

COBRA 148GTL & 2000GTL FINE VOICE LOCK

This modification gives: fine tune to the 148GTL and improves the usefulness of the 2000's fine tune. If you have converted your 2000; you probably noticed that at the extreme CCW position of the coarse tune; the fine tune has no effect on frequency-period. That is because the coarse tune is now at ground potential on it's swing, and fine tune has no voltage to add or subtract from.

This procedure will eliminate that problem. In my unit at the max CCW position of coarse tune: the fine tune moves the Fo 1.3KHz at max CW position, overall tuning range of fine tune is 2.5KHz.

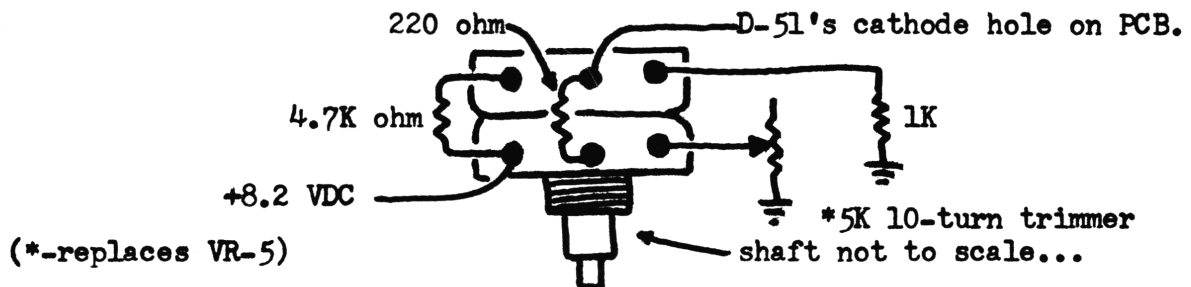
For the 148GTL you will need a coarse and fine tune dual pot, with concentric shafts: front portion should be 20K and rear portion 1K, inner shaft should control rear pot. NOTE: Be aware, the shafts for the control used in 2000GTL will not fit the 148GTL, as the shafts are too short. Control will work however-but rubs the face plate of unit. Don't order it unless you just have to have as the cost is \$7.50 + shipping. (UPDATE: ON COST! - Try \$12.50 +, UPS collect; without knobs and knob collets!).

The right size control dimensions are: Outer shaft length from the top of bushing - 5/8", inner shaft length from the top of outer shaft is 3/8", bushing size is 1/4". As of this writing neither Uniden or Dynascan can provide this correct potentiometer. The Cobra 148GTL-DX has the ideal part, but no part # available. One note however: Dual Potentiometer Manufacturer is ALPS - if anyone can get ahold of their catalog - BINGO! Let SCB know immediately and will pass on information to all readers.

Parts required for modification of Fine Tune:

- 1 - 1K ohm resistor
- 1 - 4.7K ohm resistor
- 1 - 220 ohm resistor
- 1 - 10-turn 5K ohm trimmer
- 1 - Dual Pot as described above if going to do 148GTL.

Remove the following components: R-174, R-175, R-44, VR-5, R-187, R-188, D-51, D-52, and D-75. Wire up the potentiometer as shown below..



To align the frequency, center up the knobs and adjust all three modes for center slot. Now, decide how much slide you will need. The slide is adjustable from 5KHz to 20KHz, but only in the down portion. Upwards amount of slide will remain the same. Reason: Voltage is remaining constant at the top of control; but can adjust resistance to ground with the 10-turn trimmer; thus can control the amount of voltage drop. In most cases the slide up will be about 7KHz and down about 13KHz.

Remember the 5K trimmer will control the down slide, so if it doesn't go down that far - don't panic! Adjust the 5K trimmer, for the desired range. If you want maximum slide; the 5K 10-turn trimmer may be omitted; but insert a 100 ohm resistor in its place. This is a safety measure to prevent shorting out the 8.2VDC source, - 'Murphy's Law!