

GUARANTEE

This SINGER television set is guaranteed for ninety (90) days and the picture tube for one full year against defective workmanship or material from date of purchase as new from The Singer Company or any SINGER Approved Dealer. This guarantee does not apply to parts requiring replacement through accident, misuse or neglect, or in the event this set is serviced by someone other than an authorized SINGER serviceman or with parts other than supplied by The Singer Company. Technical adjustments for picture quality, which must be performed by TV repairmen, are not included in this guarantee.

Any defective part must be returned within the guarantee period to the nearest SINGER center where, at the option of the Company, it will be repaired or replaced free of charge.

This guarantee is effective only with respect to the person making the purchase from The Singer Company or from one of its Approved Dealers. The original Sales Agreement must be presented with this certificate to obtain the benefits of the guarantee.

Any statement in addition to or contrary to the above shall be without effect.

THE SINGER COMPANY

SP33

PRINTED IN JAPAN

INSTRUCTION
BOOKLET
FOR

SINGER

personal
portable
TELEVISION



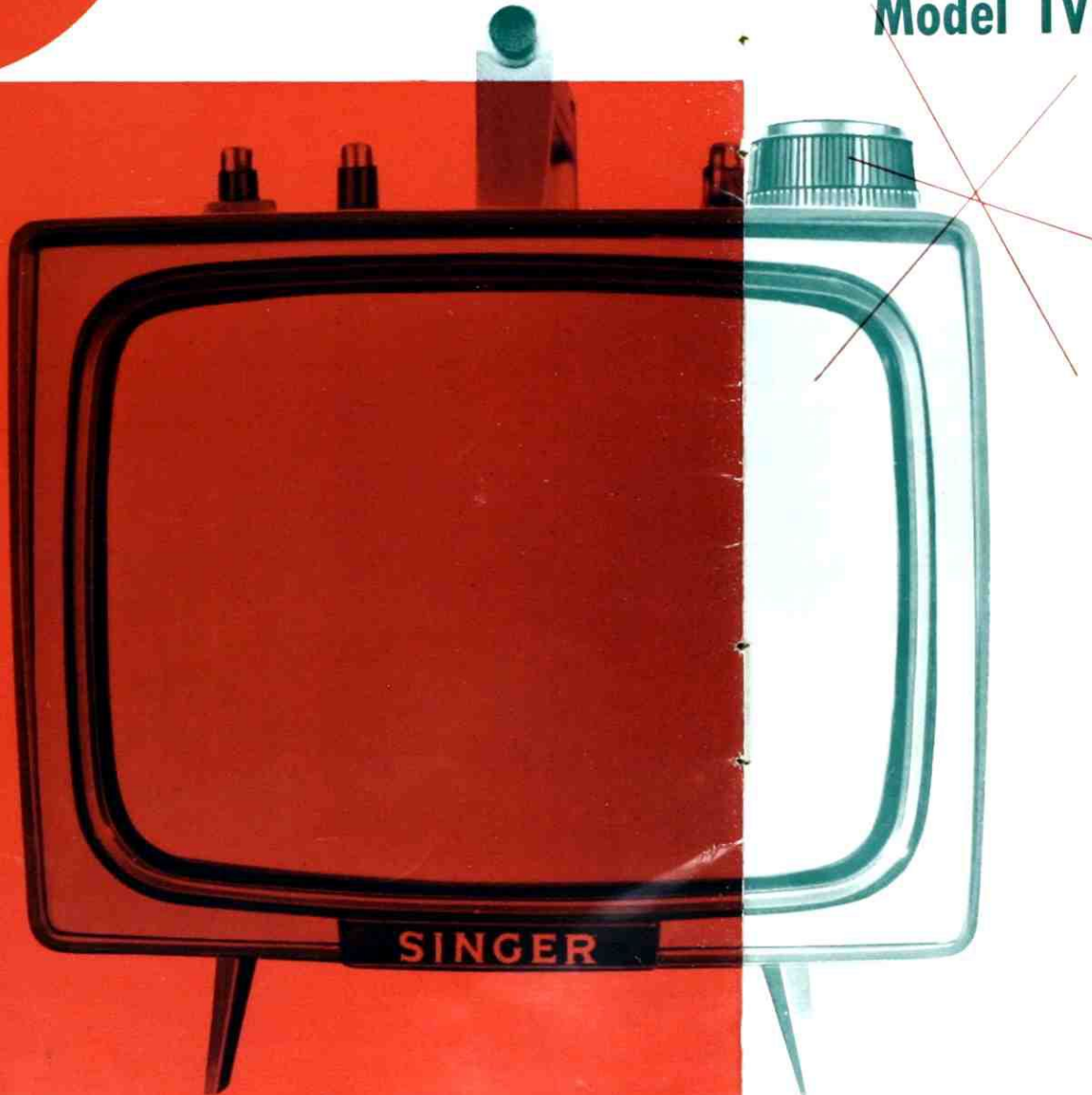
MODEL TV 6

Here is just about the smallest, lightest, most versatile TV set you would ever want. A masterpiece of modern electronic design, its beautifully detailed 6" picture can be enjoyed both indoors and out!

