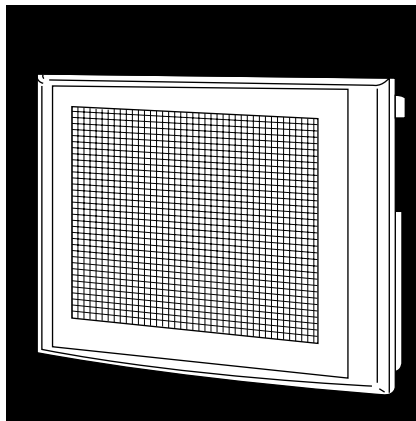


# mitsubishi

A8GT-J61BT15 Type CC-Link Communication Module

User's Manual



GRAPHIC OPERATION TERMINAL

# 800/900

## Series



Mitsubishi Graphic Operation Terminal

# • SAFETY PRECAUTIONS •

(Always read these instructions before using this equipment.)

Before using this product, please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly.

The instructions given in this manual are concerned with this product. For the safety instructions of the programmable controller system, please read the CPU module user's manual.


In this manual, the safety instructions are ranked as "DANGER" and "CAUTION".



Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.



Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Note that the  CAUTION level may lead to a serious consequence according to the circumstances. Always follow the instructions of both levels because they are important to personal safety.

Please save this manual to make it accessible when required and always forward it to the end user.

## [Design Precautions]

### DANGER

- Some faults of this module may keep the outputs on or off. An external monitoring circuit should therefore be provided to check for output signals which may lead to a serious accident. Not doing so can cause an accident due to mis-output or misoperation.
- If a communication error (including cable disconnection) occurs during monitoring with the GOT, communication between the GOT and master station is interrupted, disabling operation. When using the GOT to configure a system, assume that a GOT communication error will occur and configure a system in which switches used to perform significant operation for the system are provided on any device other than the GOT. Not doing so can cause an accident due to mis-output or misoperation.
- Read Chapter 5 "Data Link Processing Time" in the Master Module User's Manual carefully regarding the status of each station when the PLC CPU operation is stopped or the data link becomes a communication error.

Also, configure an interlocking circuit in the sequence program using the communication status information (SB and SD) so that the overall system is always maintained.

An accident may occur by false output or malfunction.

- Received data form master or local data link faulty station.

#### 1) Remote input (RX) and remote output

This varies depending on the setting of the module's condition setting switch and input data (SW4) of the data link faulty station.

OFF : CLEAR (all off)

ON : Keeps the data right before the error occurrence.

#### 2) Remote registers (RWw and RWr)

The data right before the error is kept regardless of the SW4 setting.

## [Design Precautions]

### CAUTION

- Do not bundle control lines or communication cables with the main circuit, power or other lines or lay them near these lines.  
As a guideline, separate the cables at least 100mm(3.94inch).  
Not doing so can cause misoperation due to noise.

## [Mounting Precautions]

### DANGER

- Before mounting or dismantling the module to or from the GOT, always switch off GOT power externally in all phases.  
Not doing so can cause a module failure or misoperation.

### CAUTION

- Use this module in an environment that conforms to the general specifications given in the GOT user's manual.  
Not doing so can cause an electric shock, fire, misoperation, or product damage or deterioration.
- When mounting the module to the GOT, tighten the module fixing screws within the specified torque range.  
Undertightening can cause a drop, short circuit or misoperation.  
Overtightening can cause a drop, short circuit or misoperation due to damaged screws or module.

## [Wiring Precautions]

### DANGER

- Before starting wiring work, always switch GOT power off externally in all phases.  
Not doing so can cause an electric shock, product damage or misoperation.

### CAUTION

- When switching power on or starting operation after mounting, wiring or other work, always fit the terminal cover supplied to the product.  
Not doing so can cause an electric shock, short circuit or failure.
- Always ground the FG terminal of the GOT power supply and the FG1 terminal of this module to the protective ground conductor.  
Be sure to ground the GOT and this module separately.  
Not doing so may cause an electric shock or misoperation.

## [Wiring Precautions]

### CAUTION

- Before wiring the module, confirm the rated voltage and terminal arrangement of the product.  
A fire or failure can occur if the power supply connected is different from the rating or wiring is incorrect.
- Tighten the terminal screws within the specified torque range.  
Undertightening can cause a short circuit or misoperation.  
Overtightening can cause a short circuit or misoperation due to damaged screws or module.
- Ensure that foreign matters such as chips and wire off-cuts do not enter the module.  
They can cause a fire, failure or misoperation.
- Always secure the communication cables connected to the module, e.g. run them in conduits or clamp them.  
Not doing so can damage the module or cables due to dangling, moved or accidentally pulled cables or can cause misoperation due to cable contact fault.
- Do not hold the cable part when unplugging the communication cable connected to the module.  
Disconnect the cable after loosening the screw in the part connected to the module.  
If you pull the cable connected to the module, the module or cable can be damaged or misoperation can occur due to cable connection fault.

## [Startup/Maintenance Precautions]

### DANGER

- Do not touch the terminals while power is on.  
Doing so can cause an electric shock or misoperation.
- Before starting cleaning or terminal screw retightening, always switch power off externally in all phases.  
Not doing so can cause a module failure or misoperation.  
Undertightening can cause a drop, short circuit or misoperation.  
Overtightening can cause a drop, short circuit or misoperation due to damaged screws or module.

### CAUTION

- Do not disassemble or modify the module.  
Doing so can cause a failure, misoperation, injury or fire.
- Do not touch the conductive areas and electronic parts of the module.  
Doing so can cause the module to misoperate or fail.
- Do not change any switch setting while power is on.  
Doing so can cause a failure or misoperation.
- The module is made of resin. Do not drop it or subject it to strong impact.  
Doing so can damage the module.
- Always make sure to touch the grounded metal to discharge the electricity charged in the body, etc., before touching the module.  
Failure to do so may cause a failure or malfunctions of the module.

[Disposal Precautions]

 CAUTION

- When disposing of the product, treat it as industrial waste.

REVISIONS

\* The manual number is given on the bottom left of the back cover.

Print Date	* Manual Number	Revision
Aug., 1997	IB (NA) 66788-A	First edition
Aug., 2001	IB (NA) 66788-B	<ul style="list-style-type: none"> <li>The manual layout was rearranged.</li> </ul> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Models added</div> GOT-A900 Series
Jun., 2004	IB (NA) 66788-C	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Partial corrections</div> SAFETY PRECAUTIONS, About Manuals <div style="border: 1px solid black; padding: 2px; display: inline-block;">MODEL CODE change</div> Changed from 13JL29 to 1DM074

Japanese Manual Version IB-68909-D

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## INTRODUCTION

Thank you for purchasing the Mitsubishi Graphic Operation Terminal.  
Before using the equipment, please read this manual carefully to develop full familiarity with the functions and performance of the graphic operation terminal you have purchased, so as to ensure correct use.  
Please forward a copy of this manual to the end user.

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## About Manuals

The following manuals are also related to this product.

In necessary, order them by quoting the details in the tables below.

### Related Manuals

Manual Name	Manual Number (Model Code)
<p>CC-Link System Master • Local Module type AJ61BT11/A1SJ61BT11 User's Manual</p> <p>Describes the system configuration, performance specifications, functions, handling, wiring and troubleshooting of the AJ61BT11 and A1SJ61BT11. (Option)</p>	<p>IB-66721 (13J872)</p>
<p>CC-Link System Master • Local Module type AJ61QBT11/A1SJ61QBT11 User's Manual</p> <p>Describes the system configuration, performance specifications, functions, handling, wiring and troubleshooting of the AJ61QB11 and A1SJ61QBT11. (Option)</p>	<p>IB-66722 (13J873)</p>
<p>CC-Link System Master • Local Module type QJ61BT11 User's Manual</p> <p>Describes the system configuration, performance specifications, functions, handling, wiring and troubleshooting of the QJ61BT11 (Option)</p>	<p>SH-080016 (13JL91)</p>
<p>A985GOT/A975GOT/A970GOT/A960GOT User's Manual</p> <p>Explains the specifications, general system configuration, component devices, part names, option unit loading methods, installation and wiring methods, maintenance and inspection methods, and error codes of A985GOT/A975GOT/A970GOT/A960GOT unit. (Option)</p>	<p>SH-4005 (1DM099)</p>
<p>A950GOT/A951GOT/A953GOT/A956GOT User's Manual</p> <p>Explains the specifications, general system configuration, component devices, part names, option unit loading methods, installation and wiring methods, maintenance and inspection methods, and error codes of A950GOT/A951GOT/A953GOT/A956GOT unit. (Option)</p>	<p>SH-080018 (1DM103)</p>
<p>A870GOT Graphic Operation Terminal User's Manual</p> <p>This manual describes the specifications and performance of the A870GOT main unit as well as the hardware configuration, procedures for installing optional units, operation in off-line mode, error codes, and troubleshooting guidelines. (Option)</p>	<p>IB-66628 (1DM050)</p>
<p>A850GOT Graphic Operation Terminal User's Manual</p> <p>This manual describes the specifications and performance of the A850GOT main unit as well as the hardware configuration, procedures for installing optional units, operation in off-line mode, error codes, and troubleshooting guidelines. (Option)</p>	<p>IB-66669 (1DM038)</p>
<p>GT Works Version 5/GT Designer Version 5 Reference Manual</p> <p>Deals with the system configuration of GT Works Version 5/GT Designer Version 5, the screen makeup of the GT Designer, the general description of various monitoring functions, the procedure for displaying the monitor screen on the GOT, and how to use the help function. (Option)</p>	<p>SH-080117 (1DM187)</p>
<p>GOT-A900 Series Operating Manual (GT Works Version 5/GT Designer Version 5 compatible Extended • Option Functions Manual)</p> <p>Provides the specifications of the utility, system monitoring, ladder monitoring, special function unit monitoring, network monitoring functions and list editor functions available for the GOT-A900 series and how to operate the dedicated monitor screen. (Option)</p>	<p>SH-080118 (1DM185)</p>

Manual Name	Manual Number (Model Code)
<p>GOT-A900 Series User's Manual (GT Works Version 5/GT Designer Version 5 compatible Connection System Manual)</p> <p>Gives the specifications, system configuration, setting method and connection diagram of each connection form available for the GOT-A900 series. (Option)</p>	SH-080119 (1DM189)
<p>SW3NIW-A8GOTP Graphic Settings Software Package Operating Manual (Monitor Screen Creation Manual)</p> <p>This manual describes how to create monitor screens, the monitor functions available for the GOT, how to set the monitor functions, precautions for creating monitor screens, and precautions for utilizing the monitor data of the conventional GOT. (Option)</p>	IB-66793 (1DM176)
<p>SW3NIW-A8GOTP Graphic Settings Software Package Operating Manual (Data Transmission/Debugging/Document Creation Manual)</p> <p>This manual describes the following items.</p> <ol style="list-style-type: none"> <li>1) Procedures for downloading project data to the GOT and uploading it from the GOT.</li> <li>2) Procedures for installing the operating system in the GOT.</li> <li>3) Procedures for using the A8GOTP as a virtual programmable controller and for debugging the GOT.</li> <li>4) Procedures for outputting created monitor data as a completed document (Option)</li> </ol>	IB-66794 (1DM175)
<p>GOT800 Series Operating Manual (Expanded Functions Manual)</p> <p>This manual describes the operation procedures for using the system monitor functions, monitor functions for special function units, and the dedicated monitor screens used with the ladder monitor functions. (Option)</p>	IB-66796 (1DM181)
<p>Type SW2IVD-GPPQ GPP Software package OPERATING MANUAL(Offline)</p> <p>Describes the offline functions, such as the programming method, printout method and file maintenance, of the SW2IVD-GPPQ (Option)</p>	IB-66774 (13J921)
<p>GX Developer Version 6 Operating Manual</p> <p>Describes the online functions of GX Developer including the programming procedure, printing out procedure, monitoring procedure, and debugging procedure. (Option)</p>	SH-080098 (13J989)

#### Conformation to the EMC Directive

A8GT-J61BT15 conforms to the EMC Directive only when connected to the GOT (with CE logo printed on the rating plate) which conforms to the EMC Directive. For details of Conformation to the EMC Directive, refer to the using GOT User's Manual (Hardware).

## Abbreviations and generic terms in this manual

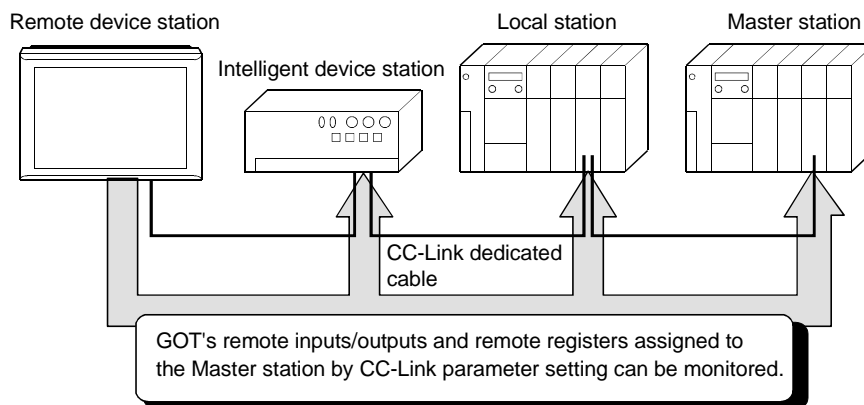
The following abbreviations and symbols are used in this manual.

Abbreviation/Generic Name/Term		Description
CC-Link		Abbreviation for the Control & Communication Link system
CC-Link communication module	A8GT-J61BT13	Abbreviation of A8GT-J61BT13 type CC-Link communication module
	A8GT-J61BT15	Abbreviation of A8GT-J61BT15 type CC-Link communication module
GOT-A900 Series	A985GOT-V	Generic term of A985GOT-TBA-V and A985GOT-TBD-V
	A985GOT	Generic term of A985GOT-TBA, A985GOT-TBD and A985GOT-TBA-EU
	A975GOT	Generic term of A975GOT-TBA-B, A975GOT-TBD-B, A975GOT-TBA, A975GOT-TBD and A975GOT-TBA-EU
	A970GOT	Generic term of A970GOT-TBA-B, A970GOT-TBD-B, A970GOT-TBA, A970GOT-TBD, A970GOT-SBA, A970GOT-SBD, A970GOT-LBA, A970GOT-LBD, A970GOT-TBA-EU and A970GOT-SBA-EU
	A97*GOT	Generic term of A975GOT and A970GOT
	A960GOT	Generic term of A960GOT-EBA, A960GOT-EBD and A960GOT-EBA-EU
	A956GOT	Generic term of A956GOT-TBD, A956GOT-SBD, A956GOT-LBD, A956GOT-TBD-M3, A956GOT-SBD-M3 and A956GOT-LBD-M3
	A956WGOT	Abbreviation of A956WGOT-TBD
GOT800 Series	A870GOT	Generic term of A8GT-70GOT-EW, A8GT-70GOT-EB, A8GT-70GOT-SW, A8GT-70GOT-SB, A8GT-70GOT-TW, A8GT-70GOT-TB
	A810GOT	Abbreviation of A8GT-10GOT-C
	A850GOT	Abbreviation of A850GOT-LWD, A850GOT-LBD, A850GOT-SWD, A850GOT-SBD, A850GOT-LWD-M3, A850GOT-LBD-M3, A850GOT-SWD-M3, A850GOT-SBD-M3
Software	GT Works Version 5	Abbreviation of SW5D5C-GTWORKS-E software package
	GT Designer Version 5	Generic term of SW5D5C-GOTR-PACKE software package and SW5D5C-GOTR-PACKEV software package
	GX Developer	Generic term of SW <input type="checkbox"/> D5C-GPPW-E/SW <input type="checkbox"/> D5F-GPPW-E software packages
Drawing Software	GT Designer	Abbreviation of image creation software GT Designer for GOT900
	SW <input type="checkbox"/> NIW-A8GOTP	Abbreviation of SW <input type="checkbox"/> NIW-A8GOTP software package
Personal computer		Personal computer where the corresponding software package is installed
Master station		Station which controls intelligent device, Local and Remote stations
Local station		Station which has a CPU and can communicate with the Master and other Local stations
Remote I/O station		Slave station in the CC-Link system which can handle bit data only
Remote device station		Slave station in the CC-Link system which can handle bit data and word data
Remote station		Generic name for remote I/O and remote device stations
Intelligent device station		Slave station in the CC-Link system which can make transient transmission, such as the A8GT-J61BT13
Master/local module		Generic name for the QJ61BT11, AJ61BT11, AJ61QBT11, A1SJ61BT11 and A1SJ61QBT11
Master module		Generic name for the QJ61BT11, AJ61BT11, AJ61QBT11, A1SJ61BT11 and A1SJ61QBT11 when used as the Master station
Local module		Generic name for the QJ61BT11, AJ61BT11, AJ61QBT11, A1SJ61BT11 and A1SJ61QBT11 when used as Local stations
Cyclic transmission		Transmission method in which the contents of the remote inputs/outputs and remote registers are updated periodically
Transient transmission		Transmission method in which communication is made at any timing
RX		Remote input
RY		Remote output
RWw		Remote register (write area)
RWr		Remote register (read area)

# 1. OVERVIEW

This user's manual includes specifications, monitoring method, handling information, programming method and other instructions of the A8GT-J61BT15 CC-Link communication module (hereinafter referred to as the "A8GT-J61BT15") used in the Control Communication Link (hereinafter referred to as "CC-Link") system.

By connecting the A8GT-J61BT15 module to the GOT, it can perform a monitoring operation as a remote device station (the number of occupied stations may be selected between 2 and 4) in the CC-Link system.



## (1) PLC CPU that allows monitoring

When the A8GT-J61BT15 is used, the following CPUs can be monitored.

- QCPU (Q mode)
- QCPU (A mode)
- QnACPU
- ACPU
- Motion controller CPU

## (2) Difference between the A8GT-J61BT13 and the A8GT-J61BT15

There are differences in the monitoring methods that can be used as well as the devices that can be monitored between the A8GT-J61BT13 and the A8GT-J61BT15.

The following table lists these differences between the A8GT-J61BT13 and the A8GT-J61BT15.

○ : Usable × : Unusable

Item		When the A8GT-J61BT13 is used	When the A8GT-J61BT15 is used
Monitoring methods	Monitoring by Cyclic Transmission	○	○
	Monitoring by Transient Transmission	○	×
Devices that can be monitored	The GOT's remote inputs/outputs and remote registers assigned to the Master station.	○	○
	All remote inputs/outputs and remote registers assigned to the Master station.	○	×



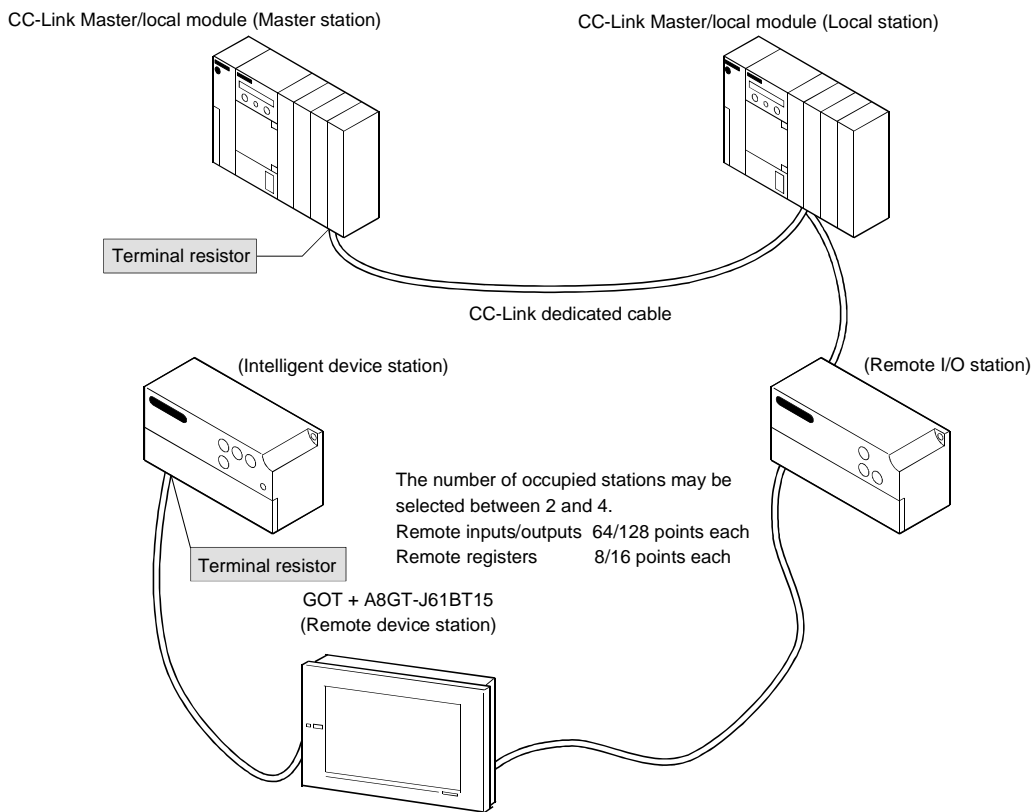
## 2. SYSTEM CONFIGURATION

This chapter describes the system configuration of the whole CC-Link system where the A8GT-J61BT15 is used.

For equipment required for the GOT, refer to the user's manual of the GOT used.

### 2.1 Overall Configuration

The following diagram shows the overall configuration for use of the A8GT-J61BT15. Up to 32 GOTs using the A8GT-J61BT15 may be connected in relation to one master module.



2.2 Instructions for System Configuration

When using the A8GT-J61BT15, follow these system configuration instructions.

(1) GOTs which can use the A8GT-J61BT15

The following GOT models can use the A8GT-J61BT15.

