YAESU
The radio

FT2DR/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 FT2DR: USA and EXP (including AUS, 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.

• DST: USA version covers North and South America, Australia and New Zealand* [FT2D_MAIN_ver***(USA)]

• DST: AUS version covers Australia and New Zealand* [FT2D_MAIN_ver***(EXP)]

  (* Note: If the transceiver cannot be set to 870,000 MHz in VFO mode, use the "DST: USA" firmware version to update the radio)

• DST: EXP/EU/CHN covers all other countries except USA [FT2D_MAIN_ver***(EXP)]

• DST: USA/EXP/AUS/EU/CHN covers all countries [FT2D_SUB_ver***(ALL)]

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.

Trademarks

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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® 10 (32 bit / 64 bit)
- Microsoft® Windows® 8.1 (32 bit / 64 bit)
- Microsoft® Windows® 8 (32 bit / 64 bit)
- Microsoft® Windows® 7 (32 bit / 64 bit, Service Pack 1 or later)

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)

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 6)
3. Update the firmware (page 15)

Preparing Microsoft .NET Framework 3.5 Service Pack 1

For the FT2DR/DE firmware update, Microsoft .NET Framework 3.5 Service Pack 1 is required. According to the Windows version you use, follow the procedure below.

For Windows 10, Windows 8.1, and Windows 8

* 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.

* Operations on a Windows 10 computer are shown in the procedure below for the purpose of explanation.

1. In the web browser, open http://www.microsoft.com/en-US/download/details.aspx?id=22 and click the [Download] button and then follow the on-screen instructions to download "dotnetfx-35setup.exe".

2. Execute the downloaded "dotnetfx35setup.exe".

    * If the "User Account Control" screen appears, click the [Yes] button.

    "An app on your PC needs the following Windows feature:" appears on the "Windows Features" screen.

3. Click [Download and install this feature].
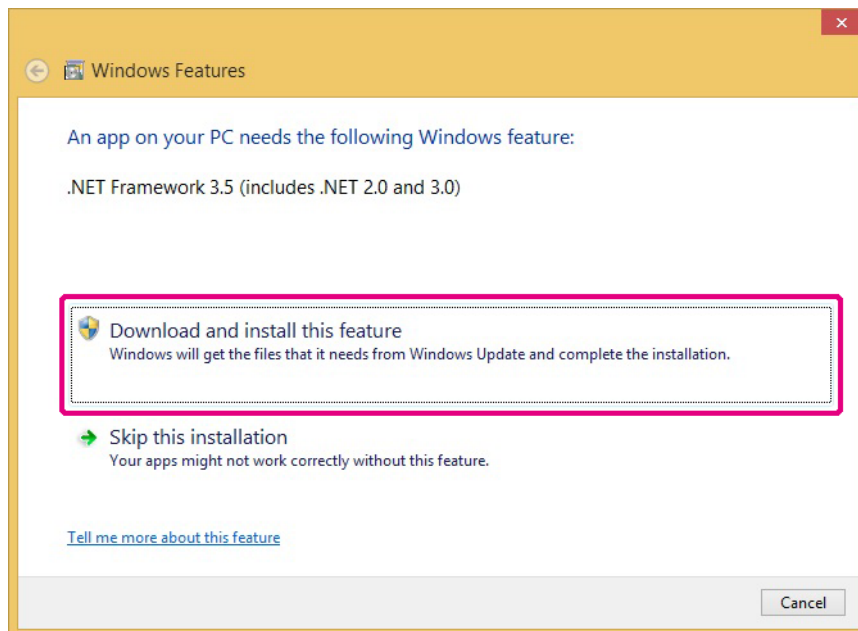
Necessary files will be downloaded and Microsoft .NET Framework 3.5 Service Pack 1 will be installed. When the installation completes, "The following feature was successfully installed:" appears on the "Windows Features" screen.

4. Click the [Close] button.
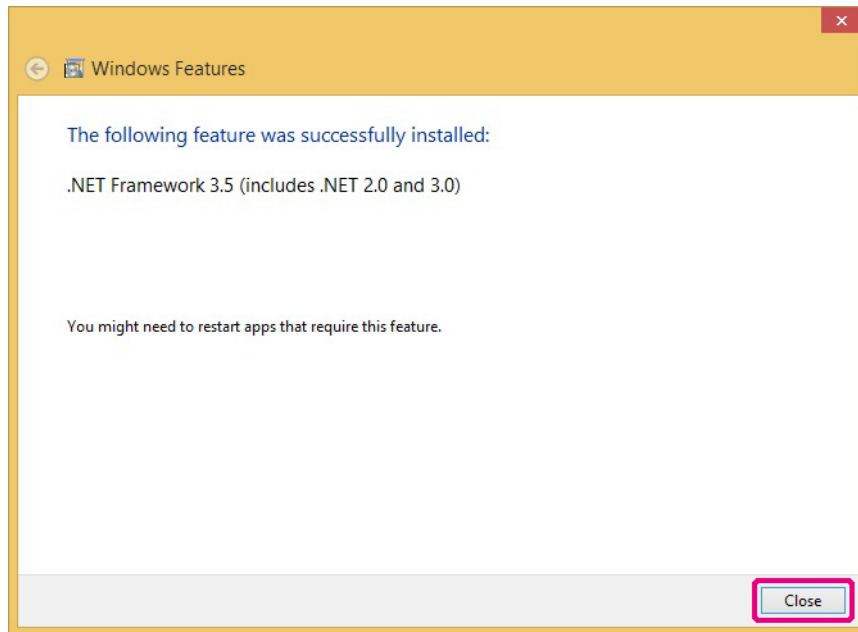
For Windows 7

Microsoft .NET Framework 3.5.1 is installed on Windows 7 computers at the time of factory shipment. Follow the procedure below to check that Microsoft .NET Framework 3.5.1 is enabled.

1. Click [Start] > [Control Panel].
   "Control Panel" appears.

2. Click [Programs].
   "Programs" appears.

3. Click [Turn Windows features on or off].
   "Windows Features" appears.

4. Check that the "Microsoft .NET Framework 3.5.1" checkbox is ticked as shown below and click the [Cancel] button.

   When the checkbox is empty, tick the checkbox and click the [OK] button.
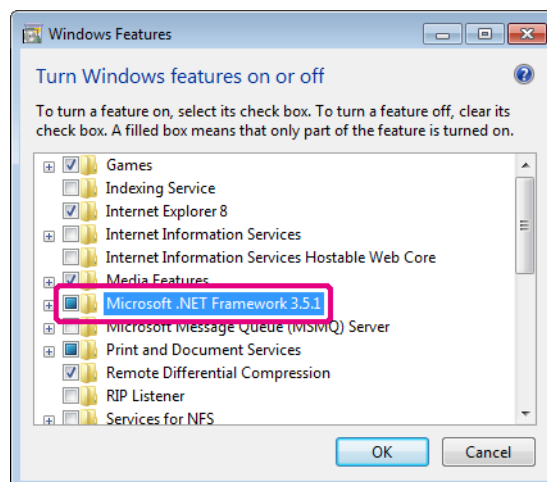
Installing a USB Driver and Microsoft Visual C++ 2008 Redistributable

