SANYO

MODEL 6L-08

All-transistor Radio

Service Manual

SPECIFICATIONS

TUNING RANGE

Standard broadcast band	540 - 1600 Kc/s
Longwave band	140 - 350 Kc/s

INTERMEDIATE FREQUENCY

455 Kc/s

TRANSISTOR COMPLEMENT

(1)	2SA201	Frequency converter
(2)	2SA202	1st IF amplifier
(3)	2SA203	2nd IF amplifier
(4)	2SB186	Driver
(5)	2SB187 × 2	Power amplifier (B class pushpull)

GERMANIUM DIODES & THERMISTOR

(1)	1N - 60	Diode : Detector & AVC
(2)	1N - 60	Diode : AVC
(3)	SDT - 20	Thermistor : Temperature compensation

OUTPUT POWER

Undistorted	290 mW
Maximum	500 mW

RADIATION SENSITIVITY
(Lower limit for 10mW output)

BC band	300 μV/m
LW band	1,000 μV/m

BATTERY

6 Volts (4 "D" Size flashlight batteries)

Current drain	No signal	8 mA
	Maximum	125 mA

LOUDSPEAKER

Size and type 4 3/4" permanent dynamic speaker
Voice coil impedance 3.3 ohms 1 watt

DIMENSIONS

Width	330 mm (13")
Height	140 mm (5 1/2")
Depth	96 mm (3 3/4")

WEIGHT

Approximately 3 1/2 lbs (without batteries)

CONTROL KNOB

ON - OFF & volume control, Tuning control, Band selector

OUTLETS for earphone & external antenna

SANYO ELECTRIC CO., LTD.

PART NO.	STOCK NO.	DESCRIPTION

CABINET

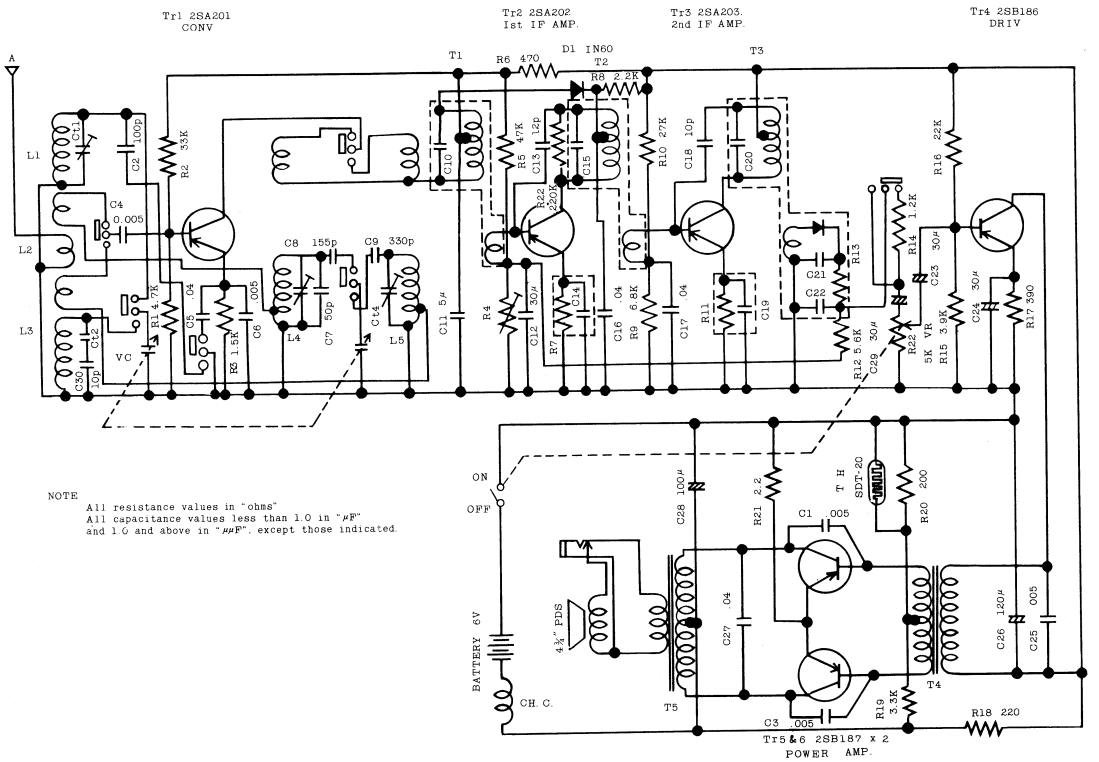
	R-31326	Cabinet
	R-31327	Battery cover
	R-35171	Battery inserting tube
	R-45176	Battery instruction sheet
	R-32116	Handle mtg. base
	R-25089	Handle mtg. link
	R-35096	Handle
	R-421038	Japan mark
	R-31328	Front panel —plastic
	R-26226a	Metal panel
	R-32247	Dial plate
	R-44097	Rubber cushion for dial plate
	R-33192	Knob
	R-26196	Metal cap for knob
	R-26224	Knob halo metal B with OFF-VOL letters
	R-26223	Knob halo metal A
	R-26492	Band switch panel

