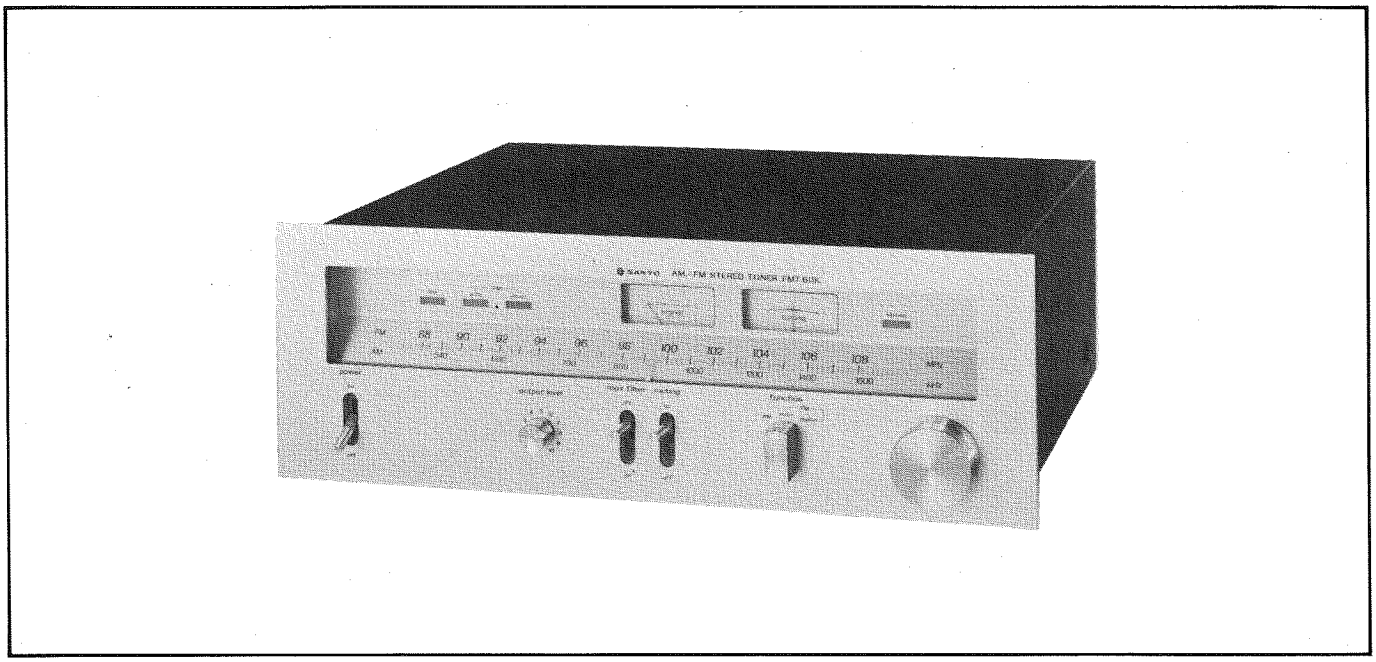
SERVICE MANUAL

STEREO TUNER

SANYO

FMT 611K
(USA)



SPECIFICATIONS (Nominal)

FM SECTION

Usable Sensitivity	
Mono	1.9 μV/10.77 dBf
Stereo	4.8 μV/18.82 dBf
50 dB Quieting Sensitivity	
Mono	2.8 μV/14.14 dBf
Stereo	38 μF / 36.79 dBf
Signal-to-Noise Ratio at 1mV	
Mono	70 dB
Stereo	66 dB
Capture Ratio	1.2 dB
Alt. Channel Selectivity (±400 kHz)	65 dB
Image Response Ratio	58 dB
Spurious Response Ratio	85 dB
IF Response Ratio	75 dB
AM Suppression Ratio	60 dB
Total Harmonic Distortion at 1mV	
Mono	0.15 %
Stereo	0.2 %
Stereo Separation (100 Hz/1 kHz/10 kHz)	35 dB/40 dB/35 dB
Sub-Carrier Product Rejection (19 kHz/38 kHz)	70 dB/70 dB
Audio Frequency Response	20 Hz – 15 kHz ±2 dB