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". 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 "FT2D_MAIN_verXXX(XXX).exe"(YAESU icon).
   * "XXX" refers to the version number.
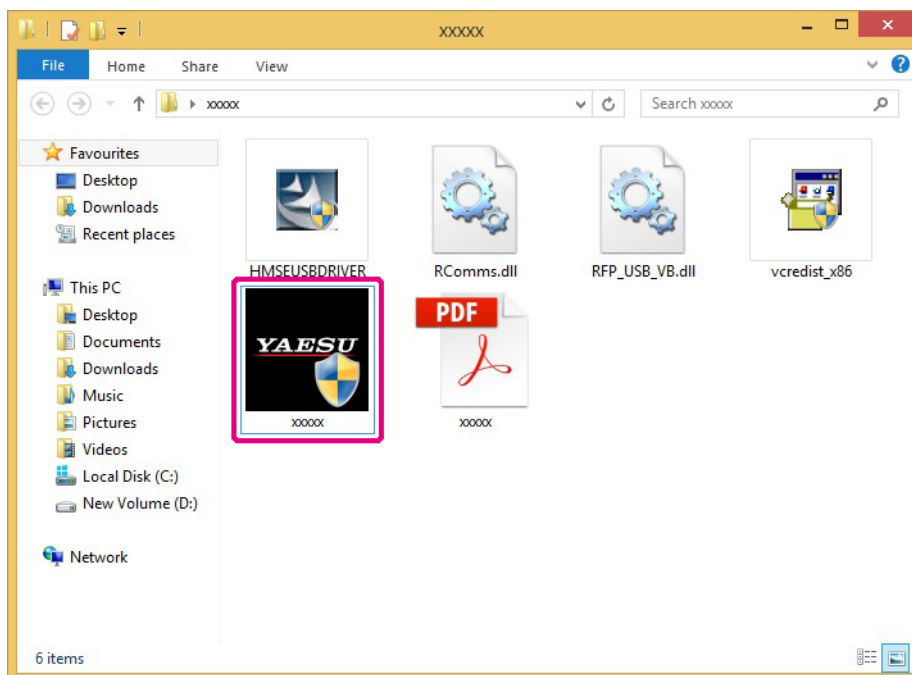
   * If the "User Account Control" screen appears, click the [Yes] button.

   The "YAESU Firmware Update Program" will start.

3. Click the [USB Driver Install] button.
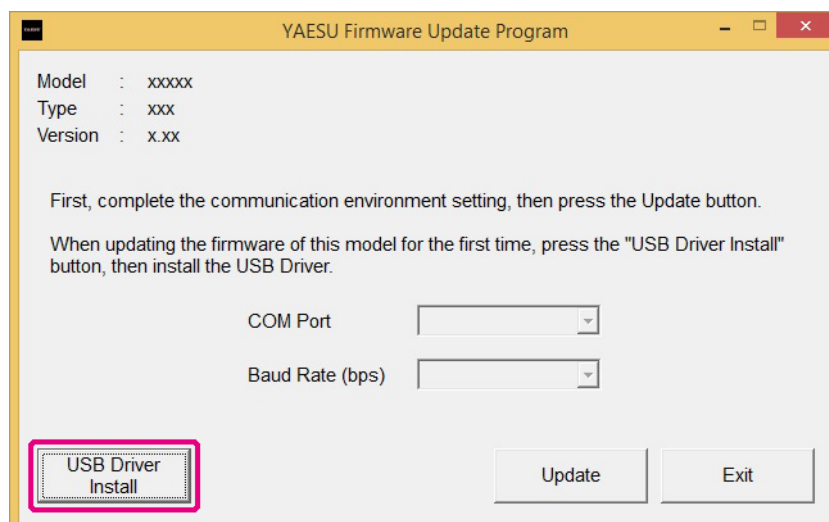
The "Driver Install" screen appears.

4. Click the [Install] button.
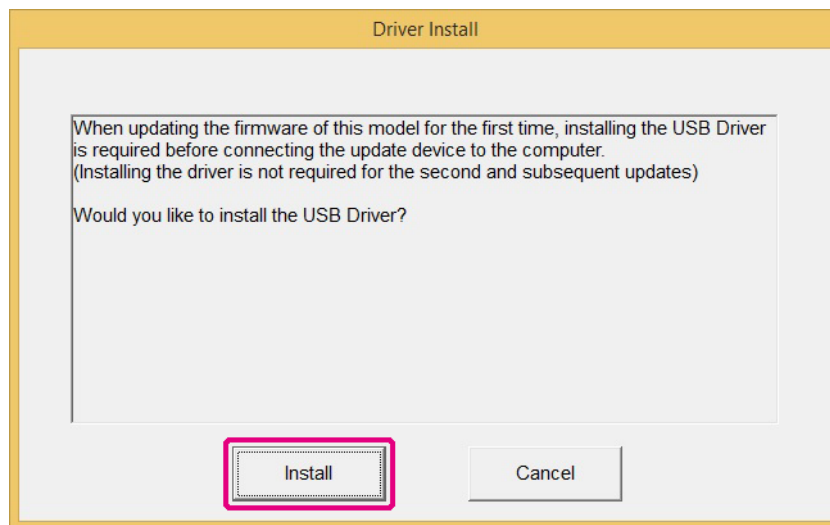
*   If the "Windows Security" screen appears, click the [Install] button.

