Firmware upgrade Yaesu FT1000D

By HB9BNK

I am a lucky owner of a Yaesu FT1000D since 1992 - it is still my best rig ever !

But, when I wanted to use the transceiver with CAT (computer aided tuning), I could not get it working. Only MIXW32 would communicate correctly - I had to specify FT1000m in the setup.

I looked at the data transfer between PC and FT1000 using a RS-232 Datascope and found, that the FT1000, when asked by the PC for a VFO-frequency, responded and added the content of the 100 memory places. This complete message was 1636 Bytes long and took about 3 seconds to transfer. Because there is no protocol between the two systems, the PC did not wait for the end of the message. The systems were never in sync.

Searching for a solution, I found the Yahoo-group FT1000D and registered. There I found the friendly support and the firmware upgrade file: FT-1000-V6.bin (timestamp: 1991/11/08

A ham-friend produced a new eprom (27C256). It must be mounted on the Control Unit Board (Q 5003 TMS27C256-15JL).

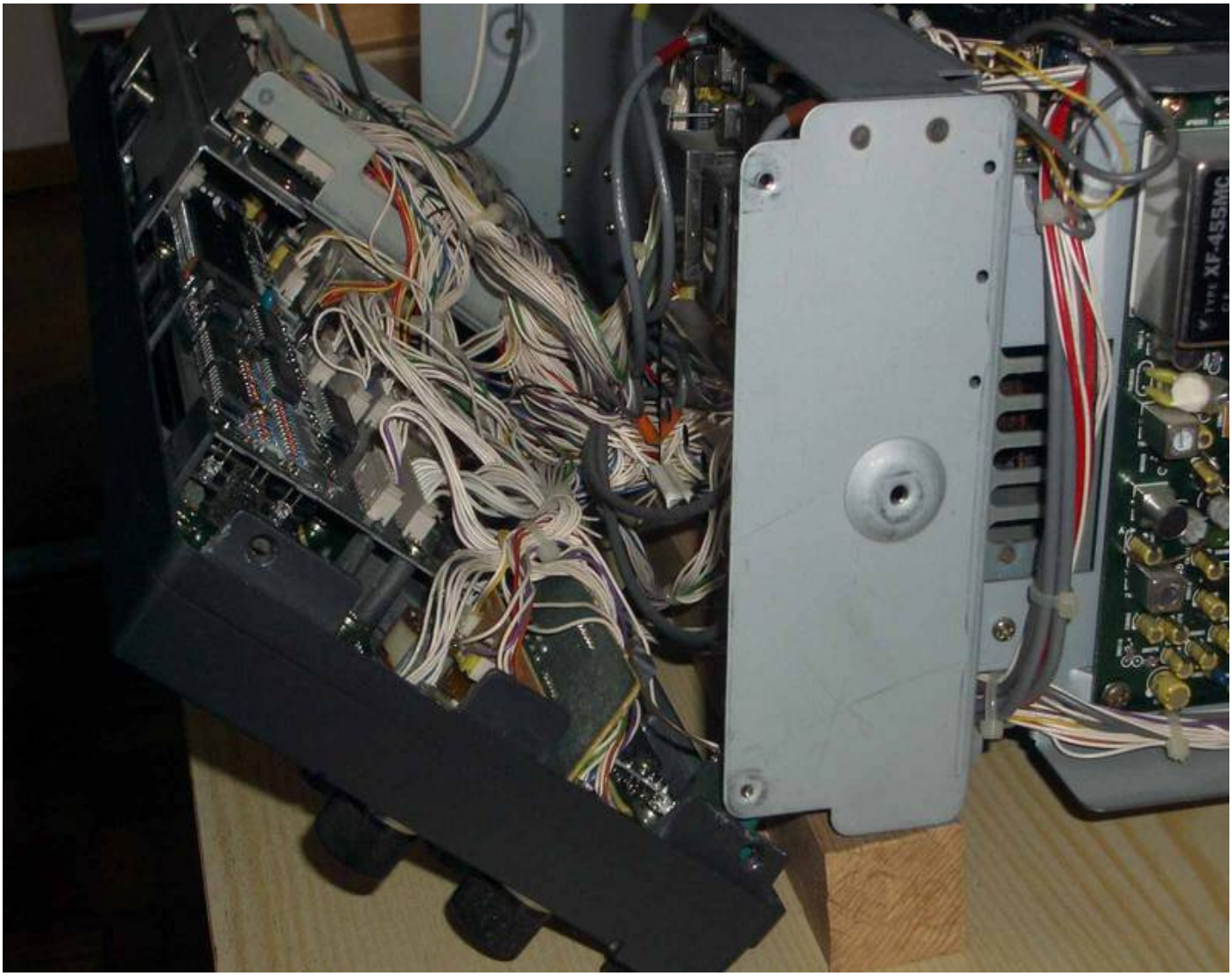
Since I published this description, I have had several requests for the bin-file or for eproms. So, if you have no access to an eprom-burner, I can ship you an eprom. I need $20 to cover my expenses. I may be out of stock for a week or two. Give me a mail to hb9bnk<at>uska.ch to discuss details.

