# 32 | Transferring Data

This chapter will explain how to transfer project files to the GP in order to display screens created in GP-Pro EX on the GP, and how to transfer the project file currently saved in the GP to a PC.
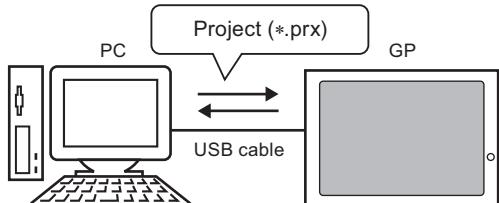
Please start by reading "32.1 Settings Menu" (page 32-2) and then turn to the corresponding page.

32.1 Settings Menu

Transferring Project Files via USB Cable
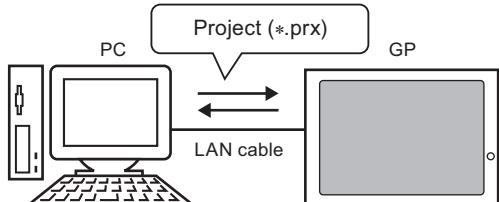
Use a USB transfer cable to transfer project files (∗.prx).

) Setup Procedure (page 32-6)
) Details (page 32-5)

Transferring Project Files via Ethernet (LAN)
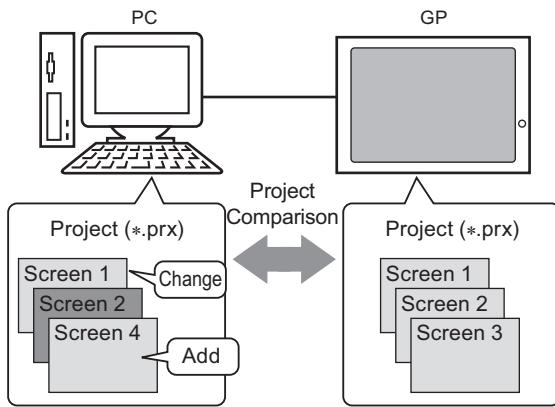
Use a LAN cable to transfer project files (∗.prx).

) Setup Procedure (page 32-13)
) Details (page 32-12)

Confirming Projects' Changes Prior to Transfer (Comparison)
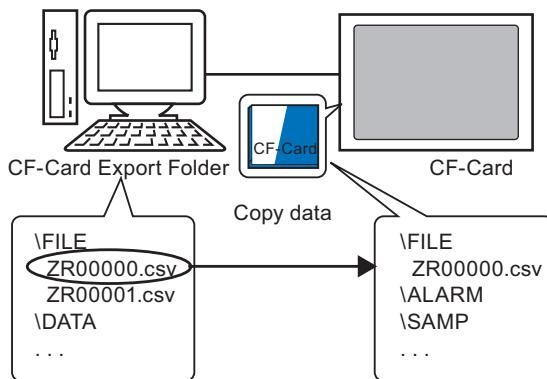
Compare the project files (∗.prx) on the PC and GP, and check which screens have been updated.

) Setup Procedure (page 32-26)
) Details (page 32-25)

Transferring Only Data to a CF-Card
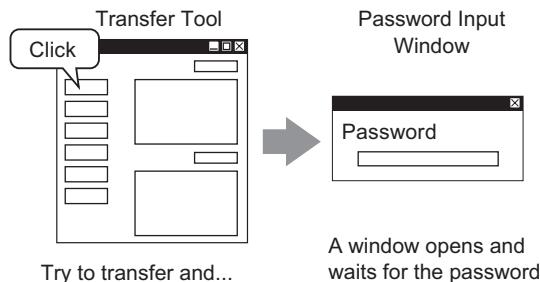
Without transferring the project file, copy recipe data to the CF-card in the GP, and alarm data from the CF-card to a PC.

CF-Card Export Folder

Copy data

CF-Card

\FILE
ZR00000.csv
ZR00001.csv
\DATA
. . .

\FILE
ZR00000.csv
\ALARM
\SAMP
. . .

☞ Setup Procedure (page 32-29)
☞ Details (page 32-28)

Transferring with Password
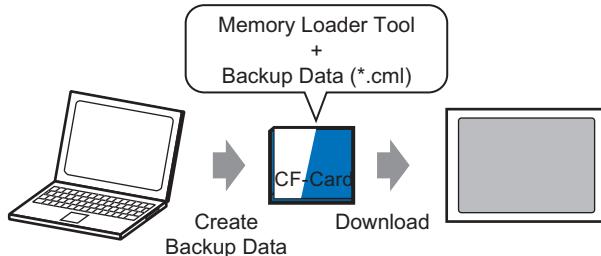
When transferring data, a Password Input Window is displayed which prevents the transfer if passwords do not match.

Transfer Tool

Click

Try to transfer and...

Password Input Window

Password

A window opens and waits for the password

☞ Setup Procedure (page 32-32)
☞ Details (page 32-31)

Downloading using the CF card
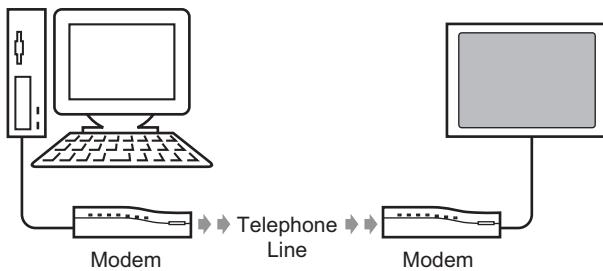
You can transfer project files between GP and your PC using the CF-card.

Memory Loader Tool
+
Backup Data (*.cml)

CF-Card

Create Backup Data   Download

☞ Setup Procedure (page 32-6)
☞ Details (page 32-5)

Updating Remote Screen Data via Modem	
Connect the modem to GP and transfer the screen data from your PC to GP. 	☞ Setup Procedure (page 32-6) ☞ Details (page 32-5)
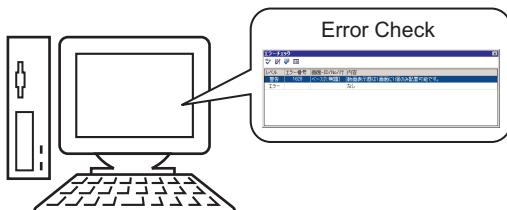
Checking Errors	
Check errors before you send the project data. 	☞ Setup Procedure (page 32-53) ☞ Details (page 32-52)
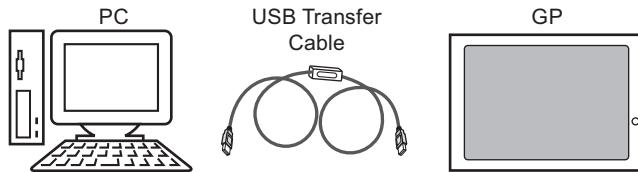
32.2 Transferring Project Files via USB Cable

Use a USB transfer cable made by Pro-face (type: CA3-USBCB-01) to connect a PC and the GP, and transfer project files (∗.prx).
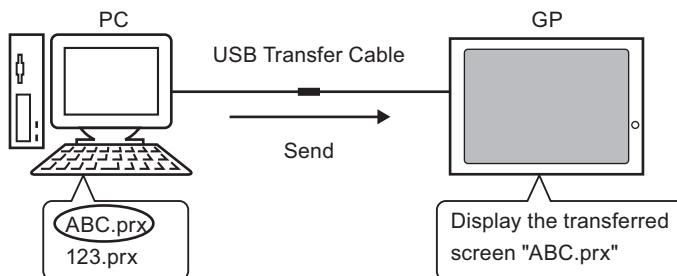
| IMPORTANT | • For information on the cable's specifications and usage method, please refer to the user's manual belonging to the USB transfer cable you are using. |

## 32.2.1 Details
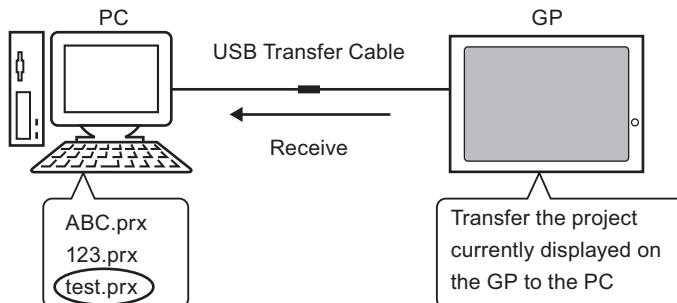
• Transfer from PC to GP (Send)
You can send the selected project files (∗.prx) to the GP and display the project.

• Transfer from GP to PC (Receive)
Project data stored in the GP can be saved to the PC as a new project file (∗.prx)

32.2.2 Transfer Process

■ Transfer from PC to GP (Send)

This section explains about the procedure of transferring project files.
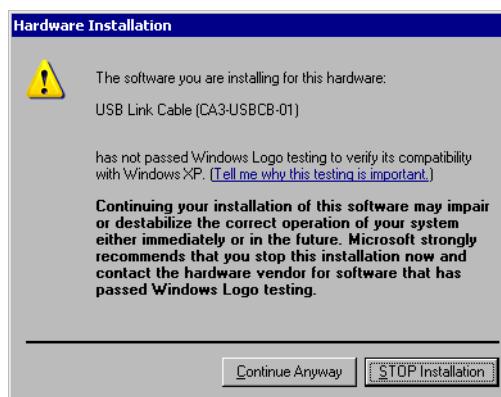
| NOTE | • For more information about the Send function, please refer to "32.10.3 How Send Works" (page 32-61) .
• Please refer to the settings guide for details.
☞ "32.10 Setting Up Transfer Tool" (page 32-55) |

1 Connect the PC and GP using the optional USB transfer cable set.
A dialog box will appear if the USB cable's drivers are not installed. Please install them as directed.
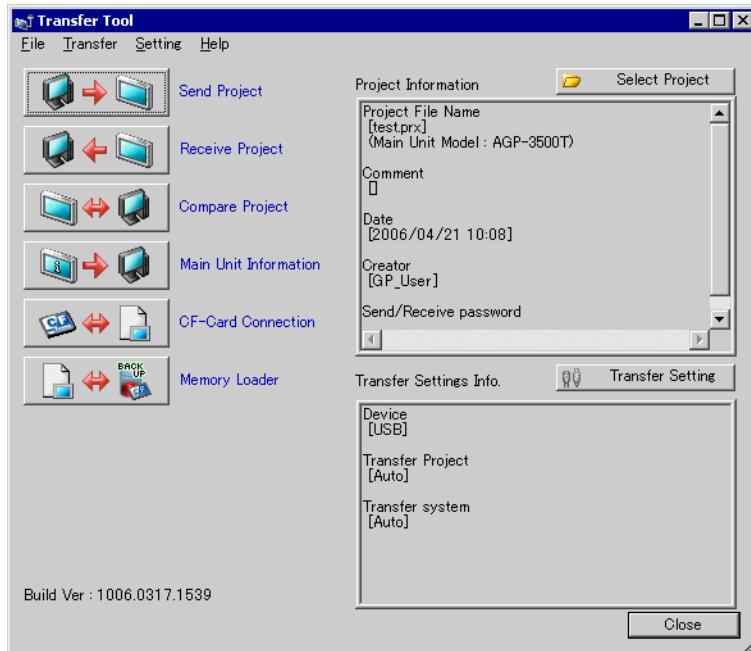
| NOTE | • Depending on the security level of Windows XP, the [Hardware Installation] dialog box will appear when installing a USB driver. Click [Continue Anyway] to start installing the driver for CA3-USBCB-01. Click [Finish] when the installation is complete. |
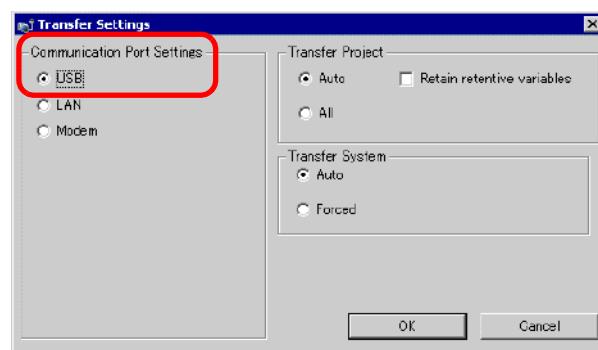
2 Turn ON the GP's power. The GP's [Initial Start Mode] screen will be displayed.
(GP Screen)

This screen will appear when you first connect the GP's power cord. After transferring a project once, this screen will not appear.
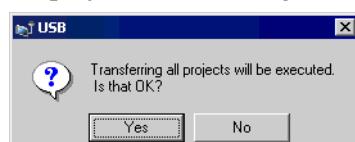
3 From GP-Pro EX's State Tool Bar, click the Transfer Project icon and bring up the Transfer Tool.
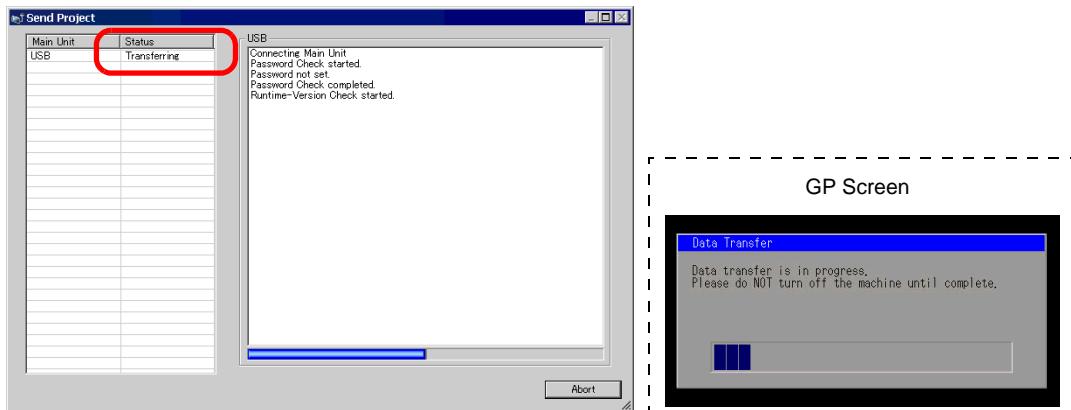
4 Check the project file name, etc., for the project to be transferred in [Project Information]. If you want to transfer a different project, click the [Select Project] button and choose a project.

5 In the [Transfer Settings Info.], please make sure that the [Device] is [USB]. If not, click [Transfer Setting] to open the [Transfer Settings] dialog box. Select [USB] in the [Communication Port Settings], then click [OK].

6 Click [Send Project].
The transfer will begin. When the following dialog box appears, click [Yes]. This dialog box is not displayed when the same project file is sent again.
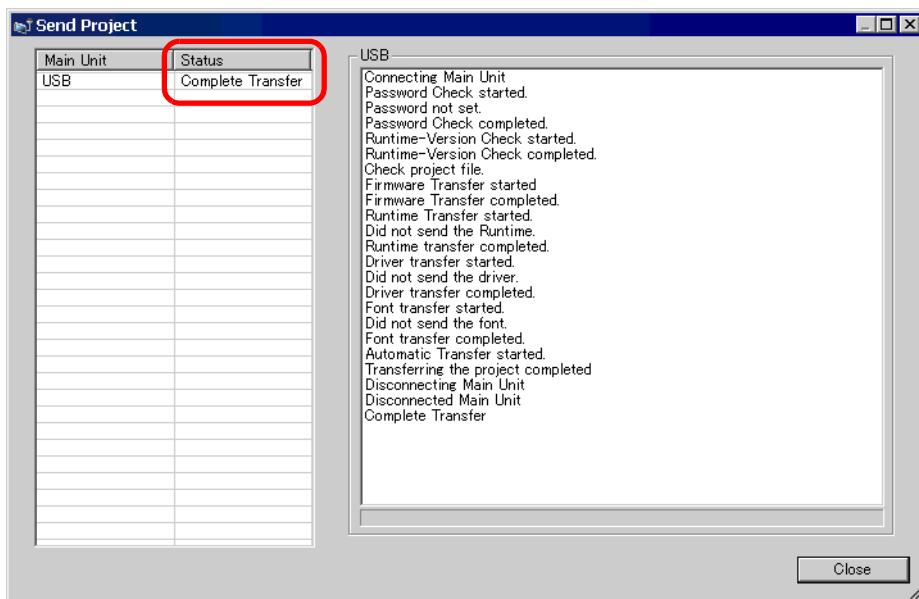
The following dialog box will be displayed during transfer and you can check the communication status.
(The GP switches into Transferring mode and communication with the device (PLC) is severed.)

7 When the transfer completes, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer].
Click [Close] and the dialog box will close.
(The GP will be reset and the transferred project's screens will be displayed.)

8 Close the dialog box to return to the Transfer Tool. Click [Close] and the Transfer Tool screen will close.

■ **Transfer from GP to PC (Receive)**
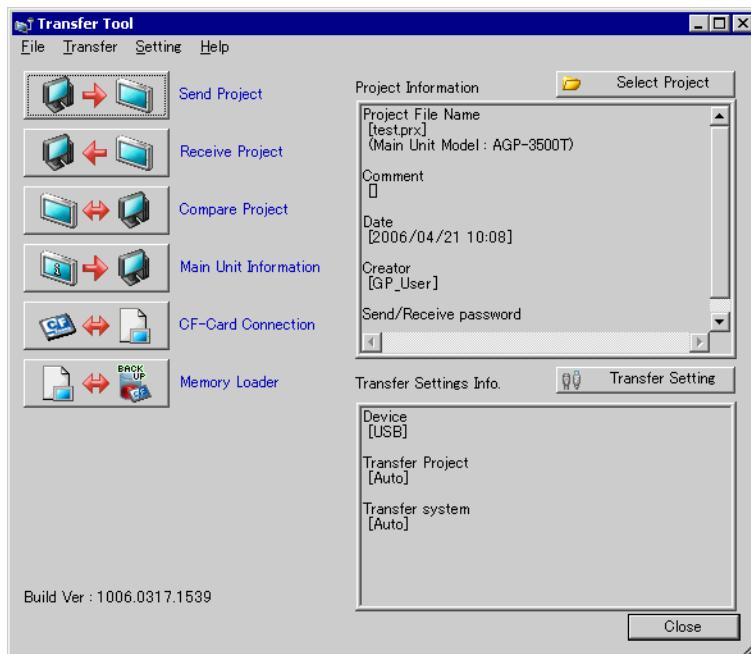
Receives project data currently stored on the GP to a PC.

