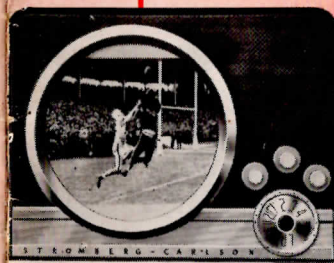


For Your Enjoyment

Your new Stromberg-Carlson was built in the plant shown below, where choice woods, tested metals, and fine workmanship are translated into harmonious aids to good living.

Telephones, switchboards, and sound equipment are built side by side with radios and television sets in this plant, dedicated to communications and the reproduction of music and the human voice. This new series of Stromberg-Carlson video receivers represents the combined efforts of thousands of men and women working together to maintain the integrity of the famous slogan—

There Is Nothing Finer Than a
STROMBERG-CARLSON



MODEL TC 10



Getting the most from your
STROMBERG-CARLSON
TELEVISION RECEIVER

Your New Stromberg-Carlson



This is your new Stromberg-Carlson television receiver. It will give you fullest enjoyment when properly installed and operated in accordance with the following instructions.

Your Stromberg-Carlson is a high quality instrument. It has been designed and built with the greatest care and skill developed through years of experience in manufacturing nothing but the finest in radio. It will bring you, with clarity and dependability, all the fine television programs in your area.

This receiver is designed to give you many years of satisfaction and pleasure and is guaranteed under the terms of the accompanying Standard Warranty Card. A factory-trained service organization of Stromberg-Carlson distributors, authorized dealers, and dealer servicemen is available to the Stromberg-Carlson owner, with access to a complete stock of parts for the repair and maintenance of any Stromberg-Carlson receiver. Your authorized dealer can thus give you prompt and efficient service.

The entire engineering and service resources of Stromberg-Carlson seek to perpetuate and guarantee the reputation it has enjoyed through more than half a century of manufacturing nothing but the finest equipment in the field of communications.

The facts and the specific information following will help you secure the utmost pleasure from your new Stromberg-Carlson.

YOUR NEW RADIO-TELEVISION RECEIVER IS A STROMBERG-CARLSON *Model TC 10*

Installation

The authorized Stromberg-Carlson dealer from whom you purchased this receiver is responsible for properly installing it in your home.

CAUTION TO SERVICEMEN: The television chassis is equipped with a safety panel for your protection. Do not attempt to service the chassis without completely disengaging the safety panel, since a television receiver contains voltages which are harmful to life. When the safety panel is removed from the chassis, all voltages are removed from the TV set; therefore, do not try to defeat the interlock and expose yourself to dangerous shock.

The kinescope should be handled carefully and always lifted or moved with both hands. This tube is highly evacuated and, if excessively jarred or dropped, may implode with sufficient force to cause injury from high velocity glass particles.

CONTROLS

To follow the explanations in this section, fold out the inside back cover which illustrates the controls described.

The television receiver TC-10 has the following controls on the front panel:

SPECIFICATIONS

The model TC-10 television receiver is a complete picture and sound receiver capable of tuning all F.C.C. assigned television channels.

TUNING RANGE

Television channels 2 to 13.

NUMBER OF TUBES

22 including 5U4-G rectifier and 10BP4 Kinescope.

VOLTAGE AND POWER CONSUMPTION RATING

117 volts, 60 cycles AC; power consumption 200 watts.

PICTURE SIZE

Normal picture is 9" wide by 6 $\frac{3}{4}$ " high; "OPERA GLASS" picture is a circular, center interest enlargement of 9" in diameter.

WARNING: The kinescope tube should be handled only by a qualified service man. A television receiver contains voltages which are dangerous to life; therefore, be particularly careful of the 10,000 volt anode supply.

Interlocks: The safety panel on the rear of the television chassis is constructed so that all power is removed when it is uncoupled from the chassis. Do not try to defeat the interlock, since it is placed on the receiver for your protection.

A—ON-OFF Switch and Volume control—This turns the set on and controls the sound output.

B—Contrast Control—This control regulates the black and white content of the picture. When turned fully clockwise, the picture will be extremely black and white. When turned counter-clockwise, the contrast between black and white will be decreased resulting in a gray-toned picture.

C—Brightness Control—This control determines the background lighting of the picture. It is used in conjunction with the contrast control to provide a picture of desired brightness and contrast.

D—Range Switch—This allows the selection of television channels either in the low group (channels 2 to 6) or the high group (channels 7 to 13).

E—Vertical Hold Control—This control regulates the framing of the picture in the vertical direction.

F—Horizontal Hold Control—This control regulates the framing of the picture in the horizontal direction.

G—Channel Selector Control—This allows the continuous tuning of channels 2 to 6 and channels 7 to 13.