MISCELLANEOUS

	R-12080	Spring nut —front panel mtg.
	R-23391	Positive terminal
	R-S8173	Negative terminal
	R-24253	Screw —battery cover mtg.
	R-12059	Speed washer —lock for above screw
	R-15085	Spring —handle mtg.
	R-44094	Rubber loop —handle mtg.
	R-S8157	Drum
	R-24255	Pointer
	R-S1014	Dial cord nylon 0.7 900mm
	R-15041	Tension spring
	R-23009	Eyelet
	R-44007	Rubber grommet
	R-S3063	Soldering lug
	R-S2025	Antenna jack
	R-S2040	Earphone jack
	R-S1054	Earphone plug
	R-S8265	Antenna lead with plug & rubber cup

Printed in Japan

Model 6L-08 Circuit Diagram



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 AVC function.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	ADJUST FOR MAXIMUM OUTPUT
IF ALIGNMENT				
1	High side thru 0.1 mf capacitor to antenna stator lug on tuning gang. Low side to chassis.	455 kc	lower end	IF transformer T 3 T 2 T 1
BROADCAST RF ALIGNMENT				
2	Fashion loop of several turns of wire and feed signal into loop antenna for signal radiation.	530 kc	lower end	BC osc coil L 5
3		1650 kc	upper end	BC osc trimmer Ct 4
4		Repeat step 2 and 3.		
5		600 kc	600 kc	BC ant coil L 3
6		1400 kc	1400 kc	BC ant trimmer Ct 3
7		Repeat step 5 and 6.		
LONGWAVE RF ALIGNMENT				
8	Fashion loop of several turns of wire and feed signal into loop antenna for signal radiation.	140 kc	lower end	LW osc coil L 4
9		360 kc	upper end	LW osc trimmer Ct 3
10		Repeat step 8 and 9.		
11		160 kc	160 kc	LW ant coil L 1
12		340 kc	340 kc	LW ant trimmer Ct 1
13		Repeat step 11 and 12.		

ADJUSTMENT OF R 4

Adjust the semi-variable resistor R 4 so that the voltage developed across the R 7 (the voltage at the emitter of Tr 2) may be $\frac{0.3 \text{ volts}}{(DC)}$ when measured with a vacuum-tube volt meter.

PART NO.	STOCK NO.	DESCRIPTION

TRANSISTORS

Tr 1	2SA201	Frequency converter
Tr 2	2SA202	1st IF amplifier
Tr 3	2SA203	2nd IF amplifier
Tr 4	2SB186	Driver
Tr 5	2SB187	Power amplifier
Tr 6	2SB187	Power amplifier

DIODES & THERMISTOR

	1N60	AVC
	1N60	Detector & AVC
	SDT-20	Stabilizer

COILS

L 1,2,3	R-S8390	Antenna coil with holder
L 4	R-W8021	Oscillator coil LW
L 5	R-W8011	Oscillator coil BC
CH	R-W1021	Choke coil

TRANSFORMERS

T 1	R-W5T008	1st IF transformer
T 2	R-W5T009	2nd IF transformer
T 3	R-M1001	3rd IF transformer with detector circuit
T 4	R-W6156	Input transformer
T 5	R-W6155	Output transformer

CONTROLS

VC	R-C1040d	Variable condenser
R 22	R-R12445a	Volume control
	R-S4109	Slide switch
Ct1-4	R-C0006a	4-block trimmer
R 4	R-R11006	Semi-variable resistor