NOTE
- For more information about the Receive function, please refer to "32.10.4 How Receive Works" (page 32-62) .
- Please refer to the settings guide for details.
    ☞ "32.10 Setting Up Transfer Tool" (page 32-55)

1 Connect the PC and GP using the optional USB transfer cable set.
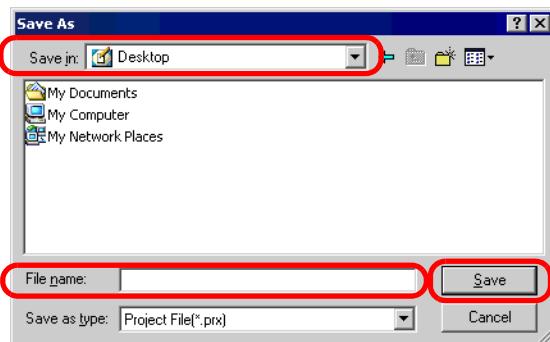
2 From GP-Pro EX's State Tool Bar, click the Transfer Project icon ![icon] and bring up the Transfer Tool.
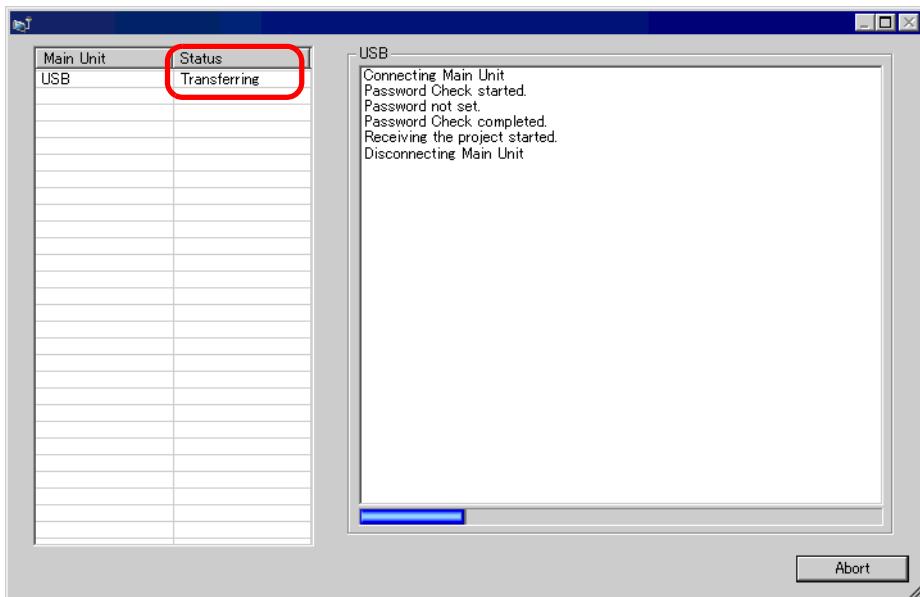
3 In the [Transfer Settings Info.], please make sure that the [Device] is [USB]. If not, click [Transfer Setting] to open the [Transfer Settings] dialog box. Select [USB] in the [Communication Port Settings], then click [OK].
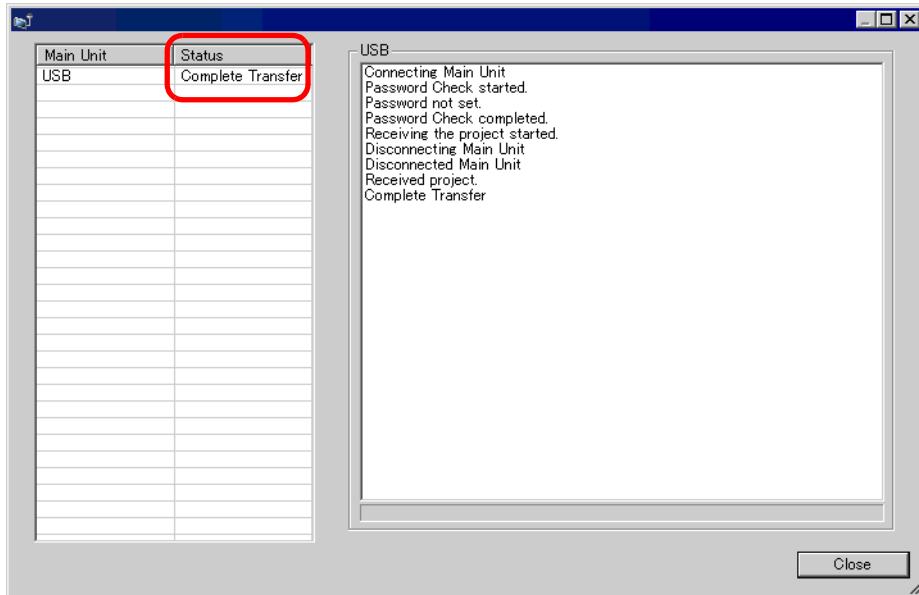
4 Click [Receive Project]. Specify the location to save data and the project file name in the following dialog box. Click [Save] to start the transfer.

The following dialog box will be displayed during transfer and you can check the communication status.

5 When the transfer completes, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer].
Click [Close] and the dialog box will close.
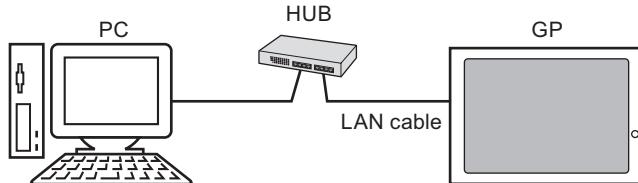
If you receive a project file which is using the Recipe function (CSV data) or other CF-card data, the following dialog box will appear. Specify the location to save the CF-card's data.
Click [OK] to return to the [Receive Project] dialog box and complete the process.

6 Close the dialog box to return to the Transfer Tool. Click [Close] and the Transfer Tool screen will close.

# 32.3 Transferring Project Files via Ethernet (LAN)

Use a LAN cable and transfer project files (∗.prx) using Ethernet.

HUB

PC   GP

LAN cable
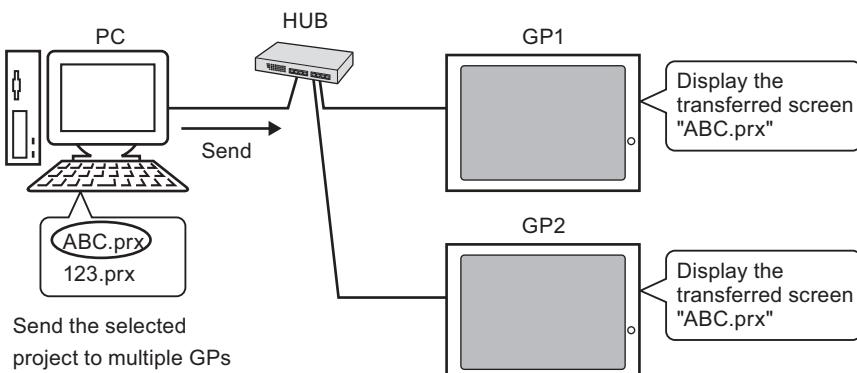
IMPORTANT
- To communicate using Ethernet, Ethernet settings (IP address, port number, etc.) must be set up on the GP.

NOTE
- You can also connect a PC and the GP directly with a cross cable without using a HUB.

32.3.1 Details
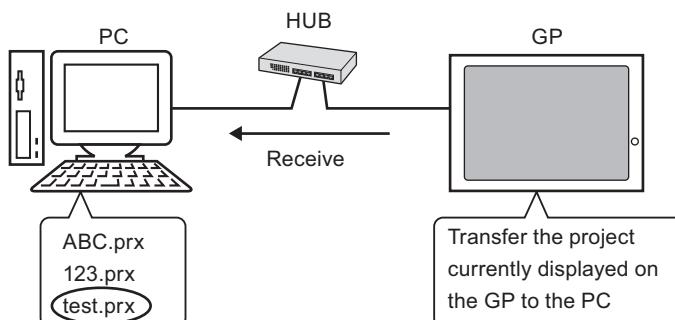
- Transfer from PC to GP (Send)
  You can send the selected project files (∗.prx) to the GP and display the project.
  The same project can be sent to multiple GPs on the network.

PC   HUB   GP1

Send

Display the transferred screen "ABC.prx"

ABC.prx
123.prx

GP2

Send the selected project to multiple GPs

Display the transferred screen "ABC.prx"

- Transfer from GP to PC (Receive)
  Project data stored in the GP can be saved to the PC as a new project file (∗.prx).
  Even if multiple GPs exist on the network, data will only be received from one selected GP.

PC   HUB   GP

Receive

ABC.prx
123.prx
test.prx

Transfer the project currently displayed on the GP to the PC

32.3.2   Transfer Process

■ Transfer from PC to GP (Send)

This procedure is used when sending the first project to the GP.

NOTE
- For more information about the Send function, please refer to "32.10.3 How Send Works" (page 32-61) .
- The IP address preset at the time of purchase can be used to transfer data.
   ☞ " ■ Data Transfer Using the Factory-set IP Address" (page 32-21)
- Please refer to the settings guide for details.
   ☞ "32.10 Setting Up Transfer Tool" (page 32-55)

1 Connect the LAN cable to the GP, and connect it to a network with the PC where GP-Pro EX is installed. (Specify the IP address of the same network on the PC.)

2 Turn ON the GP's power. The GP's [Initial Start Mode] screen will be displayed.
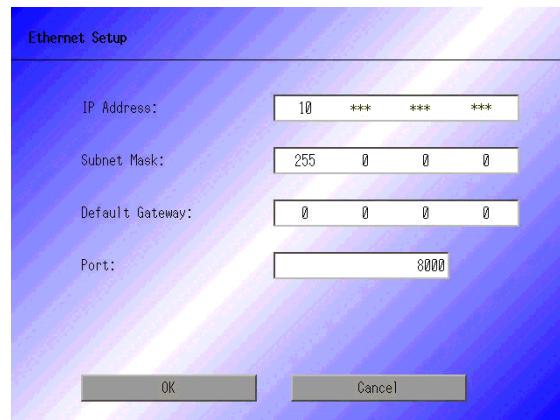
Initial Start Mode

Language   ENGLISH   ▼

Thank you for your purchasing.

To initialize this unit, please download the

Runtime system from the editor.

Note:Touch the Ethernet Setup Switch

to change the IP address.

Ethernet Setup

This screen will appear when you first connect the GP's power cord. After transferring a project once, this screen will not appear.

3 Set the IP address on the GP. Touch [Ethernet Setup]. The following screen will appear, and the contents set at the time of transfer will be displayed.

NOTE
- The IP address is set by default to 10.∗∗∗.∗∗∗.∗∗∗. The ∗∗∗ part depends on the individual model.

Ethernet Setup

IP Address: 10   ∗∗∗   ∗∗∗   ∗∗∗

Subnet Mask: 255   0   0   0

Default Gateway: 0   0   0   0

Port: 8000

OK   Cancel

4 Modify the IP address, subnet mask, etc., and touch [OK].
 (e.g.: First GP unit: [IP Address] 192.168.0.1; [Subnet Mask] 255.255.255.0)
 Set the IP address of the same network also to other GPs.
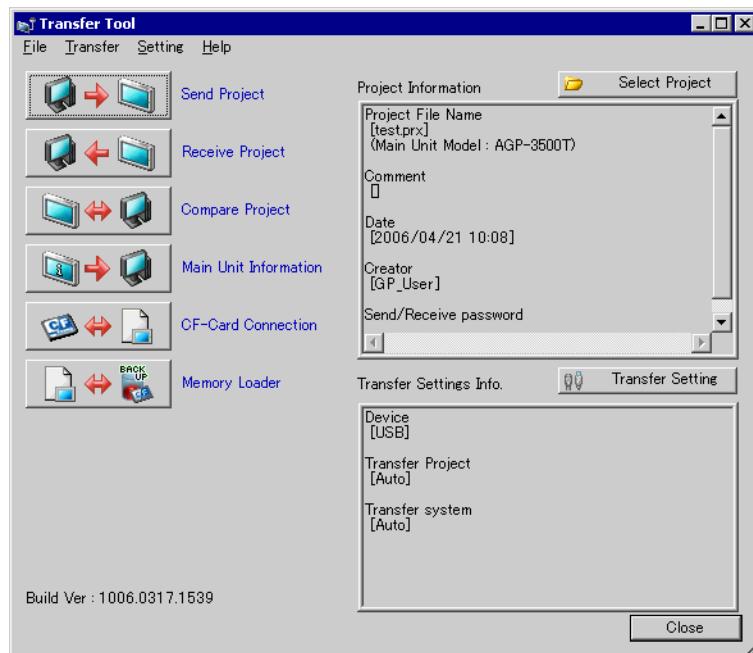
5 The confirm restart message will appear. Touch [Yes] and the system will restart.
 After restarting, the [Initial Start Mode] screen will be displayed again.

NOTE • Once a project has been transferred, starting from the next time, the [Initial Start Mode] screen will not appear. If you want to change Ethernet settings after this time, do so on the GP offline screen.
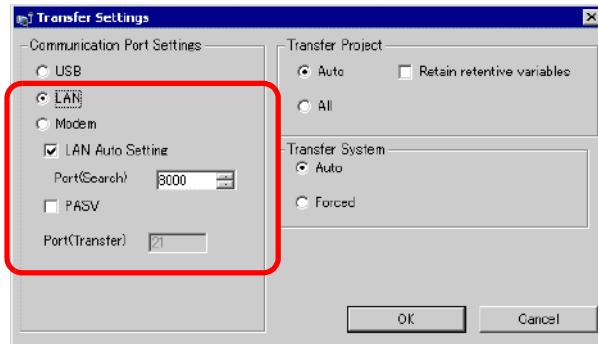
6 From GP-Pro EX's State Tool Bar, click the Transfer Project icon 🔄 and bring up the Transfer Tool.
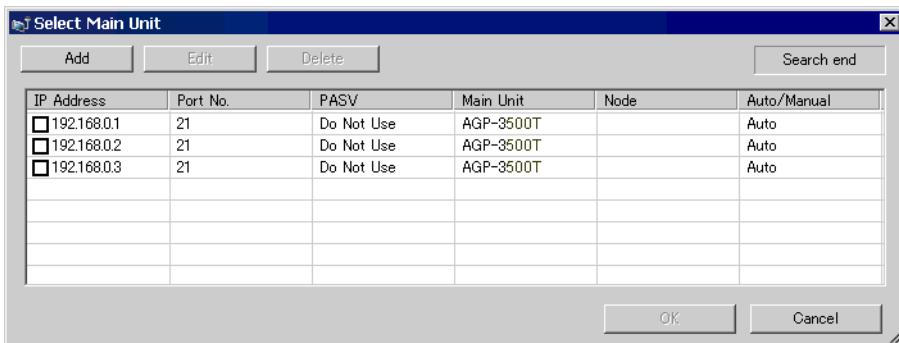
7 Check the project file name, etc., for the project to be transferred in [Project Information].
 If you want to transfer a different project, click the [Select Project] button and choose a project.

8 Click the [Transfer Setting] button and the following [Transfer Settings] dialog box will be displayed. Select [LAN] at [Communication Port Settings], put a check mark next to [LAN Auto Setting], and click [OK].
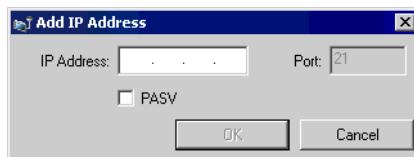
You can open the same dialog box by selecting [Transfer Project(G)]-[Transfer Settings(C)] in the [Project (F)] menu of GP-Pro EX.

9 When [Send Project] is clicked, the [Select Main Unit] dialog box will open, and the IP addresses of the GPs on the network will be displayed.
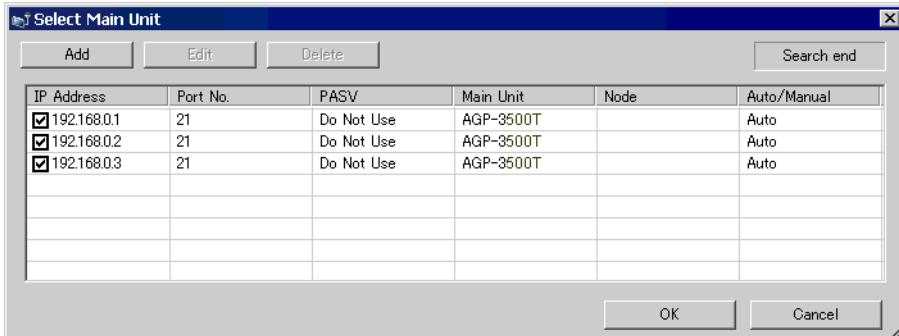
NOTE • Only GPs which correspond to the subnet masks of the PCs used for transfer will be retrieved.
• If the IP address was not automatically acquired, click [Add] and manually enter the IP address.
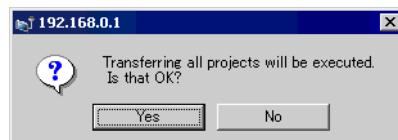
• If you cannot transfer because of limits to your access such as a firewall or router between the computer and the GP, putting a check mark next to the [PASV] option will sometimes allow you to transfer.

10 Put a check mark next to the IP address of the GP you want to transfer to and click [OK]. The transfer will begin.
When multiple IP addresses are checked, the project will be sent to multiple GPs at once.
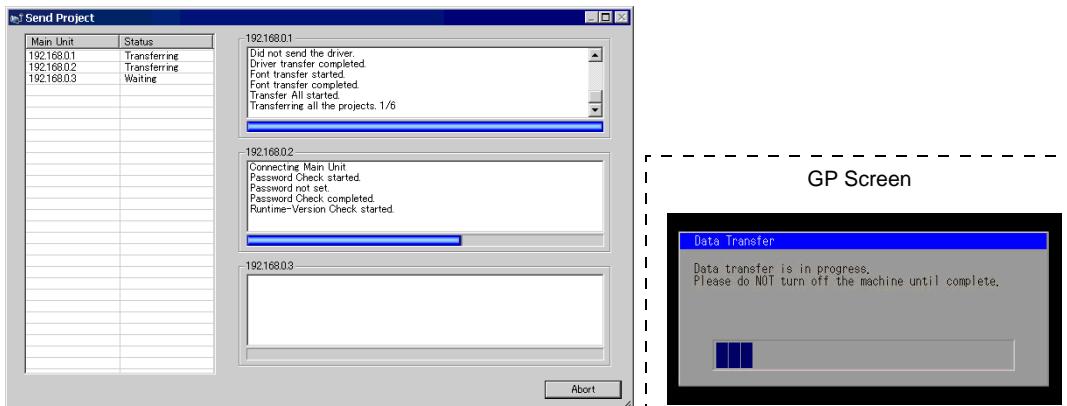
11 When the following dialog box appears, click [Yes]. (This dialog box will not be displayed when the same project file is sent again.)