AM SECTION

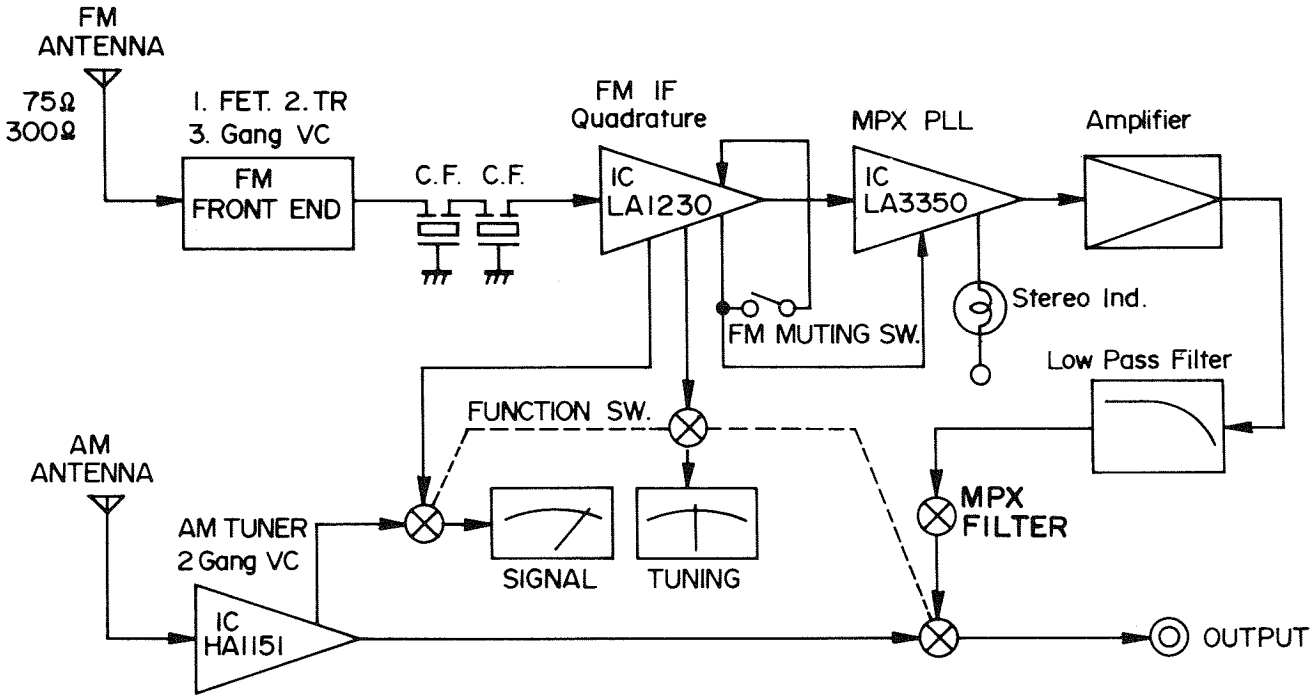
Usable Sensitivity	300 μV/m
Selectivity at ±10 kHz	40 dB
Spurious Rejection	45 dB
Image Response Ratio	50 dB
IF Response Ratio	40 dB
S/N at 100 mV/Input	65 dB
THD at 10 mV/m Antenna Input	
30 % mod.	0.3 %
80 % mod.	0.9 %

GENERAL SECTION

Power Requirements	120 V AC ±10 % 18 W
Dimensions (W x D x H)	16-1/2" x 13-3/4" x 5-7/8".
Weight	14.3 lbs.

