SETTING MANUAL

SERVICE TOOL for VRF System

UTR-YSTC   **Ver. 3.2**

CAUTION
Please read the LICENSE AGREEMENT in the manual first.

FUJITSU GENERAL LIMITED

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for
"SERVICE TOOL for VRF SYSTEM" (Version 3.2)

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1. Safety precautions

- Before using Service Tool, read this "SAFETY PRECAUTIONS" thoroughly to ensure the correct operation.
- This section describes the important safety information to operate Service Tool.
- The meanings of "WARNING" and "CAUTION" are explained as follows.

⚠ **WARNING!**	This mark indicates the procedures, which might result in the death of or serious injury to the user or service personnel if improperly performed.
⚠ **CAUTION!**	This mark indicates the procedures, which might result in personal harm to the user or damage to property if improperly performed.

This manual is for service personnel authorized to use the Service Tool. Always keep this manual in an easily accessible place for use by authorized service personnel.

⚠ WARNING!

The following notices are mainly described for the dealing of transmission adaptor, which is used for transmitting data between Service Tool and the Indoor or Outdoor unit.

1. **The transmission adaptor includes the high voltage circuit. Installation must be performed by an authorized service personnel only.**

2. **This adaptor contains no user-serviceable parts. Always consult the authorized service personnel for repairs.**

3. **When moving this adaptor, consult the authorized service personnel for disconnection and installation.**

4. **If a problem (burning, smell, etc.) occurs, turn off the electrical breaker immediately to stop operation, and then consult the authorized service personnel.**

5. **If the power supply cord is damaged, do not attempt to repair it. Contact your service representative for instructions.**

6. **If any work is to be performed on the transmission adaptor, turn off the power supply and wait at least 10 seconds. Failure to do so might lead to an electric shock.**

7. **The reference to adaptor above applies to Transmission Adaptor (UTR-YTMA).**

8. **When using U10 USB Network Adaptor, follow the instructions given in the manual that comes with the product.**

⚠ CAUTION!

Service Tool can control the air-conditioner system on a personal computer. Be careful not to turn off the power supply of the personal computer or transmission adaptor, or not to finish the application compulsorily during operation. Otherwise, Service Tool might malfunction. For personal computer used as Service Tool, refer to the instruction manual. The following notices are mainly described for the dealing of transmission adaptor, which is used for transmitting data between Service Tool and the Indoor or Outdoor unit.

1. **Ensure that all electronic equipment is at least one meter away from the adaptor. Otherwise, unexpected noise might lead to malfunction of the equipment.**

2. **Avoid installing the adaptor near a fireplace or other heating apparatus.**

3. **When installing the adaptor, take precautions to prevent access from infants.**

4. **Do not use inflammable gases near the adaptor. Otherwise, it might lead to a fire.**

5. **The rated voltage of the adaptor is 220-240V A.C. 50-60Hz. Confirm that the power supply is within this range. If the voltage is out of range, contact your electric company.**

6. **Do not change the DIP-SW setting in the adaptor. Otherwise, Service Tool might malfunction.**

7. **Do not install the adaptor in highly dust locations. Otherwise, it might lead to a fire or an electrical shock.**

8. **The operation temperature range of the adaptor is 0-46°C. Do not use it except within this range. Otherwise, the adaptor might malfunction.**

9. **Install the adaptor where the ambient relative humidity is less than 90%RH. Placing in a highly humid or damp location might lead to a fire or an electrical shock.**

10. **If water, metal or foreign material enters the adaptor, stop operation, turn off power immediately, and disconnect the power supply cord and transmission cord. Failure to disconnect might lead to a fire or an electric shock.**

