

YAESU
The radio

FT5DR/DE

Main/Sub Firmware Update Instruction Manual

YAESU MUSEN CO., LTD.

Introduction

This application is a software tool for updating the firmware of transceivers manufactured by Yaesu Musen Co., Ltd. Currently there are two different destination versions of the FT5DR/DE: USA (including AUS) and EXP (including EU) and CHN.

You must check which version radio you have and use the correct update software. The destination is marked on the box serial number label.

■ Main Firmware

- **DST: USA** version covers North and South America
Main Firmware: [FT5D_MAIN_verXXX(USA)]
- **DST: AUS** version covers Australia and New Zealand
Main Firmware: [FT5D_MAIN_verXXX(USA)]
- **DST: EU / DST: EXP** version covers Europe countries and Asia countries except China
Main Firmware: [FT5D_MAIN_verXXX(EXP)]
- **DST: CHN** version covers China only
Main Firmware: [FT5D_MAIN_verXXX(CHN)]

■ Sub Firmware

- **DST: USA / DST: AUS / DST: EXP / DST: EU / DST: CHN** version covers all countries
Sub Firmware: [FT5D_SUB_verXXX(ENG)]

CAUTION!

Be sure to confirm the model and the version of your transceiver before starting the update. Writing incorrect firmware to the transceiver may cause abnormal operation or failure.

Important Notes

- All responsibility for the use of this software lies with the customer. Yaesu cannot be held responsible in any way for any damages or losses, which may be incurred by the customer as a result of using this software.
- Copyrights and all other intellectual property rights for the software, as well as the software manual, are the property of YAESU MUSEN CO., LTD.
- Revision, modification, reverse engineering, and decompiling of this software is prohibited. Redistribution, transfer, and resale of downloaded files are also prohibited.
- Downloaded files may only be used for personal use.
- If you cannot perform the firmware upgrade yourself, please consult with one of our sales sites or service centers.

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System Requirements (Operating Environment)

In order to use this program, a personal computer (PC) with one of the following Windows operating systems, and a USB data connection cable are required

Supported Operating Systems

One of the following operating system environments:

- Microsoft® Windows® 11
- Microsoft® Windows® 10
- Microsoft® Windows® 8.1

CPU

The performance of the CPU must satisfy the operating system requirements.

RAM (System Memory)

The capacity of the RAM (system memory) must be more than sufficient to satisfy the operating system requirements.

HDD (Hard Disk Drive)

The capacity of the HDD must be more than sufficient to satisfy the operating system requirements.

In addition to the memory space required to run the operating system, about 50 MB or more of additional memory space is required to run the program.

Necessary PC peripheral interfaces

USB interface (USB Port)

USB Cable

USB Cable (Supplied)

Overview of Firmware Update

Update the firmware by following the procedures below:

1. Preparing Microsoft .NET Framework 3.5 Service Pack 1 (page 4)
2. Install a USB driver and Microsoft Visual C++ 2008 Redistributable (page 8)
3. Update the firmware (page 17)

Displaying the Firmware Version

Displays the transceiver firmware version.

1. Press and hold the [F MENU] key, and then touch [DISPLAY].
2. Rotate the DIAL knob, then touch [10 SOFTWARE VERSION].
3. The software versions of “Main”, “Sub” and “DSP” are shown.
Main Ver. : X.XX
Sub Ver. : X.XX
DSP Ver. : X.XX

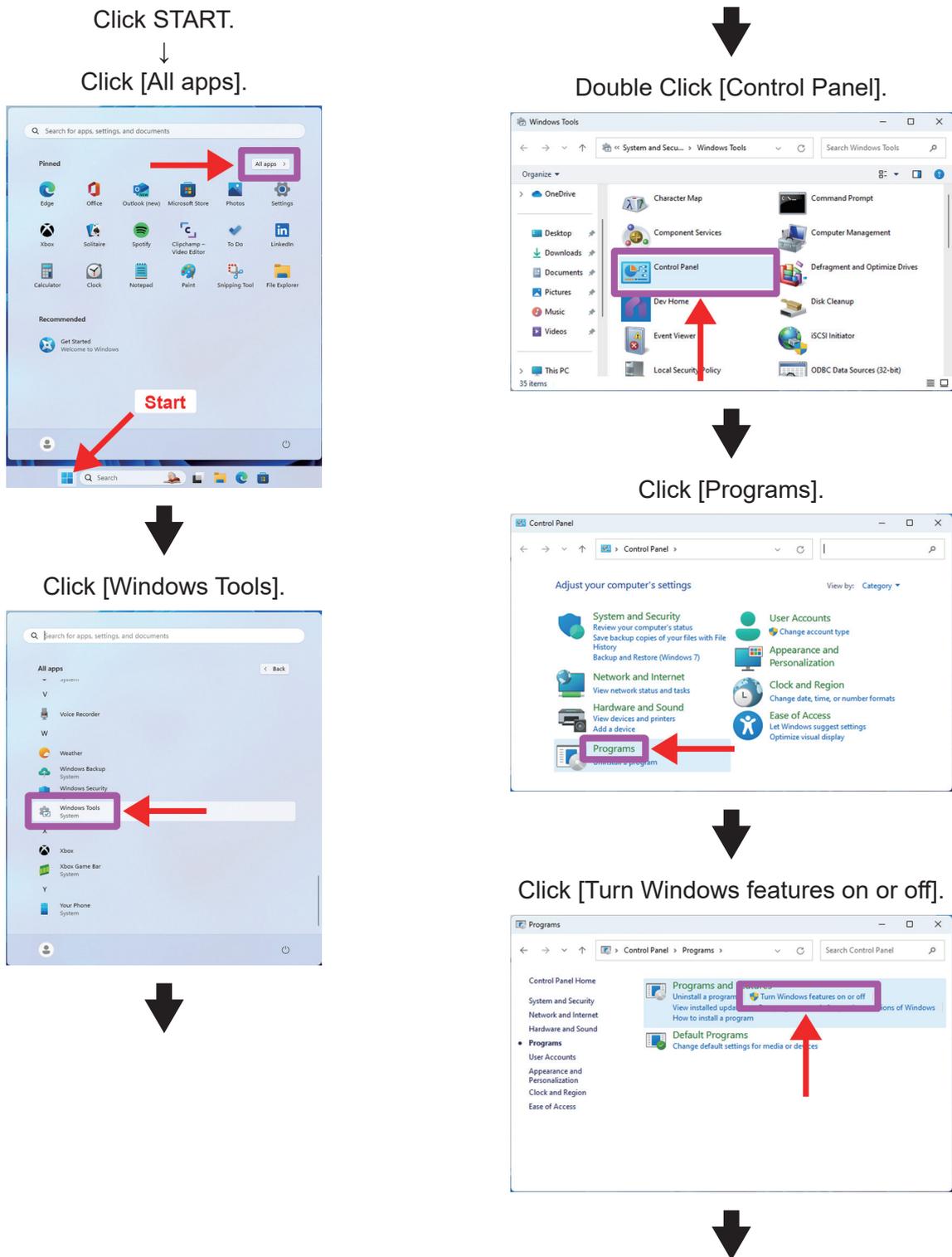
Preparing Microsoft .NET Framework 3.5 Service Pack 1

For the FT5DR/DE firmware update, Microsoft .NET Framework 3.5 Service Pack 1 is required. According to the Windows version you use, follow the procedure below.

* The following procedure must be performed only when using firmware update tool for the first time. When Microsoft .NET Framework 3.5 Service Pack 1 is already installed on your computer, skip the following procedure.

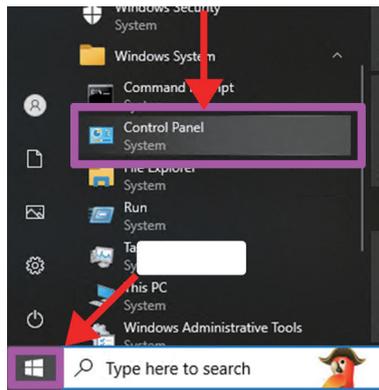
1. Open the "Windows Features" screen on the computer.

For Windows 11

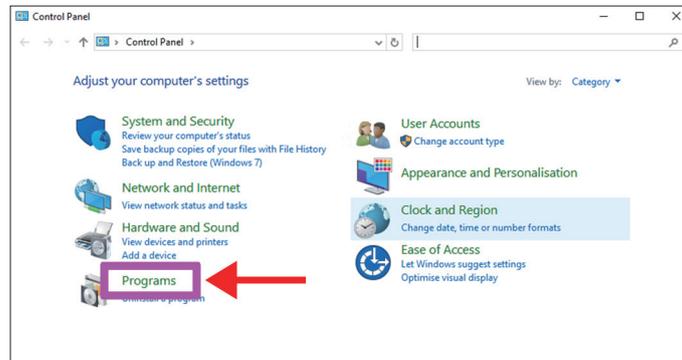


For Windows 10

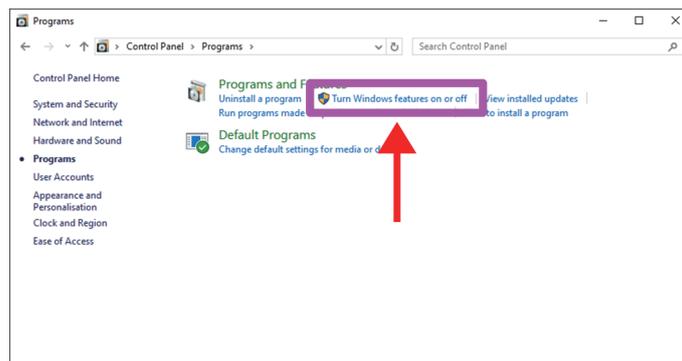
Click START → Click [Control Panel].