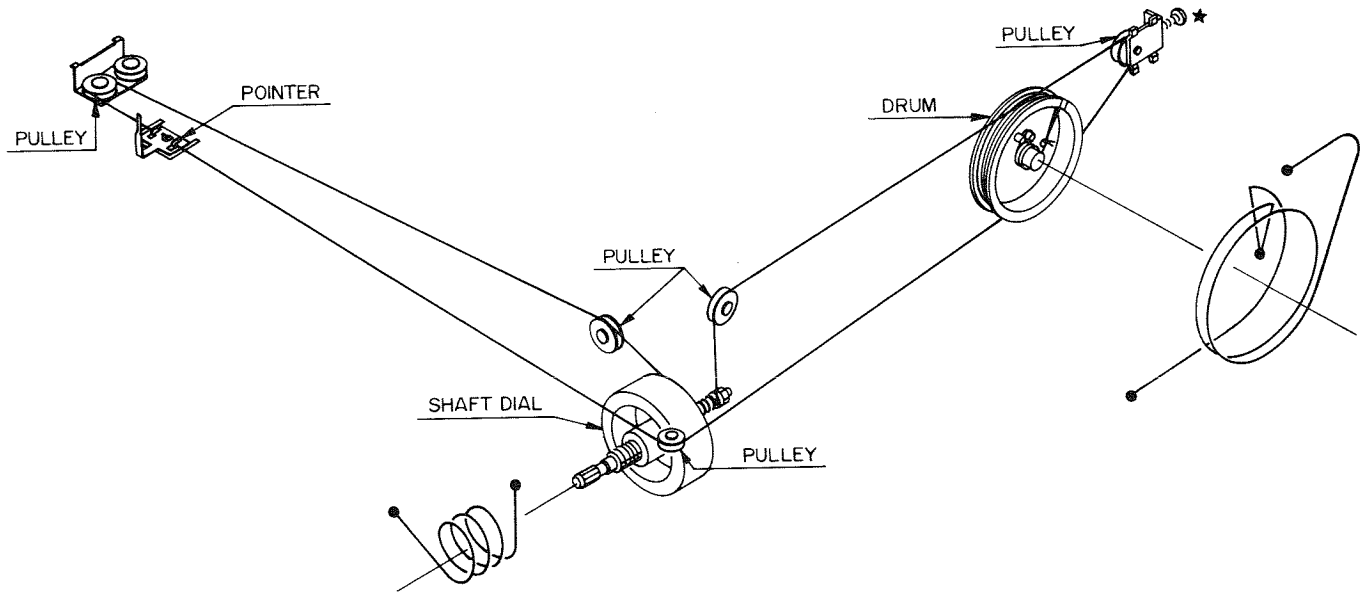
*** Specifications are subject to change without notice.**

FUNCTIONAL BLOCK DIAGRAM



DIAL CORD STRINGING

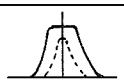
★ Adjustment screw of dial cord tension.



AM-FM RF/IF MPX ADJUSTMENT

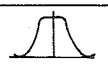
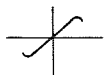
AM ADJUSTMENT

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

Step	Adjusting circuit	Connection		Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output			
1	IF	Connect 455kHz sweep generator to VC4.	Connect oscilloscope to test point TP19	Near max. capacity of VC at position of on interference.	AM 1st 9-21310 AM DET 9-21291	 455kHz
2	RF	Connect AM generator to EXT AM ANT and GND terminals. Set to 600kHz. Modulate with 30%, 1kHz.	Connect V.T.V.M. to TP19	600kHz	AM ANT 9-25050 AM OSC 9-20851	Max.
3		Change frequency to 1400kHz.	Connect V.T.V.M. to TP19	1400kHz	TC4 TC5	Max.
4	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 "AM"
5. Use a screwdriver with plastic grip for all adjustments.

FM ADJUSTMENT

Step	Adjusting circuit	Connection		Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output			
1	IF	Connect sweep 10.7MHz generator to test point TP. VC2 through 0.01 μF.	Connect oscilloscope to test point TP7	Near max. capacity of VC. at position of on interference.	1st IFT in FRONT END	 10.7MHz
2	Quadrature Detector		Connect oscilloscope to test point TP6		FM QUADRATURE COIL 9-21320	
3	RF	Connect FM RF generator through two 120-ohm resistors to FM ANT screw terminals. Set generator to 90MHz, modulate with 400Hz to provide ±75kHz deviation. Set generator output attenuator as low as possible.	Connect V.T.V.M. to tuner Output.	90MHz	LA LR	Max.
4		Change generator setting to 106MHz.	Connect V.T.V.M. to Tuner output.	106MHz	TCA TCR	Max.
5	Repeat adjustment.					