THE SINGER COMPANY

SINGER

Model TV 6



INDEX

- Introduction... .. 2
- Features... .. 3
- Power Supply: 4
 - Indoor Power Supply... .. 4
 - Special Battery 4
- Antenna: 5
 - Built-in Antenna 5
 - Outdoor Antenna 6
- Operating Controls 7
- Input Connections 8
- Operating Procedure 8
- Picture Adjustments 9
- Handling (Some "Dont's") 12
- Voltage 13
 - Removing A.C. Power Supply Unit... 13
- Earphones 14
 - Adjusting Receiver Angle 14
 - Attaching Sun Visor 14
- Accessories 15
- Specifications 18
- Circuit Diagram 21
- Service Cover 3



INTRODUCTION

This amazing television set is being offered by THE SINGER COMPANY in order to bring to its customers a beautifully made, compact television receiver of exceptional lightness for your viewing pleasure. By using superbly efficient transistors and diodes, and precision miniature parts wherever possible, complete portability with a comparatively large 6 inch diagonal picture is obtained. The picture quality is far superior to most others in both sharpness and contrast. So good, in fact, that you—or a group of friends—can enjoy the show from a considerable distance in complete comfort.

FEATURES

- * Because of space age electronic discoveries and skillful miniaturization, this SINGER personal portable measures *less than 6"* wide by 7" high by 8" deep (with A.C. power unit attached).
- * Weight is only 5.7 lbs. (7.5 lbs. with A.C. power unit attached.)
- * Long life is assured through fine engineering and painstaking construction, plus the use of 26 new type transistors and 20 diodes.
- * A sharp picture with excellent contrast is obtained by using a newly developed miniature, highly sensitive turret-type tuner and a metal backed picture tube face.
- * To insure a perfect picture free from troublesome disturbances under difficult reception conditions, special automatic control devices are incorporated into the circuitry.
- * Under all but the worst reception conditions (where a tall outdoor antenna is required), this SINGER set can be operated almost as easily as a portable radio—with results many times more enjoyable.
- * It is so portable you will be using the set almost everywhere around the house—even out in the back yard. With the A.C. power unit attached, you just plug it into any regular electrical outlet.
- * For maximum portability—in the back yard, on a picnic, at the beach, on a boat—you will need the SINGER Battery Pack (optional at moderate extra cost). You can even operate the set in the back seat of your car using the SINGER Car Antenna and Car Battery Cord sets (extra cost option), if permitted by local regulations. Check with your motor vehicle bureau on this.



POWER SUPPLY

The SINGER TV receiver uses regular AC house current, or is connected to a special battery for outdoor use.

Indoor Use

At the back of the receiver is an AC power supply unit. The line cord provided with the set should be inserted into this unit, and the other end plugged into any regular 120 Volt AC electrical outlet.

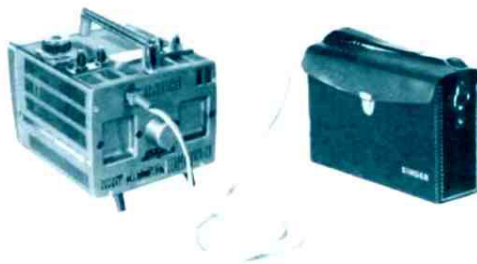


Set with AC power supply unit

Outdoor Use



Battery Case



Battery connected to set

A special SINGER Battery Pack (optional at moderate extra cost) lets you use your set anywhere within range of a TV signal. It consists of a Battery Case with built-in Battery Charger and Battery. Line cord that plugs into the back of the TV set, and into a house outlet (for recharging) are also built into the case.

ANTENNAS

Almost anywhere you take your SINGER personal portable you can be sure of clear reception through correct use of antennas.

