

SERVICE MANUAL

LW/MW/FM STEREO TUNER



SANYO

FMT 3510L (EUROPE)



SPECIFICATIONS

FM SECTION

Tuning Frequency Range	88 MHz to 108 MHz
Usable Sensitivity	Mono (DIN) 1.5 μ V
	Mono (IHF) 3.0 μ F
Signal-to-Noise Ratio at 1 mV	
	Mono 70 dB
	Stereo 65 dB
Capture Ratio	1.0 dB
Alt. Channel Selectivity (DIN)	72 dB
Image Response Ratio	50 dB
IF Response Ratio	80 dB
AM Suppression Ratio	60 dB
Total Harmonic Distortion at 1 mV	
	Mono 0.2 %
	Stereo 0.5 %
Stereo Separation (at 1 kHz)	42 dB

MW/LW SECTION

Tuning Frequency Range	MW	LW
	535 kHz to 1,605 kHz	150 kHz to 350 kHz
Usable Sensitivity	300 μ V/m	500 μ V/m
Selectivity at ± 10 kHz	40 dB	40 dB
Image Response Ratio	40 dB	40 dB
IF Response Ratio	40 dB	40 dB
Signal-to-Noise Ratio	60 dB	60 dB

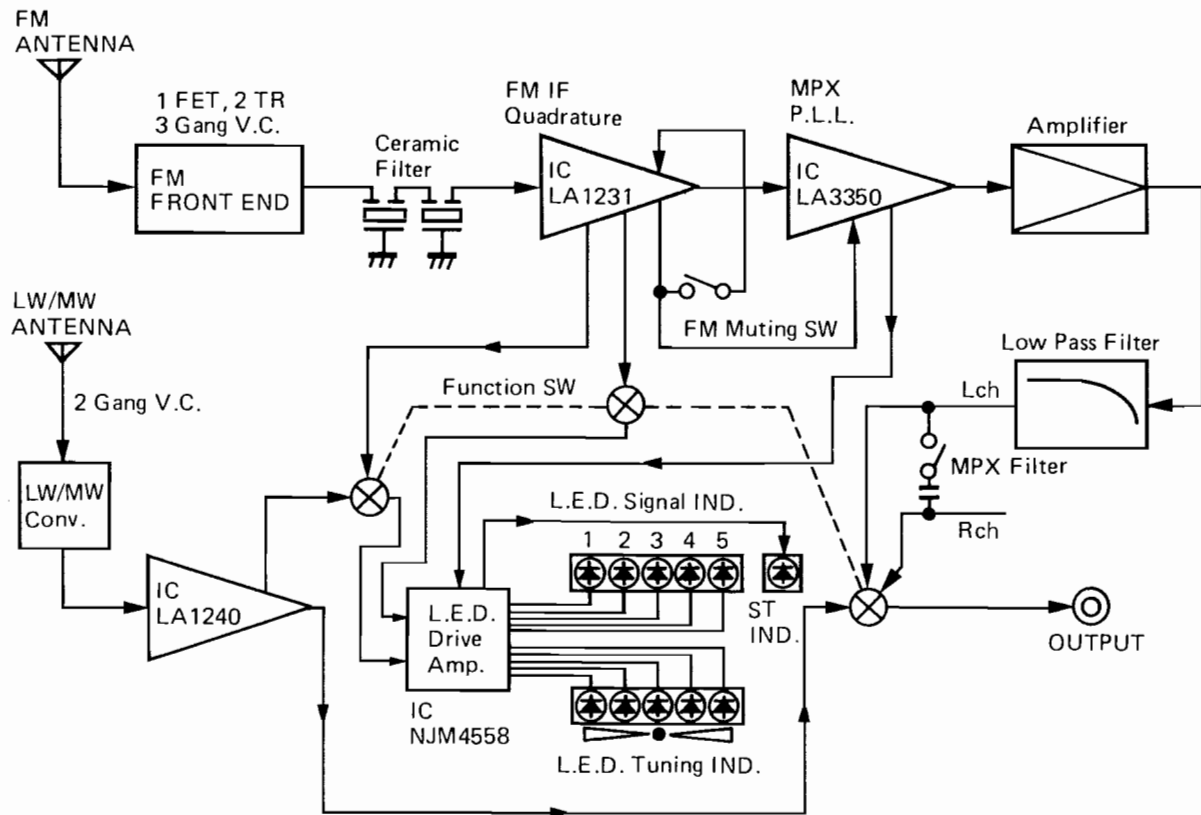
GENERAL SECTION

Power Source	AC: 110/220 V 50 Hz
Power Consumption	12 W
Dimensions (W x D x H)	440 x 325 x 89 mm
Weight	4.8 kg (approx.)

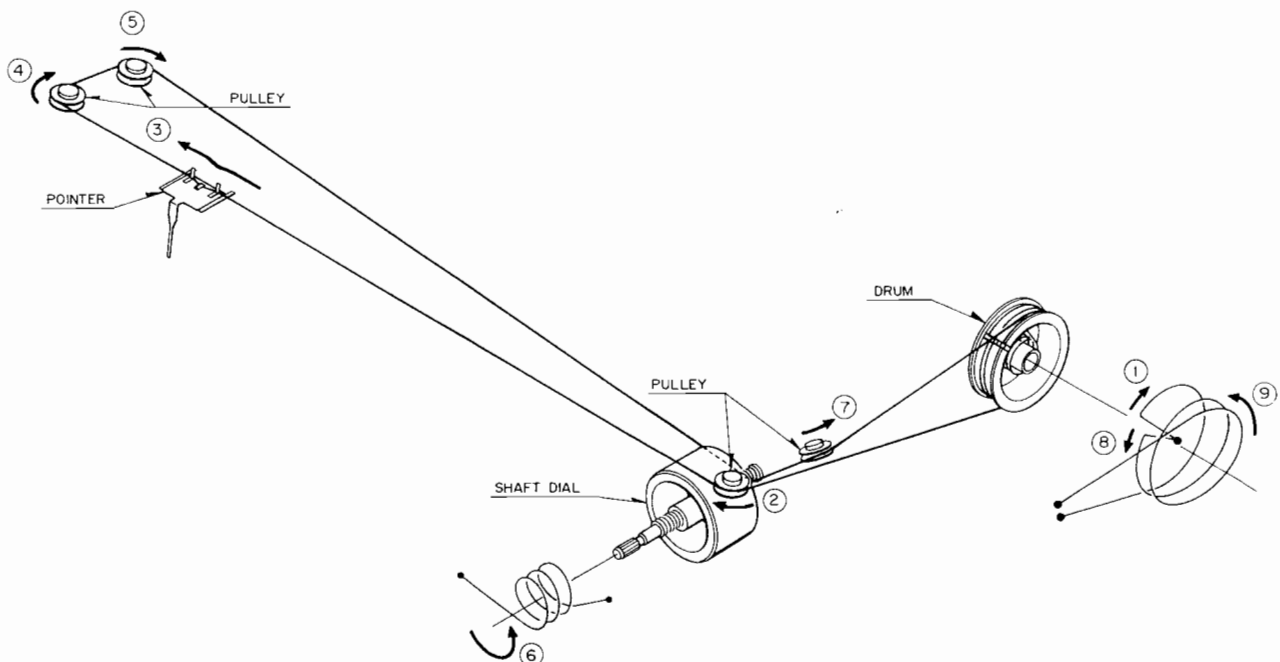
—Specifications are subject to change without notice.—

