DESCRIPTION
This television receiver employs AM (Amplitude Modulation) for reception of the picture elements and FM (Frequency Modulation) to operate the sound portion of the receiver. The Inter-Carrier Sound System is a feature of this receiver. The reception of 12 channels is provided for complete television coverage.

INSTALLATION
The installation of this receiver should be made by a Sears' service man. If the set must be moved from the location of the original installation, consult your nearest Sears' retail store or local television service man. It is advisable to save the shipping carton for future use when moving the set.

LOCATION
If it is desirable to relocate the receiver within the room always place it in a position where the antenna lead will reach the back of the set. If additional antenna lead-in is necessary, consult the nearest Sears' retail store. DO NOT add ordinary wire to the antenna lead-in of this receiver, as it will seriously affect the quality of the received picture. The receiver should be placed in a shaded portion of the room where the direct rays of the sun will not strike the viewing screen. Keep the back of the receiver at least one inch from the wall to insure proper ventilation.

CAUTION: SPECIAL CARE MUST BE TAKEN TO AVOID BREAKAGE OF THE PICTURE TUBE WHEN MOVING THIS RECEIVER. DO NOT ALLOW THE VIEWING SCREEN TO BE STRUCK WITH METALLIC OR HARD OBJECTS.
POWER SUPPLY

The receiver is designed for operation from 105-125 volt, 60 cycles, alternating current (AC) supply only. See label attached to the inside of the cabinet. Never connect to a supply having a different frequency or voltage than that specified on the label.

CAUTION: REMOVE THE ELECTRIC OR POWER CORD FROM THE WALL OR FLOOR OUTLET BEFORE REPLACING TUBES, REMOVING, ADJUSTING, OR CLEANING THE CHASSIS OR WHILE CONNECTING ANTENNA WIRES.

TUBES

The receiver is shipped with the tubes in their proper sockets. The Sears service man will install and check to see that the tubes are firmly pushed down on their sockets when he installs the receiver.

ANTENNA

INSTALLATION AND DESCRIPTION

An indoor antenna will provide satisfactory operation for this receiver if signals from the transmitter are sufficiently powerful in your location. An indoor antenna may not, however, operate satisfactorily within a steel frame building where signals are of insufficient power, or the transmitter is a considerable distance away. In such cases, it may be necessary to use an outdoor antenna.

When installing the receiver, the Sears' service man will select the proper antenna system for the best reception in your locality. A special antenna has been developed for use with this receiver which provides a satisfactory signal on all channels. The lead-in is completely shielded and may be located wherever convenient. Terminals are provided on the back of the receiver for connection of the lead-in.
OPERATION OF TELEVISION RECEIVER

TUNING
(a) IF THE RECEIVER WAS SIMPLY SHUT OFF AND NO OTHER CONTROLS HAVE BEEN DISTURBED FROM PREVIOUS OPERATION:

1. Turn ON-OFF switch to ON.

2. Turn SOUND control about one-half turn clockwise.

3. Turn STATION SELECTOR to station number desired.

4. Allow 15 to 20 seconds warm-up time.

5. Adjust the FINE TUNING control for best picture quality.

6. Adjust SOUND control for desired volume.

7. If necessary, adjust the PICTURE control so that the desired degree of contrast between the white and darker shades of the picture is obtained.

8. Slight adjustment of the BRIGHTNESS control may be necessary to obtain the best possible picture. The other controls being undisturbed from previous operation, no further adjustments should be necessary.

9. When shutting OFF, turn the ON-OFF switch fully counter-clockwise.

Fig. 2
(b) WHEN OTHER CONTROLS HAVE BEEN DISTURBED AND REQUIRE ADJUSTMENT, THE FOLLOWING ADDITIONAL STEPS SHOULD BE TAKEN:

AFTER SWITCHING ON, ADJUST SOUND CONTROL AND SET STATION SELECTOR TO STATION DESIRED AS EXPLAINED IN (a) 1 THROUGH 6, PROCEED AS FOLLOWS:

7. Turn the PICTURE control to mid-position.

8. Turn the BRIGHTNESS control fully counter-clockwise and then slowly clockwise until activity is clearly visible on the screen.

