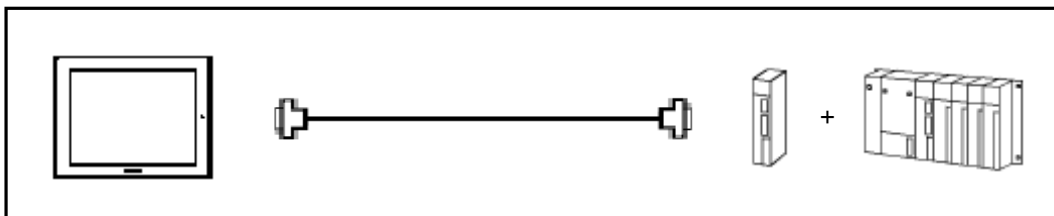



OMRON Corporation PLC

SYSMAC C Series CPU Direct Connection




System Structure



GP

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

PLC

CPU *1 	Communication Method	Connection Cable 	GP 
C200HS SRM1-C02, CQM1-CPU11 CQM1-CPU42 CPM1-20CDR-A	RS-232C	Connection Method [1]	
CQM1H-CPU21 *2 CPM2C *2	RS-232C	Connection Method [2]	

*1 Connect to a peripheral port. An OMRON cable CQM1-CIF01 is required.

*2 An OMRON cable CS1W-CN114 is required.

Procedure to Connect PLC

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



OMRON SYSMAC-C SERIES

Communication Setting Sample

■ SYSMAC C Series

GP Setup		PLC Setup	
Baud Rate	19200bps	Baud Rate	19200bps
Data Length	7 bits	Data Length	7 bits
Stop Bit	2 bits	Stop Bit	2 bits
Parity Bit	Even	Parity Bit	Even
Data Flow Control	ER Control		
Communication Format	RS-232C	Communication Format	RS-232C
		Command Level *1	Level 1,2, and 3 are valid
		Relation *1	1 to n
		DC + 5V Power Supply *1	No
		CTS Setup *1	Nomally ON
		Mode Setup *2	Host Link
		Communication *3 Condition Setting Switch	OFF
		Communication Port *4 Function Settings Switch	SW1:OFF SW2:ON
Unit No.	0	Station No.	0

*1 This setup is unavailable for the RS-232C port on C200HS, CQM1, and CPH2A.

*2 This setup is available only for the RS-232C port on C200HS and CQM1.

*3 This setup is available only for CPM2A.

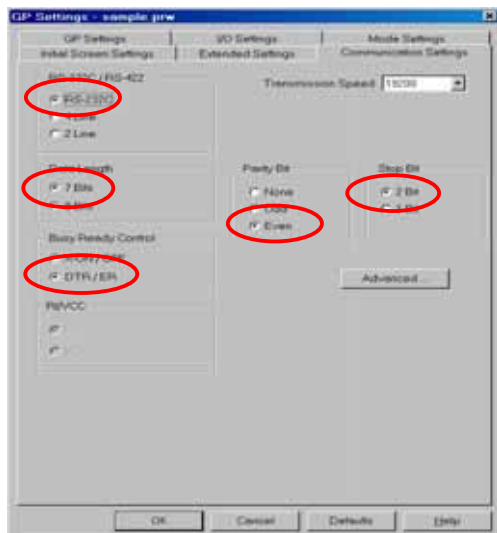
*4 This setup is available only for CPM2C.

Communication Settings [GP]

1 [GP-PRO/PB C-Package Setting]

Select [GP Setup] on Project Manager.

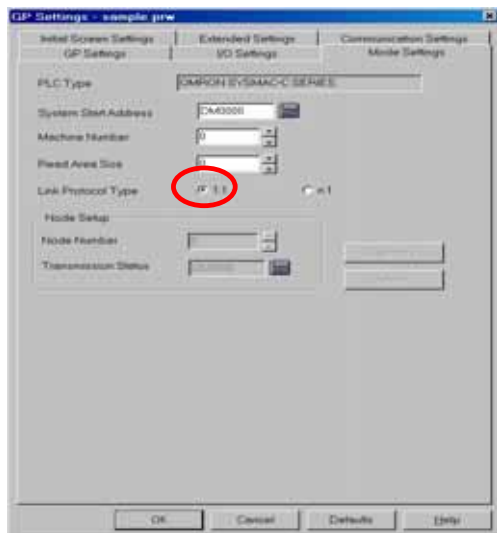
1) Communication Settings



1) Communication Settings

Transmission Speed: 19200bps
Data Length: 7 Bits
Stop Bit: 2 Bits
Parity Bit: Even
Busy Ready Control: DTR / ER
RS-232C / RS-422
RS-232C Connection: RS-232C