The USB driver will be installed, and the "USB Drive Loading…" display will blink on the "Driver Install" screen.
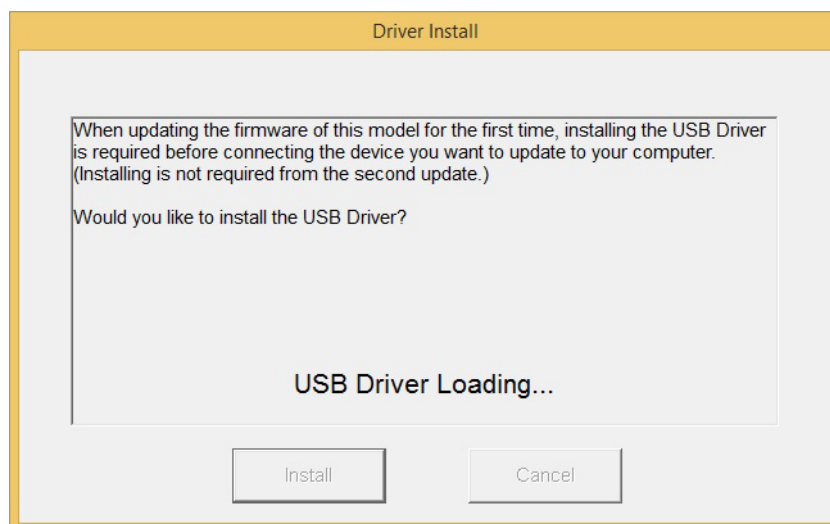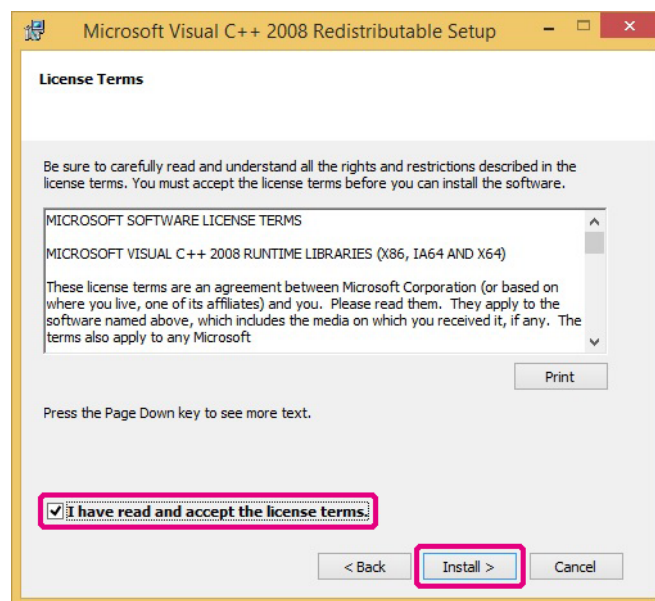

After a while, the "Microsoft Visual C++ 2008 Redistributable Setup" screen appears.
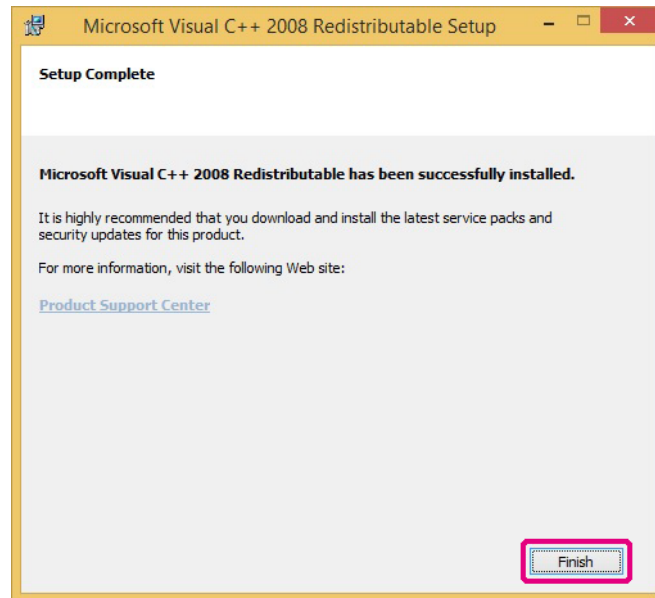
5. Click the [Next] button.
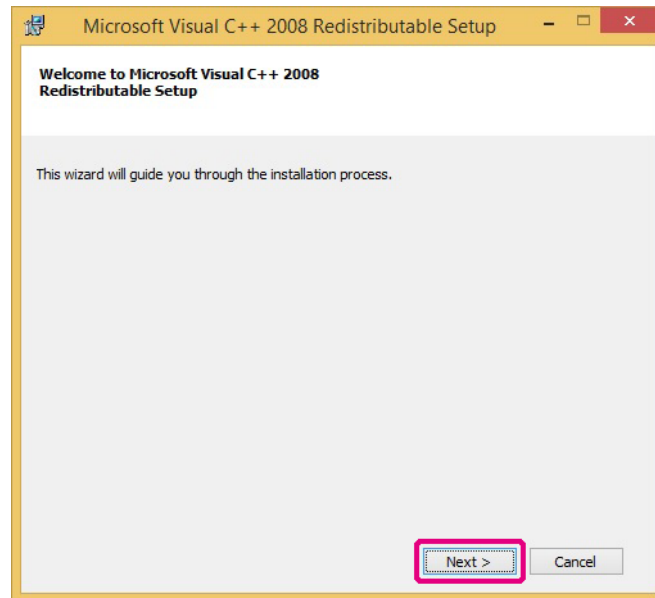
"License Terms" appears.

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.
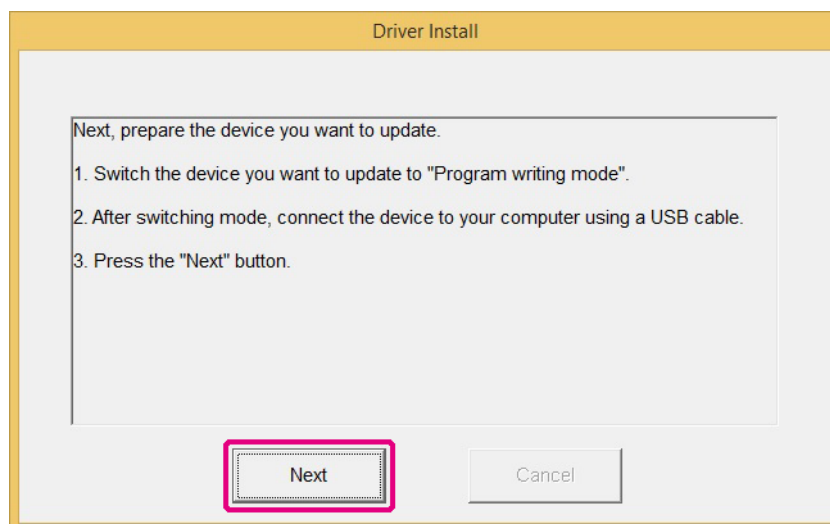
Returns to the "YAESU Firmware Update Program" screen. Follow the "Updating the Firmware" (page 15) procedure from step 3 to update the firmware.

Checking and updating the USB driver

When the power of FT2DR/DE is on, press and hold 🔘 for over one second to turn it OFF.

Remove the battery pack from the transceiver.

Move the three-position program switch of the FT2DR/DE upward to the program-writing mode, and then connect the FT2DR/DE to the PC with the supplied USB programming cable.

