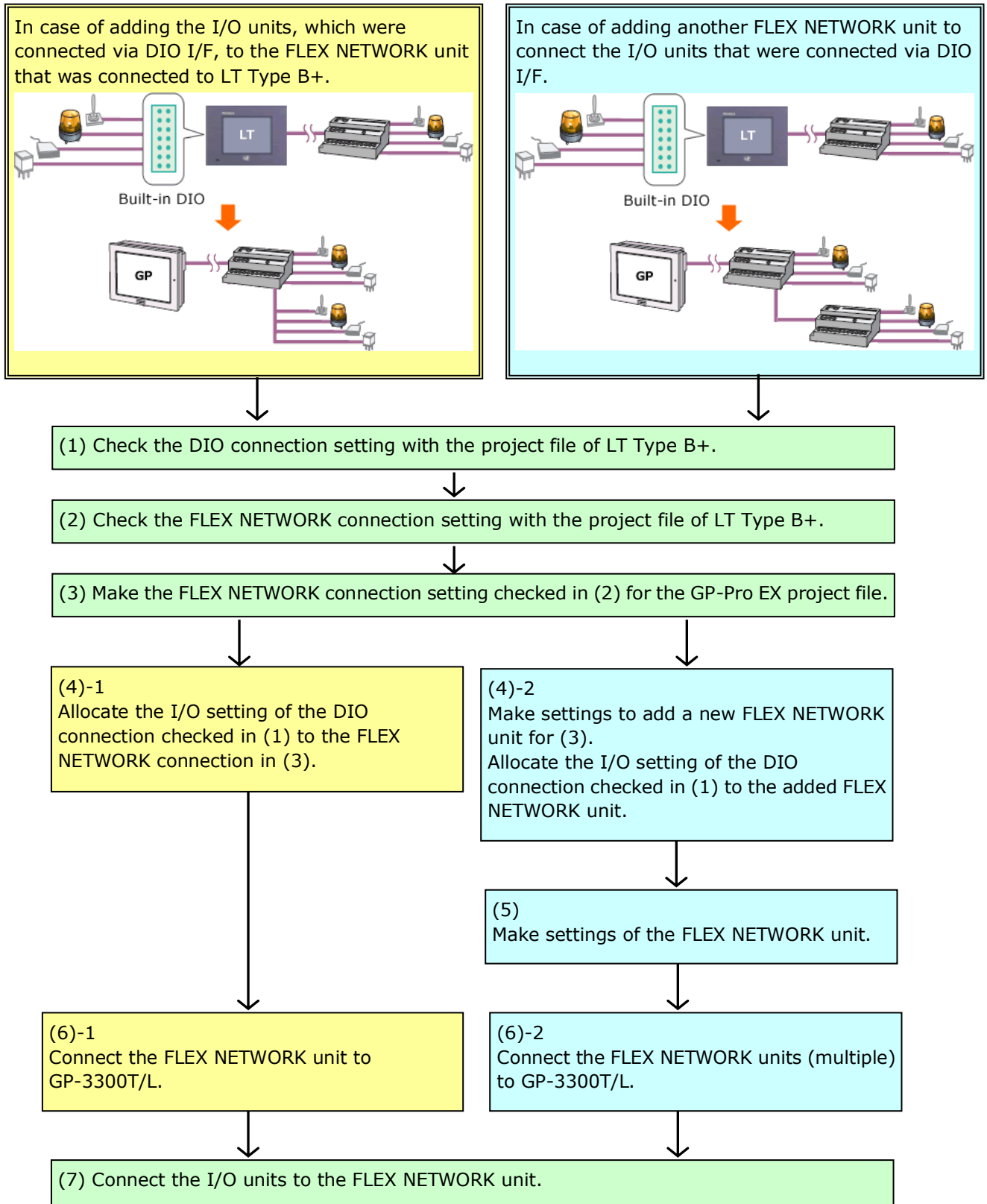
- The project file (*.prw) of LT Type B/B+/C
- GP-PRO/PBIII C-Package03
- The project file (*.prx) in [\[3.5 Change the Display Unit type\]](#).
- GP-Pro EX
- A FLEX NETWORK unit
- A FLEX NETWORK cable

