Personal Computer Link Ethernet Driver

Introduction

This manual describes how to connect the Display and the External Device (target PLC).

In this manual, the connection procedure will be described by following the below sections:

| 1 | System Configuration
This section shows the types of External Device which can be connected and SIO type. | ☞ "1 System Configuration" (page 3) |

| 2 | Selection of External Device
Select a model (series) of the External Device to be connected and connection method. | ☞ "2 Selection of External Device" (page 10) |

| 3 | Example of Communication Settings
This section shows setting examples for communicating between the Display and the External Device. | ☞ "3 Example of Communication Setting" (page 11) |

| 4 | Setup Items
This section describes communication setup items on the Display.
Set communication settings of the Display with GP-Pro Ex or in offline mode. | ☞ "4 Setup Items" (page 59) |

Operation

1 System Configuration

The system configuration in the case when the External Device and the Display are connected is shown.

Series	CPU	Link I/F	Port No.	Communication Method	Data Code Settings	Setting Example
FA-M3	F3SP25-2N F3SP28-3N F3SP35-5N F3SP38-6N F3SP53-4H F3SP58-6H	F3LE01-5T [*1]	12289	Ethernet (UDP)	Binary [*2]	Setting Example 1 (page 11)
					ASCII [*3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary [*2]	Setting Example 5 (page 19)
					ASCII [*3]	Setting Example 6 (page 21)
		F3LE11-0T [*1]	12289	Ethernet (UDP)	Binary [*2]	Setting Example 1 (page 11)
					ASCII [*3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary [*2]	Setting Example 5 (page 19)
					ASCII [*3]	Setting Example 6 (page 21)
			12291	Ethernet (UDP)	Binary [*3]	Setting Example 3 (page 15)
					ASCII [*2]	Setting Example 4 (page 17)
				Ethernet (TCP)	Binary [*3]	Setting Example 7 (page 23)
					ASCII [*2]	Setting Example 8 (page 25)

Series	CPU	Link I/F	Port No.	Communication Method	Data Code Settings	Setting Example
FA-M3	F3SP21-0N F3SP28-3S F3SP38-6S F3SP53-4S F3SP58-6S F3SP59-7S	F3LE01-5T [1] F3LE01-0T [1]	12289	Ethernet (UDP)	Binary [2]	Setting Example 1 (page 11)
					ASCII [3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary [2]	Setting Example 5 (page 19)
					ASCII [3]	Setting Example 6 (page 21)
		F3LE11-0T [1] F3LE12-0T [1]	12289	Ethernet (UDP)	Binary [2]	Setting Example 1 (page 11)
					ASCII [3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary [2]	Setting Example 5 (page 19)
					ASCII [3]	Setting Example 6 (page 21)
			12291	Ethernet (UDP)	Binary [3]	Setting Example 3 (page 15)
					ASCII [2]	Setting Example 4 (page 17)
				Ethernet (TCP)	Binary [3]	Setting Example 7 (page 23)
					ASCII [2]	Setting Example 8 (page 25)
	F3SP22-0S	F3LE01-0T [1]	12289	Ethernet (UDP)	Binary [2]	Setting Example 1 (page 11)
					ASCII [3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary [2]	Setting Example 5 (page 19)
					ASCII [3]	Setting Example 6 (page 21)

Series	CPU	Link I/F	Port No.	Communication Method	Data Code Settings	Setting Example
FA-M3	F3SP22-0S	F3LE11-0T [*1] F3LE12-0T [*1]	12289	Ethernet (UDP)	Binary [*2]	Setting Example 1 (page 11)
					ASCII [*3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary [*2]	Setting Example 5 (page 19)
					ASCII [*3]	Setting Example 6 (page 21)
			12291	Ethernet (UDP)	Binary [*3]	Setting Example 3 (page 15)
					ASCII [*2]	Setting Example 4 (page 17)
				Ethernet (TCP)	Binary [*3]	Setting Example 7 (page 23)
					ASCII [*2]	Setting Example 8 (page 25)
	F3SP66-4S F3SP67-6S	Ethernet I/F on CPU Unit	12289	Ethernet (UDP)	Binary	Setting Example 9 (page 27)
					ASCII	Setting Example 10 (page 29)
				Ethernet (TCP)	Binary	Setting Example 11 (page 31)
					ASCII	Setting Example 12 (page 33)
			12291	Ethernet (UDP)	Binary	Setting Example 13 (page 35)
					ASCII	Setting Example 14 (page 37)
				Ethernet (TCP)	Binary	Setting Example 15 (page 39)
					ASCII	Setting Example 16 (page 41)
		F3LE01-0T [*1]	12289	Ethernet (UDP)	Binary [*2]	Setting Example 1 (page 11)
					ASCII [*3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary [*2]	Setting Example 5 (page 19)
					ASCII [*3]	Setting Example 6 (page 21)

Series	CPU	Link I/F	Port No.	Communication Method	Data Code Settings	Setting Example
FA-M3	F3SP66-4S F3SP67-6S	F3LE11-0T [1] F3LE12-0T [1]	12289	Ethernet (UDP)	Binary[2]	Setting Example 1 (page 11)
					ASCII[3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary[2]	Setting Example 5 (page 19)
					ASCII[3]	Setting Example 6 (page 21)
			12291	Ethernet (UDP)	Binary[3]	Setting Example 3 (page 15)
					ASCII[2]	Setting Example 4 (page 17)
				Ethernet (TCP)	Binary[3]	Setting Example 7 (page 23)
					ASCII[2]	Setting Example 8 (page 25)
	F3SP71-4N F3SP76-7N F3SP71-4S F3SP76-7S	Ethernet I/F on CPU Unit	12289	Ethernet (UDP)	Binary	Setting Example 17 (page 43)
					ASCII	Setting Example 18 (page 45)
				Ethernet (TCP)	Binary	Setting Example 19 (page 47)
					ASCII	Setting Example 20 (page 49)
			12291	Ethernet (UDP)	Binary	Setting Example 21 (page 51)
					ASCII	Setting Example 22 (page 53)
				Ethernet (TCP)	Binary	Setting Example 23 (page 55)
					ASCII	Setting Example 24 (page 57)
		F3LE01-0T [1]	12289	Ethernet (UDP)	Binary[2]	Setting Example 1 (page 11)
					ASCII[3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary[2]	Setting Example 5 (page 19)
					ASCII[3]	Setting Example 6 (page 21)

Series	CPU	Link I/F	Port No.	Communication Method	Data Code Settings	Setting Example
FA-M3	F3SP71-4N F3SP76-7N F3SP71-4S F3SP76-7S	F3LE11-0T [*1] F3LE12-0T [*1]	12289	Ethernet (UDP)	Binary[*2]	Setting Example 1 (page 11)
					ASCII[*3]	Setting Example 2 (page 13)
				Ethernet (TCP)	Binary[*2]	Setting Example 5 (page 19)
					ASCII[*3]	Setting Example 6 (page 21)
			12291	Ethernet (UDP)	Binary[*3]	Setting Example 3 (page 15)
					ASCII[*2]	Setting Example 4 (page 17)
				Ethernet (TCP)	Binary[*3]	Setting Example 7 (page 23)
					ASCII[*2]	Setting Example 8 (page 25)

*1   In TCP connection, you can connect max 8 units of the External Device to 1 display unit.

*2   Set the data code setting to ON.

*3   Set the data code setting to OFF.

■ Connection Configuration

1:1 Connection

1:n Connection

TCP connection: maximum 16 units
UDP connection: maximum 32 units

n:1 Connection

TCP connection: maximum 8 units
UDP connection: no limitation

n:m Connection

TCP connection: maximum 8 units
UDP connection: no limitation

TCP connection: maximum 16 units
UDP connection: maximum 32 units
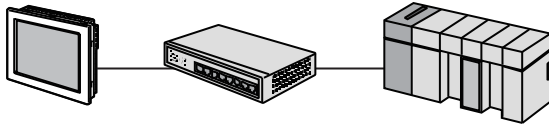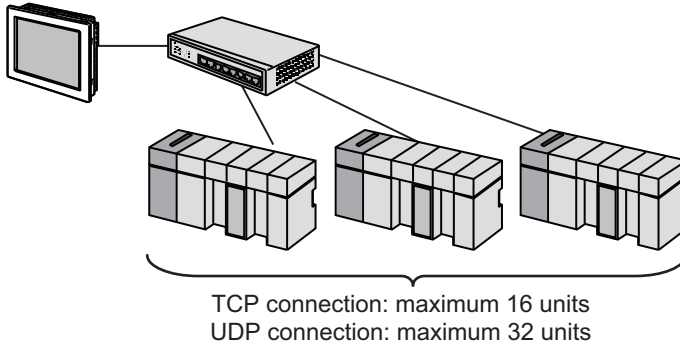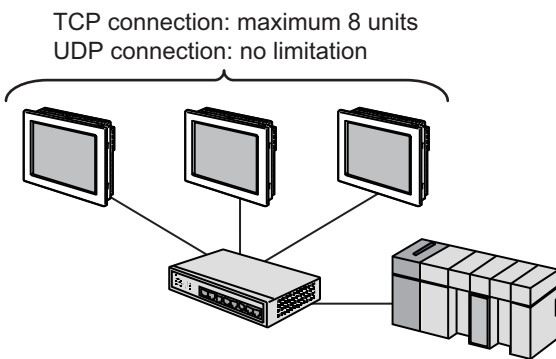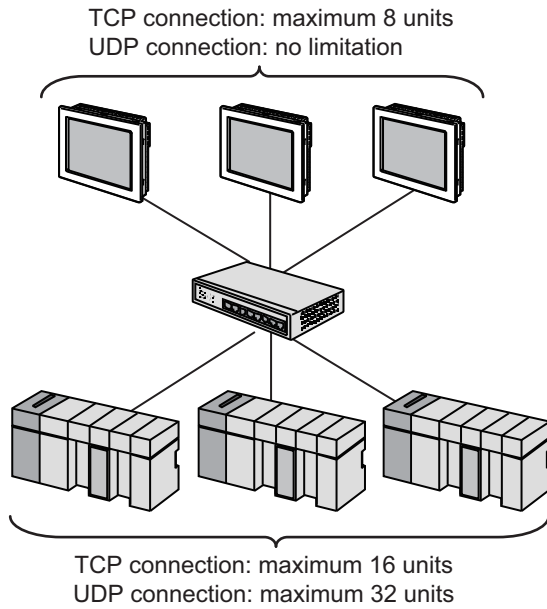
2 Selection of External Device

Select the External Device to be connected to the Display.

