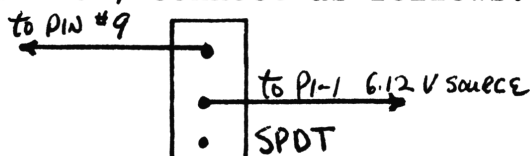


# REALISTIC TRC 459

1. Remove 9 screws in bottom cover and set aside.
2. Remove top cover
  - A. Remove 4 screws near each corner on sides
  - B. Remove 2 screws on center support
  - C. Remove clarifier, tone, RF gain, squelch, volume knobs
  - D. Lift off top.
  - E. Unplug speaker connector and plug in ext. speaker.
  - F. Unplug connector from keyboard to PC board.

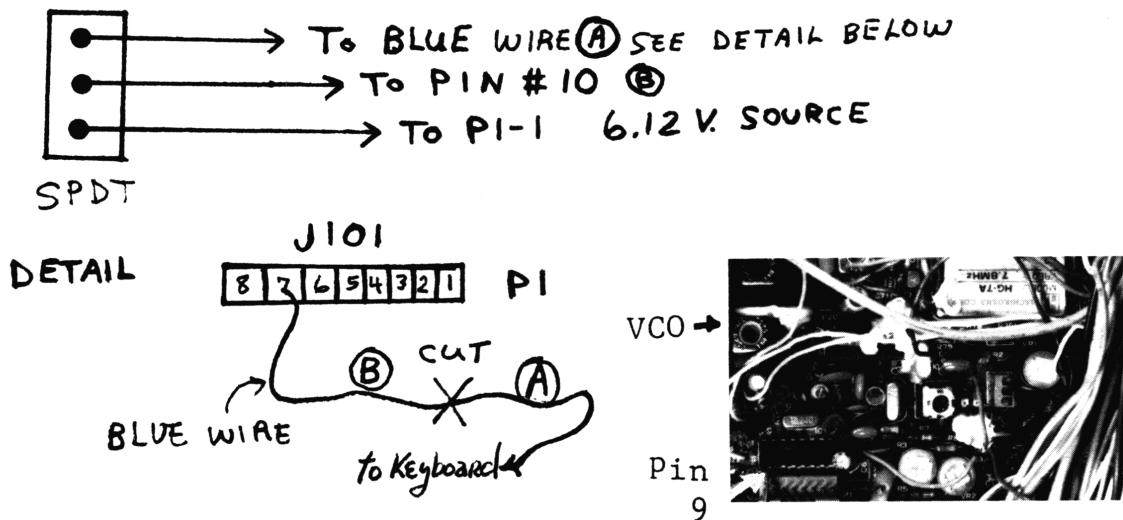
Now we are ready to begin modification

3. Remove one screw on each side of front panel to swing up toward front (remove mike).
4. Unplug J101-P1 connector toward front of IC1 on main board.
5. Very carefully, using an xacto knife with #11C blade cut away a small portion of the IC to expose Pin 9 (which has been clipped by manufacturer) and solder a wire onto it, using a grounded tip iron and applying as little heat as possible very quickly.
6. Connect another wire, to PI-1, (gray wire on J101)
7. Using a SPDT switch, connect as follows:



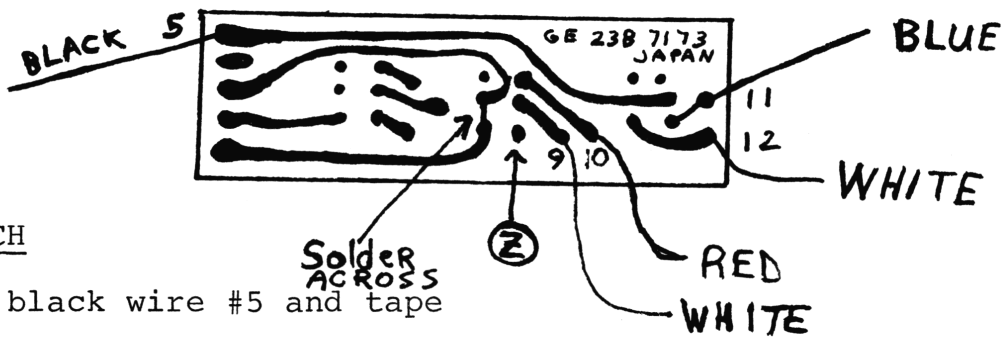
REALISTIC TRC 459 (Cont'd)

