

# Operating Guide

TO HELP YOU

ENJOY YOUR NEW

## *Zenith*

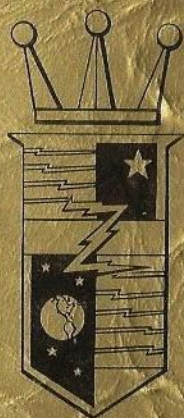
### *Super De Luxe*

**TRANS-OCEANIC**

**PORTABLE**

**MODEL Y600 — Y600L**

**CHASSIS 6T40 — 6T41**





*There Is a World of Entertainment and Pleasure  
In Your New Zenith Portable*

## *General Features*

Your Zenith Super DeLuxe Trans-Oceanic portable will operate on battery or 110 Volt AC-DC current. It uses a selenium rectifier, a current regulator and is a 5 tube superheterodyne radio, covering the standard broadcast, foreign, domestic short-wave bands, and has continuous short-wave coverage from 2 to 8 megacycles (38 to 150 meters). It has seven tuned circuits, and a 3 section tuning condenser with a tuned radio frequency stage insuring maximum sensitivity and selectivity. Freedom from blasting on powerful stations is assured by a new automatic volume control circuit which controls 2 tubes on all bands. A Deluxe Alnico 5, rubber mounted, permanent magnet, speaker in conjunction with an improved audio system provides finer tone than ever before.

The four button "RADIORGAN" tone control permits selection of 16 different tone combinations. The removable WAVEMAGNET provides reception in trains, planes, automobiles, boats, and steel constructed buildings. This standard Wavemagnet is located in the top of the cabinet and is equipped with a special extension cable for its use on windows of automobiles, planes, trains, etc. To bring in short-wave stations with greatly added volume turning the knob on the top right hand corner of the cabinet allows the WAVEROD Antenna to snap up, which, when fully extended, provides increased pick up for short-wave reception.

Two terminals have been provided at the left rear of the chassis marked "A" and "G" for external antenna and ground connections. These are for use in areas of extremely low signal strength. This external antenna and ground is automatically connected to the proper standard or short-wave circuit when the operator presses the band selector buttons.

The band selector buttons on the front panel provide an easy means of selecting the standard broadcast (BC) or the short-wave band most suitable to the time of day. Each short-wave band is electrically

SPREAD, which means that stations are separated from each other to a degree permitting great ease of tuning. A calibrated second scale has been incorporated in the top edge of the dial face. It permits short-wave stations to be accurately logged and easily relocated.

All parts are treated against moisture, temperature, and other climatic conditions. Variations in the performance of the receiver because of seasonal or geographic changes are held to a minimum, and the receiver will operate at its maximum efficiency throughout the world. Power consumption on the electric light line is 10 watts.

When the receiver is to be used in areas outside of continental U. S. A. where 110 volts AC/DC is usually not available, ballast adaptor No. S-15715 must be used. This ballast adaptor reduces 220 volts AC or 220 volts DC to 110 volts AC or 110 volts DC necessary for proper operation of the receiver.

## *Operating Instructions*

**READ CAREFULLY — KNOW YOUR ZENITH**

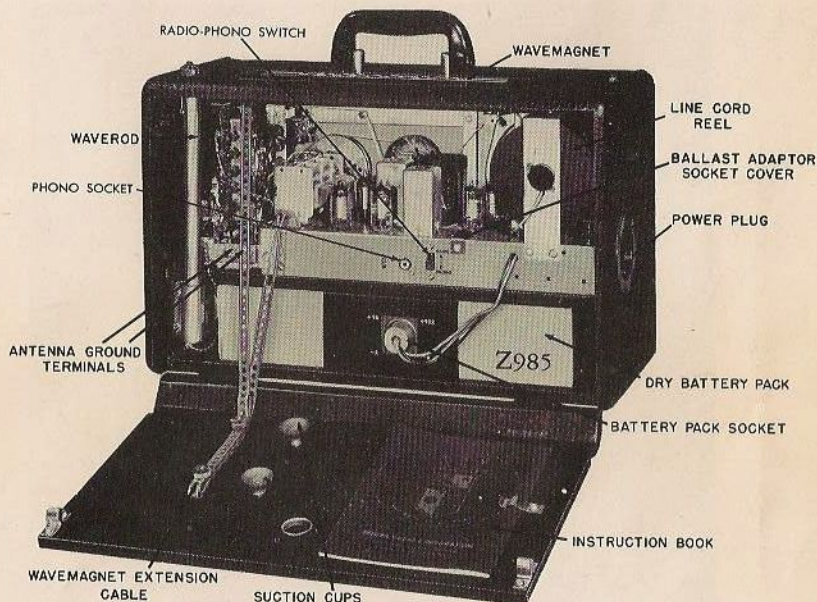


Figure 1.—Rear View, Back Cover Open.