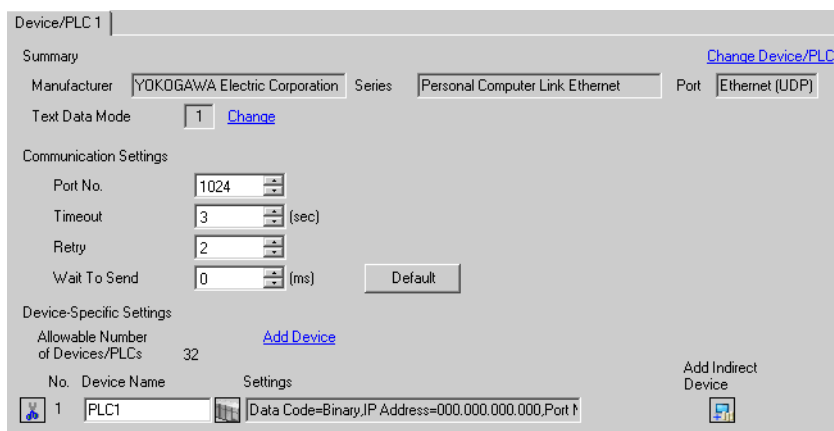| Setup Items	Setup Description
Number of Devices/ PLCs	Use an integer from 1 to 4 to enter the number of Devices/PLCs to connect to the display.
Manufacturer	Select the manufacturer of the External Device to be connected. Select "YOKOGAWA Electric Corporation".
Series	Select a model (series) of the External Device to be connected and connection method. Select "Personal Computer Link Ethernet". Check the External Device which can be connected in "Personal Computer Link Ethernet" in system configuration. ☞ "1 System Configuration" (page 3)
Port	Select the Display port to be connected to the External Device.

Use System Area	Check this option to synchronize the system data area of the Display and the device (memory) of the External Device. When synchronized, you can use the External Device's ladder program to switch the display or display the window on the Display.
	  Cf. GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
	This feature can also be set in GP-Pro EX or in the Display's offline mode.
	  Cf. GP-Pro EX Reference Manual "System Settings [Display Unit] - [System Area] Settings Guide"
	  Cf. Maintenance/Troubleshooting Guide "Main Unit - System Area Settings"

3 Example of Communication Setting

Examples of communication settings of the Display and the External Device, recommended by Pro-face, are shown.

3.1 Setting Example 1

■ Settings of GP-Pro EX
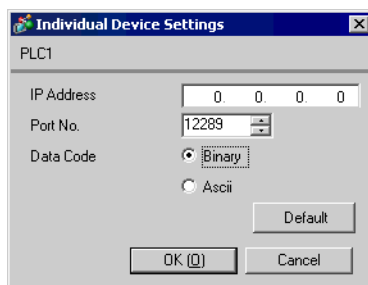
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] ⬛ .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12289

◆ Condition Setting Switch

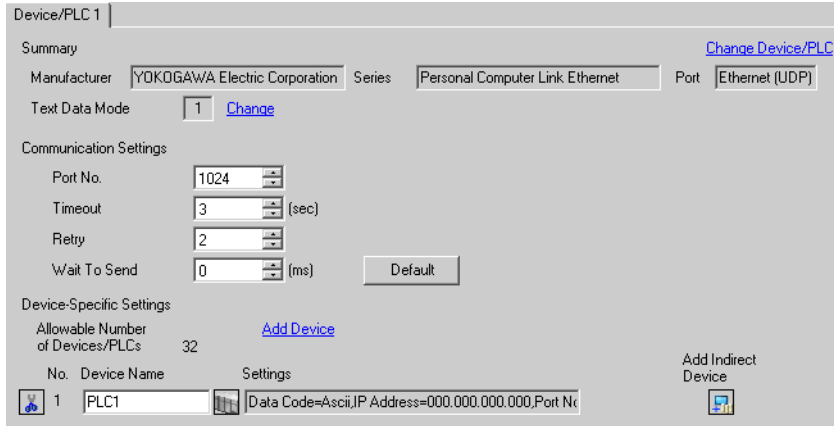| DIP Switch	Settings	Setup Description
SW1	ON	Binary
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7[1]	OFF	Close
SW8	OFF	Normal

*1   SW7 is available to set in F3LE01-5T only.

◆ Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.2 Setting Example 2

■ Settings of GP-Pro EX
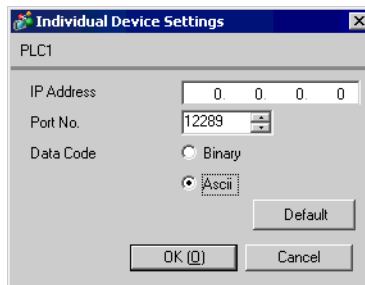
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] ⊞ .
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12289

◆ Condition Setting Switch

DIP Switch	Settings	Setup Description
SW1	OFF	ASCII
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7[*1]	OFF	Close
SW8	OFF	Normal

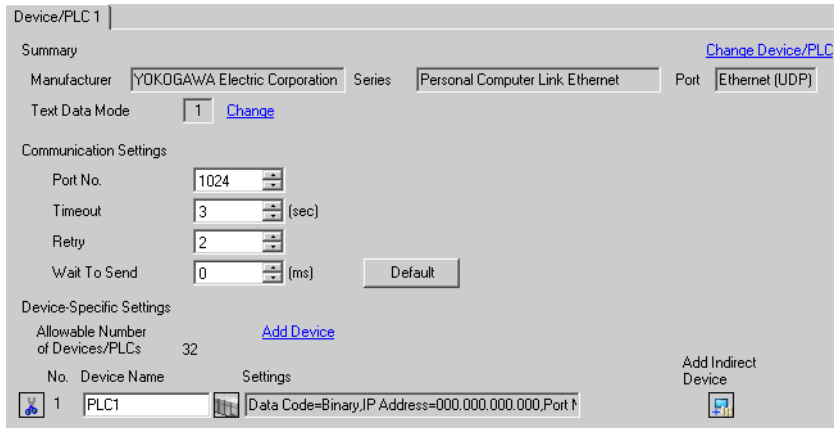*1   SW7 is available to set in F3LE01-5T only.

◆ Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.3 Setting Example 3

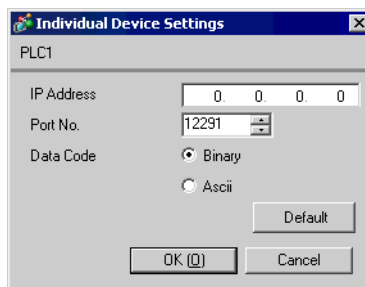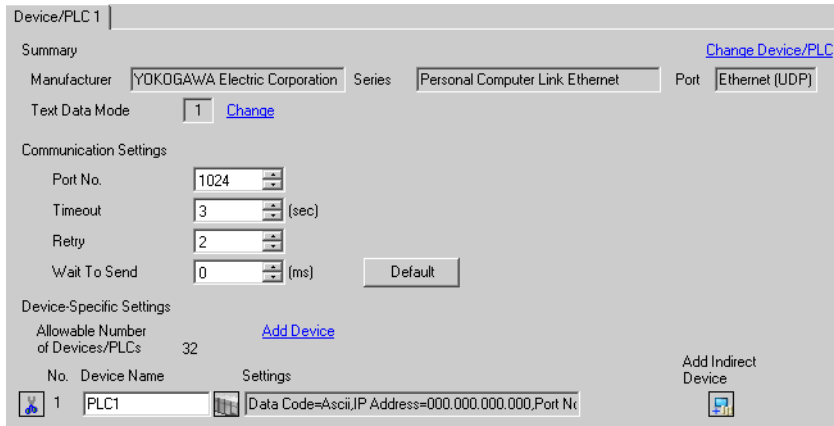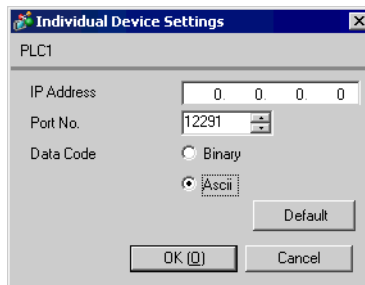### ■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

```
Device/PLC 1
  Summary                                                              Change Device/PLC
    Manufacturer  YOKOGAWA Electric Corporation  Series  Personal Computer Link Ethernet  Port  Ethernet (UDP)
    Text Data Mode     1    Change
  Communication Settings
    Port No.          1024
    Timeout           3      (sec)
    Retry             2
    Wait To Send      0      (ms)        Default
  Device-Specific Settings
    Allowable Number              Add Device                              Add Indirect
    of Devices/PLCs   32                                                  Device
      No.  Device Name        Settings
      1    PLC1               Data Code=Binary,IP Address=000.000.000.000,Port N
```

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] .
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

```
Individual Device Settings
  PLC1
    IP Address          0.   0.   0.   0
    Port No.        12291
    Data Code       ⦿ Binary
                    ○ Ascii
                              Default
                    OK (O)    Cancel
```

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12291

◆ Condition Setting Switch

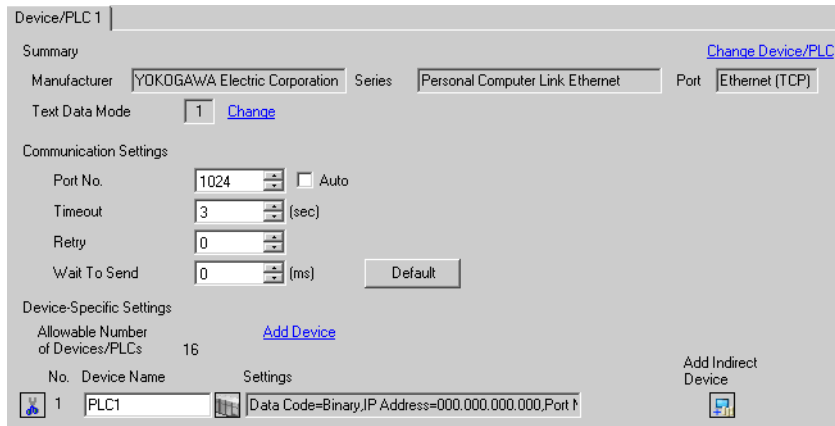| DIP Switch	Settings	Setup Description
SW1	OFF	Binary
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7	OFF	Close
SW8	OFF	Normal

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.

