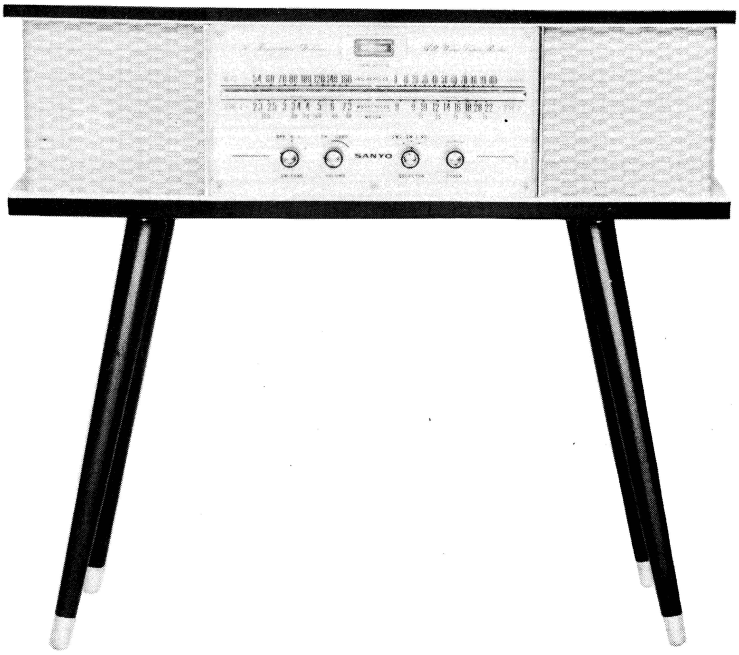
SANYO

MODEL
9U-T340

All-transistor Radio

Service Manual



SPECIFICATIONS

FREQUENCY RANGE

BC	540 – 1600 Kc/s
SW 1	2.3 – 7.3 Mc/s
SW 2	8.0 – 22.0 Mc/s

INTERMEDIATE FREQUENCY
455 Kc/s

POWER SOURCE
9 volts (6 standard flashlight batteries)

CURRENT DRAIN

No signal	20 mA
Maximum	200 mA

RADIATION SENSITIVITY
Lower limit for 10mW output

BC	316 μV/m
SW 1	200 μV/m
SW 2	56 μV

POWER OUTPUT

Undistorted	0.8 W
Maximum	1.2 W

LOUDSPEAKER
Two 5″ permanent dynamic speakers
Voice coil impedance 4 ohms

TRANSISTORS

(1)	2SA222	Local Oscillator
(2)	2SA221	Mixer
(3)	2SA202	1st IF Amplifier
(4)	2SA203	2nd IF Amplifier
(5)	2SB188	AF Pre-amplifier
(6)	2SB188	AF Amplifier
(7)	2SB188	Driver
(8)	2SB272×2	Power Amplifier (B class pushpull)

GERMANIUM DIODE & VARISTOR

(1)	IN - 60	Diode; Detector & A.G.C.
(2)	SV - 30	Varistor; Temperature Compensator

DIMENSIONS
27½″ wide × 7¼″ high × 6¼″ thick

WEIGHT
12¼ lbs approx. (excluding batteries)

SANYO ELECTRIC CO., LTD.

PART NO.	STOCK NO.	DESCRIPTION

FIXED RESISTORS (Continued)

R 16		33 K ohms ±10% ½W Mold
R 17		10 K ,, ,, ,, ,,
R 18		1.5 K ,, ,, ,, ,,
R 19		820 ,, ,, ,, ,,
R 20		27 ,, ,, ,, ,,
R 21		22 K ,, ,, ,, ,,
R 22		8.2 K ,, ,, ,, ,,
R 23		680 ,, ,, ,, ,,
R 24		470 ,, ,, ,, ,,
R 25		6.8 K ,, ± 5% ,, ,,
R 26		130 ,, ,, ,, ,,
R 27		4.7 ,, ±10% ,, ,,
R 28		47 K ,, ,, ,, ,,
R 29		820 ,, ,, ,, ,,
R 31		33 ,, ,, ,, ,,
R 32		2.2 K ,, ,, ,, ,,

