PROVISOR TC200

SETUP MANUAL

TCPRGOS–W(E) V2.00 for Windows

! **WARNING**

Read this manual before operating.
Save this manual for future reference.

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0. Introduction

TCPRGOS–W(E) is the tool for developing sequence programs for the PROVISOR TC200, which operates on a Windows98/NT personal computer.

This manual describes the setup procedures which should be performed before using the personal computer.

For the setting and operation of the personal computer, refer to the online help of this application software and the manuals given below.

- Startup manual: STE 71273
- Programming manual: STE 50736
- Operation guide of personal computer used
- Operating system (OS) instruction manual (for Windows98 or WindowsNT)

STE 71272

1. Precautions on Safety

- Carefully read through this manual before using this product properly.
- As the precautions stipulated below contain the important descriptions relating to safety, be sure to strictly observe them
- The meaning of each label is as follows:

⚠ WARNING	Indicates a potentially hazardous situation which, if the product is handled negligently, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if the product is handled negligently, may result in minor or moderate injury. Also, indicates a hazardous situation which may result in property damage.

2. Special Precautions to Be Taken

⚠ **CAUTION**

When using this product, especially take careful precautions on the following matters.

This instruction manual uses the following symbols to assure safety of the product and arouse you to warning and cautions to prevent damage to property and injury to persons.
Before the use, you should fully understand the warnings and cautions also which are stated in appropriate instruction manual of a personal computer you are using now, in addition to those given in this manual.

Mounting

- Tightening of screws
  Completely tighten the set screws of a cable for the peripheral equipment not to cause mis-operation.

- Connection
  When connecting a communication cable with a personal computer and PLC, be sure to turn off the AC power beforehand.

Cleaning

- At connector contact failure, wipe out the connector with a clean cotton cloth soaked with industrial alcohol.

3.   Table of Contents

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4.   Before the Use

4.1   About TCPRGOS–W(E)

TCPRGOS–W(E) is the tool for developing sequence programs for the PROVISOR TC200 (PLC), which runs on the Windows98/NT personal computer.
For communication between the personal computer and TC200 (PLC), RS232C communication by connecting an RS232C connector of TC200 with a serial port of personal computer, and bus communication via ISA bus (TCCUP) are available.
Also, remote communication through a telephone cable is possible.   Thus operation can be performed even from a remote place.

4.2   Applicable PLCs

This software is designed for the following PLCs.

- TCCUH/TCCUS
- TCCUHS/TCCUSS
- TCCUHA
- TCCUP/TCCUPA
- TC3 series
- TC6 series

4.3   Applicable Personal Computers

Select a personal computer which uses the Windows98 or WindowsNT for the OS. For the ISA bus communication of TCCUP and TCCUPA, the personal computer should be equipped with an ISA bus.   (Maximum four (4) slots)

4.4   System Structure

- Connecting personal computer with TC200 (PLC)
  The personal computer can be connected with the TC200 (PLC) by connecting a cable for peripheral equipment with an RS232C port of the computer.   When this happens, refer to the following drawing.

