

mitsubishi

MOTION CONTROLLER

Installation Manual

type SW6RNC-GSVE/GSVHELPE

● SAFETY PRECAUTIONS ●

(Please 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.

These precautions apply only to this product and the motion controllers. Refer to the Users manual of the motion CPU modules to use for a description of the motion controller safety precautions.

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

Depending on circumstances, procedures indicated by  CAUTION may also be linked to serious results.

In any case, it is important to follow the directions for usage.

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

For Safe Operations

1. Prevention of electric shocks

DANGER

- Never open the front case or terminal covers while the power is ON or the unit is running, as this may lead to electric shocks.
- Never run the unit with the front case or terminal cover removed. The high voltage terminal and charged sections will be exposed and may lead to electric shocks.
- Never open the front case or terminal cover at times other than wiring work or periodic inspections even if the power is OFF. The insides of the Motion controller and servo amplifier are charged and may lead to electric shocks.
- Completely turn off the externally supplied power used in the system before mounting or removing the module, performing wiring work, or inspections. Failing to do so may lead to electric shocks.
- When performing wiring work or inspections, turn the power OFF, wait at least ten minutes, and then check the voltage with a tester, etc.. Failing to do so may lead to electric shocks.
- Be sure to ground the Motion controller, servo amplifier and servomotor. (Ground resistance : 100 Ω or less) Do not ground commonly with other devices.
- The wiring work and inspections must be done by a qualified technician.
- Wire the units after installing the Motion controller, servo amplifier and servomotor. Failing to do so may lead to electric shocks or damage.
- Never operate the switches with wet hands, as this may lead to electric shocks.
- Do not damage, apply excessive stress, place heavy things on or sandwich the cables, as this may lead to electric shocks.
- Do not touch the Motion controller, servo amplifier or servomotor terminal blocks while the power is ON, as this may lead to electric shocks.
- Do not touch the built-in power supply, built-in grounding or signal wires of the Motion controller and servo amplifier, as this may lead to electric shocks.

2. For fire prevention

CAUTION

- Install the Motion controller, servo amplifier, servomotor and regenerative resistor on incombustible. Installing them directly or close to combustibles will lead to fire.
- If a fault occurs in the Motion controller or servo amplifier, shut the power OFF at the servo amplifier's power source. If a large current continues to flow, fire may occur.
- When using a regenerative resistor, shut the power OFF with an error signal. The regenerative resistor may abnormally overheat due to a fault in the regenerative transistor, etc., and may lead to fire.
- Always take heat measures such as flame proofing for the inside of the control panel where the servo amplifier or regenerative resistor is installed and for the wires used. Failing to do so may lead to fire.
- Do not damage, apply excessive stress, place heavy things on or sandwich the cables, as this may lead to fire.

3. For injury prevention

CAUTION

- Do not apply a voltage other than that specified in the instruction manual on any terminal. Doing so may lead to destruction or damage.
- Do not mistake the terminal connections, as this may lead to destruction or damage.
- Do not mistake the polarity (+ / -), as this may lead to destruction or damage.
- Do not touch the heat radiating fins of controller or servo amplifier, regenerative resistor and servomotor, etc., while the power is ON and for a short time after the power is turned OFF. In this timing, these parts become very hot and may lead to burns.
- Always turn the power OFF before touching the servomotor shaft or coupled machines, as these parts may lead to injuries.
- Do not go near the machine during test operations or during operations such as teaching. Doing so may lead to injuries.

4. Various precautions

Strictly observe the following precautions.

Mistaken handling of the unit may lead to faults, injuries or electric shocks.

(1) System structure

CAUTION

- Always install a leakage breaker on the Motion controller and servo amplifier power source.
- If installation of an electromagnetic contactor for power shut off during an error, etc., is specified in the instruction manual for the servo amplifier, etc., always install the electromagnetic contactor.
- Install the emergency stop circuit externally so that the operation can be stopped immediately and the power shut off.
- Use the Motion controller, servo amplifier, servomotor and regenerative resistor with the correct combinations listed in the instruction manual. Other combinations may lead to fire or faults.
- Use the CPU module, base unit and motion module with the correct combinations listed in the instruction manual. Other combinations may lead to faults.
- If safety standards (ex., robot safety rules, etc.,) apply to the system using the Motion controller, servo amplifier and servomotor, make sure that the safety standards are satisfied.
- Construct a safety circuit externally of the Motion controller or servo amplifier if the abnormal operation of the Motion controller or servo amplifier differ from the safety directive operation in the system.
- In systems where coasting of the servomotor will be a problem during the forced stop, emergency stop, servo OFF or power supply OFF, use dynamic brakes.
- Make sure that the system considers the coasting amount even when using dynamic brakes.
- In systems where perpendicular shaft dropping may be a problem during the forced stop, emergency stop, servo OFF or power supply OFF, use both dynamic brakes and electromagnetic brakes.

CAUTION

- The dynamic brakes must be used only on errors that cause the forced stop, emergency stop, or servo OFF. These brakes must not be used for normal braking.
- The brakes (electromagnetic brakes) assembled into the servomotor are for holding applications, and must not be used for normal braking.
- The system must have a mechanical allowance so that the machine itself can stop even if the stroke limits switch is passed through at the max. speed.
- Use wires and cables that have a wire diameter, heat resistance and bending resistance compatible with the system.
- Use wires and cables within the length of the range described in the instruction manual.
- The ratings and characteristics of the parts (other than Motion controller, servo amplifier and servomotor) used in a system must be compatible with the Motion controller, servo amplifier and servomotor.
- Install a cover on the shaft so that the rotary parts of the servomotor are not touched during operation.
- There may be some cases where holding by the electromagnetic brakes is not possible due to the life or mechanical structure (when the ball screw and servomotor are connected with a timing belt, etc.). Install a stopping device to ensure safety on the machine side.

(2) Parameter settings and programming

CAUTION

- Set the parameter values to those that are compatible with the Motion controller, servo amplifier, servomotor and regenerative resistor model and the system application. The protective functions may not function if the settings are incorrect.
- The regenerative resistor model and capacity parameters must be set to values that conform to the operation mode, servo amplifier and servo power supply module. The protective functions may not function if the settings are incorrect.
- Set the mechanical brake output and dynamic brake output validity parameters to values that are compatible with the system application. The protective functions may not function if the settings are incorrect.
- Set the stroke limit input validity parameter to a value that is compatible with the system application. The protective functions may not function if the setting is incorrect.
- Set the servomotor encoder type (increment, absolute position type, etc.) parameter to a value that is compatible with the system application. The protective functions may not function if the setting is incorrect.
- Set the servomotor capacity and type (standard, low-inertia, flat, etc.) parameter to values that are compatible with the system application. The protective functions may not function if the settings are incorrect.
- Set the servo amplifier capacity and type parameters to values that are compatible with the system application. The protective functions may not function if the settings are incorrect.

CAUTION

- Use the program commands for the program with the conditions specified in the instruction manual.
- Set the sequence function program capacity setting, device capacity, latch validity range, I/O assignment setting, and validity of continuous operation during error detection to values that are compatible with the system application. The protective functions may not function if the settings are incorrect.
- Some devices used in the program have fixed applications, so use these with the conditions specified in the instruction manual.
- The input devices and data registers assigned to the link will hold the data previous to when communication is terminated by an error, etc. Thus, an error correspondence interlock program specified in the instruction manual must be used.
- Use the interlock program specified in the intelligent function module's instruction manual for the program corresponding to the intelligent function module.

(3) Transportation and installation

CAUTION

- Transport the product with the correct method according to the mass.
- Use the servomotor suspension bolts only for the transportation of the servomotor. Do not transport the servomotor with machine installed on it.
- Do not stack products past the limit.
- When transporting the Motion controller or servo amplifier, never hold the connected wires or cables.
- When transporting the servomotor, never hold the cables, shaft or detector.
- When transporting the Motion controller or servo amplifier, never hold the front case as it may fall off.
- When transporting, installing or removing the Motion controller or servo amplifier, never hold the edges.
- Install the unit according to the instruction manual in a place where the mass can be withstood.
- Do not get on or place heavy objects on the product.
- Always observe the installation direction.
- Keep the designated clearance between the Motion controller or servo amplifier and control panel inner surface or the Motion controller and servo amplifier, Motion controller or servo amplifier and other devices.
- Do not install or operate Motion controller, servo amplifiers or servomotors that are damaged or that have missing parts.
- Do not block the intake/outtake ports of the Motion controller, servo amplifier and servomotor with cooling fan.
- Do not allow conductive matter such as screw or cutting chips or combustible matter such as oil enter the Motion controller, servo amplifier or servomotor.

⚠ CAUTION

- The Motion controller, servo amplifier and servomotor are precision machines, so do not drop or apply strong impacts on them.
- Securely fix the Motion controller, servo amplifier and servomotor to the machine according to the instruction manual. If the fixing is insufficient, these may come off during operation.
- Always install the servomotor with reduction gears in the designated direction. Failing to do so may lead to oil leaks.
- Store and use the unit in the following environmental conditions.

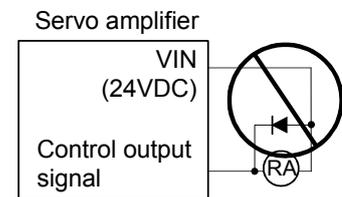
Environment	Conditions	
	Motion controller/Servo amplifier	Servomotor
Ambient temperature	According to each instruction manual.	0°C to +40°C (With no freezing) (32°F to +104°F)
Ambient humidity	According to each instruction manual.	80% RH or less (With no dew condensation)
Storage temperature	According to each instruction manual.	-20°C to +65°C (-4°F to +149°F)
Atmosphere	Indoors (where not subject to direct sunlight). No corrosive gases, flammable gases, oil mist or dust must exist	
Altitude	1000m (3280.84ft.) or less above sea level	
Vibration	According to each instruction manual	

- When coupling with the synchronous encoder or servomotor shaft end, do not apply impact such as by hitting with a hammer. Doing so may lead to detector damage.
- Do not apply a load larger than the tolerable load onto the synchronous encoder and servomotor shaft. Doing so may lead to shaft breakage.
- When not using the module for a long time, disconnect the power line from the Motion controller or servo amplifier.
- Place the Motion controller and servo amplifier in static electricity preventing vinyl bags and store.
- When storing for a long time, please contact with our sales representative.
Also, execute a trial operation.

(4) Wiring

⚠ CAUTION

- Correctly and securely wire the wires. Reconfirm the connections for mistakes and the terminal screws for tightness after wiring. Failing to do so may lead to run away of the servomotor.
- After wiring, install the protective covers such as the terminal covers to the original positions.
- Do not install a phase advancing capacitor, surge absorber or radio noise filter (option FR-BIF) on the output side of the servo amplifier.
- Correctly connect the output side (terminal U, V, W). Incorrect connections will lead the servomotor to operate abnormally.
- Do not connect a commercial power supply to the servomotor, as this may lead to trouble.
- Do not mistake the direction of the surge absorbing diode installed on the DC relay for the control signal output of brake signals, etc. Incorrect installation may lead to signals not being output when trouble occurs or the protective functions not functioning.
- Do not connect or disconnect the connection cables between each unit, the encoder cable or PLC expansion cable while the power is ON.
- Securely tighten the cable connector fixing screws and fixing mechanisms. Insufficient fixing may lead to the cables combing off during operation.
- Do not bundle the power line or cables.



(5) Trial operation and adjustment

⚠ CAUTION

- Confirm and adjust the program and each parameter before operation. Unpredictable movements may occur depending on the machine.
- Extreme adjustments and changes may lead to unstable operation, so never make them.
- When using the absolute position system function, on starting up, and when the Motion controller or absolute value motor has been replaced, always perform a home position return.

(6) Usage methods

⚠ CAUTION

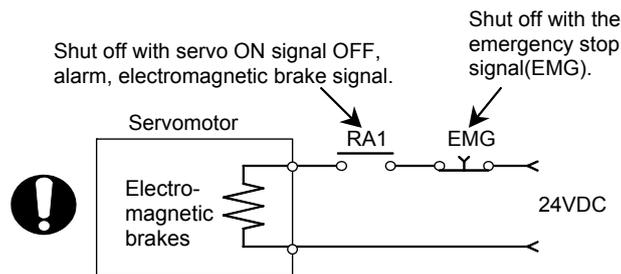
- Immediately turn OFF the power if smoke, abnormal sounds or odors are emitted from the Motion controller, servo amplifier or servomotor.
- Always execute a test operation before starting actual operations after the program or parameters have been changed or after maintenance and inspection.
- Do not attempt to disassemble and repair the units excluding a qualified technician whom our company recognized.
- Do not make any modifications to the unit.
- Keep the effect or electromagnetic obstacles to a minimum by installing a noise filter or by using wire shields, etc. Electromagnetic obstacles may affect the electronic devices used near the Motion controller or servo amplifier.
- When using the CE Mark-compliant equipment, refer to the "EMC Installation Guidelines" (data number IB(NA)-67339) for the Motion controllers and refer to the corresponding EMC guideline information for the servo amplifiers, inverters and other equipment.
- Use the units with the following conditions.

Item	Conditions					
	Q61P-A1	Q61P-A2	Q61P	Q62P	Q63P	Q64P
Input power	100 to 120VAC ^{+10%} _{-15%} (85 to 132VAC)	200 to 240VAC ^{+10%} _{-15%} (170 to 264VAC)	100 to 240VAC ^{+10%} _{-15%} (85 to 264VAC)		24VDC ^{+30%} _{-35%} (15.6 to 31.2VDC)	100 to 120VAC ^{+10%} / _{-15%} 200 to 240VAC ^{+10%} _{-15%} (85 to 132VAC/ 170 to 264VAC)
Input frequency	50/60Hz ±5%					
Tolerable momentary power failure	20ms or less					

(7) Corrective actions for errors

⚠ CAUTION

- If an error occurs in the self diagnosis of the Motion controller or servo amplifier, confirm the check details according to the instruction manual, and restore the operation.
- If a dangerous state is predicted in case of a power failure or product failure, use a servomotor with electromagnetic brakes or install a brake mechanism externally.
- Use a double circuit construction so that the electromagnetic brake operation circuit can be operated by emergency stop signals set externally.



- If an error occurs, remove the cause, secure the safety and then resume operation after alarm release.
- The unit may suddenly resume operation after a power failure is restored, so do not go near the machine. (Design the machine so that personal safety can be ensured even if the machine restarts suddenly.)

(8) Maintenance, inspection and part replacement

⚠ CAUTION

- Perform the daily and periodic inspections according to the instruction manual.
- Perform maintenance and inspection after backing up the program and parameters for the Motion controller and servo amplifier.
- Do not place fingers or hands in the clearance when opening or closing any opening.
- Periodically replace consumable parts such as batteries according to the instruction manual.
- Do not touch the lead sections such as ICs or the connector contacts.
- Before touching the module, always touch grounded metal, etc. to discharge static electricity from human body. Failure to do so may cause the module to fail or malfunction.
- Do not directly touch the module's conductive parts and electronic components. Touching them could cause an operation failure or give damage to the module.
- Do not place the Motion controller or servo amplifier on metal that may cause a power leakage or wood, plastic or vinyl that may cause static electricity buildup.
- Do not perform a megger test (insulation resistance measurement) during inspection.

⚠ CAUTION

- When replacing the Motion controller or servo amplifier, always set the new module settings correctly.
- When the Motion controller or absolute value motor has been replaced, carry out a home position return operation using one of the following methods, otherwise position displacement could occur.
 - 1) After writing the servo data to the Motion controller using programming software, switch on the power again, then perform a home position return operation.
 - 2) Using the backup function of the programming software, load the data backed up before replacement.
- After maintenance and inspections are completed, confirm that the position detection of the absolute position detector function is correct.
- Do not drop or impact the battery installed to the module.
Doing so may damage the battery, causing battery liquid to leak in the battery. Do not use the dropped or impacted battery, but dispose of it.
- Do not short circuit, charge, overheat, incinerate or disassemble the batteries.
- The electrolytic capacitor will generate gas during a fault, so do not place your face near the Motion controller or servo amplifier.
- The electrolytic capacitor and fan will deteriorate. Periodically replace these to prevent secondary damage from faults. Replacements can be made by our sales representative.

(9) About processing of waste

When you discard Motion controller, servo amplifier, a battery (primary battery) and other option articles, please follow the law of each country (area).

⚠ CAUTION

- This product is not designed or manufactured to be used in equipment or systems in situations that can affect or endanger human life.
- When considering this product for operation in special applications such as machinery or systems used in passenger transportation, medical, aerospace, atomic power, electric power, or submarine repeating applications, please contact your nearest Mitsubishi sales representative.
- Although this product was manufactured under conditions of strict quality control, you are strongly advised to install safety devices to forestall serious accidents when it is used in facilities where a breakdown in the product is likely to cause a serious accident.

(10) General cautions

⚠ CAUTION

- All drawings provided in the instruction manual show the state with the covers and safety partitions removed to explain detailed sections. When operating the product, always return the covers and partitions to the designated positions, and operate according to the instruction manual.

Revisions

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

Print Date	*Manual Number	Revision
Aug., 2001	IB(NA)-0300041-A	First edition
Dec., 2001	IB(NA)-0300041-B	<p>Addition</p> <p>Section 3.4.1(2), Section 3.4.6, Section 3.7, Section 5.5, Section 5.6, Section 5.7, Section 5.8, Section 5.9</p> <p>Correction</p> <p>Changed from SW3RN-DOSCP description to SW6RN-DOSCP description, Chapter1, Section 1.1, Section 2.1, Section 2.2, Section 2.5, Section 3.1, Section 3.2, Section 3.3, Section 3.4.1(1), Section 3.4.2, Section 3.4.3, Section 3.4.4, Section 3.5, Section 4.1, Section 4.1.1, Section 4.1.2, Section 4.6.1, Section 5.1, Section 5.2, Section 5.3, Section 5.4</p>
Jul., 2002	IB(NA)-0300041-C	<p>Addition</p> <p>Addition of Windows 2000, Windows XP, SW6RN-GSV43P and A10BD-PCF interface board description, Section 3.4.7, Section 3.4.8, Section 3.4.9, Section 3.7.1, Section 4.1.3, Section 4.3.1, Section 4.3.2</p> <p>Correction</p> <p>Section 2.5, Section 3.1, Section 3.5, Section 4.6.1</p>
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Jun., 2005	IB(NA)-0300041-G	<p>Addition</p> <p>Addition of SW6RN-GSV54P description, Section 3.4.2 (3), Section 5.15, Section 5.16, Section 5.17, Section 5.18</p> <p>Correction</p> <p>Section 3.1</p>

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

Print Date	*Manual Number	Revision
Jan., 2007	IB(NA)-0300041-H	<div data-bbox="544 311 657 342" style="border: 1px solid black; padding: 2px;">Addition</div> WARRANTY, Section 3.4.1 (3) <div data-bbox="544 394 683 425" style="border: 1px solid black; padding: 2px;">Correction</div> SAFETY PRECAUTIONS, Section 2.1, Section 2.2 (1), Section 2.2 (2), Section 2.5, Section 3.1, Section 3.3, Section 3.4.1 (1), Section 3.7, Section 5.10, Section 5.15 <div data-bbox="544 546 639 577" style="border: 1px solid black; padding: 2px;">Delete</div> Section 3.7.1
Mar., 2008	IB(NA)-0300041-J	<div data-bbox="544 631 657 663" style="border: 1px solid black; padding: 2px;">Addition</div> Section 5.19 <div data-bbox="544 714 683 745" style="border: 1px solid black; padding: 2px;">Correction</div> SAFETY PRECAUTIONS, Section 2.2 (1), Section 2.2 (2), WARRANTY

CONTENTS

1. OVERVIEW	1- 1
1.1 Features	1- 1
2. SYSTEM CONFIGURATION	2- 1 to 2- 9
2.1 Software Makeup	2- 1
2.2 System Configuration	2- 3
2.3 Component List	2- 8
2.4 SW6RNC-GSVSETE Makeup	2- 8
2.5 Operating Environment	2- 9
3. INSTALLATION AND UNINSTALLATION	3- 1 to 3-33
3.1 Installation	3- 1
3.2 Registered Icons	3- 8
3.3 Created System Directories	3-11
3.4 Operating Instructions	3-12
3.4.1 Precautions for using SW20RN-DOCPRNP	3-12
3.4.2 Precautions for operation under Windows 98	3-16
3.4.3 Precautions for simultaneous operation of SW6RNC-GSV and GX Developer	3-18
3.4.4 Simultaneous execution of SW3RN-GSV[][]P and SW6RN-GSV[][]P	3-19
3.4.5 Simultaneous execution of SW3RN-DOSCP and SW6RN-DOSCP	3-20
3.4.6 Precautions for using SNETP	3-21
3.4.7 Precautions for using USB communication in Windows 2000	3-25
3.4.8 Precautions for using SSCNET communication in Windows XP	3-27
3.4.9 Precautions for using USB communication in Windows XP	3-28
3.5 Uninstallation	3-30
3.6 Browsing the SW6RNC-GSVHELPE Operating Manuals	3-31
3.7 Updating Instructions and Procedures	3-32
3.7.1 Updating SW6RNC-GSVE to Ver.00C later	3-32
4. SSCNET COMMUNICATION DRIVERS	4- 1 to 4-33
4.1 SSCNET Communication Driver Setup Procedure	4- 1
4.1.1 When using the A30CD-PCF interface card	4- 2
4.1.2 When using the A30BD-PCF interface board	4- 4
4.1.3 When using the A10BD-PCF interface board	4- 6
4.2 How to Check the System Resources	4- 7
4.3 Setting the Interface Board	4- 9
4.3.1 Setting the A30BD-PCF Interface Board	4- 9
4.3.2 Setting the A10BD-PCF Interface Board	4-11
4.4 Registering the SSCNET Communication Drivers	4-13
4.5 Stopping the SSCNET Communication Driver	4-26
4.6 Communication Settings Using GSV[][]P	4-30
4.6.1 Communication errors	4-32

5. Troubleshooting	5- 1 to 5-14
5.1 The setup program is terminated during installation.	5- 1
5.2 GSV[][]P or DOSCP does not start or it is terminated during operation	5- 2
5.3 If communication over SSCNET or via RS232C or USB fails with GSV[][]P	5- 4
5.4 If communication over SSCNET fails with DOSCP	5- 6
5.5 If no sampling data is obtained from DOSCP	5- 7
5.6 During USB communication, communication error occurred and communication is not recovered from error	5- 7
5.7 SNETP cannot be booted properly	5- 8
5.8 When GX Developer is booted, "Can not allocate Share memory" error occurs	5- 8
5.9 RS232C communication baud rate remains unchanged	5- 8
5.10 When SNETP is booted, "Not enough memory" error occurs	5- 9
5.11 If a runtime error of insufficient memory occurs when the GSV[][]P package is started up and CAMP is operated	5- 9
5.12 The SFC programs cannot be read from the motion CPU, or cannot be displayed correctly. ·	5-10
5.13 The characters are not displayed correctly on the program editor screen.	5-10
5.14 During USB communication, the USB driver cannot be installed or communication error occurs.	5-11
5.15 DOCPRNP cannot be booted properly	5-11
5.16 Application may not be displayed correctly	5-12
5.17 Sampling omission may occur on DOSCP screen	5-12
5.18 The menu may not be displayed in the monitor screen during monitoring	5-12
5.19 AUTOEXEC.BAT is not executed	5-13

1. OVERVIEW

1. OVERVIEW

This manual explains the installation procedures, operating environment and system configuration of the SW6RNC-GSVE Q series motion controller startup support software packages and SW6RNC-GSVHELPE operating manuals.

1.1 Features

The SW6RNC-GSVE Q series motion controller startup support software packages offer a group of software packages which totally supports the control program design environment, maintenance engineering environment and application design environment for configuring a system using the motion controllers.

The software can be used for various applications such as motion controller startup, centralized monitoring and data collection.

In addition, the software supports the development of user-original application software to structure a flexible machine.

2. SYSTEM CONFIGURATION

2. SYSTEM CONFIGURATION

2.1 Software Makeup

Each software package is made up of the following software.

(1) SW6RNC-GSVE: Q series motion controller startup support software packages

The packages of SW6RNC-GSVE are as indicated in Table 2.1.

Table 2.1 Packages of SW6RNC-GSVE

	Type	Product Name	Description
Control program design environment	SW6RN-GSV13P *1	Transfer/assembly software	Supports programming, monitor and test for controller OS SV13. (For motion Q series)
	SW6RN-GSV22P *2	Automatic machine software	Supports programming, monitor and test for controller OS SV22. (For motion Q series)
	SW6RN-GSV43P *3	Machine tool peripheral software	Supports programming, monitor and test for controller OS SV43. (For motion Q series)
	SW6RN-GSV54P *4	Dedicated robot software	Supports programming, monitor and test for controller OS SV54. (For motion Q series)
	SW3RN-CAMP *5	Cam data creation software	Creates the cam patterns for cam control of controller OS SV22. Needed for use of cams. (For motion A/Q series)
	SW3RN-DOCPRNP *6 (For Office 97)	Document printing software	Converts the program and parameter data set on GSV13P, GSV22P, GSV43P, GSV54P or CAMP into the Word/Excel file format, and supports printing them.
	SW20RN-DOCPRNP *6 (For Office 2000/XP/2003)		Converts the sampling data saved on DOSCP into the Excel file format, dumps and graphs them, and supports printing them. (For motion A/Q series)
Maintenance engineering environment	SW6RN-DOSCP *7	Digital oscilloscope software	Offers the maintenance engineering environment. Shows the motion system control status in terms of waveform and effective for survey, troubleshooting and analysis.(For motion Q series)
User application design environment	SW6RN-SNETP *8	SSCNET communication system software	Links the motion controller and personal computer by SSCNET communication to access data. When SSCNET communication is used, supports the communication API designed for user application software (VB, VC++). (For motion Q series)

*1 Hereafter abbreviated to GSV13P.

*2 Hereafter abbreviated to GSV22P.

*3 Hereafter abbreviated to GSV43P.

*4 Hereafter abbreviated to GSV54P.

*5 Hereafter abbreviated to CAMP.

*6 Hereafter abbreviated to DOCPRNP.

*7 Hereafter abbreviated to DOSCP.

*8 Hereafter abbreviated to SNETP.

*: Among the above software packages marked *1 to *5, install the necessary one according to the controller OS used.

Install either of the software packages marked *6 depending on the operating environment.

You cannot install and operate SW3RN-DOCPRNP and SW20RN-DOCPRNP together.

2. SYSTEM CONFIGURATION

(2) SW6RNC-GSVHELPE: Motion controller startup support software operating manuals

No.	Manual	Description
1	SW6RN-GSV13P operating manual	Explains the corresponding operations.
2	SW6RN-GSV22P operating manual	
3	SW6RN-GSV43P operating manual	
4	SW6RN-GSV54P operating manual	
5	SW3RN-CAMP operating manual	
6	SW3RN-DOCPRNP operating manual	
7	SW20RN-DOCPRNP operating manual	
8	SW6RN-DOSCP operating manual	
9	SW6RN-SNETP operating manual	Explains the corresponding operations. Explains the communication API functions.

*Any of the above operating manuals can be browsed from the "Help" menu of the corresponding software package after installation.

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Word and Excel are registered trademarks of Microsoft Corporation in the United States.

