

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 [FT2D_MAIN_ver***(USA)]
- DST: EXP/AUS/EU/CHN covers all other countries [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.

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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)
- Microsoft[®] Windows Vista[™] (32 bit / 64 bit, Service Pack 2 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, Windows 8, and Windows Vista

- * 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].

Ì	Windows Features
	An ann an your BC needs the following Windows feature:
1	An app on your PC needs the following windows leader.
	NET Framework 3.5 (includes .NET 2.0 and 3.0)
	Download and install this feature
	Windows will get the files that it needs from Windows Update and complete the installation.
1	A Skin this installation
	Your apps might not work correctly without this feature.
	Tell me more shout this fasture
	ren me more about this reature
	Creat
	Cancel

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.

YAESU Fi	mware	re U	pdat	te Pro	gram					×
Model : xxxxx Type : xxx Version : x.xx										
First, complete the communication er When updating the firmware of this m button, then install the USB Driver.	vironm odel fo	men for th	nt set ne fir	ting, tl st time	nen pre	ess th s the '	e Upda "USB [ate bu Drive	utton. r Instal	r"
COM Port						~				
Baud Rate (b	os)					Ŧ				
USB Driver Install					Upda	ate			Exit	

The "Driver Install" screen appears.

4. Click the [Install] button.

Driver Install					
When updating the firmware of this model for the first time, installing the USB Driver is required before connecting the update device to the computer. (Installing the driver is not required for the second and subsequent updates)					
Would you like to install the USB Driver?					
Install Cancel					

* 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.

	Driver Install					
Wher is req (Insta	n updating the firmware of this model for the first time, installing the USB Driver juired before connecting the device you want to update to your computer. Illing is not required from the second update.)					
Woul	Would you like to install the USB Driver?					
	USB Driver Loading					
	install Cancel					

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++ 200 License Terms Be sure to carefully read and understan license terms. You must accept the licen	08 Redistributable Setup d all the rights and restrictions descr se terms before you can install the s	×
MICROSOFT SOFTWARE LICENSE TERM	1S ME LIBRARIES (X86, IA64 AND X64)	^
These license terms are an agreement b where you live, one of its affiliates) and software named above, which includes terms also apply to any Microsoft	vetween Microsoft Corporation (or bi I you. Please read them. They appl the media on which you received it, i	ased on y to the if any. The V
		Print
Press the Page Down key to see more to	ext.	
✓ I have read and accept the lice	nse terms.	

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.

	Driv	er Install			
Next, prepa	re the device you want to upo	late.			
1 Switch th	e device you want to undate	to "Program writing mode"			
T. Switch the device you want to update to Program whiting mode .					
2. After swit	ching mode, connect the dev	ice to your computer using a USB cable.			
3. Press the	"Next" button.				
	Novt	Capeal			
	INCXL	Calluti			

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 (b) 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.



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.

A Device Manager	
File Action View Help	
	ISB Enhanced Host Controller - 1C26 ISB Enhanced Host Controller - 1C2D
USB Composite Device	Update Driver Software
USB Root Hub USB Root Hub	Disable Uninstall
Launches the Update Driver Software Wizard for the selec	Scan for hardware changes
	Properties

Click "Browse my computer for driver software".



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

Brow	vse for driver software on your computer
Searc	h for driver software in this location:
	▼ B <u>r</u> owse
√ In	clude subfolders
+	Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
+	Let me pick from a list of device drivers on my computer This list will show installed driver software compatible with the device, and all driver software in the same category as the device.

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.

Selec	t the device driver you war	nt to install for this ha	ardware.
đ	Select the manufacturer and mo disk that contains the driver you	odel of your hardware devic 1 want to install, click Have	e and then click Next. If you have Disk.
Sho	w <u>c</u> ompatible hardware		
is G	eneric Boot USB Direct enesas USB1653 USB Boot Mode Der	vice	
	his driver has an Authenticode(tm)	signature.	Have Disk

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.

Elle Action Yiew Help Image: State of the state of	^
Image: Second	*
Image: Second	^
□ □ </th <th></th>	
→ ↓ </th <th></th>	
P = 000 Concentratives P = 000 Concentratives P = 000 Concentratives P = 000 Concentratives	
Keyboards	
Mice and other pointing devices	
P-W Monitors	
Multifunction adapters	
Network adapters	
Ports (COM & LPT)	
Renesas USB Development Tools	=
Generic Boot USB Direct	_
Construction of generation of the second s	
▷ 📲 System devices	
a - 🖶 Universal Serial Bus controllers	
- Generic USB Hub	
Inter(ii) 6 Series/C200 Series Chipset Family USB Enhanced Host Controller - 1C20	
IISE Composite Device	
USB Root Hub	
USB Root Hub	-

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".

- 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.