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

Note: The driver will not be displayed in the device manager if the FT2DR/DE and PC are not connected by the supplied cable.
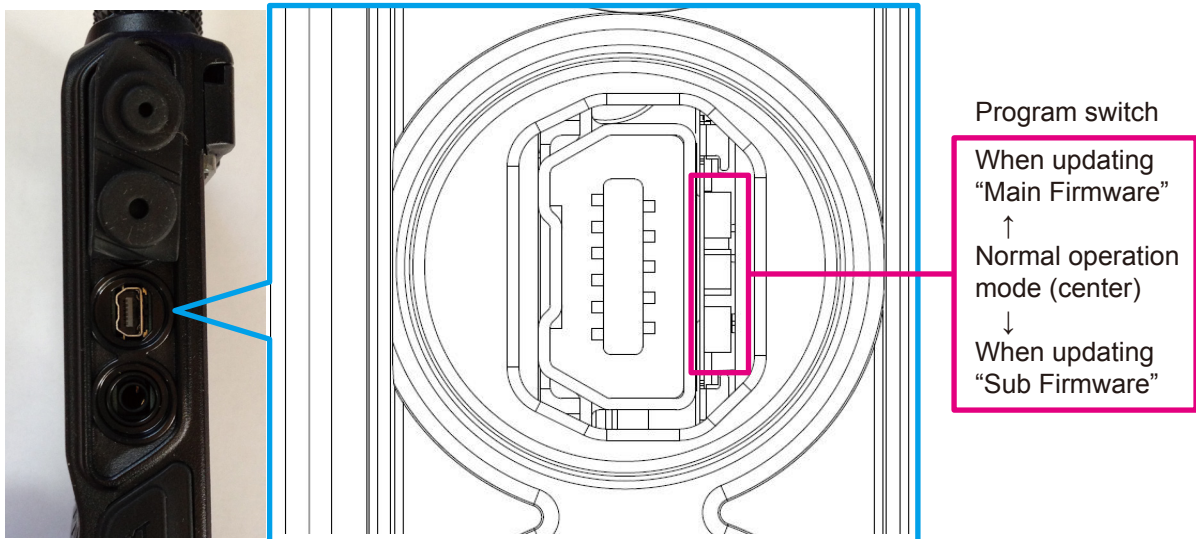
Program switch

When updating
"Main Firmware"
↑
Normal operation
mode (center)
↓
When updating
"Sub Firmware"

Connect the AC adaptor to a wall outlet and then insert the connector to the FT2DR/DE EXT DC IN terminal.

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.
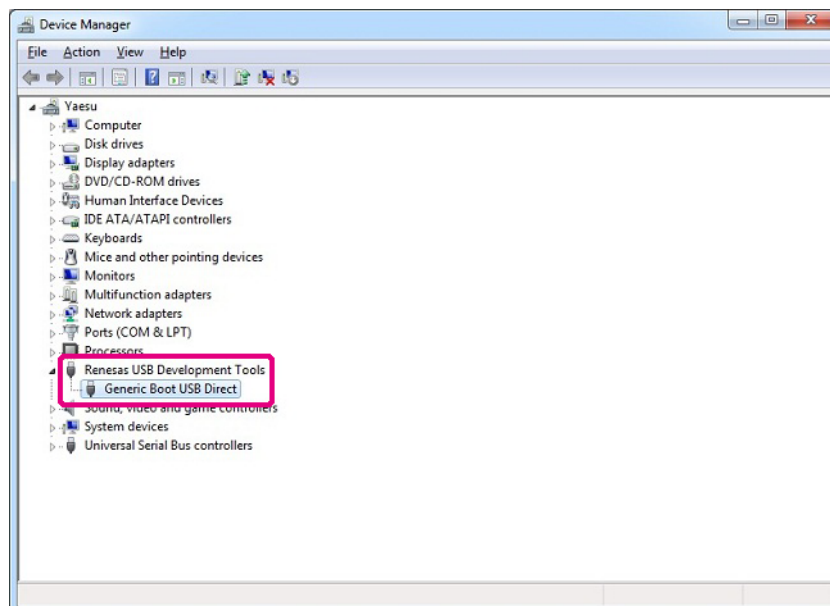
IMPORTANT NOTICE!

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

Refer to the instructions "Driver update method" on the next page, to update the correct driver "Generic Boot USB Direct".
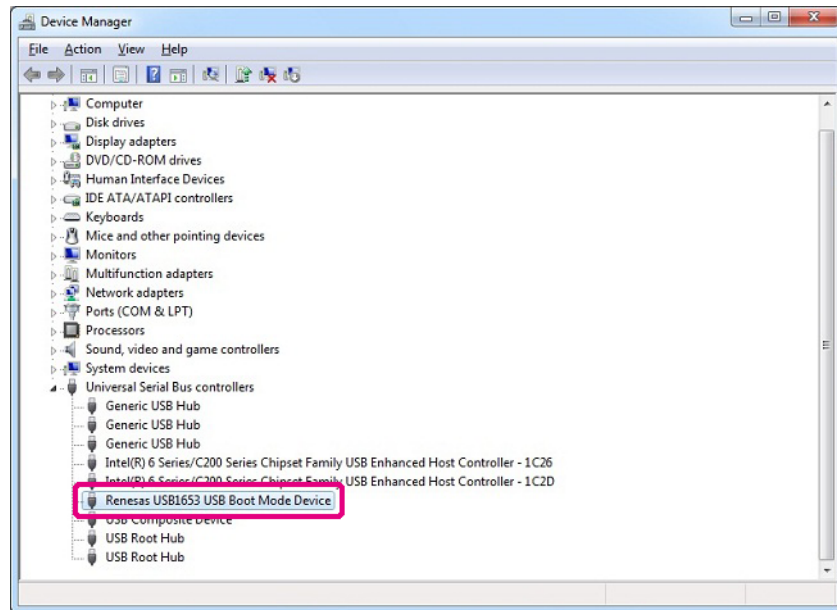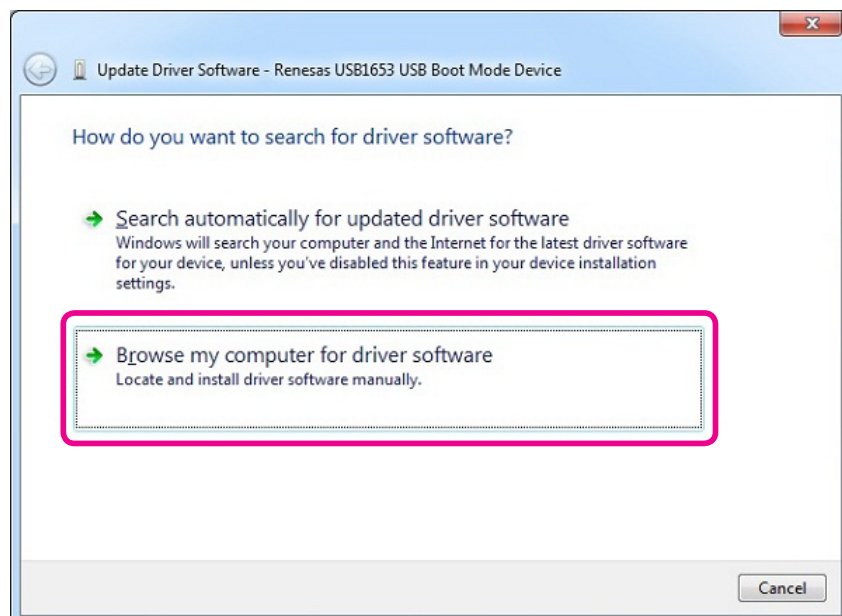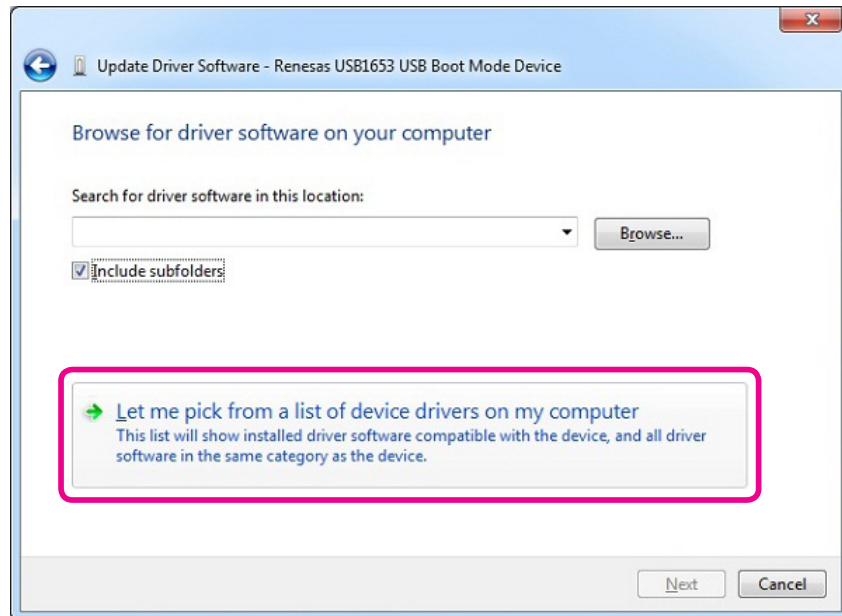
Driver update method

