



UHF DIGITAL VOICE REPEATER
ID-RP4000V
Instruction Manual

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT

CAREFULLY READ THIS INSTRUCTION MANUAL before installing or operating the ID-RP4000V.

SAVE THIS INSTRUCTION MANUAL. This manual contains important safety and operating instructions for the ID-RP4000V.

Refer to the ID-RP2 instruction manual, supplied with the ID-RP2C, for details about D-STAR system repeater instructions, installation and precautions. This instruction manual describes only the ID-RP4000V's particular installation and precautions.

EXPLICIT DEFINITIONS

WORD	DEFINITION
⚠ WARNING!	Personal injury, fire hazard or electric shock may occur.
CAUTION	Equipment damage may occur.
NOTE	If disregarded, inconvenience only. No risk or personal injury, fire or electric shock.

PRECAUTIONS

⚠ WARNING RF EXPOSURE! This device emits Radio Frequency (RF) energy. Extreme caution should be observed when operating this device. If you have any questions regarding RF exposure and safety standards please refer to the Federal Communications Commission Office of Engineering and Technology's report on Evaluating Compliance with FCC Guidelines for Human Radio Frequency Electromagnetic Fields (OET Bulletin 65).

⚠ WARNING HIGH VOLTAGE! NEVER touch an antenna or internal antenna connector during transmission. This may result in an electrical shock or burn.

⚠ WARNING HIGH VOLTAGE! NEVER install the antenna at any location where a person could easily touch the antenna during transmission. This may result in an electrical shock or burn.

⚠ WARNING! NEVER apply AC to the [DC 13.8V IN] connector. This could cause a fire or damage the ID-RP4000V.

⚠ WARNING! NEVER apply more than 16 V DC to the [DC 13.8V IN] connector. This could cause a fire or damage the ID-RP4000V.

⚠ WARNING! NEVER let metal, wire or other objects touch any internal part or connectors on the ID-RP4000V. This may result in an electric shock or this could cause a fire or damage the ID-RP4000V.

⚠ WARNING! NEVER operate or touch the ID-RP4000V with wet hands. This may result in an electric shock or may damage to the ID-RP4000V.

⚠ WARNING! NEVER connect the ID-RP4000V to a power source using reverse polarity. This will damage the ID-RP4000V.
Make sure the ID-RP4000V's power is turned OFF when connecting a DC power cable.

DO NOT use or place the ID-RP4000V in areas with temperatures below -10°C ($+14^{\circ}\text{F}$) or above $+50^{\circ}\text{C}$ ($+122^{\circ}\text{F}$).

DO NOT place the ID-RP4000V in excessively dusty environments or in direct sunlight.

DO NOT place the ID-RP4000V against walls or putting anything on top of the units. This will obstruct heat dissipation.

DO NOT use harsh solvents such as benzine or alcohol to clean the ID-RP4000V, as they will damage the ID-RP4000V's surfaces. If the ID-RP4000V becomes dusty or dirty, wipe it clean with a soft, dry cloth.

DO NOT modify the ID-RP4000V for any reason.

Place the ID-RP4000V in a secure place to avoid inadvertent use by children.

Use the specified fuse only.

For the U.S.A. only

CAUTION: Changes or modifications to the ID-RP4000V, not expressly approved by Icom Inc., could void your authority to operate the ID-RP4000V under FCC regulations.

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All other products or brands are registered trademarks or trademarks of their respective holders.

FOR CLASS B UNINTENTIONAL RADIATORS

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

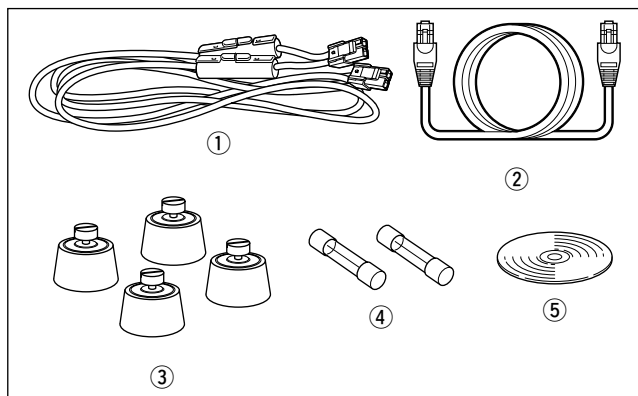
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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SUPPLIED ACCESSORIES



① Power cable (OPC-1309; approx. 1 m; 3.3 ft)	1
② Control cable (OPC-1069)	1
③ Rubber feet	4
④ Spare fuses (FGB10A)	2
⑤ Utility CD	1

The ID-RP4000V is installed into the Digital Smart Technologies for Amateur Radio (D-STAR) repeater system for operation.

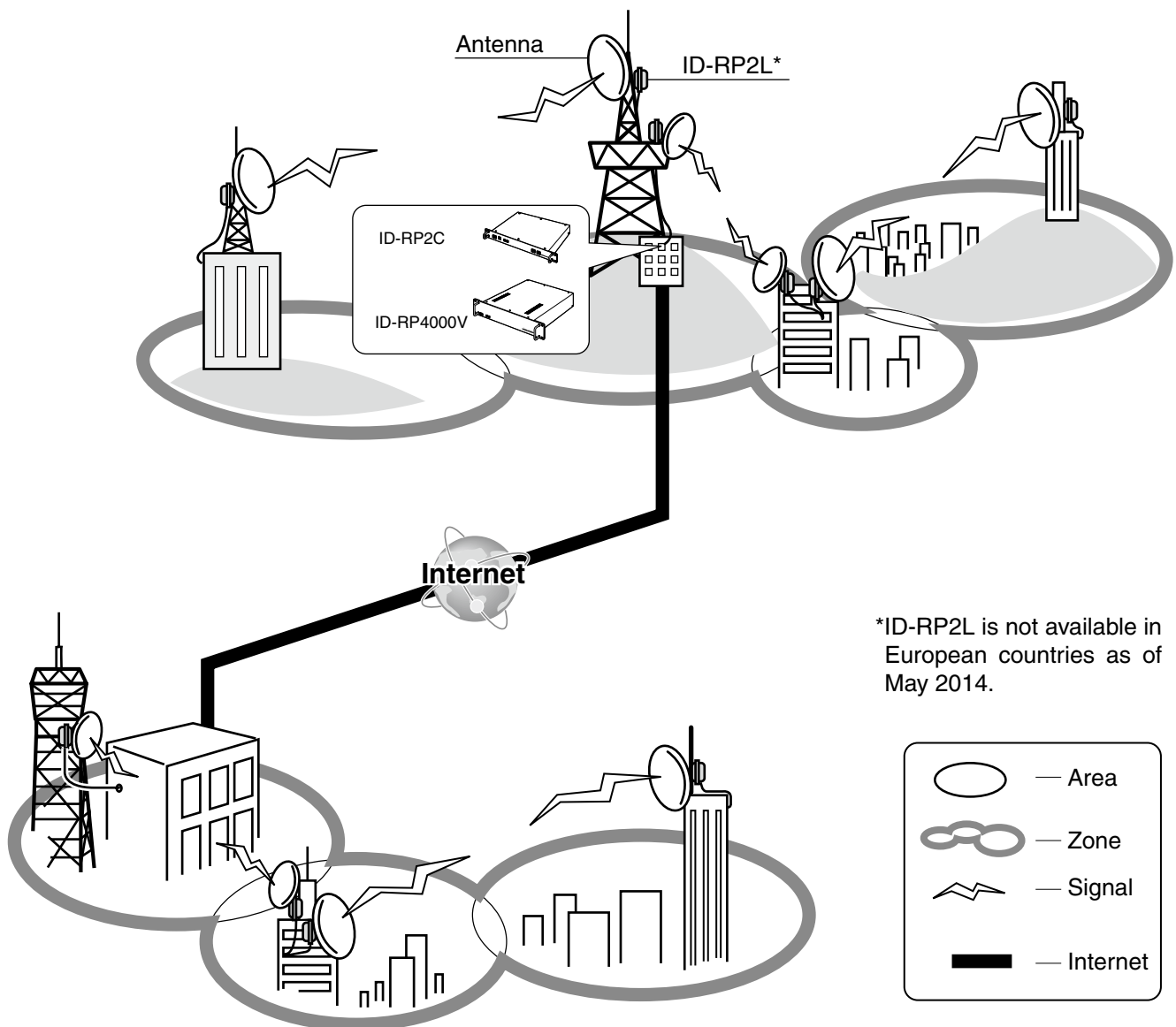
The ID-RP4000V never functions as a repeater without ID-RP2C, due to no relay function is built-in.

■ ID-RP4000V

- The ID-RP4000V is a 440 MHz digital voice and slow-speed data repeater (4.8 kbps) and connects to the ID-RP2C.

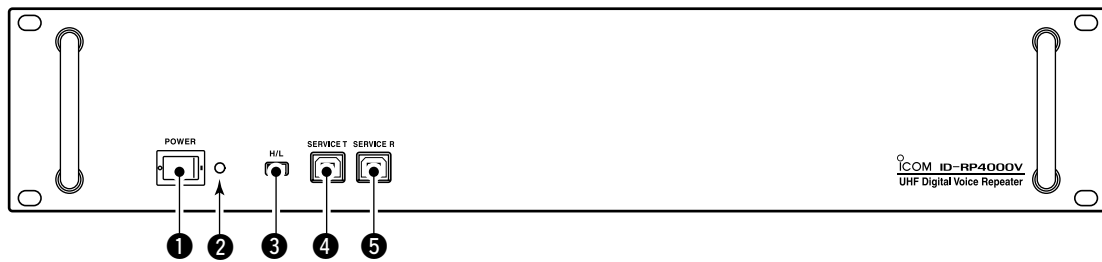
NOTE: No audio CODEC is performed in the ID-RP4000V, thus the ID-RP4000V receives and transmits 4.8 kbps serial data only.

- The ID-RP4000V utility software, supplied with the ID-RP4000V, and a PC are required for both receive and transmit frequency settings.



*ID-RP2L is not available in European countries as of May 2014.

■ Front panel



❶ POWER SWITCH [POWER]

Push to turn ON the power.

❷ POWER INDICATOR

Lights when the power is turned ON.

❸ HIGH/LOW POWER SELECT SWITCH [H/L]

Select either High (approximately 25 W) or Low (approximately 2.5 W) output power.

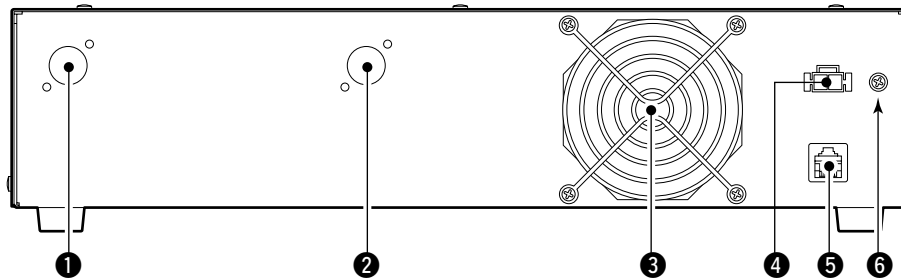
❹ SERVICE CONNECTOR T [SERVICE T] (p. 27)

Connect a PC with an A-B type USB cable to set the transmit frequency. (User supplied cable)

❺ SERVICE CONNECTOR R [SERVICE R] (p. 27)

Connect a PC with an A-B type USB cable to set the receive frequency. (User supplied cable)

■ Rear panel



❶ RECEIVE ANTENNA CONNECTOR [RX ANT] (p. 5)

Connect a 440 MHz band antenna separately, or through a duplexer.

❷ TRANSMIT ANTENNA CONNECTOR [TX ANT] (p. 5)

Connect a 440 MHz band antenna separately, or through a duplexer.

❸ COOLING FAN

NOTE: Keep the area around the fan free from obstacles.

❹ POWER CONNECTOR [DC13.8V] (p. 5)

Connect to the ID-RP2C with the supplied DC power cable (OPC-1309) to supply the DC power.

❺ [CONT I/O] (p. 5)

Connect to the ID-RP2C with the supplied control cable for serial data communications.

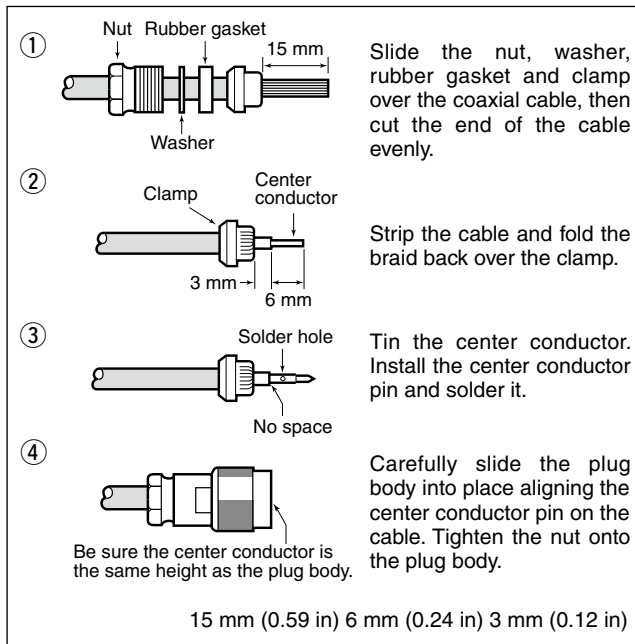
❻ GROUND TERMINAL [GND] (p. 4)

Connect to a ground to prevent electrical shocks, TVI, BCI and other problems.

3

INSTALLING AND CONNECTING

■ Attaching an “N” connector



Use 50 Ω connectors and coax cable.

Use “N” type connectors between the repeater and the antennas.