WM-4408

FUNCTIONAL BLOCK DIAGRAM

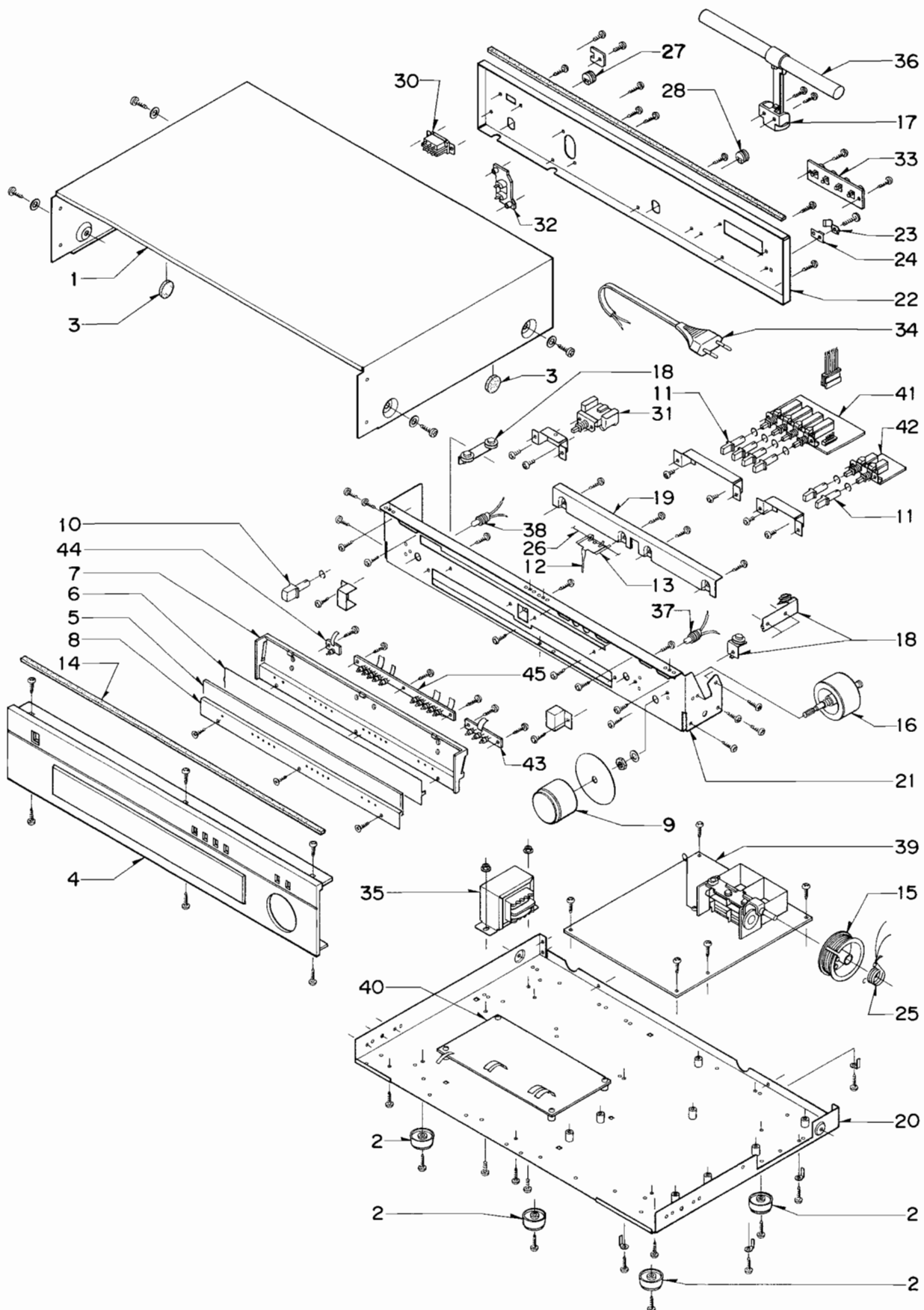


DIAL CORD STRINGING



NOTE: Check to see that the dial cord is correctly strung by turning the dial.

EXPLODED VIEW OF CABINET AND CHASSIS



PARTS LIST

PACKING PARTS LIST

Ref. No.	Parts Number	Description
	131 6 1139 80500	Box Corrugate-EXP
	131 6 2119 01441	Bag Polyethylene-EXP
	131 6 3009 29440	Pad (Right, Left)

ACCESSORIES PARTS LIST

Ref. No.	Parts Number	Description
	4 2449 20230	FM Antenna
	131 0 4004 11501	Connecting Cord
	131 2 1801 13900	Leg
	131 6 4119 80000	Explanatory Booklet

CABINET PARTS LIST

Ref. No.	Parts Number	Description
1	131 2 1410 21501	Cover
2	131 2 1801 12900	Leg
3	131 2 1801 13900	Felt (Cover Inside)

APPEARANCE PARTS LIST

Ref. No.	Parts Number	Description
4	131 0 1016 34400	Panel Decorate Assy
5	131 2 1201 34300	Plate Dial
6	131 2 1205 23300	Plate Decorate Dial
7	131 2 1207 12100	Housing
8	131 2 1314 11100	Plate Decorate
9	131 0 1001 54400	Knob, Tuning
10	131 2 1601 60000	Knob, Power Switch
11	131 2 1601 60100	Knob, Function Switch
12	131 2 4101 20002	Pointer
13	131 2 5205 12701	Cushion
14	131 2 5205 15300	Cushion

CHASSIS PARTS LIST

Ref. No.	Parts Number	Description
15	131 0 3002 11300	Drum Assy
16	131 0 3003 21300	Shaft Dial Assy
17	131 0 3008 11901	Support Antenna Assy
18	131 0 3020 11000	Pulley Assy
19	131 2 2301 12300	Rail
20	* 131 2 3301 26300	Chassis
21	* 131 2 3305 27500	Panel Front
22	* 131 2 3306 27208	Panel Rear
23	131 2 3621 00400	Cramp 75ohm Coax
24	131 2 3621 00500	Base Coax Cramp
25	131 2 4111 00400	Spring Rope
26	131 2 4112 10200	Dial Cord
27	131 2 6111 14200	Bushing (AC Cord)
28	131 2 6111 14800	Bushing (ANT Lead)