H—"OPERA GLASS" Control—This control provides for either a normal picture or an enlarged center interest picture in the manner of a "close-up" camera shot.

Controls Available at Rear of Chassis

There are eight controls for service adjustment only on the rear of the chassis available without removing the back cover. From left to right these controls and their functions are:

1. Horizontal Linearity Control—This controls the linearity of the center and right hand side of the picture. This control is adjusted with picture in "OPERA GLASS" position.
2. Horizontal Damper Control—This controls the size and left side linearity of the picture. This control is adjusted with the picture in the normal size position.
3. Horizontal Size Control—This controls the size of the picture. It is adjusted with the picture in the normal size position.
4. Vertical Size Control—This controls the vertical size of the picture in the normal size position of the picture enlargement switch.
5. Vertical Linearity Control—This controls the vertical linearity of the picture in the normal size position of the picture enlargement switch.
6. Vertical Linearity Control—This controls the vertical linearity of the picture in the "OPERA GLASS" position of the picture enlargement switch.
7. Vertical Size Control—This controls the vertical size of the picture in the "OPERA GLASS" position of the picture enlargement switch.
8. Focus Control—This controls the focus of the kinescope beam. This is adjusted for sharpest picture line structure.

OPERATING INSTRUCTIONS

Reference should be made to the picture on the inside back cover which shows the positions of the controls mentioned below:

To place the receiver in operation:

1. Turn on-off volume control (A) clockwise until the switch click is heard. **THIS TURNS THE SET ON.**
Wait from 40 to 60 seconds for warm-up.
2. Turn brightness control (C) in a clockwise direction until the face of the picture tube is faintly illuminated.
3. Turn range switch (D) to desired channel position. If a channel from 2 to 6 is desired, the range switch is turned counter-clockwise. If a channel from 7 to 13 is desired, the range switch is turned clockwise.
Note: This is a two position switch. Do not attempt to force this knob past one "click" position.
4. Turn channel selector control (G) to desired television channel. All channel numbers with black circles are aligned with the black horizontal stripe on the right hand side of the channel selector control. All channel numbers with red circles are aligned with the red horizontal stripe on the left side of the channel selector control.
5. Turn contrast control (B) in a clockwise direction until picture information appears on the picture tube face.
6. Adjust vertical hold control (E) until picture is vertically framed. The vertical control is adjusted until the picture stops moving up or down. If the picture is moving downwards, the control is turned clockwise until the picture stops moving. If the picture is moving upwards, the control is turned counter-clockwise until the picture stops moving.
7. Adjust the horizontal hold control (F) to frame the picture horizontally. If the picture is broken into diagonal

segments and they point upward going from left to right, turn the control clockwise until the picture appears upright. If the diagonal segments point downward going from left to right, turn the control counter-clockwise until the picture appears upright.

8. Advance volume control (A) until sound or hiss is heard.
9. Adjust channel selector control (G) until sound is clear and free from noise.
10. Adjust contrast control (B) and brightness control (C) for proper background and contrast. Note that for any contrast control setting the brightness control must be adjusted until the retrace lines just disappear.
11. Readjust channel selector control (G) for the best combination of a clear picture and undistorted sound.

"Opera Glass" Feature

Your new Stromberg-Carlson has a picture enlargement control, the "opera glass." Pressing the button marked "Opera Glass" (H) enlarges the center portion of the picture. See figures A and B below.

This is especially useful on programs featuring prize fights,



Figure A



Figure B

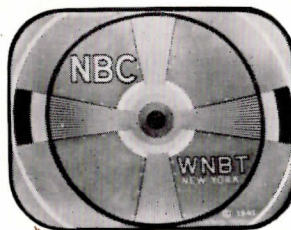
wrestlers, singers, etc., where a close-up shot is desired.

To return to a full normal picture, press the "Opera Glass" button again.

PICTURE ADJUSTMENTS ILLUSTRATED

Following are illustrations showing common picture defects together with a description of the necessary corrections.

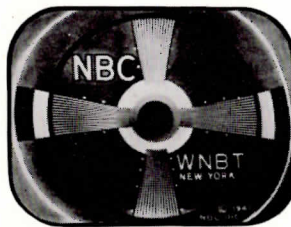
CORRECT PICTURE



A test pattern is broadcast by most stations before the program begins. A properly adjusted receiver will show a sharp, steady picture.

Several shades from black to white (five shades on the central circles of the pattern shown) should be visible.

TOO MUCH CONTRAST

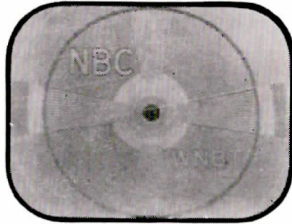


Turn the CONTRAST control counter-clockwise to make the picture lighter. Readjust the BRIGHTNESS control to obtain proper shading as shown in the correct picture on the preceding page. Several shades from black to white should be visible.

