



SHIBAURA MACHINE CO., LTD. Device Data Copy Tool Guide

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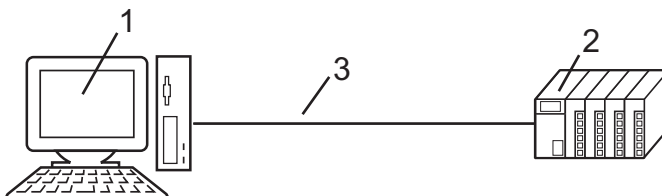
1 Overview

1.1 What is the Device Data Copy Tool

The Device Data Copy Tool is used to upload or download (hereafter referred to as the "transfer") a sequence program and register data (hereafter referred to as the "data file") from the Display.

When transferring the data file to the External Device with a Windows application (hereafter referred to as "ladder software"), it is necessary to connect the External Device to the PC with ladder software installed.

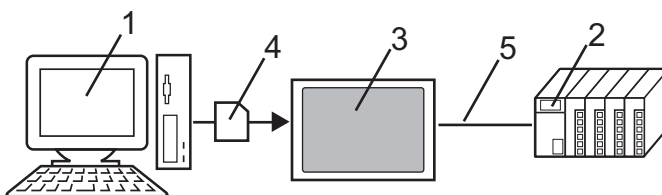
Example)



- 1 PC with ladder software installed.
- 2 External Device to be communicated with.
- 3 Cable for transfer

GP-Pro EX can transfer data files from the Display using the Device Data Copy Tool.

Example)



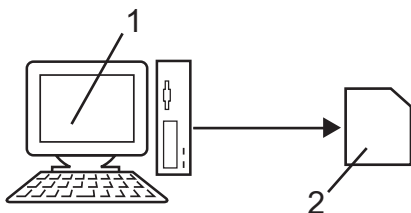
- 1 PC with ladder software installed.
- 2 External Device to be communicated with.
- 3 Display that executes transfer.
- 4 Storage device (External Storage)
- 5 Connection cable corresponding to the External Device.

Using the Device Data Copy Tool makes setting changes easier because data files can be transferred to the External Device without using a PC.

1.2 Architecture of the Device Data Copy Tool

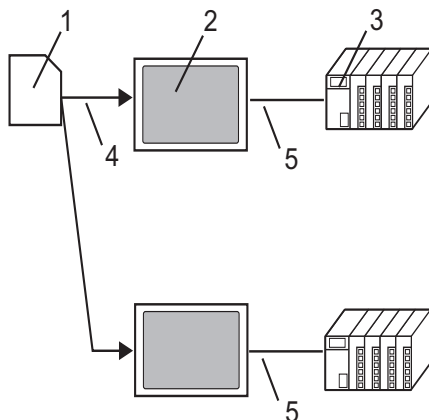
There are two steps to use the Device Data Copy Tool.

- 1 Store the data file and the External Device data transfer executable file to the storage device.



- 1 PC with ladder software installed.
- 2 Storage device to store the data file and the External Device data transfer executable file.

- 2 Transfer data files on the storage device to the External Device.



- 1 Storage device containing data files and External Device data transfer executable files.
- 2 Display that executes transfer.
- 3 External Device to be communicated with.
- 4 Connection interface on Display.
- 5 Connection cable corresponding to the External Device.

1.3 Operation Environment

The following environment is required to use the Device Data Copy Tool.

- Compatible driver
SHIBAURA MACHINE CO., LTD. TC Series (TCmini/TC200) Driver (Ver.1.11.01 or higher)
SHIBAURA MACHINE CO.,LTD. TC/TS Series Ethernet Driver (Ver.1.11.00 or higher)
- Compatible External Device
External Devices supported by compatible drivers above.
When using the TC Series (TCmini/TC200) driver, contact Shibaura Machine Co., Ltd for models that can use the external device's data copy tool.
- Compatible ladder software
SHIBAURA MACHINE CO., LTD. TPCRGOS-W(J) Ver.2.27 or higher (when using TC Series (TCmini/TC200) driver)
SHIBAURA MACHINE CO.,LTD. TC-WORX V1.01 or higher (when using TC/TS Series Ethernet driver)
- Compatible OS
Microsoft® Windows® XP (All editions of 32-bit versions)
Microsoft® Windows Vista® (All editions of 32-bit versions: Service Pack 2 or later)
Microsoft® Windows® 7 (All editions of 32-bit versions)
Microsoft® Windows® 7 (All editions of 64-bit versions: Service Pack 1 or later)
Microsoft® Windows® 8 / Microsoft® Windows® 8.1 (All editions of 32-bit/64-bit versions)
Microsoft® Windows® 10 (32-bit/64-bit versions of Home, Pro, and Enterprise)

IMPORTANT

- If the version of the driver you are using is old, update to the latest version. Confirm the driver version using GP-Pro EX:
In the workspace, from [System Settings] select [Peripheral List] to display the list of driver versions.
 - Please use the same version of the Device Data Copy Tool (Disk 2) as the version of GP-Pro EX you are using. If the Device Data Copy Tool is older than the version of GP-Pro EX you are using, the tool will not work properly.
-

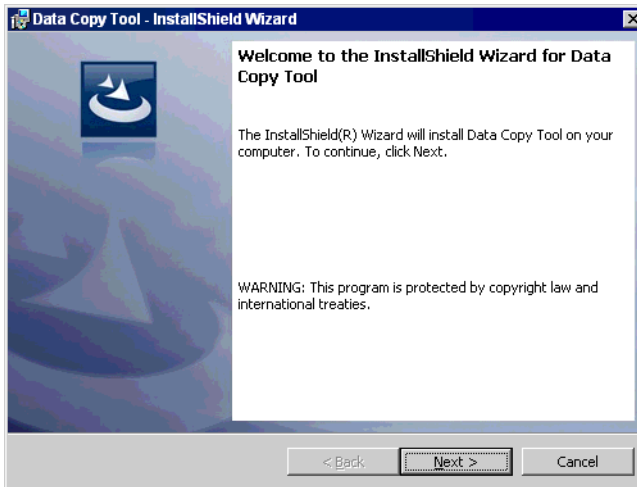
2 Installation

2.1 Installing the Device Data Copy Tool

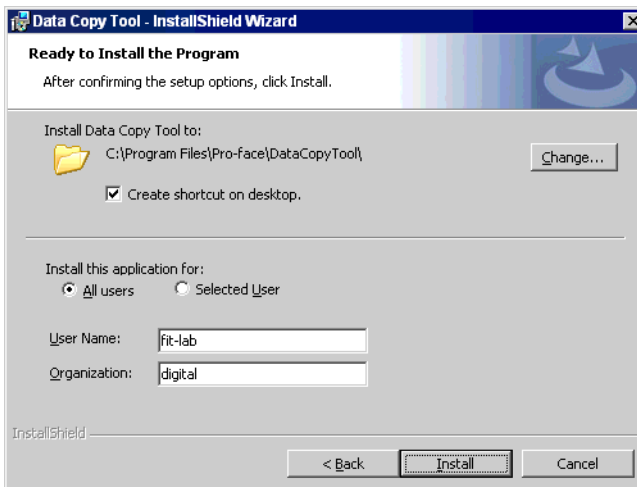
IMPORTANT

- Install the Device Data Copy Tool under the administrative privileges.
- Be sure to quit all application programs and close (disable) all resident programs, such as virus detection software.

