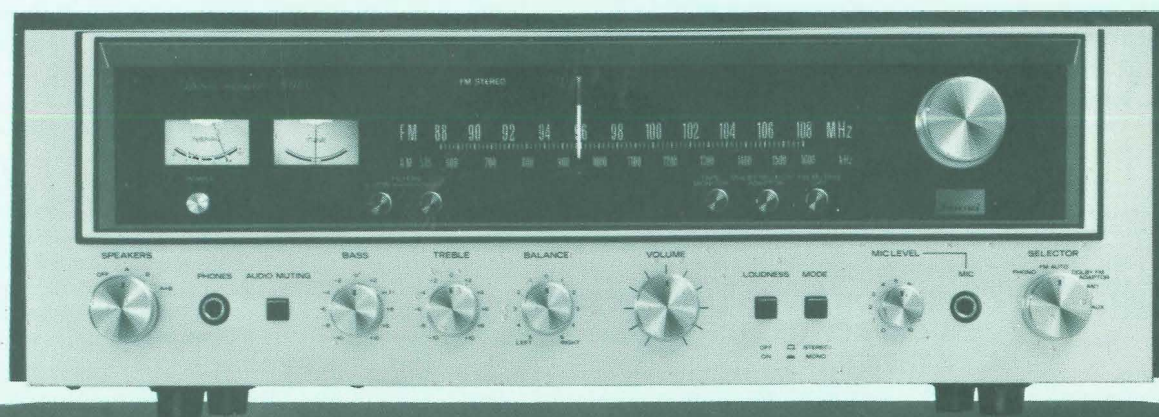


SERVICE MANUAL

AM/FM STEREO RECEIVER

SANSUI 6060/5050



Sansui

SANSUI ELECTRIC CO., LTD.

This service manual is designed for service engineers to repair, adjust, maintain and order the replacement parts of the 5050, 6060 correctly. When ordering the parts, use the stock number and parts name specifically referring to the Parts Location and Parts Lists. For general usage and maintenance of the unit, please refer to the Operating Instructions attached with the unit.

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1. SPECIFICATIONS

AUDIO SECTION

POWER OUTPUT

MODEL 5050

Min. RMS, both channels driven, from 20 to 20,000Hz, with no more than 0.5% total harmonic distortion

30 watts per channel into 8 ohms

33 watts per channel into 4 ohms

Min. RMS, both channels driven, at 1,000Hz, with no more than 0.5% total harmonic distortion

33 watts per channel into 8 ohms

35 watts per channel into 4 ohms

MODEL 6060

Min. RMS, both channels driven, from 20 to 20,000Hz, with no more than 0.4% total harmonic distortion

40 watts per channel into 8 ohms

44 watts per channel into 8 ohms

Min. RMS, both channels driven, at 1,000Hz, with no more than 0.4% total harmonic distortion

44 watts per channel into 8 ohms

46 watts per channel into 4 ohms

LOAD IMPEDANCE 4,8 ohms (SYSTEM A or B)
8 ohms (SYSTEM A+B)

POWER BANDWIDTH..... 20 to 20,000Hz at or below rated min. RMS power output and total harmonic distortion

TOTAL HARMONIC DISTORTION

MODEL 5050 less than 0.5% at or below rated min. RMS power output

MODEL 6060 less than 0.4% at or below rated min. RMS power output

INTERMODULATION DISTORTION

(70Hz:7kHz=4:1 SMPTE method)

MODEL 5050 less than 0.5%

MODEL 6060 less than 0.4%

FREQUENCY RESPONSE (at 1 watt)

..... 20 to 30,000Hz \pm 1.5dB

RIAA CURVE DEVIATION (PHONO)

..... +1.0dB, -1.0dB
(30Hz to 15kHz)

DAMPING FACTOR..... approximately 45 at 8 ohm load

INPUT SENSITIVITY AND IMPEDANCE

(1 kHz, for rated power output)

PHONO 2.5mV/50 kilohms

(Max. input capability. 160mV at 1kHz, less than 0.5% total harmonic distortion.)

MIC 2.5mV/50 kilohms

TAPE PLAY, AUX 150mV/50 kilohms

OUTPUT LEVEL (1,000Hz)

TAPE REC (pin jacks) 150mV

TAPE REC (DIN socket) 30mV

CHANNEL SEPARATION (at rated output 1,000Hz)

PHONO better than 45dB

TAPE PLAY, AUX better than 45dB

HUM AND NOISE

PHONO better than 70dB

TAPE PLAY, AUX better than 80dB

CONTROLS

MODEL 5050

BASS \pm 10dB (50Hz)

TREBLE + 10dB (10kHz)

LOUDNESS + 8dB (50Hz)
+ 6dB (10dB (10kHz))

HIGH FILTER - 10dB (10kHz)

MODEL 6060

BASS \pm 10dB (50Hz)

TREBLE \pm 10dB (10kHz)

LOUDNESS + 8dB (50Hz)
+ 6dB (10kHz)

LOW FILTER - 10dB (50Hz)

HIGH FILTER - 10dB (10kHz)

AUDIO MUTING - 20dB

FM SECTION

TUNING RANGE 88 to 108MHz

SENSITIVITY

MODEL 5050

(IHF) 11.2dBf (2.0 μ V)

(DIN) 1.1 μ V

MODEL 6060

(IHF) 10.8dBf (1.9 μ V)

(DIN) 1.1 μ V

50dB QUIETING SENSITIVITY

STEREO (IHF) 38dBf (45 μ V)

MONO (IHF) 16dBf (3.5 μ V)

TOTAL HARMONIC DISTORTION

STEREO less than 0.5%

MONO less than 0.4%

SIGNAL TO NOISE RATIO (mono)

..... better than 65dB

SELECTIVITY better than 60dB

CAPTURE RATIO less than 2.2dB

IMAGE RESPONSE RATIO (IHF) .. better than 50dB (98MHz)

IF RESPONSE RATIO (IHF) better than 75dB (98MHz)

SPURIOUS RESPONSE RATIO (IHF)

..... better than 70dB (98MHz)

SPURIOUS RADIATION less than 34dB

STEREO SEPARATION better than 40dB (1 kHz)

FREQUENCY RESPONSE 30 to 15,000Hz $\begin{matrix} +1.0 \\ -3.0 \end{matrix}$ dB

ANTENNA INPUT IMPEDANCE .. 75 Ω unbalanced
300 Ω balanced

AM SECTION

TUNING RANGE 535 to 1,605kHz

SENSITIVITY (Bar antenna)..... 50dB/m (1,000kHz)

SELECTIVITY better than 35dB (1,000kHz)

IMAGE RESPONSE RATIO (IHF) .. better than 35dB (1,000kHz)

IF RESPONSE RATIO (IHF) better than 30dB (1,000kHz)

OTHERS

MODEL 5050

POWER REQUIREMENTS

POWER VOLTAGE..... 100, 120, 220, 240V 50/60Hz
120V (Usable 110-130V)
60Hz (for U.S.A. & Canada only)

POWER CONSUMPTION 125 watts (rated)
210 watts, 250VA (max.)

MODEL 6060

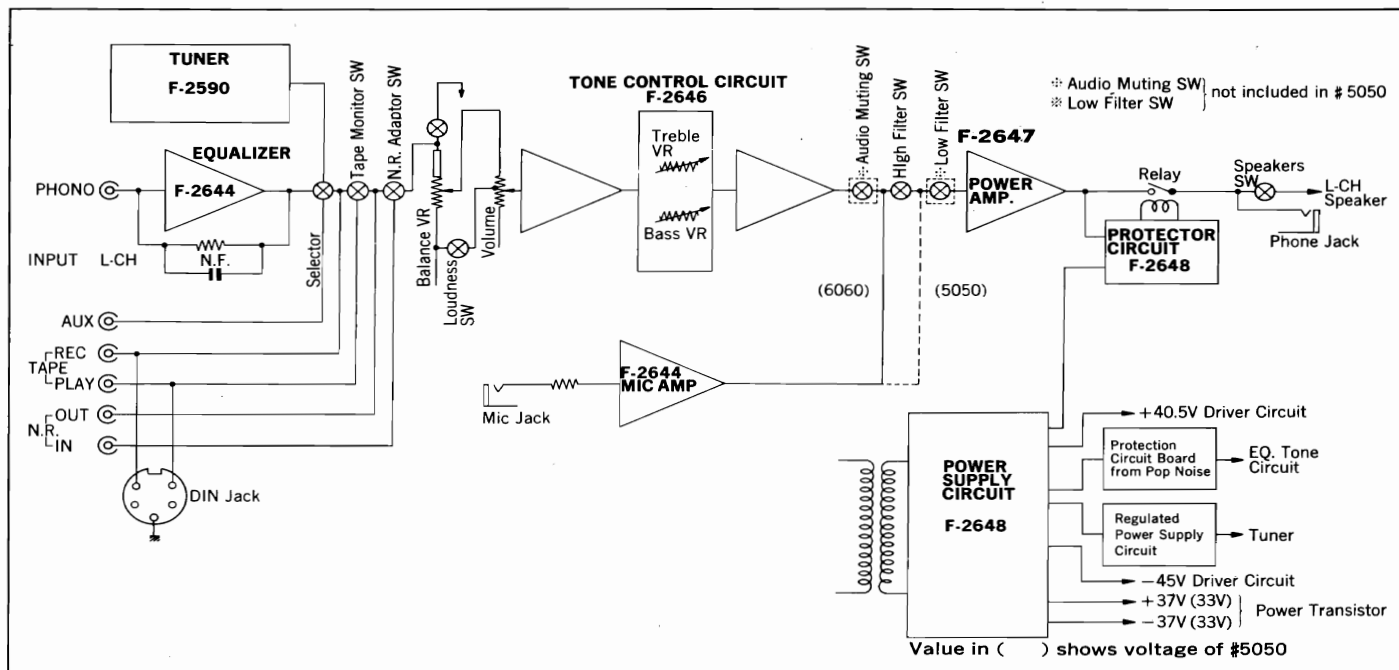
POWER REQUIREMENTS

POWER VOLTAGE..... 100, 120, 220, 240V 50/60Hz
120V (Usable 110-130V)
60Hz (for U.S.A. & Canada only)

POWER CONSUMPTION 180 watts (rated)
300 watts, 350VA (max.)

*Design and specifications subject to change without notice for improvements.

2. BLOCK DIAGRAM



3. ADJUSTMENTS

3-1. Adjustment of Bias Current (See Fig. 3-1 & 3-2)

STEP	SUBJECT	EQUIPMENT	MEASURE OUTPUT	ADJUST	ADJUST FOR
1	Bias Current L-CH	DC Volt Meter	R05, R07 F-2648	VR01 F-2647	15mV ±1mV
2	Bias Current R-CH	DC Volt Meter	R06, R08 F-2648	VR02 F-2647	15mV ±1mV

Fig. 3-1

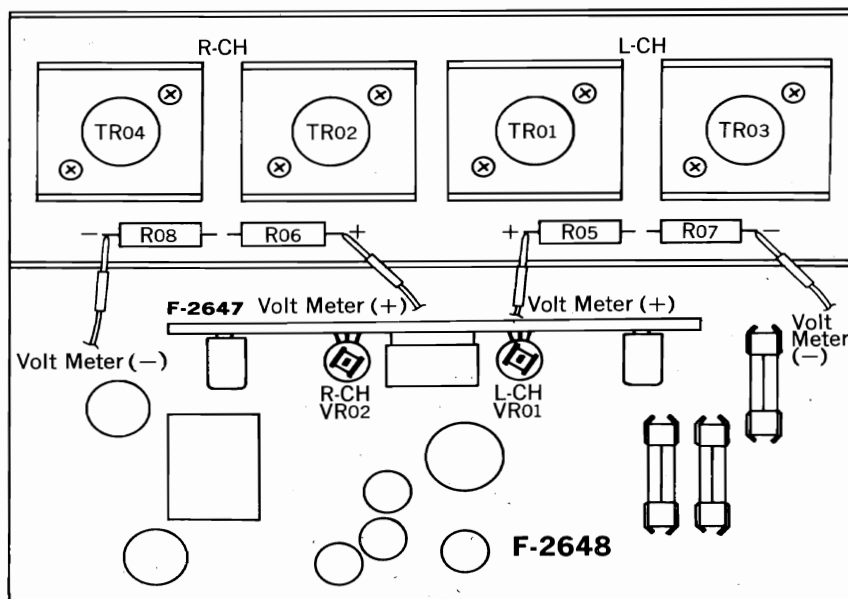
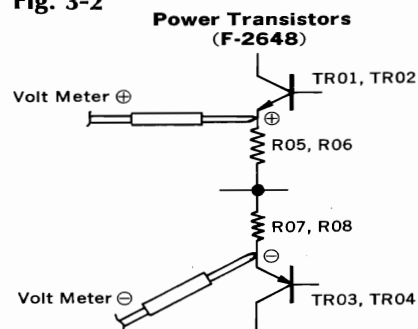
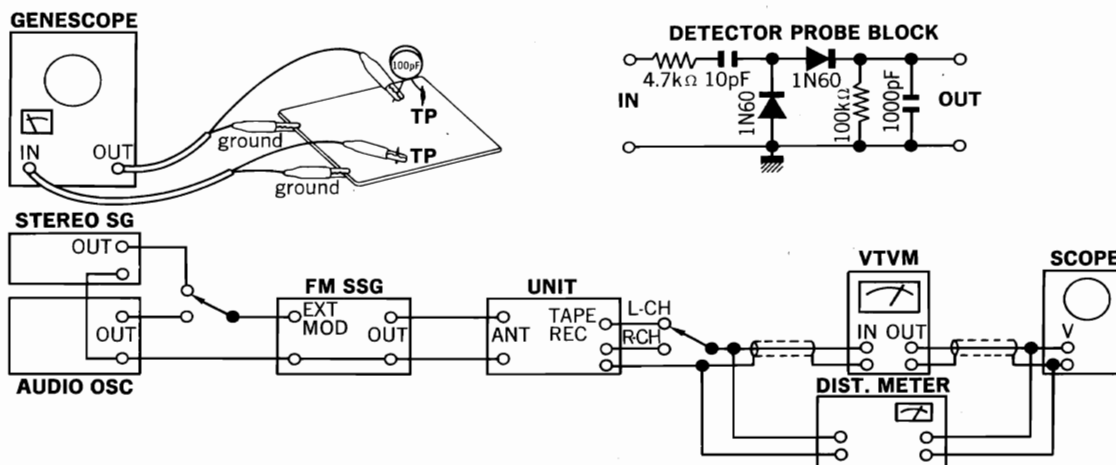


Fig. 3-2



3-2. FM & MPX Adjustment & Alignment (See Fig. 3-3 on page 5)

- Note:** 1. Selector.....FM AUTO
 2. FM Muting Switch.....OFF
 3. Connection.....Connect the output of genescope to TP through 100pF ceramic capacitor.