Open the device manager of the PC, select "Renesas USB1653 USB Boot Mode Device" in the Universal Serial Bus controllers, and right-click the mouse to display the screen shown below. Click "Update Driver Software" in the popup window.
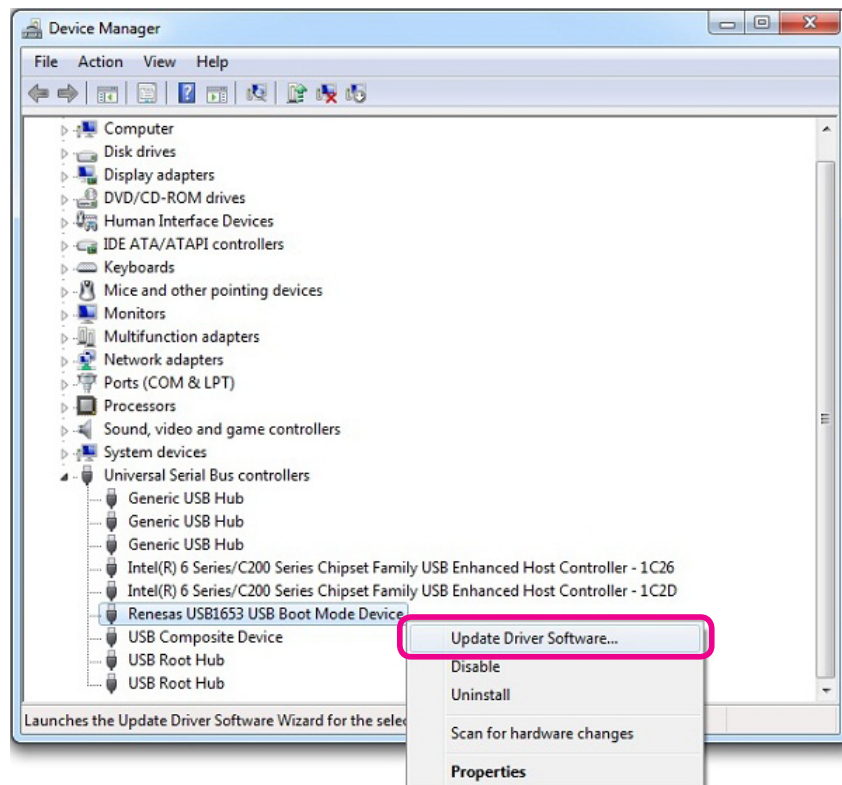
Click "Browse my computer for driver software".

Click "Let me pick from a list of device drivers on my computer".