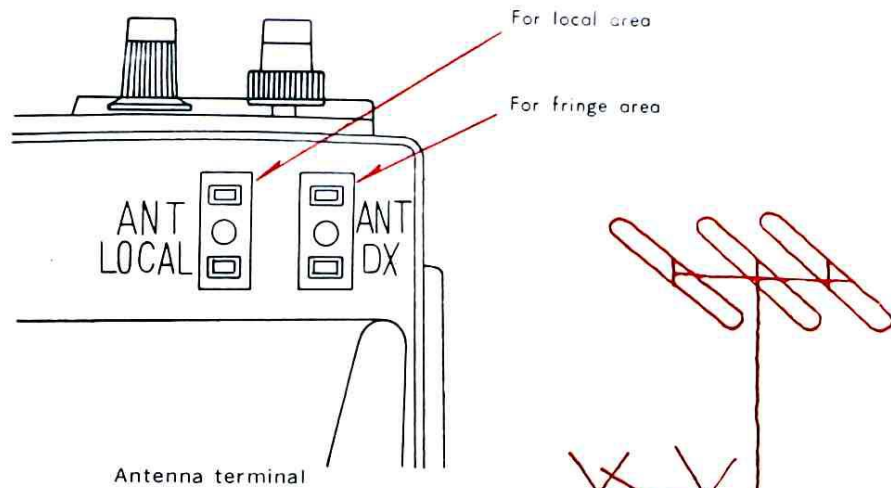
Built-in Antenna

Near the TV station, or in other areas where the signal is strong, the built-in antenna should be used. Point the telescopic antenna, located in the handle of the receiver, upward and pull out the rounded tip to extend its length. To change the position of the extended antenna, hold the base section and move the antenna through various angles until a perfect picture is obtained. For channels 2 to 6 a fully extended antenna is usually best; above 6, try shortening its length by $\frac{1}{3}$ to $\frac{1}{2}$. Also, reception is often improved if the antenna is angled down instead of straight up, with the antenna at a right angle to the source of the TV signal.

Caution: This antenna is fragile and should never be forced.



Rod antenna

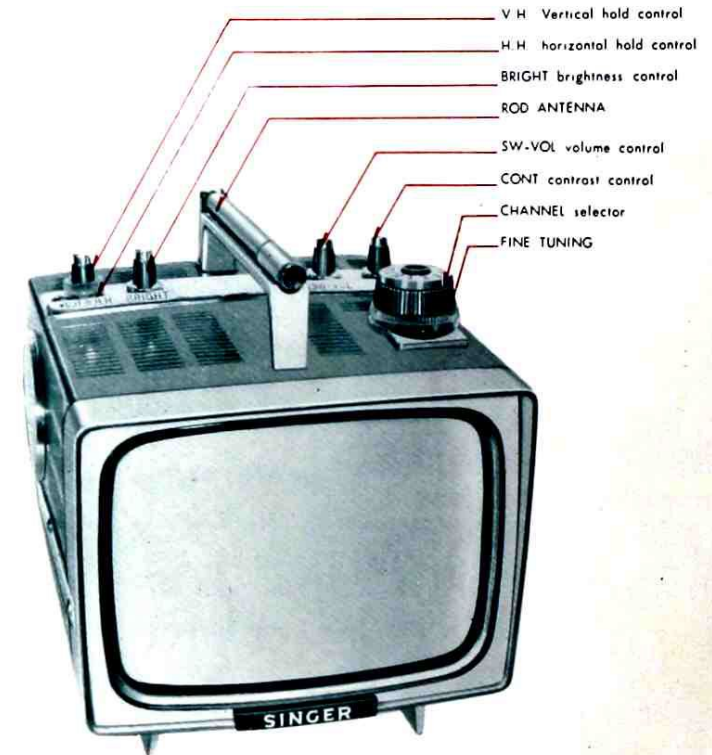


Outdoor Antenna

In areas distant from the TV station, behind a hill, or in other places where the signal is weak, it may not be possible to get a clear picture using the built-in antenna. In such cases the use of an outdoor antenna is recommended. The special antenna plug (packed with the receiver) should be secured to the end of the antenna cable of the outdoor antenna, and then plugged into one of the two Antenna Terminals (ANT), located on the back of the receiver (See pg. 8). The built-in antenna disconnects automatically.

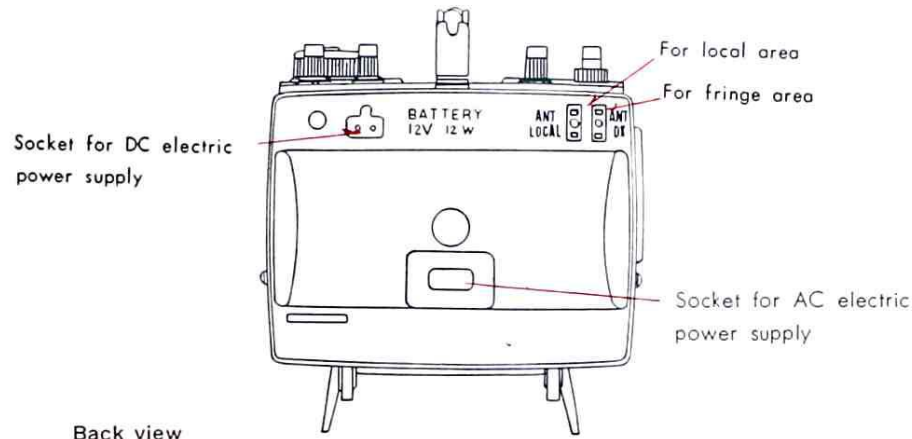
Under normal conditions the antenna plug should be inserted in the socket marked "ANT DX". However, if the picture should be unstable, or fails to synchronize, or when interference is caused by cross modulation, the antenna plug should be inserted into the "ANT LOCAL" socket.

OPERATING CONTROLS



Upper surface controlling points

INPUT CONNECTIONS



Operating Procedure

ON: Turn the second knob from the right on top of the set (SW-VOL) in a clockwise direction. This knob turns on the set with a click, and the red channel indicator arrow lights up. To shut off, turn knob counter-clockwise.