1) FM IF Adjustment & Tracking

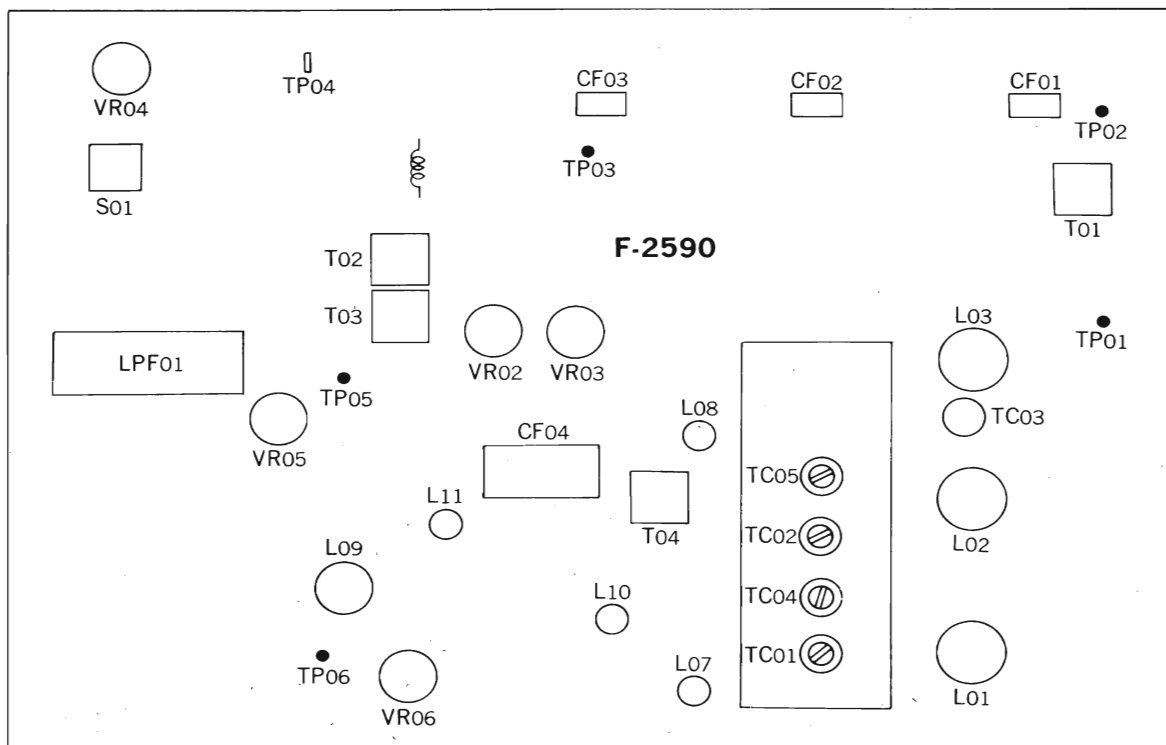
STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1.	IF Coil	Output 60dB Genescope	TP01 F-2590	TP03 F-2590 Use Detector Probe	T01 F-2590	Max. IF waveform	
2.	Discriminator Coil	Output 50dB Genescope	Same as above	TP04 F-2590	T02	Center indication on tune meter	
						Max. linearity of S curve	
3.	90MHz Dial Calibration	90MHz ANT Input 60dB 400Hz (100% MOD) FM SSG	ANT terminal 300Ω	REC OUT L or R-CH VTVM & Scope	L03 F-2590	Max. Output	
	106MHz Dial Calibration	106MHz ANT Input 60dB 400Hz (100% MOD) FM SSG	Same as above	Same as above	TC03 F-2590	Same as above	
4.	90MHz RF Adj.	90MHz ANT Input 60dB 400Hz (100% MOD) FM SSG	Same as above	Same as above	L01, L02 F-2590	Same as above	
	106MHz RF Adj.	106MHz ANT Input 60dB 400Hz (100% MOD) FM SSG	Same as above	Same as above	TC01 TC02 F-2590	Same as above	
5.	Signal Meter Volume	98MHz ANT Input 60dB 400Hz (100% MOD) FM SSG	Same as above	Signal Meter	VR02 F-2590	4.3 on Meter	

2) MPX Adjustment

STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1.	PLL VCO Adj.	98MHz ANT Input 60dB FM SSG Pilot 19kHz (10% MOD) L-CH 1kHz (45% MOD) R-CH (0% MOD) STEREO SG	ANT terminal 300Ω	Stereo indicator	VR05 F-2590	Light indicator	Adjust the VR within center of lighting level.
	PLL VCO Adj. In case of using Freq. counter.		Make short between TP04 & chassis	TP05 F-2590 Use Freq. counter	VR05 F-2590	76kHz ±200Hz	For this adjustment, run the unit over 30 seconds.
2.	Separation	98MHz ANT Input 60dB FM SSG Pilot 19kHz (10% MOD) L-CH (0% MOD) R-CH 1kHz (45% MOD) STEREO SG	ANT terminal 300Ω	REC OUT L-CH VTVM & Scope	VR04 F-2590	Min. Output -35dB	Confirm separation L-CH→R-CH -35dB
3.	Muting level & indicator level	98MHz ANT Input 23dB FM SSG Pilot 19kHz (10% MOD) L-CH 1kHz (45% MOD) R-CH (0% MOD) STEREO SG	Same as above	Stereo indicator	VR03 F-2590	Muting level 23dB Indicator lighting level 23dB	

◇ Adjusting or Connecting Points on AM, FM & FM MPX circuit board, F-2590

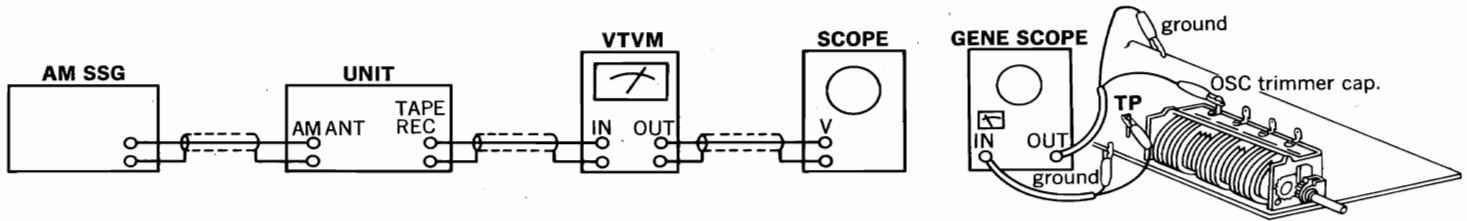
Fig. 3-3



3-3. AM IF Adjustment & Tracking (See Fig. 3-3 page 5)

Note: Selector.....AM

2. Confirm start point of dial pointer before alignment.



STEP	SUBJECT	FEED SIGNAL		MEASURE OUTPUT	ADJUST	ADJUST FOR	CONDITION
		FROM	TO				
1.	IF Coil	Genescope Output 65dB	TC04 F-2590	TP06 F-2590	CF04 F-2590	Max. IF waveform	
2.	600kHz Dial Calibration	600kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG	AM ANT terminal	REC OUT L or R-CH VTVM & Scope	T-04 F-2590	Max. Output	
	1400kHz Dial Calibration	1400kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG	Same as above	Same as above	TC05 F-2590	Same as above	
3.	600kHz RF Adj.	600kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG	Same as above	Same as above	L702 Bar Antenna	Same as above	
	1400kHz RF Adj.	1400kHz ANT Input 60dB 400Hz (MOD 30%) AM SSG	Same as above	Same as above	TC04 F-2590	Same as above	
4.	Signal Meter volume	1000kHz ANT Input 54dB 400Hz (MOD 30%) AM SSG	Same as above	Signal Meter	VR06 F-2590	4 on meter	

Abbreviations

Equipment

AM FM Generator Oscilloscope..... Genescope
 AM Standard Signal Generator AM SSG
 FM Standard Signal Generator FM SSG
 FM Stereo Generator..... Stereo SG
 Oscilloscope Scope
 Audio Oscillator Audio Osc.
 Distortion Meter Dist. Meter

Others

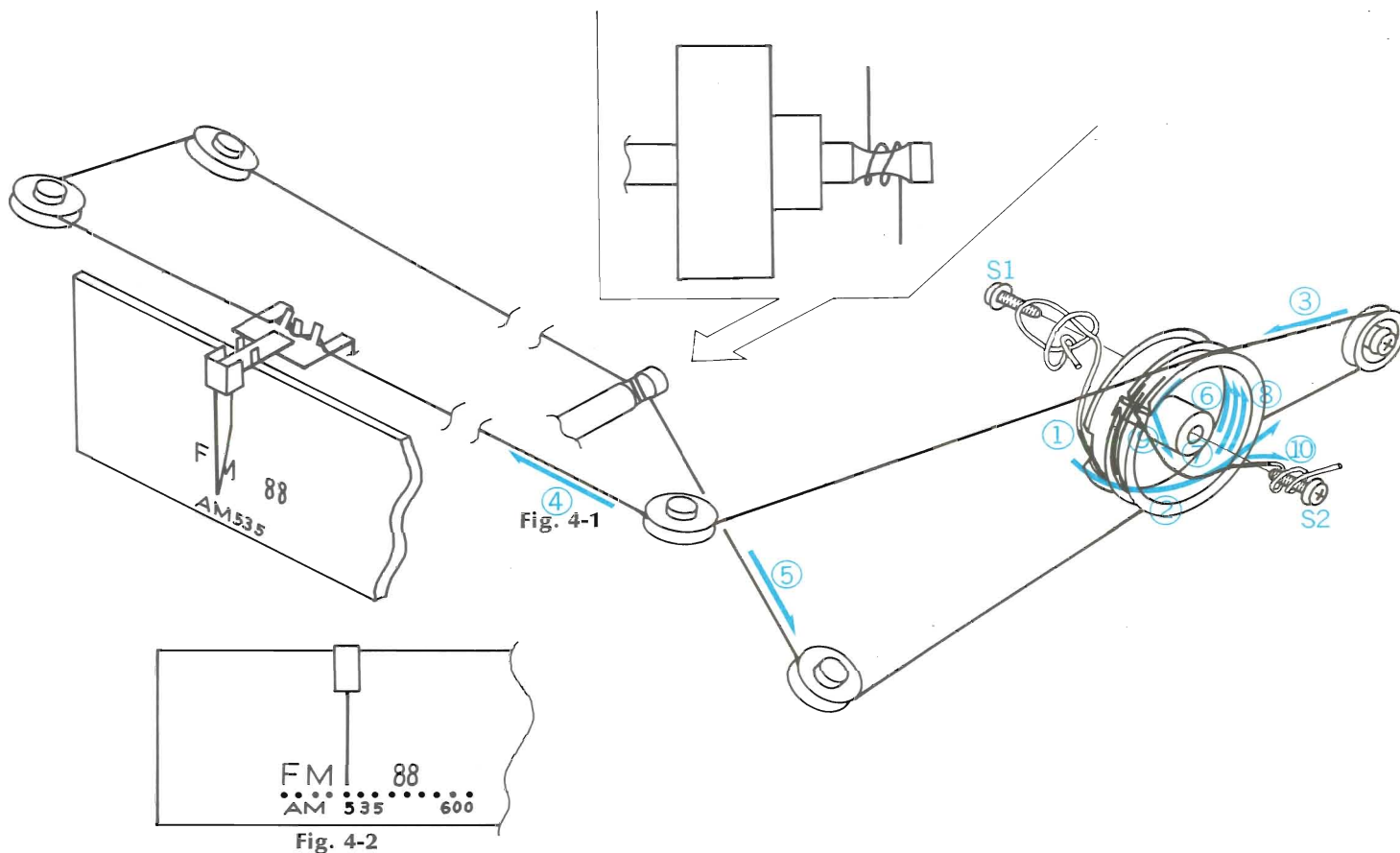
Clockwise CW.
 Counterclockwise CCW.
 Antenna ANT.
 Modulation MOD.