3.4 Setting Example 4

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 📊 .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12291

◆ Condition Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	ASCII
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7	OFF	Close
SW8	OFF	Normal

◆ Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.5 Setting Example 5

■ Settings of GP-Pro EX
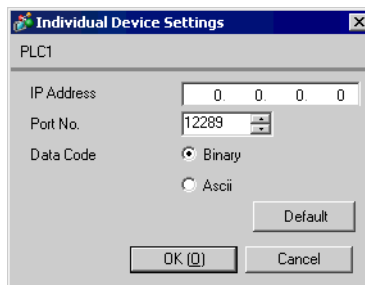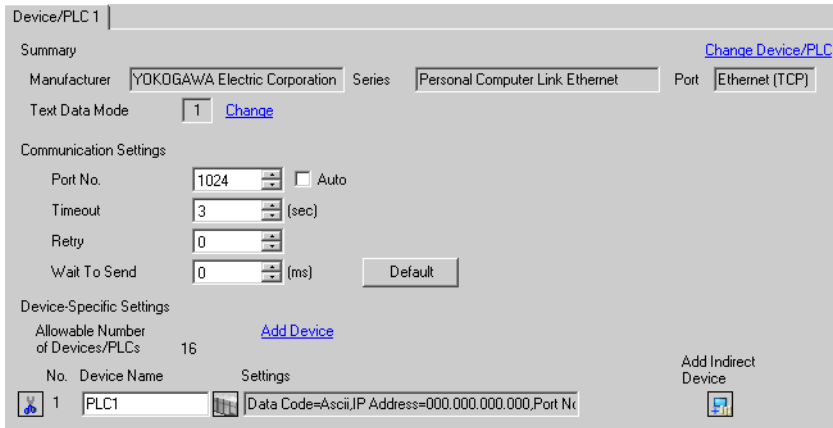
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings]　.
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.
• Set IP address on the External Device for IP address in Device-specific settings.
• You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12289

◆ Condition Setting Switch

DIP Switch	Settings	Setup Description
SW1	ON	Binary
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7[1]	OFF	Close
SW8	OFF	Normal

*1   SW7 is available to set in F3LE01-5T only.

◆ Notes

•   Check with a network administrator about IP address. Do not set the duplicate IP address.

3.6 Setting Example 6

■ Settings of GP-Pro EX

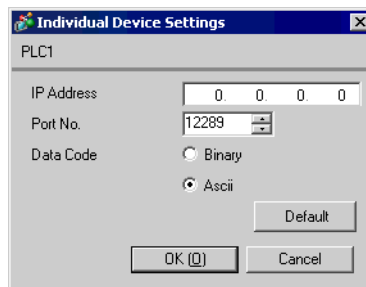#### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] ![icon] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12289

◆ Condition Setting Switch

DIP Switch	Settings	Setup Description
SW1	OFF	ASCII
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7[*1]	OFF	Close
SW8	OFF	Normal

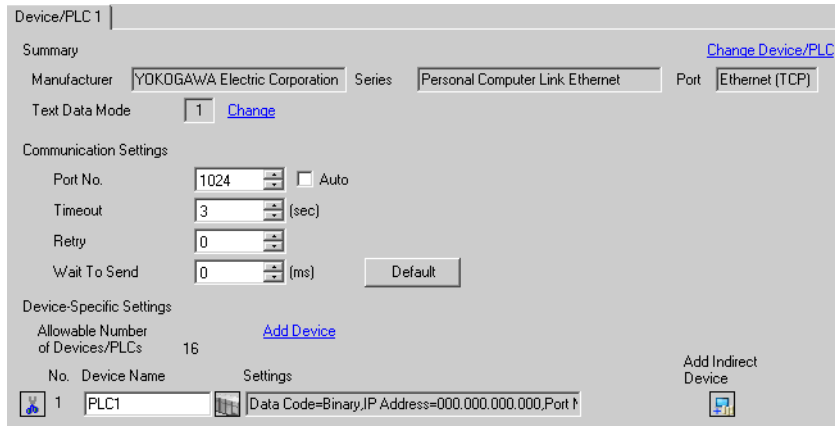*1   SW7 is available to set in F3LE01-5T only.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.

3.7 Setting Example 7

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 📊 .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12291

◆ Condition Setting Switch

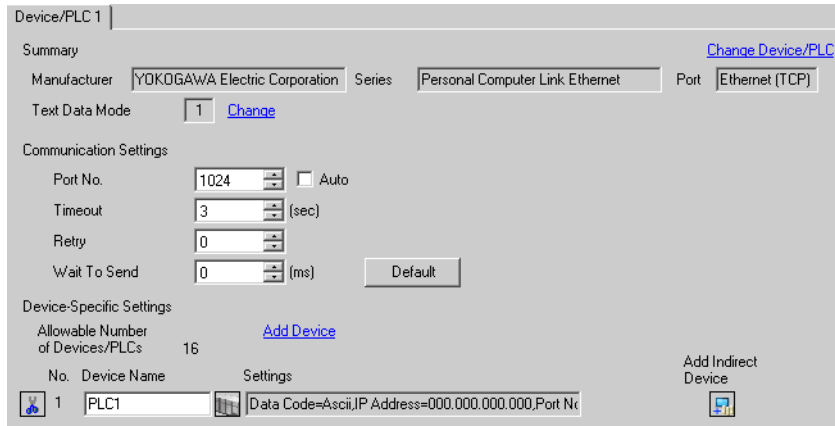| DIP Switch	Settings	Setup Description
SW1	OFF	Binary
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7	OFF	Close
SW8	OFF	Normal

◆ Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

3.8 Setting Example 8

■ Settings of GP-Pro EX
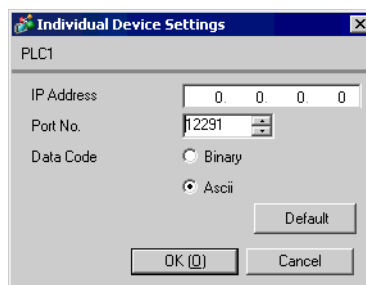
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 🔢 .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Use the switches on the side of Ethernet module for setting the External Device.

◆ IP Address Setting Switch

Use 8 Hex rotary switches for setting.

Setup Items	Setup Description
IP Address Setting Rotary Switch	Option

◆ Port No.

Setup Items	Setup Description
Port No.	12291

◆ Condition Setting Switch

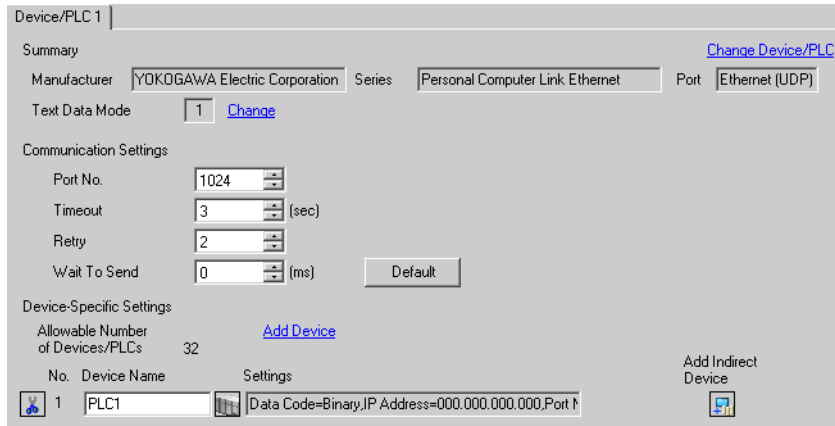| DIP Switch	Settings	Setup Description
SW1	ON	ASCII
SW2	OFF	Not protect
SW3	---	(Reserved)
SW4	---	(Reserved)
SW5	---	(Reserved)
SW6	---	(Reserved)
SW7	OFF	Close
SW8	OFF	Normal

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.

3.9 Setting Example 9
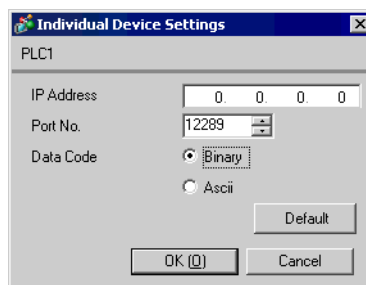
■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1

Summary   Change Device/PLC

Manufacturer   YOKOGAWA Electric Corporation   Series   Personal Computer Link Ethernet   Port   Ethernet (UDP)

Text Data Mode   1   Change

Communication Settings

Port No.   1024

Timeout   3   (sec)

Retry   2

Wait To Send   0   (ms)   Default

Device-Specific Settings

Allowable Number   Add Device
of Devices/PLCs   32

No.   Device Name   Settings   Add Indirect Device

1   PLC1   Data Code=Binary,IP Address=000.000.000.000,Port N

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings]   .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

Individual Device Settings   ×

PLC1

IP Address   0.   0.   0.   0

Port No.   12289

Data Code   ⊙ Binary
             ○ Ascii

                   Default

       OK (O)   Cancel

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- • [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- • [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

- • [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

- • [HIGHER-LEVEL LINK SERVICE] Settings

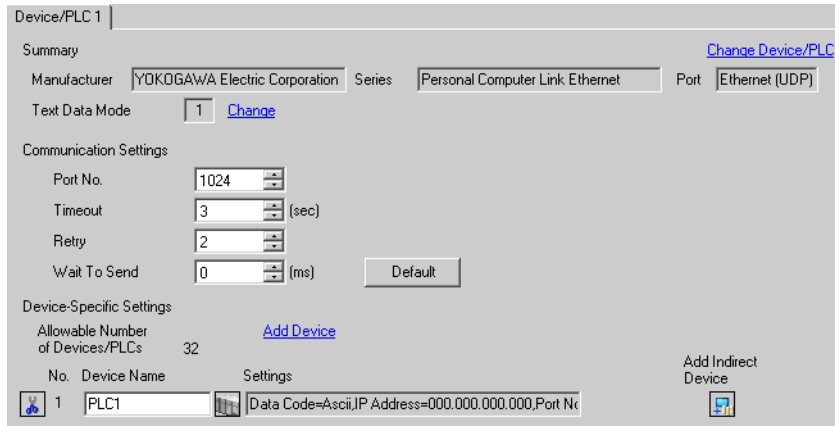| Setup Items	Setup Description
HILINK_PROTOCOL_A	1
HILINK_DATA_FORMAT_A	1

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

3.10 Setting Example 10

■ Settings of GP-Pro EX
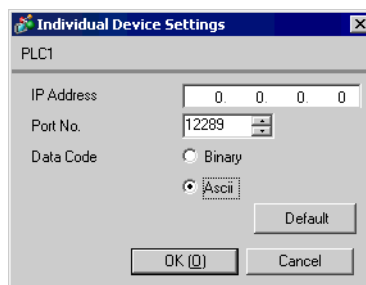
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1	
Summary	Change Device/PLC
Manufacturer YOKOGAWA Electric Corporation	Series	Personal Computer Link Ethernet	Port	Ethernet (UDP)
Text Data Mode	1	Change

