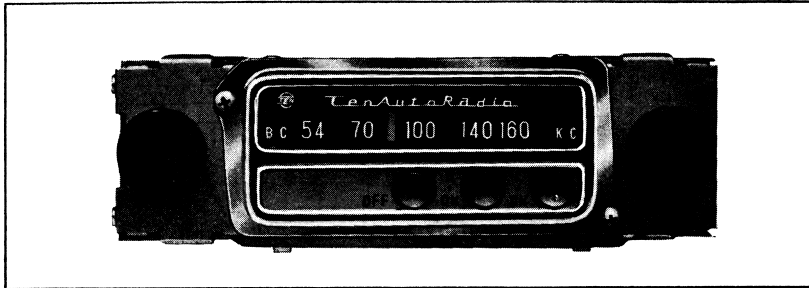


**S M - 3 6**



# AUTO RADIO SERVICE MANUAL

## ALL TRANSISTOR RADIO Model AR-530EX



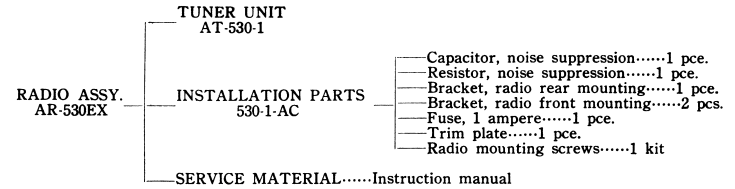
### GENERAL FEATURES

Model AR-530EX is all transistor superheterodyne manual tuning auto radio. This receiver operates from 6 or 12-volt and negative or positive grounding electrical systems. Containing six transistors and two diodes, this compact receiver is designed for universal installation in a variety of automobiles.

### SPECIFICATIONS

- TUNING RANGE:.....535 to 1605 kc.
- INTERMEDIATE FREQUENCY:.....455 kc.
- SENSITIVITY:.....24 dB or less.
- SELECTIVITY:.....18 dB or more at  $\pm 10$  kc detuning.
- S/N RATIO:.....21 dB or more.
- AUDIO OUTPUT:.....0.8 watt at 6.6 volts. 1.5 watt at 13.2 volts.
- SPEAKER IMPEDANCE:.....3.5 or 8 ohms. (Inner wiring changeable)  
4  $\square$ ' built-in speaker.
- POWER INPUT:.....6 or 12-volt battery, negative or positive terminal to ground. (Convertible with plug)  
Voltage.....6.6 or 13.2 VDC. (Convertible with slide switch)  
Current.....0.6 ampere at 6.6 volts. 0.5 ampere at 13.2 volts.

