

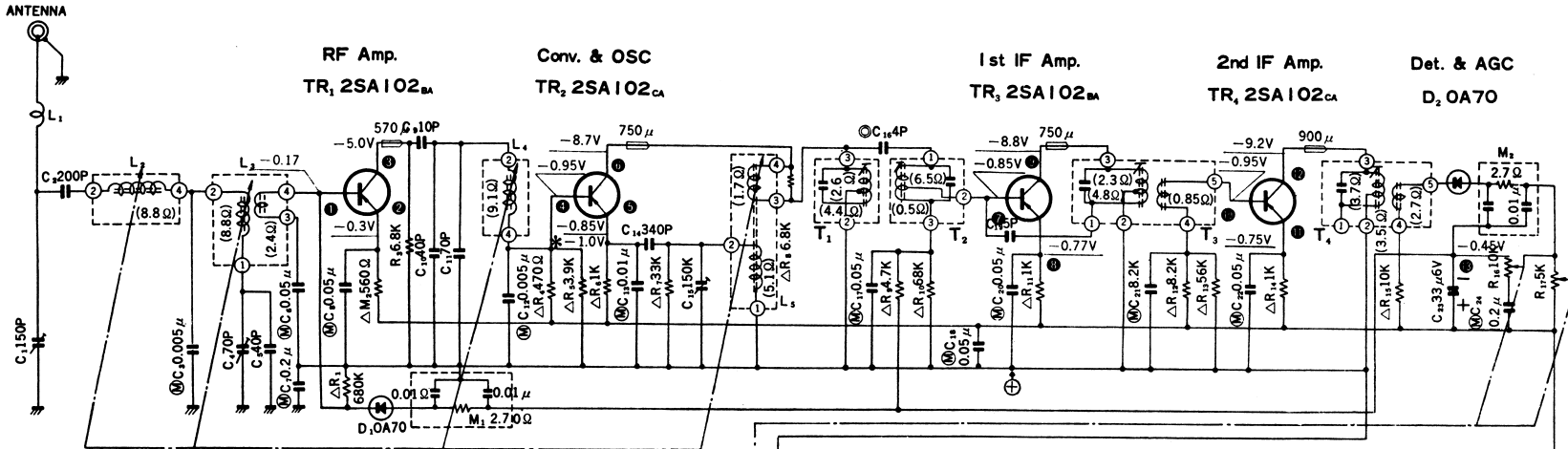
POLARITY REVERSING SOCKET (BOTTOM VIEW)

NOTE  
C<sub>7</sub> (0.2μf) is mounted on printed pattern side of circuit board.

No.	VOLTAGE	No.	VOLTAGE
1	-0.17V	15	-0.6V
2	-0.3V	16	-0.52V
3	-5.0V	17	-0.7V
4	-0.95V	18	-0.5V
5	-0.85V	19	-7.8V
6	* -1.0V	20	-0.16V
7	-8.7V	21	-0.01V
8	-0.85V	22	-6.2V
9	-0.77V	23	-0.16V
10	-8.8V	24	-0.01V
11	-0.95V	25	-6.2V
12	-0.75V	1	10V
13	-9.2V	2	8.8V
14	-0.45V		
15	-1.0V		

L<sub>4</sub> (RF. COIL) L<sub>5</sub> (OSC. COIL) L<sub>3</sub> (ANT. COIL<sub>1</sub>) L<sub>2</sub> (ANT. COIL<sub>2</sub>)

ANTENNA RECEPTACLE



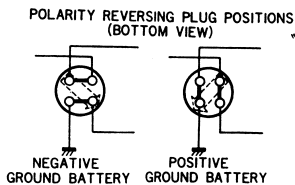
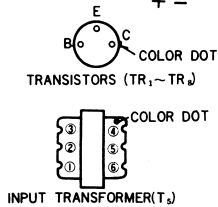
NOTES

- 1) Voltage and current values are those measured when there is no signal with a power supply voltage of 13.2V DC.
- 2) Voltage should be measured with a VOM whose internal resistance value is 20,000 ohms-per. volt.
- 3) Dial pointer is set at the highest frequency (right end) during measurement.
- 4) Measurement base

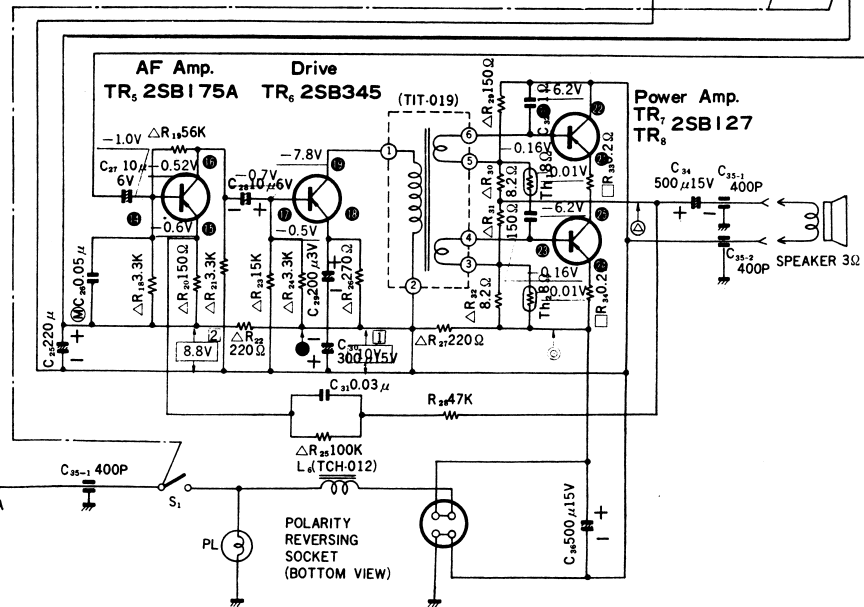
TR <sub>1</sub> ~ TR <sub>3</sub> :	LINE
TR <sub>4</sub> :	LINE
TR <sub>5</sub> :	LINE
TR <sub>6</sub> :	LINE