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 300 ohm.
4. Function switch to "FM".
5. Use a screwdriver with plastic grip for all adjustments.

FM MPX ADJUSTMENT

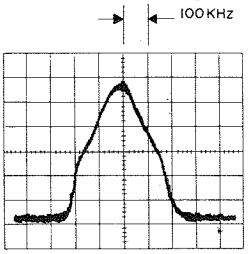
Step	Adjusting circuit	Connection		Position of tuning dial	Adjustment	
		Input	Output			
1	PLL IC FO (19kHz) Adjustment	None	Connect Frequency counter or synchroscope to TP8	Near max. capacity of VC. at position of on interference.	Adjust VR01 (5k-B) so that frequency counter or synchroscope indicate 19kHz.	
2	FMSTEREO Signal Separation	As above Steps 3,4 except modulation. Modulate LEFT channel ±67.5kHz – 400Hz audio and ±7.5kHz – 19kHz pilot carrier.	Connect V.T.V.M. to output terminal (R channel).		VR02 (1k-B)	V.T.V.M. Min.
		As above except modulate RIGHT Channel.	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.

ALIGNMENT WAVE FORMS

WITH OSCILLOSCOPE TIME BASE SETTINGS

FM IF CURVE

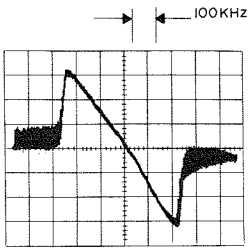


Vertical Sensitivity: 0.5V/cm.

Horizontal Sweep: 100 usec./cm.

→ IF FREQ.
FM IF
ALIGNMENT

S-CURVE

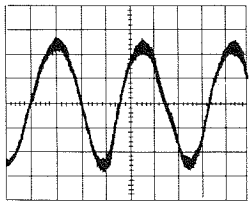


Vertical Sensitivity: 0.5V/cm.

Horizontal Sweep: 100 usec./cm.

FM DETECTOR
ALIGNMENT

SINE WAVE

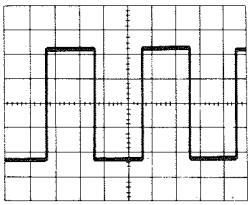


Vertical Sensitivity: 0.5V/cm.

Horizontal Sweep: 500 usec./cm.

SYMMETRICAL
TUNING

SQUARE WAVE

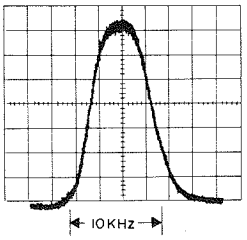


Vertical Sensitivity: 0.5V/cm.

Horizontal Sensitivity: 0.5V/cm.

