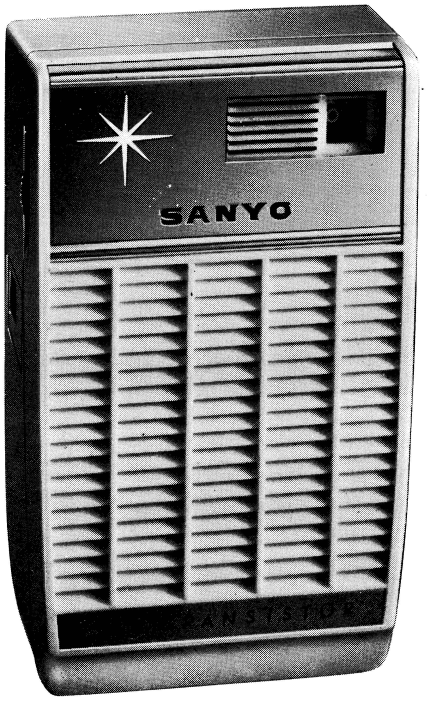
SANYO

MODEL
6C-32

All-transistor Radio

Service Manual



SPECIFICATIONS

TUNING RANGE	
standard broadcast band	540 - 1600 Kc/s
INTERMEDIATE FREQUENCY	455 Kc/s
TRANSISTORS	
2SA203 (2SA182)	frequency converter
2SA202 (2SA180)	1st IF amplifier
2SA197 (2SA198)	2nd IF amplifier
2SB185	AF amplifier
2SB187 × 2	power amplifier (single ended pushpull)
GERMANIUM DIODE	
1N60	detector & AGC
OUTPUT POWER	
undistorted	160 mW
maximum	270 mW

RADIATION SENSITIVITY
not more than 800 μV/m at 10 mW output
(average 320 μV/m)

BATTERY
9 volts (single 9-volt radio battery : 006P)

LOUDSPEAKER
2¼″ permanent dynamic speaker
voice coil impedance 40 ohms
earphone outlet provided (7 ohms)

CURRENT DRAIN	
no signal	10 mA
maximum	40 mA

DIMENSIONS
5½″ × 2½″ × 1½″

WEIGHT
7⅜ ozs approx. (excluding battery)

SANYO ELECTRIC CO., LTD.

PART NO.	STOCK NO.	DESCRIPTION

TRANSISTORS

Tr 1	2SA203 or 2SA182	Frequency Converter
Tr 2	2SA202 or 2SA180	1st IF Amplifier
Tr 3	2SA197 or 2SA198	2nd IF Amplifier
Tr 4	2SB185	AF Amplifier
Tr 5	2SB187	Power Amplifier
Tr 6	2SB187	Power Amplifier

GERMANIUM DIODE

D 1	1N60	Detector & AGC

COILS

L 1, 2	R-W2133	Antenna Coil
L 3	R-W8071a	Oscillator Coil black DMO-921A4

TRANSFORMERS

T 1	R-W5T052	1st IF Transformer yellow C-6038R
T 2	R-W5T009	2nd IF Transformer white FMC-6029A
T 3	R-W5T043	3rd IF Transformer black C-6156A
T 4	R-W6172	Input Transformer 8K : 2 Kohms × 2

CONTROLS

V C	R-C1073	Tuning Variable Capacitor with trimmers
R 21	R-R11622	Volume Control with on-off switch
R 20	R-R11007	Semi-fixed Resistor

LOUDSPEAKER

S P	R-S6195	2¼" Permanent Dynamic Speaker Voice Coil Impedance 40 ohms

RESISTOR/CAPACITOR PACKED

R 7	R-CXC002	(200 ohms ±20%)
+ C10		+ (0.01 μF + 80-20%)
+ C11		+ (0.01 μF + 80-20%)

FIXED RESISTORS

R 1		Solid	33K ohms	±10%	¼W
R 2		〃	15K 〃	〃	〃
R 3		〃	5.6K 〃	〃	〃
R 4		Carbon film	1.8K 〃	± 5%	〃
R 5		Solid	1.5K 〃	±10%	〃
R 6		〃	820 〃	〃	〃
R 8		〃	5K 〃	±20%	〃
R 9		〃	22K 〃	±10%	〃
R 10		〃	4K 〃	〃	〃

PART NO.	STOCK NO.	DESCRIPTION

FIXED RESISTORS (Continued)

R 11		Solid	1K ohms	±10%	¼W
R 12		〃	220 〃	〃	〃
R 13		〃	2.7K 〃	〃	〃
R 14		〃	130 〃	〃	〃
R 15		Carbon film	3.3 〃	± 5%	〃
R 16		Solid	2.7K 〃	±10%	〃
R 17		〃	130 〃	〃	〃
R 18		Carbon film	3.3 〃	± 5%	〃
R 19		Solid	56 〃	±20%	½W

Resistors or carbon film type can be used in stead of solid type.

