

Modifications for the Yaesu FT-51

19-07-1998 Extended RX and TX frequency

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Disclaimer: Perform this procedure at your own risk. The poster(s) of this procedure assume no liability, and this procedure is posted for general information only. The FT-51R radio is not fcc-type accepted for transmission outside of the amateur radio frequencies. This modification enables transmission on frequencies outside of the amateur radio band, and is legal for those individuals with mars/caps certificates. This modification requires the use of a low power fine tip soldering iron. individuals who are not experienced with soldering of surface mount technology should not attempt this modification, you could ruin your radio.

1. Remove the battery pack from the radio.
2. Remove the four screws directly beneath the battery pack on the radio.
3. Remove the two screws holding the contact portion of the battery compartment.
4. Remove the screw and battery pack release lever.

(the following steps make removal of the battery holding compartment easier)

5. Remove the four screws on the bottom portion of the back of the cabinet. Carefully remove the two halves of the radio. Pay attention to the gasket as you are separating the cabinet.
6. Remove the battery pack holding compartment.

The section you will know be working with is directly underneath the battery pack holding compartment (behind the touch tone pad).

7. There is a ribbon cable connected to the control board. You can leave the ribbon cable attached if you're a GOOD solderer, or you can release the two little black levers on each side of the ribbon cable and CAREFULLY slide the ribbon cable out of the socket and hold it back towards the case with a piece of tape. Be careful not to put a bend in the ribbon cable or pierce it.
8. Locate a set of etched jumpers on the pc board. They are located adjacent to the bend in the ribbon cable. They are not marked, and are situated as follows (o-o indicates closed, o o indicates open):

JP1001	○-○	○ ○ JP1005
JP1002	○ ○	○ ○ JP1006
JP1003	○ ○	○-○ JP1007
JP1004	○-○	

- Using solder wick or your preferred method of solder-removal, carefully remove the jumper for JP1007. This enables the 134-174, 420-470 MHz transmit.

10. Reassemble the radio, remembering to reinstall the gasket, and to carefully reinsert the ribbon cable if you removed it from the socket, and fasten down the little black socket locks.
11. Press the MHZ / and MHZ / buttons simultaneously while turning the power on to the radio. This enables the modification.

Some notes:

I experimented with removing JP1004, and it had no apparent effect. I did not experiment with any of the other jumpers except JP1007. There still may be 800 MHz receive buried some where in the radio, the Japanese version has 800 MHz receive. An earlier posting of mine indicates four large resistors (well, non-surface mount) connected between various microprocessor and memory pins, clearly an add-on. Experimentation with removing these produced no effect, HOWEVER, this was prior to my discovery of the JP1007 mod. I've played with the radio enough now, and don't want to push my luck, so let's let someone else try to find out if there are any more secrets buried in this fine piece of gear.

19-07-1998 Adjusted the threshold of the Squelsh

The FT-51R allows several operating parameters to be adjusted through the keypad. I have found that the high and low modulation levels and the squelch threshold can be adjusted this way. The procedure to accomplish this is as follows;

Turn the radio off

Hold the volume up, volume down, and CALL buttons down, while turning the radio on. (This requires you to carefully place your fingers on the buttons. I had to try a few times, but quickly found the proper finger positions.)

The menu should now read BAND1

Rotate the Rotary Selector Dial to the option you want to adjust. (There are a number of options to choose from. I have only tried the MOD H and MOD L options. I do NOT recommend adjusting other options without proper test equipment.)

Hold the FM function button for 1/2 sec. This enables you to change the displayed values.

Use the MHZ UP/DOWN buttons to select a new value.

Press the FM function button to save the new value.

Press the BAND button, and repeat the above procedure to adjust the parameters for the other band. (Note: To switch to the other band, both bands had to be "ON" when the radio was previously turned off.)

Press the CALL button to exit the adjustment mode.

19-07-1998 FT51: 1750Hz auch im Band

From: DG0OLG @ DB0HOT.#SAX.DEU.EU (Sascha)

Hallo FT-51R User und auch alle anderen...

Nach der Hardware-Erweiterung meines Geraetes habe ich festgestellt, dass beim umstellen des Bandes (im Servicemode) von 2 auf 7 der 1750Hz-Ton N I C H T, wie bisher beschrieben, verloren geht. Somit hat das FT-51R im Band 7 seinen groessten Frequenzbereich bei nutzbarem 1750Hz-Ton. (60-999,99 MHz)

Natuerlich kann dies auf verschiedene Baureihen zurueckzufuehren sein.

Mein FT-51R hatte auch den beschriebenen Jumper 4 (TX-Beschr?nkung auf AFU-Bereiche) nicht in der Originalversion. D.h. nach der im Handbuch beschriebenen Softwareerweiterung war mein Geraet nicht nur Rx sondern auch Tx-maessig erweitert.

!! Bei diesen "Tuning-Massnahmen" sind natuerlich die gesetzlichen Bestimmungen nicht zu vergessen!!v

P.S.

Bei meinem Geraet ist der Empfaenger unter 110MHz ziemlich taub! Je tiefer die Frequenz, desto tauber wird der RX. Bei 60MHz wird wohl kaum noch was zu empfangen bzw. zu hoeren sein. Bei meinem frueheren Geraet (C-558S) war der Empfaenger nicht so taub (100-110Mhz).

Allerdings ist das Geraet ja auch nicht dafuer gebaut...

Bei diesem relativ grossen RX-Bereich ist es natuerlich schade dass man kein Wide-Fm hat!

Ansonsten bin ich mit diesem Geraet doch sehr zufrieden!

Wer noch andere Erfahrungen mit diesem Geraet gesammelt hat, kann mir diese schreiben - ich bin interessiert an jeglicher Info ueber dieses Geraet! Hattet ihr Schaltplaene in den Unterlagen dazu? In der CQ-DL letztes Jahr (Test FT50/FT51) war er eigentlich beim Lieferumfang dabei.
73 de Sascha (DG0OLG @ DB0LPZ)

27-02-2000 The updated version mod for the yaesu FT-51r

This is a mod to RX and TX from 60-999 mhz on the Yaesu FT-51r

This is the only mod of this kind i have ever see!

Instructions:

1. Remove battery.
2. Remove 6 screws holding bottom cover.
3. Remove battery latch.
4. Loosen 4 screws holding outer case together.
5. Remove lower cover.
6. Unfasten ribbon cable and secure with tape.
7. Remove the two bottom of the three diodes found right above where the ribbon connect's.

8. Remove solder joint jp1004 (the lower left hand corner of the six joints), found above where the ribbon cable connects's).
9. Reconnect ribbon cable.
10. Re-assemble radio.
11. Hold down UP and DOWN Volume and CALL buttons while pressing power.

The display will read "BAND 1"

- Hold FM key down until F key blinks.
- Press MHZ UP or DOWN key several times until it reads "BAND 7".
- Press FM key again. It will stop blinking.
- Press CALL button.
- Radio will shut off.

Modification is now complete!

This would not be humanly possible without Bryan Herbert (ke6zgp) The MOD GOD!!

If you need a radio modded, he will do it !

Bryan Herbert E-mail: eavesdrop@earthlink.net

Mike Pattison E-mail: Landcruzed@aol.com

From: "Randy Martens" ramarrc@freeway.net

Date: Tue, 14 Sep 1999 17:10:35 -0400

Please change the jumper label to jp1007 and there are 7 jumper pads and not 6 as stated in your radio mods.

Otherwise the radio mods worked fine.