And here is, how I replaced the eprom

- As all memory info is going to be erased, be sure to note down the necessary memory channels.
- Mark the new eprom to distinguish it from the old one, once you have both on your desktop.
- Power off; disconnact all cables, remove top and bottom covers.

- Disconnect the internal power cable on the left side

- I took a piece of wood - about 4 cm thick - and used it to lift the front part of the transceiver.
- Unscrew two screws on the left and the right side, which hold the panel to the main chassis.
- The frontpanel folds forward, held by many cables.
- The eprom is located an the left side of the front panel, under a metal cover, remove this cover.



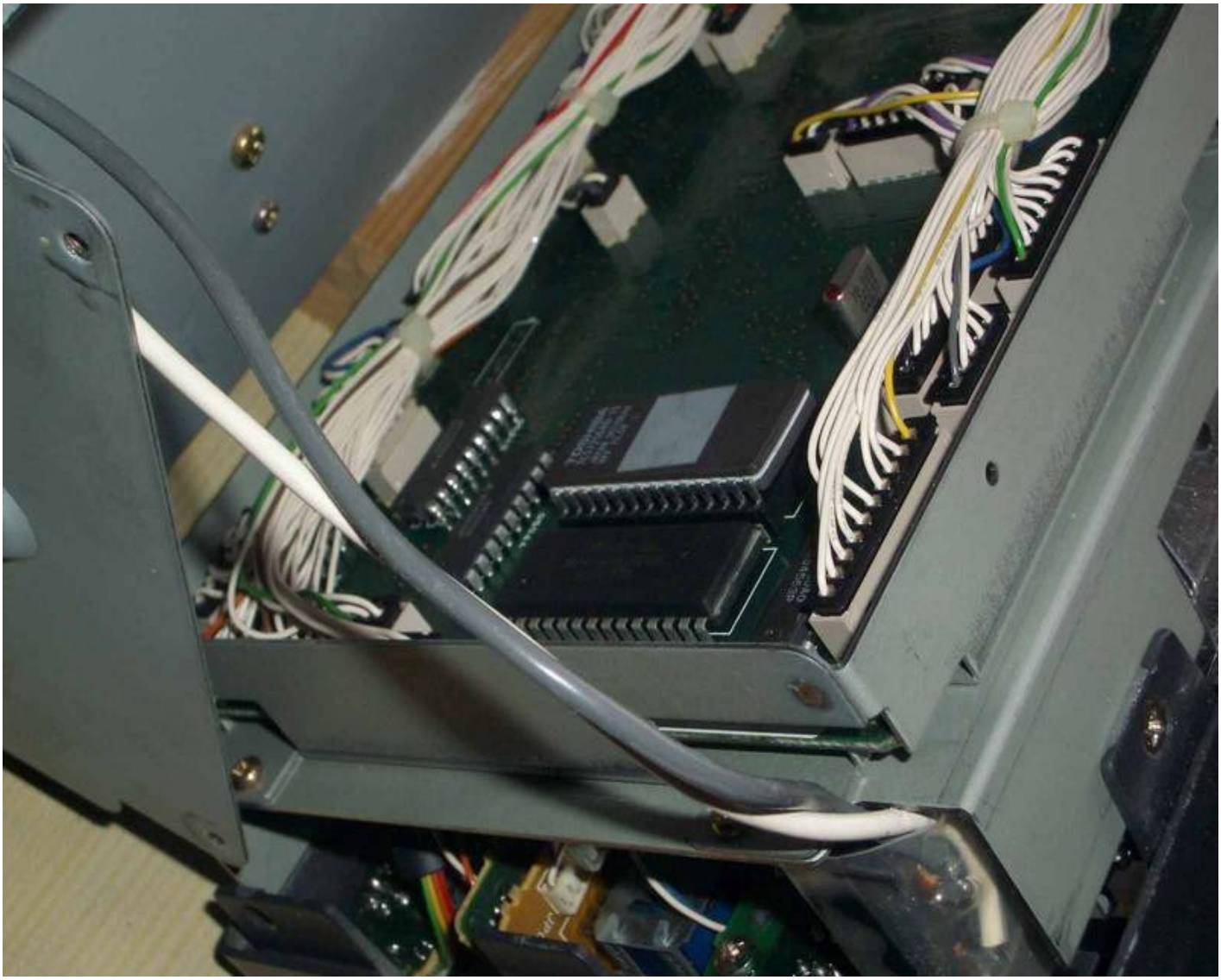
- The eprom is now visible - use antstatic procedures from now on
- **Note, that the eprom is not soldered, but simply plugged in**
- Replace the eprom, make sure, that the new one sits firmly in the socket