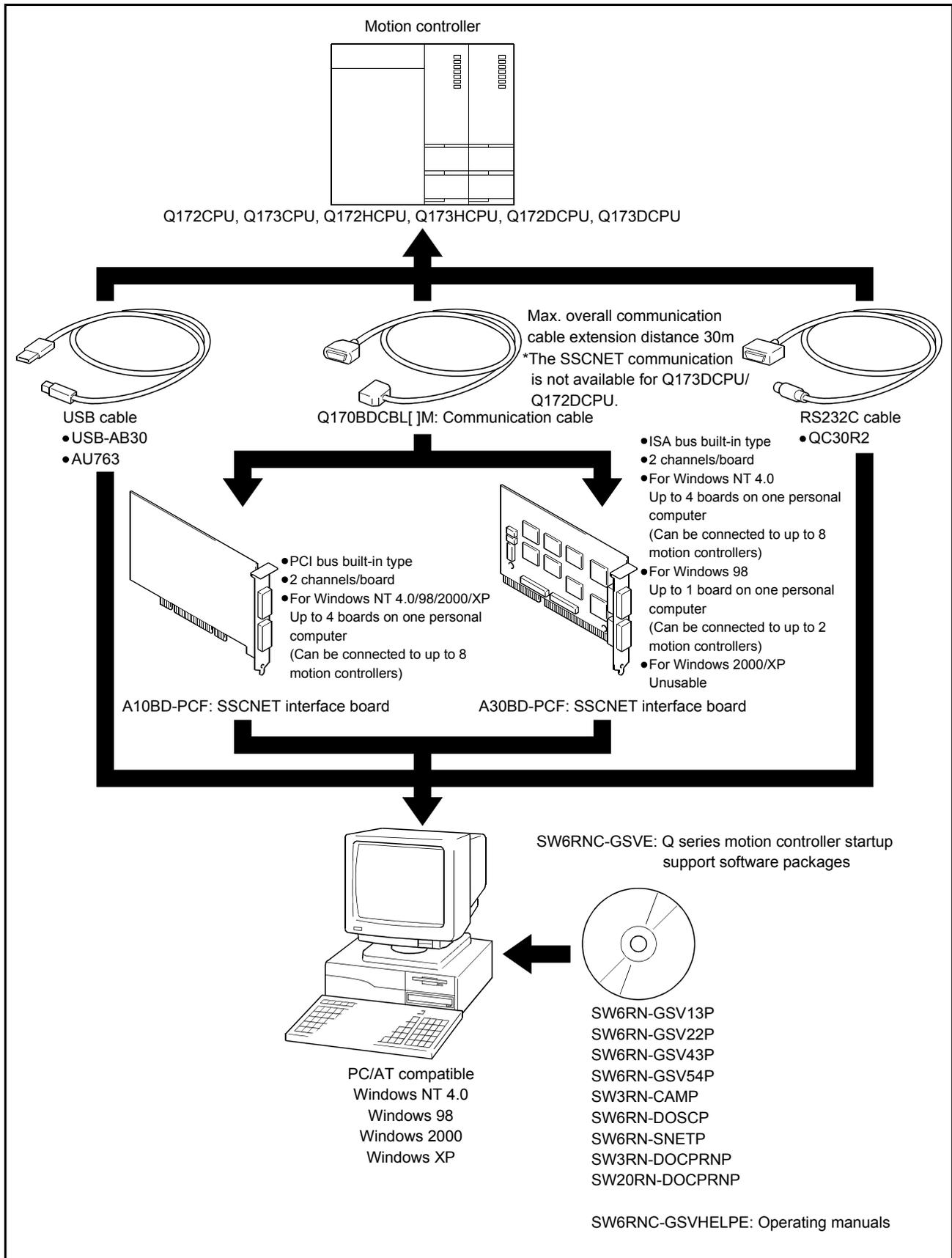
IMPORTANT

- (1) When installing SW6RNC-GSVE newly, refer to "3.1 Installation" and perform installation.
- (2) When updating SW6RNC-GSVE, refer to "3.7 Updating Instructions and Procedures" and perform updating.

2. SYSTEM CONFIGURATION

2.2 System Configuration

(1) When using a desktop personal computer



2. SYSTEM CONFIGURATION

POINT	
(1)	The interface board and interface card cannot be used together.
(2)	On some personal computers, the digital oscilloscope may not perform sampling. In that case, check the BIOS's ISA device memory and IRQ settings. (For the BIOS settings, refer to the manual of your personal computer.)
(3)	If, after SSCNET communication has been made, you remove the interface board and boot the personal computer without that board being reinstalled, Windows NT/98 may not start or may not run properly. When removing the interface board from the personal computer, you need to stop the SSCNET communication driver. For the way to stop, refer to "4.5 Stopping the SSCNET Communication Driver".
(4)	If the resume function, suspension setting, power-saving function or stand-by mode is set at the personal computer used for communication with the motion CPU, a communication error may occur. Do not use these functions at the personal computer used for communication with the motion CPU.
(5)	If the USB cable is connected or disconnected or the motion CPU is reset or turned off and on frequently during communication of the motion CPU, an unrecoverable communication error may occur. Disconnect the GSV application from the line* whenever possible when disconnecting or connecting the USB cable or resetting or turning on or off the motion CPU. If a communication error is not removed, disconnect the USB cable completely and, after five seconds, connect it again. (Though an error may occur during the first communication session after this operation, the correct function is recovered at and after the second session.) However, a communication error may not be removed even after the above operation with some personal computer models. In this case, reset the personal computer.
	* Offline state (disconnection from line) State where there is no communication with the Motion CPU (Program or parameter reading/writing, monitoring and testing are made in the online state.)
(6)	A communication error may occur according to some combination of the model of the personal computers and the USB cable and so on. If this happens, repeat operation while referring to the displayed message.
(7)	If the baud rate of the serial port of the personal computer (interface on the personal computer side) is changed for high speed communication, communication may be unsuccessful or communication retries may occur to result in slow communication, according to certain PC performance. If high speed communication is unsuccessful, decrease the baud rate.
(8)	USB cable <ul style="list-style-type: none">• The USB cable can be used with a USB driver in Windows 98/2000/XP.• It cannot be used with Windows NT.• If the USB cable is used, only one motion CPU can be connected.
(9)	You cannot fit and use the A30BD-PCF and A10BD-PCF interface boards together.

2. SYSTEM CONFIGURATION

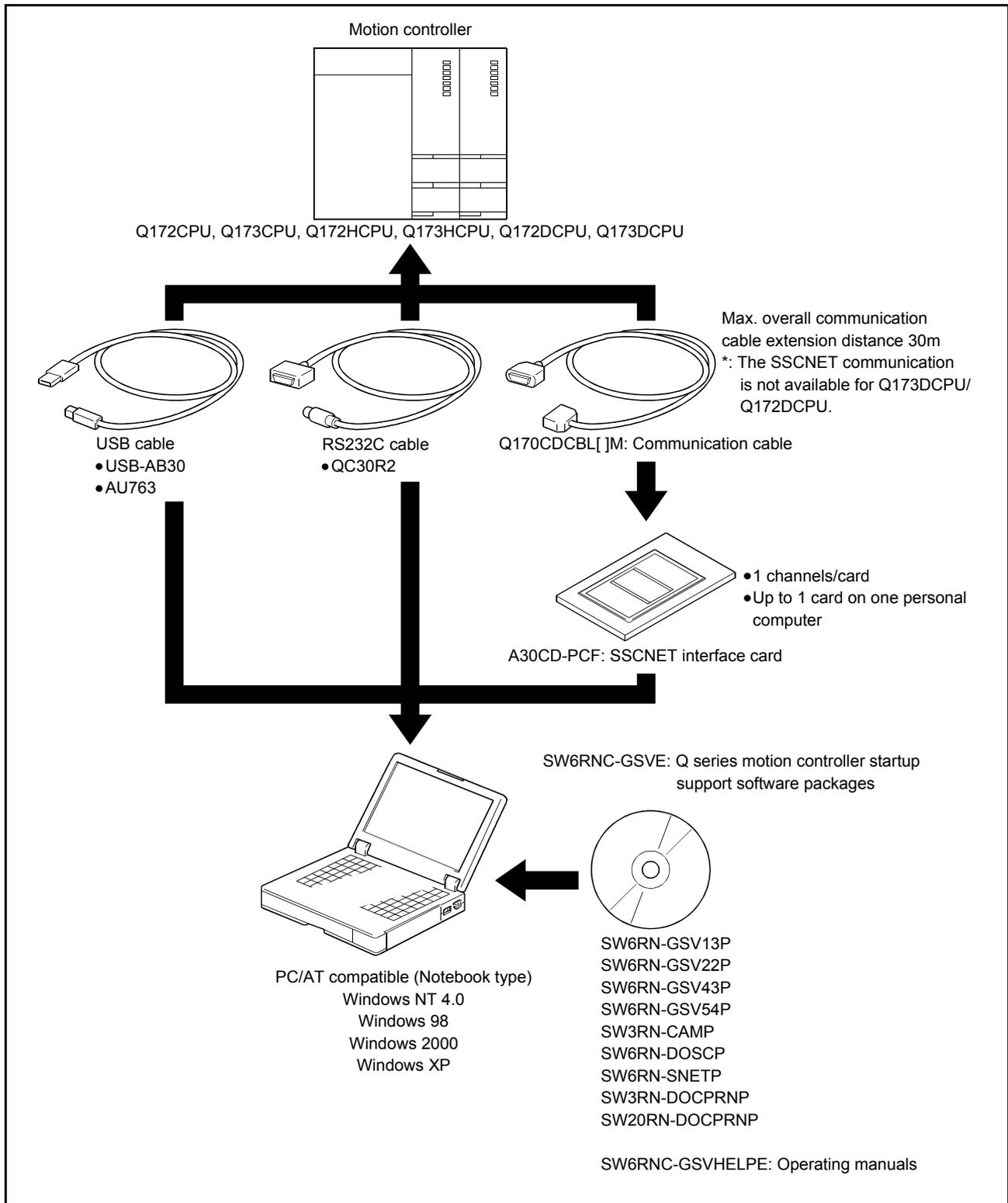
POINT				
	(10) The interface boards can be used in the following environment.			
	Windows 98	Windows NT	Windows 2000	Windows XP
A30BD-PCF interface board (ISA bus built-in type)	○	○	×	×
A10BD-PCF interface board (PCI bus built-in type)	○	○	○	○

Usable: ○
Unusable: ×

(11) When you use the plural A10BD-PCF interface boards in Windows NT, make the BIOS setting not to overlap the IRQs of each board.

2. SYSTEM CONFIGURATION

(2) When using a notebook computer



2. SYSTEM CONFIGURATION

POINT					
(1)	The interface board and interface card cannot be used together.				
(2)	<p>On some personal computers, the digital oscilloscope may not perform sampling.</p> <p>In that case, use the card enabler supplied by the personal computer maker or check the PC card controller settings (BIOS settings). (For the BIOS settings, refer to the manual of your personal computer.)</p>				
(3)	<p>For Windows 98/2000/XP, insert the interface card into the personal computer after installing SNETP and setting up the SSCNET communication drivers.</p> <p>(SNETP can be reinstalled with the interface card loaded.)</p>				
(4)	<p>If, after SSCNET communication has been made, you remove the interface card and boot the personal computer without that card being reinstalled, Windows NT may not start or may not run properly.</p> <p>For Windows NT, you need to stop the SSCNET communication driver when removing the interface card.</p> <p>For the way to stop, refer to "4.5 Stopping the SSCNET Communication Driver".</p> <p>(For Windows 98/2000/XP, use the plug and play function to remove. Using this function will not cause such phenomena.)</p>				
(5)	<p>If the resume function, suspension setting, power-saving function or stand-by mode is set at the personal computer used for communication with the motion CPU, a communication error may occur.</p> <p>Do not use these functions at the personal computer used for communication with the motion CPU.</p>				
(6)	<p>If the USB cable is connected or disconnected or the motion CPU is reset or turned off and on frequently during communication of the motion CPU, an unrecoverable communication error may occur.</p> <p>Disconnect the GSV application from the line* whenever possible when disconnecting or connecting the USB cable or resetting or turning on or off the motion CPU.</p> <p>If a communication error is not removed, disconnect the USB cable completely and, after five seconds, connect it again. (Though an error may occur during the first communication session after this operation, the correct function is recovered at and after the second session.)</p> <p>However, a communication error may not be removed even after the above operation with some personal computer models.</p> <p>In this case, reset the personal computer.</p> <p>* Offline state (disconnection from line)</p> <p>State where there is no communication with the motion CPU (Program or parameter reading/writing, monitoring and testing are made in the online state.)</p>				
(7)	<p>A communication error may occur according to some combination of the model of the personal computers and the USB cable and so on.</p> <p>If this happens, repeat operation while referring to the displayed message.</p>				
(8)	<p>If the baud rate of the serial port of the personal computer (interface on the personal computer side) is changed for high speed communication, communication may be unsuccessful or communication retries may occur to result in slow communication, according to certain personal computer performance.</p> <p>If high speed communication is unsuccessful, decrease the baud rate.</p>				
(9)	<p>USB cable</p> <ul style="list-style-type: none"> • The USB cable can be used with with a USB driver in Windows 98/2000/XP. • It cannot be used with Windows NT. • If the USB cable is used, only one motion CPU can be connected. 				
(10)	The interface cards can be used in the following environment.				
		Windows 98	Windows NT	Windows 2000	Windows XP
	A30CD-PCF interface card	○	○	○	○

Usable: ○

2. SYSTEM CONFIGURATION

2.3 Component List

Name	Type	Remarks
SSCNET interface board	A30BD-PCF	ISA bus loading type, 2 channels/board
	A10BD-PCF	PCI bus loading type, 2 channels/board
SSCNET interface card	A30CD-PCF	PCMCIA type II, 1 channel/card
Communication cable	Q170BDCBL 3M	For A30BD-PCF, A10BD-PCF 3m
	Q170BDCBL 5M	For A30BD-PCF, A10BD-PCF 5m
	Q170BDCBL 10M	For A30BD-PCF, A10BD-PCF 10m
	Q170CDCBL 3M	For A30CD-PCF 3m
	Q170CDCBL 5M	For A30CD-PCF 5m
	Q170CDCBL 10M	For A30CD-PCF 10m
USB cable	USB-AB30	Made by Elecom Co., Ltd.; recommended
	AU763	Made by Arbel Co., Ltd.; recommended
RS232C cable	QC30R2	Made by Mitsubishi Electric; recommended

2.4 SW6RNC-GSVSETE Makeup

Type	Product Packed	Remarks
SW6RNC-GSVSETE	SW6RNC-GSVE	Motion controller startup support software packages on 1 CD-ROM
	SW6RNC-GSVHELPE	Motion controller startup support software operating manuals on 1 CD-ROM
	Installation manual	IB(NA)-0300041
	A30CD-PCF	PCMCIA type II, 1 channel/card
	Q170CDCBL 3M	For A30CD-PCF, 3m

2. SYSTEM CONFIGURATION

2.5 Operating Environment

The operating environment is indicated below.

Item	Description
Computer	Personal computer that operates with Windows NT/98/2000/XP. (PC/AT compatible) <ul style="list-style-type: none"> For Windows NT/98 : Pentium 133MHz or more recommended For Windows 2000 : Pentium II 233MHz or more recommended For Windows XP : Pentium II 450MHz or more recommended
Operating system *1	Windows NT 4.0 (Service Pack 2) Windows 98 Windows 2000 Professional Windows XP Professional/Home Edition <ul style="list-style-type: none"> Microsoft Internet Explorer 5.0 or higher is needed.
Microsoft Office (Word/Excel)	Office 97 (Word97, Excel97) Office 2000 (Word2000, Excel2000) Office XP (Word2002, Excel2002) Office 2003 (Word2003, Excel2003)
Required memory	The required size changes depending on the operating system environment. <ul style="list-style-type: none"> For Windows NT/98 : 32MB or more recommended For Windows 2000 : 64MB or more recommended For Windows XP : 192MB or more recommended
Hard disk free space	Refer to the table below.
Disk drive	3.5 inch (1.44MB) floppy disk drive CD-ROM disk drive
Display	Resolution 800x600 dots, 256 or more display colors

The following spaces are required according to the software installed.

Type	Size	
	SW6RNC-GSVE	SW6RNC-GSVHELPE
SW6RN-GSV13P	65MB	40MB
SW6RN-GSV22P	66MB	45MB
SW6RN-GSV43P	55MB	32MB
SW6RN-GSV54P	40MB	20MB
SW3RN-CAMP	5MB	3MB
SW6RN-DOSCP	35MB	10MB
SW6RN-SNETP	Standard	60MB
	Custom (when all are selected)	60.5MB
SW3RN-DOCPRNP	45MB	5MB
SW20RN-DOCPRNP	45MB	5MB

POINT
(1) If you have any question as to the operating procedure of Windows in operating this software, refer to the Windows manual or commercially available guidebooks.
(2) Depending on the system font size of Windows NT/98/2000/XP, the screen may not be displayed properly. Use a small size font.

3. INSTALLATION AND UNINSTALLATION

3. INSTALLATION AND UNINSTALLATION

This chapter provides how to install and uninstall GSV13P, GSV22P, GSV43P, GSV54P, CAMP, DOSCP, SNETP and/or DOCPRNP.

3.1 Installation

This section gives the way to install and uninstall GSV13P, GSV22P, GSV43P, GSV54P, CAMP, DOSCP, SNETP and/or DOCPRNP.

IMPORTANT

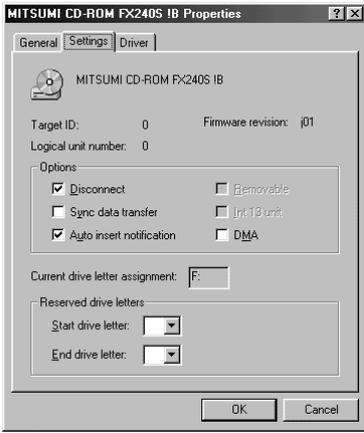
- (1) Different versions of SNETP and DOCPRNP cannot coexist and run. Always reinstall them after uninstalling them. (However, when Windows NT, Windows 98, Windows 2000 and Windows XP are installed in a single personal computer, the same versions of SNETP and DOCPRNP can coexist in respective drives without any problem.)
- (2) SW3RN-SNETP and SW6RN-SNETP (Ver. 00A) cannot coexist. To make SW3RN-SNETP and SW6RN-SNETP coexist, install SW6RN-SNETP Ver. 00B or later. (Refer to Section 3.4.6 (2) for details.)
- (3) For DOCPRNP, install the DOCPRNP software package that meets the operating environment. You cannot install and operate SW3RN-DOCPRNP and SW20RN-DOCPRNP together.

Operating Environment	DOCPRNP
Office 97 (Word 97, Excel 97)	SW3RN-DOCPRNP
Office 2000 (Word 2000, Excel 2000)	SW20RN-DOCPRNP
Office XP (Word 2002, Excel 2002)	
Office 2003 (Word 2003, Excel 2003)	

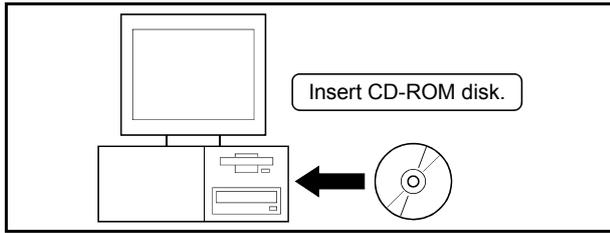
- (4) If a correction module, "Update for security problems (328310)," has been applied to your Windows XP, the setup program of SW6RNC-GSVE may not work correctly. (The following message box is displayed.)
In this case, download and apply a correction module, "Windows XP update (814995)" from the Microsoft Corporation's Web site.



3. INSTALLATION AND UNINSTALLATION

POINT						
<p>(1) Before starting installation, close all other applications running on Windows NT/98/2000/XP.</p> <p>(2) If you install this software from the CD-ROM drive of the other Windows 95/98 personal computer via a network, "Setup.Exe not found." appears and installation cannot be made. After making setting to share the folder of this software to be installed in the CD-ROM drive of the Windows 95/98 personal computer, assign it to the network drive, execute "Setup.Exe", and install this software.</p> <p>(3) If the installation of this software into the drive compressed in the drive space has stopped at any point, increase the free space of the drive and then press the [Retry] button to resume, or press the [Stop] button to stop and change the drive to the one where the installation destination is not compressed.</p> <p>(4) In any of the following cases, always uninstall (refer to Section 3.5) and reinstall the software.</p> <ul style="list-style-type: none"> • Installation failed midway • Installation destination drive is to be changed • Software is to be reinstalled <p>(5) Setup.exe is not started up in the following case. If Setup.exe is not started up automatically, execute the Setup.exe on the CD-ROM from the "Add/Remove Programs" screen, or apply the following measure.</p>	<table border="1"> <thead> <tr> <th data-bbox="534 978 1141 1012">Description</th> <th data-bbox="1144 978 1396 1012">Measure</th> </tr> </thead> <tbody> <tr> <td data-bbox="534 1016 1141 1093">With the CD-ROM inserted, your computer was turned on, and then Windows was started up.</td> <td data-bbox="1144 1016 1396 1093">Setup.exe is executed by inserting the CD-ROM again.</td> </tr> </tbody> </table>	Description	Measure	With the CD-ROM inserted, your computer was turned on, and then Windows was started up.	Setup.exe is executed by inserting the CD-ROM again.	
Description	Measure					
With the CD-ROM inserted, your computer was turned on, and then Windows was started up.	Setup.exe is executed by inserting the CD-ROM again.					
	<p>The OS is Windows 98, and the function for starting up a CD-ROM automatically has been disabled.</p> <ul style="list-style-type: none"> • How to confirm the automatic startup feature <ol style="list-style-type: none"> 1) Select [Start] - [Settings] - [Control Panel] to start up Control Panel. 2) Double-click the [System] icon on the Control Panel. 3) Display "System Properties." Click the [Device Manager] tab. The hardware models currently available with your computer are listed. 4) Select "CD-ROM" from the hardware list, and click [Property]. 5) The following dialog box is displayed. Click the [Settings] tab, and confirm the "Notify insertion automatically" item. If this item is not checked, automatic startup is not executed. 					
		<p>Check the item, and then start up Windows again. Automatic startup is enabled after Windows is started up again.</p>				

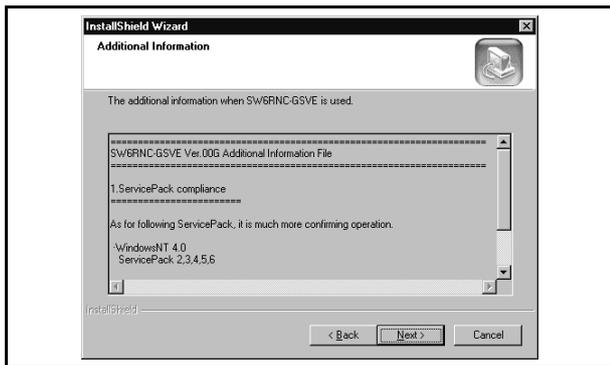
3. INSTALLATION AND UNINSTALLATION



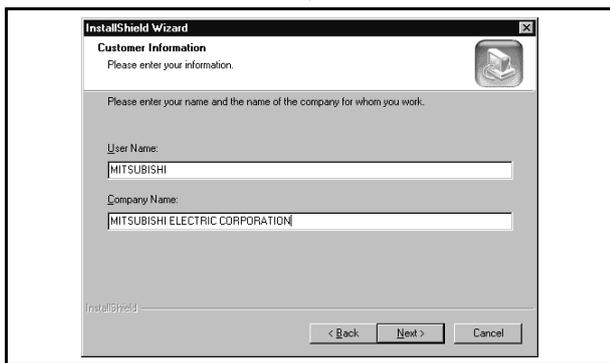
- 1) Power on the personal computer and start Windows NT/98/2000/XP.
Insert the CD-ROM disk into the CD-ROM drive.



- 2) The "Setup.exe" on the CD-ROM is started up automatically, and the left-hand screen is displayed after a while.
Click [Next >].
*: If the left-hand screen is not displayed, execute the "Setup.exe" on the CD-ROM as follows.
 - E:\Setup.exe



- 3) The additional information appears.
Click [Next >].



- 4) Type user name and company name, and click [Next >].

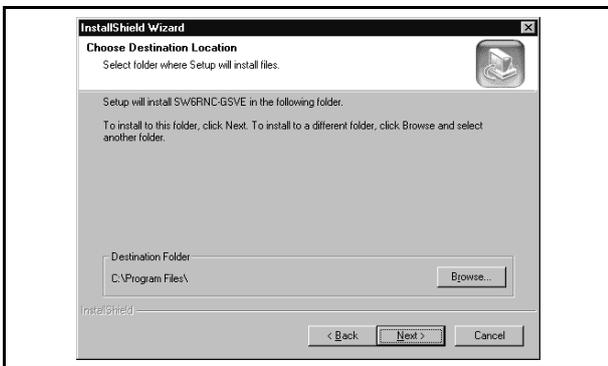
To next page

3. INSTALLATION AND UNINSTALLATION

From preceding page



5) Type product ID, and click [Next >].

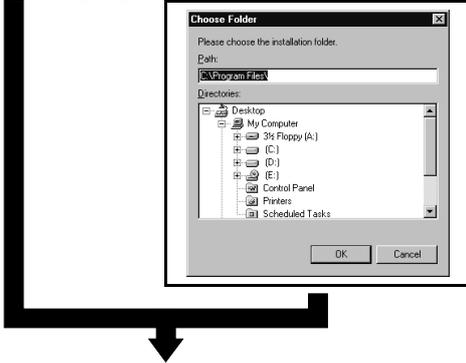


6) Choose the installation destination.
The installation destination directory defaults to "C:\Program Files".
When not changing it, click [Next >].
When changing it, click [Browse...].

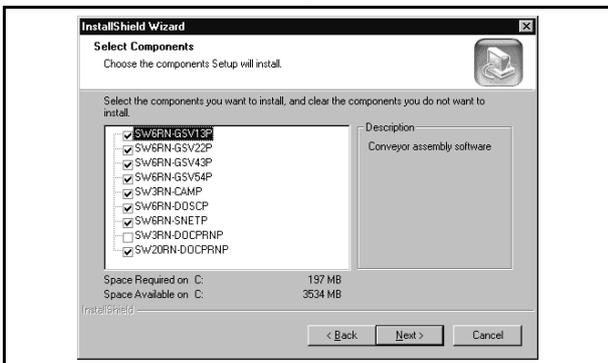


<When not changing>

<When changing>



7) Choose the new drive and directory and click [OK].
When not changing the installation destination directory, the directory selection dialog box does not appear.



8) Select the software models you install.
The software models installed have been checked.
Uncheck the software models you do not install.
Click [Next >].



To next page

3. INSTALLATION AND UNINSTALLATION

From preceding page

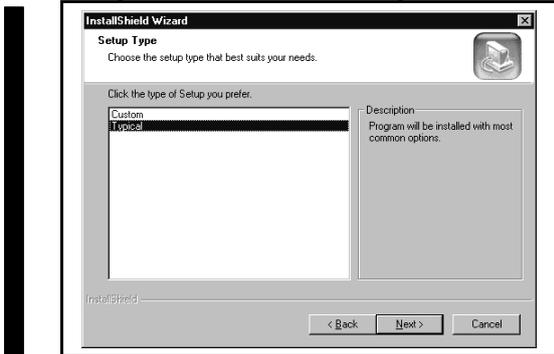


- 9) The left-hand dialog box is displayed when both SW3RN-DOCPNP and SW20RN-DOCPNP are selected. Click [OK]. The screen is returned to the screen of step 8). Select either of the two software models according to the environment you use.



<Not installing SNETP>

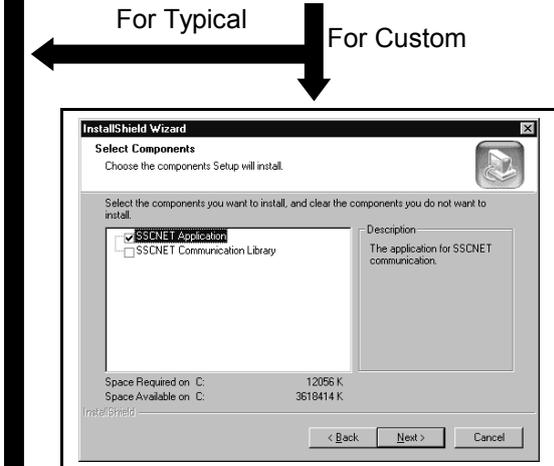
<Installing SNETP>



- 10) If you install SNETP, select a setup method. Check the setup method and click [Next >].
- "Typical" indicates that only the communication software necessary to use SW6RN-GSV[][]P/DOSCP is installed.
 - "Custom" indicates that you can choose the software to be installed. Choose Custom when designing the user application using the SSCNET communication API.

For Typical

For Custom



- 11) When you selected "Custom" as the setup method, choose the components to be installed.
- When using the SSCNET communication API to design the user application and make communication Place "[X]" in the "SSCNET communication library" checkbox and click [Next >].