Click [Programs].



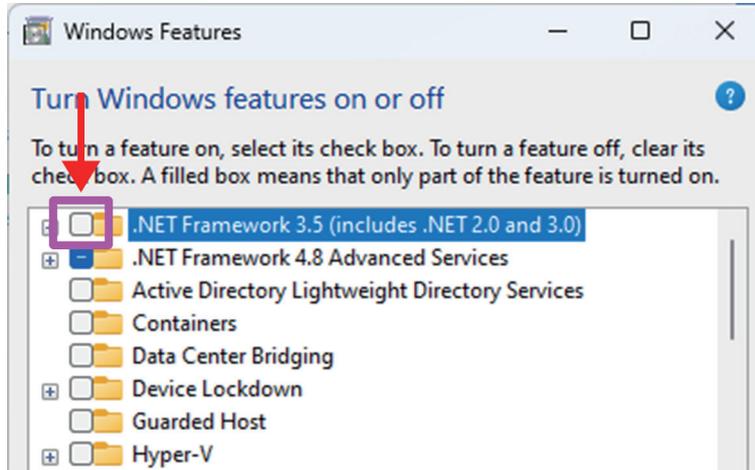
Click [Turn Windows features on or off].



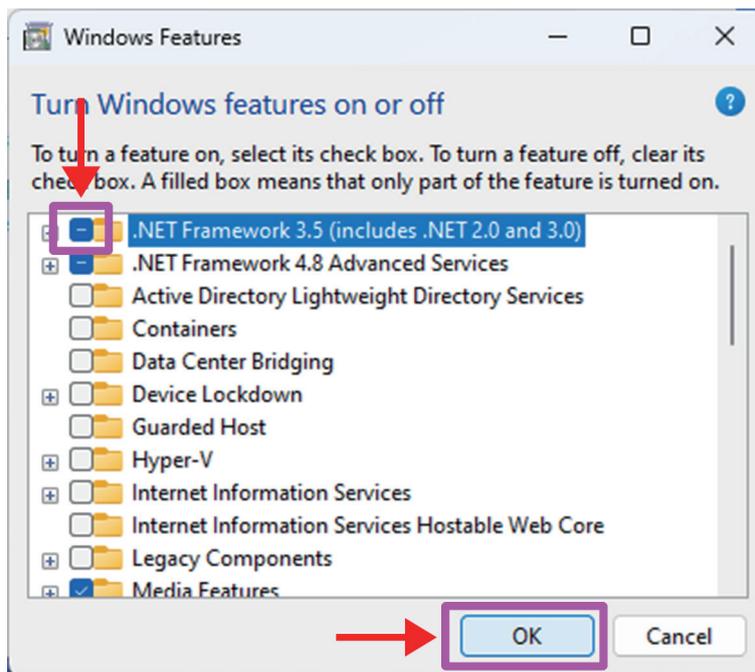
Skip to page 6 and continue with step 2

2. Verify the status of “.NET Framework 3.5 (includes .NET 2.0 and 3.0)”.
If the checkbox is not filled in, the feature is disabled. Proceed to step 3
If the checkbox is filled in, the feature is enabled.

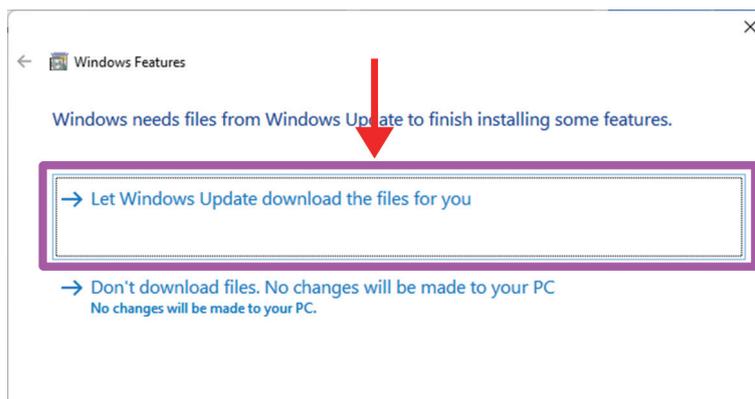
If the feature is enabled, the following steps are not necessary. Close all open windows and proceed to “Installing a USB Driver and Microsoft Visual C++ 2008 Redistributable”. (page 8).



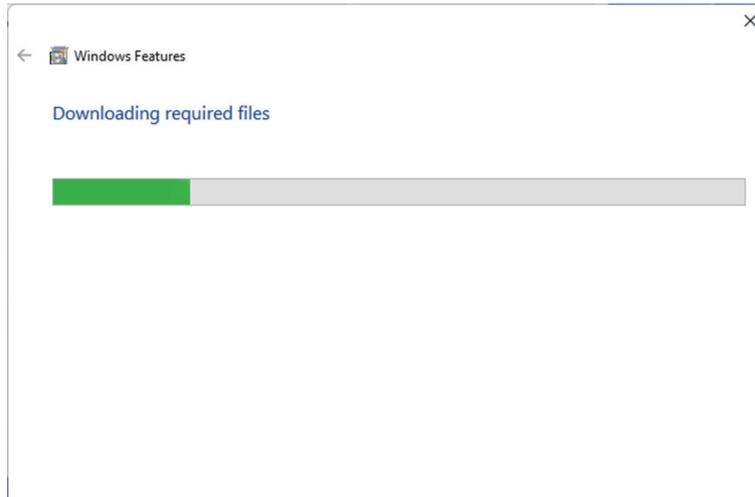
3. If the feature is disabled (the check box is not filled in), click the check box and then click [OK].



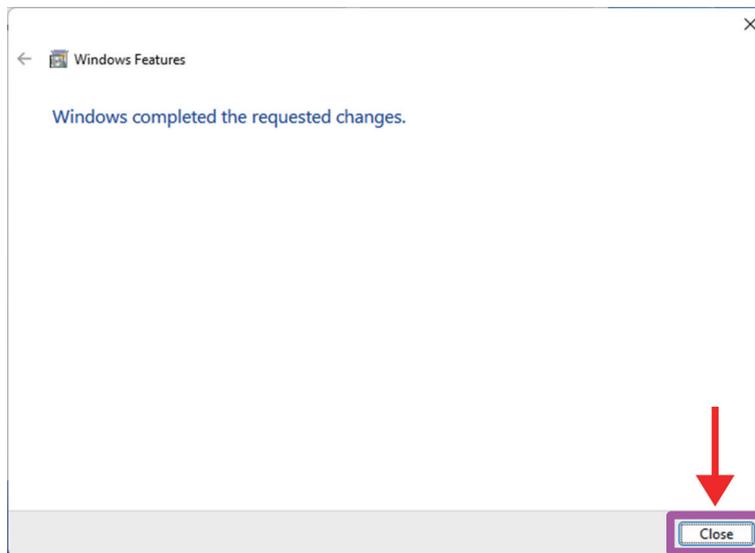
4. Click [Let Windows Update download the files for you].



5. The download will begin and then the changes will be applied.

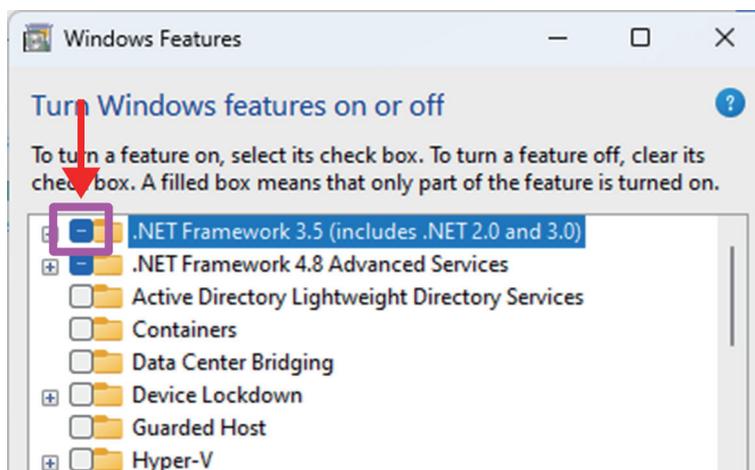


6. When the “Windows completed the requested changes.” screen appears, click [Close].



7. Please restart the PC.

8. After restarting, repeat steps 1 and 2 to confirm that “.NET Framework 3.5 (includes .NET 2.0 and 3.0)” is enabled (the checkbox is filled in).



