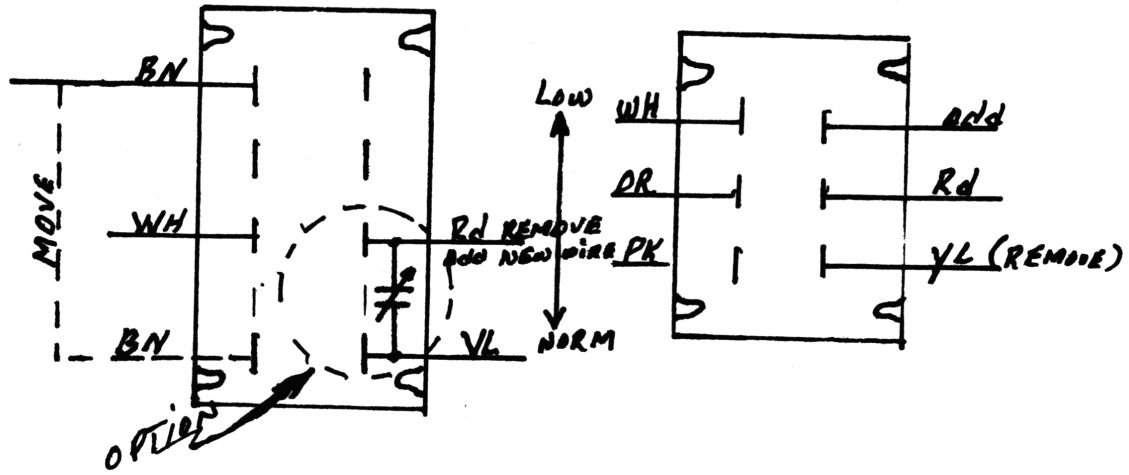
"LTD KIT" LOW CHANNEL INSTALLATION INSTRUCTIONS FOR COBRA 29LTD/GTL AND SISTER UNITS

The following switch lay-out is for the color code on the Cobra 29LTD. For other sister units or earlier models, note in pencil the color code that exist on those switches and adapt the reading material accordingly.



CLEAR THESE TWO SWITCHES BY:

1. Clipping the white and pink wires just forward of the first zip tie forward of the power plug.
2. Unsolder the orange wire at PC board, and solder the short pink wire in it's place.
3. Unsolder the red wire of the PA/CB switch from the PC board (just forward of VR-1) and unsolder the yellow wire from the switch and solder in it's place.
4. Remove all wires attached to the ANL/NB switch except the red one at the PC board. Remove the red one at the switch.
5. Move the brown wire of the ANL/NB switch to the other throw terminal.

INSTALL THE EPOXY PACK:

1. Pull the chassis grounding tab, located just above the PLL chip, straight out.
2. Mount the epoxy pack against that chassis wall just forward of the pulled out tab, with the variable cap. up. If CC-1 will not allow the epoxy pack to slide down far enough, chip out a "V" just to the rear of the lower tank on the epoxy pack using small dikes.
3. Using silicone sealant, adhere the epoxy pack to the wall.

LOW CHANNELS FOR COBRA 29LTD AND SISTER UNITS CONTINUED:

REMOVE OR UNSOLDER THE FOLLOWING COMPONENTS:

REMOVE JP-22, C-1, D-24

REMOVE AND SAVE THESE COMPONENTS TO MODIFY 21LTD, PC-66, AX-44, ETC.;
R-3, TR-2, R-6, C-7, R-5.

REMOVE C-3 and resolder where R-3 leg and TR-2 base was.

REMOVE L-1 and replace with new tank provided.

R-2 - Unsolder the body end and resolder where D-24 cathode was.

1. Solder the red wire removed from the ANL/NB switch to the spare hole in the PC pad where the leg of R-2 is attached.
2. Cut this same pad between the point just soldered and the secondary of L-1.
3. Run a jumper between the other leg of L-1's secondary and ground.
4. Connect the white wire on the CB/PA switch to this secondary leg just isolated from the PC pad. (Note the center leg of the primary does not have to be isolated since there is no connection enternally.)

CONNECT UP THE REST OF THE CB/PA switch:

1. Pull the pink 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 terminal-blue dot of the epoxy pack.
2. Continue the pink wire to the point where JP-22 was removed near L-18 and solder.
3. Pull the orange wire out of the zip ties and run it along the left side of the receiver section to the other point where JP-22 was removed.
4. Connect the red wire to the leg of R-124, just off of pin 11 of the PLL chip component side of board.
5. Connect a new wire to the same pole opposit position from where the yellow wire was removed.
6. Connect this wire to the red dot terminal of the epoxy pack.
7. Run a jumper wire from the yellow dot terminal on the epoxy pack to where C-1 was removed from the long PC run.
8. Run a grounding wire from the case of L-22 to the top tank of the epoxy pk.

CONNECT UP THE ANL/NB SWITCH:

1. Move the brown wire to the other throw position of the same pole.
2. Unsolder and lift the cathode side of D-15.
3. Connect the brown and white wire of this switch pole across these points.

LOW CHANNELS FOR COBRA 29LTD AND SISTER UNITS CONTINUED:

(OPTIONAL):*

4. Solder the VC (supplied) across the violet and red wires at the switch terminals of this switch.
5. Cut the PC trace between the 10.24 Xtal and the input leg of L-24.
6. Solder the violet and red wires across this cut.

* If full channels are desired, steps 4, 5 & 6 must be accomplished. If half channels are desired (which allows for splitting the transmitter and receiver) omit steps 4, 5, & 6.

Now your CB/PA switch is your Receiver switch and the ANL/NB switch is your Transmitter switch. With up being normal and down being low.

ALIGNMENT TX:

1. Connect power to unit and load properly with a freq. counter attached.
2. Select channel 26.
3. With both switches up to normal position, key transmitter. The reading should be 27.265Mhz. If not adjust L-24 to obtain this reading.
4. Now switch the transmitter switch down.
5. Key the transmitter again. Now the reading should be 26.8100, or if you have installed the VC (option 5K offst) should read 26.815Mhz. If you have the option and it does not read proper adjust the VC to obtain it.

ALIGNMENT RX:

1. Connect a scope or freq. meter to the leg of R-17. A scope is preferred.
2. On receive mode this reading should be 37.505Mhz. Or if you have the option 37.5117Mhz. The epoxy pack comes preset for the latter.
3. To obtain the proper freq., adjust the VC on the epoxy pack to obtain it. Use L-1 to maximize the amplitude of this signal. The tanks on the epoxy pack should require very little or no tuning. If the 37Mhz signal can not be obtained in the approximate amplitude as the 16Mhz, check your work to see that all connections were made properly.

NOTE: When making these receiver alignments the DELTA TUNE should be in it's mid detent position. The zero beat you will hear comes from the fact that the VCO freq. and 10.24Mhz does make up the total of the same freq. you are trying to receive, which will have a great deal with how and where the previous wires were run.

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 being applied or on adjacent channels, reduce the amplitude of the 37Mhz signal by inserting a resistor at the out-put of L-1 (generally less than 500 ohms.).

THIS COMPLETES INSTRUCTIONS FOR LOW CHANNELS FOR 29LTD AND SISTER UNITS.