4. THREADING OF DIAL CORD

*If a dial cord is cut off or slips, replace it by following procedures.

As this unit uses 0.6mm ϕ cord, please replace it with the same type certainly.

*The length of dial cord is approximately 160cm (65.3 inch).



4-1. Threading of Dial Cord

Thread the dial cord in numerical order from ① to ⑩ as Fig. 4-1.

- 1) Close the variable capacitor completely (Max. capacitance).
- 2) Tie dial cord to the screw S1 of the dial pulley.
- 3) Thread cord in the direction of arrow from ① to ⑩.
- 4) After ⑩, tie the cord to the screw S2 of the dial pulley.

4-2. Attachment of Dial Pointer

- 1) Close the variable capacitor completely.
- 2) Set the dial pointer as Fig. 4-2.

*Confirm that the dial pointer runs smoothly on the dial scale by turning the tuning shaft.

Parts List

Stock No.	Description
6036050	Dial Cord (0.6mm ϕ)
6146663	D35 Type Pulley

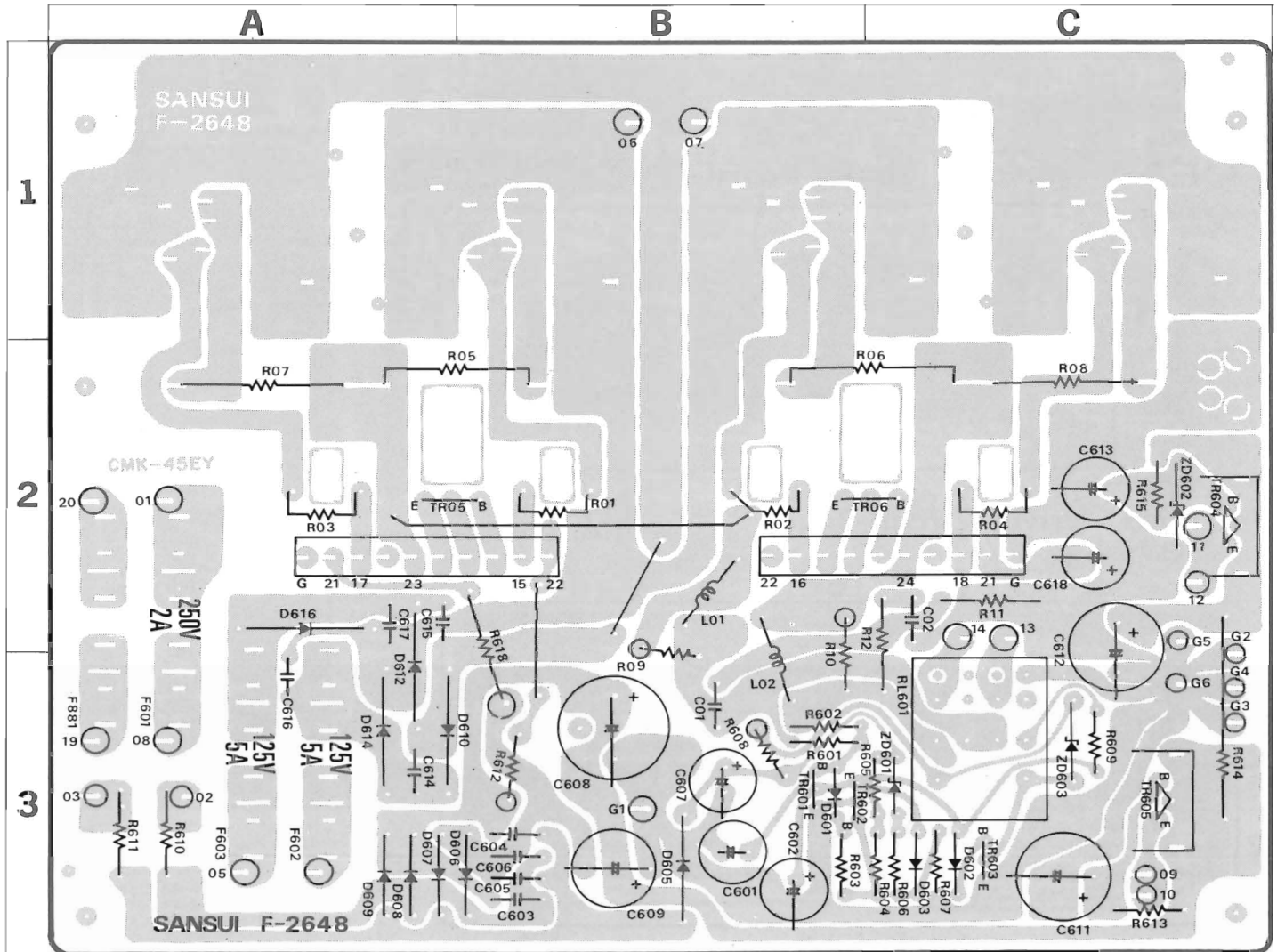
5. PARTS LOCATION AND PARTS LIST

*Values and Stock No. of most Resistors and Capacitors are shown in Common Parts Lists attached.

5-1. F-2648 Power Supply Circuit Board

(Stock No. 7501671 MODEL 5050)
(Stock No. 7501721 MODEL 6060)

Conductor Side



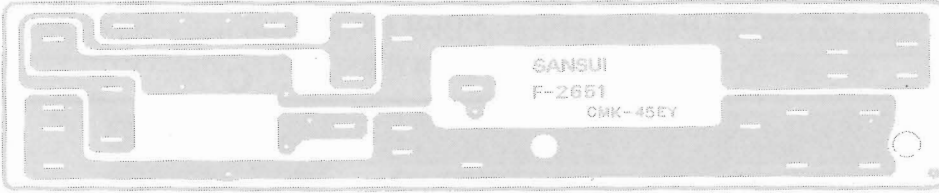
Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR05, 06	0305731, 2	2SC711 E,F	2A, B, 2B, C	C608	0549201	1000µF 63V E.C.	3 B	MODEL 5050 Only			
TR601	0305951, 2	2SC945 Q,P	3 B	C614	0655472	4700 pF	3 A	TR01, 02	0306511, 2	2SC1445 O,Y	
TR603	0306131, 2	2SC1364 6,7	3 C	C615	0655472	4700 pF	2 A	TR03, 04	0300881, 2	2SA765 O,Y	
TR604	0308392, 3	2SD313 E,F	2 C	C616	0655472	4700 pF	3 A	TR602	0300680, 1	2SA733 (2) P,Q	3 B
TR605	0308392, 3	2SD313 E,F	3 C	C617	0655472	4700 pF	2 A				
D601	0340090	DS-430	3 B	R01, 02	0193689	6.8Ω 1/4 W Fuse R.	2 B	R612	0202181	180Ω 2W M.R.	3 B
D602	0340090	DS-430	3 C	R03, 04	0193689	6.8Ω	2 A, 2 C	R618	0202151	150Ω 2W M.R.	2, 3 B
D603	0340090	DS-430	3 C	R05, 06	0152338	0.33Ω	2, AB, 2B, C	F602	0432280	4A 125V	3 A
D605	0310350		3 B	R07, 08	0152338	0.33Ω	2 A, 2 C	F603	0432280	4A 125V	3 A
D606	0310350		3 B	R09, 10	0104479	4.7Ω 1 W C.R.	2, E B	MODEL 6060 Only			
D607	0310350	10D-2 Diode	3 A	R11, 12	0103479	4.7Ω 1/2 W C.R.	2C, 2, 3 C	TR01, 02	0308541, 2	2SD188A R,Q	
D608	0310350		3 A	R608	0202221	220Ω 2 W M.R.	3 B	TR03, 04	0303381, 2	2SB545A R,Q	
D609	0310350		3 A	R610	0192229	2.2Ω	3 A	TR602	0300510, 1	2SA733 P,Q	3 B
D610	0311530		2, 3 A	R611	0192229	2.2Ω	3 A	R612	0202121	120Ω 2W M.R.	3 B
D612	0311530	30D-2 Diode	3 A	R614	0183221	220Ω 3 W Ce.R.	3 C	R618	0202101	100Ω 2W M.R.	2, 3 B
D614	0311530		3 A	L01, 02	4290210	Filter Coil	2B, 2, 3B	F602	0432290	5A 125V	3 A
D616	0311530		2 A	RL601	1150101	Relay Switch	3 C	F603	0432290	5A 125A	3 A
ZD601	0316070	EQA01-24R	3 C	F601	0432240	2A 250V AC Fuse	3 A				
ZD602	0315970	EQA01-13R	2 C		2410590	4P Pin Ass'y Type A					
ZD603	0315080	EQB01-25	E C		2420540	10P Conector Ass'y Type A					
C603	0655472	4700 pF	3 B		2410730	6P Pin Ass'y Type A					
C604	0655472	4700 pF	3 B		2410850	4P Pin Ass'y Type B					
C605	0655472	4700 pF	3 B								
C606	0655472	4700 pF	3 B								

5-2. F-2651 Illumination Circuit Board

(Stock No. 7594161 MODEL 5050)
(Stock No. 7594111 MODEL 6060)

Conductor Side



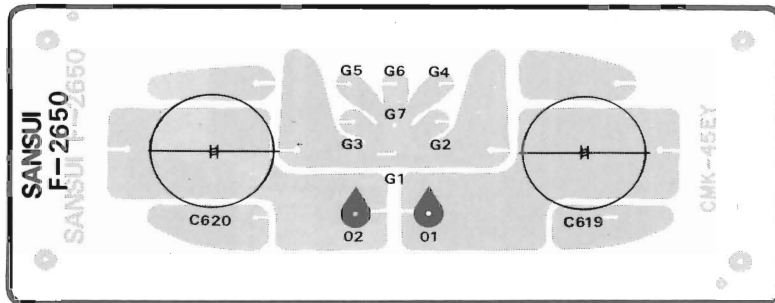
Parts List

Parts No.	Stock No.	Description
D601	0310340	10D-1 Diode
C601	0501331	330 μ F 10V E.C.
R601	0191180	18 Ω 1/4W Fuse R.

5-3. F-2650 Capacitor Circuit Board

(Stock No. 7501681 MODEL 5050)
(Stock No. 7501711 MODEL 6060)

Conductor Side



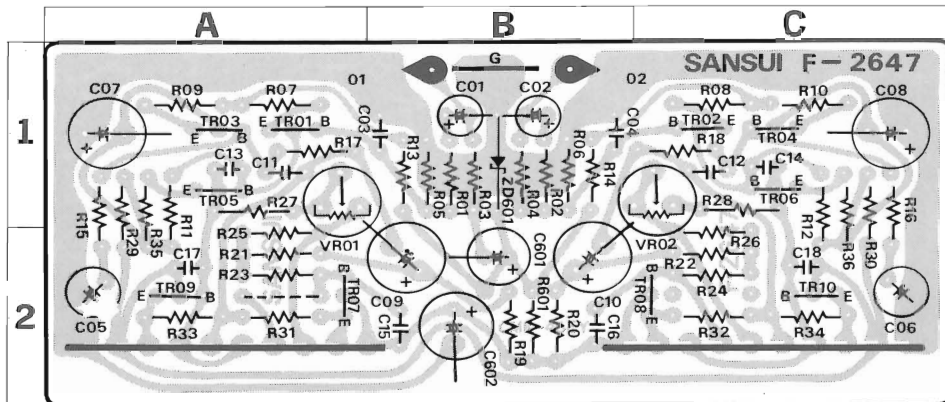
Parts List

Parts No.	Stock No.	Description
MODEL 5050 Only		
C619	0549112	4700 μ F } 50V E.C.
C620	0549112	4700 μ F }
MODEL 6060 Only		
C619	0549111	6800 pF } 50V E.C.
C620	0549111	6800 pF }

5-4. F-2647 Driver Circuit Board

(Stock No. 7571421 MODEL 5050)
(Stock No. 7571401 MODEL 6060)