11. **Do not splash water in the adaptor or touch it with wet hands. It isn't water-proof. If splashed water enters, turn off power immediately and wipe it off with a dry cloth. Failure to perform, might lead to a fire or an electric shock.**
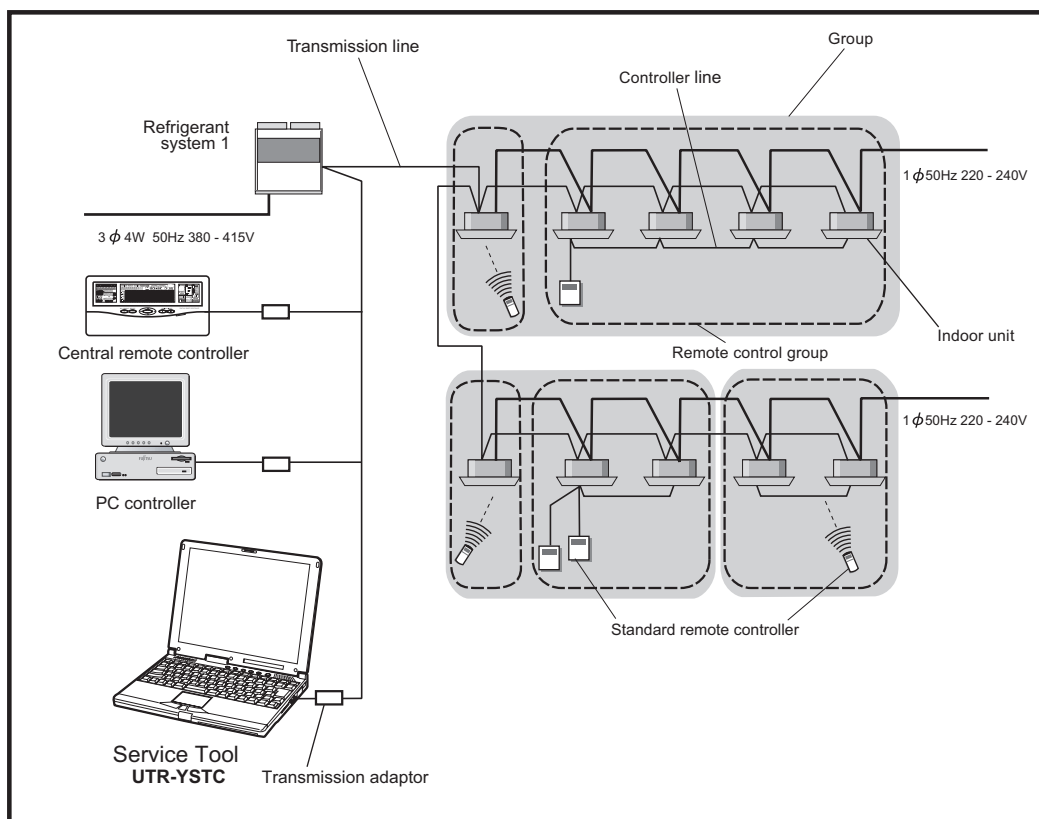
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2. Outline

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2. Outline

This operating manual explains the operating procedures for the software of Service Tools for the VRF control system.

The use of the system tools allows detailed data about the operating condition of each refrigerant system that has been installed in the building's system to be displayed in an easy-to-understand format.

Moreover, it also allows the latest data about pressure and temperature of indoor and out-door units to be monitored. If there are fluctuations in the conditions, they can be displayed clearly in graph form on a PC screen.

When an error occurs in the transmission line or in an indoor or outdoor unit in the system, details about the error can be displayed on the error history screen for easy assessment of the conditions for fast troubleshooting and resolution.
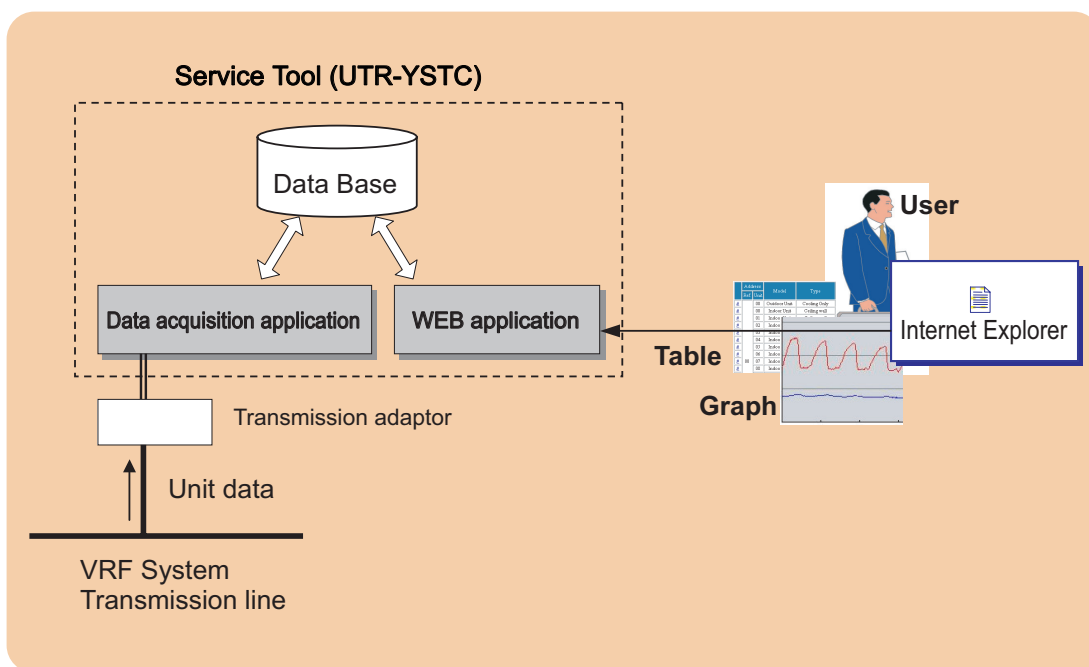
■ Software construction