SELECTION: The large knob on the right is for Channel Selection. The red arrow indicates the selected channel number.

ANTENNA: The built-in antenna can be adjusted for direction, length and angle to obtain the best possible picture.

SOUND: To increase volume, turn the (SW-VOL) further in a clockwise direction.

ADJUSTMENTS: If the picture is not stable, the following adjustments may be made:

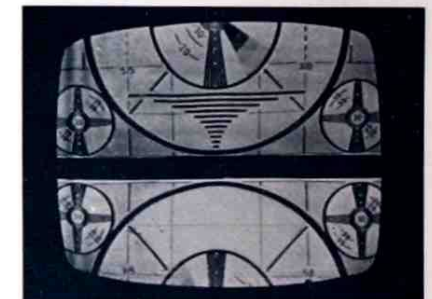
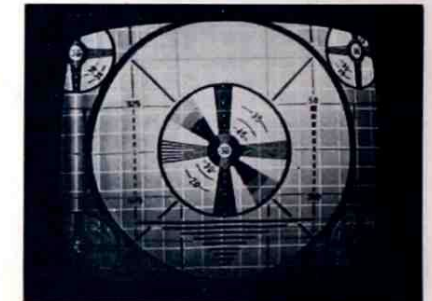
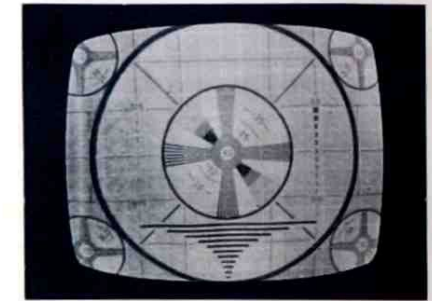
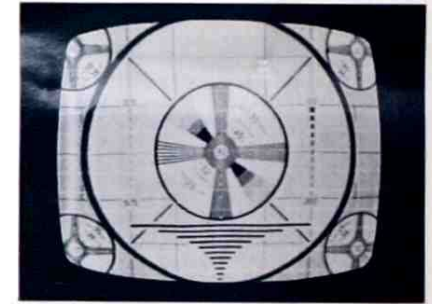
PICTURE ADJUSTMENTS

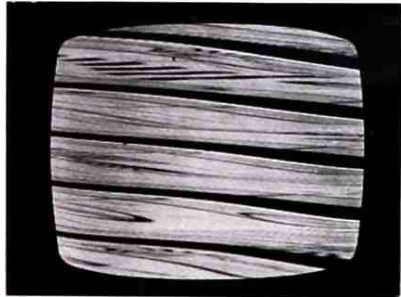
1. When picture is blurred or glittering, or when streaks are produced by sound, Fine Tuning Knob (lower part of Channel Selector Knob) should be slowly turned—first to the right, then to the left—until both sound and picture quality are perfect.

2. When picture is too bright or too dark, Brightness Control Knob (BRIGHT), should be turned to the right to make picture brighter and to the left to make it darker.

3. When black and white contrast of picture is exaggerated, Contrast Controlling Knob (CONT) should be turned counter-clockwise to reduce contrast; clockwise to increase contrast.

4. When vertical jitter or overlapping in the picture occurs, the Vertical Hold Controlling Knob (V.H.), should be slowly turned until the picture becomes stable.