Conductor Side



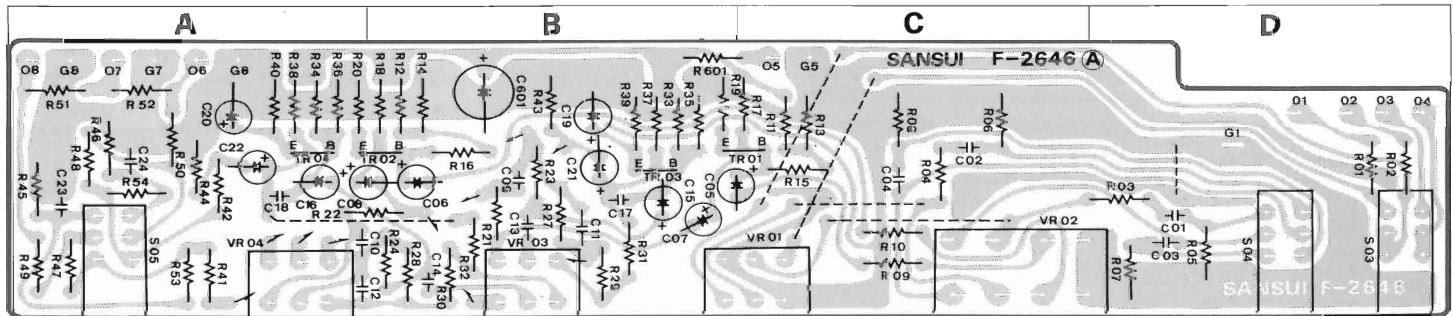
Parts List

Parts No.	Stock No.	Description	Position	
TR01, 02	0300470, 1	2SA726 (W) F,G	} Transistor	1 A. 1C
TR03, 04	0300470, 1	2SA726 (W) F,G		1 A. 1C
TR05, 06	0306360, 1	2SC1951-1, -2		1 A. 1C
TR07, 08	0308521, 2	2SD438 E,F		2 A. 2C
TR09, 10	0303361, 2	2SB560 E,F		2 A. 2C
ZD601	0315970	EQA01-13R Zener Diode	1 B	
R31, 32	0193221	220 Ω	} 1/4W Fuse R.	2 A. 2C
R33, 34	0193221	220 Ω		2 A. 2C
VR01, 02	1035310	1k Ω (B)	1 A. 1C	

5-5. F-2646 Tone Control Circuit Board

(Stock No. 7561471 MODEL 5050)
(Stock No. 7561491 MODEL 6060)

Conductor Side

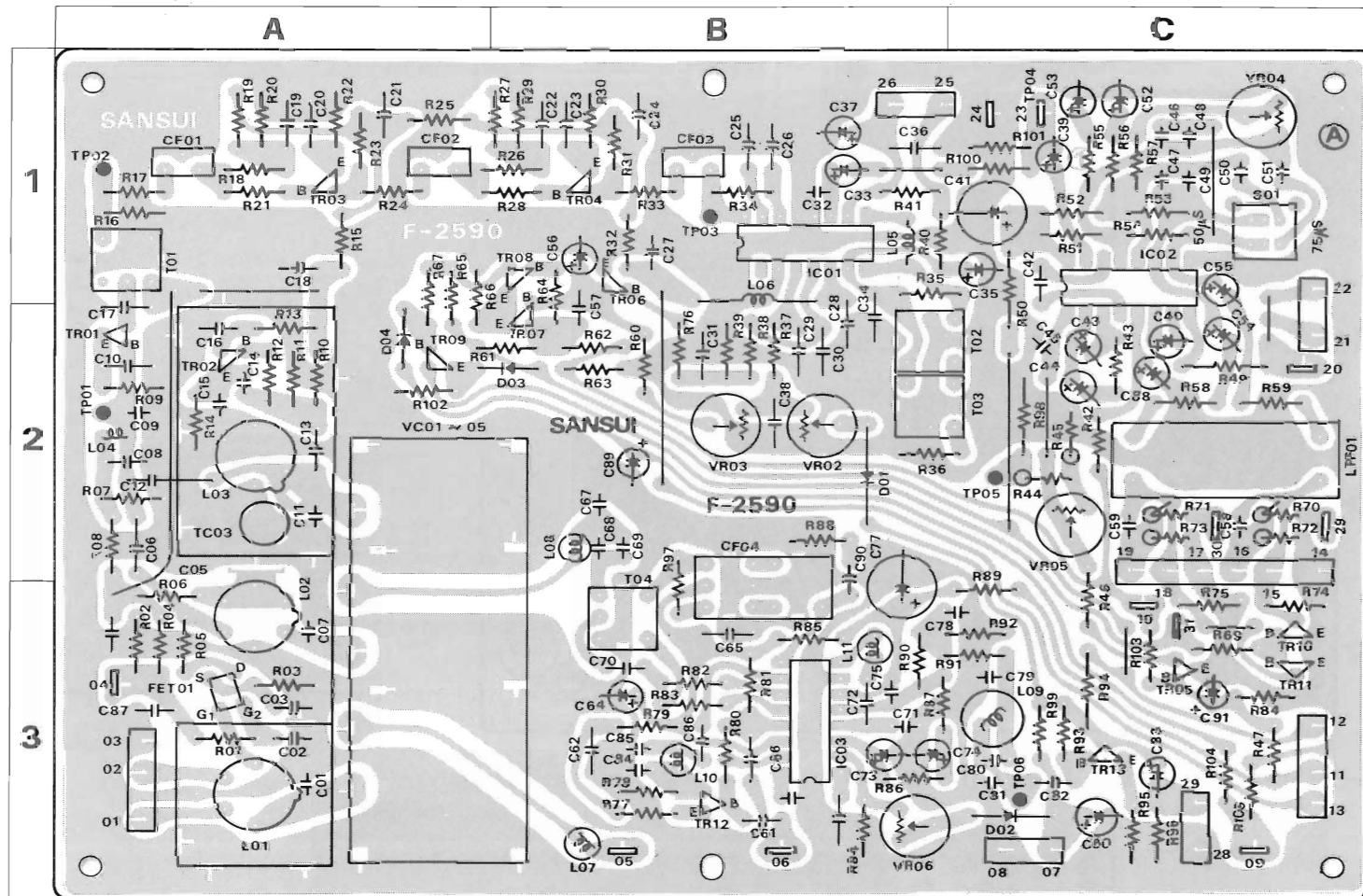


Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position
TR01, 02	0306070, 1	2SC1313 F,G	} Transistor	VR03	1015180, 1	100k Ω B x 2	B	R53, 54	0240824	820k Ω 1/4W C.R.	A
TR03, 04	0306070, 1	2SC1313 F,G		B. A	VR04	1015180, 1	100k Ω B x 2	A	MODEL 6060 Only		
C01, 02	0620331	330 pF 50V P.C.	D. C	S03	1131110	Push Switch	D	R45, 46	0240392	3.9k Ω	A
R601	0193221	220 Ω 1/4 Fuse R.	B	S05	1131290	Push Switch	A	R47, 48	0240393	39k Ω	} 1/4W C.R.
VR01	1015190, 1	100k Ω M,N	C. B	MODEL 5050 Only			R49, 50	0240222	2.2k Ω	A	
VR02	1010920, 1	250k Ω x 2	D. C	C23, 24	0600127	0.012 μ F 50V M.C.	A	S06	1131300	Push Switch	

5-6. F-2590 Tuner Circuit Board (Stock No. 7521321 MODEL 5050) (Stock No. 7521291 MODEL 6060)

Conductor Side



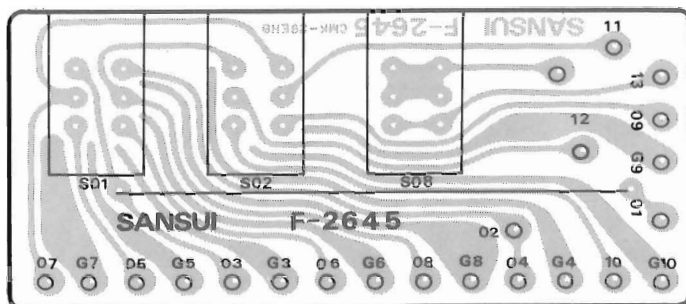
Parts List

Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position	Parts No.	Stock No.	Description	Position		
TR01	0305801	2SC1047 (B)	} Transistor	C01	0669350	15 pF	3 A	T05	4290280	Inductor			
TR02	0305801	2SC1047 (B)			C05	0659015	2200 pF	2 A	T06	4290011	Choke Coil		
TR03	0306113	2SC738 (C)			C07	0669350	15 pF	3 A	CF01	0910150	10.7MHz	1 A	
TR04	0306112	2SC738 (D)			C11	0669355	20 pF	2 A	CF02	0910150	10.7MHz	1 A	
TR05	0305731, 2	2SC711 (E, F)			C12	0679012	1.5 pF	500V G.C.	2 A	CF03	0910150	10.7MHz	1 B
TR06	0305731, 2	2SC711 (E, F)			C45	0629005	360 pF	2 C	CF04	0910280	455kHz	2, 3 B	
TR07	0305731, 2	2SC711 (E, F)			C48, 49	0620101	100 pF	50V P.C.	1 C	LF01	0910220	19kHz Low Pass Filter	
TR08	0305731, 2	2SC711 (E, F)			C50, 51	0620561	560 pF		VR02	1035170	47kΩ (B)	2 B	
TR09	0300470	2SA726 (F)			C67	0669400	15 pF	50V C.C.	2 B	VR03	1035190	100kΩ (B)	2 B
TR10, 11	{ 0305641 0306390	{ 2SC735 (Y) 2SC1636-1			C69	0620361	360 pF	50V P.C.		VR04	1035210	220kΩ (B)	1 C
TR12	0300283	2SA628 (F)			L01	4200720	Antenna Coil	3 A	VR05	1034250	4.7kΩ (B)	2 C	
TR13	0305731, 2	2SC711 (E, F)			L02	4210340	RF Coil	3 A	VR06	1035110			
TR15	0300510, 1	2SA733 (P, Q)			L03	4220400	OSC Coil	2 A	S01	1110270	Slide Switch		
IC01	0360350	IC HA1137 (W)		} IC	L04	4290110	Choke Coil	2 A	VC01	1220250	Variable Capacitor	2 A	
IC02	0360320	IC HA1196				L07	4900100		3 B	TC03	1230090	Trimmer Capacitor	
IC03	0360150	IC HA-1151			L08	4900100		2 B		2410600	6P Pin Ass'y Type D		
FT01	0370131, 2	3SK41 (1) (L, K) FET		L09	4900220	Inductor	3 C		2410910	2P Pin Ass'y Type E			
D01	0340120	VD1212 Varistor	2 B	L10	4900110		3 B		2410920	3P Pin Ass'y Type E			
D02	0310330, 1	1N60 Diode	3 C	L11	4900110		3 B						
D03	0340120	VD1212 Varistor	2 B	T01	4235930	IF Coil	1 A						
D04	0311160	1S2473D		T02	4235970		2 B, C						
				T03	4235980	FM Coil	2 B, C						
				T04	4220650	OSC Coil	3 B						

5-7. F-2645 Muting Circuit Board (Stock No. 7594151 MODEL 5050)

(Stock No. 7594101 MODEL 6060)

Conductor Side



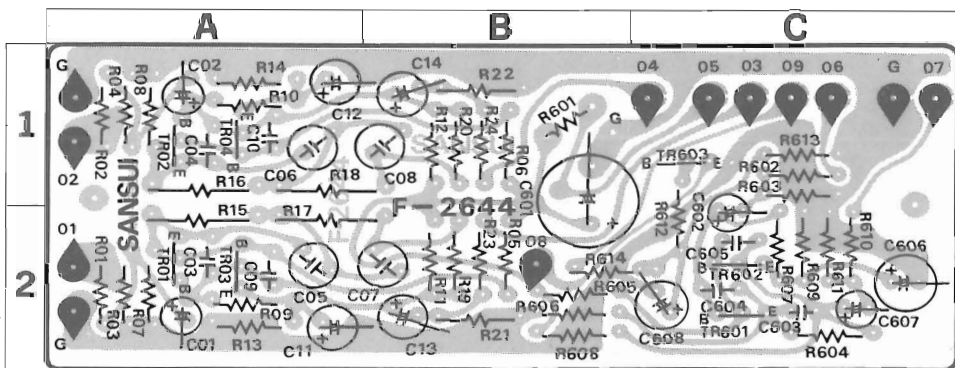
Parts List

Parts No.	Stock No.	Description
S01	1131320	Push Switch

5-8. F-2644 Equalizer Circuit Board (Stock No. 7550941 MODEL 5050)

(Stock No. 7550961 MODEL 6060)

Conductor Side

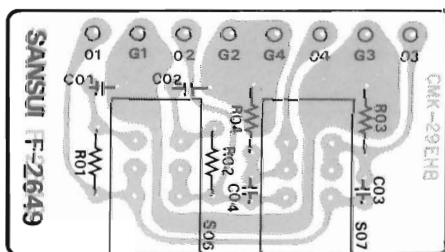


Parts List

Parts No.	Stock No.	Description	Position
TR01, 02	0306070, 1	3SC1313 F,G	Transistor 2A. 1A 2C
TR03, 04	0306070, 1	2SC1313 F,G	
TR601	0306070, 1	2SC1313 F,G	
TR602	0306070, 1	2SC1313 F,G	
C01, 02	0573339	3.3μF 35V T.C.	2A. 1A
C05, 06	0625103	10000 pF	2A. 1A
C07, 08	0625272	2700 pF	2B. 1B
C602	0573339	3.3μF 35V T.C.	2C
R15, 16	0231394	390kΩ	2A. 1A
R17, 18	0231273	27kΩ 1/2W M.R.	2A. 1A
R601	0200221	220Ω	1B
	2410920	3P pin Ass'y Type E	
	2410930	4P Pin Ass'y Type E	

5-9. F-2649 Filter Circuit Board (Stock No. 7561501 MODEL 6060 Only)

Conductor Side



5-10. Figures

Connector & Pin Ass'y

Connector

Type A (3~10 pins)	Type B (2~6 pins)	Stock No.
		2 Pins 2420450
		3 Pins 2420460
		3 Pins (RED) 2420650
		4 Pins 2420470
		5 Pins 2420480
		6 Pins 2420490

NOTE: Since stock number of female connectors (type B) with wires are not shown in each parts list of Complete circuit board, please refer to the above parts list when ordering the connector.

