

ALIGNING THE GE SUPERADIO

by Gerry Thomas

One of the odd things about my GE Superadio is its seemingly frequent (i.e. every few months) need of alignment. Now, my wife loves the radio and it's certainly possible that she's bumped or dropped it a few times, but she won't admit it. At any rate, what follows is the procedure for aligning the RF, IF, and oscillator stages of the Superadio. A DXer's Technical Guide contains an abbreviated version of the method but does not include illustrations, so in the interest of completeness and greater clarity, the following:

Accessing the interior of the cabinet

1. Unplug radio.
2. Remove the six screws on the back of the cabinet and the one that resides in the battery compartment.
3. Remove (i.e. pull off) the treble, bass and loudness knobs.
4. Take the AC cord and wrap a section of it around the tuning knob and pull straight off. Do not pry the skirt of the knob with a screwdriver unless you want a knob skirt with dings.
5. Press the on/off switch down to the "on" position.
6. Now carefully swing the bottom of the front half of the cabinet up and away, being careful not to exert excessive pressure on the on/off switch (it's a tight squeeze)

RF Alignment

7. Okay, now that we're inside the thing, look below and under the tuning scale and you'll see a circuit board on which is mounted the multi-ganged variable capacitor (VC; see Figure A). On the VC you'll notice five adjustment screws; these are, reading from left to right, C1L, C1K, C1H, C1J, and C1G.
8. Now plug in the radio and tune to a (preferably weak) station around 1400 kHz. Take an insulated screwdriver or, better yet, a plastic alignment tool, and adjust C1J and C1K for maximum signal.
9. Tune to a weak station around 580 kHz and adjust transformer T10 (the metal can with the hole in the top; see Figure A) for maximum signal.
10. Repeat steps 8 and 9 until no further improvement is noted. The RF stage is now aligned.

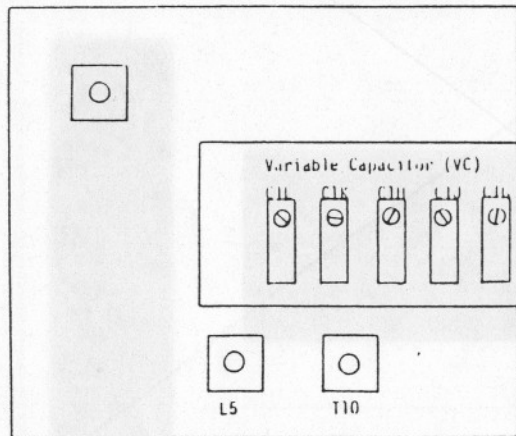


Figure A

IF Alignment

11. To align the IF's, look at the lower right quadrant of the interior of the cabinet (back half) and identify the circuit board on which the control knobs and switches are situated (see Figure B on the next page)
12. Locate IF transformers T4, T5, T6 and T9 (these are labelled on the board but the labelling can be difficult to see).
13. During the daytime (if possible) find a moderately strong local station on the low end of the band, preferably below 600 kHz. Chances are, a more distant station will be audible on an adjacent channel, especially if you place the local in the deepest possible null. Once you've found such a situation, carefully adjust with whatever alignment tool you're using, transformers T4, T5, T6 and T9 (in that order) so that the weaker station is optimally audible (i.e. best level/least splash from the local). Repeat the procedure working backwards--T9, T6, T5, T4. Repeat until you're satisfied that the signal is as good as possible. Realize that it is possible to reduce the splash of the local to a minimum but that, at the same time, the level of the weaker station will decrease to an unacceptably low level---select the best compromise point.

14. Repeat step 13 with a local station/weak station situation on the high end of the band.
15. Re-check the low-end situation.
16. Repeat steps 13-15 until no improvement is noted. If you've never before aligned the radio, audio will probably sound somewhat bassier than the pre-alignment audio---a sign of improved selectivity.

Oscillator alignment

It shouldn't often be necessary to make this adjustment, but if you have calibrated your dial and begin to notice read-out errors, proceed as follows:

17. Locate adjustment screw C1L on the VC (Figure A), tune to a station on 1600 kHz, and carefully adjust C1L for maximum signal.
 18. Locate L5 on the same circuit board and, after tuning to a station on 540 kHz, carefully adjust L5 for maximum signal.
 19. Repeat steps 17 and 18 until the radio properly tunes both ends.
- Note: Ideally these adjustments should be made at the extreme tuning fringes of the set (i.e., 1630 and 510 kHz). Use the background noise level as a gauge if you choose this method.
- Note: Do not approach the oscillator adjustment cavalierly; a slip of the adjustment tool and you can spend the rest of your life chasing a frequency across the dial.

20. Re-assembling the cabinet should be self-evident; just be sure to be especially careful not to bend the on/off switch.

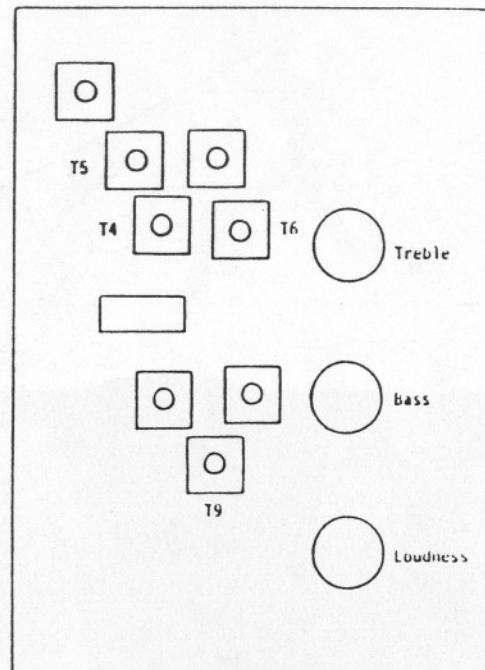


Figure B

Best DX---GT