

installation and operating instructions for model S-38A radio receiver

FEATURES

AC/DC OPERATION

AM BROADCAST 550 KC - 1650 KC

SHORT WAVE BROADCAST 1700 KC - 31 MC

DIRECT READING DIAL

SPREAD BAND TUNING

CODE OR VOICE RECEPTION

HEADSET CONNECTION



AUGUST 1949

94X475

the hallicrafters co.

MANUFACTURERS OF RADIO AND ELECTRONIC EQUIPMENT, CHICAGO 24, U. S. A.

INSTALLATION AND OPERATING INSTRUCTIONS

RADIO RECEIVER MODEL S-38A



FIG. 1. Radio Receiver Model S-38A

DESCRIPTION

The Model S-38A radio receiver is a table model all-wave superheterodyne receiver capable of receiving all of the broadcasting services between 540 kilocycles (KC) and 31 megacycles (MC) in four overlapping bands as follows:

FREQUENCY COVERAGE

BANDS	*FREQUENCY RANGE	**TYPE OF RECEPTION
1	550 KC - 1650 KC	AM/CW
2	1.7 MC - 5.1 MC	AM/CW
3	5 MC - 14.5 MC	AM/CW
4	13 MC - 31 MC	AM/CW

* First and last dial calibration.

** AM - Amplitude Modulation CW - Code

The four bands or frequency ranges of the receiver are selected by the **BAND SELECTOR**. Four individual dial scales permit the frequency of reception to be read directly from the general coverage dial. Any narrow range of frequencies in the entire frequency spectrum covered by the receiver may be spread out electrically with the **BAND SPREAD** control. This feature provides more desirable tuning in the short wave broadcast ranges and particularly in the amateur bands. The general coverage dial setting for the amateur bands is shown on the dial scale (Heavy black bars) for convenience in setting up the receiver for amateur band reception.

Speaker or headset reception is available at the operator's discretion. The selection of each is made by a slide switch located on the panel. The speaker unit is built into the cabinet, the headset is plugged into the pin jack receptacles located on the rear chassis apron.

The **AM/CW** switch permits reception of either radio telephone or c-w code signals.

The **RECEIVE/STANDBY** switch permits the operator to disable the receiver for short standby periods yet maintain the tube heaters at operating temperature for immediate operation.

The receiver normally operates from a 105-125 V. DC (Direct Current) or 60 cycle AC (Alternating Current) power source. To place the receiver in operation it is merely necessary to connect a suitable antenna to the antenna terminals located on the rear chassis apron and plug the power plug into the wall outlet. Refer to the installation details that follow especially to the paragraph on "**POWER SOURCE**", before connecting the receiver to the wall outlet and avoid unnecessary and perhaps costly repairs.

INSTALLATION

UNPACKING - Check all shipping tags and labels for instructions before removing or destroying them.

LOCATION - The receiver is equipped with protective feet for table top or shelf mounting. Avoid excessively warm locations such as outlets for the heating system or recessed locations which prevent circulation of air. If the receiver is placed with its back to the wall, leave about an inch or two of clearance between the back of the cabinet and the wall for proper ventilation.

POWER SOURCE - The receiver operates from a 105-125 volt, 60 cycle AC (Alternating Current) or 105-125 volt DC (Direct Current) source. Power consumption is approximately 30 watts. The receiver will not operate from a 25-cycle AC source directly. If in doubt as to the voltage and frequency rating of your power source, contact the local power company representative to avoid costly repairs. If the receiver does not respond after a one minute warm-up period when operating from a direct current (DC) source, the power plug may have to be reversed at the wall outlet to obtain proper polarization.

Operation from a 220-volt AC/DC source may be had by using a special line cord adapter available as an accessory. Hallicrafters part 87D1568.

ANTENNA - A three terminal strip is provided on the rear chassis apron for antenna connections. The terminals are marked "A1", "A2", and "G". A jumper bar is normally connected between terminals "A2" and "G" for single wire antenna systems and unbalanced antenna transmission lines. For doublet antenna installations using a balanced transmission line, the jumper between "A2" and "G" is disconnected. A ground connection, when used, is connected to terminal "G".

Single Wire Antenna - If a single wire antenna installation is to be used, connect the jumper bar between antenna terminals "A2" and "G". A single wire antenna of about 50 to 100 feet long (including lead-in) is then connected to terminal "A1". Erect the antenna as high and free from surrounding objects as possible. A good ground connection generally improves reception when using this type of antenna. The water pipe makes a very effective ground.

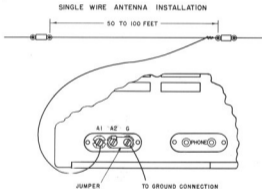


Fig. 2. Single wire antenna installation.

Doublet Antenna - The doublet antenna system is recommended for the higher frequency bands especially where maximum signal to noise is required over a relatively narrow range of frequencies. The transmission line from the antenna is connected to terminals "A1" and "A2". If a concentric line with a grounded outer conductor is used, connect the inner conductor to terminal "A1", the outer conductor to terminal "A2" and connect the jumper bar between terminals "A2" and "G".

The overall length (feet) of a doublet antenna may be determined by dividing the constant 468 by the desired frequency in megacycles.

Keep in mind that this type of antenna is directional broadside to its length and should be so oriented if maximum pickup from a given direction is desired.