Communication Settings

Port No.	1024	
Timeout	3	(sec)
Retry	2	
Wait To Send	0	(ms) Default

Device-Specific Settings

Allowable Number of Devices/PLCs 32   Add Device

No.	Device Name	Settings	Add Indirect Device
1	PLC1	Data Code=Ascii,IP Address=000.000.000.000,Port No	

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

Individual Device Settings

PLC1

IP Address	0. 0. 0. 0
Port No.	12289
Data Code	○ Binary
	⊙ Ascii

Default

OK (O)   Cancel

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

- [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

- [HIGHER-LEVEL LINK SERVICE] Settings

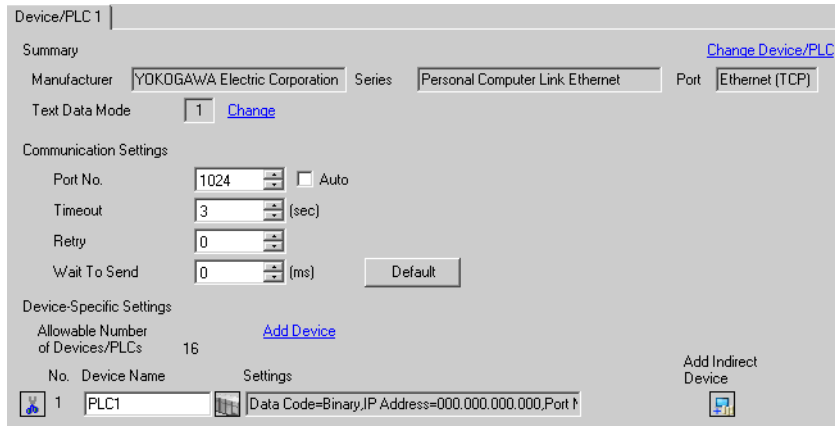| Setup Items	Setup Description
HILINK_PROTOCOL_A	1
HILINK_DATA_FORMAT_A	0

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

3.11 Setting Example 11

■ Settings of GP-Pro EX
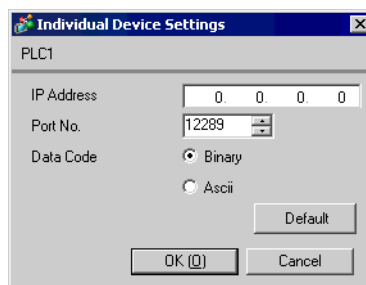
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] [   ] .
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following
settings.

• [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK
SERVICE].

• [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

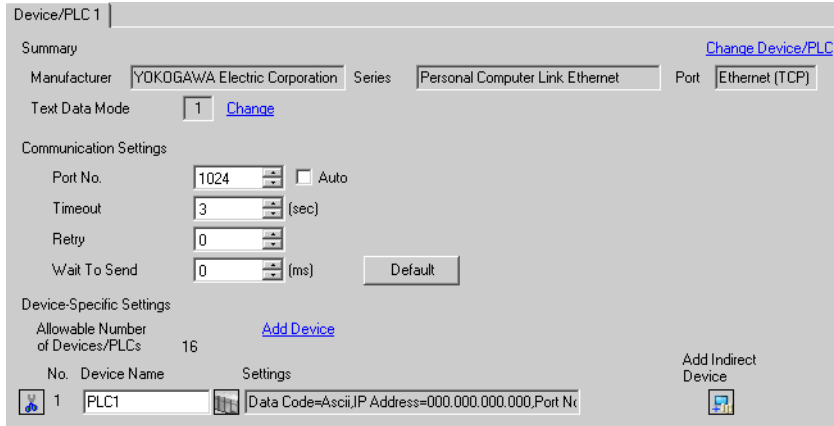| Setup Items	Setup Description
HILINK_PROTOCOL_A	0
HILINK_DATA_FORMAT_A	1

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the
External Device.

3.12 Setting Example 12
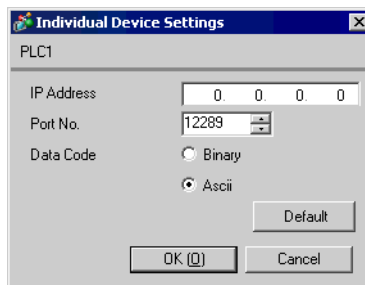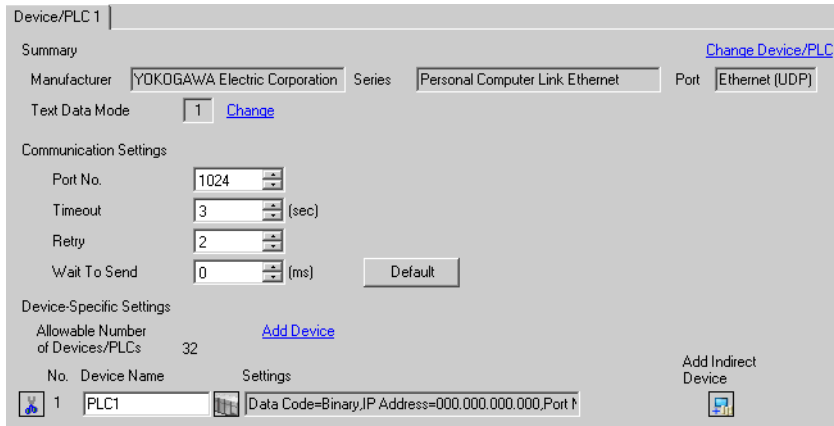
■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1

Summary   Change Device/PLC

Manufacturer | YOKOGAWA Electric Corporation | Series | Personal Computer Link Ethernet | Port | Ethernet (TCP)

Text Data Mode   1   Change

Communication Settings

Port No.   1024   □ Auto

Timeout   3   (sec)

Retry   0

Wait To Send   0   (ms)   Default

Device-Specific Settings

Allowable Number   Add Device
of Devices/PLCs   16   Add Indirect
                                                                   Device
No. Device Name   Settings

1   PLC1   Data Code=Ascii,IP Address=000.000.000.000,Port No

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 　.

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

Individual Device Settings

PLC1

IP Address   0. 0. 0. 0

Port No.   12289

Data Code   ○ Binary

               ● Ascii

                              Default

               OK (O)   Cancel

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

 • [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

 • [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

 • [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

 • [HIGHER-LEVEL LINK SERVICE] Settings

Setup Items	Setup Description
HILINK_PROTOCOL_A	0
HILINK_DATA_FORMAT_A	0

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

3.13 Setting Example 13
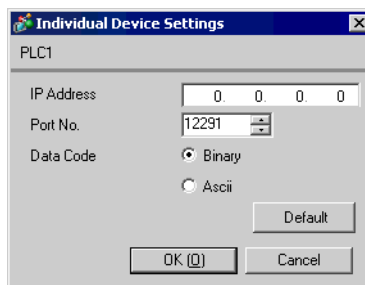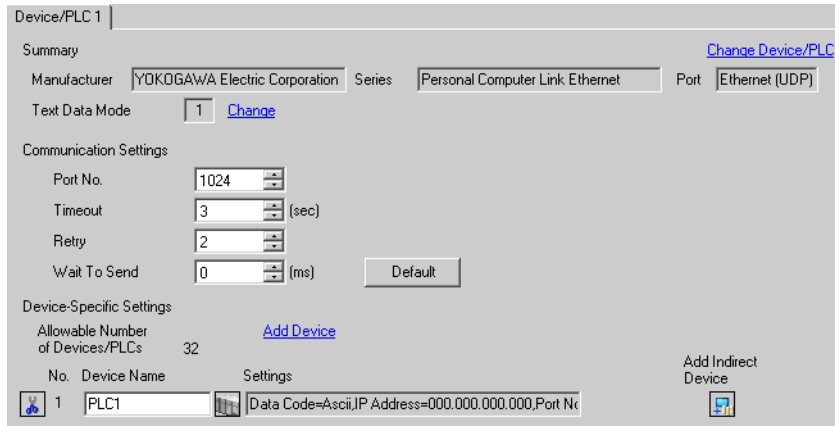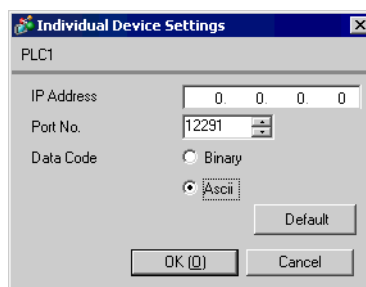
■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer	YOKOGAWA Electric Corporation	Series	Personal Computer Link Ethernet	Port	Ethernet (UDP)
Text Data Mode	1	Change

Communication Settings

Port No.	1024	
Timeout	3	(sec)
Retry	2	
Wait To Send	0	(ms)	Default

Device-Specific Settings
Allowable Number of Devices/PLCs 32   Add Device   Add Indirect Device

No.	Device Name	Settings
1	PLC1	Data Code=Binary,IP Address=000.000.000.000,Port N

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

Individual Device Settings

PLC1

IP Address	0. 0. 0. 0
Port No.	12291
Data Code	⦿ Binary
	○ Ascii

Default

OK (O)   Cancel

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

  • [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

  • [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

  • [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

  • [HIGHER-LEVEL LINK SERVICE] Settings

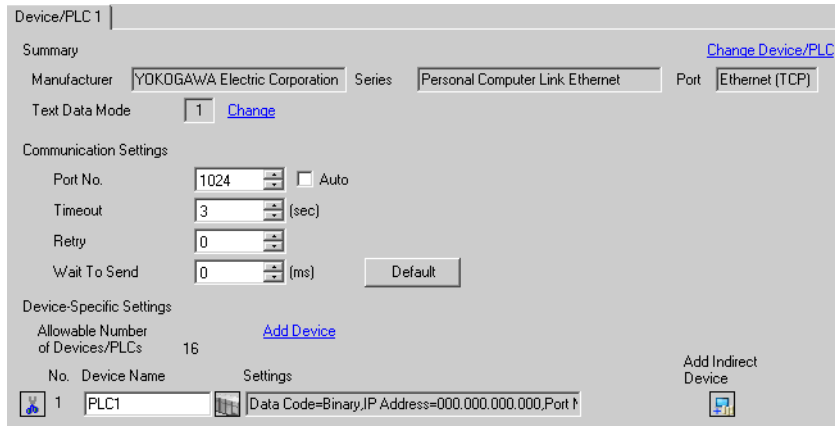| Setup Items	Setup Description
HILINK_PROTOCOL_B	1
HILINK_DATA_FORMAT_B	1