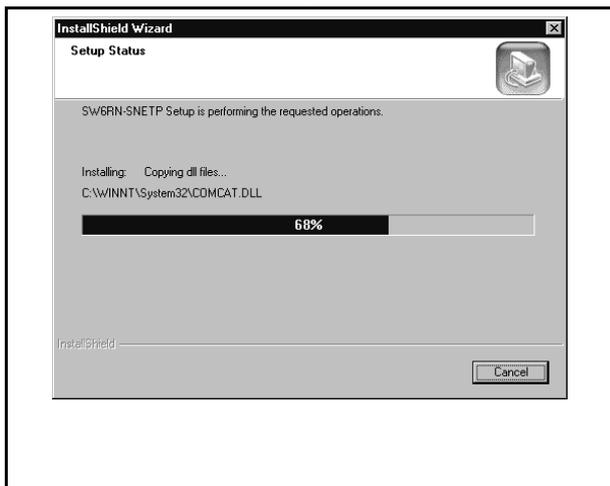
To next page

3. INSTALLATION AND UNINSTALLATION

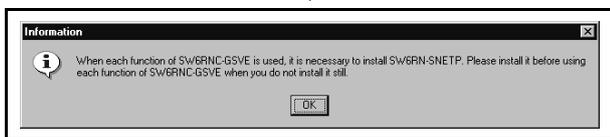
From preceding page



- 12) The dialog box shown on the left appears if the SSCNET communication driver or SNETP is not installed or SW6RN-SNETP Version 00B or later coexists with SW3RN-SNETP Ver. 00G or earlier. The SSCNET communication driver must be set up. After termination of the setup, set the SSCNET driver. In any of the following cases, the dialog box shown on the left does not appear. You need not set up the SSCNET communication driver.
- SW3RN-SNETP Ver. 00H or later is already installed
 - The SSCNET communication driver is already installed
 - In the setup method given in step 10), "Custom" is selected and "SSCNET application" is not selected (Since the SSCNET communication driver is not installed, setting is also unnecessary.)
- *: This dialog box don't appear in Windows 2000/XP.



- 13) Installation starts.
Install software in the order below.
1. SW6RN-SNETP (Easysocket)
 2. SW6RN-GSV13P
 3. SW6RN-GSV22P
 4. SW6RN-GSV43P
 5. SW6RN-GSV54P
 6. SW3RN-CAMP
 7. SW6RN-DOSCP
 8. SWnRN-DOCPNP^{*2}
- *1: If SNETP has been installed, continue installation of Easysocket.
Follow the instructions on the screen to install Easysocket
- *2: 3 or 20 is applicable to the n.



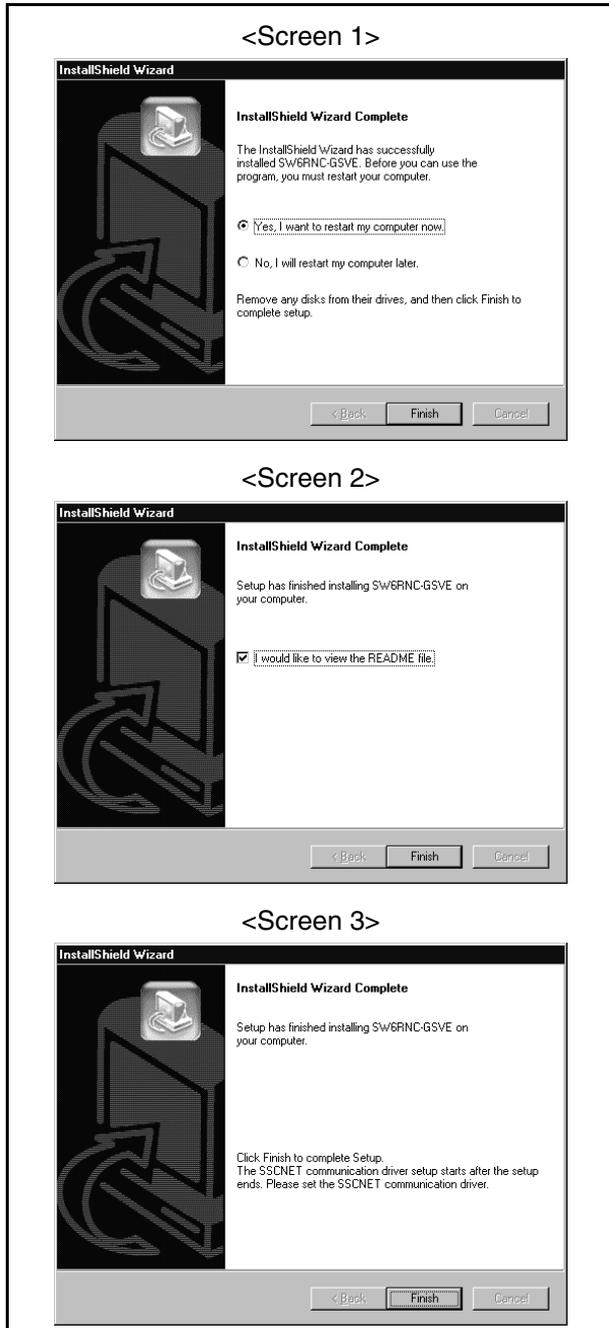
- 14) The left-hand dialog box is displayed when you install GSV13P, GSV22P, GSV43P, GSV54P, or DOSCP without selecting SNETP. Click [OK].

To next page



3. INSTALLATION AND UNINSTALLATION

From preceding page



15) The left screen appears on completion of installation.

The screen displayed changes with the software installed and their order of installation.

<For screen 1>

When using the software after completion of installation, you need to restart Windows NT/98/2000/XP.

Check "Yes, I want to restart my computer now." and click [Finish] to finish installation and restart Windows NT/98/2000/XP.

Check "No, I will restart my computer later." and click [Finish] to finish installation without restarting Windows NT/98/2000/XP.

<For screen 2>

Check "I would like to view the README file." and click [Finish] to display the README.TXT file and finish installation.

<For screen 3>

This screen appears when an SSCNET communication driver setup is required after completion of SNETP installation.

Click [Finish] to finish installation.

To make SSCNET communication in Windows NT/98, you need to perform SSCNET communication driver setup and communication setting using GSV[][]P (Section 4.6).

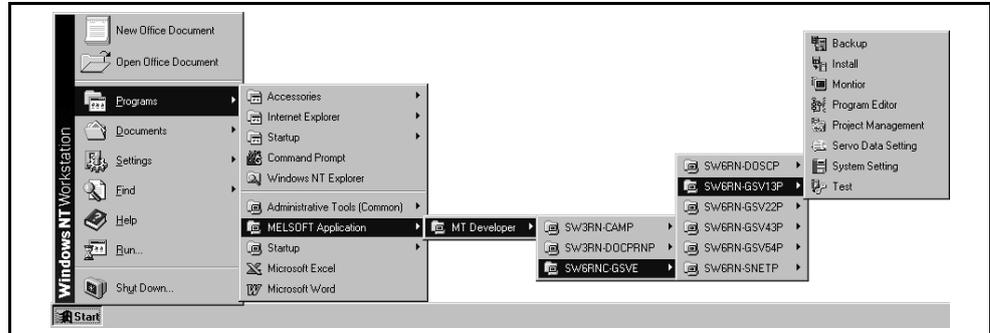
For details, refer to Chapter 4.

3. INSTALLATION AND UNINSTALLATION

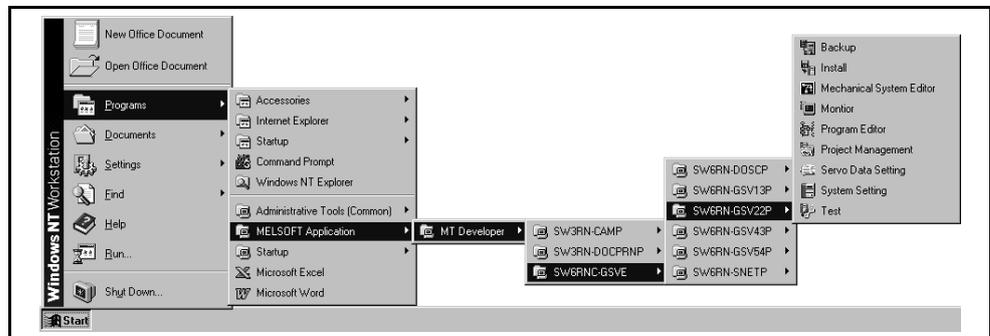
3.2 Registered Icons

Installing GSV13P, GSV22P, GSV43P, GSV54P, CAMP, DOSCP, SNETP and/or DOCPNP registers the icons as shown below.

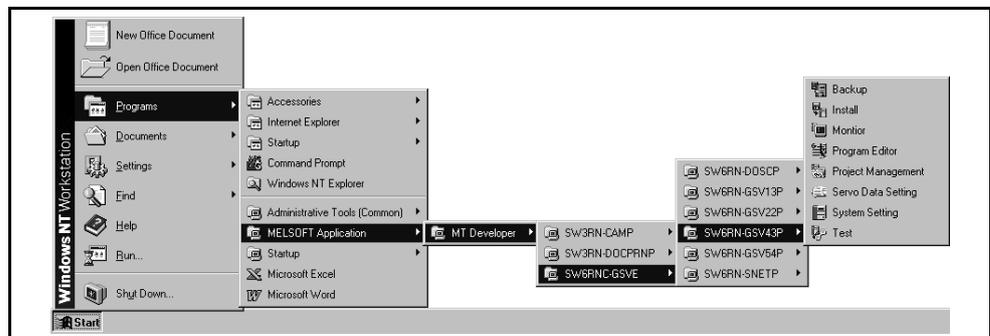
(1) GSV13P



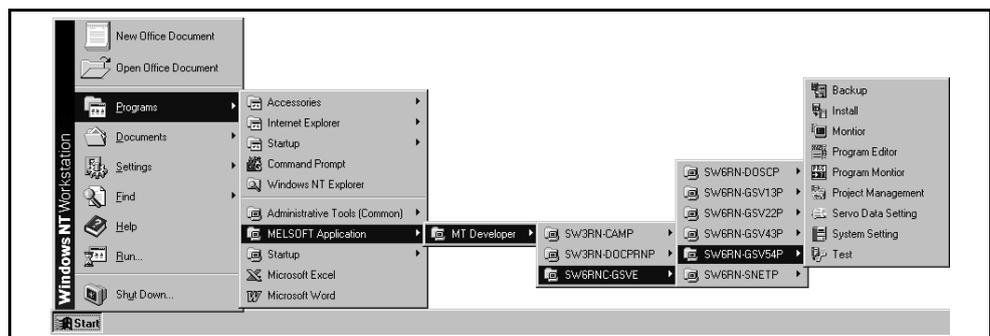
(2) GSV22P



(3) GSV43P

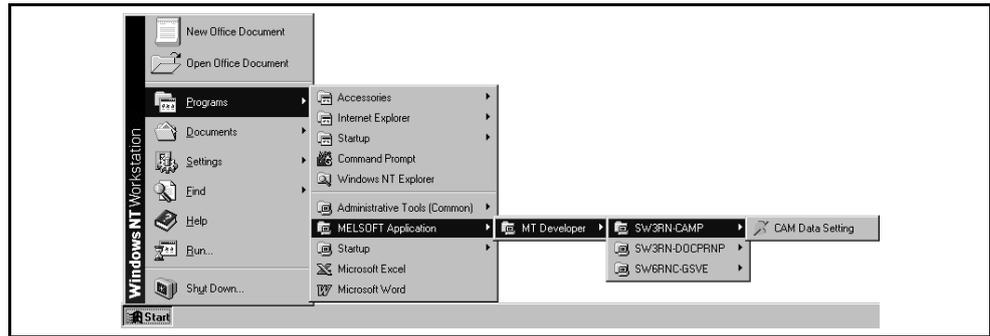


(4) GSV54P

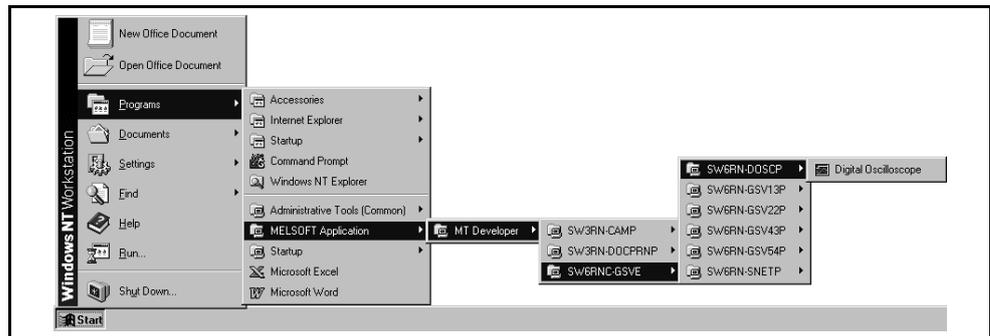


3. INSTALLATION AND UNINSTALLATION

(5) CAMP

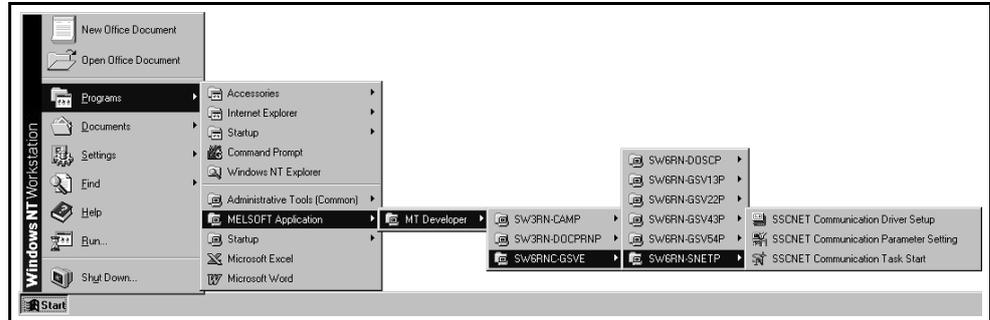


(6) DOSCP

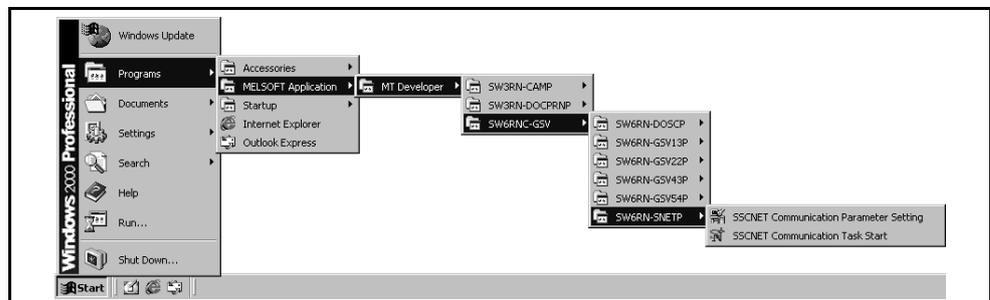


(7) SNETP

(a) When SNETP is installed in the environment of Windows NT/98

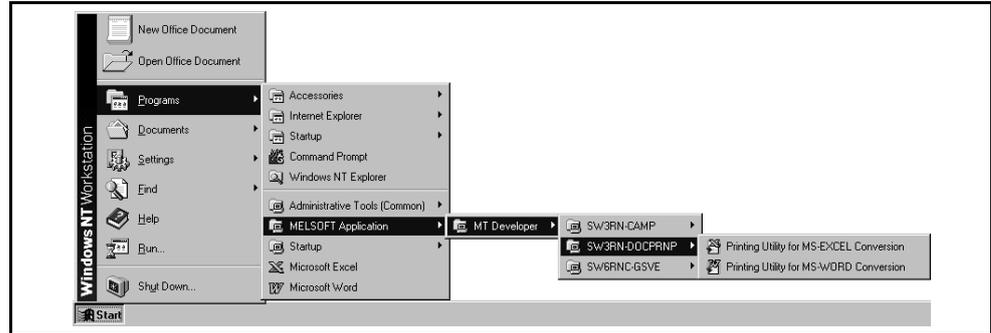


(b) When SNETP is installed in the environment of Windows 2000/XP

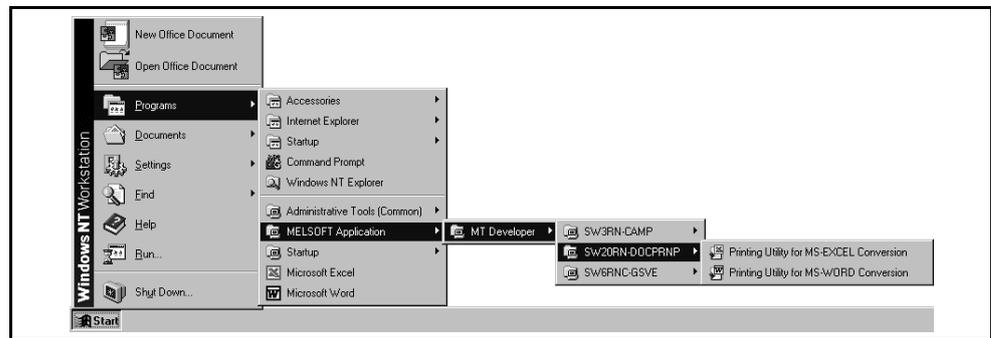


3. INSTALLATION AND UNINSTALLATION

- (8) DOCPRNP
- (a) SW3RN-DOCPRNP



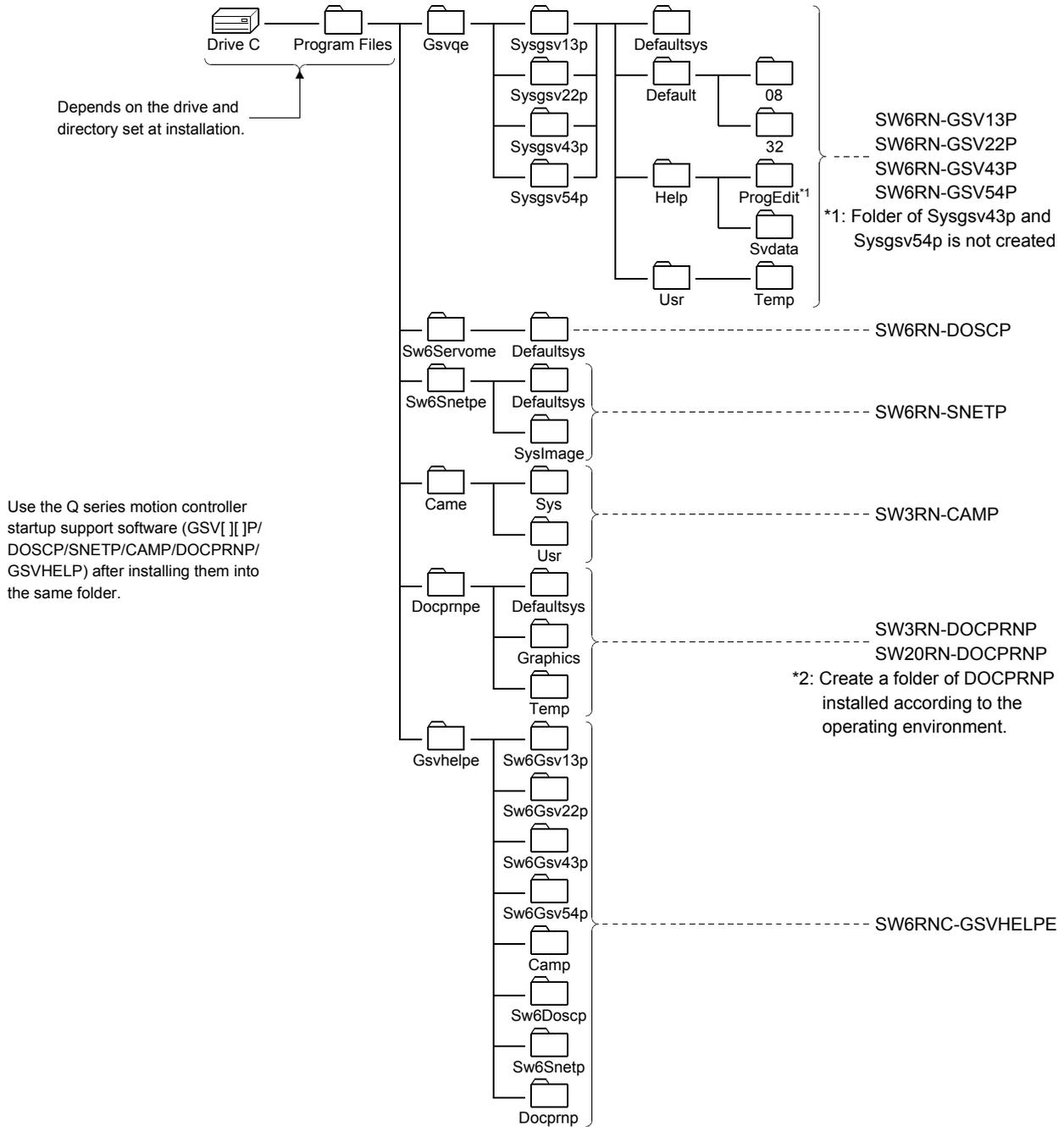
- (b) SW20RN-DOCPRNP



3. INSTALLATION AND UNINSTALLATION

3.3 Created System Directories

Installing GSV13P, GSV22P, GSV43P, GSV54P, SNETP, DOSCP, CAMP, DOCPRNP and/or GSVHELP creates the directories as shown below.



3. INSTALLATION AND UNINSTALLATION

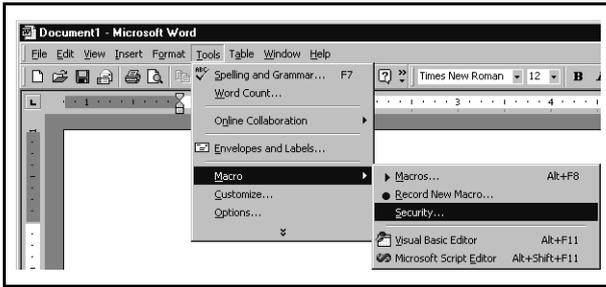
3.4 Operating Instructions

3.4.1 Precautions for Using SW20RN-DOCPRNP

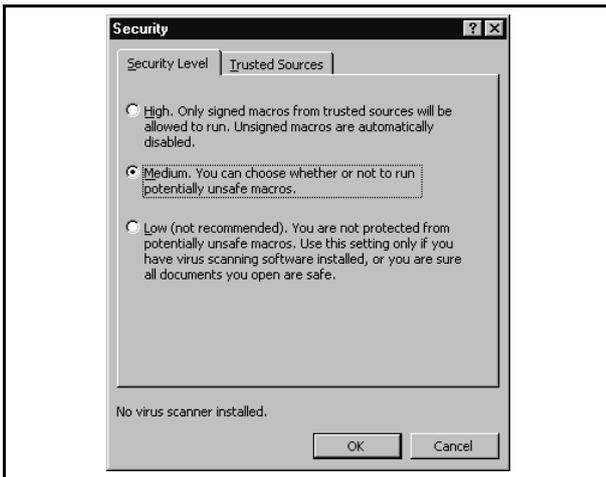
(1) Security levels of Word and Excel

To use SW20RN-DOCPRNP, the security level must be set on Word or Excel. If the security level setting is "High" or higher, you cannot use SW20RN-DOCPRNP.

Before using SW20RN-DOCPRNP, set the security level of Word or Excel to other than "Medium" or lower.



- 1) Start Word or Excel.
Click [Tools] on the menu bar.
The drop-down menu appears.
Choose and click [Macro]-[Security] in the drop-down menu.

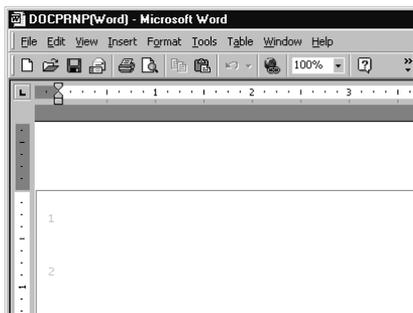


- 2) The "Security" dialog box appears.
Select "Medium" and click [OK].
Close Word or Excel to terminate the setting.

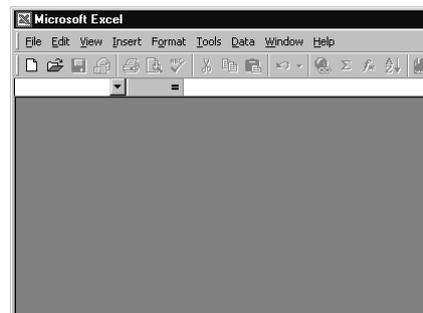
POINT

If the Word or Excel security level setting is "High" or higher at start of SW20RN-DOCPRNP, SW20RN-DOCPRNP will not start properly as described below and cannot be used. In such a case, change the Word or Excel security level setting to other than "Medium" or lower and restart SW20RN-DOCPRNP.

Word screen



Excel screen



3. INSTALLATION AND UNINSTALLATION

(2) Antivirus software

It has been reported that when the "Norton AntiVirus 2000" antivirus software of Symantec Corporation has been installed in the personal computer, specifying Office 2000 as a control feature from an external program will run the micro virus check software, one of the "Norton AntiVirus 2000" functions, making Office 2000 uncontrollable from other programs.

Hence, when "Norton AntiVirus 2000" has been installed, SW20RN-DOCPRNP that controls Office 2000 externally cannot be booted.

The following are the corrective actions for the above problem.

(a) When it is not necessary to make virus checks

Uninstall "Norton AntiVirus 2000".

(b) When it is necessary to make virus checks

Remove only the micro virus check software of "Norton AntiVirus 2000".

In this case, the other virus checks are performed.

For more information on the micro virus check software problems of "Norton AntiVirus 2000", refer to the home page of Microsoft Corporation or Symantec Corporation.

- Microsoft Corporation

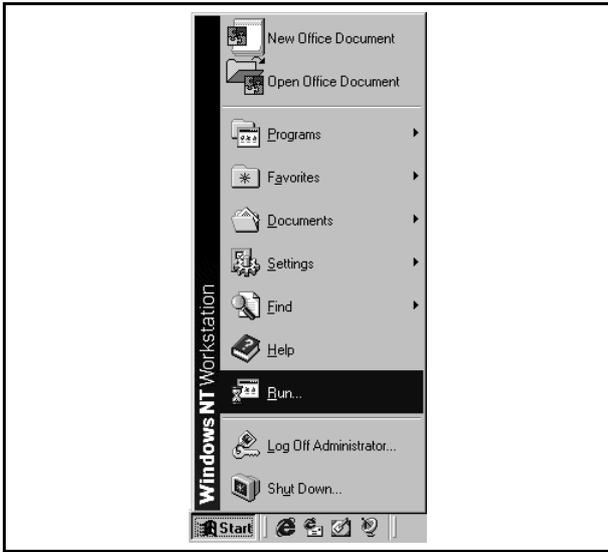
[http:// support.microsoft.com/default.aspx?scid=kb;en-us;246018#appliesto](http://support.microsoft.com/default.aspx?scid=kb;en-us;246018#appliesto)

- Symantec Corporation

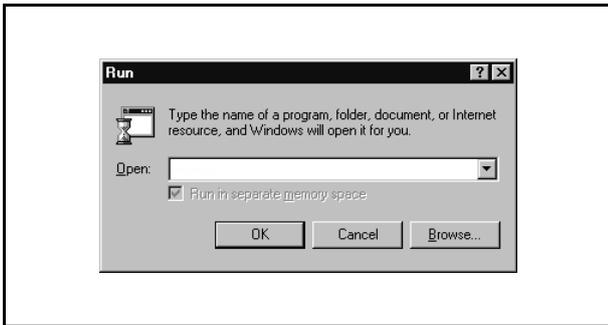
http://service1.symantec.com/SUPPORT/sunset-c2002kb.nsf/f7d6cb402f0b760785256ee600549628/6090f33c6a2fc30485256edd00478ecb?OpenDocument&src=bar_sch_nam

3. INSTALLATION AND UNINSTALLATION

- How to remove only micro virus check software from "Norton AntiVirus 2000"



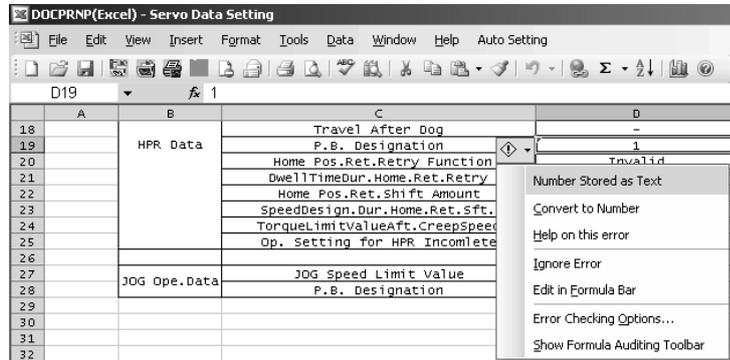
- 1) Click [Start].
Choose and click [Run...].