ELECTRICAL PARTS LIST

Ref. No.	Parts Number	Description
30	⚠ 4 2312 01020	Slide Switch (Volt Select)
31	⚠ 4 2312 03560	Push Switch Power
32	4 2359 23070	RCA 2P Jack
33	4 2379 21460	Terminal 4P (Ext. Antenna)
34	⚠ 4 2439 20521	Power Cord
35	⚠ 4 2512 09420	Power Transformer
36	4 2579 25110	Bar Antenna AM
37	4 6122 00640	Pilot Lamp (8V, 200mA)
38	4 6122 01130	Pilot Lamp (8V, 200mA)
39	* 131 0 4001 03460	RF IF MPX P.C.B. Assy
40	* 131 0 4001 03280	Power Supply P.C.B. Assy
41	* 131 0 4001 03310	Function P.C.B. Assy
42	* 131 0 4001 03330	Muting P.C.B. Assy
43	* 131 0 4001 03320	L.E.D. (Function) P.C.B. Assy
44	* 131 0 4001 03290	L.E.D. (Stereo) P.C.B. Assy
45	* 131 0 4001 03300	L.E.D. (Signal) P.C.B. Assy
C01,02	⚠ C2EHRM103A	Metallized Paper 0.01 μ F 250V $\pm$ 20%

*--Not a service part.

NOTES:

1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

PRODUCT SAFETY SHOULD BE CONSIDERED WHEN A COMPONENT REPLACEMENT IS MADE IN ANY AREA OF AN UNIT. COMPONENTS INDICATED BY A MARK ⚠ IN THIS PARTS LIST AND THE SCHEMATIC DIAGRAM SHOW COMPONENTS WHOSE VALUE HAS SPECIAL SIGNIFICANCE TO PRODUCT SAFETY. IT IS PARTICULARLY RECOMMENDED THAT ONLY PARTS SPECIFIED ON THE FOLLOWING PARTS LIST BE USED FOR COMPONENT REPLACEMENT POINTED OUT BY THE MARK.

AM-FM MULTIPLEX ALIGNMENT

AM ALIGNMENT

For alignment: Maintain generator output as low as possible for suitable indication.

TUNING ALIGNMENT						
Step	Adjusting circuit	Connection		Position of Tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output			
1	IF	Connect 455 kHz sweep generator to VC4.	Connect Oscilloscope to Test Point TP4.	Near max. capacity of VC at position of no interference	AM IFT 2-00040	
2	MW (RF)	Connect AM generator to EXT AM antenna and GND terminals. Set to 600 kHz. Modulate with 30 %, 400 Hz.	Connect Oscilloscope and AC, V.T.V.M. to Tuner Output.	600 kHz	AM BAR ANT 9-25110 MW OSC 9-20851	Max.
3		Change frequency to 1400 kHz.		1400 kHz	TC 01, 03	
4	LW (RF)	Change frequency to 160 kHz.		160 kHz	LW OSC 9-20860	Max.
5		Change frequency to 350 kHz.		350 kHz	TC 02, 04	
6	Repeat adjustments.					

1. Variable capacitor completely closed
2. Set the dial pointer to very left line dial scale.
3. Connect sweep generator, SG, V.T.V.M. and oscilloscope.
4. Function switch to "MW" or "LW"
5. Use a screwdriver with plastic grip for all adjustments.

FM ALIGNMENT

Step	Adjusting circuit	Connection		Position of Tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output			
1	IF	Connect sweep 10.7 MHz generator to test point VC2.	Connect Oscilloscope to Test Point TP1.	Near max. capacity of VC, at position of no interference	FM IFT 9-21360	
2	Quadrature Detector		Connect Oscilloscope to Test Point TP2.		FM QUADRATURE COIL 9-21320	
3	RF	Connect FM RF generator through two 120-ohm resistors to FM antenna screw terminals. Set generator to 90 MHz, modulate with 400 Hz to provide ± 75 kHz deviation. Set generator output attenuator as low as possible.	Connect V.T.V.M. to Tuner Output.	90 MHz	FM ANT COIL 9-21180 FM RF COIL 9-20460 FM OSC COIL 9-20910	Max.
4		Change generator setting to 106 MHz.		106 MHz		Max.
5	Repeat adjustments.					

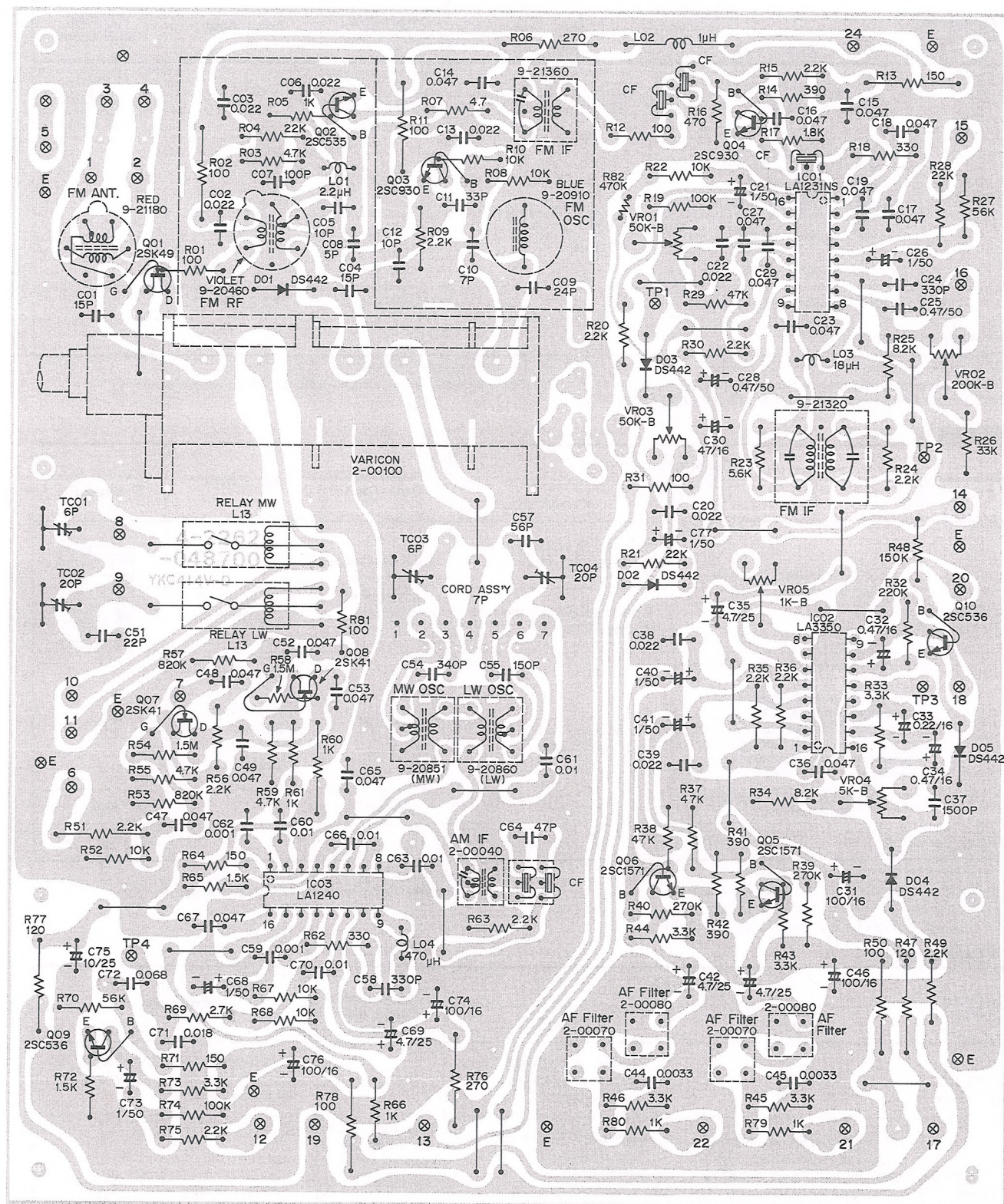
1. Variable capacitor completely closed
2. Set the dial pointer to very left line of dial scale.
3. Connect sweep generator, FM SG, V.T.V.M. and oscilloscope. FM ANT input impedance is 75 ohm.
4. Function switch to "FM"
5. Use a screwdriver with plastic grip for all adjustments.

