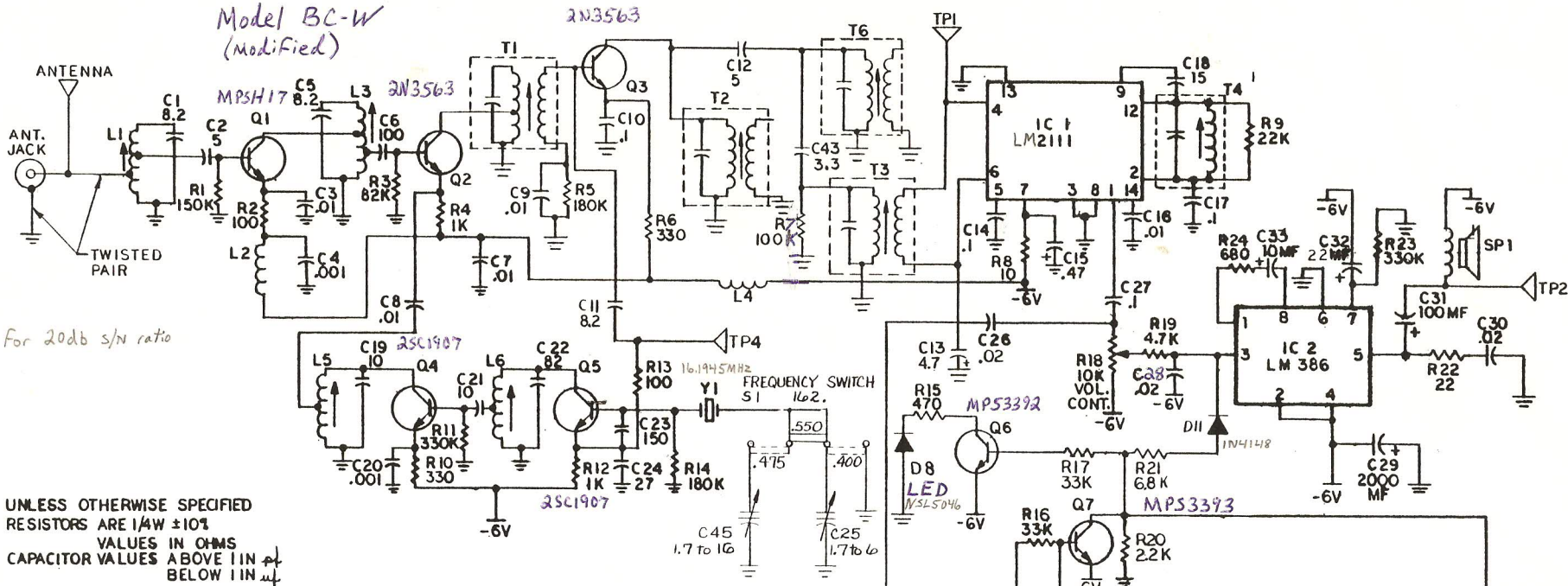


# SCHEMATIC

BEARCAT ALERT WARNING RADIO

Model BC-W  
(Modified)

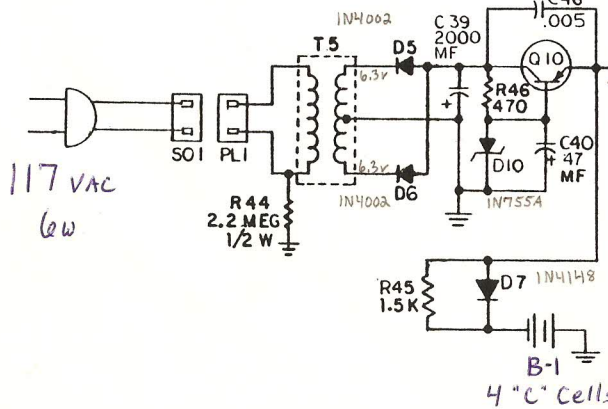
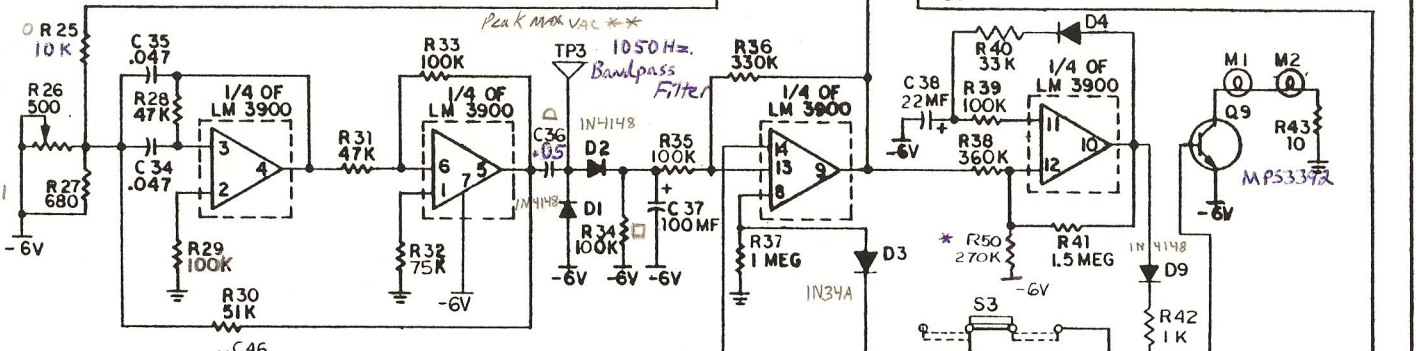
Input  
50-70 $\mu$ V



