

## Kenwood TH-F7E (TH F7 E THF7E) MARS/CAP (extended transmit)

### Warning:

This modification will reset your radio and therefore clear all pre-programmed memories etc. Please write safely police, aviation and cordless phone frequencies saved in your memory;-)

If you have never removed surface mount devices before, then experiment on some old PCB's first, or even better, on your friend's TH F6 handheld, before destroying or making a mess of your new radio. If your radios is not new, go ahead, mess it up ;-).

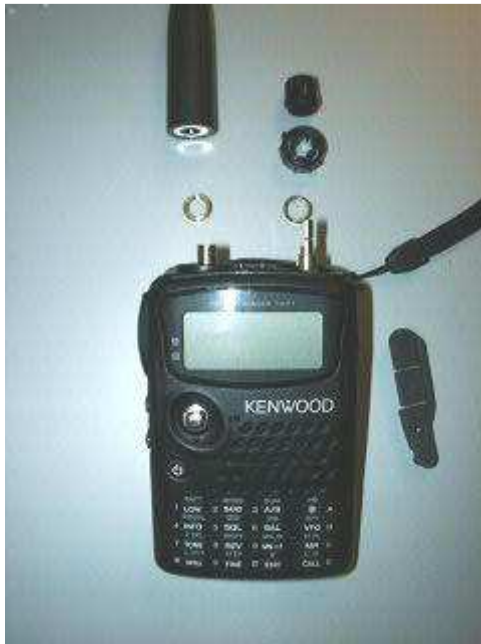
Make sure you use a low wattage soldering iron and tweezers to lift the components from the PCB. Or maybe you can use those \$2000 SMD soldering devices...

If you decide to do this modification, you do entirely at your own risk. However, make sure first you have someone to blame. Have you called your girlfriend today? ;-)

1. Remove the battery from the radio.
2. Remove the grey rubber protective cover from the right hand side of the radio. You DON'T have to remove as in this picture, just free up the SP, MIC and DC IN. If fully removed, will be a little bit hard to fix it back.



3. Remove the black plastic volume and frequency change knobs by gently pulling them vertically.
4. Remove the locking nut from the SMA aerial connector.
5. Remove the locking nut from the frequency change encoder / volume control shaft.



6. With the battery removed, look at the rear of the radio and remove the two screws at the bottom.



7. Now, Doc, let's open your next victim. It's best to gently open the radio from the bottom until you have a gap of about 10mm. (Nurse, retractor please ;-). Then hold the front panel in the palm of your left hand and gently slide the main body of the radio downwards with your right hand, until the aerial and frequency change encoder shaft are clear of the holes in the top panel of the radio. Take care not to open the radio too fast, because the internal speaker wires are very short.



8. With the radio opened up like a book, look at the left hand side of the PCB just to the left of the PCB mounted microphone. You should see two diodes and also a open pad just below were another diode could be fitted (if your transceiver is TH F7).

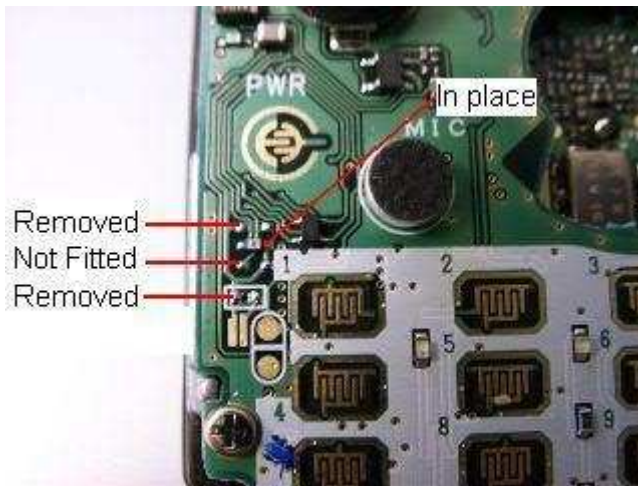
These photo's shows radio before modification.



9. Remove only the top diode. There still should be a diode in the middle position and the bottom position should be left empty as original.
10. Finally look just below the lower open pad (3rd position) you should see a resistor (zero ohm) to the left of the keypad number "1". This also must be removed to complete the modification.



This photo shows radio after modification.



11. Reassemble the radio taking care not to trap the speaker wires and also check that the small joystick and keypad membrane seats correctly.

OK That's it...

The TH-F7E will now Transmit and Receive in this intervals:

[137MHz, 174MHz)  
[410MHz, 470MHz)