FM MPX ALIGNMENT

Step	Adjusting circuit	Connection		Position of Tuning dial	Adjustment	
		Input	Output			
1	PLL IC FO (19 kHz) Adjustmnet	None	Connect Frequency counter or synchroscope to TP3.	Near max. capacity of VC. at position of no interference	Adjust VR04 (5k-B) so that frequency counter or synchroscope indicated 19 kHz.	
2	FM STEREO Signal Separation	As above Steps 3,4 except modulation. Modulate LEFT channel ± 67.5 kHz — 400 Hz audio and ± 7.5 kHz — 19 kHz pilot carrier. As above except modulate RIGHT Channel.	Connect V.T.V.M. to output terminal (R Channel).		VR05 (1k-B)	V.T.V.M. Min.
			Connect V.T.V.M. to output terminal (L Channel).			
3	Repeat steps 1,2. Set at position with max. channel separation.					

1. Variable capacitor completely closed
2. Connect FM stereo SG and V.T.V.M.
3. Function switch to "FM"
4. Use a screwdriver with plastic grip for all adjustments.

RF IF MPX P.C.BOARD (BOTTOM VIEW)

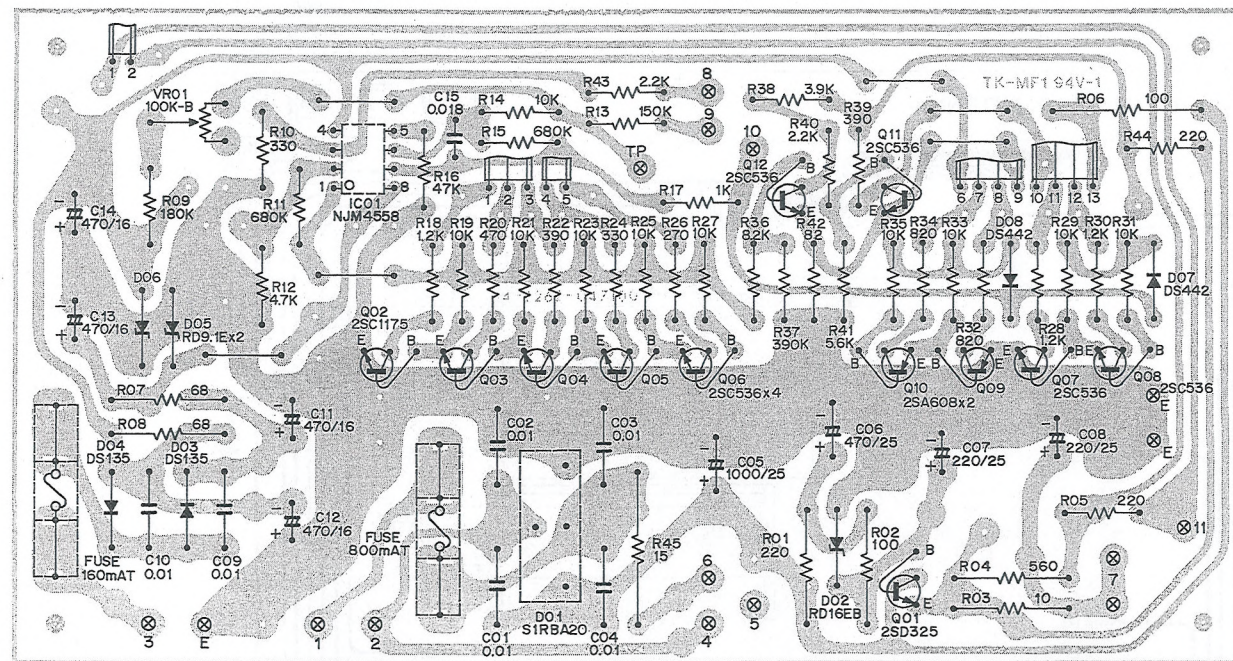


ADJUSTMENT VOLUME

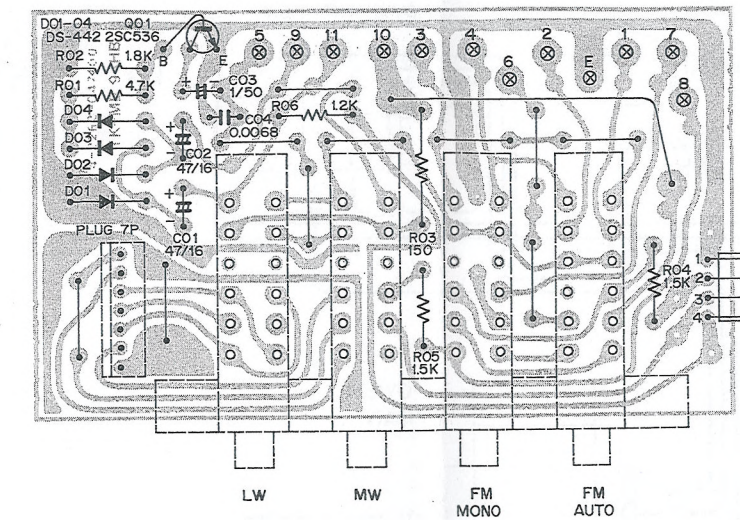
VR01 FM Muting Level
VR02 Center Zero Adjust
VR03 FM Meter Level

VR04 Free Run Freq. Cont.
VR05 FM Separation Cont.