Check "Show compatible hardware", select "Generic Boot USB Direct" inside the model selection box, and then click "Next", as shown in the screen displayed below.
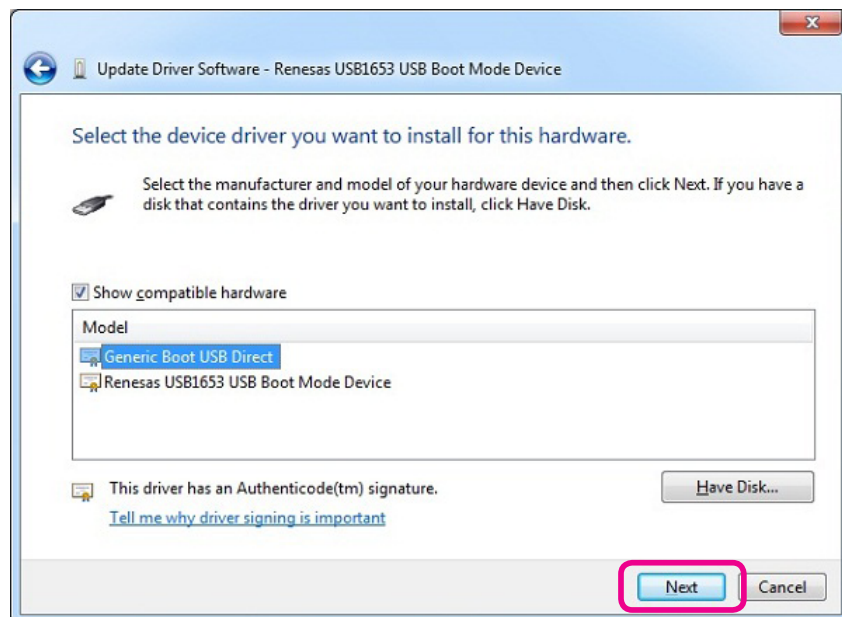
Click "Close" when the below illustrated screen is displayed.
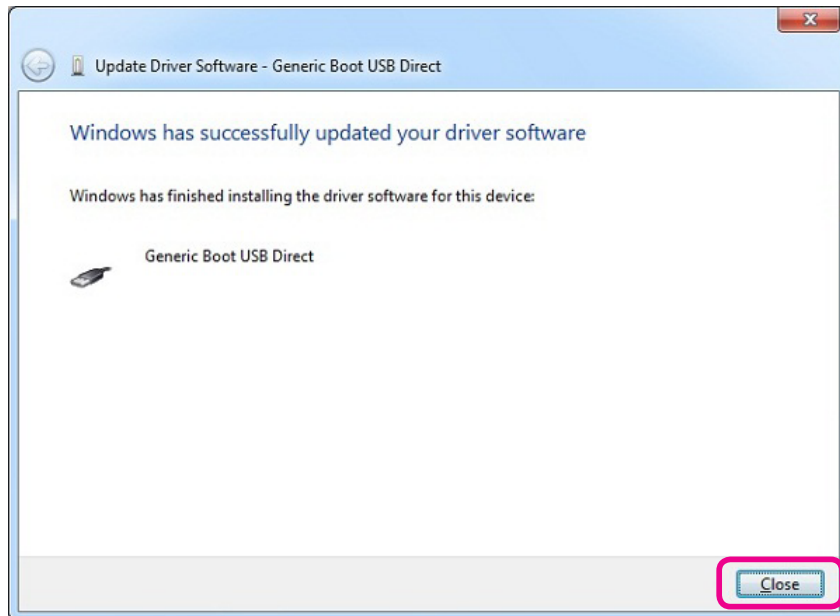
Open the device manager of the PC and verify that "Generic Boot USB Direct" is displayed in the "Renesas USB Development Tools" as illustrated below; the driver update has been completed successfully.
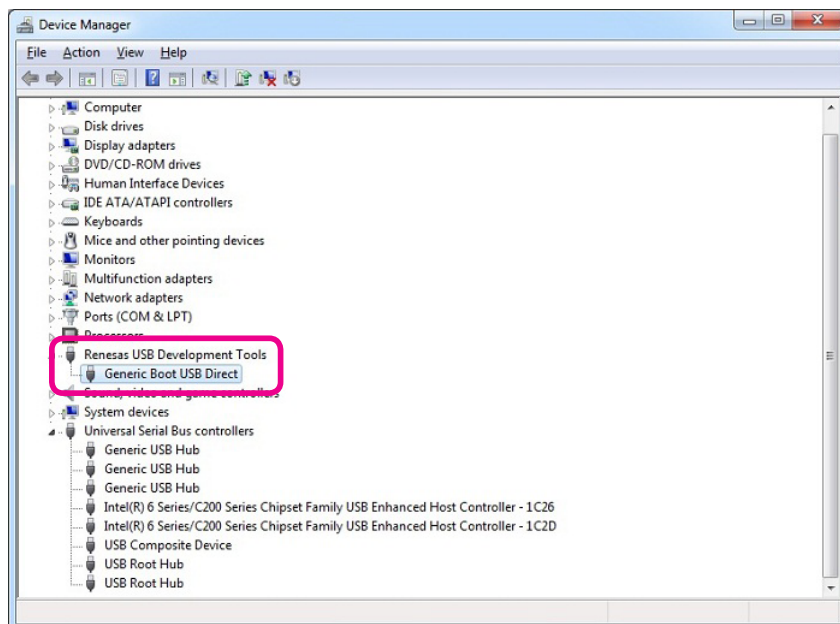
Move the three-position program switch of the FT2DR/DE to the center (normal operating position). The driver update procedure ends with this.

Updating the Firmware

Execute the FT2DR/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 FT2DR/DE, which will delete all saved data. Back up your registered data using a microSD memory card or write it down. For details on backing up data using microSD memory cards, refer to the "FT2DR/DE Operating Manual".

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1. Extract the downloaded zip file.
   The destination folder opens automatically.

2. Double-click "FT2D_MAIN_verXXX(XXX).exe" (YAESU icon).

   * "XXX" refers to the version number.

   * The file name of Sub Firmware is "FT2D_SUB_verXXX(ALL).exe".
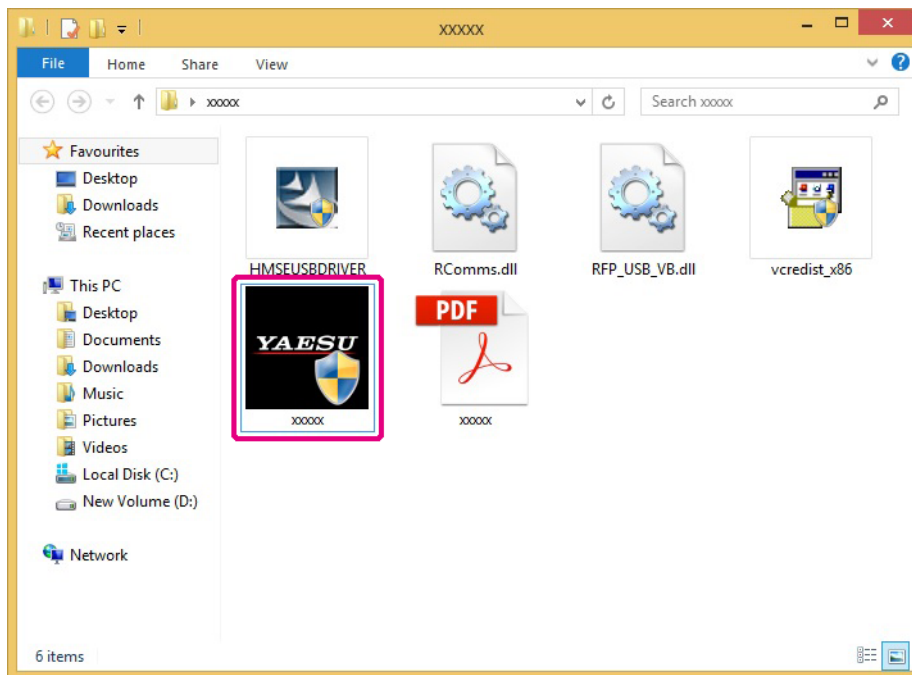
   * If the "User Account Control" screen appears, click the [Yes] button.

   The "YAESU Firmware Update Program" starts.