- The RS232C cable should be prepared or produced by the customer.   (See Para. 4.4.1.1.)
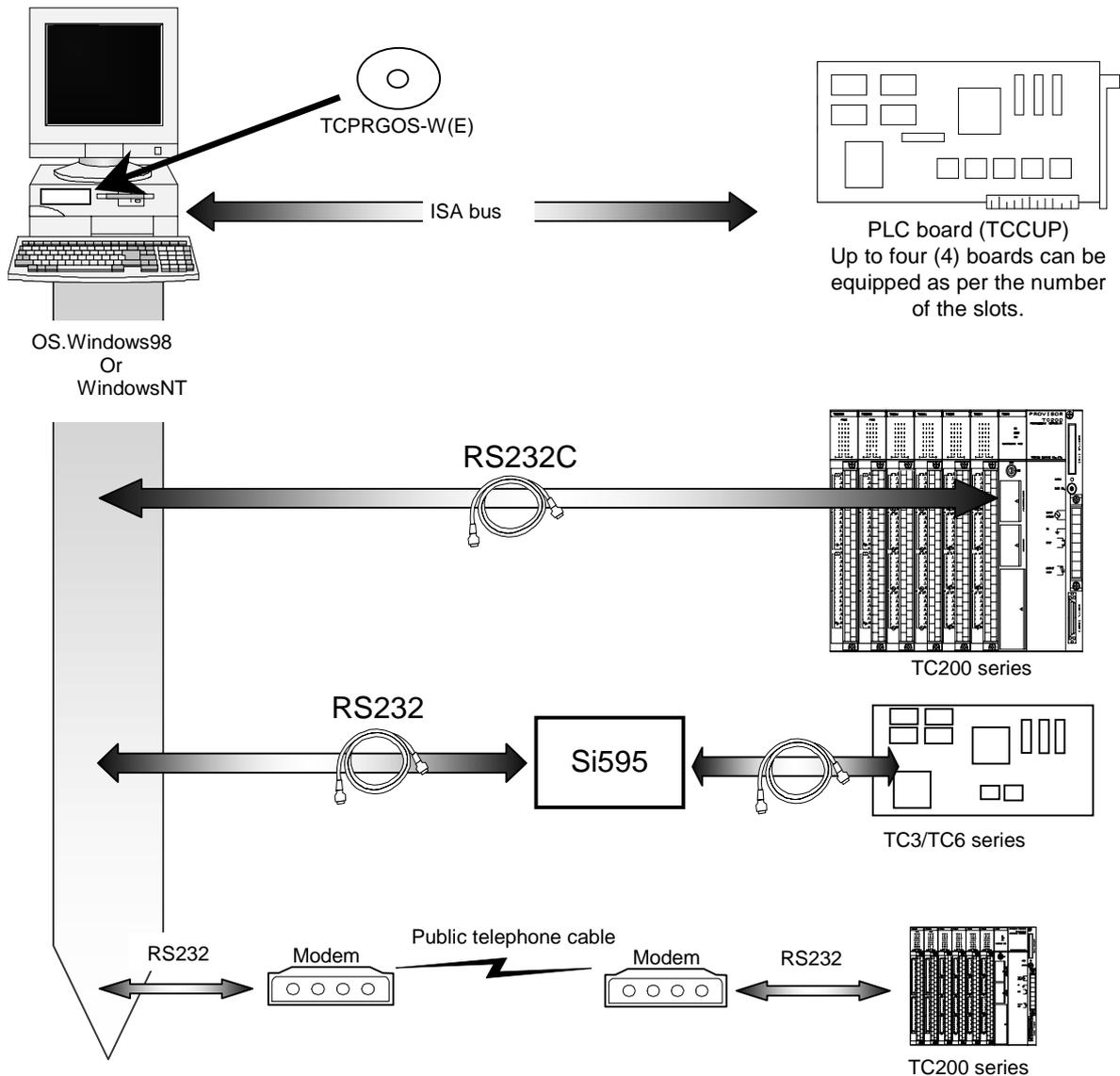
TCPRGOS-W(E)

ISA bus

PLC board (TCCUP)
Up to four (4) boards can be equipped as per the number of the slots.

OS.Windows98
Or
WindowsNT

RS232C

TC200 series

RS232

Si595

TC3/TC6 series

RS232

Modem

Public telephone cable

Modem

RS232

TC200 series

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	• Tightening of screws Completely tighten the set screws of a cable for the peripheral equipment not to cause mis-operation.
(!) **Mounting**	• Connection When connecting a communication cable with a personal computer and PLC, be sure to turn off the AC power beforehand.

4.4.1 Details of Peripheral Equipment Cable

4.4.1.1 RS232C Cable (Peripheral Equipment Cable)

RS232C cable used for PC/AT compatible computer is the Dsub 9-pin female – Dsub 9-pin female.

[Wiring of RS232C cable]

```
┌─────────────────────────────────────────────────────┐
│   Dsub 9-pin female              Dsub 9-pin female    │
│ ─────────────────              ─────────────────      │
│        Case                          Case             │
│         1------------------------------------------- 1│
│         2------------------------------------------- 2│
│         3------------------------------------------- 3│
│         4------------------------------------------- 4│
│         5------------------------------------------- 5│
│         6------------------------------------------- 6│
│         7------------------------------------------- 7│
│         8------------------------------------------- 8│
│         9------------------------------------------- 9│
└─────────────────────────────────────────────────────┘
```

Type: C232N–9FF, 1.5 m-long

C232N–9FF30, 3 m-long

Maker: ELECOM (Commercially available)

RS232C cable used for NEC PC–98 series computer is the Dsub 25-pin female – Dsub 9-pin female.