POWER SUPPLY P.C.BOARD
(BOTTOM VIEW)



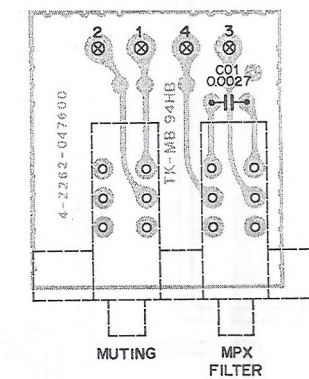
FUNCTION SWITCH P.C.BOARD
(BOTTOM VIEW)



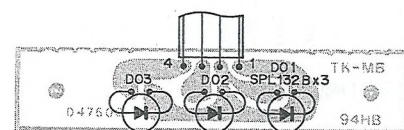
L.E.D. (SIGNAL) P.C.BOARD
(BOTTOM VIEW)



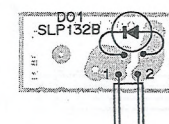
MUTING SWITCH P.C.BOARD
(BOTTOM VIEW)



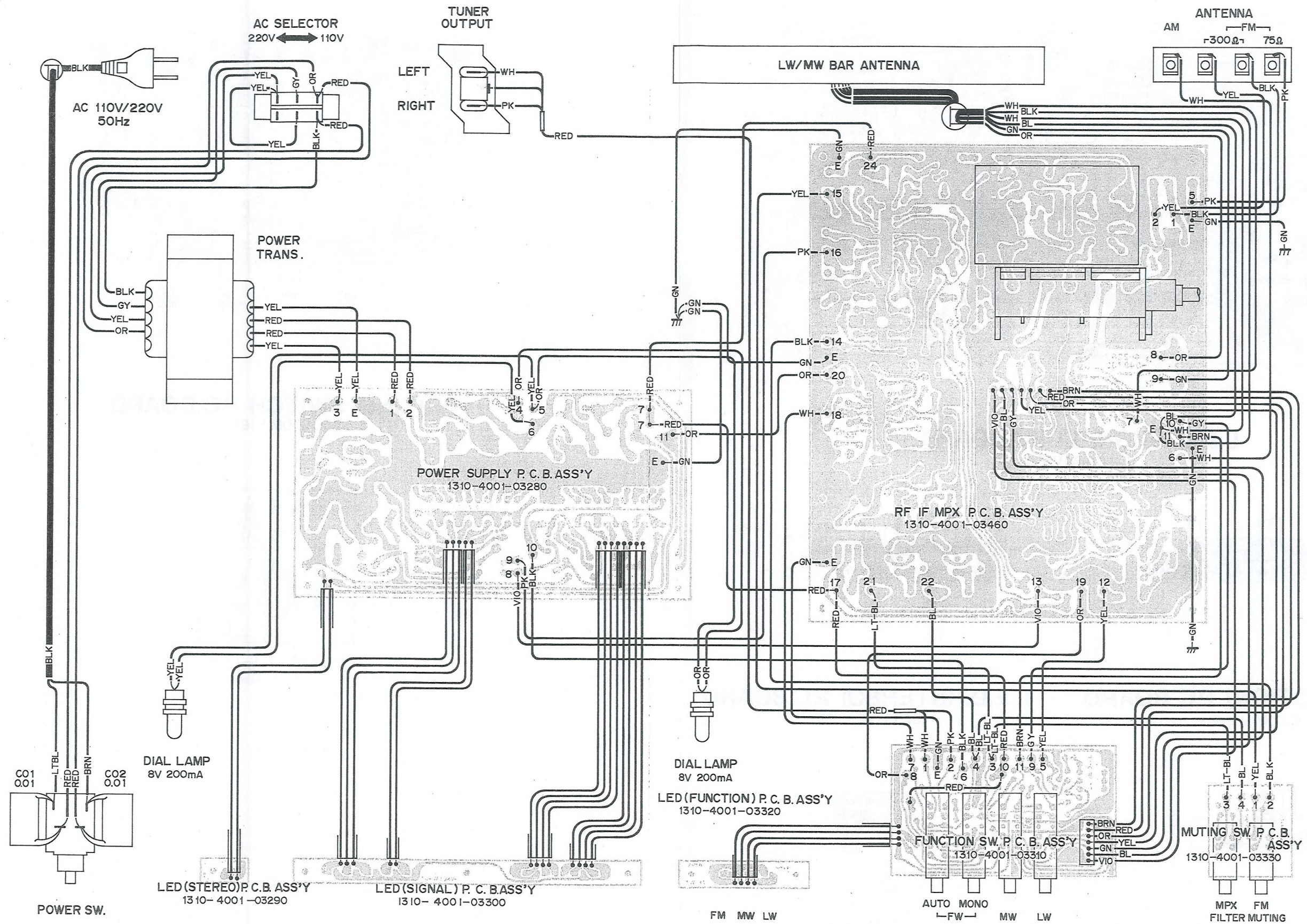
L.E.D. (FUNCTION) P.C.BOARD
(BOTTOM VIEW)



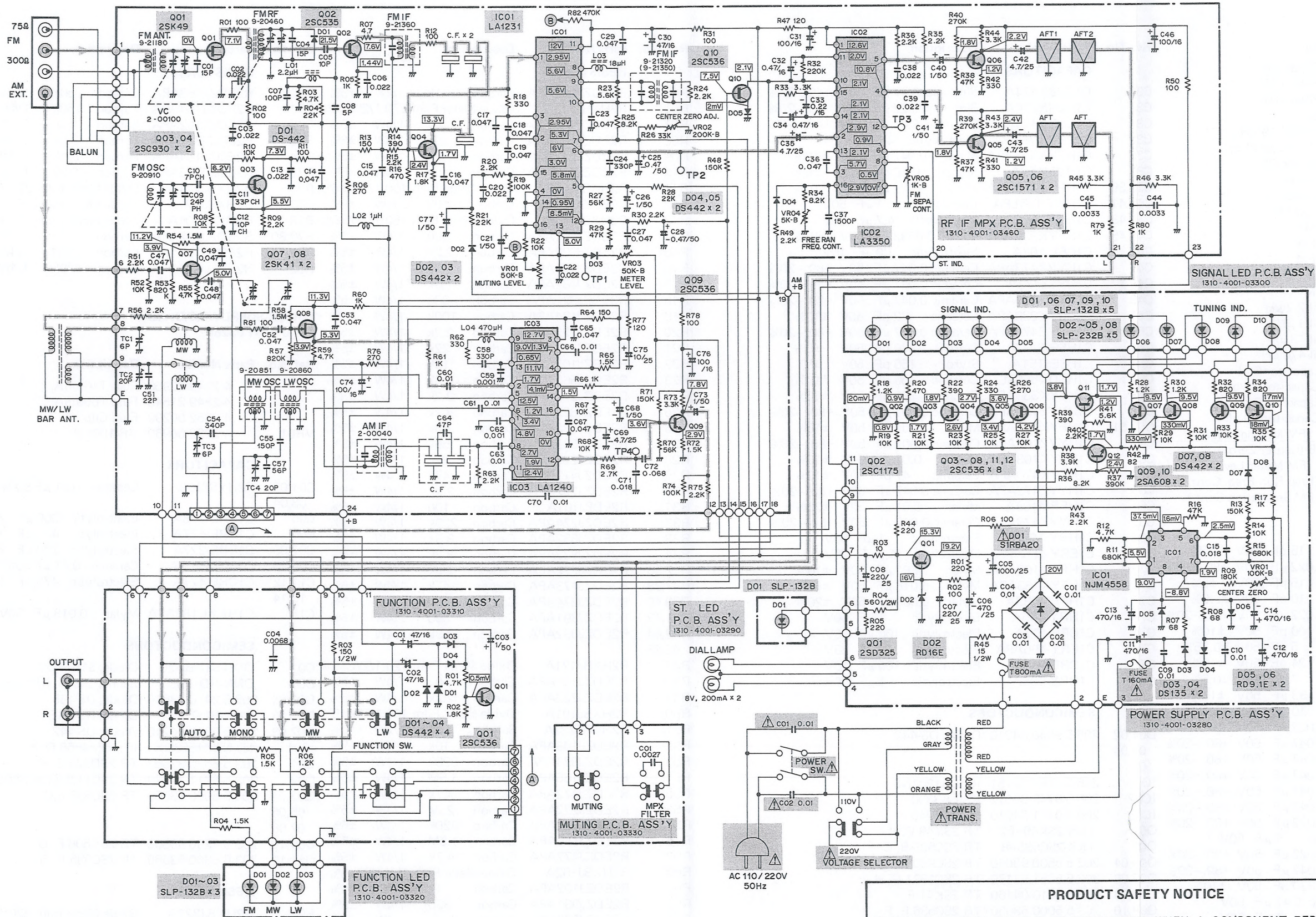
L.E.D. (STEREO) P.C.BOARD
(BOTTOM VIEW)



