

**INSTALLATION AND OPERATION  
INSTRUCTIONS  
FOR  
WESTINGHOUSE  
RADIO  
MODELS  
WR-212 and WR-312**



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## WESTINGHOUSE RADIO MODELS WR-212 and WR-312

### INTRODUCTION

The receiver comes to you with all the tubes in place, consequently the installation becomes a matter of merely making the antenna, ground and attachment cord connections. These steps are described fully in the following paragraphs.

There are a number of new and exclusive features in the Models WR-212 and WR-312 receivers which combine to make a radio of exceptional ability and performance. It is essential, however, that it be correctly installed and correctly operated in order to obtain the fine reception of which it is capable.

### ANTENNA

An efficient antenna system is of the utmost importance for the proper performance of your receiver. An all-wave antenna system is recommended for the best possible results on all wave lengths. If a single wire type of antenna is used, its overall length including the "lead-in" wire should be between 25 to 60 feet, and should be placed as high as possible and not too close to other antennas or electric light or power wires. The "lead-in" wire from the antenna should be connected to the "A" terminal on the rear panel of the chassis. A lightning arrester usually is required by the electrical code. This is to be connected between any point in the "lead-in" and any grounded object, such as a water pipe or length of pipe driven into moist earth. The connection to the pipe is made best with a standard ground clamp.

### GROUND

For best results a good ground connection for the chassis should be used. This may consist of a wire connected from a standard ground clamp, securely fastened to either a cold water pipe or a length of pipe driven into moist earth, to the "G" terminal on the rear panel of the chassis. If such a ground connection is not possible, a steam pipe may be used as a ground. In some cases a ground connection may not be necessary. However, the receiver should be tried both with and without a ground to determine which connection gives the best results.

### POWER SUPPLY

The WR-212 and WR-312 receivers are designed for lines of 105 to 125 volts, 50 to 60 cycles alternating current. Information regarding your power supply may be obtained from your local electric light company. To complete the installation of the receiver it is necessary only to insert the plug of the attachment card in any convenient electric light socket or outlet.

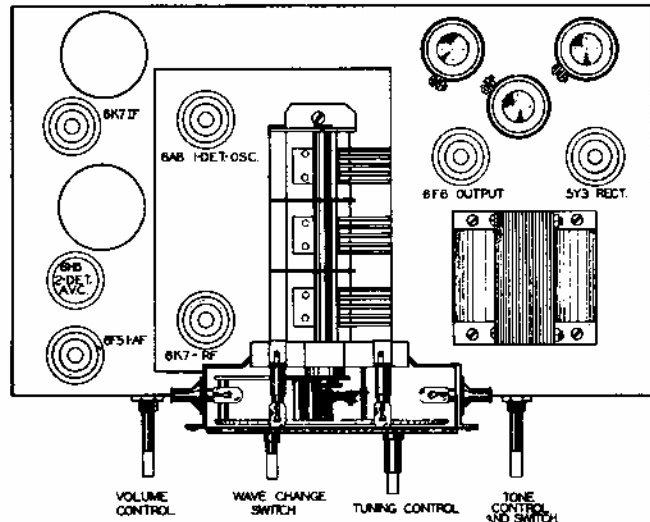
### TUBES

The receiver employs seven tubes of the following types:

- 1 - 6K7 R.F. amplifier
- 1 - 6A8 combined detector-oscillator

- 1 - 6K7 I.F. amplifier
- 1 - 6H6 2nd detector - A.V.C.
- 1 - 6F5 1st A.F. amplifier
- 1 - 6F6 power pentode amplifier
- 1 - 5Y3 rectifier

When replacing tubes the receiver should be turned "off".



**TONE CONTROL AND SWITCH:** The lower right-hand knob is a combination "on" and "off" switch and tone control. In the extreme counterclockwise position of this knob (turned to the left) the receiver is turned "off". When the control is turned clockwise (to the right) the receiver is switched "on" and the dial scale is illuminated. Further clockwise movement of the knob increases the treble or high frequency response. The position of this control may be adjusted to any individual preference. In the bass position, interference and static are reduced materially. This control is of the type which provides a gradual change in tone and has no abrupt or limited number of settings.

