

THE COBRA 21 PLUS/HIGH CHANNELS WITH THE 'A' KIT.

NOTE: THE CHANNEL 9 SWITCH APPEARS TO BE IDEAL FOR 5K OFFSET.

WARNING: THESE SWITCHES HAVE PROVEN TO BE WET CIRCUIT SWITCHES.

A DRY CIRCUIT SWITCH IS REQUIRED.

REMOVE C-208 & C-209.

CUT PC PAD AS INDICATED.

REPLACE C-209 WITH C-208.

RUN THE TWO WIRES FROM THE SPDT SWITCH, THROUGH THE BOARD AND CONNECT ONE ON EACH SIDE OF CUT.

CONNECTING THE EPOXY PACK

ISOLATE PIN 20 OF THE PLL CHIP FROM THE REMAINDER OF THE CIRCUIT.

RUN THE BROWN, RED AND ORANGE RIBBON WIRE THROUGH THE EXCESS HOLE TO THE PC SIDE OF THE BOARD.

SOLDER THE BROWN WIRE TO "B".

SOLDER THE RED WIRE TO PIN 20 OF THE PLL CHIP. (B)

REMOVE THE 10.7 CERAMIC FILTER CF-1.

SOLDER THE REMAINING THREE WIRE RIBBON IN ITS PLACE WITH THE (YELLOW OR WHITE) WIRE NEAREST THE CF-1 MARKING.

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REMOVE COVERS AND ENLARGE THE UPPER MIKE HOLE, RIGHT SIDE, IN THE BOTTOM COVER TO 1/4".

WIRE THE DPDT SWITCH SUPPLIED, AS INDICATED IN THE PACKAGING MATERIAL.

MOUNT THE DPDT SWITCH ON CHASSIS THAT MATCHES UP WITH THE ENLARGED MIKE HOLE IN THE BOTTOM COVER.

MOUNT THE EPOXY PACK ABOVE THE BRACKET MOUNTING HOLE USING PLASTIC ADHESIVE 3M 4475.

RAISE THE CATHODE LEG OF D-15.

SOLDER A WIRE FROM "B" TO THIS POINT ON THE PC BOARD WHERE D-15 WAS RAISED FROM.

SOLDER A WIRE FROM "B" ON THE SWITCH TO THE RAISED LEG OF D-15.

SOLDER A WIRE FROM THE REMAINING CONTACT ON THE POLE OF THE SWITCH TO GROUND. (SHIELD OF L-6 IS A GOOD PLACE).

REMOVE C-99 (5PF. CAPACITOR LOCATED BETWEEN MIXER CHIP IC-4 AND L-18).

REPLACE C-98 WITH THE 47 PF. CAPACITOR SUPPLIED. SOLDER ONE LEG TO PIN 4 OF THE MIXER CHIP AND LEAVE THE OTHER LEG RAISED.

SOLDER A WIRE FROM C' TO THE POINT ON THE PC BOARD WHERE C-98 WAS RAISED FROM.

THE COBRA 21 PLUS/HIGH CHANNELS WITH THE 'A' KIT.

SOLDER A WIRE FROM C TO THE RAISED LED OF THE 47PF. CAP. C-98.

SOLDER A WIRE FROM THE REMAINING TERMINAL OF THAT POLE TO THE YELLOW DOT ON THE EPOXY PACK.

RUN AN EXTRA WIRE FROM B' ON THE SWITCH TO THE UNMARKED TERMINAL OF THE EPOXY PACK.

RUN A WIRE FROM THE RED DOT ON THE EPOXY PACK TO THE LEG OF R-69 (82 OHM) LOCATED NEAR THE MARKING FOR TR-14.

5K OFFSET USING CH-9 SWITCH.

REMOVE THE JUMPER THAT IS LOCATED ACROSS THE OUTLINE OF THE NORMAL CH-9 SWITCH FOR THE 25 PLUS. (POINT A TO E BELOW).

CUT THE GROUND TRACE AS INDICATED.

MOUNT THE VC SUPPLIED ON THE PC SIDE OF BOARD FROM POINT A TO POINT B.

SOLDER TWO WIRES THROUGH FROM THE COMPONENT SIDE OF THE BOARD AT POINTS C AND D.

REMOVE C-49 (47PF.) JUST FORWARD FROM THE 10.24MHZ. CRYSTAL.

REPLACE C-49 WITH A 36 TO 39PF. CAPACITOR, LEAVING LEG NORMALLY CONNECTED TO THE CRYSTAL, RAISED.

SOLDER THE TWO WIRES JUST MENTIONED TO THE RAISED LEG AND TO THE POINT IT IS RAISED FROM.

NOTE, THE 'B' KIT FOR LOW CHANNELS IS NOT RECOMMENDED FOR THIS UNIT.