POINT TO POINT WIRING DIAGRAM



SCHEMATIC DIAGRAM



NOTES:

1. All resistors values are indicated in "ohm" ($K=10^3$, $M=10^6$).
2. All capacitors values are indicated in " μF " ($P=10^{-12}$).
3. All voltages indicated on the schematics are measured under the following conditions.
 - a. Use a V.T.V.M.
 - b. All voltages $\pm 10\%$ with respect chassis ground
 - c. No signals at input terminals
 - d. AC input at 220 volts 50 Hz
4. This is a fundamental schematics diagram. Some products may be modified without notice.

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PARTS LIST

RF IF MPX P.C.B. Assy 131 0 4001 03460											
Ref. No.	Parts Number	Description				Ref. No.	Parts Number	Description			
	4 2242 00100	Variable Capacitor					CAPACITORS				
	4 2272 00020	Ceramic Filter FM				C32	C1CUBX474A	Sint. Alu.	0.47 μF	16V	+40,—20%
	4 2272 00030	Ceramic Filter AM				C33	C1CUBX224A	Sint. Alu.	0.22 μF	16V	+40,—20%
	4 2329 20210	Relay Leed				C34	C1CUBX474A	Sint. Alu.	0.47 μF	16V	+40,—20%
	4 2522 00070	AF Filter (MPX 19 kHz)				C35	C1ERY-475APA	Electrolytic	4.7 μF	25V	
	4 2522 00080	AF Filter (MPX 38 kHz)				C36	C1HFYK473APA	Mylar	0.047 μF	50V	±10%
	4 2562 00040	IF Transformer AM				C37	C1HSEJ152A	Styrol	1500 pF	50V	±5%
	4 2569 21320	IF Transformer FM				C38,39	C1HFYK223APA	Mylar	0.022 μF	50V	±10%
	4 2569 21360	IF Transformer FM				C40,41	C1HRY-105LPA	Electrolytic	1 μF	50V	
	4 2579 21180	Antenna Coil FM				C42,43	C1ERY-475LPA	Electrolytic	4.7 μF	25V	
	4 2589 20851	OSC Coil MW				C44,45	C1HFYK332APA	Mylar	0.0033 μF	50V	±10%
	4 2589 20860	OSC Coil LW				C46	C1CRE-107A	Electrolytic	100 μF	16V	
	4 2589 20910	OSC Coil FM				C47	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%
	4 2599 20300	Balun 75 ohm/300 ohm				C48	C1HYSZ473A	Ceramic	0.047 μF	50V	+80,—20%
	4 2599 20460	RF Coil FM				C49	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%
L01	4 2539 20420	Choke Coil 2.2 μH				C51	C1HCYK220APA	Ceramic	22 pF	50V	±10%
L02	4 2539 20122	Choke Coil 1 μH				C52,53	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%
L03	4 2532 00030	Choke Coil 18 μH				C54	C1HSEJ341A	Styrol	340 pF	50V	±5%
L04	4 2539 20410	Choke Coil 470 μH				C55	C1HSEJ151A	Styrol	150 pF	50V	±5%
TC01	4 2242 00060	Variable Capacitor 6 pF				C57	C1HCDK560SL	Ceramic	56 pF	50V	±10%
TC02	4 2249 20440	Trimmer Capacitor 20 pF				C58	C1HCYK331APA	Ceramic	330 pF	50V	±10%
TC03	4 2242 00060	Variable Capacitor 6 pF				C59	C1HYYZ102APA	Ceramic	0.001 μF	50V	+80,—20%
TC04	4 2249 20440	Trimmer Capacitor 20 pF				C60,61	C1HFYK103APA	Mylar	0.01 μF	50V	±10%
VR01	4 2222 01010	VR 50k-B (FM Muting Level)				C62	C1HYYZ102APA	Ceramic	0.001 μF	50V	+80,—20%
VR02	4 2222 01020	VR 200k-B (Center Zero Adjust)				C63	C1HFYK103APA	Mylar	0.01 μF	50V	±10%
VR03	4 2222 01010	VR 50k-B (FM Meter Level)				C64	C1HCYK470APA	Ceramic	47 pF	50V	±10%
VR04	4 2222 01000	VR 5k-B (Free Run Freq. Cont.)				C65	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%
VR05	4 2222 00990	VR 1k-B (FM Separation Cont.)				C66	C1HFRM103A	Mylar	0.01 μF	50V	±20%
		CAPACITORS				C67	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%
C01	C1HCDJ150SL	Ceramic	15 pF	50V	±5%	C68	C1HRY-105APA	Electrolytic	1 μF	50V	
C02,03	C1HYYZ223APA	Ceramic	0.022 μF	50V	+80,—20%	C69	C1ERY-475APA	Electrolytic	4.7 μF	25V	
C04	C1HCDJ150SL	Ceramic	15 pF	50V	±5%	C70	C1HFYK103APA	Mylar	0.01 μF	50V	±10%
C05	C1HCDD100SL	Ceramic	10 pF	50V	±0.5%	C71	C1HFYK183APA	Mylar	0.018 μF	50V	±10%
C06	C1HYYZ223APA	Ceramic	0.022 μF	50V	+80,—20%	C72	C1HFRM683A	Mylar	0.068 μF	50V	±20%
C07	C1HCYK101APA	Ceramic	100 pF	50V	±10%	C73	C1HRY-105A	Electrolytic	1 μF	50V	
C08	C1HCDC050SL	Ceramic	5 pF	50V	±0.25%	C74	C1CRE-107A	Electrolytic	100 μF	16V	
C09	C1HCDK240PH	Ceramic	24 pF	50V	±10%	C75	C1ERY-106APA	Electrolytic	10 μF	25V	
C10	C1HCDD070CH	Ceramic	7 pF	50V	±0.5%	C76	C1CRE-107A	Electrolytic	100 μF	16V	
C11	C1HCDK330CH	Ceramic	33 pF	50V	±10%	C77	C1HRY-105APA	Electrolytic	1 μF	50V	
C12	C1HCDD100CH	Ceramic	10 pF	50V	±0.5%		SEMICONDUCTORS				
C13	C1HYYZ223APA	Ceramic	0.022 μF	50V	+80,—20%	D01,02	205 5 9040 44210	Diode, DS-442			
C14,15	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%	03,04					
C16	C1HYSZ473A	Ceramic	0.047 μF	50V	+80,—20%	05					
C17	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%	IC01	206 5 0161 23151	IC, LA1231NS			
C18	C1HYSZ473A	Ceramic	0.047 μF	50V	+80,—20%	IC02	206 5 0743 35012	IC, LA3350			
C19	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%	IC03	206 5 0171 24010	IC, LA1240			
C20	C1HYYZ223APA	Ceramic	0.022 μF	50V	+80,—20%	Q01	TNN-2SK49--F2	TR 2SK49 F, H			
C21	C1HRE-105A	Electrolytic	1 μF	50V		Q02	TKK-2SC535--B	TR 2SC535 B, C			
C22	C1HYYZ223APA	Ceramic	0.022 μF	50V	+80,—20%	Q03,04	203 5 5500 93040	TR 2SC930 D, E			
C23	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%	Q05,06	203 5 5251 57170	TR 2SC1571 G, H			
C24	C1HCYK331APA	Ceramic	330 pF	50V	±10%	Q07,08	203 5 6510 04160	TR 2SK41 F			
C25	C1HRY-474APA	Electrolytic	0.47 μF	50V		Q09,10	203 5 5000 53650	TR 2SC536 E, F			
C26	C1HRE-105A	Electrolytic	1 μF	50V			RESISTORS				
C27	C1HYYZ473APA	Ceramic	0.047 μF	50V	+80,—20%	R01	R2EDZJ101APA	Carbon	100	1/4W	±5%
C28	C1HRY-474APA	Electrolytic	0.47 μF	50V		R02	R2HXB101A	Oxide Metal Film	100	1/2W	±5%
C29	C1HYSZ473A	Ceramic	0.047 μF	50V	+80,—20%	R03	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%
C30	C1CRY-476APA	Electrolytic	47 μF	16V		R04	R2EDZJ223APA	Carbon	22k	1/4W	±5%
C31	C1CRE-107A	Electrolytic	100 μF	16V							
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PARTS LIST (Continued)