MPX F.R.F.C.
ADJUSTMENT

AM IF CURVE



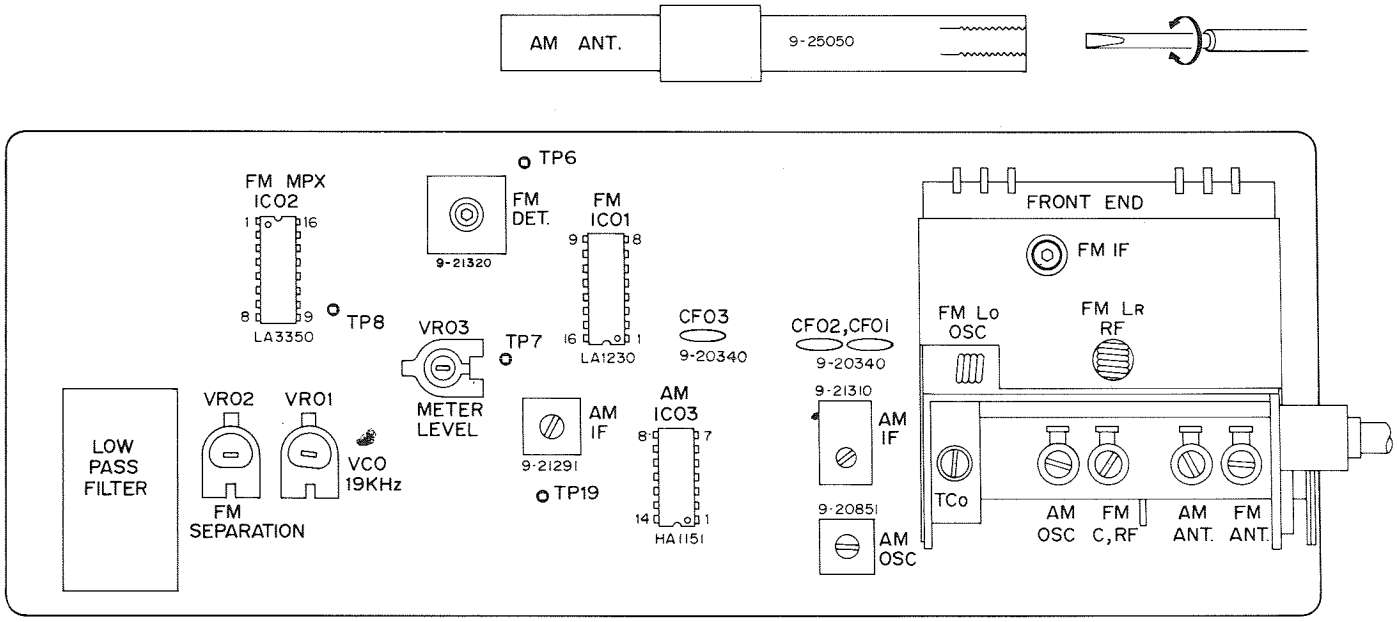
Vertical Sensitivity: 0.5V/cm.

Horizontal Sweep: 100 usec./cm.