Photographs reproduced by courtesy of RCA Service Co., Inc.

PICTURE TOO LIGHT

Turn the BRIGHTNESS control counter-clockwise to make the picture darker. It may be necessary to adjust the CONTRAST control to obtain a proper picture. As before, several shades from black to white should be visible on the cathode ray picture tube (screen).



SOUND BARS



Adjust the CHANNEL SELECTOR control when the sound is distorted or if bars show on the picture in time with the music. Use this control until both picture and sound are clear and undistorted.

INTERFERENCE

In television, static may be visible as well as audible. Interference may be experienced from reflections and unwanted radio waves as well as from static.

Types of interference which might be termed static may be caused by arcing electrical contacts as in flashing signs, switches, electric motors, electric razors, and automobile ignition systems. Faulty wiring in the house, loose antenna connections, and even large pieces of metal making intermittent contact near the antenna (as a swinging metal sign) may make visible static, generally evident as spots in the picture. Up and down movement may result from static.

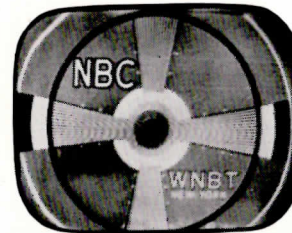
Medical diathermy equipment or other nearby radio frequency equipment may make herring-bone patterns. Short wave transmitters may cause moving diagonal bars. Low aircraft may cause brightness fluctuations. A multiple image may result from echoes from mountains or tall structures.

The antenna installation should receive all possible considerations as the above interference may be minimized or even removed by use of a suitable antenna. For this reason only the installation company authorized by your Stromberg-Carlson dealer should make the installation.

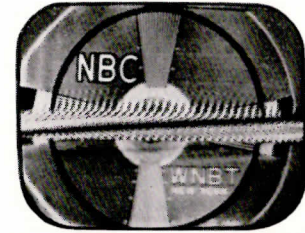
The following pictures illustrate several types of interference. It is often difficult or even impossible to remove these effects in some locations.

DIATHERMY

Short wave equipment such as medical diathermy apparatus will produce the herring-bone pattern shown on opposite page. Strong diathermy interference may completely mask a portion of the picture.



Weak Diathermy Interference

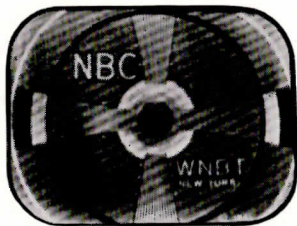


Strong Diathermy Interference

SHORT WAVE RADIO

Shortwave radio equipment, including neighboring television receiver, may cause moving diagonal bars on the picture.

This picture illustrates one of several types of radio frequency interference. A nearby high powered transmitter may cause this effect.



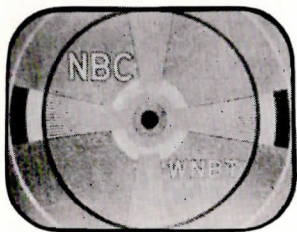
REFLECTIONS



Multiple images are caused by more than one signal arriving at the receiver at different times. Reflections from mountains or tall structures will arrive later than the direct signal giving a multiple image on the screen. It is commonly called a "ghost" picture.

WEAK SIGNAL

When the receiver is far from the transmitter, the picture may be covered with "snow" and may not be steady. Tall objects between the transmitter and receiver contribute to this effect by blocking direct transmission.



ANTENNAS

The TC-10 has been provided with an antenna switch to accommodate either a single all-channels antenna or separate high and low channels antennas. At the time of installation, this switch should be set by the serviceman for either single or double antenna service. The location of the switch is shown below.

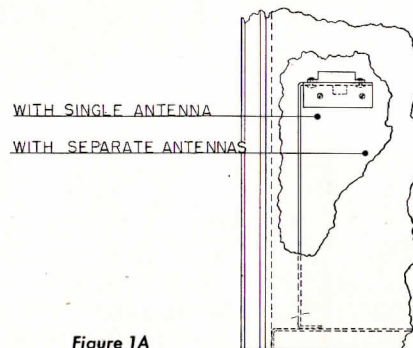


Figure 1A

The switch shown in FIG. 1-A is made accessible by turning the entire cabinet on its side and removing the bottom panel screws and sliding the panel out toward the rear of the cabinet. (*Caution:* This should not be done by anyone but a serviceman.) FIG. 1-B shows the antenna connection when a single antenna is used. WHEN A SINGLE ANTENNA IS USED, THE SWITCH SHOWN IN FIG. 1-A IS PUSHED TOWARD THE FRONT OF THE CABINET AS SHOWN. FIG. 1-C shows the connection when separate antennas are used. WHEN SEPARATE ANTENNAS ARE USED, THE SWITCH SHOWN IN FIG. 1-A IS PUSHED TOWARD THE REAR OF THE CABINET AS SHOWN.