LOUDSPEAKER

	R-S6174	Speaker with output transformer

PART NO.	STOCK NO.	DESCRIPTION

FIXED CAPACITORS

C 1		0.005μF	+30−20%	100WV	Mylar
C 2		100 pF	±10%	250WV	Titan
C 3		0.005μF	+30−20%	100WV	Mylar
C 4		0.005 ,,	,,	,,	,,
C 5		0.04 ,,	,,	,,	,,
C 6		0.005 ,,	,,	,,	,,
C 7		50 pF	±10%	250WV	Titan
C 8		155 ,,	±35%		Ceramic
C 9		330 ,,	±10%	125WV	Styrol
C13		12 ,,	,,		Ceramic
C16		0.04 μF	+30−20%	100WV	Mylar
C17		0.04 ,,	,,	,,	,,
C18		10 pF	±10%		Ceramic
C25		0.005μF	+30−20%	100WV	Mylar
C27		0.04 ,,	,,	,,	,,
C30		10 pF	±10%	25WV	Ceramic

ELECTROLYTIC CAPACITORS

C11		5 μF	+250−10%	6 WV
C12		30 ,,	,,	,,
C23		30 ,,	,,	,,
C24		30 ,,	,,	,,
C26		120 ,,	,,	10 WV
C28		100 ,,	,,	6 WV
C29		30 ,,	,,	,,

FIXED RESISTORS

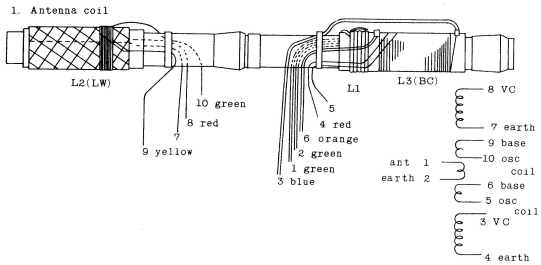
R 1		4.7 K ohms	±10%	½W	Mold
R 2		33 K ,,	,,	,,	,,
R 3		1.5 K ,,	,,	,,	,,
R 5		47 K ,,	,,	,,	,,
R 6		470 ,,	,,	,,	,,
R 8		2.2 K ,,	,,	,,	,,
R 9		6.8 K ,,	,,	,,	,,
R 10		27 K ,,	,,	,,	,,
R 12		5.6 K ,,	,,	,,	,,
R 14		1.2 K ,,	,,	,,	,,
R 15		3.9 K ,,	,,	,,	,,
R 16		22 K ,,	,,	,,	,,
R 17		390 ,,	,,	,,	,,
R 18		220 ,,	,,	,,	,,
R 19		3.3 K ,,	,,	,,	,,
R 20		200 ,,	,,	,,	,,
R 21		2.2 ,,	± 5%	¼W	Carbon film
R 22		220 ,,	±10%	½W	Mold

PACKED CAPACITOR/RESISTOR

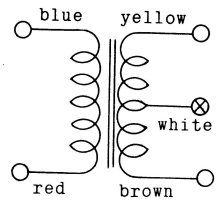
R 7+ C14	R-CXC018	(1k 0.1W ± 5%)+(0.04μF 25WV +80-20%)
R11+ C19	R-CXC004	(1k 0.1W ±10%)+(0.04μF 25WV +80-20%)

