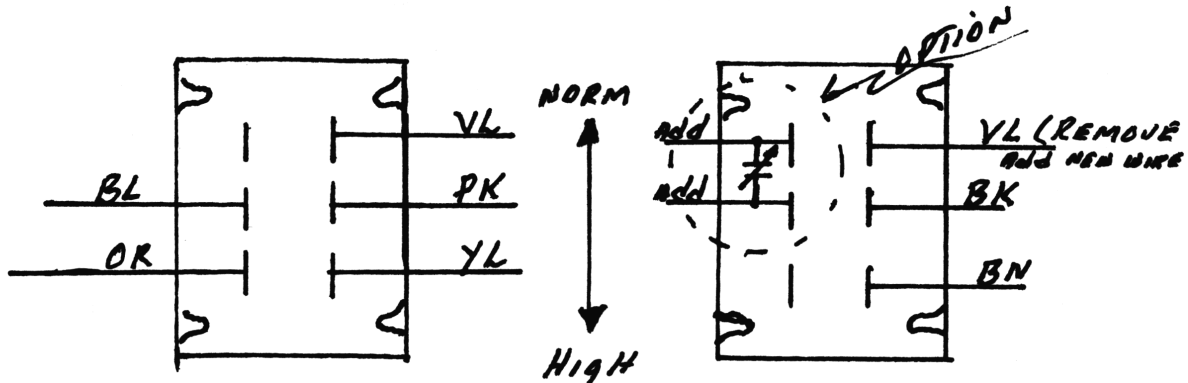


"LTD KIT" UPPER CHANNEL INSTALLATION INSTRUCTIONS FOR
COBRA 21LTD/GTL, ANDREW J, AR/AX-44, PC-66,
AND ANY SISTER UNITS

The following switch layout is for the color code on the Cobra 21LTD. For other sister units or earlier models, note in pencil the color code that exist on those switches and adapt the reading material accordingly.



USING THE TWO EXISTING SWITCHES:

1. Clip the yellow wire, also the orange wire coming from the transmitter section, just forward of the first Zip tie forward of the power plug.
2. In this same area unsolder the pink and violet wires.
3. Use the short piece of yellow wire and solder it where you unsoldered the pink 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 channel 9 switch, remove the violet wire from the switch.
6. Unsolder the brown and black wires from their respective PC boards.
7. Solder the violet wire on to the PC board where the black wire was removed.

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.

INSTALL THE FOLLOWING MISSING COMPONENTS:

R-101 - 10K	C-136 - .01uf
R-102 - 3.3K	TR-20 - Use a 2SC1675 or a 2SC1923
R-103 - 1K	L-19 - Install (supplied)

UPPER CHANNELS FOR COBRA 21LTD AND SISTER UNITS CONTINUED:

1. Solder a 220ohm resister from the leg of R-105 to C-137 leg nearest L-19.
2. Solder in a jumper wire from W-26 to W-27.
3. Solder a jumper from ground to the rear leg of the secondary of L-19.
4. On the PC side of the board, solder a 470ohm resistor to the remaining secondary leg of L-19 with its other leg run through and soldered where the body of R-104 should be. Now pull the yellow wire of the CB/ANL/PA switch out of two ties and solder it to this end of the resistor on the component side of the PC board, or through another hole in that same PC pad.

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

1. Remove JP-14.
2. Pull the violet wire out of the zip ties. Measure the distance needed to reach the blue dot terminal on the epoxy pack. Cut the insulation and pull a bare spot. Now solder it to the blue hook terminal on the epoxy pack.
3. Continue with the violet wire and solder it to the point where JP-14 was connected to L-16.
4. Pull the pink wire out of the zip ties and solder it to the other point JP-14 was connected.
5. Pull the orange wire out of the zip ties and solder it to the red dot terminal on the epoxy pack.
6. Pull the blue wire out of the zip ties and solder it to pin 1 of the PLL chip on the PC side of the board.

CONNECTING UP THE CHANNEL 9 SWITCH:

1. Unsolder R-58, turn it around and leave the leg unsoldered and lifted.
2. Connect a wire to the unused terminal on the same pole where the brown and black wires are. Solder the other end of it to the other point where R-58 was soldered.
3. Pull the black wire out of the zip ties and solder it to the raised leg of R-58.
4. Pull the brown wire out of the zip ties and solder it to pin 1 of the PLL chip, PC side.

NOTE: IF YOU WISH TO HAVE HALF CHANNELS INSTEAD OF FULL CHANNELS, OMIT STEPS 5 & 6 BELOW.*

- 5.* Solder the VC (supplies) across the two terminals opposite the new wire and the black wire, also attach wires to these terminals.
- 6.* Cut the PC trace between the 10.24Mhz Xtal and C-11. Solder these two wires across the cut.

UPPER CHANNELS FOR COBRA 21LTD AND SISTER UNITS CONTINUED:

7. Run a wire from the yellow dot terminal of the epoxy pack to the leg of C-12 nearest R-101.
8. Run a ground wire from the shield (case) of L-15 to the shield (case) of the upper tuning tank on 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 (down), key the transmitter. The reading should be 27.265Mhz. If not, adjust VC-1 to obtain this reading. If you find you must back off too far on VC-1 to obtain this reading, remove C-111 and readjust.
4. Now switch both switches up. Read the frequency of the 10.24Mhz Xtal at the forward end of R-69. Adjust the VC on the NB switch to obtain a frequency of 10.2417Mhz.
5. Using a scope, maximize the signal on the center terminal (pink wire) of the CB/ANL/PA switch by tuning L-19. The tanks on the epoxy pack should require very little or no adjustment.
6. Now key the transmitter again. The reading should be 27.725Mhz. If not adjust the VC on the epoxy pack to obtain it.

NOTE: For those wishing half channels, of course, the 10.24 Xtal would remain just that and the reading in step 6 should be adjusted to read 27.720MHz.

ALIGNMENT RX:

1. Check the receiver and make your normal alignments and peaking on normal channels, (both switches down.)
2. Now check your receiver with both switches up, while applying a 27.725Mhz signal. The sensitivity should be approximately the same. If not, a little balancing of L-1 and L-2 should accomplish this.

The zero beat signal you will hear while applying a small signal comes from the fact that two of the signals in use are equal to the frequency you are receiving.

THIS COMPLETES THE INSTALLATION INSTRUCTIONS FOR COBRA 21LTD AND SISTER UNITS.