10. If necessary, turn the VERTICAL control until the picture stops moving up or down and the moving horizontal black bar disappears.

11. If necessary, turn the HORIZONTAL control until a stationary picture is obtained. (See Fig. 4).

12. The PICTURE control may now be adjusted to obtain the desired degree of contrast between the light and dark parts of the picture.

13. Adjust the FINE TUNING control to obtain best picture quality. With this setting of the control the best picture quality should be obtained, but slight readjustment of the control will be necessary if sound bars are visible on the picture. (See Fig. 9). After the receiver has been on for some time, it may be necessary to readjust FINE TUNING for improved sound and picture quality.
(c) TO CHANGE FROM ONE STATION TO ANOTHER:

1. Rotate STATION SELECTOR so that the desired channel is tuned in.

2. Adjust the FINE TUNING control as explained in paragraph (a) 5.

3. If necessary, adjust the PICTURE and BRIGHTNESS controls until the picture is at its best. Only slight adjustment of the BRIGHTNESS and PICTURE controls should be necessary.

4. Adjust the VOLUME control for desired volume.

The clarity, brightness and contrast of the picture are controlled by the PICTURE and BRIGHTNESS controls.

DETAIL ADJUSTMENT OF THE PICTURE CONTROLS

The following illustrations (courtesy of RCA Service Company Inc., a Radio Corporation of America Subsidiary) indicate most of the effects likely to occur during tuning and instructions for their correction.

CORRECT PICTURE

A test pattern of this type is usually broadcast for about fifteen minutes before the program commences. When the receiver is correctly adjusted, the pattern is clear and steady and five distinct shades (black, dark gray, medium gray, light gray, and white) are discernable on the central circles.

Fig. 4. Correctly Adjusted
PICTURE TOO LIGHT

To make the picture darker and show more contrast, adjust the BRIGHTNESS control by turning in a counter-clockwise direction.

Fig. 5. Too Light

PICTURE SHOWS TOO MUCH CONTRAST

To reduce the amount of contrast between the light and dark parts of the picture, adjust the PICTURE control by turning in a counter-clockwise direction.

Fig. 6. Too Much Contrast
PICTURE ACTIVITY, MOVING UP OR DOWN

When the picture is moving up or down on the screen, adjust the VERTICAL control until there is a single image without vertical movement.

Fig. 7. Vertical Movement

HORIZONTAL BARS

When the picture has horizontal bars as indicated in Fig. 8, adjust the HORIZONTAL control until a stationary picture is obtained.

Fig. 8. Horizontal Bars

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BARS IN PICTURE

When the sound is distorted or if bars flicker across the picture in step with the speech or music, adjust the FINE TUNING control so that the bars disappear.

INTERFERENCE

The following illustrations show the effects of various types of local interference. There are no adjustments on the receiver which will remove such interference from the picture.

AUTOMOBILE IGNITION AND SIMILAR INTERFERENCE

Automobiles in the vicinity are apt to cause speckles on the picture or, when their effect is severe, may cause vertical picture movement. Electrical motor-driven appliances cause similar effects.

Fig. 9. Sound Bars

Fig. 10. Automobile Interference
Multiple images, sometimes known as echoes or ghosts, are caused by signals arriving at the receiver by both direct and other paths, including a reflection from a building or other objects.

No adjustment of the receiver will correct this condition. Relocation or reorientation of the receiver antenna may eliminate or minimize the condition. This work should be handled by your Sears serviceman.

Electrically operated medical equipment, such as diathermy apparatus, will produce a herringbone pattern across the picture. When severe, due to close proximity, this effect is very marked and may even obliterate part of the picture.
Transmitting and receiving short-wave radio equipment may cause interference in the picture in the form of moving ripples.