Main Parts Connection

1. Antenna coil

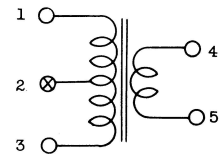


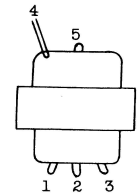
4. Input transformer



3.5K : 2K

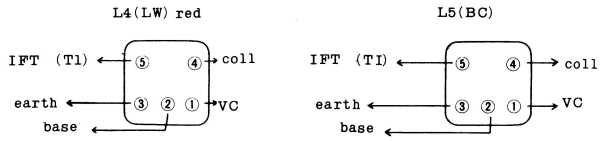
5. Output transformer



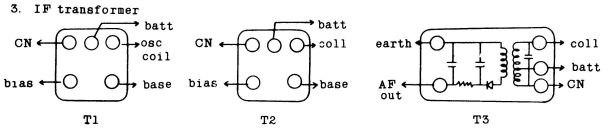


250 : 3.3 ohms

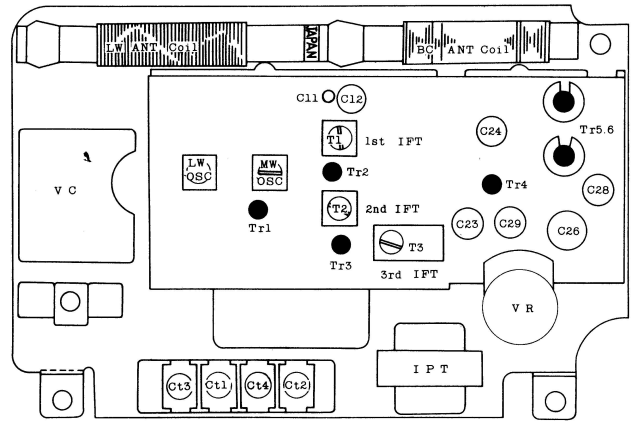
2. Oscillator coil



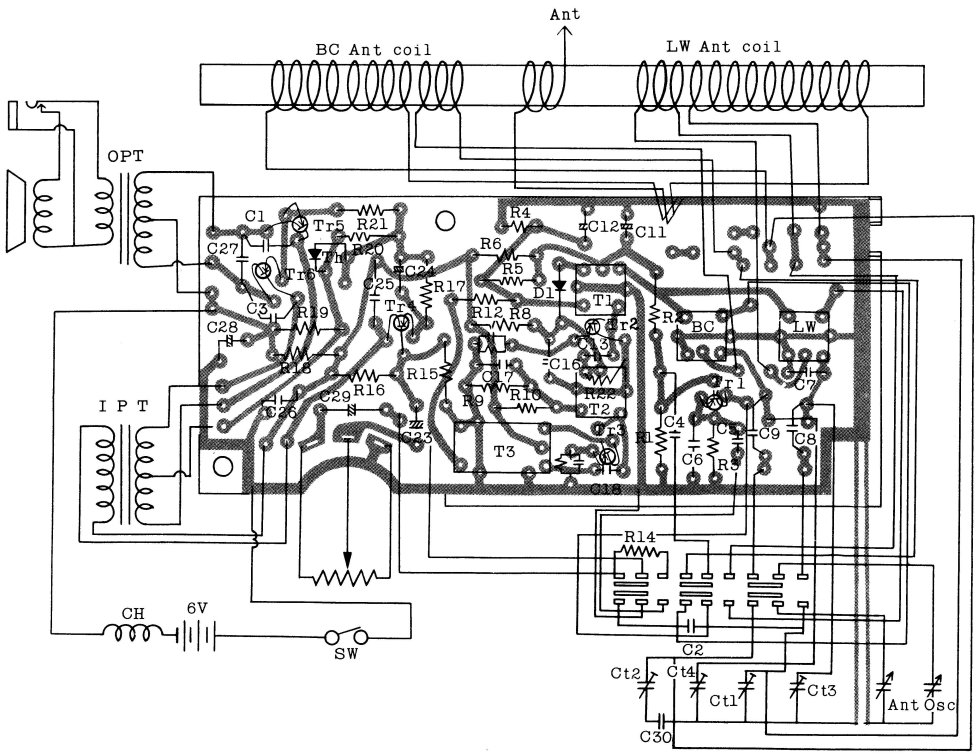
3. IF transformer

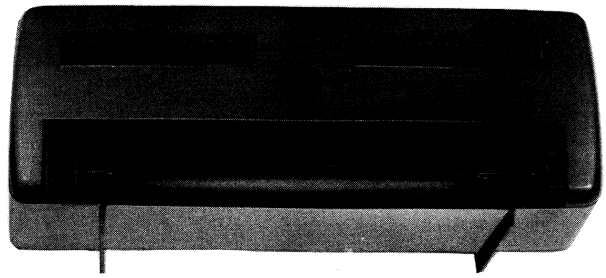


Main Parts Location



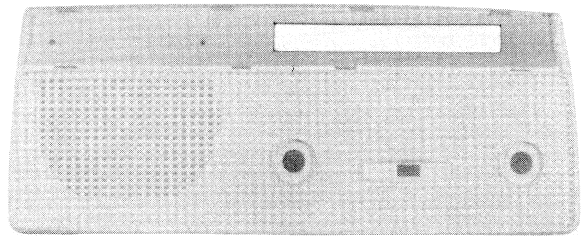
Model 6L-08 Inter-Parts Connection





(R-31326)

(R-26226a)



(R-31328)

(R-32247)

(R-35096)

(R-S1014)

(R-15041)

(R-S8265)