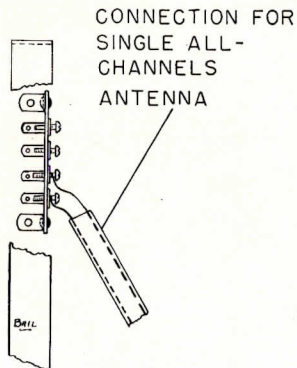


Figure 1B

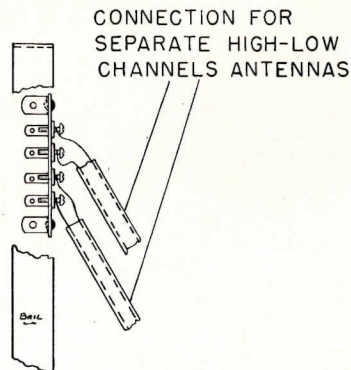
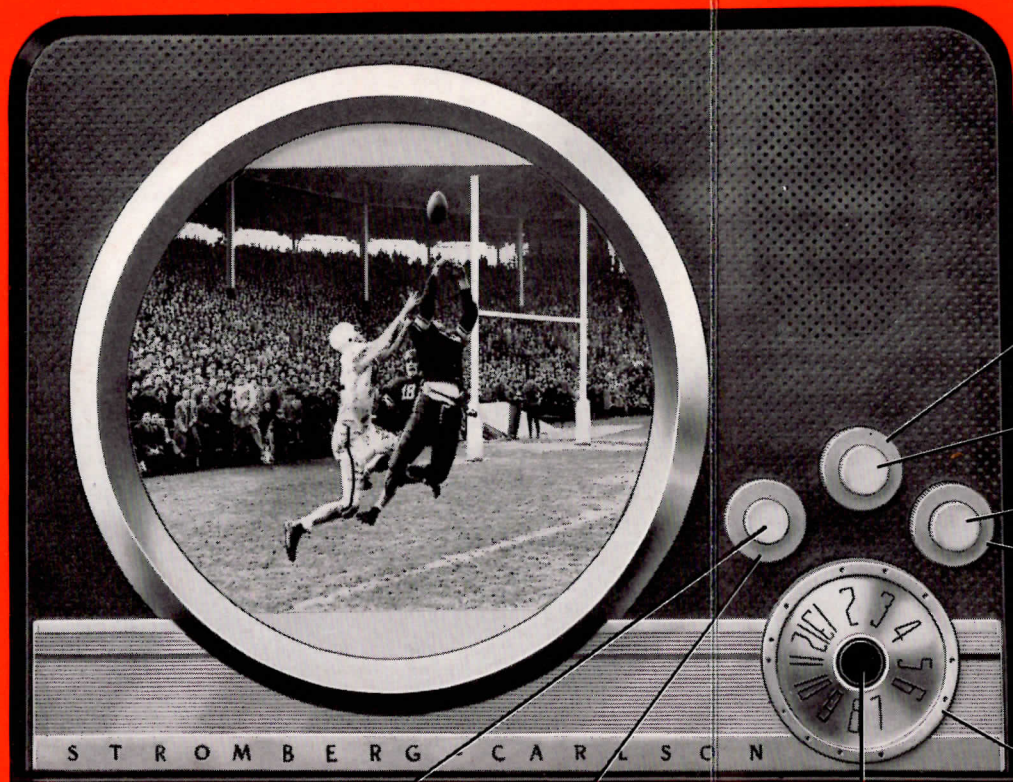


Figure 1C

Placement and Erection of Antennas

The antenna should be erected in as high a place as is possible. The antenna dipole elements should be kept clear and free of surrounding metal objects such as rain and gutter pipes, etc. If the antenna is placed in an attic or a room it should be kept clear of curtain rods, electrical conduit, water pipes, etc. Particular attention should be given to the orientation of the antenna with respect to the location of the television transmitting antenna. The position of the antenna should be such that the direction of the transmitted signal is at right angles to the DIPOLE ELEMENTS. It may be necessary to deviate from the above in the case of a strong reflected signal. The reflected signal can sometimes be discriminated against by rotating the antenna for the best combination of direct transmitter signal and minimum reflected signal.

*"There is Nothing Finer
than a Stromberg-Carlson"*



D—Range Switch

C—Brightness Control

**A—On - Off Switch
Volume Control**

B—Contrast Control

**G—Channel
Selector Control**

**H—"Opera Glass"
Picture Enlargement Control**

E—Vertical Hold Control

F—Horizontal Hold Control

S T R O M B E R G - C A R L S O N