NOTE

- If you newly add a FLEX NETWORK unit, select a FLEX NETWORK unit corresponding to the DIO connection status of LT Type B+. (*The built-in DIO interface of LT Type B+ corresponds to a FLEX NETWORK unit, [FN-XY16SK].) For FLEX NETWORK units available for sale, see [FLEX NETWORK Wire-saving I/O units] (<http://www.pro-face.com/product/other/flexnetwork.html>).
- For FLEX NETWORK connection, see [Using FLEX NETWORK External I/O] in GP-Pro EX Reference Manual (<http://www.pro-face.com/otasuke/files/manual/gpproex/new/refer/gpproex.htm>)

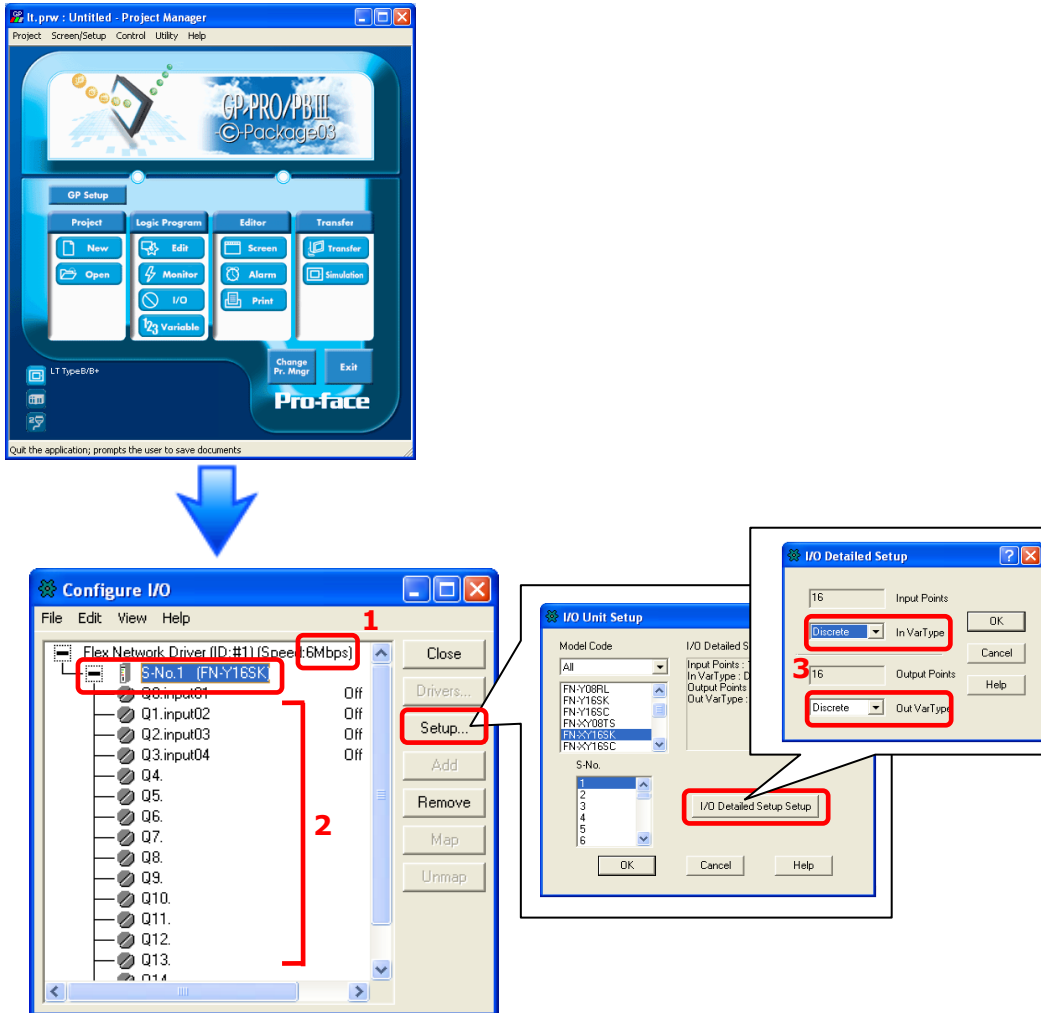
Setting Procedure

*Click each step to display their descriptions.



(1) Check the DIO connection setting with the LT Type B+ project file.

On GP-PRO/PBIII, open the LT Type B+ project file (*.prw) and click [I/O].

