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# installation and operating instructions for model S-72 portable radio receiver

## FEATURES

AC/DC & PORTABLE OPERATION

AM BROADCAST 550 KC - 1600 KC

SHORT WAVE BROADCAST 1600 KC - 30 MC

DIRECT READING SLIDE RULE DIAL

HEADSET CONNECTION

AUTOMATIC NOISE LIMITER

CODE OR VOICE RECEPTION

SPREAD BAND TUNING



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

# INSTALLATION AND OPERATING INSTRUCTIONS

## RADIO RECEIVER MODEL S-72



Fig. 1. Radio Receiver Model S-72

### DESCRIPTION

The Model S-72 radio receiver is a portable all-wave superheterodyne receiver capable of receiving all of the broadcasting services between 550 kilocycles (KC) and 30 megacycles (MC) in four overlapping bands as follows:

### FREQUENCY COVERAGE

BANDS	*FREQUENCY RANGE	**TYPE OF RECEPTION
1	550 KC - 1620 KC	AM/CW
2	1.6 MC - 4.4 MC	AM/CW
3	4.5 MC - 11.5 MC	AM/CW
4	11.0 MC - 30.0 MC	AM/CW

\* First and last dial calibration.

\*\* AM - Amplitude Modulation

CW - Code

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 self-contained antenna system consists of a loop for band 1 (550 - 1620 kc) and a telescoping whip antenna for the short wave ranges (Bands 2, 3 and 4). An external antenna connection is provided for the use of a longer antenna for semi-portable operation.

A built-in speaker provides for loudspeaker reception, while headphone reception may be had by plugging a headset into the PHONES jack located on the front panel of the receiver. The speaker is silenced when the headset plug is inserted into the jack.

A noise limiter is incorporated to provide an improved signal to noise ratio when operating in areas where severe electrical disturbances exist.

The VOICE/CODE switch permits reception of either radio telephone or c-w code signals.

The receiver normally operates from a 105-125 V, DC (Direct Current) or 60 cycle AC (Alternating Current) power source or from a self-contained battery pack for portable operation. To place the receiver in operation it is merely necessary to insert the power plug into the wall outlet for AC/DC operation or install the battery pack for portable operation. 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 before removing or destroying them.

**LOCATION** - The receiver is equipped with carrying facilities for portable operation as well as protective feet for table top or shelf mounting when operating from com-

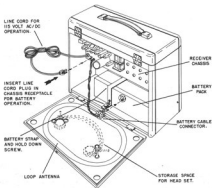


Fig. 2. Battery compartment

mercial power sources. Reception in the standard broadcast band does not require the use of the whip antenna, however, when reception in the short wave ranges is desired, clearance for the whip antenna must be provided as the antenna should be fully extended for maximum performance.

**POWER SOURCE** - Two types of power sources may be used to operate the receiver. The receiver may be operating directly from a 115 V. AC or DC wall outlet or from the battery pack carried inside the carrying case.

**AC/DC Operation** - The receiver will operate from a 105-125 volt, 60 cycle AC (Alternating current) or 105-125 volt DC (Direct current) source. Power consumption is approximately 25 watts. If you are in doubt or unfamiliar with the voltage and frequency rating of your utility service, consult the local power company representative. Attempting to operate the receiver from other sources of power than specified may involve costly repairs. If the receiver does not respond after a one minute warm-up period when operating from a 105-125 volt DC source, the power plug may have to be reversed at the wall outlet to obtain proper polarization.

**Battery Operation** - To operate the receiver from the battery supply, select one of the battery types shown on the label in the battery compartment or listed under SERVICE on the last page of this book. The batteries have been selected both for overall size and the type of power receptacle.

Open the battery compartment cover, remove the battery holddown strap screw and slip the battery pack into the compartment. Fasten the battery strap securely with the screw and plug the receiver's battery connector into the battery receptacle. Before the receiver will operate from battery power, the line cord plug must be inserted into the outlet receptacle on the chassis of the receiver. Store the line cord in its compartment and close the cover.

#### WARNING

Do not store the receiver with the battery in place. Remove the battery and store it separately if necessary. Batteries deteriorate upon standing for long periods of time and damage the finish of certain components used in the construction of radio equipment.