.4 $\mu$ V For 20db S/N ratio

UNLESS OTHERWISE SPECIFIED  
RESISTORS ARE 1/4W  $\pm$ 10%  
VALUES IN OHMS  
CAPACITOR VALUES ABOVE 1 $\mu$ IN  $\mu$ F  
BELOW 1 $\mu$ IN pF

\* Note: Not in all units  
\*\* peak with radio in 'alert' mode and tone sounding (peak to max reading)  
O 6.8K in some sets  
□ can be changed to 50K  
△ Factory modified from 1



PROCEDURES FOR RETUNING STANDARD  
THREE CHANNEL RADIOS TO RECEIVE ONE OF  
THE FOUR NEW WEATHER RADIO FREQUENCIES  
(162.425, 162.450, 162.500, 162.525)

On the attached pages are specific procedures for adjusting the electronic components of an existing standard three channel switchable radio, to receive one of the four newly assigned frequencies for operation of the National Weather Service continuous radio stations. These new frequencies are not normally found on existing radios. There is one crystal-controlled unit on the market that can be switched to all frequencies, and several units that can pick up all the frequencies by use of a tuning knob. Those that use a variable tuning arrangement are usually less sensitive and are more susceptible to adjacent channel interference.

It is recommended the adjustments or realignment be performed by a qualified electronics technician to eliminate the chance of electrical shock, and to insure the adjustments result in proper operation of the radio.

- 1) Set signal generator to the frequency desired: 162.425, 162.450, 162.500, or 162.525; modulation: at a frequency at or near 800 Hz or below, or 1200 Hz or above (don't use  $1000 \pm 150$  Hz to avoid setting off the warning alarm); deviation: 2.5 kc.
- 2) Where possible, connect an A-C voltmeter to the speaker terminals (see step 5 below).
- 3) Place channel selector switch as noted on the attached sheet.
- 4) Locate the small square transformer housing the trimmer coil or trimmer capacitor, which is adjacent to the crystal (see appropriate sketch).
- 5) Using a small jewelers type screwdriver or plastic alignment tool, carefully turn the core of this coil or trimmer capacitor until the received signal is strongest or at the highest meter reading. If the desired frequency is more than 25 kHz away from the factory adjusted frequency, it will likely be necessary to put a fixed value capacitor in series with the trimmer coil/transformer, or in parallel with the trimmer capacitor, depending on which frequency is being changed. The value of the capacitor will depend on the model of radio and its particular design features. Some trial and error selection of values may be necessary. Refer to the attached drawings for any specific recommendations. If unable to connect a meter to the speaker, follow the sequence below:
  - a) Tune core or capacitor for loudest signal while reducing signal generator output.
  - b) Remove the modulation tone on the signal generator.
  - c) Retrim core/capacitor for minimum noise or hiss.

6) If a signal generator is unavailable, a reasonably good adjustment may be obtained using an off-air signal from an operating weather radio transmitter using the desired frequency. Keep the antenna as short as possible while making the adjustments. On some models, there is a selector switch labeled Line/Rod. Place this switch in the "Rod" position. If it is not possible to receive a signal in this mode, switch to Line and make the adjustments.

Once all adjustments are made on units with a transformer core, secure the core with a small amount of bee's wax or suitable cement. Some trimmer capacitors may require similar treatment to insure against physical abuse.

BEAR CAT  
WARNING ALERT RADIO  
MODEL NO. BC-W