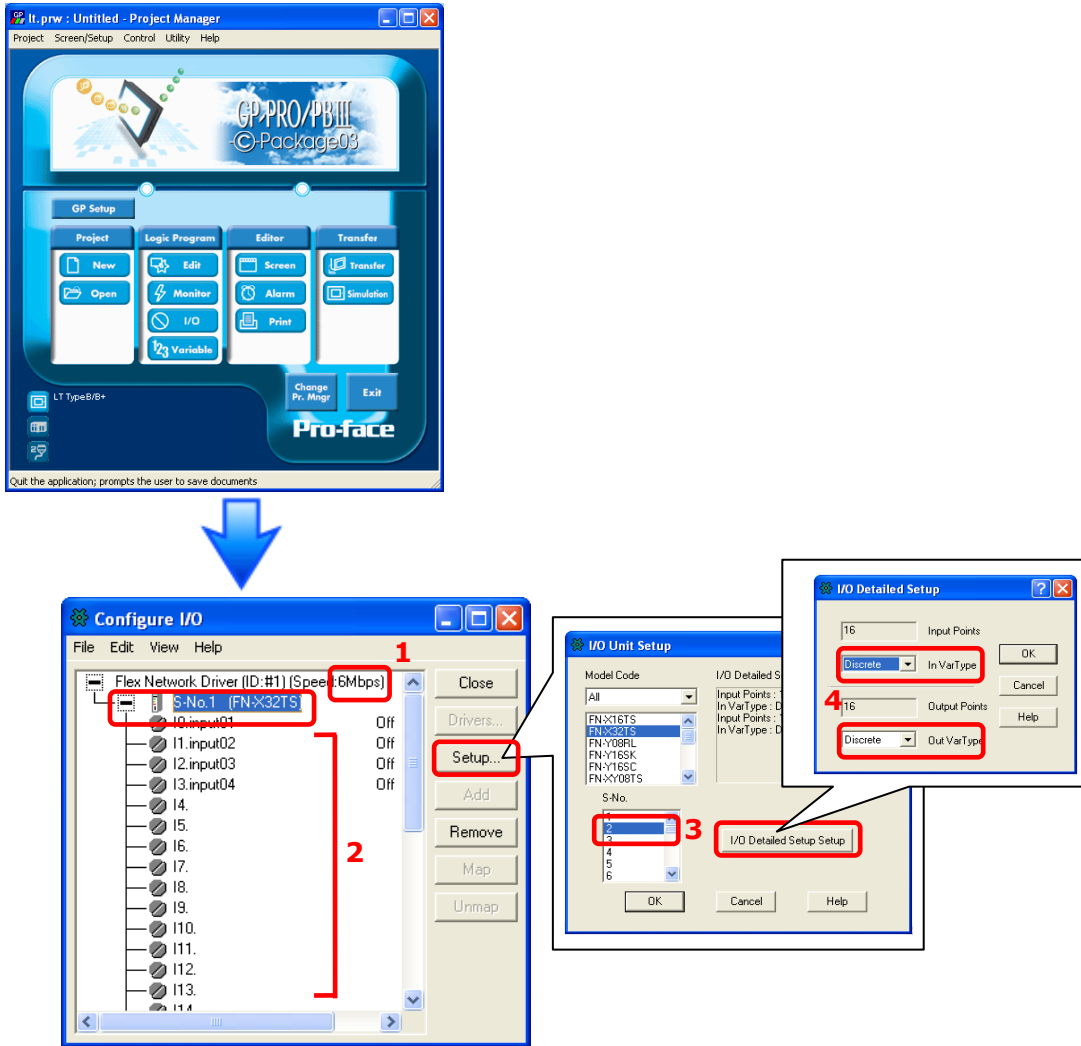


On LT Type B+, **[FN-XY16SK]** of [Configure I/O] was used as the DIO connection setting. Here, check the following setting.

- 1: FLEX NETWORK Driver Communication Speed Setup (Ex: 6Mbps)
- 2: I/O allocation of [FN-XY16SK]
- 3: The variable type set for I/O of [FN-XY16SK] (Ex: Bit)

(2) Check the FLEX NETWORK connection setting with the LT Type B+ project file.

On GP-PRO/PBIII, open the LT Type B+ project file (*.prw) and click [I/O].