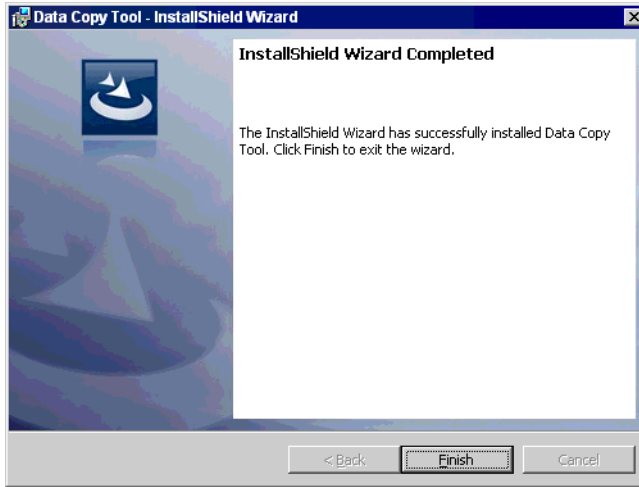
- 1 Set the Disk of GP-Pro EX to the drive to start the installer.
- 2 When the install screen is displayed, Click “Data Copy Tool”
- 3 The dialog box, “Welcome to the InstallShield Wizard for Device Data Copy Tool” is displayed, and go forward with the installation following the directions of the wizard.



- 4 Select the install destination in the “Install Data Copy Tool to:” dialog box, and click [Install] to install the Device Data Copy Tool.



- 5 The dialog box, “InstallShield Wizard Completed” is displayed, and click [Finish].

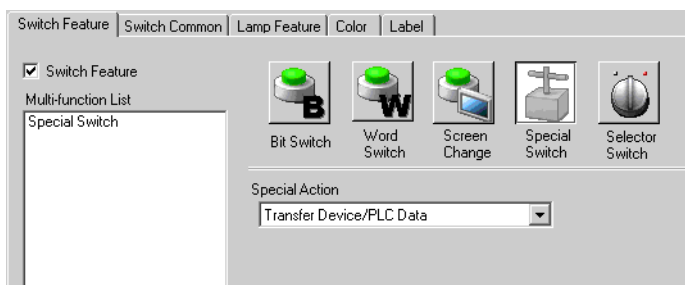


3 External Device Data Copy

In order to transfer the data files to the External Device using the storage device, it is necessary to copy the Device/PLC Data Transfer program data files on the storage device.

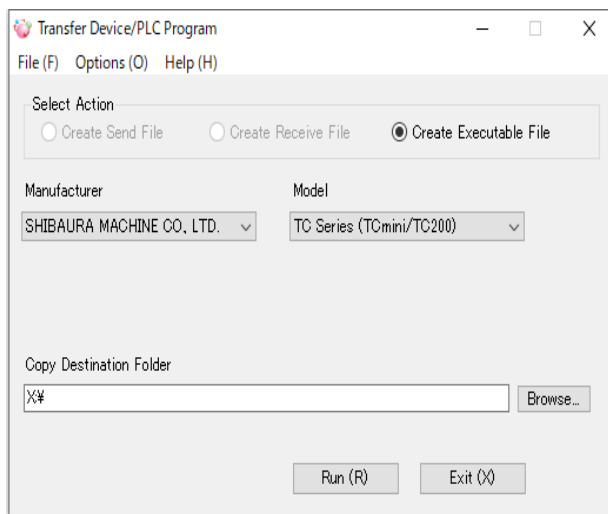
3.1 Creating A Transfer Device/PLC Data Start Switch

To create a special switch for starting the External Device data transfer, select “Transfer Device/PLC Data” from the [Special Action] menu on the Special Switch setting screen. Refer to the GP-Pro EX Reference Manual for details on how to create a Special Switch.



3.2 Copying A Device/PLC Data Transfer Program

- 1 Select [Program]-[Pro-face]-[Device Data Copy Tool] from the [Start] menu to display the Transfer Device/PLC Program.



- 2 Set the setting items as shown below.

Setup Items	Setup Description
Select Action	Create Executable File
Manufacturer	SHIBAURA MACHINE CO., LTD.
Model	TC Series (TCmini/TC200) or TC/TS Series Ethernet
Copy Destination Folder	X:\ (Select the drive letter of the storage device.)

- 3 Click [Run (R)] to make Transfer Device/PLC Data execution file in the storage device. Make a PLCTrans folder in the copy destination folder to copy the execution file.

IMPORTANT • Without an execution file in the X:\PLCTrans folder, the program will not start up. (X is the drive letter of the storage device.)

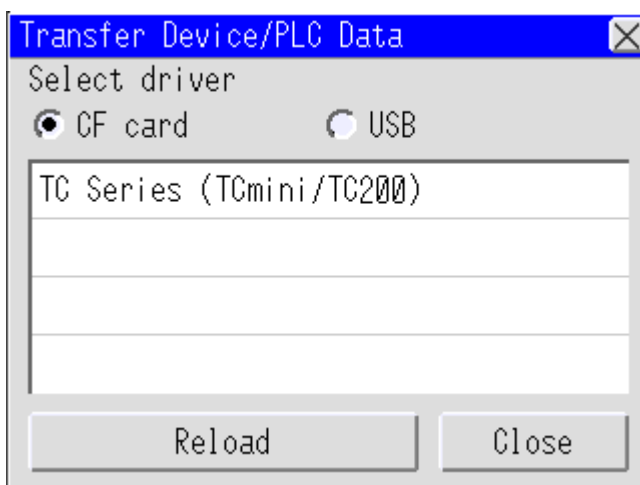
3.3 Downloading Data File

The following steps use the TC Series (TCmini/TC200) driver in its description. When using TC/TS Series Ethernet, replace the driver name with TC/TS Series Ethernet.

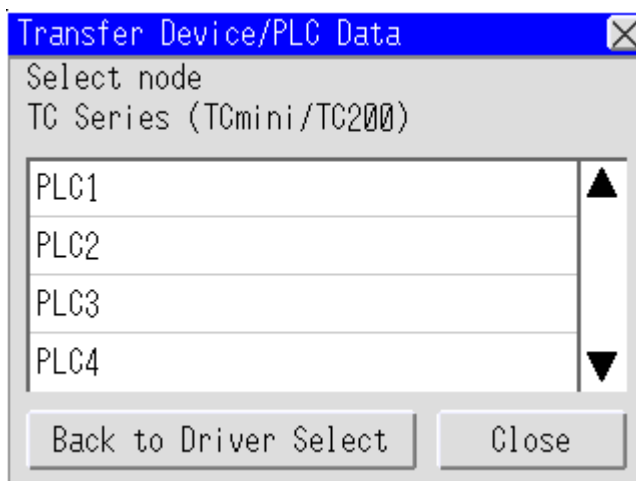
NOTE

- Check the program size of the External Device to which the data is downloaded. Procedure 7 varies depending on the program size.

- 1 Create a data file to be loaded to the External Device using a ladder software application and save to the storage device.
- 2 Connect the storage device where the data file and Transfer Device/PLC Data executable file are saved to the Display, and touch the Transfer Device/PLC Data start switch.
- 3 On the Select Driver screen, select the type of storage device connected to the Display and select the driver to be used.



- 4 On the Select External Device screen, select the External Device to be downloaded.

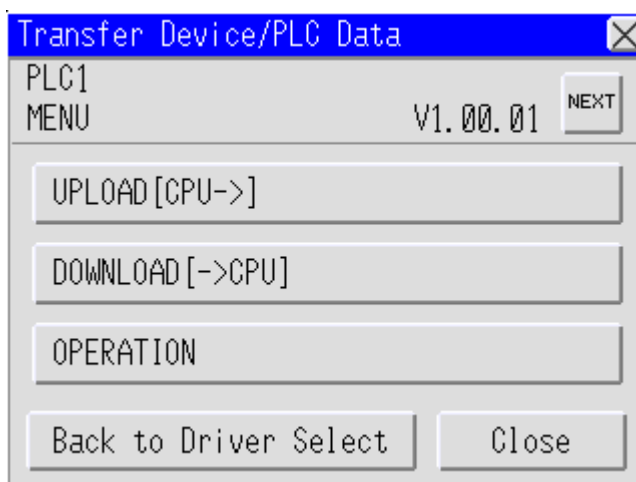
**IMPORTANT**

- When using an 1:n connection with the link unit, the directly connected master link is the only External Device to which data can be transferred. Even if a link slave is selected on the Select External Device screen, data is transferred to the directly connected master unit.