Name	Model
A985GOT-V	A985GOT-TBA-V, A985GOT-TBD-V
A985GOT	A985GOT-TBA, A985GOT-TBD
A975GOT	A975GOT-TBA(-B), A975GOT-TBD(-B)
A970GOT	A970GOT-TBA(-B), A970GOT-TBD(-B), A970GOT-SBA, A970GOT-SBD, A970GOT-LBA, A970GOT-LBD
A960GOT	A960GOT-EBA, A960GOT-EBD
A956WGOT	A956WGOT-TBD
A956GOT	A956GOT-TBD(-M3), A956GOT-SBD(-M3), A956GOT-LBD(-M3)
A870GOT	A8GT-70GOT-EW, A8GT-70GOT-EB, A8GT-70GOT-SW, A8GT-70GOT-SB, A8GT-70GOT-TW, A8GT-70GOT-TB
A850GOT	A850GOT-LWD(-M3), A850GOT-LBD(-M3), A850GOT-SWD(-M3), A850GOT-SBD(-M3)

(2) Compatible software version

When creating the GOT screen or installing the operating system (OS), always use the following software versions.

(a) GOT-A900 Series

- SW0D5C-GTWORKS-E software version A or later
- SW1D5C-GOTRE-PACK software version A or later

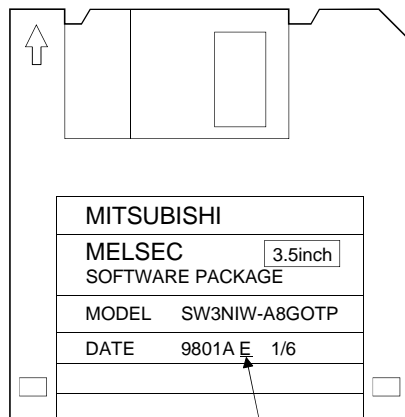
(b) GOT800 Series

- Graphics software: SW3NIW-A8GOTP software version A or later
- OS program: SW3NIW-A8SYSP software version A or later
- Special module monitor data: SW3NIW-A8GMDP

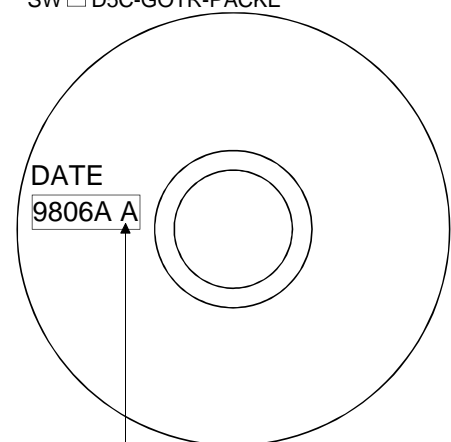
The software version can be confirmed on the rating plate of the floppy disk of the product.

SW  NIW-A8    P

SW  D5C-GTWORKS-E or  
SW  D5C-GOTR-PACKE



Indicates the software version.



Indicates the software version.

(3) Communication Driver Installed in the GOT

Install the following communication driver in the GOT.

CC-Link communication unit Used	Driver to Be Installed
A8GT-J61BT15	CC-LINK (RD)

(4) Utility function

The following table lists the GOT's utility functions that can be used when the A8GT-J61BT15 is in use.

○ : Usable × : Unusable

Item		When the A8GT-J61BT15 is used
Utility function	Brightness/contrast adjustment	○
	Screen & OS copy	○
	Setup	○
	Self-test	○*
	Memory information	○
	Clock	×
	Screen cleanup	○
	Password	○

\*: CPU communications check of the self-test function cannot be performed when the GOT800 Series are in use.

(5) Extended•option functions

Refer to the manuals listed in the table below for the GOT's extended • option functions that can be used when the A8GT-J61BT15 is in use.

GOT Used	Manuals to refer to
GOT-A900 Series	GOT-A900 Series Operating Manual (GT Works Version5/GT Designer Version5 compatible Extended•Option Functions Manual)
GOT800 Series	GOT800 Series Operating Manual (Expended Functions Manual)



### 3. SPECIFICATIONS

This chapter provides the general and performance specifications and other information of the A8GT-J61BT15.

#### 3.1 General Specifications

The general specifications of the A8GT-J61BT15 changes according to the GOT used. Refer to the user's manual of the GOT used.

#### 3.2 Performance Specifications

The following table lists the performance specifications of the A8GT-J61BT15.

Item	Specifications
CC-Link station type	Remote device station
Number of stations occupied	May be selected between 2 and 4. 2 station: RX/R Y 64 points each *1, RW write area 8 points each/read area all area 4 stations: RX/R Y 128 points each *1, RW write area 16 points each /read area all area
Monitor device	Write from GOT:RX,RWs assigned to the GOT (depending on the number of stations occupied(Refer to upper)) Resd to GOT : RX,RWs assigned to the GOT (depending on the number of stations occupied(Refer to upper))
Transmission speed	156kbps/625kbps/2.5Mbps/5Mbps/10Mbps
Max. transmission distance	Depends on the transmission speed.
Max. number of modules connected	32 (when two stations are selected) The max. number of modules connected depends on the configuration of the CC-Link system to be used. For more details on the max. number of modules connected, refer to the CC-Link System Master-Local Module User's Manual.
Connection cable	CC-Link dedicated cable
Terminal block	8-pin terminal block (M3.5×8 screws)
Applicable cable size	0.75mm <sup>2</sup> to 2.00mm <sup>2</sup>
Applicable crimping terminal	RAV1.25-3, RAV2-3.5 (conforming to JIS C2805)
Current consumption	100mA
Outline dimensions	99mm(3.9inch)(H)×149mm(5.85inch)(W)×34mm(1.34 inch)(D)
Weight	0.20kg (0.44lb)
Compatible software package *2	GOT-A900 Series SW0D5C-GTWORKS-E Version A or later SW0D5C-GOTRE-PACK Version A or later GOT800 Series SW3NIW-A8GOTP Version A or later SW3NIW-A8SYSP Version A or later SW3NIW-A8GMDP

\*1 Each of the I/O signals (RX, RY) occupies 16 points of a system area within device points.  
For more details on the I/O signals, refer to Section 4.3.1.

\*2 Be sure to use a software package that supports the GOT to be used.

For more information on the software packages that support the GOT, refer to the user's manual of the GOT to be used.



## 4. MONITORING SPECIFICATION

## 4.1 Monitoring Overview

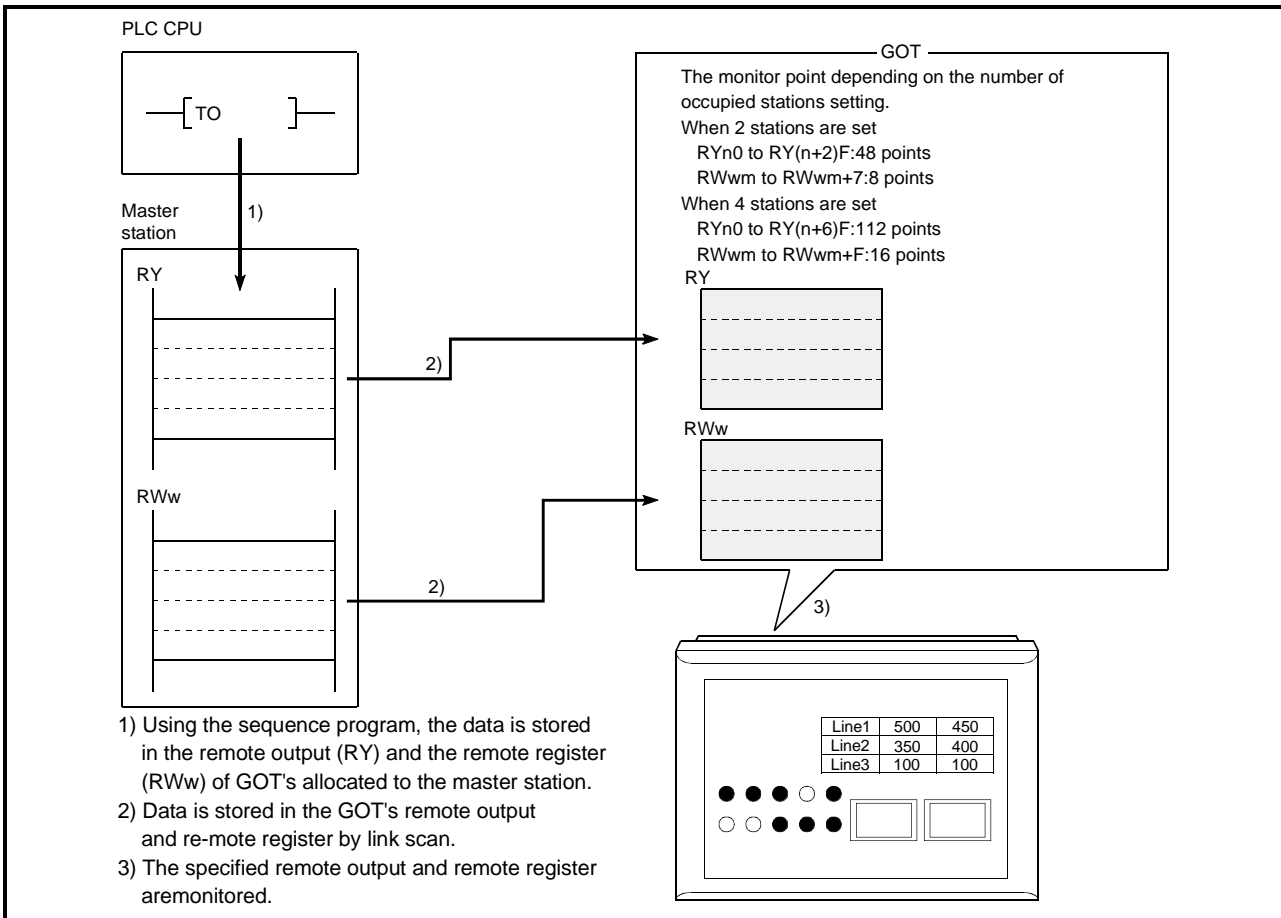
When the A8GT-J61BT15 is used, the GOT has the following two monitoring methods.

Monitor Method	Normal Monitor	Dedicated Command Monitor
Description	The remote inputs/outputs and remote registers of the GOT assigned to the remote device station in the CC-Link parameter setting are specified and monitored.	The remote register area is used as the GOT internal device transfer command area to specify and monitor the GOT internal devices.
Advantage	Data update processing speed is high.	Data update processing speed is high. Since a dedicated command is executed to develop data in the GOT internal word devices (GD0 to GD1023), multiple pieces of information, such as the operating status, production and operation directives, can be monitored within one screen. (The number of devices that can be displayed on one screen is larger than that of normal monitor.)
Disadvantage	As the remote register assignment area of the GOT is small, the number of devices that can be displayed on one screen is small.	A sequence program is needed to execute the dedicated command.

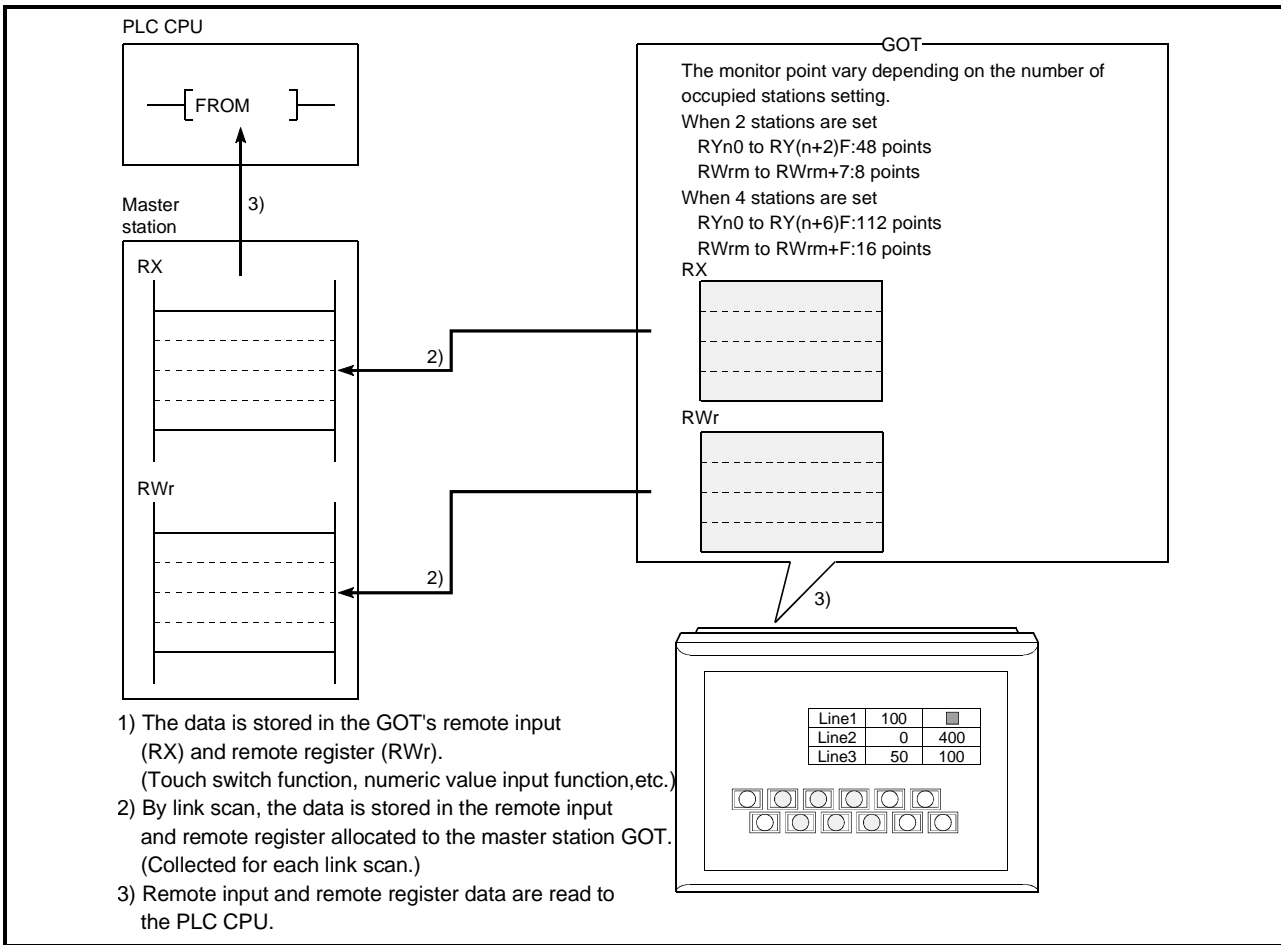
(1) Normal monitor method

In the monitor overview, the remote output and remote register (write area) are described separately from the remote input and remote register (read area), but all of the information can be displayed on one screen for monitoring.

Monitor for remote output and remote register (write area)



Monitor (write from GOT) for remote input and remote register (read area)



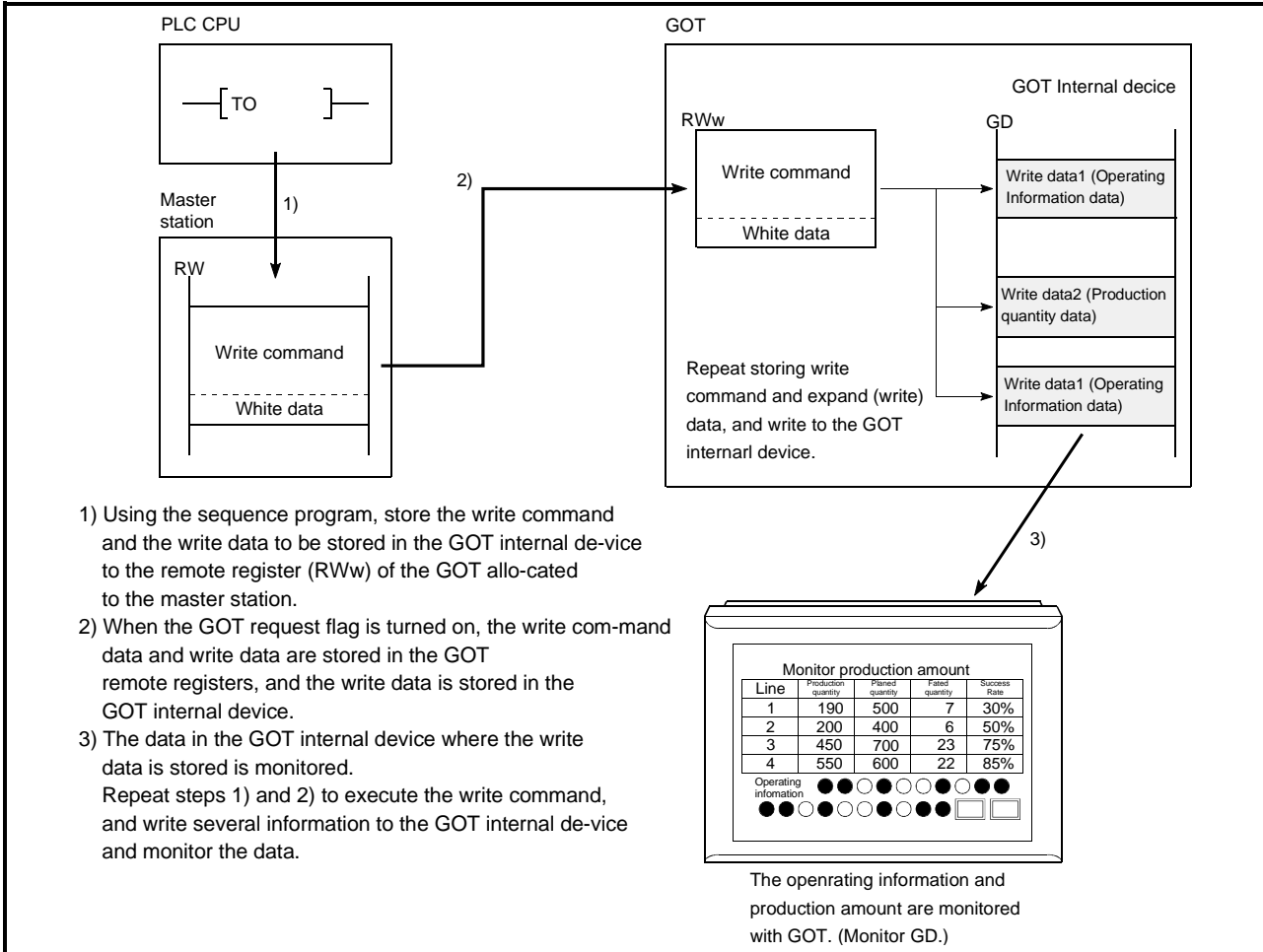
**POINT**

The GOT can input (e.g. touch key function) data to only the remote inputs (RX) and remote registers (RWr) assigned the master station.  
 It cannot input (e.g. touch key function) or display (e.g. lamp display function) data to the other remote inputs (RX) and remote registers (RWr).

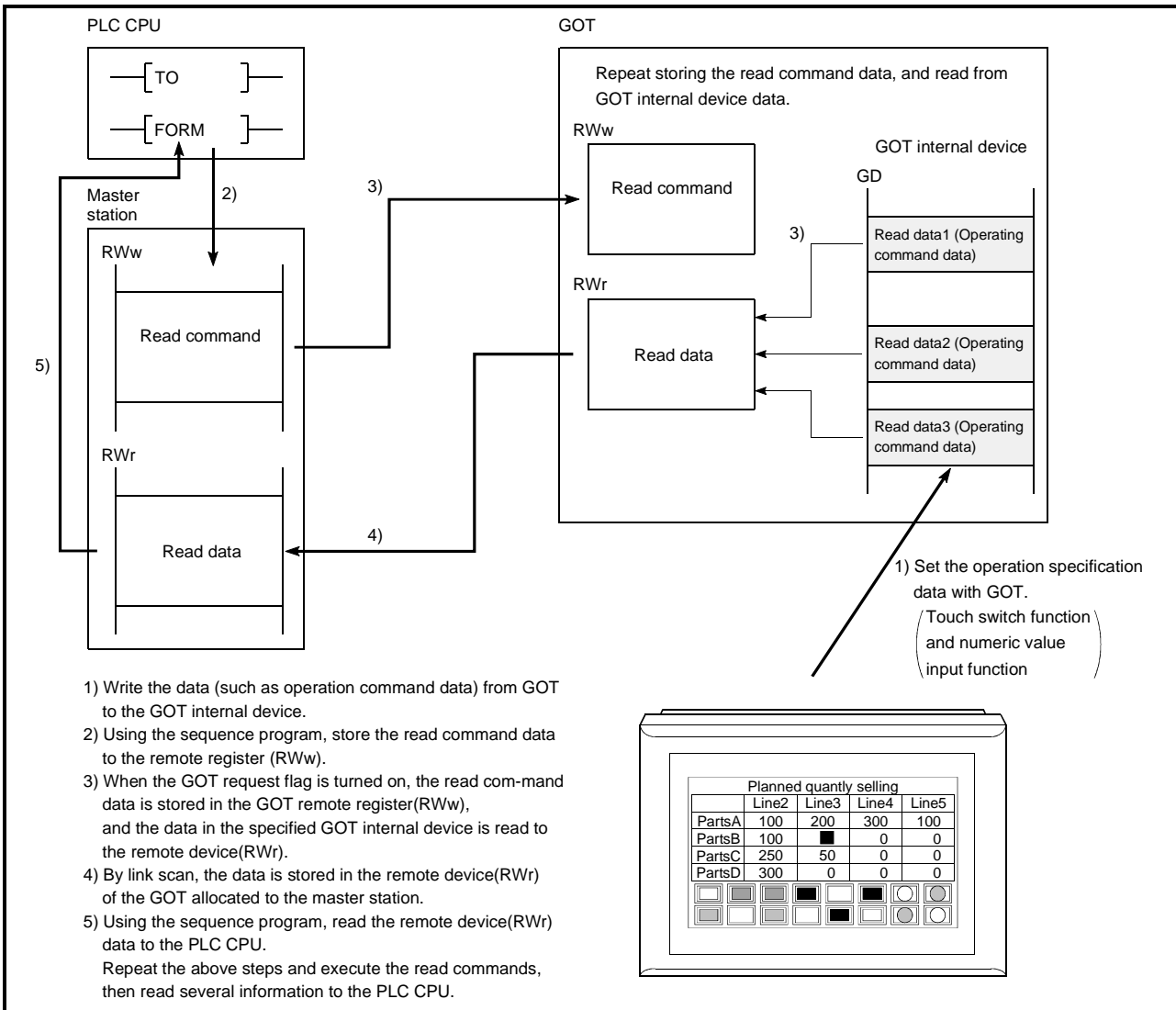
(2) Dedicated command monitor method

The remote register (write area) data is stored in the GOT internal device using dedicated commands and monitoring is performed.  
Refer to Section 4.5 for the dedicated commands.