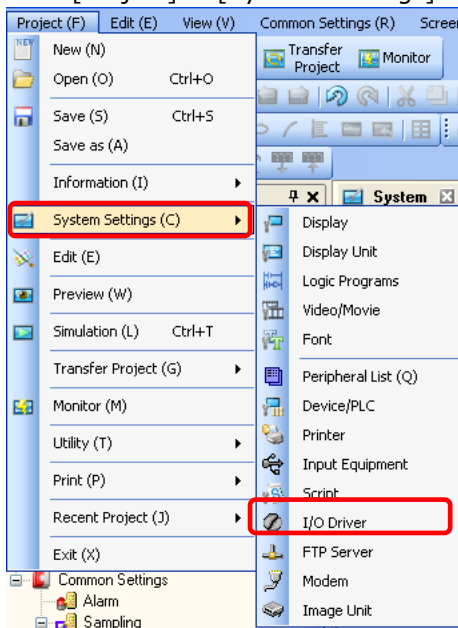
Check the setting of FLEX NETWORK units **except [FN-XY16SK]**.

- 1: FLEX NETWORK unit models except [FN-XY16SK] (Ex: FN-X32TS)
- 2: I/O allocation of [FN-X32TS]
- 3: No. of [FN-X32TS] (Ex: [2])
- 4: The variable type set for I/O of [FN-X32TS] (Ex: [Bit])

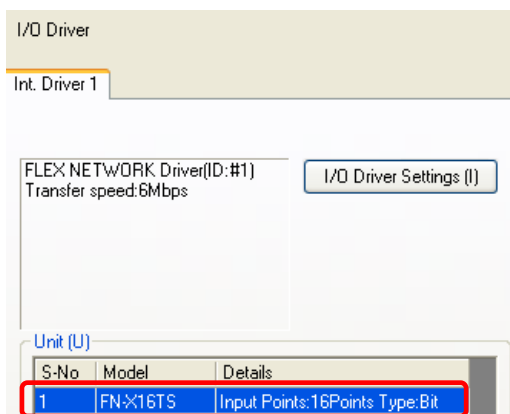
*When multiple FLEX NETWORK units are connected, check each setting of them.

(3) Make the FLEX NETWORK connection setting, which was checked in (2), for the GP-Pro EX project file.