## **1. PREPARING THE RECEIVER FOR OPERATION**

- A. OPEN REAR DOOR OF CASE by simply pulling on finger grip provided.
- B. Place the battery pack into the compartment provided below the receiver chassis and insert battery cable plug into receptacle provided for on battery. When making replacement of the battery pack be positive to use only Zenith built Z985X battery kit.

## **2. BATTERY OPERATION**

- A. The 110-volt plug must be placed in the battery saver socket provided in order for the receiver to operate on the Z985 dry battery pack. (See fig. 2.) The excess 110-volt line cord is automatically taken up by the line cord reel inside the cabinet.

The receiver is now ready for battery operation.

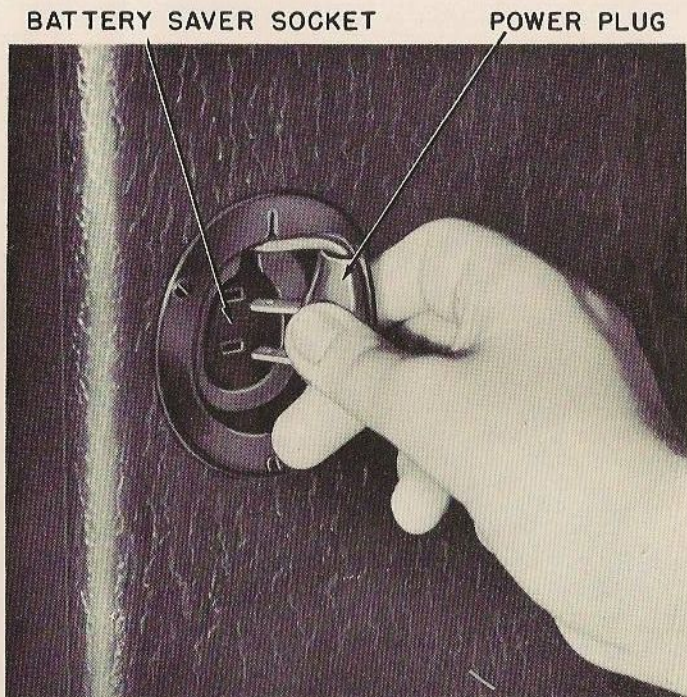


Figure 2.—Insertion of 110 Volt Plug Into Battery Saver Socket.

- B. Turn the receiver ON by rotating the left control knob clockwise. When not in use, always make certain that power is off by turning the left control knob fully counter clockwise, until a click is heard.
- C. Proceed as instructed under paragraphs 12, 13, 14, and 15.
- D. If used an average of 3 to 4 hours a day—30 hours a week, the Z985 battery pack will give approximately 150 hours of service.
- E. In the event this receiver is to be continuously operated from batteries only as a household receiver, then a longer life battery pack can be obtained Part #Z990 which is rated at approximately 750 hours. Since this battery is too large to fit into the battery compartment a battery extension cable is required, Part #S-9598.

### 3. LIGHT SOCKET OPERATION (110-125 Volts DC or AC — 25 to 60 cycle operation.)

- A. To operate the receiver on 110-volt 60 cycle Alternating Current or 110-volt Direct Current it is only necessary to remove the power plug from the Battery Saver Socket at the side of the receiver, (See fig. 2.), pull out the Power cord and captivate it in the retaining slot, (See fig. 3).

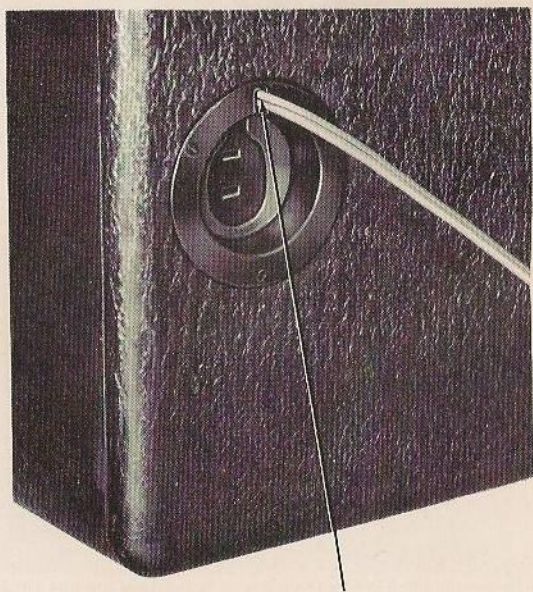


Figure 3—Power Cord Captivated in Retaining Slot.