FUNCTION P.C.B. Assy
131 0 4001 03310

Ref. No.	Parts Number	Description
RESISTORS		
R09	R2EDZJ184APA	Carbon 180k 1/4W ±5%
R10	R2EDZJ331APA	Carbon 330 1/4W ±5%
R11	R2EDZJ684APA	Carbon 680k 1/4W ±5%
R12	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%
R13	R2EDZJ154APA	Carbon 150k 1/4W ±5%
R14	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R15	R2EDZJ684APA	Carbon 680k 1/4W ±5%
R16	R2EDZJ473APA	Carbon 47k 1/4W ±5%
R17	R2EDZJ102APA	Carbon 1k 1/4W ±5%
R18	R2EDZJ122APA	Carbon 1.2k 1/4W ±5%
R19	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R20	R2EDZJ471APA	Carbon 470 1/4W ±5%
R21	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R22	R2EDZJ391APA	Carbon 390 1/4W ±5%
R23	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R24	R2EDZJ331APA	Carbon 330 1/4W ±5%
R25	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R26	R2EDZJ271APA	Carbon 270 1/4W ±5%
R27	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R28	R2EDZJ122APA	Carbon 1.2k 1/4W ±5%
R29	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R30	R2EDZJ122APA	Carbon 1.2k 1/4W ±5%
R31	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R32	R2EDZJ821APA	Carbon 820 1/4W ±5%
R33	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R34	R2EDZJ821APA	Carbon 820 1/4W ±5%
R35	R2EDZJ103APA	Carbon 10k 1/4W ±5%
R36	R2EDZJ822APA	Carbon 8.2k 1/4W ±5%
R37	R2EDZJ394APA	Carbon 390k 1/4W ±5%
R38	R2EDZJ392APA	Carbon 3.9k 1/4W ±5%
R39	R2EDZJ391APA	Carbon 390 1/4W ±5%
R40	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%
R41	R2EDZJ562APA	Carbon 5.6k 1/4W ±5%
R42	R2EDZJ820APA	Carbon 82 1/4W ±5%
R43	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%
R44	R2EDZJ221APA	Carbon 220 1/4W ±5%
R45	R2HXB150A	Oxide Metal Film 15 1/2W ±5%

L.E.D. (STEREO) P.C.B. Assy
131 0 4001 03290

Ref. No.	Parts Nuber	Description
SEMICONDUCTORS		
D01	DOO-SLP-132B	Diode, SLP-132B

L.E.D. (SIGNAL) P.C.B. Assy
131 0 4001 03300

Ref. No.	Parts Number	Description
SEMICONDUCTORS		
D01	DOO-SLP-132B	Diode, SLP-132B, Red
D02,03 04,05	DOO-SLP-232B	Diode, SLP-232B, Green
D06,07	DOO-SLP-132B	Diode, SLP-132B, Red
D08	DOO-SLP-232B	Diode, SLP-232B, Green
D09,10	DOO-SLP-132B	Diode, SLP-132B, Red.

Ref. No.	Parts Number	Description
CAPACITORS		
	4 2312 03850	Switch Push 4key
	4 2362 00130	Plug 7P
SEMICONDUCTORS		
C01	C1CRY-476APA	Electrolytic 47 μF 16V
C02	C1CRE-476A	Electrolytic 47 μF 16V
C03	C1HRY-105APA	Electrolytic 1 μF 50V
C04	C1HFRM682A	Mylar 0.0068 μF 50V ±20%
D01,02 03,04	205 5 9040 44210	Diode, DS-442
Q01	203 5 5000 53660	TR 2SC536 F, G

RESISTORS					
R01	R2EDZJ472APA	Carbon	4.7k	1/4W	±5%
R02	R2EDZJ182APA	Carbon	1.8k	1/4W	±5%
R03	R2HXB151A	Oxide Metal Film	150	1/2W	±5%
R04,05	R2EDZJ152APA	Carbon	1.5k	1/4W	±5%
R06	R2EDZJ122APA	Carbon	1.2k	1/4W	±5%

