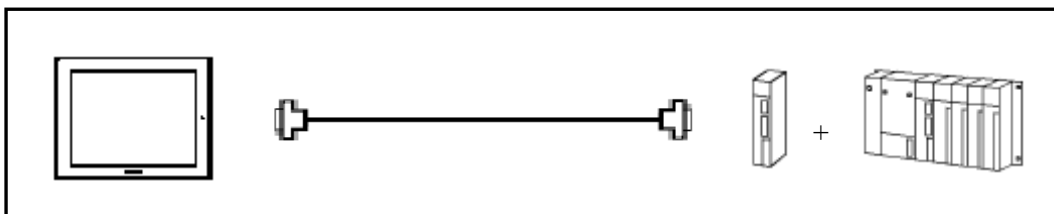# Mitsubishi <10> Mitsubishi Electric Corporation
Q Series (A Mode) + Link Unit Connection

System Structure

GP

Machine	Model	Remark
GP	GP70 Series GP77/77R Series GP2000 Series	Excepting for handy types.
GLC	GLC2000 Series	

CPU	Computer Link I/F	Communication Method	Connection Cable	GP
Q02-A Q02H-A Q06H-A	A1SJ71UC24-R2	RS-232C	**Connection Method** **[1]**	
	A1SJ71UC24-R4	RS-422	**Connection Method** **[2]**	

Procedure to Connect PLC

Select PLC Type on GP-PRO/PB
　-Package.

Refer to
Selecting PLC Type

Set the GP and PLC settings as the communication setting sample.

Refer to
Communication
Setting Sample

Set GP communication.
There are 2 ways.
　Setting on GP-PRO/PB　C-Package and transfer the data
　Setting on the Offline of the GP main unit.

Refer to
Communication
Settings　[GP]

Set PLC communication.

Refer to
Communication
Settings　[PLC]

Connect PLC to GP.
Please check the connection method according to the connection type, or distance.

Refer to
Connection Method
& **Recommended**
Products

Selecting PLC Type

Start up GP-PRO /PBIII.

Select the following PLC Type when creating the project file.

MITSUBISHI MELSEC-AnA　LINK

Communication Setting Sample

GP Setup		Computer Link Unit Settings	
Baud Rate	19200bps (fixed)	Baud Rate	19200 bps
Data Length	7bits (fixed)	Data Bit	7 bits
Stop Bit	2bits (fixed)	Stop Bit	2 bits
Parity Bit	Even	Parity Check Parity setting even/odd	Yes Even
Data Flow Control	ER Control	---	
Communication Format (RS-232C)	RS-232C	Mode Setup (RS-232C)	4 (Format 4 Protocol Mode)
Communication Format (RS-422)	4-wire type	Mode Setup (RS-422)	4 (Format 4 Protocol Mode)
-		Write possible in RUN mode	Possible
-		Sum Check	Yes
Unit No.	0 (fixed)	Station Number	0

Communication Settings [GP]

[GP-PRO/PB   C-Package Setting]