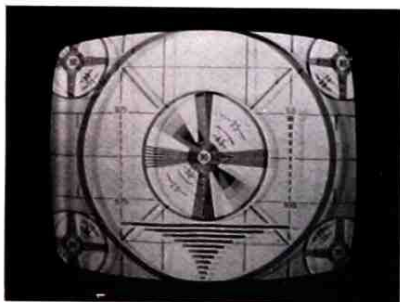




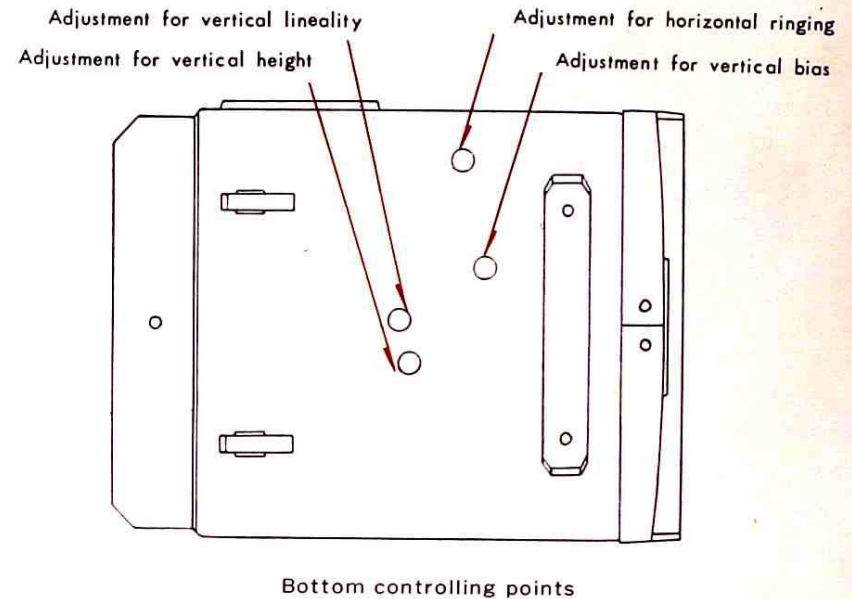
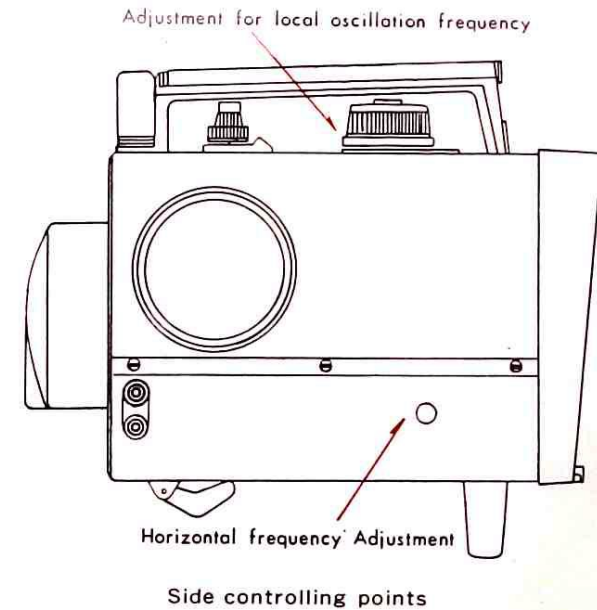
Failure in horizontal synchronizing

- When jitter with streaks or partial stretching of picture occurs, Horizontal Hold Control Knob (H.H.) should be turned to obtain correct synchronization. Once a clear, stable picture is obtained, there is usually no need to touch the adjustment knobs again. Thereafter, changeover to other television stations is made merely by turning the channel selector knob. However, better reception may possibly be obtained by slight adjustments of the fine tuning and contrast controlling knobs.

- Sometimes the picture appears doubled or tripled (reflections or ghost images). This is because of the simultaneous reception at the television antenna of a TV signal directly from a television station, and the same signal reflected by a mountain or a building near the location of the television receiver. If the built-in antenna is being used, change the length, direction and angle of the antenna, or change the location of the television receiver to obtain good picture quality. When an outdoor antenna is being used, change the place or direction of the antenna, or use an antenna with sharper directivity. This SINGER television receiver also has the adjusting points shown on the next page, but these should be touched only by expert servicemen. Once these points have been adjusted, they generally need no further readjustments.



Electric wave reflections



HANDLING



Your SINGER portable will give you long and reliable service if some care is exercised in handling it. Here are some recommendations:

- Do not operate the set in a small enclosed space, or cover its top, sides or bottom. Under these conditions the heat created while the set is in operation cannot dissipate.
- Do not stand the set on a cushion
- or operate it in its carry case
- or place it near a radiator or other heat source.
- To prevent water corrosion the set should not be placed in damp places, such as a bathroom, and special care should be taken to protect it from rain when being used outdoors.
- Also protect from water spray or dew when being used on a boat.
- To avoid corrosion, and to prevent any possibility of electrical shock, it is recommended that the set not be operated by anyone while their hands are wet.

Some "Don'ts"

V VOLTAGE

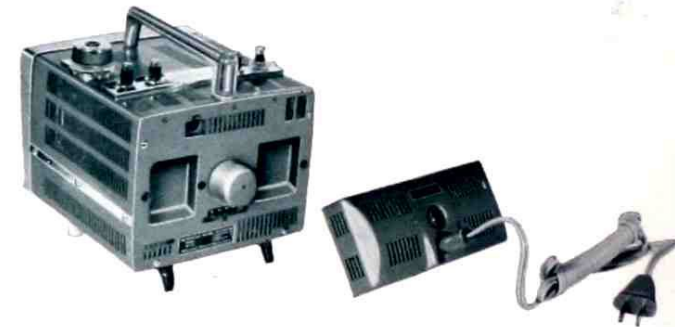
Your SINGER TV set can be connected to either AC or DC power supplies. It should be noted, however, that the only rated voltage for AC power is AC 120V, and for DC power only DC 12V.

When the picture appears larger than usual or is extremely bright, it may be because the voltage is higher than normal.

On the other hand, if the picture is dark or unusually small, or when the contrast is below the normal standard the voltage may be too low.

In a locality where the AC power supply voltage fluctuates widely, use a voltage regulator to maintain the voltage at 120V. In this case, the capacity of the voltage regulator should be over 50W.

NOTE: The spare fuses supplied with your TV set are for installation by a repairman in case he is out of stock.