When the GOT internal device write command is executed



When the GOT internal device read command is executed



4.2 Monitorable Access Range and Device Specifying Method

4.2.1 Monitorable access range

The GOT can monitor only the remote inputs/outputs and remote registers (read/write area) of the GOT assigned to the master station and the internal devices of the GOT. The devices that can be monitored are indicated below.

Monitorable Devices		Setting Device Range	
		Number of occupied stations:2 station	Number of occupied stations:4 station
Bit	Remote inputs (RX)	RXn0 to RX(n+3)F	RXn0 to RX(n+7)F
	Remote outputs (RY)	RYn0 to RY(n+3)F	RYn0 to RY(n+7)F
	Specified bits (RWw) of remote registers (write area)	RWwm to RWwm+7	RWwm to RWwm+F
	Specified bits (RWr) of remote registers (read area)	RWrn to RWrn+7	RWrn to RWrn+F
	GOT bit register (GB)	GB64 to GB1023	
	Bit designation of GOT data register (GD)	GD64 to GD1023	
Word	Remote registers (write area) (RWw)	RWwm to RWwm+7	RWwm to RWwm+F
	Remote registers (read area) (RWr)	RWrn to RWrn+7	RWrn to RWrn+F
	GOT data register (GD)	GD64 to GD1023	
	Converting GOT bit register to word (GB)*1	GB64 to GB1023	
	GOT special register (GS)*1	GS0 to GS511	

\*1 Can be monitored only when the GOT-A900 Series is used.

\*2 n and m in the table indicate the addresses assigned to the master station by station number setting.

<b>POINT</b>
Dedicated command monitor is enabled for the GOT data registers (GD) only.

4.2.2 How to specify devices when creating the monitor screen

When creating the monitor screen, set the following devices as the devices to be specified.

(1) Setting of NW number and PLC station number

Set "NW number to 0" and "PLC station number to host station".

(2) Setting of device names and device numbers

Set the following device names.

As the device numbers of the remote inputs/outputs and remote registers, set the addresses assigned by station number setting.

Device to Be Monitored	Device Name Set on Graphics Software	Setting Device Range
Remote inputs (RX)	X	X0 to X7FF
Remote outputs (RY)	Y	Y0 to Y7FF
Remote registers (write area) (RWw)	Ww	Ww0 to WwFF
Remote registers (read area) (RWr)	Wr	Wr0 to WrFF



4.3 I/O Signals to the Master Module

4.3.1 List of I/O signals

The I/O signal allocation is shown below.

The I/O signals varies depending on the set number of occupied stations (2 stations or 4 stations).

The "n" in the table indicates the address allocated to the master module by the station number setting.

(1) When monitoring using the normal monitor method

Signal Direction : GOT → Master module		Signal Direction : Master module → GOT			
Device number		Signal name	Device number		Signal name
Number of occupied stations			Number of occupied stations		
2 station	4 stations		2 station	4 stations	
RXn0 to RX(n+2)F	RXn0 to RX(n+6)F	User area	RYn0 to RY(n+2)F	RYn0 to RY(n+6)F	User area
RX(n+3)0 to RX(n+3)A	RX(n+7)0 to RX(n+7)A	Unusable	RY(n+3)0 to RY(n+3)F	RY(n+7)0 to RY(n+7)F	Unusable
RX(n+3)B	RX(n+7)B	Remote ready *1			
RX(n+3)B to RX(n+3)F	RX(n+7)B to RX(n+7)F	Unusable			

\*1 The remote ready flag turns ON at GOT power-on, at hardware reset, or when the GOT is in an operable state.

If the GOT has been powered on, the flag is OFF during offline operation (OS installation, screen data downloading) or during initial processing execution.

Use this flag in an interlock ladder for write/read performed from the CC-Link master station.

(2) When monitoring using the dedicated monitor method

Signal Direction : GOT → Master module		Signal Direction : Master module → GOT	
Device number		Device number	
Number of occupied stations		Number of occupied stations	
2 station	4 stations	2 station	4 stations
RXn0 to RX(n+2)F	RXn0 to RX(n+6)F	RYn0 to RY(n+2)F	RYn0 to RY(n+6)F
User area		User area	
RX(n+3)0	RX(n+7)0	RY(n+3)0	RY(n+7)0
GOT complete flag		GOT request flag	
RX(n+3)1 to RX(n+3)8	RX(n+7)1 to RX(n+7)8	RY(n+3)1	RY(n+7)1
		RY(n+3)2	RY(n+7)2
		RY(n+3)3 to RY(n+3)8	RY(n+7)3 to RY(n+7)8
Unusable		Unusable	
RX(n+3)9	RX(n+7)9	RY(n+3)9	RY(n+7)9
Initial data setting complete flag		Initial data setting request flag	
RX(n+3)A	RX(n+7)A	RY(n+3)A	RY(n+7)A
Error status flag		Error reset request flag	
RX(n+3)B	RX(n+7)B	RY(n+3)B	RY(n+7)B
Remote ready *1		Remote ready *1	
RX(n+3)C to RX(n+3)F	RX(n+7)C to RX(n+7)F	RY(n+3)C to RY(n+3)F	RY(n+7)C to RY(n+7)F
		Unusable	

\*1 The remote ready flag turns ON at GOT power-on, at hardware reset, or when the GOT is in an operable state.

If the GOT has been powered on, the flag is OFF during offline operation (OS installation, screen data downloading) or during initial processing execution.

Use this flag in an interlock ladder for write/read performed from the CC-Link master station.



- Do not output the reserved signals among the output signals provided from the master module to the GOT.  
If any of the reserved signals is output, the PLC system may malfunction.

4.3.2 Details of the I/O signals

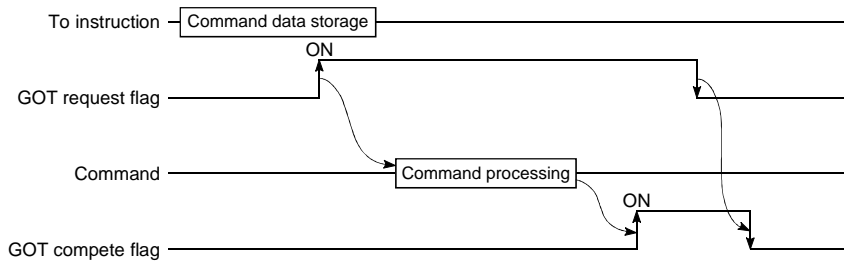
The function of each I/O signal is described below

- (1) GOT complete flag (RX(n+3)0, RX(n+7)0), and GOT request flag (RY(n+3)0, RY(n+7)0)

By turning on the GOT request flag, each command which uses the GOT internal device to monitor (excluding the initial setting command, monitor request command, and always write request command) is executed.

After each command processing is complete, the GOT complete flag turns on.

When the GOT request flag is turned off, the GOT complete flag turns off as well.

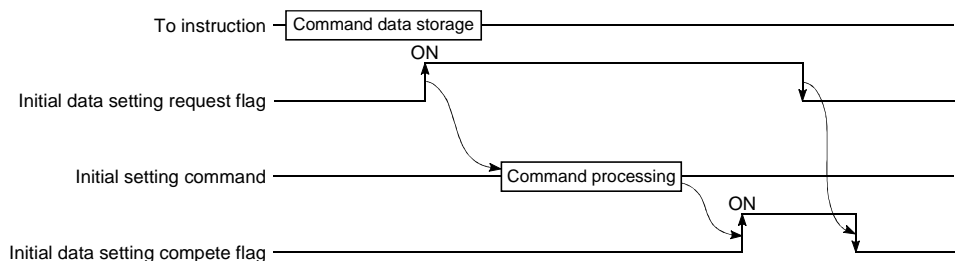


- (2) Initial data setting complete flag (RX(n+3)9, RX(n+7)9), and initial data setting request flag (RY(n+3), RY(n+7)9)

By turning on the initial data setting request flag, the initial setting command to monitor using the GOT internal device, is executed.

When the initial setting command processing is complete, the initial data setting complete flag turns on.

When the initial data setting request flag is turned off, the initial data setting complete flag turns off as well.



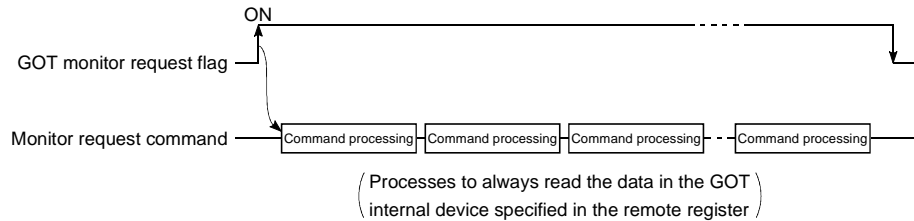
**POINT**

When performing dedicated command monitor, the initial data setting request flag must be turned ON to execute the initial setting command.

Refer to Section 4.6.1 for the initial setting command.

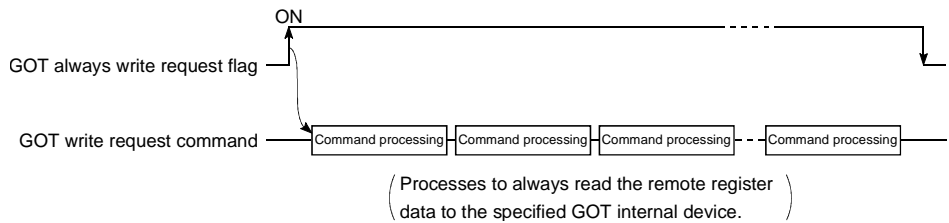
(3) GOT monitor request flag (RY(n+3)1,RY(n+7)1)

When the GOT monitor request flag is on, the data in the GOT internal device registered for monitoring is always read to the remote register.  
Refer to (a) when executing the monitor registration command.



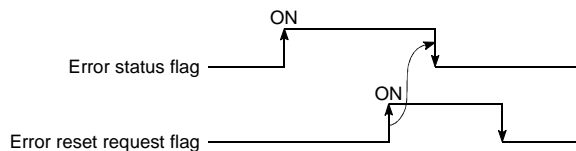
(4) GOT always write request flag (RY(n+3)2,RY(n+7)2)

When the GOT always write request flag is on, the remote device data is always written to the GOT internal device which has been registered for write.  
Refer to (a) when executing the always write register command.



(5) Error status flag (RX(n+3)A,RX(n+7)A) and error reset request flag (RY(n+3)A,RY(n+7)A)

If an error occurs during execution of a command when communicating with the GOT internal device, the error status flag turns on.  
The error status flag is turned off by turning on the error reset request flag,.



**POINT**

The error status flag turns ON if the executed dedicated command is wrong or the preset device cannot be monitored (the device is outside the monitor-enabled range).

(6) Remote ready flag (RX(n+3)B,RX(n+7)B)

Turns on during the GOT startup.  
Turns off during off-line operations (OS installation and screen data download) and initial processing execution.

#### 4.4 Remote Register Allocation

The remote register allocation for GOT is described below.

The usage of the remote registers is different between the normal monitor method and dedicated command monitor method.

The "m" and "n" in the table indicates the address allocated to the master module by the station number setting.

##### (1) When the normal monitor method

The entire area is used for user region.

Transfer Direction	Addresses		Description	Default Value
	Number of occupied stations			
	2 station	4 stations		
Master station → GOT	RWwm to RWwm+7	RWwm to RWwm+F	User write area	0
GOT → Master station	RWrn to RWrn+7	RWrn to RWrn+F	User read area	0

##### (2) When the dedicated command monitor method

The entire area is used for the GOT internal device communication commands.

Refer to Section 4.5 regarding each command for the GOT internal device communication.

Transfer Direction	Addresses		Description	Default Value
	Number of occupied stations			
	2 station	4 stations		
Master station → GOT	RWwm to RWwm+7	RWwm to RWwm+F	Command execution area to be monitored by using GOT internal device	0
GOT → Master station	RWrn to RWrn+7	RWrn to RWrn+F	Command response area to be monitored by using GOT internal device	0

## 4.5 Command List for the Dedicated Command Monitor Method

The command list for the dedicated command monitor is shown below.

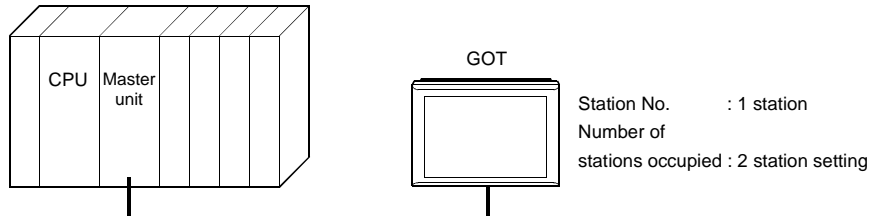
Command name	Contents	Reference Section
Initial setting	Initial setting command when monitoring with dedicated command monitor method (monitoring is performed using the GOT internal device).	Section 4.6.1
Continuous read	Command to read the specified number of points of data from the specified head GOT internal device to the remote register. Maximum read points When the number of stations is set to 4 stations: 14 points When the number of stations is set to 2 stations: 6 points	Section 4.6.2
Random read	Command to read data from several different GOT internal devices to the remote register. Maximum read points When the number of stations is set to 4 stations: 14 points When the number of stations is set to 2 stations: 6 points	Section 4.6.3
Continuous write	Command to write specified number of points of data from the remote register to the specified head GOT internal device. Maximum write points When the number of stations is set to 4 stations: 14 points When the number of stations is set to 2 stations: 6 points	Section 4.6.4
Random write	Command to write remote register data to several different GOT internal devices. Maximum write points When the number of stations is set to 4 stations: 7 points When the number of stations is set to 2 stations: 3 points	Section 4.6.5
Monitor register	Command to register the GOT internal device number that performs the always remote register read command. Maximum registration points When the number of stations is set to 4 stations: 14 points When the number of stations is set to 2 stations: 6 points	Section 4.6.6
Monitor request	Command to always read the GOT internal device data stored by executing the monitor register command to the remote register.	Section 4.6.7
Always write register	Command to always register the GOT internal device number of the GOT internal device that performs the always remote register data write command. Maximum registration points When the number of stations is set to 4 stations: 14 points When the number of stations is set to 2 stations: 6 points	Section 4.6.8
Always write request	Command to always write remote register data to the GOT internal device registered by executing the always write register command.	Section 4.6.9

4.6 Details of Each Command

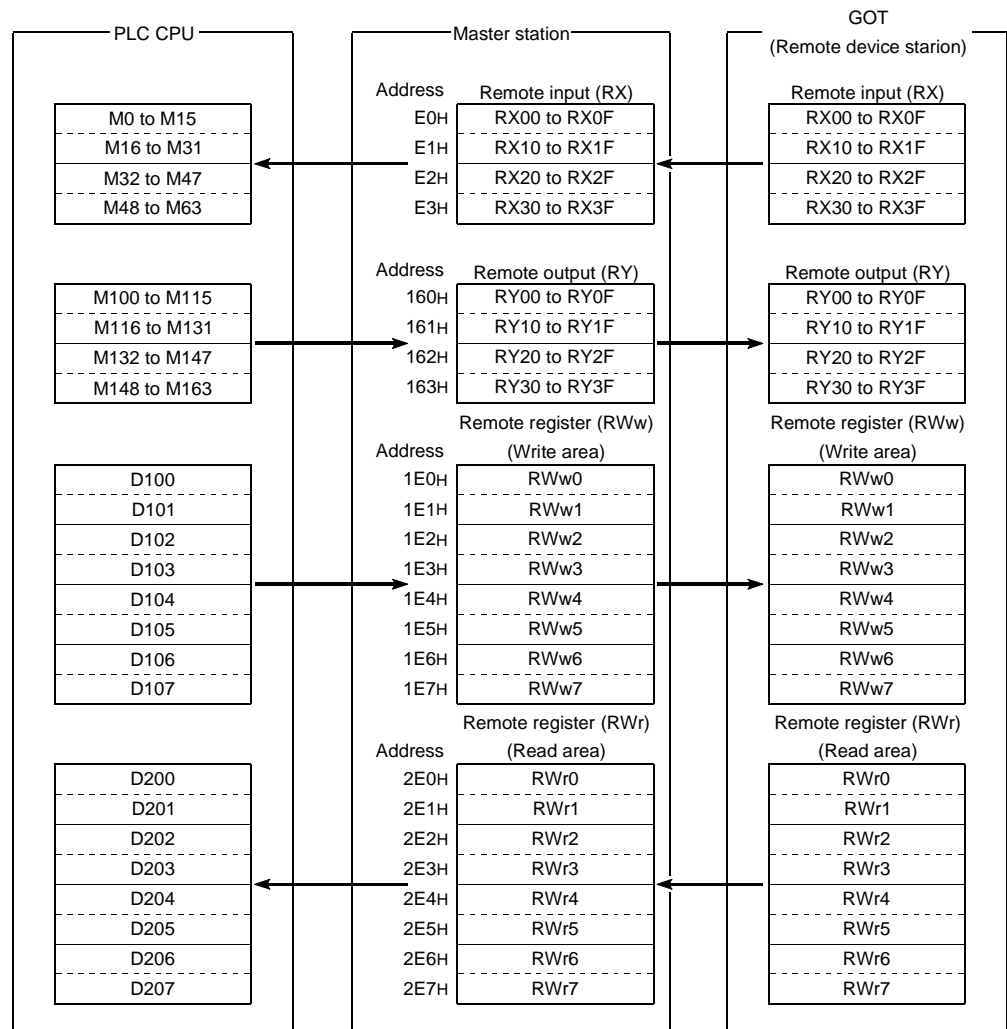
The execution method for each command is described.

The following system example is used to describe the sequence program in this section.

Refer to the CC-Link Master Module User's Manual regarding the sequence program for the entire CC-Link system.



Relationship among the PLC CPU, master station buffer memory, and remote device stations



4.6.1 Initial setting command

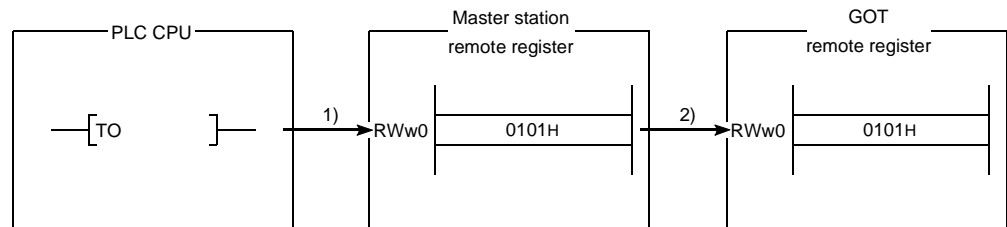
(1) Initial setting command

This is the initial setting command for monitoring with the GOT internal device. Create a sequence program for initial setting command to be processed before the commands described in Section 4.6.2 and after are executed.

(2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm (Higher byte)	1: Initial setting
	RWwm (Lower byte)	1: Monitoring by the dedicated command monitor method 2: Switch to the normal monitor method
	RWwm + 1 to RWwm + F	—
GOT → Master station	RWm to RWm + F	—

(3) Communication overview



1) Store the initial setting command data in the master station's remote register (RWw).

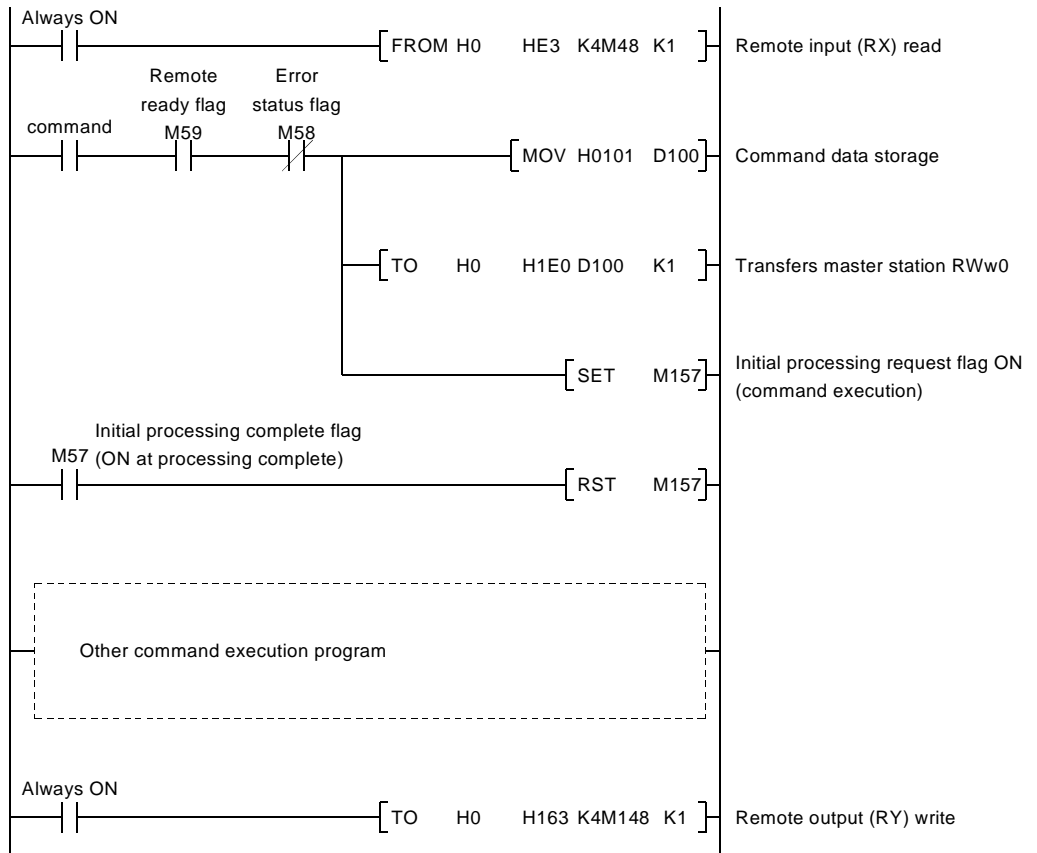
2) Turn on the initial data setting request flag and store the command data in the GOT remote register (RWw).  
(Command execution)

The initial data setting complete flag turns on when the command processing is complete.

