



11/30/09

PEP2000

This procedure is used to update Main CPU Ver. 0150 and EDSP Ver. 11.53 the flash programming for the FT-2000/D Transceivers.

*If you already have software Ver. 11.53 it is not necessary to update the FT-2000/D EDSP again.

We recommend installing the Flash Programming Software on a PC computer with Windows 2000, XP or Vista Operating System; and use the CT-119 programming cable or 8-pin mini-DIN PGM-SW (P0091526) and serial cable RS-232C, DB9F to DB9F straight cable.

NOTE: There are many USB adapters available; however some may not function with this software. We recommend using the latest USB adapter driver software when available.

The update software is available from our website at <http://www.yaesu.com>. The CT-119 programming cable is available from your authorized Vertex Standard dealer. You may also order by email to Vertex Standard parts department, yaesuparts@vxstdusa.com.

If the CT-119 programming cable or is not available you will need a RS-232C, DB9F to DB9F straight cable and 8pin mini-DIN PGM-SW (P0091526). If the DIN PGM-SW is not available you will need to operate the internal program switch S3004. Please follow the instructions in ADDENDUM: Page 7 and 9.

Install the data file to PC

1. Down load the FT-2000 data file [**FT-2000_PEP2000_11-30-09.zip**] from the following website: <http://www.yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=102&encProdID=66EA91711DFB68C03DED4AD35153E12C&DivisionID=65&isArchived=0>
2. Save the FT-2000 data file [**FT-2000_PEP2000_11-30-09.zip**] to the desktop on your computer.
3. Unzip and Extract the contents of [**FT-2000_PEP2000_11-30-09.zip**] to the desktop of your computer.
4. You will find the **PEP2000_EDSP3** and **PEP2000_MAIN** folders on your desktop.

The programmers and software are now stored on your computer on the desktop. The files designated in the last step above are ready to update your FT-2000/D Transceiver.

* The PEP_2000 MAIN folder includes the new software writer FWS003 **V2.01**. We recommend not using the earlier version software and writer.

* The PEP_2000 EDSP folder includes a new software writer EDSP **V3.01**; it no longer requires the four DLL files that were needed by V1.03. We recommend you use the **V3.01** writer and remove V1.03 and the four DLL files from you PC.

The software updates will work with all versions (AF, AS, EU, NA, OC, SA or all Countries) of the FT-2000 and FT-2000D.

Ver. 0150 MAIN CPU implements improvements (also includes all previous updates):

- The FH-2 [<-] [->] keys are made to increment the frequency at 100kHz up or down.
- CW carrier is corrected to change LSB ⇔ USB when the indication is changed on VFO B.
- Correct the CW Auto Mode.
- DMU Band scope Display Signal Peak Frequency is centered.

Ver. 11.53 EDSP implements improvements (also includes all previous updates):

- The DNR algorithm is not reset between TX/RX, to eliminate the increased receive noise after a transmission.
- Increase the response of the compression level meter in conjunction with the PROC knob. (Max up to 12dB).

NOTES:

*Rotate the [METER] switch to select “COM” (Compression). We recommend setting the PROC level within the 5dB to 10dB range.

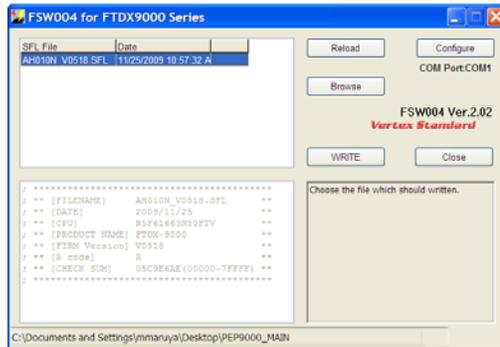
*When menu settings are saved on the DMU-2000 CF card and transferred to the new version, some previous versions may not transfer correctly. Please check your menu, update the settings, and then save the new settings to the CF card.

MAIN CPU

This procedure is used for uploading new Software into the FT-2000/D Amateur Transceivers using the CT-119 program cable. If you have the 8pin mini-DIN PGM-SW (P0091526) refer to the **8-pin mini-DIN PGM-SW** page 4.