9. This completes the installation of Microsoft .NET Framework 3.5 Service Pack 1. Continue with “Installing a USB Driver and Microsoft Visual C++ 2008 Redistributable” (page 8).

Installing a USB Driver and Microsoft Visual C++ 2008 Redistributable

Start the “**YAESU Firmware Update Program**” to install a USB driver.

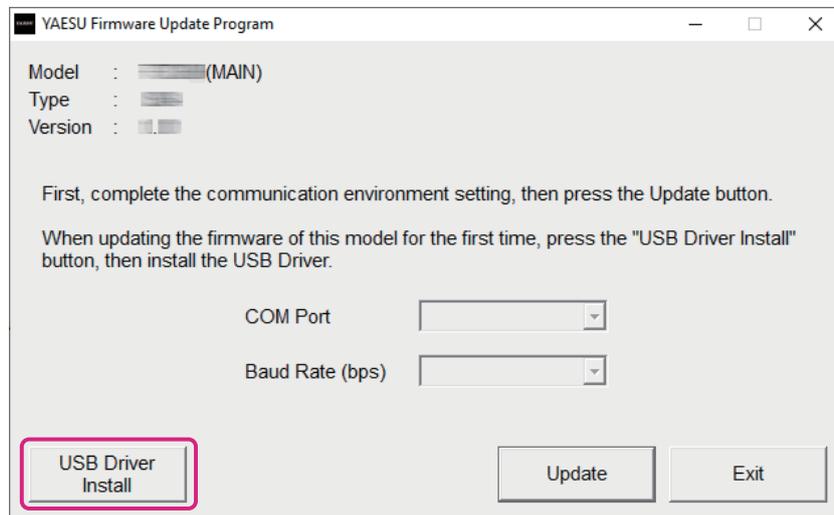
After the USB driver installation completes, install “**Microsoft Visual C++ 2008 Redistributable**”.

- * The following procedure can be used either with “**Main Firmware**” or “**Sub Firmware**”. **To update the SUB CPU, a USB driver is required separately from the Main CPU.** The same USB driver will be installed. Operations using the “**YAESU Firmware Update Program**” for “Main Firmware” are shown in the procedure below as an example for the purpose of explanation.
 - * The following procedure must be performed only when using installation application for the first time. When the USB driver is already installed on your computer, skip the following procedure.
1. Extract the downloaded zip file.
The destination folder opens automatically.
 2. Double-click “**FT5D_MAIN_verXXX(YYY).exe**” (YAESU icon).
 - * “XXX” refers to the version number and “YYY” refers to the destination versions.



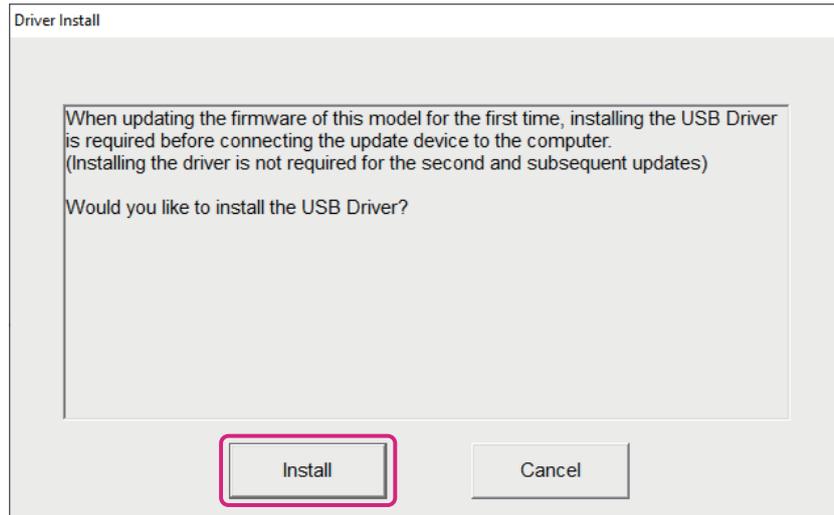
- * If the “User Account Control” screen appears, click the [Yes] button.
The “**YAESU Firmware Update Program**” will start.

3. Click the [USB Driver Install] button.



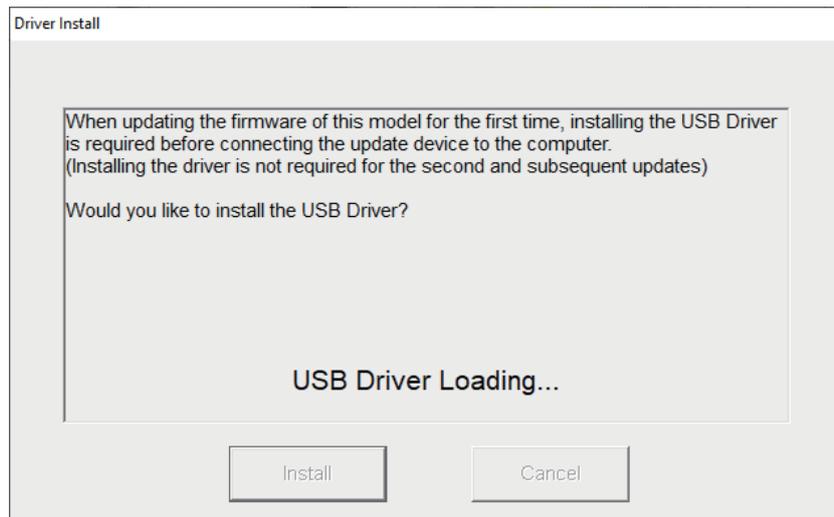
The “**Driver Install**” screen appears.

4. Click the **[Install]** button.



* If the **“Windows Security”** screen appears, click the **[Install]** button.

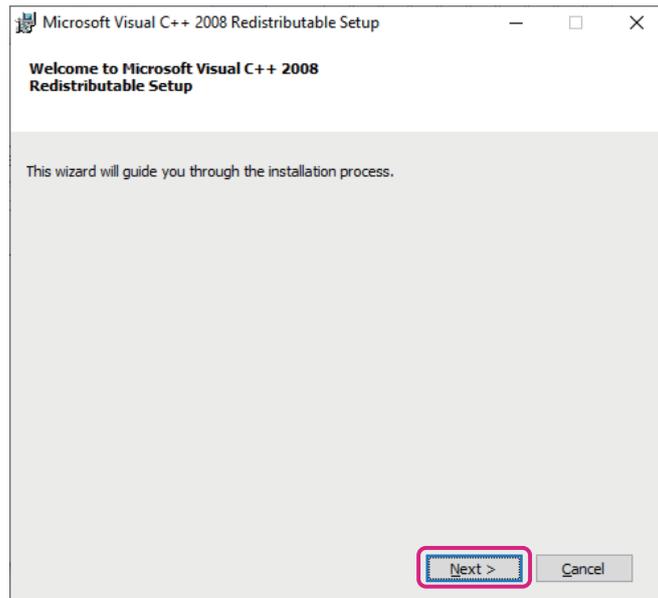
The USB driver will be installed, and the **“USB Drive Loading...”** display will blink on the **“Driver Install”** screen.



* If the **“Windows Security”** screen appears, click the **[Install]** button.

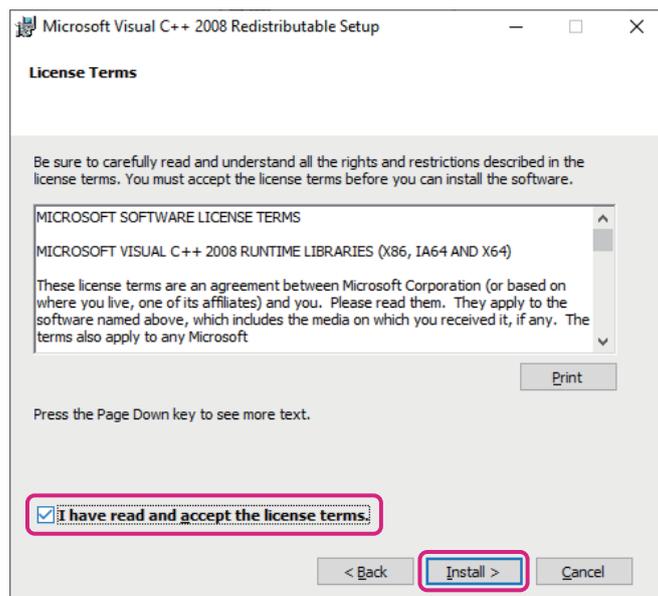
After a while, the **“Microsoft Visual C++ 2008 Redistributable Setup”** screen appears.

