



# PHILARMONIC

MODEL 448C

TYPE: Twelve-tube FM-AM superheterodyne.

POWER SOURCE: 105-125 volts, 60 cycles.

FREQUENCY RANGES: FM, 88-108 Mc.  
AM, 540-1600 Kc.

POWER CONSUMPTION:

Radio, 80 watts.

INTERMEDIATE FREQUENCIES: FM, 10.7 Mc. AM, 456 Kc.

Radio and Phonograph, 102 watts.

## INSTALLATION.

**ANTENNAS.—** For AM operation, the loop antenna attached to the rear of the chassis is generally the most satisfactory. However, terminals marked A and G are provided on the loop for the connection of an external antenna and ground, which may be used if desired.

For the reception of local FM stations, a folded-dipole antenna is provided in the cabinet. If reception of other than strictly local FM stations is desired, a good external FM antenna should be installed and connected with a 300-ohm balanced line to the input terminals on the rear of the chassis next to the phonograph input jack 124. The internal dipole must be disconnected when using the external antenna, and vice-versa.

**POWER CONNECTIONS.—** Connect the power cord to an alternating-current supply of 105-125 volts, 60 cycles. Be sure that the phonograph-motor cord is plugged into receptacle 121, the speaker plug 123 into receptacle 122, and the phonograph-pickup cord into phonograph jack 124.

**CONTROLS.—** The control knobs on the front panel perform the following functions. The numbers are from left to right.

1. Power switch and volume control.
2. Tone control. Clockwise rotation gives more high-frequency response.
3. Selector switch. Left position, AM radio; center, FM radio; right, phonograph.
4. Tuning control.

## OPERATION.

**RADIO.—** Start the set by turning the volume control clockwise about one-third of the way.

Set the selector switch on AM or FM as desired.

Turn the tuning control until the pointer indicates the frequency of the desired station. When the station comes in, slowly rotate the knob back and forth and determine the exact center position, where the background noise disappears or is sharply reduced, and the signal comes in clearly with the greatest volume. This is the correct tuning position, and careful adjustment is required, especially on FM, if the full rich-tone capability of the receiver is to be realized. A strong FM station may also be received, with considerable distortion, at positions slightly above and below the correct center position. This condition is quite normal.

Adjust the tone control for the most pleasing operation.

**PHONOGRAPH.—** Set the selector switch on the right-hand position. Operate the record changer in accordance with the accompanying instructions.