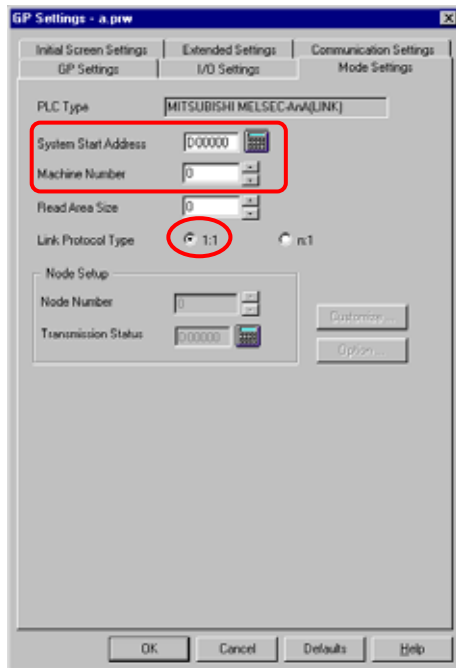Select [GP Setup] on Project Manager.
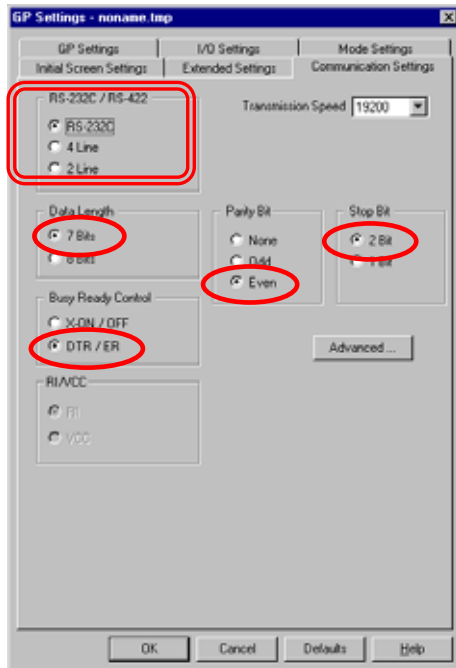
1) Communication Settings	1) Communication Settings

	Transmission Speed : 19200bps
	Data Length: 7 Bits
	Stop Bit: 2 Bit
	Parity Bit: Even
	Busy Ready Control: DTR / ER
	RS-232C/ RS-422
	   RS-232C Connection: RS-232C
	   RS-422 Connection: 4 Line
	
	 * Select one in ⬚
	   depending on the communication
	   method.

2) Mode Settings	2) Mode Settings
	System Start Address: Arbitrary Address Machine Number: 0 Link Protocol Type: 1:1

Select   [Transfer] -->   [Setup] -->   [Transfer Settings].
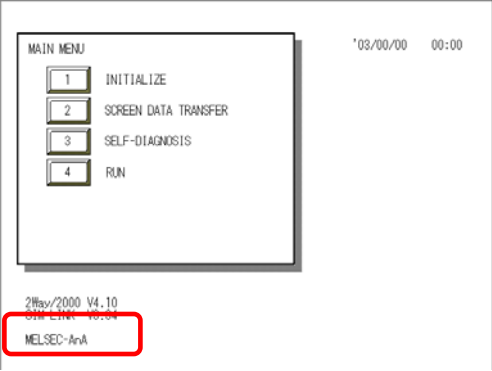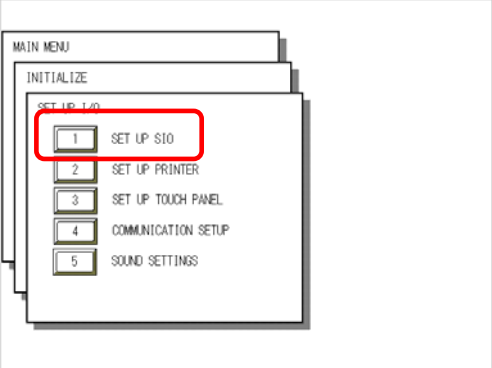
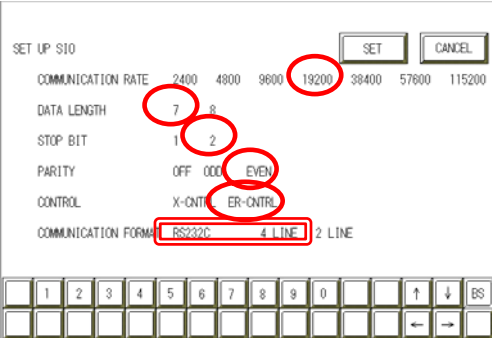3) Transfer Settings