RECOMMENDATION: Install a lightning protector between the ID-RP4000V and the antenna.

■ Power supply requirements

Make sure that the DC power supply that is used with the ID-RP4000V system meets the following requirements:

Output voltage: 13.8 V DC \pm 15%

Current capacity: At least the total current consumption of the connected equipment.

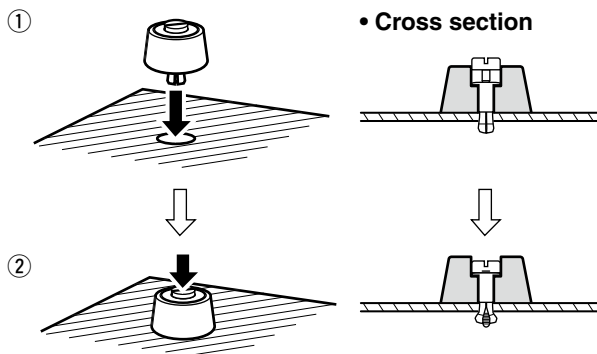
■ Installing in a system rack

The ID-RP4000V is designed to be installed in a standard EIA 19-inch rack.

Use the supplied bolts with the rack.

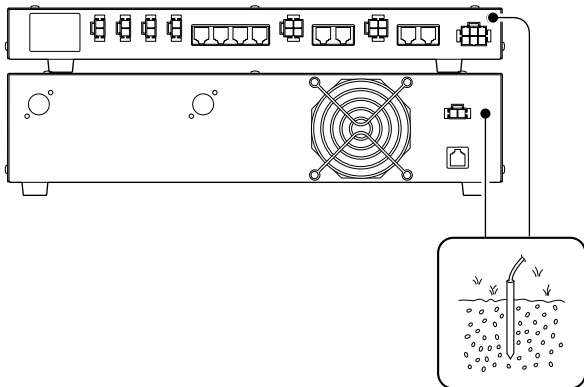
We recommend using a rack that has rails because the weight of the ID-RP4000V is approximately 7.5 kg (16.5 lbs).

■ Attaching the rubber feet



For desktop installations, attach the supplied rubber feet onto the bottom of the ID-RP4000V, as shown to the left.

■ Grounding



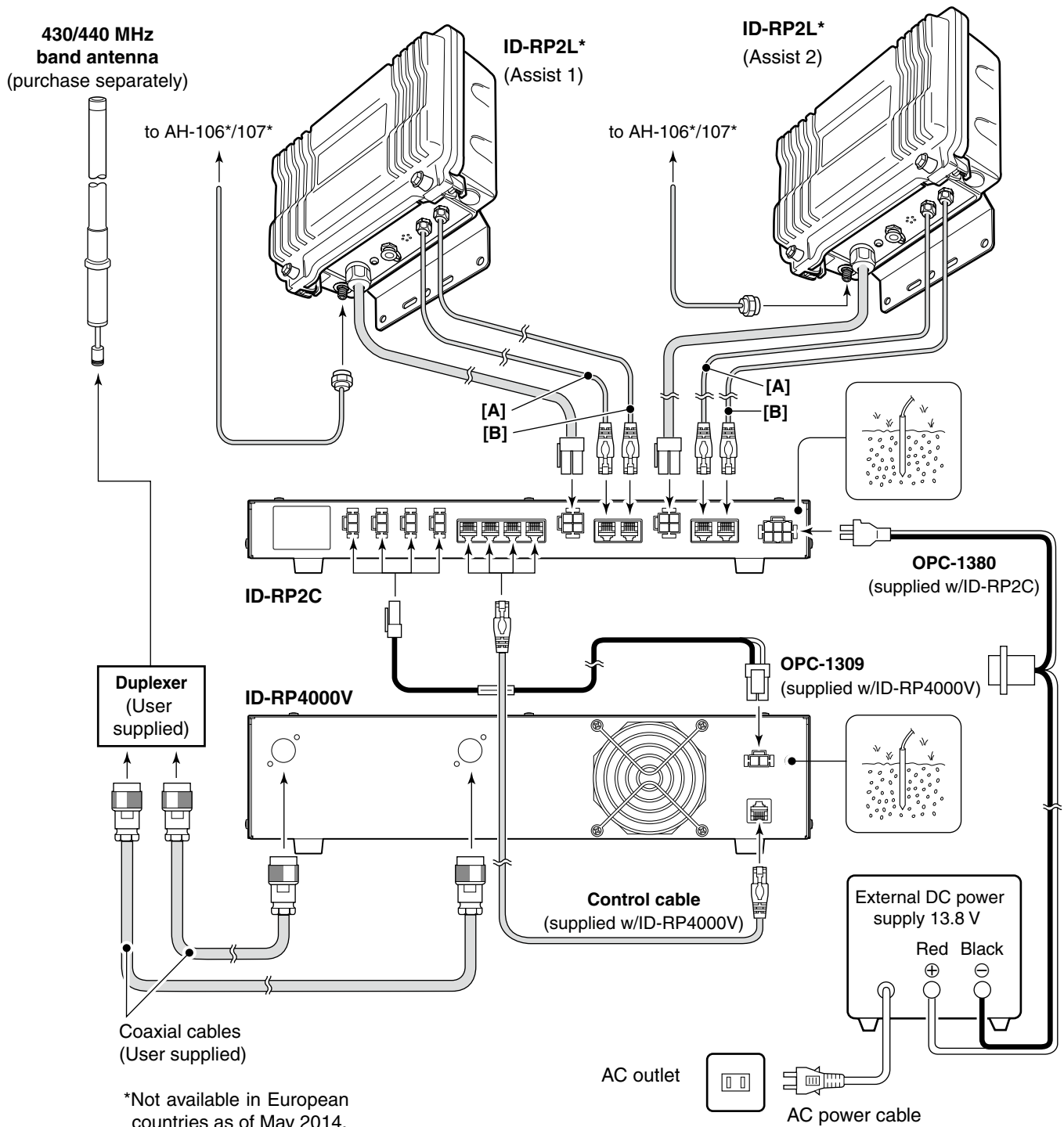
To prevent electrical shock, television interference (TVI), broadcast interference (BCI) and other problems, ground the transceiver through the GROUND terminal on the rear panel.

For best results, connect a heavy gauge wire or strap to a long earth-sunk copper rod.

Make the distance between the [GND] terminal and ground as short as possible.

⚠ WARNING! NEVER connect the [GND] terminal to a gas or electric pipe, since the connection could cause an explosion or electric shock.

■ System connections



Use an A-B type USB (Universal Serial Bus) cable between the ID-RP4000V and your PC. USB driver installation is required.

In addition, individual USB driver installations are required for each connector, because the communication port numbers are different. The instructions that follow describe the installation of the ID-RP4000V [SERVICE T] connector as an example.

IMPORTANT!

A different USB driver from the ID-1 is used for the ID-RP4000V.

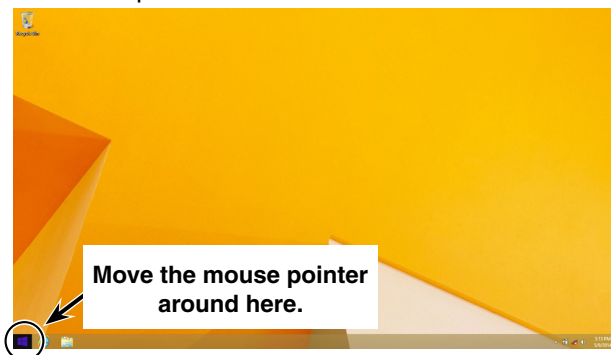
Uninstall the USB driver for ID-1 first, then install the USB driver for the ID-RP4000V, if the USB driver for the ID-1 is installed in the PC.

NOTE:

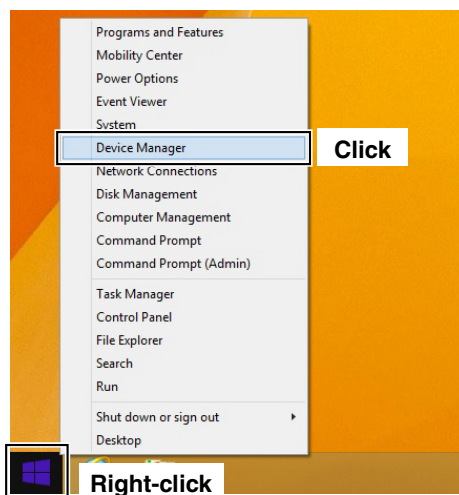
The ID-RP4000V connection may not be recognized by the PC if the USB cable is too long. Use as short a USB cable as possible.

■ Microsoft® Windows® 8.1

- ① Start Windows.
 - Quit all other applications if any are running.
 - When installing the driver, log in as the administrator.
- ② Insert the CD that is supplied with the ID-RP4000V (Application CD) into the CD drive.
 - If you download the USB driver, skip this step and go to the next step.
- ③ Connect the PC and the ID-RP4000V [SERVICE T] connector with an A-B type USB cable (User supplied).
- ④ Move the mouse pointer to the bottom left corner of the desktop.

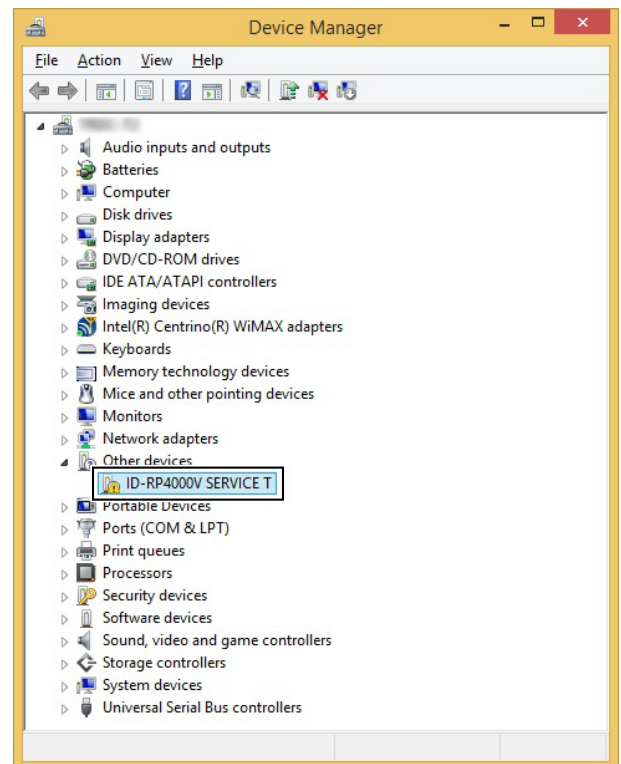


- ⑤ Right-click the Microsoft icon, and then click “Device Manager.”



- ⑥ The “Device Manager” window appears, then make sure a warning symbol “⚠” is displayed, as shown below.

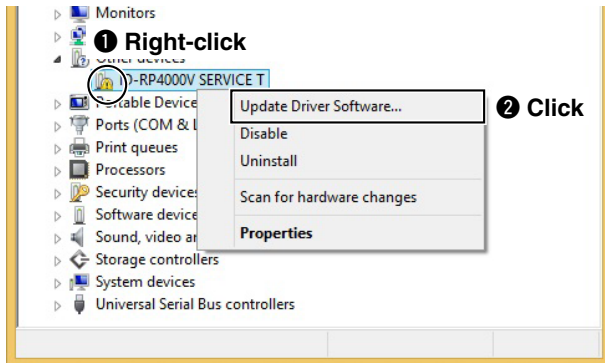
NOTE: Although the warning symbol “⚠” indicates that the driver installation has failed, continue the procedure.



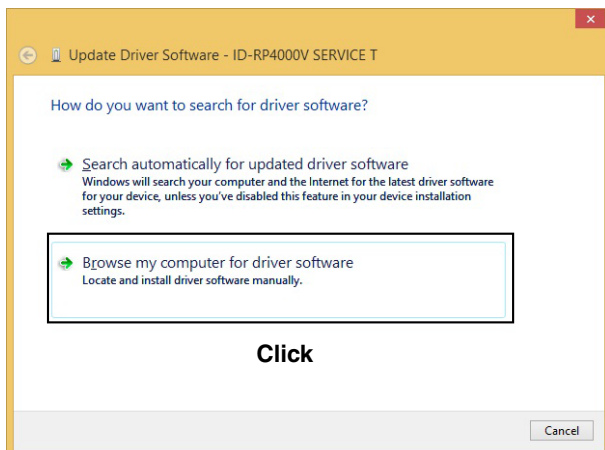
4 INSTALLING THE DRIVERS

■ Microsoft® Windows® 8.1— Continued

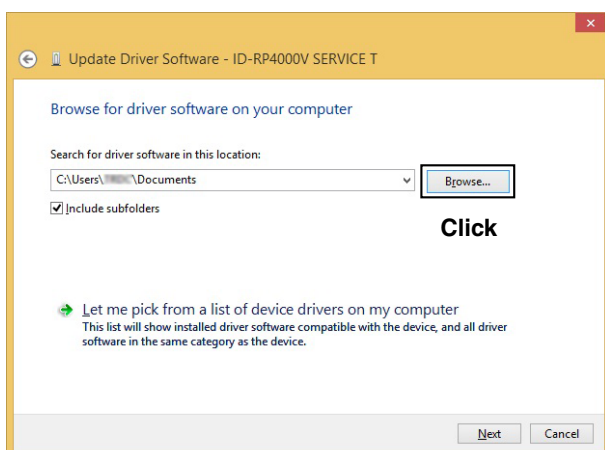
- ⑦ Right-click on the device icon with the warning symbol “⚠,” and then click “Update Driver Software...” on the menu.