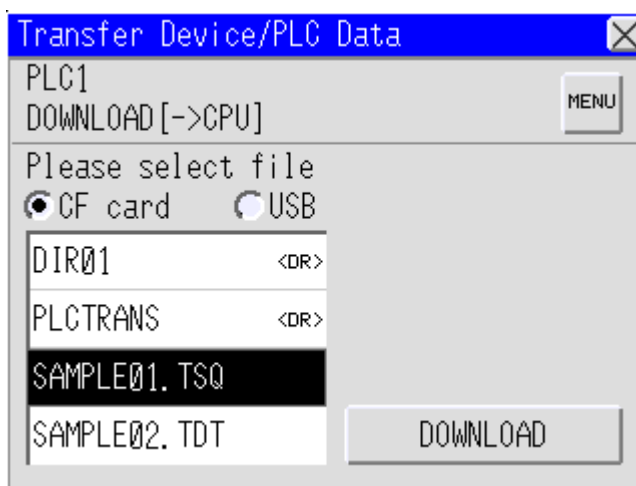
NOTE

- The screen displays the External Device name that was set in GP-Pro EX.

- 5 On the Transfer Menu screen, touch [DOWNLOAD [->CPU]].

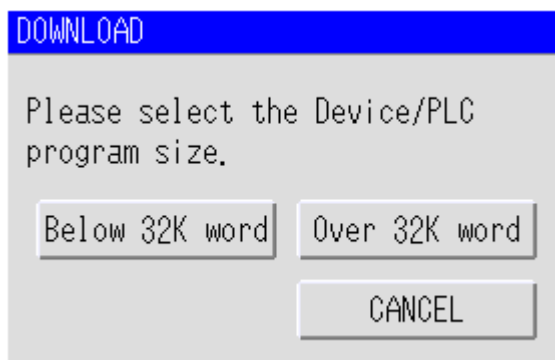


- 6 When the storage device is selected, the saved data files are displayed. Select the data file to be downloaded, and touch [DOWNLOAD].

**NOTE**

- Double-touching the data file to be downloaded starts the download.
- Only TSQ and TDT data files are displayed.

- 7 Select the External Device program size from [Below 32K word] or [Over 32K word], and start the data file download.

**IMPORTANT**

- If the selected data file size differs from the program size of the External Device, download cannot be executed properly.

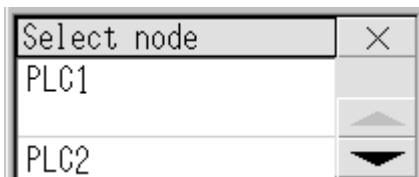
☞ "5.1 External Device Data Transmission Error Messages" (page 34)

3.4 Downloading Data File (for GP-4100 Series)

NOTE

- Check the program size of the External Device to which the data is downloaded. Procedure 7 varies depending on the program size.

- 1 Create a data file to be loaded to the External Device using a ladder software application and save to the storage device.
- 2 Connect the storage device where the data file and Transfer Device/PLC Data executable file are saved to the Display, and touch the Transfer Device/PLC Data start switch.
- 3 On the Select External Device screen, select the External Device to be downloaded.

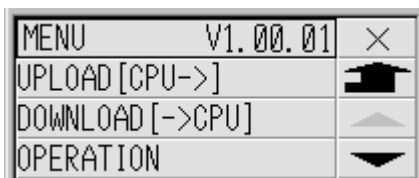

IMPORTANT

- When using a 1:n connection with the link unit, the directly connected master link is the only External Device to which data can be transferred. Even if a link slave is selected on the Select External Device screen, data is transferred to the directly connected master unit.

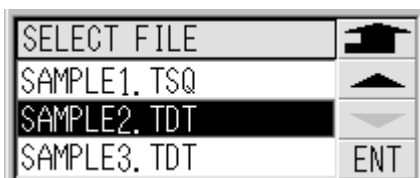
NOTE

- The screen displays the External Device name that was set in GP-Pro EX.

- 4 On the Transfer Menu screen, touch [DOWNLOAD [->CPU]].



- 5 The data files are displayed. Select the data file to be downloaded, and touch [ENT].


NOTE

- Double-touch the data file to be downloaded to move to the Download screen.
- Only TSQ and TDT data files are displayed.

6 Touch [DOWNLOAD].**7** Select the External Device program size from [Below 32K word] or [Over 32K word], and start the data file download.**IMPORTANT**

- If the selected data file size differs from the program size of the External Device, download cannot be executed properly.

☞ "5.1 External Device Data Transmission Error Messages" (page 34)

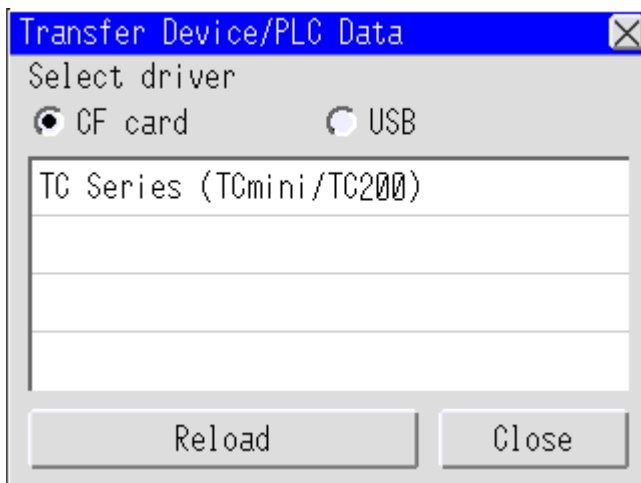
3.5 Uploading Data File

The following steps use the TC Series (TCmini/TC200) driver in its description. When using TC/TS Series Ethernet, replace the driver name with TC/TS Series Ethernet.

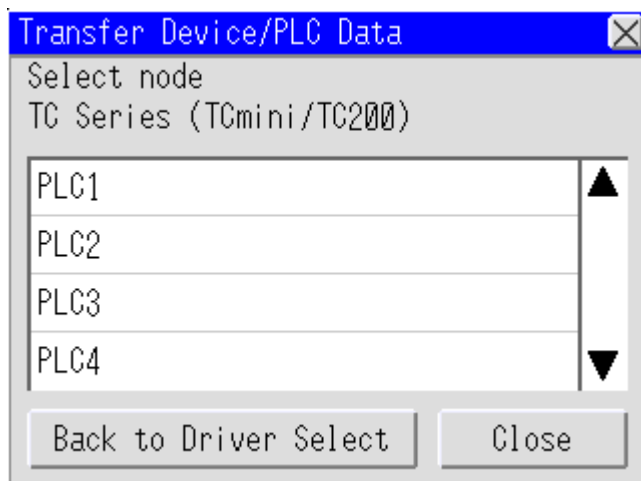
NOTE

- Check the program size of the External Device from which the data is uploaded. Procedure 9 varies depending on the program size.

- 1 Connect the Display to the storage device where the Transfer Device/PLC Data executable file is saved. Touch the Transfer Device/PLC Data start switch.
- 2 On the Select Driver screen, select the type of storage device connected to the Display and select the driver to be used.



- 3 On the Select External Device screen, select the External Device to be uploaded.

