

Instructions for  
**RCA Victor R-22**  
115 Volt AC/DC Universal Receiver

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## INTRODUCTION

This five-tube Superheterodyne receiver is a compact, readily portable instrument which may be operated from any 100 to 125 volt power supply circuit, either A. C. (alternating current—any frequency from 25 to 133 cycles per second) or D. C. (direct current).

The tuning range of this receiver is extended beyond the limits of the regular broadcast band, permitting reception of unusual and oftentimes interesting forms of intelligence (such as police calls) in addition to conventional broadcast entertainment. The actual range is from 540 to 1712 kilocycles (continuous); an additional range from 2400 to 2500 kilocycles is provided by turning a small knob which operates a frequency band switch.

## INSTALLATION

**Preliminary**—After unpacking the instrument, remove the interior packing material used to protect the Radiotrons in the sockets during shipment. Refer to the tube location diagram on the bottom of the cabinet and make certain that all tubes are rigidly in position and that the three grid clips are firmly connected to the dome terminals of the proper Radiotrons. *The RCA-78 and RCA-6A7 grid leads must be suspended over the notched supports as indicated in the diagram, in order to obtain proper operation.*

**Location**—The receiver should be located so that its power cord is within reach of an electrical outlet or lamp socket of the proper rating. Because of its light weight and small size, the instrument may be mounted upon a convenient shelf or upon an article of furniture (such as a piano or end-table) if desired.

In any installation, care should be taken to avoid restriction of natural ventilation through the cabinet as would occur with the set resting upon a soft cloth pad or with the back of the set fitted into a small compartment or placed too close to a wall or other plane surface. To prevent damage to the cabinet finish and possibly more serious internal injury, the instrument should not be placed upon or close to a radiator or other heating device. It must be mounted only in an upright position as intended to insure proper ventilation and maximum tube life.

**Antenna and Ground**—For use as a portable receiver, the attached antenna (flexible black lead approximately 20 feet in length) will normally provide good reception of local and semi-distant stations. The antenna wire should be uncoiled to full length and suspended as high as possible. When the receiver is used in a building of metallic construction an outdoor antenna is essential. In such cases, sufficient pickup may often be obtained by dropping the attached antenna lead out of a nearby window. For any permanent installation, a regulation outdoor antenna from 25 to 75 feet in length is recommended.

A *good* ground connection is essential for best performance. It should be as short and direct as possible, and preferably should be made to a cold water pipe by means of an approved ground clamp. The ground connection to the receiver is made by splicing the required length of flexible insulated copper wire to the short black lead extending from the receiver chassis.

**Power Supply**—Before connecting the power cord to the electrical outlet, make certain (1) that the supply voltage does not exceed 125 volts and (2) that the A. C.—D. C. line switch at the rear of the chassis is correctly set as indicated in the tube location diagram on the bottom of the cabinet—to the right (facing rear of set) for A. C. and to the left for D. C. supply.

## OPERATION

The instrument has three operating controls, located on the front panel of the cabinet, as follows:

- (1) *Volume Control (Combined with Power Switch)* (Left-hand Knob)—In the extreme counter-clockwise position the power is "off." Rotating the knob slightly clockwise turns on the power—further rotation increases the volume.
- (2) *Station Selector* (Right-hand Knob—Symmetrical with Volume Control)—This control is provided with an escutcheon upon which is embossed an arbitrary (0–100) graduated scale. Stations of low frequency (540 kilocycles and upward) will be received toward the "100" end of the scale. Police calls from stations transmitting at 1712 kilocycles will be received near the "0" end of the scale.
- (3) *Frequency Range Switch* (Small Knob Below and to Right of Station Selector)—With this knob in the *counter-clockwise* position, stations operating in the range from 540 to 1712 kilocycles will be received. Reception of police calls from stations in the 2400–2500 kilocycle band will be obtained with this knob in the *clockwise* position.

To operate the receiver, proceed as follows:

1. Set the Frequency Range Switch for the desired frequency band—see preceding paragraph (3).
2. Turn on the power and set the Volume Control fully clockwise for maximum volume—reduce the setting if too noisy.
3. Allow a minute or two for the tubes to heat, then turn the Station Selector slowly over the range of the dial until a desirable station program (or police call) is heard. *If no sounds (station signals or static) are heard on D. C. supply, reverse the prongs of the power plug in the receptacle.*

NOTE—Police calls in the 2400–2500 kilocycle band will be heard at dial settings between "25" and "50," approximately (each station in this band will be heard at two separate points within this portion of the dial range—the setting which provides the clearer reception should be used). The remainder of the dial range is ineffective with the Frequency Range Switch set for reception of this band. Strong local stations in the 540–1500 kilocycle broadcast band may be audible (sometimes at more than one point on the dial) when the Frequency Range Switch is set for 2400–2500 kilocycles.

4. For best reproduction reduce the Volume Control setting and adjust the Station Selector accurately for loudest volume. Always use the Volume Control—never the Station Selector—for regulation of volume.
5. When through operating, turn the Volume Control knob fully counter-clockwise until the "off" click of the power switch is heard.