**STATION SELECTOR:** The upper right-hand double knob is the station selector. The larger knob turns the tuning mechanism through an adequate reduction movement and the small knob permits very fine tuning, which is essential when tuning in short-wave stations. To further assist in tuning in short-wave stations, a "second" indicator is provided. A slight movement of the dial indicator is accompanied by a considerable movement of the "second" indicator. Arbitrary numbers from 0 to 60 are printed on the dial scale. Short-wave stations can be accurately recorded by noting the position of the dial indicator with regard to scale marking and then noting the location of the "second" indicator. The full-vision dial is calibrated in kilocycles on all three wave bands.

A "Precision Eye", located on the front of the cabinet, is provided to aid in the proper adjustment of the station selector. The indication takes the form of a shadow on a green screen. To locate the best reception point of a station, turn the station selector knob until the shadow is at the narrowest position.

**MULTI-WAVE SELECTOR:** The upper left-hand knob selects the particular band (of wave length or frequency) desired. This wave band selector switch has three positions and corresponds with the three scales on the dial. These positions are indicated by corresponding colored dots on the cabinet just above the knob.

**WHITE** indicates that the selector switch is in the broadcast band position (525 to 1850 KC.), which is printed in white on the dial scale.

**GREEN** indicates the first short-wave band (750 to 5950 KC.), in which will be found short-wave, police, aviation, and amateur stations.

**RED** indicates the second short-wave band (5900 to 18,500 KC.), for world-wide broadcast reception.

Short-wave reception is unlike that on the standard broadcast band in several respects. Tuning is extremely sharp and the station selector must consequently be adjusted accurately. In locating new stations the station selector must be turned very slowly and carefully. It will be found that certain stations are heard best during the daytime, some in the evening, and others at night. The difference in time between the receiver and transmitter also must be considered in endeavoring to pick up distant or foreign stations. Many broadcasting stations transmit both on regular and short-wave. In many cases the short-wave transmission will provide the more satisfactory reception, particularly when atmospheric disturbances or static are troublesome.

**VOLUME CONTROL:** The lower left-hand knob adjusts the volume to the desired level. The greatest volume is obtained with this control turned fully to the right (or in a clockwise direction).

Automatic volume control is provided within the receiver and prevents any noticeable change in volume from fading signals. "Blasting" from powerful locals is eliminated when tuning and the operation of the receiver is greatly simplified.

#### SERVICE

Your receiver has been carefully tested and inspected before leaving the factory and if installed properly and operated in accordance with these instructions should furnish the best in radio reception. Any further information regarding its operation or matters per-

taining to service should be taken up with the dealer from whom the receiver was purchased.

#### GUARANTEE

The Westinghouse Electric Supply Company agrees to furnish a new part in exchange for any part of any unit of its manufacture which, under normal installation, use and service, becomes inoperative as a result of any defect in material or workmanship, provided the unit is delivered intact, by the owner or his accredited agent, within ninety days from date of sale to the first user, with proof of the date of sale and with all transportation charges prepaid, to an official Radio Dealer or Wholesaler of the Company, and further provided it is found by the Company to be thus defective.

The Company is not responsible for failure of any of its products due to ordinary wear or to neglect, misuse, accident, incorrect wiring or improper installation, and is not responsible for any consequential damage; nor is the Company responsible for any correction when other than spare parts made by it are used, or when any repair, replacement or adjustment has been made outside of its official Radio Dealers, Wholesalers, or its Factory; when any component part or assembly is delivered for examination independently of the unit to which it belongs.

Any part of the unit approved for exchange hereunder shall be exchanged by the official Radio Dealer or Wholesaler of the Company without charge for the part to the user or his accredited agent, but any charge for labor incurred in disassembling, assembling or testing the unit, or in removing or installing the unit, or incurred for transportation of the unit, duty or tax thereon, or any other contingent expense, will not be assumed by the Company.

The Company is not responsible for any liability for the damage or injury to any person or part resulting directly or indirectly from design, material, workmanship or installation of any of its products.

This guarantee supersedes all other guarantees of the Company for its Radio products either expressed or implied; and no one is authorized by the Company to vary any of its terms or conditions.

Effective June 1, 1934.

Westinghouse Electric Supply Co.

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