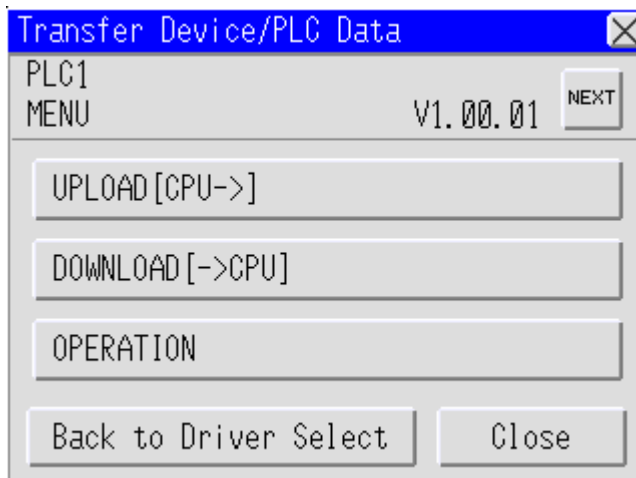

IMPORTANT

- When using a 1:n connection with the link unit, the directly connected master link is the only External Device to which data can be transferred. Even if a link slave is selected on the Select External Device screen, data is transferred to the directly connected master unit.

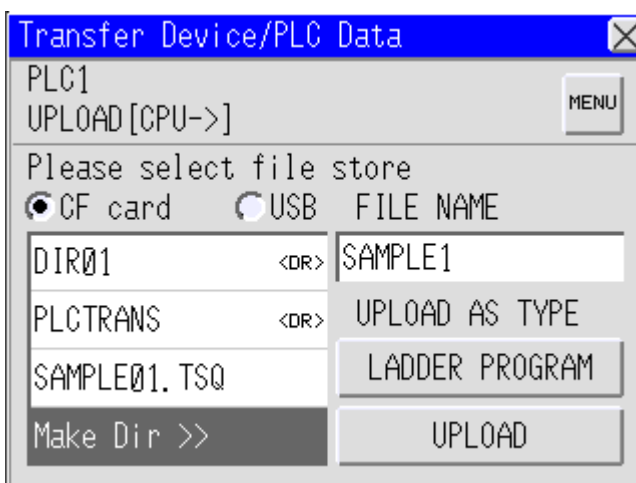
NOTE

- The screen displays the External Device name that was set in GP-Pro EX.

- 4 On the Transfer Menu screen, touch [UPLOAD [CPU->]].

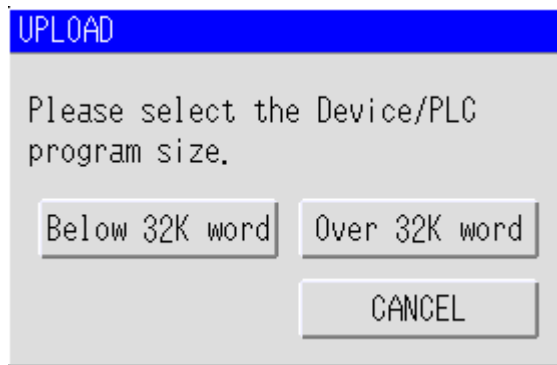


- 5 Select the folder to save the uploaded data file. Touch [Make Dir>>] to create a folder. Name the folder with a maximum of eight single-byte characters. To move the ladder file to the folder, double touch the folder name to be moved.



- 6 Enter the file name to be assigned to the data file uploaded in the [FILE NAME]. The file name can have up to 16 single-byte characters.
- 7 From [UPLOADED AS TYPE], touch [LADDER PROGRAM], and select the file type from [Ladder Program] or [Register Data].
- 8 Touch [UPLOAD].

- 9 Select the External Device program size from [Below 32K word] or [Over 32K word], and start the data file upload.



IMPORTANT • If the selected data file size differs from the program size of the External Device, upload cannot be executed properly.

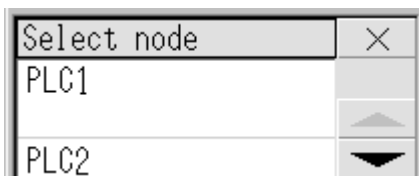
- 10 After uploading, connect the storage device to the PC and read the data file with the ladder software.

3.6 Uploading Data File (for GP-4100 Series)

NOTE

- Check the program size of the External Device from which the data is uploaded. Procedure 8 varies depending on the program size.

- 1 Connect the Display to the storage device where the Transfer Device/PLC Data executable file is saved. Touch the Transfer Device/PLC Data start switch.
- 2 On the Select External Device screen, select the External Device to be uploaded.

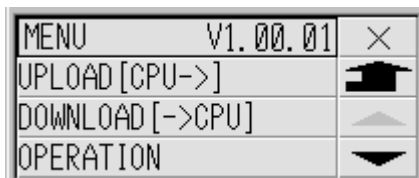

IMPORTANT

- When using an 1:n connection with the link unit, the directly connected master link is the only External Device to which data can be transferred. Even if a link slave is selected on the Select External Device screen, data is transferred to the directly connected master unit.

NOTE

- The screen displays the External Device name that was set in GP-Pro EX.

- 3 On the Transfer Menu screen, touch [UPLOAD [CPU->]].



- 4 Select the file type to be uploaded on the Upload As Type screen, and touch [ENT].


NOTE

- Double-touch the file type to be uploaded to move to the Select Folder screen.

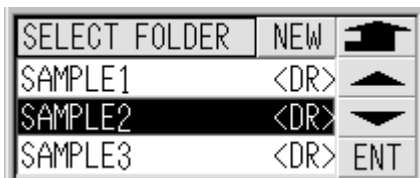
- 5 Select the folder to save the data file that was uploaded on the Select Folder screen.

To make a new folder, touch [NEW] to display the folder name input keyboard.

Name the folder with a maximum of eight single-byte characters.

To move the ladder file to the folder, double touch the folder name to be moved.

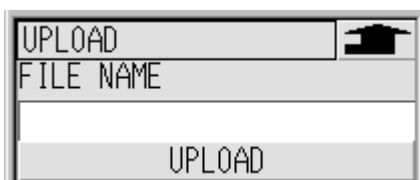
After moving the data file to the folder, touch [ENT].



- 6 Enter the file name to be assigned to the data file uploaded in the [FILE NAME].

When the text box is touched, the file name input keyboard is displayed.

The file name can have up to 16 single-byte characters.



NOTE

- When the data file was selected on the Select Folder screen, the selected file name is displayed in [FILE NAME]. Change the file name as necessary.

- 7 Touch [UPLOAD].

- 8 Select the External Device program size from [Below 32K word] or [Over 32K word], and start the data file upload.



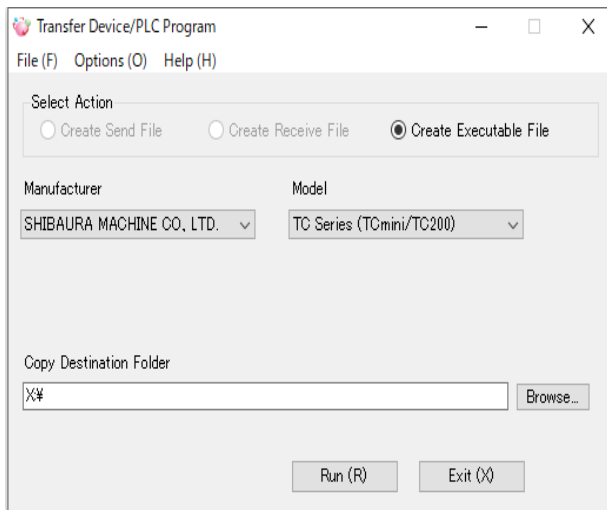
IMPORTANT

- If the selected data file size differs from the program size of the External Device, upload cannot be executed properly.