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

3.14 Setting Example 14
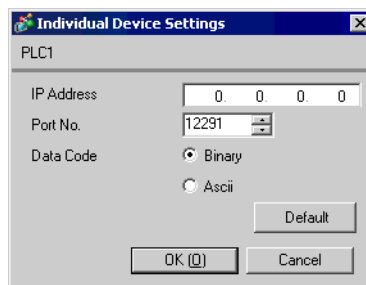
■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

Device/PLC 1		
Summary		Change Device/PLC
Manufacturer	YOKOGAWA Electric Corporation	Series	Personal Computer Link Ethernet	Port	Ethernet (UDP)
Text Data Mode	1 Change	

Communication Settings

Port No.	1024	
Timeout	3	(sec)
Retry	2	
Wait To Send	0	(ms)	Default

Device-Specific Settings
Allowable Number of Devices/PLCs 32   Add Device
Add Indirect Device

No.	Device Name	Settings
1	PLC1	Data Code=Ascii,IP Address=000.000.000.000,Port No

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] ![icon] .
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

Individual Device Settings

PLC1

IP Address	0. 0. 0. 0
Port No.	12291
Data Code	○ Binary
	● Ascii

Default

OK (O)   Cancel

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

- [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

- [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

- [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

- [HIGHER-LEVEL LINK SERVICE] Settings

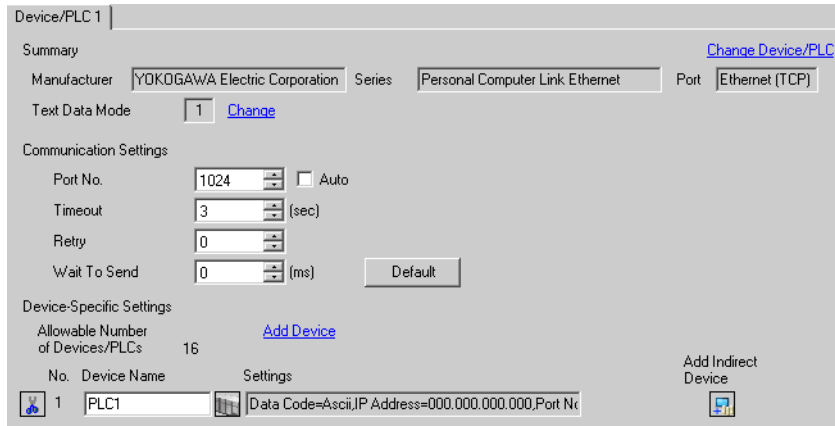| Setup Items	Setup Description
HILINK_PROTOCOL_B	1
HILINK_DATA_FORMAT_B	0

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

3.15 Setting Example 15
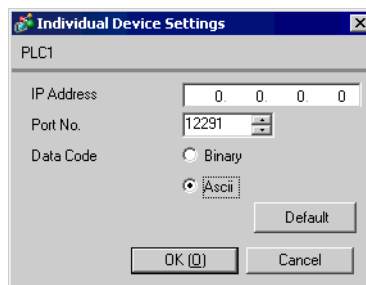
■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

```
Device/PLC 1
Summary                                                           Change Device/PLC
Manufacturer  YOKOGAWA Electric Corporation  Series  Personal Computer Link Ethernet  Port  Ethernet (TCP)
Text Data Mode       1    Change
Communication Settings
  Port No.          1024  □ Auto
  Timeout           3    (sec)
  Retry             0
  Wait To Send      0    (ms)        Default
Device-Specific Settings
  Allowable Number         Add Device                           Add Indirect
  of Devices/PLCs    16                                         Device
  No.  Device Name        Settings
  1    PLC1               Data Code=Binary,IP Address=000.000.000.000,Port N
```

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] ┃┃ .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

```
Individual Device Settings          ×
PLC1
  IP Address          0.  0.  0.  0
  Port No.         12291
  Data Code        ● Binary
                   ○ Ascii
                            Default
              OK (O)        Cancel
```

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

• [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

• [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

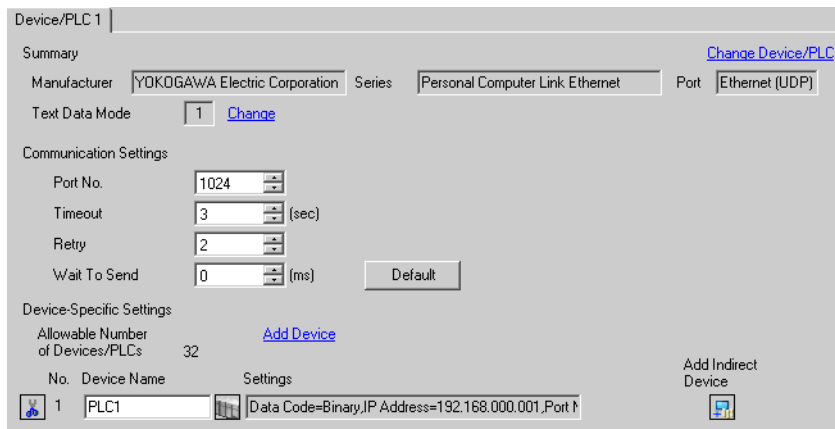| Setup Items	Setup Description
HILINK_PROTOCOL_B	0
HILINK_DATA_FORMAT_B	1

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

3.16 Setting Example 16

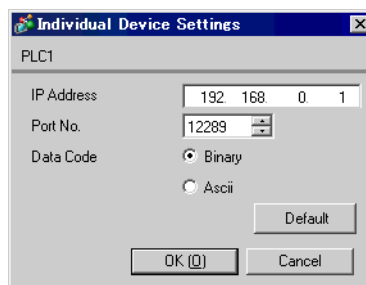### ■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

```
Device/PLC 1
Summary                                                        Change Device/PLC
  Manufacturer   YOKOGAWA Electric Corporation  Series  Personal Computer Link Ethernet   Port  Ethernet (TCP)
  Text Data Mode        1    Change

Communication Settings
  Port No.           1024      ⊟  □ Auto
  Timeout            3         ⊟  (sec)
  Retry              0         ⊟
  Wait To Send       0         ⊟  (ms)      Default

Device-Specific Settings
  Allowable Number            Add Device
  of Devices/PLCs   16                                          Add Indirect
  No.  Device Name        Settings                              Device
  ✂ 1  PLC1           ▥  Data Code=Ascii,IP Address=000.000.000.000,Port Nc   🔲
```

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] ▥ .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

```
Individual Device Settings                    ×
PLC1

  IP Address            0.   0.   0.   0
  Port No.            12291    ⊟
  Data Code           ○ Binary
                      ⦿ Ascii

                                 Default

              OK (O)          Cancel
```

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

Make communication settings of the External Device with the ladder soft (Wide Field2).

Please refer to the manual of the External Device for more details.

◆ Procedure

1 Start the ladder soft.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 In the [LOAD] settings, select the settings to be loaded. Set 0 (not loaded) for the others except the following settings.

　• [LOAD] Settings

Setup Items	Setup Description
NETWORK	1
ETHERNET	1
HIGHER-LEVEL LINK SERVICE	1

5 Make communication settings with the [Setting] tree's [NETWORK][ETHERNET][HIGHER-LEVEL LINK SERVICE].

　• [NETWORK] Settings

Setup Items	Setup Description
NETWORK_SELECT	1

　• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	IP Address of the External Device Ex: 192.168.0.3
ETHER_SUBNET_MASK	Subnet Mask of the External Device Ex: 255.255.255.0

　• [HIGHER-LEVEL LINK SERVICE] Settings

Setup Items	Setup Description
HILINK_PROTOCOL_B	0
HILINK_DATA_FORMAT_B	0

6 Select [Save as] from the [File] menu and save the CPU property file.

7 Select [Download]-[CPU Properties] from the [ONLINE] menu and download the set CPU property file to the External Device.

3.17 Setting Example 17

■ Settings of GP-Pro EX
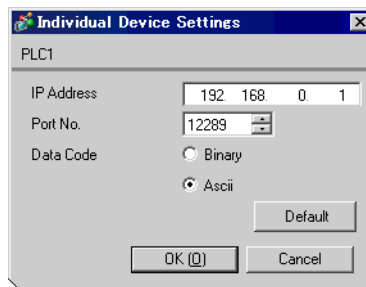
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 　.

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

Setup Items	Setup Description
HILINK_PROTOCOL_A	1
HILINK_DATA_FORMAT_A	1
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

3.18 Setting Example 18

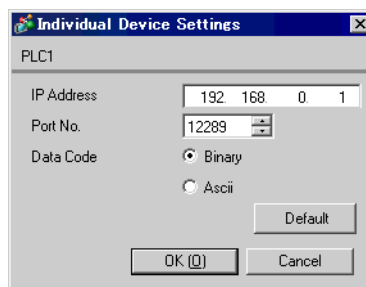### ■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 🔢 .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

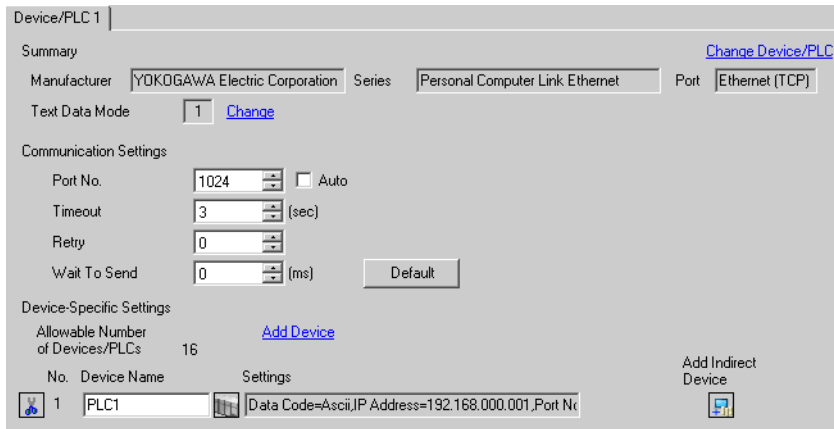| Setup Items	Setup Description
HILINK_PROTOCOL_A	1
HILINK_DATA_FORMAT_A	0
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

3.19   Setting Example 19

■ Settings of GP-Pro EX

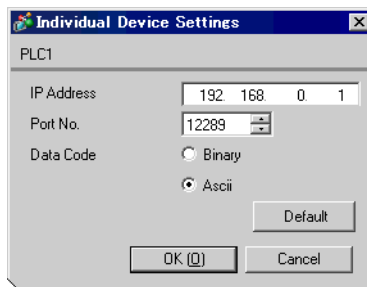#### ◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] [📷] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