By executing this command, the GOT will be in the monitor status with the dedicated command monitor method.



(4) Sequence program example



4.6.2 Continuous read command

(1) Continuous read command

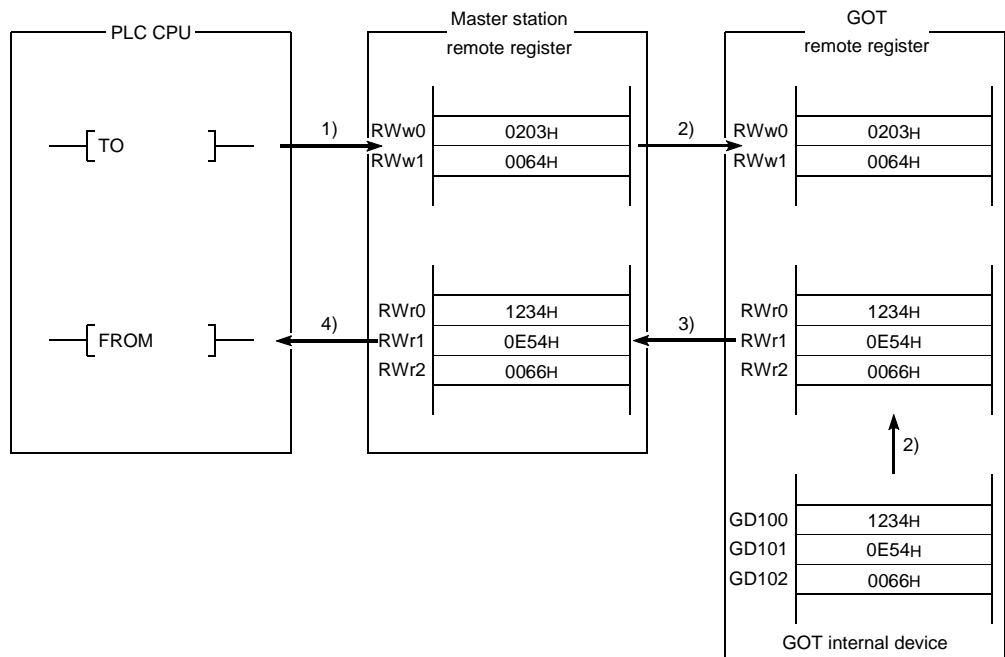
This is a command to read data for a specified number of points from the specified head GOT internal device to the remote register.

(2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm (Higher byte)	2: Continuous read setting
	RWwm (Lower byte)	When the occupied points are 2 stations 1 to 6 : GOT internal device point to be read When the occupied points are 4 stations 1 to 14 : GOT internal device point to be read
	RWwm + 1	0 to 1023 : Head GOT internal device numbers to be read
	RWwm + 2 to RWwm + F	_____
GOT → Master station	RWm to RWm + D	Stores the data to be read from the GOT internal device
	RWm + E, RWm + F	_____

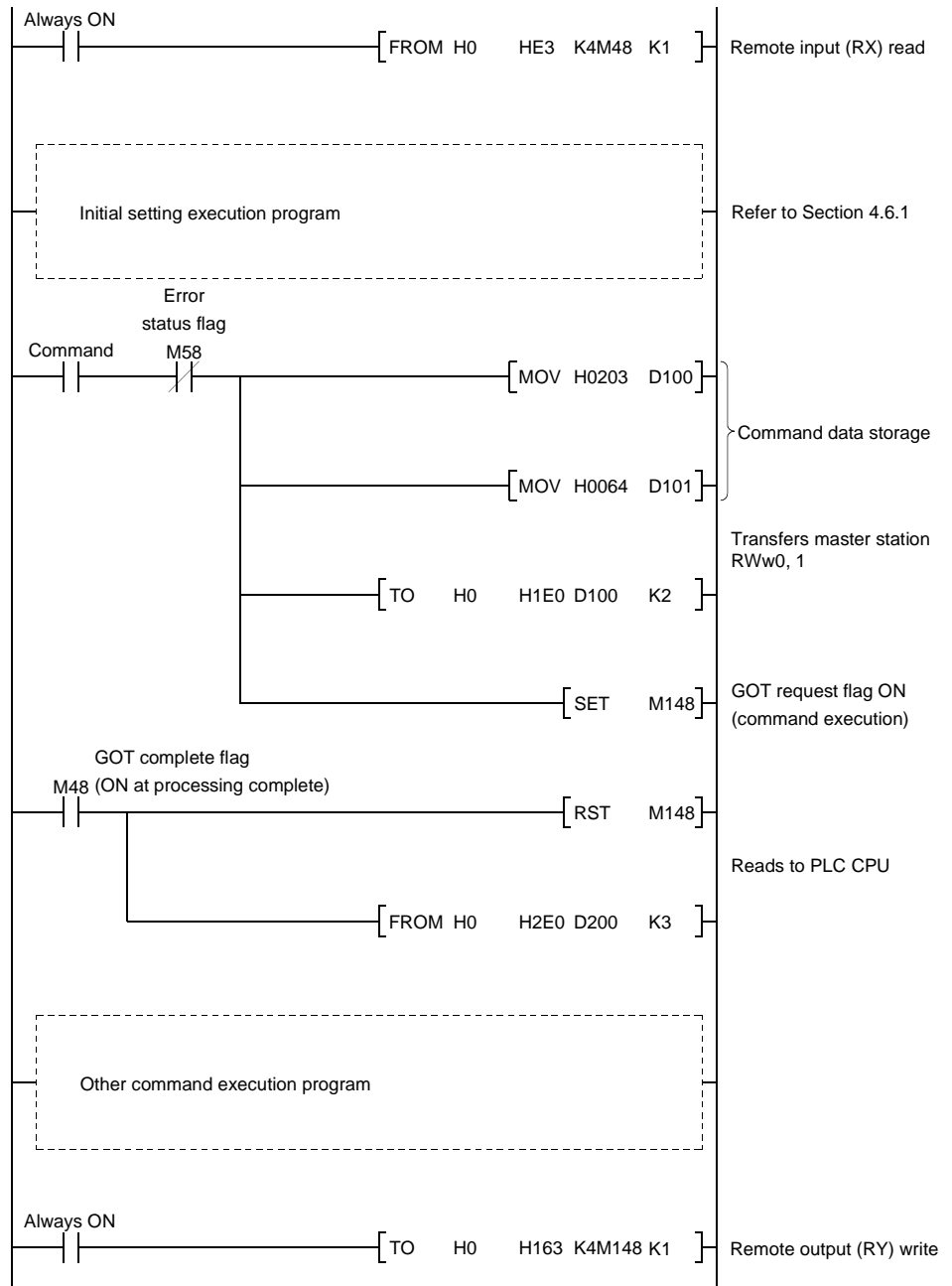
(3) Communication overview

When reading three points from the GOT internal device GD100 to the remote register (RWr)



- 1) Store the continuous read command data in the master station's remote register (RWw).
- 2) Turn on the GOT request flag, and read the data in GD100 to 102 are read to the remote register (RWr) by storing the command data in the GOT remote register (RWw).  
(Command execution)  
The GOT complete flag turns on when the command processing is complete.
- 3) By link scan, the read data is stored in the master station's remote register (RWr).
- 4) Read the data to the PLC CPU using the FROM instruction, etc.

(4) Sequence program example



4.6.3 Random read command

(1) Random read command

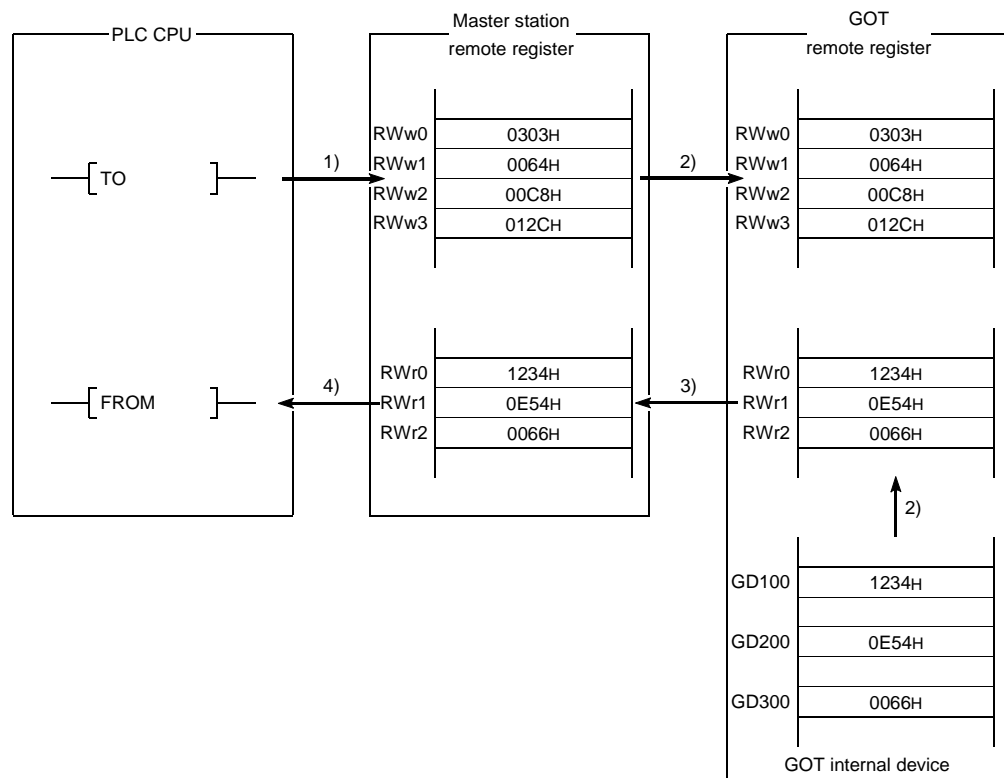
This is a command to read data from several different GOT internal devices to the remote register.

(2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm (Higher byte)	3: Random read setting
	RWwm (Lower byte)	When the occupied points are 2 stations 1 to 6 : GOT internal device point to be read When the occupied points are 4 stations 1 to 14 : GOT internal device point to be read
	RWwm + 1 to RWwn + F	0 to 1023 : GOT internal device numbers to be read (Storage for the setting mentioned above)
GOT → Master station	RWm to RWm + D	Stores the data to be read from the GOT internal device (Storage for the setting mentioned above)
	RWm + E, RWm + F	—

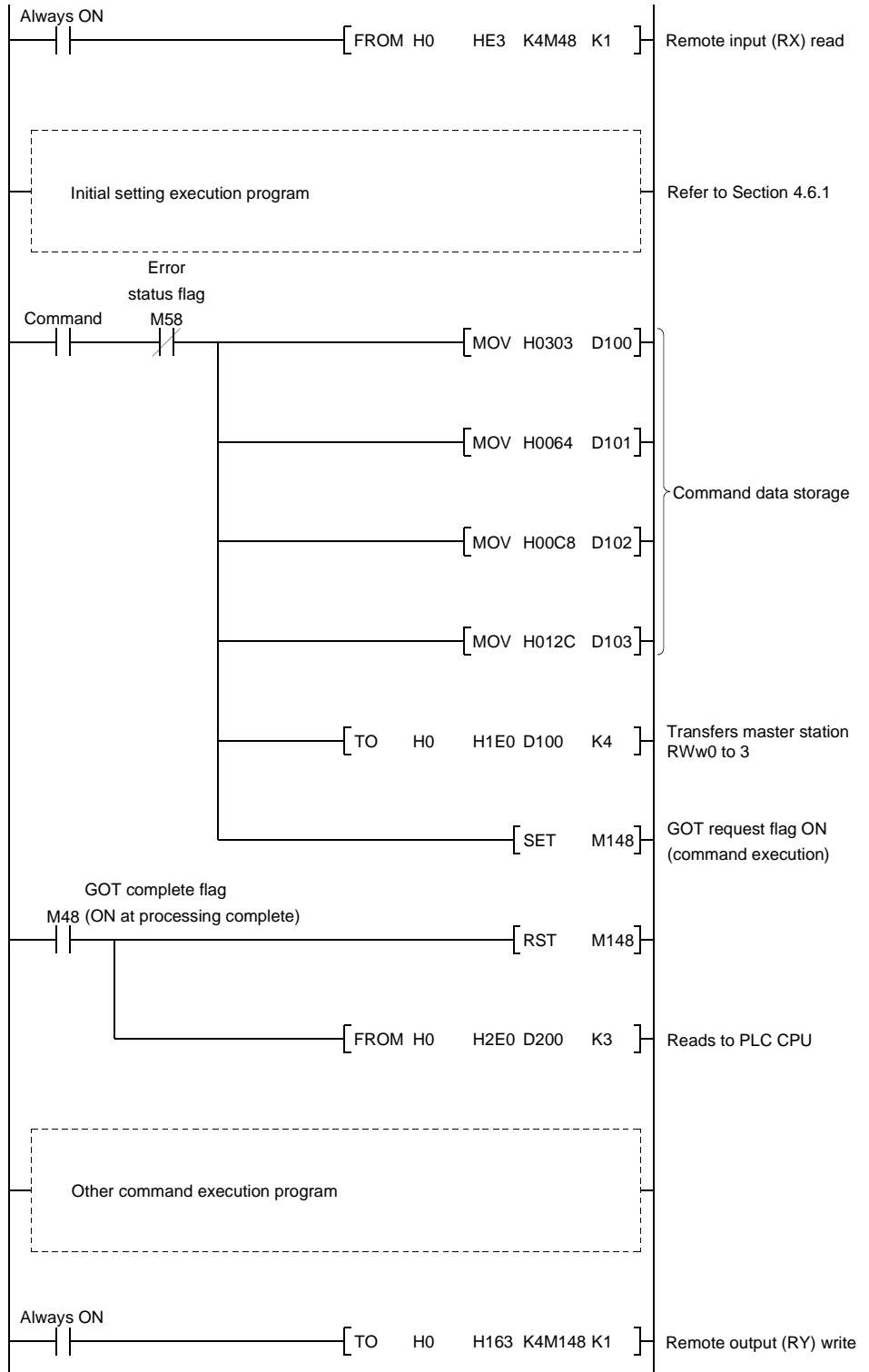
(3) Communication overview

When reading data from the GOT internal device GD100, 200 and 300 to the remote register.



- 1) Store the continuous read command data in the master station's remote register (RWw).
- 2) Turn on the GOT request flag, and read the data in GD100, 200, and 300 are read to the remote register (RWr) by storing the command data in the GOT remote register (RWw).  
(Command execution)  
The GOT complete flag turns on when the command processing is complete.
- 3) By link scan, the read data is stored in the master station's remote register (RWr).
- 4) Read the data to the PLC CPU using the FROM instruction, etc.

(4) Sequence program example



4.6.4 Continuous write command

(1) Continuous write command

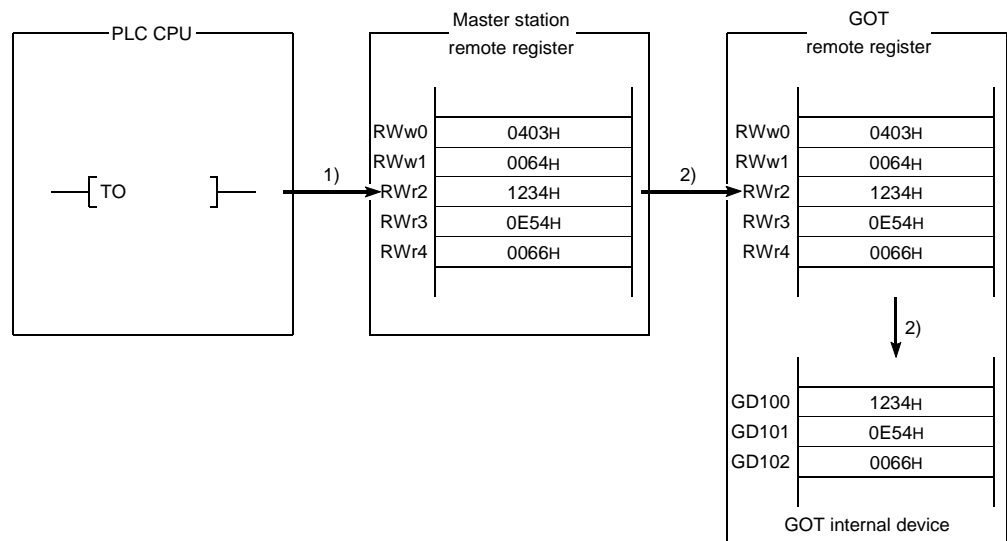
This is a command to write data from a specified number of points of remote registers to the specified head GOT internal device.

(2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm (Higher byte)	4: Continuous write setting
	RWwm (Lower byte)	When the occupied points are 2 stations 1 to 6 :Points to be written to the GOT internal device When the occupied points are 4 stations 1 to 14 :Points to be written to the GOT internal device
	RWwm + 1	0 to 1023 :Head GOT internal device numbers to be written
	RWwm + 2 to RWwn + F	Stores the data to be written to the GOT internal device
GOT → Master station	RWm to RWm + F	——

(3) Communication overview

When writing remote register data to the GOT internal device GD100, 101, and 102 (3points)



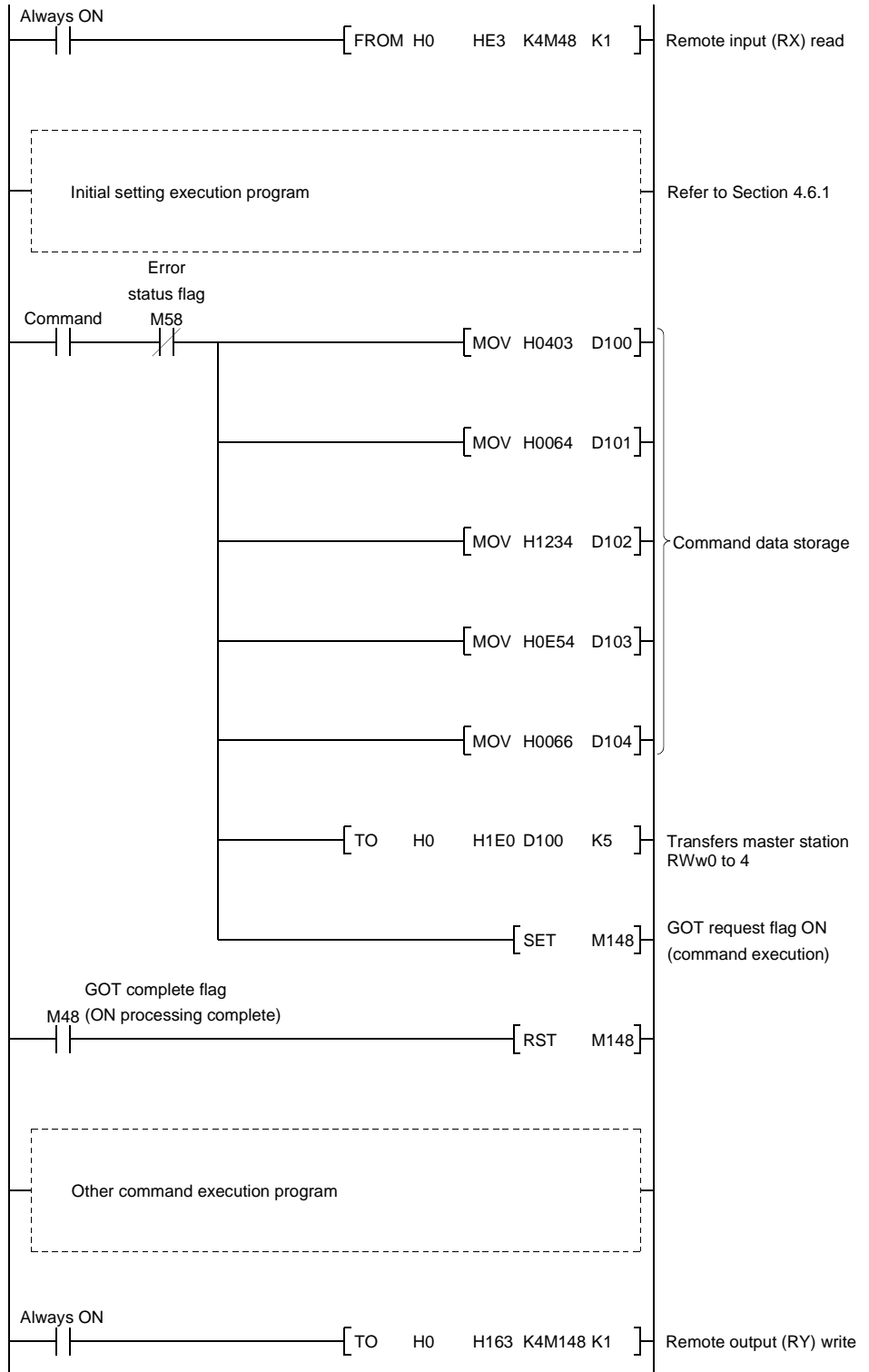
1) Store the continuous write command data in the master station's remote register (RWw).

2) Turn on the GOT request flag, and store the command data in the GOT remote register (RWw). Store the data in GD100, 101, and 102.