- 5) Voltages of TR<sub>2</sub> indicated \* mark are those measured when the dial pointer is set at lower frequency (left end).
- 6) Resistance values ( ) of coils are those for DC current.
- 7) Symbols

- △ : Carbon film Resistor
- : Wire Wound Resistor
- ⊙ : Titanium Condenser (ordinary)
- ⊙ : Polyester Film Condenser
- ⊙ : Titanium Condenser (for temperature compensation)
- ⊖ : Electrolytic Condenser



"A" LEAD → 260m  
13.2V DC F: 1A



## ALIGNMENT INSTRUCTIONS

Check for specified source voltage. 13.2V

Set volume control to maximum.

Set tone control to treble.

Use only enough generator output to provide a usable indication.

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1 2 4	Through dummy (Fig. 4) to antenna receptacle.	450 Kc (400~Mod.)	Point of non interference.	Output meter across voice coil.	T <sub>1</sub> , T <sub>2</sub> , T <sub>3</sub> , T <sub>4</sub> .	Adjust for maximum output.
5	"	530 Kc (400~Mod.)	Tune for max.	"	C <sub>15</sub>	"
6 7 8	"	1400 Kc (400~Mod.)	Tune to signal.	"	C <sub>10</sub> , C <sub>4</sub> , C <sub>1</sub> .	"

With radio installed in car and antenna fully extended, tune in a weak station near 1400 KC and adjust C<sub>1</sub> for maximum output.

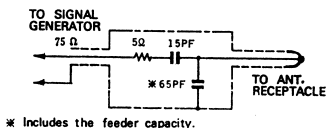


Fig. 4 Dummy Antenna Detail

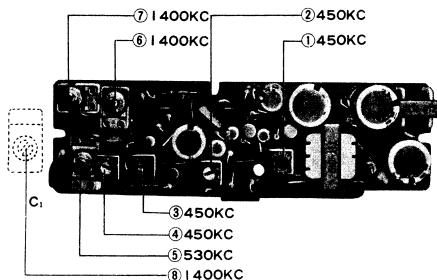


Fig. 5 Component View-Alignment Points.



# NATIONAL

## Service Manual

### 8-TRANSISTOR CAR RADIO

### MODEL CR-530N



#### SPECIFICATIONS

Frequency Range :	MW 535-1605 KC (561-187 m)	Power Supply Voltage :	DC 11-16V (standard voltage: 13.2V) Negative ground
Intermediate Frequency :	450 KC	Power Consumption :	Approx. 5.3W (0.4A @13.2V) at 0.5W output
Transistors :	2SA102 RF Amplifier	Output Impedance :	3~8Ω
	2SA102 Converter	Dimensions :	Height 2"
	2SA102 1st IF Amplifier		Width 6 $\frac{3}{4}$ "
	2SA102 2nd IF Amplifier		Depth 4 $\frac{3}{4}$ "
	2SB175A AF Amplifier	Weight :	Approx. 3 lbs.
	2SB345 AF Driver		
	2SB127 Power Amplifier (push-pull)		
	2SB127		
	OA70 AGC		
Diodes :	OA70 Detector		
Sensitivity :	20μV for 0.5W Output		
Power Output :	6W Maximum		

#### PARTS LOCATION WITH UPPER COVER REMOVED

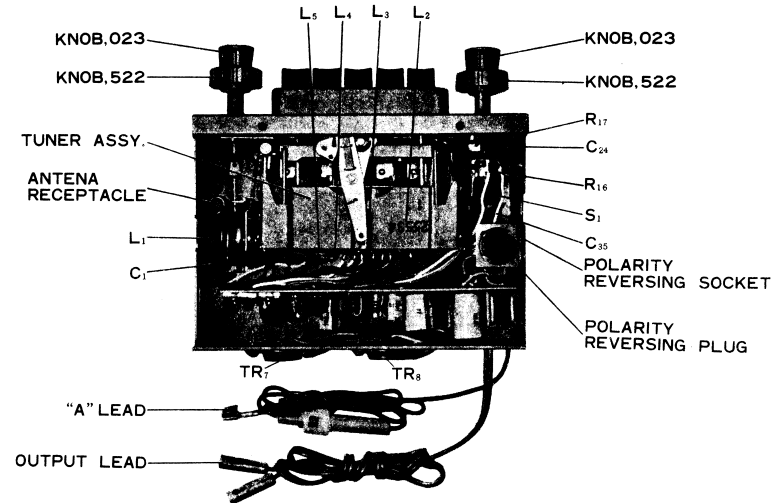


Fig. 1 Top View-Parts Identification.

#### 4 SCREWS TO REMOVE UPPER COVER.