3) Transfer Settings   GP System Settings: Checked
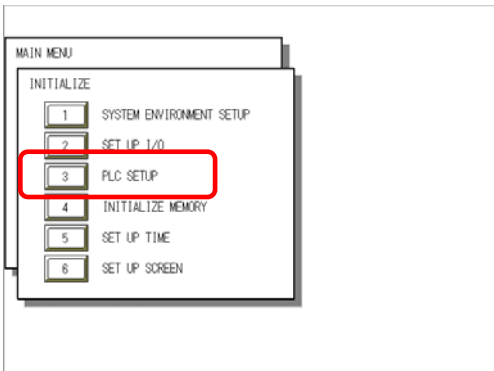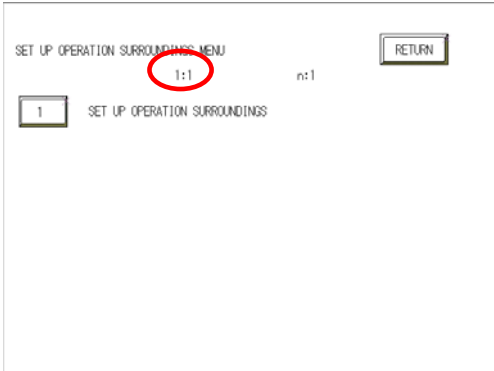
Transfer to GP after settings completed.
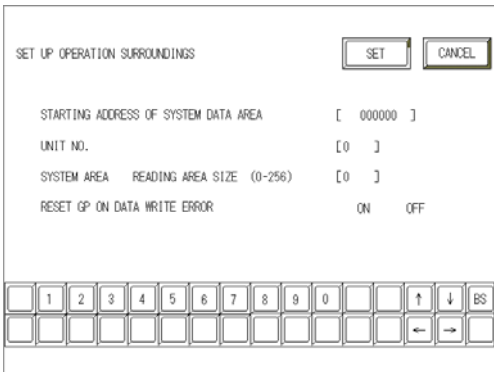
[GP Settings]

-Displaying Setting Screen-

Touch the left top of the screen within 10 second after powering on.

Or touch the right top and the right bottom of the screen at the same time. Keep 2 points touched and touch the left bottom. The menu bar will display on the bottom of the screen. Then touch [Offline].
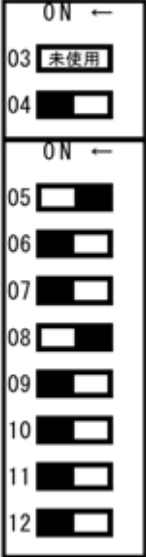
1) Checking GP Type	1) Checking GP Type
	If you have selected Mitsubishi MELSEC - AnA (Link), the following will be shown. "MELSEC – AnA"
2) Communication Settings	2) Communication Settings

	[MAIN MENU]
	    ↓
	[INITIALIZE]
	    ↓
	[SET UP I/O]
	    ↓
	[SET UP SIO]

	Communication Rate: 19200bps
	Data Length: 7 Bits
	Stop Bit: 2 Bits
	Parity: Even
	Control: ER Cntrl
	Communication Format
	   RS-232C Connection :RS-232C
	   RS-422 Connection :4 Line
	
	 * Select one in [ ]
	
	   depending on the communication
	
	   method.

3) Setting up Operation Surroundings	3) Setting up Operation Surroundings
MAIN MENU INITIALIZE 1 SYSTEM ENVIRONMENT SETUP 2 SET UP I/O 3 PLC SETUP 4 INITIALIZE MEMORY 5 SET UP TIME 6 SET UP SCREEN	[MAIN MENU] ↓ [INITIALIZE] ↓ [PLC SETUP] ↓ [PLC SETUP]
SET UP OPERATION SURROUNDINGS MENU RETURN 1:1 n:1 1 SET UP OPERATION SURROUNDINGS	SET UP OPERATION SURROUNDINGS MENU: 1:1
SET UP OPERATION SURROUNDINGS SET CANCEL STARTING ADDRESS OF SYSTEM DATA AREA [000000] UNIT NO. [0] SYSTEM AREA READING AREA SIZE (0-256) [0] RESET GP ON DATA WRITE ERROR ON OFF 1 2 3 4 5 6 7 8 9 0 ↑ ↓ BS ← →	Starting Address of System Data Area: Arbitrary Address Unit No.: 0