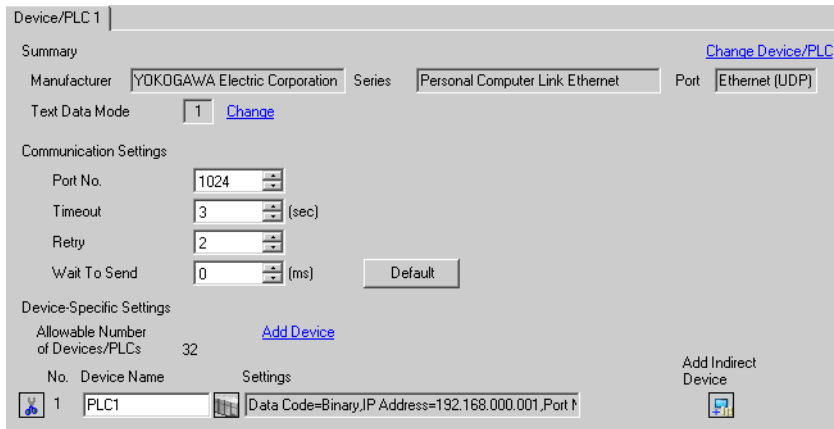| Setup Items	Setup Description
HILINK_PROTOCOL_A	0
HILINK_DATA_FORMAT_A	1
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

3.20 Setting Example 20

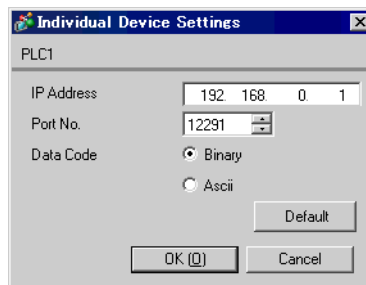### ■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] ![icon] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

    • [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

    • [HIGHER-LEVEL LINK SERVICE] Settings

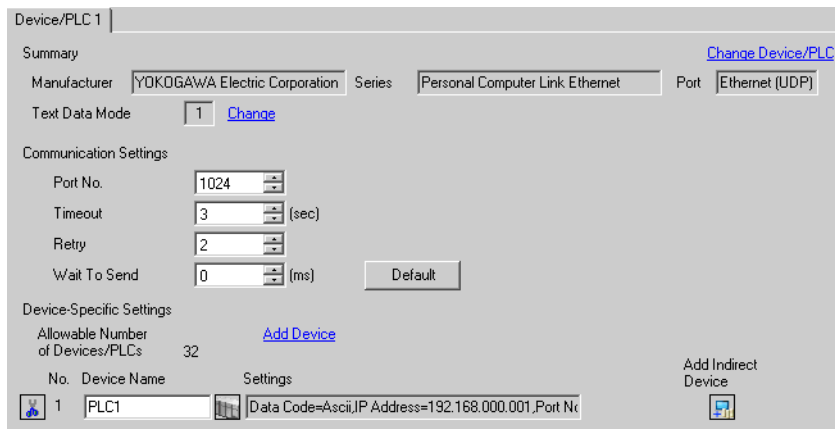| Setup Items	Setup Description
HILINK_PROTOCOL_A	0
HILINK_DATA_FORMAT_A	0
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

3.21   Setting Example 21

■ Settings of GP-Pro EX
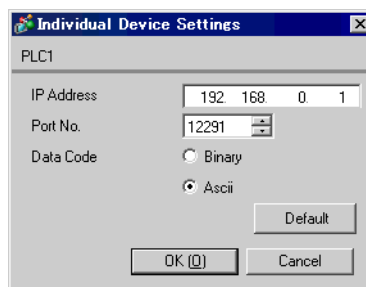
◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 📊 .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

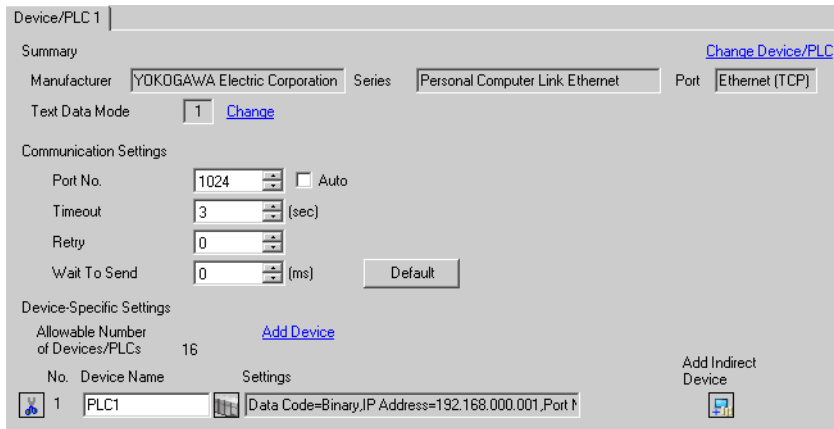| Setup Items	Setup Description
HILINK_PROTOCOL_B	1
HILINK_DATA_FORMAT_B	1
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

3.22 Setting Example 22
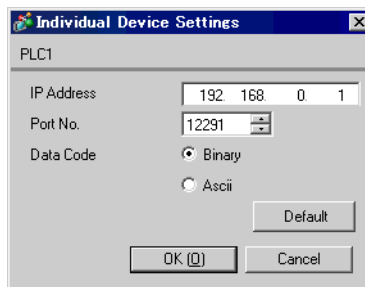
■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

```
Device/PLC 1

Summary                                                          Change Device/PLC
  Manufacturer   YOKOGAWA Electric Corporation   Series   Personal Computer Link Ethernet   Port   Ethernet (UDP)
  Text Data Mode        1    Change

Communication Settings
  Port No.              1024
  Timeout               3        (sec)
  Retry                 2
  Wait To Send          0        (ms)        Default

Device-Specific Settings
  Allowable Number              Add Device
  of Devices/PLCs       32                                            Add Indirect
  No.   Device Name         Settings                                  Device
   1    PLC1            Data Code=Ascii,IP Address=192.168.000.001,Port No
```

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] [ ].
To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

```
Individual Device Settings                       ×
PLC1

  IP Address              192  168    0    1
  Port No.                12291
  Data Code               ○ Binary
                          ● Ascii
                                              Default

                     OK (O)          Cancel
```

◆ Notes

• Check with a network administrator about IP address. Do not set the duplicate IP address.

• Set IP address on the External Device for IP address in Device-specific settings.

• You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

 • [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

 • [HIGHER-LEVEL LINK SERVICE] Settings

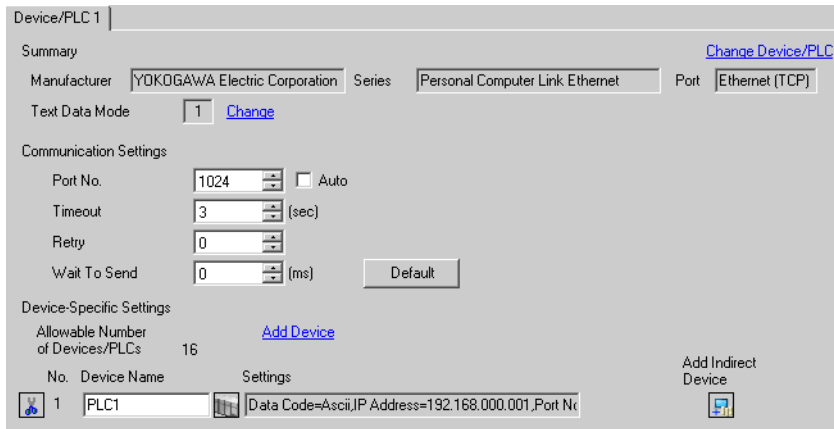| Setup Items	Setup Description
HILINK_PROTOCOL_B	1
HILINK_DATA_FORMAT_B	0
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

3.23 Setting Example 23

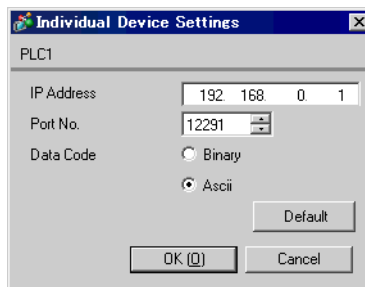### ■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 　．

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

Setup Items	Setup Description
HILINK_PROTOCOL_B	0
HILINK_DATA_FORMAT_B	1
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

3.24 Setting Example 24

■ Settings of GP-Pro EX

◆ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC].

◆ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] [ ] .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

◆ Notes

- Check with a network administrator about IP address. Do not set the duplicate IP address.
- Set IP address on the External Device for IP address in Device-specific settings.
- You need to set IP address on the Display in the offline mode of the Display.

■ Setting of External Device

The ladder software (WideField3) configures the External Device's communication settings.

Refer to your External Device manual for communication setting details.

◆ Procedure

1 Start up the ladder software.

2 Create a new project. Select the External Device to be used when creating the project.

3 Select [Open]-[CPU Properties] from the [File] menu and open the CPU property file for settings.

4 Select [CPU properties] from [Project Settings].

5 Make communication settings with the [SETUP] tree's [ETHERNET], [HIGHER-LEVEL LINK SERVICE].

• [ETHERNET] Settings

Setup Items	Setup Description
ETHER_MY_IPADDRESS	192.168.0.1
ETHER_SUBNET_MASK	255.255.255.0

• [HIGHER-LEVEL LINK SERVICE] Settings

Setup Items	Setup Description
HILINK_PROTOCOL_B	0
HILINK_DATA_FORMAT_B	0
HLINK_PROTECT	0

6 Download the setting CPU property file and the project file to the External Device.

7 Reboot the External Device.

4   Setup Items

Set communication settings of the Display with GP-Pro EX or in offline mode of the Display.

The setting of each parameter must be identical to that of External Device.

