



Figure 3-2. NC109 Dial Scales and Tuning Controls

3.1.1 AM Operation

The following adjustments will be necessary during operation:

- Select frequency range by positioning BAND switch.
- Set the GENERAL COVERAGE dial pointer in the band to be tuned at a spot where no signal is heard and adjust the ANTENNA control for maximum background noise. This setting is satisfactory while operating over a limited frequency range.
- Adjust the MAIN TUNING control to select a signal.
- Adjust VOLUME for a comfortable listening level.
- If excessive spurious noises are heard, (auto ignition, etc.), place the MODE switch in its ANL position. Automatic noise limiting reduces fidelity and therefore should be used only when necessary.

3.1.2 CW Operation

- The SENSITIVITY control is used as a volume control for CW operation and should be adjusted accordingly.
- Adjust the PITCH control for a pleasing note.
- All other adjustments are the same as for AM operation.

3.1.3 Single Sideband Operation

The recent upsurge in single sideband activity by amateur radio operators makes it necessary for a communications receiver to have a beat-frequency oscillator that is sufficiently stable to produce a constant carrier injection signal, and a system of demodulation capable of reproducing single sideband intelligence without strong harmonic distortion. Both of these requirements are fulfilled by your NC109.

The procedure for tuning single sideband signals with your NC109 is relatively simple. First, set up your receiver for bandspread tuning an amateur band (as described in paragraph 3.2). Set the MODE switch at AM and the PITCH control to its center position. Adjust the BANDSPREAD control to locate a single sideband signal (identified by its "garbled" sound). Set the VOLUME control at maximum. Carefully tune for maximum S-meter deflection. Set the MODE switch to SSB and adjust the PITCH control slightly to either side of center until the "garble" clears and a readable signal is obtained. The SENSITIVITY control is used as a volume control for SSB reception.

3.2 TUNING

The GENERAL COVERAGE and BANDSPREAD scales (figure 3-2) are calibrated in megacycles and contain special markings to simplify tuning. The CONELRAD frequencies, .64 and 12.4 mc, are indicated on band A by the civil defense symbol