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

Transfer Settings

Send Information

- ☒ Download Information
- ☒ GP System Screen
- ☐ Filing Data(CF card)
- ☐ Data Trans Func CSV Data(CF card)

Transfer Method

- ☒ Send All Screens
- ☐ Automatically Send Changed Screens
- ☐ Send User Selected Screens

Transfer Mode

- ☒ Preparation for a transfer and a transfer are made simultaneous.
- ☐ It is transferred after preparation for a transfer is finished.

Setup

- ☒ Automatic Setup
- ☐ Force System Setup
- ☐ Do NOT Perform Setup

Use Extended Program :

- ☒ Simulation

Setup CFG file :

- ☒ English
- ☐ Japanese
- ☐ Selection

System Screen

Communications Port

- ☒ COM
 - Comm Port: COM1
 - Baud Rate: 115.2K (bps)
 - Retry Count: 5
- ☐ Ethernet
 - IP Address: 0. 0. 0. 0
 - Port: 8000
- ☐ Ethernet: Auto Acquisition
- ☐ Memory Loader

OK Cancel Help

3) Transfer Settings GP System Settings: Checked

Transfer to GP after settings completed.

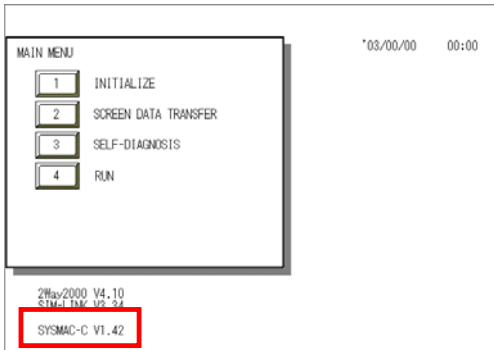
2. [GP Settings]

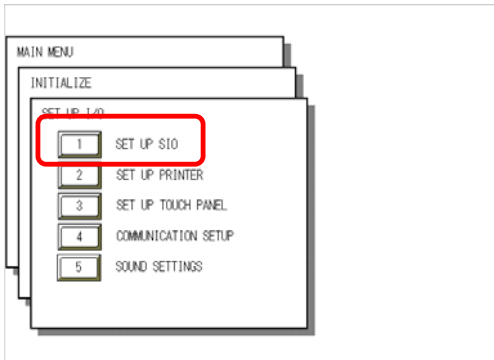
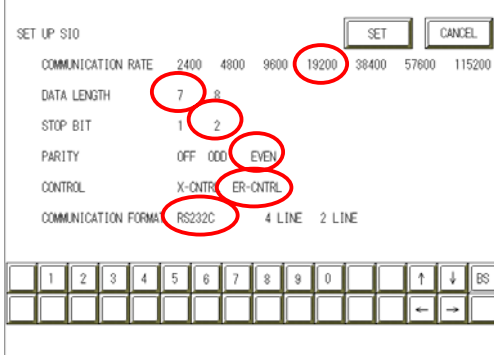
- Displaying Setting Screen -

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

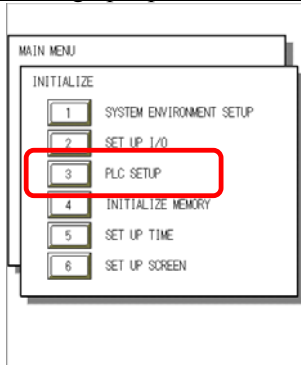
Or touch the top right and the bottom right of the screen at the same time. Keep 2 points touched and touch the bottom left. The menu bar will display on the bottom of the screen.

Then touch [Offline].