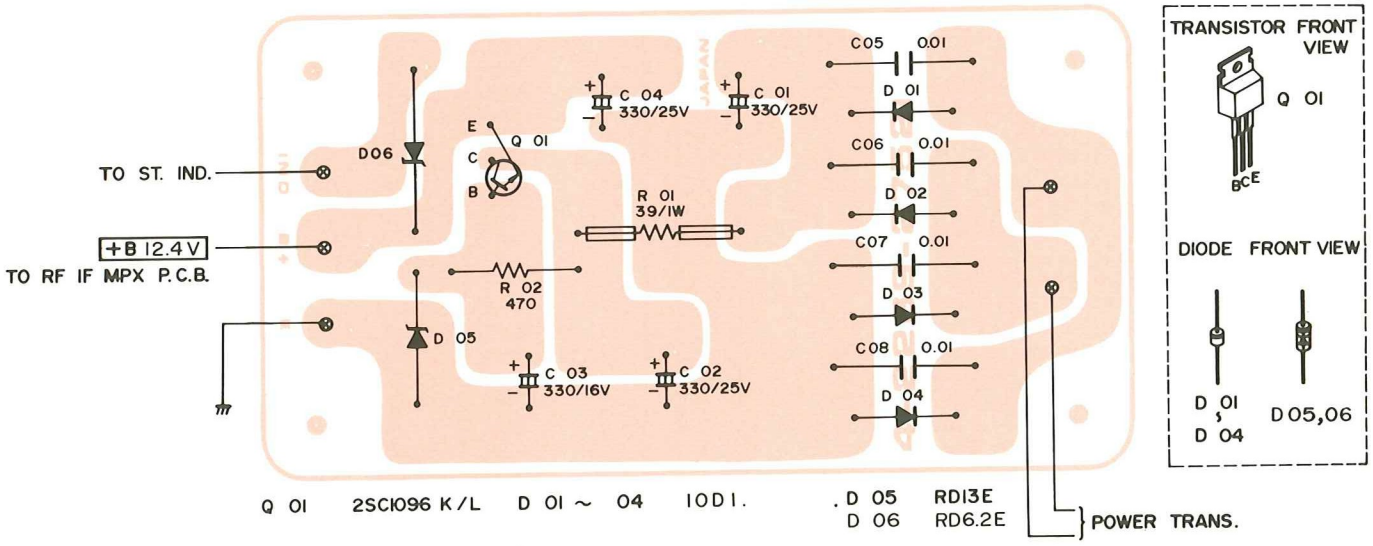
AM IF
ALIGNMENT

AM-FM RF/IF MPX BOARD LAYOUT

(TOP VIEW)

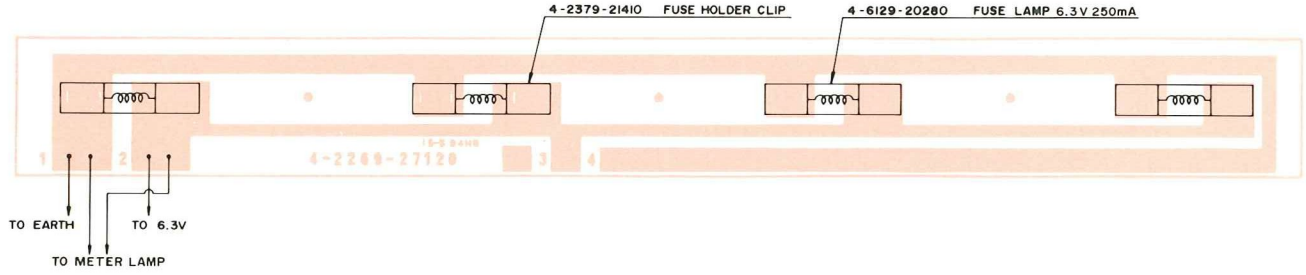


POWER SUPPLY P.C.BOARD
(BOTTOM VIEW)



TRANSISTOR DC VOLTAGES				
SYMBOL No.	DEVICE	B	C	E
Q01	2SC1096	12.6V	18V	12.4V

DIAL LAMP P.C.BOARD
(BOTTOM VIEW)



PARTS LIST

Ref.No.	Parts No.	Description	Q'ty
POWER SUPPLY P.C.B. ASSY			
	131 0 4001 70604	Power Supply P.C.B. Assy	1
	CAPACITORS		
C01,02	C1ERE-337A--	Electrolytic 330 μF 25V	2
C03	C1CRE-337A--	Electrolytic 330 μF 16V	1
C04	C1ERE-337A--	Electrolytic 330 μF 25V	1
C05,06 07,08	C2HYDP103A--	Ceramic 0.01 μF 500V +100,–0%	4
	SEMICONDUCTORS		
D01,02 03,04	DCC-10D1----N	Diode 10D1	4
D05	DNN-RD13E----	Zener Diode RD-13E	1
D06	DNN-RD6.2E---	Zener Diode RD-6.2E	1
Q01	TNN-2SC1096-K	TR 2SC1096K	1
	RESISTORS		
R01	R3AXPK390A	Oxide Metal Film 39 1W ±10%	1
R02	R2EDSJ471A	Carbon 470 1/4W ±5%	1

Ref.No.	Parts No.	Description	Q'ty
DIAL LAMP P.C.B. ASSY			
	131 0 4001 67101	Dial Lamp P.C.B. Assy	1
	131 2 1406 12100	Plate Color	4
	4 2379 21410	Lamp Holder	8
	4 6129 20280	Pilot Lamp, 6.3V 250mA	4

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.