5. Click the **[Next]** button.



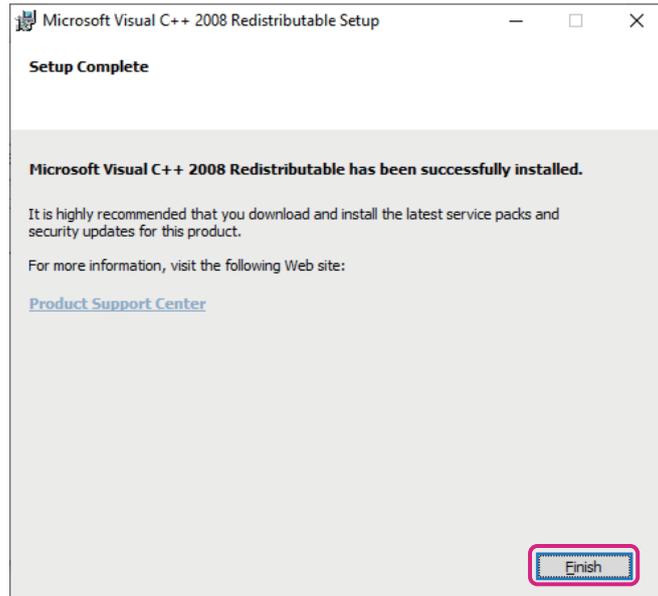
“License Terms” appears.

6. Check the **[I have read and accept the license terms.]** checkbox and click the **[Install]** button.



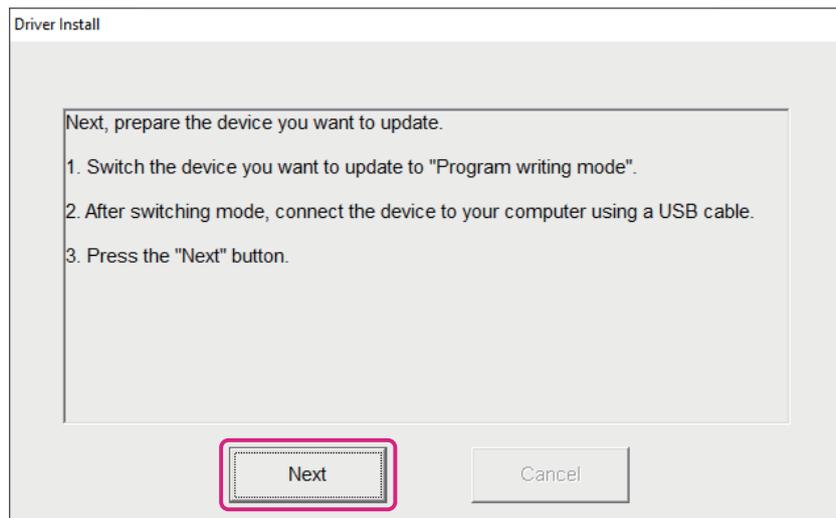
Microsoft Visual C++ 2008 Redistributable will be installed. When the installation completes, “Setup Complete” appears on the “Microsoft Visual C++ 2008 Redistributable Setup” screen.

7. Click the **[Finish]** button.



Returns to the “**Driver Install**” screen of the YAESU Firmware Update Program.

8. Click the **[Next]** button.



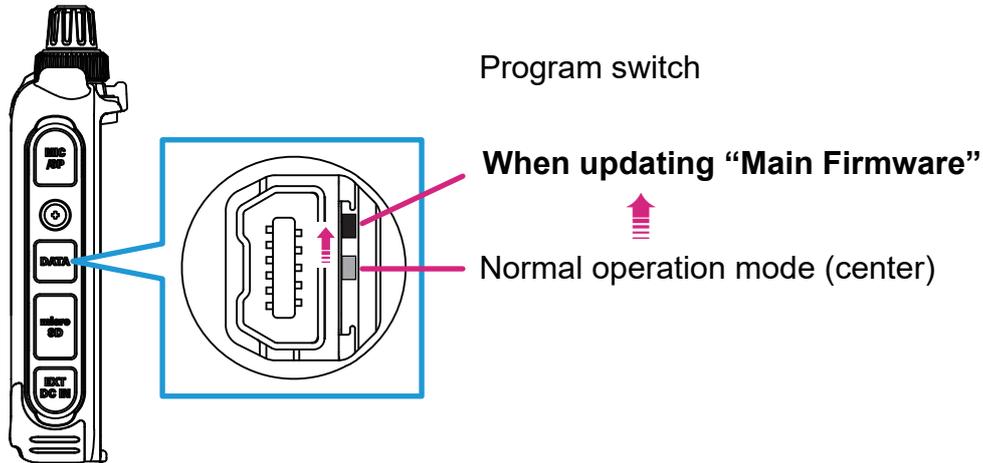
Returns to the “**YAESU Firmware Update Program**” screen. Follow the “**Updating the Firmware**” (page 17) procedure from step 3 to update the firmware.

Checking and updating the USB driver

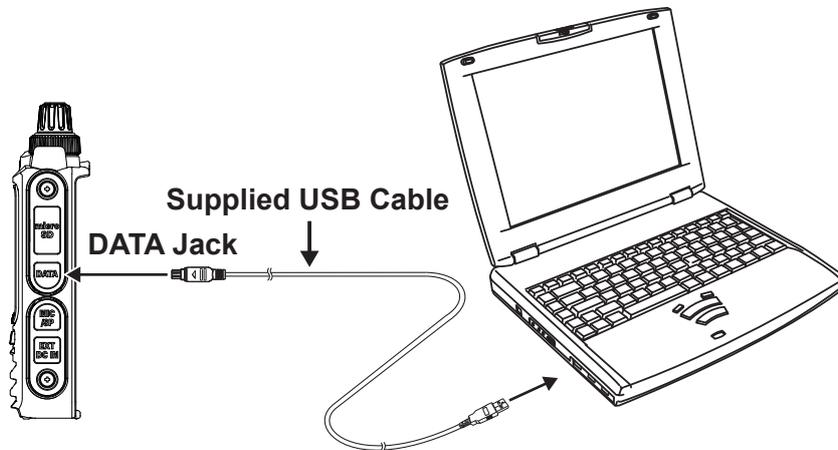
1. When the power of FT5DR/DE is ON, press and hold **[POWER]** switch to turn it **OFF**.
2. Remove the battery pack and the AC adaptor from the transceiver.
3. Move the three-position **[program]** switch of the FT5DR/DE upward to the MAIN program-writing mode, and then connect the FT5DR/DE to the PC with the supplied USB programming cable.

Note: The driver will not be displayed in the device manager if the FT5DR/DE and PC are not connected by the supplied cable.

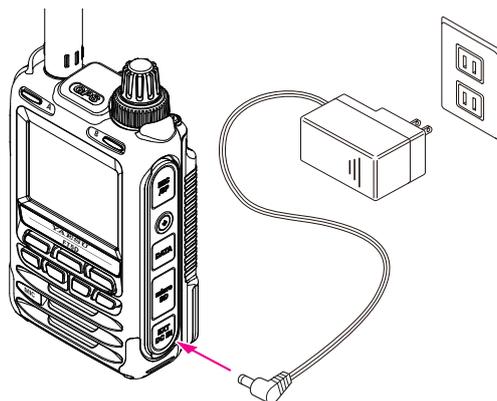
To access the program switch, carefully lift the microSD and DATA jack cover. The three-position program switch is located through the right side case, directly behind the DATA jack.



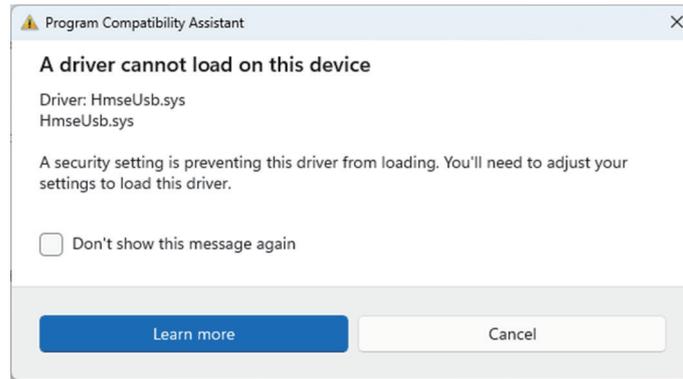
4. Use the supplied USB cable to connect the FT5DR/DE DATA jack to the computer.



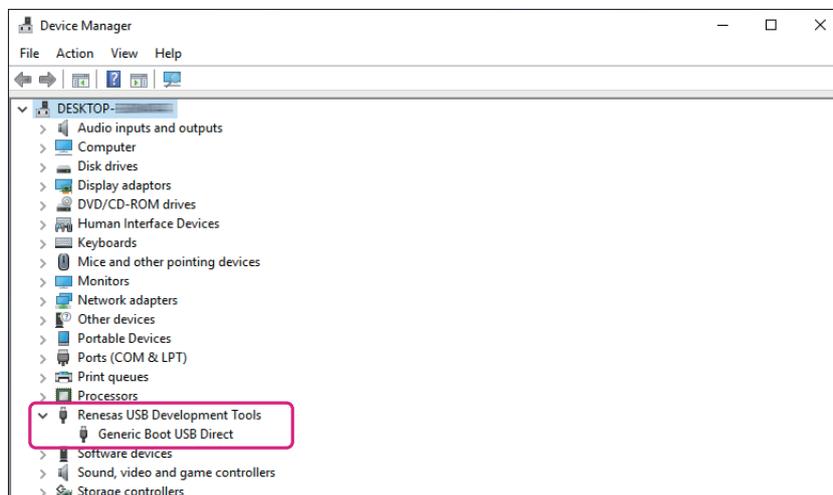
5. Connect the AC adaptor to a wall outlet and then insert the DC plug to the FT5DR/DE EXT DC IN jack.