The service tool software consists of the two functions `Data acquisition application` and `WEB application`.

The `Data acquisition application` is a program which is made resident when the service tool starts, and exchanges data with the VRF System transmission line. The received Unit data is saved to a Data base.
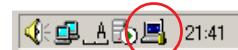
The `WEB application` is a program which converts the acquired Unit data to Table and Graph, and displays them to a browser (Internet Explorer). It also converts operations input from the User and passes them to the Data acquisition application through the Database.
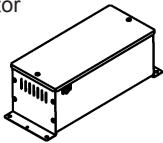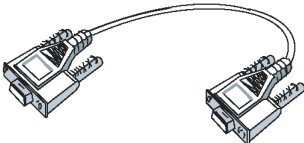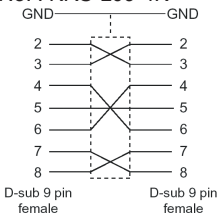
2. Outline

Service Tool (UTR-YSTC)

Data Base

Data acquisition application

WEB application

Transmission adaptor

Unit data

VRF System
Transmission line

User

Internet Explorer

Table

Graph

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3. Installation

3. Installation

3-1 Precautions

- This product requires the use of one of the following optional transmission adaptors.
  Procure them in advance.

Name & Shapes	Q'ty	Remark
Transmission Adaptor	1	Model : UTR-YTMA
Interlink Cable (Field Supply)	1	Parts No. : KRS-L09-4K

or

Name & Shapes	Q'ty	Remark
Transmission Adaptor (U10 USB Network Interface -TP/FT-10 Channel) (Field Supply)	1	Model : 75010 (Echelon Corporation)

3-2 Recommended specs

This tool operates in the environment below.

AT compatible machine that runs Microsoft® Windows®	
Operating System	Microsoft® Windows® 2000 professional (English version) Service pack 3 or later or Microsoft® Windows® XP professional (English version) Service pack 1 or later
Hard Disk	2.1GB
CPU	Intel® Pentium®/Celeron®, AMD Athlon™/Duron™ 1Ghz or higher
Memory	256MB or more
Display	1024 X 768 dots or higher
Interface	D-Sub 9pin RS-232C Port (for UTR-YTMA) X 1 or USB Port (for U10 USB Network Interface) X 1 USB Port (for Software protection key) X 1
Required Software	Microsoft® Internet Explorer 6.0 or later Adobe® Acrobat® Reader™ 4.0 or later

3-3　Installation flow

> ## ⚠ WARNING!
>
> • Service Tool is tested to install and operate under new Windows environment.
>   When program executional environment of Windows is corrupted or abnormal, or other softwares that interfere with the operation of Service Tool is installed or running, Service Tool may not install or run properly. It is usually extremely difficult to detect such conditions, if it occurs.
> • Service Tool product is provided with softwares, drivers, components listed below.
>   If the same kind of softwares, drivers, components with different version is installed on the same PC, Service Tool may not install or run properly.
>   1) .NET Framework
>   2) Internet Information Services (IIS)
>   3) Microsoft Data Access Components (MDAC)
>   4) Microsoft SQL Server 2000 Desktop Engine (MSDE)

Software installation   (5-1) (5-2)

| Insert installation CD |

⬇

| Microsoft .Net Framework 1.1 setup |

⬇

| Message confirming the installation of Adobe Acrobat Reader |

Continue ⬇   Cancel ➡ Installer terminates

| Internet Information Services (IIS) setup |

⬇

| IIS mapping information restoration |

⬇

| Microsoft Data Access Components 2.8 (MDAC) setup
Microsoft SQL Server 2000 Desktop Engine (MSDE) setup
Service Tool for VRF System Ver 3.2 setup |