X & ROTE		YAESU Firmwa	are Update Pro	gram	-		×
Model : Type : Version :	XXXXX XXX X.XX						
First, com When upd button, the	plete the co lating the firr en install the	mmunication environ nware of this model USB Driver.	ment setting, t for the first tim	hen press the U _l e, press the "US	pdate but B Driver I	ton. Install	
		COM Port		*			
		Baud Rate (bps)		Ŧ			
USB Dri Instal	ver I			Update	E	xit	

The update preparation procedure appears. Make FT2DR/DE ready for the update.

YAESU Firmware Update Program -	×
Model : xxxxx Type : xxx Version : x.xx	
 Before updating, make sure to follow the preparation procedure below. (For details, refer to the PDF file.) 1. Remove the battery pack from the transceiver. 2. Remove the DATA terminal cover on the right side surface of the transceiver. 3. Change the program switch next to the DATA terminal to main CPU write mode (update and the transceiver to your PC using the supplied cable. 5. Connect the AC adaptor to the transceiver to supply power. After the preparation procedure above, press the OK button. 	o).
USB Driver Install OK Can	cel

- 4. When the power of FT2DR/DE is on, press and hold b 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.



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].

YAESU Firmware Update Program		×
Model : xxxxx Type : xxx Version : x.xx		
 Before updating, make sure to follow the preparation procedure below. (For details, refer to the PDF file.) 1. Remove the battery pack from the transceiver. 2. Remove the DATA terminal cover on the right side surface of the transceiver. 3. Change the program switch next to the DATA terminal to main CPU write mode (u. 4. Connect the FT2D transceiver to your PC using the supplied cable. 5. Connect the AC adaptor to the transceiver to supply power. 	ıp).	~
After the preparation procedure above, press the OK button. USB Driver Install OK Car	ncel	

The "Select USB Device" screen appears.

10. Click the [OK] button.

Model · vvvv	YAESU Firmware Update Program	- 🗆 ×
Type : xxx Version : x.xx	Select USB Device	<
Updating 0%	1 USB device located OK VID_0458&PID_0025: 6&236cc9f3&0&7 Cancel	
USB Driver Install	OK	Cancel

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.

14.849	YAESU Firmware Update Program	- 🗆 ×
Model : xxxxx Type : xxx Version : x.xx		
	XXXXXX ×	
Updating 100%	Firmware Update is complete.	
	ОК	
USB Driver Install	OK	Cancel

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

*****	YAESU Firmware Update Program		×
Model Type Version	2 XXXXX 2 XXX 2 X.XX		
The upd: Lastly, m (For deta 1. Discoi 2. Discoi 3. Chang 4. Attach 5. Conne 6. Perfor 7. Check	ited program has been transferred. ake sure to follow the procedure below. ils, refer to the PDF file.) nect the AC adaptor from the transceiver. nect the cable connected to the DATA terminal. ie the program switch to normal operation mode (center). the cover. ict the AC adaptor to the transceiver. m ALL RESET. the version number.		~
USB [Inst)river all OK	Exit	

- 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. Perform all-reset. Press and hold b for over one second to turn the power OFF.
- 17. While pressing down (BACK), [DISP], and (BAND) together, press (1). The transceiver turns on and you will hear a beep sound.
- 18. After you hear a beep sound, release the keys. "ALL RESET?" appears on the display.
- 19. Touch [OK].

You will hear a beep sound and the call sign input guidance screen appears.

20. Press DISP.

The call sign input screen appears.

- 21. Switch between the alphabet and numeric keys to input the call sign.
- 22. Press 💩.

The call sign sets and the frequency screen appears.

- 23. Check the firmware version. Touch [MODE] to select the digital mode.
- 24. Press and hold the DBP key for over one second. The transceiver mode switches to set mode.
- 25. Touch [DISPLAY]. Setting items appears.
- 26. Rotate the DIAL and touch [11 SOFTWARE VERSION]. The software versions of "Main", "Sub", and "DSP" appear.
- 27. Check the firmware version and click the [OK] button on the "YAESU Firmware Update Program" screen.

ea an se	YAESU Firmware Update Program 🛛 🗕 🗖 🗙
Model :	XXXXX
Type :	XXXX
Version :	X.XX
The updat	ed program has been transferred.
Lastly, ma	ke sure to follow the procedure below.
(For detail	s, refer to the PDF file.)
1. Disconr	Hect the AC adaptor from the transceiver.
2. Disconr	Hect the cable connected to the DATA terminal.
3. Change	the program switch to normal operation mode (center).
4. Attach ti	he cover.
5. Connec	t the AC adaptor to the transceiver.
6. Perform	ALL RESET.
7. Check ti	he version number.
USB Dr Insta	

Returns to the YAESU Firmware Update Program startup screen.

28. Click the [Exit] button.

YARNY	YAESU Firmwa	are Update Program	- 🗆 🗙
Model : x Type : x Version : x	XXXX XX .XX		
First, comple When updati button, then i	te the communication enviror ng the firmware of this model nstall the USB Driver.	for the first time, press the Up	date button. 3 Driver Install"
	COM Port Baud Rate (bps)	×	
USB Driver Install	r	Update	Exit

The YAESU Firmware Update Program finishes.

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.