Communication Settings [PLC]
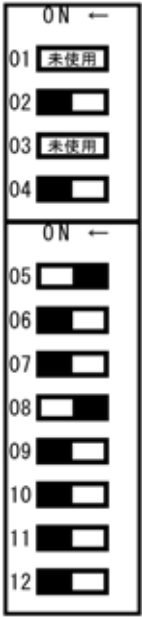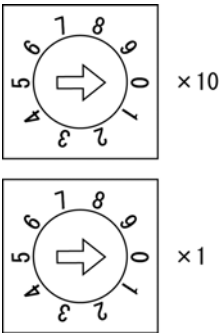
[RS-232C Connection]

[Computer Link Unit A1SJ71UC24-R2]

1) Mode Setup	1) Mode Setup
MODE	4 (Format 4 Protocol)
2) Communication Settings **Set switches to the black.** 	2) Communication Settings Baud Rate :19200bps Data Bit :7 Bits Stop Bit :2 Bits Parity Check :Yes Parity Setting Even/Odd :Even Write Possible in RUN Mode: Possible Sum Check :Yes

[RS-422 Connection]

[Connecting via Computer Link Unit A1SJ71UC24-R4]

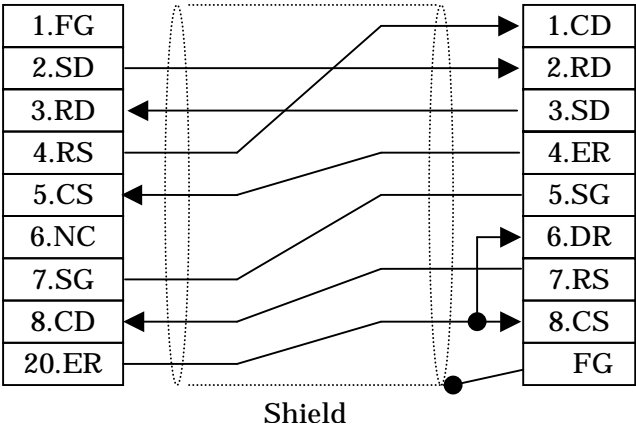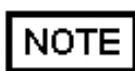| 1) Mode Setup	1) Mode Setup
MODE	8 (Format 4 Protocol)
2) Communication Settings **Set switches to the black.** 	2) Communication Settings Baud Rate :19200bps Data Bit :7 Bits Stop Bit :2 Bits Parity Check :Yes Parity Setting Even/Odd :Even Write Possible in RUN Mode: Possible Sum Check :Yes
3) Node Settings STATION NO 	3) Node Settings Station Number: 0

Connection Method

[   ]   RS-232C Connection

Type	Connection Method	Distance
Using GP000-IS02-MS		3
Creating Cable	GP Unit (25p Male) — PLC (9p Male) 1.FG — 1.CD 2.SD — 2.RD 3.RD — 3.SD 4.RS — 4.ER 5.CS — 5.SG 6.NC — 6.DR 7.SG — 7.RS 8.CD — 8.CS 20.ER — FG Shield	Within 15

