Installation

Location

Prior to beginning operation of the transceiver, a basic installation must be prepared. Installation of the transceiver itself is a rather simple procedure.

In selecting the location for the unit, two basic factors must be considered.

1. Access to a 120V, 60 Hz power source.
2. The location must be convenient for running the antenna lead-in cable if an outside antenna installation is proposed.

Base Station Antenna

Since the maximum allowable power output of the transmitter is limited by the FCC, the antenna is the most important factor affecting transmission distance. Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element.

The recommended method of antenna tuning is to use an in-line watt-meter or VSWR bridge to adjust the antenna tuning for minimum reflected power on channel 20.

The radio may be used with any type of 50-ohm base station antenna. A ground plane vertical antenna will provide the most uniform horizontal coverage. This type of antenna is best suited for communication with a mobile unit. For point-to-point operation where both stations are fixed, a direction beam will usually increase communicating range since this type of antenna concentrates transmitted energy in one direction. The beam antenna also allows the receiver to "listen" in only one direction thus reducing interfering signals.

Antenna height is an important factor when maximum range is desired. Keep antenna clear of surrounding structures or foliage. FCC regulations for base station antenna height are:

> Base Station antennas may not be higher than 60 feet above the ground when using a tower, mast or pole, and no higher than 20 feet above an existing structure.

These are only general regulations applicable to most but not all parts of the nation. Locations near airports and some military installations are subject to different rules; therefore, it is best to contact your nearest Federal Communications Commission office for information regarding your specific area.

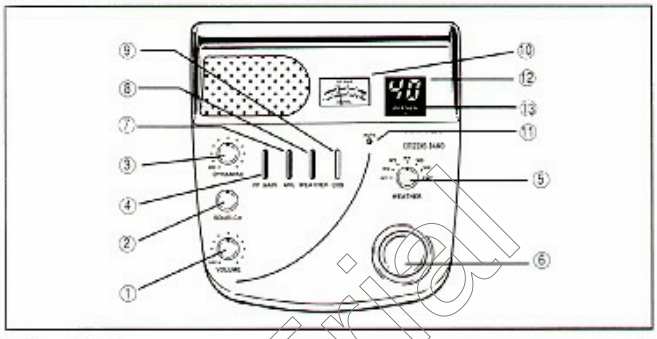
Remote Speaker

The external speaker jack (EXT. SPKR.) on the rear panel is used for remote receiver monitoring. The external speaker should have 4–8 ohms impedance and be able to handle at least 5 watts. When the external speaker is plugged in, the internal speaker is disconnected.

Operation

Controls and Indicators

Refer to controls, indicators and connectors as illustrated below:



A. Front Panel

1. **OFF/ON/VOLUME.** Turn clockwise to turn power on and set the desired listening volume.
2. **SQUELCH.** This control is used to cut off or eliminate receiver background noise in the absence of an incoming signal. For maximum receiver sensitivity it is desired that the control be adjusted only to the point where the receiver background noise or ambient background noise is eliminated. Adjust until the receiver noise disappears. This will require the incoming signal to be slightly stronger than the average receiver noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clockwise setting. **NOTE:** the **SQUELCH** Control will not operate in the WEATHER position. The **SQUELCH** can only operate when the CB/WEATHER switch is in the CB position.
3. **DYNAMIKE.** Adjusts the microphone gain in the transmit mode. This controls the gain to the extent that full talk power is available several inches away from the microphone. Non-operative in WEATHER mode.
4. **RF GAIN.** Adjust as required to optimize signal. This control is used primarily to optimize reception in strong signal areas. Gain is reduced by pressing this button.
5. **WEATHER CHANNEL SELECTOR.** This switch selects any one of the seven U.S. NOAA Weatherband broadcast stations (see p. 1). Always keep set to local NOAA Frequency. See enclosed brochure and card for NOAA information.