- 9 After uploading, connect the storage device to the PC and read the data file with the ladder software.

4 Setup Items

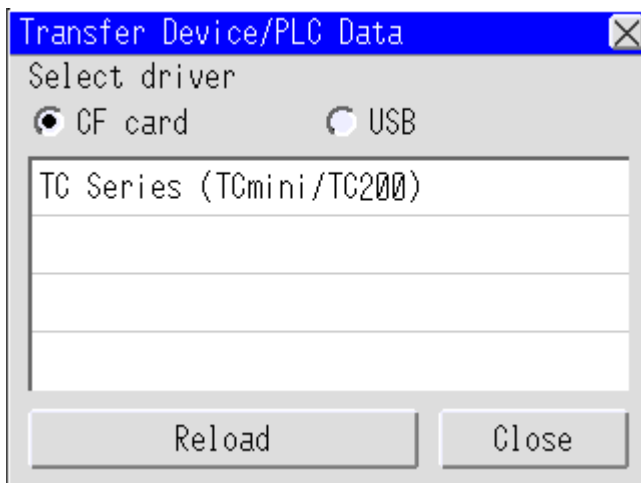
4.1 Transfer Device/PLC Program



Setup Items	Setup Description
Menu bar	<ul style="list-style-type: none"> • [File (F)] Menu <ul style="list-style-type: none"> •[Run (R)]: Execute making an execute file. •[Exit (X)]: Exit the Transfer Device/PLC Program. • [Option (O)] Menu <ul style="list-style-type: none"> •[Change Language (L)]: Switch the displayed language to [English] or [Japanese]. When the language is switched, a confirmation message is displayed, so click [Yes] and reboot the Transfer Device/PLC Program. • [Help (H)] Menu <ul style="list-style-type: none"> •[Version Information (A)]: Display the version number of the Transfer Device/PLC Program.
Select Action	<ul style="list-style-type: none"> • Making Execution File Make Transfer Device/PLC Data execution file.
Manufacturer	Select the manufacturer name of the External Device.
Model	Select the series name of the External Device.
Copy Destination Folder	<p>Enter the folder location in the storage device to store Transfer Device/PLC Data executable file. e.g.) When the USB storage connected to the computer is displayed as "Removal disk (F:)" to store the Transfer Device/PLC Data execution file in the "PLCTrans" folder in the USB storage F:\</p> <p>NOTE</p> <ul style="list-style-type: none"> • The folder can be selected in the [Browse For Folder] dialog box that is displayed after clicking [Browse ...].
Run (R)	Make the Transfer Device/PLC Data execution file.
Exit (X)	Exit the Transfer Device/PLC Program.

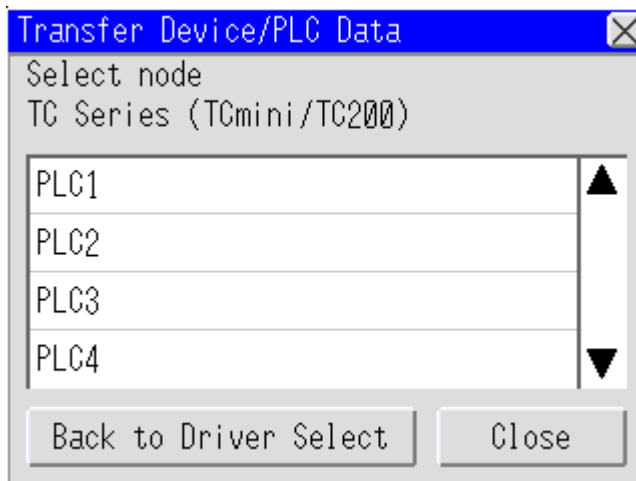
4.2 External Device Data Transfer

■ Select Driver Screen



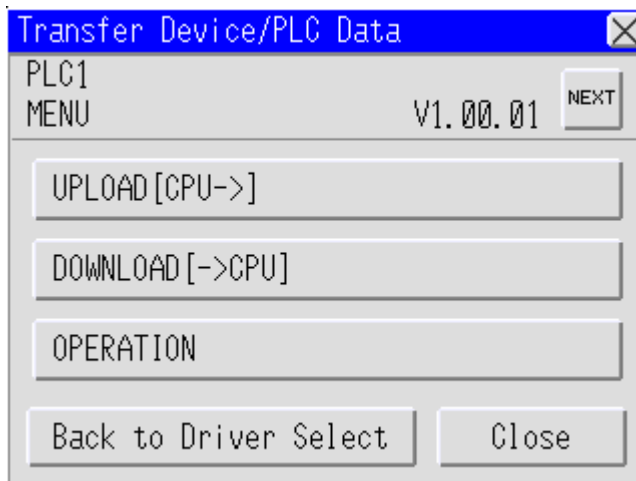
Setup Items	Setup Description
Select storage device	Select the storage device where the data file is stored (CF card or USB storage).
Select driver	Select from the list of drivers stored in the selected storage device. Touch the driver in the list to display the Select Device Screen.
Reload	Search drivers in the storage device again.
Close	End transfer of External Device data. When transfer of the External Device data is complete, the Display reboots.

■ Select External Device Screen



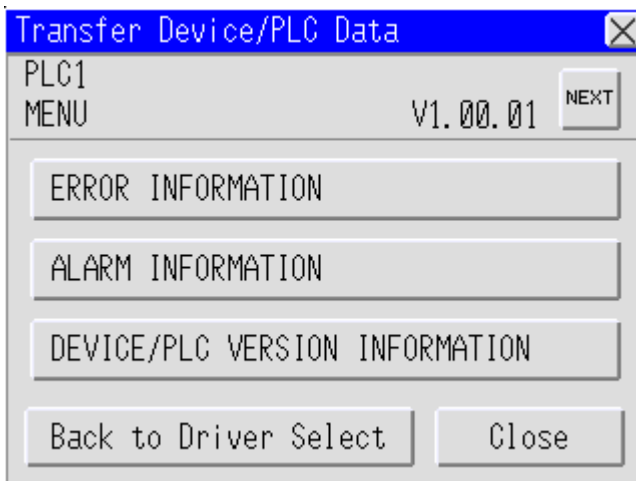
Setup Items	Setup Description
Select node	The External Devices in use are displayed on the list. When touching the External Device to which the data file is transferred, the Transfer Menu screen is displayed. When there are multiple External Devices from which to select, touch the scroll arrows displayed at the top and bottom of the screen to scroll the list up and down.
Back to Driver Select	Return to the Select Driver Screen.
Close	End transfer of External Device data. When transfer of the External Device data is complete, the Display reboots.

■ Transfer Menu Screen (1)



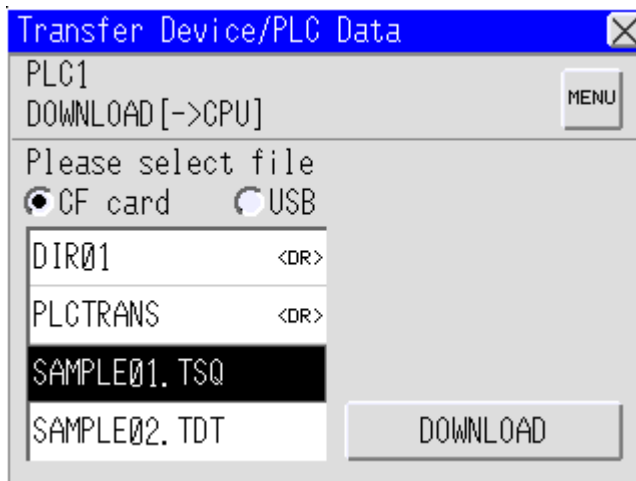
Setup Items	Setup Description
UPLOAD [CPU->]	Touch when storing the External Device data file in the storage device. The Upload Screen is displayed.
DOWNLOAD [->CPU]	Touch when transferring the data file stored in the storage device to the External Device. The Download Screen is displayed.
OPERATION	Touch to monitor or switch the External Device's RUN/STOP status. The CPU Status Screen is displayed.
Back to Driver Select	Return to Select Driver Screen.
Close	End transfer of External Device data. When transfer of the External Device data is complete, the Display reboots.
NEXT	Transfer Menu Screen (2) is displayed.

