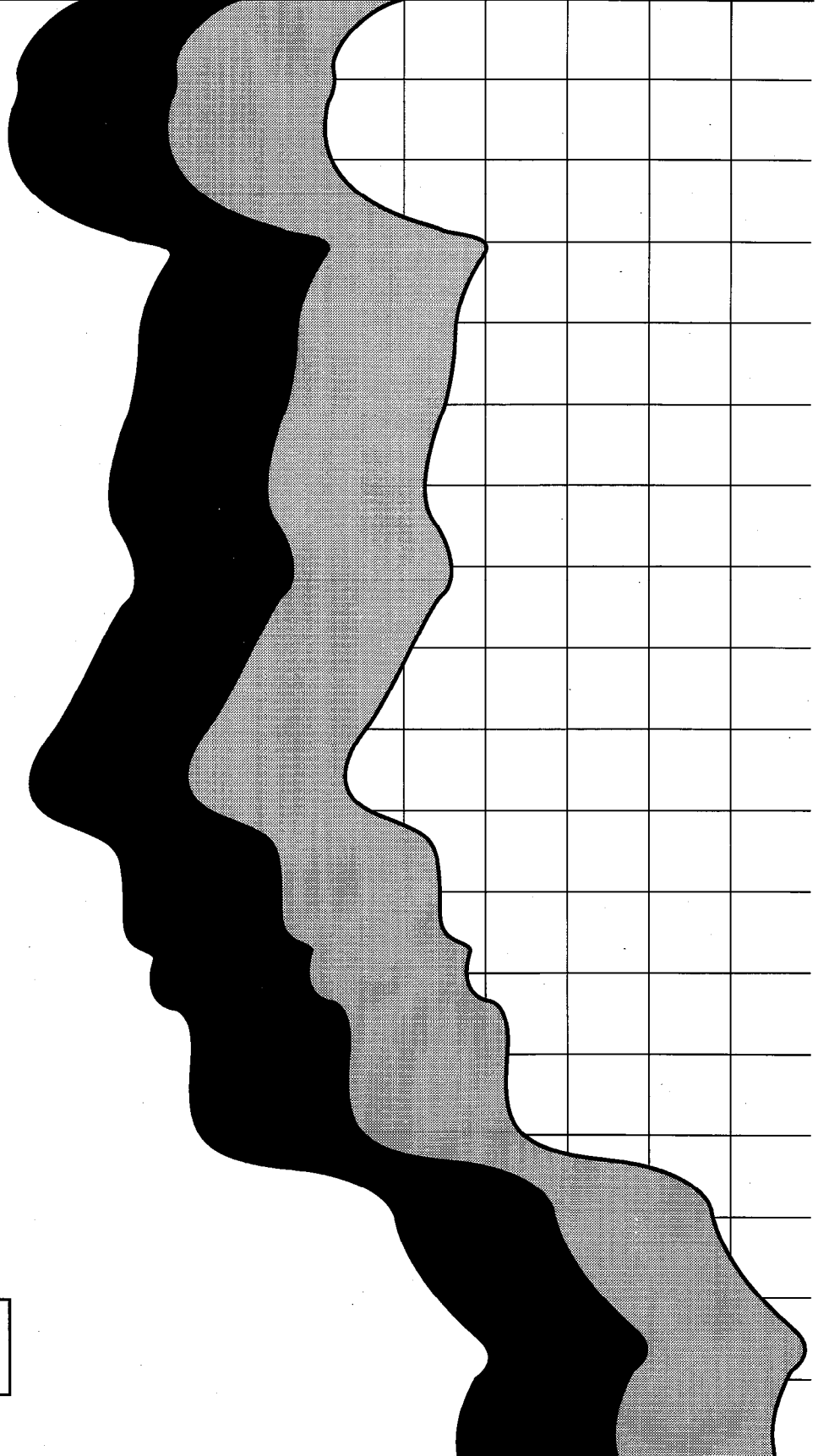


MITSUBISHI

CC-Link Interface Card
type A80BDE-J61BT13 for SW1DNF-CCLINK

User's Manual



MELSEC

● SAFETY INSTRUCTIONS ●

(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 "WARNING" and "CAUTION".




DANGER

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



CAUTION

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.

[Designing Instructions]



WARNING

- When a communication error has occurred in data link, the faulty station results in the following condition.
Using communication status data, make up an interlock circuit in the sequence program to operate the system safely.
False outputs or malfunction may cause an accident.
(1) General-purpose inputs from this module all turn off.
(2) General-purpose outputs from this module all turn off.
- Some failures of the A80BDE-J61BT13 may cause the inputs/outputs to turn on or off. For I/O signals which may lead to serious accidents, provide an external monitoring circuit.

[Designing Instructions]

CAUTION

- Use the A80BDE-J61BT13 in an environment that conforms to the general specifications given in this manual.
Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration.
- 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 a malfunction due to noise.

[Mounting Instructions]

CAUTION

- Do not touch the conductive areas of the A80BDE-J61BT13 directly.
Doing so can cause the A80BDE-J61BT13 to malfunction or fail.
- Securely fix the A80BDE-J61BT13 with mounting screws and securely tighten the mounting screws within the specified torque range.
Undertightening can cause a short circuit or malfunction.
Overtightening can cause a short circuit due to the damage of the screws.

[Wiring Instructions]

WARNING

- Before starting mounting, wiring or other work, always switch power off externally in all phases.
Not doing so may cause an electric shock, product damage or malfunction.
- When switching power on or starting operation after mounting, wiring or other work, always close the terminal cover supplied with the product.
Not doing so may cause an electric shock.

[Wiring Instructions]

CAUTION

- Always earth the FG terminal to the protective earth conductor on the personal computer side. Not doing so may cause a malfunction.
If a malfunction occurs after earthing the personal computer, earth both the FG terminal of the personal computer and the SLD terminal of the A80BDE-J61BT13.
- Tighten the terminal screws within the specified torque range.
Undertightening can cause a short circuit or malfunction.
Overtightening can cause a short circuit or malfunction due to the damage of the screws or A80BDE-J61BT13.
- Ensure that foreign matters such as chips and wire off-cuts do not enter the personal computer. They can cause a fire, failure or malfunction.
- Always secure the communication cable connected to the A80BDE-J61BT13, e.g. run it in a conduit or clamp it.
Not doing so can damage the A80BDE-J61BT13 or cable due to the dangling, moved or accidentally pulled cable or can cause a malfunction due to a cable contact fault.
- Do not hold the cable part when unplugging the communication cable connected to the A80BDE-J61BT13.
Unplug the cable after loosening the screw in the cable part connected to the A80BDE-J61BT13.
If you pull the cable connected to the A80BDE-J61BT13, the A80BDE-J61BT13 or cable can be damaged or a malfunction can occur due to a cable contact fault.

[Startup/Maintenance Instructions]

WARNING

- Do not touch the terminals while power is on.
Doing so can cause a malfunction.
- Before starting cleaning or terminal screw retightening, always switch power off externally in all phases.
Not doing so can cause an A80BDE-J61BT13 failure or malfunction.
Undertightening can cause a drop, short circuit or malfunction.
Overtightening can cause a drop, short circuit or malfunction due to the damage of the screws or A80BDE-J61BT13.

[Startup/Maintenance Instructions]

 **CAUTION**

- Do not disassemble or modify the A80BDE-J61BT13.
Doing so can cause a failure, malfunction, injury or fire.
- Before mounting or dismounting the A80BDE-J61BT13 to or from a personal computer, always switch power off externally in all phases.
Not doing so can cause the A80BDE-J61BT13 to fail or malfunction.

[Disposal Instructions]

 **CAUTION**

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

REVISIONS

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

Print Date	*Manual Number	Revision
Jul. 1998	IB(NA)-66865	First edition

This manual does not warrant or license any industrial property rights and other rights. Under no circumstances will Mitsubishi Electric be liable or responsible for any consequential problems involving the industrial property rights which may arise as a result of the use of this equipment described in this manual.

INTRODUCTION

Thank you for choosing the Mitsubishi General Purpose Personal Computer Board.

Before using the product, please read this manual carefully to use the equipment to its optimum.

A copy of this manual should be forwarded to the end user.

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About the Manuals

The following manuals are related to this product.
Refer to the following table and request the required ones.

Relevant Manuals

Manual Name	Manual Number (Type Code)
CC-Link System Master · Local Module type AJ61BT11/A1SJ61BT11 User's Manual Describes the system configuration, performance specifications, functions, handling, wiring and troubleshooting of the AJ61BT11 and A1SJ61BT11. (Option)	IB-66721 (13J872)
CC-Link System Master · Local Module type AJ61QBT11/A1SJ61QBT11 User's Manual Describes the system configuration, performance specifications, functions, handling, wiring and troubleshooting of the AJ61QBT11 and A1SJ61QBT11. (Option)	SH-66722 (13J873)

1. INTRODUCTION

This manual provides the specifications, handling and monitoring procedures for the A80BDE-J61BT13 CC-Link interface board which is loaded to a PCI* bus as an optional board to an IBM PC/AT or a 100% - compatible machine (hereafter known as "personal computer") to make up a CC-Link system.

The A80BDE-J61BT13 applies to the following CC-Link system.

- Local station of CC-Link system

*: PCI stands for Peripheral Component Interconnect.

1.1 Features

The board has the following features.

- (1) A personal computer can be integrated into a CC-Link system.
A personal computer loaded with the A80BDE-J61BT13 can be used as a local station.
- (2) The adoption of a PCI bus makes troublesome switch setting unnecessary.
Merely loading the A80BDE-J61BT13 to a PCI bus automatically makes initial setting.
- (3) Test and monitor data related to CC-Link are displayed.
The testing and monitoring statuses of the CC-Link system can be displayed on the personal computer, ensuring ease of operation.
- (4) User-programming compatible functions are available.
Visual C++ and Visual Basic compatible functions allow the PC CPU to be controlled from a remote location and the devices to be accessed, facilitating user application creation.

1.2 Packing List

After unpacking, make sure that the following parts are contained.

Description	Quantity
A80BDE-J61BT13 CC-Link interface board	1
SW1DNF-CCLINK CC-Link software package	1 (3 disks)
A80BDE-J61BT13 CC-Link interface board user's manual (this manual)	1
Terminal resistor (110Ω), 1/2W (brown/brown/brown/...)	2

CAUTION

The terminal resistors are included in the packing of the CC-Link system master/local module.

1.3 Abbreviations, Generic Names and Terms Used in This Manual

The following abbreviations, generic names and terms are used in this manual.

Abbreviations and Generic Names	Description
A80BDE-J61BT13	Abbreviation for the A80BDE-J61BT13 CC-Link interface board
CC-Link	Abbreviation for the Control & Communication Link system
Master station	Station which controls the remote, local and intelligent device stations
Local station	Station which has a CPU and can communicate with the master and local stations
Remote I/O station	Remote station which handles bit data only (AJ65BTB□-□□, AJ65BTC□-□□)
Remote station	Generic name for the remote I/O and remote device stations
Intelligent device station	Slave station in the CC-Link system which can make transient transmission, e.g. AJ65BT-R2
Master/local module	Generic name for the AJ61QBT11, A1SJ61QBT11, AJ61BT11 and A1SJ61BT11
Master module	Generic name for the AJ61QBT11, A1SJ61QBT11, AJ61BT11 and A1SJ61BT11 used as a master station
Remote module	Generic name for the AJ65BTB□-□□, AJ65BTC□-□□, AJ65BT-64AD, AJ65BT-64DAV, AJ65BT-64DAI, A852GOT, etc.
Intelligent module	Module which can make transient transmission, e.g. AJ65BT-R2
Cyclic transmission	Function which updates the data of the remote inputs/outputs and remote registers periodically
Transient transmission	Function which communicates data with the specified station at the access request of the PC CPU, etc.
SB	Link special relay
SW	Link special register
RX	Remote input
RY	Remote output
RWw	Remote register (write area)
RWr	Remote register (read area)

2. EMC DIRECTIVE

2.1 Requirements for Compliance with the EMC Directive

We are required to comply with the EMC Directive among the European Directives. The EMC Directive requires that "products should not emit strong electromagnetic waves to the outside: Emission (electromagnetic interference)" and "products should not be affected by electromagnetic waves from the outside: Immunity (electromagnetic sensitivity)".

Sections 2.1.1 to 2.1.6 provide instructions for using the A80BDE-J61BT13 to configure up machinery to comply with the EMC Directive.

It should be noted that although we made our best efforts to prepare the documents on the basis of the regulation requirements and standards we obtained, we do not guarantee that the whole machinery manufactured in accordance with the documents complies with the above Directive. How to comply with the EMC Directive and whether the relevant machinery complies with the EMC Directive or not must be determined by the manufacturer of the relevant machinery itself.

2.1.1 EMC Directive

The following table lists standards related to the EMC Directive.

Specifications	Test Item	Test	Standard Values
EN50081-2 : 1995	EN55011 Radiation noise	Measure waves emitted by a product.	30M-230MHz QP: 50dB μ V/m (measured 3m away) ^{*1} 230M-1000MHz QP: 57dB μ V/m (measured 3m away)
	EN55011 Conductive noise	Measure noise released by a product to power line.	150k-500kHz QP : 79dB, Mean : 66db ^{*1} 500k-30MHz QP : 73dB, Mean : 60dB
prEN50052-2 : 1991	IEC801-2 Electrostatic immunity ^{*2}	Immunity test made by applying static electricity to an equipment enclosure.	4kV: contact discharge 8kV: air discharge
	IEC801-3 Radiation field ^{*2}	Immunity test made by applying electric field to a product.	10V/m, 27-500MHz
	IEC801-4 First transient burst noise	Immunity test made by applying burst noise to power and signal lines.	2kV
EN50082-2 : 1995	EN61000-4-2 Static electricity immunity ^{*2}	Immunity test made by applying static electricity to an equipment enclosure.	4kV: contact discharge 8kV: air discharge
	EN61000-4-4 First transient burst noise	Immunity test made by applying burst noise to power and signal lines.	2kV
	ENV50140 Radiation field AM modulation ^{*2}	Immunity test made by applying electric field to a product.	10V/m, 80-1000MHz, 80% modulation @ 1kHz
	ENV50204 Radiation field Pulse modulation ^{*2}	Immunity test made by applying electric field to a product.	10V/m, 900MHz, Pulse modulation 200Hz, 50% duty
	ENV50141 Conductive noise	Immunity test made by inducing electromagnetic field into power and signal lines.	10Vrms, 0.15-80MHz, 80% modulation @ 1kHz

*1: QP: Quasi-peak value, Mean: Average value

*2: The corresponding tests were made with the board loaded to the personal computer.

2.1.2 Installation in control box

Installation in a control box not only ensures safety but also has a great effect on the shielding of PC-generated noise with the control box.

(1) Control box

- (a) The control box should be conductive.
- (b) When fixing the top and bottom plates, etc. of the control box with bolts, mask the paint to permit surface contact.
- (c) To reserve electrical contact with the control box, mask the paint on the bolts used for mounting the inner plates to the control box so that conductivity may be reserved on the widest possible surface.
- (d) To reserve low impedance at high frequencies, connect the control box to the ground with thick ground wires.
- (e) The hole of the control box should be 10cm max. in diameter. If it is more than 10cm, electric waves may leak.

(2) Routing the power and ground wires

Route the ground and power wires of the personal computer as described below.

- (a) Provide a control box grounding point near the personal computer and earth the FG (FG: frame ground) terminal of the personal computer or the SLD terminal (SLD: shield) of the A80BDE-J61BT13 with the thickest and shortest possible wires (about 30cm or less long) to that point. Since the FG and SLD terminals are designed to draw noise generated inside the personal computer to the ground, the lowest possible impedance must be reserved. Also, because of their function to release noise, their wires carry noise and they should be run in a short distance to prevent them from acting as antennas.

Note: A longer conductor acts as a more efficient noise radiation antenna.

- (b) The ground wires drawn from the grounding point should be twisted with the power wires. Doing so can release noise from the power wires to a larger ground. However, when a noise filter is fitted to the power wires, this twisting may not be needed.

2.1.3 Cables

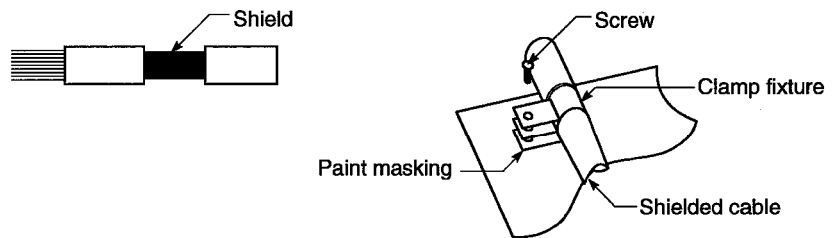
Cables drawn from the control box include high-frequency noise components and act as antennas outside the control box to radiate noise. Cables drawn to outside the control box must be shielded cables.

Use of shielded cables are also effective to increase noise immunity.

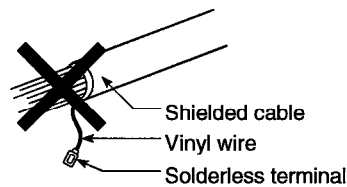
EN50082-2 does not define the meaning of "related to control". However, given the spirit of the EMC Directive, we understand signal lines which may endanger people or equipment due to a malfunction should be defined as "signals related to control" and require high noise immunity.

(1) Earthing the shield

- (a) Ground a shield at a point near the outlet of a cable from a control box. If the grounding point is away from the outlet position, the cable after the grounding point will cause electromagnetic induction again, generating high-frequency noise.
- (b) The shield should be grounded in a wide surface of the control box. The following clamp fixture may be used. However, mask the paint on the control box's inner wall which makes contact with the fixture.



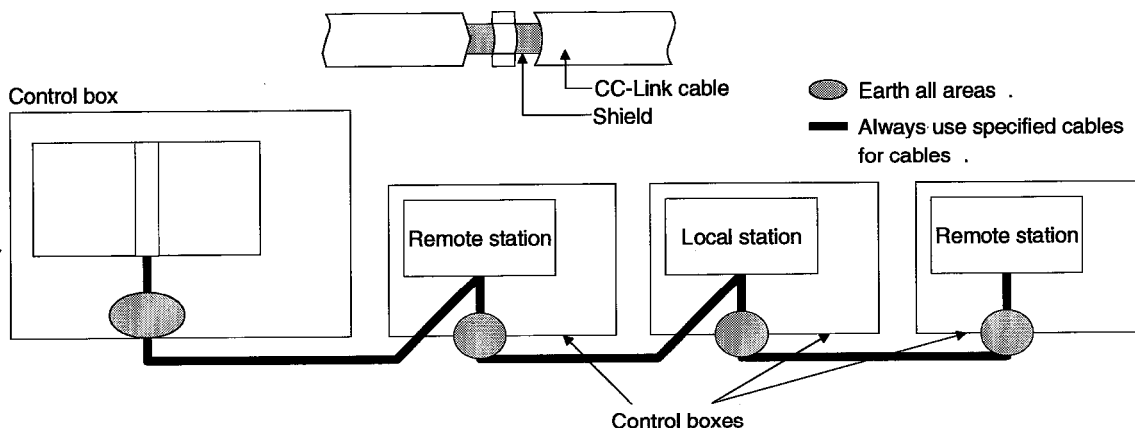
Note: If a vinyl wire is soldered to the shield of the shielded cable and the end of that wire is grounded, this grounding method will increase high-frequency impedance and eliminate the effect of the shield.



(2) Earthing the CC-Link cables

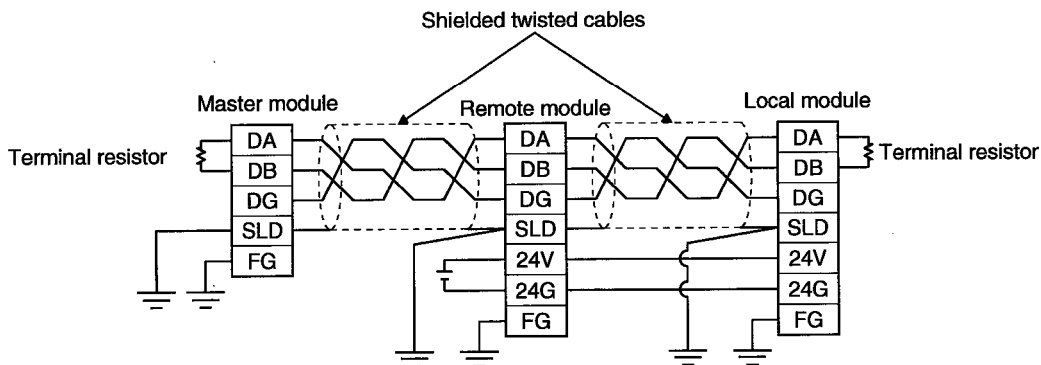
(a) The twisted cables connected to the modules on the master, local and remote stations in CC-Link must also be earthed.

Since each twisted cable is shielded, strip some of its sheath as shown below and earth the exposed shield portion in the widest possible area.



In addition, earth each cable in a position close to the outlet of the control box and within 30cm from the board terminal section.

- (b) For the CC-Link cables, always use the specified cables.
- (c) Do not use ferrite cores with the Link cables from the modules and boards.
- (d) Earth both the FG and SLD terminals of each module and board.



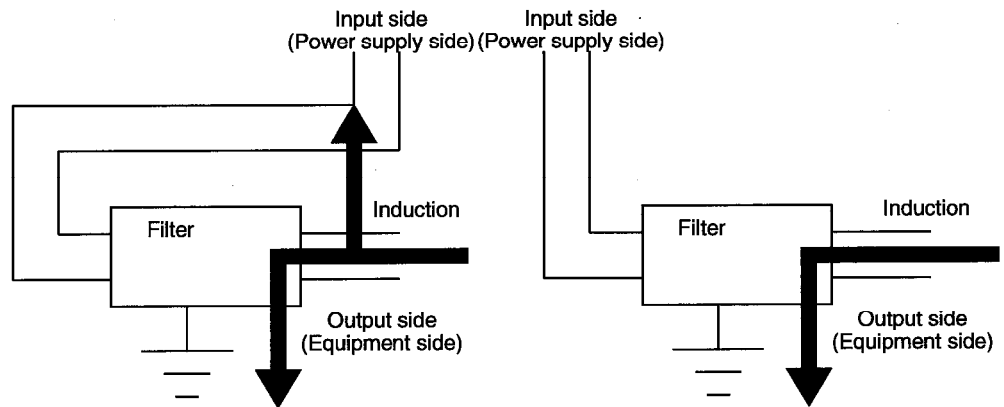
2.1.4 Noise filter (Power line filter)

A noise filter has an effect on conductive noise. With the exception of some models, it is not required to fit a noise filter to the power line, but fitting it can further suppress noise. (A noise filter is effective on noise reduction in the 10MHz or less bandwidth of conductive noise.) Use any of the following noise filters (double π type filters) or equivalent.

Type	FN343-3/01	FN660-6/06	ZHC2203-11
Maker	SCHAFFNER	SCHAFFNER	TDK
Rated current	3A	6A	3A
Rated voltage	250V		

The instructions below should be followed when fitting a noise filter.

- (1) Do not bundle the input and output side wirings of the noise filter. Doing so will induce output side noise into the input side wiring whose noise has been removed by the filter.



- (2) Earth the ground terminal of the noise filter to the control box in the shortest possible distance (about 10cm(3.94inch)).

3. SYSTEM CONFIGURATION

This chapter explains the system configuration for use of the A80BDE-J61BT13.

3.1 System Configuration of the A80BDE-J61BT13

The system configuration for use of the A80BDE-J61BT13 is shown below.