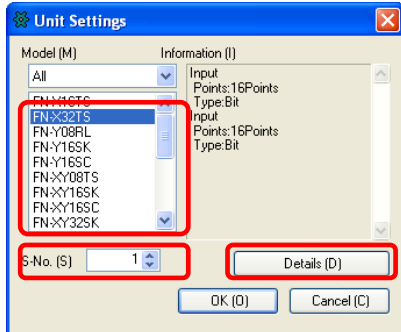
1. Open the project file after the display unit type was changed to [AGP-3300T-FN1M] or [AGP-3300L-FN1M] in the [step 5 of Chapter 3](#).
2. Click [Project] ->[System Settings]->[I/O Driver].



3. The [I/O Driver] window appears. Double click [Unit].

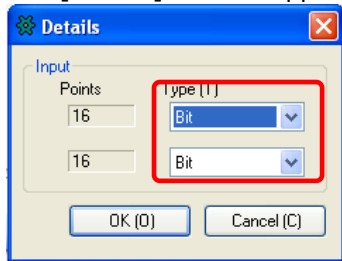


- The [Unit Settings] window appears.



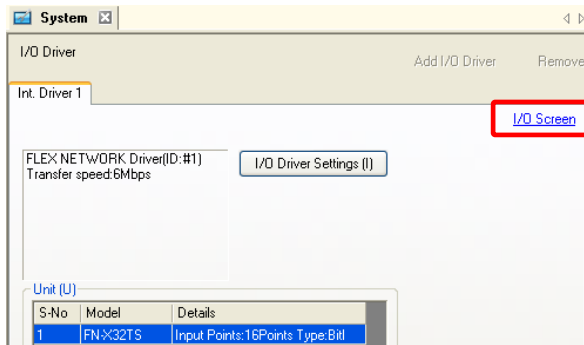
Select the [FLEX NETWORK Unit Type] and [S-No.] checked in the step (2).
(Ex: Unit Type [FN-X32TS], S-No.[2])

- Click [Details].
- The [Details] window appears.

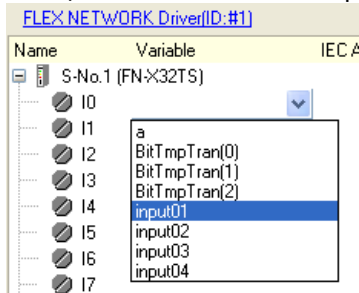


Select the variable type set for I/O, which was checked in the step (2).
(Ex: Bit)

- Click [OK]. The [I/O Driver] window returns. Click [I/O Screen] on the top right of the window.



- The I/O allocation window appears.



Allocate the same I/O as the FLEX NETWORK unit's, which was checked in the step (2). Double click the variable part of each I/O to select the registered variables on the pull-down menu.

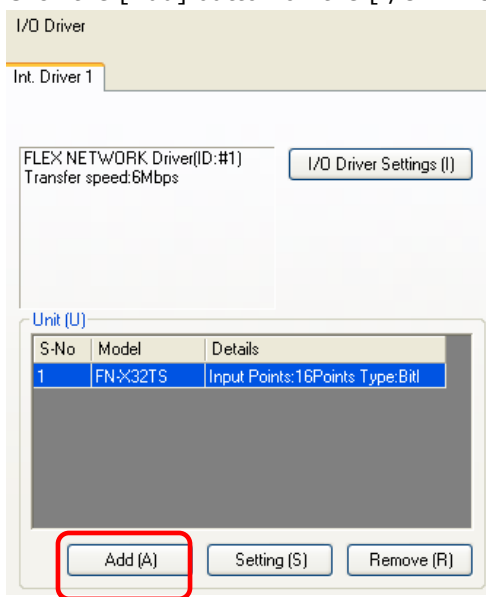
(4)-1 Allocate the I/O setting of the DIO connection, which was checked in (1), to the FLEX NETWORK connection in (3).

Additionally, allocate the [FN-XY16SK I/O allocation] checked in the step (1) to the available parts in 8 in the step (3).