- B. Plug the line cord into any convenient light socket. After the receiver is in operation try reversing the plug for minimum hum or noise when operating on alternating current.
- C. On direct current reverse the plug if the set does not operate after having been turned ON. On DIRECT CURRENT the set will operate ONLY with the plug in one position.

### Thermal Regulator Tube

- D. This receiver comes equipped with a thermal regulator tube 50A1. This thermal regulator tube controls the filament current in such a manner as to keep filament emission normal. This enables the receiver to function on line voltages as low as 90 volts and as high as 130 volts.

When the receiver is operated with the ballast adaptor set for either 220 volts AC or 220 volts DC, it will enable the set to operate on a low line voltage of 200 volts or a high line voltage of 250 volts.

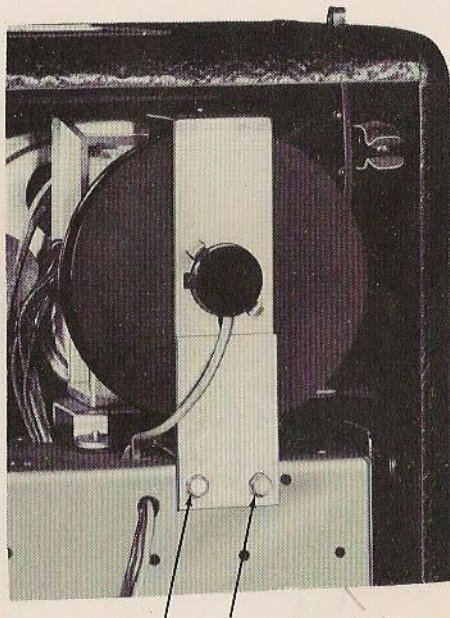


Figure 4.—Remove the two red screws to take out the line cord reel for access to 50A1 Thermal Regulator Tube.

In the event it becomes necessary to replace the 50A1, remove the two red screws (see fig. 4). This will allow you to take out the line cord reel and gives easy access to the 50A1.

**220-240 Volts DC or AC — 25 to 60 cycle operation.**

- E. If the receiver is to be used in locations where a current supply of 220-240 Volts AC or DC is available, ballast adaptor S-15715 should be used. This ballast adaptor assembly can be obtained from your local Zenith distributor and need only be plugged into the ballast adaptor socket. The ballast adaptor socket is under the cover plate. This cover plate can be removed by unfastening the cover plate mounting screw. (See fig. 5.)

1. Loosen the screw holding the switch positioning plate.

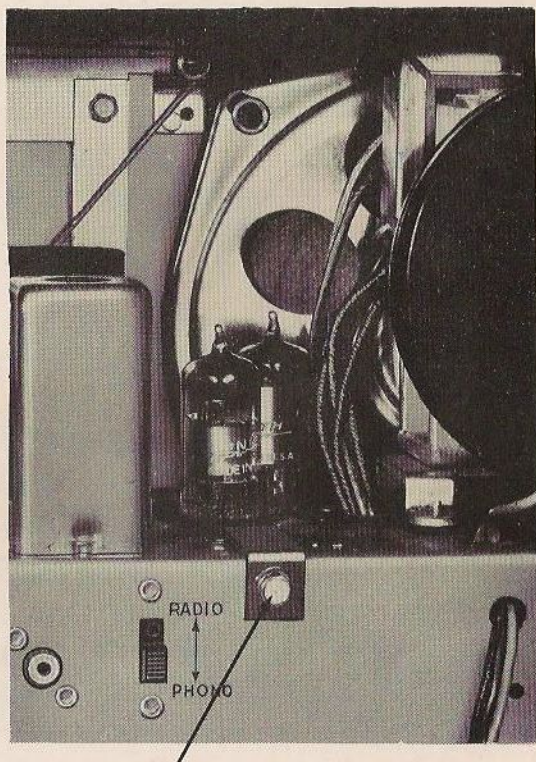


Figure 5—Remove screw to take off ballast adaptor cover plate.



2. Move the switch on the ballast adaptor to either 110 volts AC-DC, 220 volts DC or 220 volts AC position to conform to the type current on which the set is to be operated. (See Figure 6.)

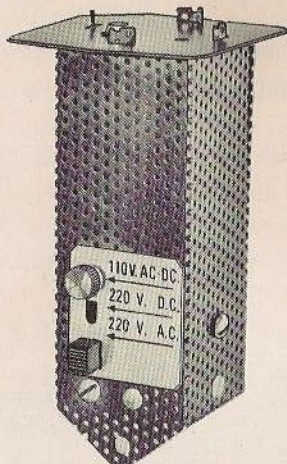


Figure 6—Ballast Adapter Switch Positions.