⬇

| WIBU-KEY setup |

⬇

| Displays Setting Manual for Service Tool
Message confirming Windows restart displayed |

⬇

```
┌─────────────────────────────────────────────────────────────────┐
│ Manual settings change                                          │
│  ┌───────────────────────────────────────────────────────────┐  │
│  │ Operating System setting                                  │  │
│  │        ┌──────────────────────────────────────┐           │  │
│  │        │ Area option              (6-1-1) │           │  │
│  │        └──────────────────────────────────────┘           │  │
│  │                          ↓                                │  │
│  │        ┌──────────────────────────────────────┐           │  │
│  │        │ Windows® Firewall        (6-1-2) │           │  │
│  │        └──────────────────────────────────────┘           │  │
│  └───────────────────────────────────────────────────────────┘  │
│                          ⬇                                       │
│  ┌───────────────────────────────────────────────────────────┐  │
│  │ Internet Explorer setting                        (6-2) │  │
│  └───────────────────────────────────────────────────────────┘  │
└─────────────────────────────────────────────────────────────────┘
                           ⬇
┌─────────────────────────────────────────────────────────────────┐
│ Operating System re-start                                       │
└─────────────────────────────────────────────────────────────────┘
```

- Only English version MDAC and MSDE component is compliant with this product.
  Operation cannot be guaranteed when other language version is used.
- Have installation performed by a user belonging to the Administrators group.
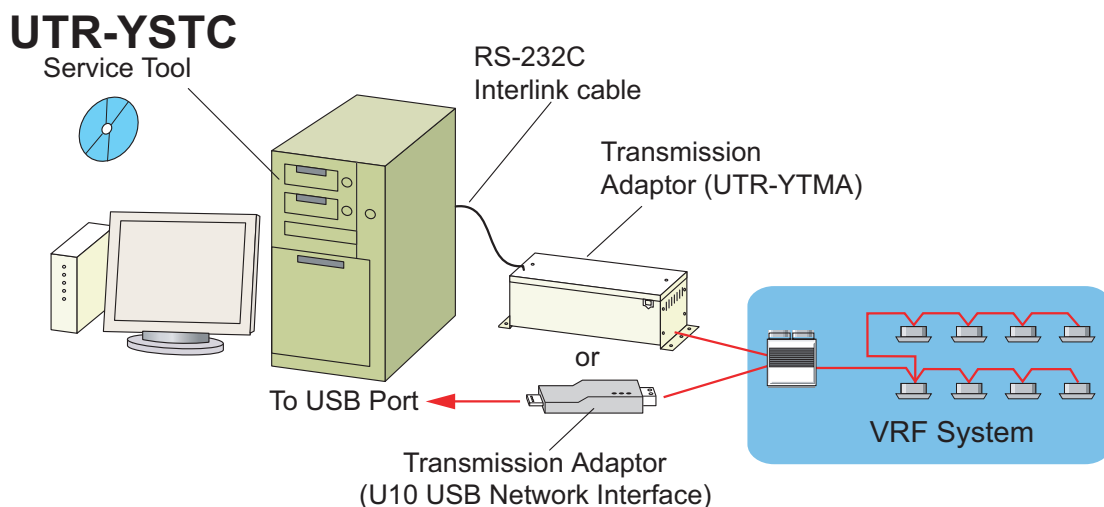
3. Installation

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4. Hard ware installation

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4. Hard ware installation

4-1 Transmission adaptor installation

UTR-YSTC
Service Tool

RS-232C
Interlink cable

Transmission
Adaptor (UTR-YTMA)

To USB Port

or

Transmission Adaptor
(U10 USB Network Interface)

VRF System

<When using UTR-YTMA>

This transmission adaptor is connected using the RS-232C port of a personal computer.
An inter link cable is used to connect the transmission adaptors and the RS-232C port. The
cable must be procured in the field. For the cable specifications, refer to par. 3. Installation.

① Fix the transmission adaptor at the installation please, and perform the power supply
wiring and VRF System transmission line wiring.

For details, refer to the **Installation Instruction Sheet** supplied with the transmission
adaptor.

② Connect the transmission adaptor to the personal computer COM port.

<When using U10 USB Network Interface>

This transmission adaptor is connected using the USB port of a personal computer.
To use this product, install necessary drivers/software for this product following the ***QUICK
START*** enclosed with this product.