■ Transfer Menu Screen (2)



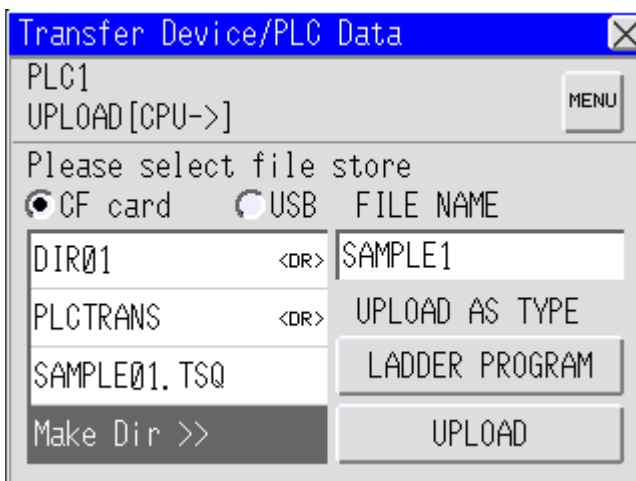
Setup Items	Setup Description
ERROR INFORMATION	External Device error information is displayed.
ALARM INFORMATION	External Device alarm information is displayed.
DEVICE/PLC VERSION INFORMATION	External Device version information is displayed.
Back to Driver Select	Return to Select Driver Screen.
Close	End transfer of External Device data. When transfer of the External Device data is complete, the Display reboots.
NEXT	Transfer Menu Screen (1) is displayed.

■ Download Screen



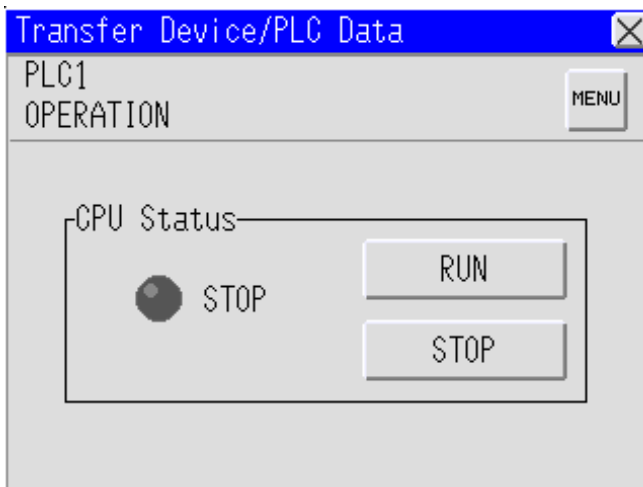
Setup Items	Setup Description
Select storage device	Select the storage device where the data files to be transferred to the External Device is stored (CF card or USB storage).
Select data file	Select the data file to be transferred to the External Device.
DOWNLOAD	Transfer the selected data file to the External Device.

■ Upload Screen



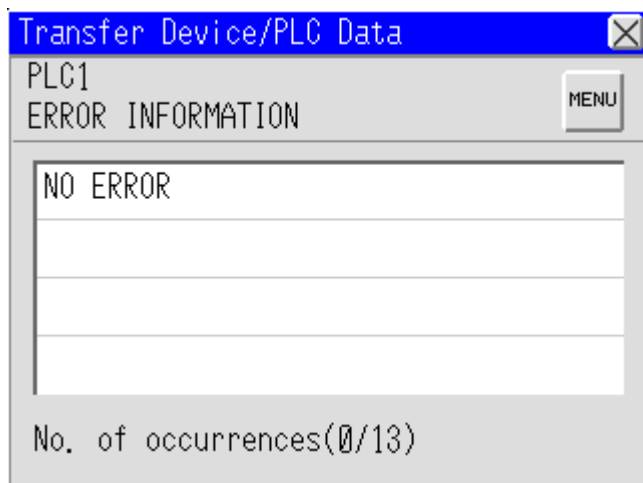
Setup Items	Setup Description
Select storage device	Select the storage device to store the data files of the External Device (CF card or USB storage).
Select storage file folder	Select the folder to store the data file of the External Device. Touch [Make Dir>>] to create a folder.
FILE NAME	Enter the name of the uploaded data file.
UPLOAD AS TYPE	Select the type of data file to be uploaded from [LADDER PROGRAM] or [REGISTER DATA]. (Default: [LADDER PROGRAM])
UPLOAD	Transfer the data file with the upload setting to the storage device.

■ Operation Screen




Setup Items	Setup Description
CPU Status	The External Device CPU Status is displayed. Touch [RUN] or [STOP] to switch between running or stopping operation of the External Device.

■ Error Information Screen

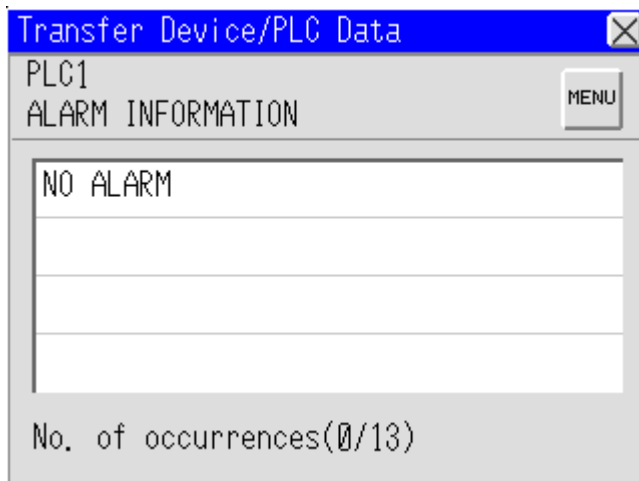


Setup Items	Setup Description
ERROR INFORMATION	External Device error information is displayed.

NOTE

- Refer to the error message list for the displayed error.
 "5 Error Messages" (page 34)

■ Alarm Information Screen



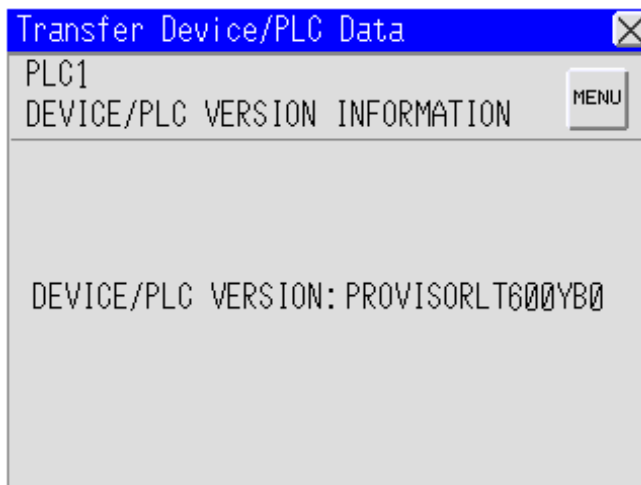
Setup Items	Setup Description
ALARM INFORMATION	External Device alarm information is displayed.

NOTE

- Refer to the alarm message list for the displayed error.