3. Do not move switch to 110 volt position, when the receiver is operating from a 220 volt source, or the tubes will be burned out.

#### 4. TUNING DIAL

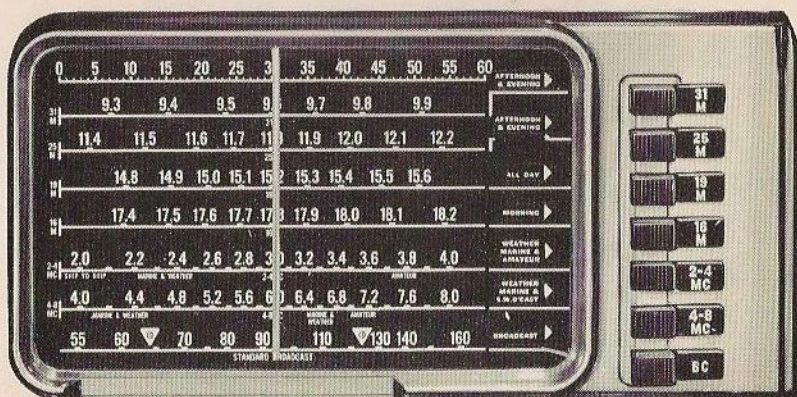


Figure 7—Dial Scale and Band Selector Buttons



**CIVIL DEFENSE SYMBOLS.** In the event of a national emergency when broadcast stations must leave the air, civil defense information will be broadcast by the CONELRAD plan. To hear such information, tune your radio to 640 or 1240 Kc indicated by the civil defense symbol on the dial.

(See fig. 7.) Study the dial carefully. The dial scale for the band you wish to tune is opposite and to the left of the band selector button. (For example, when you press the 19M band selector read the dial scale to the left of this selector button. You will then be tuning from 14.8mc to 15.6mc.) If you wish to tune some other band, press the desired band selector button and read the dial scale to the left of it.

#### THE SEVEN BAND RANGES ARE:

BAND	METERS	MEGACYCLES	KILOCYCLES
BC	555M to 188M	.54Mc to 1.6Mc	540Kc to 1600Kc
4-8Mc	75M to 38M	4Mc to 8Mc	4000Kc to 8000Kc
2-4Mc	150M to 75M	2Mc to 4Mc	2000Kc to 4000Kc
16M	16M	17.4Mc to 18.2Mc	17400Kc to 18200Kc
19M	19M	14.8Mc to 15.6Mc	14800Kc to 15600Kc
25M	25M	11.4Mc to 12.2Mc	11400Kc to 12200Kc
31M	31M	9.3Mc to 9.9Mc	9300Kc to 9900Kc

(M indicates Meters; Kc indicates Kilocycles; Mc indicates Megacycles.)

#### 5. CONTINUOUS COVERAGE BANDS

This portable has continuous coverage from 2 to 4 megacycles (150 to 75 meters) and 4 to 8 megacycles (75 to 38 meters).

The continuous coverage band can be used by sportsmen, yachtsmen and others operating boats in the Great Lakes, Pacific Coast, Atlantic Coast, Gulf of Mexico and Caribbean Sea areas.

The Weather Broadcast Schedule as well as the Short Wave Station List are in the chart and log compartment built into the front cover. The compartment can be opened and held in position by the door latch. (See fig. 8.)

The Weather Broadcast Schedules will give the exact up-to-the-minute as well as predicted weather reports for the areas in which they are operating. These weather reports are vitally important in continuing or planning a cruise in either inland or off-shore waters of Continental U.S.A.

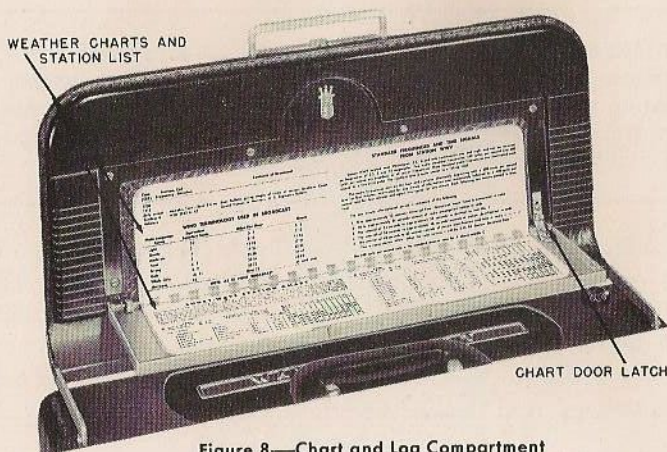


Figure 8—Chart and Log Compartment

The 4 to 8 megacycle continuous coverage band also includes the 49 meter, 6.0 Mc to 6.2 Mc International Short Wave Band.