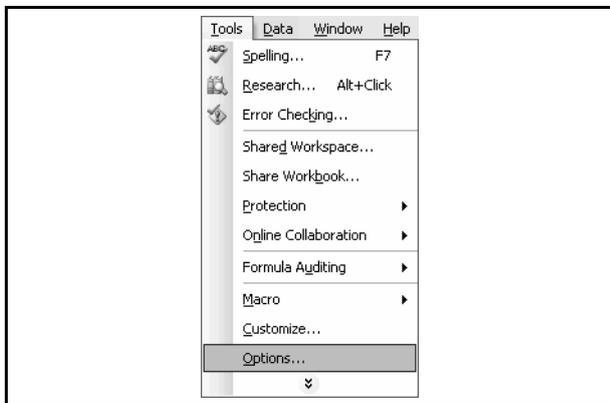
- 2) The Run dialog box appears.
Enter the name as indicated below and click [OK].
 - For Windows 98
[C:\Windows\System\regsvr32\U "C:\Program Files\Norton\AntiVirus\OfficeAV.dll"]
 - For Windows NT/2000/XP
[regsvr32\U C:\Program Files\Norton\AntiVirus\OfficeAV.dll]
*In the underlined area, specify the path where Norton AntiVirus 2000 has been installed.
- 3) When the command succeeds, the "DllUnregisterServer in C:\Program Files\Norton AntiVirus\OfficeAV.dll succeeded" message appears and the micro virus check software is removed. If it has failed, check the path and execute the command again.

3. INSTALLATION AND UNINSTALLATION

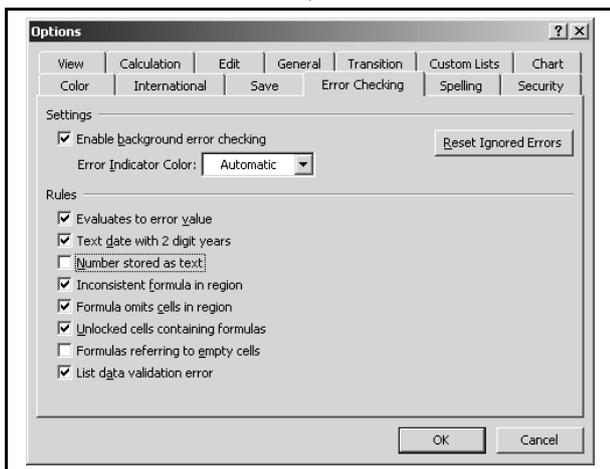
- (3) Warning display on Excel sheet
 When converted using SW20RN-DOCPNP, the following warning may be displayed on the Excel sheet after conversion.



To avoid displaying these warnings, set the following.



- 1) Start Excel.
 Click [Tools] on the menu bar.
 The drop-down menu appears.
 Choose and click [Options] in the drop-down menu.



- 2) The "Options" dialog box appears.
 Clear the check mark from "" of "Number stored as text".
 Click [OK] to finish the setting.

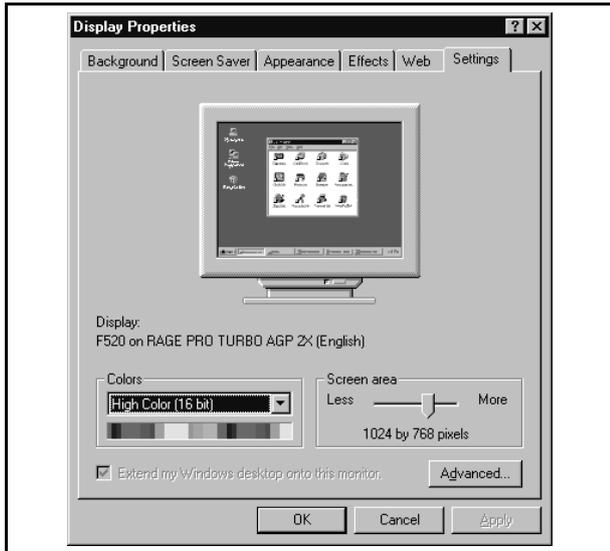
3. INSTALLATION AND UNINSTALLATION

3.4.2 Precautions for operation under Windows 98

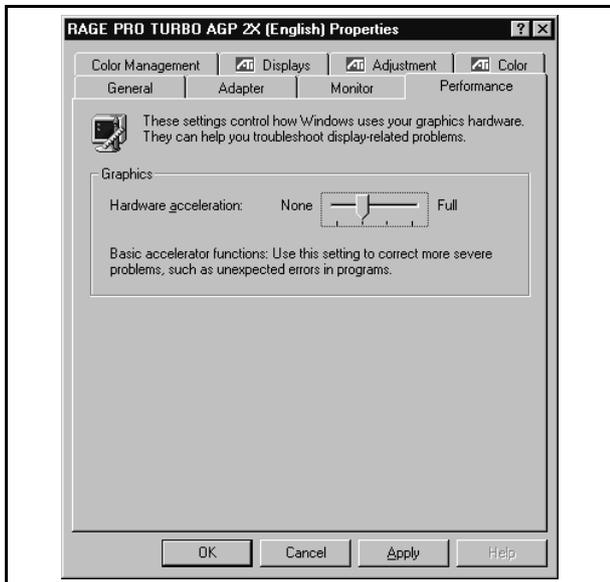
When the GSV application is used under Windows 98, the following phenomena may occur.

Follow the description for the countermeasure.

- (1) The color inside the GSV application window is not displayed correctly.
The color inside the GSV application window may not be displayed correctly with the maximum setting of the graphics hardware accelerator.
In this case, change the graphics accelerator setting to a basic setting.



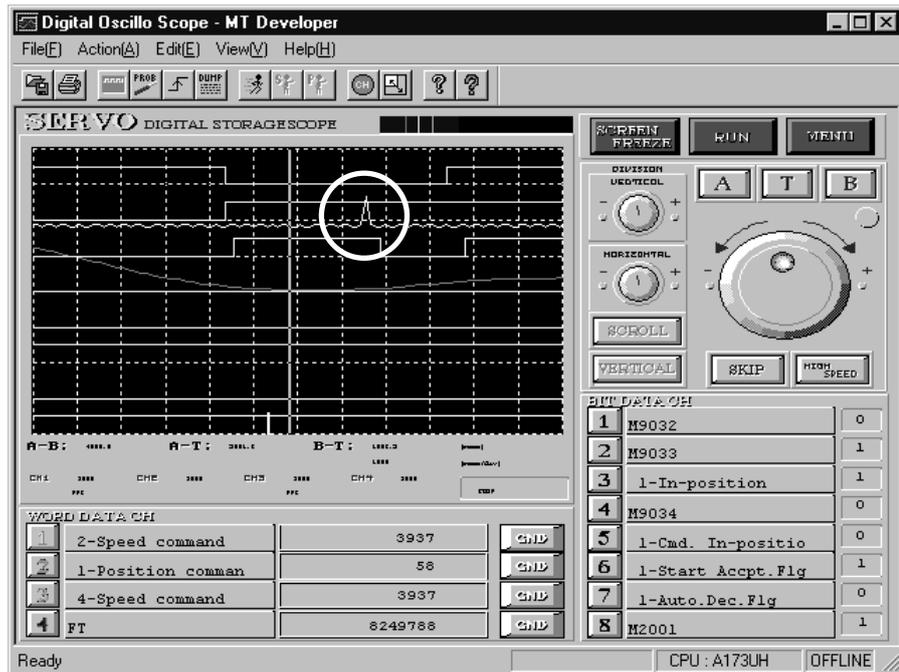
- 1) Double click on "Display" in the Control Panel.
The "Display Properties" window is displayed.
Select the "Settings" tab and click on [Advanced...].



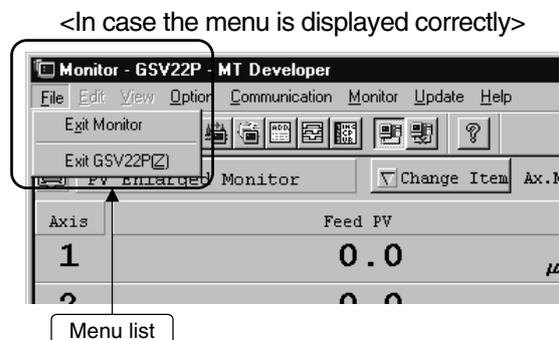
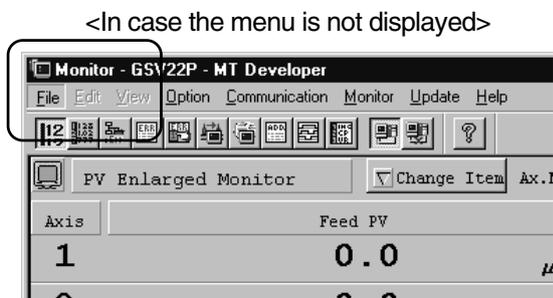
- 2) Select the "Performance" tab and change the "graphics hardware acceleration" setting to a basic one and click on [OK].
Close "Display Properties" and reset the PC.
* If necessary, recover the original setting of the graphics hardware acceleration.

3. INSTALLATION AND UNINSTALLATION

- (2) On the digital oscilloscope (DOSCP) screen, a sampling omission may occur during sampling of data by SSCNET communication.
- If one of the following operation is performed during sampling, a sampling failure may occur. (Accordingly there is disorder in the displayed waveform. In the figure below, a spike is displayed in the speed command.)
- Another application is started.
 - The function screen of GSV[][]P is started.
 - Programs or parameters are uploaded or downloaded with GSV[][]P.
- If there is a failure in the sampling data even when the above operation is not performed, terminate the other applications.



- (3) The menu may not be displayed in the monitor screen during monitoring. When you click the menu during monitoring, the menu list may not be displayed.
- In this case, the menu will be displayed by moving the mouse pointer below after clicking the menu.
- If the menu is not displayed above operation, operate the menu after stopping monitoring.



3. INSTALLATION AND UNINSTALLATION

3.4.3 Precautions for simultaneous operation of SW6RNC-GSVE and GX Developer

(1) If SW6RN-SNETP is used for communication over SSCNET

To use the SW6RN-GSV application (communication over SSCNET) and GX Developer (communication via RS232C/USB) simultaneously, take care of the starting and terminating sequence of applications.

[Starting sequence]

- SW6RN-SNETP ---> GSV[][]P/DOSCP/GX Developer

[Terminating sequence]

- GSV[][]P/DOSCP/GX Developer ---> SW6RN-SNETP

If the above sequence is not observed, the following phenomena will occur.

(a) If SNETP is started after GX Developer is started

Though the VLINKS window is not displayed, communication over SSCNET is performed correctly, and there is no problem in the operation.

(b) If SNETP is terminated though GX Developer is not terminated

The VLINKS window remains but it is terminated when GX Developer is terminated.

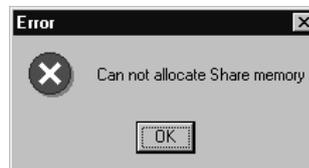
Or SNETP is started without termination of GX Developer, so that communication over SSCNET functions correctly.

Do not close the VLINKS window manually because otherwise the following phenomenon will occur.

- When SNETP is started next time, VLINKS does not start and correct communication over SSCNET becomes unavailable.

If the window is closed manually, exit from GX Developer and restart SNETP.

(c) If GX Developer is started after SNETP is terminated, the following error may occur.

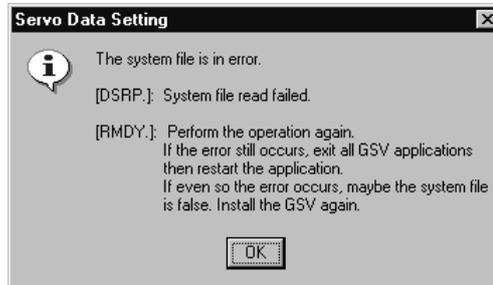


If this error occurs, terminate GX Developer then restart.

3. INSTALLATION AND UNINSTALLATION

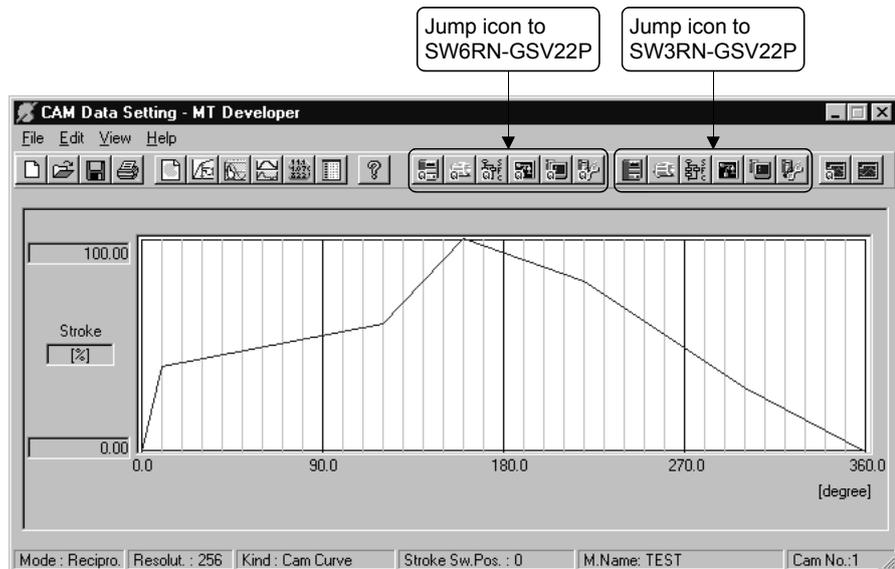
3.4.4 Simultaneous execution of SW3RN-GSV[][]P and SW6RN-GSV[][]P

SW3RN-GSV[][]P and SW6RN-GSV[][]P cannot be used simultaneously. If the operation described below is attempted, the following error message is displayed in response to the GSV[][]P started later and startup fails.



[Operation]

- Starting SW3RN-GSV[][]P and SW6RN-GSV[][]P simultaneously from menu
- CAMP (Cam Data Setting) for executing both JUMP icons to SW3RN-GSV[][]P and SW6RN-GSV[][]P



Do not perform above operations.
SW3RN-GSV[][]P and SW6RN-GSV[][]P cannot be executed simultaneously.
Start either application only.

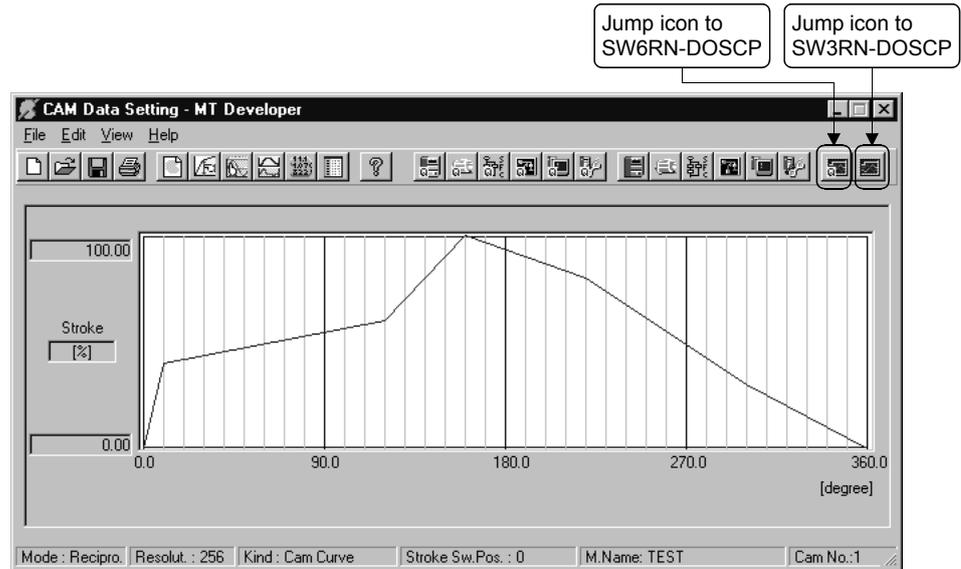
3. INSTALLATION AND UNINSTALLATION

3.4.5 Simultaneous execution of SW3RN-DOSCP and SW6RN-DOSCP

You cannot use SW3RN-DOSCP and SW6RN-DOSCP together.
If the following operation is performed, DOSCP booted later is not started and is ignored.

[Operation]

- Starting SW3RN-DOSCP and SW6RN-DOSCP simultaneously from menu
- CAMP (Cam Data Setting) for executing both JUMP icons to SW3RN-DOSCP and SW6RN-DOSCP



Do not perform above operations.
SW3RN-DOSCP and SW6RN-DOSCP cannot be executed simultaneously.
Start either application only.

3. INSTALLATION AND UNINSTALLATION

3.4.6 Precautions for using SNETP

- (1) SW3RN-SNETP or SW6RN-SNETP (Ver. 00A) is in use
(SW6RN-GSV[][]P (Ver. 00A) is in use)

In any of the following cases, corresponding SNETP may result in a communication error, disabling normal communication.

- SNETP of an early version is used to perform a communication method that is not supported.
- Two or more copies of SNETP of different versions are installed.
- Both SW3RN-SNETP and SW6RN-SNETP are installed.
- Windows NT, Windows 98, Windows 2000 and Windows XP are installed in a single PC and SNETP of different versions is installed in each drive.
- Windows NT, Windows 98, Windows 2000 and Windows XP are installed in a single PC and SW3RN-SNETP and SW6RN-SNETP are installed in each drive.

Only one version of corresponding SNETP may be installed into one personal computer.

Install only one copy of SNETP of the best version according to the desired communications means (SSCNET, USB, 232C).

The communications means supported by each version of SNETP is shown in the table 3.1.

Table 3.1 The communications means supported by each version of SNETP

	Version	For A motion SW3RN-GSV[][]P	For Q motion(Q172/Q173) SW6RN-GSV[][]P	SW3RN-DOSCP*
SW3RN-SNETP	Ver.00A	Communication can be made over SSCNET.	Q motion is not supported (a communication error is caused).	Can be used. (However, a communication error is caused upon Q172/Q173.)
	Ver.00B		Communication can be made over SSCNET.	Can be used
	Ver.00E or later	Communication can be made over SSCNET or via RS232C.	Communication can be made over SSCNET.	
SW6RN-SNETP	Ver.00A	Communication can be made over SSCNET.	Communication can be made over SSCNET or via RS232C or USB.	

*: SW3RN-DOSCP is only for communication over SSCNET.

IMPORTANT

When updating SW6RN-GSV[][]P (to Ver. 00B or later), refer to "3.7 Updating Instructions and Procedures" and update one set of SW6RNC-GSVE.
In this case, SW6RN-SNETP is updated (to Ver. 00B or later).
Refer to the instructions in (2) on the next page.

3. INSTALLATION AND UNINSTALLATION

(2) Precautions for use of SW6RN-SNETP Ver. 00B or later

(a) Coexistence of SNETP

SW6RN-SNETP Ver. 00B or later can be installed to coexist with SW3RN-SNETP.

Table 3.2 SNETP Versions That Can Coexist

Software Packages	Compatible Version	Remarks
SW6RN-SNETP	Ver. 00B or later (Ver. 00A cannot coexist)	Dedicated to the Q motion controller. Incompatible with the applications designed for A motion controllers.
SW3RN-SNETP	Any version ^{*1}	

*1: For SW3RN-SNETP Ver. 00G or earlier, however, there are precautions for installation/uninstallation. Refer to "Section 3.4.6 (2) (d)".

(b) GSV applications compatible with SW6RN-SNETP Ver. 00B or later

Table 3.3 indicates the GSV applications compatible with SW6RN-SNETP Ver. 00B or later.

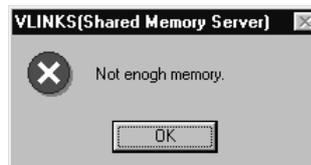
Table 3.3 GSV applications compatible with SW6RN-SNETP Ver. 00B or later

Software Packages	Compatible Version	Remarks
SW6RN-GSV13P	Ver.00B or later	When using any of the packages given on the left, use SW6RN-SNETP Ver. 00B or later.
SW6RN-GSV22P		
SW6RN-DOSCP	Ver.00A or later	

(c) Concurrent execution of SW3RN-SNETP and SW6RN-SNETP

You cannot use SW3RN-SNETP and SW6RN-SNETP together.

- 1) When those programs are started in order of SW3RN-SNETP and SW6RN-SNETP, SW6RN-SNETP booted is ignored.
- 2) When the programs are started in order of SW6RN-SNETP and SW3RN-SNETP (Ver. 00H or later), SW3RN-SNETP booted is ignored.
- 3) When the programs are started in order of SW6RN-SNETP and SW3RN-SNETP (Ver. 00G or earlier), SW3RN-SNETP displays the following message and does not start properly.
Exit from SW3RN-SNETP.



3. INSTALLATION AND UNINSTALLATION

- (d) Precautions for installation, uninstallation and updating when SW6RN-SNETP (Ver. 00B or later) and SW3RN-SNETP (Ver. 00G or earlier) coexist
- When SW6RN-SNETP Ver. 00B or later and SW3RN-SNETP Ver. 00G or earlier coexist, note that there are restrictions on installation and uninstallation.
- 1) When installing SW3RN-SNETP (Ver. 00G or earlier) into the personal computer where SW6RN-SNETP (Ver. 00B or later) has been installed
 - After installing SW3RN-SNETP, always set the driver setup again.
 - 2) When uninstalling SW3RN-SNETP in the personal computer where SW6RN-SNETP (Ver. 00B or later) and SW3RN-SNETP (Ver. 00G or earlier) coexist
 - Uninstall "SW6RN-SNETP", "SW3RN-SNETP" and "SSCNET communication driver" once.
After uninstallation, reinstall SW6RN-SNETP and set the driver setup.
 - 3) When updating SW3RN-SNETP to Ver. 00H or later in the personal computer where SW6RN-SNETP (Ver. 00B or later) and SW3RN-SNETP (Ver. 00G or earlier) coexist
 - Refer to Section 3.4.6 (2) (f) 2 1).
- (e) Precautions for uninstalling SW6RN-SNETP (Ver. 00B or later) or SW3RN-SNETP (Ver. 00H or later)
- Uninstall SW6RN-SNETP Ver. 00B or later or SW3RN-SNETP Ver. 00H or later as described below.
- 1) When SNETP does not coexist
 - a) When uninstalling SW6RN-SNETP (Ver. 00B or later)
Uninstall "SW6RN-SNETP" and "SSCNET communication driver".
 - b) When uninstalling SW3RN-SNETP (Ver. 00H or later)
Uninstall "SW3RN-SNETP" and "SSCNET communication driver".
 - 2) When SW6RN-SNETP (Ver. 00B or later) and SW3RN-SNETP (Ver. 00H or later) coexist
 - a) When uninstalling SW6RN-SNETP (Ver. 00B or later) only
Uninstall "SW6RN-SNETP" only. (Do not uninstall the "SSCNET communication driver".)
 - b) When uninstalling SW3RN-SNETP (Ver. 00H or later) only
Uninstall "SW3RN-SNETP" only. (Do not uninstall the "SSCNET communication driver".)
 - c) When uninstalling both SW6RN-SNETP (Ver. 00B or later) and SW3RN-SNETP (Ver. 00H or later)
Uninstall "SW6RN-SNETP", "SW3RN-SNETP" and "SSCNET communication driver".

3. INSTALLATION AND UNINSTALLATION

(f) Precautions for updating SNETP

Update SW6RN-SNETP to Ver. 00B or later or SW3RN-SNETP to Ver. 00H or later as described below.

- 1) When updating SW6RN-SNETP (Ver. 00A) to Ver. 00B or later
After uninstalling "SW6RN-SNETP", install new SW6RN-SNETP and perform a driver setup.
- 2) When updating SW3RN-SNETP (Ver. 00G or earlier) to Ver. 00P or later
 - a) When SNETP does not coexist
After uninstalling "SW3RN-SNETP", install new SW3RN-SNETP and perform a driver setup.
 - b) When SW3RN-SNETP coexists with SW6RN-SNETP (Ver. 00B)
After uninstalling "SW3RN-SNETP" and "SSCNET communication driver", install new SW3RN-SNETP and perform a driver setup.
 - c) When updating SW6RN-SNETP (Ver. 00B or later)
After uninstalling "SW6RN-SNETP", install new SW6RN-SNETP.
A driver setup is not necessary.
 - d) When updating SW3RN-SNETP (Ver. 00H or later)
After uninstalling "SW3RN-SNETP", install new SW3RN-SNETP.
A driver setup is not necessary.

3. INSTALLATION AND UNINSTALLATION

3.4.7 Precautions for using USB communication in Windows 2000

When Windows 2000 is used, the USB driver must be installed to make USB communication with the Q motion CPU for the first time.
The following indicates a USB driver installation procedure.



- 1) The screen shown on the left appears when you connect the personal computer and Q motion by the USB cable.
Click the [Next >].



- 2) Choose "Search for a suitable driver for my device (recommended)" and click the [Next >].



- 3) Check "Specify a location" and click the [Next >].

To next page

3. INSTALLATION AND UNINSTALLATION

From preceding page



- 4) As the left screen appears, set the product installation destination "Easysocket\USBdrivers" and click the [Next >].

The screen shown on the left shows the example of setting C:\MELSEC\Easysocket\USBdrivers. If volume MELSOFT products have been installed, browse the installation destination of the first product.



- 5) The left screen appears. Click the [Next >].



- 6) The screen on the left appears to indicate completion of installation. Click the [Finish] to terminate installation.



Completion

3. INSTALLATION AND UNINSTALLATION

3.4.8 Precautions for using SSCNET communication in Windows XP

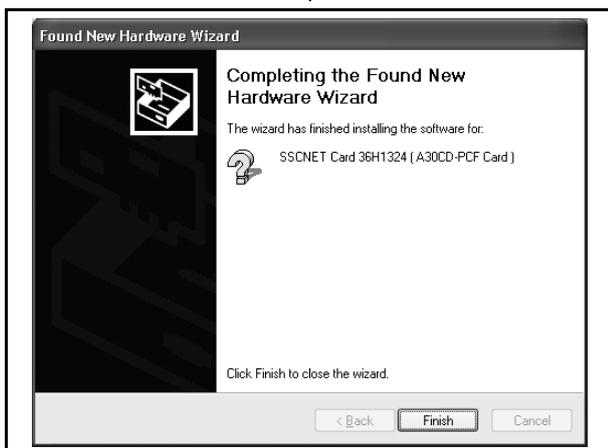
When the A30CD-PCF or A10BD-PCF is to be used for the first time in the Windows XP, the SSCNET communication driver must be installed. The following indicates the operation procedure to install the A30CD-PCF driver.
(For the A10BD-PCF, also perform similar operation to install the driver.)



- 1) Insert the A30CD-PCF into the personal computer. The window on the left will soon appear. Choose "Install the software automatically [Recommended]" and click [Next >].



- 2) The window on the left appears. Click [Continue Anyway].



- 3) The window on the left appears. Click [Finish].
This completes driver installation.

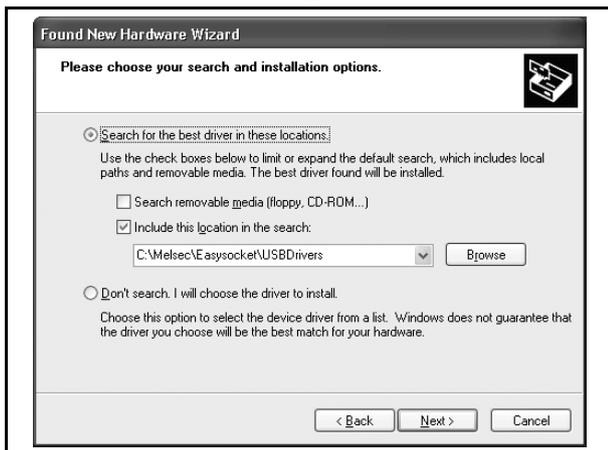
3. INSTALLATION AND UNINSTALLATION

3.4.9 Precautions for using USB communication in Windows XP

When Windows XP is used, the USB driver must be installed to make USB communication with the Q motion CPU for the first time.
The following indicates a USB driver installation procedure.



- 1) The screen shown on the left appears when you connect the personal computer and Q motion by the USB cable.
Choose "Install from a list or specific location [Advanced]" and click the [Next >].