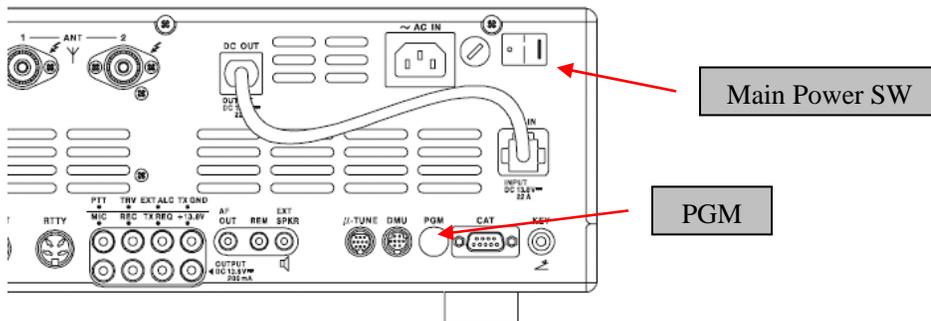
*Don't forget to write down (or save to a CF Card) any personal menu settings you have changed from the default before you start. Please see the DMU-2000 Data Management Operation Manual for the procedure to save your settings to a CF card.

- (1) Turn off the main power switch located on the back of the FT-2000 (or turn off the power supply for FT-2000D and wait a minute, until the capacitors discharge) and remove the AC power cord.
- (2) Connect the CT-119 Cable's DB9F connector to the serial port COM1 in the back of your computer. If you use a USB to serial adapter, you might need to change the COM Port number.
- (3) Now go to the desktop open PEP2000_MAIN folder and find the **FSW003** icon as shown below. Double-click the FSW003 icon, displayed on the Program Screen.



NOTE: If you receive a “communications error” message on your screen, click on the **Configure** box and choose a different COM port from the drop down menu. Then click the **WRITE** button again.

- (4) When the program opens, confirm that the file AH025_V0150.SFL is highlighted; if not, click on it to highlight it.
- (5) Remove the black cover from the PGM jack (bottom left on the rear panel). Plug the mini-DIN connector of the CT-119 into the PGM jack. Be sure that the **arrow** indicator on the mini-DIN plug is **down**. Plug the AC cord into the radio and turn the main power switch on the back of the radio to the ON position. [NOTE: The radio will not show a display now.]



- (6) Click on [WRITE] in the program window. A status bar with green bars should appear below the [WRITE] button. *Note disregard the on screen instruction to [3. Turn “S3004” on].*
- (7) When the loading process is complete, an [OK?] box will appear. Click [OK?].
- (8) Turn off the main power switch, (or turn off the power supply for FT-2000D and wait a minute, until the capacitors discharge) and unplug the AC power cord.
- (9) Unplug the CT-119 from the radio.
- (10) Plug the AC power cord into the radio and turn the main power switch on the back of the radio to the ON position (or turn on the power supply for FT-2000D).
- (11) Plug the radio back in. Press and hold in the [FAST] and [LOCK] keys; while holding them in, press the front power switch to turn the radio on. This resets the radio and locks in the new software.

- Turn the radio off. The main CPU updating process is now complete. Follow the instructions below to update the EDSP.

8-pin mini-DIN PGM-SW

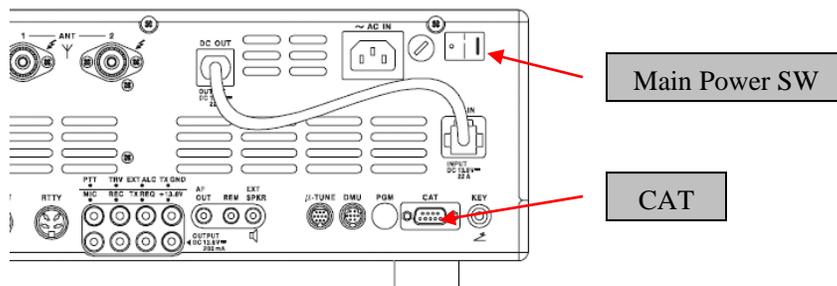
- Turn the main REAR power switch OFF.
- Connect a RS-232C straight cable to the CAT connector.
- Open the file FSW003.
- Insert the 8-pin mini-DIN PMG-SW connector to FT-2000/D (PMG) jack.
- Turn on the REAR Main power switch.
- I choose the .sfl file of the version V0150 to write in and push WRITE of the screen.
- When complete appears, click OK. Turn the REAR power switch OFF.
- Remove the 8-pin mini-DIN PMG-SW and the RS-232C cable.
- Turn on REAR power switch.
- Reset the radio to default.

NOTE: for a more detailed description see the Main CPU programming.

EDSP

This procedure is used for uploading new EDSP Software into the FT-2000/D Amateur Transceivers, from your personal computer, using the RS-232C, DB9F to DB9F straight cable.