## 6. DIAL-O-MAP

The chart and log housed in the inside of the front cover contains a DIAL-O-MAP. This plus the accompanying time map will enable you to determine the time in any part of the world.

## 7. SPLIT-SECOND SCALE

This feature is provided in the upper outer edge of the dial face to assure ease and accuracy in logging and relocating the foreign stations. Example: A station heard at 9.55 megacycles on the 31 meter band would be logged as — 31 meter band 27 seconds.

## 8. DIAL LIGHT SWITCH

To turn on the dial light, press the Dial Light Control (located on the lower left corner of the front panel) to the left. (See fig. 9.) This control is of the momentary contact type and the dial will only be illuminated when the control is pressed to the left.

The dial light battery is located in the lower left corner of the battery compartment. When this battery is worn out and needs replacing, remove it from its retaining clamp and pull out the battery cable plug and replace the battery with a new one, type Z1. (See fig. 10.)



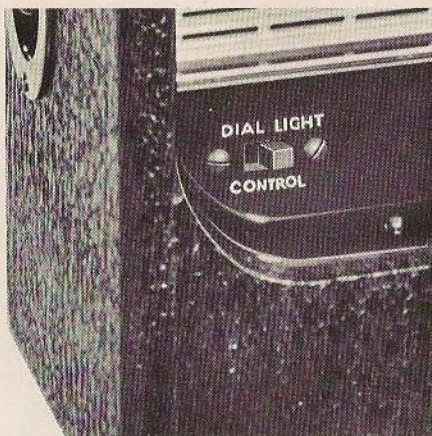


Figure 9—Dial Light Control.

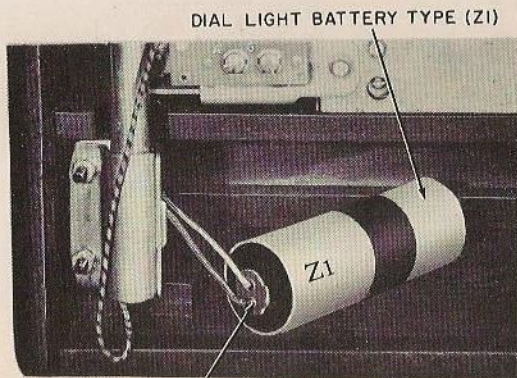


Figure 10—Dial Light Battery, Cable and Plug.

## 9. RADIORGAN

The tonal characteristics of the receiver may be regulated to the listeners preference by means of the four tone buttons below the dial. The combination of these four buttons in either of their two positions offers 16 possible tonal combinations. The portion of the tonal range is shown above each button.

## 10. HEADPHONES

In trains, dormitories, hospitals or schools, etc., it may be necessary

to operate the receiver without disturbing nearby persons. The use of headphones is especially helpful for airplane travel. Special low impedance Zenith Headphone Kit, part number S-18631, available through your Zenith dealer, is easily adaptable to the chassis of the receiver. To connect these headphones place the earphone plug into the socket provided. (See Figure 11.) Plugging the headphones into the earphone jack automatically disconnects the speaker.





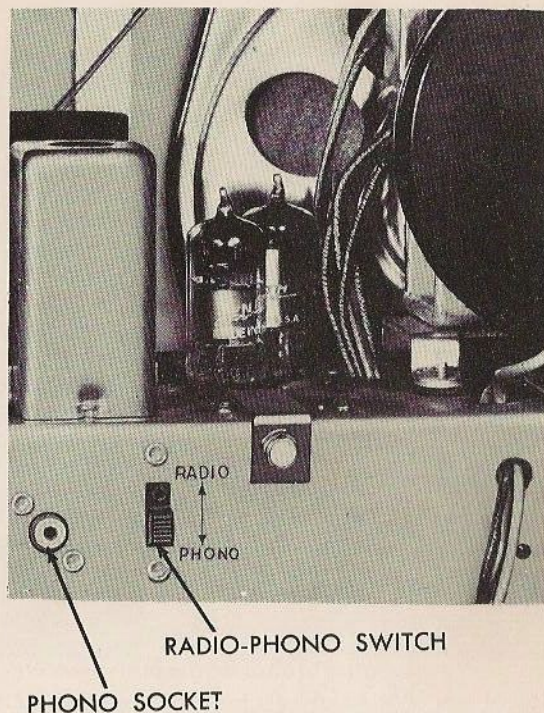


Figure 12

## 12. TUBE COMPLEMENT

Tube	Type	Use
1	1U4	RF Amplifier
1	1L6	Converter
1	1U4	IF Amplifier
1	1U5	AVC, 2nd Detector and 1st Audio Amplifier
1	3V4	Power Amplifier

### Selenium Rectifier

1	212-13	Rectifier
---	--------	-----------

### Current Regulator Tube

50A1	Filament Current Regulator
------	-------------------------------

See Figure 13 for location of tubes on chassis.