- 2) As the screen on the left appears, choose "Include this location in the search".
Check "Include this location in the search" and set "Easysocket\USBdrivers" of the folder where GX Developer was installed.
After setting, click the [Next >]
The screen shown on the left shows the example of setting C:\MELSEC\Easysocket\USBdrivers.
If volume MELSOFT products have been installed, browse the installation destination of the first product.



- 3) As the screen on the left appears, click the [Continue Anyway].

To next page

3. INSTALLATION AND UNINSTALLATION

From preceding page

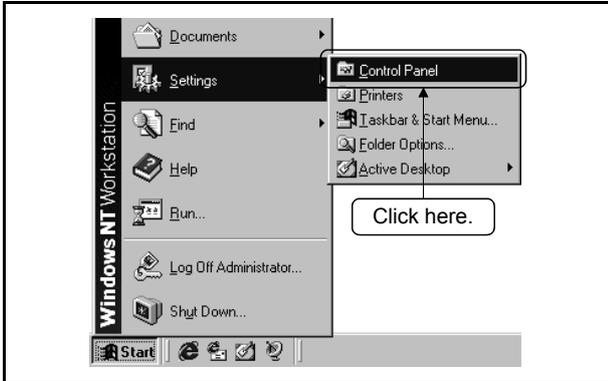


- 4) The screen on the left appears to indicate completion of installation. Click the [Finish] to terminate installation.

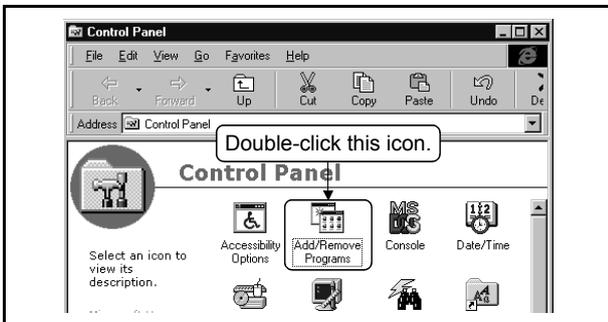
3. INSTALLATION AND UNINSTALLATION

3.5 Uninstallation

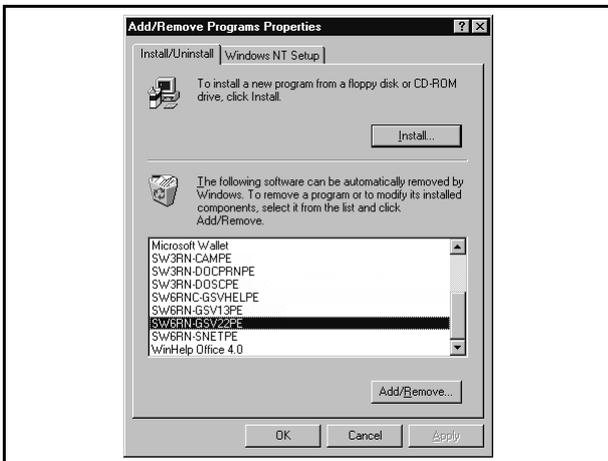
This section gives the way to delete GSV13P, GSV22P, GSV43P, GSV54P, CAMP, DOSCP, SNETP and/or DOCPRNP from the hard disk.



- 1) Click [Start] on the taskbar and move the cursor to [Settings].
Click [Control Panel].



- 2) The Control Panel window appears.
Double-click "Add/Remove Programs" from Control Panel.

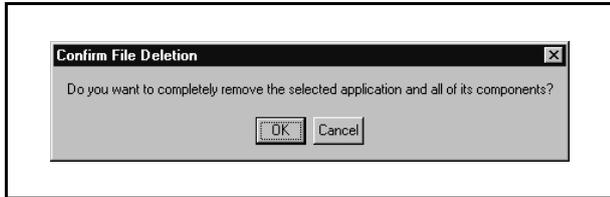


- 3) The "Add/Remove Programs Properties" screen appears.
Choose the software to be deleted and click [Add/Remove...].

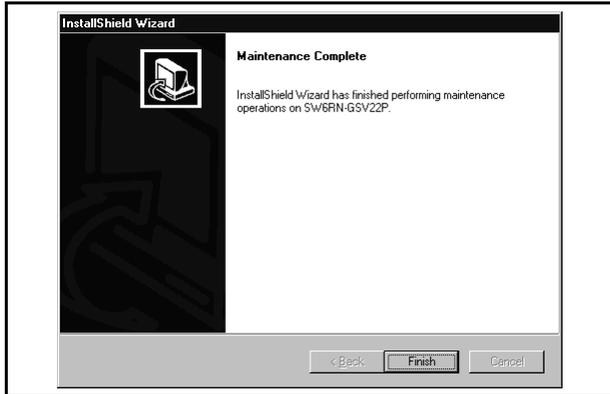
To next page

3. INSTALLATION AND UNINSTALLATION

From preceding page



- 4) Check that the selected application files will be deleted.
Click [OK] to uninstall.
Uninstallation starts.
Click [Cancel] when not uninstalling.
This returns the display to the previous screen.



- 5) This completes uninstallation.
Click [Finish] to finish the addition and removal of applications.

3.6 Browsing the SW6RNC-GSVHELPE Operating Manuals

After installing the SW6RNC-GSVHELPE Operating Manuals, you can browse them by performing the following operation.

- (1) You can browse any of the operating manuals from the "Help" menu of the corresponding software package.



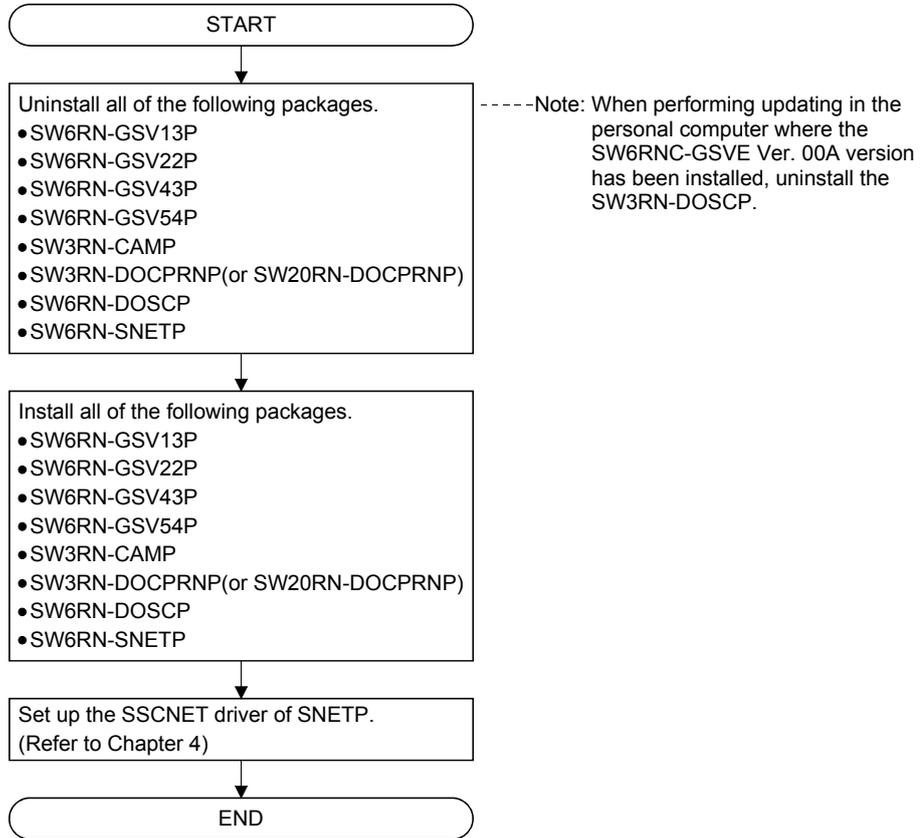
- (2) Each operating manual is a file in the Windows help format (extension is HLP).
Any operating manual can be browsed by directly double-clicking the corresponding file from Explorer or like.
(Refer to Section 3.3 for the folder where SW6RNC-GSVHELPE has been installed.)

3. INSTALLATION AND UNINSTALLATION

3.7 Updating Instructions and Procedures

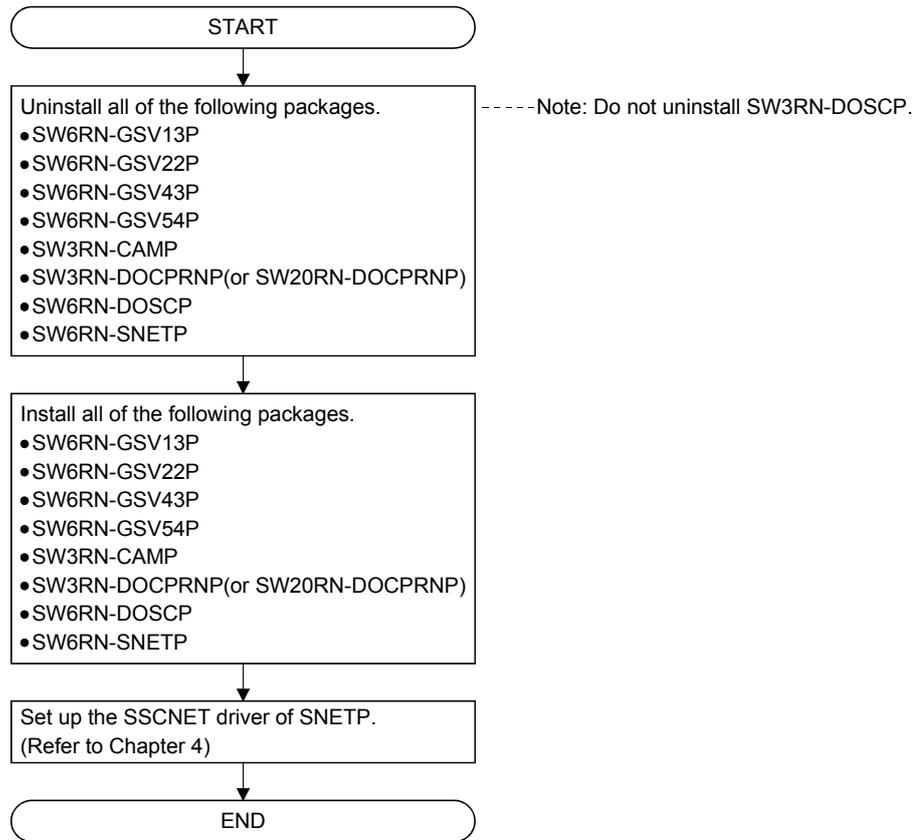
When you update SW6RNC-GSVE, update all packages.
This section describes the instructions and operating procedures for updating SW6RNC-GSVE.

(1) Updating performed when only SW6RNC-GSVE has been installed



3. INSTALLATION AND UNINSTALLATION

(2) Updating performed when SW6RN-GSV and SW3RN-GSV coexist



POINT

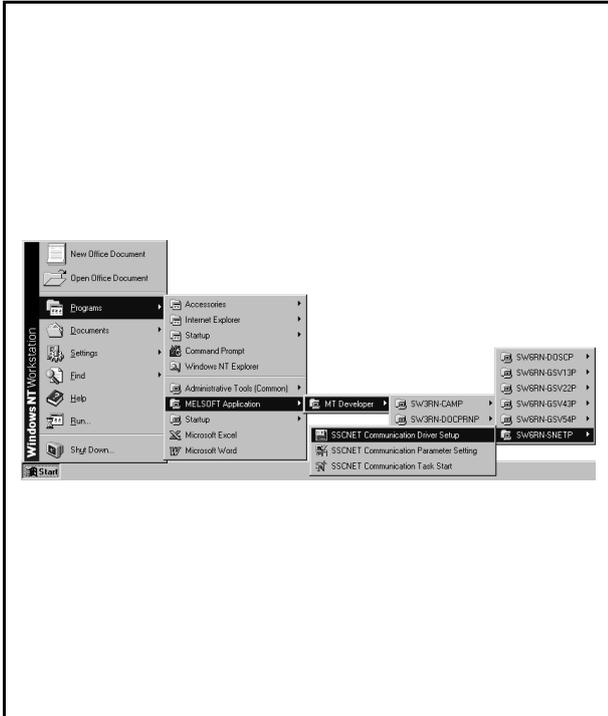
- (1) For the installation/uninstallation operation associated with updating, refer to "3.1 Installation" and "3.5 Uninstallation".
- (2) When using SW6RNC-GSVE Ver. 00C or later, install SW6RN-GSV[][]P, SW6RN-DOSCP and SW6RN-SNETP from the same CD-ROM.

4. SSCNET COMMUNICATION DRIVERS

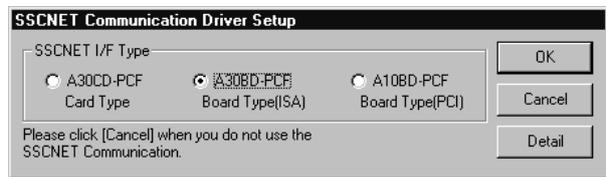
4. SSCNET COMMUNICATION DRIVERS

4.1 SSCNET Communication Driver Setup Procedure

To make SSCNET communication in Windows NT/98, you need to perform SSCNET communication driver setup
 Perform the setup work of the SSCNET communication drivers in the [SSCNET Communication Driver Setup] window of SNETP.



- 1) Choose and click [Programs]-[MELSOFT Application]-[MT Developer]-[SW6RNC-GSVE]-[SW6RN-SNETP]-[SSCNET Communication Driver Setup] in the Start menu.
 The following Communication Driver Setup window appears.



Choose "A30CD-PCF Card Type" when using the A30CD-PCF interface card, or choose "A30BD-PCF Board Type" when using the A30BD-PCF interface board, or choose "A10BD-PCF Board Type" when using the A10BD-PCF interface board.
 Hereafter, the A30CD-PCF interface card is represented as the "interface card" and the A30BD-PCF interface board and the A10BD-PCF interface board as the "interface board".

POINT

- (1) You need not set the driver when you do not fit the interface card or interface board to the personal computer as described below.
 Always click [Cancel] in the "SSCNET Communication Driver Setup" window.
 - When only RS232C/USB communication is used
 - When SSCNET communication is not used
 (When only the offline function for program edit, etc. is used)
 - When there is no interface card or interface board
- (2) In either of the following cases, an SSCNET communication driver setup is not performed because of compatibility with the plug and play function.
 - When the A30CD-PCF interface card and the A10CD-PCF interface board is used in the Windows 2000/XP environment.
- (3) The interface boards and interface cards can be used in the following environment.

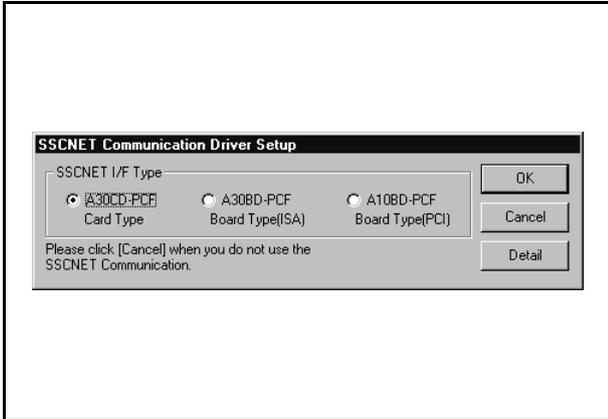
	Windows 98	Windows NT	Windows 2000	Windows XP
A30BD-PCF interface board	○	○	×	×
A10BD-PCF interface board	○	○	○	○
A30CD-PCF interface card	○	○	○	○

Usable: ○
 Unusable: ×

4. SSCNET COMMUNICATION DRIVERS

4.1.1 When using the A30CD-PCF interface card

This section provides the SSCNET communication driver setup procedure for use of the interface card.



- 1) The SSCNET Communication Driver Setup window appears.
*You need not make the setting when you use RS232C communication or do not use SSCNET communication.
Click [Cancel] to exit from SSCNET Communication Driver Setup.

<For Windows NT>

Choose "A30CD-PCF Card Type" and click [Detail].

<For Windows 98>

Choose "A30CD-PCF Card Type" and click [OK].

*Detail setting is not necessary for Windows 98.

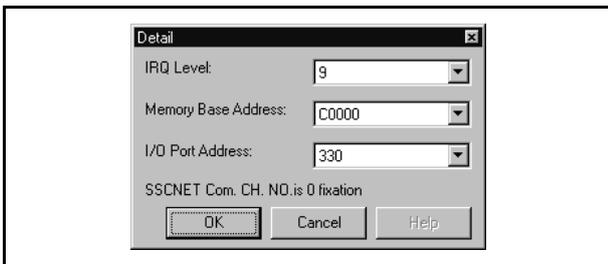
For Windows NT



For Windows 98

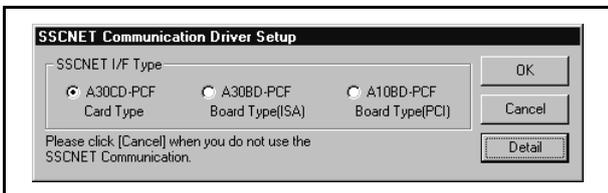


To 4)



- 2) Check and set the free areas of IRQ Level, Memory Base Address and I/O Port Address.
Click [OK].

*For the way to check the free areas, refer to "4.2 How to Check the System Resources".



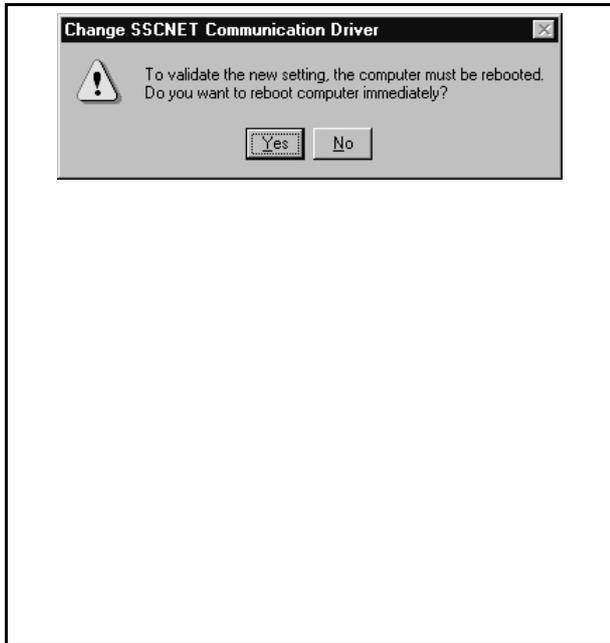
- 3) Click [OK].



To next page

4. SSCNET COMMUNICATION DRIVERS

From preceding page



4) The left dialog box appears.

<For Windows NT>

- When the interface card is already loaded
Click [Yes].
The personal computer is restarted.
- When the interface card is not yet loaded
Click [No].
Choose "Shut Down" in the Start menu to power off the personal computer.
After making sure that the power is off, load the interface card into the personal computer.

<For Windows 98>

Click [Yes].

The personal computer is restarted.

After Windows 98 has restarted, load the interface card into the personal computer.

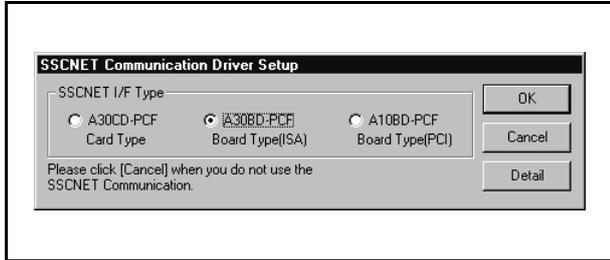
IRQ Level, Memory Base Address and I/O Port Address are automatically set by the plug and play function of Windows 98.

5) After Windows NT/98 has restarted, choosing and clicking [Programs]-[MELSOFT Application]-[MT Developer]-[SW6RNC-GSVE]-[SW6RN-SNETP]-[SS CNET Communication Task Start] in the Start menu makes SSCNET communication ready to start.

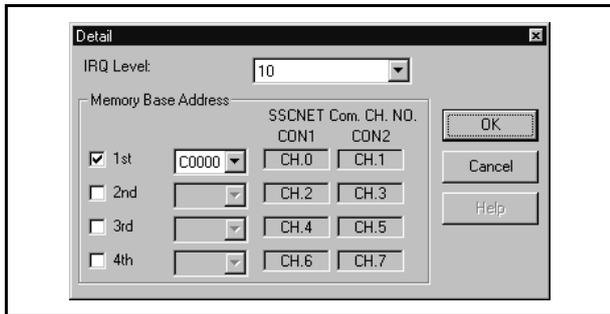
4. SSCNET COMMUNICATION DRIVERS

4.1.2 When using the A30BD-PCF interface board

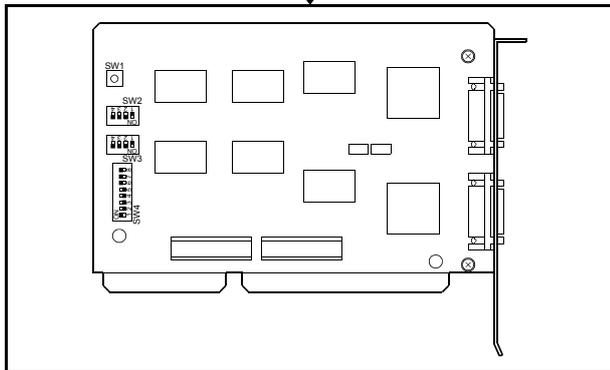
This section provides the SSCNET communication driver setup procedure for use of the interface board.



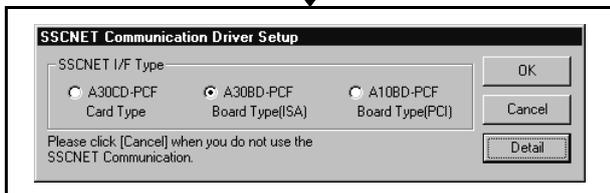
- 1) The SSCNET Communication Driver Setup window appears. Choose "A30BD-PCF Board Type" and click [Detail]. *You need not make the setting when you use RS232C/USB communication or do not use SSCNET communication. Click [Cancel] to exit from SSCNET Communication Driver Setup.



- 2) Check and set the free areas of IRQ Level and Memory Base Address. Click [OK]. *For the way to check the free areas, refer to "4.2 How to Check the System Resources".



- 3) The data set in the Detail Setting window must be reflected on the switch setting of the interface board. Refer to "4.3.1 Setting the A30BD-PCF Interface Board" and make the switch setting of the interface board.

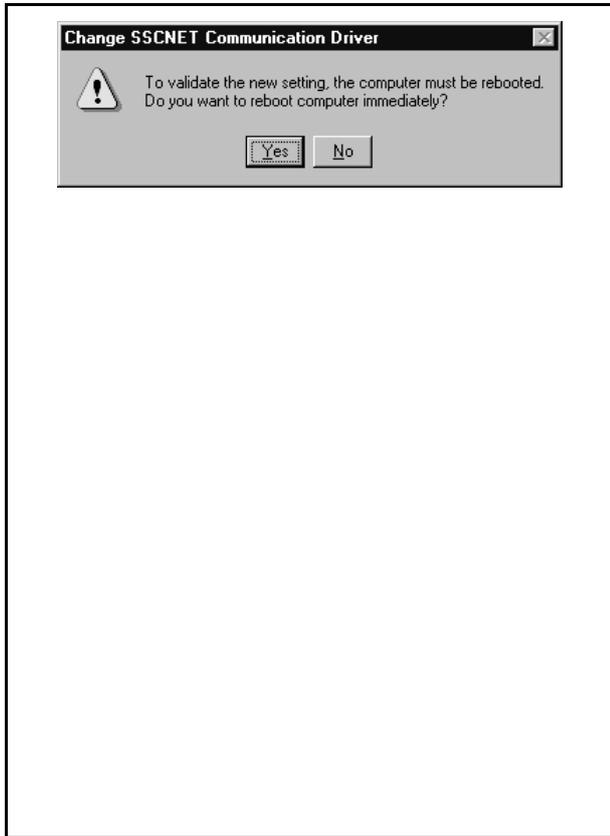


- 4) Click [OK].

To next page

4. SSCNET COMMUNICATION DRIVERS

From preceding page



5) The left dialog box appears.

<For Windows NT>

Click [No].

Choose "Shut Down" in the Start menu to power off the personal computer.

After making sure that the power is off, confirm the switch setting of the interface board and load the interface board into the personal computer.

After Windows NT has restarted, choosing and clicking [Programs]-[MELSOFT Application]-[MT Developer]-[SW6RNC-GSVE]-[SW6RN-SNETP]-[SSCNET Communication Task Start] in the Start menu makes SSCNET communication ready to start.

<For Windows 98>

Click [No].

Choose "Shut Down" in the Start menu to power off the personal computer.

After making sure that the power is off, confirm the switch setting of the interface board and load the interface board into the personal computer.

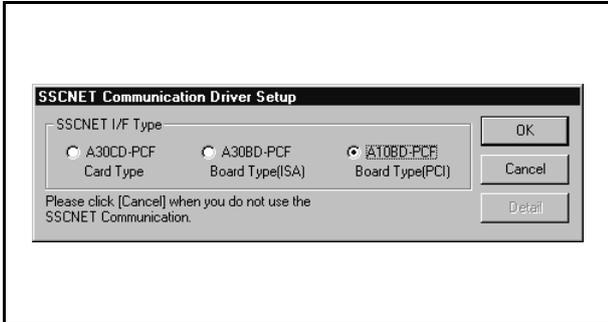
Restart Windows 98 and register the SSCNET communication drivers.

For the registration of the SSCNET communication driver, refer to "4.4 Registering the SSCNET Communication Drivers".

4. SSCNET COMMUNICATION DRIVERS

4.1.3 When using the A10BD-PCF interface board

This section provides the SSCNET communication driver setup procedure for use of the interface board.



- 1) The SSCNET Communication Driver Setup window appears.
Choose "A10BD-PCF Board Type" and click [OK].
*1: You need not make the setting when you use the A10BD-PCF interface board.
*2: You need not make the setting when you use RS232C communication or do not use SSCNET communication.
Click [Cancel] to exit from SSCNET Communication Driver Setup.



- 2) The left dialog box appears.
<For Windows NT>
Click [No].
Choose "Shut Down" in the Start menu to power off the personal computer.
After making sure that the power is off, confirm the switch setting of the interface board and load the interface board into the personal computer.
<For Windows 98>
Click [No].
Choose "Shut Down" in the Start menu to power off the personal computer.
After making sure that the power is off, confirm the switch setting of the interface board and load the interface board into the personal computer.
- 3) After Windows NT/98 has restarted, choosing and clicking [Programs] -[MELSOFT Application]-[MT Developer]-[SW6RNC-GSVE]-[SW6RN-SNETP]-[SSCNET Communication Task Start] in the Start menu makes SSCNET communication ready to start.

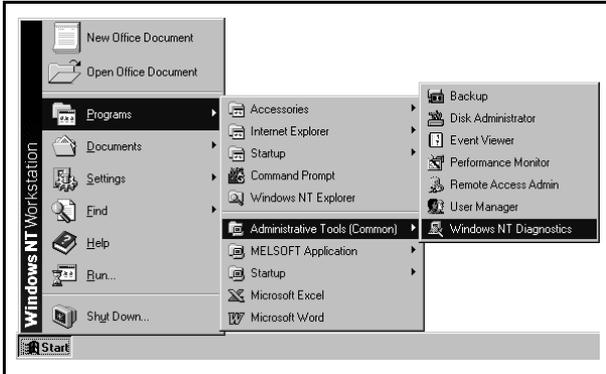
4. SSCNET COMMUNICATION DRIVERS

4.2 How to Check the System Resources

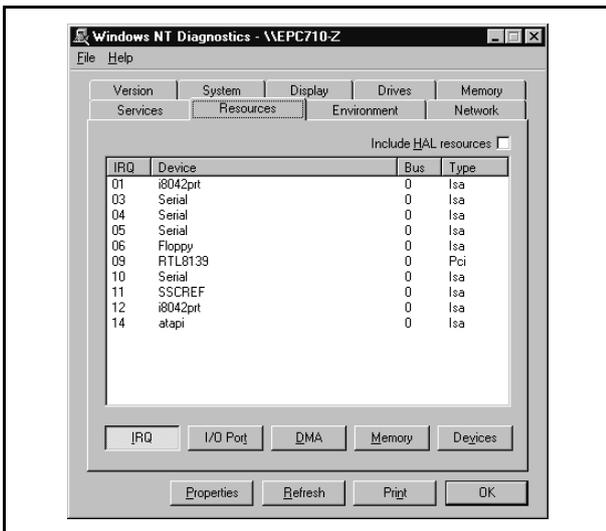
This section explains how to check the free areas of the system resources such as IRQ Level, Memory Base Address and I/O Port Address.