- Remount the cover

- Remount the frontplate
- Reconnect the internal power cable on the left side

- Connect the external power cable

- Press buttons 1.5 and 7 MHz while power on. The Las-Vegas-test will begin and show the firmware version after a short time - it should show version 6.0
- Power off
- Mount top and bottom covers



FT-1000 EPROM REPLACEMENT

The following procedure will allow the owner or service technician to replace Q5003 on the Control Unit, for service or software upgrade purposes.

Note that Q5003 is a CMOS device, and anti-static precautions should be taken during replacement of this IC. A grounded wrist band is recommended, and by all means be absolutely certain that the FT-1000 is unplugged prior to commencing service work.

Procedure

(1) Remove the top and bottom covers, as shown in the pictorial at right.

(2) Place the FT-1000 at the edge of the service bench, so as to allow the front panel to be folded down.

Now loosen the bottom two screws, and remove the top two screws, all of which secure the front panel to the frame.

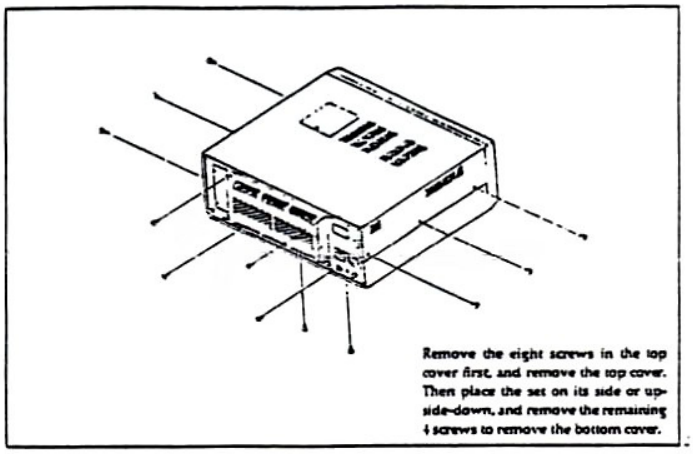
Gently fold the front panel downward.

(3) Inspection of the front panel assembly that has been folded down will show a large, shiny shield over the leftmost circuit board, which is the Control Unit. Remove the shield from the Control Unit.