The following dialog box will be displayed during transfer and you can check the communication status.
The following is an example of sending multiple projects.
(The GP switches into Transferring mode and communication with the device (PLC) is severed.)
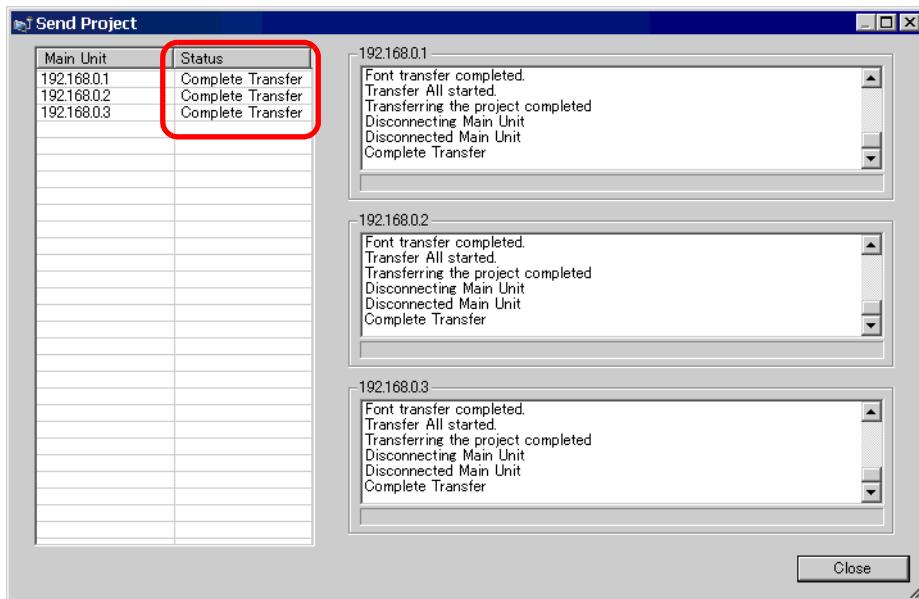
NOTE
• If you select multiple IP Addresses to transfer, the 1st machine start transferring first and then the 2nd machine, and then the 3rd machine, etc... in sequence.
• If a password is set to any project file transferred to one of the GPs, the next GP cannot start transfer until the password is confirmed.

12 When the transfer completes, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer].
Click [Close] and the dialog box will close.
(The GP will be reset and the transferred project's screens will be displayed.)

13 Close the dialog box to return to the Transfer Tool. Click [Close] and the Transfer Tool screen will close.
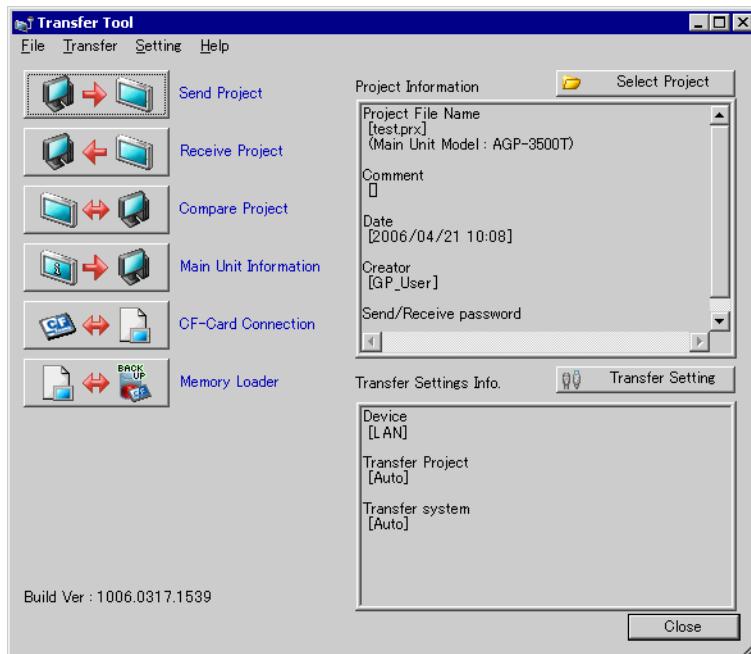
■ **Transfer from GP to PC (Receive)**

Receives project data currently stored on the GP to a PC. You must set an IP address on the GP prior to receiving data using Ethernet.
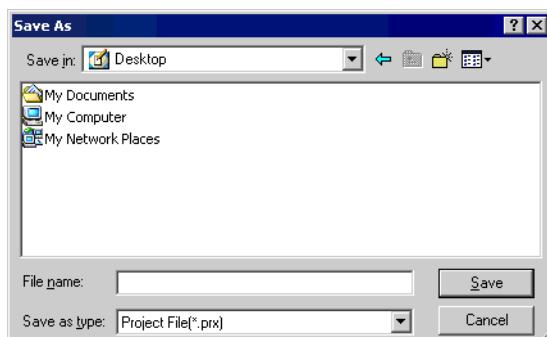
> NOTE
> • For more information about the Receive function, please refer to "32.10.4 How Receive Works" (page 32-62)
> • Please refer to the settings guide for details.
>   ) "32.10 Setting Up Transfer Tool" (page 32-55)
> • Set an IP address in the "Ethernet Settings" on the offline screen.

1 Connect the LAN cable to the GP, and connect it to a network with the PC where GP-Pro EX is installed. (Specify the IP address of the same network on the PC.)
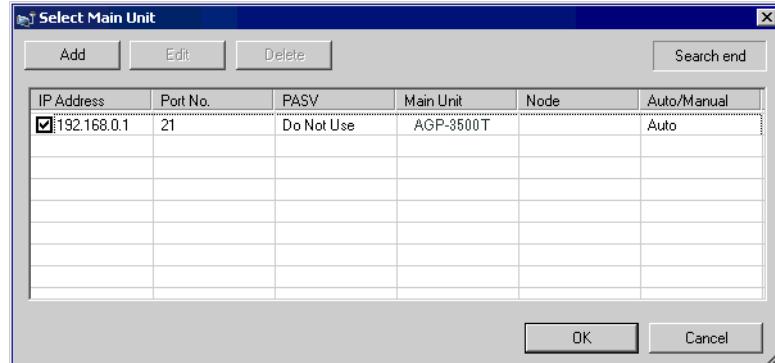
2 From GP-Pro EX's State Tool Bar, click the Transfer Project icon 🖳 and bring up the Transfer Tool.
Please ensure that [LAN] is selected for [Transfer Settings Info.]'s [Device].

3 Click [Receive Project]. The [Save As] dialog box will be displayed. Specify the [Save in] location and [File name] for the data to be received, and click [Save].
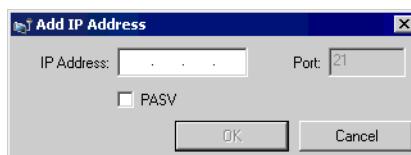
4 The [Select Main Unit] dialog box will be displayed, and the IP addresses of the GPs on the network will be listed. Put a check mark next to the IP address of the target GP and click [OK]. The file reception will begin.
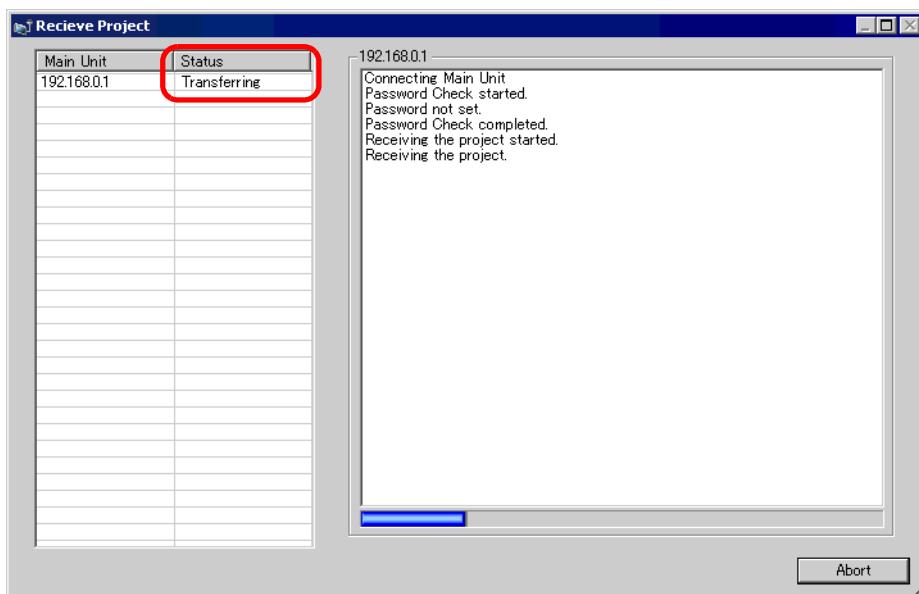
NOTE
- Only GPs which correspond to the subnet masks of the PCs used for transfer will be retrieved.
- If the IP address was not automatically acquired, click [Add] and manually enter the IP address.
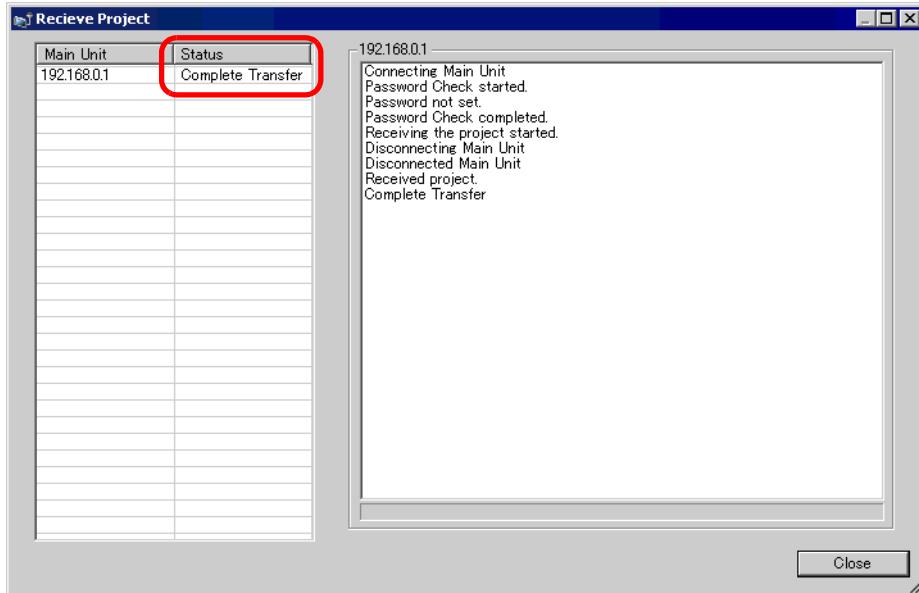
- If you cannot transfer because of limits to your access such as a firewall or router between the computer and the GP, putting a check mark next to the [PASV] option will sometimes allow you to transfer.
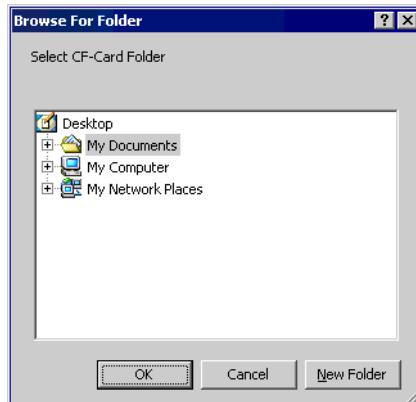
The following dialog box will be displayed during file reception and you can check the communication status.

5 When the file reception completes, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer].
Click [Close] and the dialog box will close.

If you receive a project file which is using the Recipe function (CSV data) or other CF-card data, the following dialog box will appear. Specify the location to save the CF-card's data. Click [OK] to return to the [Receive Project] dialog box and complete the process.

6 Close the dialog box to return to the Transfer Tool. Click [Close] and the Transfer Tool screen will close.

■ Data Transfer Using the Factory-set IP Address

The default IP address of the GP is set at the factory. When transferring with this IP address, change the IP address used by the PC you wish to transfer to.

| IMPORTANT | • Do not use the factory-set IP address when a private address "10.***.***.***"is used on the same network. Otherwise, a network communication error may occur. |

| NOTE | • Please refer to the settings guide for details.
☞ "32.10 Setting Up Transfer Tool" (page 32-55) |

1 Modify the PC's IP address subnet mask.
Set the IP address within the range of "10.255.255.1" to "10.255.255.254" and the subnet mask to "255.0.0.0".
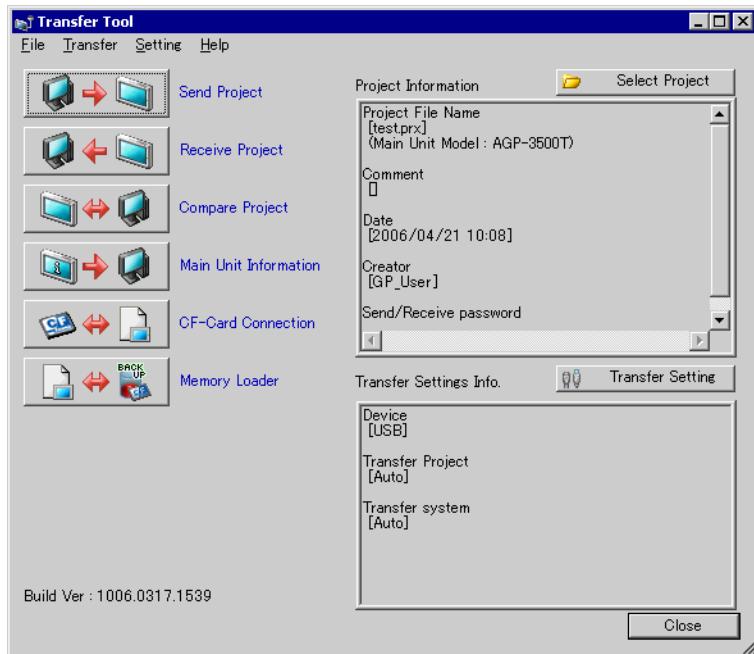
| NOTE | • Depending on the PC, you may have to restart before the settings will take effect. |

2 Connect the LAN cable to the GP, and connect it to a network with the PC where GP-Pro EX is installed.
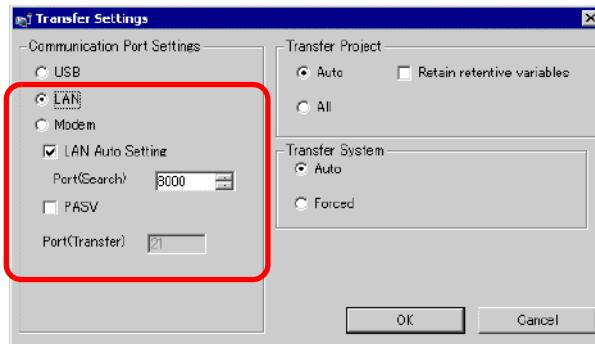
3 Turn ON the GP's power. The GP's [Initial Start Mode] screen will be displayed. Ethernet settings do not need to be set.

4 From GP-Pro EX's State Tool Bar, click the Transfer Project icon [icon] and bring up the Transfer Tool.
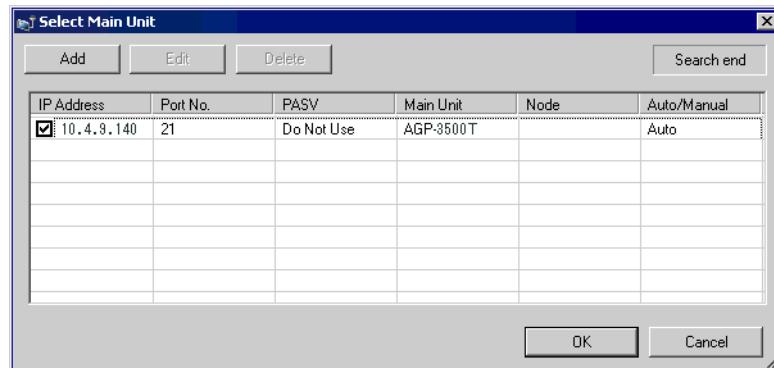
5 Click the [Transfer Setting] button. The following dialog box will open. Select [LAN] at [Communication Port Settings], make sure that [LAN Auto Setting] has a check mark, and click [OK].

You can open the same dialog box by selecting [Transfer Project(G)]-[Transfer Settings(C)] in the [Project (F)] menu of GP-Pro EX.
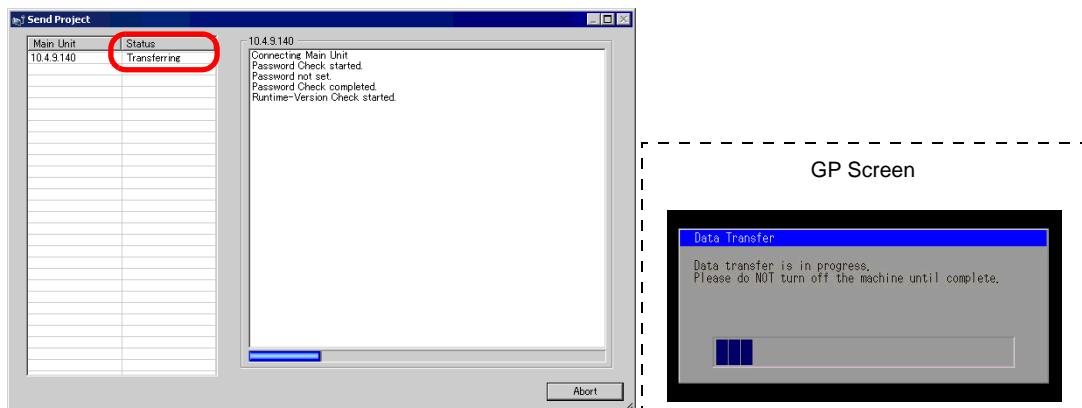
6 When [Send Project] is clicked, the [Select Main Unit] dialog box will open, and the IP address of the GP set at the factory will be displayed. Put a check mark next to the IP address and click [OK]. The transfer will begin. When multiple IP addresses are checked, the project will be sent to multiple GPs at once.
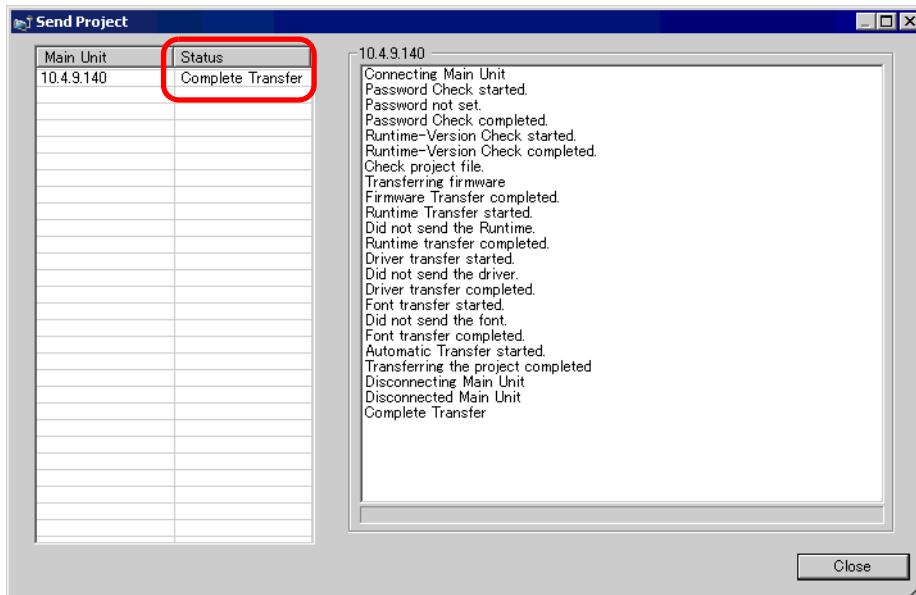
NOTE • If the GP's IP address and subnet mask have changed, they will not be retrieved. If they have changed, please set the updated IP address and subnet mask on the PC as well.