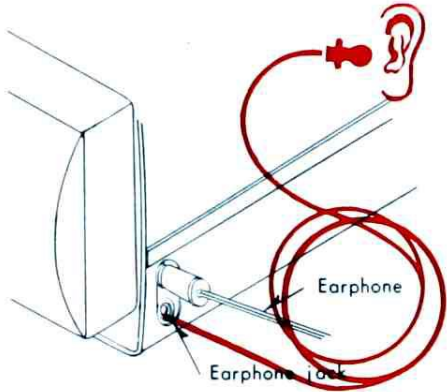


AC power supply unit removed

Removing the AC Power Supply Unit

Located at the back of the set, this unit is for use with normal indoor electric outlets only. To remove it, turn the large screw in the center of the unit in a counter-clockwise direction with a coin. Removing the AC power supply unit lightens the set's weight by 1.8 lbs. for out-of-doors use.

EARPHONES



Earphone jack

Sound from the speaker can be shut off and private listening through an earphone (one per TV set) accomplished by plugging the earphone into the upper of the two earphone jacks (EARPHONE). If it is plugged into the lower jack, sound comes through both the speaker and the earphone simultaneously. If earphones are plugged into *both jacks*, the sound can only be heard through the earphones.

Adjusting Viewing Angle

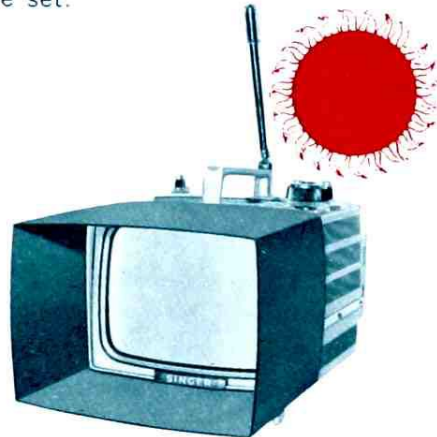
The back legs of the SINGER TV receiver can be pivoted forward or backward to raise or lower the back of the set for comfortable viewing.



Back legs folded

Attaching Sun Visor

Glare-proof reception in bright electric light or sunlight is enhanced through the use of a hood, which can be attached to the front of the set.



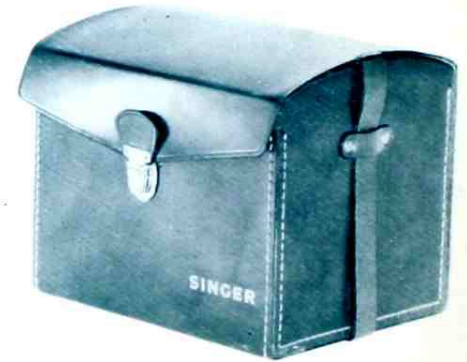
Sun visor attached

ACCESSORIES

for your SINGER[®] personal portable television set.

TV Carrying Case Model TVC 6

Smartly designed, and made of SUR-V-LON, a high quality, mildew resistant artificial leather, the case holds your SINGER set, its power supply cord and hood.



Carrying case

TV Car Saddle Stand Model TVS 6

If permitted in your State, the stand can be used to support your SINGER portable inside an automobile. It fits on the back of the front seat, for viewing by rear set passengers. (extra cost option.)



Car saddle stand

[®] A Trademark of THE SINGER COMPANY

BATTERY PACK ACCESSORIES

(extra cost option)



Battery case with built-in charger



Battery

Battery Model TVB 6

A recently developed DC storage battery, it provides a light-weight source of power to make your SINGER TV receiver truly portable. Rechargeable for long life, it helps insure perfect outdoor reception.

Battery Case With Built-In Charger Model TVBC 6

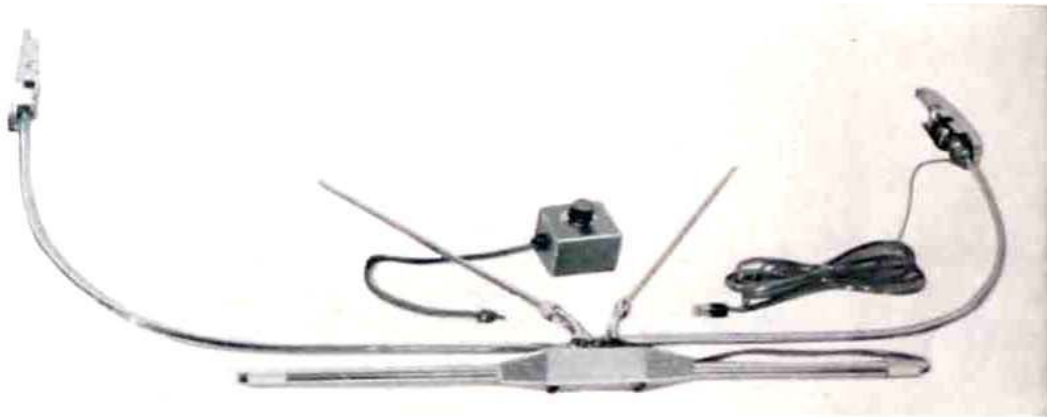
To make the storage battery convenient to carry, recharge and plug in, this carrying case and a battery charger are included in the SINGER Battery Pack set.