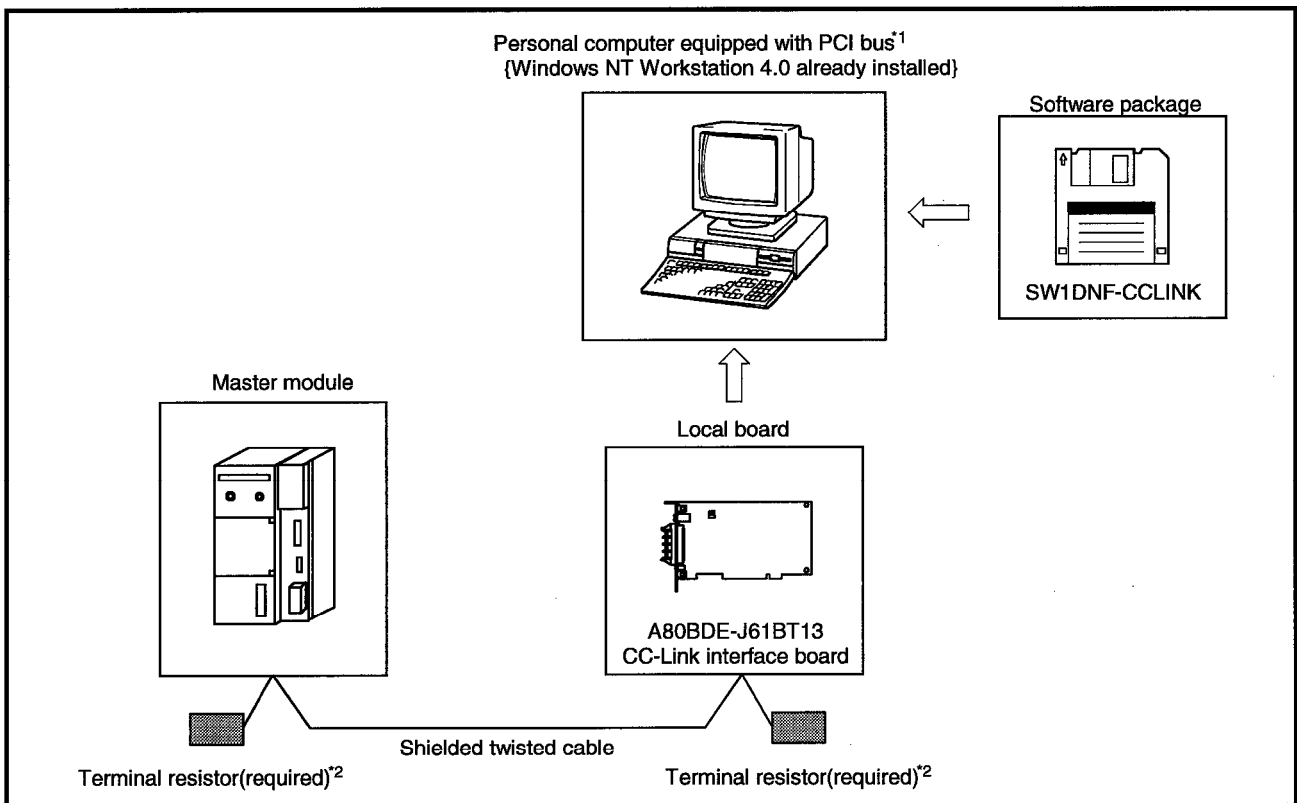
Up to 26 A80BDE-J61BT13's may be connected to one master station if the following conditions are satisfied.

(1) $\{(1 \times a) + (2 \times b) + (3 \times c) + (4 \times d)\} \leq 64$

- a: Number of modules occupying one station
- b: Number of modules occupying two stations
- c: Number of modules occupying three stations
- d: Number of modules occupying four stations

(2) $\{(16 \times A) + (54 \times B) + (88 \times C)\} \leq 2304$

- A: Number of remote I/O stations ≤ 64
- B: Number of remote device stations ≤ 42
- C: Number of local, standby master and intelligent device stations ≤ 26



*1 A multiprocessor-compatible personal computer cannot be used because of driver incompatibility.

*2 The terminal resistors are provided for the master module.

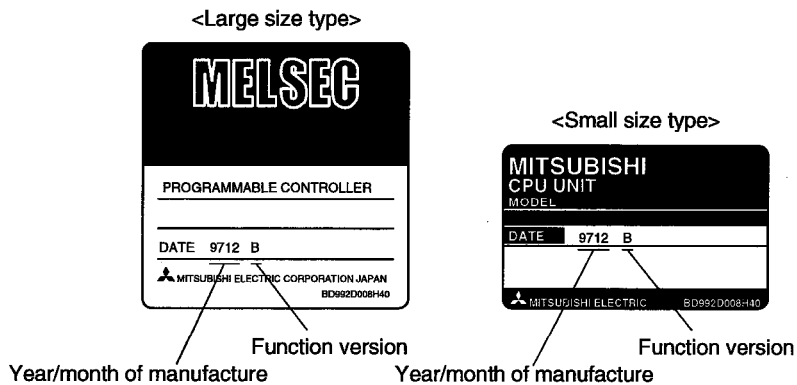
3.2 Applicable System

This section describes the CC-Link system's master module with which the A80BDE-J61BT13 may be used.

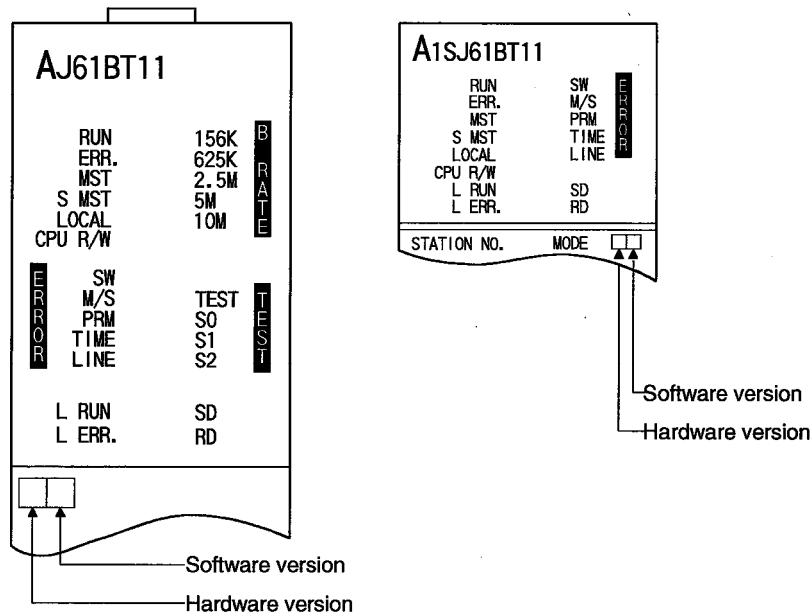
The A80BDE-J61BT13 may be used with the master module whose function version is B or later and whose software version is J or later.

Products before the above versions cannot be used.

The function version is indicated in the DATE column of the rating plate.



The software version is indicated on the module version seal at the module front.



3.3 Operating Environment

The A80BDE-J61BT13 should be operated in the following environment.

Item	Description
Personal computer	Personal computer which is equipped with Pentium 133MHz or more and 1 or more PCI bus slots and on which Windows NT Workstation 4.0 operates
PCI bus specifications	5VDC, 32-bit bus System clock: 33MHz
Operating system (OS)	Windows NT Workstation 4.0 (Japanese version)
Required memory capacity	32MB or more
Hard disk free capacity	20MB or more
Disk drive (required for driver installation)	3.5 inch (1.44MB) floppy disk drive

The development software (Visual Basic Ver5.0J, Visual C++ Ver5.0J) is required to perform user programming using functions.

CAUTION

A multiprocessor-compatible personal computer cannot be used because of driver incompatibility.

4. SPECIFICATIONS

This chapter explains the performance specifications and functions of the A80BDE-J61BT13.

4.1 General Specifications

(1) The following table lists the general specifications of the A80BDE-J61BT13.

Item	Specifications					
Operating ambient temperature	0 to 55°C					
Storage ambient temperature	-20 to 75°C					
Operating ambient humidity	10 to 90%RH, non-condensing					
Storage ambient humidity	10 to 90%RH, non-condensing					
Vibration resistance	Conforms to JIS B3501 and IEC 1131-2.		Frequency	Acceleration	Amplitude	Sweep Count
		In case of intermittent vibration	10 to 57Hz	—	0.075mm	10 times in each of X, Y and Z directions (for 80 minutes)
			57 to 150Hz	9.8m/s ² {1G}	—	
		In case of continuous vibration	10 to 57Hz	—	0.035mm	
57 to 150Hz	4.9m/s ² {0.5G}		—			
Shock resistance	Conforms to JIS B3501 and IEC 1131-2 (147m/s ² {15G}, 3 times in each of X, Y and Z directions).					
Operating atmosphere	No corrosive gas					
Operating altitude	2000m(6557.38ft) max.					
Installation site	Inside control box					
Overvoltage category*1	II or less					
Contamination level*2	2 or less					

*1: Indicates the element in the distribution system between the public electricity grid and the mechanical equipment inside the premises that the relevant device is assumed to be connected to.

Category II applies to devices such as those that draw their power supply from fixed installations.

The surge voltage withstand capability of devices with ratings up to 300V is 2,500V.

*2: This index gives a measure of the incidence of conductive materials in the environment in which the device is used.

A contamination level of 2 indicates an environment in which there is only contamination by non-conducting materials, but due to occasional condensation, conductivity may occur.

(2) After the A80BDE-J61BT13 has been loaded, its general specifications conform to those of the personal computer.

4.2 Performance Specifications

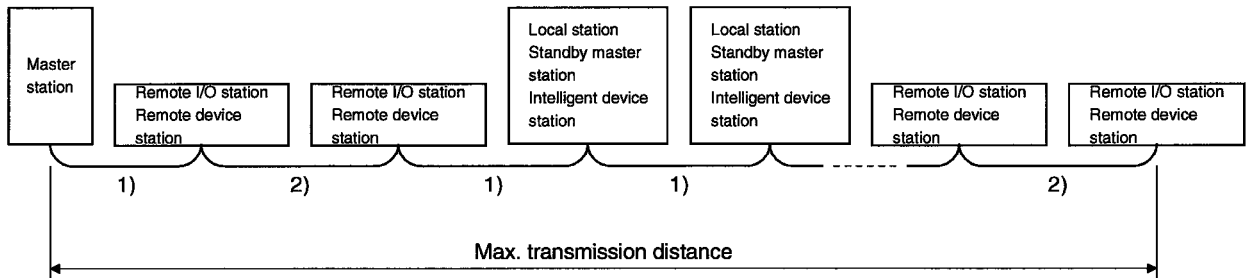
The following table lists the performance specifications of the A80BDE-J61BT13.

Item	Specifications
Transmission speed	May be selected from among 156kbps, 625kbps, 2.5Mbps, 5Mbps and 10Mbps.
Max. transmission distance	Depends on the transmission speed. (Refer to Section 4.3)
Number of stations occupied	1 or 4 stations (changed by setting)
Max. number of link points per system	Remote input, output (RX, RY): 2048 points Remote register (RWw): 256 points (master station → local station) Remote register (RWr): 256 points (local station → master station)
Number of link points per station	Remote input, output (RX, RY): 30 points Remote register (RWw): 4 points (master station → local station) Remote register (RWr): 4 points (local station → master station)
Communication system	Polling system
Synchronization system	Frame synchronization system
Coding system	NRZI system
Transmission path form	Bus (RS485)
Transmission format	HDLC compliant
Error control system	CRC($X^{10}+X^{12}+X^5+1$)
Connection cable	Shielded twisted cable (refer to Section 4.4 for recommended cable)
RAS functions	<ul style="list-style-type: none"> · Automatic return function · Slave station disconnection function · Fault detection by link special relays/registers · Data link status check · Online tests (hardware test, line test) · Unusual temperature detection · Watchdog timer error (WDT) detection
Number of loadable boards	Max. 4
Loaded slot	Personal computer PCI bus slot
Number of slots occupied	1 slot
Internal current consumption (5VDC)	0.4A
Weight	0.16kg(0.352lb)

4.3 Maximum Transmission Distance in the CC-Link System

The following is the max. transmission distance in the CC-Link system.

- 1) Independently of the transmission speed setting, "at least 2m(0.61ft)" of interstation cable length is required between the master/local or intelligent device station and its preceding or succeeding station.
- 2) Care should be taken at the transmission speeds of 5Mbps and 10Mbps, since the max. transmission distance depends on the interstation cable length between remote I/O station/remote device station and remote I/O station/remote device station at those transmission speeds.

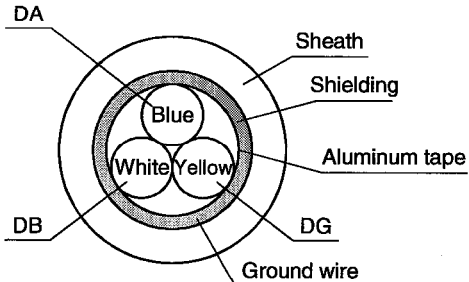


Transmission Speed	1)	2)	Max. Transmission Distance
156kbps	2m(0.61ft) or more	30cm(11.82inch) or more	1200m(366ft)
625kbps		30cm(11.82inch) or more	600m(183ft)
2.5Mbps		30cm(11.82inch) or more	200m(61ft)
5Mbps		60cm(23.64inch) or more	150m(45.75ft)
		30cm(11.82inch) to 59cm(23.25inch)	110m(33.55ft)
10Mbps		1m(0.31ft) or more	100m(30.5ft)
		60cm(23.64inch) to 99cm(39.01inch)	80m(24.4ft)
		30cm(11.82inch) to 59cm(23.25inch)	50m(15.25ft)

4.4 Specifications of the Twisted Cable

This section describes the recommended twisted cable and the specifications of the cable that may be used in CC-Link.

If the cable used is not the following recommended one, we cannot guarantee the performance of CC-Link.

Item	Specifications
Type	FANC-SB 0.5mm ² ×3
Cable type	Shielded twisted cable
Conductor sectional area	0.5mm ²
Conductor resistance (20°C)	37.8Ω/km or less
Insulation resistance	10000Ω·km or more
Withstanding voltage	500VDC, 1 minute
Capacitance (1kHz)	60nF/km or less
Characteristic impedance (1MHz)	100±15Ω
Section	
Outline dimension	7mm
Approx. weight	65kg/km(0.47lb/ft)

4.5 Function List

The following table lists the functions of the A80BDE-J61BT13.

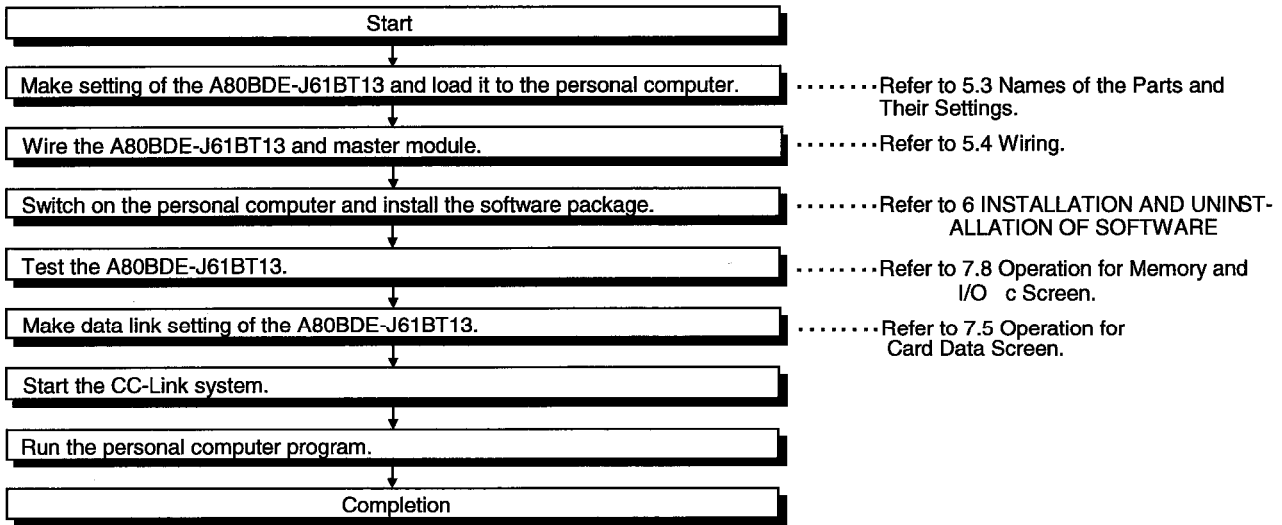
Name	Description
Data communication functions	(1) Using the cyclic transmission function, communication can be made via CC-Link as to the remote inputs (RX), remote outputs (RY) and remote registers (RWw, RWr). <ul style="list-style-type: none">· Number of link points per stationRemote inputs/outputs (RX, RY): 30 pointsRemote registers (RWw): 4 pointsRemote register (RWr): 4 points (2) Using the transient transmission function, communication can be made with the master and intelligent device stations.
Test functions	In the test mode, tests can be conducted for hardware checks.
RAS functions	Automatic return function, slave station disconnection function, data link status check, offline test
Self-diagnostic functions	<ul style="list-style-type: none">· Error code is shown to give an error message.· Faults detected are stored in special relays and special registers.

5. PRE-OPERATION PROCEDURE AND SETTINGS

This chapter explains the pre-operation procedure for the A80BDE-J61BT13 and the part names and settings, wiring method and hardware tests of the A80BDE-J61BT13.

5.1 Pre-Operation Procedure

This section describes the pre-operation procedure for the A80BDE-J61BT13.



CAUTION


The master module side must be set to operate the CC-Link system.
 Set the master module as required.
 For the master module setting, refer to the master module user's manual.


5.2 Installation

This section provides the handling instructions and installation environment of the A80BDE-J61BT13.

5.2.1 Handling instructions

The handling instructions of the A80BDE-J61BT13 are as follows.

 WARNING	<ul style="list-style-type: none"> ● Do not touch the terminals and connectors while power is on. Doing so may cause an electric shock or can cause a malfunction.
--	---

 CAUTION	<ul style="list-style-type: none"> ● Securely fix the A80BDE-J61BT13 with mounting screws and securely tighten the mounting screws within the specified torque range. Undertightening can cause a malfunction. Overtightening can cause a malfunction due to the damage of the screws or module. ● Do not touch the conductive areas of the A80BDE-J61BT13 directly. Doing so can cause the A80BDE-J61BT13 to malfunction or fail. ● Tighten the terminal screws within the specified torque range. Undertightening can cause a short circuit or malfunction. Overtightening can cause a short circuit or malfunction due to the damage of the screws or A80BDE-J61BT13. ● Handle the A80BDE-J61BT13 in a place where static electricity does not exist. Not doing so can cause a failure or malfunction. ● Ensure that foreign matters such as chips and wire off-cuts do not enter the personal computer. They can cause a fire, failure or malfunction. ● Do not disassemble or modify the A80BDE-J61BT13. Doing so can cause a failure, malfunction, injury or fire. ● Before mounting or dismounting the A80BDE-J61BT13 to or from a personal computer, always switch power off externally in all phases. Not doing so can cause the A80BDE-J61BT13 and personal computer to fail or malfunction. ● When disposing of the product, handle it as industrial waste. ● Do not drop the A80BDE-J61BT13 or subject it to strong impact. Doing so can cause a failure or malfunction.
--	---

(1) Tighten the terminal and fixing screws of the A80BDE-J61BT13 in the following range.

Screw Location	Tightening Torque Range
Terminal block terminal screw (M3.5 screw)	59 to 88N·cm(6 to 9kgf·cm)
Terminal block mounting screw (M3.5 screw)	59 to 88N·cm(6 to 9kgf·cm)

5.2.2 Installation environment

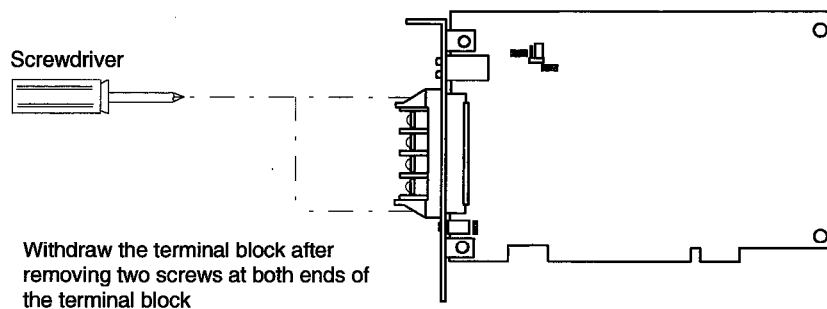
For the installation of the personal computer loaded with the A80BDE-J61BT13, refer to the instruction manual attached to the personal computer.

**CAUTION**

- Be sure to earth the personal computer to the protective earth conductor. Not doing so may cause a malfunction.
If a malfunction occurs after earthing the personal computer, earth both the FG terminal of the personal computer and the SLD terminal of the A80BDE-J61BT13.

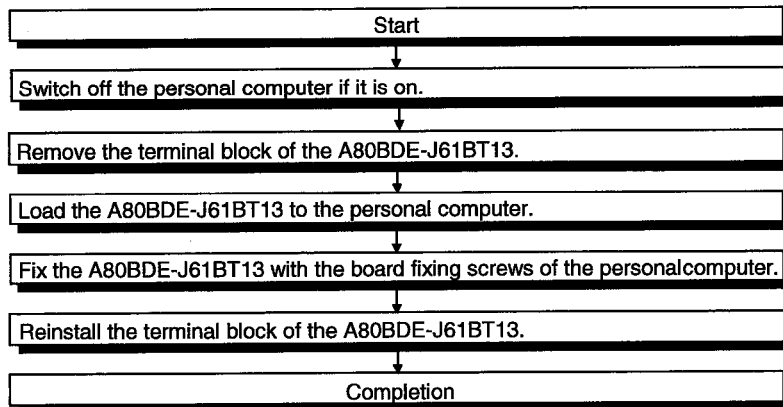
5.2.3 Terminal block removal

Using a two-piece terminal block, the A80BDE-J61BT13 can be changed without removing the signal lines to the terminal block.
Remove the terminal block as shown below.



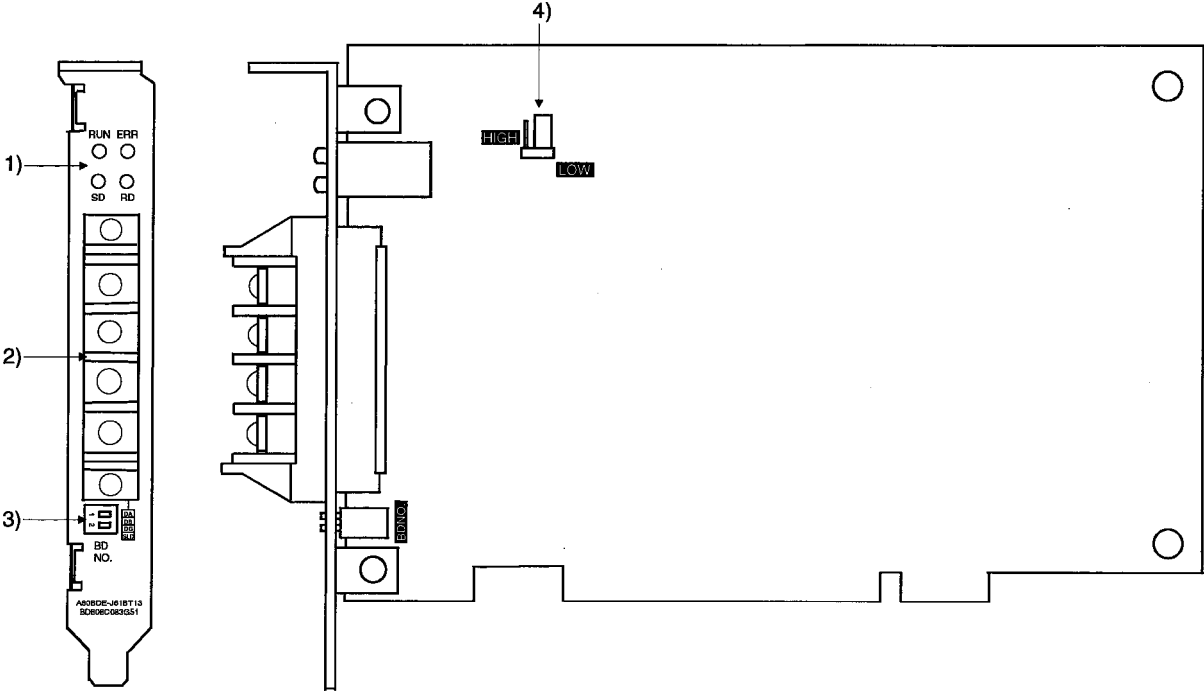
5.2.4 Procedure of loading the A80BDE-J61BT13 to the personal computer



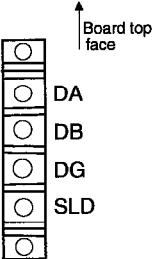

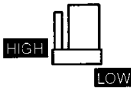
Load the A80BDE-J61BT13 to the personal computer in the following procedure.