The following dialog box will be displayed during transfer and you can check the communication status.
(The GP switches into Transferring mode and communication with the device (PLC) is severed.)

7 When the transfer completes, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer].
Click [Close] and the dialog box will close.
(The GP will be reset and the transferred project's screens will be displayed.)

8 Close the dialog box to return to the Transfer Tool. Click [Close] and the Transfer Tool screen will close.

32.4 Confirming Projects' Changes Prior to Transfer (Comparison)

32.4.1 Details

Compare the open project with GP-Pro EX (or a selected project) and the project which GP remembers. This is useful to check which screen has been updated before the transfer.

The following things can be observed from the comparison results:

- Screen numbers are the same, and screen contents are different.
  $\rightarrow$ A Screen (s) updated
- Screen (s) exist only on the PC. $\rightarrow$ Screen (s) added
- Screen (s) exist only on the GP. $\rightarrow$ Screen (s) deleted

---
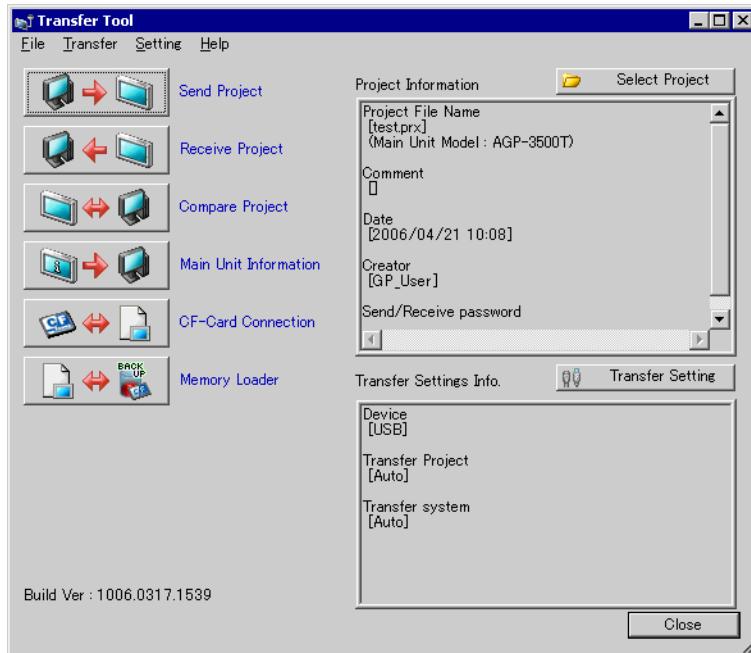
NOTE • Even when connected to an Ethernet (LAN), only one GP on the network can be selected for comparison.

32.4.2 Comparison Procedure
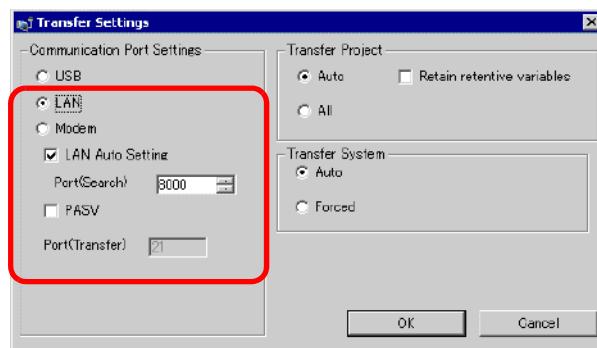
Compare the currently open project in GP-Pro EX and the project stored in the GP connected through LAN.

NOTE • Please refer to the settings guide for details.
) "32.10 Setting Up Transfer Tool" (page 32-55)
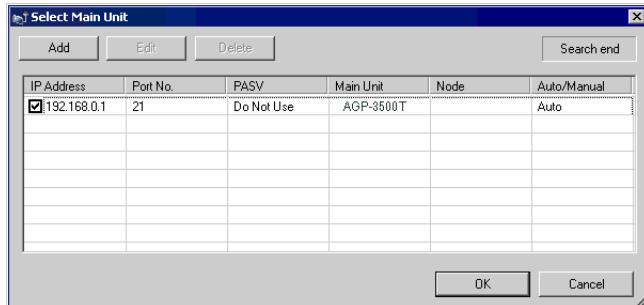
1 From GP-Pro EX's State Tool Bar, click the Transfer Project icon and bring up the Transfer Tool.
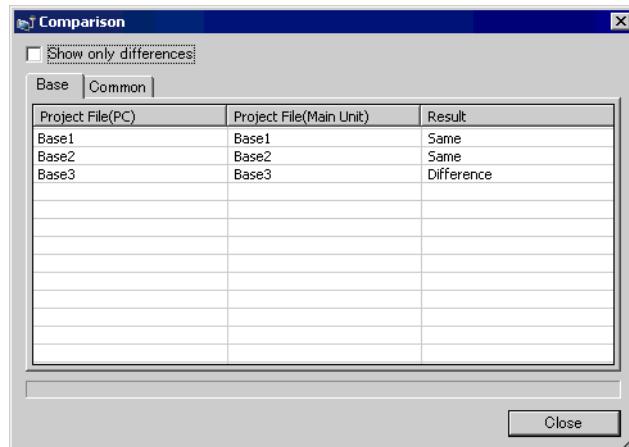
2 Click the [Transfer Setting] button and the following [Transfer Settings] dialog box will be displayed. Select [LAN] at [Communication Port Settings], put a check mark next to [LAN Auto Setting], and click [OK].
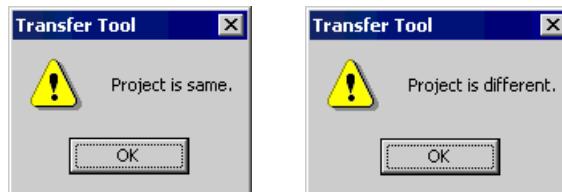
3 Put a check mark next to the IP address of the GP to read project data and click [OK].

4 The following [Comparison] dialog box will appear and display the results of the comparison by screen between the PC and GP.

NOTE

• Put a check mark next to the [Show only differences] box, and the comparison results will not show screens which are the [Same].
• The following messages will be displayed when there are no differences between the two projects, and when the project to compare is a completely different file from the project in the GP, respectively.

5 After confirming the results, click [Close] and the dialog box will close.

32.5 Transferring Only Data to a CF-Card

32.5.1 Details

With the [CF-Card Connection] feature of the Transfer tools, you can check data currently stored in the CF-Card in GP on your PC.
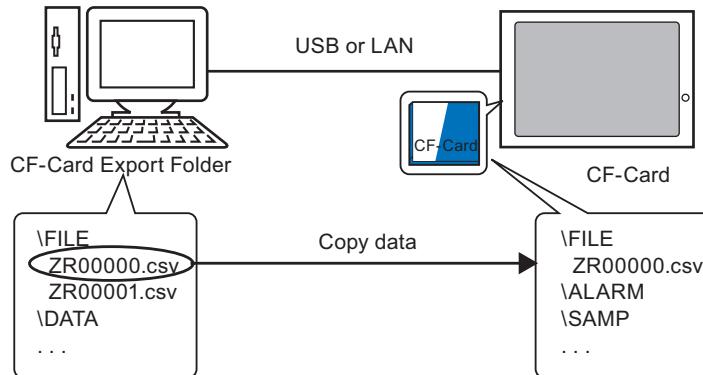
This feature is used to copy data between the PC's CF-card export folder and the GP's CF-card, to delete the data in a CF-card, or to change a file name.

• Data copy

You can copy data designated in the CF-card export folder (Recipe data and image data) to the GP's CF-card without transferring the project.

Also, you can copy data stored in the GP's CF-card (Alarm data and sampling data) to a PC.
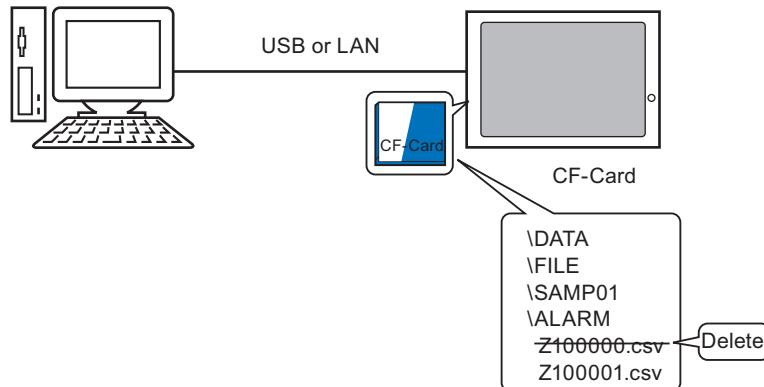
e.g.) Copy created Recipe data (ZR00000.csv) to the CF-card

• Delete CF-card data

You can delete data in the CF-card inserted in the GP.

e.g.) Delete CF-card Alarm data (Z100000.csv)
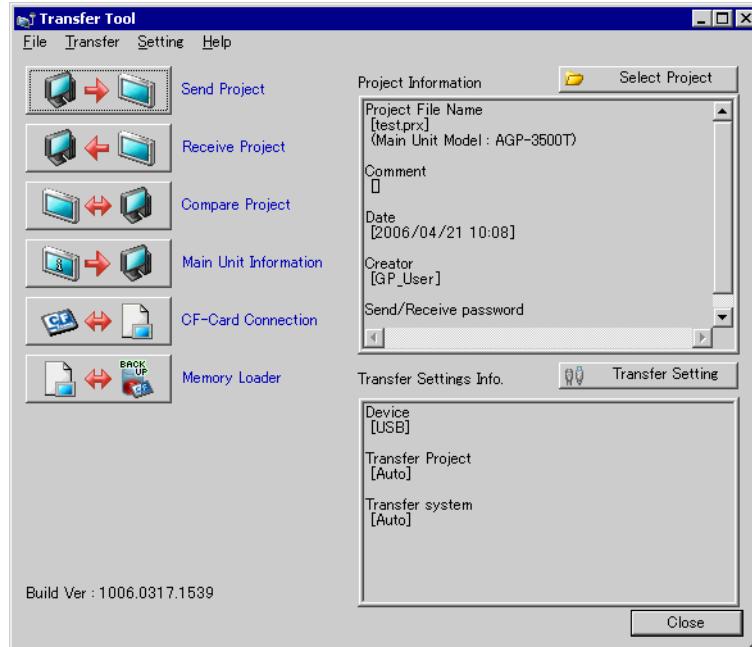
32.5.2 Transfer Process

Copy the recipe data (ZR00000.csv) in the CF-Card Output Folder to the CF-card in GP.
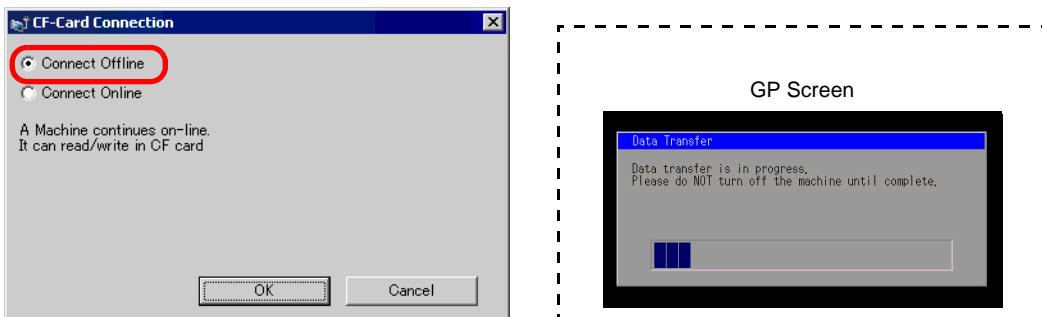
> NOTE
> • Please refer to the settings guide for details.
> ☞ "32.10 Setting Up Transfer Tool" (page 32-55)

1 From GP-Pro EX's State Tool Bar, click the Transfer Project icon 🖳 and bring up the Transfer Tool.
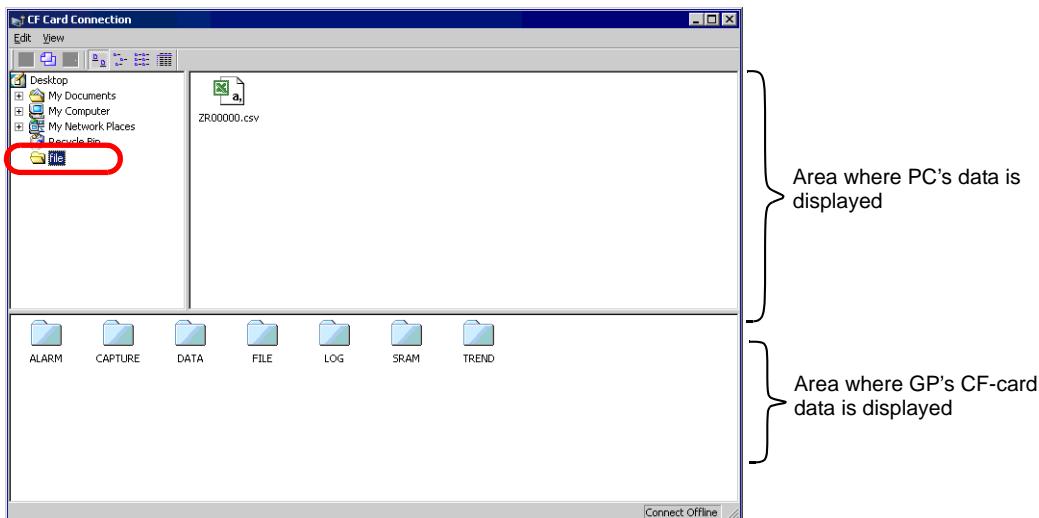
2 Click [CF-Card Connection]. The following dialog box will be displayed. Select [Connect Offline] and click [OK].
(The GP switches into Transfer mode and communication with the device (PLC) is severed.)

> NOTE
> • When [Connect Online] is selected, you can only check data information. You cannot copy, delete, or move data in the CF-Card.

3 When the CF-card transfer tool starts, specify the FILE folder in the CF-Card Output Folder from the folder list on the left. Data in the folder will be displayed on the right side.

Area where PC's data is displayed

Area where GP's CF-card data is displayed

4 Select the Recipe data (ZR00000.csv) from the data displayed on the right-hand side, then drag it to the lower CF-card area.

NOTE • You can also select the recipe data (ZR00000.csv), click 🔲 to copy, then click 🔲 in the CF-card area to paste it.

5 Close the tool with ✕, and go back to Transfer tools.
Click [Close] and the Transfer Tool screen will close.
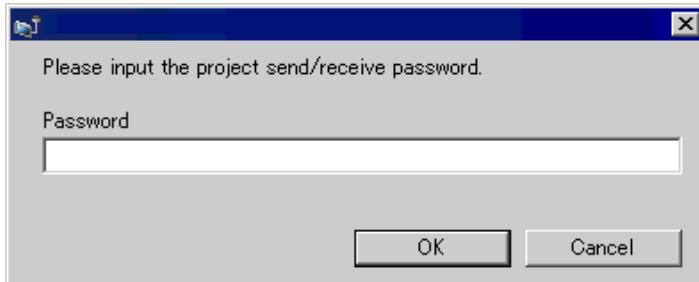
32.6　Transferring with Password

32.6.1　Details

You can protect the sending/receiving of projects by setting a password.
When sending/receiving projects, a Password Input Window is displayed, which prevents the transfer if passwords do not match.
This feature can be used as security measures, because only the specific persons can transfer data.

IMPORTANT
- Please do not forget the password as you will then be unable to transfer data.
- If a wrong password is inputted three times, the transfer will be canceled.

NOTE
- If a Password Input window remains displayed for 10 minutes without any input or movement, an alarm message will appear. After another 10 minutes pass, a timeout will occur and the transfer will be forcibly canceled.
- As for the project to which a password has been set, you have to input the password when comparing it or transferring it to the CF-card as well.
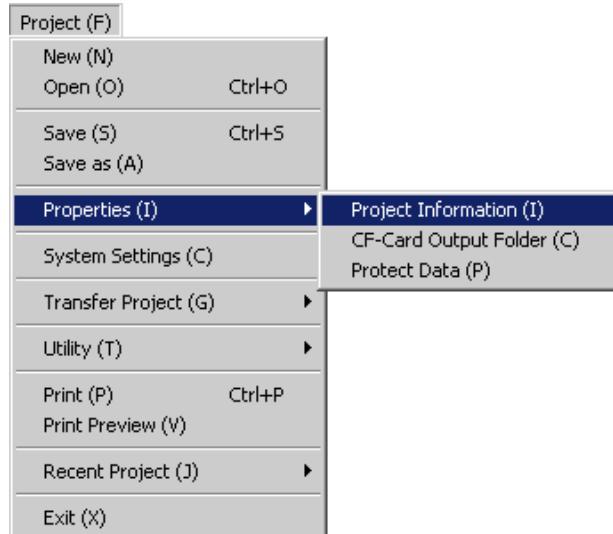
32.6.2 Setup Procedure

Set a password.
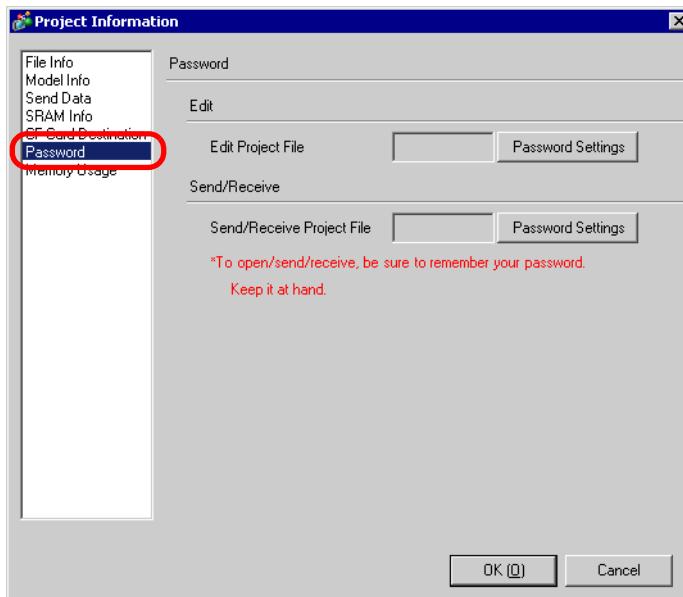
| IMPORTANT | • Please do not forget the password as you will then be unable to transfer data. |

1 Select GP-Pro EX's [Project (F)] menu - [Properties (I)] option - [Project Information (I)] command.
The [Project Information] dialog box will open up.