AUTOMOBILE ACCESSORIES

(extra cost option)

Car Antenna Models TVA 1 and TVA 2

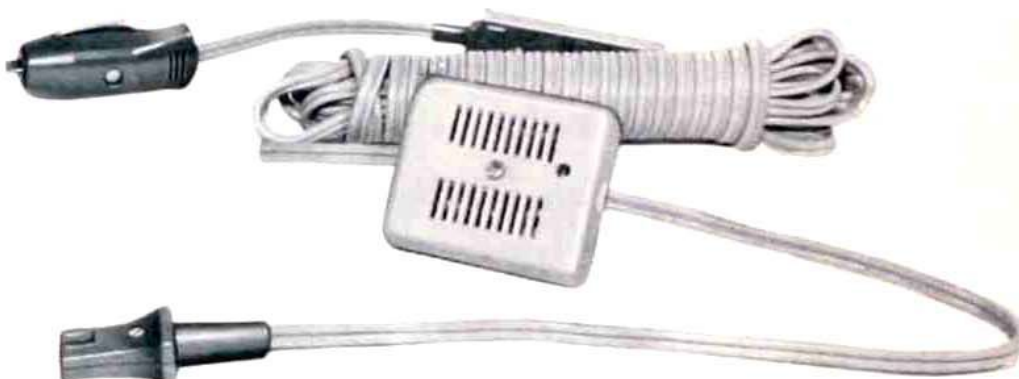
In areas where you are permitted to operate a television receiver in an automobile, a very satisfactory picture can be obtained on your SINGER portable by using this Car Antenna. It is readily attached to or removed from metal car tops, and there is no danger of scratching the car finish.



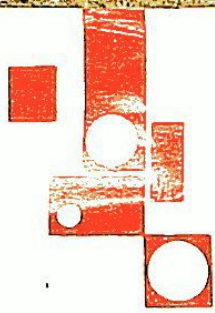
Car antenna, disassembled

Car Battery Cord Model TVA 3

This special cord lets you connect your SINGER TV to any 12 vt. battery by simply plugging it into the cigarette lighter socket. The other end is inserted into the 12 vt. DC input at the back of the set. If the set does not go on, just reverse the two-pronged connector on the plug line. A spare fuse is included with your car battery cord. Unscrew cover of voltage regulator to check for blown fuse.



Car battery cord



SPECIFICATIONS

Receiver system	Inter-carrier system (Channel 2-13)
Sensitivity	Suitable for fringe reception, adjustable for local reception
Antenna input	300
Power supply	AC 120 V 60 cycles DC 12 V Special battery (3.5 A.H.) or car battery
Power consumption	AC 26 Watts DC 12 Watts (1 A)
Speaker	2-1/2 inch, permanent magnet dynamic speaker. Voice coil impedance 8 ohms.
Automatic frequency control	Balanced saw tooth system
Automatic gain control	Improved keyed AGC system
Video carrier IF	26.75 Mc 4 stages
Sound carrier IF	22.25 Mc 2 stages
Inter carrier IF	4.5 Mc
Sound output	Maximum 200 mmW
Cabinet	Super-compact portable type Width 5-7/8", Height 4-5/16" including legs and handle 6-11/16", Depth 6-11/16" (When AC power supply unit mounted, 7-7/8")
Weight	5.7 lbs. (When AC power supply unit is mounted 7.5 lbs.)
Picture tube	Type 150AB4, 6 inch 90° deflection, metal back, electrostatic focussing, electromagnetic deflection

Transistors

TR-101	VHF RF Amplifier
TR-102	Mixer
TR-103	Local Oscillator
TR-201	1st Video IF Amplifier
TR-202	2nd Video IF Amplifier
TR-203	3rd Video IF Amplifier
TR-204	4th Video IF Amplifier
TR-205	Video Amplifier
TR-206	AGC Amplifier
TR-207	Video Output
TR-301	1st Sound IF Amplifier
TR-302	2nd Sound IF Amplifier & Limiter
TR-303	Audio Amplifier
TR-304	Audio Output
TR-305	"
TR-401	Sync. Separator
TR-402	Sync. Amplifier
TR-403	Vertical Oscillator
TR-404	Vertical Amplifier
TR-405	Vertical Output
TR-501	Phase Splitter
TR-502	AFC Amplifier
TR-503 <i>25B77</i>	Horizontal Oscillator
TR-504 <i>25B80</i>	Horizontal Driver
TR-505 <i>25B275</i>	Horizontal Output
TR-601 <i>25B83</i>	Power Filter