(1) For Windows NT

Refer to the Windows NT diagnostics and check the free areas of the system resources.



- 1) Choose and click [Programs]-[Administrative Tools (Common)]-[Windows NT Diagnostics] in the Start menu.



- 2) The Windows NT Diagnostics window appears. Click [Resources]. Click [IRQ], [I/O Port] and [Memory] to check the free areas.
[IRQ] Check the IRQ level.
[I/O Port] Check the I/O Port Address.
[Memory] Check the Memory Base Address.
*1 When using the interface board, you need not check the I/O Port Address.
*2 For details of the Windows NT diagnostics, refer to the Windows NT manual.

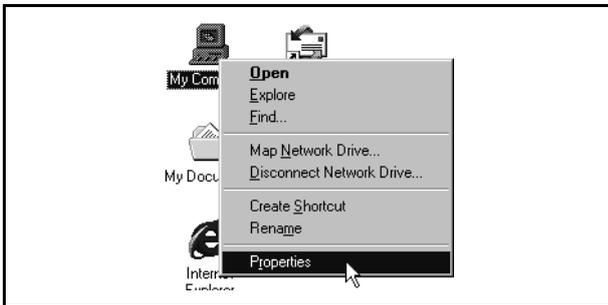
POINT

The resource use state may be described in the manual of the personal computer.
In this case, refer to the manual.

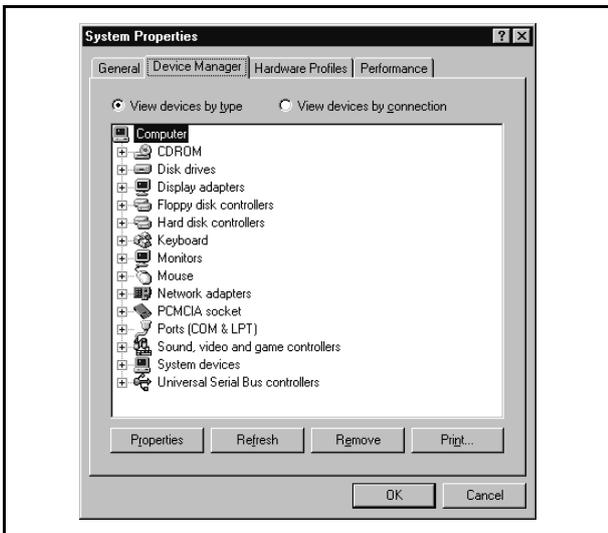
4. SSCNET COMMUNICATION DRIVERS

(2) For Windows 98

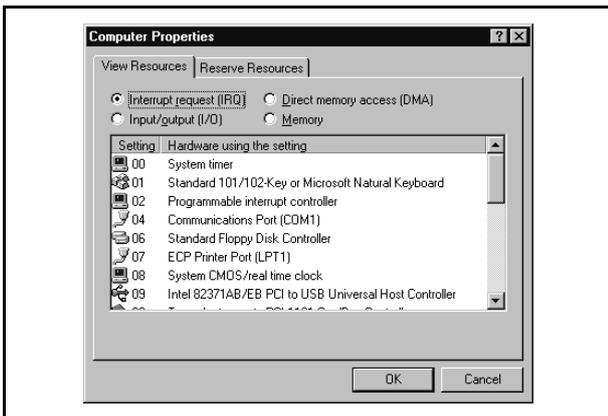
Check the free areas of the system resources from the My Computer icon on the desktop.



- 1) Choose and right-click the My Computer icon on the desktop.
The pop-up menu appears.
Click [Properties] from the pop-up menu.



- 2) The "System Properties" window appears.
Click [Device Manager].
Make sure that the Computer icon is highlighted and click [Properties].



- 3) The "Computer Properties" window appears.
Click [Interrupt Request] and [Memory] to check the free areas.
 - Interrupt Request ···· Check the IRQ level.
 - Memory ··········· Check the Memory Base Address.

*For details of the computer properties, refer to the Windows 98 manual.

POINT

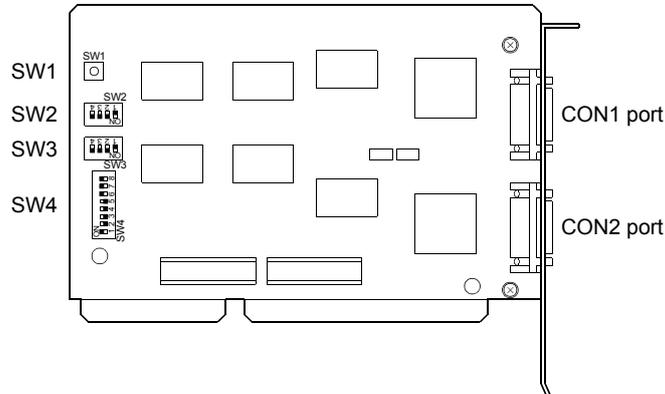
The resource use state may be described in the manual of the personal computer.
In this case, refer to the manual.

4. SSCNET COMMUNICATION DRIVERS

4.3 Setting the Interface Board

4.3.1 Setting the A30BD-PCF Interface Board

This section describes the switch setting of the interface board.



(1) Reset switch (SW1)

Turn on the reset switch (SW1) to reset the interface board.

During communication, do not press the reset switch as it will shut off communication.

If proper communication cannot be made, reset the interface board with the reset switch and then make communication.

(2) Interrupt level (SW2, SW3)

Set the identification number (IRQ level) used by the Operating System to recognize the interface board.

When setting the interrupt level, set to ON only one switch whose level does not overlap the interrupts of the other ISA bus extension boards, and set all other switches to OFF.

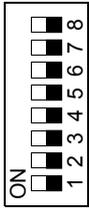
Note that the settings of SW2 and SW3 should be the same.

SW2, SW3	Definition	Default	Remarks	
	1	IRQ10 enable	OFF	
	2	IRQ11 enable	OFF	OFF : Invalid ON : Valid
	3	IRQ12 enable	OFF	
	4	IRQ15 enable	OFF	

4. SSCNET COMMUNICATION DRIVERS

(3) Setting the occupied addresses (SW4)

Set the addresses occupied by the interface board on the personal computer.

SW4		Definition	Default	Remarks
	1	Not used	OFF	Always set to OFF.
	2	Controller setting line 1 (CON1 port)	OFF	Always set to ON.
	3	Controller setting line 2 (CON2 port)	OFF	
	4	Address selection 1	OFF	Set the occupied addresses. For details, refer to the following Table 4.1.
	5	Address selection 2	OFF	
	6	Address selection 3	OFF	
	7	8/16 bit width selection	OFF	Set the bit width of the ISA bus. Set to OFF (16 bits). OFF : 16 bits ON : 8 bits
	8	IRQ switching	OFF	Always set to ON.

1) Address selection 1 to 3 (SW4-4 to 6) and occupied regions

One interface board occupies a 16K byte region.

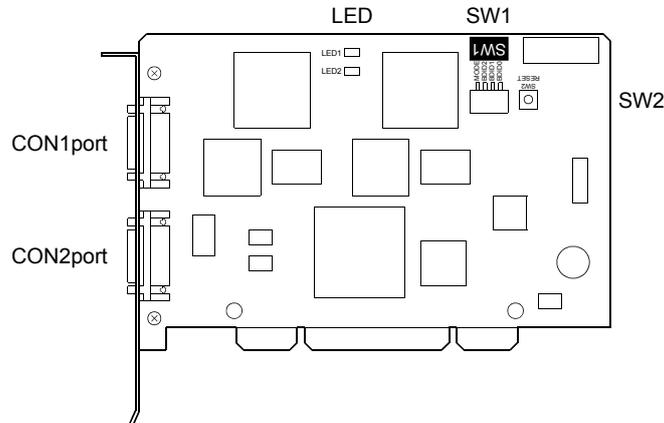
Table 4.1 Occupied Address Regions

Switch			Occupied Address Region	CON1 Port Region	CON2 Port Region
4	5	6	First to last	First to last	First to last
OFF	OFF	OFF	C0000h to C3FFFh	C0000h to C0FFFh	C1000h to C1FFFh
OFF	OFF	ON	C4000h to C7FFFh	C4000h to C4FFFh	C5000h to C5FFFh
OFF	ON	OFF	C8000h to CBFFFh	C8000h to C8FFFh	C9000h to C9FFFh
OFF	ON	ON	CC000h to CFFFFh	CC000h to CCFFFh	CD000h to CDFFFh
ON	OFF	OFF	D0000h to D3FFFh	D0000h to D0FFFh	D1000h to D1FFFh
ON	OFF	ON	D4000h to D7FFFh	D4000h to D4FFFh	D5000h to D5FFFh
ON	ON	OFF	D8000h to DBFFFh	D8000h to D8FFFh	D9000h to D9FFFh
ON	ON	ON	DC000h to DFFFFh	DC000h to DCFFFh	DD000h to DDFFFh

4. SSCNET COMMUNICATION DRIVERS

4.3.2 Setting the A10BD-PCF Interface Board

This section explains the switch setting of the A10BD-PCF interface board.



(1) Board ID setting switch (SW1)

When there are two or more PCI type A10BD-PCF's, set the ID numbers to identify the respective A10BD-PCF's.

SW1	Definition	Default	Remarks
	1 Board ID bit 0 (BDID0)	OFF	Set the ID number. For details, refer to the following Table 4.2.
	2 Board ID bit 1 (BDID1)	OFF	
	3 Board ID bit 2 (BDID2)	OFF	
	4 Controller setting (MODE)	ON	Always set to ON.

1) Board ID bit choices 0 to 2 (SW1-1 to 3) and ID numbers

Table 4.2 ID Numbers

Switch Numbers			Board ID
1 BDID0	2 BDID1	3 BDID2	
OFF	OFF	OFF	0
ON	OFF	OFF	1
OFF	ON	OFF	2
ON	ON	OFF	3

(2) Reset switch (SW2)

Turn on the reset switch (SW2) to reset the A10BD-PCF.

Do not press the reset switch during communication since doing so will shut off communication.

If normal communication cannot be made, press the reset switch to reset the A10BD-PCF and then start communication.

4. SSCNET COMMUNICATION DRIVERS

(3) LED display

Indicates the status of the A10BD-PCF.

- When the A10BD-PCF is normal: Flicker
- When the A10BD-PCF is abnormal: On or off

LED1 For CON1 port

LED2 For CON2 port

(4) Allotment between Board IDs and SSCNET CH No.

Bord ID	CON1 port	CON2 port
0	CH.0	CH.1
1	CH.2	CH.3
2	CH.4	CH.5
3	CH.6	CH.7

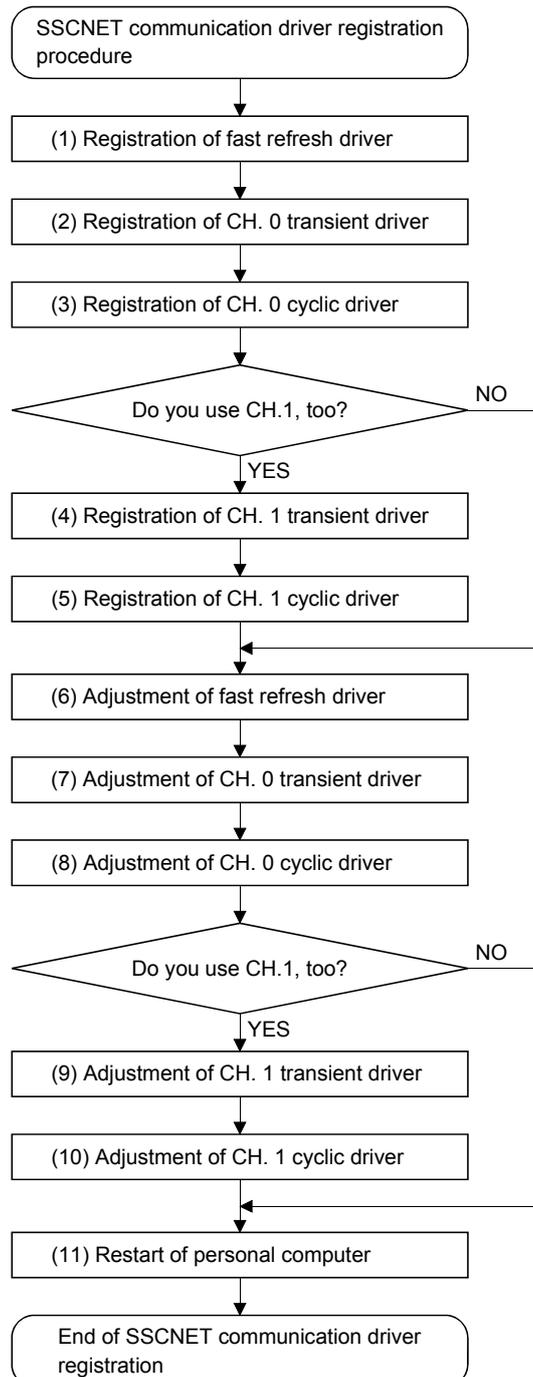
4. SSCNET COMMUNICATION DRIVERS

4.4 Registering the SSCNET Communication Drivers

When using the A30BD-PCF interface board on Windows 98 to make SSCNET communication, register the SSCNET communication drivers in the following procedure. (The following operation is not required when using the A30CD-PCF interface card and A10BD-PCF interface board.)

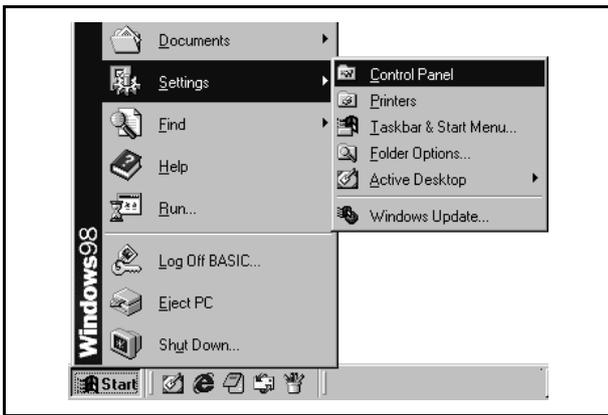
Since the A30BD-PCF interface board is not compatible with the plug and play function of Windows 98, you need to register the SSCNET communication drivers to Windows 98 after installing SNETP and setting up the SSCNET communication drivers. (When reinstalling SNETP, the SSCNET communication drivers are already registered and need not be registered again.)

Register the SSCNET communication drivers in the following procedure.

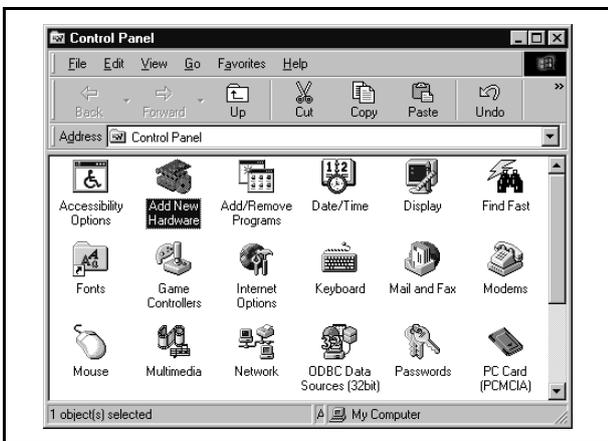


4. SSCNET COMMUNICATION DRIVERS

(1) Registering the fast refresh driver



- 1) Click [Start] on the taskbar and move the cursor to [Settings].
Click [Control Panel].



- 2) The "Control Panel" window appears.
Double-click "Add New Hardware" from Control Panel.



- 3) The "Add New Hardware Wizard" screen appears.
Click [Next >].



To next page

4. SSCNET COMMUNICATION DRIVERS

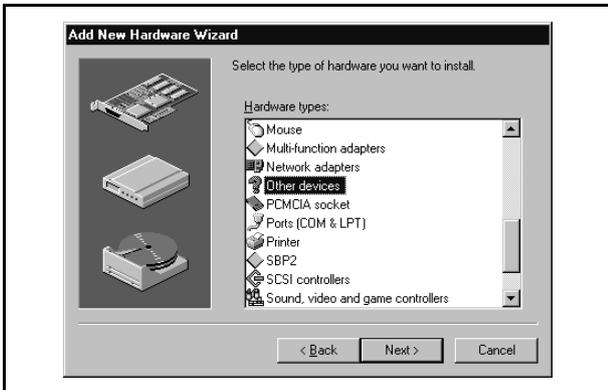
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4) Click [Next >].



5) Check "No, I want to select the hardware from a list." and click [Next >].



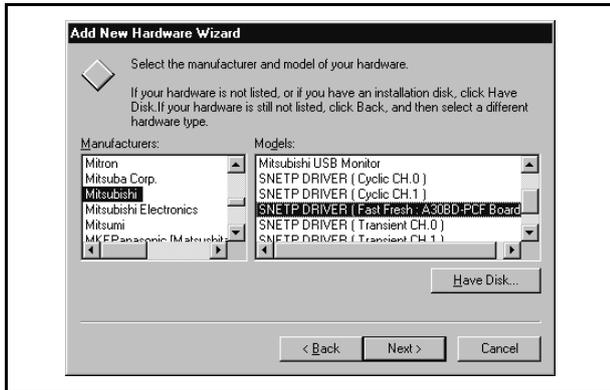
6) Choose "Other devices" and click [Next >].



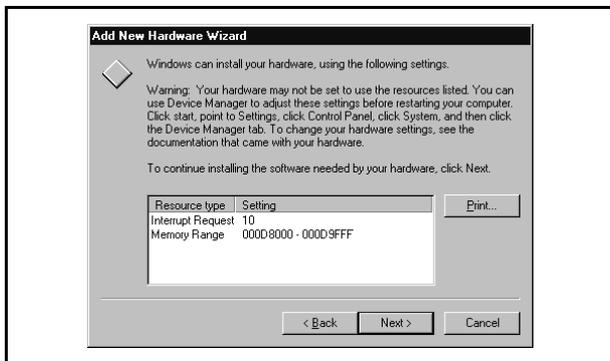
To next page

4. SSCNET COMMUNICATION DRIVERS

From preceding page



7) Choose "Mitsubishi" as Maker and "SNETP DRIVER (Fast Fresh: A30BD-PCF Board)" as Model, and click [Next >].



8) Click [Next >].



9) Click [Finish].



10) Click [No].

4. SSCNET COMMUNICATION DRIVERS

(2) Registering the CH. 0 transient driver



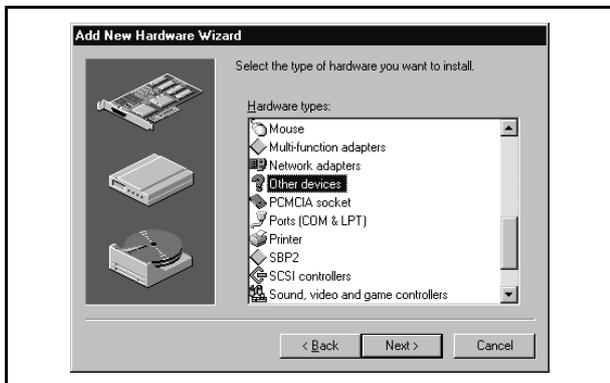
- 1) Double-click "Add New Hardware" from Control Panel. The "Add New Hardware Wizard" screen appears. Click [Next >].



- 2) Click [Next >].



- 3) Check "No, I want to select the hardware from a list." and click [Next >].

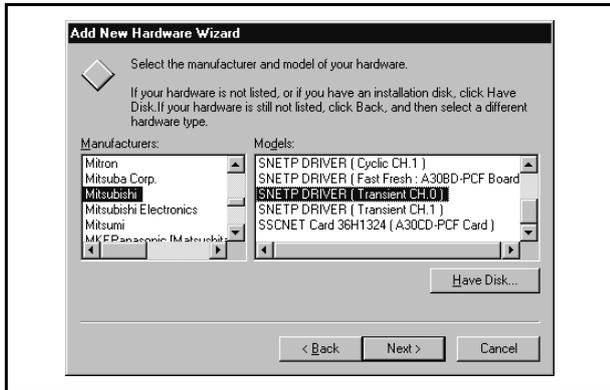


- 4) Choose "Other devices" and click [Next >].

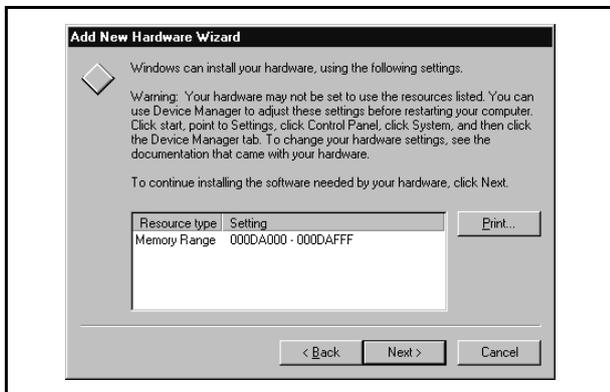
To next page

4. SSCNET COMMUNICATION DRIVERS

From preceding page



5) Choose "Mitsubishi" as Maker and "SNETP DRIVER (Transient CH. 0)" as Model, and click [Next >].



6) Click [Next >].



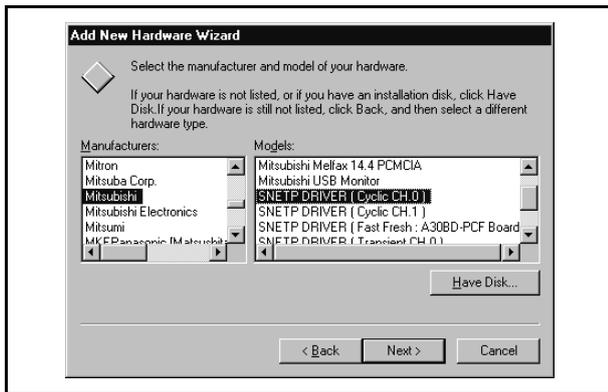
7) Click [Finish].



8) Click [No].

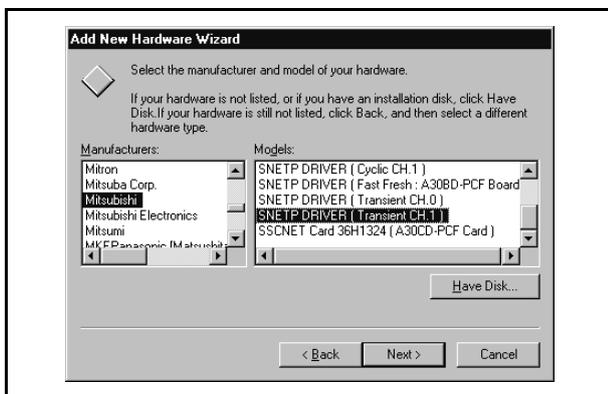
4. SSCNET COMMUNICATION DRIVERS

(3) Registering the CH. 0 cyclic driver



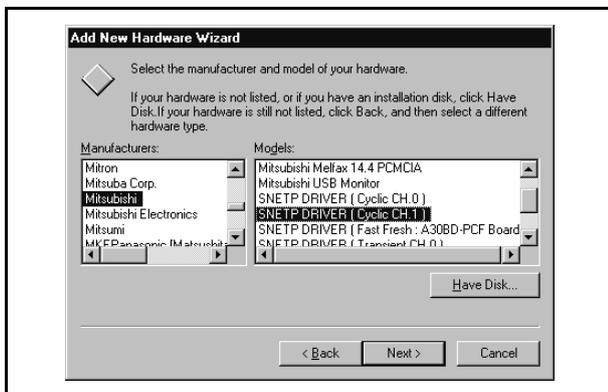
- 1) Register the CH. 0 cyclic driver in the procedure as in "(2) Registering the CH. 0 transient driver". Note that "SNETP DRIVER (Cyclic CH. 0)" should be chosen as Model in the hardware maker and model selection window.

(4) Registering the CH. 1 transient driver



- 1) When not using CH. 1, you need not make this setting. Proceed to "(6) Adjusting the fast refresh driver". Register the CH. 1 transient driver in the procedure as in "(2) Registering the CH. 0 transient driver". Note that "SNETP DRIVER (Transient CH. 1)" should be chosen as Model in the hardware maker and model selection window.

(5) Registering the CH. 1 cyclic driver



- 1) When not using CH. 1, you need not make this setting. Proceed to "(6) Adjusting the fast refresh driver". Register the CH. 1 cyclic driver in the procedure as in "(2) Registering the CH. 0 transient driver". Note that "SNETP DRIVER (Cyclic CH. 1)" should be chosen as Model in the hardware maker and model selection window.

4. SSCNET COMMUNICATION DRIVERS

(6) Adjusting the fast refresh driver

Adjust the IRQ and occupied addresses of the SSCNET communication drivers to the data assigned in detail setting of "SSCNET Communication Driver Setup".

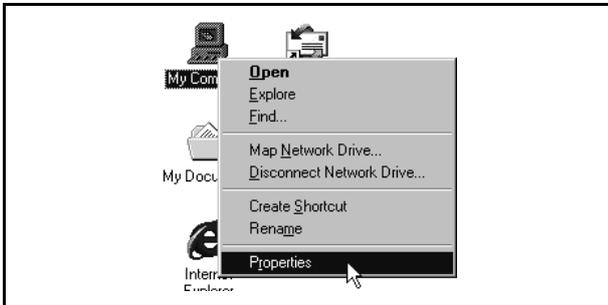
The following example assumes that the following assignment was made in detail setting of "SSCNET Communication Driver Setup".

(Example)

- IRQ 11
- Memory Base Address ... D0000



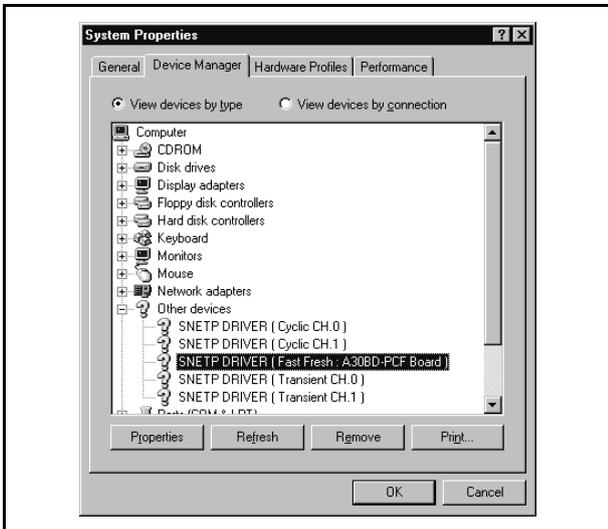
(SSCNET Communication Driver Setup window)



1) Choose and right-click the My Computer icon on the desktop.

The pop-up menu appears.

Click [Properties] from the pop-up menu.



2) The "System Properties" window appears.

Click [Device Manager].

Choose and double-click "Other devices".

You can confirm the interface board drivers registered in (1) to (5).

- SNETP DRIVER (Transient CH. 0)
- SNETP DRIVER (Cyclic CH. 0)
- SNETP DRIVER (Transient CH. 1)*
- SNETP DRIVER (Cyclic CH. 1)*
- SNETP DRIVER (Fast Fresh: A30BD-PCF Board)

*Displayed only when CH.1 is registered in driver registration.

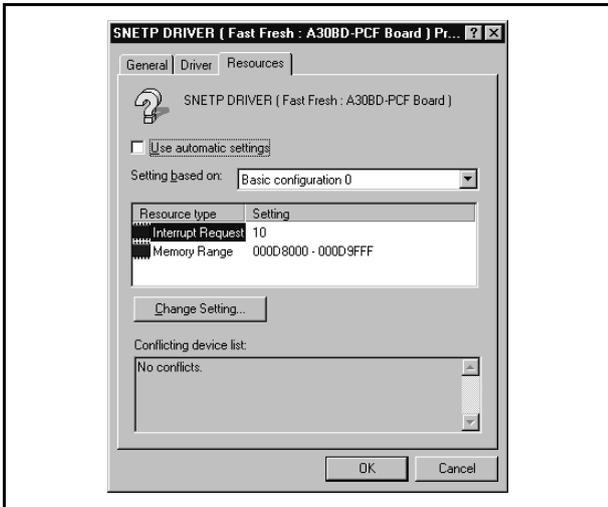
When CH. 1 is not used, these drivers are not registered and are not shown.