[Wiring of RS232C cable]

```
┌─────────────────────────────────────────────────────┐
│    Dsub 9-pin female          Dsub 25-pin female      │
│    Case                       Case                    │
│    1 --------------------------------------------8    │
│    2 --------------------------------------------3    │
│    3 --------------------------------------------2    │
│    4 -------------------------------------------20    │
│    5 --------------------------------------------7    │
│    6 --------------------------------------------6    │
│    7 --------------------------------------------4    │
│    8 --------------------------------------------5    │
│    9 -------------------------------------------22    │
└─────────────────────────────────────────────────────┘
```

Type: KRS–6102FK, 2 m-long
          KRS–3104FK, 4 m-long

Maker: ELECOM (Commercially available)

Caution: When your computer is equipped with infrared communication, make the infrared communication function invalid.
          When this function is set to "ON" or "USE", use of RS232C port may not possible according to the model of computer.   (Libretto made by Toshiba Corp.)

┌───┐
│ ⊙   • Tightening of screws   │
│   Completely tighten the set screws of a cable for the │
│   !   peripheral equipment not to cause mis-operation.   │
│   │
│   • Connection   │
│ Mounting   When connecting a communication cable with a personal │
│   computer and PLC, be sure to turn off the AC power   │
│   beforehand.   │
└───┘

4.5   Confirming Components

Components of TCPRGOS–W(E)

- TCPRGOS–W(E) install disk (CD-ROM)   :   One (1) pcs.
  Startup manual   :   STE 71723
  Setup manual (this manual)   :   STE 71722

Requirements of the system
- Programmable controller   :   TC200 series
  TC200 instruction manual   :   STE 50796
  Programming manual   :   STE 50736
- RS232C communication cable (commercially available)
                                              :   C232N–9FF

4.6   Operating Environment

The conditions for a personal computer on which this software can run are as follows:

| Items	Conditions
CPU	Personal computer incorporating CPU whose capacity is Pentium 200 MHz or over (Use of Pentium 233 MHz or over is recommended.)
Hard disk capacity	Free space of 10 M byte or over
Cd-rom disk drive	One (1) drive.
Minimum available memory	Windows98: 16 MB or over (Use of 32 MB or over is recommended.) WindowsNT: 32 MB or over
Operating system	Windows98 or WindowsNT 4.0
Display	Display that can be connected with computer and designed for Windows98 or WindowsNT with resolution of 640×480 dots or over. (Recommendable resolution is 1024×768 dots or over.)
RS232C serial communication port	One (1) port
ISA bus	When PLC is the TCCUP or TCCUPA, the number of slots is one (1) or over.
Others	Keyboard, mouse, printer, FD, modem (for remote maintenance system) that can be connected with computer and designed for Windows98 or WindowsNT.

Relevant PLC (CU module)	TC200 series
	
	    TCCUH /TCCUS (+TCCM)
	    TCCUHS /TCCUSS (+TCCM)
	    TCCUHA (+TCCM)
	    TCCUP/TCCUPA
	    TC3 series + Si595
	    TC6 series + Si595

5. How to Install

This section describes the setup procedures when the cd-rom drive is set as the "D" drive.