RESISTOR & CAPACITOR PACKED

PRC-2104	R-C-XC-004	1K ohms 10% 0.04 μF +80−20% 25WV
PRC-30211	R-C-XC-002	200 ohms 20% 0.01 μF +80−20% 25WV 0.01 μF +80−20% 25WV

CABINET

	R-S9015	Cabinet assembly
	R-26402	Back screen
	R-31409	Dial plate
	R-26403	Metal strip
	R-26405	Metal column
	R-26404	Check meter panel
	R-111236	Check meter mtg. panel
	R-S5509	Check meter
	R-11986	Slide rail
	R-S8301	Pointer assembly A
	R-S8302	Pointer assembly B
	R-11244	Dial cord clamp with tapped hole
	R-11648	Leg mtg. metal
	R-S8372	Leg —long
	R-S8491a	Leg —short
	R-S8169	Battery case
	R-35170	Battery inserting tube
	R-421684a	Back cover

MISCELLANEOUS

	R-34004	Pulley
	R-24002	Pulley shaft
	R-S8157	Drum
	R-S8037	Tuner shaft
	R-15041	Dial drive spring
	R-S8299	Knob
	R-44004	Rubber grommet for tuning gang
	R-32130	Polystyrol bushing
	R-23552	Heat dispersing metal