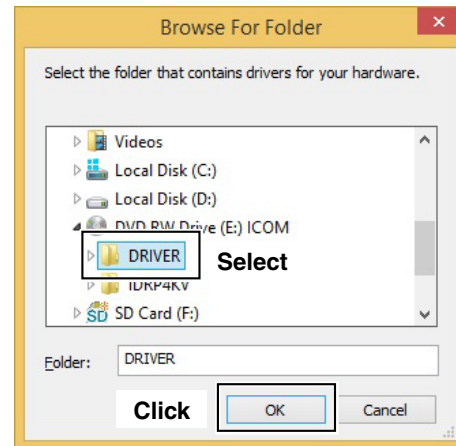
- ⑧ The window shown below will appear. Click “Browse my computer for driver software.”



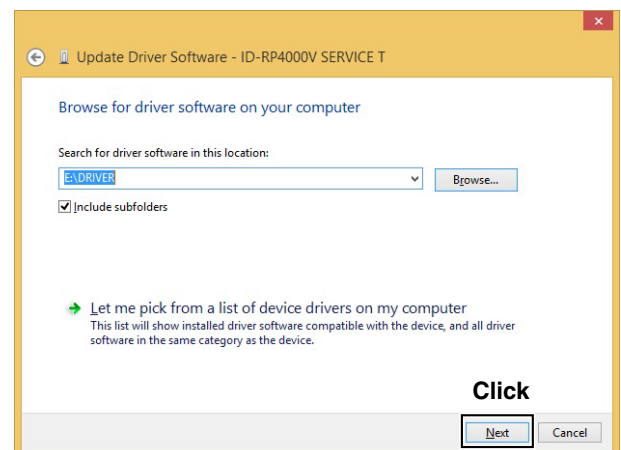
- ⑨ “Browse for driver software on your computer” will appear. Click [Browse...].



- ⑩ Select the “DRIVER” folder in the application CD, or the expanded driver file (downloaded driver file), and then click [OK].



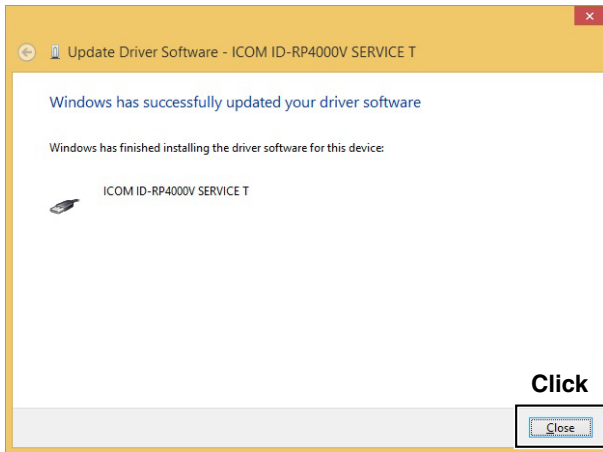
- ⑪ Click [Next] to start the installation of “ID-RP4000V SERVICE T” driver software.



- ⑫ When the Windows Security screen appears, click [Install] to continue.



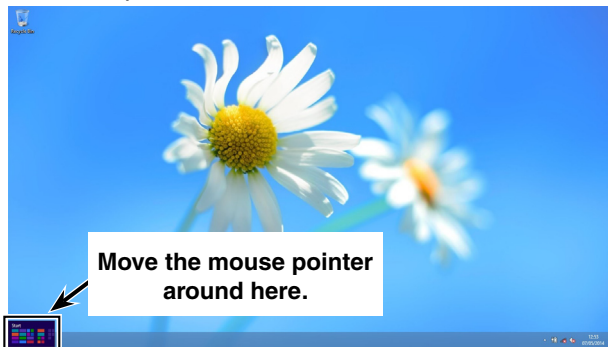
- ⑬ After the installation is completed, “Windows has successfully updated your driver software” will appear. Click [Close].



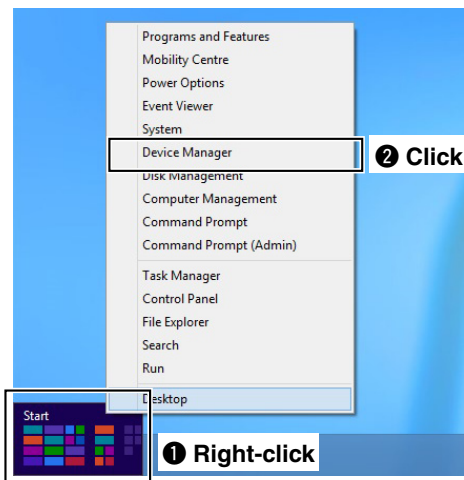
- ⑭ Again, right-click on the device icon with the warning symbol “⚠” in the “Device manager,” and then click “Update Driver Software...” on the menu.
- ⑮ Repeat ⑥ to ⑬, to install the “ID-RP4000V SERVICE T” driver software.
- ⑯ Eject the CD from the CD drive, and then restart the PC.

■ Microsoft® Windows® 8

- ① Start Windows.
 - Quit all other applications if any are running.
 - When installing the driver, log in as the administrator.
- ② Insert the CD that is supplied with the ID-RP4000V (Application CD) into the CD drive.
 - If you download the USB driver, skip this step and go to the next step.
- ③ Connect the PC and the ID-RP4000V [SERVICE T] connector with an A-B type USB cable (User supplied).
- ④ Move the mouse pointer to the bottom left corner of the desktop.

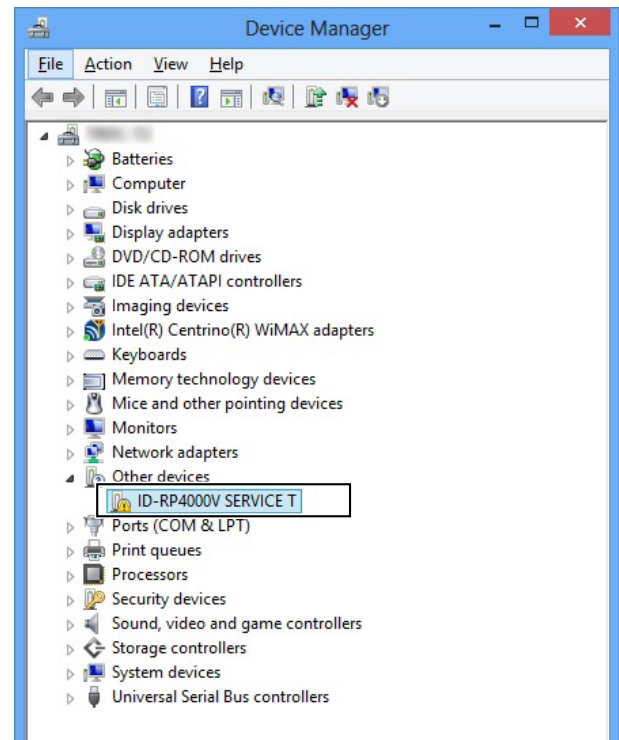


- ⑤ Right-click the <START> icon, and then click “Device Manager.”

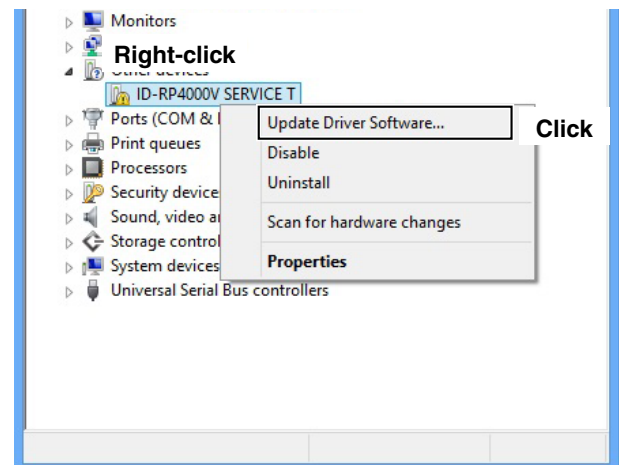


- ⑥ The “Device Manager” window appears, then make sure a warning symbol “⚠” is displayed, as shown below.

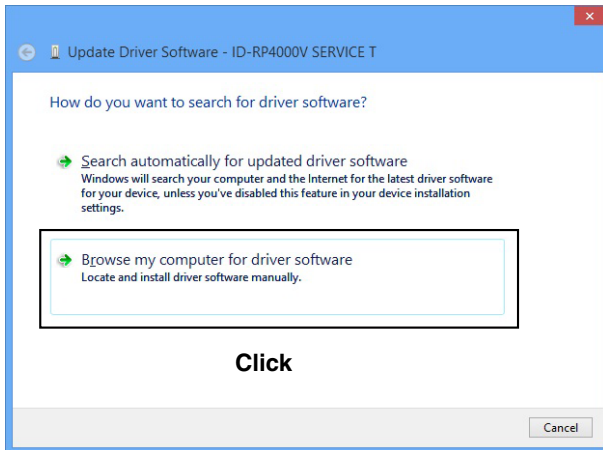
NOTE: Although the warning symbol “⚠” indicates that the driver installation has failed, continue the procedure.



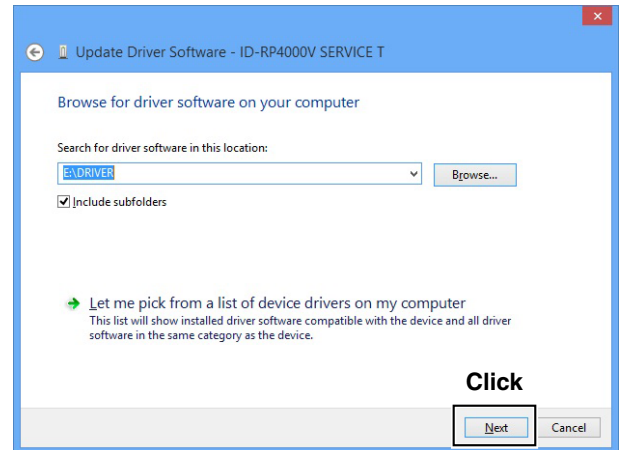
- ⑦ Right-click on the device icon with the warning symbol “⚠,” and then click “Update Driver Software...” on the menu.



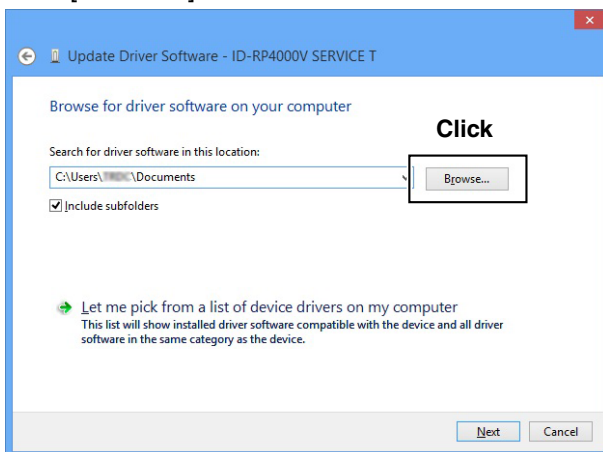
- ⑧ The window shown below will appear.
Click “Browse my computer for driver software.”



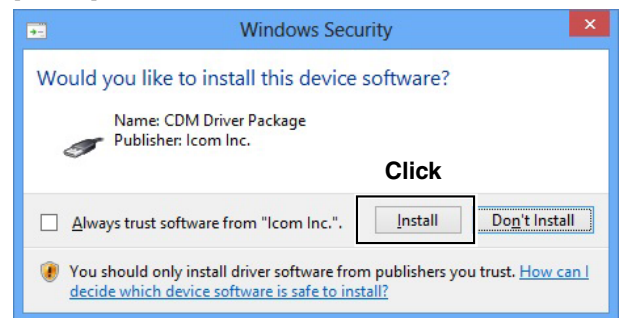
- ⑪ Click [Next] to start the installation of “ID-RP4000V SERVICE T” driver software.



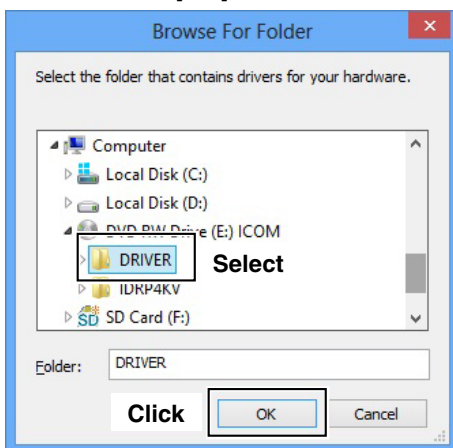
- ⑨ “Browse for driver software on your computer” will appear.
Click [Browse...].



- ⑫ When the Windows Security screen appears, click [Install] to continue.



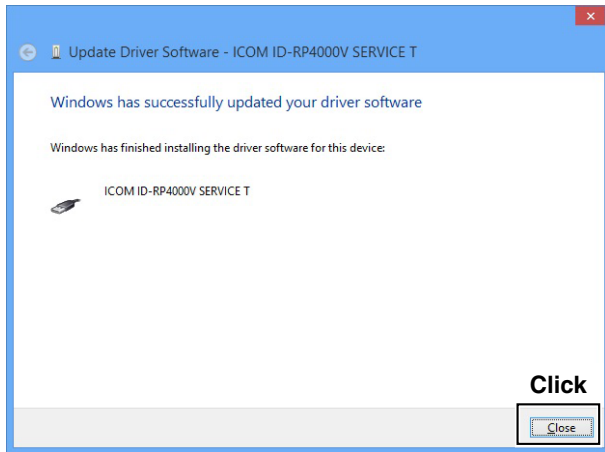
- ⑩ Select the “DRIVER” folder in the application CD, or the expanded driver file (downloaded driver file), and then click [OK].