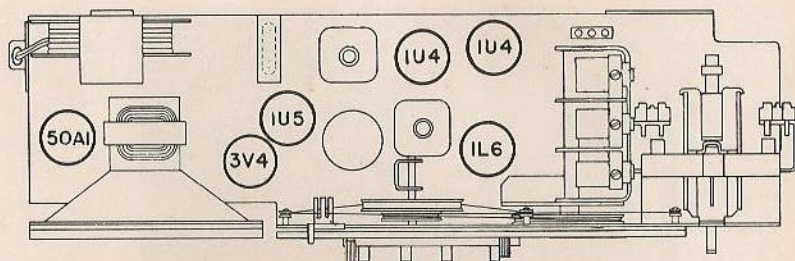


Figure 13—Top View of Chassis Showing Tube Location.

### 13. STANDARD BROADCAST

#### (Normal Conditions)

- A. Use the receiver with the antenna in position as shipped from the factory. It is not necessary to remove the Wavemagnet under normal conditions. A loop antenna is, naturally, directional. If reception of a station is not satisfactory, rotate the entire receiver for the position of greater signal and least interference. The directional property is also helpful in eliminating noises caused by local electrical devices.
- B. In the event it is inconvenient to rotate the entire receiver to obtain the position of best signal and least interference, proceed as follows.
  1. Free the wavemagnet cable by turning off the thumb screws which hold the cable to the cabinet back. (See Fig. 1.)
  2. Remove the Broadcast Wavemagnet by pressing up through the finger hole provided at the center under the edge of the cabinet top. (See Fig. 15.)
  3. Tilt the handle forward as far as it will go, thus revealing the hole in the top of the handle and then place the pivot at the bottom of the wavemagnet into this hole. (See Fig. 14.) The wavemagnet can then be rotated to the position of best reception and least interference.
- C. Press the Band Selector Button Marked BC.
- D. Turn the set "On" with the left knob. Turn this control to a well advanced position and reset to the desired volume, after a station has been tuned in.



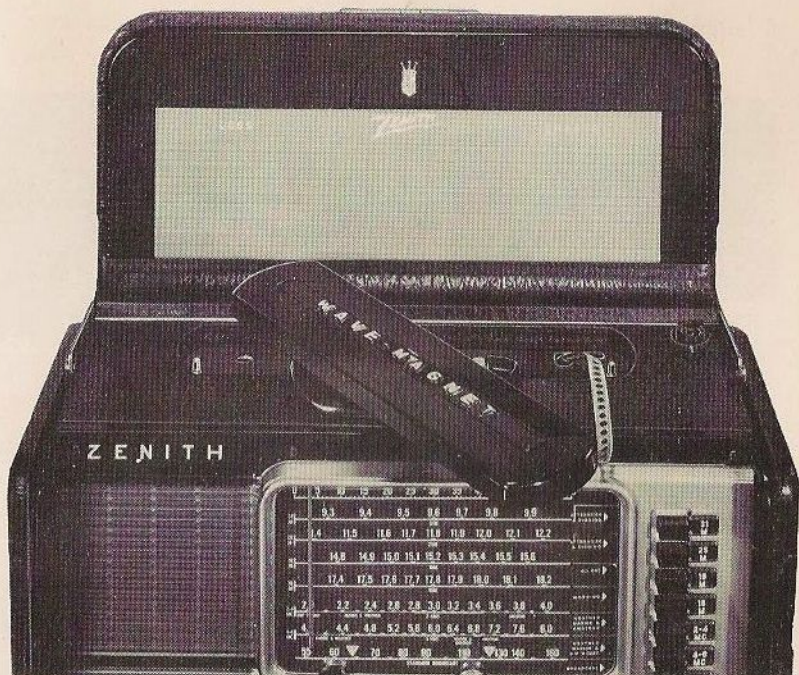


Figure 14—Wavemagnet Mounted on Handle.

- E. Tune with the right hand knob and read the standard broadcast scale on the dial.
- F. Adjust RADIORGAN for desired tone.
- G. When hunting for distant broadcast or short-wave stations set the volume control knob to an advanced position. Turn it back to the desired level after a station has been tuned in.