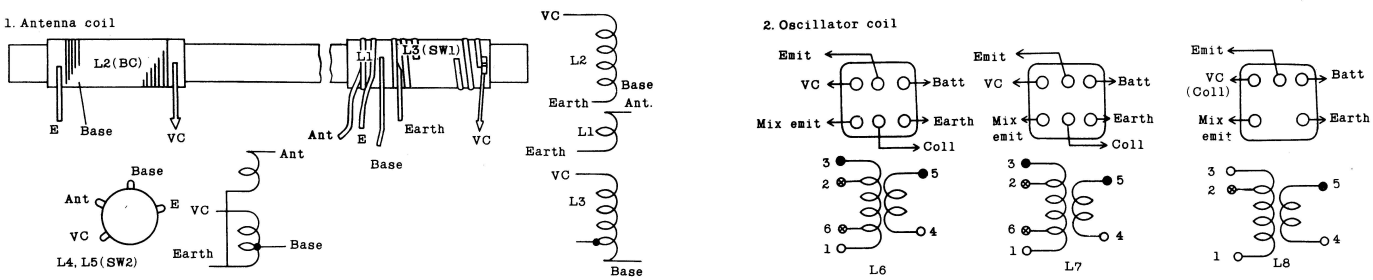
Printed in Japan

ALIGNMENT PROCEDURES

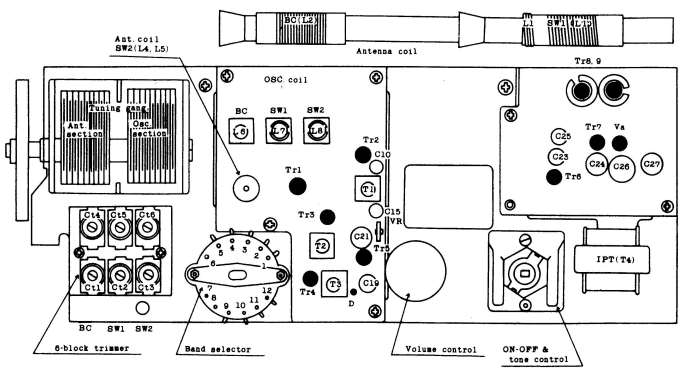
Apply volt-meter across the voice coil. Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain output reading in order to avoid AGC function.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	ADJUST FOR MAXIMUM OUTPUT
IF ALIGNMENT				
1	High side through 0.1 mf capacitor to antenna stator lug on tuning gang. Low side to chassis.	455 Kc	530 Kc	T 3 T 2 T 1
BROADCAST RF ALIGNMENT				
2	Fashion loop of several turns of wire and radiate signal into loop antenna.	530 Kc	left end	L 6
3		1650 Kc	right end	Ct 4
4		Repeat steps 2 and 3.		
5		600 Kc	600 Kc	L 2
6		1400 Kc	1400 Kc	Ct 1
7		Repeat steps 5 and 6.		
SHORTWAVE 1 RF ALIGNMENT				
8	Fashion loop of several turns of wire and radiate signal into loop antenna.	2.25 Mc	left end	L 7
9		7.5 Mc	right end	Ct 5
10		Repeat steps 8 and 9.		
11		2.5 Mc	2.5 Mc	L 3
12		6.5 Mc	6.5 Mc	Ct 2
13		Repeat steps 11 and 12.		
SHORTWAVE 2 RF ALIGNMENT				
14	High side through dummy antenna to antenna terminal. Low side to chassis.	7.5 Mc	left end	L 8
15		23 Mc	right end	Ct 6
16		Repeat steps 14 and 15.		
17		8 Mc	8 Mc	L 5
18		21 Mc	21 Mc	Ct 3
19		Repeat steps 17 and 18.		

Main Parts Connection



Main Parts Location



PART NO.	STOCK NO.	DESCRIPTION

TRANSISTORS

Tr 1	2SA222	Local oscillator
Tr 2	2SA221	Mixer
Tr 3	2SA202	1st IF amplifier
Tr 4	2SA203	2nd IF amplifier
Tr 5	2SB188	AF pre-amplifier
Tr 6	2SB188	AF amplifier
Tr 7	2SB188	Driver
Tr 8	2SB272	Power amplifier
Tr 9	2SB272	Power amplifier

DIODE AND VARISTOR

	IN-60	Detector & A.G.C.
	SV-30	Temperature compensator

COILS

L 1	R-S8294a	Antenna coil
L 2	R-S8294a	Antenna coil
L 3	R-S8294a	Antenna coil
L 4	R-W2111	Antenna coil
L 5	R-W2111	Antenna coil
L 6	R-W8008	Oscillator coil BC
L 7	R-W8050	Oscillator coil SW 1
L 8	R-W8051a	Oscillator coil SW 2

TRANSFORMERS

T 1	R-W5T008	1st IF Transformer
T 2	R-W5T009	2nd IF Transformer
T 3	R-W5T023	3rd IF Transformer
T 4	R-W6134	Input Transformer
T 5	R-W6153	Output Transformer

CONTROLS

	R-S4040	Band Selector
	R-S4039	Tone Selector
VC	R-C1051	Tuning Capacitor
Ct1-6	R-C0009	6-block Trimmer
VR	R-R12471	Volume Control

LOUDSPEAKERS

SP 1	R-S6157	5″ permanent dynamic with OPT (T5)
SP 2	R-S6158	5″ permanent dynamic

PART NO.	STOCK NO.	DESCRIPTION

ELECTROLYTIC CAPACITORS

C10		5 μF	+250−10%	6WV		
C15		10 ,,	,,	,,	3 ,,	
C19		30 ,,	,,	,,	3 ,,	
C20		10 ,,	,,	,,	50 ,,	Tubular
C21		50 ,,	,,	,,	9 ,,	
C22		5 ,,	,,	,,	6 ,,	Tubular
C23		30 ,,	,,	,,	3 ,,	
C24		30 ,,	,,	,,	6 ,,	
C25		30 ,,	,,	,,	3 ,,	
C26		200 ,,	,,	,,	6 ,,	
C27		120 ,,	,,	,,	10 ,,	
C35		5 ,,	,,	,,	6 ,,	Tubular
C36		100 ,,	,,	,,	6 ,,	