5.3 Names of the Parts and Their Settings

This section explains the names of the A80BDE-J61BT13 parts and their settings.



Number	Name	Description				
		LED Name	Description	ON	OFF	
1)	Operation indicator LEDs RUN ERR  SD RD 	RUN	Lit to indicate that the A80BDE-J61BT13 is normal and extinguished to indicate a WDT error	A80BDE-J61BT13 normal	· WDT error · Personal computer power OFF	
		ERR.	Lit to indicate a network communication status error	Data link communication abnormal	Data link communication normal	
		SD	Flickers to indicate data transmission in data link	Flickers during data link transmission		
		RD	Flickers to indicate data receive in data link	Flickers during data link receive		
2)	Data link terminal block 	Used to connect the twisted cable for data link. (2-piece terminal block)				
3)	Channel No. setting switches  BD NO.	Used to set the channel number of the A80BDE-J61BT13.				
		Board No.	Channel No.	Switches		Remarks
				1	2	
		0	81	OFF	OFF	Default setting
		1	82	ON	OFF	
		2	83	OFF	ON	
3	84	ON	ON			
When loading two or more A80BDE-J61BT13's, set different board numbers.						
4)	Unusual temperature detection setting jumper 	Used to set the temperature at which unusual temperature is detected.				
		Setting	Description	Remarks		
		HIGH	Detection temperature is set to 55°C.			
		LOW	Detection temperature is set to 45°C.	Default setting		

5.4 Wiring

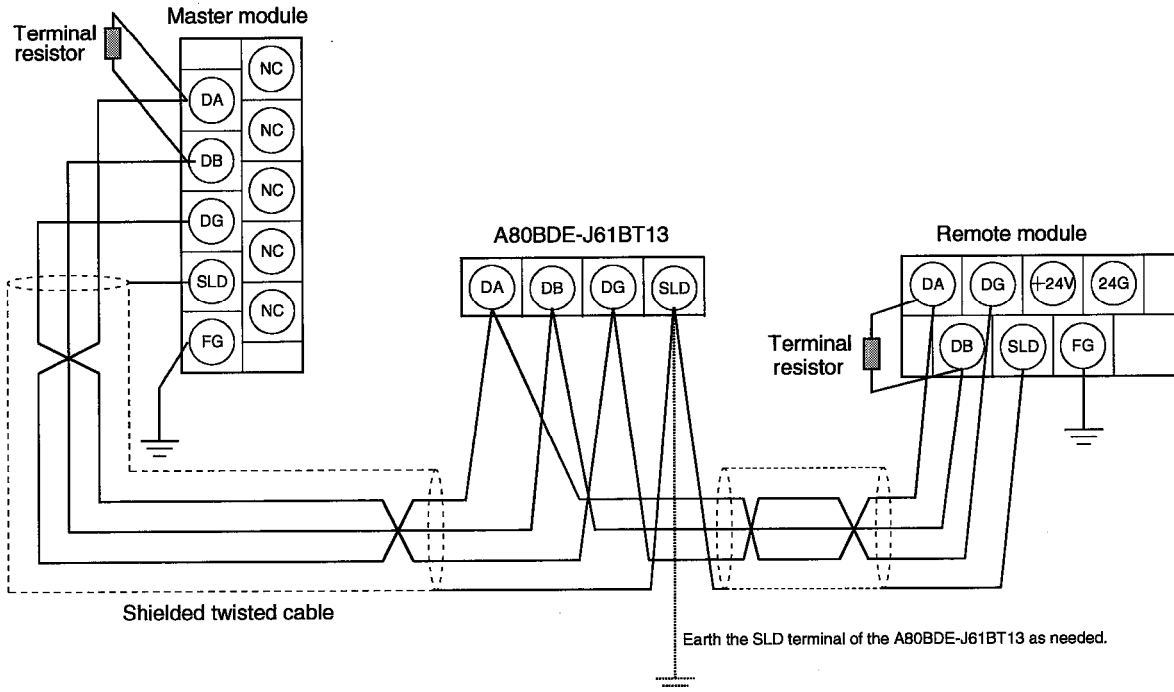
5.4.1 Twisted cable handling instructions

If twisted cables are handled roughly, they may be damaged. Therefore,

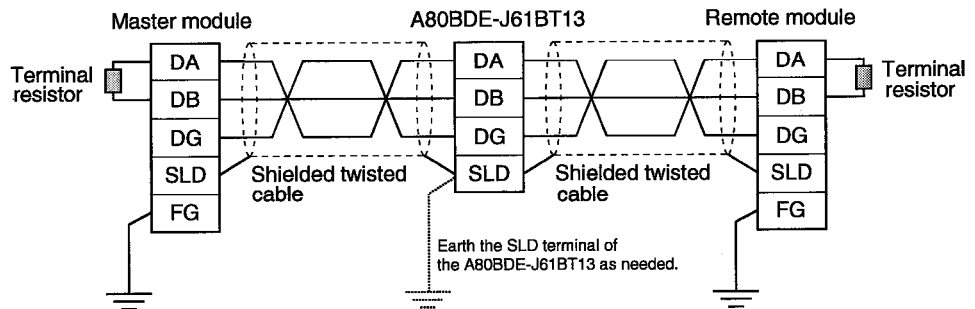
- (1) Do not compress the cable with a sharp edge.
- (2) Do not twist the cable roughly.
- (3) Do not pull the cable roughly (more than permissible tension).
- (4) Do not stamp on the cable.
- (5) Do not put anything on the cable.
- (6) Do not scratch the cable sheath.

5.4.2 Connection of cables with the modules

The following diagram shows how to wire twisted cables between the master module, remote module and interface board.



[Sketch]



CAUTION

- Be sure to earth the personal computer to the protective earth conductor. Not doing so may cause a malfunction. If a malfunction occurs after earthing the personal computer, earth the FG terminal of the personal computer and the SLD terminal of the A80BDE-J61BT13.

POINT

The "terminal resistors" supplied with the master module must be connected to the modules at both ends of the data link. (Connect them across DA-DB)

6. INSTALLATION AND UNINSTALLATION OF THE SOFTWARE PACKAGE

This chapter describes how to install and uninstall the software package.

6.1 Instructions for Installing the Software Package

When installing the software package, the following instructions should be followed.

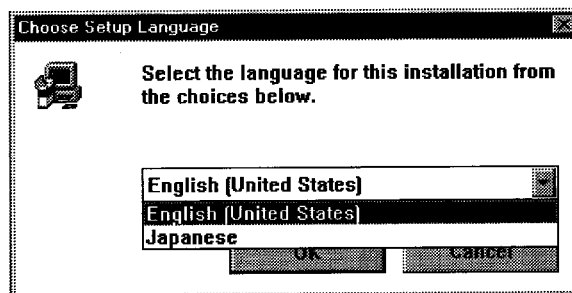
- (1) The following points should be noted when using the A80BDE-J61BT13 on the personal computer which uses the MELSECNET/10 interface board.
 - (a) The communication DLL included in the software package supplied to the MELSECNET/10 interface board cannot be used to make A80BDE-J61BT13 communication. Always install and use the software package (SW1DNF-CCLINK) supplied to the A80BDE-J61BT13.
(The communication DLL of SW1DNF-CCLINK also allows communications of the MELSECNET/10 interface boards.)
 - (b) The following job is required for the application program already developed in the software package supplied to the MELSECNET/10 interface board.
 - 1) The EXE file generated using MDFUNC32.LIB should be re-linked using MDFUNC32.LIB supplied to SW1DNF-CCLINK.
 - 2) When the mdRandR or mdRandW function is used, a data storage area of 1 word (2 bytes) is required if the bit device data specified is 1 byte (8 points) or less.
If the data storage area size used is less than 2 bytes, make correction to make it 2 bytes or more.
- (2) Installing the SW0IVNT-CSKP packaging disables CC-Link communication. Also, if the SW1DNF-CCLINK is installed in the personal computer where the SW0IVNT-CSKP has already been installed, any communication for other than the CC-Link and MELSECNET/10 interface boards is disabled.

6.2 Installation of the Software Package

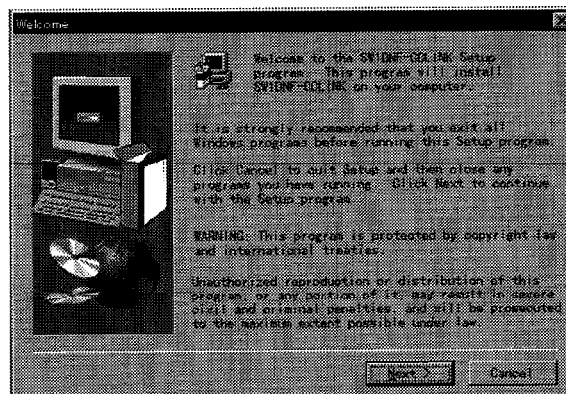
Install the software package in the following procedure.

POINT
<ul style="list-style-type: none">• Log on the system as a user having the administrator attributes.• Install the software package after removing all applications included in the startup and restarting Windows NT.

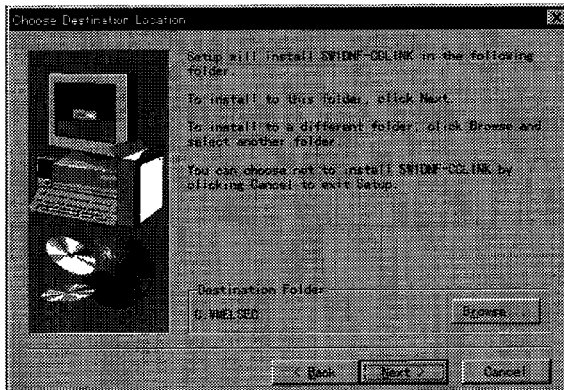
- 1) After turning on the personal computer, start Windows NT.
- 2) Insert the first floppy disk into the FDD.
- 3) Execute "SETUP.EXE".
- 4) The following screen will soon appear. Choose English(United States).



- 5) The following screen will soon appear. Click the [Next>] button.

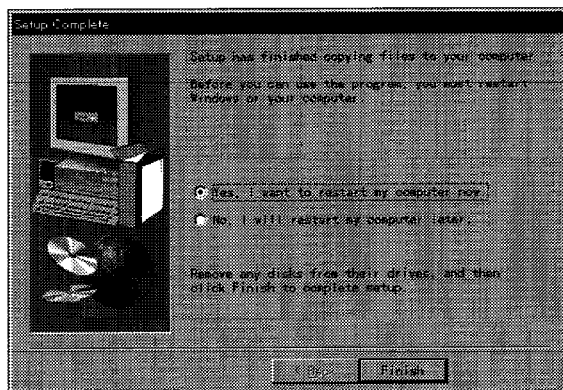


- 6) After setting the component to be installed and the installation destination directory, click the [Next>] button.



[Browse]button ... Used to change the installation destination directory.

- 7) The installation instructions appear. After confirming the instructions, click the [Next>] button.
- 8) To use the software package, Windows NT must be restarted. After setting the processing with the option button, click the [Finish] button.



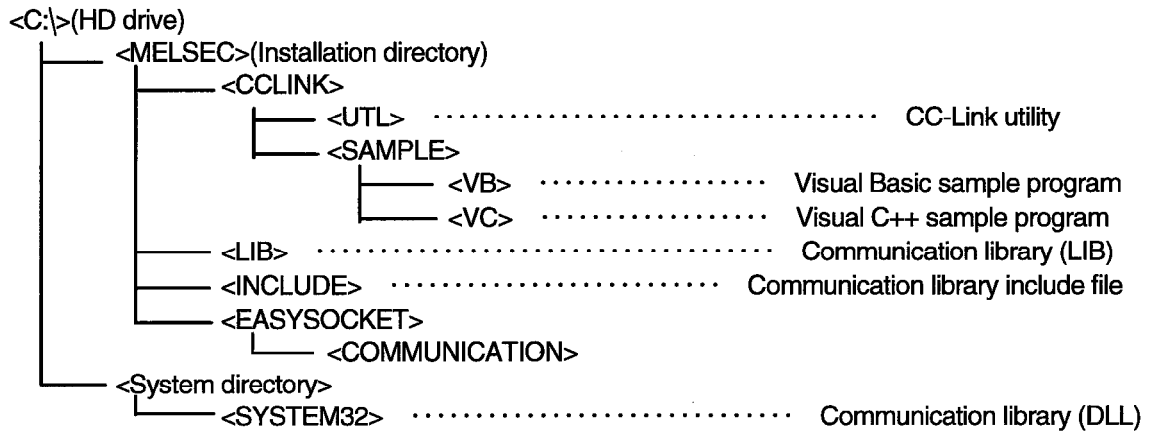
POINT

If you failed during installation, uninstall, then reinstall the software package.

6.3 Directory Make-up

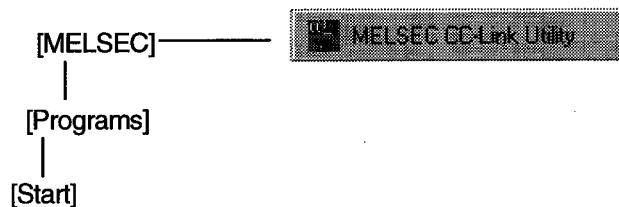
The installation operation creates the directories of the following make-up in the hard disk.

When the software package was installed by default, it is installed under "C:\MELSEC\".



6.4 Registered Icons

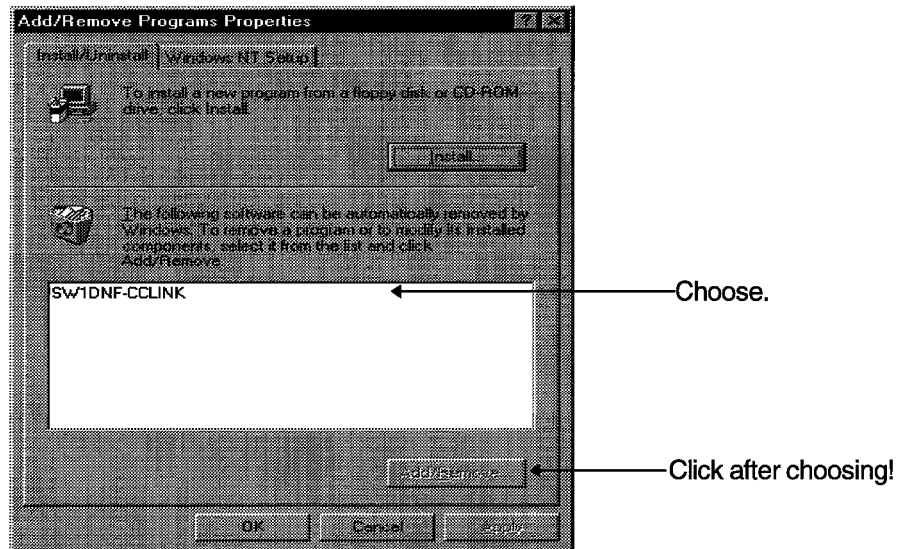
When the software package is installed, the following icons are registered.



6.5 Uninstallation of the Software Package

Files related to the software package are deleted from the hard disk.

Choose [Control Panel]-[Add/Remove Programs] to display the following dialog box. Choose SWnDNF-CCLINK, click the [Add/Remove] button, and follow the instructions.



7. CC-Link UTILITY

This chapter explains how to operate and set the CC-Link utility.

7.1 Function List

The following table lists the functions of the CC-Link utility.

Function	Description	Refer To
Card List	Used to list the hardware data of the A80BDE-J61BT13 loaded.	Section 7.4
Card Data	Used to show and set various data on the A80BDE-J61BT13 loaded.	Section 7.5
Line Monitor (Host Station)	Used to show the line status of the host station.	Section 7.6
Line Monitor (Other Stations)	Used to show the line status of the other stations.	Section 7.7
Memory and I/O Diagnostic	Used to diagnose the 2-port memory and I/O ports used by the board.	Section 7.8
Test	Used to test the A80BDE-J61BT13 loaded.	Section 7.9
Version Data	Used to show the version of the CC-Link utility.	Section 7.10

7.2 Starting Method

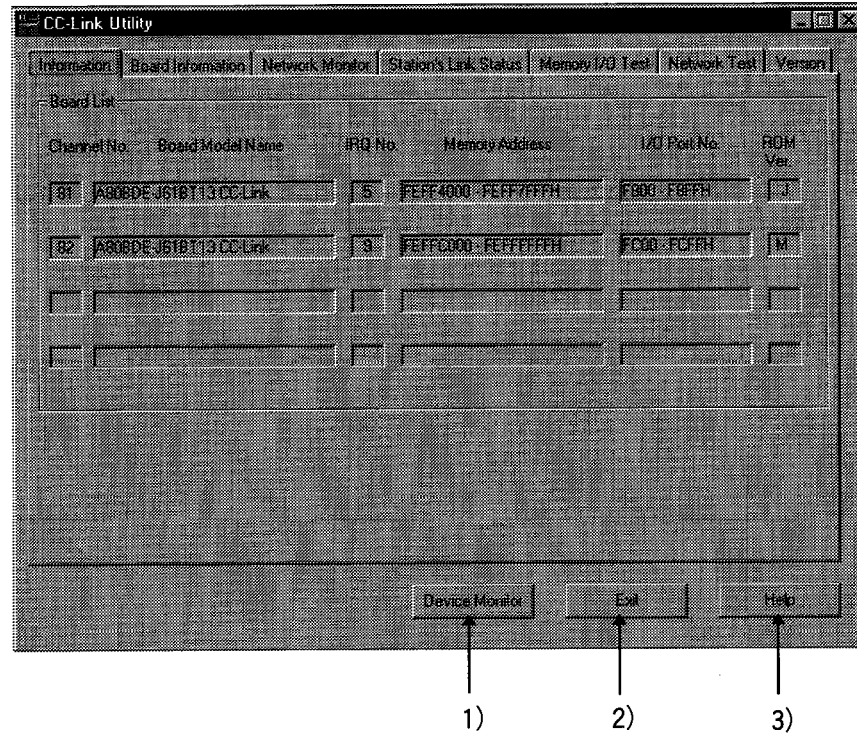
Start the CC-Link utility in the following method.

Click [Start]-[Programs]-[MELSEC]-[CC-Link Utility].



7.3 Explanation of the Buttons

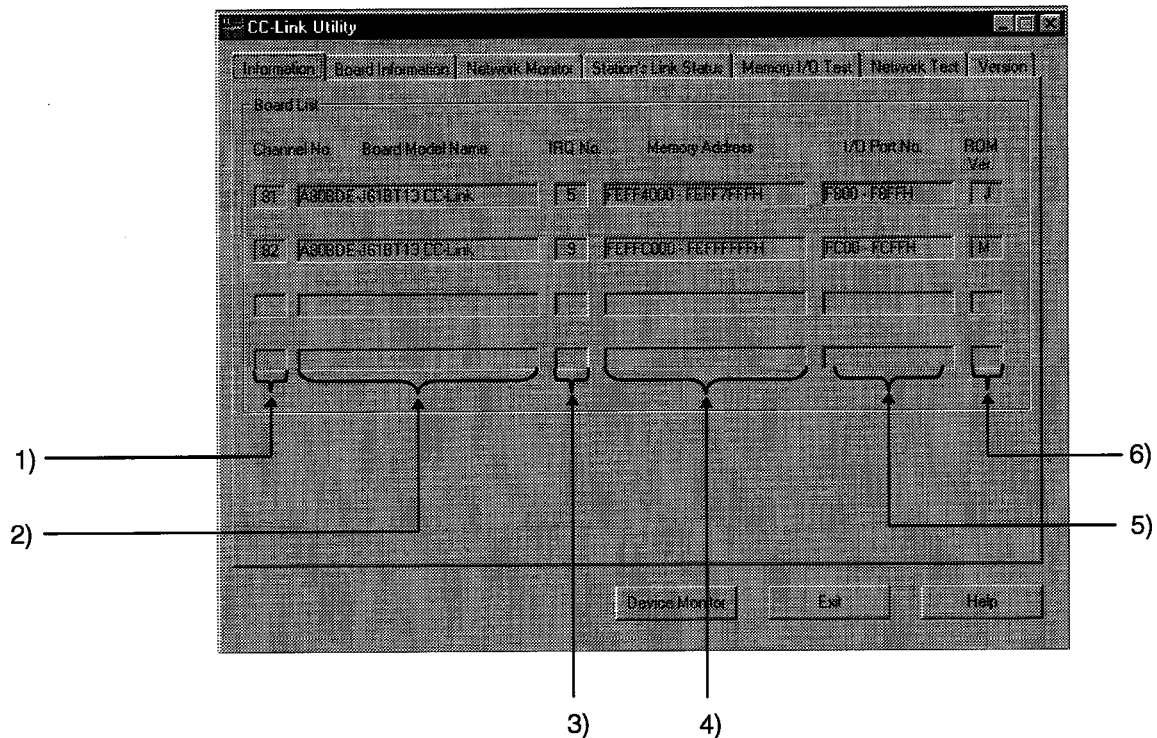
The buttons are defined as follows.



- 1) [Device Monitor] button
Used to start the device monitor utility.
- 2) [Exit] button
Used to finish the CC-Link utility.
- 3) [Help] button
Used to display CC-Link utility Help.

7.4 Card List

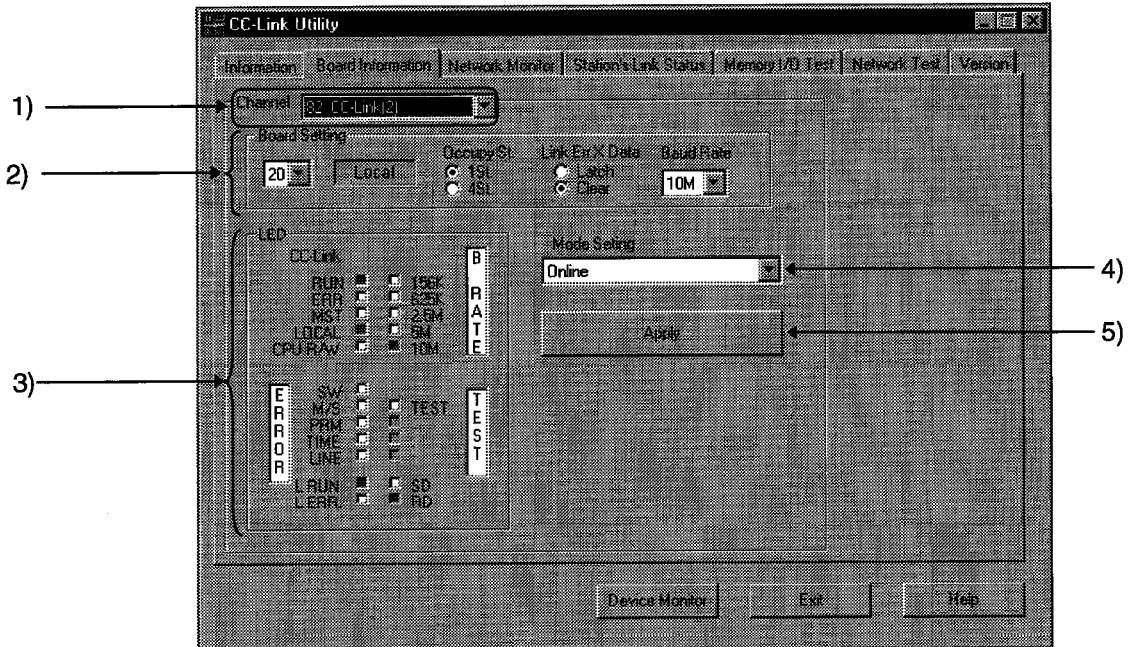
Used to display the information on the hardware set to the A80BDE-J61BT13.