■ Microsoft® Windows® 8— Continued

- ⑬ After the installation is completed, “Windows has successfully updated your driver software” will appear.

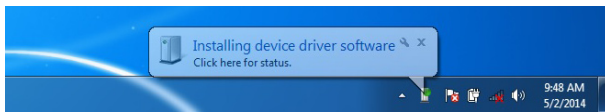
Click [Close].



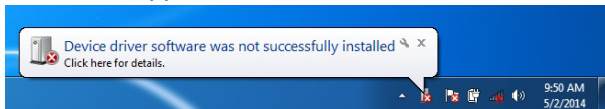
- ⑭ Again, right-click on the device icon with the warning symbol “⚠” in the “Device manager,” and then click “Update Driver Software...” on the menu.
- ⑮ Repeat ⑥ to ⑬, to install the “ID-RP4000V SERVICE T” driver software.
- ⑯ Eject the CD from the CD drive, and then restart the PC.

■ Microsoft® Windows® 7

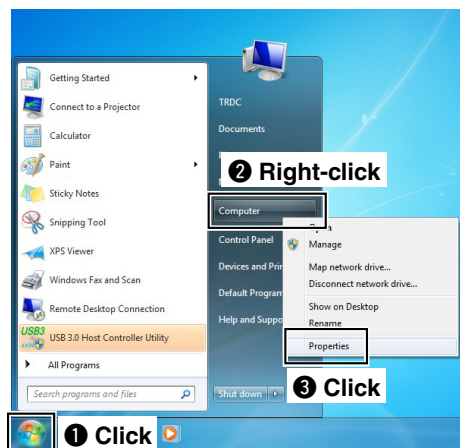
- ① Start Windows.
 - Quit all other applications if any are running.
 - When installing the driver, log in as the administrator.
- ② Insert the CD that is supplied with the ID-RP4000V (Application CD) into the CD drive.
 - If you download the USB driver, skip this step and go to the next step.
- ③ Connect the PC and the ID-RP4000V [SERVICE T] connector with an A-B type USB cable (User supplied).
Then the dialog shown below will appear.



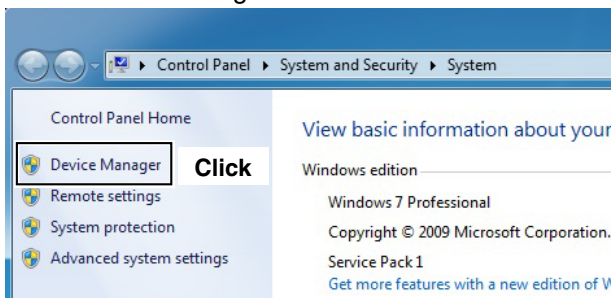
- ④ “Device driver software was not successfully installed will appear soon.”



- ⑤ Move the mouse pointer to the bottom left corner of the desktop.
Click the Windows “START” icon, right-click “Computer” in the <Start> menu, and then click “Properties.”

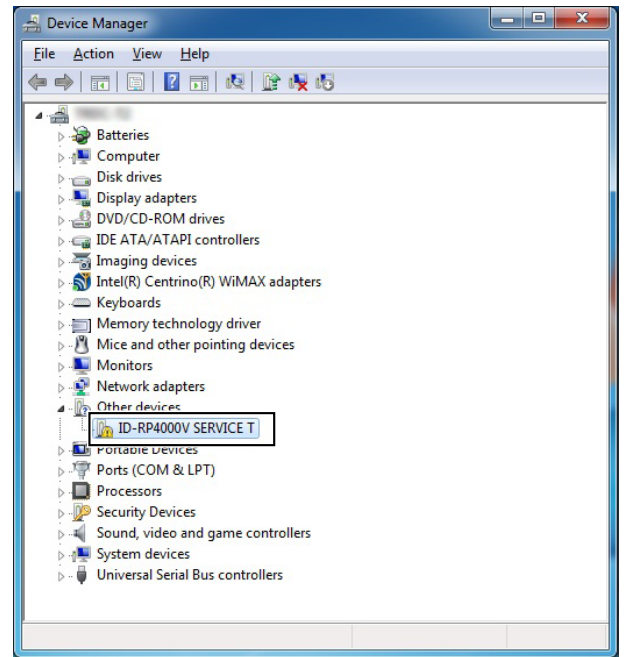


- ⑥ The “Control Panel Home” window will appear.
Click “Device Manager.”

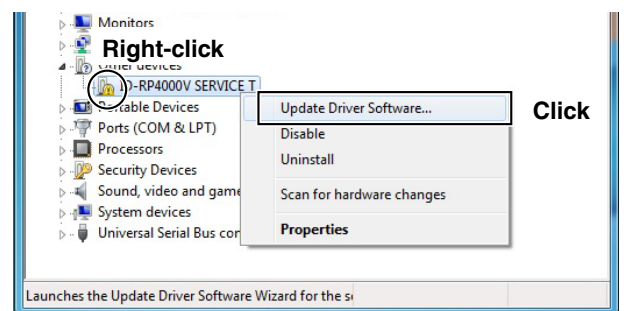


- ⑦ The “Device Manager” window appears, then make sure a warning symbol “⚠” is displayed, as shown below.

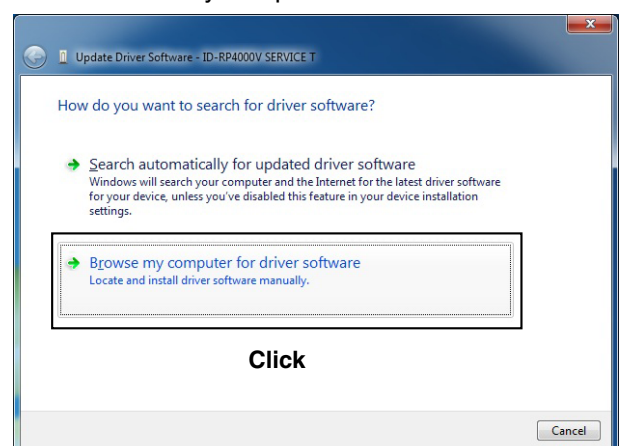
NOTE: Although the warning symbol “⚠” indicates that the driver installation has failed, continue the procedure.



- ⑧ Right-click on the device icon with the warning symbol “⚠,” and then click “Update Driver Software...” on the menu.



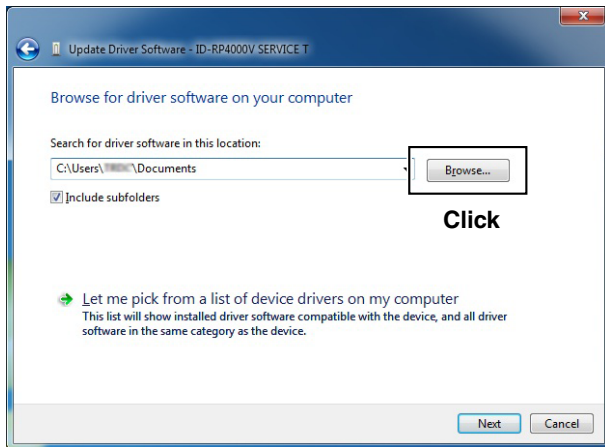
- ⑨ The window shown below will appear.
Click “Browse my computer for driver software.”



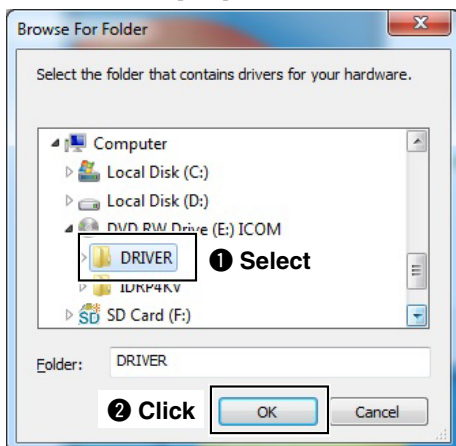
4 INSTALLING THE DRIVERS

■ Microsoft® Windows® 7— continued

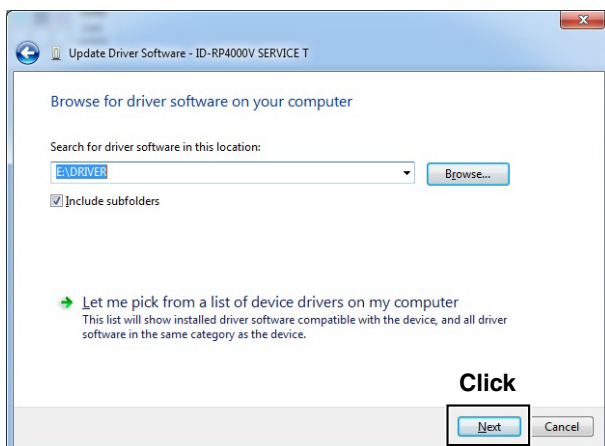
- ⑩ “Browse for driver software on your computer” will appear. Click [Browse...].



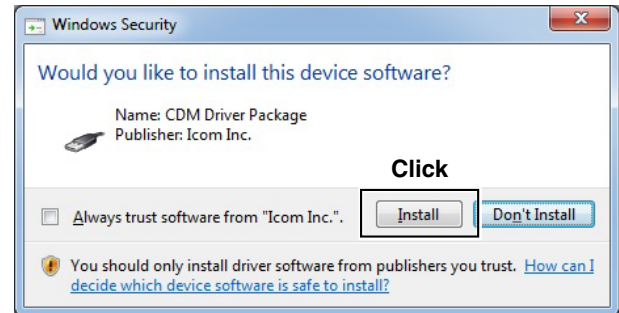
- ⑪ Select the “DRIVER” folder in the application CD, or the expanded driver file (downloaded driver file), and then click [OK].



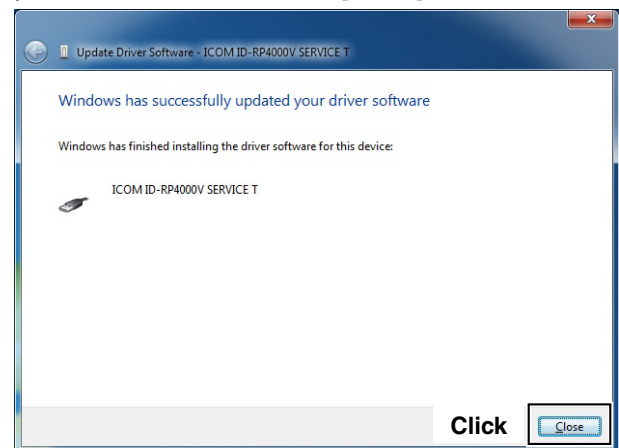
- ⑫ “Browse for driver software on your computer” will appear again. Click [Next] to start the installation of “ID-RP4000V SERVICE T.”



- ⑬ When the Windows Security screen appears, click [Install] to continue.



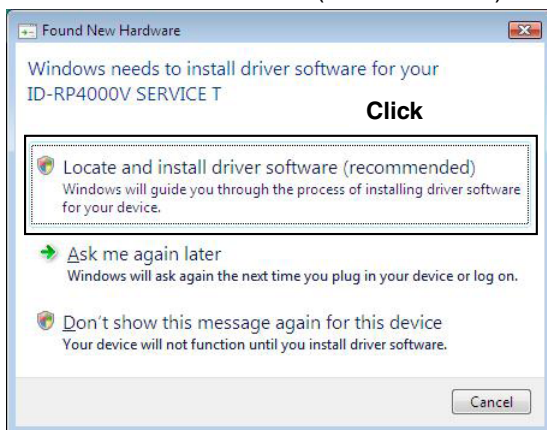
- ⑭ After the installation is completed, “Windows has successfully updated your driver software” will appear as shown below. Click [Close].



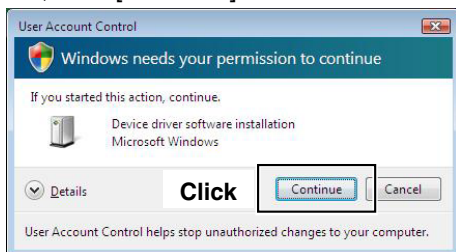
- ⑮ The dialog “Device driver software was not successfully installed” will appear again.
⑯ Repeat ⑦ to ⑭, to install the “ID-RP4000V SERVICE T” driver software.
⑰ Eject the CD from the CD drive, and then restart the PC.

■ Microsoft® Windows Vista®

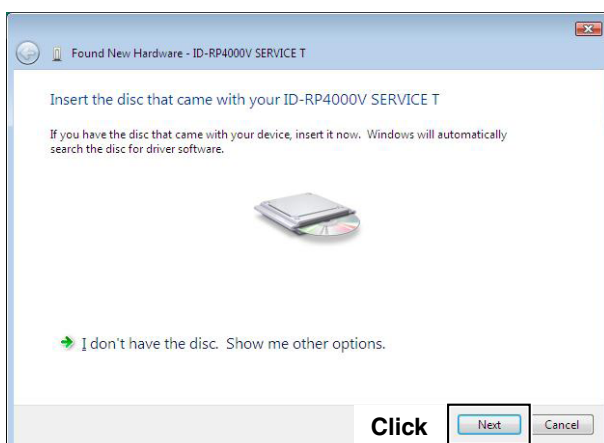
- ① Start Windows.
 - Quit all other applications if any are running.
 - When installing the driver, log in as the administrator.
- ② Insert the CD that is supplied with the ID-RP4000V (Application CD) into the CD drive.
 - If you download the USB driver, skip this step and go to the next step.
- ③ Connect the PC and the ID-RP4000V [SERVICE T] connector with an A-B type USB cable (User supplied).
- ④ The window shown below will appear. Click “Locate and install driver software (recommended).”



- ⑤ If “User Account Control” dialog box appears as at left, click [Continue].