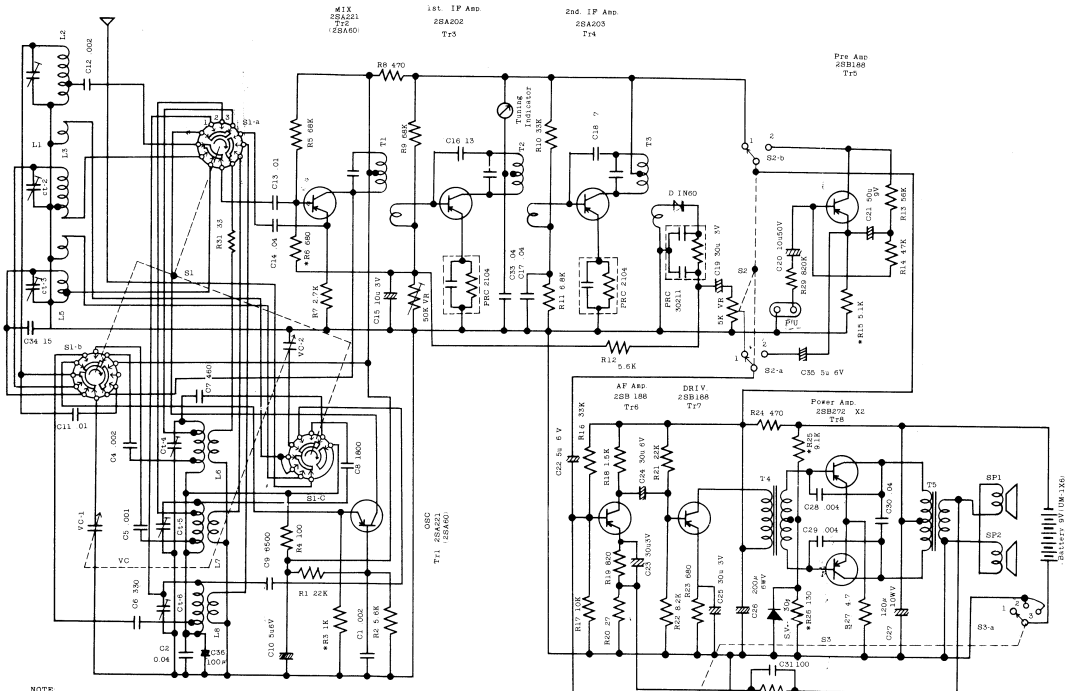
FIXED CAPACITORS

C 1		0.002 μF	+30−20%	100WV	Mylar	
C 2		0.04 ,,	,,	,,	100 ,,	,,
C 4		0.002 ,,	,,	,,	100 ,,	,,
C 5		0.001 ,,	,,	,,	100 ,,	,,
C 6		330 μμF	±10%	125 ,,	Styrol	
C 7		460 ,,	±3.5%	500 ,,	Titanium	
C 8		1800 ,,	±10%	35 ,,	Styrol	
C 9		6500 ,,	,,	250 ,,	,,	
C11		0.01 μF	+30−20%	100 ,,	Mylar	
C12		0.002 ,,	,,	,,	100 ,,	,,
C13		0.01 ,,	,,	,,	100 ,,	,,
C14		0.04 ,,	,,	,,	100 ,,	,,
C16		13 μμF	±10%	25 ,,	Ceramic	
C17		0.04 μF	+30−20%	100 ,,	Mylar	
C18		7 μμF	±0.5μμF	25 ,,	Ceramic	
C28		0.004 μF	+30−20%	100 ,,	Mylar	
C29		0.004 ,,	,,	,,	100 ,,	,,
C30		0.04 ,,	,,	,,	100 ,,	,,
C31		100 μμF	±10%	500 ,,	Titanium	
C32		0.05 μF	+30−20%	100 ,,	Mylar	
C34		15 μμF	±10%	25 ,,	Ceramic	