2 Select [Password] from the item list on the left-hand side of the [Project Information] dialog box.

3 Click [Password Settings] beside the [Send/Receive Project File]. The following dialog box will open.

4 Enter a password of up to 24 single-byte characters in [Password].
   Confirm the password by entering the same input in [Password (Reenter)].
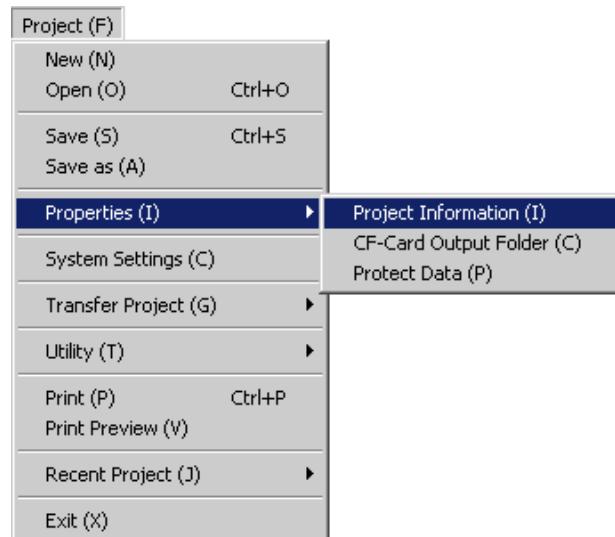
5 Click [OK] and the password settings are complete.

32.6.3 Remove/Change Transfer Password
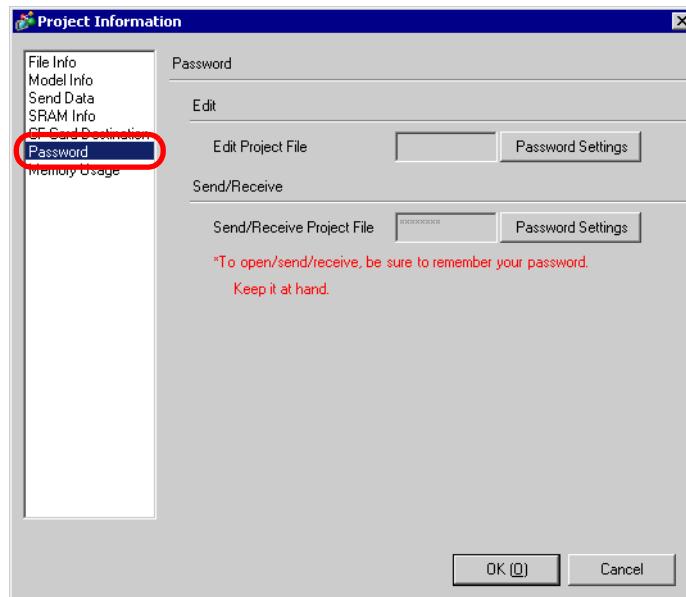
Releases a previously set password.

1 Select GP-Pro EX's [Project (F)] menu - [Properties (I)] option - [Project Information (I)] command.
The [Project Information] dialog box will open up.

2 Select [Password] from the item list on the left-hand side of the [Project Information] dialog box.

3 Click [Password Settings] beside the [Send/Receive Project File]. The following dialog box will open.

4 Enter the currently set password.

5 Leave [Password] and [Password (Reenter)] blank and click [OK]. The password will be released.

| NOTE | • To change the password, enter the new password in [Password], enter the same input in [Password (Reenter)], and click [OK]. |
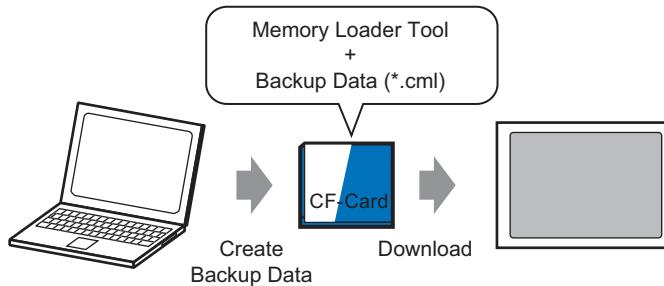
32.7 Downloading using the CF card

32.7.1 Details

Even without the USB cable or LAN cable connections, you can transfer project files between GP and PC by using the CF-card. You can also use the CF-card to copy project files from one GP to another GP.
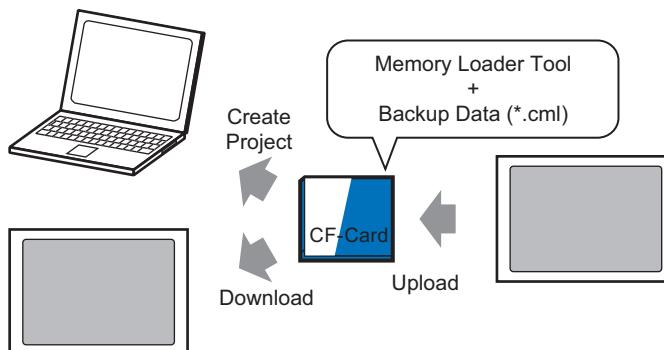
- PC → GP Transfer
  Download and display on the GP the project backup data created on the CF card.

- GP → PC Transfer
  Upload backup data from the GP to the CF card and create a project file on the PC. Or, you can download and display the backup data on a different GP.
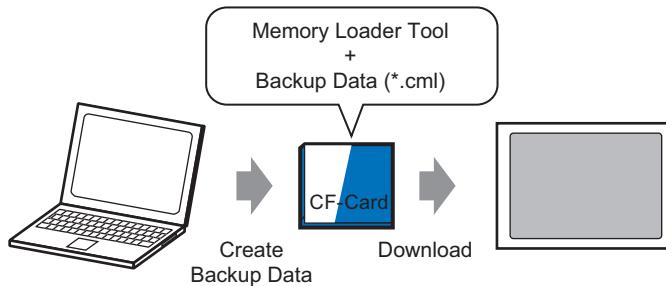
IMPORTANT
- For you to back up and upload the GP project to the CF card, or run the project from the CF card's back up data, a special tool (Memory Loader Tool) is required in the CF card.

32.7.2 Transfer Process

NOTE
- Please refer to the settings guide for details.
) " ■ [Memory Loader] Setup Guide" (page 32-59)
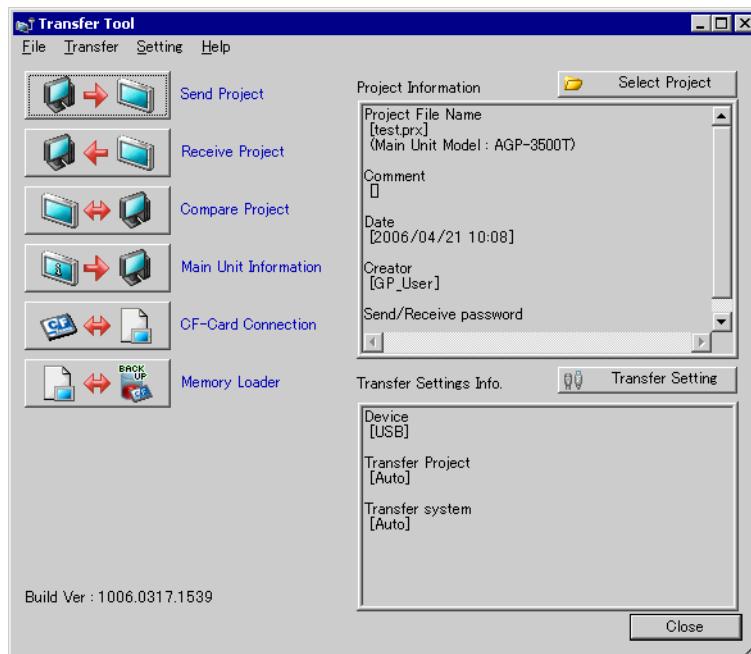
■ Transferring Project Files from PC to GP

Create a CF card with backup data of the project, then on the GP run the project from the CF card. By creating backup data on the PC, the Memory Loader Tool is automatically stored onto the CF card.
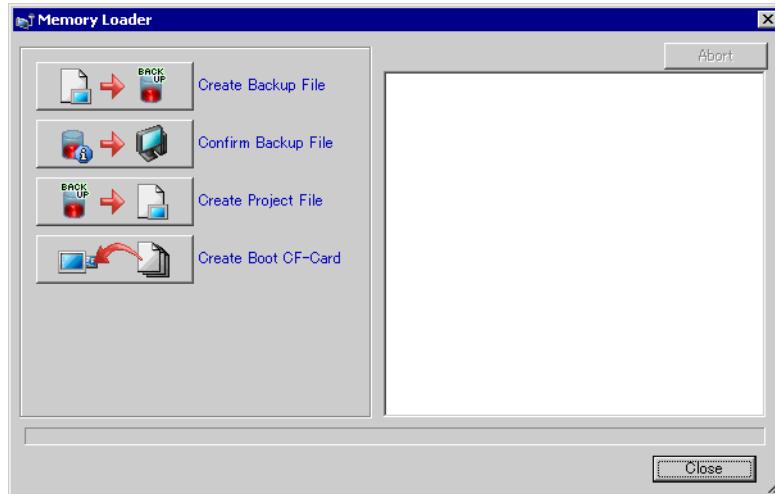
IMPORTANT
- You must use a CF-Card that has been formatted (initialized) in FAT format. You can also use GP to initialize the CF-Card. For the procedure, refer "2.7.2 Initializing the CF card" in "Maintenance/Troubleshooting".

1 From GP-Pro EX state toolbar, click Transfer Project icon 🖥 to start [Transfer Tool].
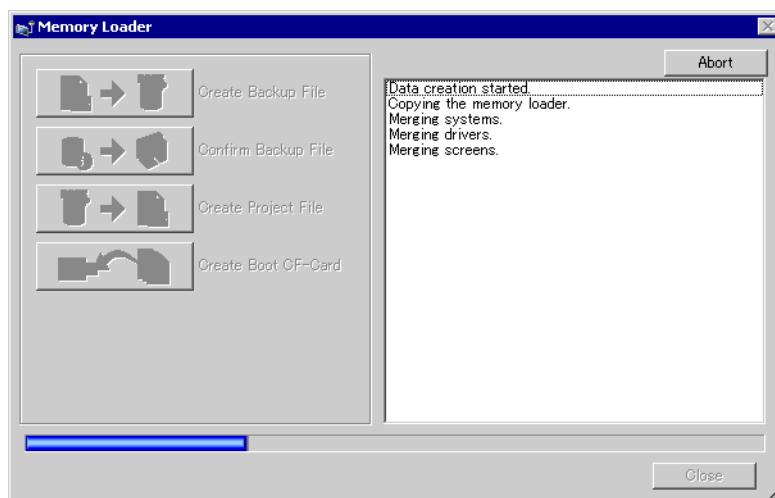
2 Click [Memory Loader] to open the next dialog box.

3 Click [Create Backup] to start creating data.
The following dialog box will be displayed during this process so that you can check the progress.
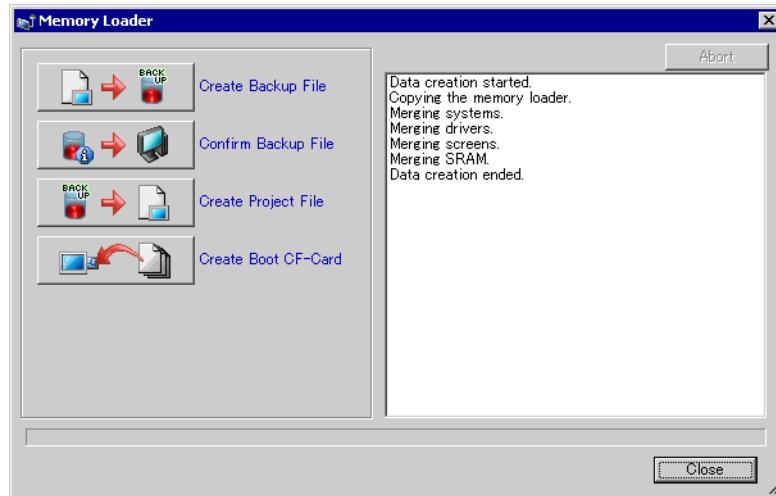
NOTE
• To create backup data (∗.cml), you should specify the CF-Card Output Folder in advance. If [CF-Card Destination] is not specified, the following warning message will appear. Click [OK] and specify the CF-card destination.

) "5.7.2 Setup Procedure ■ CF-Card Output Folder Setting Procedure" (page 5-38)
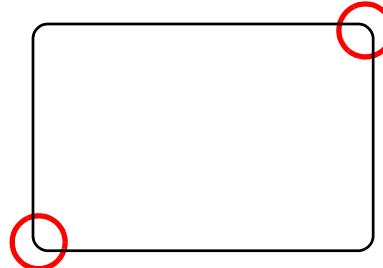
4 If the message "Data creation ended." appears, click [Close] to close the screen.

5 Move or copy all data created in the CF-Card Output folder to the CF-Card. Now the project backup data and the Memory Loader Tool are saved on the CF-Card.

6 Insert the CF-card you created to GP.
Touch the top-right corner → the bottom-left corner (or top-left → bottom-right) of the GP screen within 0.5 seconds and change to the offline mode.
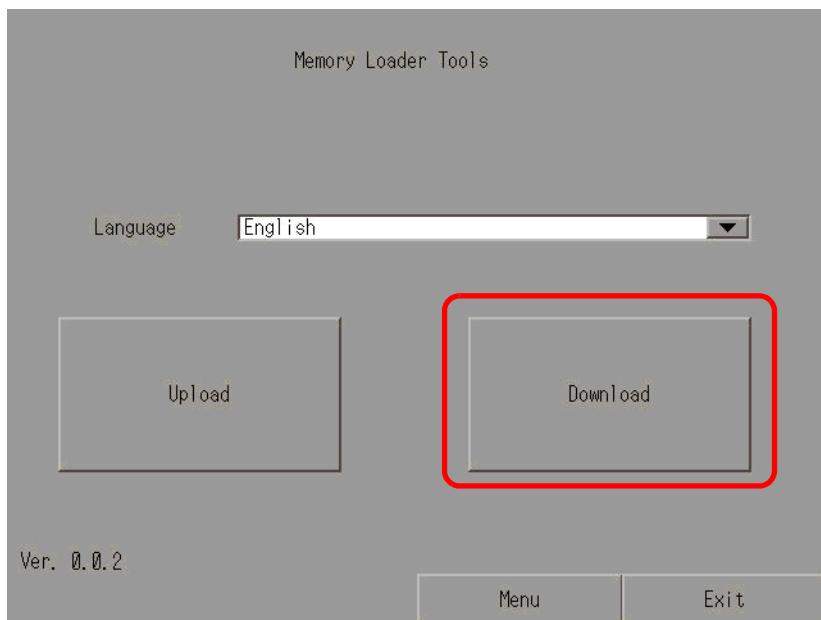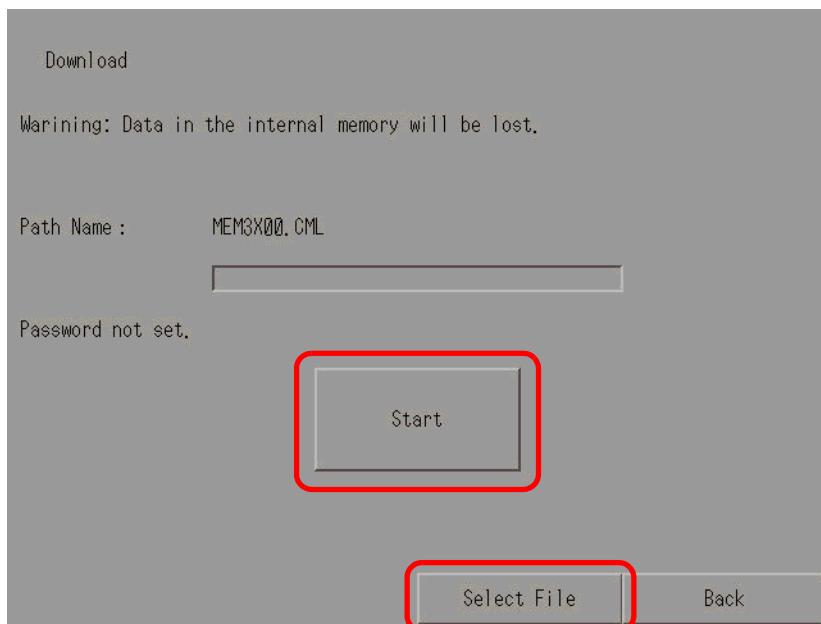
NOTE
• You can realize CF Start from the offline mode or with the dip switch on the back of GP. Turn off the power of GP and turn the dip switch No.1 ON, and then turn the power ON again. The Memory Loader Tool will start.

7 When the System menu appears, touch [CF Startup]. GP will be reset automatically.

8 The Memory Loader Tool starts and the following screen will be displayed. Touch [Download].

9 Select a file you want to transfer in the [Select File] and touch [Start] to start downloading (if the transfer password is set, enter the password before touching [Start]).
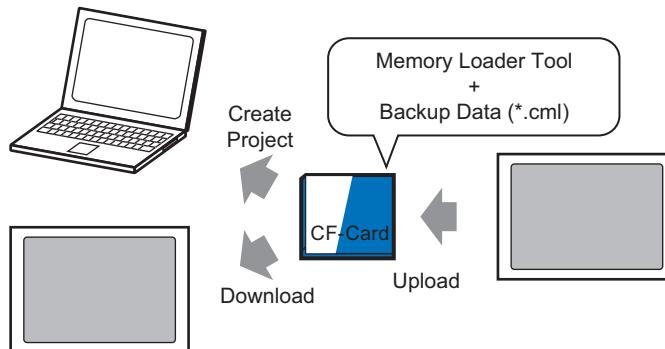
IMPORTANT
• Once you commit download, all project data that has been stored in GP will be deleted, including the data in the backup SRAM.
• If you performed CF Start with the dip switch, turn the No.1 dip switch back OFF.

10 Once download is complete, touch [Back] – [Exit] to exit the Memory Loader Tool.

■ Transferring Project Files from GP to PC (or another GP)

Back up (upload) the GP project to the CF card. On the PC, you can convert the backed up data (∗.cml) to a project file (∗.prx) and make any edits, or download to other GPs.
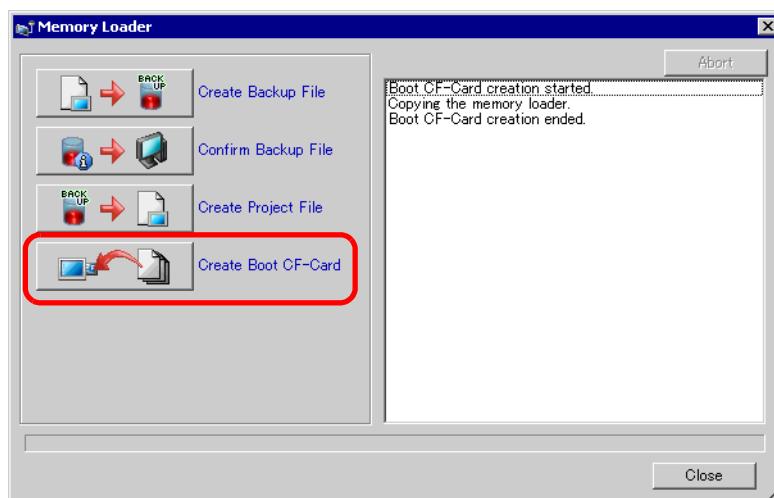

IMPORTANT
• You must use a CF-Card that has been formatted (initialized) in FAT format. You can also use GP to initialize the CF-Card. For the procedure, refer "2.7.2 Initializing the CF card" in "Maintenance/Troubleshooting".