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4-2   Turning on the power

> ### ⚠ WARNING!
>
> Do not turn on the power until all installation work is completed.

Once the wiring has been installed, the power can be turned on. Follow the procedure below for turning on the power.

① Turn on the power for all connected indoor units.

② Turn on the power for all connected outdoor units.

③ Turn on the power for all connected transmission adaptor.
(Not necessary when using U10 USB Network Interface *1)

> **Note** ℹ *1 Make sure that USB equipment (USB hub, etc.) that this product is connected to, is not overloaded (power supplied thru the interface does not exceeds the maximum limit).

④ Turn on the power for Service Tool PC.

4. Hard ware installation

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5. Software installation

5. Software Installation & Removal

5-1 Installation Notes

Before starting the installation of this product, check each of the followings.
- Install Adobe Acrobat Reader (Ver. 4.0 or later) prior to the installation. (Adobe Acrobat Reader does not come with this product).
- Have the installation CD of the Windows version (Windows XP or Windows 2000) used for the PC ready. This will be required during the installation of IIS.
  If the following screen is displayed during IIS setup, you must follow the instructions on the screen. If you cancel the installation, setup will not be completed properly.
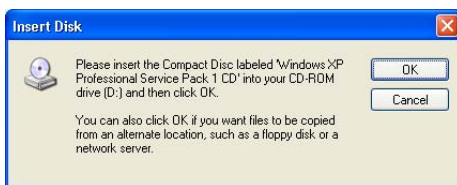

- If one of the following product is already installed, remove it first. Also remove it when re-installing other software components such as IIS, MSDE and WIBU-Key drivers. Refer "5-3 Software Removal" for how to remove these products.
  - Service Tool for VRF System Ver. 3.0 or later
  - Web Monitoring Tool for VRF System Ver. 3.0 or later
- Do NOT insert WIBU-Key (Software protection key) enclosed with this product to the PC until product installation is completed.
- You are required to login to the computer as Administrator (or equivalent) to the PC to install this product.
- Stop all running programs before you start the installation.
- If Anti-Virus software product is installed, temporarily disable the software during the installation of this product.
- Please delete "Temporary Internet Files".
  IE menu [tools] → [Internet Options ...] → [General] tab → Press [Delete Files ...] button. If [Delete Files] message screen is displayed, check [Delete all offline content] and press "OK".

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5-2 Software Installation

① Insert the CD for the "Service Tool for VRF System Ver. 3.2" into the CD drive of the PC you are about to install.

② Double click the "VRFSystemInstall.bat " stored in the root directory of the CD drive with the mouse.
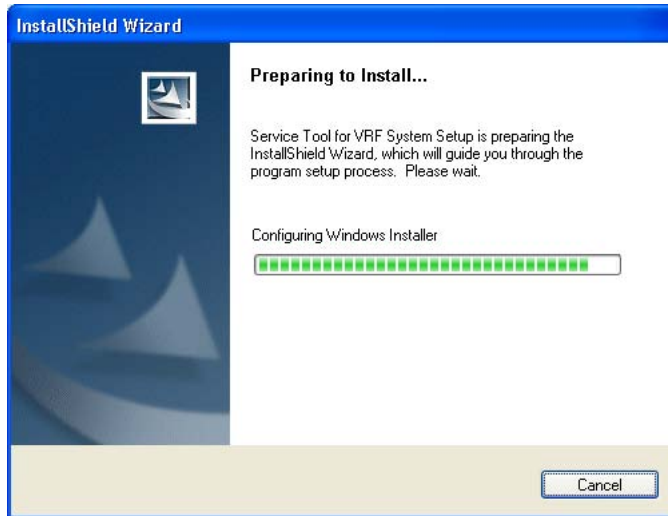
③ After installation starts, follow the direction on the screen, which will guide you through the installation.