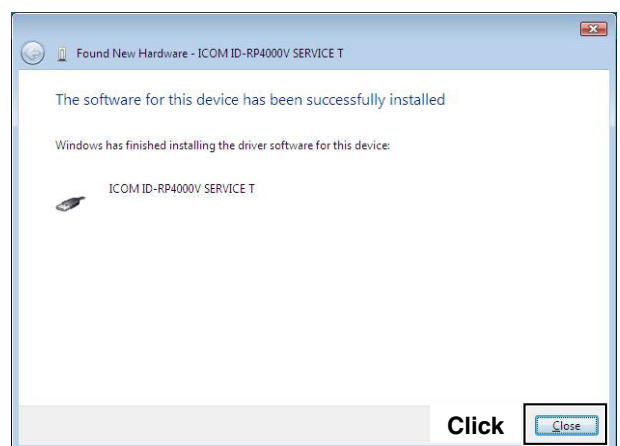
- ⑥ The “Found New Hardware - ID-RP4000V Service T” window will appear. Click [Next] to start the installation of the driver software.



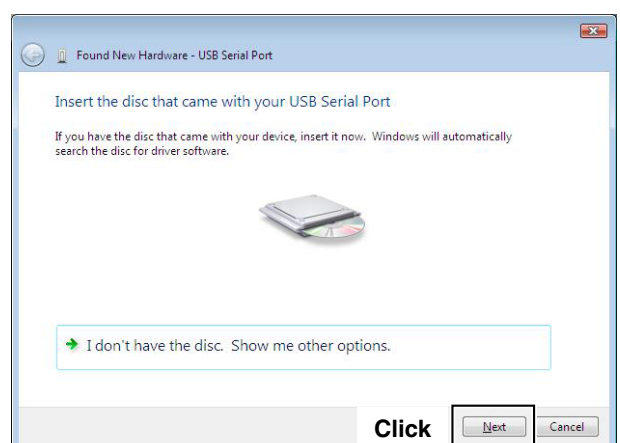
- ⑦ When the Windows Security screen appears, click “Install this driver software anyway” to continue.



- ⑧ After the installation is completed, “The software for this device has been successfully installed” will appear. Click [Close].



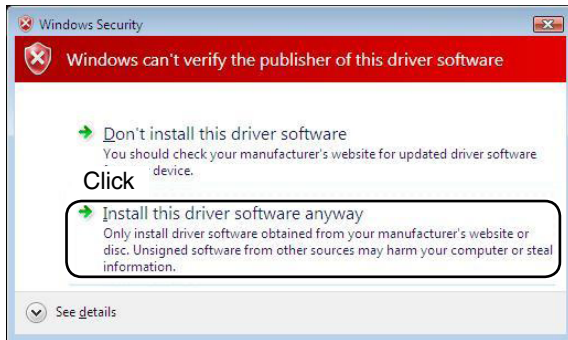
- ⑨ The “Found New Hardware - USB Serial Port” window will appear, click [Next] to start the installation of the driver software.



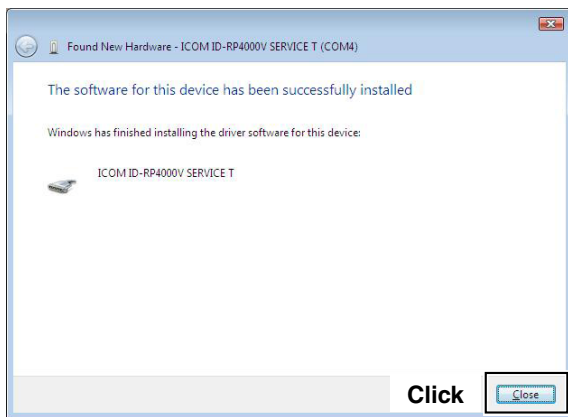
4 INSTALLING THE DRIVERS

■ Microsoft® Windows Vista®— continued

- ⑩ When the Windows Security screen appears, click “Install this driver software anyway” to continue.



- ⑪ After the installation is completed, “The software for this device has been successfully installed” will appear. Click [Close].



- ⑫ Eject the CD from the CD drive, and then restart the PC.

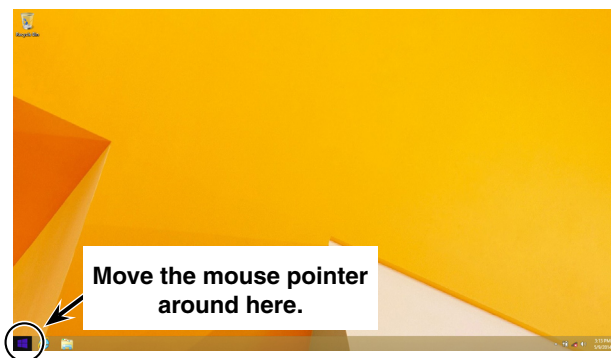
■ Checking the COM port

After the driver installation, check the driver availability and the COM port number.

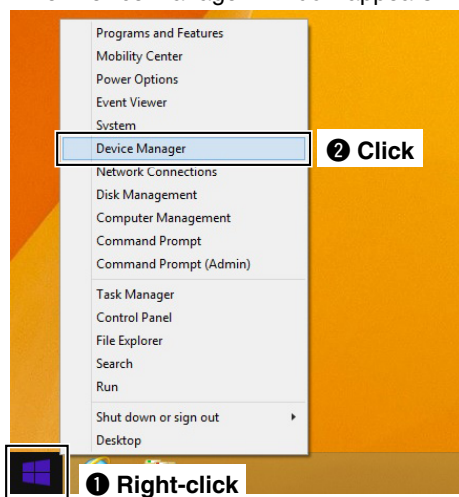
In this section, checking the COM port number of the ID-RP4000V [SERVICE T] connector is used for instruction example.

◇ Microsoft® Windows® 8.1

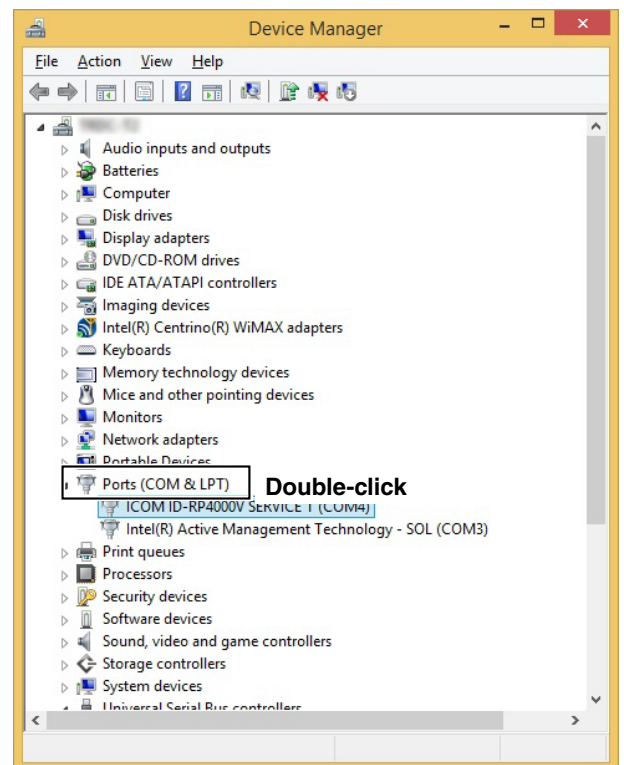
- ① Start Windows.
 - When opening the Device Manager, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with the USB cable.
- ③ Move the mouse pointer to the bottom left corner of the desktop.



- ④ Right-click the Microsoft icon, and then click “Device Manager.”
 - The “Device Manager” window appears.



- ⑤ Double-click “Ports (COM&LPT)” on the “Device Manager” screen to check the COM port number.
 - When the driver is completely installed, “ICOM ID-RP4000V SERVICE T (COM*)” is displayed. The screen shows the USB serial COM port number “4.”

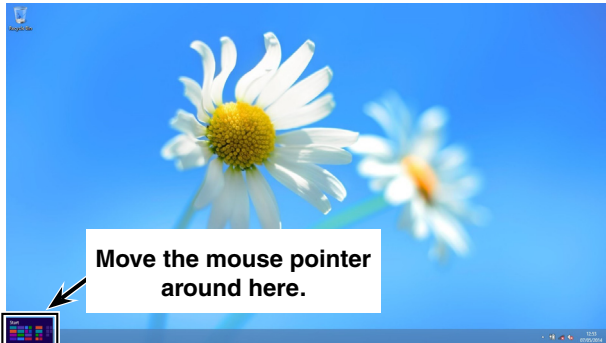


- The COM port number is displayed instead of “*.” If the repeater has two COM ports, two COM port numbers are displayed.
- Depending on the PC environment, the COM port number may differ.
- If “!” or “x” is displayed on the “Device Manager” screen, the driver may not be properly installed. In this case, first uninstall the USB driver, then reinstall it.

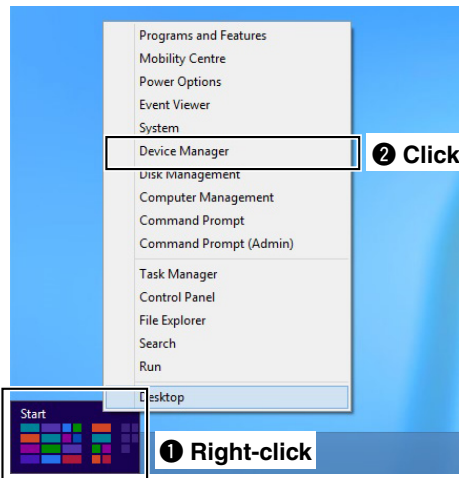
■ Checking the COM port— continued

◆ Microsoft® Windows® 8

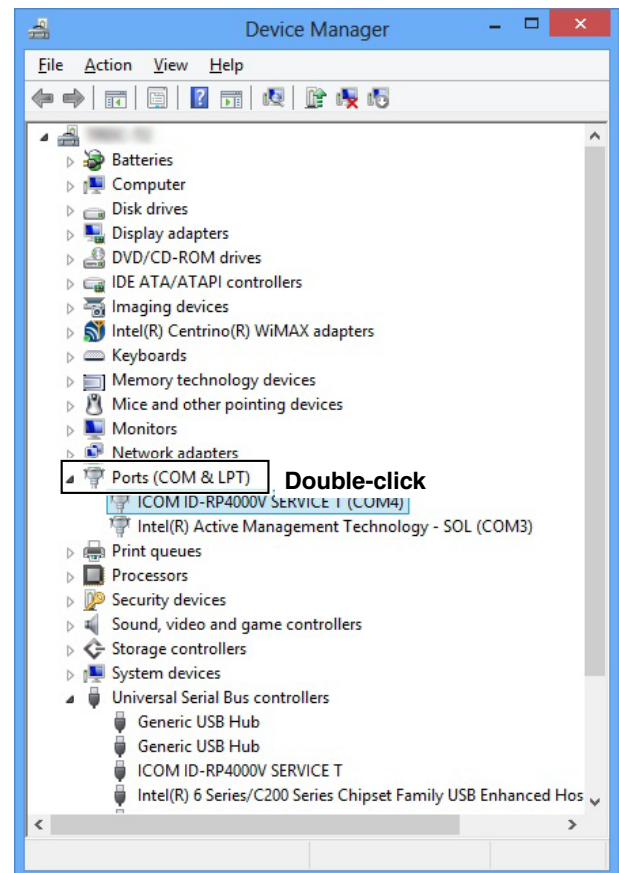
- ① Start Windows.
 - When opening the Device Manager, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with the USB cable.
- ③ Move the mouse pointer at the left-bottom corner of the desktop.



- ④ Right-click the <START> icon, and then click “Device Manager.”
 - The “Device Manager” window appears.



- ⑤ Double-click “Ports (COM&LPT)” on the “Device Manager” screen to check the COM port number.
 - When the driver is completely installed, “ICOM ID-RP4000V SERVICE T (COM*)” is displayed. The screen shows the USB serial COM port number “4.”

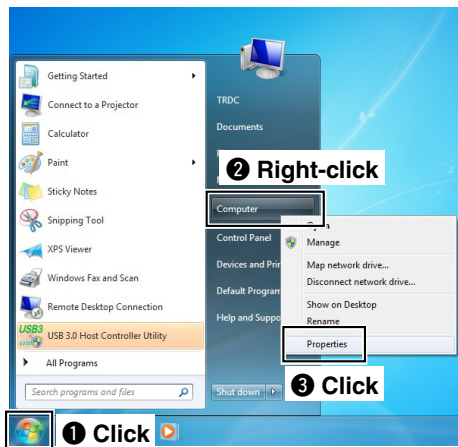


- The COM port number is displayed instead of “*.” If the repeater has two COM ports, two COM port numbers are displayed.
- Depending on the PC environment, the COM port number may differ.
- If “!” or “x” is displayed on the “Device Manager” screen, the driver may not be properly installed. In this case, first uninstall the USB driver, then reinstall it.

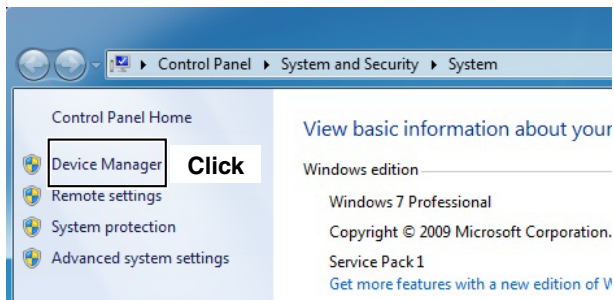
◇ Microsoft® Windows® 7

- ① Start Windows.
 - When opening the Device Manager, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with the USB cable.
- ③ Move the mouse pointer at the left-bottom corner of the desktop.