FIXED CAPACITORS

C 1		Mylar (T)	0.004 μF	+30-20%	25WV
C 2		〃 (S)	0.003 〃	〃 〃	〃
C 3		Ceramic(S)	10pF	±10%	〃
C 4		〃 (S)	0.04 μF	+80-20%	〃
C 5		Electrol.	30 〃		3WV
C 6		Ceramic(S)	0.04 〃	+80-20%	25WV
C 7		〃 (S)	0.04 〃	〃 〃	〃
*C 8		〃 (S)	7pF	±0.5pF	〃
		〃	10 〃	±10%	〃
C 9		Mylar (S)	0.02 μF	+30-20%	150WV
C 12		Electrol.	5 〃		6WV
C 13		〃	5 〃		〃
C 14		〃	30 〃		3WV
C 15		Mylar (S)	0.005 〃	+30-20%	150WV
C 16		Electrol.	50 〃		9WV
C 17		〃	120 〃		6WV

Mark (S) shows square type and (T) shows tubular type.
Either of the two is used depending on the transistor (Tr 3).

CABINET

	R-31461a	Cabinet - front enclosure
	R-32277	Dial Window Cover
	R-26585	Metal Panel
	R-26568	Metal Strip "SIX TRANSISTOR"
	R-47333	Battery Instruction Sheet Speaker Glille Net
	R-31479	Back Cover - back enclosure
	R-41027	Battery Cushion
	R-24142a	Screw to fix back cover
	R-13027aL	Lock Washer for above screw
	R-12095	Speed Washer - speaker mtg.
	R-32278	Tuning Control Knob
	R-32279	Volume Control Knob

CHANGE R - 13027aL ⟶ R - 13061

MISCELLANEOUS

	R-48088	Leather Case
	R-S1027a	Battery Snap-on Terminal
	R-S2107	Earphone Jack
	R-S6199	Earphone

CHANGE R - 6199 ⟶ R - S6210

SPECIFICATION SUBJECTS TO CHANGE WITHOUT NOTICE.

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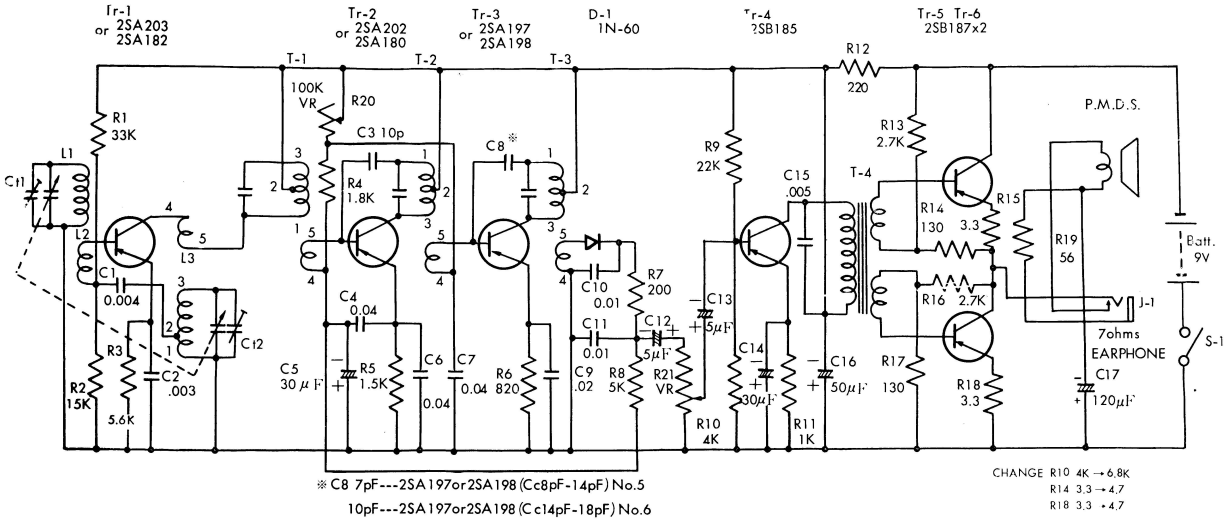
CIRCUIT DIAGRAM



ALIGNMENT PROCEDURES

Apply volt-meter across the voice coil. Volume control should be at maximum position. Output of signal generator should be not higher than necessary to obtain output reading in order to avoid AGC function.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	ADJUST FOR MAXIMUM OUTPUT
IF ALIGNMENT				
1	Positive side thru 0.1 μF capacitor to antenna stator lug on tuning gang. Negative side to ground.	455 kc	lower end	IF transformer T 3 T 2 T 1
BROADCAST RF ALIGNMENT				
2	Make loop of several turns of wire and feed signal into it.	520 kc	lower end	Osc coil L3
3		1650 kc	upper end	Osc trimmer Ct2
4		Repeat steps 2 and 3.		
5		600 kc	600 kc	Ant coil L1
6		1400 kc	1400 kc	Ant trimmer Ct1
7		Repeat steps 5 and 6.		