◆ Create Start CF-Card

Create the Memory Loader Tool in the CF-card you are going to use before transferring data to the CF-card. (To backup (upload) projects in GP to the CF-Card, or to start (download) projects from backup data in the CF-Card, you need the special Memory Loader Tool.)
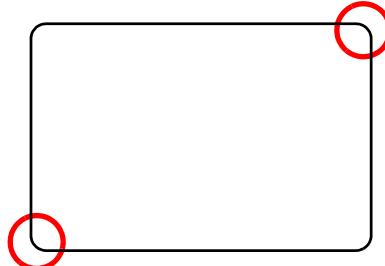
1 From GP-Pro EX state toolbar, click Transfer Project icon 🖳 to start [Transfer Tool].

2 When you click [Memory Loader], the following dialog box will appear.

3 Click [Create Boot CF-Card]. The Memory Loader Tool will be created in the designated CF-Card Output Folder.

4 Move or copy all data you created to the CF-card. Now the CF-card for CF Start is ready.

◆ Transfer (GP → CF-Card → PC)
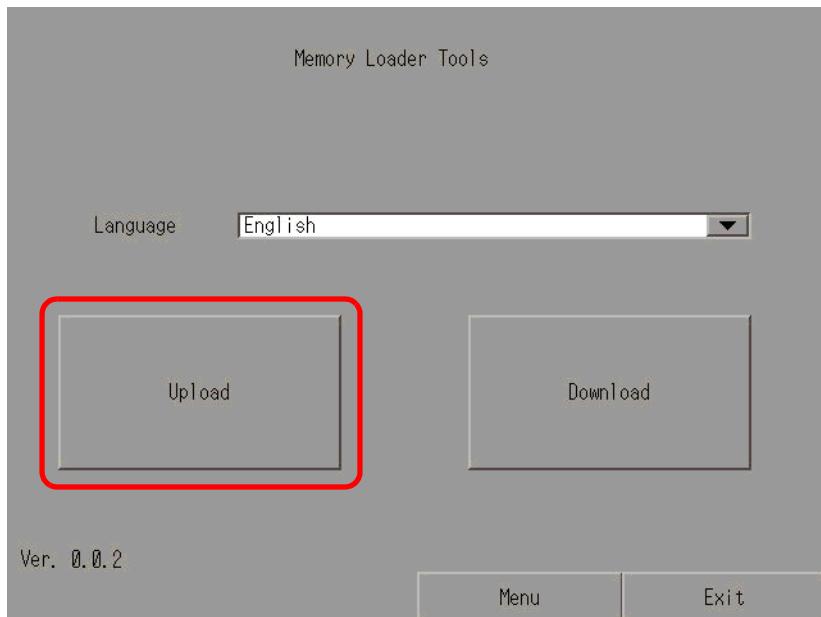
1 Insert the Start CF-card in GP. Touch the top-right corner → the bottom-left corner (or top-left → bottom-right) of the GP screen within 0.5 seconds and change to the offline mode.
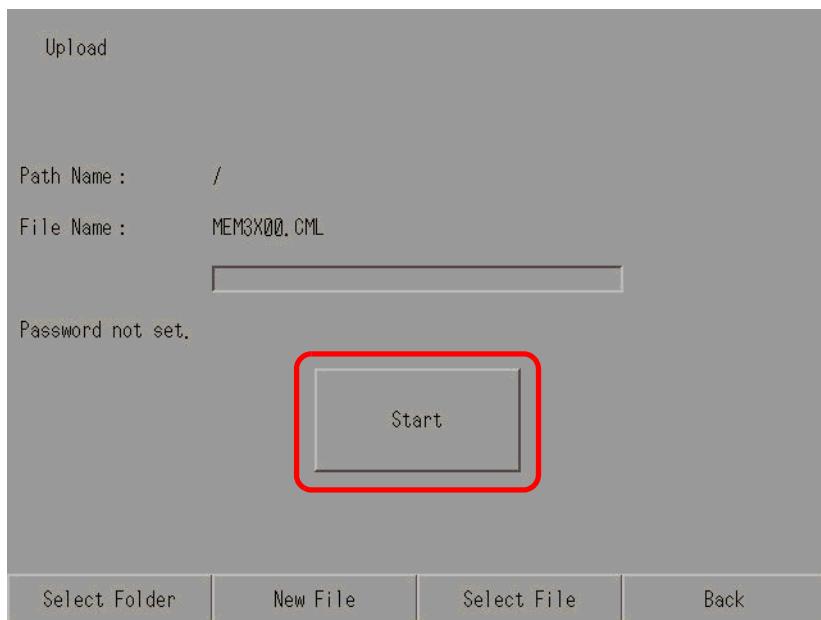
2 When the System menu appears, touch [CF Startup]. GP will be reset automatically.

3 The Memory Loader Tool starts and the following screen will be displayed. Touch [Upload].

4 Touch [Start] to start saving the project in GP as backup data (∗.cml). (If the transfer password is set, enter the password before touching [Start].)

```
Upload


Path Name :        /

File Name :        MEM3X00.CML


Password not set.


                  ┌──────────────────┐
                  │                  │
                  │      Start       │
                  │                  │
                  └──────────────────┘



  Select Folder      New File       Select File        Back
```
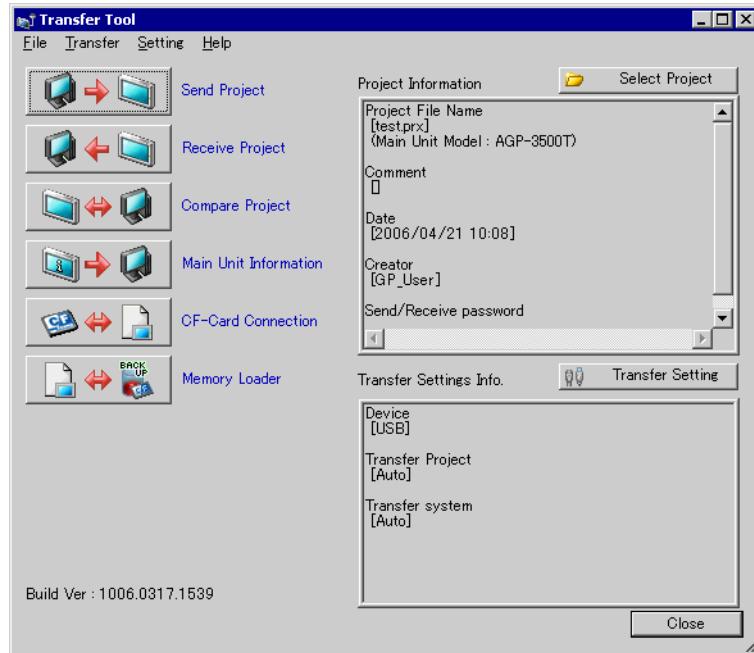
NOTE • Backup data will be saved as displayed [File Name]. As default, if you are using AGP-3500T, this will be "MEM3X00.CML". If you want to save as other file name, touch [New File] to specify a new file name or use [Select File] to overwrite the existing file in the CF-card.
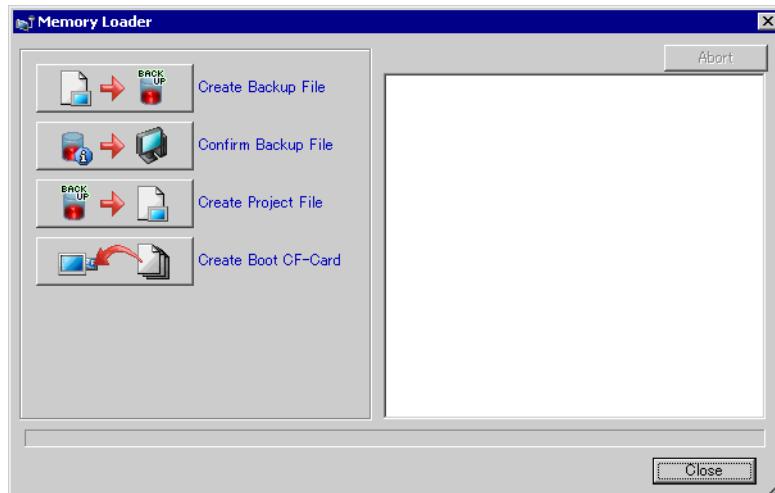
5 Once upload is complete, touch [Back] to go back to the initial screen of the Memory Loader Tool. Touch [Exit] to exit.

6 Remove the CF-card from GP and insert it to your PC's CF-card slot.
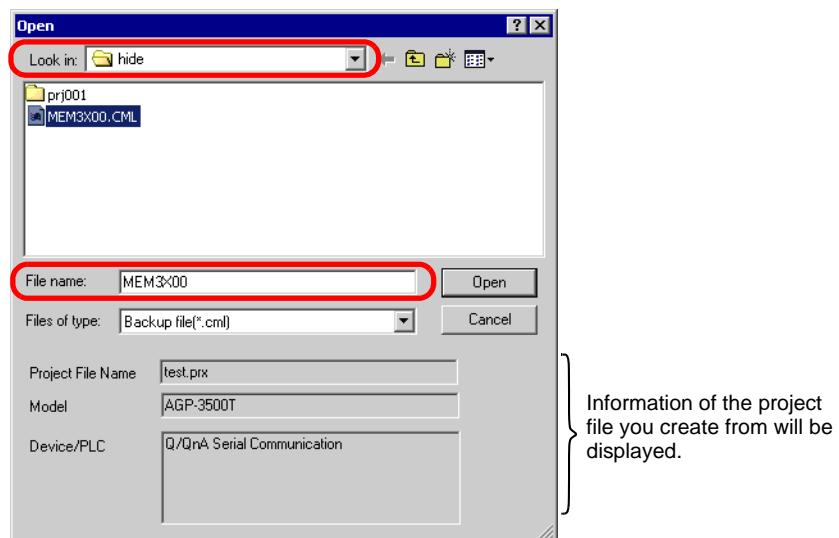
7 From GP-Pro EX state toolbar, click Transfer Project icon ◻️ to start [Transfer Tool].
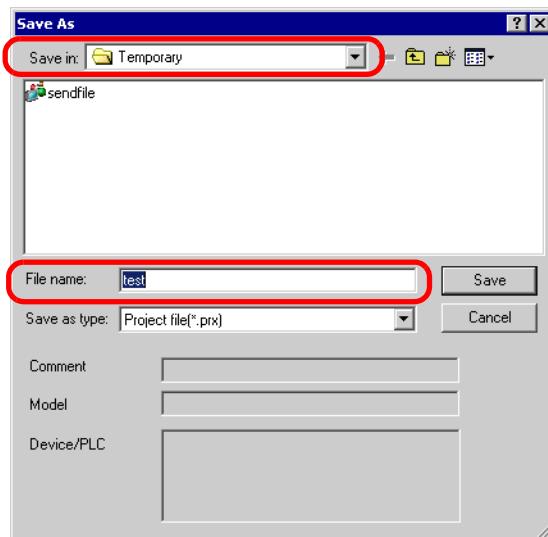
8 When you click [Memory Loader], the following dialog box will appear.
  Click [Create Project File].
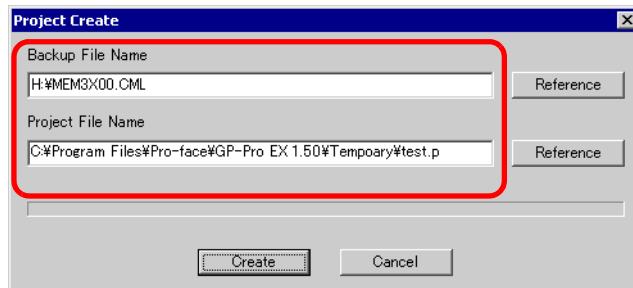
9 In the next dialog box, specify the [Look in] location in the CF-card. Select a backup file (∗.cml) you want to convert to a project file (∗.prx), and click [Open].

Information of the project file you create from will be displayed.

10 Specify the name and the location of the project file you are going to create and click [Save].
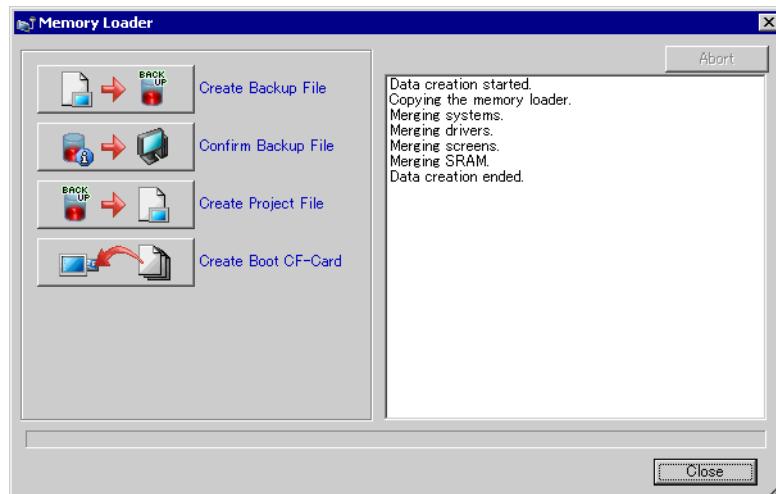
11 Check the settings in the dialog box and click [Create].

Project Create

Backup File Name

H:¥MEM3X00.CML   [Reference]

Project File Name

C:¥Program Files¥Pro-face¥GP-Pro EX 1.50¥Tempoary¥test.p   [Reference]

[Create]   [Cancel]

NOTE • Click [Reference] to edit the settings of the backup file or the project file.

---

12 The data creation progress will be displayed.
   If the message "Data creation ended." appears, click [Close] to close the screen.
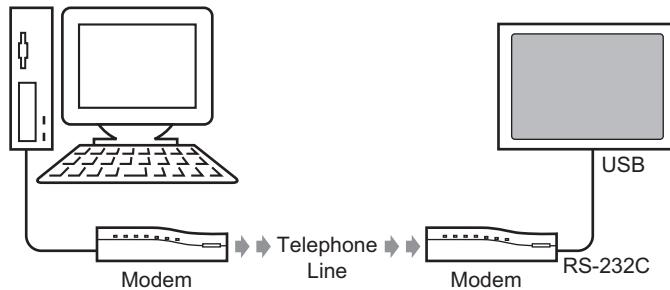
Memory Loader

[Abort]

Create Backup File

Confirm Backup File

Create Project File

Create Boot CF-Card

Data creation started.
Copying the memory loader.
Merging systems.
Merging drivers.
Merging screens.
Merging SRAM.
Data creation ended.

[Close]

32.8   Updating Remote Screen Data via Modem

32.8.1   Details
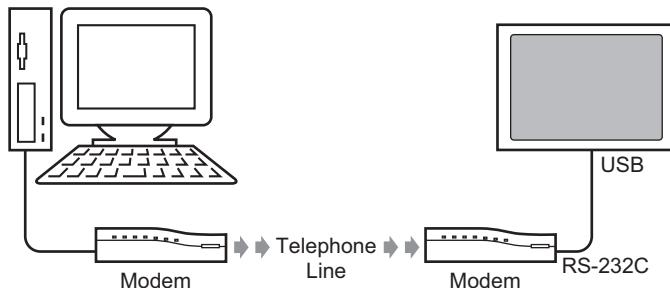
Using a modem, transfers screen data edited on the PC to a remote GP. You can also transfer from the GP to the PC.

NOTE
• In this transfer, you can only transfer screen information of the project file. You cannot transfer all projects or the system.
• To connect GP and a modem, use "CA6-USB232-01", a USB-Serial (RS-232C) conversion cable manufactured by Pro-face (sold separately). The following conversion cable can also be used:
Manufacturer: I-O DATA DEVICE, Inc., Model: USB-RSAQ3

32.8.2 Transfer Process

Connect a modem to your PC and GP. Transfer the screen data via dial-up connection from your PC to GP.
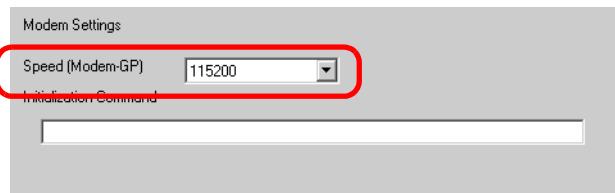
| NOTE | • Your PC needs to have a proper communication settings for the modem. You can check the [Phone and Modem Options] in the Windows®'s [Control Panel].
• To connect GP and a modem, use "CA6-USB232-01", a USB-Serial (RS-232C) conversion cable manufactured by Pro-face (sold separately). The following conversion cable can also be used:
Manufacturer: I-O DATA DEVICE, Inc., Model: USB-RSAQ3 |

1 From GP-Pro EX state toolbar, click System Settings icon [icon] to display the [System Settings Window] and click [Modem Settings].

| NOTE | • If the [System Settings Window] tab is not displayed in the workspace, select the [View (V)] menu - [Work Space (W)] option - [System Settings Window (S)] command. |
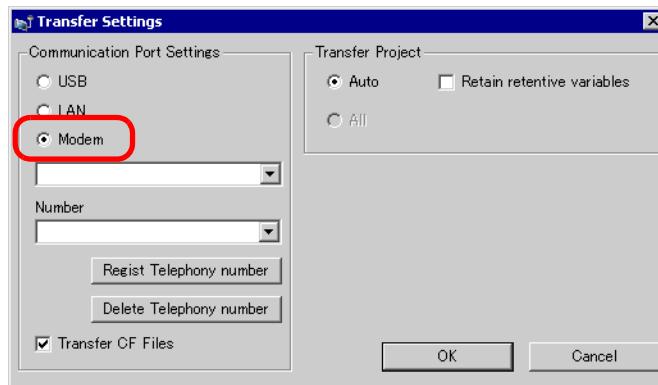
2 Select the communication speed of the modem. Now you have finished the modem settings for GP-Pro EX.

Modem Settings

Speed (Modem-GP)   115200

Initialization Command

NOTE • For the proper modem settings, please read the manual of the modem.

3 Click Transfer Project icon to start [Transfer Tool].

4 Click [Transfer Settings] and the following dialog box will appear. Select [Modem] in the [Communication Port Settings].

