- 7. SOLDER THE OTHER LEAD OF THE 390pf CAP TO THE CENTER LEAD OF A 5" LENGTH OF RG 174/U.
- 8. SOLDER THE OTHER END OF THE COAX CENTER LEAD TO A BOTTOM N/C CONTACT OF THE DPDT SWITCH, WHEN MOUNTED AS VIEWED FROM THE BOTTOM OF THE CHASSIS. SOLDER THE SHIELD TO THE TOP OR N/O CONTACT, WHEN THE SWITCH IS IN THE STANDBY POSITION.
- 9. SOLDER THE CENTER OF THE REMAINING COAX TO THE CENTER TERMINAL OF THE AUDIO JACK AND THE SHIELD TO THE GROUND TERMINAL. SOLDER THE CENTER LEAD OF THE OTHER END TO THE COMMON OR CENTER TERMINAL OF THE SIDE OF THE SWITCH ALREADY USED. SOLDER THE SHIELD TO THE N/C OR TOP TERMINAL WITH THE OTHER SHIELD.
- 10. SOLDER A WIRE TO THE END OF RESISTOR R46 AS REMOVED FROM THE BOARD.
- 11. SOLDER THE END OF A WIRE IN THE HOLE WHERE R46 WAS REMOVED FROM.
- 12. SOLDER THE OTHER END OF THE WIRE, THAT YOU CONNECTED TO THE RESISTOR, TO THE CENTER OR COMMON TERMINAL OF THE SWITCH ON THE SIDE NOT YET USED.
- 13. SOLDER THE UNCONNECTED END OF THE WIRE CONNECTED TO THE PC BOARD, TO THE TOP OR N/C TERMINAL OF THE DPDT SWITCH WHEN IN STANDBY AS VIEWED FROM THE BOTTOM.
- 14. MOUNT THE SWITCH, REINSTALL THE BOARD, AND REASSEMBLE UNIT.

THE MODIFICATION IS NOW COMPLETE AND SENSITIVE ENOUGH TO CHECK CRYSTAL OSCILATOR CIRCUITS RIGHT AT THE CRYSTAL. (BUT NOT RECOMMENDED.)

## COBRA 18LTD TUNE-UP

REFER TO SECRET CB VOLUME 20, PAGE 36.

PROCEED AS FOLLOWS: INJECT A 1Kc TONE VIA MIC.

TUNE/PEAK L11, L10, L9 (AFTER SLUG IS INSERTED), & L7. L8 IS NOT AJUSTABLE, IT IS A FIXED RF CHOKE.

FOR TALK BACK; ADD A 1000hm RESISTOR AT PIN "5" OF THE MIC CONNECTOR INSIDE THE RADIO, AND A SHORT PIECE OF WIRE ON OTHER END TO THE CASE OF L4.

NOTE: RADIO OVERMODULATES EASILY. CHECK ON SCOPE AND ADJUST AS REQUIRED.

## REALISTIC TRC-415 TUNE-UP

FINAL = 2SC2078

TUNE-UP: TRANSMIT, ADJUST L7, L8, L9, L10, L11, L12 (PEAK WITH 1Kc TONE); ALSO TRY SQUEEZING/SPREADING L13 AND RFC9.

RECEIVE, ADJUST L2, L3, L4, L5, RV1 = "S" METER LED'S, RV2 = RF METER LED'S, RV3 = SQUELCH RANGE, RV4 = MODULATION ADJUST.

RADIO TALKS GOOD WHEN PEAKED AND RV4 WIDE OPEN WITH JUST THE STOCK MIC! RECEIVER FILTER IS A CFU455H EITHER DOUBLE OR BETTER YET, REPLACE WITH A CF"W"455H.(THERE'S NOT MUCH ROOM FOR ANYTHING ELSE. RADIO IS AN ITTY BITTY

THING!) NO ROOM FOR CHANNEL KIT. MIGHT TRY SOMETHING SIMILAR TO THE TRC 210 "SKIP" CONVERSION (REF: SECRET CB VOLUME 24 PP 31-34) FOR EVEN CHANNELS.

## **COBRA 2000GTL COUNTER 2MHz SPAN**

## COURTESY CARD KIT

MODIFICATION FOR EXPANDING THE READING CAPABILITY OF THE COBRA 2000GTL COUNTER, TO A BANDWIDTH OF 2MHz, USING A SPECIAL "GRAY" EPOXY CARD KIT, VERY MUCH LIKE THE TC-DX KIT, ONLY, MADE JUST FOR THE 2000GTL COUNTER. THIS KIT IS AVAILABLE FROM SELMAN ENTERPRISES. JUST SPECIFY THAT IT'S THE GRAY 2000GTL COUNTER CARD KIT.

- 1. UNPLUG THE FREQUENCY COUNTER/CLOCK UNIT.
- 2. ON THE PC SIDE OF THE CB UNIT THERE ARE 4 SCREWS THAT HOLD THE FREQ/CLOCK UNIT ON TO THE CHASSIS. REMOVE THESE 4 SCREWS.
- 3. REMOVE THE TOP AND BOTTOM COVERS OF THE FREQ/CLK UNIT. MOUNT THE EPOXY PACK INSIDE THE TOP COVER, IN THE REAR/RIGHT CORNER, LEAVING 1/4" CLEARANCE FROM THE LIPS. WE SUGGEST THAT YOU USE 3M 4475 PLASTIC ADHESIVE.
- 4. INSIDE THE UNIT YOU WILL FIND TWO TUNING TANKS. ALL CONNECTIONS ARE TO BE MADE NEAR THESE TANKS.

NOTE: THIS IS A DOUBLE SIDED BOARD, WITH PLATED THROUGH HOLES. IT IS NOT THAT COMMON IN CB SO SOME OF YOU MAY NOT BE FAMILIAR WITH THE PROCEEDURES ENVOLVED IN REMOVING OR CHANGING COMPONENTS IN THIS TYPE OF BOARD. THERE ARE TWO RECOMMENDED WAYS. \$1, YOU CAN CUT OUT A COMPONENT LEAVING ITS' LEGS LONG ENOUGH TO SOLDER THE REPLACEMENT COMPONENT TO. \$2, OR, CUT THE COMPONENT LEGS SHORT AND SUCK THE REMAINING PIECE OUT ON THE BOTTOM SIDE OF THE BOARD. IN EITHER CASE, YOU MUST BE CAREFUL NOT TO OVERHEAT THE PLATED THROUGH HOLE EYELET SO AS TO PREVENT SEPERATION OF IT FROM THE PLATED THROUGH HOLE. IF YOU USE THE FIRST WAY IN THIS MOD, YOU SHOULD PUT SLEEVING ON THE WIRES SO THAT YOU CAN SLIDE THEM DOWN IN PLACE AFTER SOLDERING. DROP A DAB OF 4475 ON THE INSIDE OF THE SLEEVE AFTER IT IS IN PLACE TO PREVENT ITS' MOVING.

- 5. LOCATED BETWEEN THE TWO TANKS MENTIONED AND THE WALL OF THE SHIELD, FIND FET501. REMOVE THIS FET. DRAIN (D) IS THE LEG TOWARD THE CORNER. SUPPLY (S) IS THE CENTER AND GATE (G) IS THE REMAINING LEAD.
- 6. THERE IS A .022uf CAPACITOR, C531, TOWARD THE CENTER, NEXT TO L502. REMOVE THIS CAPACITOR.