

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**

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### *. 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 PROCEDURES INVOLVED 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.

## MODIFYING THE COBRA 2000GTL USING THE CARD KIT TC-DX KIT.

7. ON THE SIDE OF L501 TOWARD THE SHIELD WALL, FIND R517, A 150ohm RESISTOR. CLIP THE LEG AND SEPERATE THE LEG AND BODY OR REMOVE THE LEG.
8. ON THE PRINTED SIDE OF THE CIRCUIT BOARD, SOLDER A 15pf CAPACITOR ACROSS THE OUTSIDE LEGS OF THE THREE LEAD SIDE OF L501.
9. SOLDER A JUMPER FROM THE PC PAD THAT INCLUDES THE CENTER LEAD OF L501 AND THE BODY OF R517, TO GROUND OR THE SHIELD POST OF L501.
10. CONNECT WIRES FROM THE THREE HOLES (OR CUT LEADS) OF WHERE FET501 WAS, A WIRE TO THE LEAD OR WHERE THE LEAD WAS OF R517 AND A WIRE TO TP502.
11. PUT THE LOWER COVER BACK IN PLACE AND REMOUNT THE FREQ/CLK UNIT.
12. USING A PIECE OF TAPE, TAPE THE TOP COVER'S LIP TO THE BACK SIDE OF THE UNIT SHIELD, AND LET IT LEAN AGAINST THE TRANSFORMER.
13. CONNECT THE DRAIN OF FET501 TO THE YELLOW DOT ON THE TC-DX EPOXY PACK. CONNECT THE SUPPLY TO A TANK SHIELD ON THE PAK. CONNECT THE GATE TO THE BLUE DOT ON THE EPOXY PACK. CONNECT THE LEAD OR WHERE THE LEAD WAS OF R517 TO THE RED DOT ON THE PACK. CONNECT TP502 TO THE ORANGE DOT.

### ADJUSTMENT

1. WITH THE RADIO SET TO THE SAME CENTER FREQUENCY THAT WAS USED FOR ITS' ALIGNMENT, PUT A SCOPE ON PIN 3 OF IC512. (A SMALL 8 PIN CHIP JUST TO THE LEFT OF L501.) ADJUST THE TWO TANKS ON THE EPOXY PACK FOR MAXIMUM AMPLITUDE.
2. CHECK READINGS FROM ONE END OF FREQUENCY SPREAD TO THE OTHER. IF ALL IS WELL, REPLACE COVERS.

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1. REMOVE THE COVERS FROM THE UNIT.
2. REMOVE THE DYNAMIC CONTROL FROM THE CONTROL PANEL AND TAPE AND TIE IT BACK TO THE POWER AND MIC WIRES.

### *NOTE: LEAVE CONTROL FULLY CLOCKWISE.*

3. PUT TAPE ON THE ANODIZED METAL OF THE FRONT PANEL IN THE AREA TO THE REAR OF WHERE THE DYNAMIC CONTROL WAS REMOVED.
4. ENLARGE THE MOUNTING HOLE, WHERE THE DYNAMIC CONTROL WAS REMOVED TO 3/8".
5. DRILL A 1/8" HOLE JUST TO THE LEFT OF WHERE THE CONTROL PANEL THICKENS, IN LINE WITH THE OTHER CONTROLS. THIS POINT CAN EASILY BE DETERMINED BY