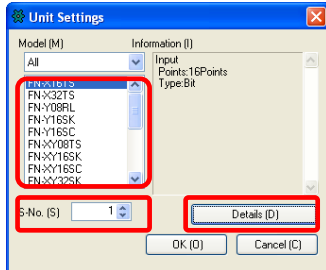
The I/O setting on GP-Pro EX is now completed. Click [Save] on the [Project] menu to save the changes.

(4)-2 Make settings to add FLEX NETWORK units for the step (3).

1. Click the [Add] button on the [I/O Driver] window.



- The [Unit Settings] window appears. Make the following settings.



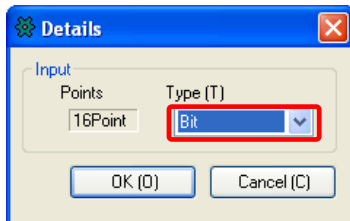
Type	Select a type of a FLEX NETWORK unit model to be newly added. (Ex: [FN-X16TS])
S-No.	Specify any number that doesn't overlap with another already registered FLEX NETWORK unit's. (Ex: [1])

NOTE

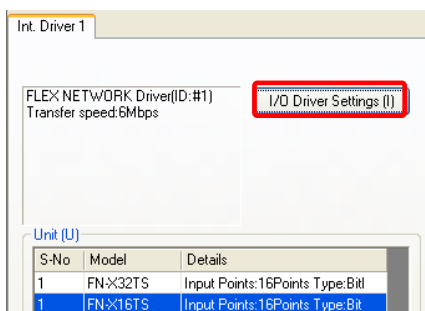
For a FLEX NETWORK unit, the number of stations differs depending on a type. When setting a S-No., consider the number of stations and set it so that the numbers do not overlap.

For example, if you use an I/O unit with 32 discrete inputs and 32 discrete outputs for a total of 64 points, and define S-No.1, then the I/O unit will use station number 1 to 4. If you define S-No.1, 2, 3, or 4 for another FLEX NETWORK unit, an error will occur and data cannot be transferred.

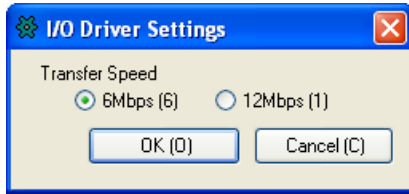
- Click [Details].
- The [Details] window appears. Select a type corresponding to an I/O unit to be connected. (EX: [Bit])



- Click [OK] to return to the [I/O Driver] window.
- Click the [I/O Driver Settings] button on the [I/O Driver] window.

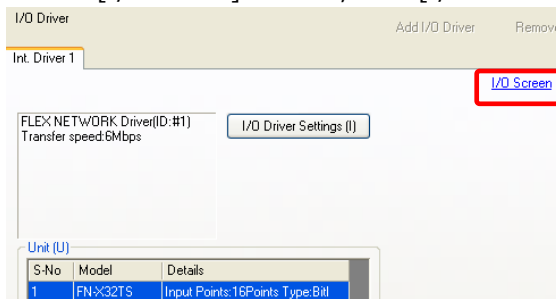


7. Select the same speed as that of the FLEX NETWORK driver setting, which was checked in the step (1) and click [OK].

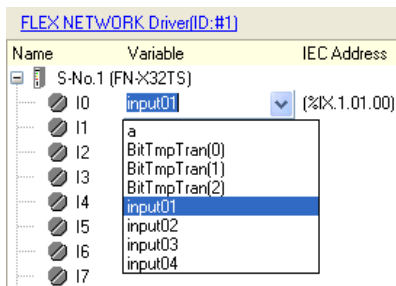


And allocate the I/O of the DIO connection, which was checked in the step (1), to the added FLEX NETWORK unit.

8. On the [I/O Driver] window, click [I/O Screen] on top right.



9. The I/O allocation window appears.


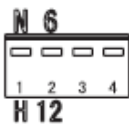



Allocate the same I/O as the FN-XY16SK's, which was checked in the step (1). Double click the variable part of each I/O to select the registered variables on the pull-down menu.