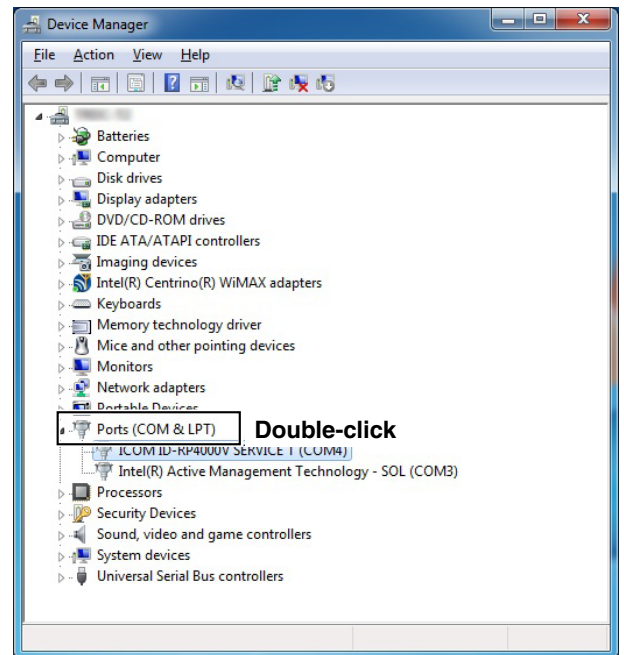
Click the Windows “START” icon, right-click “Computer” in the <Start> menu, and then click “Properties.”



- ④ The “Control Panel Home” window will appear.
 - Click “Device Manager.”
 - The “Device Manager” window appears.



- ⑤ Double-click “Ports (COM&LPT)” on the “Device Manager” screen to check the COM port number.
 - When the driver is completely installed, “ICOM ID-RP4000V SERVICE T (COM*)” is displayed. The screen shows the USB serial COM port number “4.”

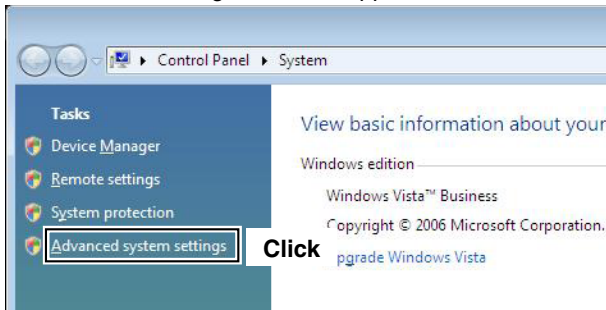


- The COM port number is displayed instead of “*.” If the repeater has two COM ports, two COM port numbers are displayed.
- Depending on the PC environment, the COM port number may differ.
- If “!” or “x” is displayed on the “Device Manager” screen, the driver may not be properly installed. In this case, first uninstall the USB driver, then reinstall it.

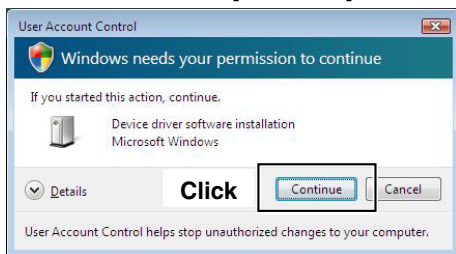
■ Checking the COM port— continued

◆ Microsoft® Windows Vista®

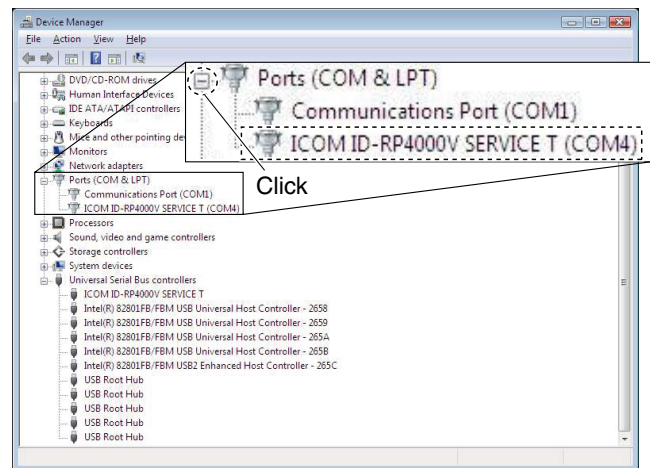
- ① Start Windows.
 - When opening the Device Manager, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with the USB cable.
- ③ Select the Desktop, then move the mouse pointer to the bottom left corner.
Click the Windows “START” icon, right-click “Computer” in the <Start> menu, and then click “Properties.”
- ④ The “Control Panel Home” window will appear.
Click “Device Manager.”
 - The “Device Manager” window appears.



- ⑤ If “User Account Control” dialog box appears as shown below, click [Continue].



- ⑥ Click “+” of Ports (COM&LPT) on the “Device Manager” screen to check the COM port number.
 - When the driver is completely installed, “ICOM ID-RP4000V SERVICE T (COM*)” is displayed. The screen shows the USB serial COM port number “4.”



- The COM port number is displayed instead of “*.” If the repeater has two COM ports, two COM port numbers are displayed.
- Depending on the PC environment, the COM port number may differ.
- If “!” or “x” is displayed on the “Device Manager” screen, the driver may not be properly installed. In this case, first uninstall the USB driver, then reinstall it.

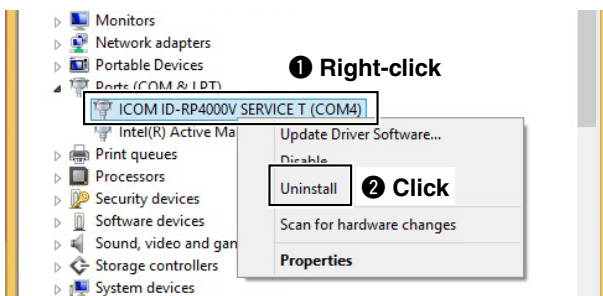
■ Uninstalling the USB driver

◆ Microsoft® Windows® 8.1

- ① Start Windows.
 - When uninstalling the driver, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with the USB cable.
- ③ Move the mouse pointer to the bottom left corner of the desktop.
 - Right-click the Microsoft icon, and then click “Device Manager.”
 - The “Device Manager” window appears.
- ④ Double-click “Ports (COM&LPT)” on the “Device Manager” screen.
 - “ICOM ID-RP4000V SERVICE T (COM*)” appears.



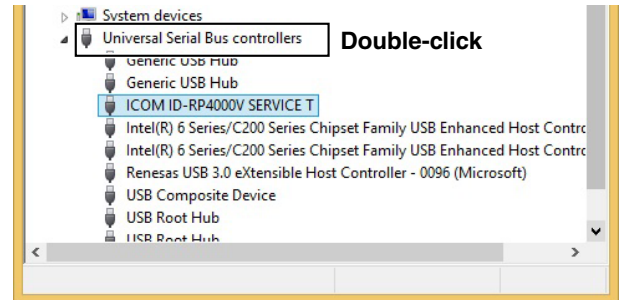
- ⑤ Right-click “ICOM ID-RP4000V SERVICE T (COM*)” and then click “Uninstall.”



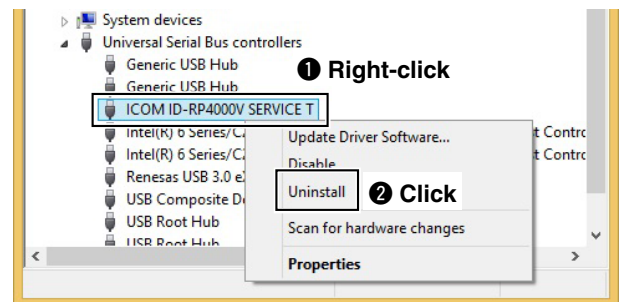
- ⑥ The “Confirm Device Uninstall” window will appear. Check “Delete the driver software for this device.” and then click [OK].



- ⑦ Double-click “Universal Serial Bus controllers” on the “Device Manager” screen.
 - “ICOM ID-RP4000V SERVICE T” appears.



- ⑧ Right-click “ICOM ID-RP4000V SERVICE T” and then click “Uninstall.”



- ⑨ The “Confirm Device Uninstall” window will appear. Check “Delete the driver software for this device.” and then click [OK].

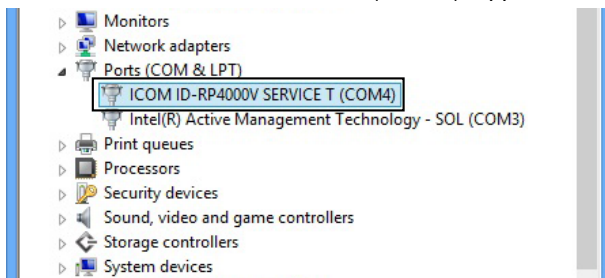


- ⑩ Restart the PC.

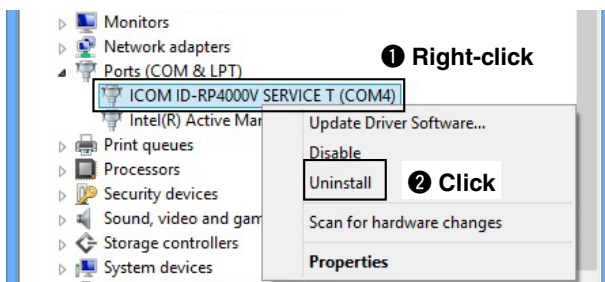
■ Uninstalling the USB driver— continued

◇ Microsoft® Windows® 8

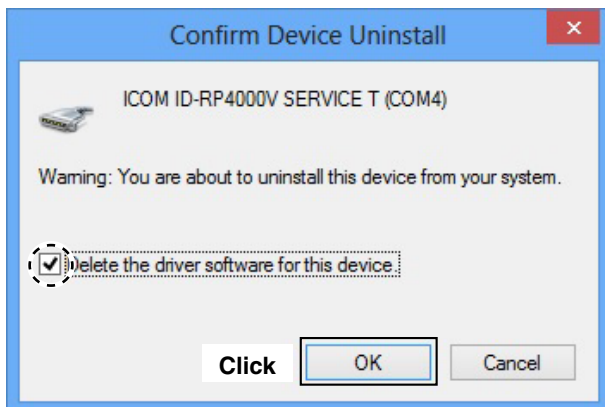
- ① Start Windows.
 - When uninstalling the driver, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with a USB cable (A-B type; purchase separately).
- ③ Move the mouse pointer at the left-bottom corner of the desktop.
 - Right-click the <START> icon, and then click “Device Manager.”
 - The “Device Manager” window appears.
- ④ Double-click “Ports (COM&LPT)” on the “Device Manager” screen.
 - “ICOM ID-RP4000V SERVICE T (COM *)” appears.



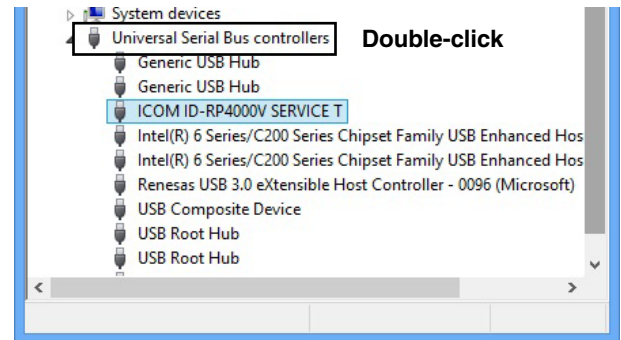
- ⑤ Right-click “ICOM ID-RP4000V SERVICE T (COM *)” and then click “Uninstall.”



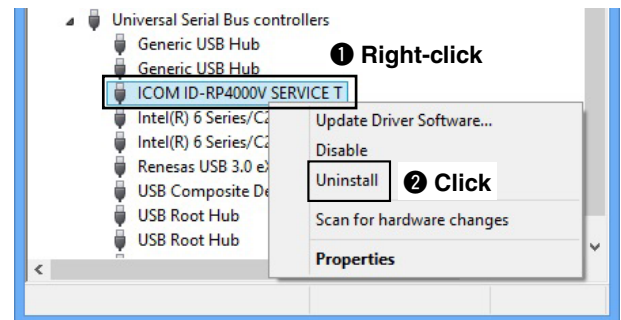
- ⑥ The “Confirm Device Uninstall” window will appear. Check “Delete the driver software for this device.” and then click [OK].



- ⑦ Double-click “Universal Serial Bus controllers” on the “Device Manager” screen.
 - “ICOM ID-RP4000V SERVICE T” appears.



- ⑧ Right-click “ICOM ID-RP4000V SERVICE T” and then click “Uninstall.”



- ⑨ The “Confirm Device Uninstall” window will appear. Check “Delete the driver software for this device.” and then click [OK].



- ⑩ Restart the PC.

◇ Microsoft® Windows® 7

- ① Start Windows.
 - When uninstalling the driver, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with a USB cable (A-B type: purchase separately).
- ③ Move the mouse pointer at the left-bottom corner of the desktop.

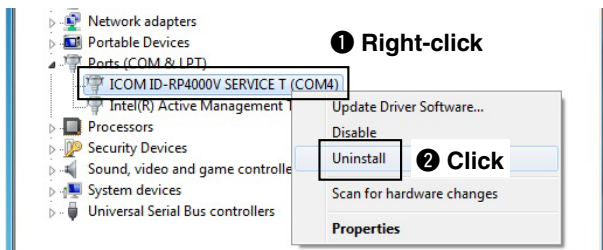
Click the Windows “START” icon, right-click “Computer” in the <Start> menu, and then click “Properties.”
- ④ The “Control Panel Home” window will appear.

Click “Device Manager.”