Transfer Settings

Communication Port Settings

○ USB
○ LAN
⦿ Modem

Number

Regist Telephony number
Delete Telephony number

☑ Transfer CF Files

Transfer Project

⦿ Auto   ☐ Retain retentive variables
○ All

OK   Cancel
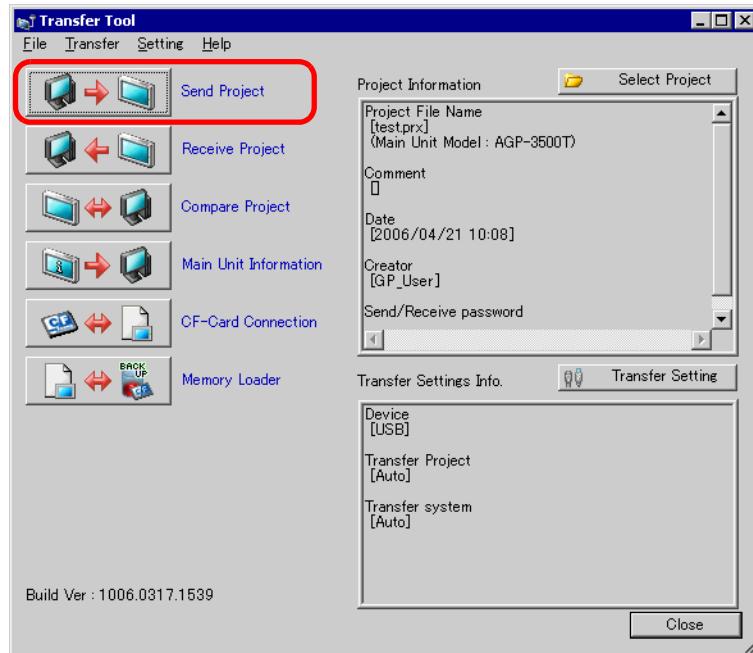
5 Select the modem you are going to use from the modems registered with your PC. (The registered modems can be viewed by using [Device Manager] in [Control Panel].) Enter the telephone number of the modem connected with GP in the [Phone No.] field.

6 If you don't need to transfer data in the CF-Card Output Folder to the CF-card in GP, uncheck [Transfer CF Files] and click [OK].

☐ Transfer CF Files
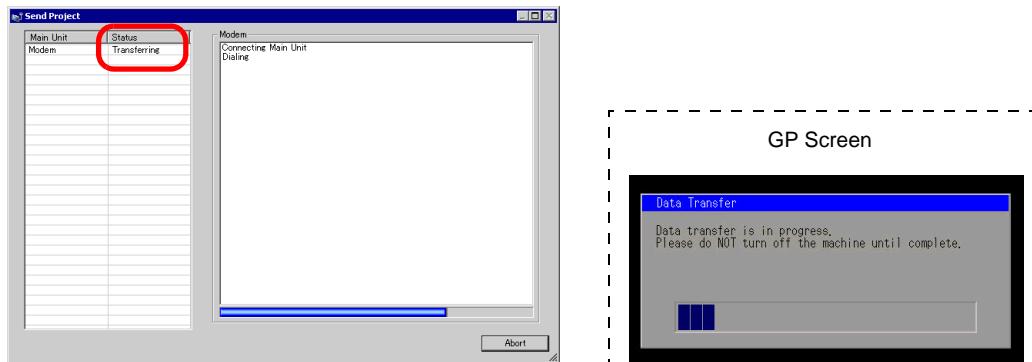
7 Click [Send Project] to start the transfer.
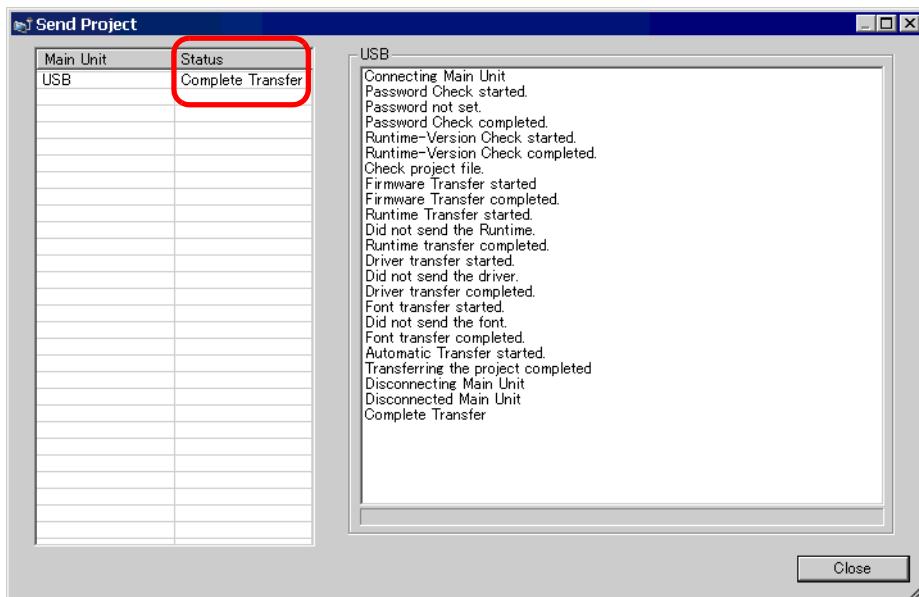
During the transfer, the following dialog box will appear so that you can check the communication status.
(The GP switches into Transferring mode and communication with the device (PLC) is severed.)

8 When the transfer completes, the status displayed in the dialog box will change from [Transferring] to [Complete Transfer].

Click [Close] and the dialog box will close.

(The GP will be reset and the transferred project's screens will be displayed.)
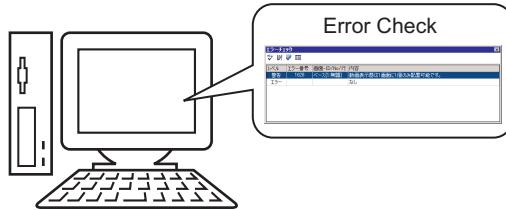
9 Close the dialog box to return to the Transfer Tool. Click [Close] and the Transfer Tool screen will close.

32.9   Checking Errors

32.9.1   Details

Make sure there is no error in the screen settings and the logic program before sending the project file, so that you can avoid error corrections afterwards.
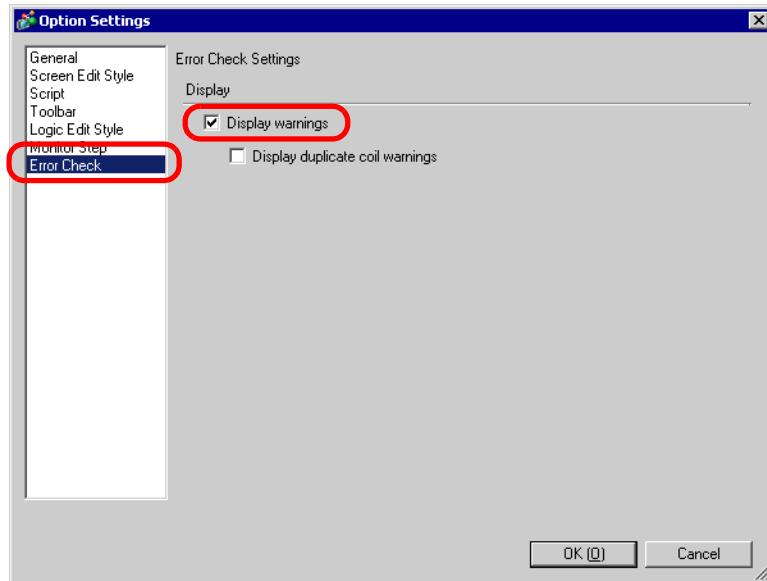
NOTE   • Automatic error check will performed when you transfer or save a project file.
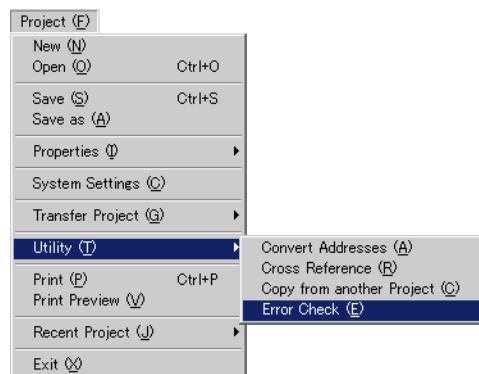
32.9.2 Setup Procedure

NOTE
- Please refer to the settings guide for details.
  ☞ "5.13.7 [Option Settings] Settings Guide" (page 5-128)
  ☞ "5.13.4 [Utility] Settings Guide" (page 5-78)
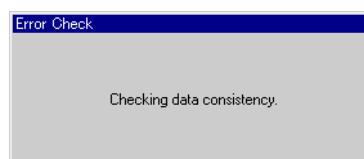
1 Select [Option Settings (O)] in the [View (V)] menu to display the [Option Settings] dialog box. Select the [Error Check] and check the [Display warnings]. Click [OK] to finish the setting.
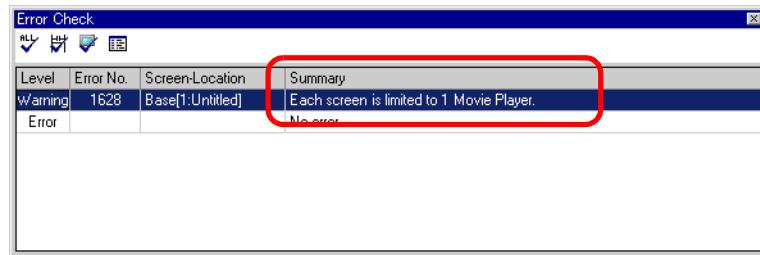
2 Select [Error Check (E)] from the [Utility (T)] of the [Project (F)] to start the Error Check.
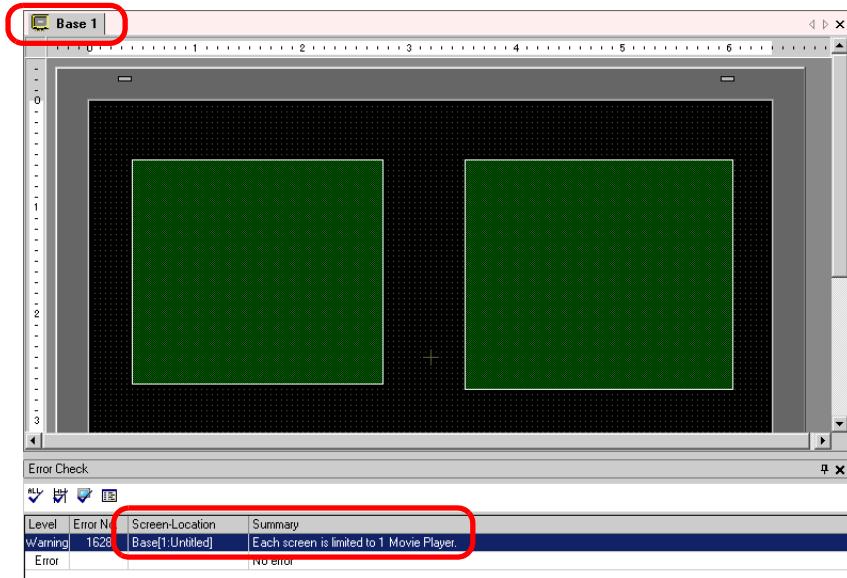
During the Error Check, the following window will be displayed. This window automatically closes when finished.

3 If there is an error or a warning, the following screen will appear. Check details in the [Summary] column.
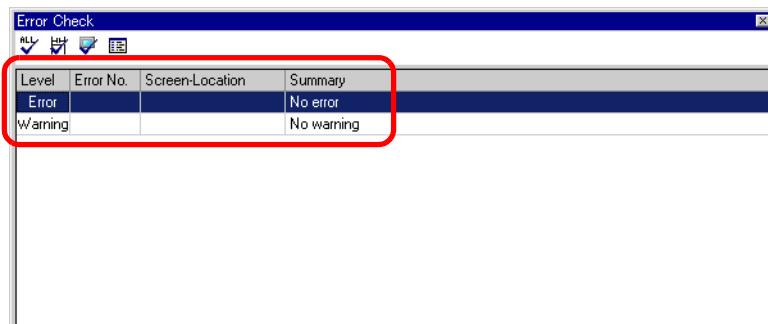
4 If you double-click on the selected line in the list, the screen with the error will appear.
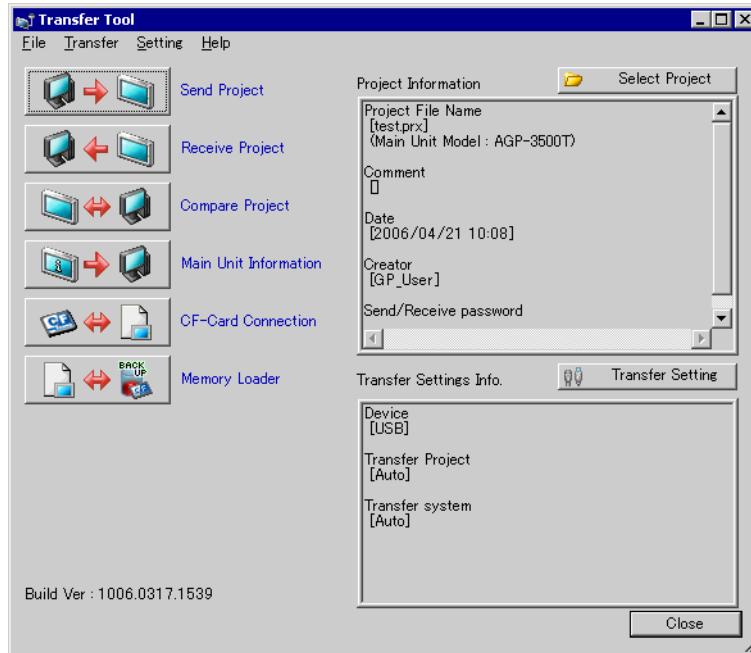
NOTE
• For errors in the logic program, see the following section.

☞ "29.11 Correcting Logic Program Errors" (page 29-82)

5 Make corrections in the relevant areas and click 🗹 to recheck errors. Repeat this process and once all the errors are fixed, the window will look like the following.

32.10 Setting Up Transfer Tool

The tool used for transferring project data between a PC and the GP is called "Transfer Tool". From GP-Pro EX's State Tool Bar, click the [Transfer Project] icon 🖥️ (or select the [Project (F)] menu - [Transfer Project (G)] option - [Other Transfer (E)] command to bring up the Transfer Tool.
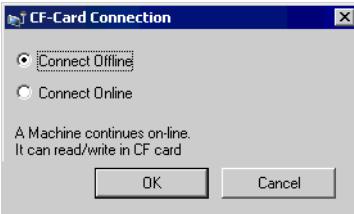
NOTE
• You can only install the transfer tool and not GP-Pro EX in your PC. This is useful if you only perform transfers with the PC which is different from the PC with the development environment for drawing.
) "32.10.5 Installing only Transfer Tool" (page 32-63)
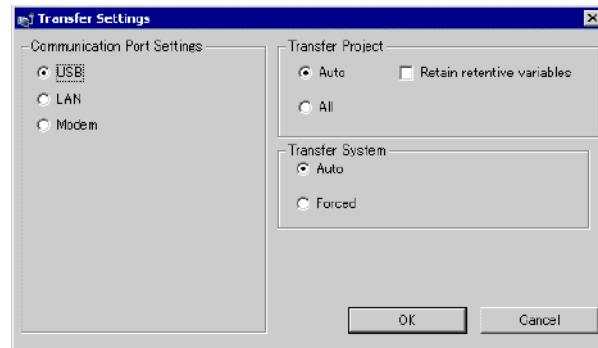
Setting	Description
Send Project	Sends the currently open project in GP-Pro EX (or a project selected in [Select Project]) to the GP. For projects set with the CF-card export folder, the data in the CF-card export folder will be sent to the CF-card inserted in the GP.) "32.10.3 How Send Works" (page 32-61) **IMPORTANT** • When a send occurs, data stored in GP's backup SRAM will be deleted.
Receive Project	Project data stored in a connected GP is received and saved to the PC in a designated location as a new project file (∗.prx). For projects using the CF-card, all data on the CF-card inserted in the GP will also be received and saved in a designated location.) "32.10.4 How Receive Works" (page 32-62)

Continued

Setting	Description
Compare Project	Compares the currently open project in GP-Pro EX (or a project selected in [Select Project]) and the project stored in a connected GP, and displays the results. For project set with the CF-card export folder, the CF-card export folder data and the data on the CF-card inserted in the GP will also be compared.
Main Unit Information	Reads and displays the connected GP's system version, stored project information and screen information. System Version : Type and version of the main unit, version of the driver Project Information : Project file name, comment, date, creator Screen List : Each screen's number and type (Base screen, Window screen, and Common screen), comment, size, date
CF-Card Connection	Tasks you can perform are different depending on the connection. **CF-Card Connection** dialog: ○ Connect Offline ○ Connect Online A Machine continues on-line. It can read/write in CF card [OK] [Cancel] • Connect Offline While the CF-card is connected, GP is switched to the Transferring mode and other devices such as PLC become disconnected. You can copy files between the CF-card Output folder and the CF-card, delete and change names of the files in the CF-card. • Connect Online While the CF-card is connected, GP is also communicating with other devices such as PLC. You can check the CF-card information (File Name, File Size, Date). **NOTE** • GP is automatically disconnected from the CF-card 10 minutes after the last action in the CF-card.
Memory Loader	In the [Memory Loader] dialog box, you can create and verify backup data or create a project file from the backup data. ☞ " ■ [Memory Loader] Setup Guide" (page 32-59)
Select Project	Opens a dialog box to select the project file (∗.prx) you want to transfer to the GP.
Project Information	Displays information for the currently displayed project in GP-Pro EX (or a project selected in [Select Project]). Change to another project using [Select Project] and the display will update to that project's information.
Transfer Setting	In the [Transfer Settings] dialog box, you can modify port (USB/LAN) or transfer method. ☞ "32.10.1 Setting UP [Transfer Settings]" (page 32-57)
Transfer Settings Info.	Displays setting information about the currently set GP's communication port and transfer method. Modify the [Transfer Settings] and these contents will be updated.
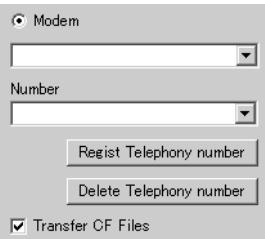
32.10.1　Setting UP [Transfer Settings]

Select GP-Pro EX's [Project (F)] menu - [Transfer Project (G)] option - [Transfer Settings (C)] command or click [Transfer Settings] on the Transfer Tool to display the following dialog box.
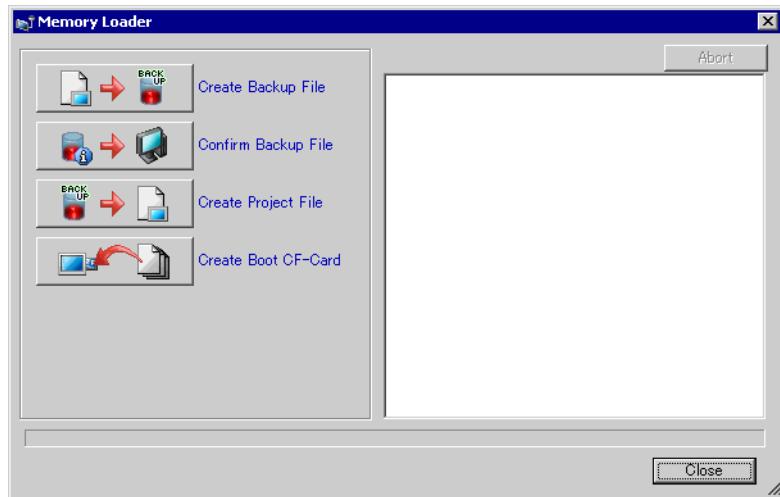
Setting			Description
Communication Port Settings	USB		Designate this when using a USB transfer cable to transfer screens.
	LAN		Designate this when using Ethernet (LAN) to transfer screens.
		LAN Auto Setting	Setting Designate whether or not to automatically search all GPs on the same network when [LAN] is selected.
		Port (Search)	When [LAN Auto Setting] is designated, set the port number during search.
		PASV	When [LAN] is selected, designate this if communication does not work due to the network security.
		Port (Transfer)	When [PASV] is designated, displays the port number that will be used.

