

| SERVICE INFORMATION LETTER

Developed by Lee Craner WB6SSW (leecraner@aol.com)

KWM-380 TRANSCEIVER (622-5093-001, -101)
HF-380 TRANSCEIVER (622-3580-001, -101)

PROVIDE TUNE FUNCTION FOR ANTENNA TUNING

This service information letter describes a method of changing the use of the Spot push button, which normally provides an 800-Hz tone to the receive audio, to transmit a CW carrier for adjusting a manual or automatic antenna tuner or coupler. After modification, the Spot push button will transmit a steady CW carrier regardless of the setting of the Mode, MOX and VOX controls,

This modification consists of adding a user supplied relay and four diodes, relocating one wire from the front panel controls and adding five jumper wires. No permanent changes are made to the transceiver and the modification is easily removed.

Estimated time required is three man-hours.

The modification parts are itemized in the material information paragraph.

No special tools or equipment are required.

All changes are made to the front panel control wiring.

MODIFICATION PROCEDURES

- A. Turn off all power to the transceiver.
- B. Remove the dust cover by removing the four screws located adjacent to the four feet on the bottom of the transceiver.
- C. Remove the front two of the four Phillips-head screws securing either side of the front panel braces to the sides of the chassis and tilt the panel forward.
- D. Using a small piece of perforated circuit board and the pictures in Figure 1 and Figure 2 and the schematic in Figure 4 as a guide, create a circuit board for the SPDT relay, the three 1N4148 diodes and the one 1N4002 diode.

- E. Using double stick tape or other mounting method, mount the circuit board in a convenient spot on the front side of the card cage, making sure that it will not interfere with the front panel controls.
- F. Unsolder the gray wire from the S2 Spot switch and insulate the bared end using a 1/2" piece of 1/8" shrink wrap tubing.
- G. Using a 26 AWG wire, solder the S2 Spot switch terminal vacated in Step F to the point on the circuit board where the cathode ends (banded ends) of all three 1N4454 diodes join.
- H. Unsolder the green wire from common terminal of the S4 Mode switch and solder it to the cathode side of the 1N4002 diode on the circuit board.
- I. Using a 26 AWG wire, solder the green wire soldered in step I to the "pole" terminal of the relay on the circuit board.
- J. Solder a 26 AWG wire from the S4 Mode switch terminal vacated in Step H to the normally closed terminal of the relay on the circuit board.
- K. Solder a 26 AWG wire from CW terminal of the S4 Mode switch to the normally opened terminal of the relay on the circuit board. This terminal of the S4 Mode switch will also have a gray wire soldered to it.
- L. Using a 26 AWG wire, solder the "tip" terminal of J10, the Key jack on the rear panel of the transceiver to the anode end of one of the two remaining 1N4454 diodes on the circuit board. This terminal on J10 will also have a green wire soldered to it.
- M. Using a 26 AWG wire, solder the ungrounded terminal of S7A MOX switch to the anode end of the final 1N4454 diode on the circuit board. This terminal on S7A will also have a blue and a brown wire soldered to it.
- N. Plug transceiver in, turn on, and check that carrier is transmitted whenever the Spot push button is pushed, without regard to the setting of the Mode, MOX and VOX controls.

NOTE: Since pushing the Spot button will cause the transceiver to transmit a carrier, care must be used not to transmit on an unauthorized frequency or to cause unnecessary interference.
- O. Reinstall the two Phillips-head screws removed in step C.
- P. Reinstall the dust cover and secure with the four screws removed in step B.

MATERIAL INFORMATION

The parts listed below are required to modify one KWM-380 or one HF-380. Numbers shown in parenthesis are Radio Shack catalog numbers.

<u>QTY</u>	<u>DESCRIPTION</u>
1	SPDT 5VDC Relay (275-240)
3	Diodes, 1N4148 (276-1122)
1	Diode, 1N4002 (276-1102)
1	Perf board 1 3/4 x 1 3/4 (276-148)
3 inches	Double stick foam back tape
6 inches	1/8" shrink wrap tubing
3 feet	Wire, 26 AWG. insulated hook up (278-858)

NOTE: I would like to keep track of the number KWM-380's and HF-380's that have been modified per the above. So, if you perform the above modification on your transceiver, please let me know by sending an email to me at leecraner@aol.com.

