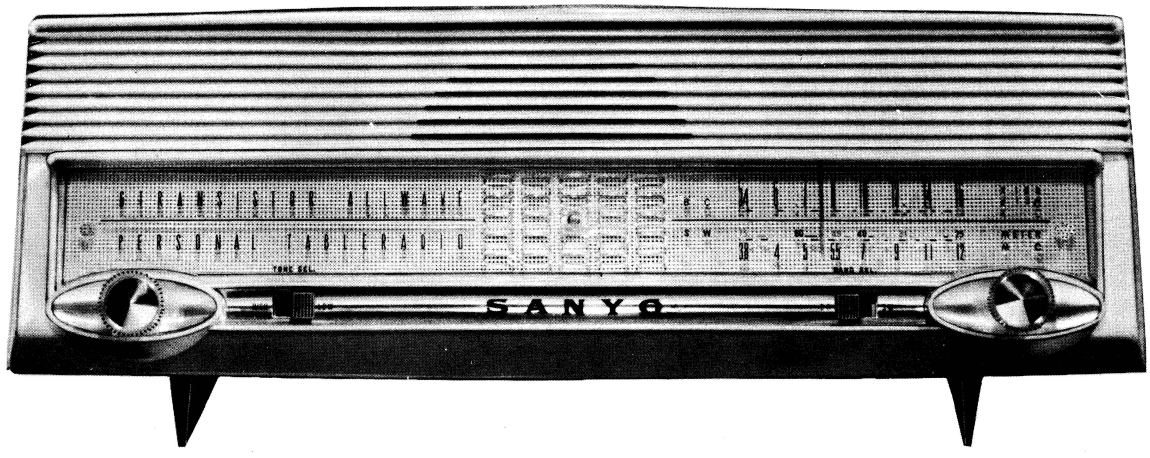
SANYO

MODEL
6S-T27

All-transistor Radio

Service Manual



SPECIFICATIONS

TUNING RANGE

Standard broadcast band	540 – 1600 Kc/s
Shortwave band	3.8 – 12.0 Mc/s

INTERMEDIATE FREQUENCY

455 Kc/s

TRANSISTOR COMPLEMENT

(1)	2SA60	Frequency Converter
(2)	2SA202	1st IF Amplifier
(3)	2SA203	2nd IF Amplifier
(4)	2SB23A	AF Amplifier
(5)	2SB187 × 2	Power Amplifier (B class pushpull)

GERMANIUM DIODES & THERMISTOR

(1)	IN 60	Diode; Oscillation Voltage Limiter
(2)	IN 60	Diode; AGC
(3)	IN 60	Diode; Detector & A.G.C.
(4)	SDT - 20	Thermistor; Temperature Compensator

POWER OUTPUT

Undistorted	270 mW
Maximum	400 mW

RADIATION SENSITIVITY

BC band	110 μV/m
SW band	63 μV/m

BATTERY

Type	6 volts (4 size D flashlight batteries)	
Current Drain	No signal	7.2 mA
	Maximum	69.6 mA

LOUDSPEAKER

Size and type	4″ Permanent dynamic speaker
Voice coil impedance	3.3 ohms at 1.000 c/s

DIMENSIONS

Width	14 inches
Height	4½ inches
Depth	6½ inches

WEIGHT

Approximately 3½ lbs without batteries

SANYO ELECTRIC CO., LTD.

PART NO.	STOCK NO.	DESCRIPTION

TRANSISTORS

Tr 1	2SA60	Frequency Converter
Tr 2	2SA202	1st IF Amplifier
Tr 3	2SA203	2nd IF Amplifier
Tr 4	2SB23A	AF Amplifier
Tr 5	2SB187	Power Amplifier
Tr 6	2SB187	Power Amplifier

DIODES AND THERMISTOR

D 1	IN 60	Oscillation Voltage Limiter
D 2	IN 60	AGC
D 3	IN 60	Detector & AGC
T H	SDT-20	Temperature compensator