IF LOW CHANNELS ARE DESIRED, WE SUGGEST THAT YOU USE THE 'LTD' KIT OR THE 'TECH'S CHOICE'. WE FIND THAT MOST TECHNICIANS, PREFER TO MODIFY UP AND DOWN WHEN USING THE 'LTD' KIT, SO WE WILL GIVE YOU THAT PROCEDURE.

MAKE UP A 4 POLE 3 POSITION SWITCH IN ONE OF THE FOLLOWING MANNERS.

PUNCH OR DRILL A 3/8" HOLE IN THE BOTTOM COVER IN LINE WITH AND 1/4" TO THE REAR OF THE UPPER MOST MIKE HOLDER HOLE ON THE RIGHT SIDE OF THE UNIT.

PUT THE COVER BACK IN PLACE AND MARK THE CENTER OF THIS HOLE ON THE CHASSIS.

WITH THE COVER OFF MARK TWO MORE PLACES 13/32" ON BOTH SIDES OF THIS POINT.

PUNCH OR DRILL A 3/8" HOLE IN THE CENTER AND 1/8" HOLES ON EACH SIDE.

MOUNT SWITCH.

BEFORE MOUNTING THE EPOXY PACK. USE A WOOD RASP AND FILE OFF THE LEVEL OF THE LOWER RIGHT SIDE. (VIEWED WITH THE VC UP) FOR ABOUT 1/2".

MOUNT THE EPOXY PACK JUST TO THE REAR OF THE BRACKET MOUNTING HOLE BUT DO NOT COVER THE ADJUSTMENT OF L-18. USE HOT GLUE, PLASTIC ADHESIVE OF ADHESIVE SEALANT.

DRILL AN EXCESS HOLE OF 7/32" BETWEEN L-5 & L-9 OUT ABOUT 1/8" AND EQUAL DISTANCE THE LEG AND BODY OF THE 3.3K RESISTOR.

MAKE THESE CONNECTIONS.

A VIA THE BLUE DOT ON EPOXY PACK, THROUGH THE EXCESS HOLE AND TO THE OUTPUT LEG OF L-9. CUT THE PC RUN LEAVING THIS POINT.

B TO THE LEG OF RESISTOR MARKED TP-2.

C TO THE STRAIGHT LEG YELLOW DOT ON EPOXY PACK.

D RAISE THE REAR MOST LEG OF C-102 (LIES ADJACENT TO TP-2 FRONT TO REAR.) AND ATTACH.

E CHANGE D-15 FROM A SILICON TO GERMANIUM AND LEAVE THE CATHODE RAISED. CONNECT E WHERE THE CATHODE WAS.

F SOLDER IT TO THE RAISED LEG OF D-15.

G TO GROUND.

H & I FOR FULL CHANNELS, REMOVE C-49, CHANGE IT TO A 36 TO 39PF. AND LEAVE THE LEG NEAREST THE 10.24MHZ. CRYSTAL RAISED. CONNECT THESE WIRES TO THE RAISED LEG AND WHERE IT WAS RAISED FROM

H & I FOR HALF CHANNELS. I TO THE LEG OF THE 82 OHM RESISTOR ADJACENT TO THE MARKING TR-14. H TO THE RED DOT ON THE EPOXY PACK.

RUN A GROUND WIRE FROM THE CASE OF L-3 TO THE CASE OF THE UPPER TANK ON THE EPOXY PACK.

IF YOU ARE WIRING FOR FULL CHANNELS YOU WILL HAVE TO RUN A WIRE DIRECTLY FROM THE LEG OF THE 82OHM RESISTOR TO THE RED DOT ON THE EPOXY PACK.

PLACES TO FIND PARTS AND TOOLS MENTIONED IN THESE TECH'S NOTES.

4 POLE 3 POSITION SWITCHES: SELMAN ENTERPRISES OR CARD-KIT.

HAND PUNCH SETS: 3/32" TO 9/32" ORDER #937102 \$39.00

5/32" TO 17/32" TO 17/32" ORDER #927105 \$108.00

MSC INDUSTRIAL SUPPLY CO. 151 SUNNYSIDE BLVD. PLAINVIEW IL, NY. 11803 PH (800) 645-7270

TECH'S NOTES

AS MENTIONED EARLIER IN TECH'S NOTES, THE TC AM (TECH'S CHOICE AM) KIT IS ONE OF THE KITS SPECIALLY DESIGNED FOR THE 21 PLUS UNITS. SINCE THE 21 PLUS AND THE 25 PLUS IS THE SAME UNIT EXCEPT FOR A FEW INTERNAL OPTIONS, THIS PROCEDURE COVERS BOTH.

MODIFYING THE 21 PLUS AND THE 25 PLUS IS THE SAME UNIT EXCEPT FOR A FEW INTERNAL OPTIONS, THIS PROCEDURE COVERS BOTH.

THE 21 PLUS & 25 PLUS/USING THE TECH'S CHOICE KIT

PRECISE LOCATIONS ARE IMPORTANT IN THIS MODIFICATION.