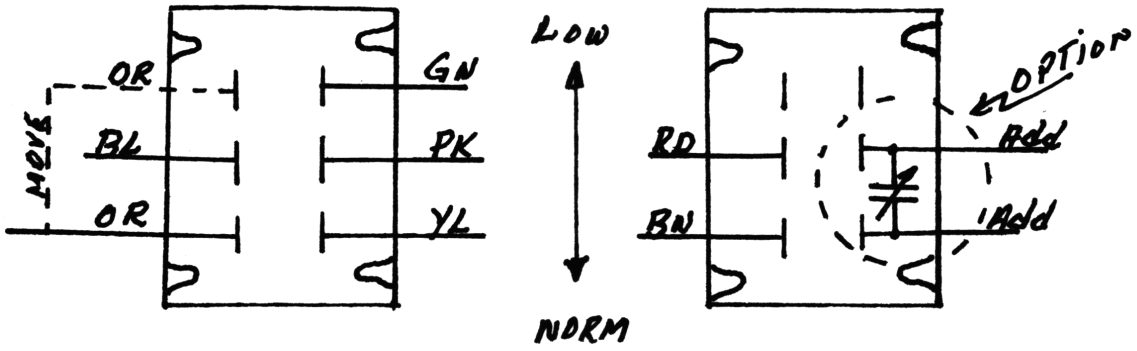
"LTD KIT" LOW CHANNEL INSTALLATION INSTRUCTIONS FOR COBRA 25LTD/GTL, AR/AX 711, AND SISTER UNITS

The following switch lay-out is for the color code on the Cobra 25LTD. For other sister units or earlier models, note in pencil the color code that exist on those switches and adapt the reading material accordingly.



USE THE CB/ANL/PA and THE NB SWITCHES FOR THIS MOD:

1. Clip the pink, also the orange wire coming from the transmitter section just forward of the first zip tie, just forward of the power plug.
2. In this same area, unsolder the yellow and green wires.
3. Use the short piece of pink wire and solder it where you unsoldered the yellow wire.
4. Just forward of the audio transformer and directly center from the audio chip, unsolder the blue wire. Solder in it's place the piece of orange wire that runs from the transmitter section.
5. To clear the NB switch, clip the red wire attached at W-27 about 1½ inches long. Unsolder the brown wire at W-26 and solder the 1½ inch wire in its place.

INSTALLING THE EPOXY PACK:

1. Pull the chassis grounding tab, located just above the PLL chip, straight out.
2. Stand the wire tape up against the selector.
3. Using silicone sealant, adhere the epoxy pack to the chassis wall just forward of the pulled out tab, with the VC upward.

REMOVE THE FOLLOWING COMPONENTS:

REMOVE: R-104, R-105, R-106, C-137, TR-21, TR-22, C-12, C-15, D-3
REMOVE: L-19 and replace with the tank supplied.

1. Solder a 220 ohm resistor from the leg of R-105 to the C-137 leg nearest L-19.

LOW CHANNELS FOR COBRA 25LTD AND SISTER UNITS CONTINUED:

2. Solder a jumper from ground to the rear leg of the secondary of L-19.
3. On the PC side of the board, solder a 470 ohm resistor to the remaining secondary leg of L-19 with its other leg run through and soldered where the body of R-104 was. Now pull the green wire of the CB/ANL/PA switch out of its first two ties and solder it to the end of this resistor on the component side of the board, or through another hole in that same PC pad.

CONNECT UP THE REST OF THE CB/ANL/PA SWITCH:

1. Pull the yellow wire out of the zip ties. Measure the distance needed to reach the blue terminal on the epoxy pack. Cut the insulation and pull a bare spot. Now solder it to the hook/blue dot terminal on the epoxy pack.
2. Continue the yellow wire underneath the board (printed side) to the output secondary leg of L-16. Cut this same PC run just before the empty hole on the run.
3. Pull the pink wire out of the zip ties and run it on the component side of the board to this open hole just mentioned.
4. Change the orange wire to the opposite throw of the same pole.
5. Connect the blue wire to pin 1 of the PLL chip and the orange wire to the red dot terminal on the epoxy pack.

NOW CONNECT UP THE NB SWITCH:

1. Unsolder R-58, turn it around and leave the leg unsoldered and lifted.
2. Connect the brown and red wires to this resistor and the PC where it would be connected.

(OPTIONAL)*

3. Solder the VC (supplied) across the two terminals of the other pole of the switch, across from the red and brown wires. Also attach wires to these terminals.
4. Cut the PC trace between the 10.24 Xtal and C-111. Solder these two wires across the cut.

* If full channels are desired, steps 3 & 4 must be accomplished. If half channels are desired (which allows for splitting the transmitter and receiver) omit steps 3 & 4.

Now your CB/ANL/PA switch is your receiver switch and your NB switch is your transmitter switch.

LOW CHANNELS FOR COBRA 25LTD AND SISTER UNITS CONTINUED:

5. Run a wire from the yellow dot terminal on the epoxy pack to the leg of C-12 nearest R-101.
6. Run a ground wire from the shield case of L-5 to the shield case of the upper tuning tank of the epoxy pack.

ALIGNMENT TX:

1. Connect power to the unit and load properly with a freq counter attached.
2. Select channel 26.
3. With both switches in normal position, key the transmitter, the reading should be 27.265 Mhz. If not, adjust VC-1 to obtain this reading.
4. Now switch the transmitter switch down, key the transmitter again. Now the reading should be 26.8100 or if you have the option installed 26.815 Mhz. If you have installed the option and you have not obtained the proper reading, adjust the installed VC to obtain it.

ALIGNMENT RX:

1. Connect a scope or freq. meter to the leg of R-6. A scope is preferred.
2. On receive mode and the receiver switch down, this reading should be 37.505 Mhz or, if you have the option 37.5117 Mhz. The epoxy pack comes preset for the latter.
3. To obtain the proper frequency adjust the VC on the epoxy pack. Use L-19 to maximize the amplitude of this signal. The tanks on the epoxy pack should require very little or no adjustment. If the 37Mhz signal can not be obtained in the approximate same amplitude as the 16Mhz, check your work to see that all connections were made properly.

NOTE: When making alignments with a small signal applied, you will detect a zero beat signal. The zero beat you hear comes from the fact that two other signals exist enternally, who's sum is equal to the frequency you are trying to receive. (VCO and 10.24)

4. Make your normal receiver alignment and peaking on normal channels.
5. Now switch to low channels and check receiver sensitivity. If you have a needle on the meter even when no signal is applied or on adjacent channel, reduce the amplitude of the 37Mhz signal by inserting a resistor at the output leg of L-19, (generally less than 500 ohms.)

THIS COMPLETES INSTRUCTIONS FOR LOW CHANNELS FOR COBRA 25LTD AND SISTER UNITS.