* If a communication cable is used, it must be connected to the SG.
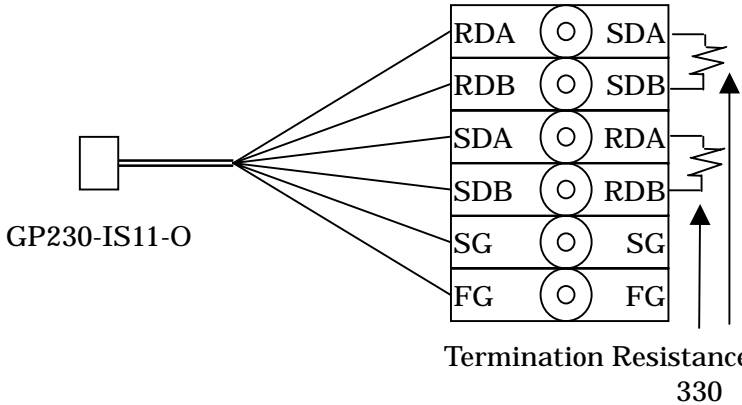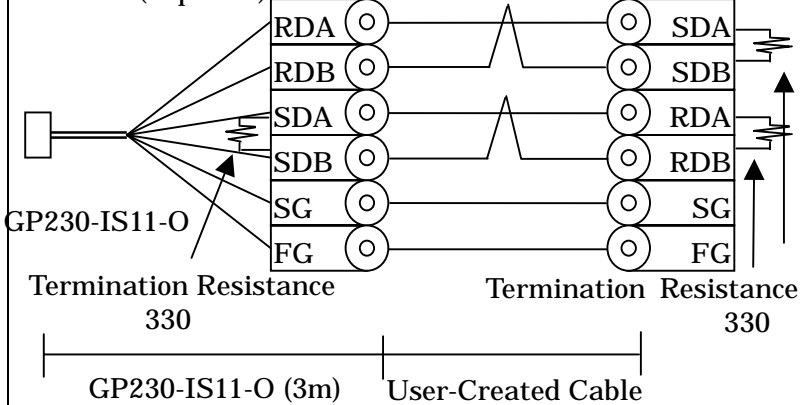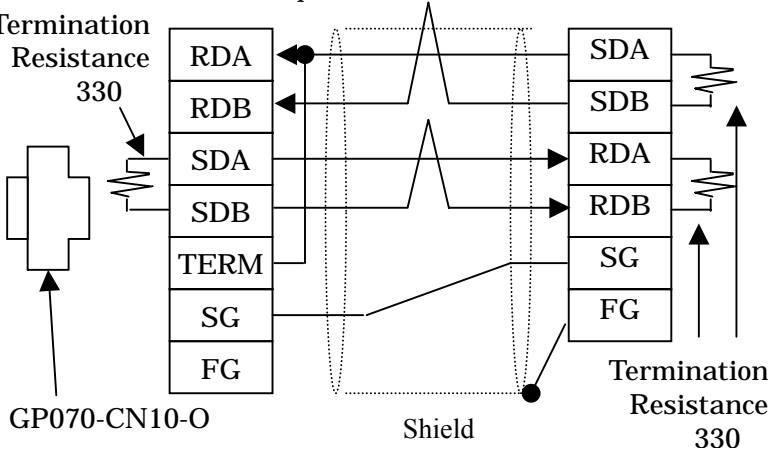
NOTE The optional cable, GP000-IS02-MS is 3m long. If you need a longer cable or shorter, please use a User-Created cable to connect.

Recommended Products

Connecter/Cover for GP	D-sub 25 pin Plug	XM2A-2501 <OMRON Co.>
	Cover for D-sub 25 pin	XM2S-2511 <OMRON Co.>
	Jack Screw	XM2Z-0071 <OMRON Co.>
Cable	CO-MA-VV-SB5P × 28AWG <Hitachi Cable Ltd.>	
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45	