- 1) Channel No.
Displays the channel No.
- 2) Board Model Name
Displays the type of the board connected.
- 3) IRQ No.
Shows the IRQ number used by the A80BDE-J61BT13.
- 4) Memory Address
Shows the range of the two-port memory occupied by the A80BDE-J61BT13.
- 5) I/O Port No.
Shows the range of the I/O ports occupied by the A80BDE-J61BT13.
- 6) ROM Ver.
Shows the version of the ROM in the A80BDE-J61BT13.

7.5 Operation for Card Data Screen

Used to display and set various data on the A80BDE-J61BT13 loaded.



POINT

When changing the screen, set the mode to "online" or "offline".

1) Channel
Shows the channel used.

2) Board Setting
Set the information on the host station.

Item	Description
Station number	Station 1 to 64
Number of stations occupied	1 station/4 stations
Data entered at fault	Held/cleared
Transmission speed	156k/625k/2.5M/5M/10Mbps

3) LED status

The LEDs indicate the operating information on the A80BDE-J61BT13.

LED Name	LED Lit to Indicate
RUN	CC-Link system normal
ERR.	Communication abnormal
MST	Master station
LOCAL	Local station
CPU R/W	Communicating
SW	Switch setting error
M/S	Repeated master station error
PRM	Parameter error
TIME	Time-out
LINE	Open cable error
L RUN	Data link in progress
L ERR.	Communication error
156k	LED corresponding to the preset baudrate is lit.
625k	
2.5M	
5M	
10M	
TEST	Offline test in progress
SD	Data being transmitted
RD	Data being received

4) Mode setting

Set the mode of the A80BDE-J61BT13. Shows the current mode.

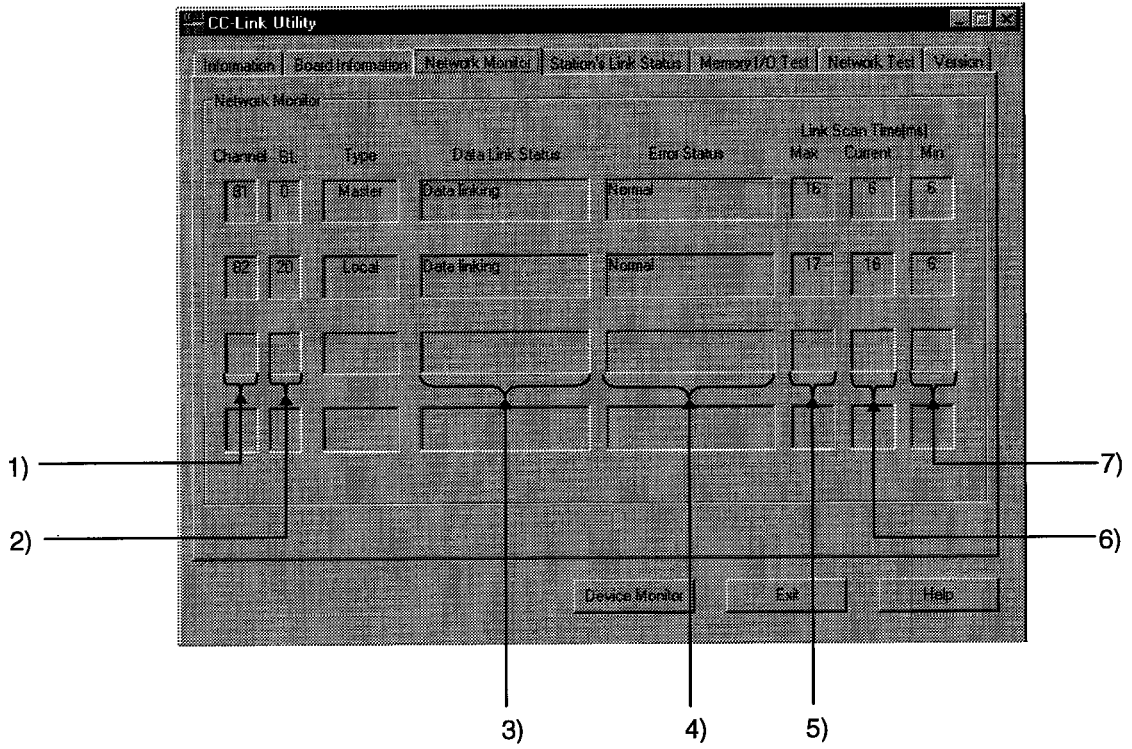
Mode	Description
online (automatic return yes)	Used for ordinary communication.
offline	The state in which the board is not connected to the network.
H/W test mode	Hardware operation check mode tests the hardware with the A80BDE-J61BT13. [Procedure] Connect a terminal resistor across terminals DA-DB. Set to the "H/W test mode" and press the [Apply] button.

5) Update button

Used to update the setting to the A80BDE-J61BT13 on the channel chosen at 1).

7.6 Operation for Line Monitor (Host Station) Screen

Used to monitor the line status of the host station.



1) Channel
Shows the channel No.

2) St.
Displays the station number of the host station.

3) Data Link Status

Monitors and shows the starting status of the data link.

Status	Description
Initial	Initial state
No Parameter	Parameters not received.
Data linking	Data link is being executed.
Data link stopping	Data link is at a stop.
Disconnecting(Not Poking)	Disconnection state with no inquiry from the master station.
Disconnecting(Line Error)	Disconnection state due to line fault.
Disconnecting	Disconnection state due to other factor.
Line Testing	Line test is being conducted.
Parameter Set Testing	Parameter setting test is being made from the master station.
Automatic Returning	Return processing is being performed automatically.
Resetting	Board reset processing is being performed.

4) Error Status

Monitors and shows the error status.

Indication	Description
Normal	Normal state.
Transmission Error	Transmission path fault was detected.
Parameter Error	Parameter error was detected.
CRC Error	CRC error was detected.
Time Out Error	Time-out error was detected.
Abort Error	CC-Link board (gate array) fault was detected.
Setting Error	Setting error was detected.
Other Error	Other fault was detected.

5) Link Scan Time (Max)

Displays the maximum value of link scan time. (1ms increments)

6) Link Scan Time (Current)

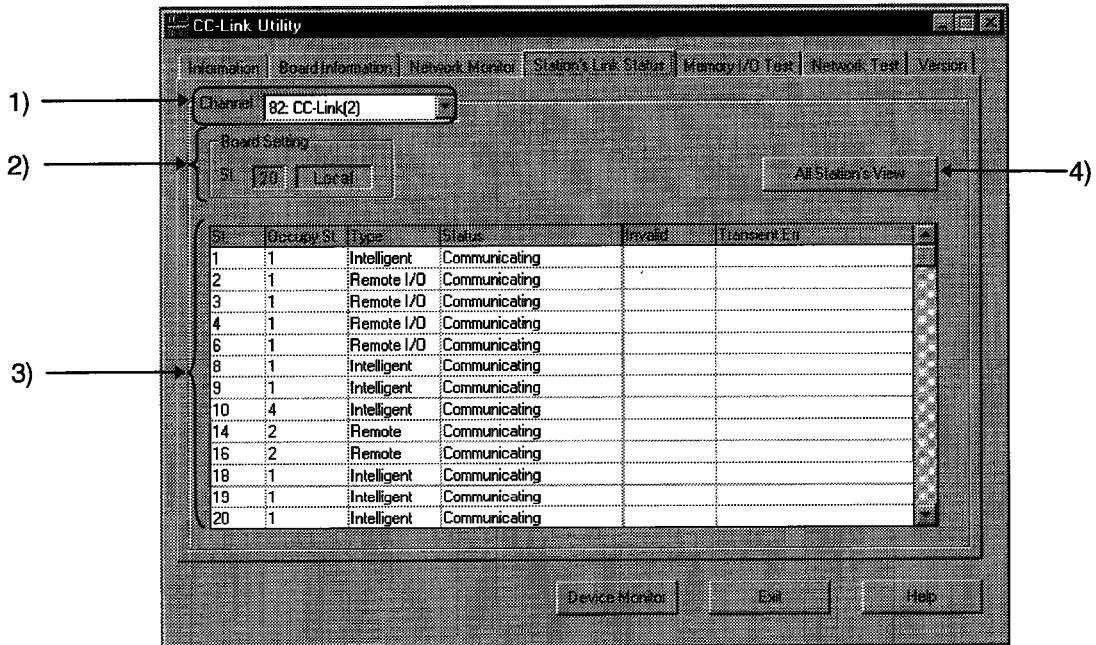
Displays the current value of link scan time. (1ms increments)

7) Link Scan Time (Min)

Displays the minimum value of link scan time. (1ms increments)

7.7 Operation for Line Monitor (Other Stations) Screen

Shows the line statuses of the other stations.



POINT
 Line monitor (other stations) is carried out only when the host station in the "Communicating" state.

- 1) Channel
Set the channel used.
- 2) Board Setting
Shows the data of the host station.
- 3) Other Station Status
Shows the states of the other stations.
 St. : Displays the set station number.
 Occupy St. : Displays the number of stations occupied.
 Type : Displays the type of the set station.

Indication	Description
Remote Device	Remote device station
Remote I/O	Remote I/O station
Intelligent	Intelligent station, local station

Status : Shows the status of the other station.

Indication	Description
Communicating	Normal
Communication interrupted	Communication interrupted
Link error	Link error occurred
WDT error	Watchdog timer error occurred
Fuse brake off	There is a fuse-blown station
Repeated station	Same station number was repeated
Moved switch	Switch was moved

Invalid : Shows the stations set to make error invalid.

Indication	Description
Invalid	Yes
(Free)	No

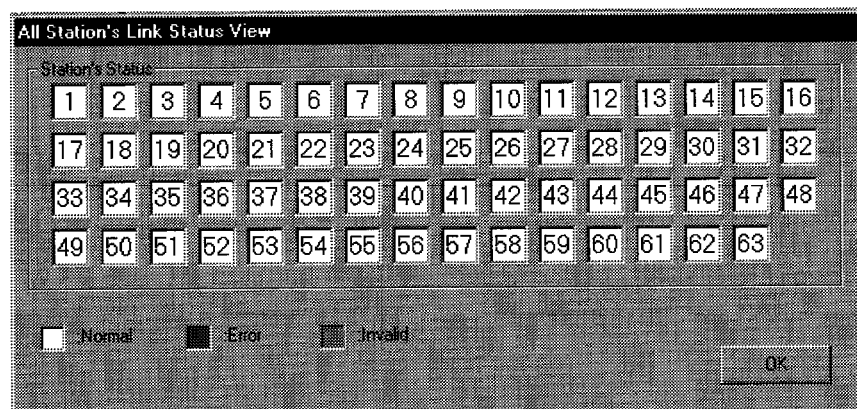
Transient Err : Displays the status of transient error.

Indication	Description
Transient Err	With error
(Free)	Without error

4) All Station's View

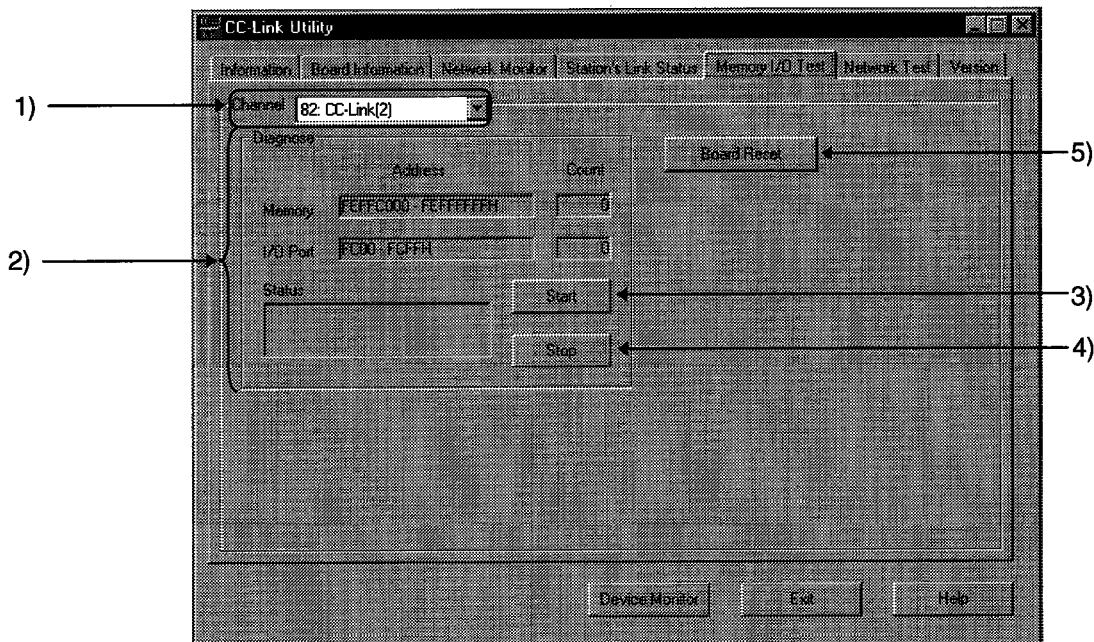
Lists the communication statuses of the other stations.

<Other station communication status list>



7.8 Operation for Memory and I/O Diagnostic Screen

Diagnoses the 2-port memory and I/O ports used by the A80BDE-J61BT13.

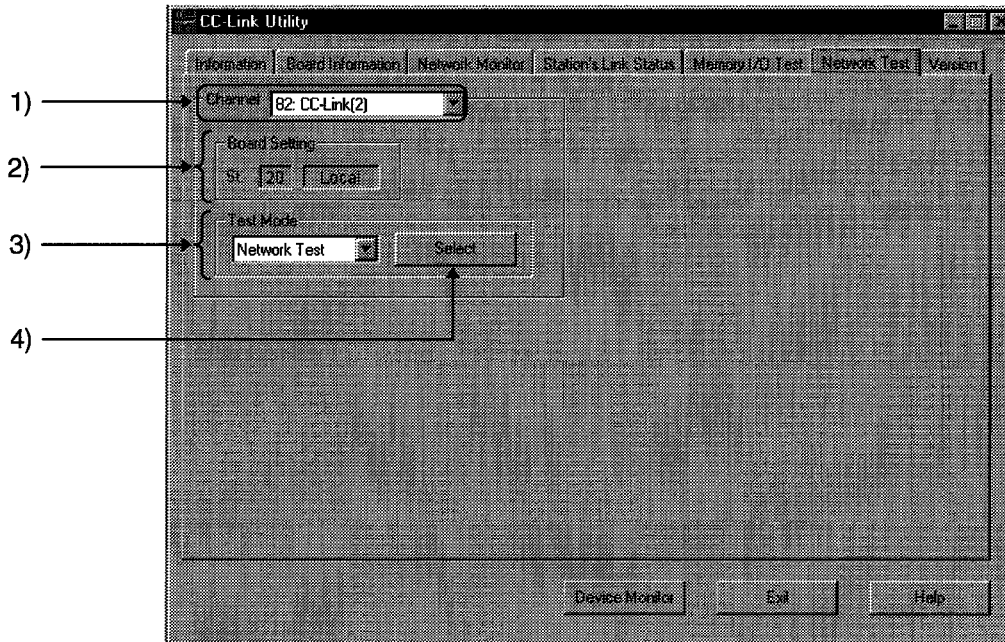
**POINT**

- Before starting the test, disconnect the external cable.
- Before changing the screen, click the "STOP" button to stop the test

- 1) Channel
Set the channel used.
- 2) Diagnose
Shows the addresses and count of diagnosis.
- 3) [Start] button
Used to start memory and I/O diagnosis.
- 4) [Stop] button
Used to stop memory and I/O diagnosis.
- 5) [Board reset] button
Used to reset the A80BDE-J61BT13.

7.9 Operation for Test Screen

Used to test the A80BDE-J61BT13 loaded.

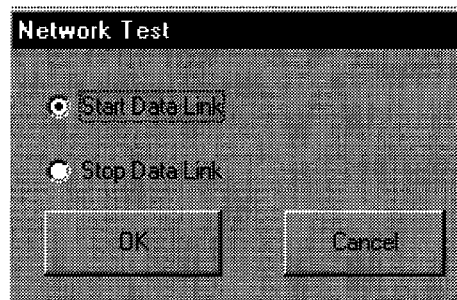


- 1) Channel
Set the channel used.
- 2) Board Setting
Shows the data of the host station.
- 3) Test Mode
Set the item of the test.

Test	Description
Network Test	Makes the link start and stop test.

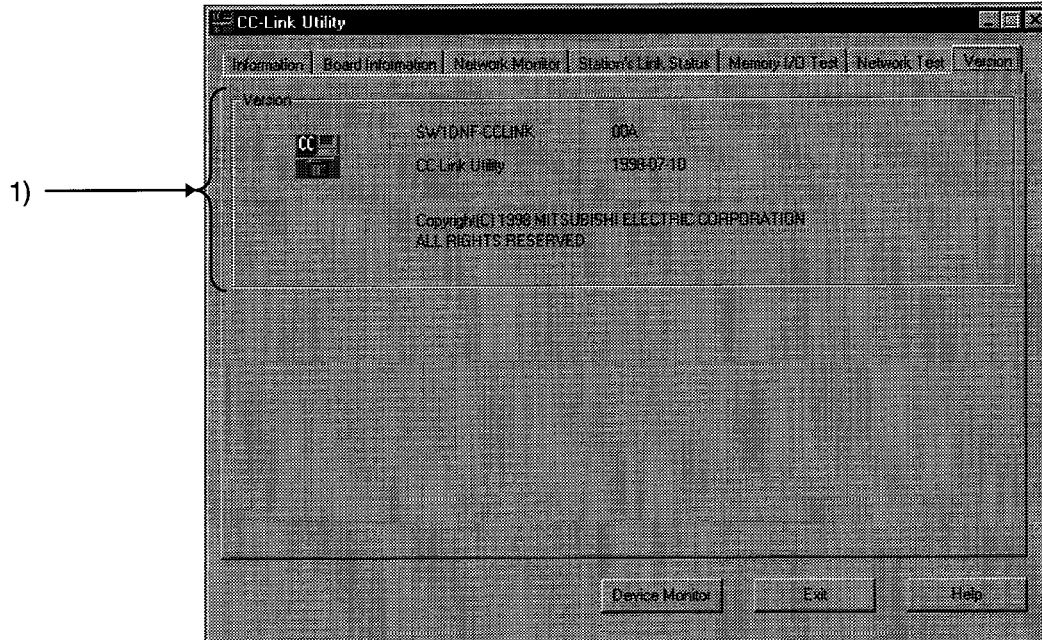
- 4) [Select]button
Used to start the test.

<Network test>



7.10 Version Data

Shows the version data of the CC-Link utility.



1) Version data

Shows the version of the software package and the version of the utility.

8. DEVICE MONITOR UTILITY

This chapter explains how to operate and set the device monitor utility.

8.1 Function List

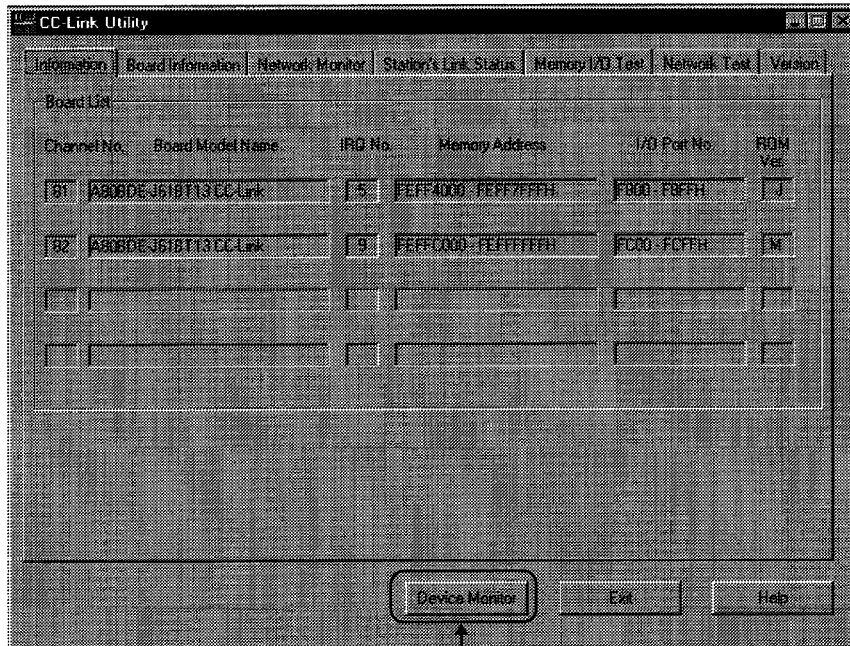
The following table lists the functions of the device monitor utility.

Item		Description	Refer To
Menu	Batch monitor	Used to display only one specified device on the screen.	Section 8.3.1
	16-point registration monitor	Used to monitor up to five bit devices and one word device at the same time.	Section 8.3.2
	Finish	Used to finish the utility.	Section 8.3.3
Setting	Network setting	Used to set the network used for device monitor.	Section 8.4.1
	Device setting	Used to set the device to be monitored.	Section 8.4.2
Device Write	Changing the data	Used to change the value of the specified word device.	Section 8.5.1
	Consecutive data change	Used to change the values of the specified word device consecutively.	Section 8.5.2
	Setting the bit device	Used to turn on the bit of the specified bit device.	Section 8.5.3
	Resetting the bit device	Used to turn off the bit of the specified bit device.	Section 8.5.4
Changing the Display	—	Used to change the display form of device monitor.	Section 8.6
Help	Help	Used to display Help.	Section 8.7.1
	Version data	Used to show the version data of the device monitor utility.	Section 8.7.2
Other Operation	—	Double-click the device number to change the device value.	Section 8.8

8.2 Starting Method

Start the device monitor utility in the following method.

Press the [Device Monitor] button on the [Information] screen of the CC-Link utility.



Click!

8.3 Menu

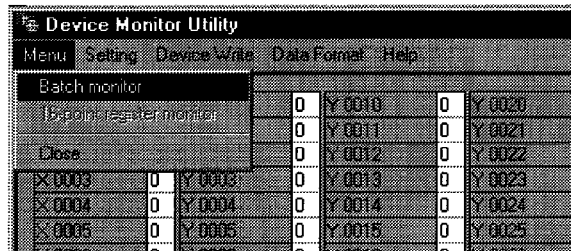
8.3.1 Batch monitor

Monitors only one specified device.