- Turn off the main power switch located on the back of the FT-2000 (or turn off the power supply for FT-2000D and wait a minute, until the capacitors discharge) and remove the AC power cord.
- Connect a serial RS-232C, DB9F to DB9F straight cable to the COM1 connector of your computer and the 9-pin CAT connector on the rear of the transceiver. If you use a USB to serial adapter, you might need to change the COM Port number.



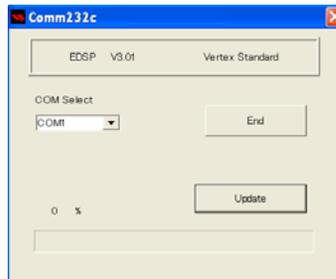
- Reconnect the power cord and turn ON the main power switch located on the back of the FT-2000 (or turn ON the power supply for FT-2000D).
- While holding the [DNR] + [CONT] + [DNF] buttons, press the front power switch to turn the radio on. You will see [dSP Prg NO 1] on the radio display.



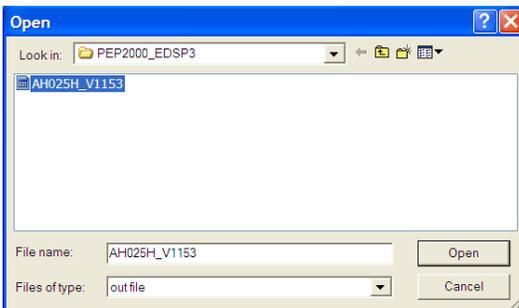
- On your computer desk top open PEP2000_EDSP folder and find the **EDSP-301** icon as shown below. Double-click the EDSP-301 icon, displayed on the Program Screen.



EDSP-301
Comm232c MFC アプリケーション



- Click the Update button. You will see AH025_V1153 out file displayed. If you do not see AH025_V1153 (as in the screen below), then open the “Look in:” window and go to the desktop and find PEP2000_EDSP. Open the folder and AH025_V1153 will be displayed in the window. Click AH010N_V1153 out file to **highlight** it. Then click the Open button and wait until the program is loaded, and 100% is indicated on the bar graph, [completion!!] will be displayed.



NOTE: If you receive a “communications error” message on your screen, click on the **COM Select** box arrow and choose a different COM port from the drop down menu. Then click the Update button and Open button again.
EDSP-301 download software writer works only in **38.4kbps**. The writing speed is fixed in the download algorithm of the EDSP board.

- Turn the front Power Switch and the Main Power Switch in the back OFF (or turn off the power supply for FT-2000D and wait a minute, until the capacitors discharge) and remove the AC power cord. This resets the radio and locks in the new software. Remove the DB9F to DB9F cable. The updating process is now complete.

It is important to reset the FT-2000/D. Plug the radio back in. Press and hold in the [FAST] and [LOCK] keys; while holding them in, turn the radio back on (this resets the radio and locks in the new software).

NOTE: We recommend trying the new factory default settings rather than transferring your old ones, because of the changes in the EDSP and the Main CPU, you may wish to make new settings.

The software versions can be displayed on the radio

While holding the three buttons [GEN]+[50]+[ENT] turn the radio on. The software version will be displayed in the VFO-A window for 5 seconds then the radio will start up in normal operation.



We hope this new software will increase your enjoyment of your FT-2000/D. Thank you for choosing Yaesu radios. If you have any problems or questions please contact Vertex Standard, Amateur Tech Support. amateurtech@vxstdusa.com

Best regards,

Mikio Maruya, WA6F
Executive Vice President
Engineering & Customer Service

Vertex Standard USA, Inc.