	<h3>1) Checking GP Type</h3> <p>If you have selected OMRON SYSMAC-C Series, following will be shown.</p> <p>“SYSMAC-C”</p>
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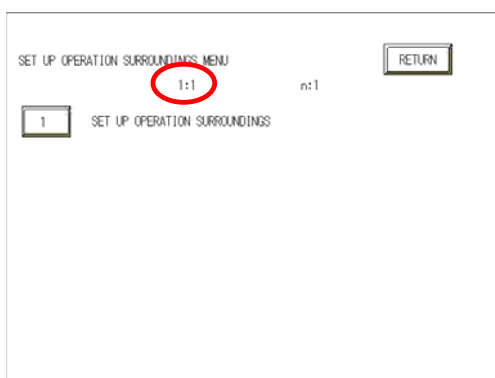
<h3>2) Communication Settings</h3> 	<h3>2) Communication Settings</h3> <pre> [MAIN MENU] ↓ [INITIALIZE] ↓ [SET UP I/O] ↓ [SET UP SIO] </pre>
	<p>Communication Rate: 19200bps Data Length: 7 Bits Stop Bit: 2 Bits Parity: Even Control: ER Cntrl Communication Format RS-232C Connection: RS-232C</p>

3) Setting up Operation Surroundings

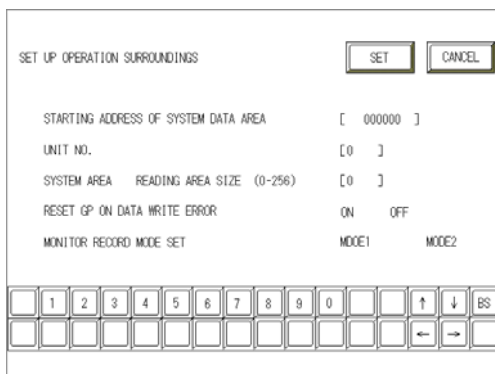


3) Setting up Operation Surroundings

[MAIN MENU]
↓
[INITIALIZE]
↓
[PLC SETUP]
↓
[PLC SETUP]



SET UP OPERATION SURROUNDINGS MENU:
1:1



Starting Address of System Data Area:
Arbitrary Address
Unit No.: 0

Communication Settings [PLC]

1. Peripheral Port Connection on CPU Unit

Word Address	Value	Setting Contents
DM6650	0001 (HEX)	Depending on the settings of DM6651 Mode Setup: Host Link
DM6651	0304 (HEX)	Baud Rate: 19200bps Data Length: 7 Bits Stop Bit: 2 Bits Parity Bit: Even
DM6653	0000 (HEX)	Host Link Station No. Settings: Station No. 0

* To connect CQM1, CQM1H, or C200HS, please make sure to turn OFF the mode setup switch SW5 on the CPU unit.


* To connect CPM2C, set SW1 and SW2 of “Communication Port Function Setting Switch” as below.

SW1 : OFF

SW2 : ON

Connection Method

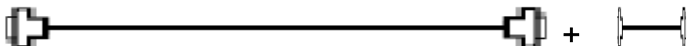
1. Isolation Cable CQM1-CIF01

Type	Connection Method	Distance
Using Isolation Cable CQM1-CIF01 by OMRON		3.3m



- ◆ Connect to a peripheral port.
- ◆ The CQM1-CPU11 has only one peripheral port, so a programming console cannot be used at the same time with the GP.
- ◆ If power to CQM1 is turned OFF while it is connected to the GP, "RUN" (operation) will stop. To change CQM1 to RUN mode when the power is turned back ON, change [Power ON Operation Mode Setting] of CQM1 to [RUN].

2. Isolation Cable CQM1-CIF01 and CS1W-CN114

Type	Connection Method	Distance
Using Combination of Isolation Cable CQM1-CIF01 by OMRON and Connector Conversion Cable CS1W-CN114		3.3m + 0.05m (Total 3.35m)



- ◆ Connect to a peripheral port.
- ◆ The CQM1-CPU11 has only one peripheral port, so a programming console cannot be used at the same time with the GP.
- ◆ If power to CQM1 is turned OFF while it is connected to the GP, “RUN” (operation) will stop. To change CQM1 to RUN mode when the power is turned back ON, change [Power ON Operation Mode Setting] of CQM1 to [RUN].