FIXED RESISTORS

R 1		22 K ohms	±10%	½W	Mold
R 2		5.6 K ,,	,,	,,	,,
R 3		1 K ,,	± 5%	,,	,,
R 4		100 ,,	±10%	,,	,,
R 5		68 K ,,	,,	,,	,,
R 6		680 ,,	± 5%	,,	,,
R 7		2.7 K ,,	±10%	,,	,,
R 8		470 ,,	,,	,,	,,
R 9		68 K ,,	,,	,,	,,
R 10		33 K ,,	,,	,,	,,
R 11		6.8 K ,,	,,	,,	,,
R 12		5 6 K ,,	,,	,,	,,
R 13		56 K ,,	,,	,,	,,
R 14		47 K ,,	,,	,,	,,
R 15		5.1 K ,,	± 5%	,,	,,

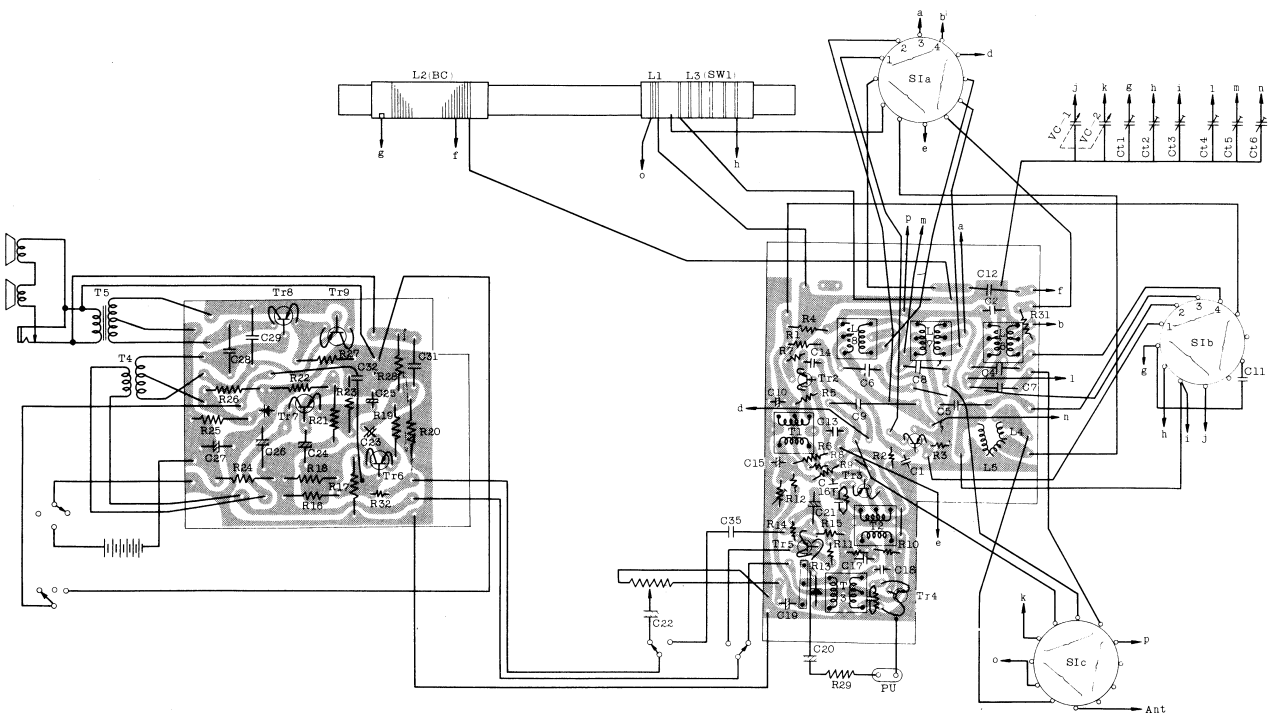
Model 9U-T340 Circuit Diagram



NOTE:

1. All resistor values in "ohms" K=1,000
2. Error of resistor values. No mark: ±10% * mark: ±5%
3. All capacitor values less than 1.0 in "mF" and 1.0 and avove in "mmF" except those indicated.
4. S1.... Band Selected switch. 1... SW2 2... SW1 3... BC
5. S2... Input selected switch 1.... Radio 2.... PH(phono)
6. S3... Tone Switch 1.... OFF 2.... H(High) 3.... L(Low)