If the following screen appears, it will be necessary to change the Windows “Core Isolation” settings. Change the settings by following the procedure explained on page 12.



6. Open the computer Device Manager.
To verify that the driver has been successfully installed on the computer, confirm “**Generic Boot USB Direct**” appears under “**Renesas USB Development Tools**” in the computer Device Manager listing.



IMPORTANT NOTICE!

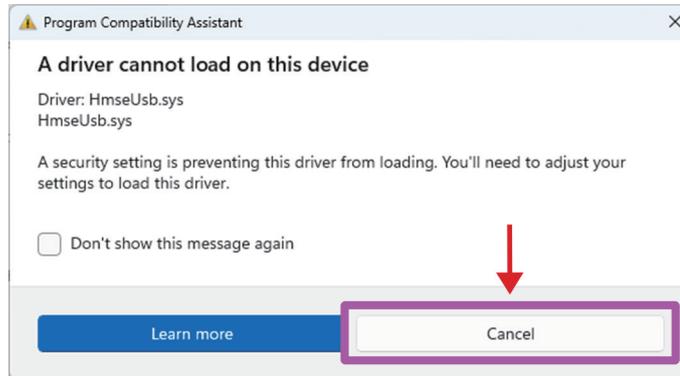
When “**Renesas USB1653 USB Boot Mode Device**” appears in the Universal Serial Bus controllers, as shown in the Device Manager, the PC will incorrectly recognize the driver.

Refer to the instructions “**Installing a USB Driver and Microsoft Visual C++ 2008 Redistributable**” (Page 8)”, to install the correct driver “**Generic Boot USB Direct**”.

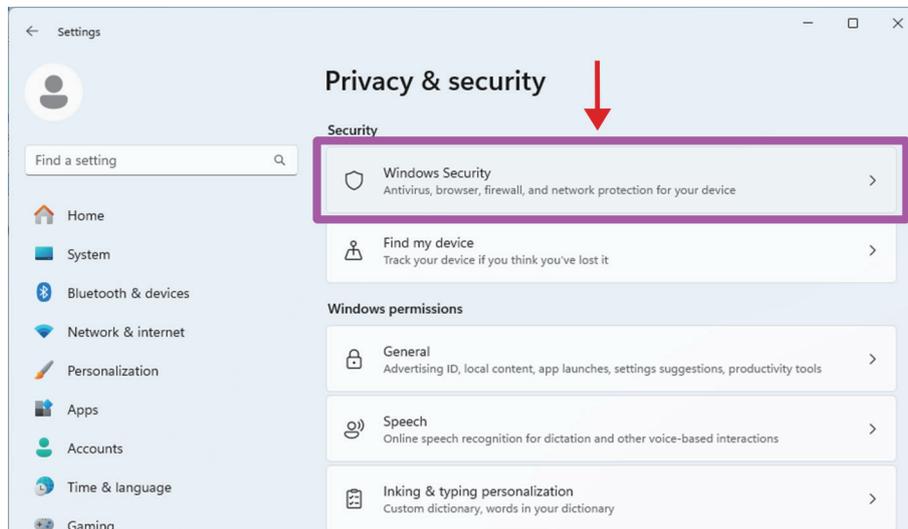
How to configure Core Isolation

If the following screen appears, it will be necessary to change the Windows “Core Isolation” settings.

1. Click Cancel to close the screen.



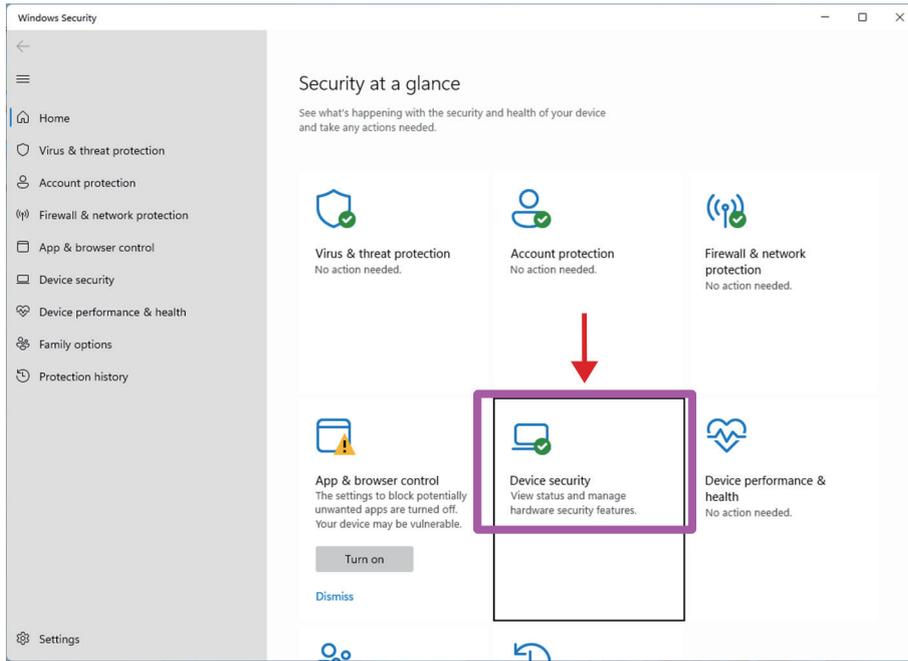
2. Open “Privacy and Security” on the computer.
[Start] → [Settings] → [Privacy & security]
3. Click [Windows Security].



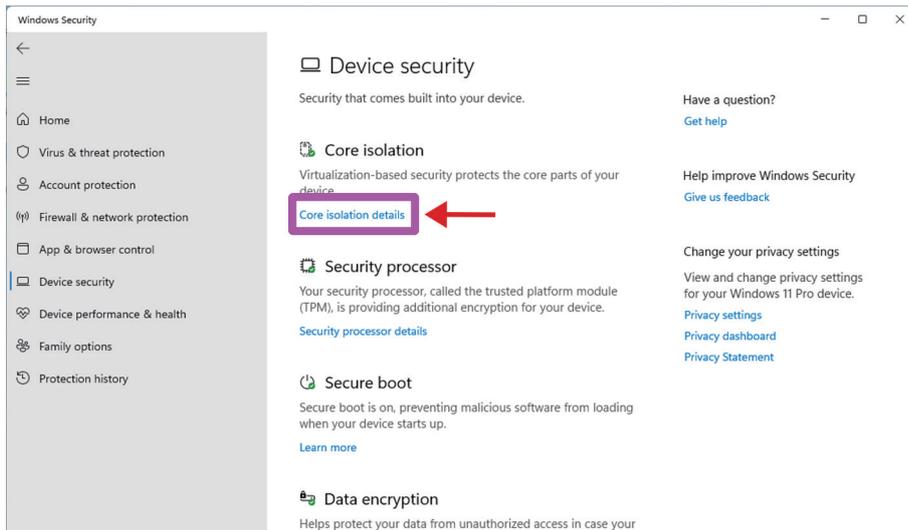
4. Click [Open Windows Security].



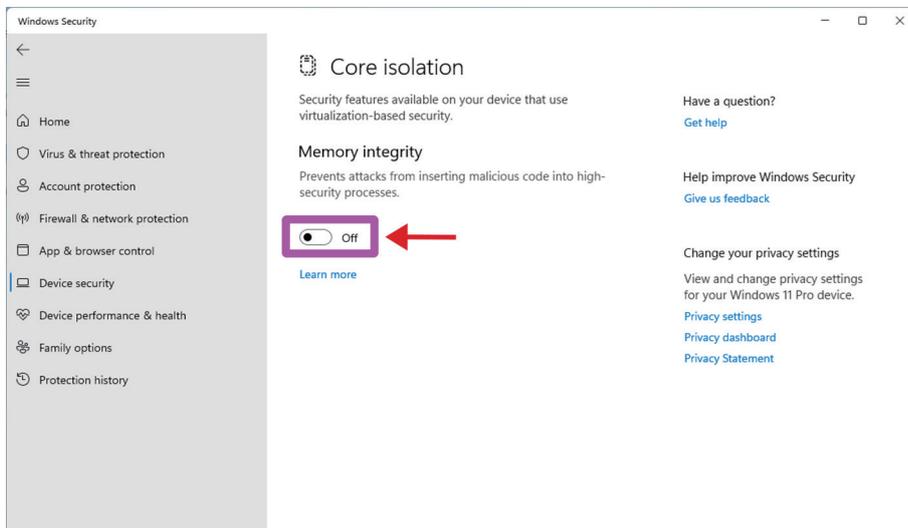
5. Click [Device security].