④ When installation program ends, Setting Manual for this product and "Windows Restart Confirmation Message" will appear. If you have not completed the remaining setup procedures described in the next section ("6. Setting") of the Setting Manual yet, do NOT restart the Windows. Complete the remaining setup procedures according to the description in the Setting Manual displayed on the screen first.
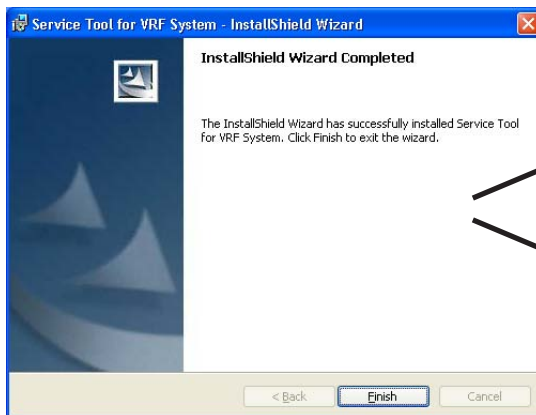
Displaying Setting manual (PDF file).

5. Software installation

⑤ After all the setup is completed, restart the Windows.

> **Note** Operation to be performed after inserting WIBU-Key (Software protection
> key) and when the "Found New Hardware Wizard" screen appears.
>   1   From the 3 Windows Update Options, select "No, not this time". Then
>   click "Next" to continue. This dialog may not always show.
>   2   Select "Install the software automatically (Recommended).". Then click
>   "Next" to continue.
>   3   When completion dialog appears, click "Finish".

5-3 Software Removal

Before executing this procedure, be sure to stop the Service Tool program if it is running.
Also, make sure that WIBU-Key is not inserted to the PC.

① Open **start** → [Control Panel] → [Add or Remove Programs], and then
remove the following programs.

② Select the program to be removed from the list below and click Remove .

Target software	Program name
.NET Framework 1.1	Microsoft .NET Framework 1.1
MSDE2000*	Microsoft SQL Server Desktop Engine
WIBU-KEY	WIBU-KEY Setup (WIlBU-KEY Remove)
Service Tool Ver. 3.0	• Service Tool for VRF System (Data acquisition) • Service Tool for VRF System (Web)
Service Tool Ver. 3.1 or later	Service Tool for VRF System
Web Monitoring Tool Ver. 3.0	• Web Monitoring Tool for VRF System (Data acquisition) • Web Monitoring Tool for VRF System (Web)
Web Monitoring Tool Ver. 3.1 or later	Web Monitoring Tool for VRF System

* If you have removed MSDE2000, make sure that you have deleted the following installation
folder.
[Target folder] Installation drive:\\Program files\Microsoft SQL Server

③ Uninstall [IIS] from [Add/Remove Windows Components] of [Add/Remove Programs] in the Control Panel. (Remove "check" and follow the direction on the screen.)
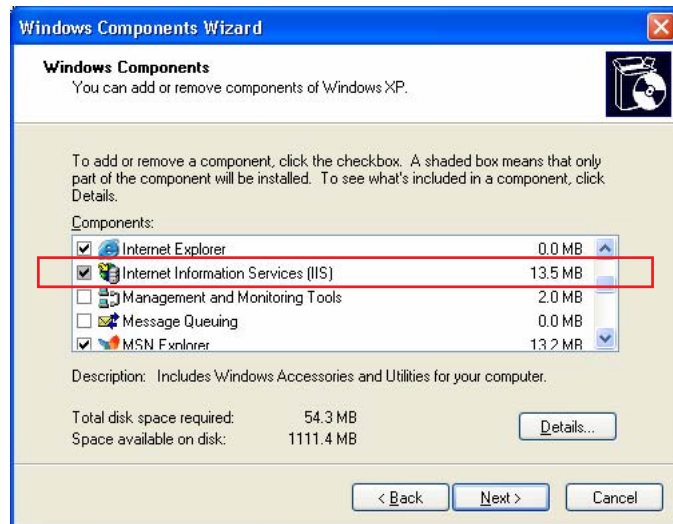
> **Note** For IIS, do not remove it unless there is a definite need.
> If for certain reason, you have to remove IIS, remove Service Tool/Web Monitoring Tool first before removing IIS.

④ If removal is completed, restart the Windows.

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6. Setting

6-1 Operating System setting

6-1-1 Regional option

① Open the regional setting screen by sequentially selecting the menus as follows:

start → [Control Panel] → [Date, Time, Language, and Regional Options]

→ [Regional and Language Options]

> **Note** ℹ️
> • When the control panel display format is Classic View, select the menus in the following order:
>
> **start** → [Control Panel] → [Regional and Language Options]

② ③ The screen shown below is displayed.
Select English (United Kingdom) at the Standard and formats area of the Regional Options tab.
Select English (United Kingdom) at the Language for non-Unicode programs of the Advanced tab.
For Windows2000 : Click Set default... button of the General tab.
Select English (United Kingdom) at the Select System Locale screen.

