FT-1000 and FT-1000D Firmware Upgrade Instructions

Please note: This firmware upgrade only applies to the **Yaesu FT-1000** and **FT-1000D** HF Transceivers.

The upgrade **does not apply** to the FT-1000MP, FT-1000MP MkV or FT-1000MP MkV Field as these transceivers are already fully CAT compliant.

Why do I need to upgrade the firmware?

If you intend to control your FT-1000 or FT-1000D from your PC via the CAT (Computer Aided Transceiver) interface, you need Firmware 6.0 installed. Although earlier versions of the firmware claimed to be CAT compliant with details published in the transceiver user manual, the data format was found to give problems with many CAT control applications. The problems presented themselves as slow control between the radio and PC or no connection at all. The issue seems to be related to the size of the data block returned by the radio being too long causing the CAT control applications to "time out" or lose synchronisation with the transceiver.

Yaesu recognised this issue and released firmware 6.0 to fix the problem. While the FT-1000 and FT-1000D transceivers were supported by Yaesu, a firmware update programme was made available via Yeasu Dealers. This involved returning the transceiver for installation of the new Rom. However, since the Yaesu support for the transceivers has long been discontinued, the Dealer firmware update option was withdrawn.

This "after-market" firmware update will allow you to bring your FT-1000D up to v6.0 which is the very latest Rom version making the transceiver fully CAT compliant with the many CAT control applications available.

How do I know which firmware is currently installed on my FT-1000D?

This is known as the Las Vegas test. Turn off the transceiver and whilst holding the 1+3 keypad buttons, turn the radio back on. The display will reveal the firmware revision.

If your FT-1000 returns "Yaesu 6.00" in the display, you already have the latest firmware version and you do not need to proceed. Transceivers with firmware revisions lower than 6.00 will benefit from the upgrade.

Proceed at your own risk

To change the firmware, you will need to open the transceiver to swap out the ROM located within the control unit. This is a relatively simple task but please understand that it is done entirely at your own risk. If you do not feel confident in doing the upgrade, please do not carry out the procedure. XGGCOMMS.COM will not be held responsible for any damage caused to your transceiver, associated equipment, property or any personal injury whilst carrying out this upgrade. Every care is taken to ensure that the installation instructions are accurate (errors and omissions excepted).

Preparations for the upgrade

You will need a Posi-Drive or Philips screwdriver, a small flat blade screwdriver, ideally an eprom extractor and an anti-static mat or pad to lay your transceiver on. Give yourself plenty of space to work in.

Please follow good antistatic procedures. The components in the transceiver are relatively robust but ensure that you are well grounded before touching the internals. An antistatic wrist strap connected to ground would be the preferred method of work. Remember my caveat that the work is done at your own risk.

Upgrade steps

1. The Eprom upgrade will wipe any memories in your transceiver. If you want to transfer settings across, you will need to make a note of all memory settings before you start. When you are happy you have all memory settings noted, turn the transceiver off, open the access panel on the top cover of the transceiver and move the "Backup" switch to "Off" At this point you can fully disconnect the transceiver and move it to your area of work for the firmware upgrade.