Continued

Setting			Description
Communication Port Settings	Modem		Select this option when you use a modem to transfer projects. • Modem Number Regist Telephony number Delete Telephony number ☑ Transfer CF Files
		Number	Enter the phone number you use for the modem.
		Register Telephony number	You can register up to 100 phone numbers.
		Delete Telephony number	You can delete phone numbers which are already registered.
	Transfer CF Files		You can transfer data in the CF-card to the modem.
Transfer Project	Auto		The project to be transferred is automatically compared with the currently stored project in the GP to see if they are the same. If they are the same project, only updated or added screen data will be sent. When sending a new project (none of the data is in the GP), or when a different project is stored in the GP, the whole project will be sent only after [OK] is selected for a displayed confirmation message.
	All		Sends the whole project to be transferred. Overwrites the existing project on the GP.
	Retain retentive variables		You can choose to transfer the project while you retain the current variables. IMPORTANT • When this option is not selected, the data in the variable will be initialized.
Transfer System	Auto		When sending a project, this function automatically compares the system version of GP-Pro EX and the GP. It then downloads any necessary system programs[*1], protocol programs[*2], or fonts[*3] to the GP. They will be downloaded in the following cases: • When you perform transfer when GP still has no data (factory default) • When the system program (Runtime) stored in the GP is older than the version of GP-Pro EX • When old versions of protocol programs (drivers) are stored in the GP, or when project device/PLC settings have been added/changed. • When a font not in the GP was used during screen creation.
	Forced		When sending a project, after formatting the GP, system programs[*1], protocol programs[*2], and fonts[*3] are forced to download to the GP. Even if the version of GP-Pro EX is older than the existing one, they will be downloaded.

*1　Data used to operate the project on the GP
*2　Data needed to communicate with the device/PLC to be used.
*3　Font data used by the project.
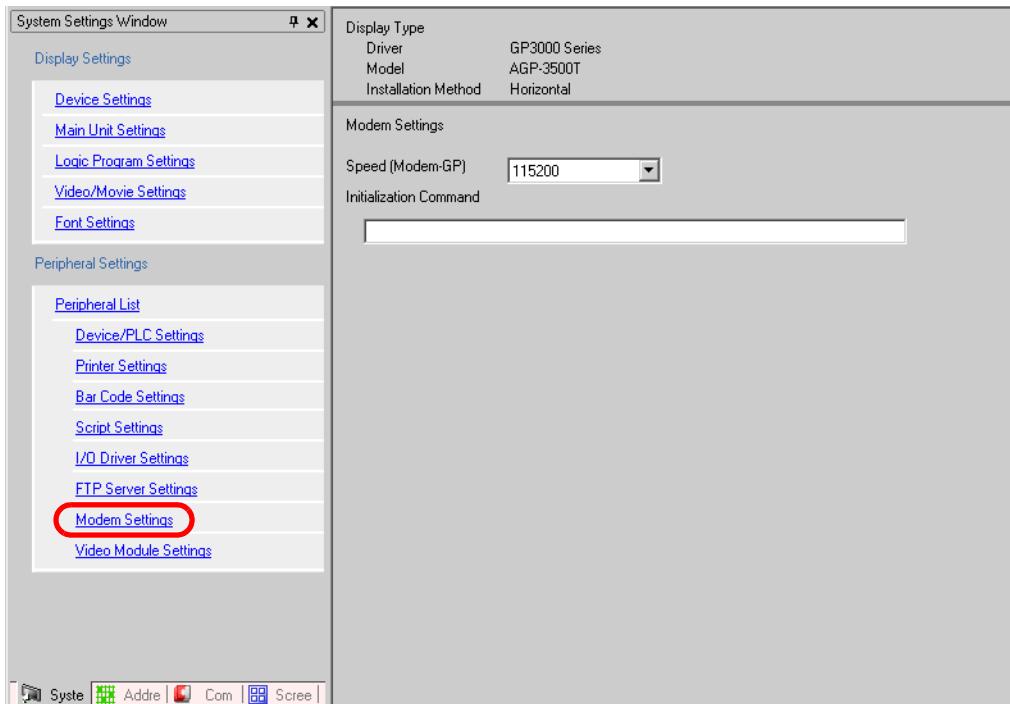
■ [Memory Loader] Setup Guide

NOTE

• To use [Memory Loader], you need to set up the [CF-Card Output Folder].
  ☞ " ◆ CF-Card Destination" (page 5-73)

Setting	Description
Create Backup File	Create backup data (∗.cml) of the project (or the project you selected in the [Select Project]) which is currently open with GP-Pro EX. The Memory Loader Tool for the CF Start in GP will be automatically created at the same time.

Confirm Backup File	[System Information], [Project Information], [Backup Size], backup file name and date stored in the backup data will be listed.
	
	• About Backup File Name
	  Default name of the backup files depends on the GP's model.
	  AGP-3600T, 3500T, 3500S, 3500L, 3400T, 3400S:
	  → MEM3X00.CML
	  AGP-3750T, 3650T, 3550T, 3450T:
	  → MEM3X50.CML
	  AGP-3300T, 3300S, 3300L, 3301S, 3301L:
	  → MEM330X.CML

Create Project File	You can create a project file (∗.prx) from backup data (∗.cml).
Create Boot CF-Card	You can create the Memory Loader Tool needed for upload/download between GP and the CF-Card in the specified CF-card Output folder. By copying all the necessary data to the CF-card, you can create the Start CF-card.

32.10.2 [Modem Settings] Setup Guide
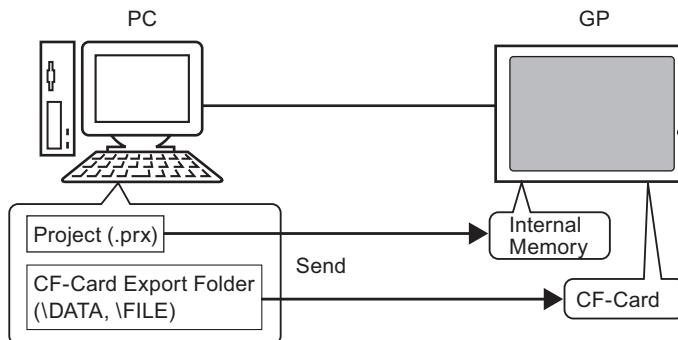
Setting	Description
Speed (Modem-GP)	Set the communication speed between modem and GP.
Initialization Command	Enter the Initialization Command of the modem.

NOTE
• For setting details, please refer to the instruction manual included in your modem.

32.10.3   How Send Works

Writes the currently open project in GP-Pro EX (or a selected project) to the GP.
If a project is set with the CF-card export folder, the data in the CF-card export folder
(\DATA and \FILE) will be saved to the CF-card inserted in the GP.
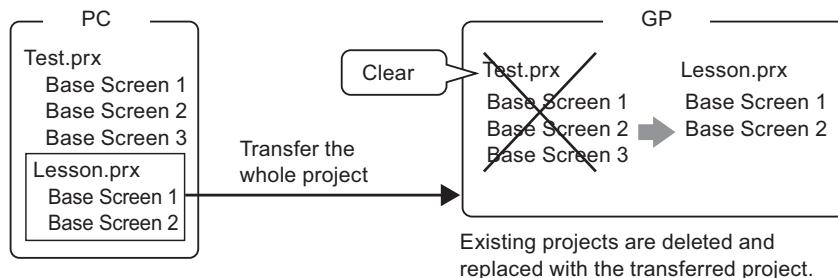
NOTE
- Only one project file (∗.prx) can be saved in the GP.
- When sending a project, the necessary system programs, protocol programs, and fonts will be automatically downloaded to the GP. For that reason, the transfer will take some time.
- If the CF-card export folder contains the same file, the file will be overwritten during the transfer.

If the same project exists in the GP, only modified or added screens will be sent.
When no project is in the GP or when a different project is stored in the GP, the whole project will be sent.

When a different project is stored in the GP
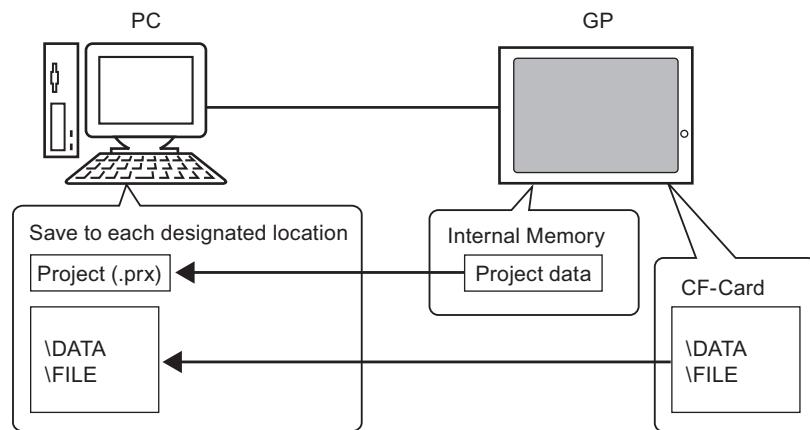
e.g.) Transfer "Lesson.prx" to the GP where "Test.prx" is stored.

32.10.4 How Receive Works

Project data currently stored in the GP is read and saved to a PC in a designated location as a new project file (∗.prx).
If the project uses the CF-card export folder, the data contained in the CF-card (\DATA and \FILE) will also be saved to the designated location.

32.10.5 Installing only Transfer Tool

When transferring between the GP and a PC other than the one with the development environment (PC running), transfer can be done by installing only the Transfer Tool.

Operating Systems that support Transfer Tool

- Windows 2000 Professional (SP3 or above)
- Windows XP
- Windows 98 (Second Edition or above)
- Windows Me

IMPORTANT
- A GP-Pro EX installation will not execute on a PC where Transfer Tool is installed. Please uninstall Transfer Tool and then install GP-Pro EX.

■ Installing Transfer Tool

1 Insert the GP-Pro EX's CD-ROM into the PC.
The following screen will appear.

2 Click [Transfer Tool].
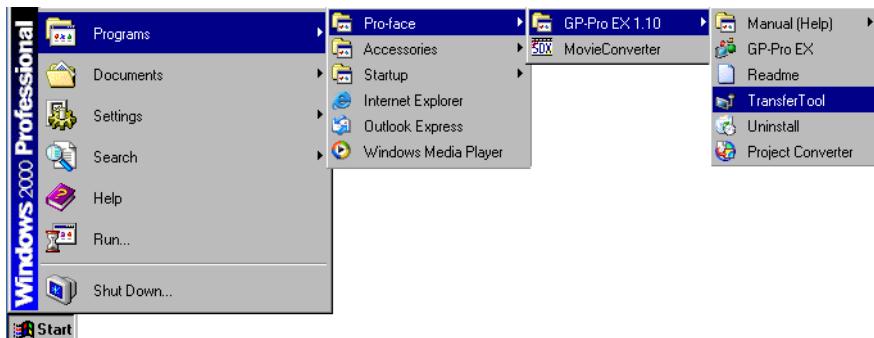
NOTE
- The [Transfer Tool] will not function on any PC where GP-Pro EX is previously installed.

3 Designate a destination folder for the installation. The initial setting will be set to "C:\Program Files\Pro-face\GP-Pro EX 1.10".
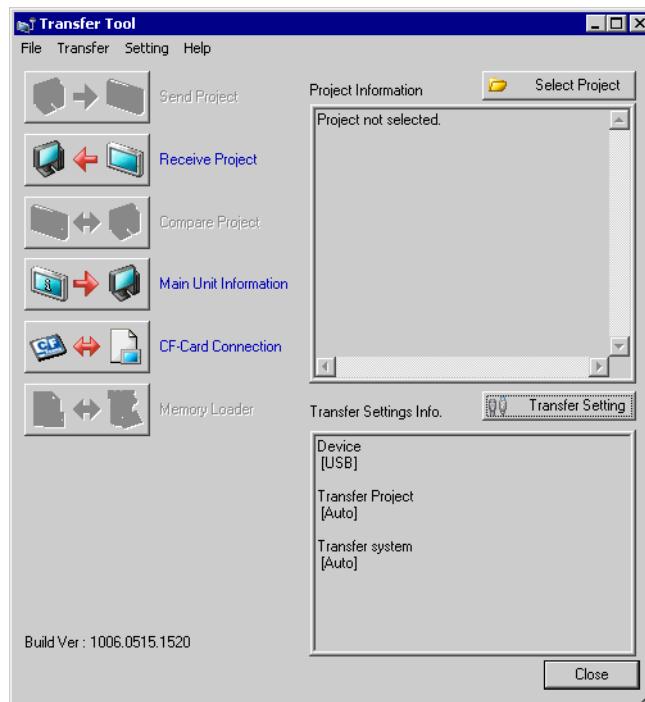
4 The installation will begin. When completed, please restart the PC.

■ **Transfer Tool: From Triggering to Sending**

1 From the Start menu of your PC, select [Programs] - [Pro-face] - [GP-Pro EX 1.10] - [Transfer Tool].

2 Transfer Tool will start up.

3 To receive a project from the GP, click [Receive Project].
  To send a project or compare projects, first choose a project with [Select Project].

32.11   Restrictions

32.11.1   Restrictions for Transfer

- When sending a project, data stored in GP's backup SRAM (Sampling data, etc.) will be deleted.
- When sending a project, the necessary system programs, protocol programs, and fonts will be automatically downloaded to the GP. For that reason, the transfer will take some time. Downloads will occur in the following cases:
  - When the GP does not have any data loaded in it (when it is used for the first time after its purchase).
  - When the system program (Runtime) stored in the GP is older than the version of GP-Pro EX.
  - When old versions of protocol programs (drivers) are stored in the GP, or when project device/PLC settings have been added/changed.
  - When a font not in the GP was used during screen creation.

  When a download occurs, the GP is reset, and after starting up the transferred screens will appear.
- When the GP unit enters offline mode, the project cannot be transferred.
- While a project is being sent, the GP will switch to Transfer mode. During that time communication with all devices (PLCs) is cut. This is the same as during offline mode.
- When an abnormality is found during the initialization of the system program stored in the GP (Runtime), an error message is displayed on the GP. In such a case, you need to transfer the project file again.

32.11.2   Restrictions for Transfer Using Ethernet

- You can transfer data between the GP and a PC on a different network by using a router, etc. However, there are cases where the PC cannot automatically search the GP on a different network.
- For a PC that is using 2 or more LAN cards, the desired GP may not be acquired even if you automatically acquire the IP addresses. This happens because the OS searches the GP connected to the LAN card that was previously found. Click [Add] on the [Select Main Unit] dialog box and manually set the IP address of the GP you wish to transfer to.
- When Microsoft Windows XP Service Pack 2 is used and the Transfer Tool starts, a message appears to show that the operation is blocked by the Windows firewall feature. You can continue the transfer process by canceling the blocking. However, if you transfer data to two or more GP units, you need to select [PASV] for [Communication Port Settings] in the [Transfer Settings] dialog box, or disable the firewall feature.

32.11.3 Restrictions on CF-Card Connection

- When the GP unit enters offline mode, CF-card tool cannot be used.
- There is a limit to the frequency that data can be rewritten to the CF-card. (500 KB of data can be rewritten around 100,000 times) Please make sure to backup to another media.
- ☞ "A.4 Transfering Data Between a CF Card and a USB Memory Device" (page A-66)
- If there is no action for 5 minutes after you started the CF card tool, the Warning message will appear. If you do not take any action for another 5 minutes after this message, GP will be automatically disconnected.

32.11.4 Restrictions on Modem Transfer

- If GP has no data (factory default), you cannot perform a modem transfer.
- You cannot transfer a newly created project file by modem. You can only update the screen data of the project which has already been transferred to the GP.
- You cannot transfer the project file when it is updated in the following conditions:
  - When system settings are changed
  - When the version of GP-Pro EX that created the project is different (Except for the case where the versions of the runtime system, protocol driver, and IO driver match the version of GP-Pro EX that updated the project)
- Only the following types of modem can be connected with GP:
  - A modem which supports AT commands
  - A modem which allows the automatic answering function
  - A modem which is capable of hardware flow control
  - A modem which can return strings with a Result command
  You cannot use a modem that can be used only after connecting to a specific operation center.
- Since GP's receiving modem is analog, you cannot use ISDN TA modem with your PC.
- The modem connected to your PC must support "AT commands". Use a Windows-compatible modem that can establish telephone communication with the modem connected with GP. You cannot use a modem that can be used only after connecting to a specific operation center.
- For supported modem models, refer to Pro-face's support site "Otasuke Pro!" (http://www.pro-face.com/otasuke/). Supported models may change due to GP upgrades.

32.11.5 Restrictions on Memory Loader

- CF-Card needs to be more than 64MB.
- There is a limit to the frequency that data can be rewritten to the CF-card. (500 KB of data can be rewritten around 100,000 times) Please make sure to backup to another media.

■ CF-Card Usage Warnings

- When removing the CF-card, please verify that the access LED lamp is switched off. There is a chance that CF-card data can be lost or damaged.
- While accessing the CF-card, do not turn the GP unit off, reset the GP, or remove the CF-card. Create a preset verification screen for information about CF-card access. Turn off power, reset, open the CF-card cover, or remove the CF-card only after verifying that screen.

- When inserting the CF-card in the GP unit, please make sure you have the correct side up and the correct location for the CF-card connecter. If installed incorrectly, damage can occur to the data or to the CF-card/GP unit.
- Please use a CF-card made by Pro-face. If using another company's CF-card, damage may occur to the CF-card's data.
- Please make sure to back up all CF-card data.
- Please refrain from doing the following, as it can result in damage to data and equipment:
  - Bending the CF-card
  - Dropping the CF-card
  - Spilling water on the card
  - Touching the CF-card's connecters directly
  - Disassembling or modifying the CF-card

Memo