Tube**1 tube**

V 501 High Voltage Rectifier

26 transistors**Germanium Diodes**

CD201	IN60	AGC
CD202	IN60	Video Damper
CD203	IN60	Video Detector
CD204	IN60	AGC
CD205	IN60	"
CD301	IN60	FM Detector
CD302	IN60	"
CD401	IN60	Vertical Oscillator
CD402	IN60	Noise Limiter
CD501	IN60	AFC Phase Detector
CD502	IN60	"
CD503	IN60	Horizontal Oscillator
CD504	IS309	Damper
CD507	IN34A	Pulse Rectifier

Silicon Diodes

CD505	IS315	Medium Voltage Rectifier
CD506	SD-1	"
CD601	HR13	Power Rectifier
CD602	HR13	"
CD603	HR13	"
CD604	HR13	"

Thermister

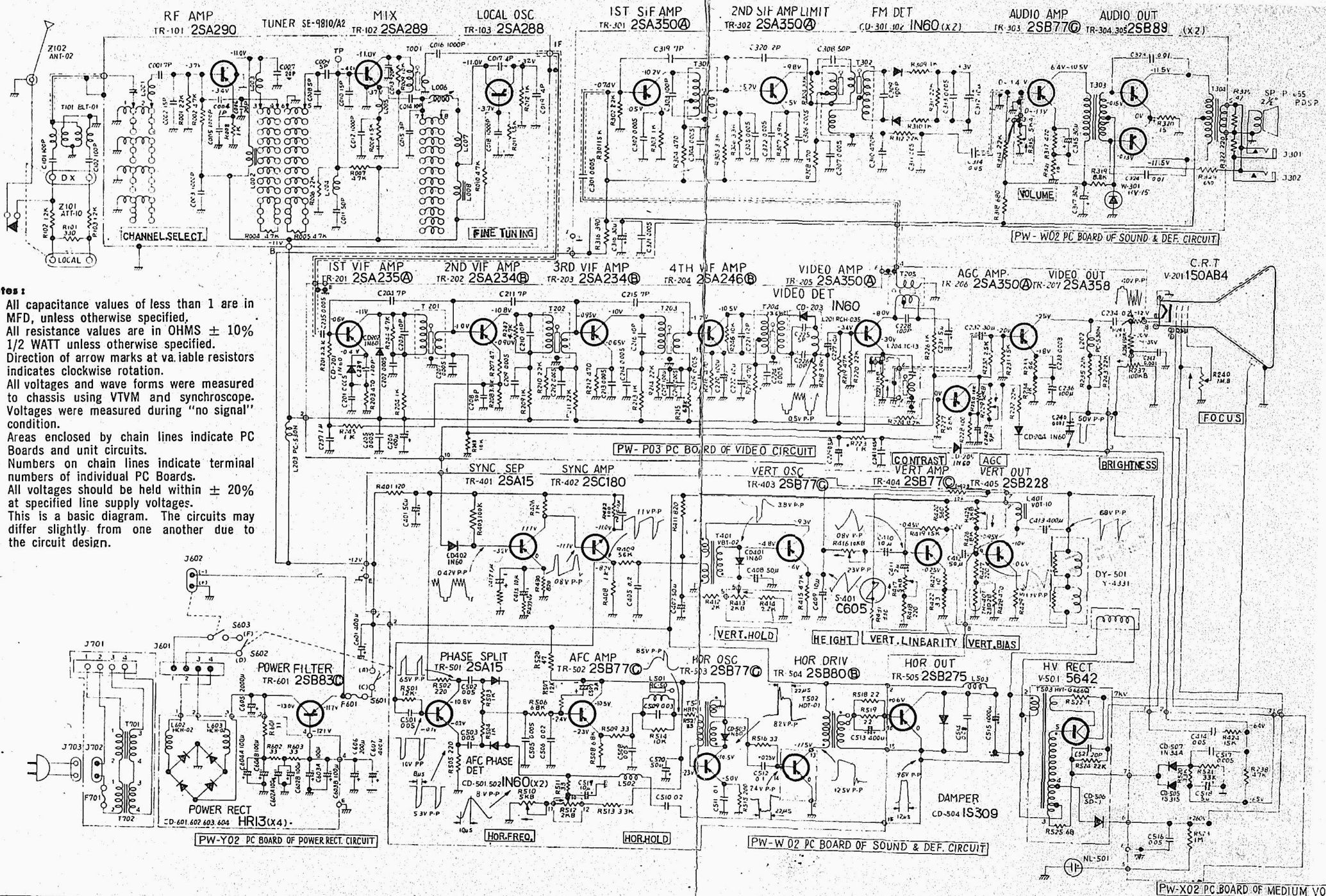
TH401	23D28	Vert. Output Temperature Compensator
--------------	-------	--------------------------------------

Varistor

W-301	HV-15	Audio Output Temperature
S-401	C-605	Vert. Output Pulse Limiter

14 diodes**6 diodes****1****2**

SINGER TRANSISTOR TELEVISION MODEL TV 6 SCHEMATIC DIAGRAM



SERVICE

Your new SINGER television set, with proper care, will give you years of excellent service. However, should it ever need repairs or adjustments, please contact the SINGER center from which you purchased the set, or any center that carries SINGER television.