ADJUSTMENT OF SEMI-FIXED RESISTOR (R20)

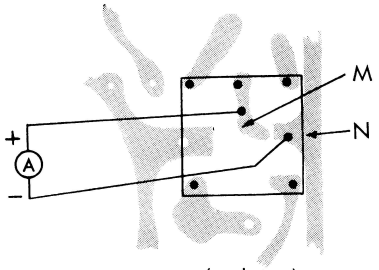
Set the value of R20 at maximum and make a receiver tune in no signal (station).

Apply 9 volts to the receiver as power source.

Connect an ammeter (range : 1 mA) between two points M and N as illustrated.

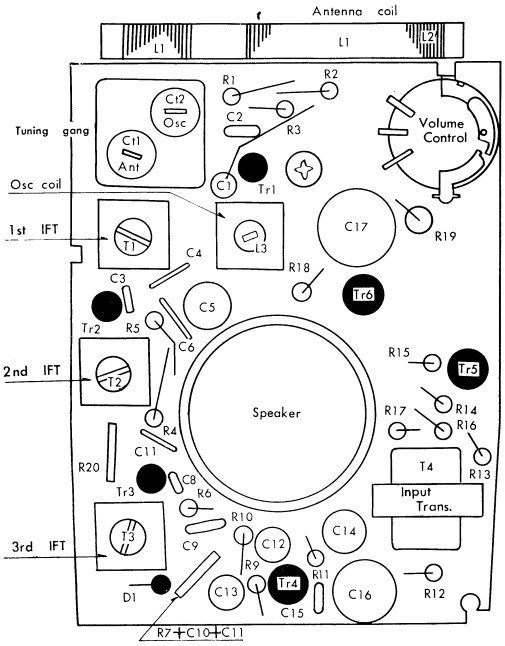
Adjust the value of R20 in order to obtain 450 μA deflection.

Short-circuit the two points by soldering after adjustment.

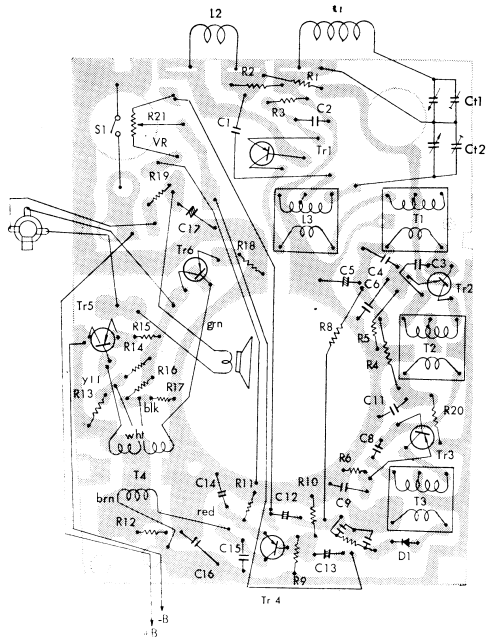


T2 (2nd IFT)

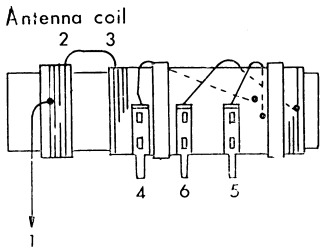
MAIN PARTS LOCATION

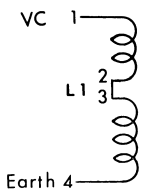


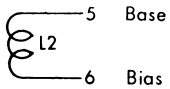
INTER PARTS CONNECTION

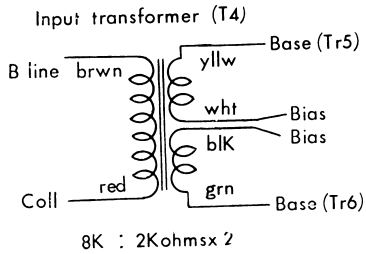


MAIN PARTS TERMINAL IDENTIFICATION









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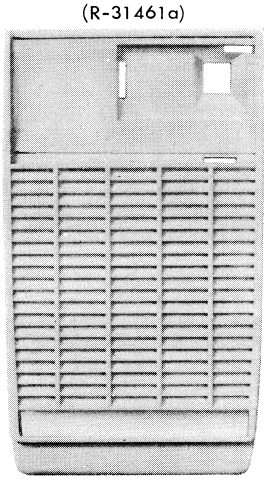
(R-31461a)



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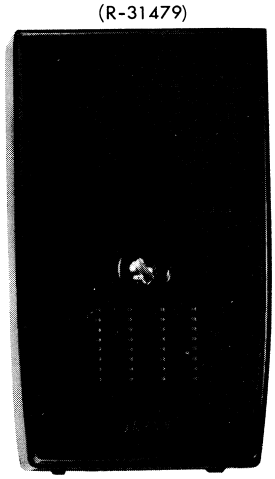

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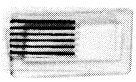

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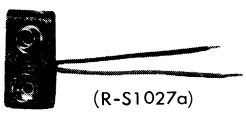

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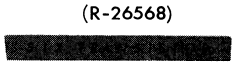
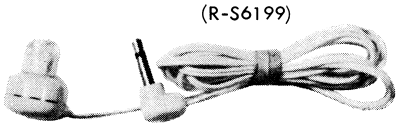
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