☞ "5 Error Messages" (page 34)

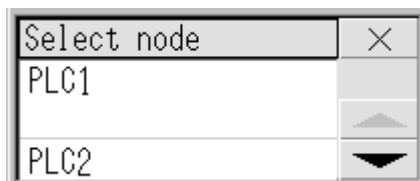
■ Device/PLC Version Information Screen






Setup Items	Setup Description
DEVICE/PLC VERSION INFORMATION	External Device version information is displayed.

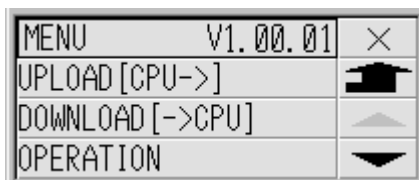
4.3 External Device Data Transfer (for GP-4100 Series)




■ Select External Device Screen



Setup Items	Setup Description
Select node	External Device list is displayed. Touch the External Device where the data file is transferred to, and the screen becomes the Transfer Menu screen.
Close 	End transfer of External Device data. When transfer of the External Device data is complete, the Display reboots.
Scroll up 	List scrolls up by one line.
Scroll down 	List scrolls down by one line.




■ Transfer Menu Screen (1)



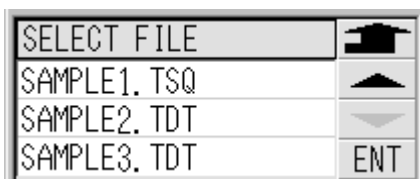
Setup Items	Setup Description
UPLOAD [CPU->]	Touch when storing the External Device data file in the storage device. The screen becomes the UPLoad AS TYPE screen.
DOWNLOAD [->CPU]	Touch when transferring the data file stored in the storage device to the External Device. The screen becomes the Select Download File screen.
OPERATION	Touch to monitor or switch the External Device's RUN/STOP status. The screen becomes the Operation screen.
Close 	End transfer of External Device data. When transfer of the External Device data is complete, the Display reboots.
Return 	When touched, the screen becomes the Select External Device screen.
Scroll down 	When touched, the next menu button group is displayed.





■ Transfer Menu Screen (2)



Setup Items	Setup Description
ERROR INFORMATION	External Device error information is displayed.
ALARM INFORMATION	External Device alarm information is displayed.
PLC VERSION INFO.	External Device version information is displayed.
Close 	End transfer of External Device data. When transfer of the External Device data is complete, the Display reboots.
Return 	When touched, the screen becomes the Select External Device screen.
Scroll up 	When touched, the next menu button group is displayed.


■ Select Download File Screen



Setup Items	Setup Description
SELECT FILE	Select the data file to be transferred to the External Device.
Return 	Return to the screen used to open this screen.
Scroll up 	List scrolls up by one line.
Scroll down 	List scrolls down by one line.
ENT 	Determine the file to be downloaded. Set the selected file on the list as a download target file, and the screen becomes the Download screen.



■ Download Screen



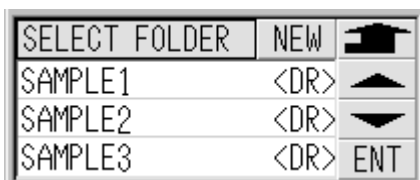
Setup Items	Setup Description
FILE NAME	Display the name of the downloaded data file.
DOWNLOAD	Transfer the selected data file to the External Device.
Return 	Return to the screen used to open this screen.






■ Upload As Type Screen



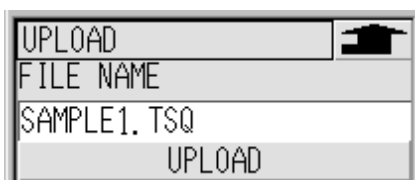
Setup Items	Setup Description
UPLOAD AS TYPE	The list that can be selected by the file type is displayed.
LADDER PROGRAM	Select when the data file type to be uploaded is a ladder program.
REGISTER DATA	Select when the data file type to be uploaded is register data.
Return 	Cancel the Upload As Type screen, and return to the previous screen.
ENT 	Determine the file type that was selected on the file type list. The screen becomes the Select Folder screen.


■ Select Folder Screen



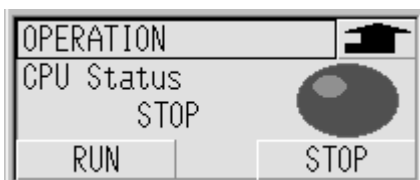
Setup Items	Setup Description
SELECT FOLDER	Folders and file names in the USB storage are displayed. <DR> is displayed on the right side of the list for folders.
Return 	Return to the screen used to open this screen.
NEW 	Create a new folder in the current directory. The folder name input keyboard is displayed by touching.
Scroll up 	List selection is scrolled up by one line.
Scroll down 	List selection is scrolled down by one line.
ENT 	Determine the folder where the file to be uploaded is stored. The folder that is displayed when this button is pressed is set as the upload folder. After touching, the screen becomes the Upload screen.


■ Upload Screen



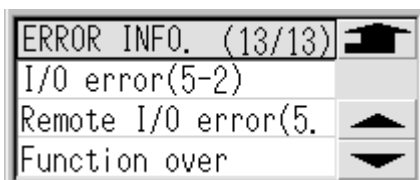
Setup Items	Setup Description
FILE NAME	The file name that is specified when the uploaded program is stored in the USB. When the text box is touched, the file name input keyboard is displayed.
UPLOAD	Transfer the data file with the upload setting to the storage device.
Return 	Return to the screen used to open this screen.




■ Operation Screen



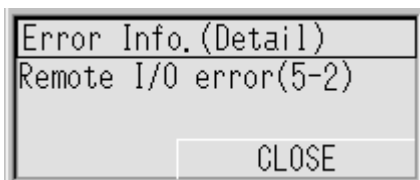
Setup Items	Setup Description
CPU Status	The External Device CPU Status is displayed. Touch [RUN] or [STOP] to switch between running or stopping operation of the External Device.
Return 	Return to the screen used to open this screen.

■ Error Information Screen



Setup Items	Setup Description
ERROR INFO.	It is the list to display the current error information. When the list is touched, the screen is changed to the Error Information (Detail) screen. When the error message exceeds 9 double-byte characters (18 single-byte characters), the 10th double-byte character (19th single-byte character) is replaced with "." and later characters are not displayed. When no error has occurred, "NO ERROR" is displayed.
Return 	The screen is returned to the Transfer Menu screen.
Scroll up 	List scrolls up by one line.
Scroll down 	List scrolls down by one line.

■ Error Information (Detail) Screen



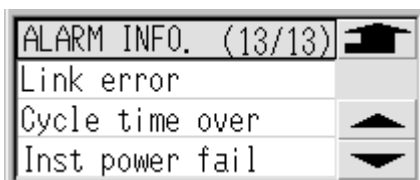
Setup Items	Setup Description
Error Info. (Detail)	The entire error messages that were touched on the error list of the Error Information screen.
CLOSE	Close the Error Information (Detail) screen, and the screen is changed to the Error Information screen.




NOTE

- Refer to the error message list for the displayed error.

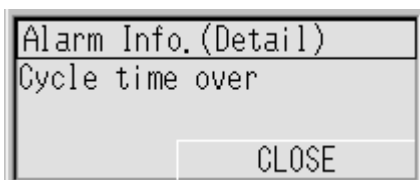
☞ "5 Error Messages" (page 34)

■ Alarm Information Screen



Setup Items	Setup Description
ALARM INFO.	Lists the current alarm information. When the list is touched, the screen becomes the Alarm Information (Detail) screen. When the alarm message exceeds 9 double-byte characters (18 single-byte characters), the 10th double-byte character (19th single-byte character) is replaced with "." and later characters are not displayed. When no alarm has occurred, "NO ALARM" is displayed.
Return 	The screen is returned to the Transfer Menu screen.
Scroll up 	List scrolls up by one line.
Scroll down 	List scrolls down by one line.