COILS

L 1,2,3	R-S8312a	Antenna Coil
L 4	R-W8011	Oscillator Coil BC
L 5	R-W8012	Oscillator Coil SW

TRANSFORMERS

T 1	R-W5T008	1st IF Transformer
T 2	R-W5T009	2nd IF Transformer
T 3	R-M1001	DET Module
T 4	R-W6137	Input Transformer
T 5	R-W6098	Output Transformer

CONTROLS

SW 1	R-S4109	Band Switch
SW 2	R-S4191	Tone Switch
VR	R-R12472	Volume Control
VC	R-C1040d	Variable Capacitor
Ct1,2 3,4	R-C0021	4-block Trimmer

LOUDSPEAKER

S P	R-S6171	4″ permanent dynamic type

RESISTOR/CAPACITOR PACKED

R7+ C12	R-CX-C004	1K ohms+0.04 μF
R11+ C17	R-CXC-004	1K ohms+0.04 μF

PART NO.	STOCK NO.	DESCRIPTION

CAPACITORS

C 1		Mylar	0.002μF	+30−20%	100WV
C 2		,,	0.005 ,,	,, ,,	,,
C 3		,,	0.01 ,,	,, ,,	,,
C 4		Styrol	330 pF	±10%	1K WV
C 5		,,	2500 ,,	,,	,,
C 6		Ceramic	5 ,,	±0.5pF	25 WV
C 7		Electrolytic	5 μF	+250−10%	6 WV
C 8		,,	30 ,,	,, ,,	,,
C10		Ceramic	13 pF	±10%	25 WV
C13		Mylar	0.04 μF	+30−20%	100WV
C14		,,	0.04 ,,	,, ,,	,,
C15		Ceramic	8 pF	±0.5pF	25 WV
C20		Electrolytic	30 μF	+250−10%	6 WV
C21		,,	30 ,,	,, ,,	,,
C22		Mylar	0.05 ,,	+30−20%	100WV
C23		Electrolytic	120 ,,	+250−10%	10 WV
C24		Ceramic	0.005 ,,	+80−20%	25 WV
C25		Mylar	0.05 ,,	+30−20%	100WV
C26		Electrolytic	100 ,,	+250−10%	6 WV
C27		Mylar	500 pF	+30−20%	100WV

RESISTORS

R 1		Mold	33 K ohms	±10%	½W
R 2		,,	4.7 K ,,	,,	,,
R 3		,,	1.5 K ,,	,,	,,
R 4		,,	68 K ,,	,,	,,
R 5		,,	680 ,,	,,	,,
R 6		,,	6.8 K ,,	,,	,,
R 8		,,	2.2 K ,,	,,	,,
R 9		,,	33 K ,,	,,	,,
R 10		,,	6.8 K ,,	,,	,,
R 13		,,	22 K ,,	,,	,,
R 14		,,	6.8 K ,,	,,	,,
R 15		,,	470 ,,	,,	,,
R 16		,,	270 ,,	,,	,,
R 17		,,	3.3 K ,,	,,	,,
R 18		,,	200 ,,	± 5%	¼W
R 19		,,	2.2 ,,	±10%	,,

