

AX/AR-144 Mod with automatic 5KHz drop
by J.A.

1. "Clean Off" Brite/Dim switch by removing R419 and R421 from switch PCB. Also remove ground line from meter lamp (tied next to R421) and reconnect to PCB ground. This 'hard wires' unit to brite mode. Clean out all holes where components removed.
2. Perform conversion from SCB Volume 11, page 17-18, DISREGARD SLIDE PART OF MODIFICATION. Wire Pin 9 through 1N914 to switch side of R421.
3. New Slide Mod: Remove clarifier White lead from main PCB and reconnect to collector of TR35. Remove Brown lead and connect to wiper of a 20K 10-turn trim pot. Connect one arm of trim pot through 1N914 to hole where meter lamp ground line was on switch PCB. (See Fig. 1) Leave other arm of pot loose, no connection.
4. On main PCB, remove D32; change D30 to a 'Super Diode' connecting a 5.6_mh choke in series to cathode side. Replace R122 with a 39K $\frac{1}{4}$ W resistor. DO NOT simply remove R122 with no replacement; as will 'overload' the Varactor and hangs up slider on one Fo per channel-NO slide at all! —This is **PROVEN MISTAKE!**— Clarifier circuitry should now look like Figure 2.
5. With unit in 'Low Fo' mode ('Dim') center up clarifier: L16-AM, L17-USB, L18-LSB. Switch to High Fo's (Brite) and adjust 10-turn trim pot until the frequency is again centered on the 'odd'.
NOTE: If you have moved the main clarifier pot, will have to start over again with this step.
6. L14 may need touching up to get all the Fo's. In some cases will require another 'Super Diode' to make the VCO stretch.

New Fo's: Dim - Regular CB channels
Brite - 27.415-27.855MHz, selector 1-40

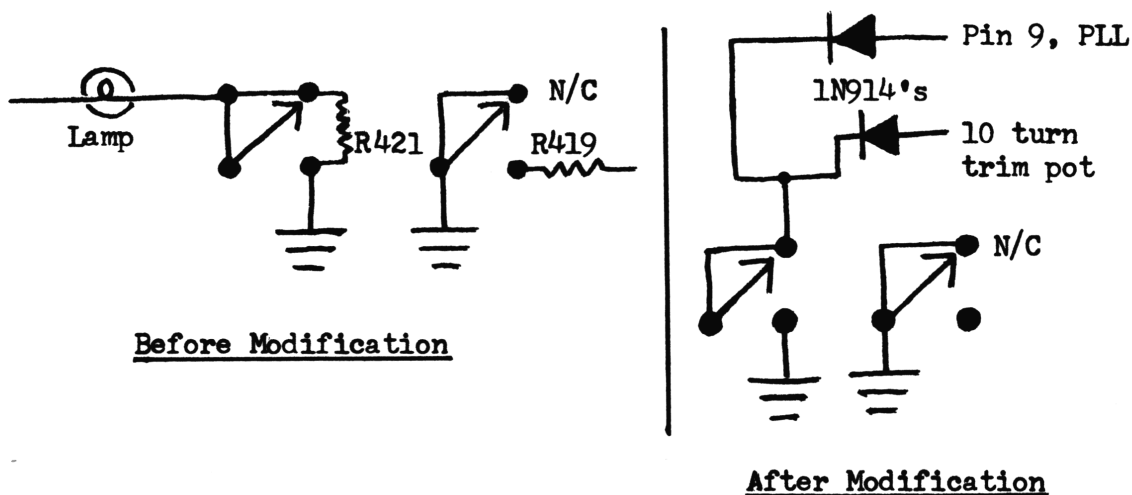
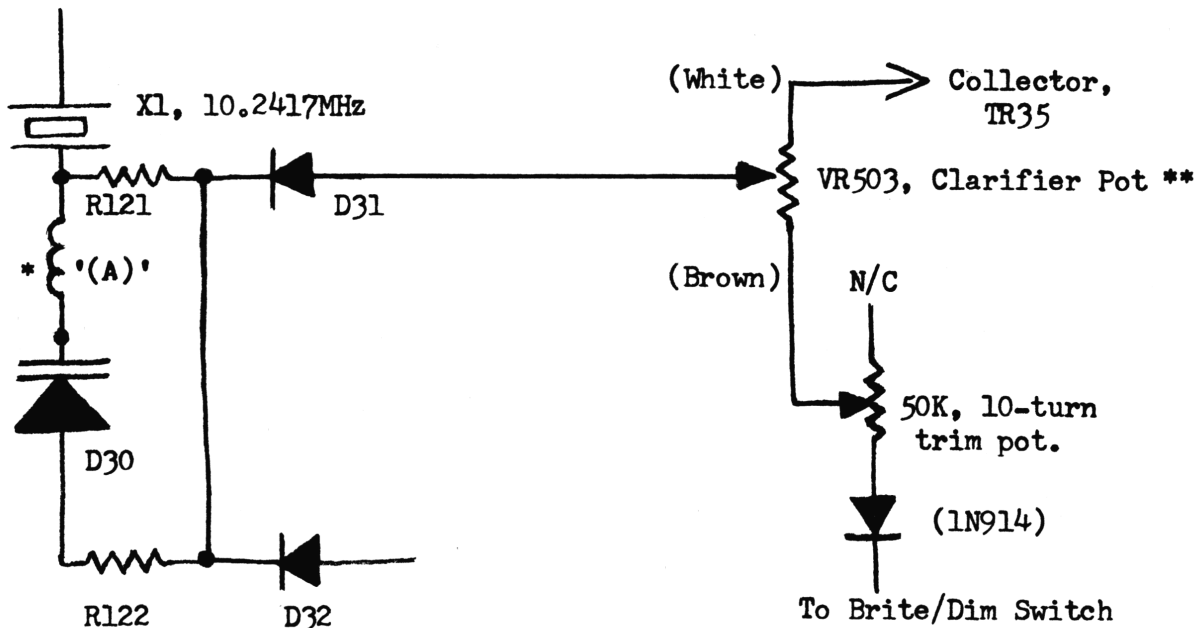


FIGURE 1 - BRITE/DIM SWITCH (BRITE POS SHOWN)

Figure 2, Clarifier Circuit...

(READ ALL NOTES PERTAINING TO CHANGES.....)



'(A)' - Choke added in series, 5.6 microhenry.

D30 - Change to a 'Super Diode'.

D32 - Remove completely from circuit.

R122 - Change to a 39K $\frac{1}{4}$ W.

* - 5.6_mH was chosen to give maximum slide without dumping. TOO MUCH downward slide on rig. R122 was changed to a 39K for same reason. In fact 'prototype' rig (S/N 130019XX) had to almost 'bottom out' slugs in L16, L17, and L18 to center clarifier.

** - Prototype used a 32K Duncan 10-turn pot. A 20K 10-turn pot would possibly work better - no 'dead spot' at ends. Original clarifier pot is a 20K.

TROUBLE SPOT

G.L.

PC66, Cobra 25GTL, and similar chassis: Final Out, replaced-still no output? Checked driver and buffer-OK. Collector voltage on RF Final doesn't pull down to proper level under TX condition. Tune L17 towards top of core (TA7310 mixer output coil). If some power returns-REPLACE L17... Will check good on VOM, but is bad.