[Regional Options tab]   [Advanced tab]
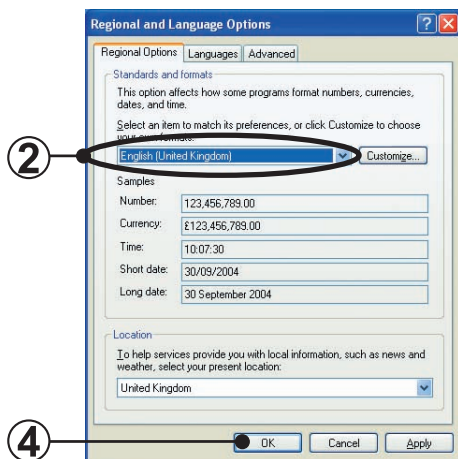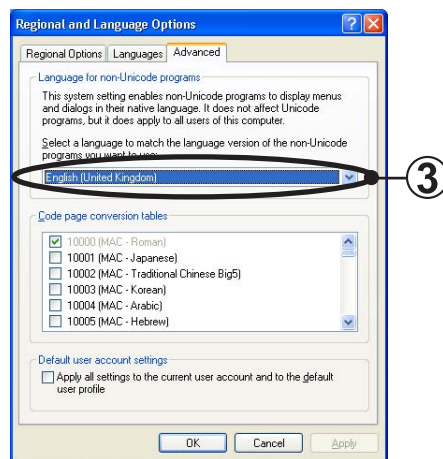
> **Note** ℹ️
> Do not change the settings clicking the [Customize...] button. Set the settings as follows, if by chance, the current settings differs.
>
> [Numbers] ......Decimal symbol: "." (dot)
>
> [Time] ....Time separator: ":" (colon)
>
> [Date] ....Date separator: "/" (slash)

④ Click [OK].

6-2   Internet Explorer setting

① Start Internet Explorer, and select the following from the menu bar.
[Tools] → [Internet Options...]

② The screen shown below is displayed.
Select the Security tab.
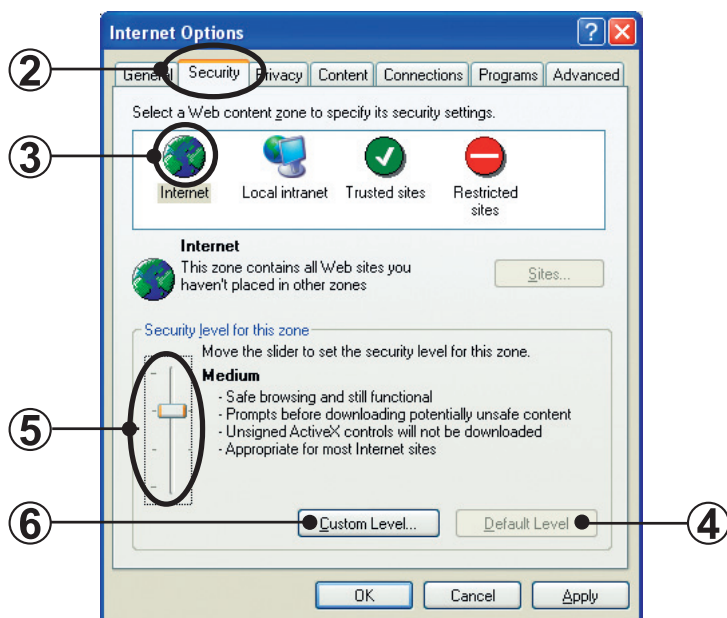
③ Select Internet.

④ Click [Default Level].

⑤ Set the slider that indicates the Security Level to Medium.

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6. Setting

⑥ For Windows® XP SP2 and later versions, perform steps **⑥** thru **⑨**. Otherwise, advance to step **⑩**.

Click [Default Level].