- Start up the Explorer and double-click "TCPRGOS-W(E) Disk1 SETUP.EXE" in the "D" drive.
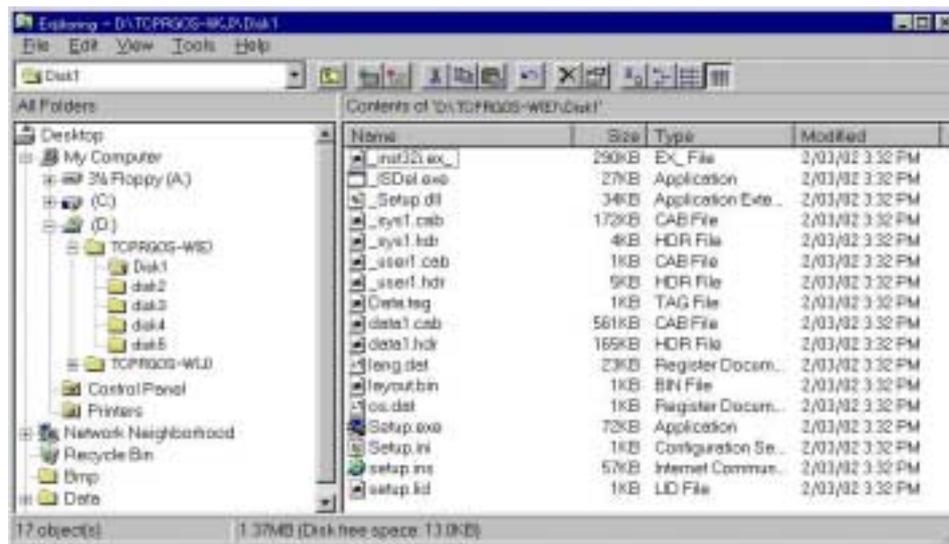
- The TCPRGOS–W(E)V＊.＊＊ Installer starts. Press the [Next] button.
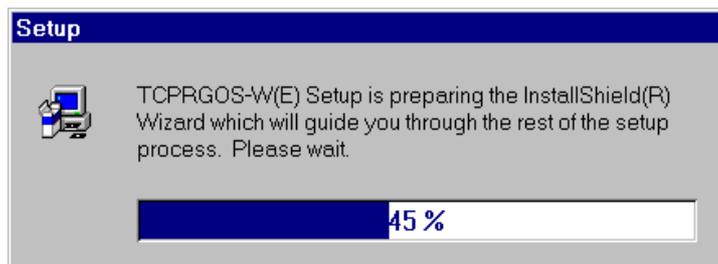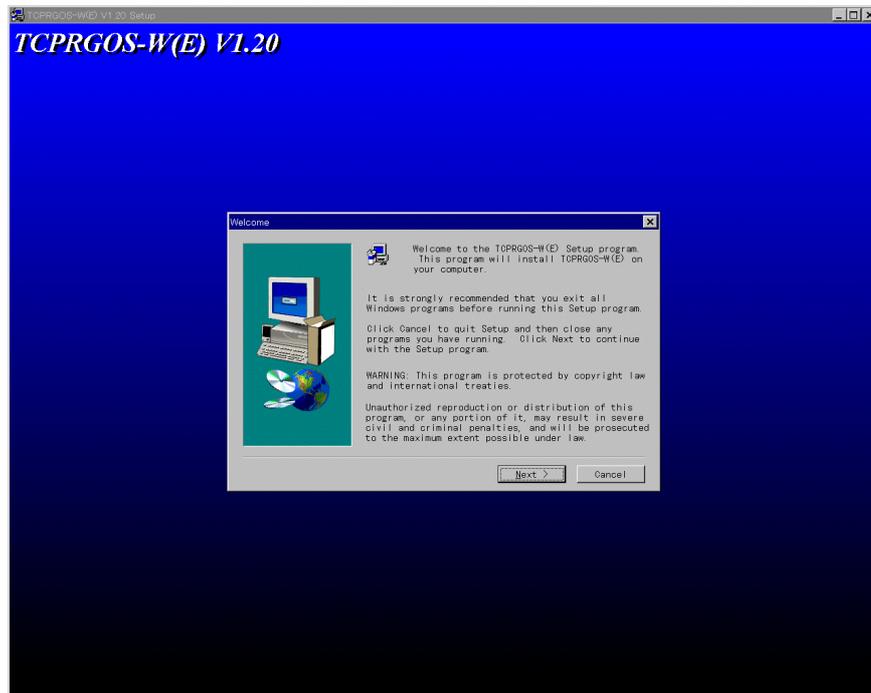