### COMPOSITION



### PARTS LOCATION ON PC BOARD

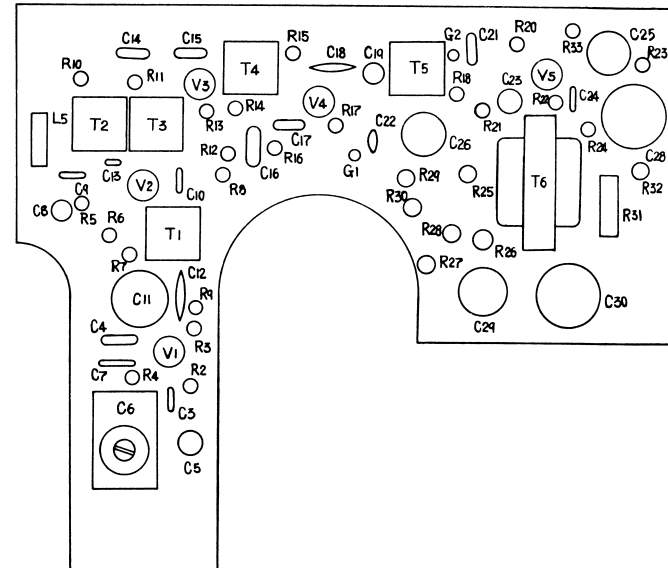
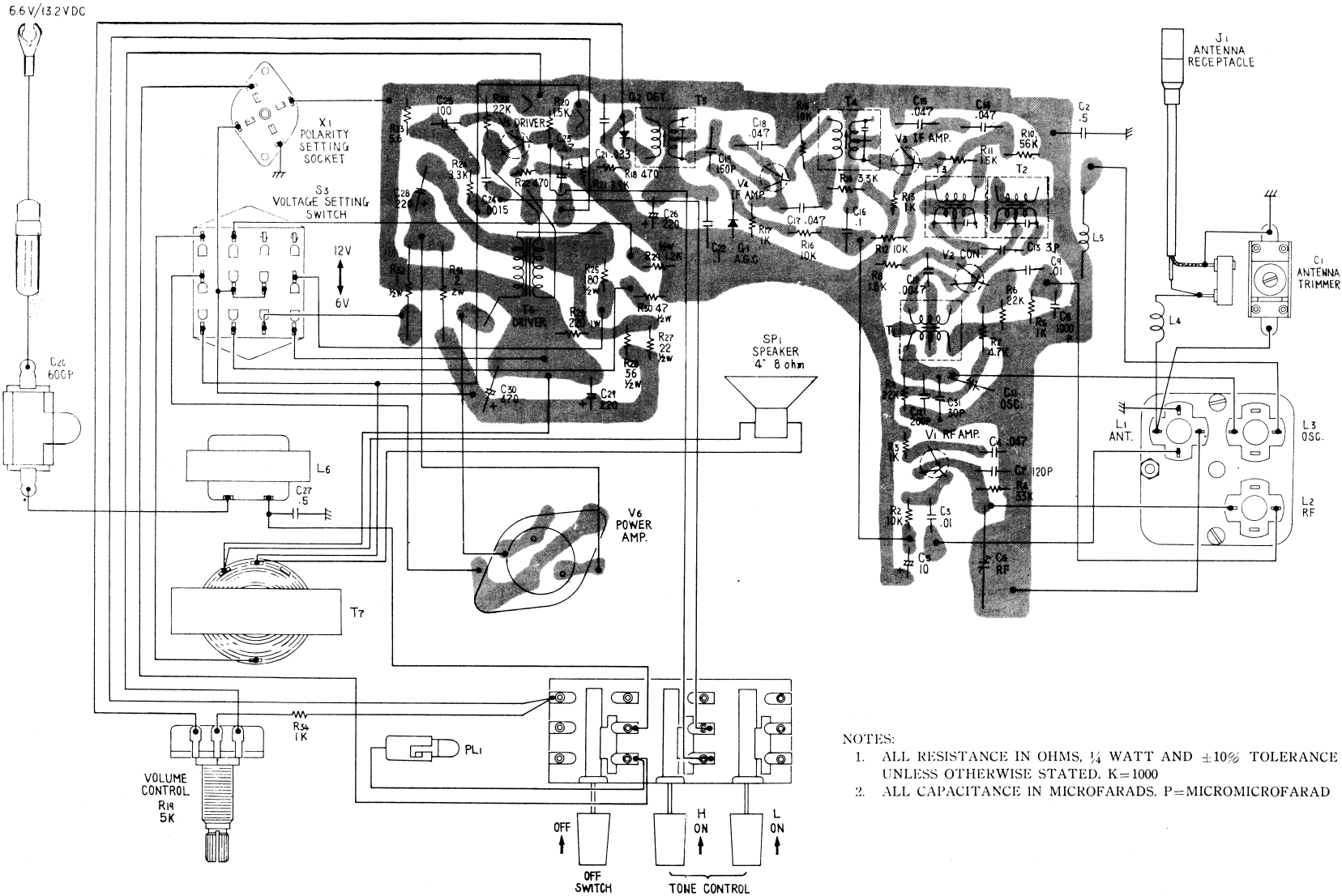