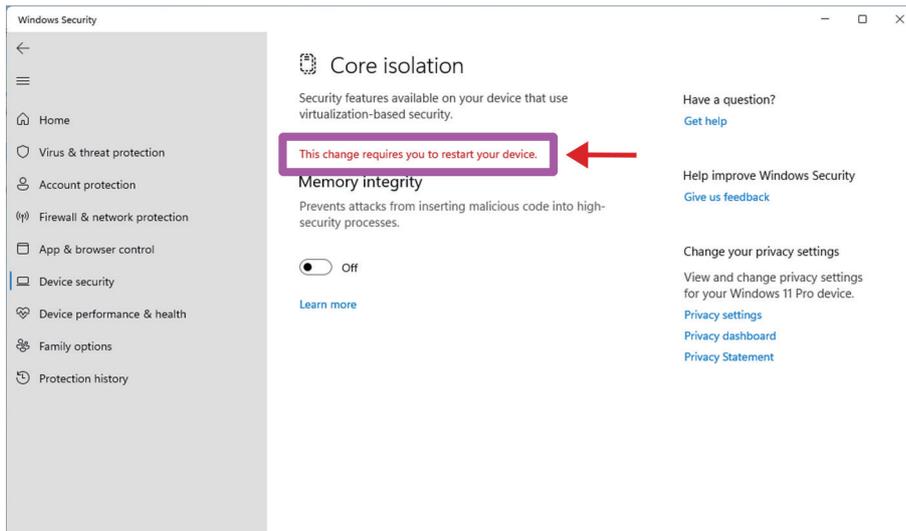
6. Click [Core Isolation Details] in the [Core Isolation] section.



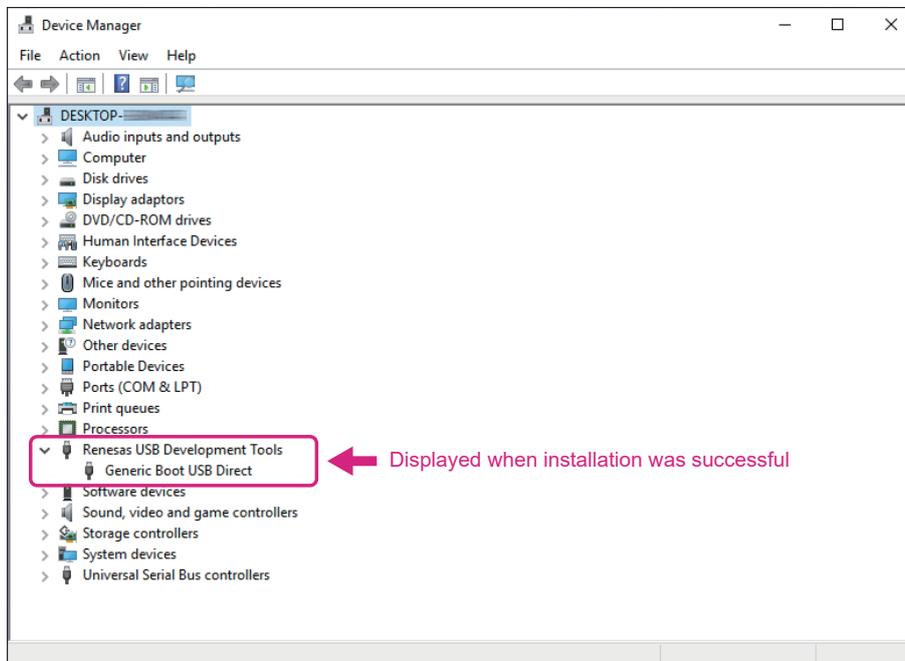
7. Turn OFF the switch in the [Memory Integrity] section.



8. If the pop-up screen instruction [Restart your device to apply these changes] is displayed, restart the computer.



9. Open the Device Manager on the computer and verify that the indicated device is listed (see the below illustration):



Updating the Firmware

Execute the FT5DR/DE firmware update.

- * The “**Main Firmware**” update procedure is shown below as an example for the purpose of explanation.
- * The “**Sub Firmware**” update can be executed by following the same procedure.

Caution

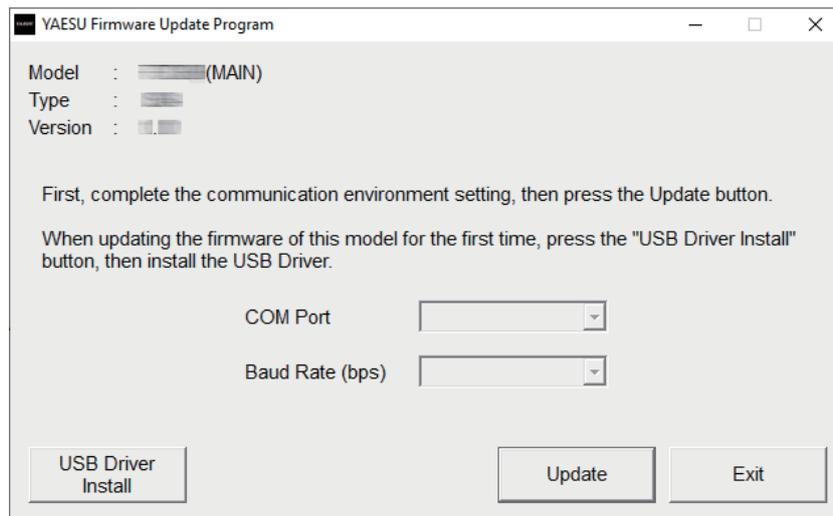
After updating the firmware, reset-all will be executed for FT5DR/DE, which will delete all saved data. Back up your registered memory channel data using a microSD memory card or write it down. For details on “Saving/Loading Memory Channel Information to/from microSD Memory Card”, refer to the “FT5DR/DE Operating Manual”.

1. Extract the downloaded zip file.
The destination folder opens automatically.
2. Double-click “**FT5D_MAIN_verXXX(YYY).exe**” (YAESU icon).
 - * “XXX” refers to the version number and “YYY” refers to the destination versions.
 - * The file name of Sub Firmware is “**FT5D_SUB_verXXX(ALL).exe**”.

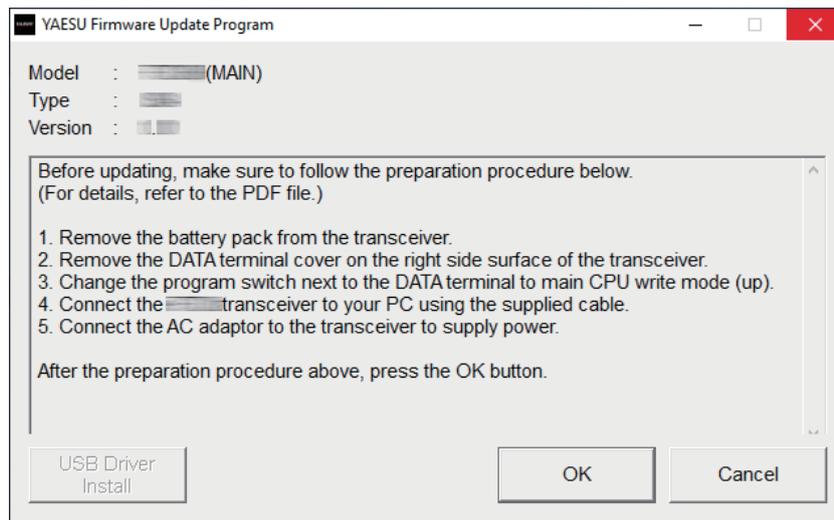


- * If the “**User Account Control**” screen appears, click the [Yes] button.
The “**YAESU Firmware Update Program**” starts.