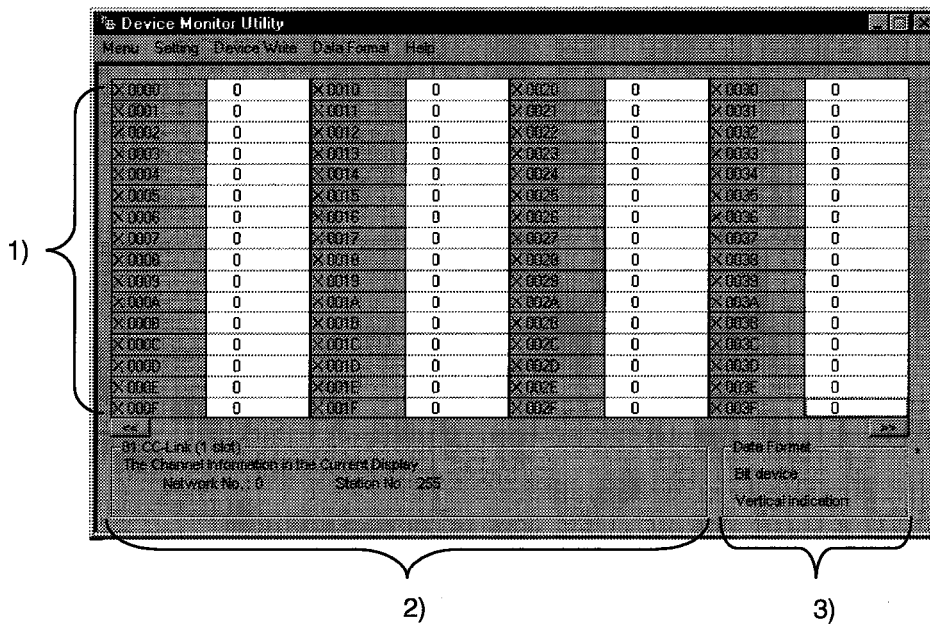
(1) Selected menu

Choose [Menu]-[Batch monitor] on the menu bar.

(May only be chosen when 16-point registration monitor is executed)



(2) Display screen



1) Device data

Shows the current device states. When changing the display form, refer to Section 8.6.

2) Network status

Displays the status of the network currently set. When setting the network, refer to Section 8.4.1.

3) Display method

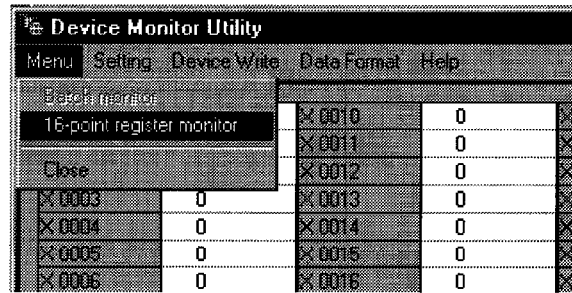
Shows the displayed device type (word device, bit device) and display form. When changing the device type, refer to Section 8.4.2. When changing the display form, refer to Section 8.6.

8.3.2 16-point registration monitor

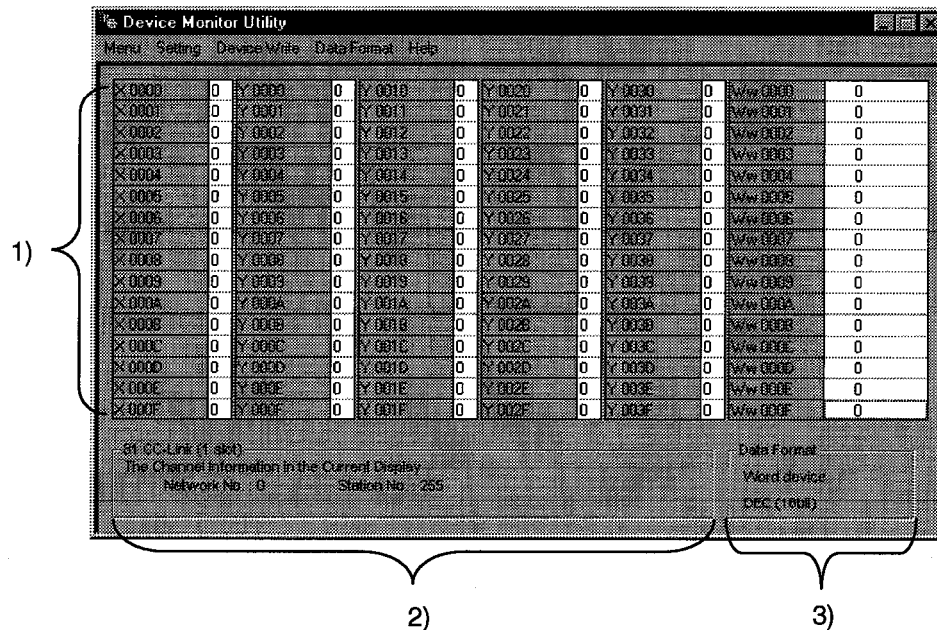
Monitors up to five bit devices and one word device at the same time.

(1) Selected menu

Choose [Menu]-[16-point register monitor] on the menu bar.



(2) Display screen



1) Device data

Shows the current device states. When changing the display form, refer to Section 8.6.

2) Network status

Displays the status of the network currently set. When setting the network, refer to Section 8.4.1.

3) Display method

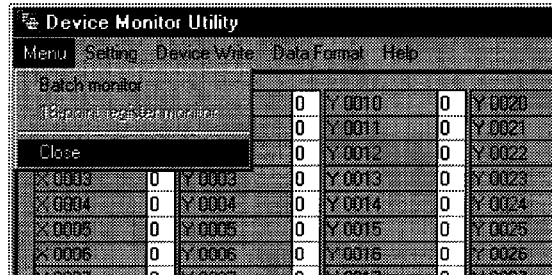
Shows the displayed device type (word device, bit device) and display form. When changing the device type, refer to Section 8.4.2. When changing the display form, refer to Section 8.6.

8.3.3 Finish

Finishes the device monitor utility.

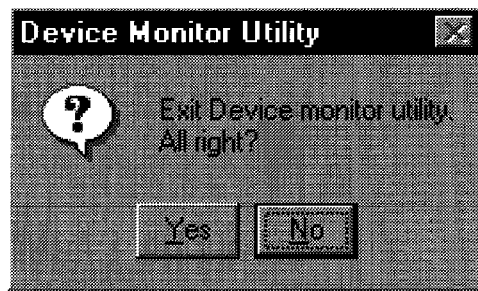
(1) Selected menu

Choose [Menu]-[Close] on the menu bar.



(2) Dialog box

Choosing [Close] displays the following dialog box.



Choose [Yes].....The device monitor utility is finished.

Choose [No].....The dialog box is closed to return to the display screen.

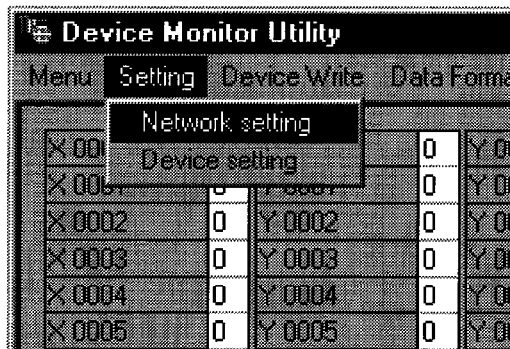
8.4 Setting

8.4.1 Network setting

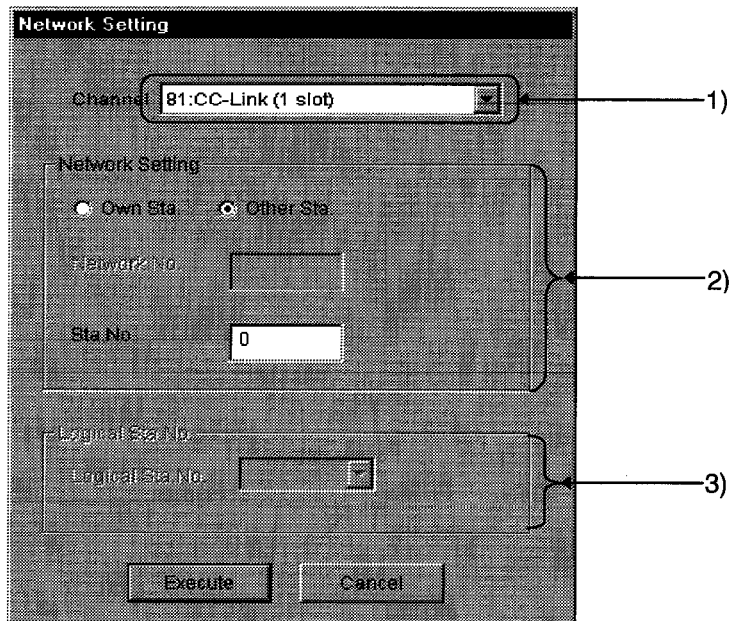
Set the network used for device monitor. Make this setting when starting the device monitor utility.

(1) Selected menu

Choose [Setting]-[Network setting] on the menu bar.



(2) Dialog box



1) Channel

Set the channel used.

2) Network Setting

Set the host or other station, network number and station number.

3) Logical Station No. Setting

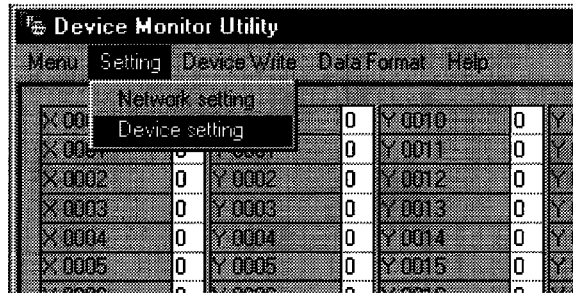
Set the logical station number.

8.4.2 Device setting

Set the device to be monitored.

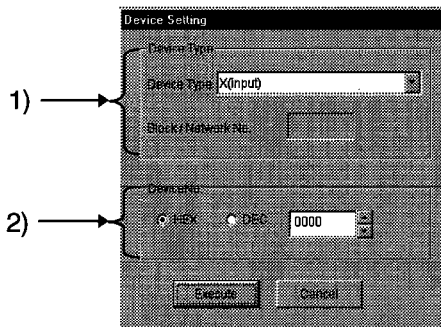
(1) Selected menu

Choose [Setting]-[Device setting] on the menu bar.

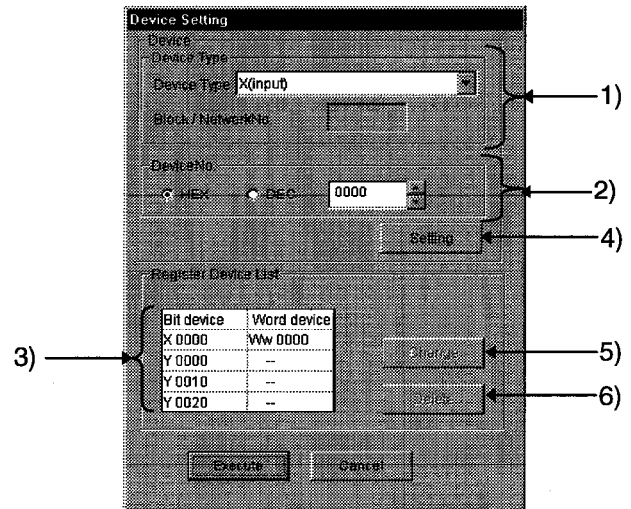


(2) Dialog box

For batch monitor



For 16-point registration monitor



- 1) Device type
Set the monitored device type, block No. and network No.
- 2) Device No.
Set the first number of the monitored device. (HEX: hexadecimal, DEC: decimal)
- 3) Register Device List
Lists the devices registered.
- 4) [Setting]button
Used to register the settings in 1) and 2) and add them to 3) (registered device list).
- 5) [Change]button
When you choose the device to be changed and click this button, the registered data is changed.
- 6) [Delete]button
When you choose the device to be deleted and click this button, that device is deleted from the registered device list.

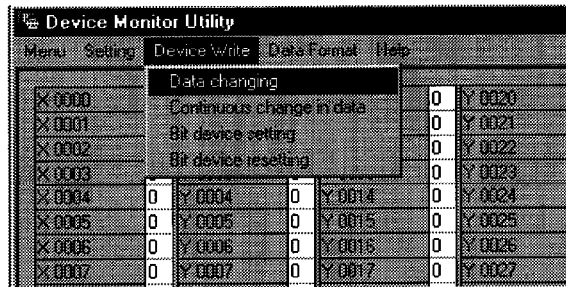
8.5 Device Write

8.5.1 Changing the data

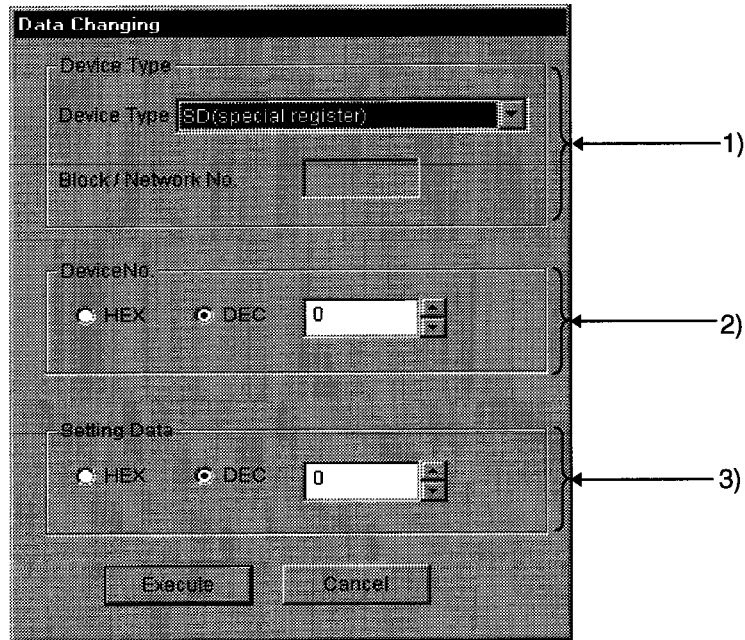
Change the data of the specified word device.

(1) Selected menu

Choose [Device Write]-[Data changing] on the menu bar.



(2) Dialog box



1) Device Type

Set the device type whose data will be changed, block No. and network No.

2) Device No.

Set the device No. whose data will be changed. (HEX: hexadecimal, DEC: decimal)

3) Setting Data

Set the data to be changed. (HEX: hexadecimal, DEC: decimal)

**WARNING**

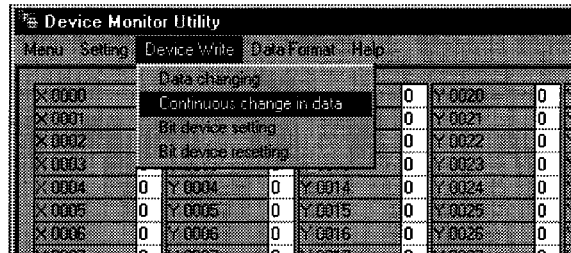
- For data changing control exercised for the PC that is operating, configure up an interlock circuit in the sequence program to keep the whole system operating safely. Also, determine what corrective actions to be taken at occurrence of a data communication error between your personal computer and PC CPU.

8.5.2 Consecutive data change

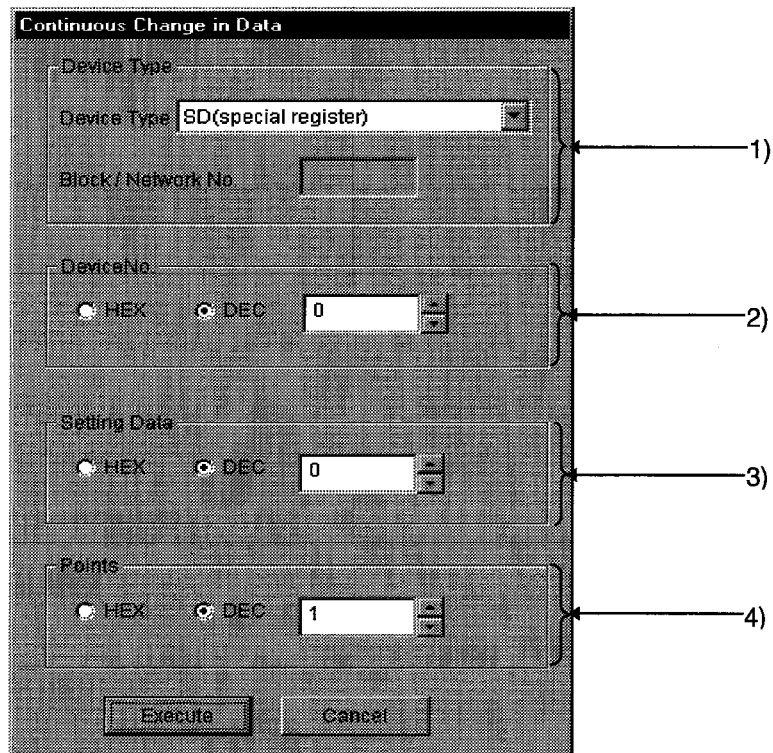
Change the preset points of the specified word device into the specified data.

(1) Selected menu

Choose [Device Write]-[Continuous change data] on the menu bar.



(2) Dialog box



- 1) Device Type
Set the device type whose data will be changed, block No. and network No.
- 2) Device No.
Set the first address of the device No. whose data will be changed.
(HEX: hexadecimal, DEC: decimal)
- 3) Setting Data
Set the data to be changed consecutively. (HEX: hexadecimal, DEC: decimal)
- 4) Points
Set the number of points of the data to be changed.

 **WARNING**

- For data changing control exercised for the PC that is operating, configure up an interlock circuit in the sequence program to keep the whole system operating safely. Also, determine what corrective actions to be taken at occurrence of a data communication error between your personal computer and PC CPU.

8.5.3 Setting the bit device

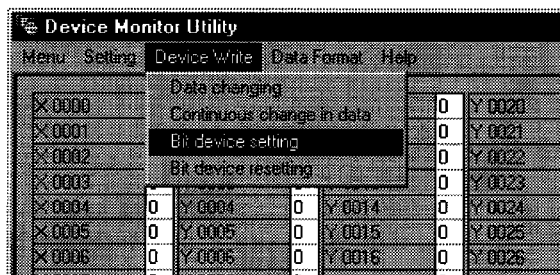
Turn on the specified bit device.

CAUTION

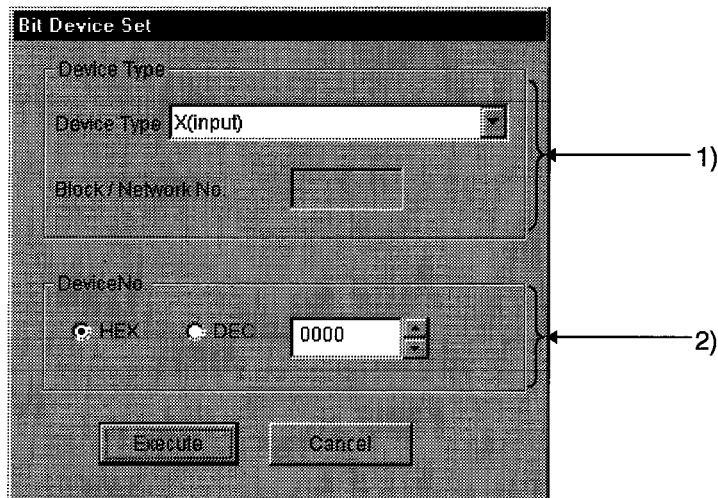
"RX", "RY" and "SB" cannot be specified as the device to be set. Doing so will result in error (-3).

(1) Selected menu

Choose [Device Write]-[Bit device setting] on the menu bar.



(2) Dialog box




1) Device Type

Set the device type to be turned on, block No. and network No.

2) Device No.

Set the bit device No. to be turned on. (HEX: hexadecimal, DEC: decimal)

 WARNING	<ul style="list-style-type: none"> ● For data changing control exercised for the PC that is operating, configure up an interlock circuit in the sequence program to keep the whole system operating safely. Also, determine what corrective actions to be taken at occurrence of a data communication error between your personal computer and PC CPU.
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8.5.4 Resetting the bit device

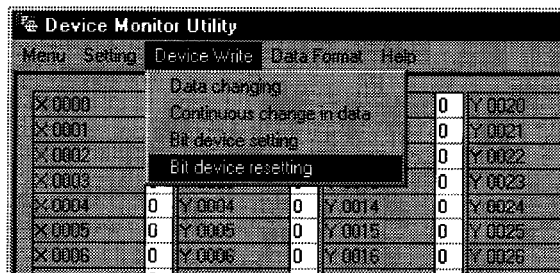
Turn off the specified bit device.

CAUTION

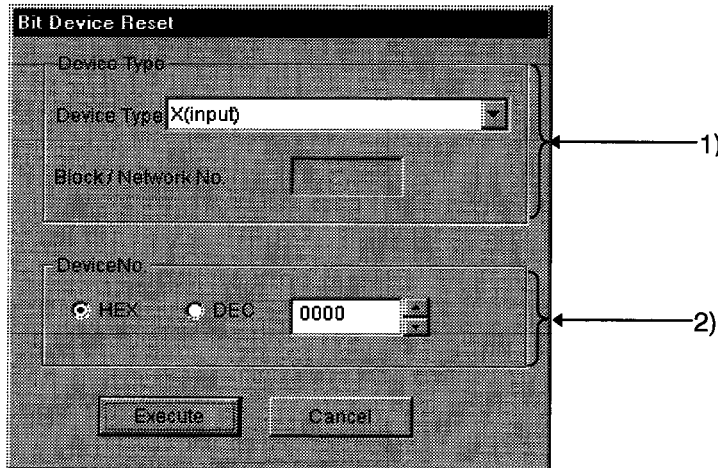
"RX", "RY" and "SB" cannot be specified as the device to be reset. Doing so will result in error (-3).

(1) Selected menu

Choose [Device Write]-[Bit device resetting] on the menu bar.



(2) Dialog box



1) Device Type

Set the device type to be turned off, block No. and network No.

2) Device No.

Set the bit device No. to be turned off. (HEX: hexadecimal, DEC: decimal)

! WARNING

- For data changing control exercised for the PC that is operating, configure up an interlock circuit in the sequence program to keep the whole system operating safely. Also, determine what corrective actions to be taken at occurrence of a data communication error between your personal computer and PC CPU.

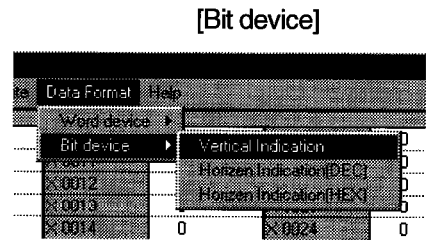
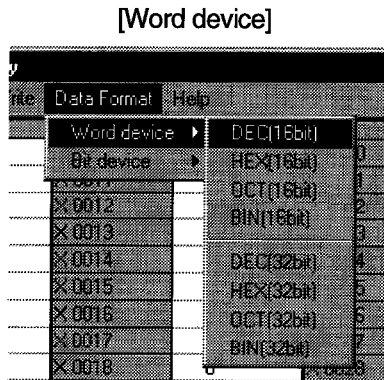
8.6 Changing the Display

Change the display form for device monitor into the chosen one.

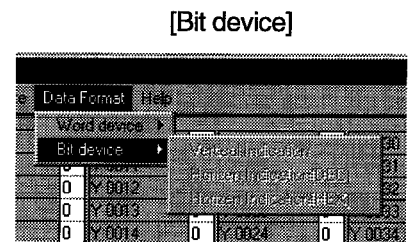
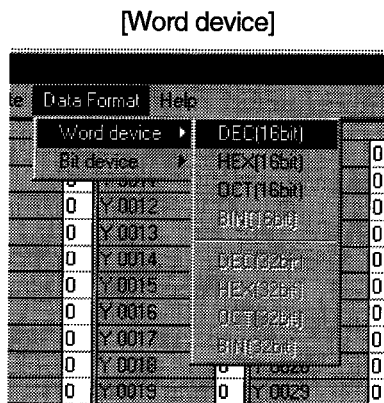
(1) Selected menu

Choose [Word Format]-[Word(Bit) device] on the menu bar.

(a) Batch monitor



(b) 16-point registration monitor

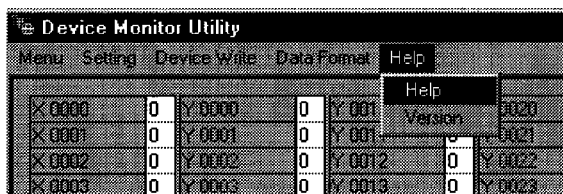


8.7 Help

8.7.1 Help

Display the help screen for the device monitor utility.

