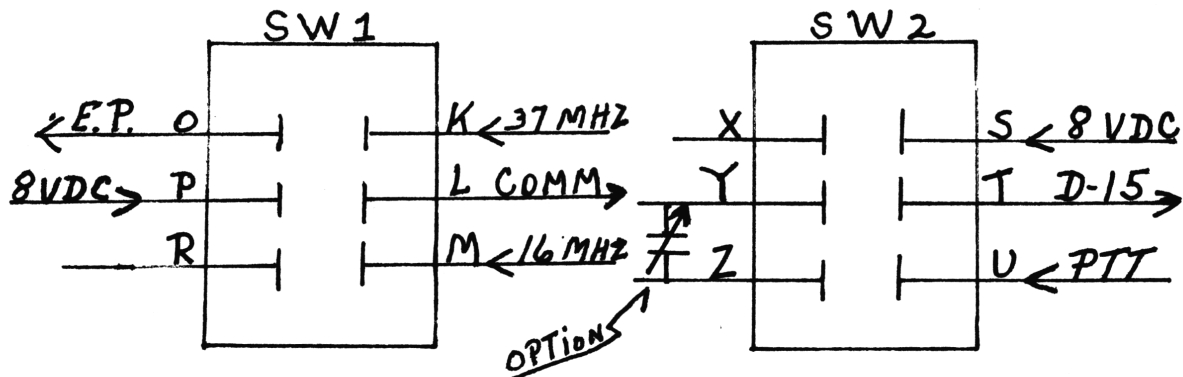


"LTD KIT" HIGH CHANNEL INSTALLATION INSTRUCTIONS
FOR COBRA 21/25 PLUS UNITS AND ANY SISTER UNITS

It is not feasible to use the existing switches on these units. We suggest that for any and all single modifications, that you use two DPDT sub-miniature switches. Also, since we will be using 8VDC Regulated (maximum allowable voltage) on the Epoxy Pack, we feel that the final 37Mhz. amplifier can be eliminated. True, you will not have quite as clear of a signal but since the circuits are all on the same plane, you are less likely to pick up stray signals or have as much mutual inductance.

MOUNTING THE SWITCHES AND EPOXY PACK

1. Use the mike clip hole located to the rear of the cover screw on the lower cover as one of the mounting holes for the switches.
2. Mark the top cover equal distance and in line with this hole. Make you a hole there for the second switch.
3. Mount the Epoxy Pack approximately 1/8 inch to the rear of these switches. Use silicone sealant and mount with VC up.



CONNECTING SWITCH #1

1. Remove C-102 from the PC board and solder it to the common or point L on switch #1.
2. Solder a wire between C-102 and the hole it was removed from nearest pin 1 on the VCO, Mixer chip.
3. Solder wire M in the other hole left by removing C-102.
4. Strip wire M bare at the spot it passes the blue terminal and solder it to that terminal.
5. Solder wire K to the yellow dot terminal on the Epoxy Pack.
6. Solder wire P to the leg of R-69 (82 ohm resistor) located just to the left of TR-14.
7. Connect wire O to the red dot terminal on the Epoxy Pack.

HIGH CHANNELS FOR COBRA 21/25 PLUS AND SISTER UNITS CONTINUED:

CONNECTING SWITCH #2

1. Raise the cathode leg of D-15 off the board. It is located just forward of the PLL chip with it's cathode forward.
2. Solder wire U on the board where D-15 was removed.
3. Solder wire T onto the raised leg of D-15.
4. Solder wire S to 8VDC or wire P of switch #1.
*OPTION: If only half channels are desired omit steps 5, 6, and 7 below. If you wish to operate on full channels these steps must be accomplished.
- *5. Solder the VC (supplied) across wires and terminals Y & Z.
- *6. Remove C-49, located just forward of the 10.24Mhz. Xtal along side of L-8. (If the legs of C-49 are not long enough to stand one leg up while the other leg is soldered in the forward most hole then replace it with another that is).
- *7. Solder wire Y & Z to the raised leg of C-49 and the other in the hole it was raised from.

AN ALTERNATE METHOD

For better trimming of the frequency, you may desire to drill a hole in the PC board where the Printed Circuit number is stamped, and run the two wires through to the PC side. In this case do not lift the leg of C-49, but cut the PC run between the 10.24MHZ Xtal & leg of C-49. Then connect wires across this cut.

8. Now solder a jumper wire from the case (shield) of L-6 to the top tank case (shield) on the Epoxy Pack.

ALIGNMENT

TRANSMIT

1. Connect power to the unit and load properly with a frequency counter attached.
2. Select channel 26.
3. With both switches down in normal position, key the transmitter. The reading should be 27.265Mhz. If not, adjust the frequency by changing the size of C-49.
4. Now switch both switches up. Key the transmitter again. The reading should be 27.720Mhz. If not and you are using half channels, adjust the VC on the Epoxy Pack to obtain this reading. However if you are using full channels the VC you installed and the VC on the Epoxy Pack must be adjusted independently.
- *5. Read the VCO frequency at TP-2. It should read 17.0283Mhz. while on receive. If not then adjust the VC on the switch to obtain it.

HIGH CHANNELS FOR COBRA 21/25 PLUS AND SISTER UNITS CONTINUED:

- *6. Now key the transmitter and adjust the VC on the Epoxy Pack to obtain a transmitter frequency of 27.725Mhz.

RECEIVE

The receiver should require very little tuning. Go through a normal receiver alignment and adjustment using normal channel 40.

THIS COMPLETES INSTALLATION INSTRUCTIONS FOR COBRA 21/25 PLUS UNITS AND SISTER UNITS.

"LTD KIT" INSTALLATIONS AND INSTRUCTIONS
FOR COBRA 29 PLUS AND ANY SISTER UNITS

The installation and alignment instructions for this unit remains about the same as for the Cobra 21 Plus and 25 Plus. EXCEPT:

1. Location and installation of switches and Epoxy Pack.
2. Location of components.
3. The methods of breaking into circuits for switching.

DIFFERENCES

1. We suggest that the second switch be located 1/2 inch and in line front to rear with the first switch.
2. The Epoxy Pack should be located just to the rear of the mounting bolt hole. Put a bolt in to make sure that it clears.
3. On location of components you will find C-49 between FT-1 and L-9.
4. The 8VDC regulated can be better obtained at the long jumper just to the rear of the PLL Chip.
5. If you wish to carry the wires to the PC side of the board for 5K offset, there is a good place to drill the hole just to the rear and slightly left of FT-1.
6. As for breaking into circuits, for low channels, the 16Mhz. signal can be better switched if you raise the leg of R-16 along with the parallel-*ing capacitor C-19 (TP-2).*

ALL OTHER THINGS REMAIN ABOUT THE SAME.

THIS COMPLETES THE INSTALLATION INSTRUCTIONS FOR COBRA 29 PLUS AND ANY SISTER UNITS.