3. Click the [Update] button.



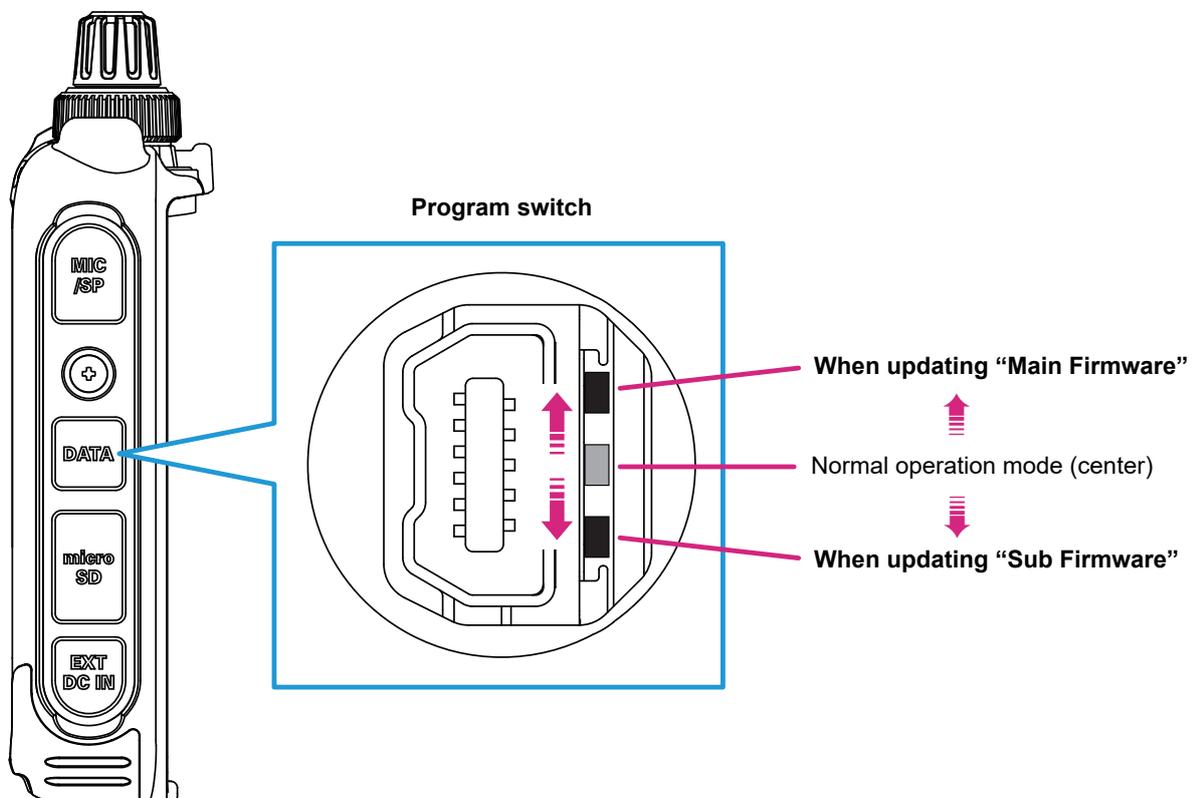
The update preparation procedure appears. Make FT5DR/DE ready for the update.



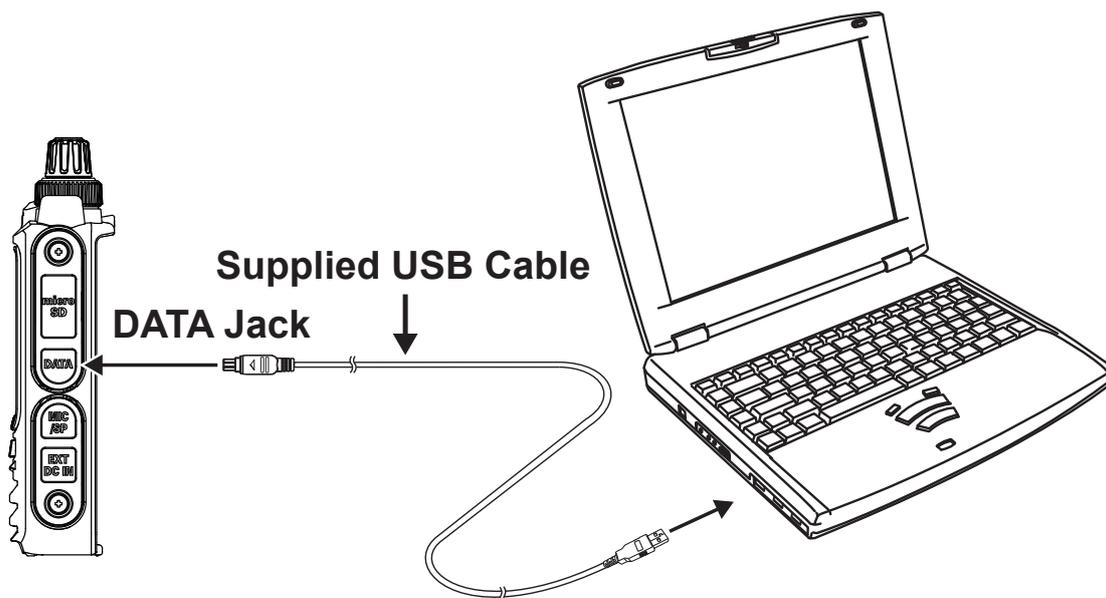
4. When the power of FT5DR/DE is ON, press and hold **[POWER]** switch to turn it **OFF**.
5. Remove the battery pack and the AC adaptor from the transceiver.
6. Follow the caution below and use a pointed object such as a pin to change the position of the program switch provided on the right side of the DATA jack located on the right-side surface of the transceiver.

Caution

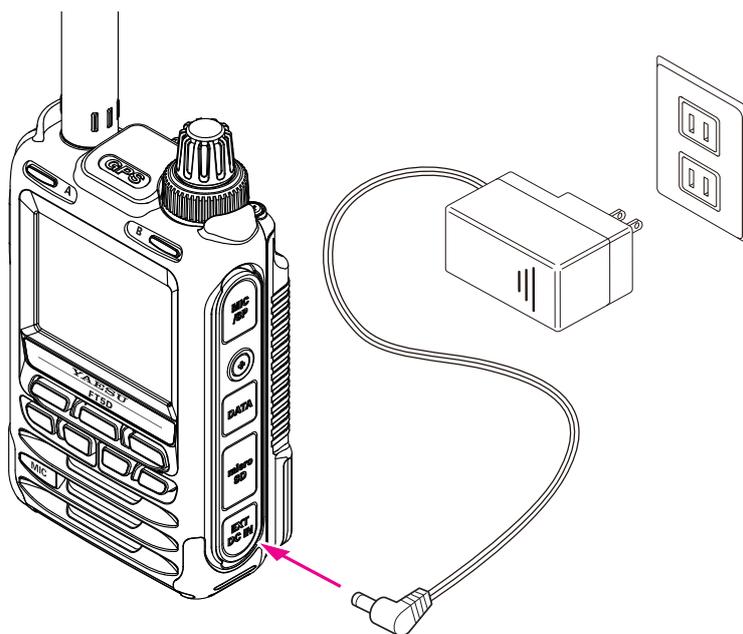
*When updating "Main Firmware", change the program switch position to the upper side.
When updating "Sub Firmware", change the program switch position to the lower side.*



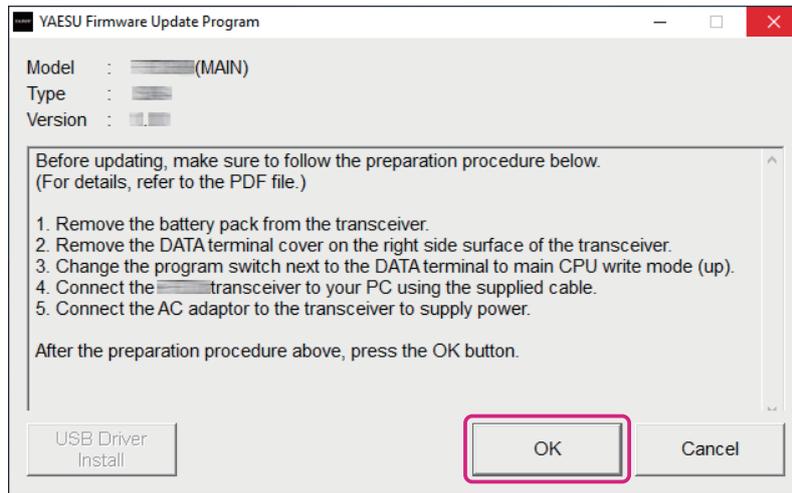
7. Use the supplied cable to connect the FT5DR/DE DATA jack to the computer.



8. Connect the AC adaptor to a wall outlet and then insert the DC plug to the FT5DR/DE EXT DC IN jack.

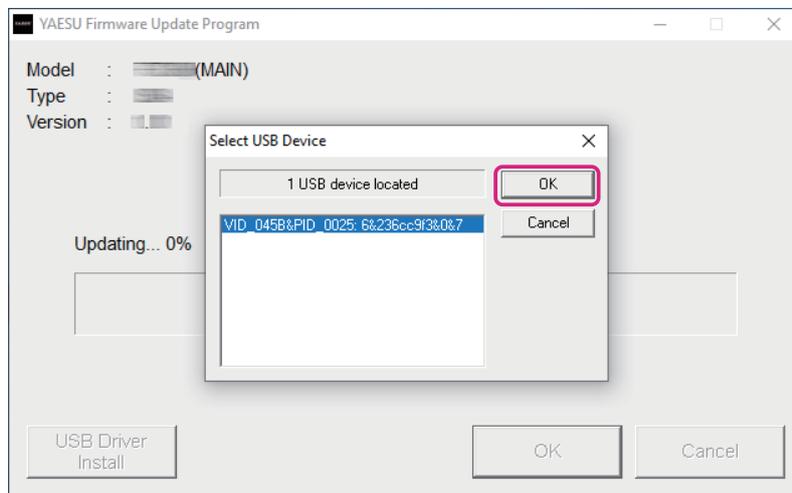


9. On the YAESU Firmware Update Program screen, press the [OK] button.



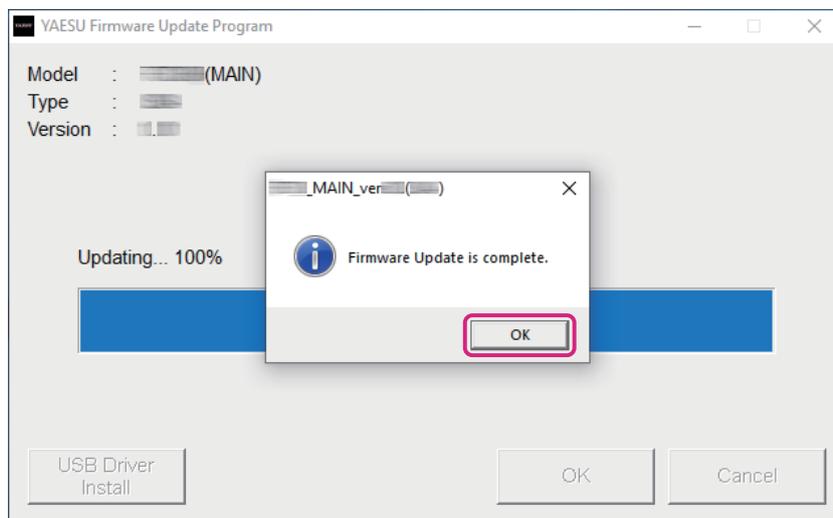
The “Select USB Device” screen appears.