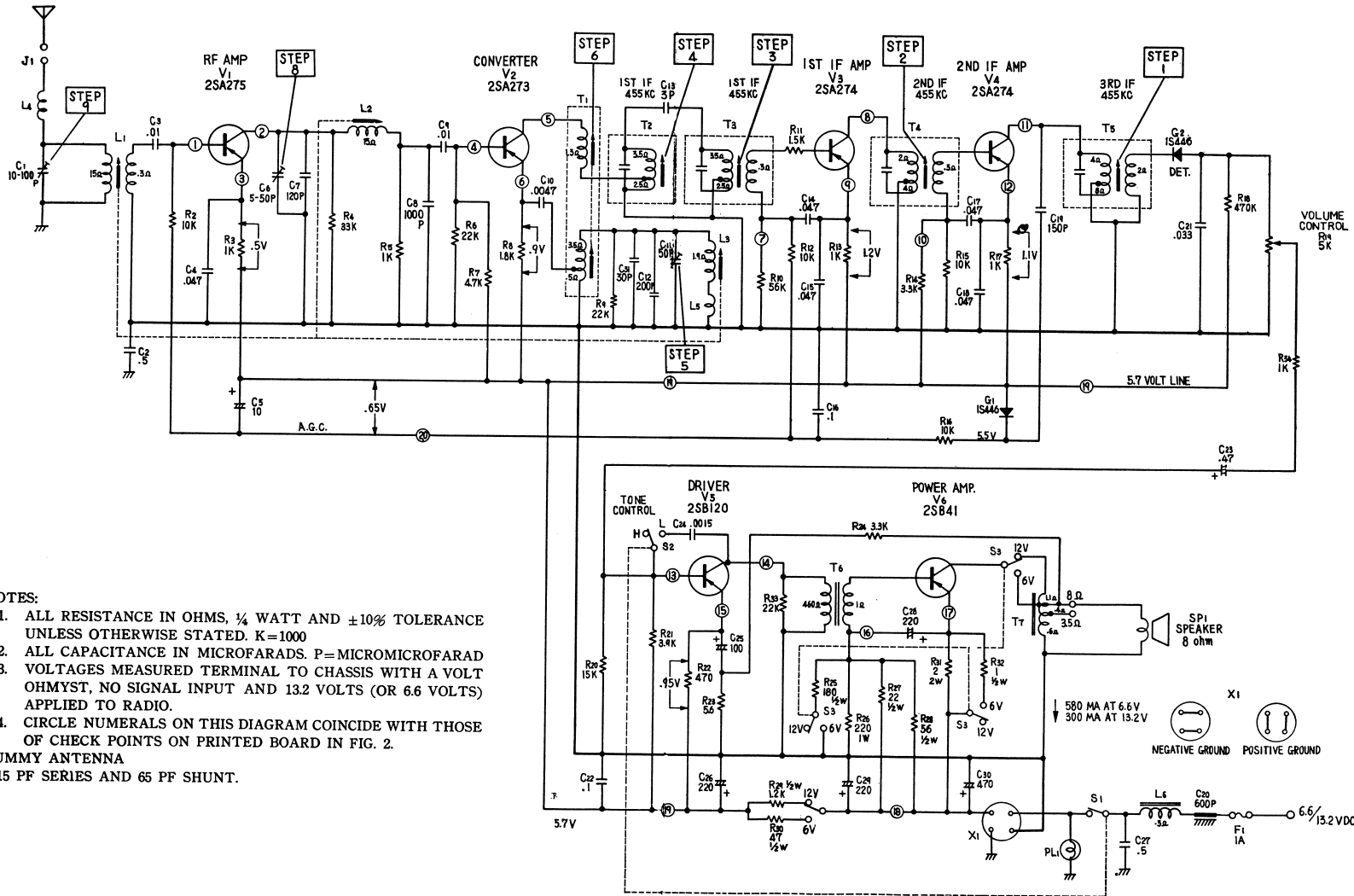
Fig. 1

T14

Ten AR530EX



- NOTES:
1. ALL RESISTANCE IN OHMS, 1/4 WATT AND ±10% TOLERANCE UNLESS OTHERWISE STATED. K=1000
  2. ALL CAPACITANCE IN MICROFARADS. P=MICROMICROFARAD

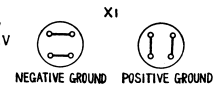


NOTES:

1. ALL RESISTANCE IN OHMS, 1/4 WATT AND ±10% TOLERANCE UNLESS OTHERWISE STATED. K=1000
2. ALL CAPACITANCE IN MICROFARADS. P=MICROMICROFARAD
3. VOLTAGES MEASURED TERMINAL TO CHASSIS WITH A VOLT OHMYST, NO SIGNAL INPUT AND 13.2 VOLTS (OR 6.6 VOLTS) APPLIED TO RADIO.
4. CIRCLE NUMERALS ON THIS DIAGRAM COINCIDE WITH THOSE OF CHECK POINTS ON PRINTED BOARD IN FIG. 2.