#### 14. STANDARD BROADCAST RECEPTION (Steel Structures)

- A. In steel structures and vehicles, remove the Broadcast Wavemagnet by pressing up through the finger hole provided at the center under edge of the cabinet top. (See Fig. 15.)

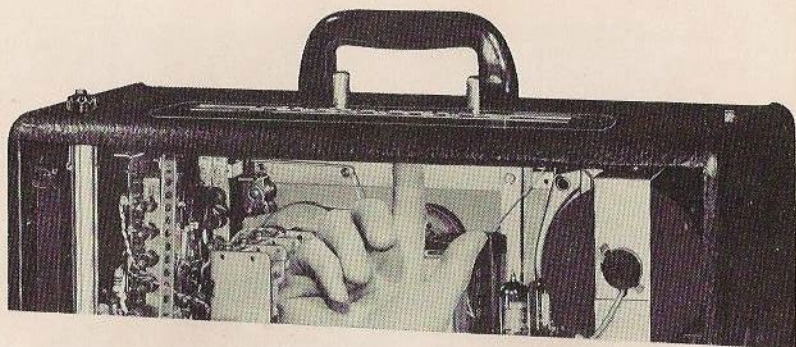


Figure 15—Press Up Thru Finger Hole to Remove Wavemagnet.

- B. Free the Wavemagnet cable by turning off the thumb screws which hold the cable to the cabinet back. (See fig. 1.) When wavemagnet is used in normal position (on top of cabinet) be certain that the



Figure 16—Detachable Wavemagnet in Position on a Window.



wavemagnet cable is placed in the exact position as illustrated in fig. 1.

- C. Remove the suction cups from the back of the case and snap them on the Wavemagnet snap buttons.
- D. Moisten the suction cups and apply the Broadcast Wavemagnet to the center of a window. (See Fig. 16.)
- E. Experiment with various positions on the window for best reception and minimum noise.
- F. Antenna and ground terminals have been provided in the left rear of the receiver chassis, to which an external antenna and ground may be connected. It is only necessary to use these external antenna and ground connections when the receiver is to be operated in areas with extremely low signal strengths where it is difficult to receive a desired signal on the standard Wavemagnet. (See Figure 17.)
- G. In the event the receiver is to be operated below deck of a ship where signals are sometimes very weak then a lead-in wire must run up to an antenna erected above deck. If the electrical noise from the ship's equipment is dominant over the signal it may even be necessary for the lead-in wire to be shielded.

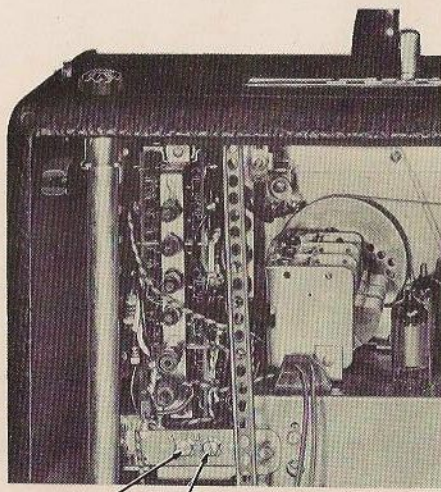


Figure 17—Antenna and Ground Terminals.

## 15. SHORTWAVE RECEPTION

### (Average Conditions)

- A. Raise cover to upright position.
- B. Turn Waverod button and extend the Waverod to its full length. (See Figure 18.) When it is fully extended it should be approximately four feet above the cabinet.



Figure 18—Waverod Must Be Extended for Shortwave Reception.

- C. Press desired shortwave band selector button.
- D. Turn set "On" by rotating the left knob clockwise.
- E. Tune the set with the right knob, tune very slowly, and read dial scale according to band button.

## 16. SHORTWAVE RECEPTION

(On 2 to 8 megacycles continuous coverage marine bands, in areas with extremely low signal strength)

- A. An antenna and ground terminal have been provided in the left rear of the receiver chassis, (See Figure 17), to which an external antenna and ground may be connected. It is only necessary to use



these external antenna and ground connections when the receiver is to be operated in areas with extremely low signal strength where it is difficult to receive a desired signal on the standard Waverod.

## 17. CABINET MAINTENANCE

If your Trans-Oceanic has a leather covering, it will require no care or treatment of any sort. If it should become dirty it can be wiped clean with a damp cloth. Never use furniture polishes of any sort on the leather, as their use may damage it.

If your Trans-Oceanic has the black stag covering and should require cleaning, use a very mild solution of Ivory soap and water to clean it. Do not soak the cabinet in this process. Then as a preservative use a wax paste polish.

An appropriate colored shoe polish can be used to eliminate scuff marks.