**ANTENNA** - Built-in antenna facilities are available for normal receiving conditions. For broadcast band reception (Band 1) a built-in loop is used; for short wave reception (Bands 2, 3 and 4) a telescoping whip antenna is extended full length from the front panel. Where receiving conditions require more signal pickup than available from either the loop or whip antenna, a length of wire may be added to the short length wire located in the battery compartment. The length of this type antenna is not critical, use any convenient length.

**HEADSET CONNECTION** - A standard two circuit headset jack, located at the front panel is provided for headset reception. Any headset having a working impedance of 500 to 2,000 ohms may be used successfully with this receiver. Inserting the headset plug into the jack automatically silences the speaker. The headset may be carried in the battery compartment if desired.

## OPERATION

#### WARNING

When operating from the battery source make sure the ON-OFF/VOLUME control is turned fully to the left until the switch clicks when turning off the receiver. This is important in a battery-operated radio because there is no dial light or

characteristic background noise or hum to indicate that the radio is operating.

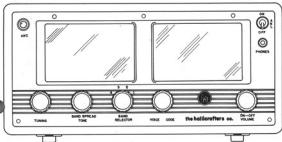


Fig. 3. Location of controls

**GENERAL BROADCAST RECEPTION** - For regular broadcast entertainment purposes, set the **BAND SELECTOR** at 1, the **VOICE/CODE** control at **VOICE** and the **ANL** switch at **OFF**. Turn on the receiver with the **ON-OFF/VOLUME** control by turning this control to the right. Use the **TUNING** control and **VOLUME** control in the usual manner, tuning for the loudest, clearest reception to obtain top performance from the receiver. The combination **BAND SPREAD/TONE** control is to be used as a tone control on the broadcast band. When operating the receiver from an 115 V. AC or DC outlet allow about a minute for warm-up. If the receiver doesn't respond after a one-minute warm-up, reverse the power plug at the wall outlet to obtain proper polarity. When operating from battery power be sure to plug the line cord plug into the receptacle on the receiver chassis. To turn off the receiver turn the **ON-OFF/VOLUME** control counter-clockwise until the switch clicks.

If the receiver is operated in an area blanketed by heavy static or noise, setting the **ANL** switch at **ON** will generally reduce this unwanted background.

**SHORT WAVE 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 channel 2, 3 or 4. Read the frequency of reception from the dial scale corresponding to the setting of the band selector knob. Any section or narrow range of frequencies may be spread out by tuning the stations with the **BAND SPREAD/TONE** control. Note that the dial calibration will be true only when the bandspread pointer is set at 100. For code reception set the **VOICE/CODE** control at **CODE** and tune for the desired pitch when tuning in the station. As described above, noisy reception can be improved by setting the **ANL** switch at **ON**.

## SERVICE

**TUBE REPLACEMENT** - The tube types and their relative position in the receiver are shown in Fig. 4. When inserting miniature tubes, lineup the seven small pins before pushing straight down to seat the base of the tube on the socket. Handle all tubes with care as they are considered fragile and do not tolerate much mechanical abuse.

**BATTERY REPLACEMENT** - The following battery list covers the various makes and their type or types which may be used in the Model S-72 receiver. Refer to the section **INSTALLATION** for installation details.

## REPLACEMENT BATTERY LIST

Manufacturer	Type No.	Manufacturer	Type No.
BRIGHT STAR . . . . .	66-50	OLIN . . . . .	0615 0614
BURGESS . . . . .	G6M60 F6A60	RAY-O-VAC . . . . .	AB878 AB994
DELCO . . . . .	8760	RCA . . . . .	V8018 V8019
EVEREADY . . . . .	754 753	SEARS ROEBUCK . . . . .	57E8404
GENERAL . . . . .	60A6F65 60A6F65	USALITE . . . . .	680
MONTGOMERY WARD . . . . .	82A35M 82A33	WESTERN-WIZARD . . . . .	3B6470 3B6480
NATIONAL UNION . . . . .	N808	WILLARD . . . . .	60B6F6/5 60A6F6/5

NOTE - Only one battery pack of the types listed above is required.

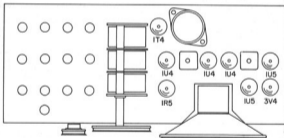


Fig. 4. Top view, location of tubes.

**SERVICE OR OPERATING 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.

# NOTES

Generalvertretung für die Schweiz!



RADIO EN GROS & FABRIKATION

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## 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."*