10. Click the [OK] button.

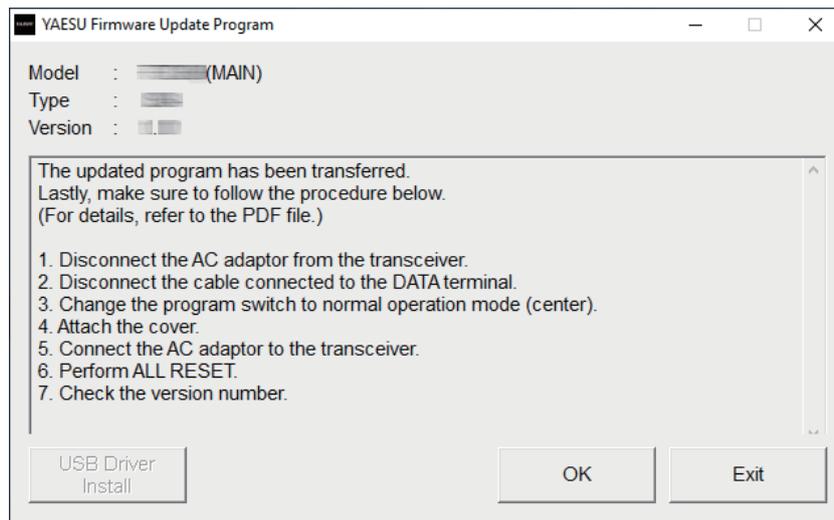


The firmware transfer starts and the FT5DR/DE firmware update executes (it takes about Main Firmware: 20 seconds or Sub Firmware: 90 seconds to complete the update). When the firmware update completes, a message appears.

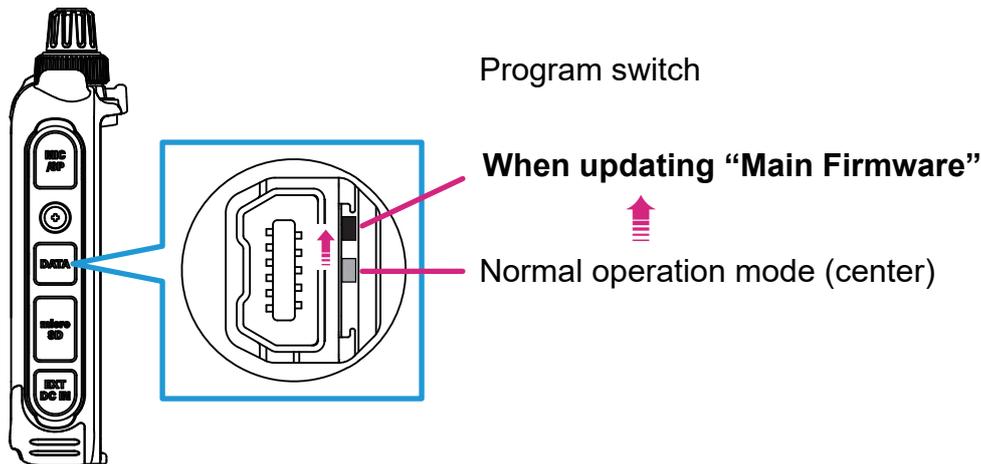
11. Click the [OK] button.



The post-update procedure appears. Perform the post-update procedure.



12. Disconnect the AC adaptor from the transceiver.
13. Disconnect the USB cable from the DATA jack and the computer.
14. Use a pointed object such as a pin to change the “**program**” switch position to “**normal operation mode (center)**”.



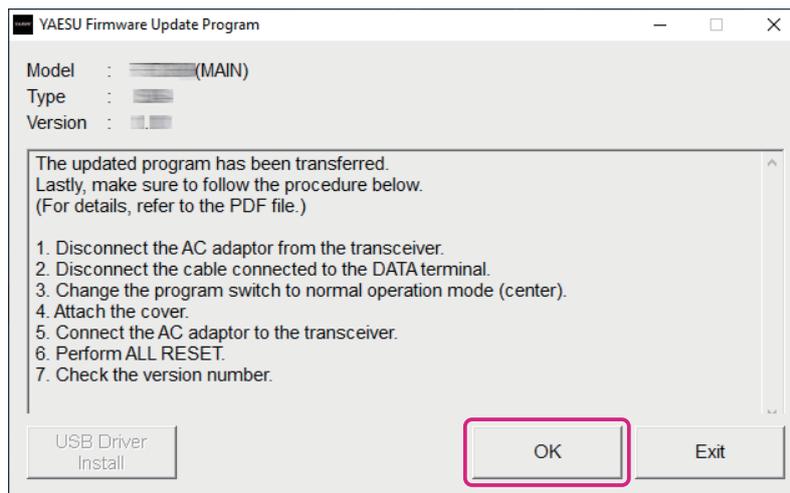
15. Connect the AC adaptor to the FT5DR/DE EXT DC IN jack.
16. Press and hold the **[POWER]** switch to turn the power **ON**. All-reset will be executed. You will hear a beep sound and the call sign input guidance screen appears.
17. Press the **[F MENU]** key. The call sign input screen appears.
18. Switch between the alphabet and numeric keys to input the call sign.
19. Press the **PTT** switch. The call sign sets and the frequency screen appears.

Caution

When the screen is displayed, proceed to the next step. Operation of the keys or dials may cause abnormal operation.

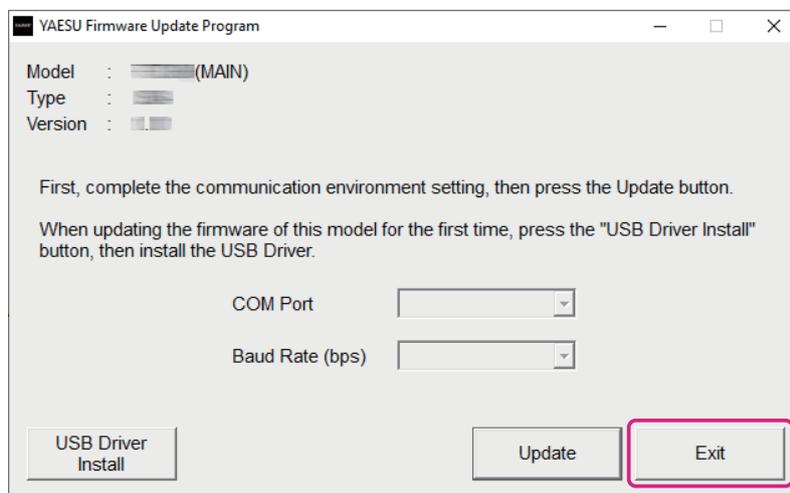
20. Press and hold the **[POWER]** switch to turn the power **OFF**.

21. Click the [OK] button on the “YAESU Firmware Update Program” screen.



Returns to the YAESU Firm Firmware Update Program startup screen.

22. Click the [Exit] button.



When the transceiver becomes inoperable

1. Disconnect the AC adaptor from the transceiver.
2. While pressing and holding [F MENU], [A/B], and [BAND] keys simultaneously, connect the AC adaptor.
The transceiver turns on and you will hear a beep sound.
3. After you hear a beep sound, release the [F MENU], [A/B], and [BAND] keys.
“ALL RESET?” appears on the display.
4. Touch [OK].
You will hear a beep sound and the call sign input guidance screen appears.
5. Press the [F MENU] key.
The call sign input screen appears.
6. Switch between the alphabet and numeric keys to input the call sign.
7. Press the PTT switch.
The call sign sets and the frequency screen appears.
8. Proceed to step 20 above.

Uninstalling the YAESU Firmware Update Program

Delete the folder containing the extracted update program.

- * Since the program has not written to the registry or system folder, the program can be uninstalled simply by deleting the folder.



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