☞"3 Example of Communication Setting" (page 11)
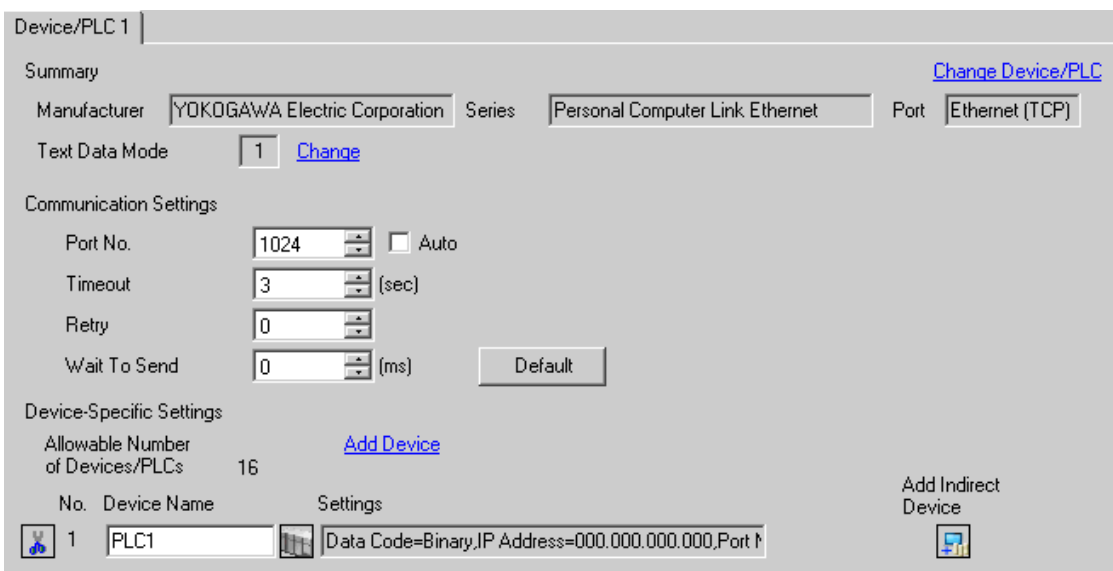
NOTE	• Set the Display's IP address in offline mode.
	Cf. Maintenance/Troubleshooting Guide "Ethernet Settings"

4.1   Setup Items in GP-Pro EX

■ Communication Settings

To display the setup screen, from the [Project] menu, point to [System Settings] and select [Device/PLC]..

Setup Items	Setup Description
Port No.	Use an integer from 1024 to 65535 to enter the port No. of the Display. When you check the option of [Auto Assign], the port No. will be automatically set. **NOTE** • [Auto Assign] option is available to set only when you select "Ethernet (TCP)" in [Connecting Method].
Timeout	Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.

NOTE	• Refer to the GP-Pro EX Reference Manual for Indirect Device.
	Cf. GP-Pro EX Reference Manual "Changing the Device/PLC at Runtime (Indirect Device)"

■ Device Setting

To display the [Individual Device Settings] dialog box, from [Device-Specific Settings] in the [Device/PLC] window, select the External Device and click [Settings] 📑 .

To connect multiple External Devices, from [Device-Specific Settings] in the [Device/PLC] window, click [Add Device] to add another External Device.

Setup Items	Setup Description
IP Address	Set IP address of the External Device. **NOTE** • Check with a network administrator about IP address. Do not set the duplicate IP address.
Port No.	Use an integer 12289 or 12291 to enter the port No. of the External Device.
Data Code	Select the data format to communicate with the External Device from "Binary" or "ASCII".

4.2 Setup Items in Offline Mode

NOTE • Refer to the Maintenance/Troubleshooting guide for information on how to enter offline mode or about the operation.

Cf. Maintenance/Troubleshooting Guide "Offline Mode"

■ Communication Settings

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings] in offline mode. Touch the External Device you want to set from the displayed list.

Comm.	Device			

Personal Computer Link Ethernet [UDP] Page 1/1

```
Port No.          ● Fixed    ○ Auto
                            1024  ▼  ▲

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

| Exit | | Back | 2005/09/01 19:39:44 |

Setup Items	Setup Description
Port No.	Set the Port No. of the Display. In UDP connection, entered port No. will be assigned regardless of whether you select [Fixed] or [Auto]. In TCP connection, select either of [Fixed] or [Auto]. When you select [Fixed], use an integer from 1024 to 65535 to enter the port No. of the Display. When you select [Auto], the port No. will be automatically assigned regardless of the entered value.
Timeout	Use an integer from 1 to 127 to enter the time (s) for which the Display waits for the response from the External Device.
Retry	In case of no response from the External Device, use an integer from 0 to 255 to enter how many times the Display retransmits the command.
Wait To Send	Use an integer from 0 to 255 to enter standby time (ms) for the Display from receiving packets to transmitting next commands.

■ Device Setting

To display the setting screen, touch [Device/PLC Settings] from [Peripheral Settings]. Touch the External Device you want to set from the displayed list, and touch [Device].

Comm.	Device			

Personal Computer Link Ethernet   [UDP]   Page 1/1

Device/PLC Name |PLC1   ▼|

IP Address   0   0   0   0
Port No.   12289   ▼ | ▲

Data Code |Binary   ▼|

| | Exit | | Back | 2005/09/01 19:39:47 |

Setup Items	Setup Description
Device/PLC Name	Select the External Device for device setting. Device name is a title of External Device set with GP-Pro EX.(Initial value [PLC1])
IP Address	Set IP address of the External Device. **NOTE** • Check with a network administrator about IP address. Do not set the duplicate IP address.
Port No.	Use an integer 12289 or 12291 to enter the port No. of the External Device.
Data Code	Select the data format to communicate with the External Device from "Binary" or "ASCII".

5   Supported Device

Range of supported device address is shown in the table below. Please note that the actually supported range of the devices varies depending on the External Device to be used. Please check the actual range in the manual of your External Device.

Enter the External Device address in the dialog below.
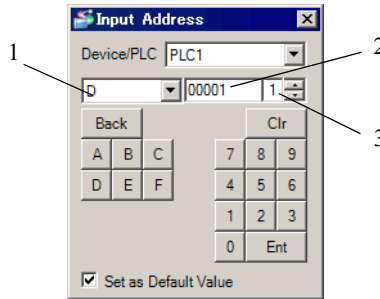
|	
1. Device	Select the Device.
2. Address	Enter the address.
3. CPU number	Enter the CPU number of the External Device with which to communicate, using the number from 1 to 4.

• Address notation
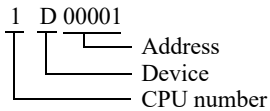
⬚ This address can be specified as system data area.

| Device	Bit Address	Word Address	32 bits	Notes
Input Relay	X00201 to X71664	X00201 to X71649		÷16+1] *1*2
Output Relay	Y00201 to Y71664	Y00201 to Y71649		÷16+1] *1
Internal Relay	I00001 to I65535	I0001 to I65521		÷16+1]
Common Relay	E0001 to E4096	E0001 to E4081		÷16+1]
Special Relay	M0001 to M9984	M0001 to M9969		÷16+1]
Link Relay	L00001 to L78192	L00001 to L78177		÷16+1] *3
Time-up Relay	TU0001 to TU3072	---		
Count-up Relay	CU000 to CU3072	---		
Timer present value	---	TP0001 to TP3072		
Timer present value (count-up)	---	TI0001 to TI3072		
Timer preset value	---	TS0001 to TS3072	L/H	*2
Counter present value	---	CP0001 to CP3072		
Counter present value (count-up)	---	CI0001 to CI3072		
Counter preset value	---	CS001 to CS3072		*2
Data Register	---	D00001 to D65535		Bit 15]
Common Register	---	B000001 to B262144		Bit 15]
Cache Register	---	F000001 to F524288		Bit 15] *4
General Register	---	R0001 to R4096		Bit 15]
Special Register	---	Z0001 to Z1024		Bit 15]
Link Register	---	W00001 to W78192		Bit 15] *3
Special Module	---	SW0010000 to SW7169999		*2*5
Information	---	INF100 to INF101		*2*6
	---	INF200 to INF214		*2*6
	---	INF30010 to INF37163		*2*6
	INF4100.00 to INF4215.15	INF4100 to INF4215	L/H	*2*6
	---	INF500		*6
Program Information	---	PRI00000 to PRI99913		*2*7
User Log Read	---	ULR000000 to ULR 064128		*2*8
Error History Read	---	ERH000000 to ERH 128022		*2*9

*1   Address for input relay and output relay can be specified when data position number (bit) 01 to 49 for lower 2 digits is the value of (multiples of 16) + 1 only.

Example: X00201

```
X   0    02   01
              └───── Data Position No.
         └────────── Module slot No.
    └─────────────── Module unit No.
```
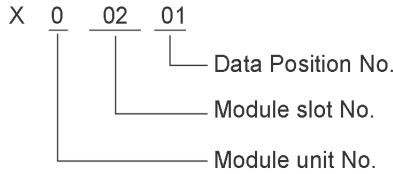
*2   Write disable

*3   In link relay (L) and link register (W), the upper 1st digit on address input area shows the link number, and lower 4th digit shows the address. Specify the word address for link relay (L) and link register (W) with the value of (multiples of 16) + 1.

Example: When specifying L71024 of link relay

```
L   7   1024
            └────── Address(Link Relay:0001 to 8192 Link device:0001 to 4096
        └────────── Link No.(0 to 7)
    └────────────── Device Name(Link Relay:L  Link device:W)
```
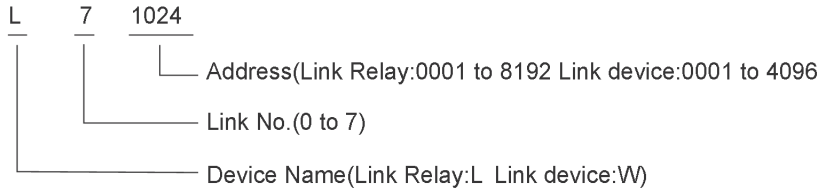
*4   Only the F3SP71-4N, F3SP76-7N, F3SP71-4S and F3SP76-7S can be used.

*5   Information of Special Module Read/Write