DUMMY ANTENNA

15 PF SERIES AND 65 PF SHUNT.



580 MA AT 6.6V  
300 MA AT 13.2V

5.7V, 6.6/13.2VDC, 1A

CHECK POINTS ON PC BOARD

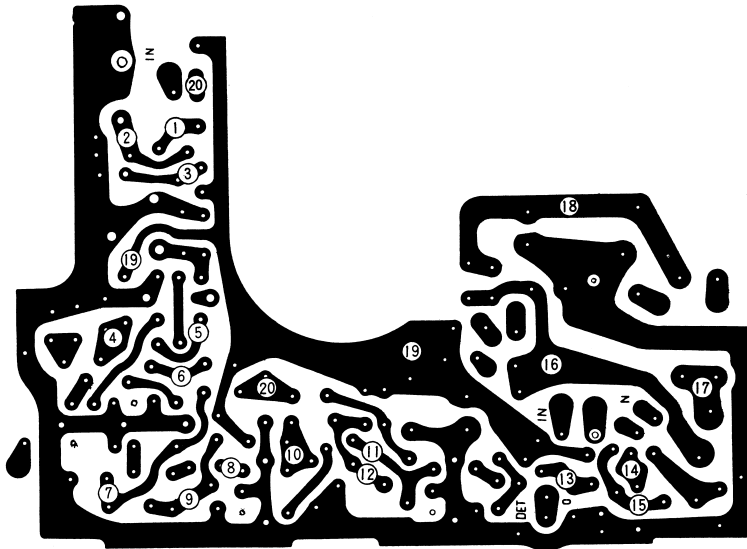


Fig. 4

PARTS LAYOUT

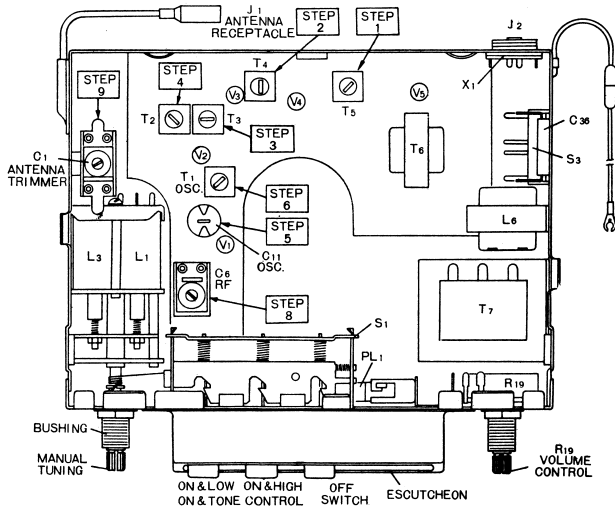


Fig. 5

CONNECTION INSTRUCTION IN ALIGNMENT

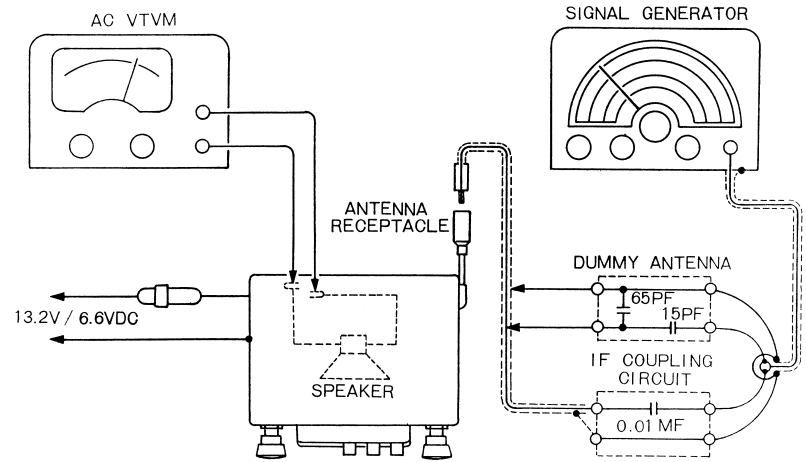


Fig. 6

ALIGNMENT PROCEDURE DETAILS

Connect an AC VTVM or output meter across speaker voice coil. Set volume control to maximum and tone control to treble. Attenuate signal generator as required to keep output meter reading between one and three volts. (2 volts are equal to 0.5 watt at 8 ohms.)

STEP	GENERATOR CONNECTION	GENERATOR FREQUENCY	SET TUNER TO	ADJUST	REMARKS
1~4	Thru 0.01 mf Cond. to RF Transistor V <sub>1</sub> Collector	455 kc	Near 1000 kc	T <sub>5</sub> = STEP-1 T <sub>4</sub> = STEP-2 T <sub>3</sub> = STEP-3 T <sub>2</sub> = STEP-4	Repeat STEP-1 to 4 until no further gain in output can be obtained.
5	Thru Dummy Ant. to Ant. Recept.	1630 kc	Hi-end stop	C <sub>11</sub> = STEP-5	Adjust for maximum meter indication.
6	Thru Dummy Ant. to Ant. Recept.	525 kc	Low-end stop	T <sub>1</sub> = STEP-6	Adjust for maximum meter indication.
7	REPEAT STEP-5 AND 6 UNTIL NO FURTHER GAIN IN OUTPUT CAN BE OBTAINED.				
8	Thru Dummy Ant. to Ant. Recept.	1400 kc	Just tune in SG frequency.	C <sub>6</sub> = STEP-8	Adjust for maximum meter indication.
9	With radio in car and antenna fully extended, tune in a weak station near 1400 kc.			C <sub>1</sub> = STEP-9	Readjust antenna trimmer C <sub>1</sub> for maximum volume.

**Notice for Antenna Trimmer Alignment**

As it may be hard to adjust antenna trimmer after installing radio in car, connect temporarily each lead, then adjust it.