- (1) Selected menu
Choose [Help]-[Help] on the menu bar.

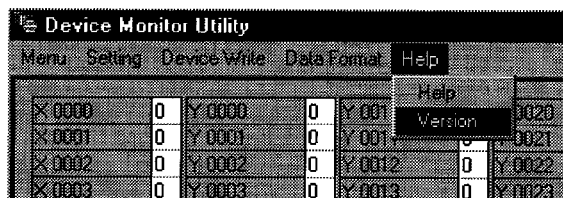


8.7.2 Version data

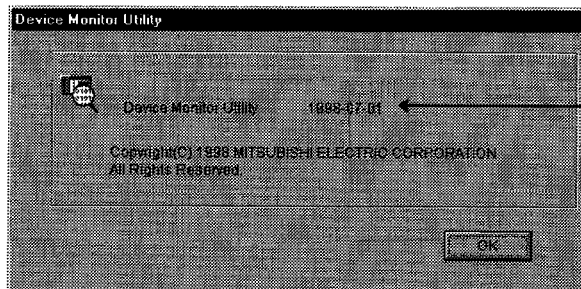
Display the version data of the device monitor utility.

(1) Selected menu

Choose [Help]-[Version] on the menu bar.



(2) Display screen



Indicates the version of the device monitor utility.

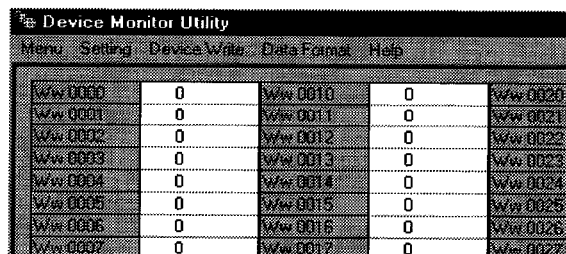
8.8 Other Operation

By double-clicking the device number on the screen during monitoring, you can change the data of the word device or turn on-off the bit device.

(1) Word device

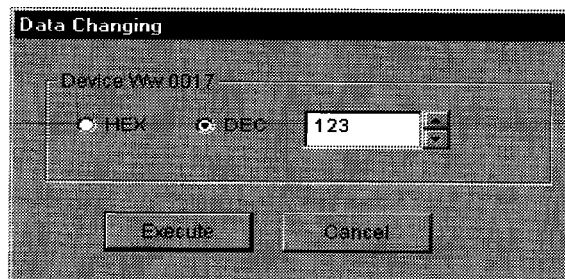
Perform the following operation to change the data of the word device. (Only when the display form is 16 bits)

- 1) Double-click the number of the word device whose data will be changed.

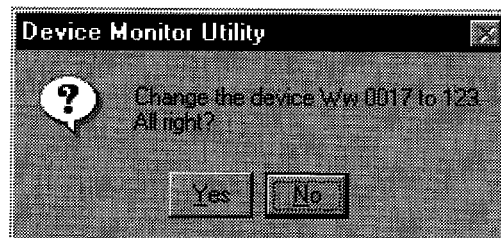


Device Monitor Utility				
Menu	Setting	Device Write	Data Format	Help
Ww 0000	0	Ww 0010	0	Ww 0020
Ww 0001	0	Ww 0011	0	Ww 0021
Ww 0002	0	Ww 0012	0	Ww 0022
Ww 0003	0	Ww 0013	0	Ww 0023
Ww 0004	0	Ww 0014	0	Ww 0024
Ww 0005	0	Ww 0015	0	Ww 0025
Ww 0006	0	Ww 0016	0	Ww 0026
Ww 0007	0	Ww 0017	0	Ww 0027

- 2) The following dialog box appears. Set any value. After setting, click the [Execute] button.



- 3) When the data may be changed, choose [Yes] in the following dialog box. To stop, choose [No].



- 4) Data changing completion

 **WARNING**

- For data changing control exercised for the PC that is operating, configure up an interlock circuit in the sequence program to keep the whole system operating safely. Also, determine what corrective actions to be taken at occurrence of a data communication error between your personal computer and PC CPU.

(2) Bit device

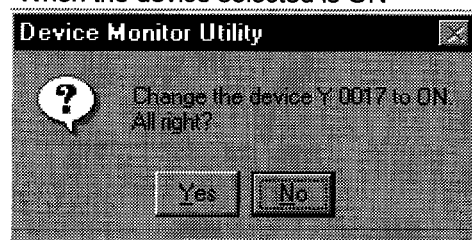
Perform the following operation to turn on-off the bit device. This operation may be performed only when the display form is [Vertical Indication].

- 1) Double-click the number of the bit device whose data will be changed.

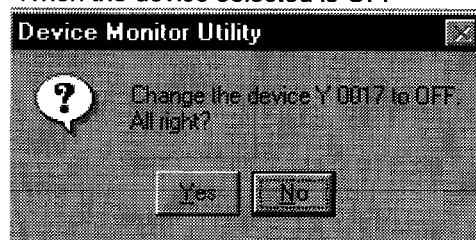
Device Monitor Utility				
Menu	Setting	Device Write	Data Format	Help
Y 0000	0	Y 0010	0	Y 0018
Y 0001	0	Y 0011	0	Y 0019
Y 0002	0	Y 0012	0	Y 0020
Y 0003	0	Y 0013	0	Y 0021
Y 0004	0	Y 0014	0	Y 0022
Y 0005	0	Y 0015	0	Y 0023
Y 0006	0	Y 0016	0	Y 0024
Y 0007	0	Y 0017	0	Y 0025

- 2) When the data may be changed, choose [Yes] in the following dialog box. To stop, choose [No].

When the device selected is ON



When the device selected is OFF



- 3) Data changing completion

! WARNING

- For data changing control exercised for the PC that is operating, configure up an interlock circuit in the sequence program to keep the whole system operating safely. Also, determine what corrective actions to be taken at occurrence of a data communication error between your personal computer and PC CPU.

9. FUNCTIONS

9.1 Function List

Available functions are listed below.

Function Name	Description
mdBdLedRead	Host board LED read
mdBdModRead	Host board mode read
mdBdModSet	Host board mode setting
mdBdRst	Host board reset
mdBdSwRead	Host board switch status read
mdBdVerRead	Host board version read
mdClose	Communication line close
mdControl	Remote RUN/STOP/PAUSE
mdDevRst	Bit device reset
mdDevSet	Bit device set
mdInit	PC device address table refresh
mdOpen	Communication line open
mdRandR	Random device read
mdRandW	Random device write
mdReceive	Batch device read
	RECV function
	Buffer memory read
mdSend	Batch device write
	SEND function
	Buffer memory write
mdTypeRead	PC CPU type read

CAUTION

The functions are described in detail in HELP of the software package.

Start the CC-Link utility and choose [Help] from the menu.

For the places of storing the header file to be included when a user program is created and the library to be imported during link, refer to "Section 6.3 Directory Make-Up".

9.2 Restrictions on Use of the Functions

There are the following restrictions on use of the functions.

- (1) The development languages supported are Visual Basic Ver5.0J and Visual C++ Ver5.0J only.
- (2) If any of several processes is forced by the Task Manager or other command of Windows NT to end communication which was started by opening the same channel No. in the processes, the other processes may stop in the communication function execution portion.
If such a phenomenon occurs, terminate all the processes that use the same channel No. and restart them.
- (3) The following points should be noted when using the A80BDE-J61BT13 on the personal computer which uses the MELSECNET/10 interface board.
 - (a) The communication DLL included in the software package supplied to the MELSECNET/10 interface board cannot be used to make A80BDE-J61BT13 communication.
Always install and use the software package (SW1DNF-CCLINK) supplied to the A80BDE-J61BT13.
(The communication DLL of SW1DNF-CCLINK also allows communications of the MELSECNET/10 interface boards.)
 - (b) The following job is required for the application program already developed in the software package supplied to the MELSECNET/10 interface board.
 - 1) The EXE file generated using MDFUNC32.LIB should be re-linked using MDFUNC32.LIB supplied to SW1DNF-CCLINK.
 - 2) When the mdRandR or mdRandW function is used, a data storage area of 1 word (2 bytes) is required if the bit device data specified is 1 byte (8 points) or less.
If the data storage area size used is less than 2 bytes, make correction to make it 2 bytes or more.
- (4) Installing the SW0IVNT-CSKP packaging disables CC-Link communication. Also, if the SW1DNF-CCLINK is installed in the personal computer where the SW0IVNT-CSKP has already been installed, any communication for other than the CC-Link and MELSECNET/10 interface boards is disabled.

9.3 Accessible Devices

Devices available for CC-Link communication are listed below.
 Devices not listed cannot be accessed.

POINT
"Batch" and "random" in the lists are defined as follows. Batch Batch read/batch write Random Random read/random write/bit set/bit reset

9.3.1 Devices in the host station

The following devices in the host station are accessible.

Device		A80BDE-J61BT13
RX	Batch	○
	Random	○
RY	Batch	○
	Random	○
SB	Batch	○
	Random	○
SW	Batch	○
	Random	○
Random access buffer	Batch	○
	Random	×
RWw	Batch	○
	Random	×
RWr	Batch	○
	Random	○
Buffer memory	Batch	○
	Random	○
RECV for QnA	Batch	○
	Random	×

9.3.2 Devices in the other stations

The following devices in the other stations are accessible.

Device		Access Destination						
		A1(N)	A0J2H A1S(S1) A1SJ A2C A2(S1) A2N(S1) A2S(S1)	A2A(S1) A2AS(S1) A2U(S1)	A2SH(S1) A3(N) A3A A3U	A4U	Q2A(-S1) Q2AS(-S1) Q2AH(-S1) Q3A Q4A	Personal computer
X	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
Y	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
L	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
M	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
Special M	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
F	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
T(contact)	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	×	×
T(coil)	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	×	×
C(contact)	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	×	×
C(coil)	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	×	×
T(present value)	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
C(present value)	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
D	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
Special D	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
T(set value main)	Batch	○	○	○	○	○	×	×
	Random	×	×	×	×	×	×	×
T(set value sub 1)	Batch	×	×	○ ^{*1}	○	○	×	×
	Random	×	×	×	×	×	×	×

*1: Inaccessible for the A2A(-S1)CPU.

Device		Access Destination						
		A1(N)	A0J2H A1S(S1) A1SJ A2C A2(S1) A2N(S1) A2S(S1)	A2A(S1) A2AS(S1) A2U(S1)	A2SH(S1) A3(N) A3A A3U	A4U	Q2A(-S1) Q2AS(-S1) Q2AH(-S1) Q3A Q4A	Personal computer
T(set value sub 2)	Batch	×	×	×	×	○	×	×
	Random	×	×	×	×	×	×	×
T(set value sub 3)	Batch	×	×	×	×	○	×	×
	Random	×	×	×	×	×	×	×
C(set value main)	Batch	○	○	○	○	○	×	×
	Random	×	×	×	×	×	×	×
C(set value sub 1)	Batch	×	×	○ ^{*1}	○	○	×	×
	Random	×	×	×	×	×	×	×
C(set value sub 2)	Batch	×	×	×	×	○	×	×
	Random	×	×	×	×	×	×	×
C(set value sub 3)	Batch	×	×	×	×	○	×	×
	Random	×	×	×	×	×	×	×
A	Batch	○	○	○	○	○	×	×
	Random	○	○	○	○	○	×	×
Z	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
V (index register)	Batch	○	○	○	○	○	×	×
	Random	○	○	○	○	○	×	×
R	Batch	×	○	○	○	○	○	×
	Random	×	○	○	○	○	○	×
Extra R	Batch	×	○	○	○	○	○	×
	Random	×	○	○	○	○	○	×
B	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
W	Batch	○	○	○	○	○	○	×
	Random	○	○	○	○	○	○	×
QnA link special relay (on QnACPU)	Batch	×	×	×	×	×	○	×
	Random	×	×	×	×	×	○	×
Retentive timer (contact)	Batch	×	×	×	×	×	○	×
	Random	×	×	×	×	×	×	×
Retentive timer (coil)	Batch	×	×	×	×	×	○	×
	Random	×	×	×	×	×	×	×

*1: Inaccessible for the A2A(-S1)CPU.

Device		Access Destination						
		A1(N)	A0J2H A1S(S1) A1SJ A2C A2(S1) A2N(S1) A2S(S1)	A2A(S1) A2AS(S1) A2U(S1)	A2SH(S1) A3(N) A3A A3U	A4U	Q2A(-S1) Q2AS(-S1) Q2AH(-S1) Q3A Q4A	Personal computer
QnA link special register (on QnACPU)	Batch	×	×	×	×	×	○	×
	Random	×	×	×	×	×	○	×
QnA edge relay (on QnACPU)	Batch	×	×	×	×	×	○	×
	Random	×	×	×	×	×	○	×
Retentive timer (present value)	Batch	×	×	×	×	×	○	×
	Random	×	×	×	×	×	○	×
QnA SEND function With arrival confirmation	Batch	×	×	×	×	×	○	○
	Random	×	×	×	×	×	×	○
QnA SEND function Without arrival confirmation	Batch	×	×	×	×	×	○	○
	Random	×	×	×	×	×	×	○
Buffer memory	Batch	○	○	○	○	○	○	○
	Random	×	×	×	×	×	×	×
Random access buffer	Batch	○	○	○	○	○	○	○
	Random	×	×	×	×	×	×	×
Link Input	Batch	○	○	○	○	○	○	○
	Random	×	×	×	×	×	×	×
Link output	Batch	○	○	○	○	○	○	○
	Random	×	×	×	×	×	×	×
Link register ^{*2}	Batch	○	○	○	○	○	○	○
	Random	×	×	×	×	×	×	×
Link special relay	Batch	○	○	○	○	○	○	○
	Random	×	×	×	×	×	×	×
Link special register	Batch	○	○	○	○	○	○	○
	Random	×	×	×	×	×	×	×

*2: The link registers are divided into the RWw and RWr areas according to the device No. ranges.

0H~ FFH : RWw

100H~1FFH : RWr

REMARKS

For the addresses in access to the buffer memory, refer to the user's manual of the corresponding module.

10. ERROR CODES

The following table lists error definitions and corrective actions corresponding to the error codes returned by the functions.

Error Code (HEX)	Error Definition	Corrective Action
0	Normal end	—
1	Driver not started. Same interrupt number or I/O address used for another board.	Correct error at driver start. Check board setting.
2	Board response error Time-out occurred during waiting for processing response.	Reconsider operating status and board loading status of accessed station. Make retry in application program.
65 (41)	Channel error Unregistered channel number specified.	Check channel number.
66 (42)	Already OPEN error Specified channel already open.	Set OPEN to once.
67 (43)	Already CLOSE error Specified channel already closed.	Set CLOSE to once.
68 (44)	PATH error PATH set is other than the one whose line was opened.	Set the PATH number whose line was opened.
69 (45)	Processing code error Unsupported processing code issued.	Use supported processing code.
70 (46)	Station number designation error Specified station number wrong. Host station was requested to perform processing to be requested of another station. Station number is that of host station (0xFF) but network No. is not 0.	Correct station number specified in application program.
71 (47)	Receive data error (at RECV request) Data not received.	Wait until data is received.
72 (48)	Mode setting waiting Mode not set.	Set mode.
73 (49)	Mode error Another station was requested though mode setting is other than online.	Set mode to online. Cancel request.
	Interrupt number error Same interrupt number repeated for another board. I/O address error Same I/O address repeated for another board.	Check board setting.
77 (4D)	Memory reservation error Memory could not be reserved.	Terminate other operating application. Check whether system is operating properly. Restart system.
78 (4E)	Time-out error at mode setting Mode setting was made but could not be achieved due to time-out.	Check for repeated 2-port memory for another board and restart. Alternatively, hardware is faulty.
79 (4F)	Switch setting data error Argument parameters at switch setting are in error.	Check argument parameter setting of switch setting data.
80 (50)	Shared memory address mapping failed.	Check for repeated shared memory address for another interface board.
85 (55)	Channel number error (at RECV request) Channel number error	Check channel No. at RECV request.
100 (64)	Host station board being accessed or SEND request being given Access request was issued to host station board while host station board is being accessed.	Make retry.

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Error Code (HEX)	Error Definition	Corrective Action
101 (65)	Routing parameter error Routing parameters not set.	Correct routing parameters.
102 (66)	Data transmission error Data transmission failed.	Make retry. Check whether system is operating properly.
103 (67)	Data receive error Data receive failed.	Restart system.
128 (80)	Read count error The number of read bytes set is outside range.	Set the read count to within range.
129 (81)	Device type error Specified device type is invalid.	Check device type.
130 (82)	Device No. error Specified device No. is outside range. When bit device is specified, device No. is not a multiple of 8 for ACPU or 16 for QnACPU.	Check device No.
131 (83)	Device point error Number of points set is outside device range. When bit device is specified, number of points is not a multiple of 8 for ACPU or 16 for QnACPU.	Check size.
132 (84)	Write count error The number of written bytes set is outside range.	Set the write count to within range.
133 (85)	Link parameters Link parameters are corrupted. Total slave station count link parameter setting is 0. Fixed pattern link parameter data is corrupted. Sumcheck link parameter data is corrupted.	Re-set link parameters.
135 (87)	Remote RUN/STOP/PAUSE designation error Value set for remote RUN/STOP/PAUSE is other than 0 to 2.	Re-set value to any of 0-2.
136 (88)	Random write designation error Value set for random write is other than 0 to 2.	Re-set value to any of 0-2.
137 (89)	Processing cancel Next processing was requested before end of preceding processing.	Request processing again after end of preceding processing.
215 (D7)	Receive data length error Receive data length or byte length is beyond range.	Make retry. Check cable.
	Requested data buffer length excess Data length of requested data is beyond requested data area.	Reduce requested data size.
228 (E4)	Link designation error Set processing code cannot be processed by requested station. (Checked by requested link module)	Check requested station number and processing code.
1280 (500)	Host board memory access error	Check host board switch setting and move memory address to area unaffected by other boards. For 8-bit memory access, change it to 16 bits.
1281 (501)	I/O port access disable	Change I/O port address setting. Make self-check of board to test hardware.
16386 (4002)	Request received cannot be processed.	Change request destination.
16432 (4030)	Specified device type does not exist.	Check specified device type.

10. ERROR CODES

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Error Code (HEX)	Error Definition	Corrective Action
16433 (4031)	Specified device No. is outside range.	Check specified device No.
16448 (4040)	Module does not exist.	Request which resulted in error should not be made to specified special function module.
16449 (4041)	Number of device points is outside range.	Check the first address and number of access points and make access within existing range.
16450 (4042)	Corresponding module is faulty.	Check whether specified module is operating properly.
16451 (4043)	Module does not exist in specified position.	Check the first I/O numbers of specified module.
-26336 (9920)	Interface board was routed to other loop.	Change routing request destination to AnUCPU or QnACPU.
-26334 (9922)	Board reset error During access to other station, task using other identical channel made board reset.	Access other station again.
-28158 (9202)	WDT error	Restart Windows.
-28156 (9204)	2-port memory area handshake error	Remove other optional board. Change interface board.
-28151 (9209)	APSNO error (Unauthorized response data was received)	Change machine at processing request destination.
-28150 (920A)	Data link interrupt error	Link device of host station was accessed while data link is interrupted.
-25056 (9E20)	Interface board at request destination was given request which cannot be processed.	Execute only mdTypeRead for interface board of other station.
-24959 (9E81)	Device type error Device type specified for requested station is invalid. (Checked by requested link module)	Check device type.
-24958 (9E82)	Device No. error Device No. specified for requested station is outside range. When bit device is specified, device No. is not a multiple of 8. (Checked by requested link module)	Check device No.
-24957 (9E83)	Device point error Number of points set is outside device range specified for requested station. (Checked by requested link module)	Check size.
-19967 (B201)	Corresponding station fault during transmission During transient transmission, data link error occurred at corresponding station.	Check other station communication status, whether temporary error invalid station is specified or not, or whether host station is in data link error or not.
-19184 (B510)	Sending channel in use when SEND function is used (host station) Channel in use was used.	The same channel cannot be used at the same time. Change channel number or avoid using the same channel at the same time.
-19183 (B511)	Receiving channel in use when SEND function is used Channel of corresponding station is in use.	Wait for some time and re-execute SEND instruction. Check whether two or more requests have been given by host station and several stations to the same channel of corresponding station.
-19164 (B524)	Corresponding station fault at transmission destination During transient transmission, data link error occurred at corresponding station.	Check other station communication status, whether temporary error invalid station is specified or not, or whether host station is in data link error or not.
-18575 (B771)	Corresponding station absence error Corresponding station does not exist at specified station number.	Check station number of request destination and specify correct station number.

Error Code (HEX)	Error Definition	Corrective Action
-18568 (B778)	Response time-out Response from request destination timed out. (Transmission source timed out.)	Make retry after some time. Check access destination.
-18560 (B780)	Module mode switch setting error Access to CPU device was specified though corresponding station is set in I/O mode.	Set to intelligent mode or specify internal device only.
-18419 (B80D)	Number of addresses + points is beyond range. Number of processing points set is beyond range.	Set number of processing points to within device range.
-18411 (B815)	Module mode switch setting error Access to CPU device was specified though corresponding station is set in I/O mode.	Set to intelligent mode or specify internal device only.
-16386 (BFFE)	CPU monitor time-out Response from CPU timed out. (Transmission source timed out.)	Make retry after some time. Check access destination.
-1 (FFFF)	Path error Specified path is invalid.	Use path returned by mdOpen function.
-2 (FFFE)	Device No. error Specified device No. is outside range. When bit device is specified, device No. is not a multiple of 8.	Check the first device No. of specified device.
-3 (FFFD)	Device type error Specified device type is invalid.	Check whether device type given in device type list is used or not.
-5 (FFFB)	Size error Device No. + size is beyond device range. Odd-numbered bytes were set for access.	Check specified size.
-6 (FFFA)	Block count error Number of blocks specified for dev[0] in random device read/write is outside range.	Check the number of blocks specified for dev[0].
-8 (FFF8)	Channel No. error Channel No. specified for mdOpen function is invalid.	Check specified channel No.
-12 (FFF4)	Block error Block No. of specified extra file register is invalid.	Check block No. (device type) of extra file register.
-13 (FFF3)	Write protect error Block No. of specified extra file register is the same as write protect area of memory cassette.	Check block No. (device type) of extra file register. Check write protect DIP switch of memory cassette at access destination.
-14 (FFF2)	Memory cassette error Accessed CPU is not loaded with memory cassette or is loaded with improper memory cassette.	Check memory cassette at access destination.
-15 (FFF1)	Read area length error Read area size by read data storage array variable is small.	Check read size and size of read data storage destination.
-16 (FFF0)	Station number, network No. error Station number or network No. is outside range.	Check specified station number and network.
-17 (FFEF)	All station, group No. designation error All stations or group No. was specified for unsupported function.	Check whether all stations or group No. may be specified for the function.
-18 (FFEE)	Remote designation error Code specified is other than specified code.	Check specified code.