- Now, execute the operation according to the directions of the Installer.
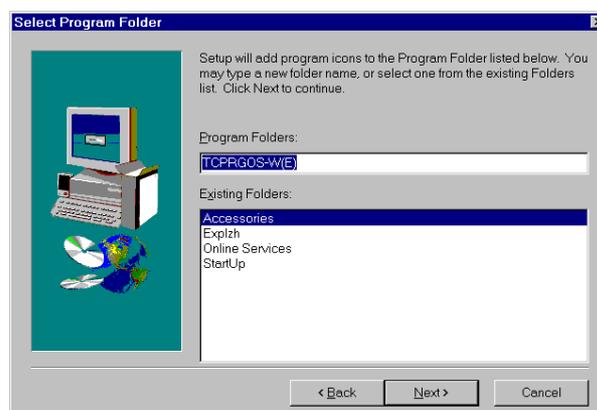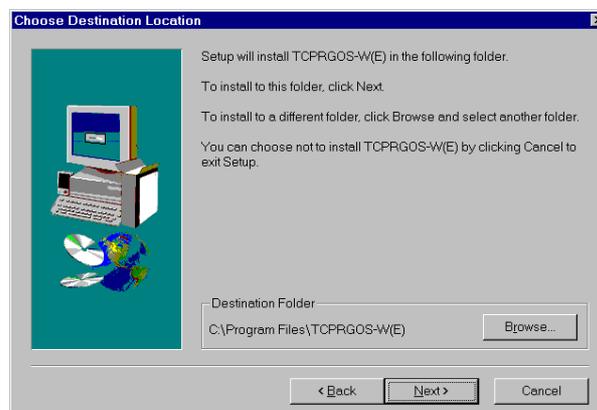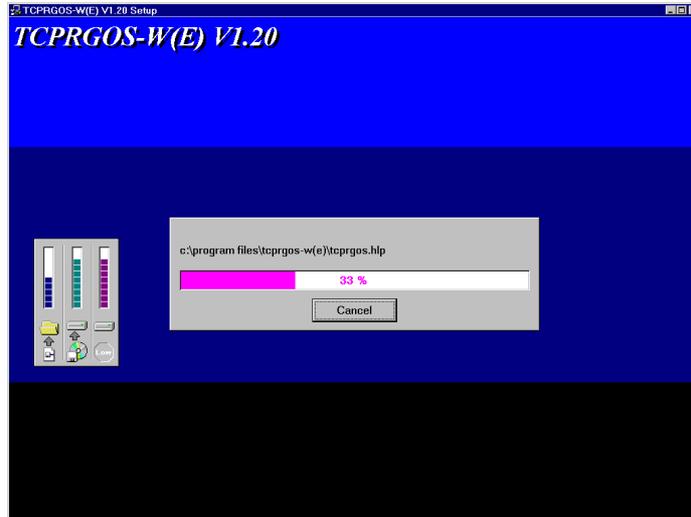
- Click the [End] button, and the TCPRGOS–W(E) has been installed.