73

Lee Craner WB6SSW

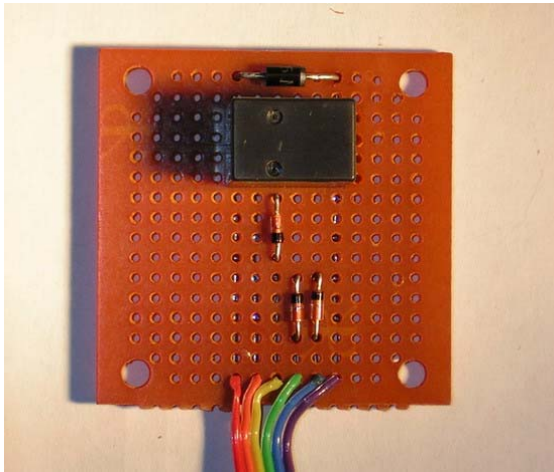


Figure 1

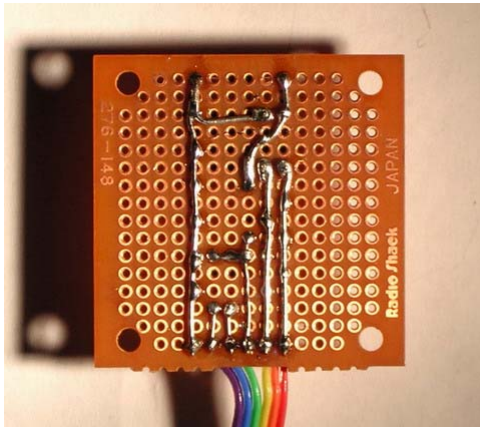


Figure 2

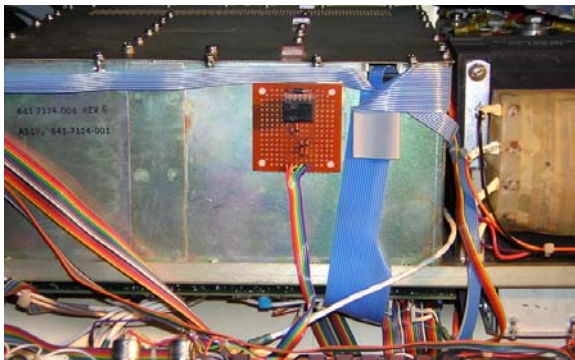


Figure 3

SERVICE INFORMATION LETTER Spot Switch Modification

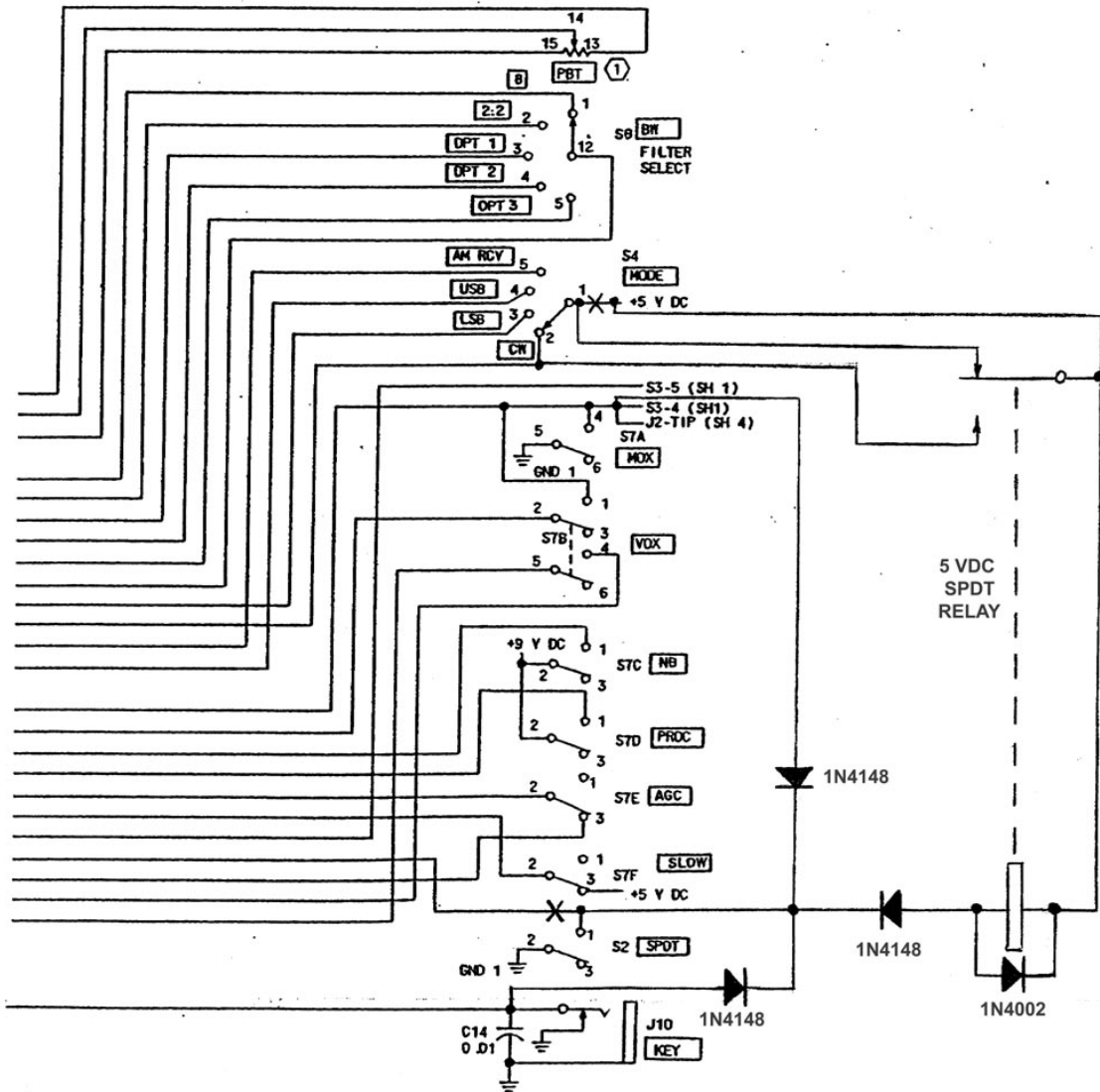


Figure 4