change R17 3.3K→3.9K

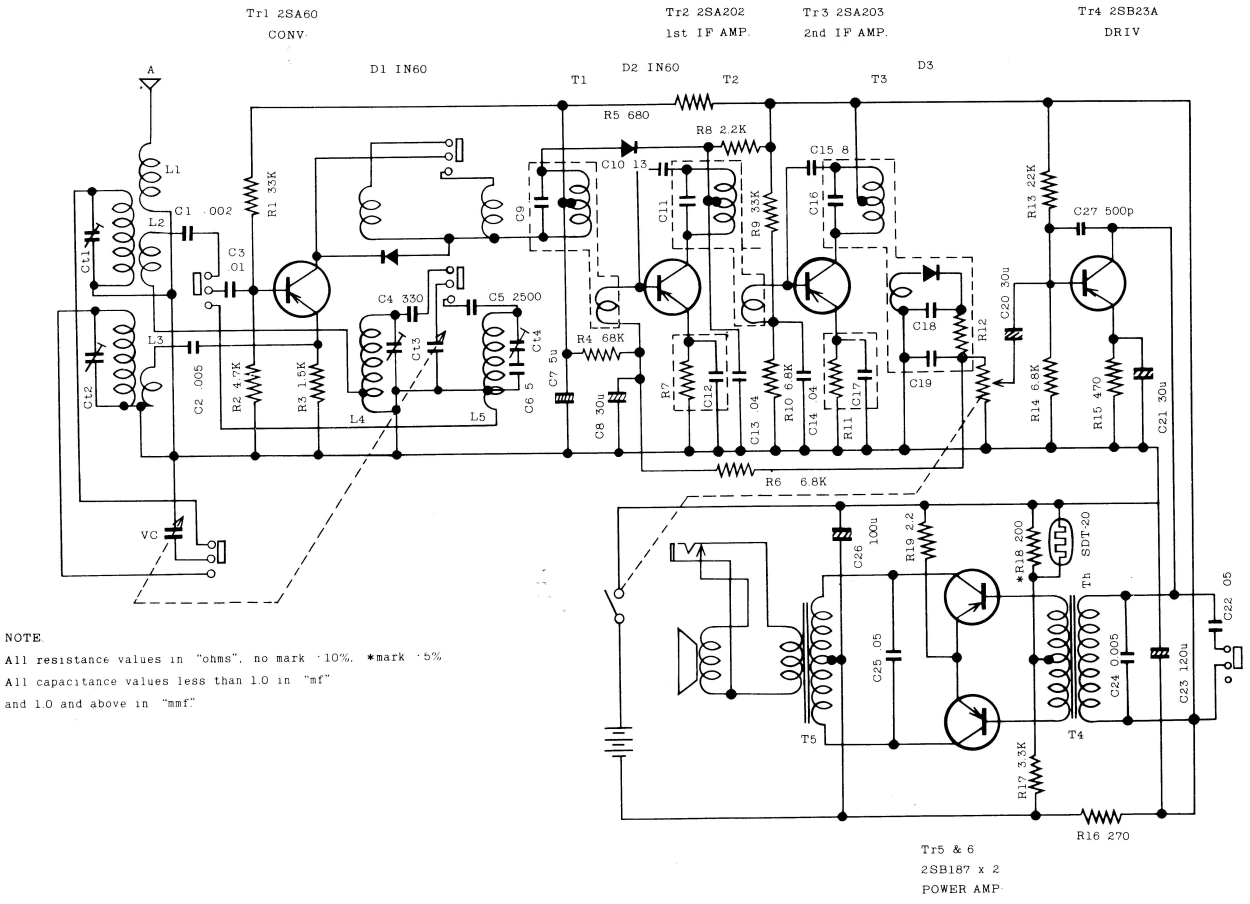
CABINET

	R-31377	Cabinet
	R-31405	Panel—polystyrol
	R-31407	Battery case
	R-35171	Battery cover
	R-26401	Back plate
	R-S8305	Knob
	R-23332	(+) terminal
	R-S8132	(−) terminal

MISCELLANEOUS

	R-S2040	Earphone socket
	R-S2025a	Antenna socket
	R-S8309	Pointer
	R-S8265	Antenna stick-on rubber cup
	R-32208	Dial panel
	R-111235	Slide rail
	R-24482	Pulley