Fig. 13 R.F. Interference

TELEVISION BROADCASTING CHANNELS

This television receiver is designed for operation on all twelve television channels as allocated by the Federal Communications Commission. However, in no area are there stations operating on all channels. Each of the twelve channels is designated by a number 2 to 13. These numbers correspond to the number on the channel selector switch.

The channel number on which a station telecasts will be announced and published by that station.

WHAT TO EXPECT FROM TELEVISION

Television reception cannot be any better than the receiver installation and locality permit. Generally speaking, television reception is limited by the high frequencies used, 54 to 88 megacycles (low band) and 174-216 megacycles (high band), to a distance of about 25 miles. Occasionally stations may be received from greater distances but this is not normal and cannot be depended upon for consistent entertainment. The exact distance will vary depending upon the terrain (hills, etc.), the power of the stations, receiver antenna installation, and obstructions (buildings, etc.), between the receiver antenna and the station transmitting antenna.
CONDITIONS AFFECTING RECEPTION

AUTOMATIC GAIN CONTROL

Automatic gain control is a circuit feature which changes the sensitivity of the receiver to correspond to the strength of the signal from the station. This tends to maintain the same picture brilliance for all stations over a wide range of signal strength. It also minimizes the effect of “fading” or alterations in the signal strength of a given station.

There are natural causes that sometimes prevent perfect reception. The more common of them are:

STATIC

Static is due to electrical discharges in the atmosphere. It is especially noticeable during the summer when thunderstorms are frequent. Thunderstorms may cause static hundreds of miles away from the location of the storms. Snowstorms in winter also are a cause of static. Most local broadcasting stations are strong enough to override static. Static produces a speckled effect similar to a snowstorm on the viewing screen.

IGNITION OR ELECTRICAL INTERFERENCE

Automobiles or any electrical appliance that creates an electric spark during its operation may cause an effect similar to that produced by static. Vacuum cleaners, electric motors, some types of electric refrigerators, electric flat irons with automatic heat regulators, etc., are some of the common household appliances that may cause interference. X-Ray machines, flashing electric signs, trolley cars and medical diathermy machines often cause interference over a wide area.

AIRCRAFT EFFECT

If an aeroplane flies across the path between the receiving antenna and the transmitter, it may cause the picture to fade or flutter momentarily.

NORMAL CARE AND MAINTENANCE REQUIRED

To maintain this television receiver at top-notch efficiency, it is advisable to have the tubes tested every six months. When removing tubes from sockets, mark each tube and socket so that tubes can be replaced into the proper socket. If each tube is not replaced into the correct socket, proper operation may not be obtained. If an outdoor antenna is used, it is advisable to have a Sears’ service man inspect it periodically, perhaps once a year. All connections should be checked to be sure that they are clean and tight, that no wires are broken and that the antenna is well insulated from the ground at all points.
IF THE RECEIVER FAILS TO OPERATE PROPERLY

Carefully re-read this instruction leaflet to be sure that the receiver is being operated correctly.

Be sure that the power cord plug is making good contact in its receptacle.

The power cord is attached to the rear cover of the high voltage box and is connected to the receiver chassis by an interlocking plug and socket connector. This safety feature is incorporated for your protection. No attempt should be made to operate this receiver out of the cabinet or by any means which will permit it to be turned on while in the cabinet without the high voltage box cover in place.

If you purchased your receiver from a Sears’ retail store and it does not operate properly after you have followed these suggestions, call the radio service department of your nearest Sears’ retail store. Sears’ retail stores are fully equipped to handle your service requirements.

GUARANTEE

The guarantee on the Silvertone television receiver is stated in the Certificate of Guaranty which is presented to you upon completion of the installation.

The guarantee covering Silvertone tubes is also stated in your Certificate of Guaranty.
SEARS, ROEBUCK AND CO.