Inter-Parts Connection



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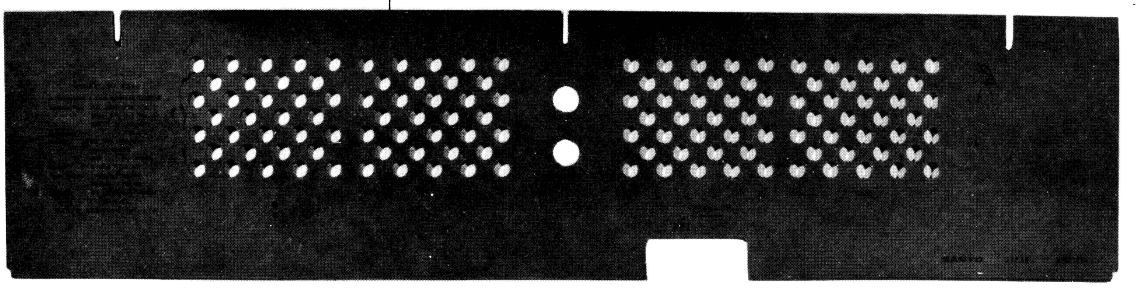

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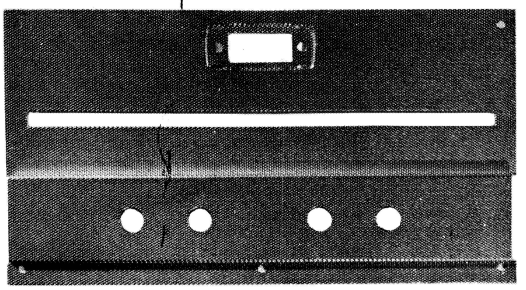

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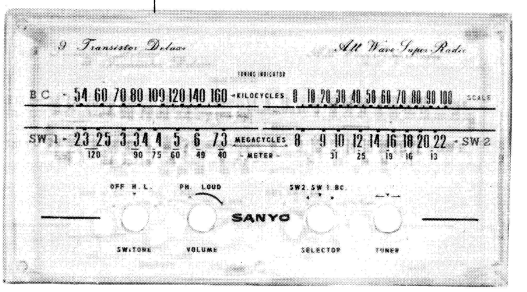

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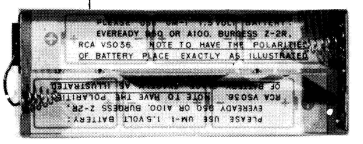

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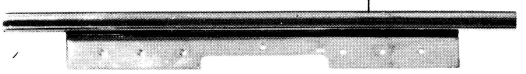

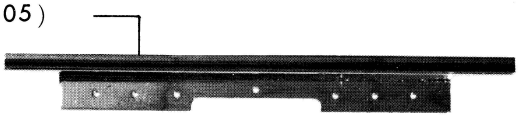

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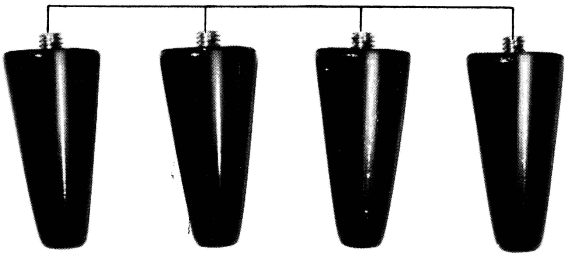

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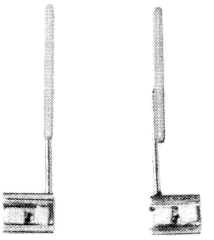

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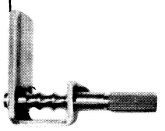

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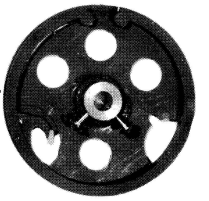
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