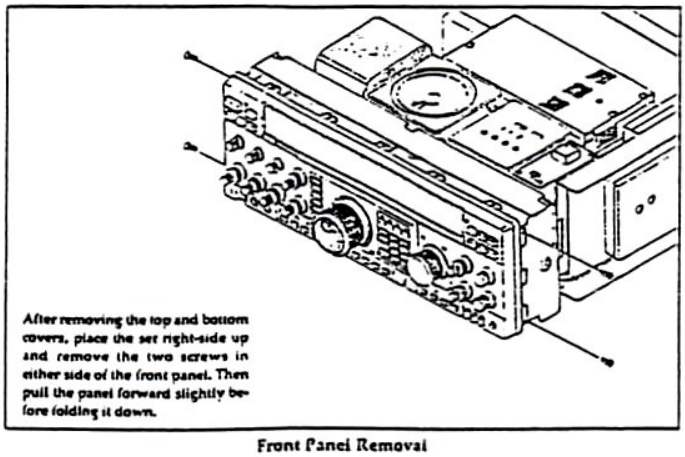
(4) Locate and remove Q5003, which is the large IC installed in a socket. Note the polarity of Q5003. Reinstall the new IC in the socket, being careful not to bend any pins.

(5) Reinstall the shield plate, and fold up the front panel assembly. Secure the panel, and replace the top and bottom covers.

Case Disassembly

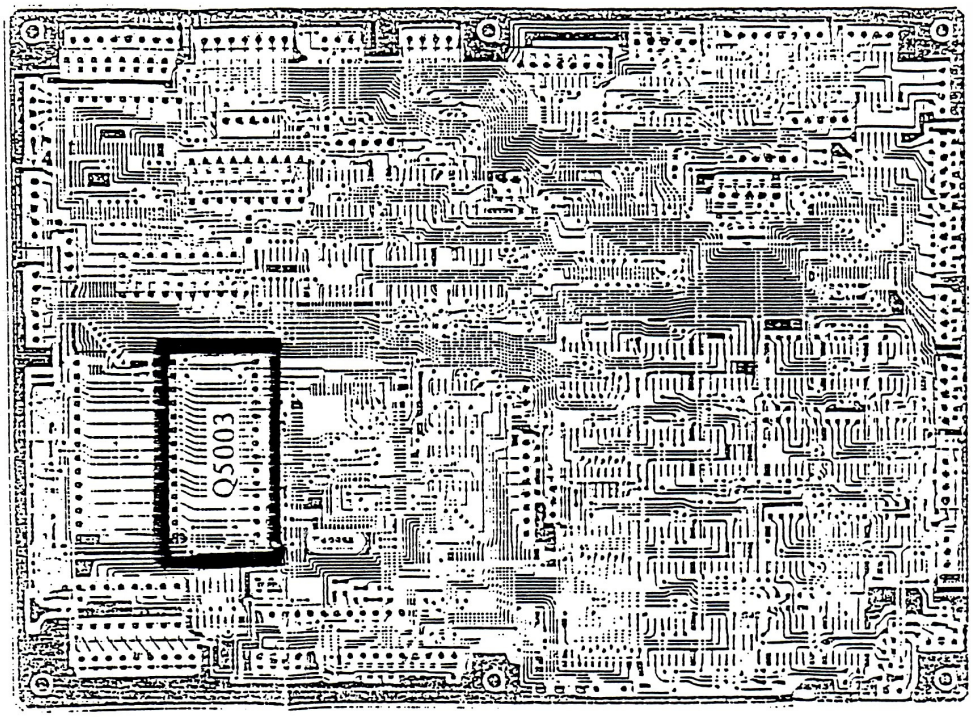


Top & Bottom Cover Removal



Front Panel Removal

FT-1000 CONTROL UNIT PART LOCATION GUIDE



This is the view of the Control Unit in its "folded down" position; that is, the bottom of the board in this depiction is actually the top of the board when folded up in its normal, installed position.

Q5003 is the only IC on this board which is socketed. Therefore, it should be easy to locate.