(Command execution)

The GOT complete flag turns on when the command processing is complete.

(4) Sequence program example



4.6.5 Random write command

(1) Random write command

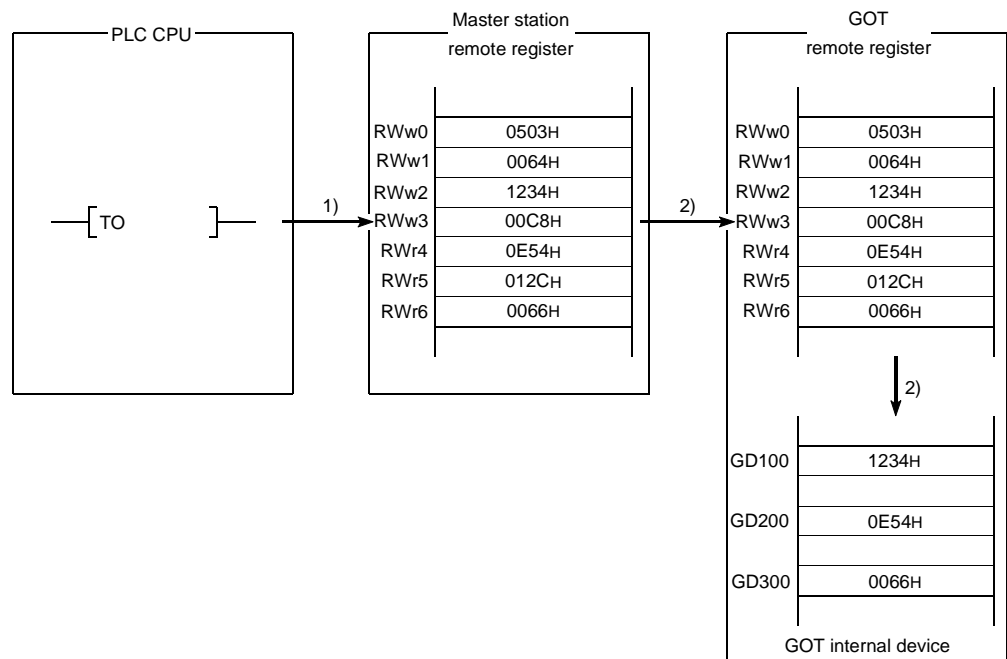
This is a command to write remote register data to several different GOT internal devices.

(2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm (Higher byte)	5: Random write setting
	RWwm (Lower byte)	When the occupied points are 2 stations 1 to 3 :Points to be written to the GOT internal device When the occupied points are 4 stations 1 to 7 :Points to be written to the GOT internal device
	RWwm + 1	0 to 1023 : GOT internal device numbers to be written
	RWwm + 2	Stores the data to be written to the GOT internal device described above
	RWwm + 3 to RWwn + E	Stores the data to be written and GOT internal device numbers for the setting points like mentioned above.
	RWwn + F	_____
GOT → Master station	RWrn to RWrn + F	_____

(3) Communication overview

When writing remote register data to the GOT internal device GD100, 200, and 300 (3points)



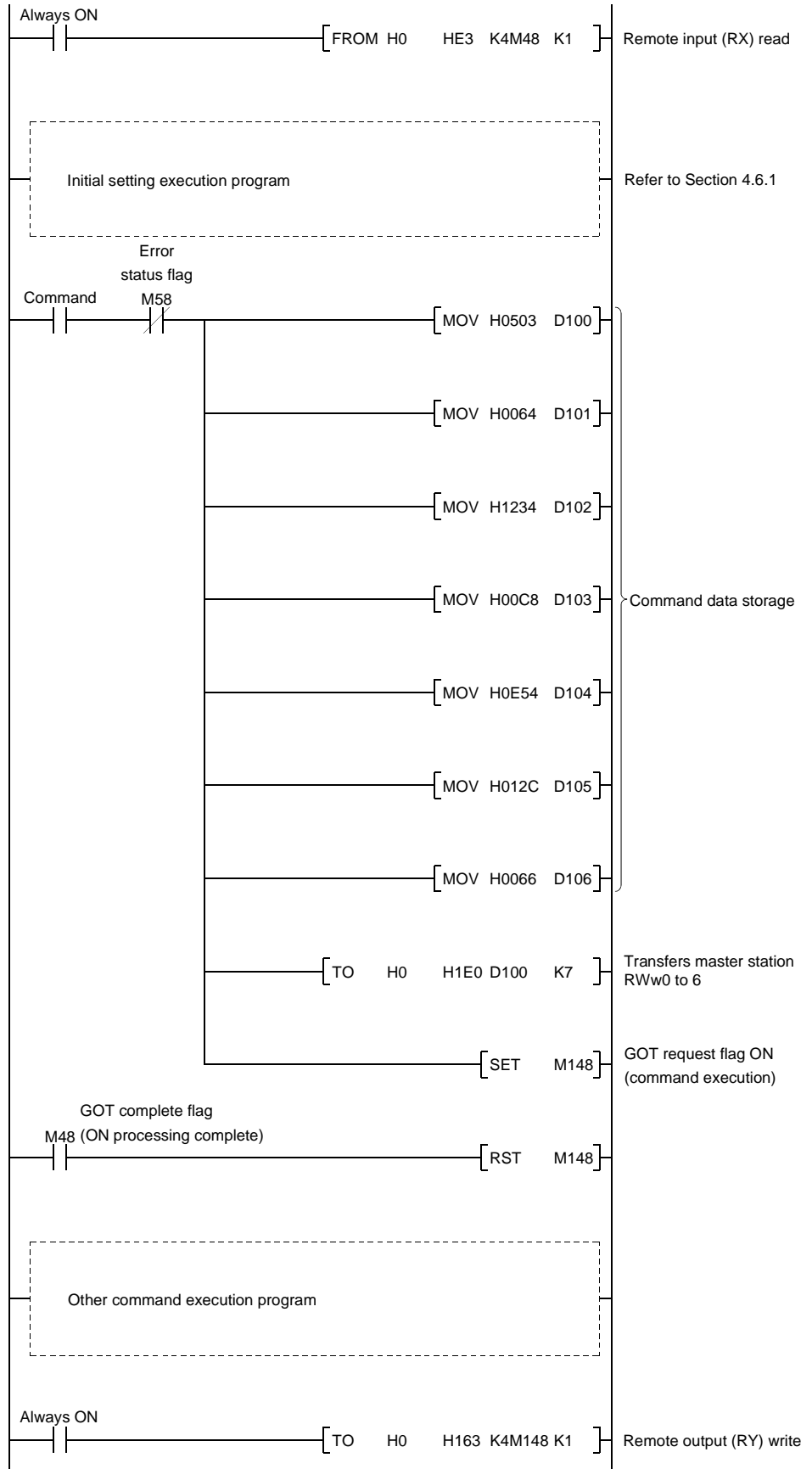
1) Store the random write command data in the master station's remote register (RWw).

2) Turn on the GOT request flag, and store the command data in the GOT remote register (RWw). Store the write data in GD100, 200, and 300. (Command execution)

The GOT complete flag turns on when the command processing is complete.



(4) Sequence program example



## 4.6.6 Monitor register command

## (1) Monitor register command

This is a command to always register the device number of the GOT internal device which reads the remote register.

After executing the monitor register command, always execute the monitor request command.

## (2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm (Higher byte)	6: Monitor register setting
	RWwm (Lower byte)	When the occupied points are 2 stations 1 to 6 :Points to be written to the GOT internal device When the occupied points are 4 stations 1 to 14 :Points to be written to the GOT internal device
	RWwm + 1 to RWwn + E	0 to 1023 : GOT internal device numbers to be registered (Storage for the setting mentioned above)
	RWwn + F	_____
GOT → Master station	RWm to RWm + F	_____

## (3) Communication overview

Refer to Section 4.6.7.

## 4.6.7 Monitor request command

## (1) Monitor request command

This is a command to always read the data in the GOT internal device registered by the monitor register command execution to the remote register.

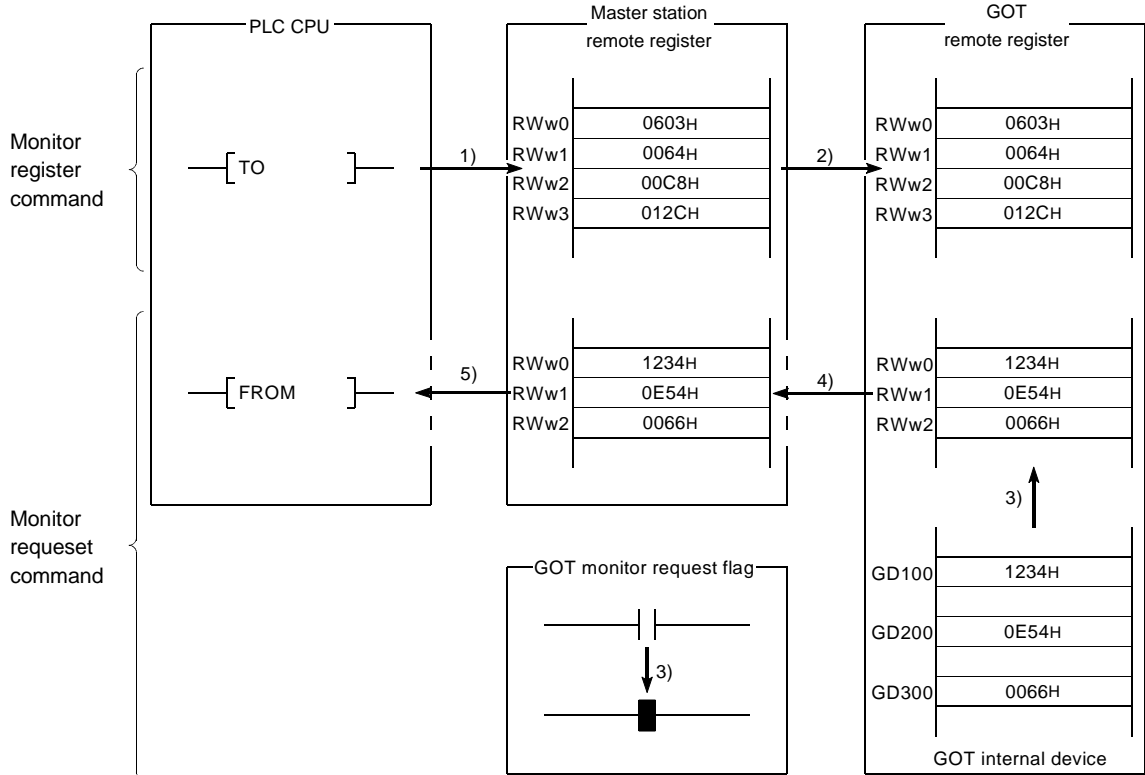
Execute the monitor request command after the monitor register command is executed.

## (2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm + 1 to RWwn + F	_____
GOT → Master station	RWm to RWm + F	_____

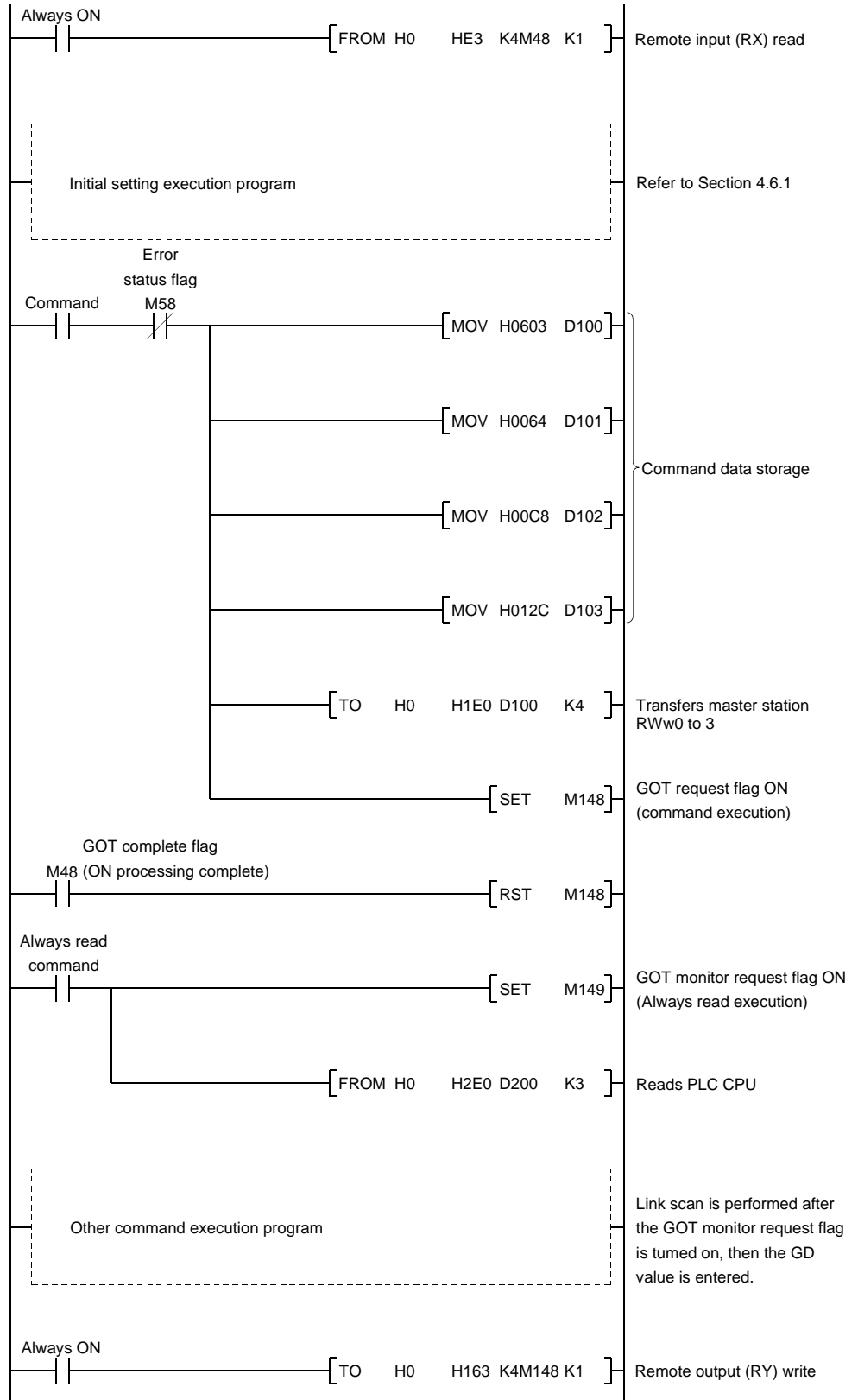
(3) Communication overview

When always reading the data in the GOT internal device GD100, 200, and 300 to the remote register.



- 1) Store the monitor register command data in the master station's remote register (RWw).
- 2) Turn on the GOT request flag, and store the command data in the GOT remote register (RWw).  
(Command execution)  
The GOT complete flag turns on when the command processing is complete.
- 3) By turning on the GOT monitor request flag, always read the data in the GD100, 200 and 300 to the remote register (RWr).
- 4) By link scan, the read data is stored in the master station's remote register (RWr).
- 5) Read the data to the PLC CPU using the FROM instruction, etc.

(4) Sequence program example



## 4.6.8 Always write register command

## (1) Always write register command

This is a command to always register the device number of the GOT internal device that performs the remote register data write.

After executing the always write register command, always execute the always write request command.

## (2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm (Higher byte)	8: Always write register setting
	RWwm (Lower byte)	When the occupied points are 2 stations 1 to 6 :Points to be written to the GOT internal device When the occupied points are 4 stations 1 to 14 :Points to be written to the GOT internal device
	RWwm + 1 to RWwn + E	0 to 1023 : GOT internal device numbers to be registered (Storage for the setting mentioned above)
	RWwn + F	_____
GOT → Master station	RWm to RWm + F	_____

## (3) Communication overview

Refer to Section 4.6.9.

## 4.6.9 Always write request command

## (1) Always write request command

This is a command to always write data in the remote register to the GOT internal device registered by executing the always write register command.

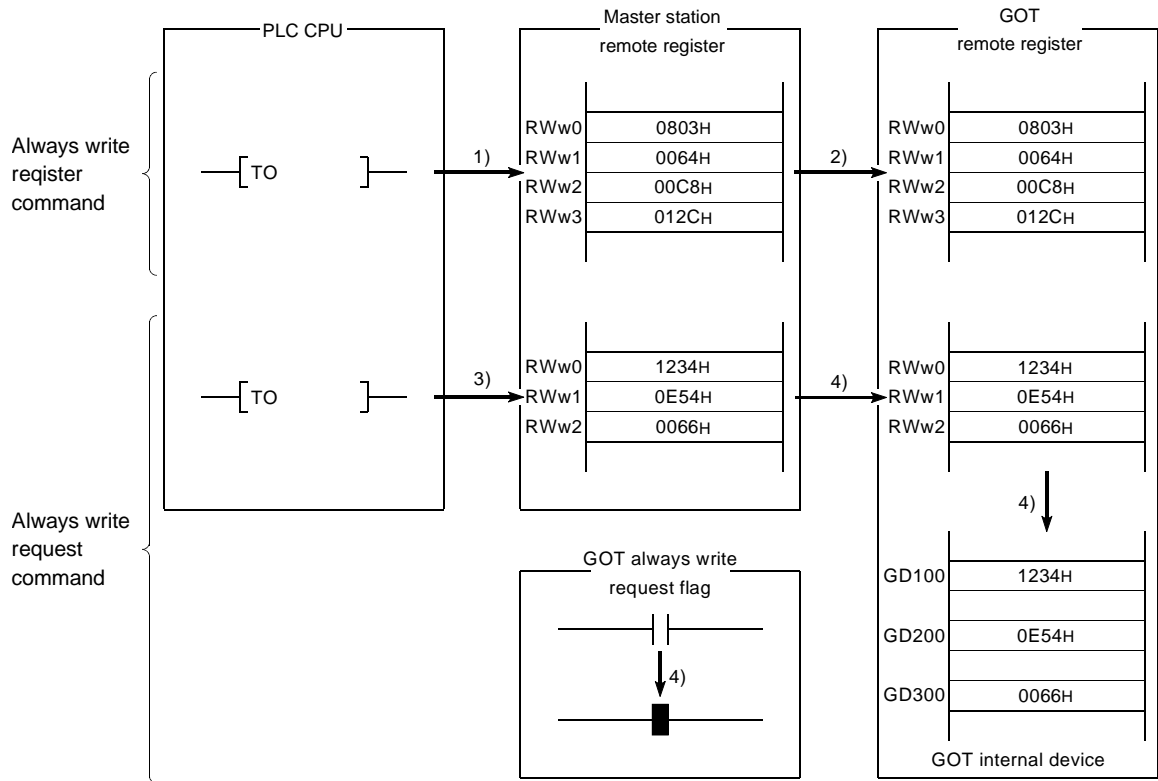
Execute the always write request command after executing the always write register command.

## (2) Command format

Transfer Direction	Addresses	Write data
Master station → GOT	RWwm to RWwn + D	Store write data for the number of points registered with the always write register command
	RWwn + E, RWwn + F	_____
GOT → Master station	RWm to RWm + F	_____

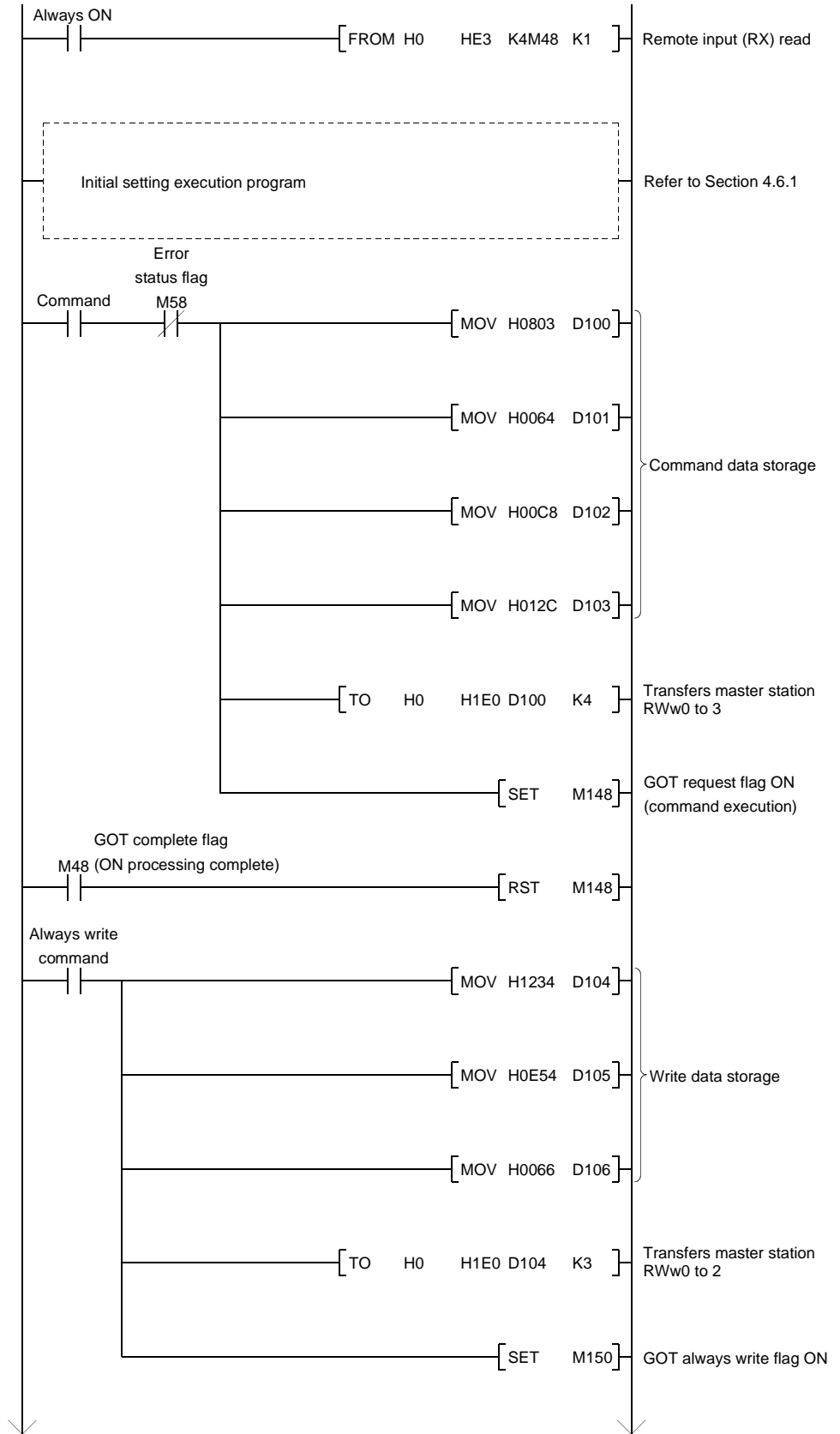
(3) Communication overview

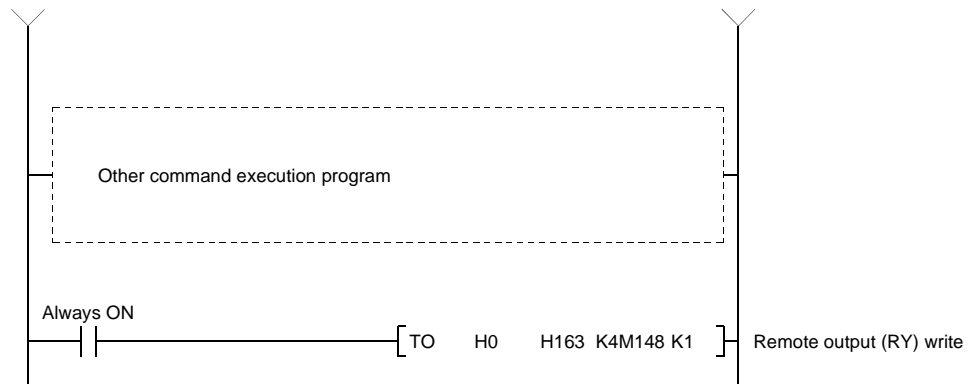
When always writing data in the remote register to the GOT internal device GD100, 110 and 120.