Pin Ass'y

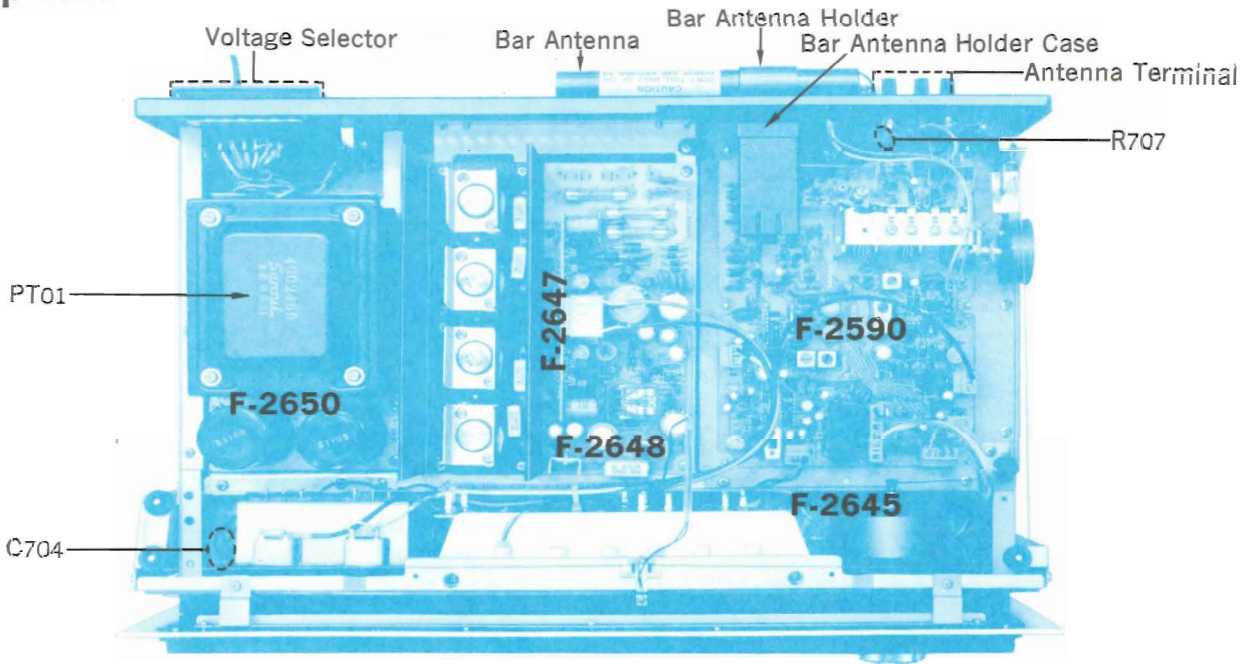
Type A (3~10 pins)	Type B (3~10 pins)	Type C (3~10 pins)
Type D (2~6 pins)	Type E (2~6 pins)	Type F (2~6 pins)

Abbreviations

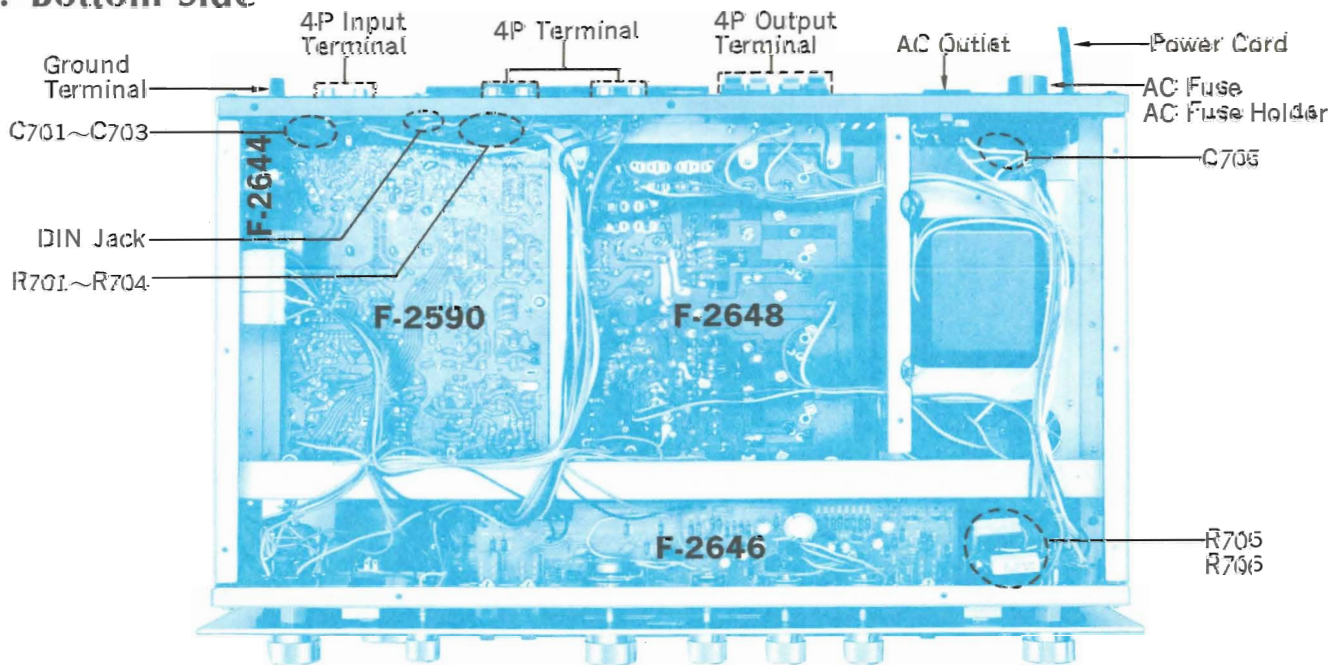
C.R. : Carbon Resistor	BP.E.C.: Bi-Polar Electrolytic Capacitor
S.R. : Solid Resistor	C.C. : Ceramic Capacitor
Ce.R. : Cement Resistor	Mi.C. : Mica Capacitor
M.R. : Metallized Film Resistor	O.C. : Oil Capacitor
M.C. : Mylar Capacitor	P.C. : Polystyrene Capacitor
E.C. : Electrolytic Capacitor	E.C. : Tantalum Capacitor

6. OTHER PARTS

6-1. Top Side



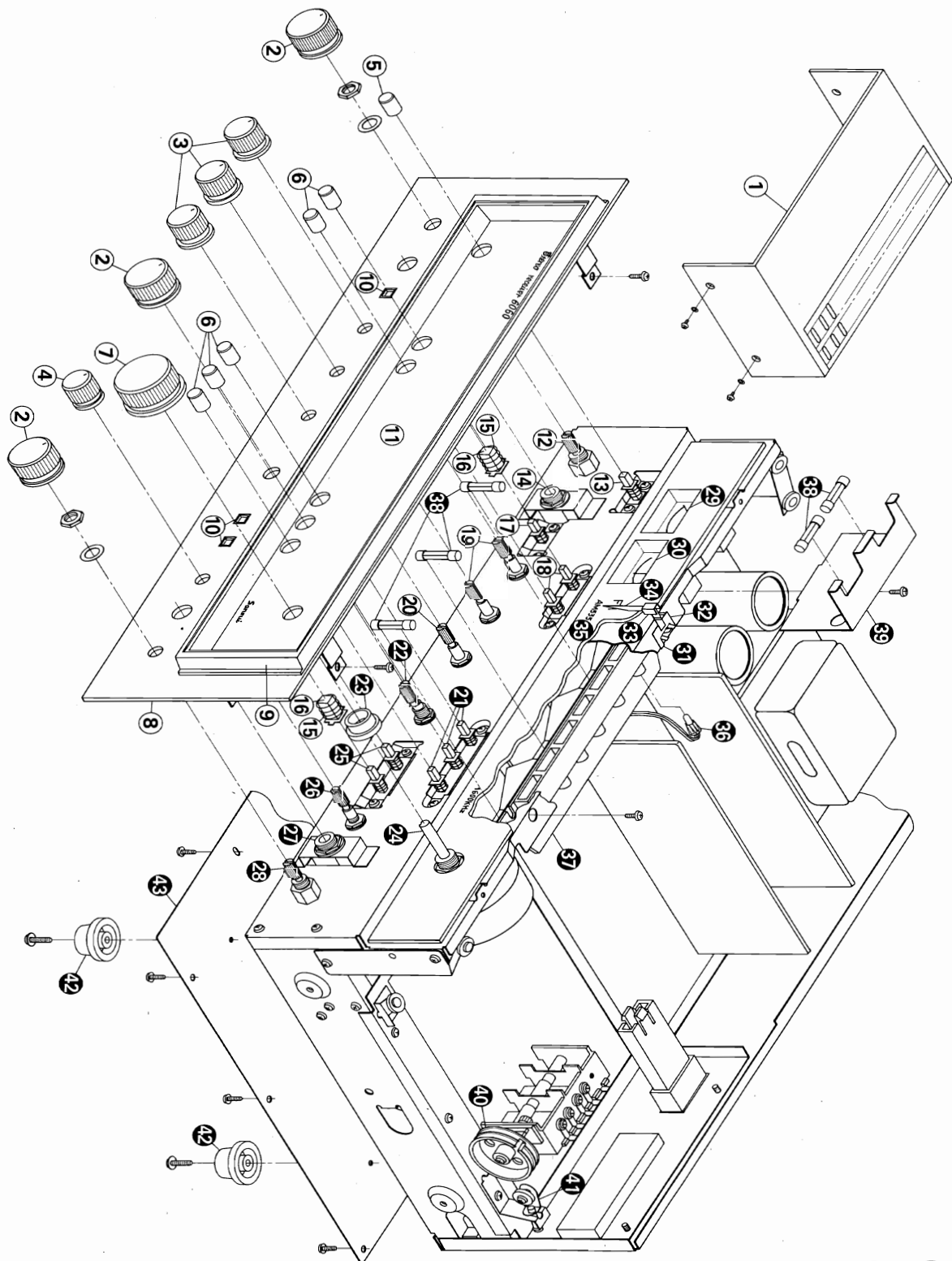
6-2. Bottom Side



Parts List (Top Side & Bottom Side)

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
C701~703	0657473	4700µF 50V C.C.	J703	2400041	DIN Jack	2210030		P Type Fuse Holder
C704	0605337	0.03µF 250V M.C.	F701		AC Fuse	2410091		6P Voltage Selector Plug
C705	0658102	0.0047µF 150V C.C.		0432260	3A 250V (220/240V)	2410030		10P Voltage Selector Socket
R701, 702	0240104	100kΩ 1/4W C.R.		0432290	5A 250V (100/120V)	3800010		Power Cord
R703, 704	0240204	200kΩ 1/4W C.R.		0432240	2A 250V (220/240V)	3500090		Strain Relief
R705, 706	0163221	220Ω 1/2W C.R.		0432280	4A 125V (100/120V)	526442		Bar Antenna Holder
R707	00000122	1.2kΩ 1/2W C.R.		2200020	4P Terminal	5287200		Bar Antenna Holder Case
R708	0240122	1.2kΩ 1/4W C.R.		2210010	Antenna Terminal	PT01	4002460	Power Transformer (MODEL 4030)
L702	4200830	Bar Antenna		2230150	Ground Terminal		4002470	Power Transformer (MODER 5050)
CO701, 702	2450060	AC Outlet		2250160	4P Output Terminal			
				2300050	Fuse Holder			

