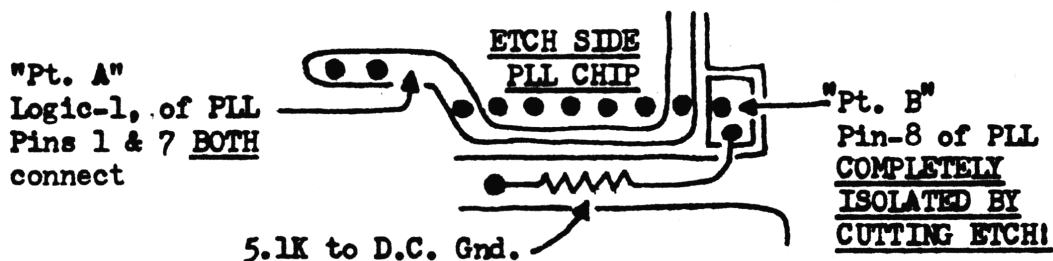


Marko CB-444, Conversion to 'ALPHA'

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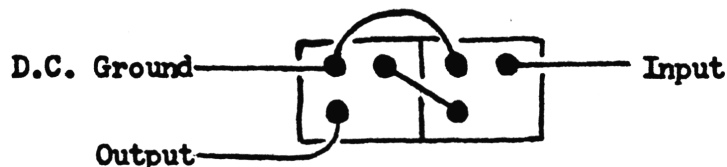
1. Remove covers; mark location of color-coded wires going to speaker; then pull the connectors off. All further work on unit is done with external speaker. Use a dummy load when tuning....
2. Locate D-1; is found in front of L-1. Carefully remove, clean out holes.
3. Replace D-1 with the 'Super Diode', DO NOT apply excess heat when soldering!
4. Check unit to see that all present frequencies are still operational.
5. Follow diagram below for PLL Chip modification. Cut etch completely and make sure Pin 8 is completely isolated from D.C. ground. Then install a 5.1K ohm 1/4W, 5% resistor as shown. (Note: Pts A & B, as will use in later steps.)



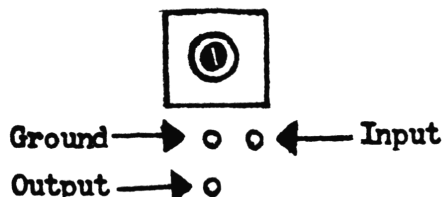
6. Check unit again, see that all present frequencies are still operational.
7. Locate Orange wires (2) on the ANL/NB switch. Trace both back to source; one should go to standoff #41 - remove wire from standoff. The other should trace to Hi/Mid/Lo switch - cut this OFF at the ANL/NB switch.
8. Locate the Grey wire on ANL/NB switch - trace back to source, should go to standoff #31. Remove from standoff.
9. Re-route both 'long wires taken off standoffs' to etch side of PCB. Cut to length so that the Orange will go Pt. A, and Grey to Pt. B. Solder in place carefully. (See Step 5 for Pts A & B.)
10. Re-route the short Orange wire up to component side of chassis. (Optional-you might want to replace this wire at the Hi/Mid/Lo switch, as will require splicing to reach standoff #31.) If not; splice/sleeve another piece of Orange wire to existing; re-route to standoff #31 and **SOLDER** to it.
11. Solder another piece of Orange wire from standoff #31 to standoff #41.
12. Tie up all wires in the cable sheath, including those re-routed to PLL.
13. ANL/NB switch to ANL: re-check all present frequencies. Switch to NB, Channel 1, Low - should have 25.685MHz. If not re-tune L-1, SLOWLY, a maximum of $\frac{1}{8}$ turn CW or CCW. If it doesn't come up try a 'slight' readjustment of L-2.. (L-1 and L-2 are used to get the frequency coverage at this time.)

Marko CB-444, 'ALPHA' (cont.)

14. Using the 'Alpha Frequency Chart'; for switching and outputs: adjust L-1, L-2, and T-2 at this time only to get all the frequencies up. Don't bother adjusting for maximum power at this time!
15. When all the Fo's from 25.685 to 28.305 are obtained you then adjust the following for PEAK LINEAR POWER. (As flat as possible across the whole band.) Adjust T-3, T-4, L-7, L-11, and L-12.
16. Be careful that the top or bottom frequencies don't fall out drastically! In some cases, L-1, T-2, T-3, T-4, L-7, L-11, L-12. (L-1 is very critical to broadbanding!).
17. If linear power output can't be obtained. L-7, L-11, and L-12 will have to be 'stagger-tuned'. (This has had to be done on only 20% of all units worked on so far.)
18. With no changes in the RF Power section; all units worked on achieved a minimum of 6W across the whole band. By taking your time, can get it to do 7W with no trouble.
19. If you are slightly off-frequency, the small capacitors next to the crystals will get you back on.
20. Receive was no problem in this unit!
21. Rejection Was A Problem! Remove the 455KHz filter (CF2); obtain another from local electronics outlet; or from a 'junked' out C.B.
22. Glue or tape the two filters together, then re-wire as below.



23. Carefully reinstall the new filter on the component side in the cleaned out holes as follows below:



24. Additional adjustments: RV1-Sq Rng; RV2-AMC; RV3-S Ntr; RV4-RF Mtr. There is one additional adjustment pot located on small PCB. (Techs, this is for deviation 1.7KHz, the two coils are for FM Rx.)