

RECEIVER OPERATION

Operation of the receiver is extremely easy once you understand the function of the various controls, as explained in the following paragraphs.

VOLUME-AC OFF control:

This is a standard power switch and audio volume control combination. The control is turned clockwise from the AC OFF position to turn on the receiver and adjust the audio volume level in the speaker.

SENSITIVITY control:

This control, often called the "RF GAIN" control, adjusts the sensitivity of the IF amplifier stages. When listening to AM radiotelephone signals, this control is ordinarily left in the extreme clockwise position ("Full open"), since the AVC circuit adjusts the sensitivity automatically when a steady carrier is present. During reception of radiotelegraph (CW) and single-sideband-suppressed-carrier signals (while there is no steady carrier for proper AVC action), volume level is ordinarily adjusted with the SENSITIVITY control, while the VOLUME control is left two-thirds or further towards full clockwise. Additional information regarding adjustment of this control is included in the paragraphs labelled "TYPES OF SIGNALS AND HOW TO TUNE THEM IN."

When the volume level is adjusted with the SENSITIVITY control, the panel meter ("S" meter) will have a steady up-scale reading that varies with the setting of the control. The "S" meter reads correctly only when the sensitivity control is at full clockwise position.

ANTENNA CONTROL:

This control adjusts the resonant frequency of the receiver antenna coils to compensate for various types of antennas. Adjust the control for strongest signal level, or, in the absence of a signal, adjust or "peak" the control for maximum background noise.

ANL OFF-ON switch:

This is a switch located on the back panel for operating the automatic noise limiter. The control is normally left in ANL-OFF position. When pulse-type noise interference (such as automobile ignition noise) is present, the interference will be greatly reduced by switching to the ANL-ON position.

BFO PHONE-CW SSB switch:

This switch establishes the operating conditions for the reception of either AM radio-telephone signals or CW (code) and SSB (single-sideband-suppressed-carrier) signals. When in PHONE position, the beat-frequency oscillator (BFO) is off, and the automatic-volume-control circuit is operating. When the switch is in CW-SSB position, the BFO is turned on and the AVC circuit is disabled.

BFO PITCH:

This control is normally left in mid position. See "Types of Signals".

RECEIVE-STANDBY switch:

This switch silences the receiver during standby conditions, as during transmission periods in an amateur radio station. When the switch is in RECEIVE position, the receiver is operating normally. When the switch is in STANDBY position, one lead to the speaker is opened, silencing the audio output.

The switch terminals are in parallel with the MUTE terminals on the rear of the receiver cabinet. When an external switching circuit is used in place of the front panel switch, the switch is left in STANDBY position. The audio lead is then opened and closed by the external contacts.

BAND SELECTOR, BANDSPREAD, and MAIN TUNING controls:

The detailed operation of these controls is explained for two general cases under the heading TUNING SIGNALS.

The BAND SELECTOR control switches in the proper coils in the RF Tuner.

The MAIN TUNING control rotates the main tuning capacitor (and the corresponding slide-rule dial indicator) for fast-rate tuning of the entire corresponding frequency spread.

The BANDSPREAD control rotates the bandspread tuning capacitor (and the corresponding slide-rule dial indicator) for slow-rate tuning of any small portion of the main tuning frequency spread.

"S" METER

The GR-212 panel meter indicates the relative strength of received signals. The meter will indicate properly only when the SENSITIVITY control is full clockwise. The "S Units" (1 to 9) on the meter are approximately 6 db apart. Calibrations above S9 are marked directly in db.

S-METER ZERO ADJUSTMENT

The GR-212 S-Meter may require a zero adjustment from time to time as a result of tube and component aging. To make this adjustment, perform the following steps:

1. Set up the receiver for AM operation on any frequency. Be sure the SENSITIVITY control is fully clockwise.
2. Disconnect the antenna from the terminal board on the rear of the receiver cabinet.
3. With a slim screwdriver (approximately 1/8 inch wide), engage the slot in the S-meter adjustment potentiometer. The access hole for this control is labeled on the cabinet backplate.
4. While observing the meter, adjust the control until the meter reading is precisely zero (exact left-hand end of meter scale).
5. Reconnect the antenna. The adjustment procedure is complete.