6-3. Exploded View



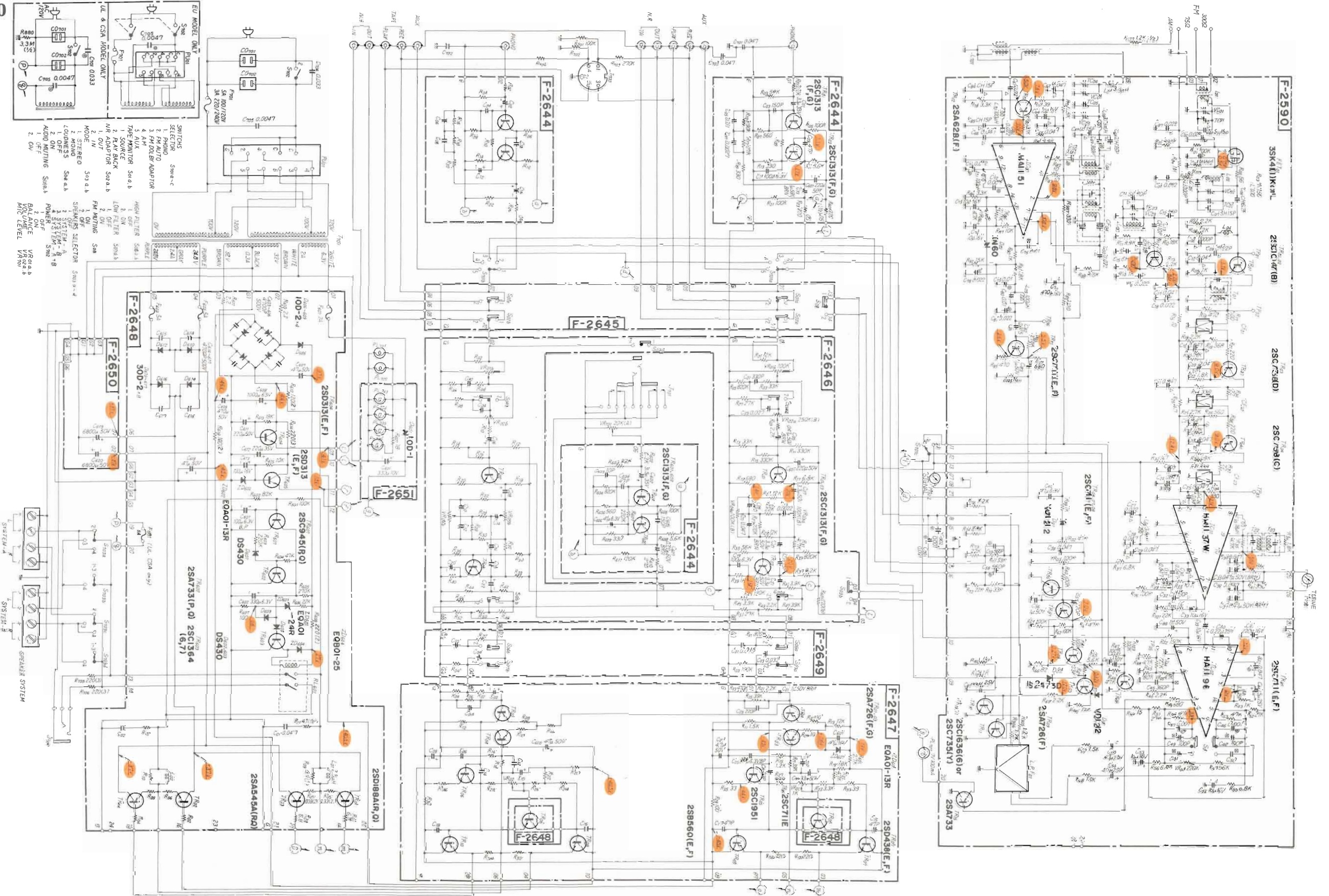
1 ~ 20
21 ~ 43

Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description	Parts No.	Stock No.	Description
1	5727020	Wood Bonnet (MODEL 5050)	11	5446291	Smoked Plate (MODEL 5050)	21	1131320	Push Switch	33	0400200	Dial Pointer Lamp, 6.3V 75mA
2	5727010	Wood Bonnet (MODEL 6060)	12	5446281	Smoked Plate (MODEL 6060)	22	1010920, 1	Volume, 250K Ω B x 2	34	5416050	Dial Pointer
3	5318380	M-7 Type Knob	13	1101470	Speakers Switch	23	5393300	Mastling Ring	35	5408090	Dial Glass
4	5318410	S-10 Type Knob	14	1131190	Power Switch	24	7036491	Tuning Unit As'y	36	0400450	FM STEREO Lamp, TV 100mA
5	5318721	E-13 Type Knob	15	2430190	Head Phone Jack	25	1131310	MODE, LOUDNESS Switch	37	5058270	Illumination Box
6	5326550	Push Knob (B)	16	6906480	Spring	26	1005170, 1	20K Ω , MIC Volume	38	0420040	Meter Lamp, TV 320mA
7	5326580	Push Knob (C)	17	5326530	Push Knob	27	2430170	MIC Jack	39	5288130	Meter Holder
8	5318420	T-12 Type Knob	18	1131290	(High Filter Switch (MODEL 5050)	28	1102690, 1	Selector	40	6146643	D35 Type Pulley
9	5304850	Front Panel (MODEL 5050)	19	1131300	(Audio Muting Switch (MODEL 6060)	29	4301000	Signal Meter	41	7134082	Tension Unit
10	5304840	Front Panel (MODEL 6060)	20	1015180, 1	Low, High Filter Switch (MODEL 6060)	30	4300990	Tune Meter	42	5316821	Leg
		Panel Window			Tone Control Volume, 100K Ω B x 2	31	5416350	Holder, Dial Pointer	43	5058651	Bottom Plate
		Knob Guide			Balance Volume, 100K Ω M.N.	32	5516030	Tellon Sheet			

7. SCHEMATIC DIAGRAM

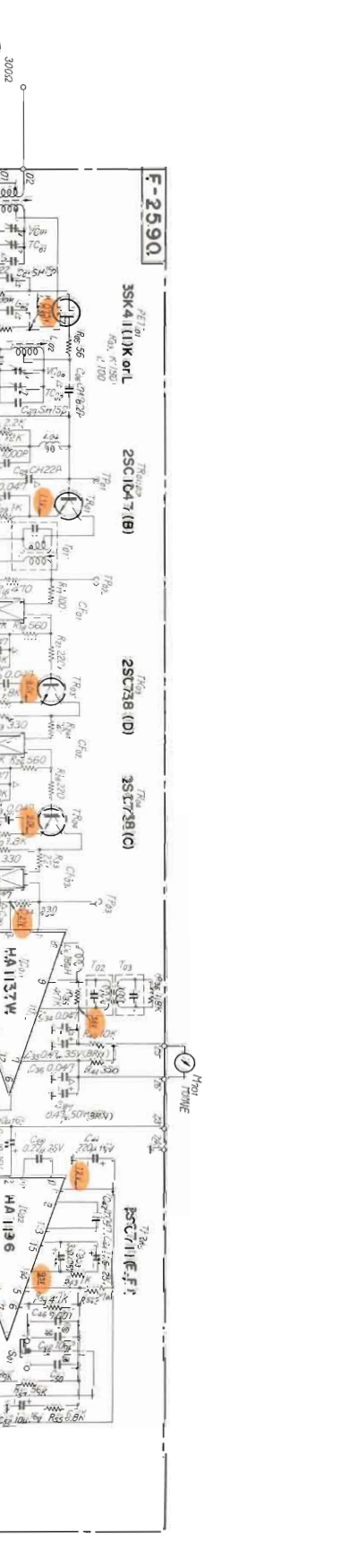
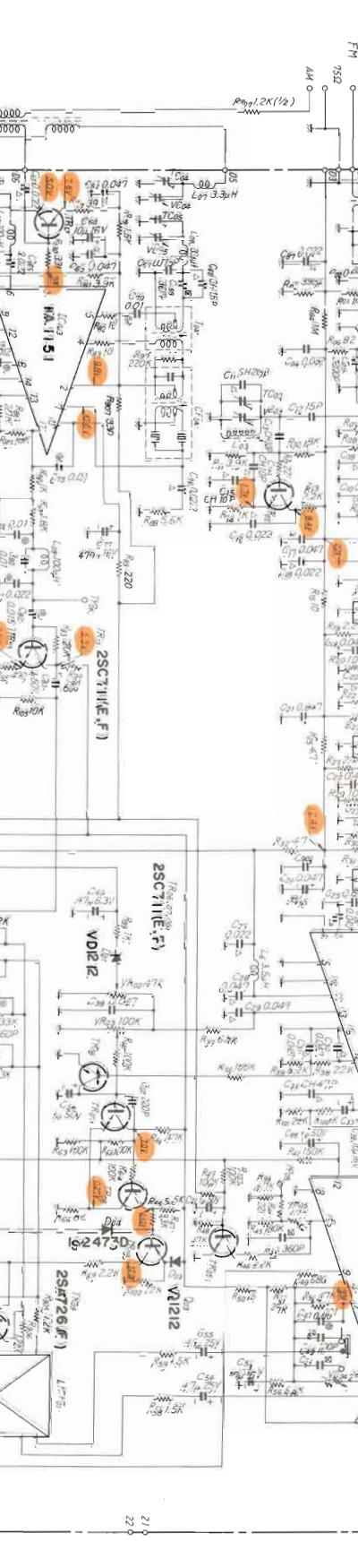
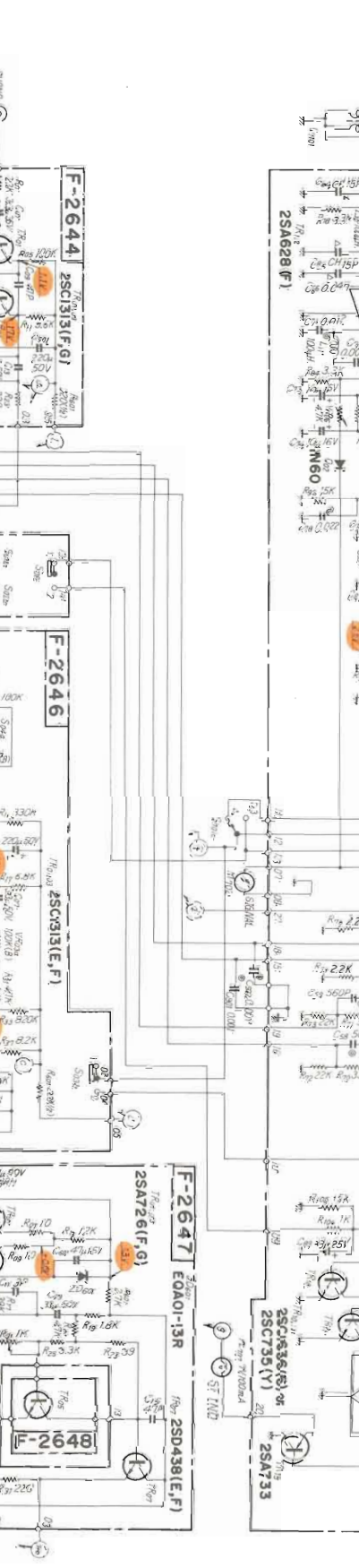
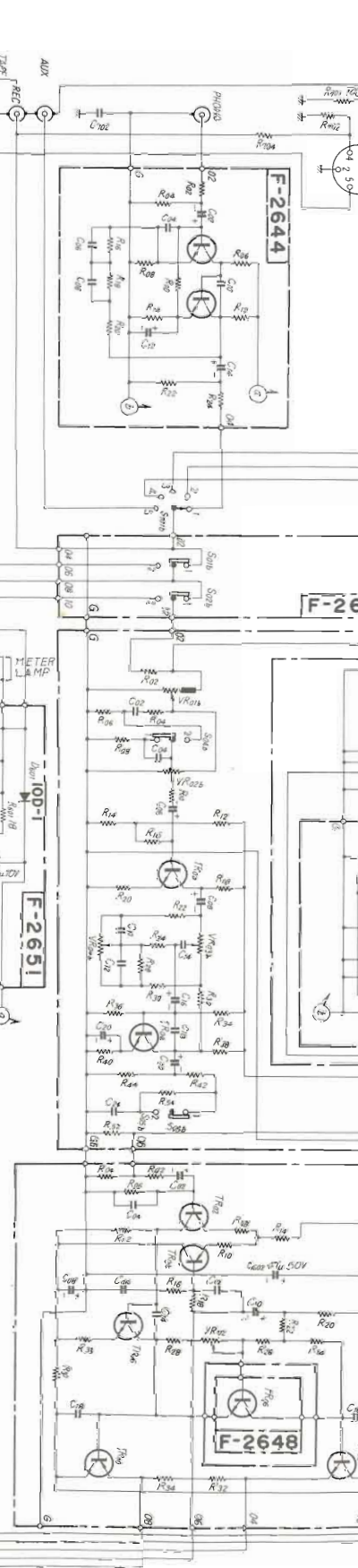
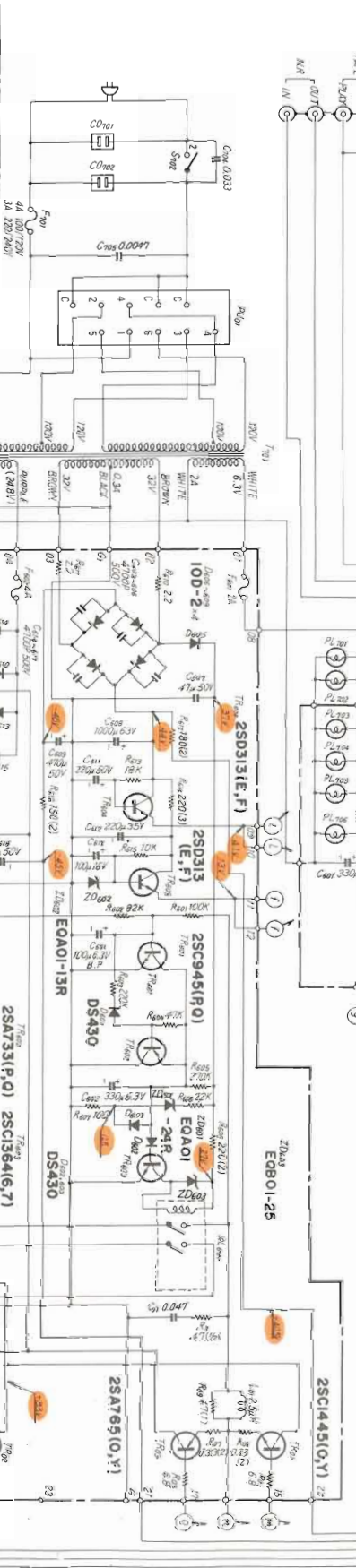
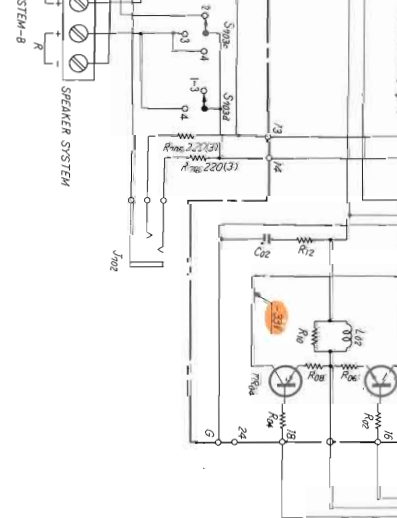
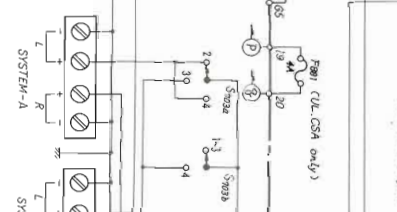
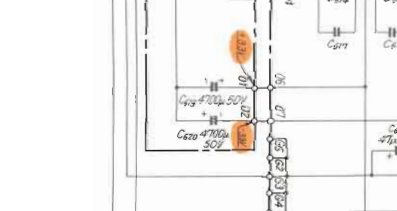
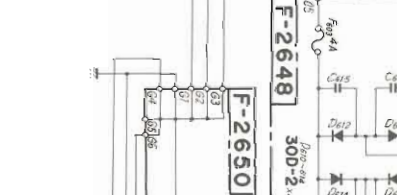
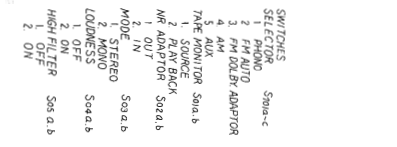
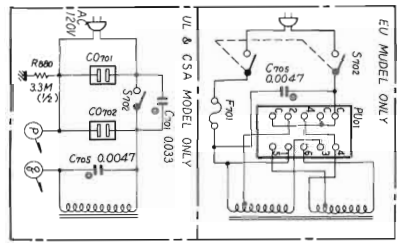
7-1. MODEL 6060