[   ]   RS-422 Connection

Type	Connection Method	Distance
Using GP230-IS11-O	GP Unit (25pMale) ... PLC Terminal Block RDA — SDA RDB — SDB SDA — RDA SDB — RDB SG — SG FG — FG GP230-IS11-O Termination Resistance 330	5
Extending GP230-IS11-O	Cable with 6 wires ... PLC Terminal Block with 6 contacts GP Unit (25pMale) RDA — SDA RDB — SDB SDA — RDA SDB — RDB SG — SG FG — FG GP230-IS11-O Termination Resistance 330 Termination Resistance 330 GP230-IS11-O (3m) User-Created Cable	5 - 500
Using GP070-CN10-O	Conversion Adapter ... PLC Terminal Block Termination Resistance 330 RDA — SDA RDB — SDB SDA — RDA SDB — RDB TERM — SG SG — FG FG GP070-CN10-O Shield Termination Resistance 330	Within 500

Creating Cable	GP Unit (25p Male)	PLC Terminal Block	

GP Unit (25p Male)
1.FG
7.SG
9.TRM
10.RDA
11.SDA
15.SDB
16.RDB
18.CSB
19.ERB
21.CSA
22.ERA

PLC Terminal Block
SDA
SDB
RDA
RDB
SG
FG

Termination Resistance 330

Termination Resistance 330

Shield

Within 500

* If a communication cable is used, it must be connected to the SG.

* Termination Resistance

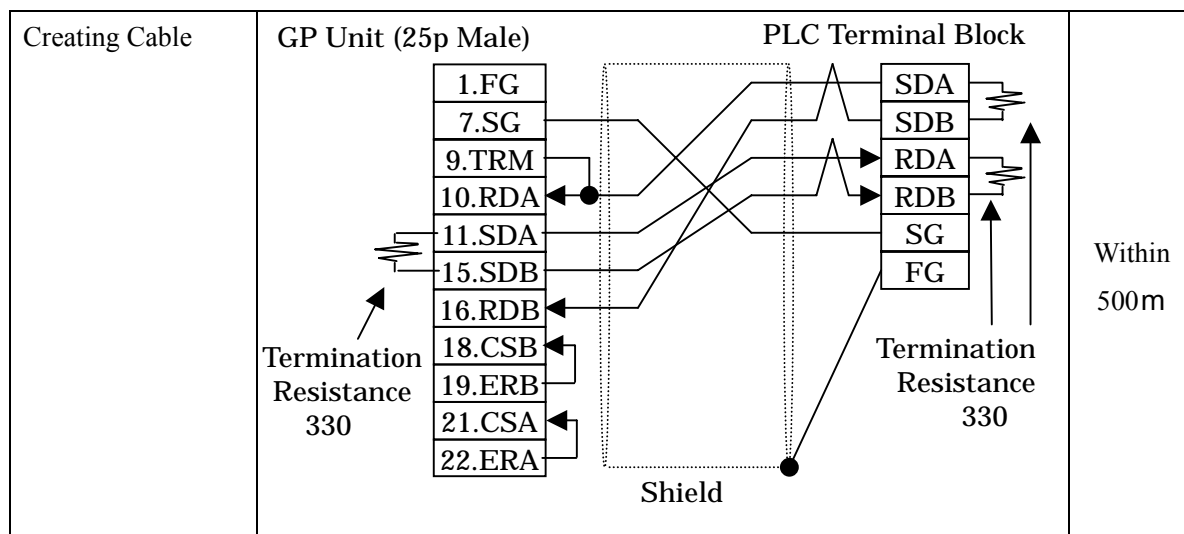> **PLC /   between SDA and SDB, between RDA and RDB :   330**
>
>   **(with wattage specified on PLC)**
>
> **GP Unit /   as required (Refer to Cable Diagrams) :   330**
>
>   **(with wattage specified on PLC)**

Important

Recommended Products

Connecter/Cover for GP	D-sub 25 pin Plug	XM2A-2501 <OMRON Co.>
	Cover for D-sub 25 pin	XM2S-2511 <OMRON Co.>
	Jack Screw	XM2Z-0071 <OMRON Co.>
Cable	SPEV(SB)-MPC-0.2*3P <Mitsubishi Cable Ind.>	
Setscrew	Metric Coarse Screw Tread : M2.6 × 0.45	