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Error Code (HEX)	Error Definition	Corrective Action
-19 (FFED)	SEND/RECV channel No. error Channel No. specified for SEND/RECV function is outside range.	Check specified channel No.
-21 (FFEB)	Error occurrence at gethostname() Error occurrence at function gethostname().	Check whether specified host name exists in HOSTS file.
-24 (FFE8)	Time-out error occurred at select() Time-out error occurred at function select().	Check whether MGW server service is started at server machine. Check whether Ethernet communication can be made normally with server machine.
-25 (FFE7)	Error occurred at sendto() Error occurred at function sendto().	Check whether Ethernet communication can be made normally with server machine.
-26 (FFE6)	Error occurred at recvfrom() Error occurred at function recvfrom().	
-28 (FFE4)	Abnormal response receive Abnormal response was received.	
-29 (FFE3)	Receive data length excess Data received was more than required.	
-30 (FFE2)	Sequence No. error Received sequence No. is in error.	
-31 (FFE1)	DLL load error Load of DLL needed to execute function failed.	Set up package again.
-33 (FFDF)	Unauthorized access destination error Communication destination setting is unauthorized.	Check whether communication destination is set to utility correctly.
-34 (FFDE)	Registry open error Registry opening failed.	
-35 (FFDD)	Registry read error Registry read failed.	
-36 (FFDC)	Registry write error Write to registry failed.	
-37 (FFDB)	Communication initialization setting error Initial setting for communication processing failed.	Make retry. As memory may be short, terminate other operating applications. Check whether system is operating properly. Re-start system.
-38 (FFDA)	Ethernet communication setting error Setting for Ethernet communication failed.	Make retry. Check whether communication destination is set to utility correctly. As memory may be short, terminate other operating applications. Check whether system is operating properly. Re-start system.
-39 (FFD9)	COM communication setting error Setting for COM communication failed.	
-41 (FFD7)	COM control error Control in COM communication cannot be exercised correctly.	Make retry. Check whether system is operating properly. Re-start system.
-42 (FFD6)	Close error Communication cannot be closed.	
-50 (FFCE)	Open path max. value excess Path already open exceeded max. value (32).	Close several paths.
-51 (FFCD)	Exclusive control error Error occurred in exclusive control.	Make retry. Check whether system is operating properly.

11. TROUBLESHOOTING

This chapter describes various errors which may occur during system building and how to clear up their causes and take proper actions.

11.1 Troubleshooting Instructions

Faults must be minimized to start up the system fast. However, once a fault has occurred, the important point is how fast its cause can be found.

The following three basics must be observed for this troubleshooting.

(1) Visual checks

Check the following.

- 1) External equipment motions (in stop and operating statuses)
- 2) Power supply on or off
- 3) Wiring conditions (connection cables)
- 4) LED indication state (power LED)
- 5) Checking of whether the personal computer complies with the operating environment or not

After completing the visual checks 1) to 5), connect the external

(2) Fault check

Observe any changes in the error condition during the following operations.

- 1) Change input states and see if correct changes can be read by a test program.
- 2) Alternate between ON and OFF of outputs to see if the external equipment status changes correctly.

(3) Narrow down the possible causes.

From above (1) and (2), deduce where the fault lies.

- 1) Personal computer side or external equipment side
- 2) Personal computer or board
- 3) Connection cable
- 4) User program

11.2 Troubleshooting by Fault Type

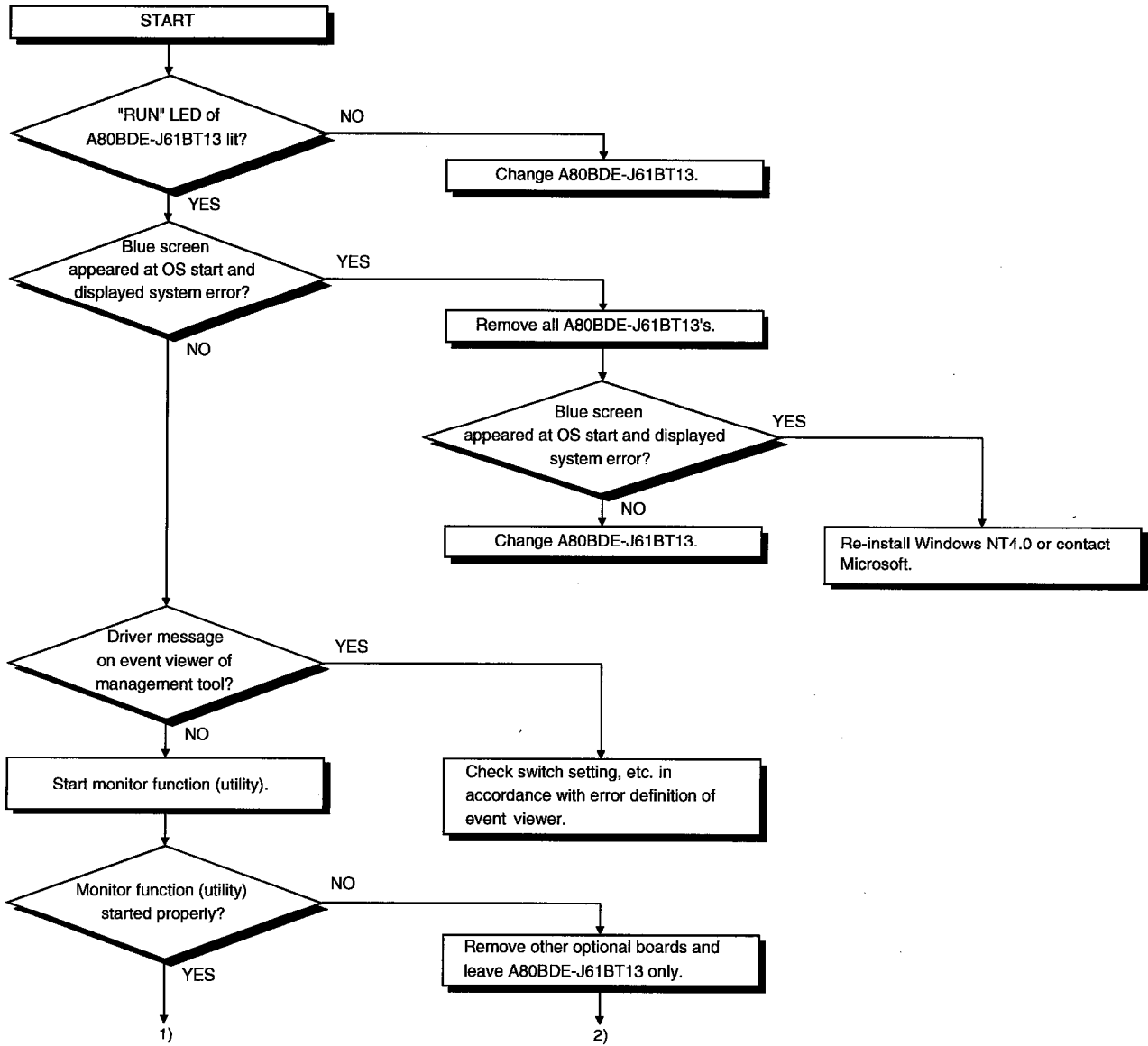
If any fault has occurred, search Table 11.1 for a troubleshooting procedure.

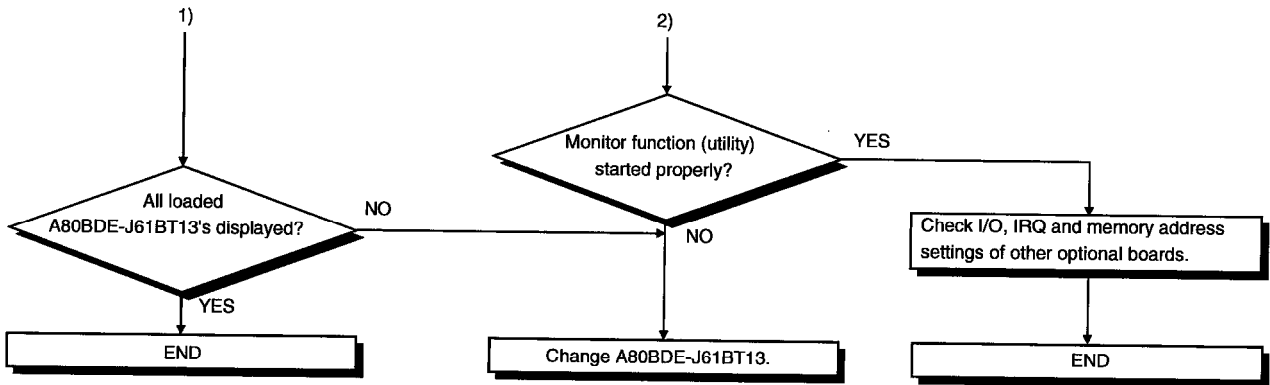
Table 11.1 Troubleshooting by Fault Type

No.	Fault	Troubleshooting Method
1	Proper operation was not performed at start of A80BDE-J61BT13	Refer to Section 11.3 Board/Personal Computer Failed to Operate.
2	Data link was not made after connection of A80BDE-J61BT13 and master and other stations	Refer to Section 11.4 Data Link Could Not Be Made.
3	Error occurred during data link 1) Specific device has non-scheduled value. 2) Data cannot be read/written from/to device accessed by using function in user program. 3) Communication is stopped from time to time during user program run. 4) System shutdown (blue screen) or system reset occurred during user program run on Windows NT.	Refer to Section 11.5 Error Occurred during Data Link.

11.3 Board/Personal Computer Failed to Operate

The following flowchart indicates how to make self-check on the personal computer if proper operation is not performed at start of the A80BDE-J61BT13.





11.3.1 List of error event messages displayed at driver start

The following table lists errors displayed on the event viewer.

Even ID (HEX)	Error Definition	Corrective Action
256 (100)	Driver could not be executed because of error occurring at driver start.	Reinstall driver package. If the error still persists, reinstall Windows NT.
257 (101)	Interface board could not be detected.	Check interface board loading state.
258 (102)	No response from hardware.	Change interface board.
259 (103)	Number of boards detected is more than the max. number of boards that may be loaded.	Remove excess boards.
262 (106)	Device name link failed.	Reinstall Windows NT.
268 (10C)	Error occurred in receive processing. (Requested package is unauthorized.)	Check programs of personal computer and PC which request this personal computer to perform processing.
279 (117)	Error occurred at the time of write to registry.	Reinstall software package.
280 (118)	Request received from other station cannot be processed. (Response request which cannot be processed was received.)	Check programs of personal computer and PC which request this personal computer to perform processing.
282 (11A)	I/O port mapping failed.	Same I/O port is repeated for other resource. Remove other optional board.
283 (11B)	Shared memory area of interface board is repeated for other hardware.	Remove other optional board.
284 (11C)	IRQ of interface board is repeated for other hardware.	Remove other optional board.
285 (11D)	Detecting unusual temperature, interface board may not operate properly.	Install personal computer in place where temperature is proper.
286 (11E)	Reservation of memory area required for driver start failed.	Increase system memory.
288 (120)	WDT error occurred.	Remove other optional board.
289 (121)	Handshake of shared memory area failed.	Reset board. If the error still persists, change board.
290 (122)	Same board number is repeated for other interface board.	Re-set board number without repeating the same number.
291 (123)	Shared memory area mapping failed.	Remove other optional board.
293 (125)	Interrupt registration failed.	Remove other optional board.
294 (126)	I/O ports of interface board are also used for other hardware.	Remove other optional board.*1

*1: If this event error occurs on a personal computer which has the following BIOS setup items, restart it after setting "Plug & Play O/S" to [No] and "Reset Configuration Data" to [Yes] as indicated in Example.

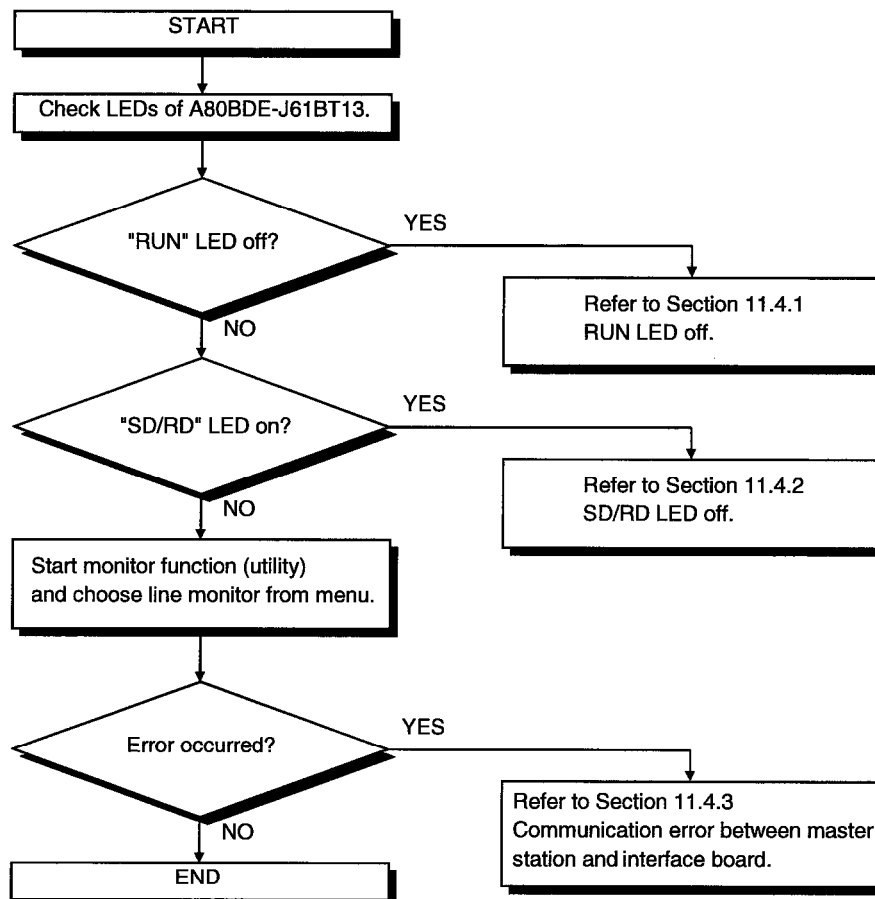
Example)

BIOS Setup Utility

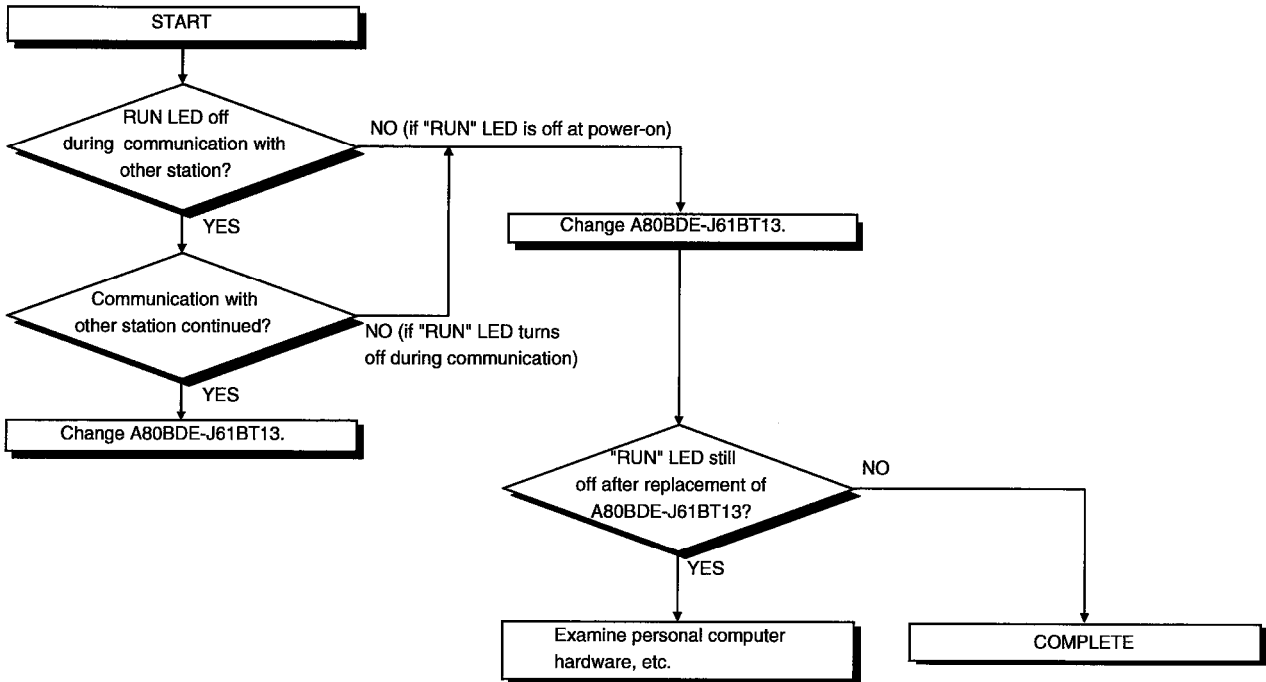
Plug & Play O/S	: [YES]	→	[No]
Reset Configuration Data:	[No]	→	[YES]

11.4 Data Link Could Not Be Made

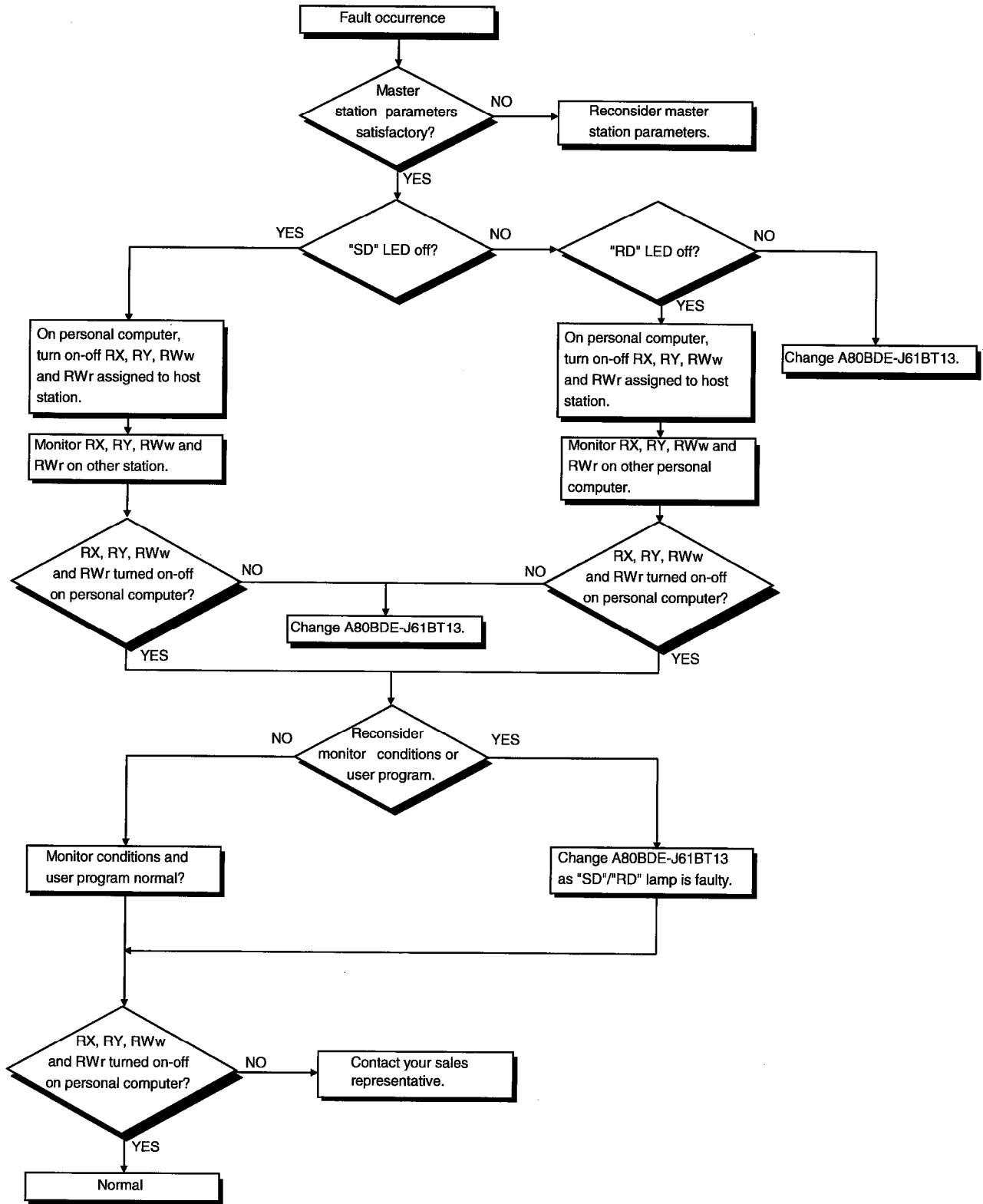
The following flowchart gives what to do when data link could not be made after connection of the A80BDE-J61BT13 and other stations.