2. You will need to remove both top and bottom covers from your transceiver. There are 3 screws on each side, 2 in the centre area of the bottom cover and 2 on the rear edge of the bottom cover fixing it to the rear panel. (10 screws in total). You can leave the 4 feet attached to the bottom panel.
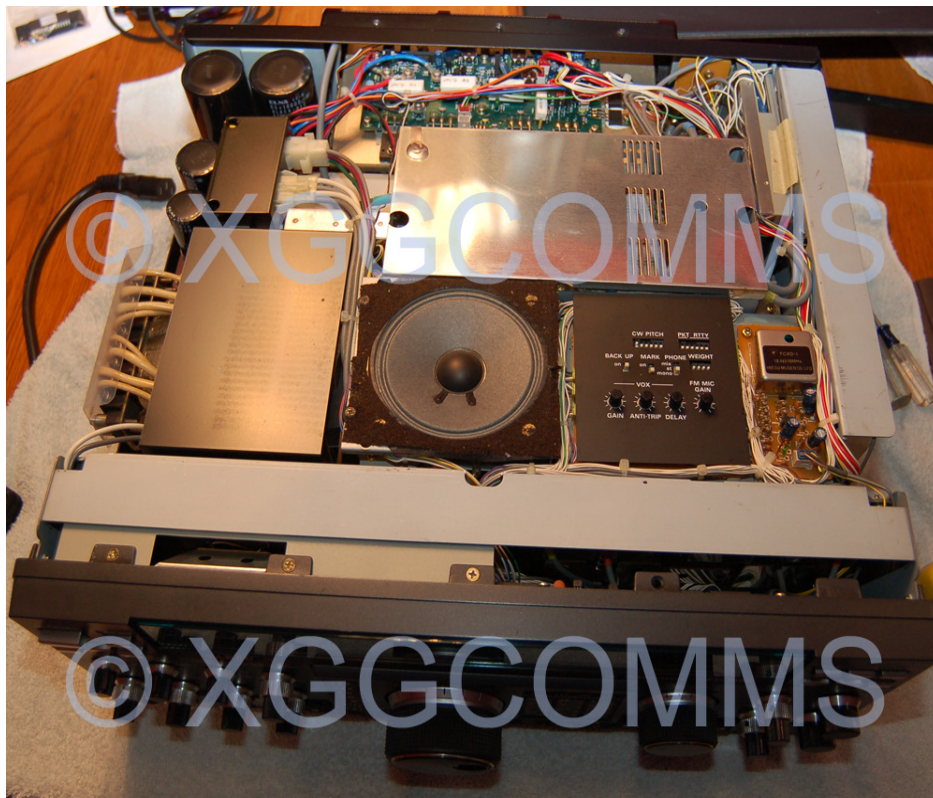
3. Remove front panel control unit power plug (circled below) from the PSU assembly on the left hand side of the transceiver.

4. Remove the 4 screws that secure the front panel of the transceiver to the left and right hand sides of the chassis (circled below). Carefully hinge the panel forward feeding the power cable you removed in step 3 (also circled) through the chassis. The chassis edges are sharp so make sure the cable does not get damaged as you feed it through. Also, the front panel is pretty heavy due to the excellent build quality of the FT-1000. Be prepared for this as you remove the 4 screws. Be very careful not to put any undue strain on the many control cables connecting the front panel to the main transceiver chassis.
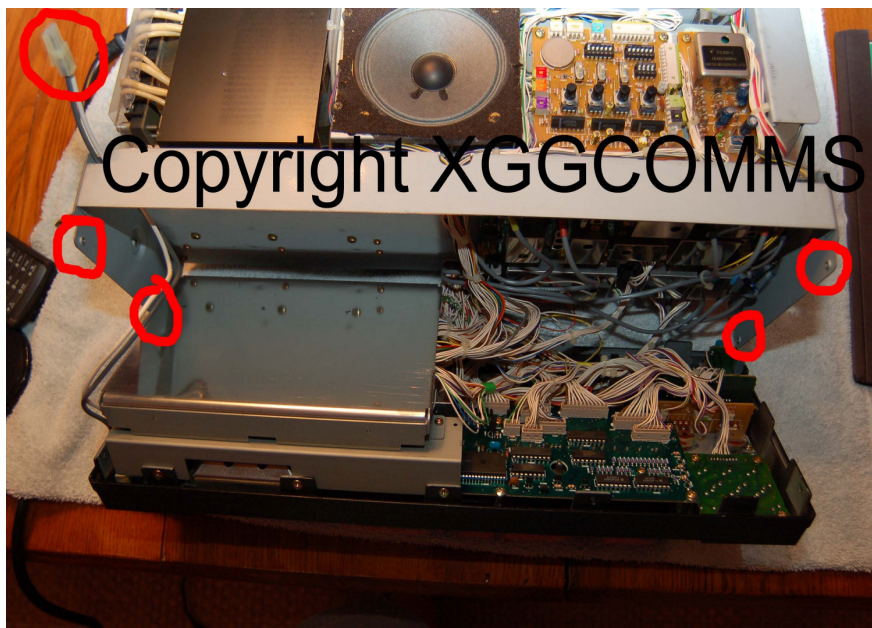
5. The firmware Rom is located under the cover on the left hand side of the front panel assembly. With a small screwdriver, gently prise off the top cover taking care to not damage the cable loom that enters the assembly from the right hand side.

6. Once you have gently lifted the cover open, the original firmware Rom can be removed ideally by using an IC extractor tool. Its component ID is Q5003. Please follow good antistatic procedures. If you choose to use a small flat blade screwdriver to remove the Rom, be very careful not to damage the socket or even worse, slip and damage tracks on the PCB. Gently prise the chip from the socket being careful not to bend or fracture any pins just in case you need to re-use the Rom. The photo below shows the location of the Rom (after removal). Also note the location of Pin 1 of the Rom. Pin 1 is located towards the centre of the PCB.