 - The “Device Manager” window appears.
- ⑤ Double-click “Ports (COM&LPT)” on the “Device Manager” screen.
 - “ICOM ID-RP4000V SERVICE T (COM*)” appears.



- ⑥ Right-click “ICOM ID-RP4000V SERVICE T (COM*)” and then click “Uninstall.”

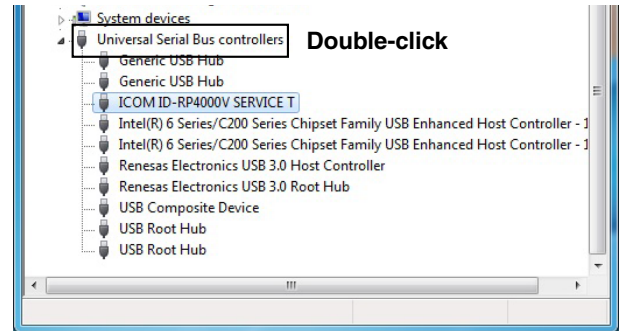


- ⑦ The “Confirm Device Uninstall” window will appear.

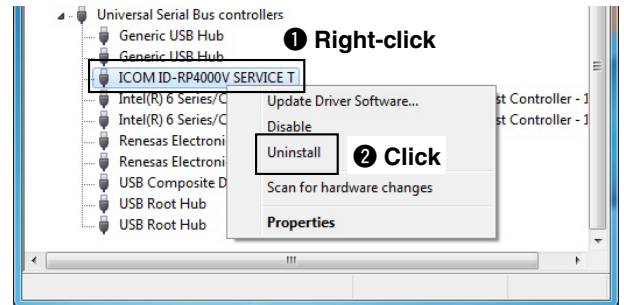
Check “Delete the driver software for this device.” and then click [OK].



- ⑧ Double-click “Universal Serial Bus controllers” on the “Device Manager” screen.
 - “ICOM ID-RP4000V SERVICE T” appears.



- ⑨ Right-click “ICOM ID-RP4000V SERVICE T” and then click “Uninstall.”



- ⑩ The “Confirm Device Uninstall” window will appear.

Check “Delete the driver software for this device.” and then click [OK].



- ⑪ Restart the PC.

■ Uninstalling the USB driver— continued

◇ Microsoft® Windows Vista®

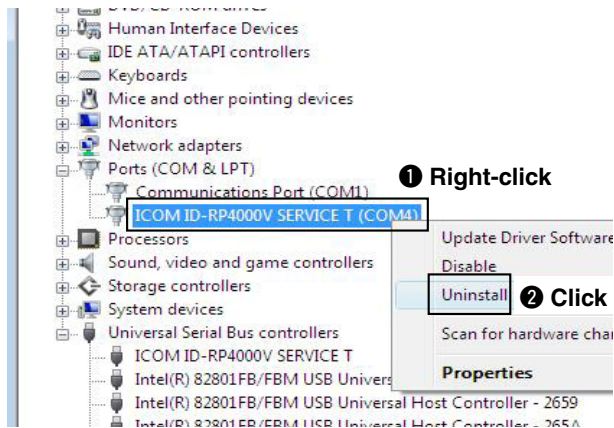
- ① Start Windows.
 - When uninstalling the driver, log in as the administrator.
- ② Connect the PC and the ID-RP4000V [SERVICE T] connector with a USB cable (A-B type; purchase separately).
- ③ Move the mouse pointer at the left-bottom corner of the desktop.

Click the Windows “START” icon, right-click “Computer” in the <Start> menu, and then click “Properties.”
- ④ The “Control Panel Home” window will appear.

Click “Device Manager.”

 - The “Device Manager” window appears.
- ⑤ Click “+” of Ports (COM&LPT).

Right-click the “ICOM ID-RP4000V SERVICE T (COM*)”, then select “Uninstall.”

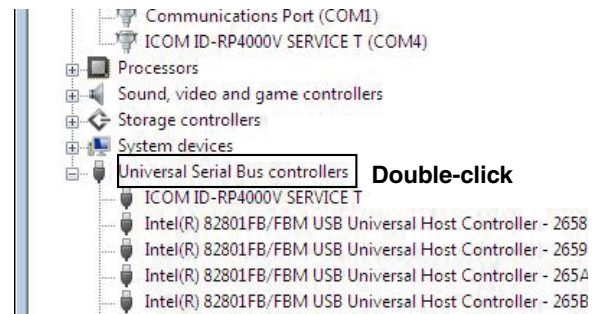


- ⑥ The “Confirm Device Uninstall” window will appear.

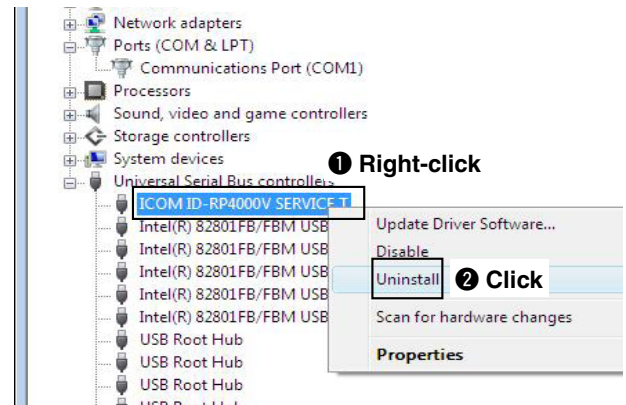
Check “Delete the driver software for this device.” and then click [OK].



- ⑦ Double-click “Universal Serial Bus controllers” on the “Device Manager” screen.
 - “ICOM ID-RP4000V SERVICE T” appears.



- ⑧ Right-click the “ICOM ID-RP4000V SERVICE T”, then select “Uninstall.”



- ⑨ The “Confirm Device Uninstall” window will appear.

Check “Delete the driver software for this device.” and then click [OK].



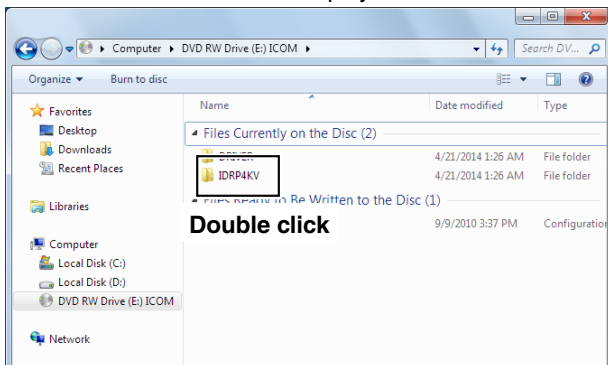
- ⑩ Restart the PC.

The utility software is used to set call signs and operating frequencies.

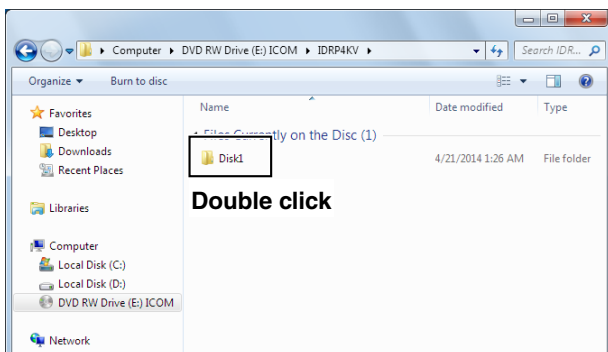
This section is based on using Microsoft® Windows® 7. The displayed screens, indications or operations may slightly differ from the instructions, depending on your system configuration or Windows operating system.

■ Installing

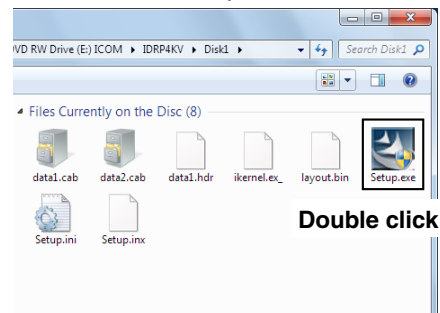
- ① Start Windows.
 - Quit all other applications if any are running.
 - When uninstalling the driver, log in as the administrator.
- ② Insert the CD that is supplied with the ID-RP4000V (Application CD) into the CD drive.
- ③ Click “Computer” and then display the contents of the CD.
- ④ Double click “IDRP4KV” folder.
 - Contents of the folder are displayed.



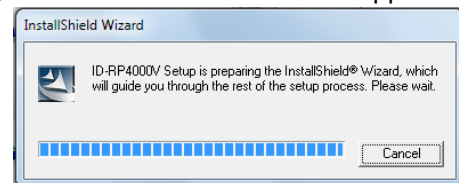
- ⑤ Double click “Disk1” folder.
 - Contents of the folder are displayed.



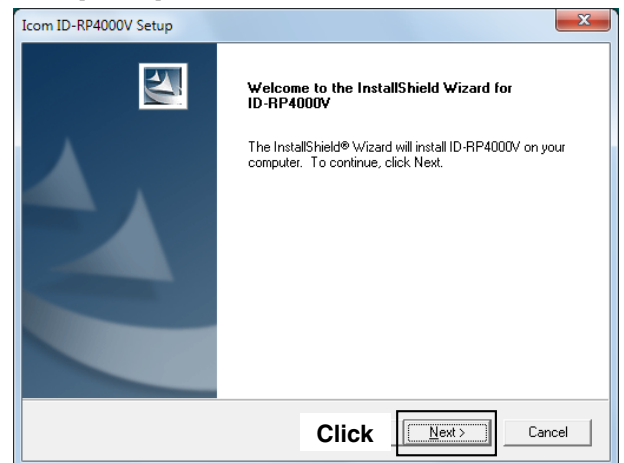
- ⑥ Double click “Setup.exe” file.



- ⑦ “InstallShield Wizard” screen appears.



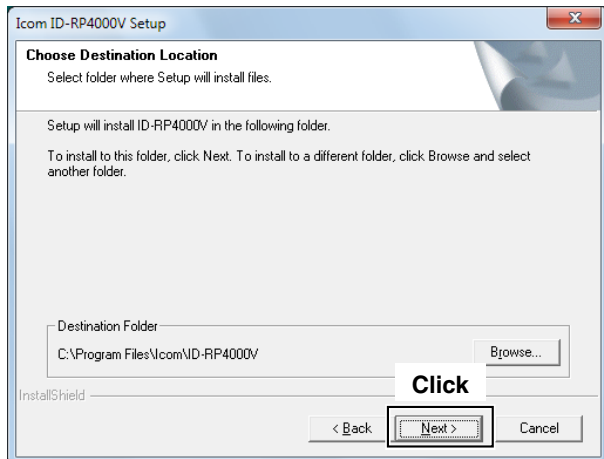
- ⑧ Click [Next>].



■ Installing— continued

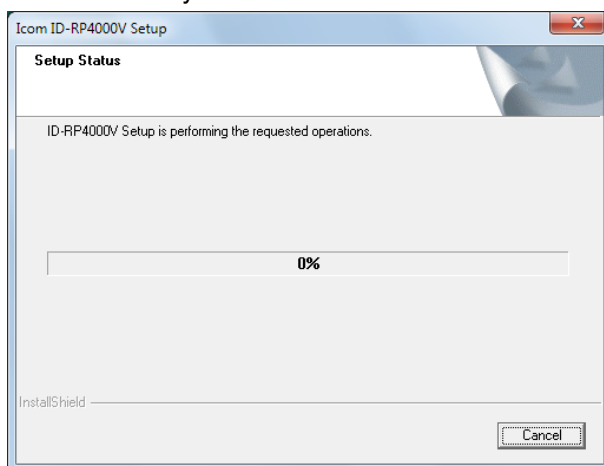
⑨ The “Choose Destination Location” screen appears.

- When installing the Utility software at the displayed location, click [Next>].
- When installing to a different location, click [Browse...], select the desired location and then click [Next>].



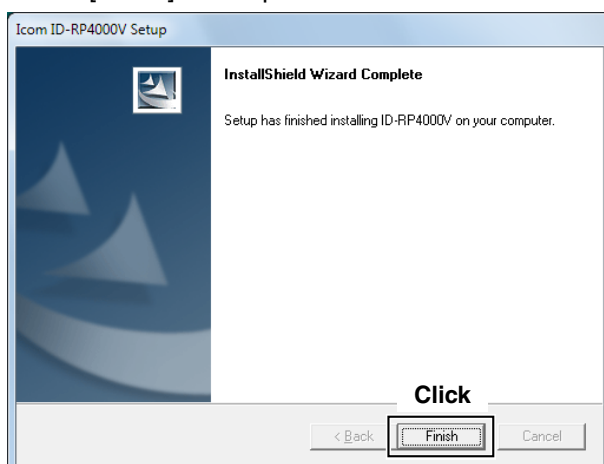
NOTE: After installing the utility, the short cut icon will automatically be created on the desktop. When the icon looks like white square, right-click on the desktop, and then click “Refresh,” or, reboot the PC.

⑩ Starts the Utility software installation.



⑪ The “InstallShield Wizard Complete” screen appears when the installation is finished.

- Click [Finish] to complete the installation.

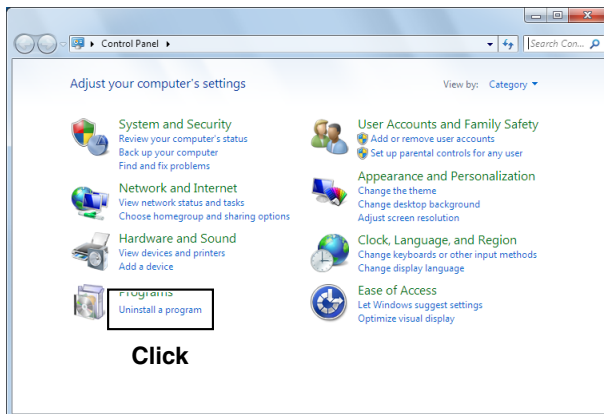


⑫ Eject the CD from the CD drive, then reboot the PC.