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 • Design and specification subject to change without notice for improvements.

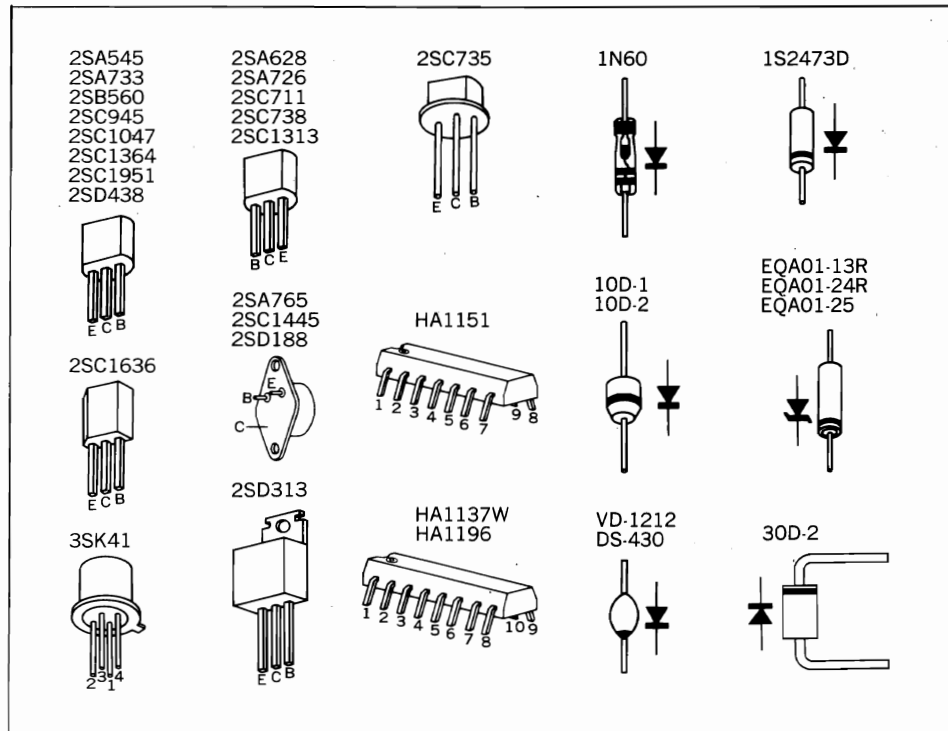


7-2. MODEL 5050

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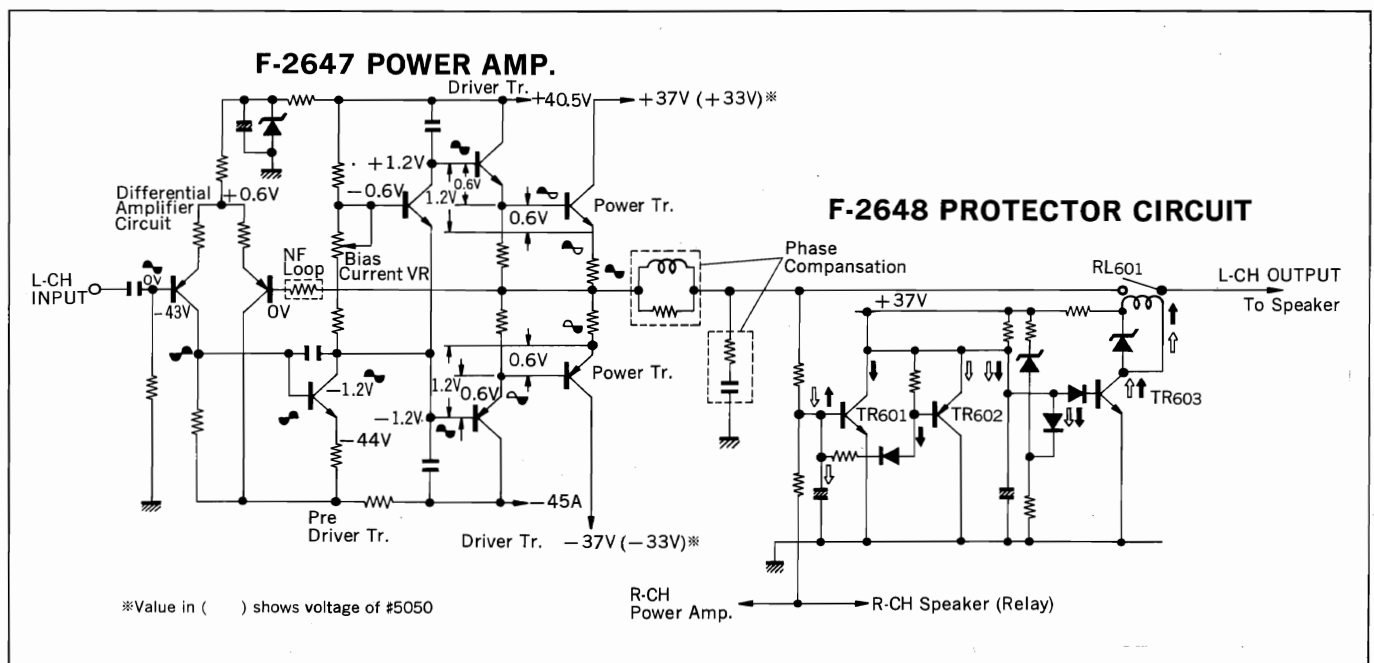


7-3. Semiconductor



8. OPERATION BLOCK DIAGRAM

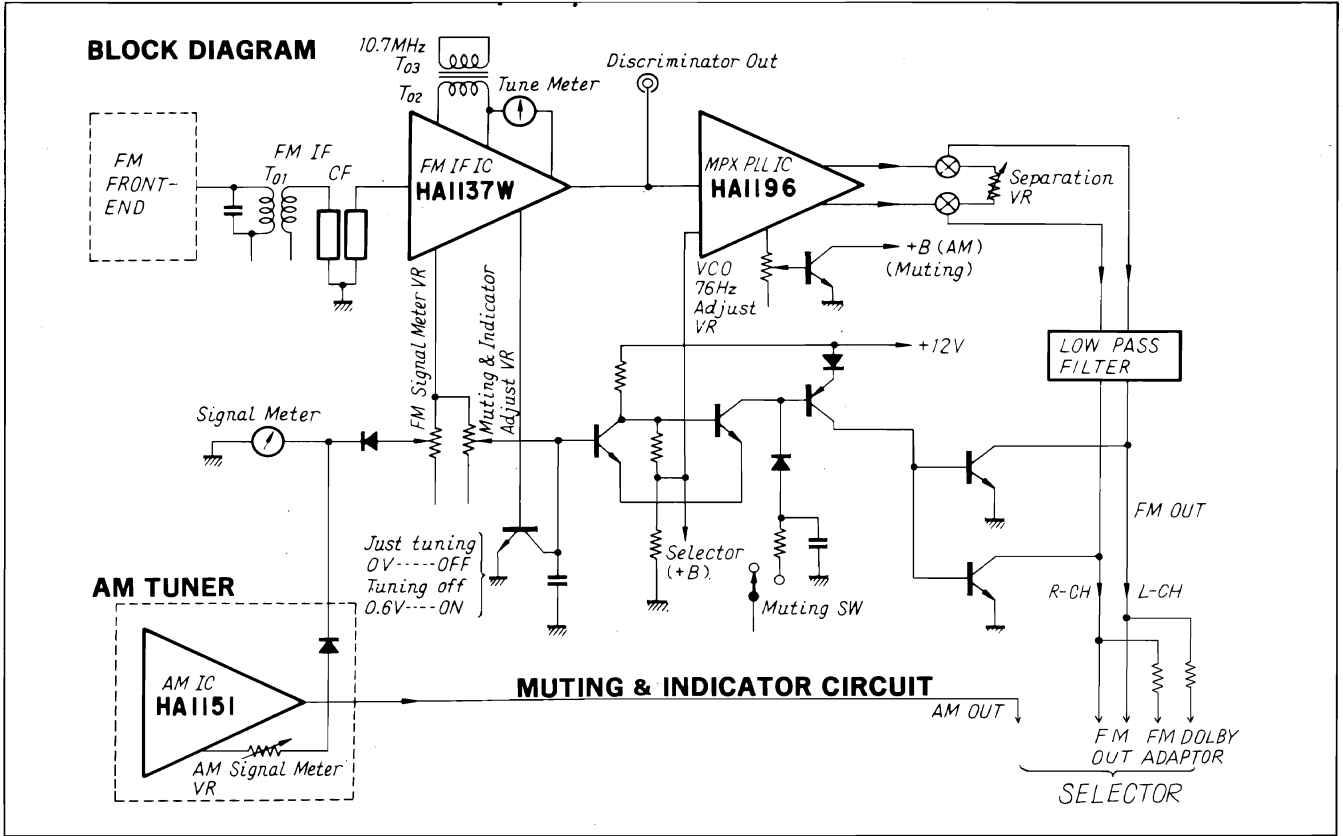
8-1. Block Diagram of Power AMP. & Protector Circuit