Here, choose "SNETP DRIVER (Fast Fresh: A30BD-PCF Board)" and click [Properties].

To next page

4. SSCNET COMMUNICATION DRIVERS

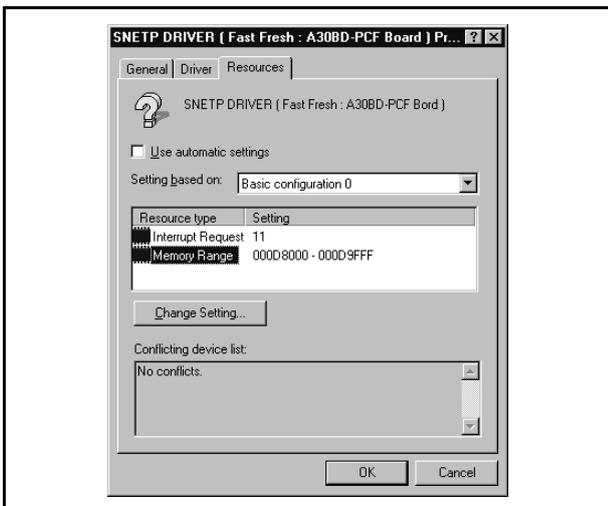
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- 3) The "SNETP DRIVER (Fast Fresh: A30BD-PCF Board) Properties" window appears. Click [Resources] and confirm the interrupt request and memory range.
 - Adjustment is not needed if the settings are the same as in "SSCNET Communication Driver Setup". Click [OK].
 - If the settings differ from the "SSCNET Communication Driver Setup" data, choose the type of the resource to be changed and click [Change Setting...].
- 4) If the interrupt request (IRQ Level) differs, choose "Interrupt request" to highlight it, and click [Change Setting...].



- 5) The "Edit Interrupt Request" window appears. Type "11" in the Value field and click [OK].



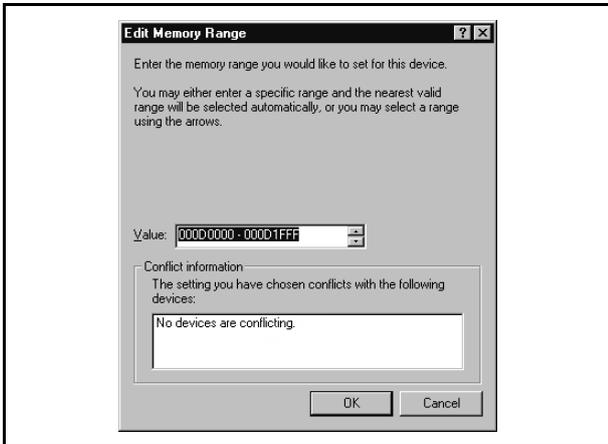
- 6) If the memory range (Memory Base Address) differs, choose "Memory range" to highlight it, and click [Change Setting...].



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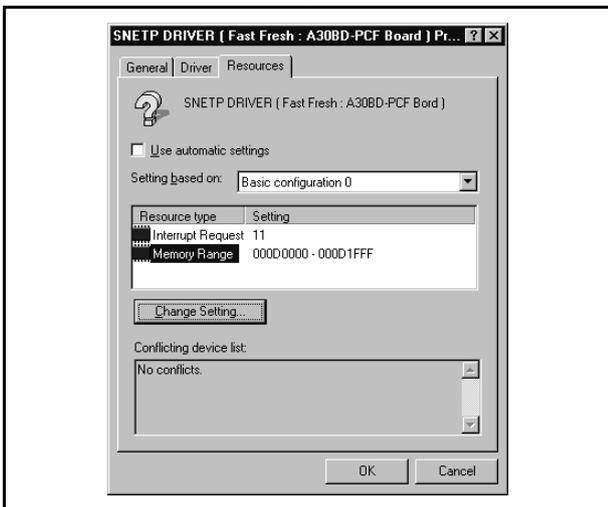
4. SSCNET COMMUNICATION DRIVERS

From preceding page

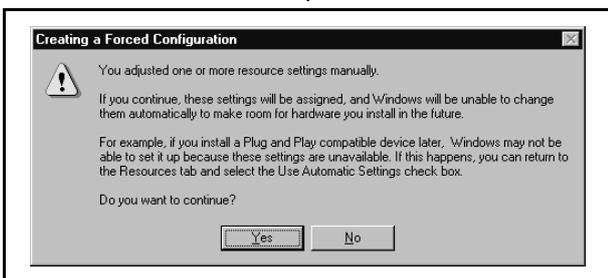


7) The "Edit Memory Range" window appears. Type "D0000-D1FFF" in the Value field and click [OK].

*Section 4.4 (12) provides the SSCNET Communication Driver Setup Memory Base Address and driver memory range setting table. Use it for your reference.



8) Click [OK].



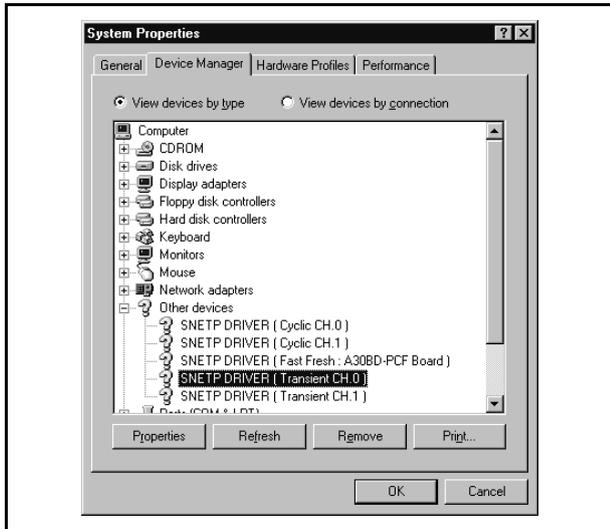
9) The "Creating a Forced Configuration" dialog box. Click [Yes].

This finishes the adjustment of the fast refresh driver.

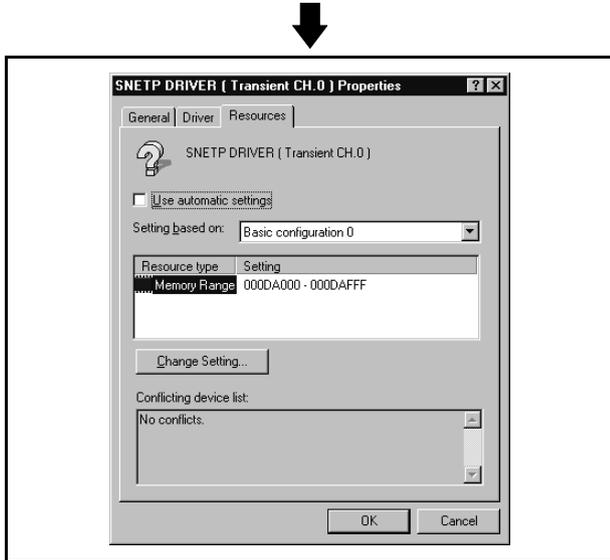
4. SSCNET COMMUNICATION DRIVERS

(7) Adjusting the CH. 0 transient driver

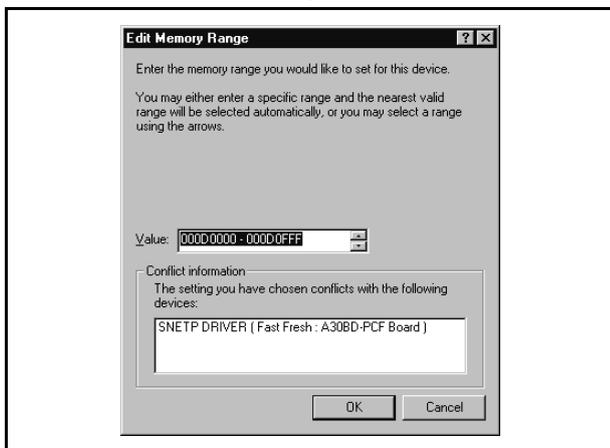
Adjust this driver as in the adjustment of the fast refresh driver.



- 1) As in the adjustment of the fast refresh driver, choose Properties from the My Computer icon to show the "System Properties" window. Click [Device Manager]. Choose and double-click "Other devices". Choose "SNETP DRIVER (Transient CH. 0)" and click [Properties].



- 2) The "SNETP DRIVER (Transient CH. 0)" Properties" window appears. Click [Resources]. Choose "Memory range" to highlight it and click [Change Setting...].

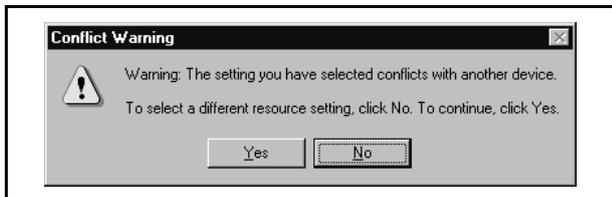


- 3) The "Memory Range" window appears. Type "D0000-D0FFF" in the Value field and click [OK].
*Set the same "Memory range" value as set in the fast refresh driver.
*Section 4.4 (12) provides the SSCNET Communication Driver Setup Memory Base Address and driver memory range setting table. Use it for your reference.

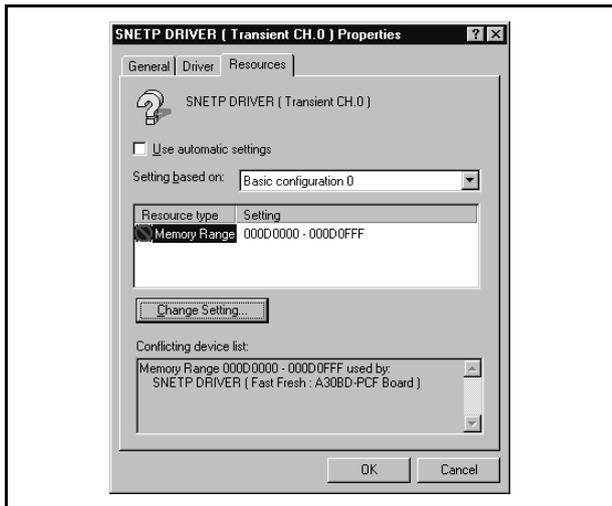
To next page

4. SSCNET COMMUNICATION DRIVERS

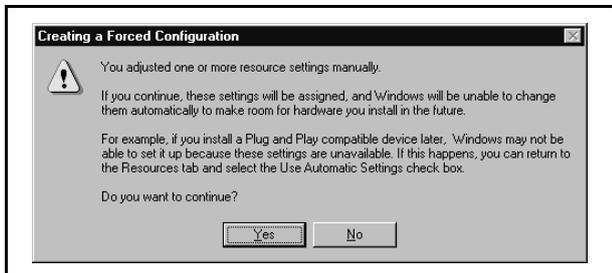
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4) The "Conflict Warning" dialog box appears, but click [Yes].



5) Click [OK].



6) The "Creating a Forced Configuration" dialog box. Click [Yes]. This finishes the adjustment of the CH. 0 transient driver.

(8) Adjusting the CH. 0 cyclic driver

Adjust the CH. 0 cyclic driver in the procedure as in "(7) Adjusting the CH. 0 transient driver".

Note that "SNETP DRIVER (Cyclic CH. 0)" should be selected in the "System Properties" window.

Set the memory range for CH. 0 cyclic driver adjustment to the same value as the memory range of the CH. 0 transient driver.

4. SSCNET COMMUNICATION DRIVERS

(9) Adjusting the CH. 1 transient driver

When not using CH. 1, you need not adjust the CH. 1 transient driver. Proceed to "(11) Restarting the personal computer".

(a) Adjust the CH. 1 transient driver in the procedure as in "(7) Adjusting the CH. 0 transient driver".

Note that "SNETP DRIVER (Transient CH. 1)" should be selected in the "System Properties" window.

(b) Set the memory range for CH. 1 transient driver adjustment to the value set for the CH. 0 memory range plus "1000".

(example)

When the CH. 0 value is "000D0000-000D0FFF", set the CH. 1 transient driver value to "000D1000-000D1FFF".

(10) Adjusting the CH. 1 cyclic driver

When not using CH. 1, you need not adjust the CH. 1 cyclic driver. Proceed to "(11) Restarting the personal computer".

(a) Adjust the CH. 1 cyclic driver in the procedure as in "(7) Adjusting the CH. 0 transient driver".

Note that "SNETP DRIVER (Cyclic CH. 1)" should be selected in the "System Properties" window.

(b) Set the memory range for CH. 1 cyclic driver adjustment to the same value as the memory range of the CH. 1 transient driver.

(11) Restarting the personal computer

After all settings are over, click [Close] in "System Properties" to close the window.

Click [Shut Down] in the Start menu to restart the personal computer.

(12) Memory Base Addresses of SSCNET Communication Driver Setup and Memory Ranges of Drivers

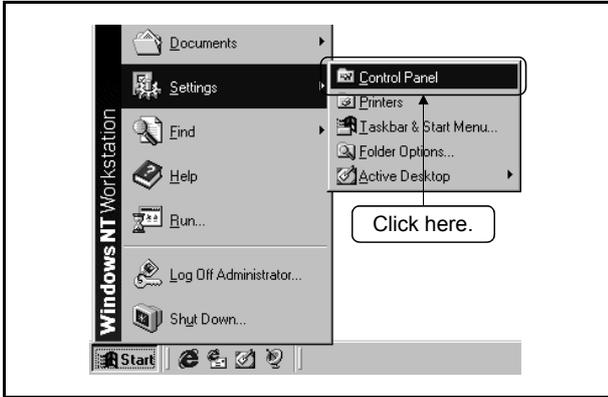
Memory Base Address	Memory Range of Refresh Driver	Memory Ranges of Transient/Cyclic Driver	
		CH.0	CH.1
C0000	C0000h to C1FFFh	C0000h to C0FFFh	C1000h to C1FFFh
C4000	C4000h to C5FFFh	C4000h to C4FFFh	C5000h to C5FFFh
C8000	C8000h to C9FFFh	C8000h to C8FFFh	C9000h to C9FFFh
CC000	CC000h to CDFFFh	CC000h to CCFFFh	CD000h to CDFFFh
D0000	D0000h to D1FFFh	D0000h to D0FFFh	D1000h to D1FFFh
D4000	D4000h to D5FFFh	D4000h to D4FFFh	D5000h to D5FFFh
D8000	D8000h to D9FFFh	D8000h to D8FFFh	D9000h to D9FFFh
DC000	DC000h to DDFFFh	DC000h to DCFFFh	DD000h to DDFFFh

4. SSCNET COMMUNICATION DRIVERS

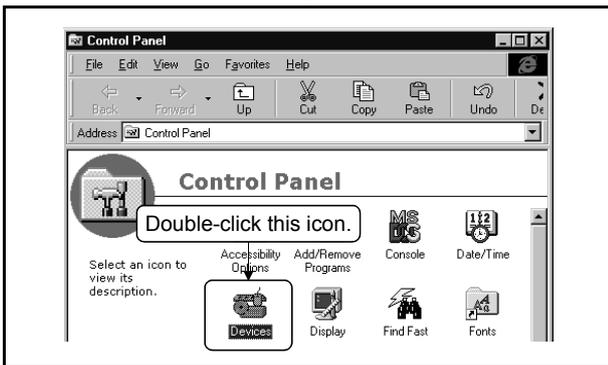
4.5 Stopping the SSCNET Communication Driver

When removing the interface board or interface card on Windows NT/98 from the personal computer, you need to stop the SSCNET communication driver.
(When removing the interface card on Windows 98, use the plug and play function of Windows. You need not perform the following operation.)

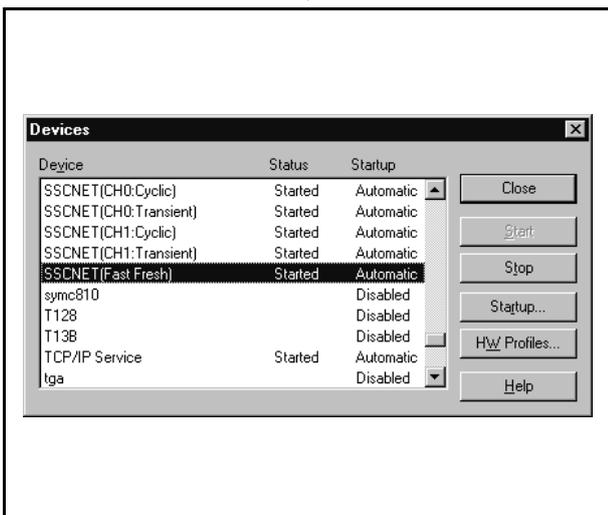
(1) For Windows NT



- 1) Click [Start] on the taskbar and move the cursor to [Settings].
Click [Control Panel].



- 2) The Control Panel window appears.
Double-click "Devices" from the Control Panel.



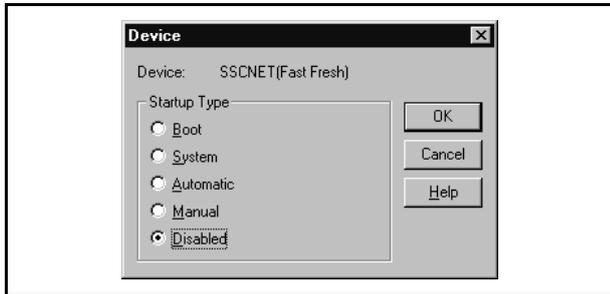
- 3) The "Devices" screen appears.
The SSCNET communication devices appear in the device list.
Make sure that the following devices are displayed.
 - SSCNET (CH. 0: Transient)
 - SSCNET (CH. 0: Cyclic)
 - SSCNET (CH. 1: Transient)*
 - SSCNET (CH. 1: Cyclic)*
 - SSCNET (Fast Fresh)

*1: For the interface card, CH. 1 does not appear.
*2: When you are using two or more interface boards, transient and cyclic communication devices for CH. 2 and later are displayed.
When there are four boards fitted, devices for up to CH. 8 appear.
- 4) Choose SSCNET (Fast Fresh) and click [Startup...].

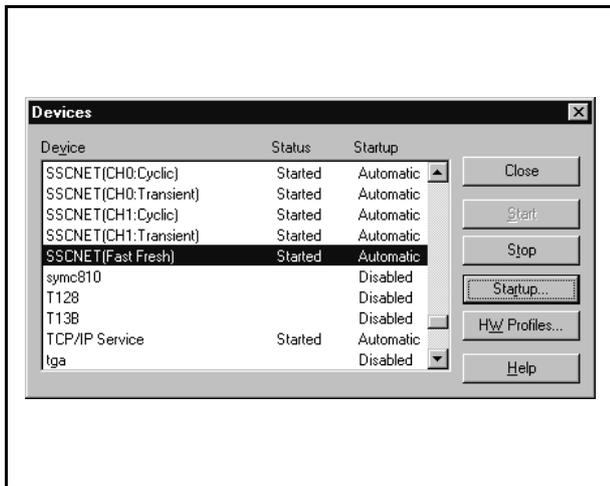
To next page

4. SSCNET COMMUNICATION DRIVERS

From preceding page



5) Choose "Disabled" from the Startup options and click [OK].



6) The "Devices" screen reappears. Perform the operations in steps 4) and 5) also for the other devices.

- SSCNET (CH. 0: Transient)
- SSCNET (CH. 0: Cyclic)
- SSCNET (CH. 1: Transient)*1
- SSCNET (CH. 1: Cyclic)*1

*1: For the interface card, CH. 1 does not appear.

*2: When you are using two or more interface boards, transient and cyclic communication devices for CH. 2 and later are displayed. When there are four boards fitted, devices for up to CH. 8 appear.

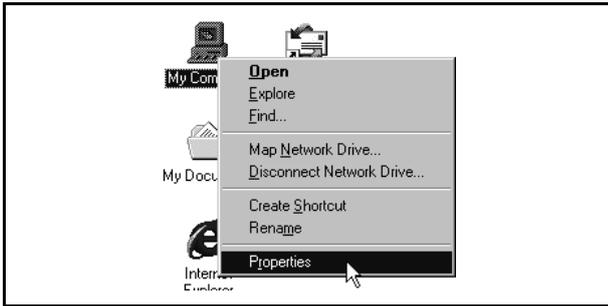
7) Click [Close].

8) Close the Control Panel and choose [Shut Down] in the Start menu to reboot the personal computer. The SSCNET communication driver stops after rebooting.

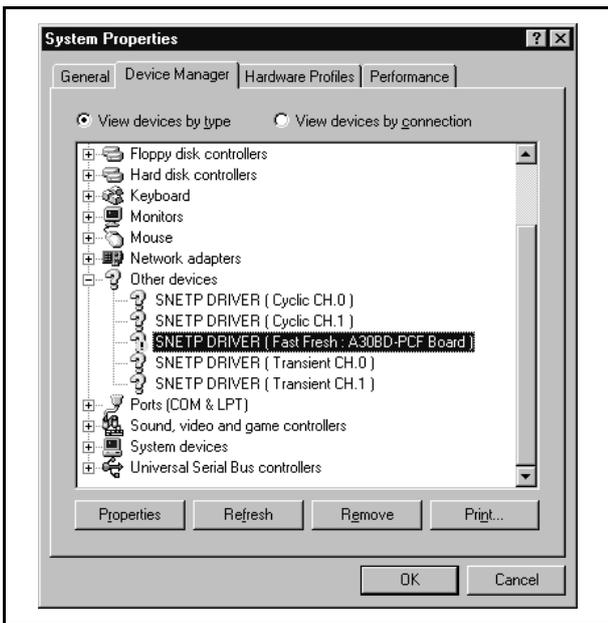
9) Before removing the interface card or interface board, choose [Shut Down] in the Start menu to power off the personal computer.

4. SSCNET COMMUNICATION DRIVERS

(2) For Windows 98

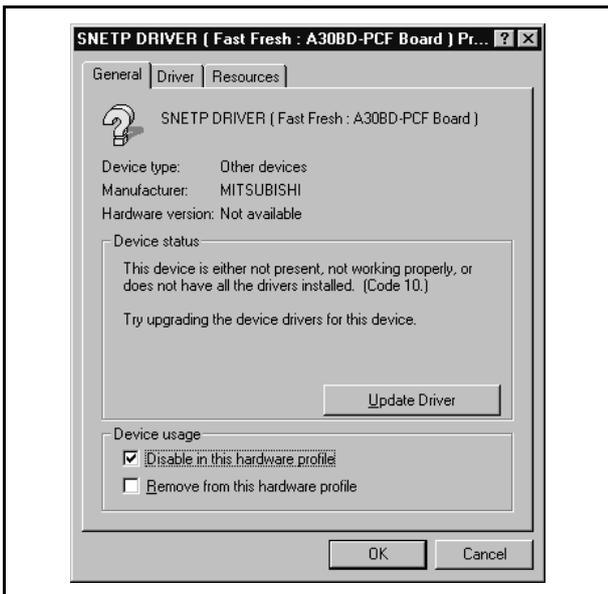


- 1) Select the My Computer icon on the desktop and right-click.
The pop-up menu appears.
Click [Properties] from the pop-up menu.



- 2) The "System Properties" window appears.
Click [Device Manager].
Choose "Other devices" and double-click.
Check to see if there are the following devices in "Other devices".
 - SNETP DRIVER (Transient CH. 0)
 - SNETP DRIVER (Cyclic CH. 0)
 - SNETP DRIVER (Transient CH. 1)*
 - SNETP DRIVER (Cyclic CH. 1)*
 - SNETP DRIVER (Fast Fresh: A30BD-PCF Board)

*These devices appear only when CH. 1 has been registered in driver registration.
When CH. 1 is not used, they are not displayed since they have not been registered.
- 3) Choose "SNETP DRIVER (Fast Fresh: A30BD-PCF Board)" and click [Properties].

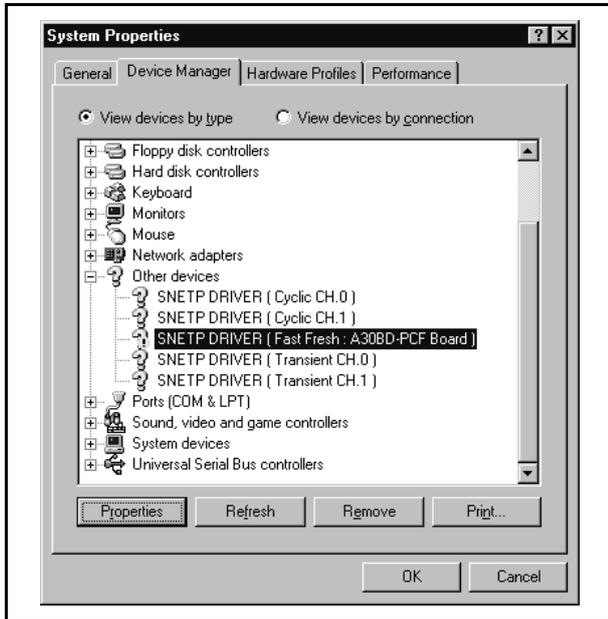


- 4) The "SNETP DRIVER (Fast Fresh: A30BD-PCF Board) Properties" window appears.
Turn on "Disable in this hardware profile" under "Device usage" and click [OK].

To next page

4. SSCNET COMMUNICATION DRIVERS

From preceding page



- 5) The "System Properties" window reappears. Perform the operations in steps 3) and 4) also for the other devices.
- SNETP DRIVER (Transient CH. 0)
 - SNETP DRIVER (Cyclic CH. 0)
 - SNETP DRIVER (Transient CH. 1)*
 - SNETP DRIVER (Cyclic CH. 1)*
- *Perform operations only when CH. 1 has been registered in driver registration.
- 6) Click [OK] to close the "System Properties" window.

- 7) Choose "Shut Down" in the Start menu to reboot the personal computer.
The SSCNET communication driver stops after rebooting.
- 8) Before removing the interface board, choose [Exit Windows] in the Start menu to power off the personal computer.

5. TROUBLESHOOTING

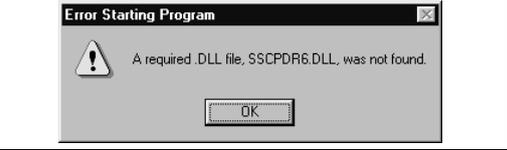
5. TROUBLESHOOTING

Remedies for trouble are described in this section.
Refer to this section when you are in trouble.