```
SW0  01 0003
              └──Data Position No. (0000 to 9999)
           └─────Module Slot No. (01 to 16)
        └────────Module Unit No. (0 to 7)
```
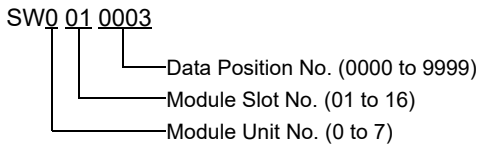
*6 Information Read
1. Read the status of CPU module and program

INF 1 00

       0: CPU status (1 word)
       1:Program status (1 word)

     Parameter No. (1)

2. Read the information of system ID, CPU type and area size

INF 2 00

    ASCII mode:
      13,14: Program area size (2 words)
      12: CPU type (1 word)
      08 to 11: Revisiov (4 words)
      00 to 07: System ID (8 words)
    Binary mode:
      13: Program area size (1 word)
      12: CPU type (1 word)
      08 to 11: Revisiov (4 words)
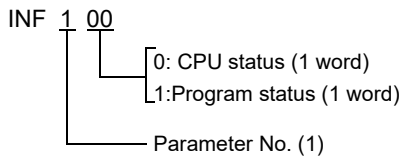   00 to 07: System ID (8 words)

    Parameter No. (2)
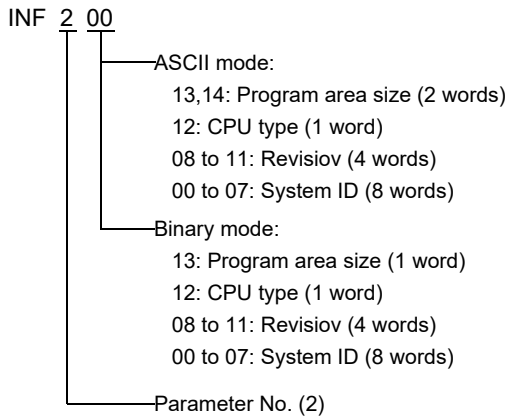
3. Read the mounting module name

INF 3 0 01 0

      3: Input/Output relay point (1 word)
      2: Input/Output (1 word)
      0,1: Module name (2 words)

     Slot No. (1 to 16)

     Unit No. (0 to 7)

     Parameter No. (3)
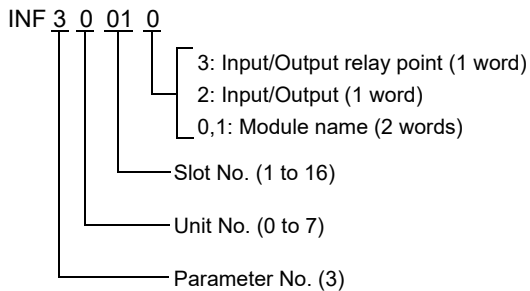
4. Read the ERR LED of CPU module or the ALM LED lighting factor

INF 4 1 01

     0 to 15: Factor (16 words)

     Factor designated flag (1:ERR factor, 2:ALM factor)

     Parameter No. (4)
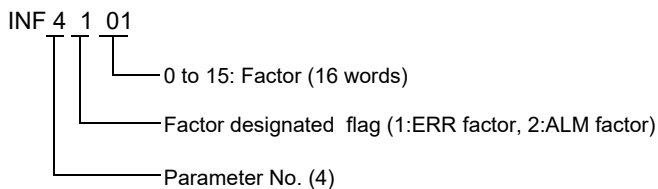
5. Delete the current alarm information of CPU module (write only)

INF 5 00

     Parameter No. (5)
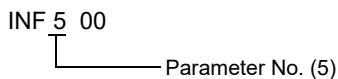
*7   Program Information Read

When 000 is written in Read information
PRI   000 00

└─ ASCII mode:
   Creation date: 7 to 13 (7 words)
   Size step No.: 4 to 6 (3 words)
   Program name: 0 to 3 (4 words)

└─ Binary mode:
   Creation date: 6 to 10 (5 words)
   Size step No.: 4 to 5 (2 words)
   Program name: 0 to 3 (4 words)

└─ Read information (000: Program name, Creation date)
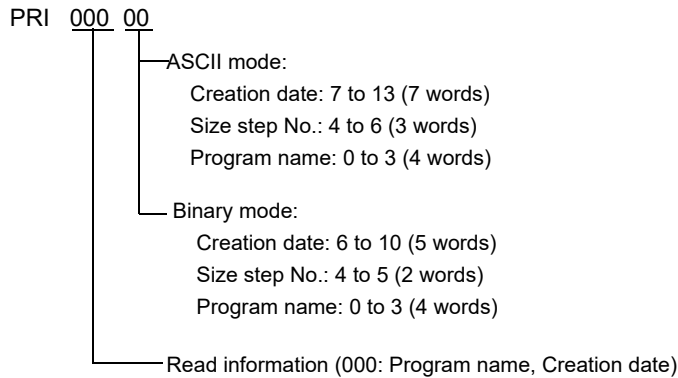
When one of the numbers from 001 to 999 is written in Read information

PRI   000 00

└─ ASCII mode:
   Size step No.: 4 to 6 (3 words)
   Program name: 0 to 3 (4 words)

└─ Binary mode:
   Size step No.: 4 to 5 (2 words)
   Program name: 0 to 3 (4 words)

└─ Read information (001 to 999: Reading such as the block names of No.n)

*8   User Log Read

ULR   000 000

└─ User log: 0 to 128 (word)

└─ User log reading point
   000: Latest user log
   001 to 064: No.n user log from new data

*9   Error History Read

ERH   000 000

└─ ASCII mode:
   0: Error information
      (00: System error, 01: BASIC error, 02: Sequence error, 03: I/O error)
   1, 2: Error code (Charactor string)
   3 to 6: Date (YY/MM/DD) charactor string
   7 to 10: Time (HH:MM:SS) charactor string
   11 to 22: Added information (Charactor string)

└─ Binary mode:
   0: Error information
      (0000: System error, 0001: BASIC error, 0002: Sequence error, 0003: I/O error)
   1: Error code
   2 to 4: Date (YYYY/MMMM/DDDD)
   5 to 7: Time (HHHH:MMMM:SSSS)
   8 to 18: Added information

└─ Error history reading point
   000: Latest error data
   001 to 128: No.n error data from new data

NOTE
• Please refer to the GP-Pro EX Reference Manual for system data area.

Cf.   GP-Pro EX Reference Manual "LS Area (Direct Access Method Area)"
• Please refer to the precautions on manual notation for icons in the table.

☞ "Manual Symbols and Terminology"

6   Device Code and Address Code

Use device code and address code when you select "Device Type & Address" for the address type in data displays.

Device	Device Name	Device Code (HEX)	Address Code
Input Relay	1X	0080	(Module unit No. x 0x40) + ((Module slot No. - 1) x 0x4) + ((Terminal No. - 1) divided by 16)[*1]
	2X	0180	
	3X	0280	
	4X	0380	
Output Relay	1Y	0081	(Module unit No. x 0x40) + ((Module slot No. - 1) x 0x4) + ((Terminal No. - 1) divided by 16)[*1]
	2Y	0181	
	3Y	0281	
	4Y	0381	
Internal Relay	1I	0082	Value of (word address - 1) divided by 16
	2I	0182	
	3I	0282	
	4I	0382	
Common Relay	1E	0084	Value of (word address - 1) divided by 16
	2E	0184	
	3E	0284	
	4E	0384	
Special Relay	1M	0083	Value of (word address - 1) divided by 16
	2M	0183	
	3M	0283	
	4M	0383	
Link Relay	1L	0088	(Link No. x 0x10000) + ((word address - 1) divided by 16)[*2]
	2L	0188	
	3L	0288	
	4L	0388	
Timer present value	1TP	0060	Value of word address from which 1 is deducted
	2TP	0160	
	3TP	0260	
	4TP	0360	

Device	Device Name	Device Code (HEX)	Address Code
Timer present value (count-up)	1TI	006D	Value of word address from which 1 is deducted
	2TI	016D	
	3TI	026D	
	4TI	036D	
Timer preset value	1TS	0063	Value of word address from which 1 is deducted
	2TS	0163	
	3TS	0263	
	4TS	0363	
Counter present value	1CP	0061	Value of word address from which 1 is deducted
	2CP	0161	
	3CP	0261	
	4CP	0361	
Counter present value (count-up)	1CI	006E	Value of word address from which 1 is deducted
	2CI	016E	
	3CI	026E	
	4CI	036E	
Counter preset value	1CS	0064	Value of word address from which 1 is deducted
	2CS	0164	
	3CS	0264	
	4CS	0364	
Data Register	1D	0000	Value of word address from which 1 is deducted
	2D	0100	
	3D	0200	
	4D	0300	
Common Register	1B	0004	Value of word address from which 1 is deducted
	2B	0104	
	3B	0204	
	4B	0304	
Cache Register[3]	1F	0006	Value of word address from which 1 is deducted
	2F	0106	
	3F	0206	
	4F	0306	

Device	Device Name	Device Code (HEX)	Address Code
General Register	1R	0003	Value of word address from which 1 is deducted
	2R	0103	
	3R	0203	
	4R	0303	
Special Register	1Z	0001	Value of word address from which 1 is deducted
	2Z	0101	
	3Z	0201	
	4Z	0301	
Link Register	1W	0002	(Link No. x 0x10000) + ((word address - 1) divided by 16)[*2]
	2W	0102	
	3W	0202	
	4W	0302	
Special Module	1SW	0065	Word address
	2SW	0165	
	3SW	0265	
	4SW	0365	

Device	Device Name	Device Code (HEX)	Address Code
Information	1INF1	0066	Word address (Read only)
	2INF1	0166	
	3INF1	0266	
	4INF1	0366	
	1INF2	006a	Word address (Read only)
	2INF2	016a	
	3INF2	026a	
	4INF2	036a	
	1INF3	006b	Word address (Read only)
	2INF3	016b	
	3INF3	026b	
	4INF3	036b	
	1INF4	0005	Word address (Read only)
	2INF4	0105	
	3INF4	0205	
	4INF4	0305	
	1INF5	006c	Word address (Write only)
	2INF5	016c	
	3INF5	026c	
	4INF5	036c	
Program Information	1PRI	0067	Word address (Read only)
	2PRI	0167	
	3PRI	0267	
	4PRI	0367	
User Log Read	1ULR	0068	Word address (Read only)
	2ULR	0168	
	3ULR	0268	
	4ULR	0368	
Error History Read	1ERH	0069	Word address (Read only)
	2ERH	0169	
	3ERH	0269	
	4ERH	0369	

*1   Please refer to "5 Supported Device *1" for each name.

*2   Please refer to "5 Supported Device *3" for each name.

*3   Only the F3SP71-4N, F3SP76-7N, F3SP71-4S and F3SP76-7S can be used.

7   Error Messages

Error messages are displayed on the screen of Display as follows: "No. : Device Name: Error Message (Error Occurrence Area)". Each description is shown below.

Item	Description
No.	Error No.
Device Name	Name of External Device where error occurs. Device name is a title of External Device set with GP-Pro EX.(Initial value [PLC1])
Error Message	Displays messages related to the error which occurs.
Error Occurrence Area	Displays IP address or device address of External Device where error occurs, or error codes received from External Device. **NOTE** • IP address is displayed such as "IP address (Decimal): MAC address (Hex)". • Device address is displayed such as "Address: Device address". • Received error codes are displayed such as "Decimal [Hex]".

Display Examples of Error Messages

"RHAA035: PLC1: Error has been responded for device write command (Error Code: 2 [02H])"

NOTE
• Refer to your External Device manual for details on received error codes.
• Refer to "Display-related errors" in "Maintenance/Troubleshooting Guide" for details on the error messages common to the driver.