The I/O setting on GP-Pro EX is now completed. Click [Save] on the [Project] menu to save the changes.

(5) Make settings of the FLEX NETWORK unit.

Make settings of the added FLEX NETWORK unit itself in (4)-2.

	<p>TERM</p>	<p>OFF *When multiple units are linked together, turn on only the unit to be connected to the terminal of the communication cable.</p>
	<p>Speed (SW2)</p>	<p>Select the same speed as that of the FLEX NETWORK driver setting, which was checked in the step (1) 6->6Mbps 12->12Mbps</p>
	<p>S-No. (Hex)</p>	<p>Set the last digit of the same number as the S-No. set in 2. (4)-2. *Ex: S-No. [16]=10h (Hex) -> Set [0].</p>

(6)-1 Connect the FLEX NETWORK unit to GP-3300T/L.

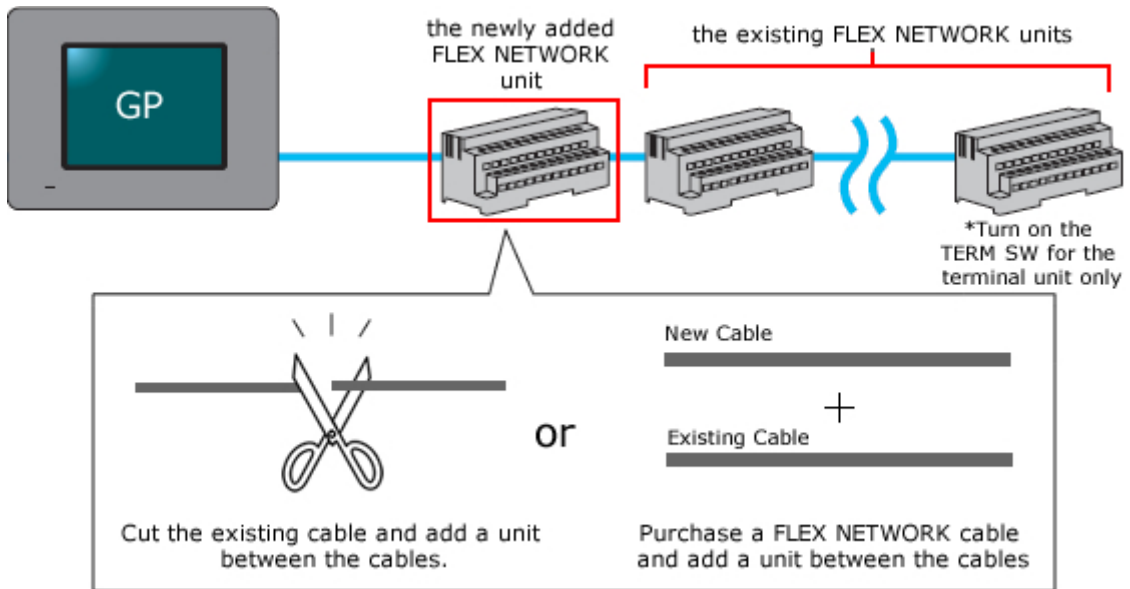
The FLEX NETWORK unit and cable that were used for LT Type B/B+/C can be also used for GP-3300T/L.

But replace the FLEX NETWORK connector with the one for GP-3300T/L.

(6)-2 Connect the multiple FLEX NETWORK units to GP-3300T/L.

The FLEX NETWORK units and cables that were used for LT Type B/B+/C can be also used for GP-3300T/L.

Connect a new FLEX NETWORK unit as shown below.



*When connecting multiple FLEX NETWORK units, wiring is straight.

*For details of wiring, see each FLEX NETWORK unit's instruction manual.

(7) Connect the I/O units to the FLEX NETWORK unit.

Connect the I/O units according to the I/O terminal setting of FLEX NETWORK on GP-Pro EXs.