3. Click the [Update] button.
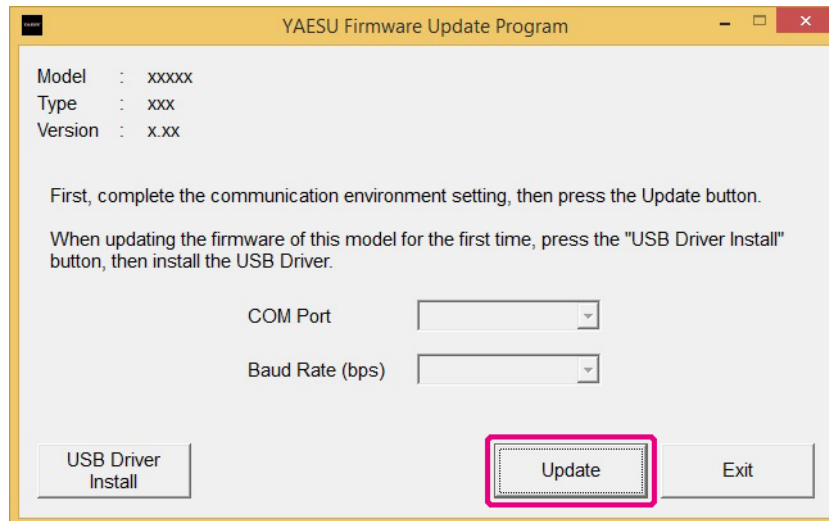
The update preparation procedure appears. Make FT2DR/DE ready for the update.
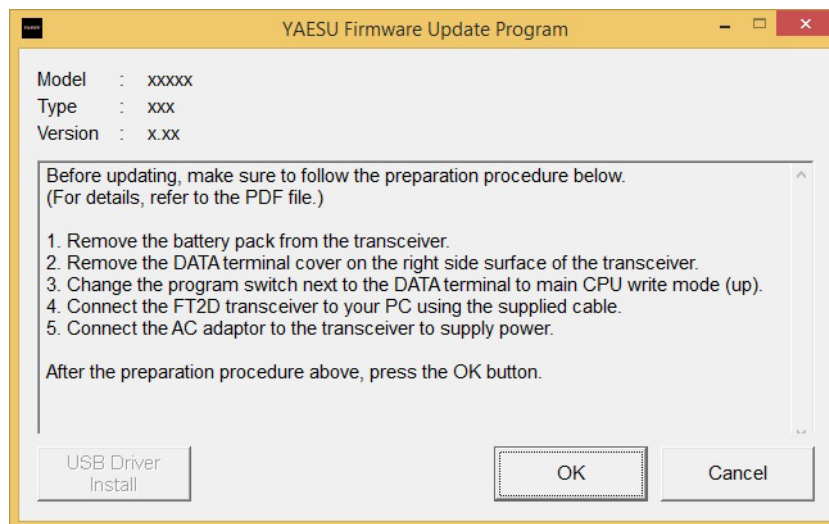

4. When the power of FT2DR/DE is on, press and hold 🔘 for over one second to turn it OFF.
5. Remove the battery pack from the transceiver.

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 terminal 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.

Program switch

When updating "Main Firmware"
↑
Normal operation mode (center)
↓
When updating "Sub Firmware"
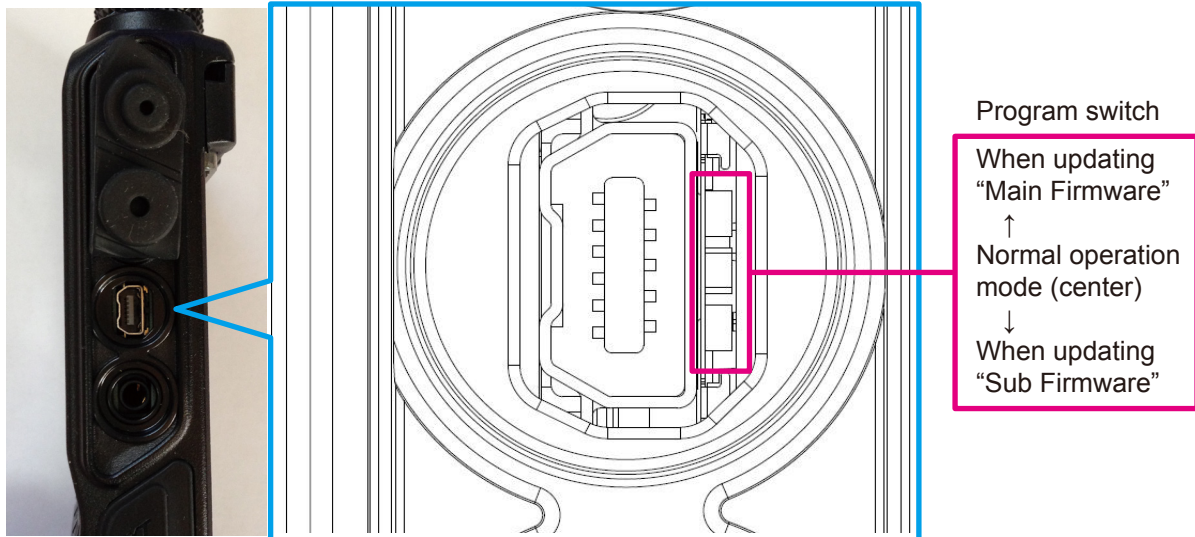
7. Use the supplied cable to connect the FT2DR/DE DATA terminal to the computer.

8. Connect the AC adaptor to a wall outlet and then insert the connector to the FT2DR/DE EXT DC IN terminal.

9. On the YAESU Firmware Update Program screen, press [OK].
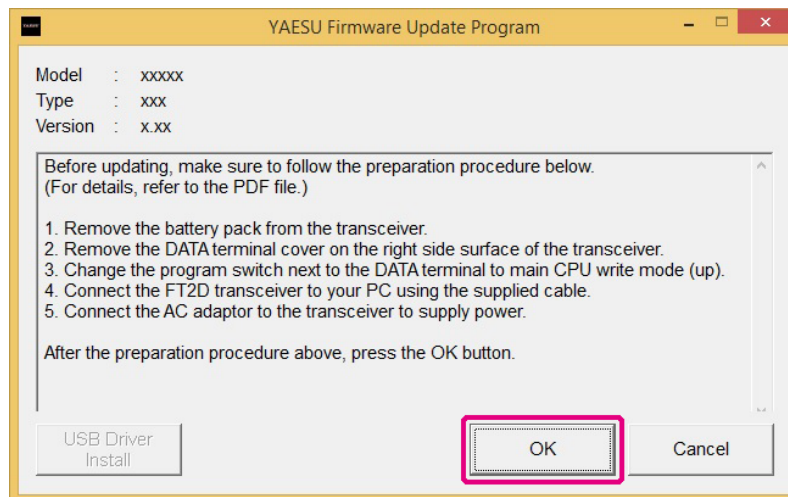
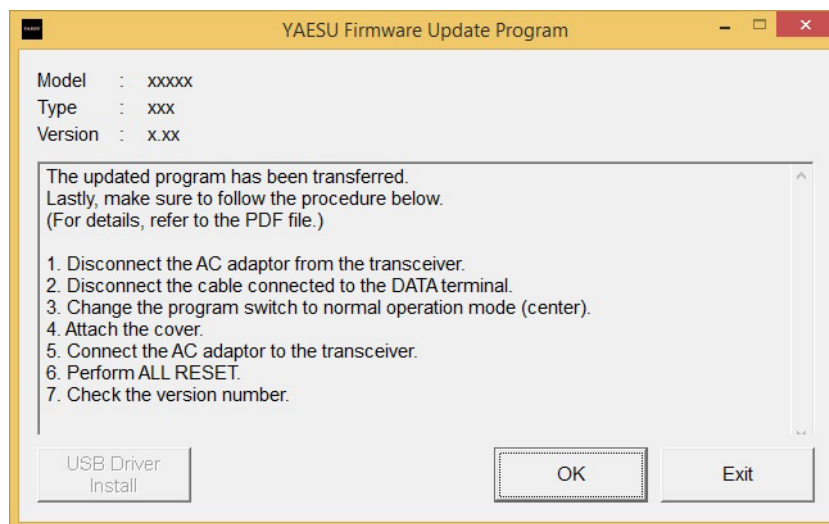The "Select USB Device" screen appears.