7. Now you are ready to insert the new Eprom into the Q5003 socket. Be careful not to bend any pins and again, please follow good antistatic procedures. See the photo below showing the new Eprom installed and note the location of Pin 1 and the "indent" at the end of the package. It is well worth double checking to ensure have not bent any pins under the socket when you pushed the new Eprom home.
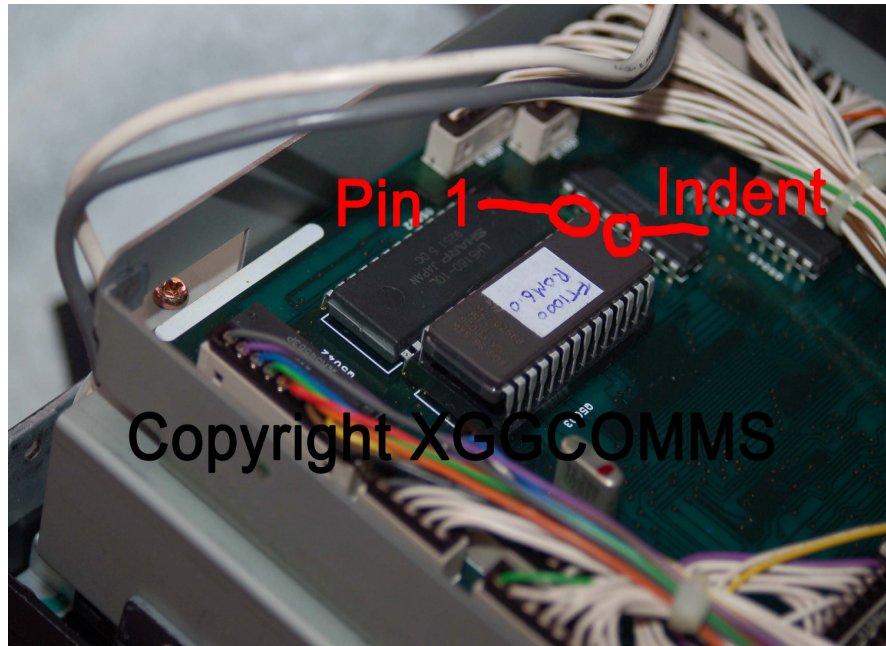
8. Once you are 100% happy that the new Eprom is installed correctly, it is time for re-assembly. You first need to re-install the cover over the enclosure that houses the Eprom. Be extremely careful not to pinch any of the many wires that leave the right hand side of the enclosure. See photo below.

9. Once you are happy that the cover is back in place and you have not snagged any cables, gently lift the transceiver front panel back up to align it with the 4 fixing holes in the chassis sides. As you do this, carefully feed the power cable back through on the left hand side. Make sure that you have not damaged or trapped any of the control cables that connect the front panel to the main chassis. If all is Ok, re-attach the front panel to the chassis with the 4 fixing screws.

10. Reconnect the power supply connector to the power supply unit as removed in step 3.

11. You can now put the top and bottom covers onto your transceiver with the 10 fixing screws.

12. Set the memory back-up switch back to the ON position.

13. You are now ready to re-power your FT-1000. The firmware upgrade can be checked by re-running the Las Vegas test. Whilst holding the 1+3 keypad buttons, turn the radio back on. The display will reveal the firmware revision. If all went well, you will get a display like the photo below saying "Yaesu 6.00"

14. Hopefully, you now have a fully upgraded FT-1000 with Rom 6.0 which will give the transceiver full CAT compatibility. You will need to re-program any memory channels you had set and it is well worth checking your radio for correct functionality. It is always possible you have trapped or disturbed a cable/connector in the re-assembly.

In the unlike event that you have a problem and the transceiver will not start up, then you can always revert to the original Yaesu Rom. If you find that the provided version 6.0 Eprom is faulty, you can return it for a full refund or replacement.

As I stated at the start of the procedure, this was done entirely at your own risk. XGGCOMMS makes all reasonable efforts to ensure that the information provided is accurate and the Eproms are fully checked before shipment. However, as the upgrade is at your own risk, XGGCOMMS will not be held responsible in any way for damage to your equipment or personal injury incurred during the installation.