- 1) Store the always write register command data in the master station's remote register (RWw).
- 2) Turn on the GOT request flag, and store the command data in the GOT remote register (RWw).  
(Command execution)  
The GOT complete flag turns on when the command processing is complete.
- 3) Store the always write data in the master station's remote register (RWw).
- 4) Always write the write data to the GOT internal device GD100, 200, and 300 by turning on the GOT always write request flag.

(4) Sequence program example







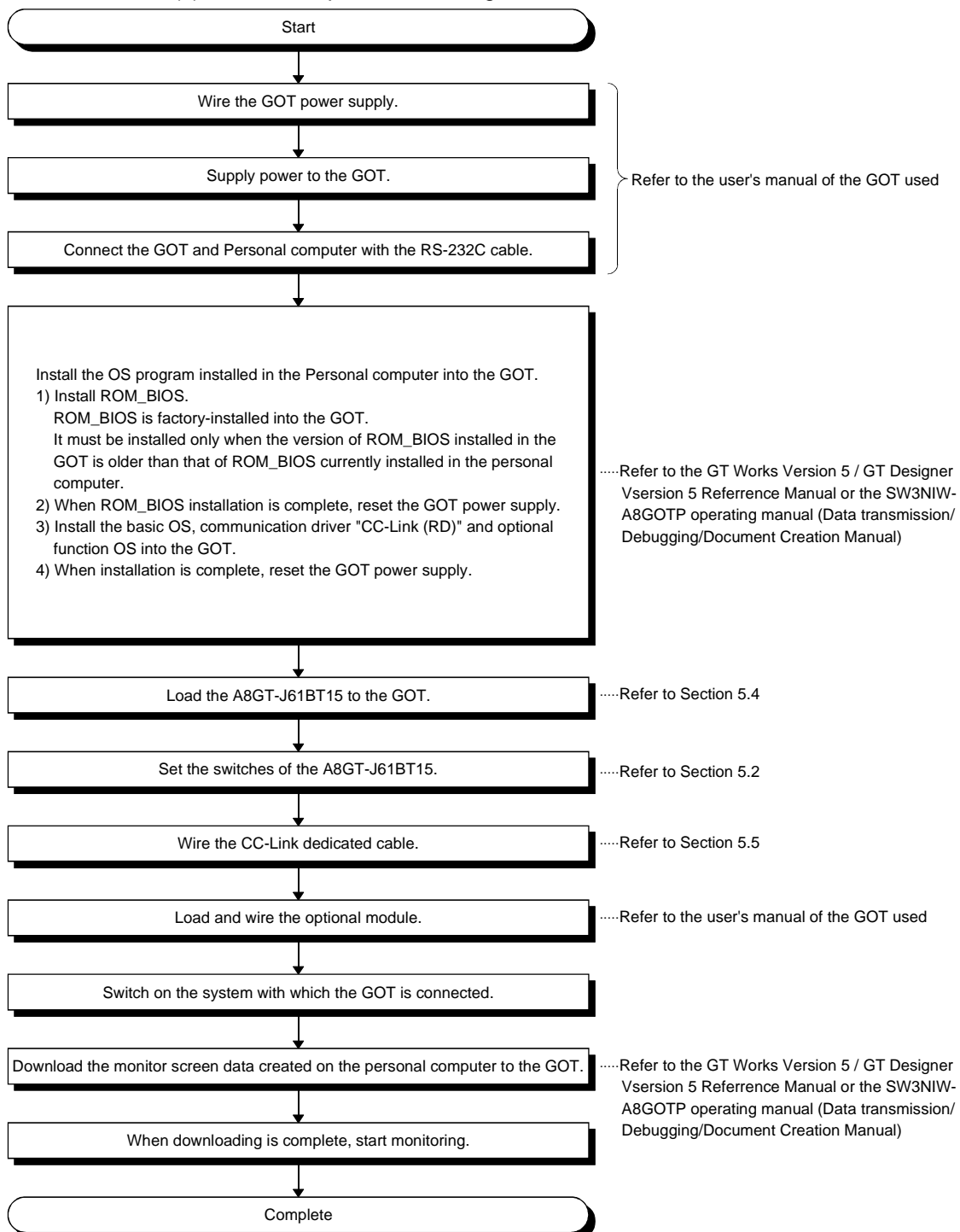
## 5. PRE-OPERATION SETTINGS AND PROCEDURE

This chapter provides a pre-operation procedure, the names of the parts and their settings, and the wiring method for the A8GT-J61BT15.

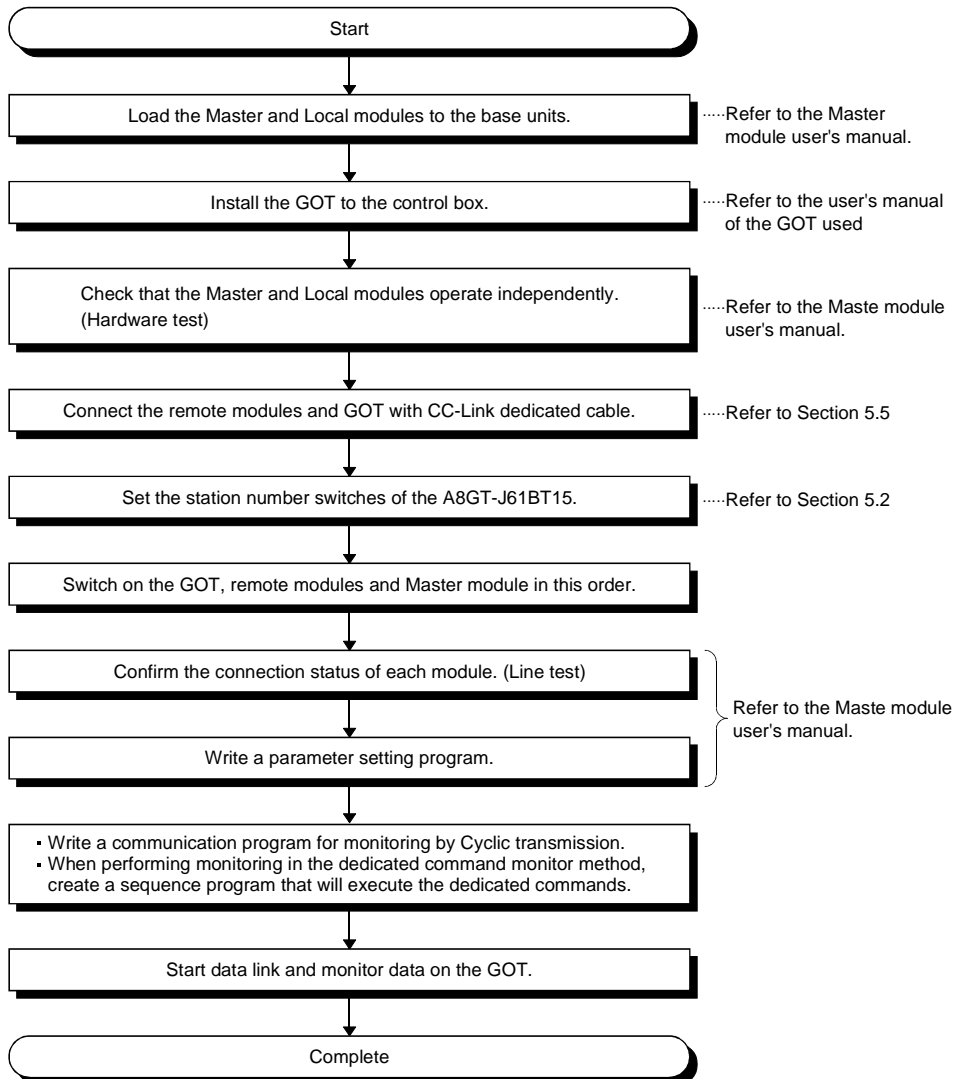
### 5.1 Pre-Operation Procedure

The following flowchart indicates a pre-operation procedure.

(1) Procedure up to downloading of monitor screen data to the GOT

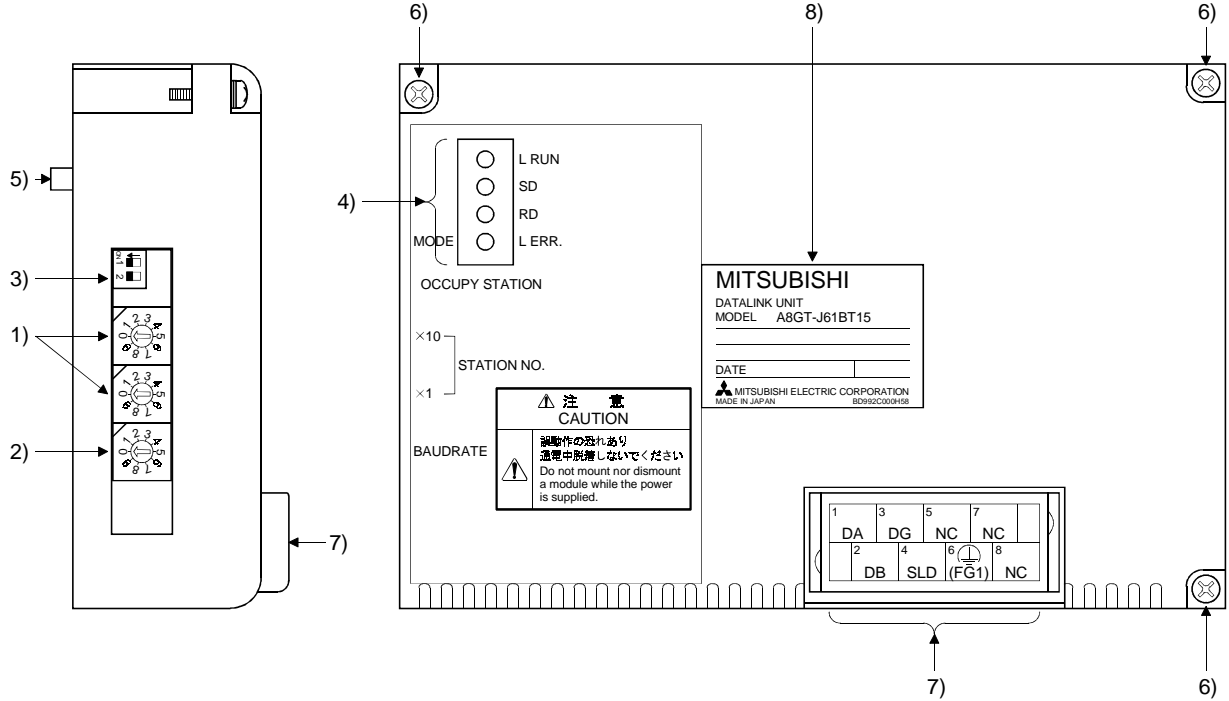


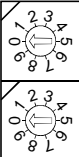

(2) Procedure up to CC-Link data link


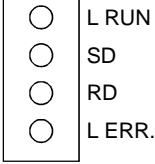
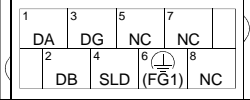


5.2 Names of the Parts and Their Settings

This section provides the names of the A8GT-J61BT15 parts and how to set the switches.



Number	Name	Description														
1)	Station number setting switches 	Used to set the station number of the A8GT-J61BT15 between 1 and 64. (Factory setting: 01) Use "×10" to set the tens. Use "×1" to set the units.														
2)	Transmission baudrate setting switch 	Used to set the transmission speed of the module. (Factory setting:0) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Number to be Set</th> <th>Transmission Baudrate</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>156kbps</td> </tr> <tr> <td>1</td> <td>625kbps</td> </tr> <tr> <td>2</td> <td>2.5Mbps</td> </tr> <tr> <td>3</td> <td>5Mbps</td> </tr> <tr> <td>4</td> <td>10Mbps</td> </tr> <tr> <td>5 to 9</td> <td>Reserved (If the value you set is 5 to 9, the L.ERR LED is lit to indicate a communication error.)</td> </tr> </tbody> </table>	Number to be Set	Transmission Baudrate	0	156kbps	1	625kbps	2	2.5Mbps	3	5Mbps	4	10Mbps	5 to 9	Reserved (If the value you set is 5 to 9, the L.ERR LED is lit to indicate a communication error.)
Number to be Set	Transmission Baudrate															
0	156kbps															
1	625kbps															
2	2.5Mbps															
3	5Mbps															
4	10Mbps															
5 to 9	Reserved (If the value you set is 5 to 9, the L.ERR LED is lit to indicate a communication error.)															

Number	Name	Description											
3)	Number of stations occupied setting switch 	Used to set the number of occupied stations. (Factory setting:OFF(4 stations) ) <table border="1" style="margin-left: 20px;"> <thead> <tr> <th rowspan="2">Number</th> <th colspan="2">Switch Position</th> </tr> <tr> <th>ON</th> <th>OFF</th> </tr> </thead> <tbody> <tr> <td>SW1</td> <td>1 stations</td> <td>4 stations</td> </tr> <tr> <td>SW2</td> <td colspan="2">Must not be used</td> </tr> </tbody> </table>	Number	Switch Position		ON	OFF	SW1	1 stations	4 stations	SW2	Must not be used	
Number	Switch Position												
	ON	OFF											
SW1	1 stations	4 stations											
SW2	Must not be used												
4)	Indicator LEDs 	Data link status can be conformed by the on/off statuses of the LEDs. <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>LED Name</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>L RUN LED</td> <td>On:Indicates that communication is normal. Off:Indicates a communication break (time excess error).</td> </tr> <tr> <td>SD LED</td> <td>On:Indicates data transmission.</td> </tr> <tr> <td>RD LED</td> <td>On:Indicates data receive.</td> </tr> <tr> <td>L ERR. LED</td> <td>On: Indicates a communication data error (CRC error). Flicker: Indicates that any switch (1 to 3) position was changed while power is on. Off: Indicates that communication is normal.</td> </tr> </tbody> </table>	LED Name	Description	L RUN LED	On:Indicates that communication is normal. Off:Indicates a communication break (time excess error).	SD LED	On:Indicates data transmission.	RD LED	On:Indicates data receive.	L ERR. LED	On: Indicates a communication data error (CRC error). Flicker: Indicates that any switch (1 to 3) position was changed while power is on. Off: Indicates that communication is normal.	
LED Name	Description												
L RUN LED	On:Indicates that communication is normal. Off:Indicates a communication break (time excess error).												
SD LED	On:Indicates data transmission.												
RD LED	On:Indicates data receive.												
L ERR. LED	On: Indicates a communication data error (CRC error). Flicker: Indicates that any switch (1 to 3) position was changed while power is on. Off: Indicates that communication is normal.												
5)	Connector	Connector for connection to the GOT											
6)	Module fixing screws	Screws for installation to the GOT (M3×3 screw)											
7)	Terminal block 	Terminal block for cable connection (M3×8 screw)											
8)	Rating plate	_____											

### 5.3 Handling Instructions

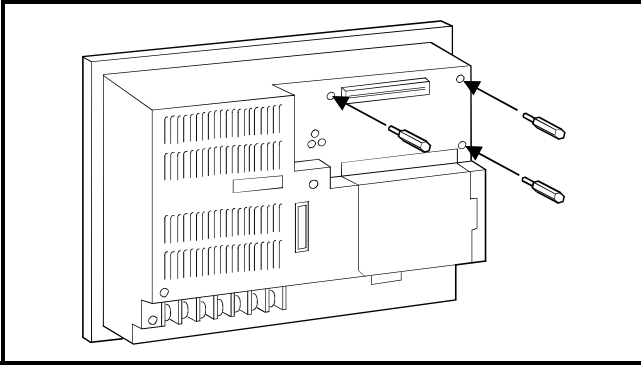
Tighten the mounting and terminal screws of the A8GT-J61BT13 within the following ranges.

Screw Location	Tightening Torque Range
Module mounting screw (M3 screw)	39 to 59N•cm
Terminal block terminal screw (M3 screw)	39 to 59N•cm
Terminal block mounting screw (M3.5 screw)	59 to 88N•cm

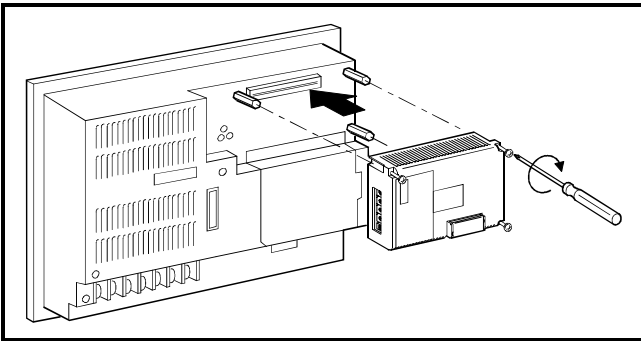
## 5.4 Mounting Procedures

This section provides the procedures to mount the A8GT-J61BT15 to and from the GOT.

## (1) Mounting the A8GT-J61BT15 to the GOT-A900 Series

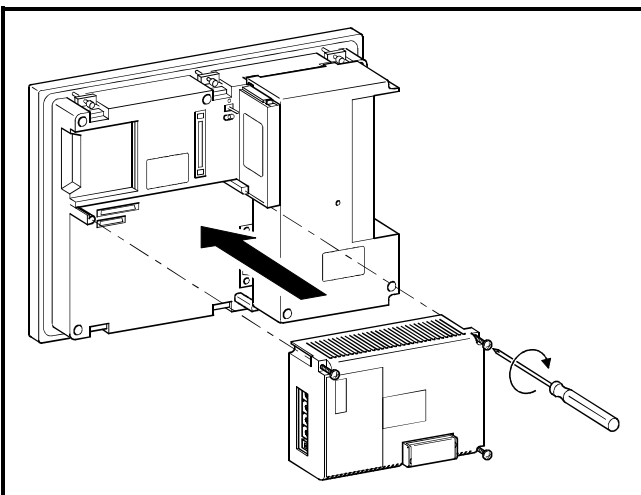


- 1) Fit the communication module securing fixtures in the GOT main unit.



- 2) Mount the A8GT-J61BT15 on the GOT interface.
- 3) Tighten and fix the mounting screws (3 pcs.) of the communication module in the specified torque range. (39 to 59 N•cm)
- 4) To remove the unit, reverse the installation procedure.

## (2) Mounting the A8GT-J61BT15 to the GOT800 Series

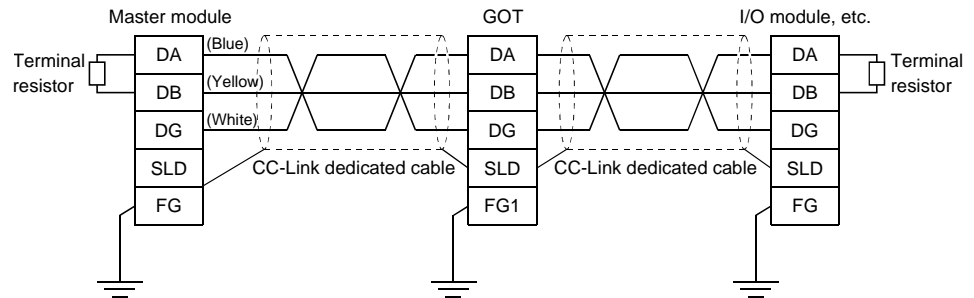


- 1) Fit the A8GT-J61BT15 to the mounting section of the GOT.
- 2) Tighten the module fixing screws (3 pcs.) to within the specified torque range (39 to 59N•cm).
- 3) To remove the unit, reverse the installation procedure.

5.5 Wiring Method

The following diagram shows how to wire the GOT and CC-Link system modules.