11.4.1 RUN LED off



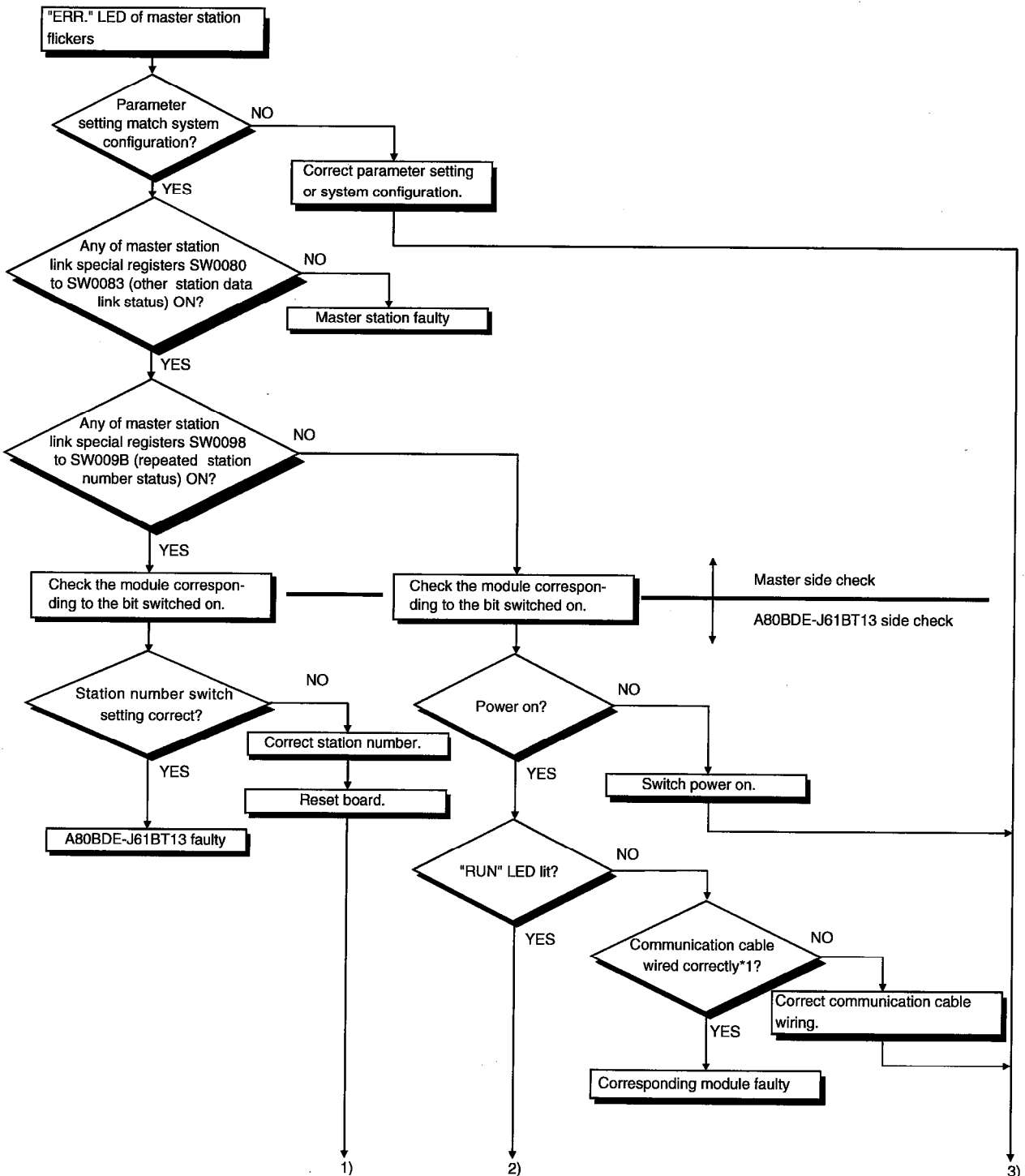
11.4.2 SD/RD LED off

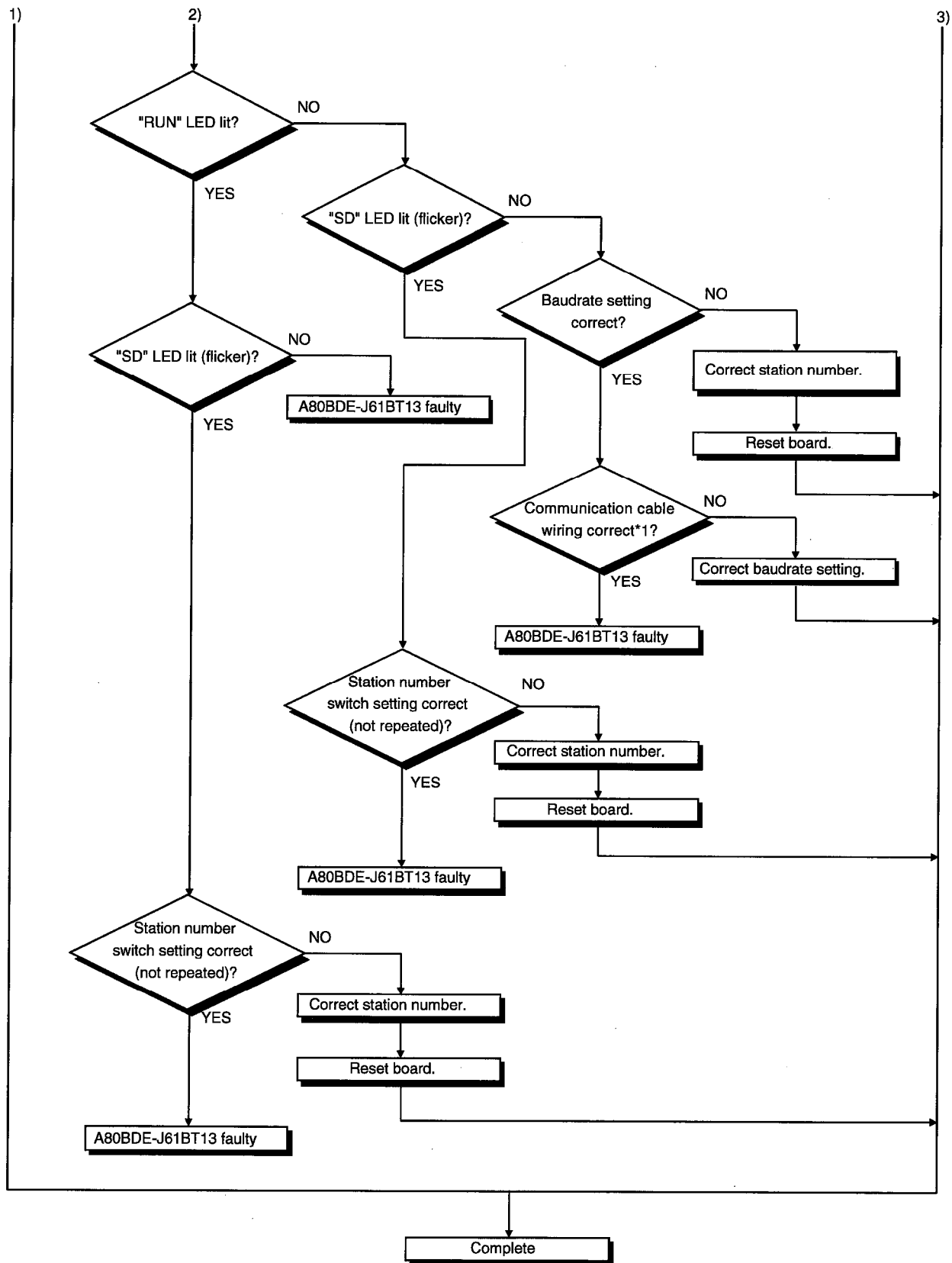


11.4.3 Communication error between master station and A80BDE-J61BT13

If any repeated station number bit in any of the link special registers SW0098 to SW009B (repeated station number status) switches on, check the A80BDE-J61BT13 of the corresponding station number in the following flowchart.

Troubleshooting flowchart used when the "ERR." LED of the master station flickers

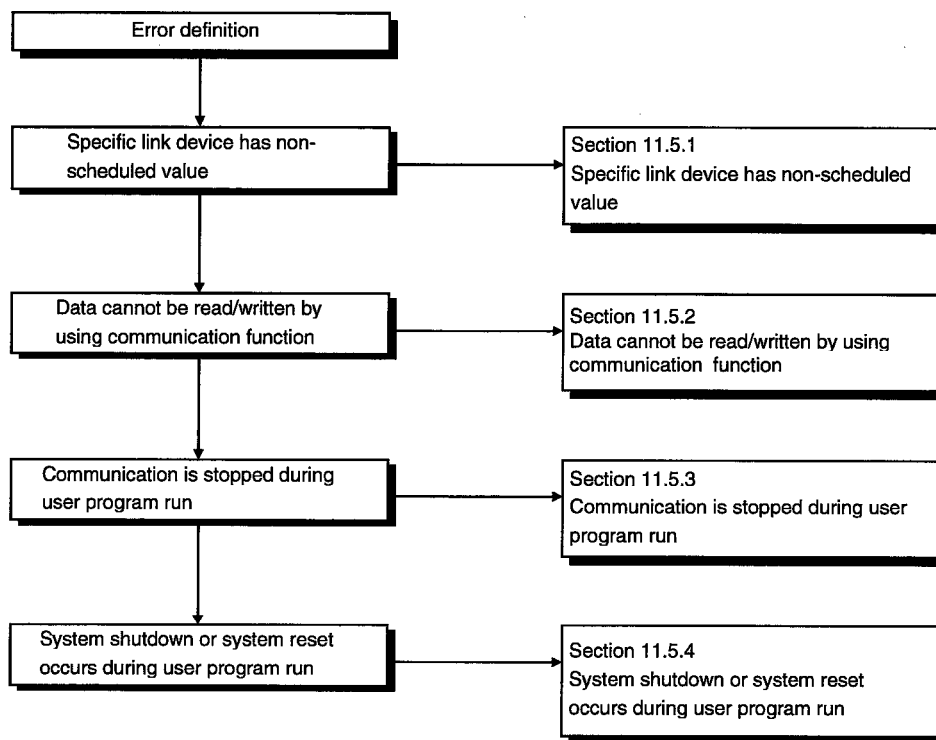




*1: Check for short circuit, reverse connection, wire breakage, no terminal resistor, improper FG connection, improper overall distance and improper interstation distance.

11.5 Error Occurred during Data Link

The following flowchart indicates what to do when an error occurred during data link.

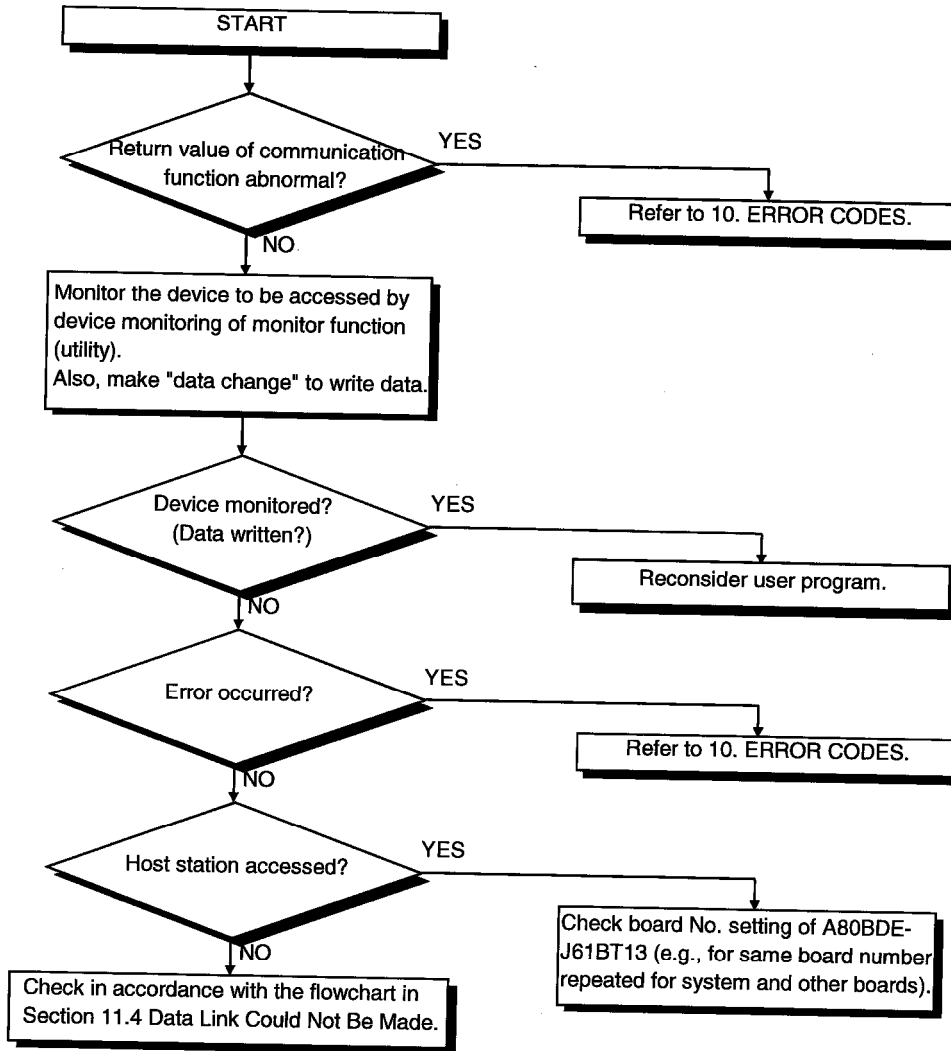


11.5.1 Specific link device has non-scheduled value

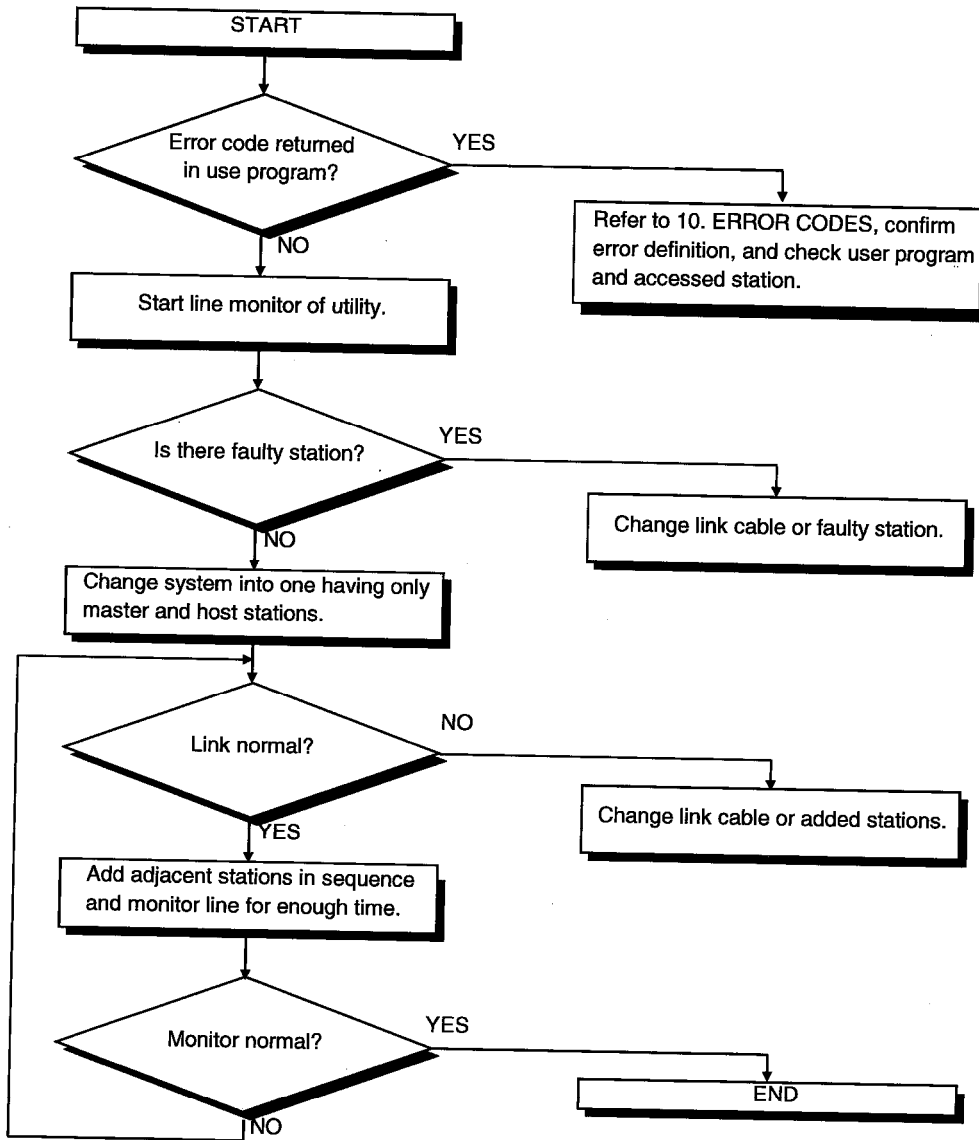
Check the following.

- (1) By network monitoring of monitor function, check for a faulty link station.
- (2) In management, check the link parameter assignment range.
- (3) In the PC, check the range of the device used in the sequence program.
- (4) In the user program, check the argument data of the communication function in the section accessing the specific link device.

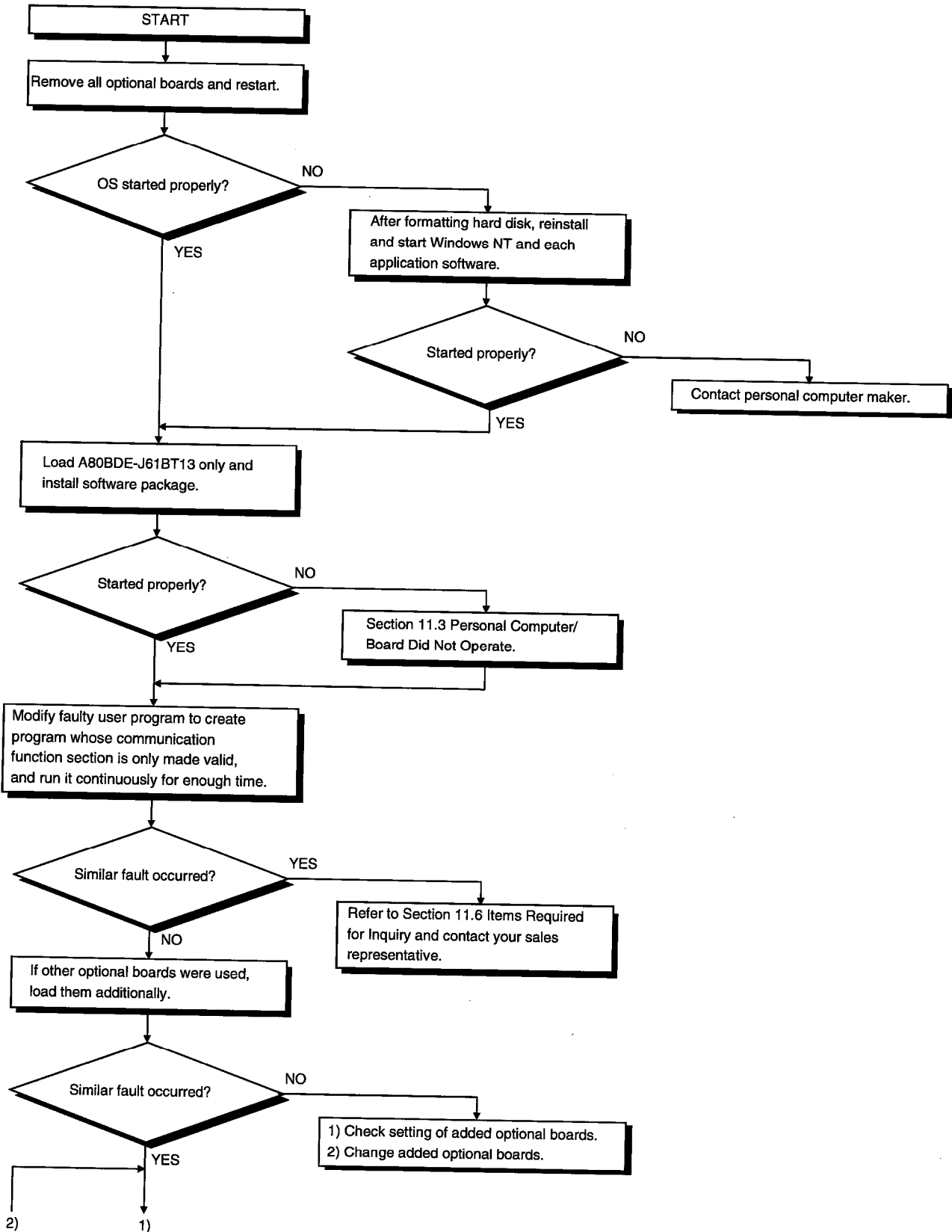
11.5.2 Data cannot be read/written by using communication function

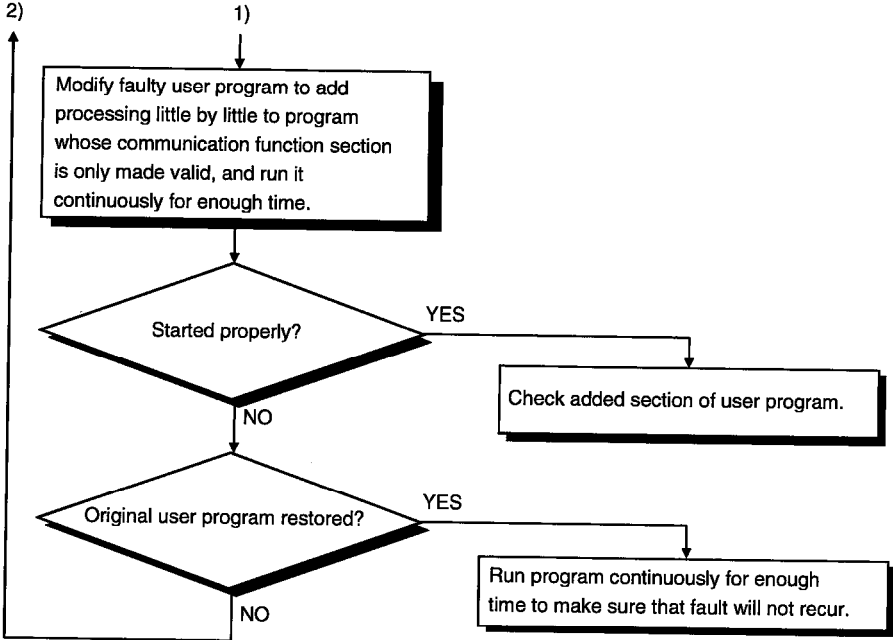


11.5.3 Communication is stopped during user program run



11.5.4 System shutdown or system reset occurs during user program run





11.6 Items Required for Inquiry

When you judged that the board is faulty and contact your sales representative, always inform us of the following conditions and circumstances.

(1) Fault phenomenon (specifically)

Example) At start after power-on, "board Not response" appears and the board does not start.

(2) Personal computer maker, personal computer name, personal computer type

(3) Main memory capacity, hard disk capacity, CPU type

(4) OS name:Windows NT4.0

(5) Loading slot position, number of boards loaded

(6) Presence/absence of other's optional boards

(7) When other's optional boards are loaded, indicate the following items per board.

·Board type

·Board maker

·Memory address (first address and occupying size)

·I/O address (first address and occupying size)

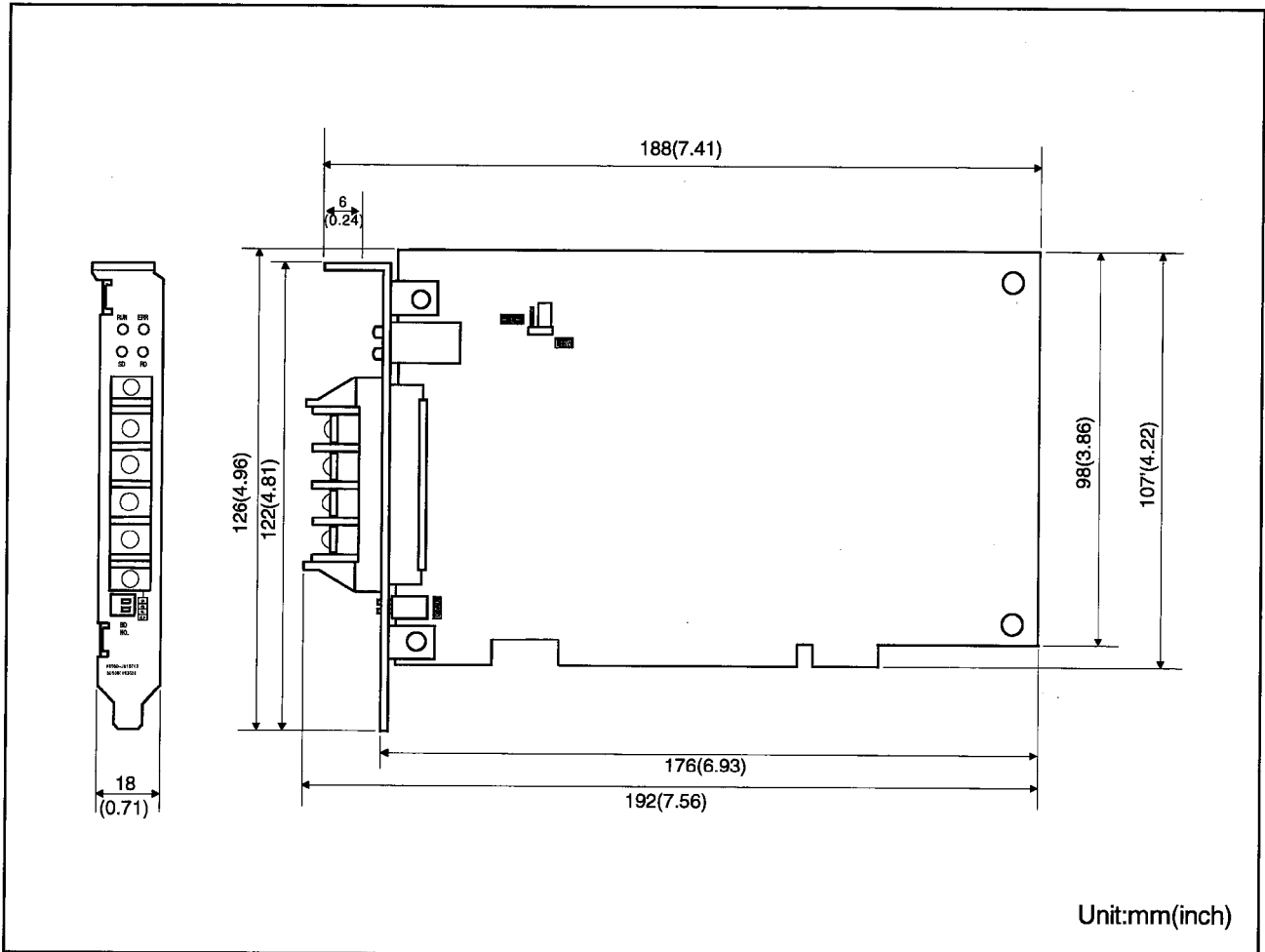
·IRQ number, DMA number

(8) Presence/absence of comparison and check on other personal computer

(9) Switching setting

APPENDIX

Appendix 1 Outline Dimension Drawing



CC-Link Interface Card
type A80BDE-J61BT13 for SW1DNF-CCLINK

User's Manual

MODEL	A80BD-BT13-1-U-E
MODEL CODE	13JL67
IB(NA)66865-A(9807)MEE	

 **MITSUBISHI ELECTRIC CORPORATION**

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