## WARRANTY

Zenith Radio Corporation warrants each new Zenith radio receiver, phonographic reproducer, or combination thereof, and each new Zenith Quality Tube to be free from defects in workmanship and material arising from normal usage. Its obligation under this warranty is limited to replacing any part or parts of the receiver, reproducer or combination, or replacing tubes which, within ninety (90) days from date of purchase, shall be returned to the authorized dealer from whom the purchase was made and which shall be found to have been thus defective in accordance with the policies established by Zenith Radio Corporation.

The obligation of Zenith Radio Corporation is limited to making replacement parts available to the purchaser, and does not include either the making or the furnishing of any labor in connection with the installation of such replacement parts nor does it include responsibility for any transportation expense.

Zenith Radio Corporation assumes no liability and shall not be liable in any respect for failure to perform or delay in performing its obligations with respect to the above warranty if such failure or delay results, directly or indirectly, from any preference, priority or allocation order issued by the Government, or because of any other act of the Government or by war, conditions of war, inadequate transportation facilities, conditions of weather, acts of God, strikes, lockouts, governmental controls, or Zenith's reasonable requirements for manufacturing purposes, or any cause beyond its control or occurring without its fault, whether the same kind or not.

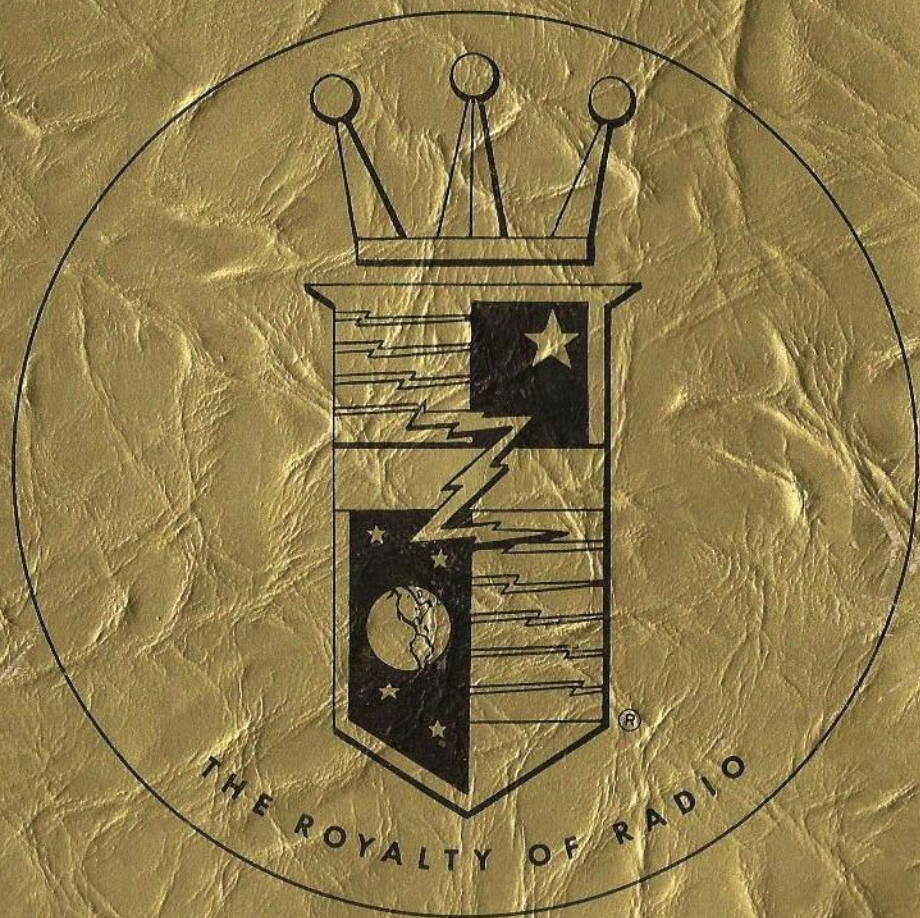
### Conditions and Exclusions

This warranty is expressly in lieu of all other agreements and warranties, expressed or implied, and Zenith Radio Corporation neither assumes nor authorizes any representative or other person to assume for it any other liability in connection with the sale of Zenith Radio receivers, phonographic reproducers, or combinations thereof, or Zenith Quality Tubes.

The warranty herein shall not apply to any receiver or parts thereof which have been repaired or replaced by anyone other than an authorized Zenith dealer, service contractor or distributor or which have been subject to alteration, misuse, negligence or accident, or to the parts of any receiver which has had the serial number or name altered, defaced or removed.

ZENITH RADIO CORPORATION





## **ZENITH RADIO CORPORATION**

6001 West Dickens Avenue  
CHICAGO 39, ILLINOIS