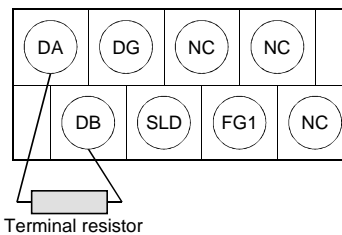
(1) Wiring the GOT and CC-Link system modules by CC-Link dedicated cable



(2) Connection of terminal resistor to the GOT

When connecting a terminal resistor to the GOT, always connect it in the following position.

The terminal resistor is contained in the package of the Master module.



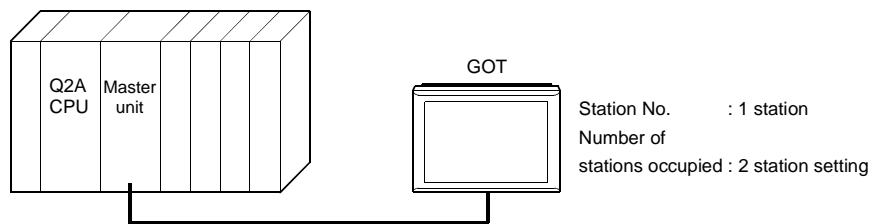
POINT
<ul style="list-style-type: none"> <li>• The "terminal resistors" supplied with the Master module must be connected to the modules at both ends of data link. (Connect them across DA-DB.)</li> <li>• Connect the shield wire of the CC-Link dedicated cable to "SLD" of each module. Since "SLD" is connected to "FG/FG1" internally, always ground the FG terminal and FG1 terminal to the protective ground conductor.</li> <li>• The FG terminal of the GOT power supply and the FG1 terminal of the A8GT-J61BT15 must be connected separately.</li> </ul>

## 6. PROGRAMMING

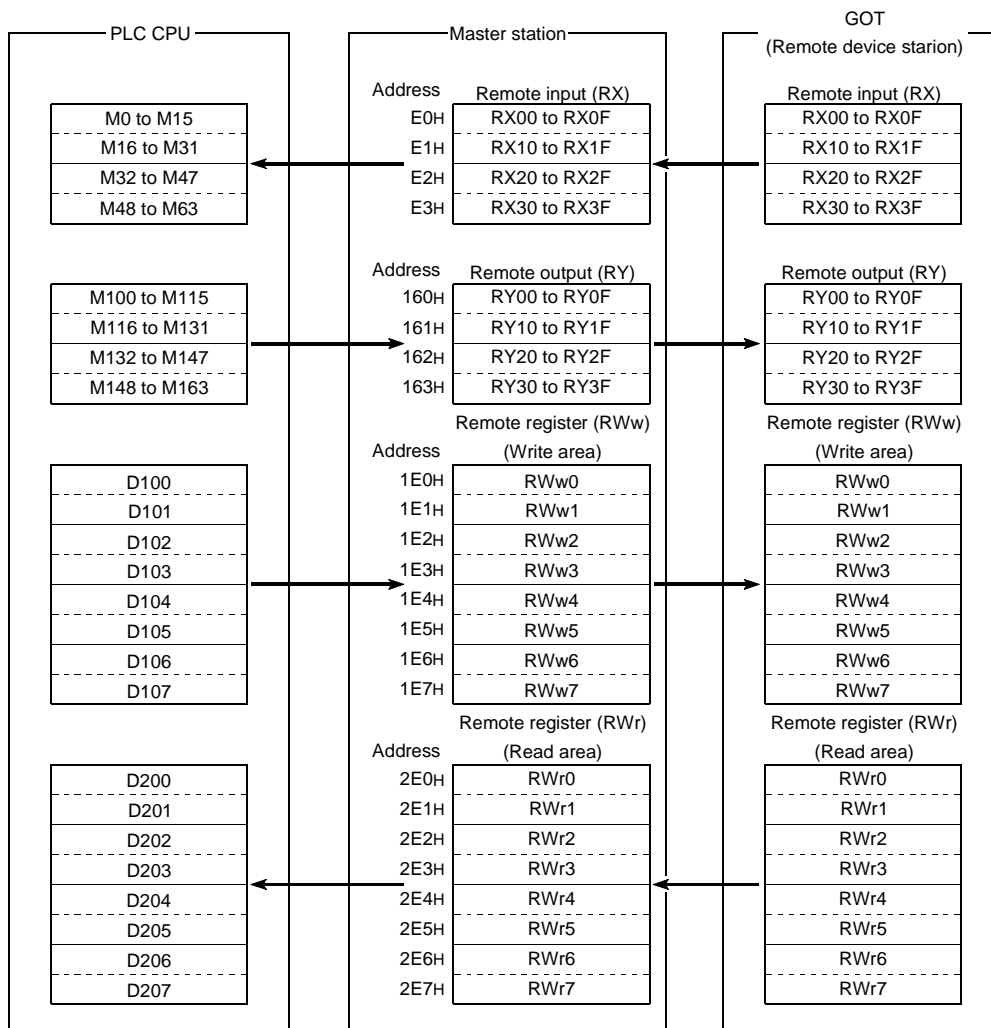
### 6.1 Sequence Program Example When Monitoring Using the Normal Monitor Method

The following system example is used to describe the sequence program in this section. Refer to the CC-Link Master Module User's Manual regarding the sequence program for the entire CC-Link system.

#### 6.1.1 System configuration of the program example



#### 6.1.2 Relationship among the PLC CPU, master station buffer memory, and remote device stations





6.1.3 Examples of created monitor screen data

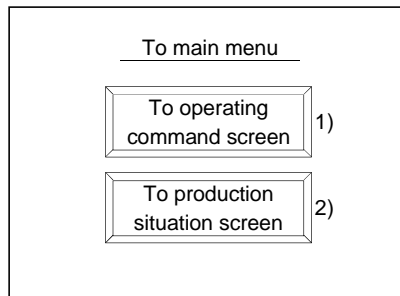
The following are the monitor screen data examples of the A970GOT + A8GT-J61BT15 (remote device station).

Refer to the help function of GT Designer for the way to set each object function.

(1) Common setting

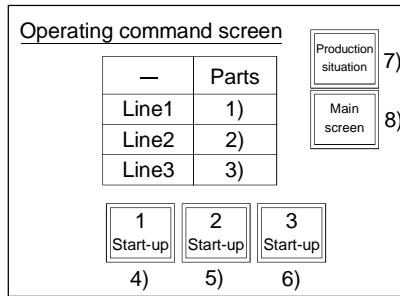
Setting Item	PLC Type	GOT Type	Base Screen Switching Device
Settings	MELSEC-QnA,Q	A97*GOT/GT SoftGOT	Ww0

(2) Base screen No. 1 settings



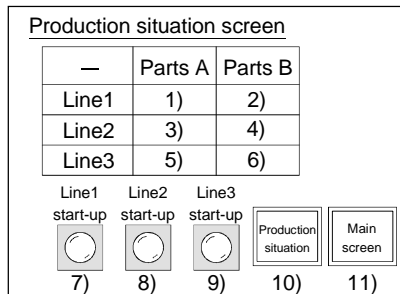
No.	Object Function to Be Set	Setting	Operation
1)	Touch key function	Bit SET: X1 (RX1) to M1 Bit RST: X0 (RX0) to M0 Bit RST: X2 (RX2) to M2	Settings made to switch to base screen No. 2.
2)	Touch key function	Bit SET: X2 (RX2) to M2 Bit RST: X0 (RX0) to M0 Bit RST: X1 (RX1) to M1	Settings made to switch to base screen No. 3.

(3) Base screen No. 2 settings



No.	Object Function to Be Set	Setting	Operation
1)	Numerical input function	Write device Wr0 to D200	Settings made to store the values entered with the numerical input function into D200-D202.
2)	Numerical input function	Write device Wr1 to D201	
3)	Numerical input function	Write device Wr2 to D202	
4)	Touch key function	Bit alternate: X3 (RX3) to M3	Settings made to store the ON/OFF information entered with the touch key function into M200-M201.
5)	Touch key function	Bit alternate: X4 (RX4) to M4	
6)	Touch key function	Bit alternate: X5 (RX5) to M5	
7)	Touch key function	Bit SET: X2 (RX2) to M2 Bit RST: X0 (RX0) to M0 Bit RST: X1 (RX1) to M1	Settings made to switch to base screen No. 3.
8)	Touch key function	Bit SET: X0 (RX0) to M0 Bit RST: X1 (RX1) to M1 Bit RST: X2 (RX2) to M2	Settings made to switch to base screen No. 1.

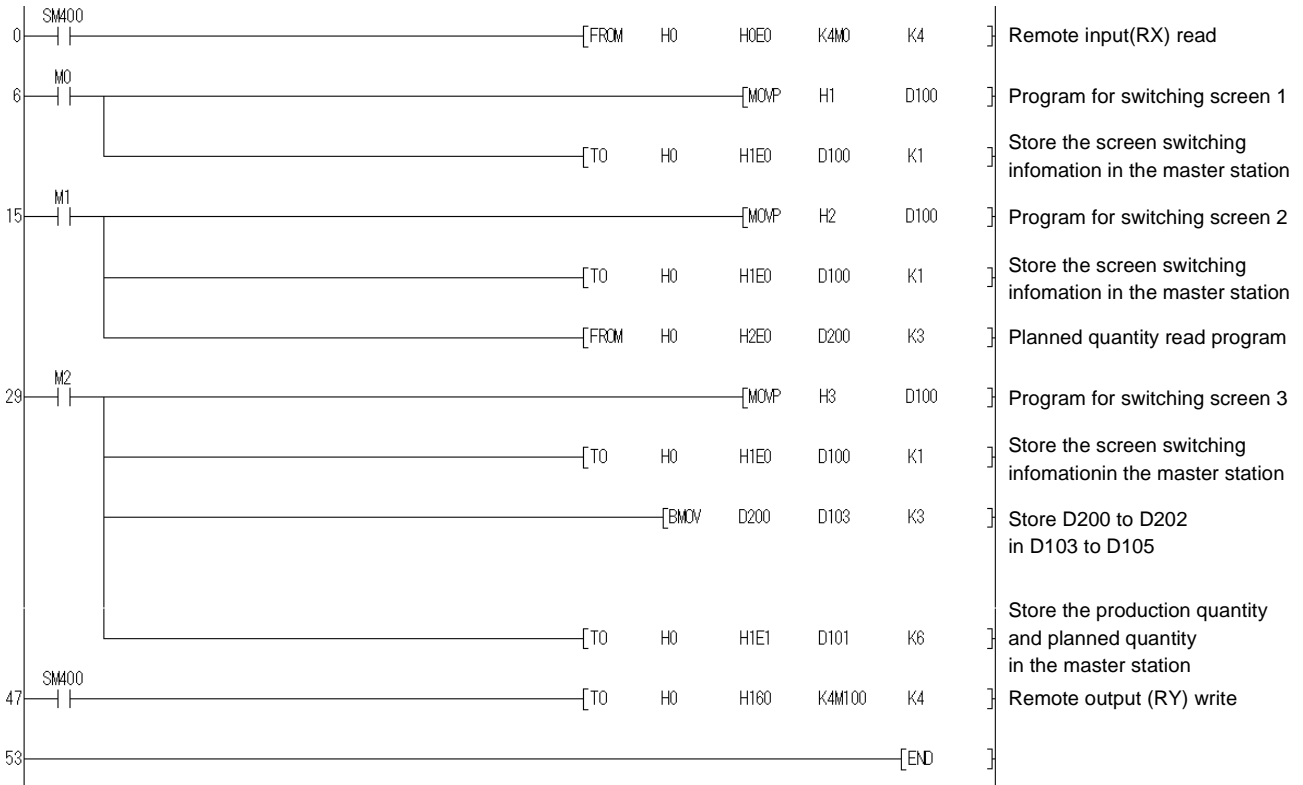
(4) Base screen No. 3 settings



No.	Object Function to Be Set	Setting	Operation
1)	Numerical display function	Monitor device: Ww1 (RWw1) from D101	Settings made to display the values stored in D101-D106.
2)	Numerical display function	Monitor device: Ww2 (RWw2) from D102	
3)	Numerical display function	Monitor device: Ww3 (RWw3) from D103	
4)	Touch key function	Monitor device: Ww4 (RWw4) from D104	
5)	Touch key function	Monitor device: Ww5 (RWw5) from D105	
6)	Touch key function	Monitor device: Ww6 (RWw6) from D106	
7)	Lamp display function	Monitor device: Y0 (RY0) from M100	Settings made to display on the GOT the line operating statuses (ON/OFF) output to the remote I/O station.
8)	Lamp display function	Monitor device: Y1 (RY1) from M101	
9)	Lamp display function	Monitor device: Y2 (RY2) from M102	
10)	Touch key function	Bit SET: X1 (RX1) to M1 Bit RST: X0 (RX0) to M0 Bit RST: X2 (RX2) to M2	Settings made to switch to base screen No. 2.
11)	Touch key function	Bit SET: X0 (RX0) to M0 Bit RST: X1 (RX1) to M1 Bit RST: X2 (RX2) to M2	Settings made to switch to base screen No. 1.

(5) Sequence program example

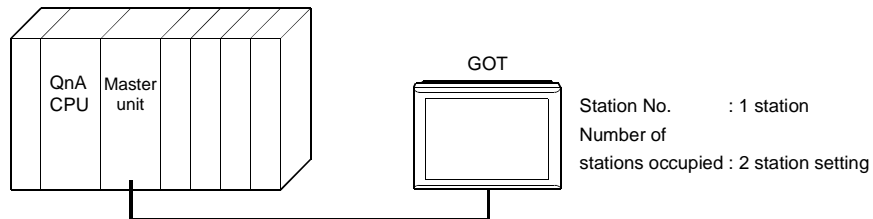
Refer to the Master Module User's Manual about the program for setting CC-Link parameter.



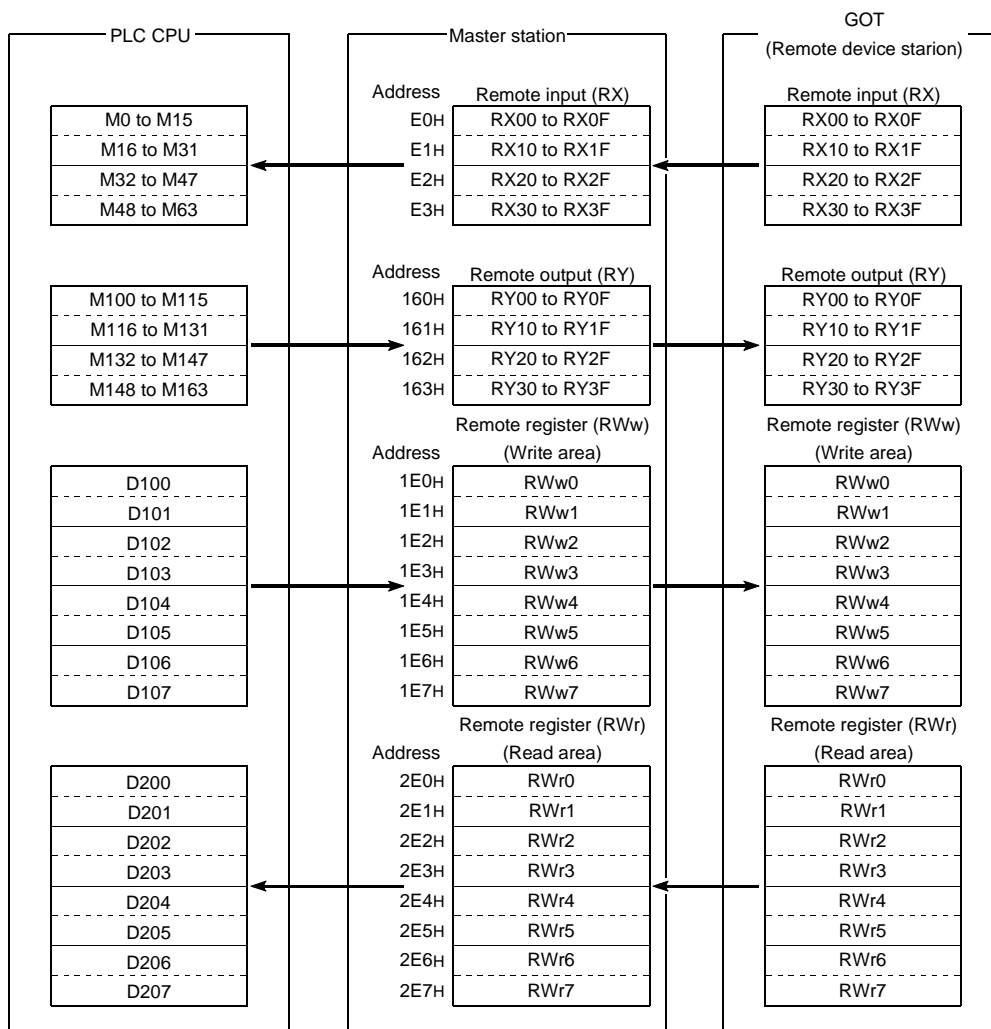
### 6.2 Sequence Program Example When Monitoring Using Dedicated Command Monitor Method

The following system example is used to describe the sequence program in this section. Refer to the CC-Link Master Module User's Manual regarding the sequence program for the entire CC-Link system.

#### 6.2.1 System configuration of the program example



#### 6.2.2 Relationship among the PLC CPU, master station buffer memory, and remote device stations



## 6.2.3 Examples of created monitor screen data

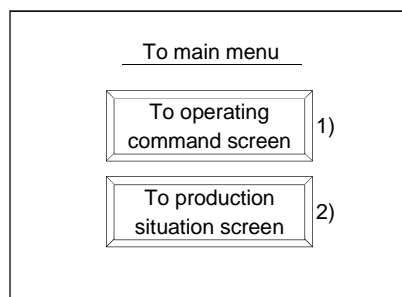
The following are the monitor screen data examples of the A970GOT+A8GT-J61BT15 (remote device station).

Refer to the help function of GT Designer for the way to set each object function.

## (1) Common setting

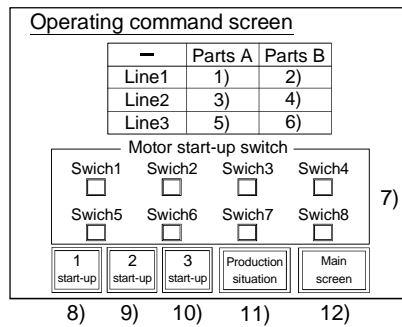
Setting Item	PLC Type	GOT Type	Base Screen Switching Device
Settings	MELSEC-QnA,Q	A97*GOT/GT SoftGOT	GD100

## (2) Base screen No. 1 settings



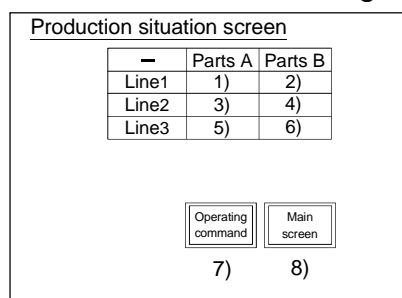
No.	Object Function to Be Set	Setting	Operation
1)	Touch key function	Base screen switching fixed value: 2	Setting made to switch to base screen No. 2.
2)	Touch key function	Base screen switching fixed value: 3	Setting made to switch to base screen No. 3.

(3) Base screen No. 3 settings



No.	Object Function to Be Set	Setting	Operation
1)	Numerical input function	Monitor device: GD200	Settings made to store the values entered with the numerical input function into GD200-GD205.
2)	Numerical input function	Monitor device: GD201	
3)	Numerical input function	Monitor device: GD202	
4)	Numerical input function	Monitor device: GD203	
5)	Numerical input function	Monitor device: GD204	
6)	Numerical input function	Monitor device: GD205	
7)	Touch key function (Switches 1 to 8)	Switch 1: GD250 b0 Switch 2: GD250 b1 Switch 3: GD250 b2 Switch 4: GD250 b3 Switch 5: GD250 b4 Switch 6: GD250 b5 Switch 7: GD250 b6 Switch 8: GD250 b7	Settings made to store the ON/OFF information entered with the touch key function into the specified bits (b0 to b7) of GD250.
8)	Touch key function	Bit alternate: GD255 b0	Settings made to store the ON/OFF information entered with the touch key function into the specified bits (b0 to b2) of GD255.
9)	Touch key function	Bit alternate: GD255 b1	
10)	Touch key function	Bit alternate: GD255 b2	
11)	Touch key function	Base screen switching fixed value: 3	Setting made to switch to base screen No. 3.
12)	Touch key function	Base screen switching fixed value: 1	Setting made to switch to base screen No. 1.

