

SCANNER TRICKS

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REGENCY ACT-16K: Frequency Limits Removal

1. Touch "MA"
2. Touch "9"
3. Touch "CL"
4. This removes frequency limits.

Frequency Limits Re-entered

1. Touch "MA"
2. Touch "9"
3. Touch "."
4. Frequency limit back in.

BEARCAT 220: OUT OF BAND SEARCH - All 3 bands.....

50-118MHz Range

1. Manually select Channel 2. Enter "50.000"
 2. Select channel 1 in manual mode.
 3. Enter "50.000" and press "Limit".
 4. Step to channel 2, and enter "118.000" and press "Limit".
 5. Press "Search". The unit will display "Error".
 6. Press "Limit" again.
 7. Press "Search".
- Unit will now be searching from 50-118MHz.
Press "Scan" to resume normal functions.

136-144MHz Range

1. Manually select Channel 2. Enter "136.000".
 2. Select Channel 1 in manual mode.
 3. Enter "136.000" and press "Limit".
 4. Step to Channel 2 and enter "144.000" and press "Limit".
 5. Press "Search". The unit will display "Error".
 6. Press "Limit" again.
 7. Press "Search".
- Unit will now be searching from 136-144MHz.
Press "Scan" to resume normal functions.

174-420.5MHz Range

1. Manually select Channel 2. Enter "174.000".
 2. Select Channel 1 in manual mode.
 3. Enter "174.000" and press "Limit".
 4. Step to Channel 2 and enter "420.500" and press "Limit".
 5. Press "Search". The unit will display "Error".
 6. Press "Limit" again.
 7. Press "Search".
- Unit will now be searching from 174-420.5MHz.
Press "Scan" to resume normal functions.

SCANNER TRICKS.....(Cont.).....

BEARCAT 220; STORING 'ACTIVE' OUT OF BAND FREQUENCIES.....

Although you can store and monitor these out of band frequencies, we have been unable to get the unit to include them in it's listening while scanning.

Once you've entered the search limits, you can go to "Scan" and then back to "Manual" and step to any channel without wiping out your search data. So before you start any serious searching, go to "Scan", then back to "Manual". Manually step to the channel you will want for your new found frequency. (We will use Channel 20 for reference, assume we have stepped to Channel 20 and the search started.)

Let's say the unit has stopped on 140.995MHz.

Press "E" to enter the new found frequency into Channel 20. As soon as "E" is pushed, the unit will resume searching. This can be done to any channel.

After putting a frequency in channel 20, you certainly don't want to put another one in on top of it. So - go to "Scan", then "Manual" and step to your next selected channel. Press "Search again and repeat the above process for the new channel when another active frequency is found.

Now to listen to those new found frequencies, manually step unit to the channel you wish to monitor. The unit will display "Error". Press "E", it will now be displaying the frequency you saved and will listen to the transmissions on that frequency. You must repeat this process each time you wish to monitor an out of band frequency you've stored.

BEARCAT 220; INCREASED SCAN DELAY.....

If you own a BC220, you know the frustration of trying to listen to an exciting conversation. You hear one station transmit/unkey and "almost" 1 second later the scanner takes off! You've missed the answer!

The selective scan delay in the BC220 is an internal function of the microprocessor. What this means is that you can't just change a capacitor and lengthen the delay. Now for the solution to this problem.

BUT, there is a drawback - your 'Priority' feature is useless. When it jumps back to check the priority channel it stays there the length of the delay. The great feature of this modification is that it can be used with and without the selective scan delay feature of the BC220.

For starters, Bearcat's IC2 labeled 'B531' on the schematic, and SC8780P, E1841 in the parts list appears to be nothing more than an MC3357P. So with this in mind, we can proceed to our modification.

1. Refer to Fig. B. Locate R74 and Q15. (R74 is coming from pin 13 of IC2, Scan Control.)

SCANNER TRICKS.....(Cont.).....

BEARCAT 220: INCREASED SCAN DELAY...(Cont.)...

2. Refer to Fig. A. This is the circuit we will be constructing.
3. Refer to Fig. B., and locate T2. Connect the emitter of a 2N3904 to the case of T2, with transistor package leaning towards Q15.
4. Connect 4.7K resistor to C60 side of R74. Hereafter referred to as "RA".
5. Connect the other end to base of 2N3904 installed in Step 3.
6. Connect a 2.2K resistor; hereafter referred to as "RB"; to RA/R74 junction so that the RB and RA resistors are both now connected to C60 side of R74.
7. Connect other end of RB resistor to collector of 2N3904.
8. Drill a $\frac{1}{4}$ " hole in rear of unit close to top; but be careful; as the top must still fit when finished.
9. Mount a SPST switch in hole, solder two 6" wires to terminals.
10. Run wires from switch through hole in board next to battery holder, then to component side of board.
11. Connect 330Mfd capacitor; negative to RB/2N3904-collector junction.
12. Connect outside terminal wire from switch to positive side of capacitor.
13. Connect center terminal of switch to R74/Q15-base junction.
14. Melt some wax over the components to hold them in place.
15. Re-install covers after checking all solder joints, etc.

What we are doing is switching the 330Mfd capacitor in/out of the scan control circuit.

We don't want to have it in circuit before it receives a signal because it would take the "Delay Time" to stop the scan and by that time we're at a 'different' channel. So what we want to do is switch the capacitor in when we stop the scan. Therefore we only delay "Scan Start".

Without "RB" in circuit, there is enough residual ground through the transistor to partially put "CA" in circuit. It's enough to effect our "Scan Stop" signal. It has to charge CA before it can stop the scan. This means we never receive anything.

SCANNER TRICKS.....(Cont.).....

BEARCAT 220: INCREASED SCAN DELAY...(Cont.)...

- Parts List: 2N3904 (1)
330Mfd/16V Axial Electrolytic Capacitor (1)
2.2K $\frac{1}{4}$ W resistor (1)
4.7K $\frac{1}{4}$ W resistor (1)
SPST miniature switch (1)

FIGURE A