Model 6S-T27 Circuit Diagram



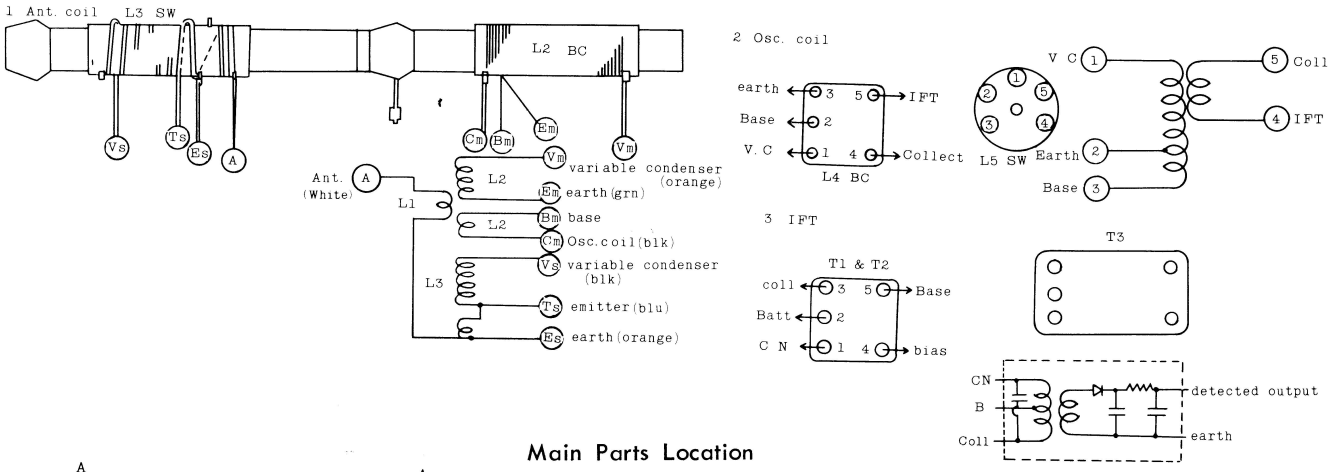
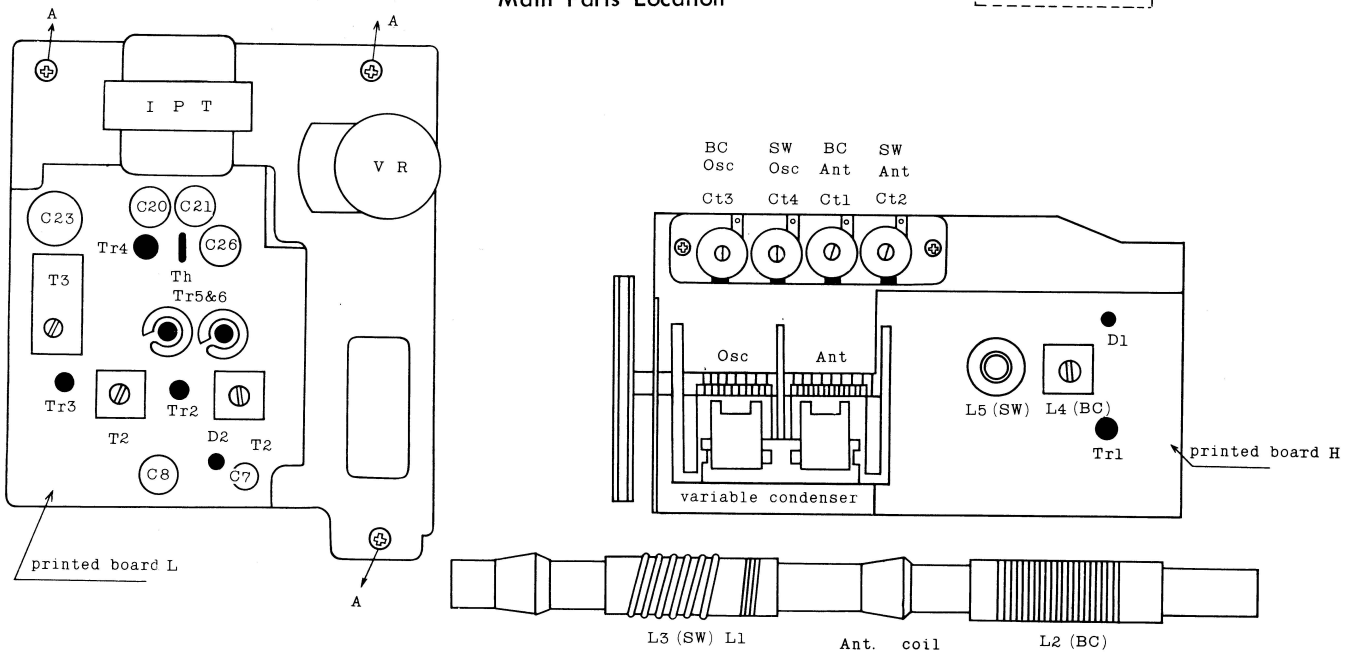
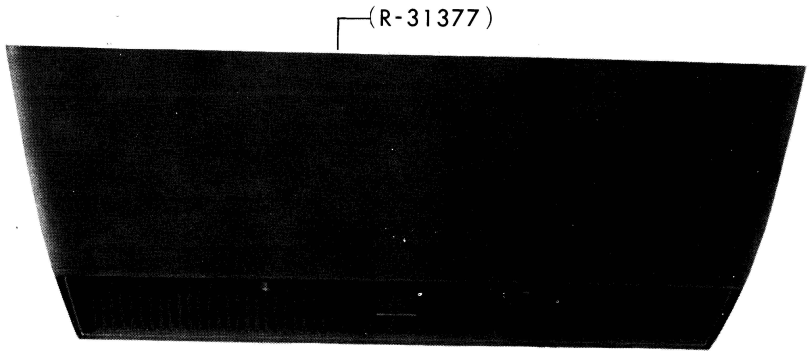
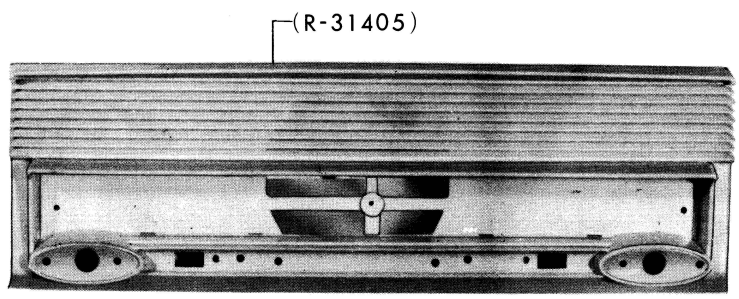
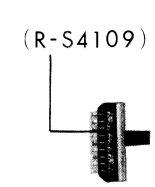
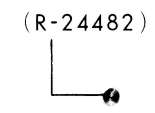
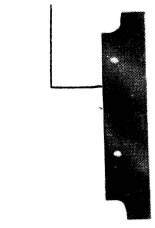
NOTE
All resistance values in "ohms", no mark ·10%, *mark ·5%
All capacitance values less than 1.0 in "mf"
and 1.0 and above in "mmf"

ALIGNMENT PROCEDURES

Apply volt-meter across the voice coil. Volume control should be at maximum position. Output of signal generator should be no 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 0.1 μF capacitor in series to antenna stator lug on variable condenser. Negative side to chassis.	455 Kc	540 Kc	T 3 T 2 T 1
BROADCAST RF ALIGNMENT				
2	Fashion loop of 2 or 3 turns of wire and radiate signal into loop antenna.	600 Kc	600 Kc	L 4
3		1,400 Kc	1,400 Kc	Ct 3
4		Repeat steps 2 and 3.		
5		600 Kc	600 Kc	L 2
6		1,400 Kc	1,400 Kc	Ct 1
7		Repeat steps 5 and 6.		
SHORTWAVE RF ALIGNMENT				
8	Fashion loop of 2 or 3 turns of wire and radiate signal into loop antenna.	4 Mc	4 Mc	L 5
9		11 Mc	11 Mc	Ct 4
10		Repeat steps 8 and 9.		
11		4 Mc	4 Mc	L 3
12		11 Mc	11 Mc	Ct 2
13		Repeat steps 11 and 12.		

Main Parts Connection



Main Parts Location