⑦ The screen shown below is displayed.
Set "Allow script-initiated windows without size or position constraints" to Enable.
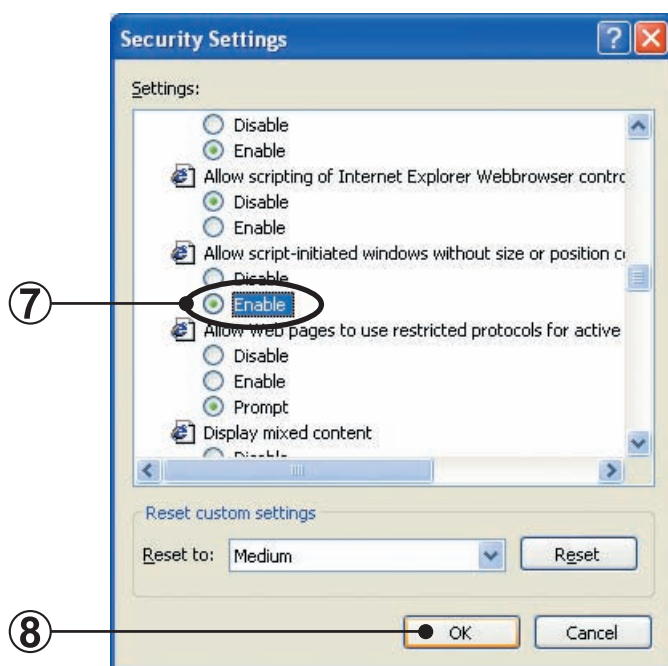
⑧ Click [OK].

⑨ The screen shown below is displayed.

Click [Yes].

⑩ The screen shown below is displayed.
Select the Connections tab.

Internet Options [?][X]

General | Security | Privacy | Conter | Connections | rograms | Advanced ——— ⑩

To set up an Internet connection, click Setup. [Setup...]

Dial-up and Virtual Private Network settings

[Add...]
[Remove]

Choose Settings if you need to configure a proxy server for a connection. [Settings...]
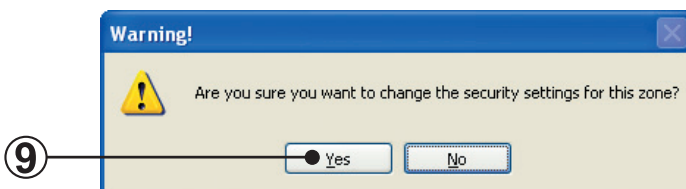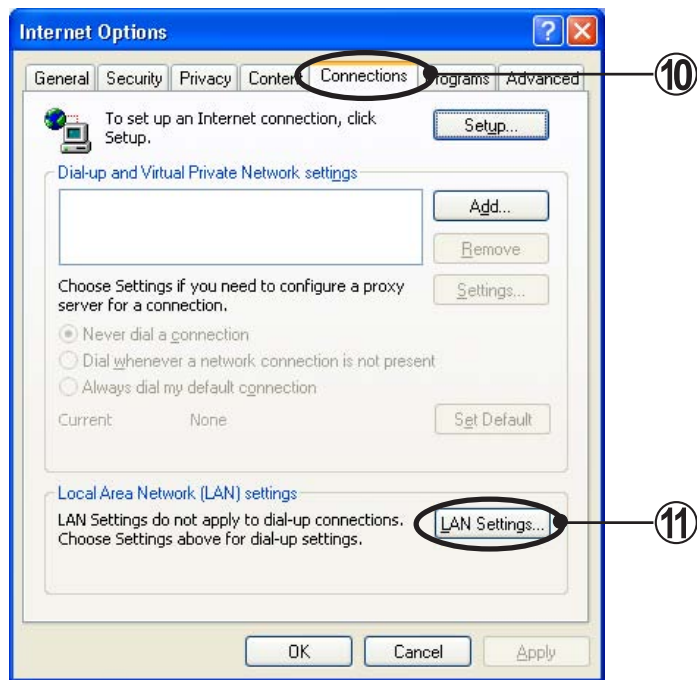
○ Never dial a connection
○ Dial whenever a network connection is not present
○ Always dial my default connection

Current   None   [Set Default]

Local Area Network (LAN) settings

LAN Settings do not apply to dial-up connections. Choose Settings above for dial-up settings. [LAN Settings...] ——— ⑪

[OK] [Cancel] [Apply]

⑪ Click [LAN Settings...] .

⑫ The screen shown below is displayed.
If you are using a proxy server, check on the [Bypass proxy server for local addresses] and press [OK] .

Local Area Network (LAN) Settings [?][X]

Automatic configuration

Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.

☐ Automatically detect settings
☐ Use automatic configuration script

Address [   ]

Proxy server

☑ Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).

Address: 92.168.16.107   Port: 3128   [Advanced...]
☑ Bypass proxy server for local addresses

[OK] [Cancel]

⑬ Finish setup by clicking [OK] in the Internet Options window.

6. Setting

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