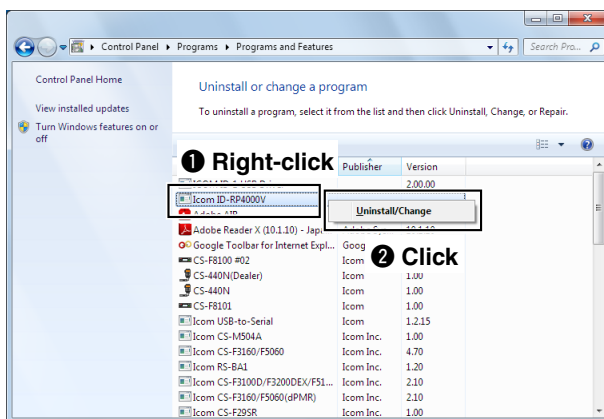
■ Uninstalling the Utility software

Uninstall the utility software using with the standard application in Windows, “Add and Remove Programs,” as follows.

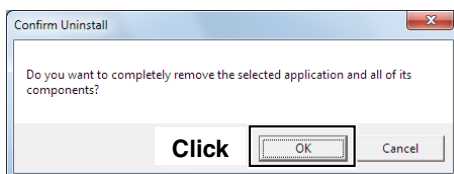
- ① Open “Control Panel” in the Start menu, and then click “Uninstall a program.”



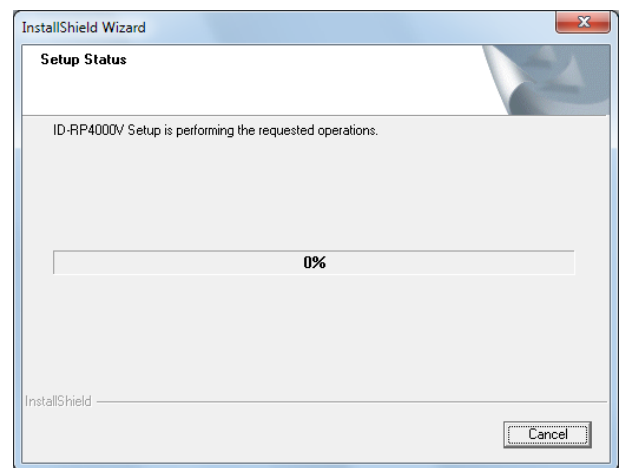
- ② Right-click the “Icom ID-RP4000V,” then click “Uninstall/Change”.



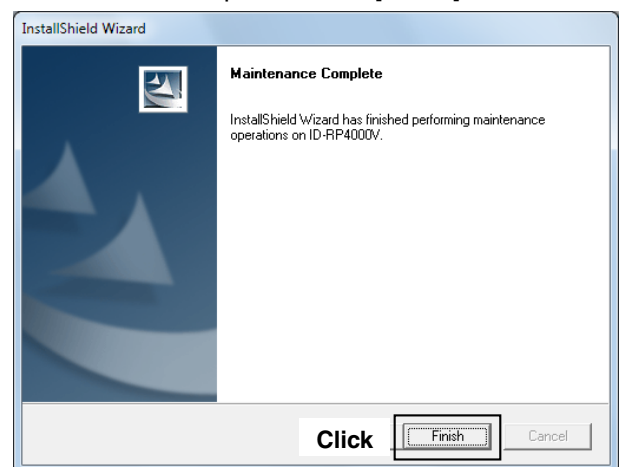
- ③ “Confirm Uninstall” screen appears, click [OK].



- ④ The screen appears as shown below when the un-installation starts.



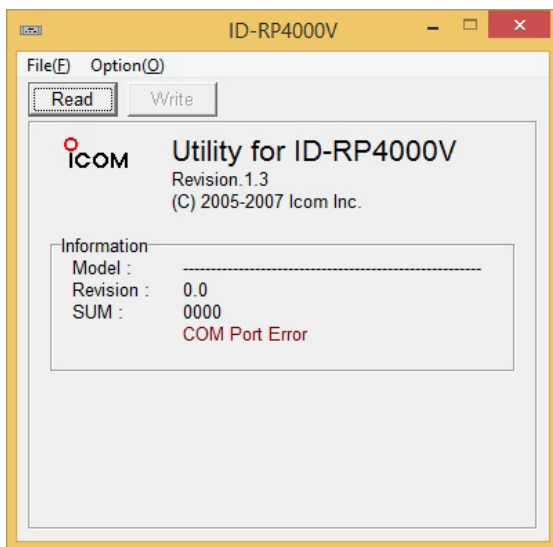
- ⑤ The screen appears as shown below when the un-installation is completed. Click [Finish].



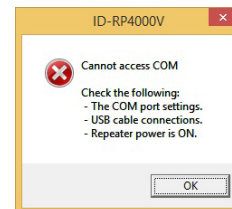
Frequency setting for ID-RP4000V

NOTE:

The ID-RP4000V connection may not be recognized by the PC depending on the length of the USB cable. Using as short a USB cable as possible is recommended.

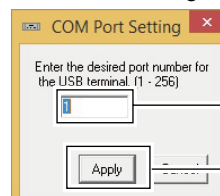


- ① Start up the PC.
- ② Connect a USB cable (A-B type; purchase separately) between PC's USB port and ID-RP4000V [SERVICE T] or [SERVICE R] connector, then turn the ID-RP4000V power ON.
 - Connect a USB cable to [SERVICE R] when setting receive frequency.
 - Connect a USB cable to [SERVICE T] when setting transmit frequency.
- ③ Start up the ID-RP4000V utility. Double click the "ID-RP4000V" icon on the desktop or select the "ID-RP4000V" in "Program" in "Start" menu.
- ④ The screen as at left appears, then the dialog below is displayed.
 - Click [OK].



NOTE: The screen, described in steps ⑤, appears instead of these screens when the correct COM port number is set.

- Click <Option (O)> menu then select <COM Port(P)...>. Enter the allocated number of the ID-RP4000V [SERVICE T/R] connector then click [Apply] in the displayed "COM Port Setting" screen.

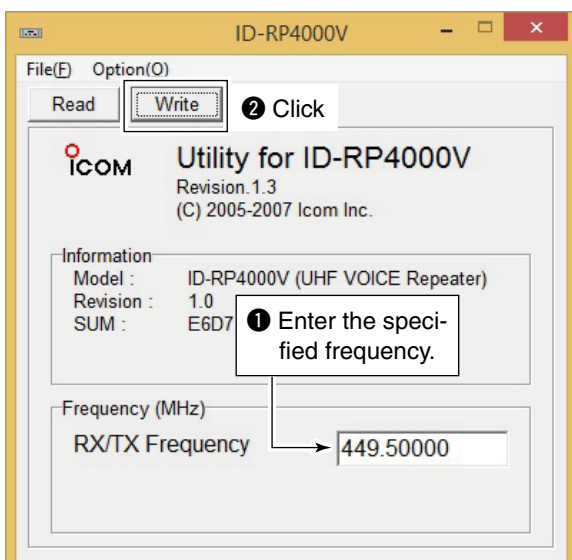


Enter the COM port number

Click

NOTE: See pages 16 to 19 for the COM port number confirmation details.

- ⑤ The utility reads the ID-RP4000V setting and the screen as at left appears when the correct COM port number is set.
- ⑥ Enter the specified receive and transmit frequencies into "RX/TX Frequency" column.
- ⑦ Click [Write] to program the set frequencies into the ID-RP4000V.



■ Troubleshooting

If your ID-RP4000V seems is not operating correctly, check the following points before sending it to an authorized Icom service center.

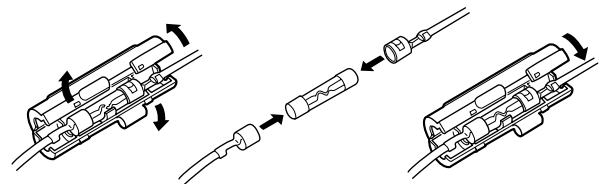
PROBLEM	POSSIBLE CAUSE	SOLUTION	REF.
Does not turn ON.	<ul style="list-style-type: none"> Power connector has a poor contact. Blown fuse. 	<ul style="list-style-type: none"> Check the connector pins and then re-connect the DC power cable. Fix the problem, then replace the fuse. 	<p>p. 5</p> <p>p. 28</p>
No transmit output power, or low output power.	<ul style="list-style-type: none"> Antenna or coaxial cable has problems. 	<ul style="list-style-type: none"> Check, and if necessary, replace the coaxial cable or the antenna connector. 	pp. 3, 5
Sensitivity is low and only strong signals are heard.	<ul style="list-style-type: none"> Antenna or coaxial cable has problems. 	<ul style="list-style-type: none"> Check, and if necessary, replace the coaxial cable or the antenna connector. 	pp. 3, 5
Does not function, even if a signal is received.	<ul style="list-style-type: none"> The repeater controller, ID-RP2C, setting is wrong. 	<ul style="list-style-type: none"> Read the ID-RP2 instruction manual and correct the repeater controller settings. 	—
The PC does not recognize the ID-RP4000V.	<ul style="list-style-type: none"> The USB cable is too long. 	<ul style="list-style-type: none"> Use a shorter USB cable. 	p. 6
The settings cannot be programmed into the ID-RP4000V properly.	<ul style="list-style-type: none"> The USB cable is too long. 	<ul style="list-style-type: none"> Use a shorter USB cable. 	p. 27

■ Cleaning

DO NOT use harsh solvents such as benzine or alcohol when cleaning, as they can damage the ID-RP4000V's surfaces.

■ Replacing fuses

If a fuse blows, or the ID-RP4000V stops functioning, find the source of the problem, repair it, and then replace the damaged fuse with a new rated one.



Fuse: FGB10A

■ Specifications

◇ General

- Frequency range

U.S.A.:	Tx/Rx	440 to 450 MHz
Europe:	Tx/Rx	430 to 440 MHz
- Type of emission: F1D (GMSK: F7W for system operation)
- Frequency stability: ± 0.8 kHz (based on 25°C (+77°F))
- Frequency resolutions: 5/6.25 kHz
- Antenna connector: N type
- Antenna impedance: 50 Ω (unbalanced)
- Communication speed: 4.8 kbps
- Power supply requirement: 13.8 V DC $\pm 15\%$ (negative ground)
- Current drain:

Tx (High)	Less than 7.0 A
Tx (Low)	Less than 3.0 A
Rx Stand-by	Less than 0.7 A
- Usable temperature range: -10°C to +50°C (+14°F to +122°F)
- Dimensions (projections not included): 483 (W)×88 (H)×428 (D) mm (19 (W)×3.5 (H)×16.8 (D) inches)
- Weight (approximately): 7.5 kg (16 lb 9 oz)

◇ Transmitter

- Tx output power (at 13.8 V DC):

High	23–30 W
Low	2–3 W
- Modulation system: Quadrature (244.8 MHz)
- Occupied bandwidth: Less than 5.5 kHz
- Spurious emissions: Less than -60dB

◇ Receiver

- Receive system: Double-conversion superheterodyne
- Intermediate frequencies:

1st	70.0 MHz
2nd	455 kHz
- Sensitivity (BER 1×10^{-2}): Less than 0.45 μ V
- Adjacent channel selectivity: More than 65 dB (20 kHz offset)
- Intermodulation rejection ratio: More than 65 dB (± 20 kHz/40 kHz)
- Receive spurious: Less than -57 dBm
- Spurious and image rejection ratio: More than 70 dB

All stated specifications are subject to change without notice or obligation.

■ System units

ID-RP2D	1.2 GHZ DATA REPEATER
ID-RP2V	1.2 GHZ DIGITAL VOICE REPEATER
ID-RP2L*	10 GHZ MICROWAVE LINK REPEATER
ID-RP2000V	VHF DIGITAL VOICE REPEATER
AH-106*	10 GHZ PARABOLIC ANTENNA (800 (d))
AH-107*	10 GHZ PARABOLIC ANTENNA (450 (d))
AH-108	1.2 GHZ COLLINEAR ANTENNA

*Not available in European countries as of May 2014

• ISO 3166-1

	Country	Codes		Country	Codes
1	Austria	AT	18	Liechtenstein	LI
2	Belgium	BE	19	Lithuania	LT
3	Bulgaria	BG	20	Luxembourg	LU
4	Croatia	HR	21	Malta	MT
5	Czech Republic	CZ	22	Netherlands	NL
6	Cyprus	CY	23	Norway	NO
7	Denmark	DK	24	Poland	PL
8	Estonia	EE	25	Portugal	PT
9	Finland	FI	26	Romania	RO
10	France	FR	27	Slovakia	SK
11	Germany	DE	28	Slovenia	SI
12	Greece	GR	29	Spain	ES
13	Hungary	HU	30	Sweden	SE
14	Iceland	IS	31	Switzerland	CH
15	Ireland	IE	32	Turkey	TR
16	Italy	IT	33	United Kingdom	GB
17	Latvia	LV			

[illegible]

[illegible]

Count on us!

#31 (Europe)

<Intended Country of Use>

☐ AT ☐ BE ☐ CY ☐ CZ ☐ DK ☐ EE
☐ FI ☐ FR ☐ DE ☐ GR ☐ HU ☐ IE
☐ IT ☐ LV ☐ LT ☐ LU ☐ MT ☐ NL
☐ PL ☐ PT ☐ SK ☐ SI ☐ ES ☐ SE
☐ GB ☐ IS ☐ LI ☐ NO ☐ CH ☐ BG
☐ RO ☐ TR ☐ HR