L.E.D. (FUNCTION) P.C.B. Assy
131 0 4001 03320

Ref. No.	Parts Number	Description
SEMICONDUCTORS		
D01,02 03	DOO-SLP-132B	Diode, SLP-132B

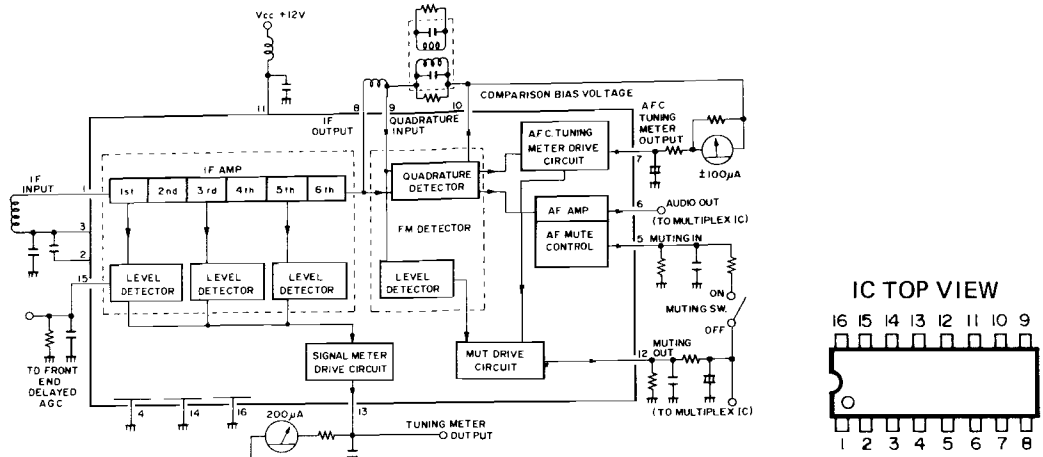
MUTING P.C.B. Assy
131 0 4001 03330

Ref. No.	Parts Number	Description
	4 2312 03840	Switch Push 2key

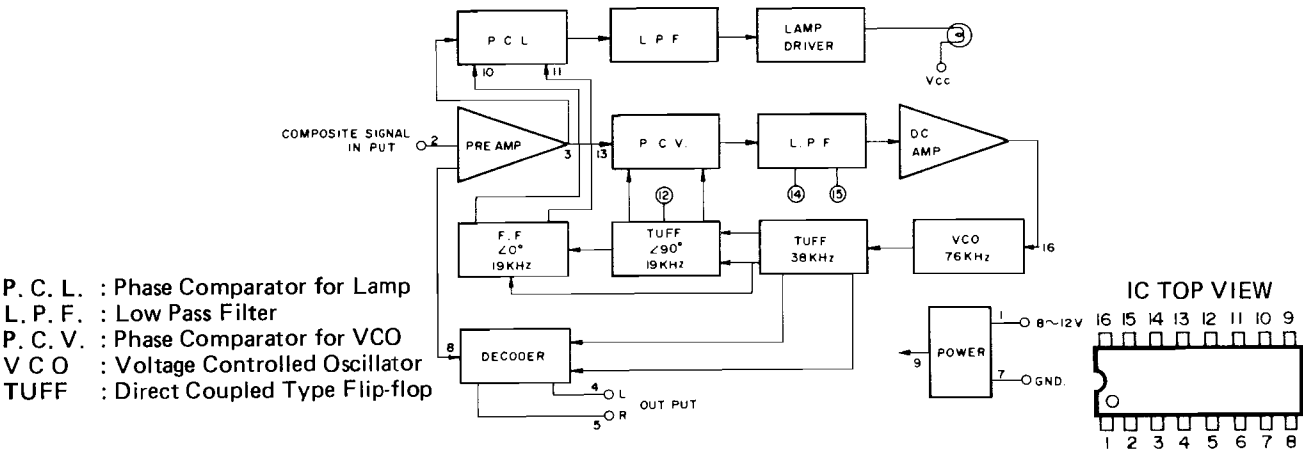
CAPACITORS		
C01	C1HFYK272APA	Mylar 0.0027 μF 50V ±10%

NOTES:
1. Part orders must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and/or resistors must be multiple of 10 pcs.

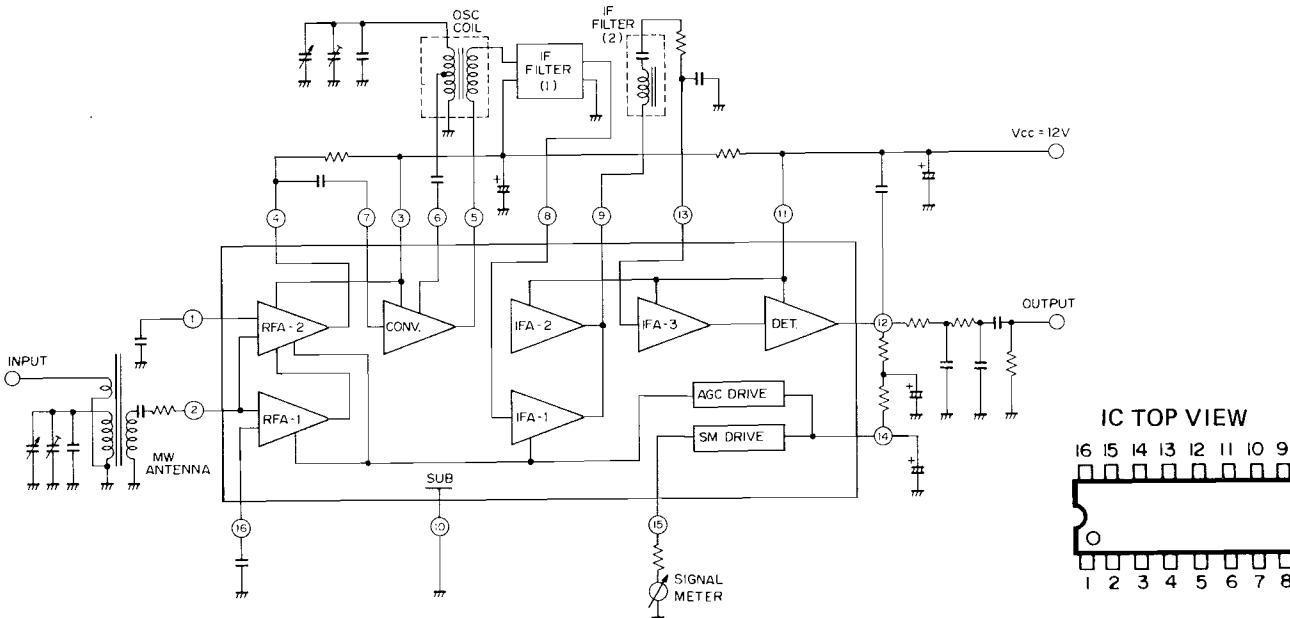
FM IF IC LA1231 SIGNAL FLOW



FM MPX IC LA3350 SIGNAL FLOW



AM RF IF IC LA1240 SIGNAL FLOW



MEMO