8. Wire another switch as follows-SPDT



Note: Do the following steps if you want the channels on the NB/ANL and Dimmer switch:

1. Remove SWR CAL, NB/ANL, Dimmer knobs.
2. Remove 2 screws holding switch board in place.
3. Lift up board so it is accessible.



DIMMER SWITCH

- A. Cut black wire #5 and tape
- B. Cut blue wire #11 and tape
- C. Cut white wire #12 and tape
5. Solder a new wire onto where black wire was and connect other end to P1-1 to pick up 6.12V
6. Solder a new wire onto where blue #11 wire was and connect the other end to Pin #9 on IC1.

## REALISTIC TRC 459 (Cont'd)

### NB/ANL

7. Cut red #10 and white #9 and tape.
8. Solder across NB switch so #2,13 and 3, 14 are connected together. This is so NB will always be on.
9. Solder a wire from where white wire was (#9 hole) and other end to Pin #10, IC1 (blue wire, Step 8 page 1).
10. Solder a wire from where red wire was ( 10 hole) to end of blue wire (cut in Step 8 Page 1) encoder side.
11. Solder a wire to unused switch pole opposite #9 hole (marked ~~Z~~ on above drawing) and connect other end to #5. Step 5 above to pick up 6 volt supply.
12. Reinstall board and knobs.

### CHECKOUT AND ALIGNMENT

1. Double check all steps up to this point.
2. Plug in keyboard connector.
3. Apply power.
4. Adjust T1 VCO for full coverage.
5. For AM Mod. clip D54. This set does not have real good audio.
6. For ALC, clip R22. Sideband will run about 15-20W pep.
7. VR14 is AM power adjustment. It will bring it up to about 8-10W, but I suggest keeping it at 4-5W to get good modulation drive.

### CLARIFIER MOD.

1. Cut wire off of J103-3 and ground (this is a violet wire)
2. Cut green wire off J103-1 and splice into gray wire next to R2 at point 35. This is a 6.12 volt source.
3. Clip R2.
4. Slide +3KC -2KC. Super diodes or chokes will not give you anymore slide in this design.
5. L2 adjusts USB; VR3 adjusts LSB; VR2 adjusts AM. Readjust as necessary to give proper up/down slide and proper USB/LSB offset.

REASSEMBLE, HOOK UP SPEAKER AGAIN AND YOU ARE READY TO GO.

This set, as is, will perform really well as a low frequency radio. However, with the stock 17.8875 crystal, it will only go up to 27.595. If you would like to change the output frequency, here is how to do it.

If we substitute a 17.215 crystal in place of 17.8875 crystal, channel 1 will drop down to 26.295, a drop of 670 KC. If you subtract the crystal frequency you can see that a change in X2 gives a corresponding change in output frequency of the same amount of KC difference between X2 and the new X2. For coverage up to 28.045, change X2 to a 18.3375 Xtal. Adjust T1 VCO adjustment for full coverage.

## PLL INFORMATION

Any chassis which has the MB8734 PLL chip can easily be modified. Although it could be done by switching the 11MHz crystal, that leaves something to be desired. By far, the best way to do this is to pull the 8734 and replace it with the now famous MB8719 PLL chip. Then use the standard modification (pins 10 and 11) as found on pages 25-27 this volume. Check to make sure the unit in question has an 11.3258 Xtal or you will go down instead of up.