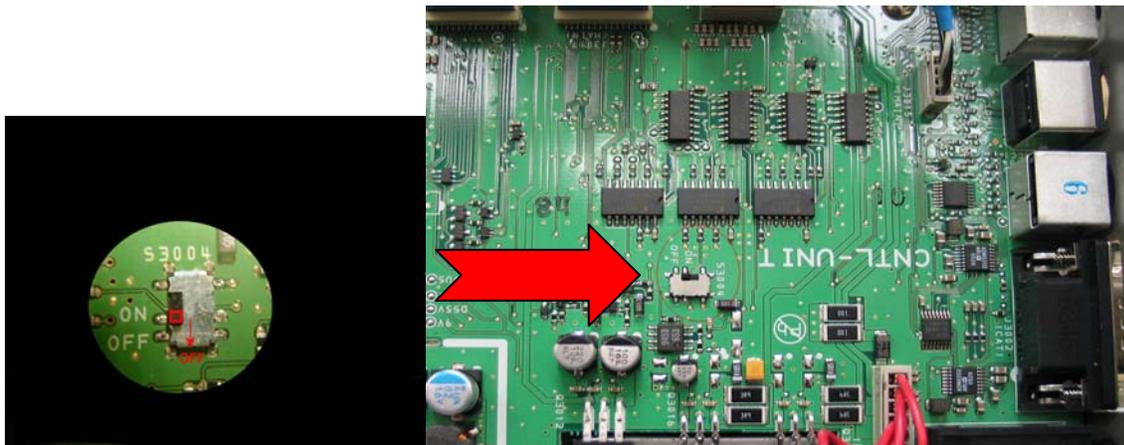
ADDENDUM

If the CT-119 programming cable or 8-pin mini-DIN PGM-SW (P0091526) is not available you will need a serial cable RS-232C, DB9F to DB9F straight cable. Please follow these instructions.

*Don't forget to write down (or save to a CF Card) any personal menu settings you have changed from the default before you start. Please see the DMU-2000 Data Management Operation Manual for the procedure to save your settings to a CF card.

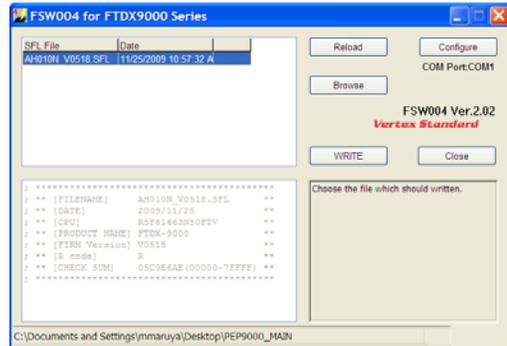
We recommend you follow this process, steps (1) thru (18), the first time you program your radio. After you are familiar with the location of the switch S3004 you may wish to bypass Steps (2) and (15), and operate the switch through the hole under the left rear foot (near the CAT connector). See the illustration below Figure A. You must be **extremely careful** to avoid damage to the PC components (which may not be covered by the Limited Warranty). Use a flashlight and insulated tool to operate the switch.

- (1) Turn off the main power switch located on the back of the FT-2000 (or turn off the power supply for FT-2000D and wait a minute, until the capacitors discharge) and remove the AC power cord.
- (2) You must access the programming switch S3004. It is located on the control PC board on the bottom of the FT-2000/D. To find and operate the switch, remove the top cover (9 black screws). Remove the bottom cover (seven black screws). Remove the bottom shield (15 silver screws). Carefully Place the Transceiver bottom side up on a sturdy cleared worktable. Find the micro-switch on the pc board near the rear right hand corner when looking down at the bottom of the FT-2000/D. (See the attached photo.)



- (3) Connect a serial cable RS-232C, DB9F to DB9F straight cable to the COM1 connector of your computer and the 9-pin CAT connector on the rear of the transceiver. If you use a USB to serial adapter, you might need to change the COM Port number.
- (4) Switch the programming micro **switch S3004 to on.**
- (5) Connect the AC power cord. (In the case of the FT-2000D connect the power supply cables.)
- (6) Turn on the main power switch. (Located on the rear panel of the FT-2000 or on the front of the power supply for the FT-2000D.)

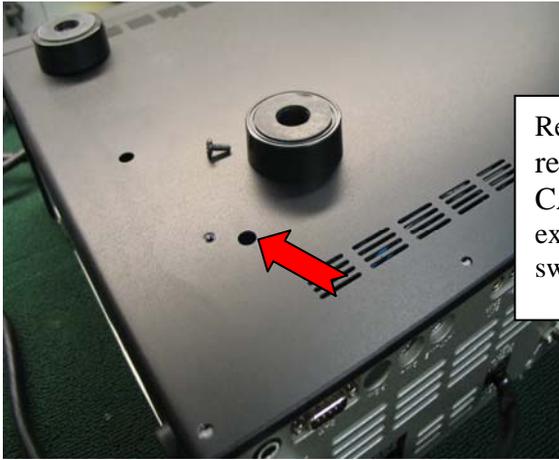
- (7) Now go to the desktop open PEP2000_MAIN folder and find the **FSW003** icon as shown below. Double-click the FSW003 icon, displayed on the Program Screen.