6. How to Uninstall

- Before uninstalling the TCPRGOS–W(E), register or delete the OCX file. Otherwise, unnecessary key is left in the registry.

- Register or deletion of OCX file
    - Double-click and execute "Unregist.bat" in the install directory.
    - When the system displays a message box, register or deletion of OCX file has finished.
    - Uninstall the TCPRGOS–W(E) by selecting [Control panel] – [Add/Remove Programs].

7. How to Start up

To start up this software, select the appropriate menu from the Start button.
(TCPRGOS–W(E)V*.**)
Or double-click "TCPRGOS–W(E)V*.**" in the install directory.
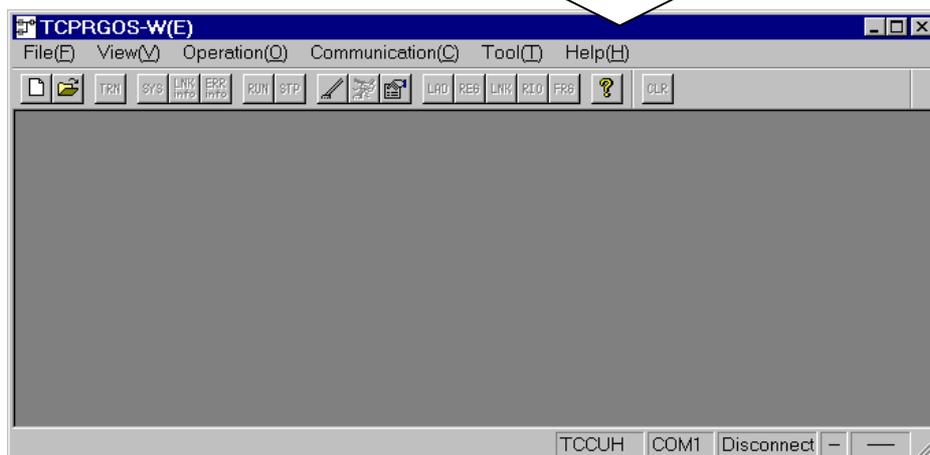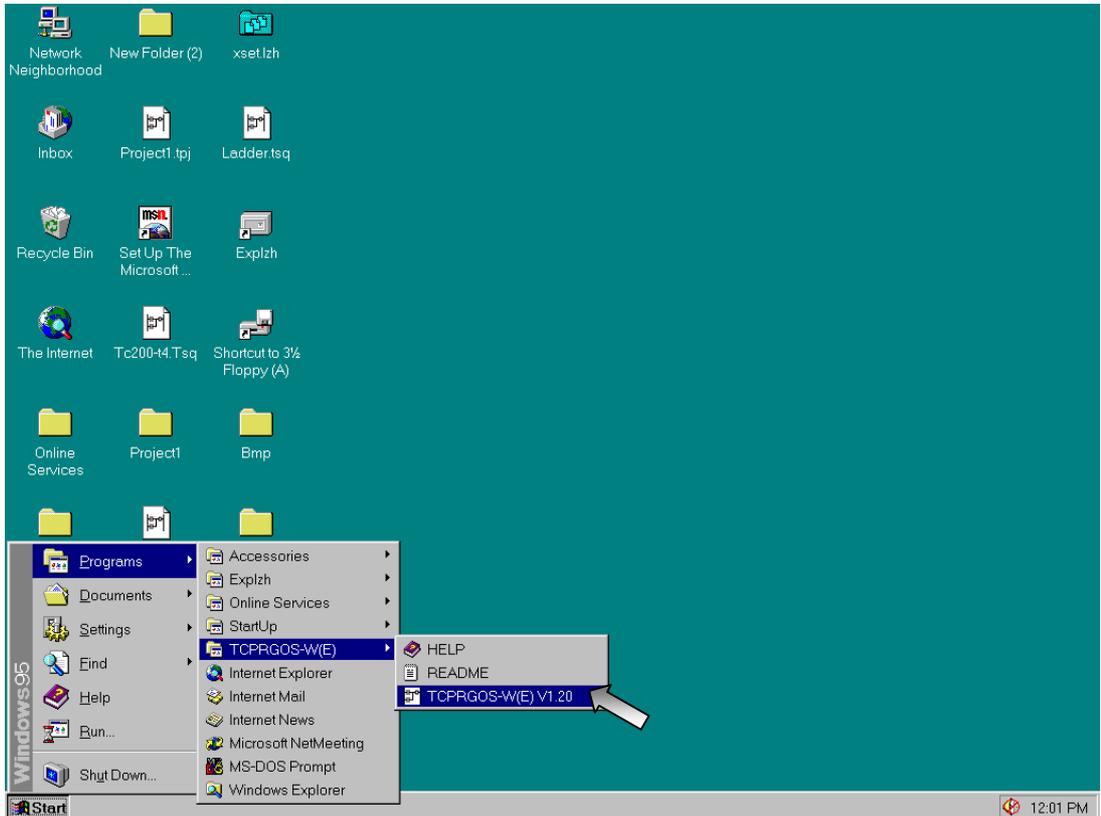
7.1   When the Software Will Not Start up Normally

When the software will not start up normally just after the installation, version of the DLL file may be outdated.   When this happens, install the newest DLL file in the following manner.

① Finish all other application programs and make sure that the following files exist in the system directory.

- MFC42.DLL
- MFC42LOC.DLL
- MSVCRT.DLL
- CMCTLJP.DLL
- COMCTL32.OCX

② Check each file for the software version.   If the software version is more outdated than the version given below, delete the relevant file.

File: [Property]   Tag: [Version information]   Item: [Software version]

File name	Software version
MFC42.DLL	6.00.8665.0
MFC42LOC.DLL	5.0.000
MSVCRT.DLL	6.10.8637.0
CMCTLJP.DLL	6.00.8022
COMCTL32.OCX	6.00.8105

③ Install again according to Section 5.

④ Confirm the startup according to Section 7.

Edition No.	Revision	Revised Date	In Charge	Approved by
0	Newly prepared.	Apr, 2002		
1	Change of a font.	Jun.2004		
2				
3				
4				

APPROVED BY:

CHECKED BY:

PREPARED BY:

STE 71272