DOUBLET ANTENNA INSTALLATION
USING TWISTED PAIR LEAD-IN

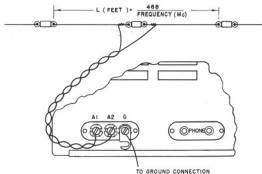


FIG. 3. Doublet antenna installation.

HEADSET CONNECTION - A pair of pin jacks are provided at the rear chassis apron for the headset phone tips. Any headset having a working impedance of 500 to 2,000 ohms may be used successfully with this receiver. To place the headset circuit in operation, set the **SPEAKER/PHONES** switch at **PHONES**.

OPERATION

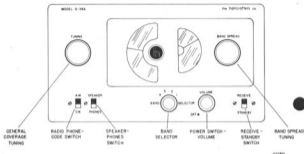


Fig. 4. Location of controls.

GENERAL BROADCAST RECEPTION - For regular broadcast entertainment purposes, set the **BAND SELECTOR** at 1, the **AM/CW** switch at **AM**, the **SPEAKER/PHONES** switch at **SPEAKER** and the **RECEIVE/STANDBY** switch at **RECEIVE**. Turn on the receiver with the **VOLUME** control by turning it clockwise. Use the **TUNING** control and **VOLUME** control in the usual manner, tuning for the loudest, clearest reception to obtain top performance from the receiver. When operating the receiver from a 115 V. DC outlet allow about a minute for warm-up. If the receiver doesn't respond after a reasonable warm-up period, reverse the power plug at the wall outlet to obtain proper polarity. In certain cases hum picked up from an AC outlet may be reduced by properly polarizing the power plug.

To turn off the receiver, turn the **VOLUME** control counter-clockwise until the power switch clicks.

SHORTWAVE RECEPTION - Radio telephone or voice reception in the short wave bands is accomplished as described above for general broadcast reception except that the **BAND SELECTOR** is set for ranges 2, 3 or 4. The frequency of reception is read from the dial scale which corresponds to the setting of the band selector knob. A section of the dial or short range of frequencies may be spread out by tuning the stations with the **BANDSPREAD** control. Note that the general coverage dial calibration will be true only when the bandspread pointer is set at zero. Code reception is accomplished by setting the **AM/CW** switch at **CW** and tuning for the desired pitch when tuning in the station.

BANDSPREAD TUNING - To use the bandspread dial, set the dial pointer at zero, set the general coverage dial pointer at the high frequency limit of the range of frequencies to be covered and tune in the stations with the **BAND SPREAD** control. For example: - Assume that the 40 meter amateur band is to be covered. Set the **BAND SELECTOR** at 3, the general coverage dial at 7.3 mc and tune with the **BAND SPREAD** control. The use of the bandspread feature is similar for the reception of shortwave broadcast, etc. In this case the bandspread dial is first set at zero and the station or group of stations located on the general coverage dial. Then by setting the general coverage dial pointer slightly higher in frequency than the group, the bandspread control will tune through the range, spreading out the group of stations over a large portion of the bandspread dial scale.

RECEIVE/STANDBY SWITCH - This switch must be set at **RECEIVE** for normal operation. To disable the receiver for short stand-by periods set the switch at **STANDBY**. This leaves the heaters at operating temperature during standby periods and permits instant response when reception is again desired.

SPEAKER/PHONES - Normally this switch is set at **SPEAKER** for loud speaker reception. Setting the switch at **PHONES** switches the output circuit from the speaker to the headset output jacks located on the rear apron of the chassis.

SERVICE

TUBE REPLACEMENT - The tube types and their relative position in the receiver are shown in the illustration, Fig. 5. When installing a replacement tube, insert the center guide pin into the center hole of the tube socket; rotate the tube until the key on the guide pin drops into the notch in the socket hole; and push down until the base of the tube rests firmly on the socket.

Handle tubes with care as they are considered fragile and do not tolerate much mechanical abuse.

DIAL LAMP REPLACEMENT - Refer to Fig. 5 for the location of the dial lamp. To replace a defective lamp, reach in through the rear of the cabinet and unclip the dial lamp socket by compressing the side springs. The socket and defective lamp may then be brought out into the open for service.

Make replacements with 6-8 volt Mazda #47 (Brown bead) lamps.

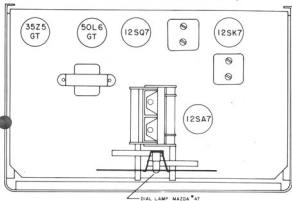


Fig. 5. Top view, location of tubes and dial lamp.

SERVICE OR OPERATION QUESTIONS - For further details regarding operation or servicing of the receiver, contact your dealer directly. Make no shipments directly to the factory before first writing for authorization and instructions. The factory cannot accept responsibility for unauthorized shipments.

Warranty

"This product is warranted to be free from defective material or parts, and it is agreed to furnish a new part in exchange for any part of this unit which under normal installation, use and service discloses such defect provided the unit is delivered by the owner to the authorized radio dealer or wholesaler from whom purchased, intact, for examination with all transportation charges prepaid within ninety days from the date of sale to original purchaser and provided that such examination discloses that it is thus defective.

This warranty does not extend to any radio products which have been subjected to misuse, neglect, accident, incorrect wiring not our own, improper installation, or to use in violation of instructions furnished by us, nor extend to units which have been repaired or altered outside of our authorized facilities, nor to cases where the serial number thereof has been removed, defaced or changed, nor to accessories used therewith not of our own manufacture.

This warranty is in lieu of other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of our radio products."