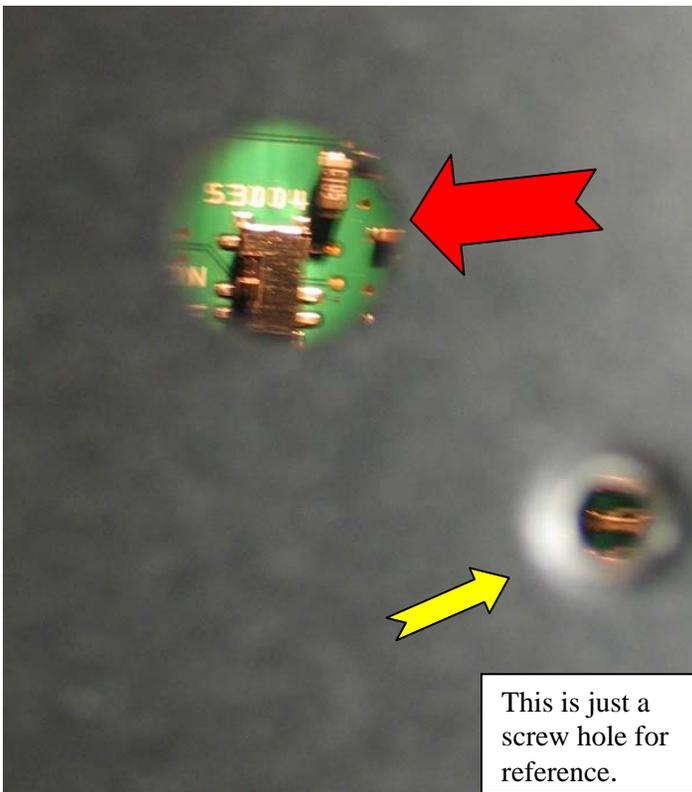
NOTE: If you receive a “communications error” message on your screen, click on the **Configure** box and choose a different COM port from the drop down menu. Then click the **WRITE** button again.

- (8) When the program opens, confirm that the file AH025_V0150.SFL is highlighted; if not, click on it to highlight it
- (9) Click on [WRITE] in the program window. A green status bar should appear below the [WRITE] button to show the progress of the download. Do not interrupt the process until it completes.
- (10) When the loading process is complete, an [OK?] box will appear. Click [OK?].
- (11) Turn off the main power switch. (Located on the rear panel of the FT-2000 or on the front of the power supply for the FT-2000D.)
- (12) Disconnect the AC power cord (or turn off the power supply for FT-2000D and wait a minute, until the capacitors discharge).
- (13) Switch the programming micro **switch S3004 to the off position.**
- (14) Remove DB9F straight cable from the CAT connector on the rear of the transceiver.
- (15) Replace the bottom shield panel (15 screws). Replace the bottom case (7 black screws). Replace the top case (9 black screws)
- (16) Reconnect the power cord, (or power supply and connectors for FT-2000D)
- (17) Turn the main power switch located on the back of the FT-2000 to the ON position (or turn on the power supply for FT-2000D).
- (18) Press and hold in the [FAST] and [LOCK] keys; while holding them in, press the front power switch to turn the radio on. This resets the radio and locks in the new software. The updating process is now complete. You may need to enter your custom menu settings now.

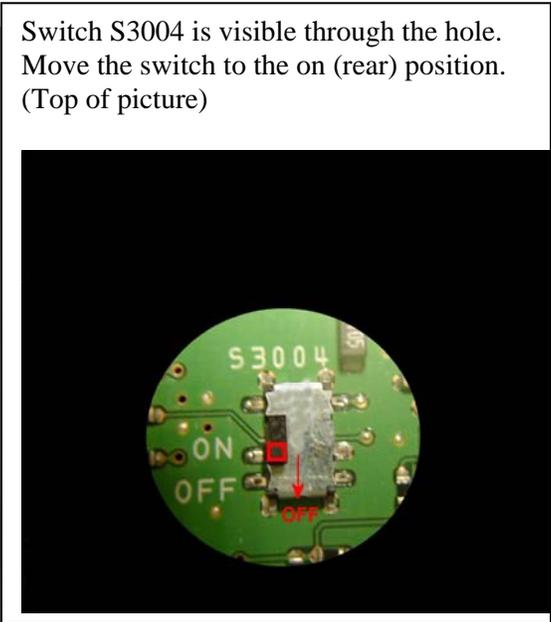
Figure A



Remove the left rear foot (near the CAT connector) to expose the program switch access hole.



This is just a screw hole for reference.



Switch S3004 is visible through the hole. Move the switch to the on (rear) position. (Top of picture)