10. Click the [OK] button.
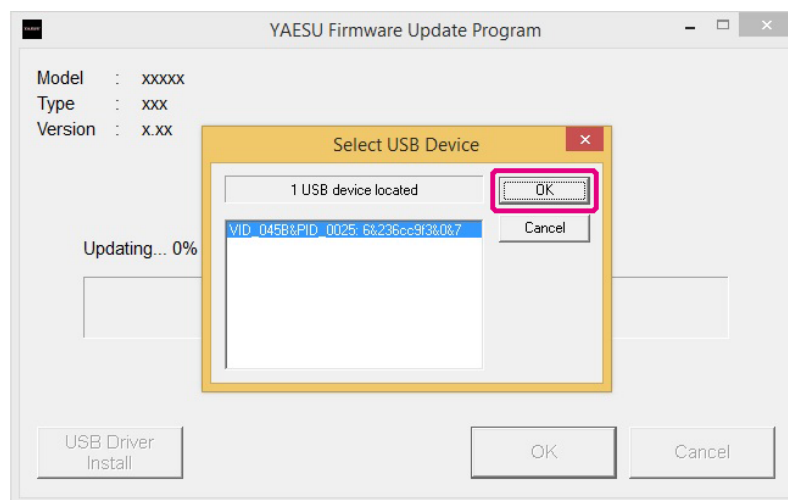
The firmware transfer starts and the FT2DR/DE firmware update executes (it takes about 20 seconds to complete the update). When the firmware update completes, a message appears.

11. Click the [OK] button.
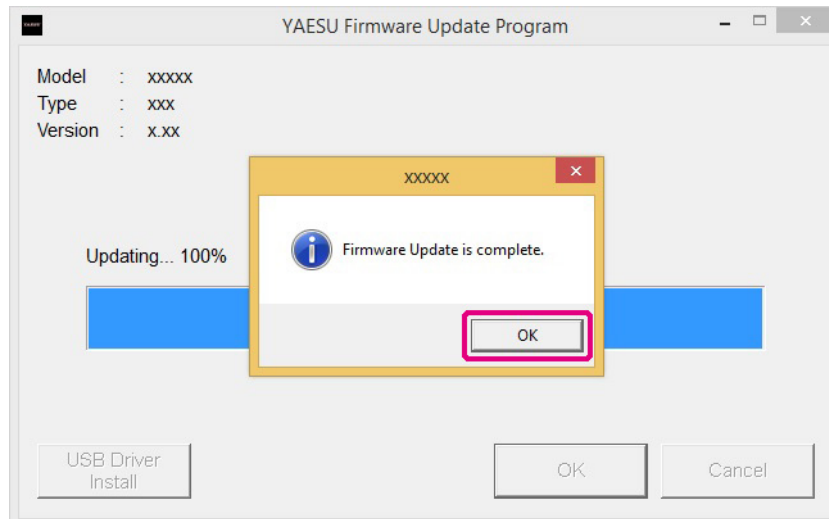
The post-update procedure appears. Perform the post-update procedure.

12. Disconnect the AC adaptor from the transceiver.

13. Disconnect the cable from the DATA terminal and the computer.

14. Use a pointed object such as a pin to change the program switch position to "normal operation mode (center)".

    * For details on the program switch position, refer to the illustration in step 6.

15. Connect the AC adaptor connector to the FT2DR/DE EXT DC IN terminal.

16. Press and hold 🔘 for over one second 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 DISP.
    The call sign input screen appears.

18. Switch between the alphabet and numeric keys to input the call sign.

19. Press 🔘.
   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.

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20. Press and hold 🖑 for over one second to turn the power OFF.

21. Click the [OK] button on the "YAESU Firmware Update Program" screen.
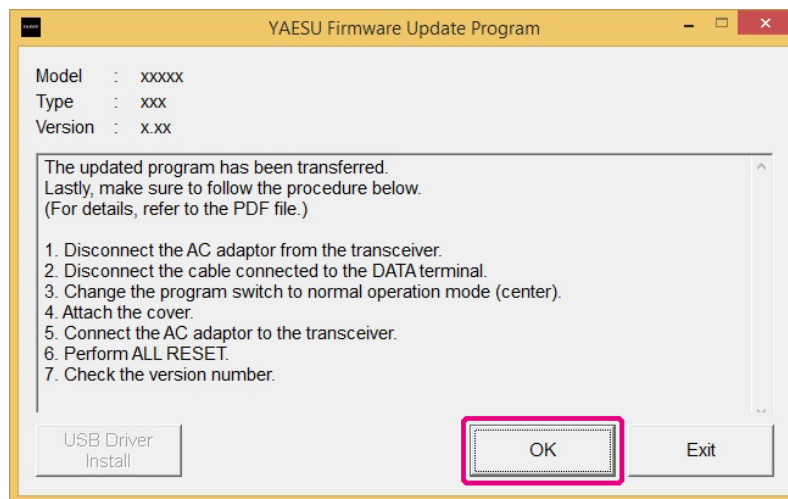
Returns to the YAESU Firmware Update Program startup screen.

22. Click the [Exit] button.
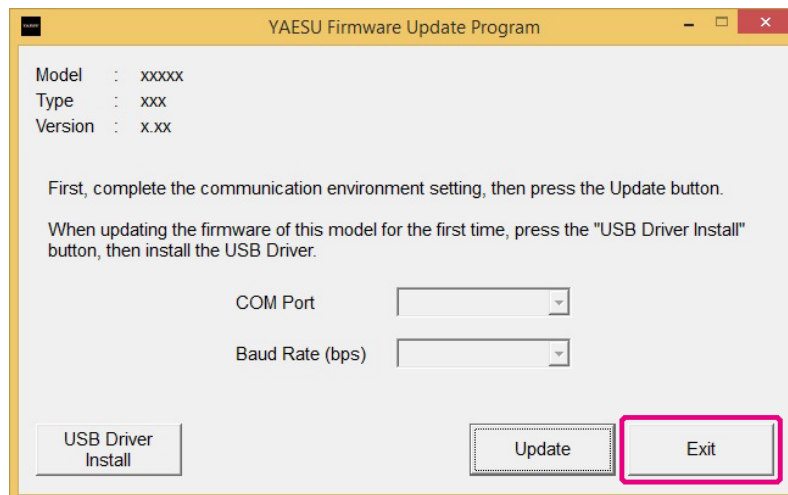
23. Update of MAIN and SUB firmware is completed. Proceed to update the DSP firmware.

When the transceiver becomes inoperable

1. Disconnect the AC adaptor from the transceiver.
2. While pressing and holding `BACK`, `DISP`, 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 `BACK`, `DISP`, 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 `DISP`.
   The call sign input screen appears.
6. Switch between the alphabet and numeric keys to input the call sign.
7. Press 🖑.
   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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