5.1 The setup program is terminated during installation.

No.	Phenomenon	Cause and remedy
1	<p>The following message box is displayed during installation.</p>  <p>Or, the following message box is displayed after the installation is repeated.</p> 	<p>There is a possibility that a correction module or a service pack are not correctly applied.</p> <p>In the case that a correction module "Update for security problems (328310)" has been applied to your Windows XP, there is a possibility that a correction module "Windows XP update (814995)" is not applied or it is applied but the system files replace older version.</p> <p>In this case, download and apply a correction module, "Windows XP update (814995)" from the Microsoft Corporation's Web site.</p>

5. TROUBLESHOOTING

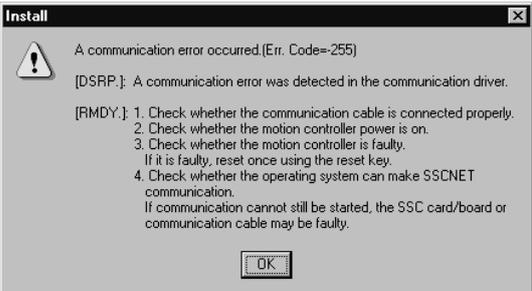
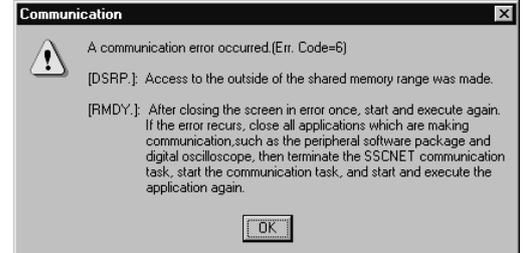
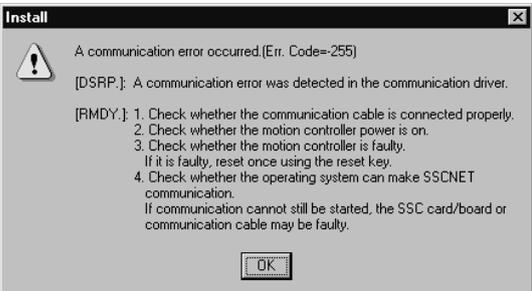
No.	Phenomenon	Corresponding Version	Cause and remedy
4	<p>When monitor, DOSCP or other application is started from the menu, the following message describing failure to find "sscpdr6.dll" is displayed.</p> <ul style="list-style-type: none"> Windows NT/2000/XP  <ul style="list-style-type: none"> Windows 98 	<p>SW6RN-GSV[] [] P (Ver.00B or later) SW6RN-DOS CP</p>	<p>1) SNETP is not installed. Even if communication with the CPU is not made actually, SNETP must be installed. Refer to section 3.1 "Installation" to install the SW6RN-SNETP (Ver. 00B or later). If communication is made only with the Q172/Q173CPU, install SW6RN-SNETP.</p> <ul style="list-style-type: none"> A list of applications for communication with the CPU is displayed. The following applications cause the phenomenon described to the left. (Applications other than those listed below operate without SNETP.) GSV[] [] P : Monitor, communication, program editor, install, mechanical system editor, test, backup, servo data setting (for writing to servo amplifier) <p>SW6RN-DOSCP: Digital oscilloscope</p>
5	<p>The communication starting procedure causes the following error and termination of the process.</p> 		<p>2) SNETP has been installed but is incompatible with the package given on the left. (SW6RN-SNETP (Ver. 00B or later) has been installed.) Refer to "3.7 Updating Instructions and Procedures" and update one set of SW6RNC-GSVE.</p>
6	<p>Even when a Jump icon (monitor, digital oscilloscope or other applications for performing communication) of GSV[] [] P is clicked on, jumping does not occur. (However, no error is caused.)</p>	<p>SW6RN-GSV[] [] P (Ver.00B or later)</p>	<p>3) The PATH specified as the long name has been described in AUTOEXEC.BAT. *: Long name: Folder name of 9 or more characters Describe the SNETP PATH before the PATH specified as the long name, and always add "%PATH%" before the part where the long name has been specified. It is not required if it has already been described. (Example)</p> <ul style="list-style-type: none"> Before change SET PATH="C:\Program Files\ABC;" (*1) SET PATH=%PATH%;C:\PROGRA~1\Sw6Sne~1; (*2) ↓ After change SET PATH=%PATH%;"C:\PROGRA~1\Sw6Sne~1;" SET PATH=%PATH%;"C:\Program Files\ABC;" <p>*: Always described the _____ (wiggly line) part. (*1): Long name PATH (*2): SNETP PATH</p> <p>4) AUTOEXEC.BAT is not made valid. Refer to section 5.19 AUTOEXEC.BAT is not executed for details.</p>

5. TROUBLESHOOTING

5.3 If communication over SSCNET or via RS232C or USB fails with GSV[][JP

Refer to the description of "Remedy" in the error message basically for the action to be taken upon a communication error.

If the problem is not removed, refer to the table below for corrective action.

No.	Phenomenon	Cause and remedy
1	<p>Communication error "-255" occurred during communication over SSCNET.</p> 	<p>1) The actually connected channel does not agree with the setting. Refer to section 4.6 "Communication setting with GSV[][JP" to check the SSCNET communication channel.</p> <p>2) The SSCNET communication driver is not set up correctly. Set up the SSCNET communication driver to perform communication over SSCNET. Refer to section 4.1 "SSCNET communication driver setup procedure" to set up the driver.</p>
2	<p>Communication error "-252" occurred during communication over SSCNET.</p> 	<p>When SW6RN-GSV[][JP (Ver. 00A) is in use, the phenomenon described on the left may occur.</p> <ul style="list-style-type: none"> Refer to "3.7 Updating Instructions and Procedures" and update one set of SW6RNC-GSVE. When it is not updated, follow the remedy since the possible cause is any of the following 1) to 5).
3	<p>Communication error "6" occurred during communication via RS232C/USB.</p> 	<p>1) SNETP of an early version is used. (A communication means (SSCNET, 232C or USB) that is not supported is designated, or SNETP of a version that does not support Q172/Q173 is used.) Uninstall the early version and install the new version of SNETP that supports the Q172/Q173CPU. (*1)</p> <p>2) Two or more copies of SNETP of different versions are installed. Uninstall all copies of SNETP. If any system directory (file) of SNETP remains after they are uninstalled, delete using Explorer or the like. Next, install only one copy of SNETP of a version that supports the Q172/Q173CPU. (*1)</p> <p>3) Both SW3RN-SNETP and SW6RN-SNETP are installed in one PC. Uninstall both SW3RN-SNETP and SW6RN-SNETP and install either one again. (*1)</p>
4	<p>Communication error "-255" occurred during communication via RS232C/USB.</p> 	<p>4) Windows 98, Windows NT, Windows 2000 and Windows XP are installed in one PC and SNETP of different versions is installed in each drive. Uninstall all copies of SNETP then install SNETP of a single version that supports the Q172/Q173CPU to both the Windows 98, Windows NT, Windows 2000 and Windows XP drives. (*1)</p> <p>5) Windows 98, Windows NT, Windows 2000 and Windows XP are installed in one PC and SW3RN-SNETP and SW6RN-SNETP are installed in each drive. Uninstall all copies of SNETP then install SNETP of a single version that support the Q172/Q173CPU to both the Windows 98, Windows NT, Windows 2000 and Windows XP drives. (*1)</p>

*1: Refer to section 3.4.6(1) to install the best SNETP.

If communication is made only with the Q172/Q173CPU, install SW6RN-SNETP (Ver.00A).

5. TROUBLESHOOTING

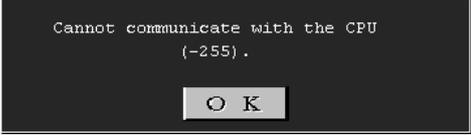
No.	Phenomenon	Cause and remedy
5	<p>Communication error "10" occurred during communication over SSCNET.</p>	<p>1) SW3RN-SNETP was booted. Exit from SW3RN-SNETP and boot SW6RN-SNETP.</p>

*1: Refer to section 3.4.6(1) to install the best SNETP.

If communication is made only with the Q172/Q173CPU, install SW6RN-SNETP (Ver.00A).

5. TROUBLESHOOTING

5.4 If communication over SSCNET fails with DOSCP

No.	Phenomenon	Cause and remedy
1	Communication error "50" or "51" occurred.  	When SW3RN-DOSCP is in use <ul style="list-style-type: none"> SW3RN-SNETP is not booted. Boot SW3RN-SNETP. When SW6RN-DOSCP is in use <ul style="list-style-type: none"> SW6RN-SNETP (Ver. 00B or later) is not booted. Boot SW6RN-SNETP (Ver. 00B or later).
2	Communication error "10" occurs. 	When SW3RN-DOSCP is in use <ul style="list-style-type: none"> SW6RN-SNETP (Ver. 00B or later) has been booted. Exit from SW6RN-SNETP (Ver. 00B or later) and boot SW3RN-SNETP. When SW6RN-DOSCP is in use <ul style="list-style-type: none"> SW3RN-SNETP has been booted. Exit from SW3RN-SNETP and boot SW6RN-SNETP (Ver. 00B or later).
3	Communication error "-255" occurs. 	The actually connected channel does not agree with the setting. Check the communication channel. (For the channel setting checking method, refer to the help of DOSCP.) When SW3RN-DOSCP is in use, the phenomenon described on the left may occur. <ul style="list-style-type: none"> Refer to "3.7 Updating Instructions and Procedures" and update one set of SW6RNC-GSVE. After that, boot SW6RN-DOSCP. When SW3RN-DOSCP is in use, follow the remedy since the possible cause is any of the following 1) to 5). <ol style="list-style-type: none"> SNETP of an early version is used. (A communication means (SSCNET, 232C or USB) that is not supported is designated, or SNETP of a version that does not support Q172/Q173 is used.) Uninstall the early version and install the new version of SNETP that supports the Q172/Q173CPU. (*1) Two or more copies of SNETP of different versions are installed. Uninstall all copies of SNETP. If any system directory (file) of SNETP remains after they are uninstalled, delete using Explorer or the like. Next, install only one copy of SNETP of a version that supports the Q172/Q173CPU. (*1) Both SW3RN-SNETP and SW6RN-SNETP are installed in one PC. Uninstall both SW3RN-SNETP and SW6RN-SNETP and install either one again. (*1) Windows 98, Windows NT, Windows 2000 and Windows XP are installed in one PC and SNETP of different versions is installed in each drive. Uninstall all copies of SNETP then install SNETP of a single version that supports the Q172/Q173CPU to both the Windows 98, Windows NT, Windows 2000 and Windows XP drives. (*1) Windows 98, Windows NT, Windows 2000 and Windows XP are installed in one PC and SW3RN-SNETP and SW6RN-SNETP are installed in each drive. Uninstall all copies of SNETP then install SNETP of a single version that support the Q172/Q173CPU to both the Windows 98, Windows NT, Windows 2000 and Windows XP drives. (*1)

*1: Refer to section 3.4.6(1) to install the best SNETP.

If communication is made only with the Q172/Q173CPU, install SW6RN-SNETP (Ver.00A).

5. TROUBLESHOOTING

No.	Phenomenon	Cause and remedy
4	<p>Communication error "12" occurs.</p> 	<p>The SSCNET communication driver is not set up correctly. To perform communication over SSCNET, set up the SSCNET communication driver.</p> <p>To do this, refer to section 4.1 "SSCNET communication driver setup procedure."</p>

*1: Refer to section 3.4.6(1) to install the best SNETP.

If communication is made only with the Q172/Q173CPU, install SW6RN-SNETP (Ver.00A).

5.5 If no sampling data is obtained from DOSCP

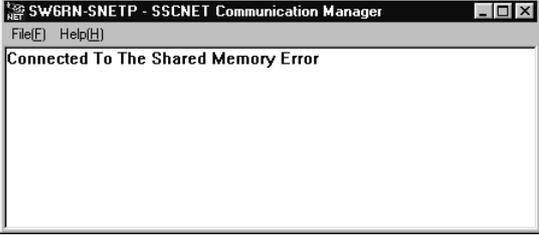
No.	Phenomenon	Cause and remedy
1	No sampling data is obtained. (The waveform is not detected.)	<p>1) The SSCNET communication driver is not set up correctly. To perform communication over SSCNET, set up the SSCNET communication driver. To do this, refer to section 4.1 "SSCNET communication driver setup procedure."</p> <p>2) The channel setting is OFFLINE. After clicking the [MENU] button, click the [CHANNEL] button to display the "Communication setting window", choose the correct channel, and set ONLINE.</p>

5.6 During USB communication, communication error occurred and communication is not recovered from error

No.	Phenomenon	Cause and remedy
1	A communication error occurred during USB communication with the motion CPU, and communication is not recovered from the error.	<p>Any of operations 1) to 3) was performed during USB communication with the motion CPU.</p> <p>1) The USB cable was disconnected and connected during communication with the motion CPU.</p> <p>2) The motion CPU was reset.</p> <p>3) The motion CPU was powered on/off frequently.</p> <p>Do not perform any of operations 1) to 3) during USB communication.</p> <p>Doing so may cause a communication error, from which communication cannot be recovered.</p> <p>If any of operations 1) to 3) is to be performed, put the GSV applications in an offline status* where possible.</p> <p>If communication is not recovered from the error, disconnect the USB cable once, and after 5 or more seconds have elapsed, reconnect it. (The communication error may occur at the first time after the above operation is performed, but communication will return to normal at the second time and later.)</p> <p>Depending on the personal computer model, however, communication may not be recovered from the error if the above operation is performed.</p> <p>In that case, reset the personal computer.</p> <p>*Offline status: Status in which communication is not made with the motion CPU (In an online status, program/parameter read/write, monitoring, test or like is in execution.)</p>

5. TROUBLESHOOTING

5.7 SNETP cannot be booted properly

No.	Phenomenon	Cause and remedy
1	<p>The SSCNET communication manager window displays "Shared memory connection error" and SNETP is not booted properly.</p>  <p>If SSCNET communication is started in this status, communication error "51" will occur.</p> 	<p>With SW6RN-SNETP and GX Developer booted, operation to exit from SNETP was performed in the procedure of 1) to 3).</p> <ol style="list-style-type: none"> 1) Exit from SNETP. 2) Here, the VLINKS window remains. (It remains since it is also used on GX Developer.) 3) Close the VLINKS window manually. <p>If the operation to exit from SNETP is performed in the procedure 1) to 3), VLINKS cannot be booted properly at the next start of SNETP, causing the phenomenon given on the left.</p> <p>If you have closed VLINKS manually, exit from GX Developer once and restart SW6RN-SNETP.</p>

5.8 When GX Developer is booted, "Can not allocate Share memory" error occurs

No.	Phenomenon	Cause and remedy
1	<p>When GX Developer is booted, "Can not allocate Share memory" error occurs.</p> 	<p>Booting GX Developer during termination of SNETP may cause the phenomenon given on the left.</p> <p>If this error has occurred, exit from GX Developer once and reboot GX Developer.</p>

5.9 RS232C communication baud rate remains unchanged

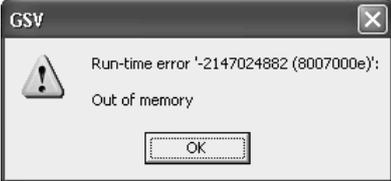
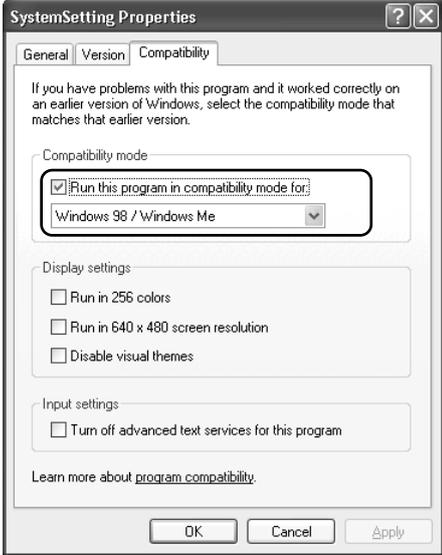
No.	Phenomenon	Cause and remedy
1	<p>If you change the baud rate setting of RS232C communication, it is not reflected on the actual communication baud rate.</p>	<p>When making RS232C communication on the same port using GSV[][]P, DOSCP and GX Developer, use the same baud rate setting.</p> <p>If RS232C communication is made at different settings, the setting used at the first communication started is made valid. Before changing the baud rate setting, stop communication with all CPUs once.</p>

5. TROUBLESHOOTING

5.10 When SNETP is booted, "Not enough memory" error occurs

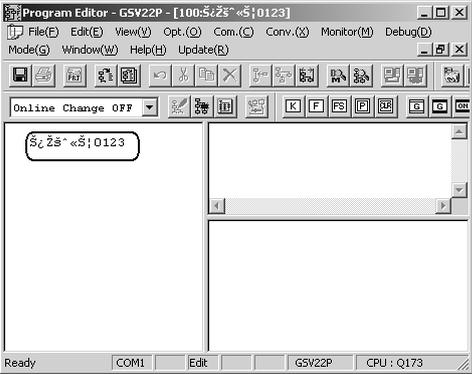
No.	Phenomenon	Cause and remedy
1	When SNETP is booted, "Not enough memory" error occurs. 	1) When SNETP is booted in the order of SW6RN-SNETP Ver. 00B or later and SW3RN-SNETP Ver. 00G or earlier, SW3RN-SNETP displays the error given on the left and does not start. Exit from SW3RN-SNETP. (Refer to section 3.4.6 Precautions for using SNETP for details.) 2) Booting SW6RN-SNETP Ver.00A during termination of GX Developer, SW6RN-SNETP displays the error given on the left and does not start. Refer to section 3.4.3 Precautions for simultaneous operation of SW6RNC-GSVE and GX Developer for details.

5.11 If a runtime error of insufficient memory occurs when the GSV[][]P package is started up and CAMP is operated

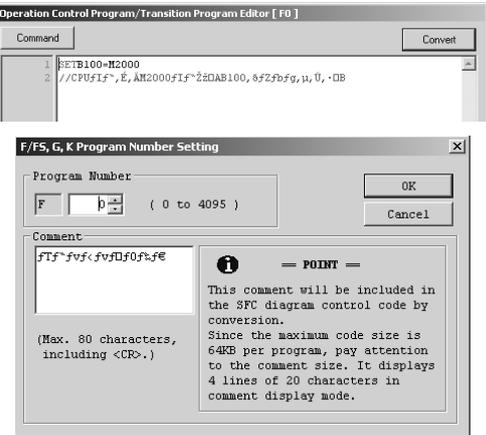
No.	Phenomenon	Cause and remedy
1	A runtime error of insufficient memory occurs when the GSV[][]P package is started up and CAMP is operated, and the program exits as it is (for Windows XP) 	The "Run this program in compatibility mode for:" item is checked on the properties screen of the application. Uncheck the item, and execute the program again. 

5. TROUBLESHOOTING

5.12 The SFC programs cannot be read from the motion CPU, or cannot be displayed correctly.

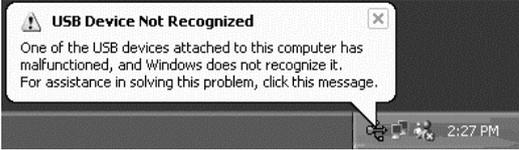
No.	Phenomenon	Corresponding Package	Cause and remedy
1	<ul style="list-style-type: none"> Windows 98 The following message is displayed in the reading cycle from the motion CPU, and the program is not read.  <ul style="list-style-type: none"> Windows NT/2000/XP The program is read from the motion CPU correctly, but the SFC program may not be displayed correctly on the program editor screen. In this case, the program is not edited. 	SW6RN-GSV 13P/GSV22P	There is a possibility that the Japanese characters are included in the SFC program name. After changing the Japanese characters to ASCII characters with the Japanese edition of GSV package, open with the English edition of GSV package.

5.13 The characters are not displayed correctly on the program editor screen.

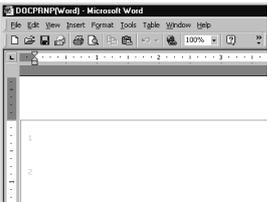
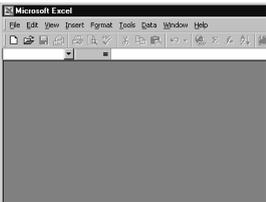
No.	Phenomenon	Corresponding Package	Cause and remedy
1	<p>The characters are not displayed correctly on the program editor screen.</p> 	SW6RN-GSV 13P/GSV22P	There is a possibility that Japanese characters are used in SFC comment or comments in F/G programs. Though the characters are not displayed correctly on the program editor screen, the comments can be edited. Delete garbage characters and enter ASCII characters.

5. TROUBLESHOOTING

5.14 During USB communication, the USB driver cannot be installed or communication error occurs.

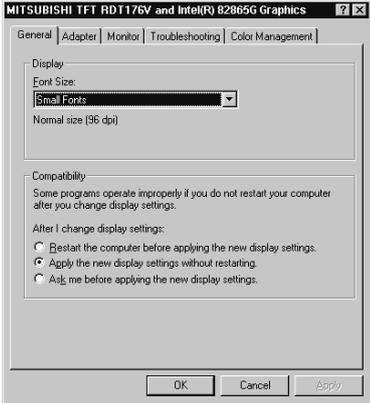
No.	Phenomenon	Cause and remedy
1	<p>The following error occurs and the USB driver cannot be installed when USB communication is performed with the Q motion CPU.</p> <p><Windows XP></p>  <p><Windows2000></p> 	<p>When USB communication is performed in normal mode with a Q motion CPU on which the main OS has not been installed (at the time of initial shipment), the USB driver cannot be installed, and the state shown on the left occurs.</p> <p>If the main OS has not been installed, change the Q motion CPU to installation mode, and perform USB communication again. The USB driver will be installed.</p> <p>However, when USB communication is performed for the first time on Windows 2000 or Windows XP, it is necessary to perform settings and install the USB driver. Refer to the following explanation for the setting procedure.</p> <ul style="list-style-type: none"> • For Windows 2000 : "3.4.7 Precautions for using USB communication in Windows 2000" • For Windows XP : "3.4.9 Precautions for using USB communication in Windows XP" <p>*: Refer to the user manual for the motion controller Q series (Q173CPU/Q172CPU/Q173HCPU/Q172HCPU) regarding how to deal with the Q motion CPU.</p>
2	<p>The following communication error occurs, and communication with the CPU cannot be done when USB communication is performed with the Q motion CPU. (Error Code = 14850)</p> 	

5.15 DOCPRNP cannot be booted properly

No.	Phenomenon	Cause and remedy
1	<p>DOCPRNP do not start up properly as below.</p> <p>Word screen</p>  <p>Excel screen</p> 	<p>If the security level setting is "High" or higher on Word or Excel, you cannot use SW20RN-DOCPRNP. Before using SW20RN-DOCPRNP, set the security level of Word or Excel to other than "Medium" or lower and restart SW20RN-DOCPRNP. Refer to section 3.4.1 Precautions for using SW20RN-DOCPRNP (1) for details.</p> <p>It has been reported that when antivirus software has been installed in the PC, SW20RN-DOCPRNP cannot be booted. Refer to section 3.4.1 Precautions for using SW20RN-DOCPRNP (2) for details.</p>

5. TROUBLESHOOTING

5.16 Application may not be displayed correctly

No.	Phenomenon	Cause and remedy
1	The color inside the GSV application window may not be displayed correctly.	Change the graphics accelerator setting to basic setting on "Display" in the Control Panel. Refer to section 3.4.2 Precautions for operation under Windows 98 (1) for details.
2	GSV application may not be displayed correctly as below. 	GSV application may not be displayed in the case of other than "Small Font" (Default) on the system font size of Windows. In this case, change the font size to "Small Font" (Default) on "Display" in the Control Panel. 

5.17 Sampling omission may occur on DOSCP screen

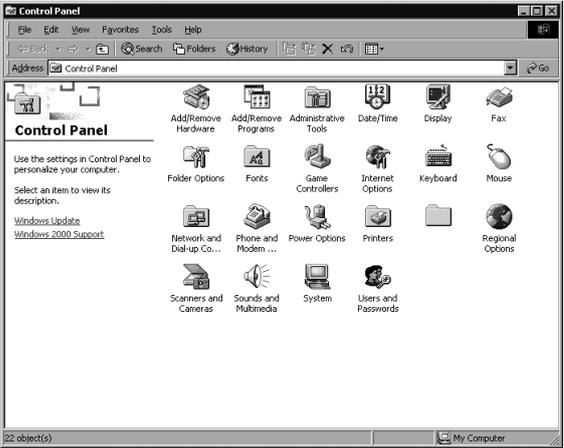
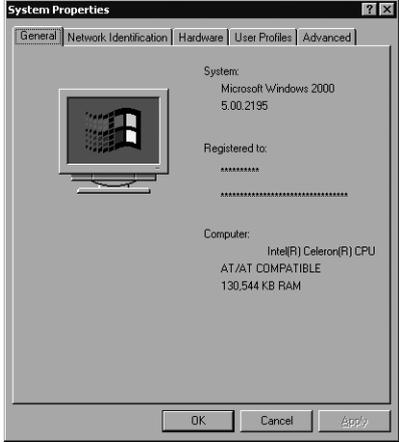
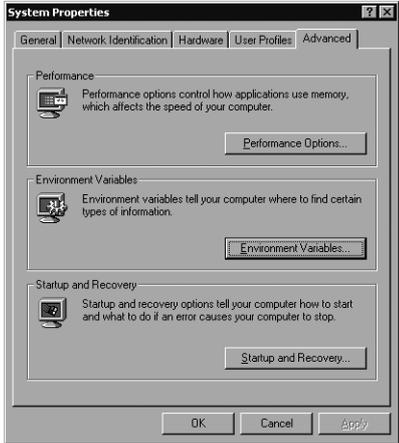
No.	Phenomenon	Cause and remedy
1	On the digital oscilloscope (DOSCP) screen, a sampling omission may occur during sampling of data by SSCNET communication (PC real-time read method) under Windows 98.	If other operation is performed during sampling, a sampling failure may occur. Refer to section 3.4.2 Precautions for operation under Windows 98 (2) for details.

5.18 The menu may not be displayed in the monitor screen during monitoring

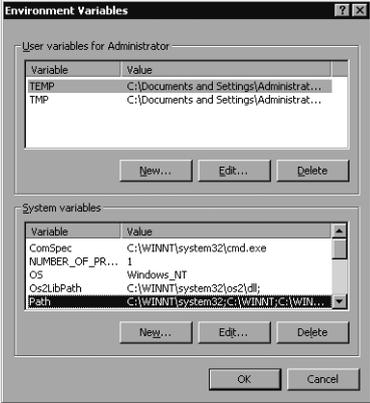
No.	Phenomenon	Cause and remedy
1	The menu list may not be opened in the monitor screen during monitoring under Windows 98.	The menu will be displayed by moving the mouse pointer below. Refer to section 3.4.2 Precautions for operation under Windows 98 (3) for details.

5. TROUBLESHOOTING

5.19 AUTOEXEC.BAT is not executed

No.	Phenomenon	Cause and remedy
1	AUTOEXEC.BAT is not executed.	<p>Specify the installation path in the following procedure. The remedy is not effective for Windows 98.</p> <ol style="list-style-type: none"> 1) Open the Control Panel of Windows and select "Performance and Maintenance".  <ol style="list-style-type: none"> 2) Select "System". 3) Select the "Advanced" tab from System Properties.  <ol style="list-style-type: none"> 4) Click the [Environment Variables] button. 

5. TROUBLESHOOTING

No.	Phenomenon	Cause and remedy
1		<p>5) Select "Path" in System variables and click the [Edit] button.</p>  <p>6) Add the path of SW6RN-SNETP (*1,2) to the last of Variable value and click the [OK] button. Close all the dialogs.</p>  <p>(*1): <u>C:\Program Files\Sw6Snetp</u>; (Specify the installation path of SW6RN-SNETP for the underlined part.) (*2): Confirm that there is a semicolon at the last of the existing Variable value when adding a path. If there is no semicolon, add one before adding the installation path of SW6RN-SNETP.</p>

WARRANTY

Please confirm the following product warranty details before using this product.

1. Gratis Warranty Term and Gratis Warranty Range

If any faults or defects (hereinafter "Failure") found to be the responsibility of Mitsubishi occurs during use of the product within the gratis warranty term, the product shall be repaired at no cost via the sales representative or Mitsubishi Service Company.

However, if repairs are required onsite at domestic or overseas location, expenses to send an engineer will be solely at the customer's discretion. Mitsubishi shall not be held responsible for any re-commissioning, maintenance, or testing on-site that involves replacement of the failed module.

[Gratis Warranty Term]

Note that an installation period of less than one year after installation in your company or your customer's premises or a period of less than 18 months (counted from the date of production) after shipment from our company, whichever is shorter, is selected.

[Gratis Warranty Range]

(1) Diagnosis of failure

As a general rule, diagnosis of failure is done on site by the customer.

However, Mitsubishi or Mitsubishi service network can perform this service for an agreed upon fee upon the customer's request.

There will be no charges if the cause of the breakdown is found to be the fault of Mitsubishi.

(2) Breakdown repairs

There will be a charge for breakdown repairs, exchange replacements and on site visits for the following four conditions, otherwise there will be a charge.

1) Breakdowns due to improper storage, handling, careless accident, software or hardware design by the customer

2) Breakdowns due to modifications of the product without the consent of the manufacturer

3) Breakdowns resulting from using the product outside the specified specifications of the product

4) Breakdowns that are outside the terms of warranty

Since the above services are limited to Japan, diagnosis of failures, etc. are not performed abroad.

If you desire the after service abroad, please register with Mitsubishi. For details, consult us in advance.

2. Exclusion of Loss in Opportunity and Secondary Loss from Warranty Liability

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; opportunity loss or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

3. Onerous Repair Term after Discontinuation of Production

Mitsubishi shall accept onerous product repairs for seven years after production of the product is discontinued.

4. Delivery Term

In regard to the standard product, Mitsubishi shall deliver the standard product without application settings or adjustments to the customer and Mitsubishi is not liable for on site adjustment or test run of the product.

5. Precautions for Choosing the Products

(1) These products have been manufactured as a general-purpose part for general industries, and have not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.

(2) Before using the products for special purposes such as nuclear power, electric power, aerospace, medicine, passenger movement vehicles or under water relays, contact Mitsubishi.

(3) These products have been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

(4) When exporting any of the products or related technologies described in this catalogue, you must obtain an export license if it is subject to Japanese Export Control Law.