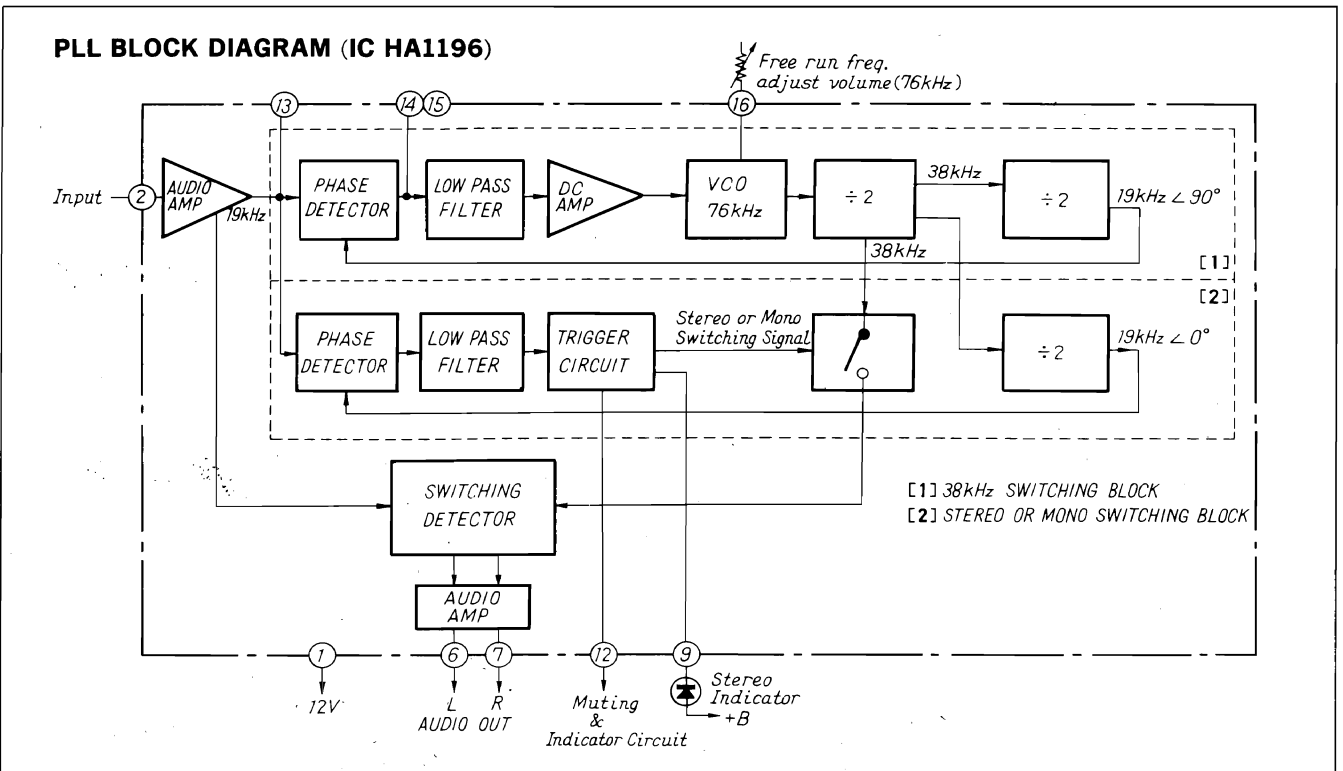
※ This Protection (Relay) Circuit serves to protect speakers when DC voltage appears at output of power amplifier stage, resulting in relay being released. When the DC voltage exceeds 2.5V, the arrows ↓ ↑

show the variation of voltage drop or increase. When the DC voltage drops below -2.5V, the arrows ↓ ↑ show the variation of voltage drop or increase as well.

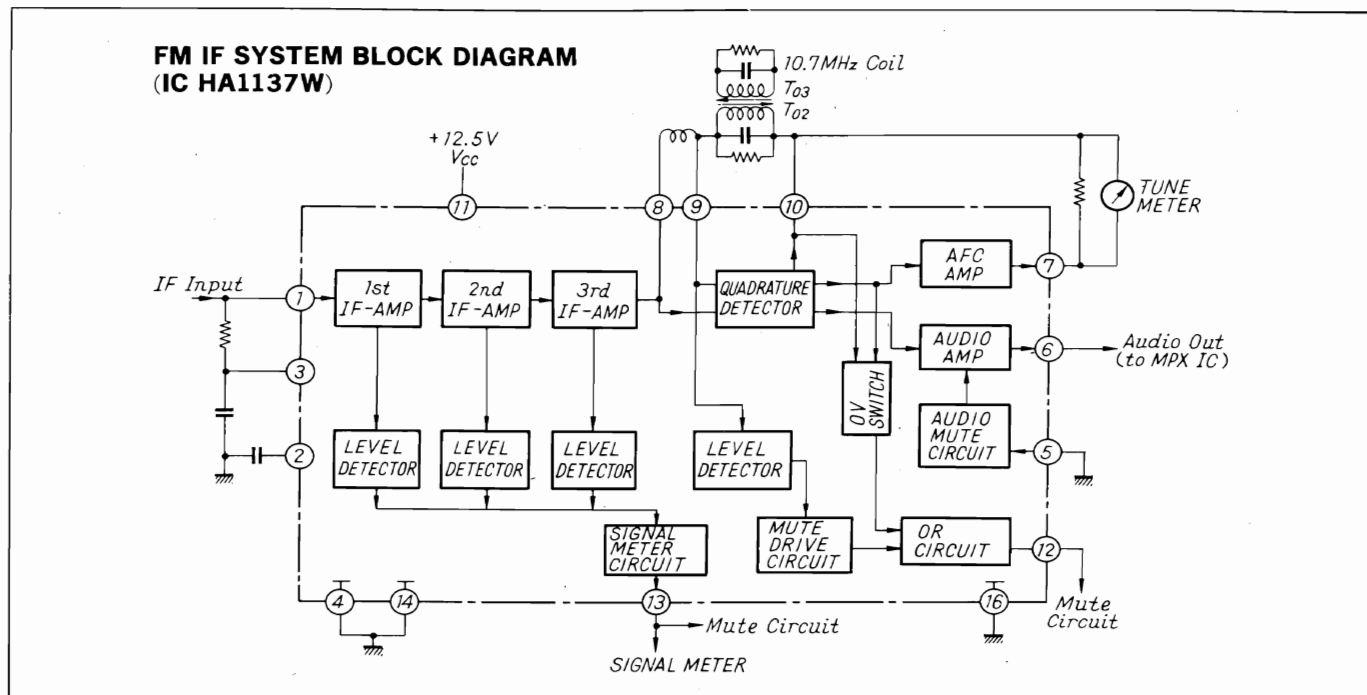
8-2. Block Diagram of Tuner Section



8-3. PLL Block Diagram (IC HA1196)



8-4. FM IF System Block Diagram (IC HA1137W)



※ Functions (IC HA1137W)

This IC has operating functions of various circuits as listed below.

- 1) IF AMP.
- 2) Quadrature detection.
- 3) Low-Noise audio Preamp.
- 4) Delayed AGC detector and driver for Front-end.
- 5) Signal meter circuit.
- 6) Center meter circuit.
- 7) Muting (operation to input signal strength).
- 8) Muting (operation at detuning).
- 9) Multipass circuit.

※ Main features (IC HA1137W)

1. This IC includes all functions required in FM IF stage.
2. As indicated above, this IC has functions of Muting circuit which operates below a certain input signal level. And also the IC includes new muting circuit, namely it has 0 volt switch which operates the muting circuit when the difference (absolute value) of detector output voltage between Tuning-ON and Detuning exceeds a certain voltage, utilizing S-curve characteristics of FM detector. By this advantage, it is possible to eliminate or avoid "Pop noise" caused by variation of the DC voltage at tuning-OFF.
3. The IC makes it possible to produce high-quality tuner having better selectivity and sensitivity by connecting 6-element filters between Front-end and the IC, as it has higher gain and better suppression ratio in amplitude modulation.
4. Linear swing of signal meter is obtained.

※ Main features of PLL (IC HA1196)

In the multiplex demodulation circuit, because of sub-carrier wave (38kHz) being required for demodulation, the pilot signal (19kHz) sent from FM stereo broadcasting station is being made while doubling.

It is necessary for this sub-carrier wave that its phase confirms to that of pilot signal correctly, and if there is any phase difference between them, FM stereo separation becomes poor.

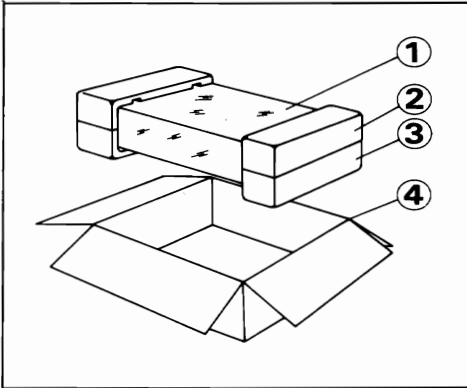
In the conventional products, LC resonance circuit has been used so far for the circuit of this section, on the other hand, in model 7070, IC in PLL is used, which prevents FM stereo separation from becoming poor due to deviation in resonance frequency or phase to temperature change and, in result, ensures stereo separation of more than 50dB at 1kHz.

Advantages

- 1) Selectivity is superior.
- 2) Phase characteristics is good.
- 3) It is virtually not affected by temperature.
- 4) No secular change occurs.

9. PACKING LIST

Parts No.	Stock No.	Description
1	9116690	Vinyl Cover
2	9028000	Stylofoam Packing
3	9009220	Carton Case (MODEL 6060)
	9009230	Carton Case (MODEL 5050)
4	5996080	Curl Stopper



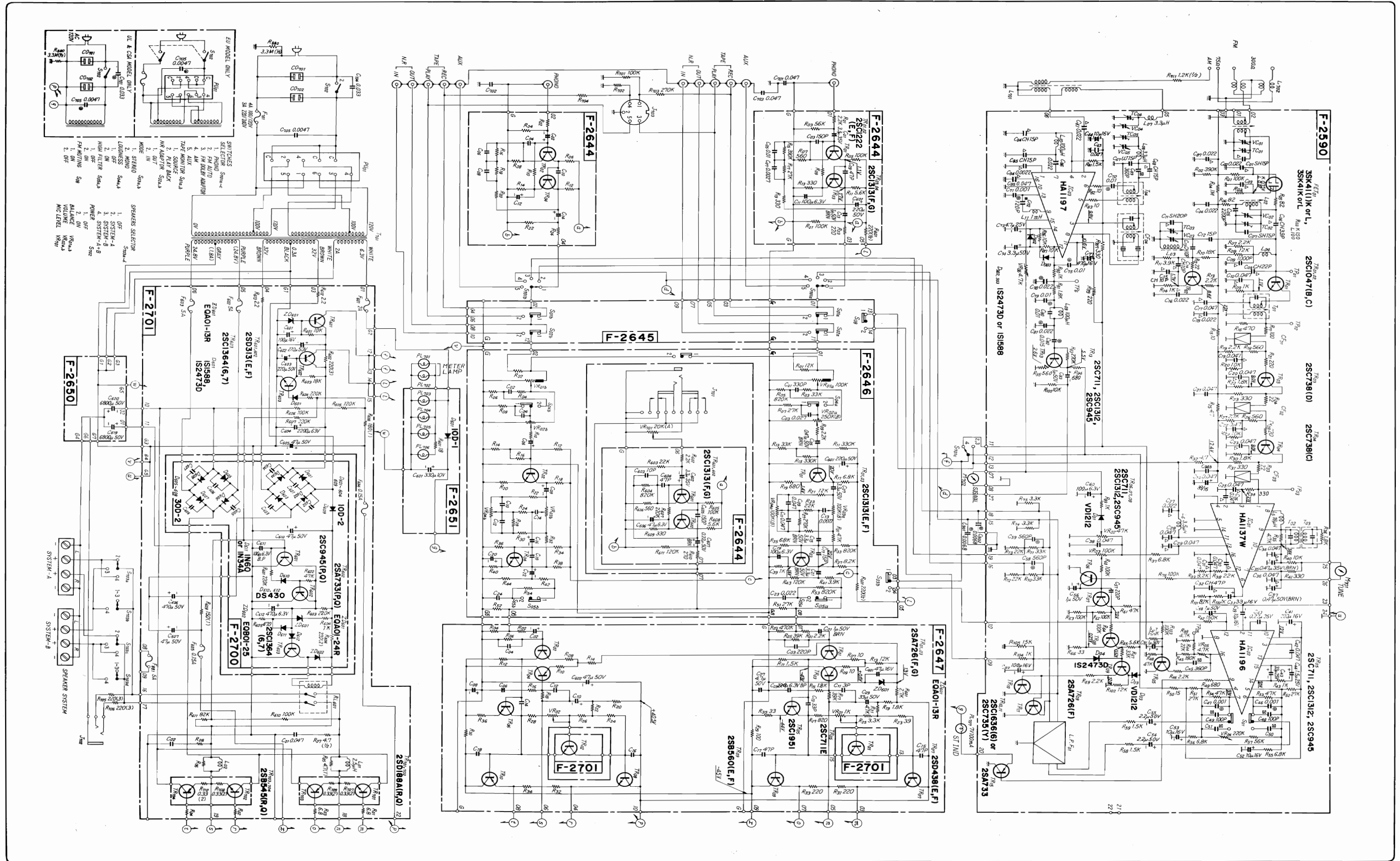
10. ACCESSORY PARTS LIST

Stock No.	Description
9209850	Operating Instructions (MODEL 6060)
9209860	Operating Instructions (MODEL 5050)
9237390	Schematic Diagram (MODEL 6060)
9237400	Schematic Diagram (MODEL 5050)

SANSUI ELECTRIC CO., LTD.
14-1, 2-chome, Izumi, Suginamiku, Tokyo 168, Japan.
TELEPHONE: (03) 323-1111 / TELEX: 232-2076

SANSUI 5050 SCHEMATIC DIAGRAM

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SANSUI 6060 SCHEMATIC DIAGRAM



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