■ Alarm Information (Detail) Screen



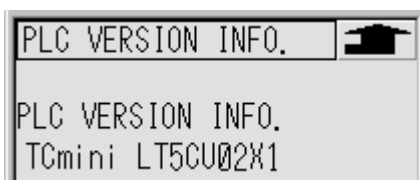
Setup Items	Setup Description
Alarm Info. (Detail)	Display the entire alarm messages that were touched on the alarm list of the Alarm Information screen.
CLOSE	Close the Alarm Information (Detail) screen, and the screen becomes the Alarm Information screen.


NOTE

- For error message details, refer to the alarm message list.

☞ "5 Error Messages" (page 34)

■ Device/PLC Version Information screen



Setup Items	Setup Description
PLC VERSION INFO.	External Device version information is displayed.
Return 	The screen is returned to the Transfer Menu screen.

5 Error Messages

5.1 External Device Data Transmission Error Messages

External Device Data transmission error messages are as follows.

Error Message	Description
Failed in connection	Check the communication setting and cables. This error message is also displayed if the program size exceeded 32K word when uploading or downloading to a 32K word or less External Device. Select program size correctly.
Response timed out has occurred	Check the communication setting and cables. This error message is also displayed if the program size exceeded 32K word when uploading or downloading to a 32K word or less External Device. Select program size correctly.
(File Name) :Failed in save the file	File could not be saved during upload. Check the access authority of the folder and capacity of the storage device.
(File Name):Failed in open the file	The file could not be opened during downloading. Check the data file.
(File Name):The file is broken or incorrect file format	This error message is displayed when the sequence program differs from the specified format. Check the sequence program.
(File Name):The downloaded program size exceeds 32K words. Download was interrupted.	This error message is displayed when a data file exceeding 32K word is downloaded as program size [32K word or less]. Make adjustments so that the data file to be downloaded fits within the External Device program size.

5.2 External Device Error Messages

Error message displays the rack number and the card number. For example, when an I/O error occurs on rack number 2 and card number 1, "I/O error (2-1)" is displayed.

External Device error messages are as follows.

Error Message	Cause	Remedial action
CPU down	CPU down.	Please exchange the CU module or main bodies of the sequencer.
ROM error	OS ROM error.	Please exchange the CU module or main bodies of the sequencer.
RAM error	OS RAM error.	Please exchange the CU module or main bodies of the sequencer.
Backup data error	PLC memory data error.	Please execute initial clearness.
I/O error	I/O data bus error.	Please check or change relevant I/O module.
Remote I/O error	It is a communication abnormality between the remote I/O modules.	Please confirm the remote I/O modules, or connecting cable.
Function over	Exceeds number of function commands.	Please reduce the number of use of FE instructions as the execution condition is ordered changing FL.
Undefined label error	Label used in jump command, etc. is undefined.	Please confirm the sequence program.
Illegal command	Command is used illegally.	Please confirm the sequence program.
Power error	Extend I/O rack DC5V error. (4.5 V or less)	Please confirm it within the range of the specification the input power supply. Please exchange the power supply modules when it is correct.
Interrupt ove	Interrupt time is over.	Please delete program from int. programs.
Dual label error	The label used by the jump instruction etc. is doubly defined.	Please confirm the sequence program.
User func WD error	The processing of the user function is not in time.	Please review the user function, and shorten the processing time.

5.3 External Device Alarm Messages

Alarm message displays the rack number and the card number. For example, when rack number 2 and card number 1's fuse blows, "Fuse off (2-1)" is displayed.

External Device alarm messages are as follows.

Alarm Message	Cause	Remedial action
Temperature error	The range of the specification temperature has been exceeded.	Please examine the method of cooling compulsion with the fan etc.
Battery error	Battery voltage drop. (2.8 V or less)	Please change battery.
Link error	PLC link transmit error.	Please check connected cable or link table created.
Cycle time over	1-cycle processing time exceeds specified time.	Please check to see if there are many commands whose processing speed is slow, such as program block created with permanent loop.
Inst power fail	Instantaneous PLC power fail	Instantaneous power fail of 10 ms or over. Please turn power on again.
Undefined function	Undefined function command is used.	Please modify function command.
Fuse off	Output module fuse is off.	Please change fuse.
I/O mismatch	Output command is used for input module.	Please confirm the sequence program.
Link master over	Multiple link masters exist.	Please confirm the installation module.
Changing I/O card	The I/O module exchange has been selected (I/O is not served).	The I/O CHANGE switch has been turned on.
Memory card error	Memory card write/read error.	Please change memory card.
Link table error	Link table error	Please confirm the link table. Please execute reload the link table, or initial clearness if necessary.
Intelligent error	Intelligent module error	Please confirm the manual of an intelligent module.

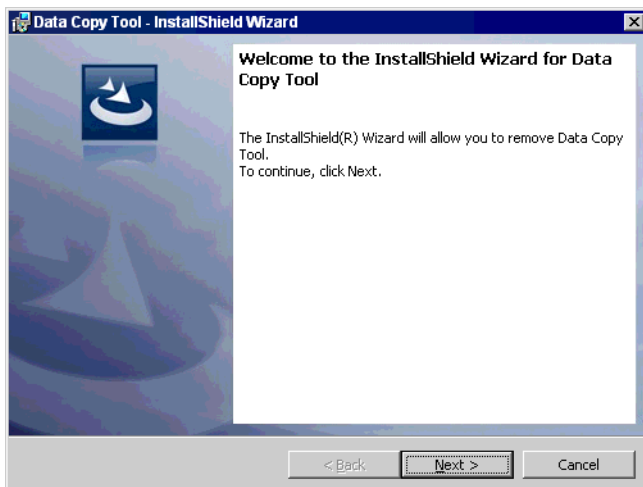
6 Restrictions

- We recommend Pro-face's CF Card as the storage device to be used for the Device Data Copy Tool.
- After the External Device data transmission mode ends, the Display is rebooted.
- Device Data Copy Tool only supports Japanese and English. If unrecognizable letters are specified to the device name, folder or file names may not be displayed correctly.
- Folder and file names with more than 8 letters are displayed with truncated file names on the External Device Data Transfer screen.
- The file path to access the storage device is 80 letters or less. Exceeding 80 letters results in an error because the file cannot be accessed. We recommend that you use file paths with 20 or less letters for uploading and downloading.
- Select the External Device program size properly when uploading and downloading. When the wrong program size is selected, the program cannot be uploaded or downloaded.
If a program that exceeds 32K word is downloaded to a External Device whose program size is 32K word or less, the OS may be rewritten. Refer to the External Device specifications for the maximum program size.
- The Device Data Copy Tool does not support the External Device password lock/unlock feature. If the password is locked, unlock the password with the programming tool (made by Shibaura Machine Co., Ltd.), etc. to use the Device Data Copy Tool.
- When applying user restrictions to the Device Data Copy Tool, use the GP-ProEX security settings. Usage can be restricted by setting the security level to the special switch that starts the Transfer Device/PLC Data screen. Refer to the GP-Pro EX Reference Manual "Enhancing Security" for details on security settings.
- Use the communication driver setting for communication settings (communication speed, data length, etc.). Confirm or change in off-line setting.
- When using an 1:n connection with the link unit, the directly connected master link is the only External Device to which data can be transferred. Even if a link slave is selected on the Select External Device screen, data is transferred to the directly connected master unit.

7 Appendix

7.1 Uninstalling the Device Data Copy Tool

- 1 Set the Disk of GP-Pro EX to the drive to start the installer.
- 2 When the install screen is displayed, click “Data Copy Tool”.
- 3 The InstallShield Wizard is displayed. Click [Next >].



- 4 Click [Remove] to uninstall the Device Data Copy Tool.