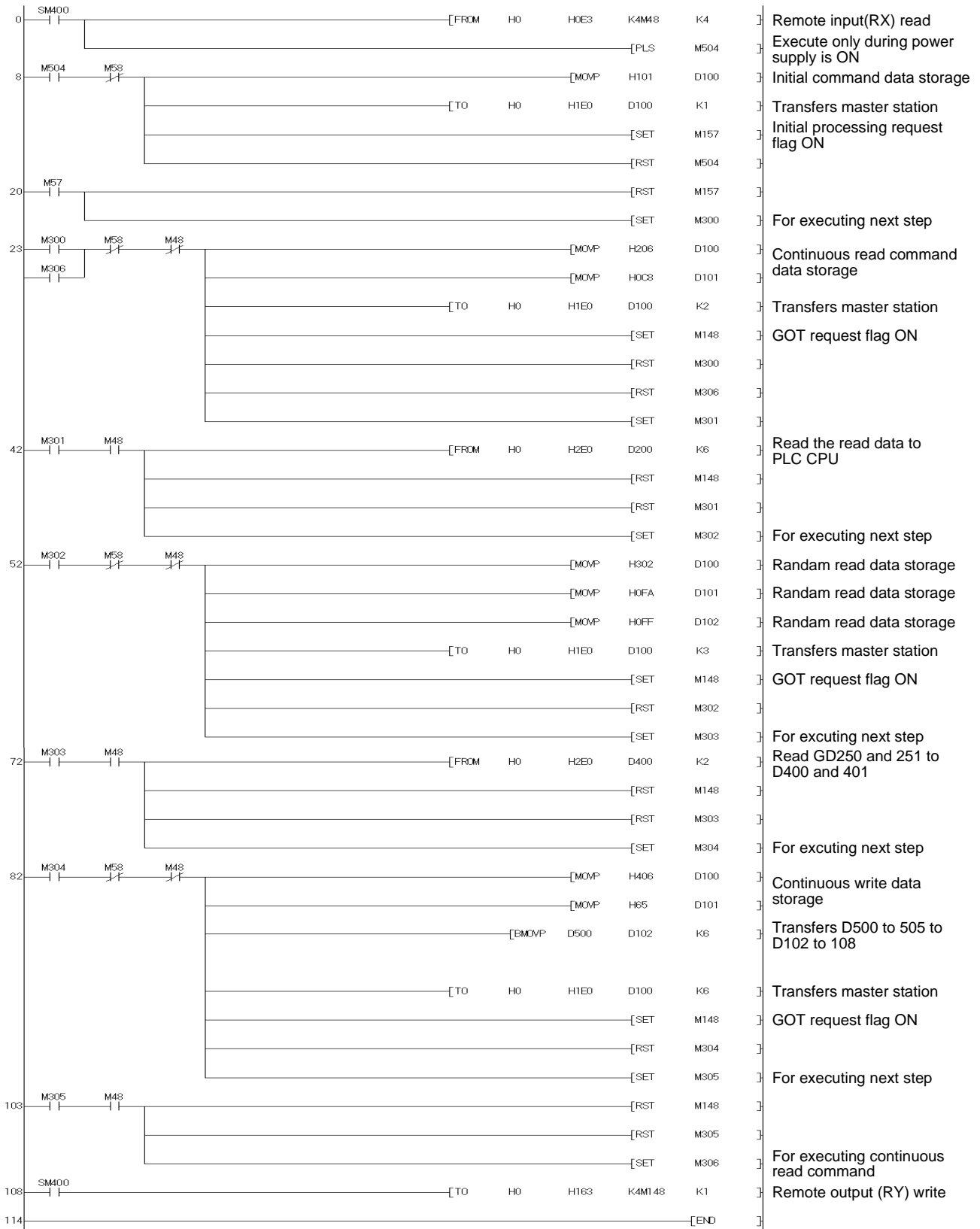
(4) Base screen No. 3 settings



No.	Object Function to Be Set	Setting	Operation
1)	Numerical display function	Monitor device: GD101	Settings made to display the values stored in GD101-GD106.
2)	Numerical display function	Monitor device: GD102	
3)	Numerical display function	Monitor device: GD103	
4)	Numerical display function	Monitor device: GD104	
5)	Numerical display function	Monitor device: GD105	
6)	Numerical display function	Monitor device: GD106	
7)	Touch key function	Base screen switching fixed value: 2	Setting made to switch to base screen No. 2.
8)	Touch key function	Base screen switching fixed value: 1	Setting made to switch to base screen No. 1.

(5) Sequence program example

Refer to the Master Module User's Manual about the program for setting CC-Link parameter.



## 7. TROUBLESHOOTING

This section gives simple troubleshooting for use of the A8GT-J61BT15.

POINT	
<p>By setting the alarm list display (system alarm) function to the display screen using the graphics software, the GOT can quickly detect a link error, in addition to the following errors.</p> <p>When a link error occurs, the following error code and error messages are displayed in the display field of the alarm list display (system alarm) function.</p>	
Error code	Message
402	<ul style="list-style-type: none"> <li>• Communication disable (GOT800 Series)</li> <li>• Communication time-out (GOT-A900 Series)</li> </ul>
<p>For more details on how to set up the alarm list display (system alarm) function and the contents of display, refer to the manuals listed in the table below.</p>	
GOT Used	Manuals to refer to
GOT-A900 Series	GT Designer Help function
GOT800 Series	SW <input type="checkbox"/> NIW-A8GOTP Operating Manual (Monitor Screen Creation Manual)

### 7.1 LED-Indicated Error Causes and Their Corrective Actions

This section explains how to check errors indicated by the LEDs of the A8GT-J61BT15.

For errors related to the PLC CPU and Master module, refer to the user's manuals of the PLC CPU and Master module.

(1) If the L RUN LED of the A8GT-J61BT15 goes off

Cause	Corrective Action
CC-Link dedicated cable is broken or shorted.	Check and repair the CC-Link dedicated cable.
Master station stopped link.	Check for an error at the Master station.
Station number was repeated.	Switch power on again * 1 after correcting the station number setting of the module of which station number was repeated.
GOT parameters have not been set.	Correct the GOT parameter setting and switch power of the GOT again * 1.
Power is not supplied to the GOT or voltage is insufficient.	Supply power to the GOT and check the voltage of the power supply.
Switch setting is outside the specified range (station number 0 or 65 or more, transmission speed 5 to 9).	Correct the switch setting and switch power on again * 1.



(2) If the L ERR LED of the A8GT-J61BT15 flickers

Cause	Corrective Action
Mode, station number or transmission speed switch setting was changed during normal operation.	Return the mode, station number or transmission speed switch setting to the previous position and switch power on again *1. If the L RUN LED is not lit after switching power on again, the hardware may be faulty. Consult your sales representative.
Station number or transmission speed switch is faulty.	If the L ERR LED begins to flicker though switch setting was not changed during operation, the hardware may be faulty. Consult your sales representative.

(3) If the L ERR LED of the A8GT-J61BT15 is lit

Cause	Corrective Action
Switch setting is outside the specified range (station number 0 or 65 or more, transmission speed 5 to 9).	Correct the switch setting and switch power on again *1.
Terminal resistors are left unconnected.	Check that the terminal resistors are connected. If not, connect them and switch power on again *1.
A8GT-J61BT15 or CC-Link dedicated cable are affected by noise.	<ul style="list-style-type: none"> <li>• Connect both ends of the shield wire of the CC-Link dedicated cable to ground (earth conductors separately) via SLD and FG1 of each module.</li> <li>• Securely connect the FG terminal of the module to ground.</li> <li>• Securely ground the piping when running cables in piping.</li> </ul>

\*1: Switch power on again: Switch power on again or turn on the reset switch.

7

## 7.2 Troubleshooting for Dedicated Command Monitor

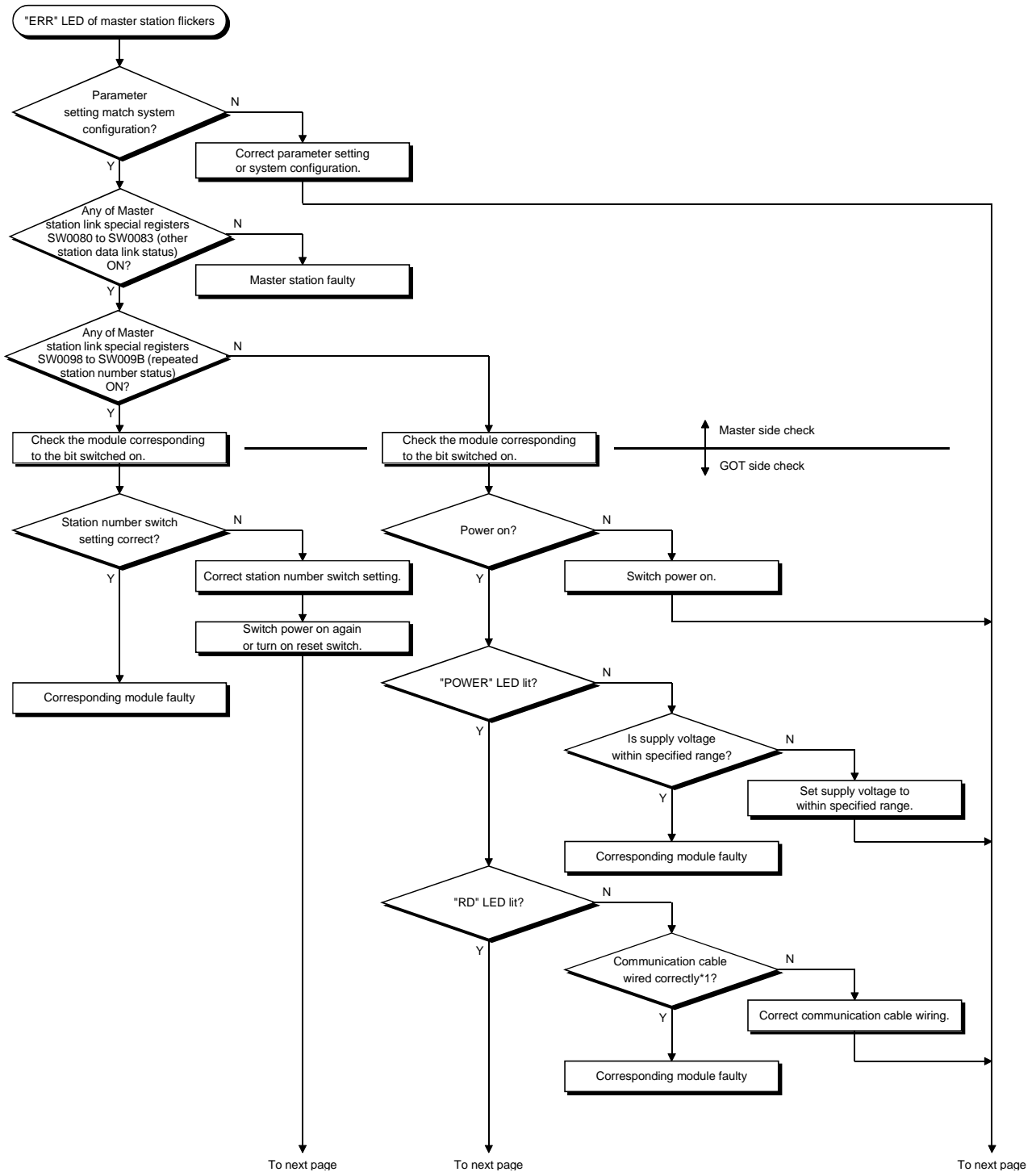
(1) If the error status flag turned on

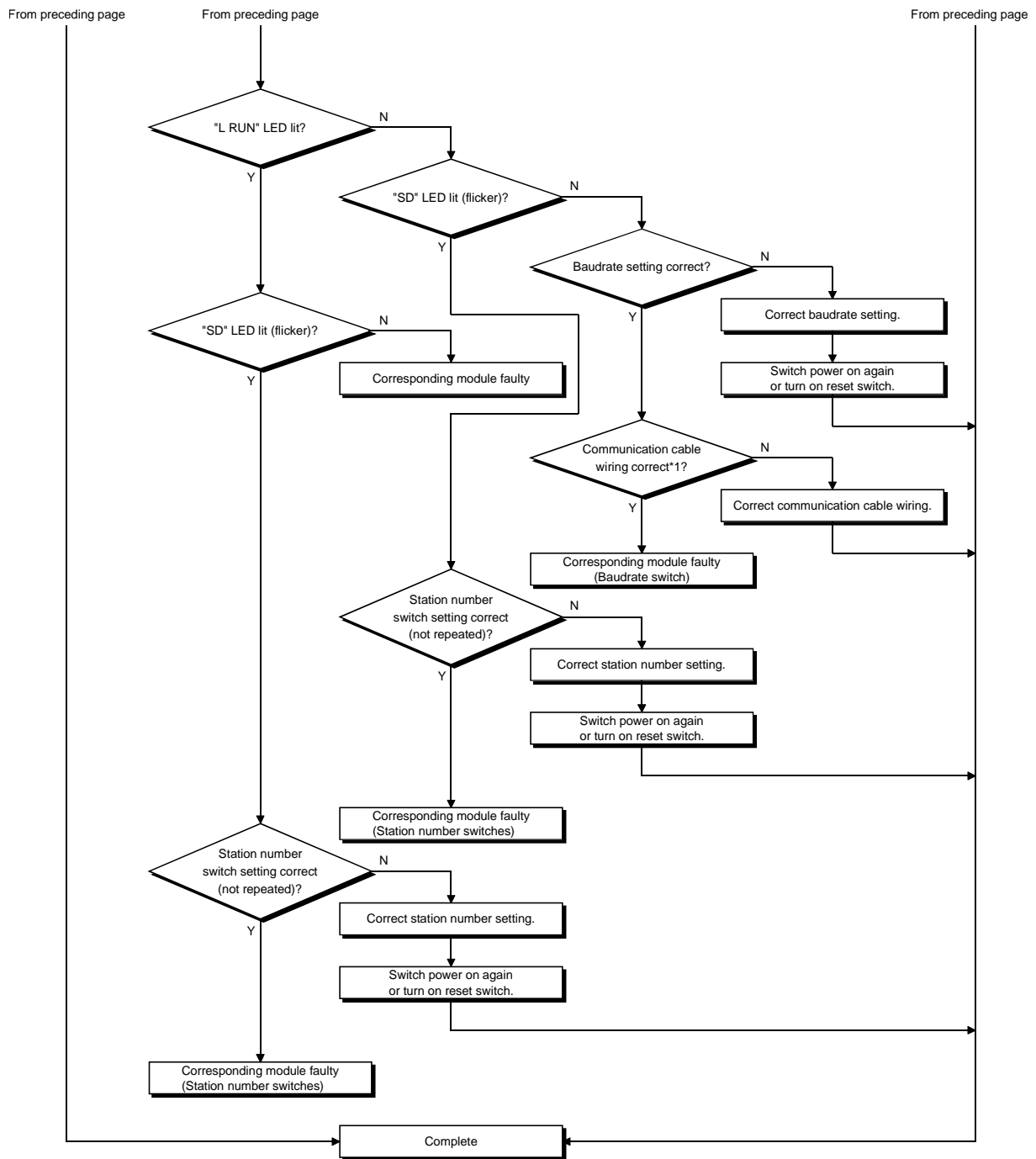
Cause	Corrective Action
Executed dedicated command is incorrect.	Check if the dedicated command is incorrect or not.
Monitored device is outside the setting range.	Check if the set device is outside the range or not.

7.3 Communication Error Occurs between Master Station and GOT

If any repeated station number bit in any of the link special registers SW0098 to SW009B (repeated station number status) switches on, check the GOT of the corresponding station number in the following flowchart.

Troubleshooting flowchart used when the "ERR" LED of the Master station flickers

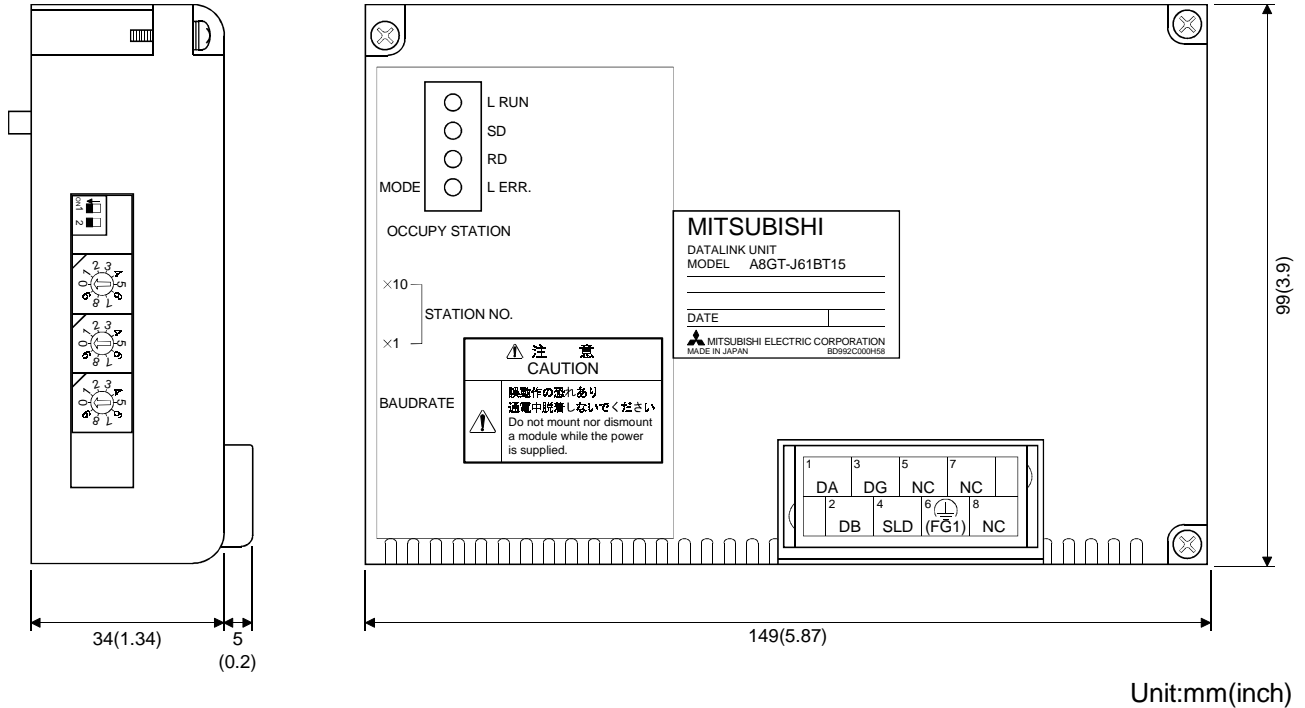




\*1: Check for short circuit, reverse connection, wire breakage, no terminal resistor, improper FG connection, improper overall distance and improper interstation distance.

APPENDICES

Appendix 1. Outline Dimension Drawing



Appendix 2. Calculating Formulas of the Processing Time of the Remote Device Station When the A8GT-J61BT15 is Used

The following explains the calculating formulas of the processing time of the remote device station when the A8GT-J61BT15 is used (when the GOT is an remote device station).

(1) Calculating formula

$SM + LS \times 3 + 100$  (processing time of the remote device station: 100 ms)  
 = processing time of the remote device station when the A8GT-J61BT15 is used

SM : Scan time of the Master station's sequence program  
 LS : Link scan time

(2) Example of calculation

When SM: 10 ms, LS: 5 ms

$10 + 5 \times 3 + 100 = 125$  (ms)



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# WARRANTY

Please confirm the following product warranty details before starting use.

## 1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the dealer or Mitsubishi Service Company. Note that if repairs are required at a site overseas, on a detached island or remote place, expenses to dispatch an engineer shall be charged for.

### [Gratis Warranty Term]

The gratis warranty term of the product shall be for one year after the date of purchase or delivery to a designated place.

Note that after manufacture and shipment from Mitsubishi, the maximum distribution period shall be six (6) months, and the longest gratis warranty term after manufacturing shall be eighteen (18) months. The gratis warranty term of repair parts shall not exceed the gratis warranty term before repairs.

### [Gratis Warranty Range]

- (1) The range shall be limited to normal use within the usage state, usage methods and usage environment, etc., which follow the conditions and precautions, etc., given in the instruction manual, user's manual and caution labels on the product.
- (2) Even within the gratis warranty term, repairs shall be charged for in the following cases.
  1. Failure occurring from inappropriate storage or handling, carelessness or negligence by the user. Failure caused by the user's hardware or software design.
  2. Failure caused by unapproved modifications, etc., to the product by the user.
  3. When the Mitsubishi product is assembled into a user's device, Failure that could have been avoided if functions or structures, judged as necessary in the legal safety measures the user's device is subject to or as necessary by industry standards, had been provided.
  4. Failure that could have been avoided if consumable parts (battery, backlight, fuse, etc.) designated in the instruction manual had been correctly serviced or replaced.
  5. Failure caused by external irresistible forces such as fires or abnormal voltages, and Failure caused by force majeure such as earthquakes, lightning, wind and water damage.
  6. Failure caused by reasons unpredictable by scientific technology standards at time of shipment from Mitsubishi.
  7. Any other failure found not to be the responsibility of Mitsubishi or the user.

## 2. Onerous repair term after discontinuation of production

- (1) Mitsubishi shall accept onerous product repairs for seven (7) years after production of the product is discontinued. Discontinuation of production shall be notified with Mitsubishi Technical Bulletins, etc.
- (2) Product supply (including repair parts) is not possible after production is discontinued.

## 3. Overseas service

Overseas, repairs shall be accepted by Mitsubishi's local overseas FA Center. Note that the repair conditions at each FA Center may differ.

## 4. Exclusion of chance loss and secondary loss from warranty liability

Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to damages caused by any cause found not to be the responsibility of Mitsubishi, chance losses, lost profits incurred to the user by Failures of Mitsubishi products, damages and secondary damages caused from special reasons regardless of Mitsubishi's expectations, compensation for accidents, and compensation for damages to products other than Mitsubishi products and other duties.

## 5. Changes in product specifications

The specifications given in the catalogs, manuals or technical documents are subject to change without prior notice.

## 6. Product application

- (1) In using the Mitsubishi MELSEC programmable logic controller, the usage conditions shall be that the application will not lead to a major accident even if any problem or fault should occur in the programmable logic controller device, and that backup and fail-safe functions are systematically provided outside of the device for any problem or fault.
- (2) The Mitsubishi general-purpose programmable logic controller has been designed and manufactured for applications in general industries, etc. Thus, applications in which the public could be affected such as in nuclear power plants and other power plants operated by respective power companies, and applications in which a special quality assurance system is required, such as for Railway companies or National Defense purposes shall be excluded from the programmable logic controller applications.

Note that even with these applications, if the user approves that the application is to be limited and a special quality is not required, application shall be possible.

When considering use in aircraft, medical applications, railways, incineration and fuel devices, manned transport devices, equipment for recreation and amusement, and safety devices, in which human life or assets could be greatly affected and for which a particularly high reliability is required in terms of safety and control system, please consult with Mitsubishi and discuss the required specifications.

# A8GT-J61BT15 Type CC-Link Communication Module

## User's Manual

MODEL	A8GT-J61BT15-U-E
MODEL CODE	1DM074
IB(NA)-66788-C(0406)MEE	

 **MITSUBISHI ELECTRIC CORPORATION**

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When exported from Japan, this manual does not require application to the Ministry of Economy, Trade and Industry for service transaction permission.

Specifications subject to change without notice.