PARTS LIST

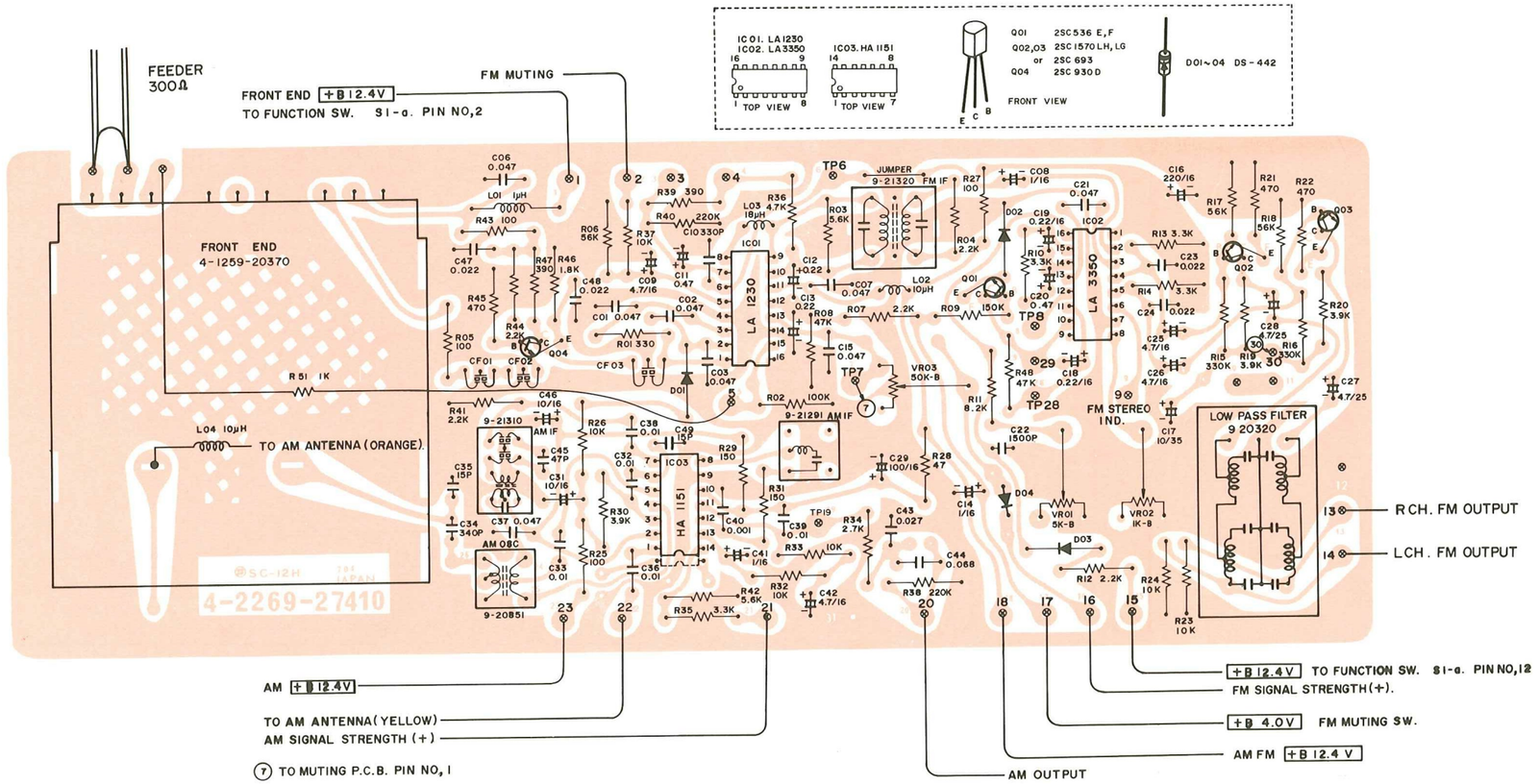
Ref.No.	Parts No.	Description	Q'ty
RF-IF/MPX P.C.B. ASSY			
	131 0 4001 80708	RF-IF/MPX P.C.B. Assy	1
VR01	4 2229 22842	VR B-5k	1
VR02	4 2229 24210	VR 1kB	1
VR03	4 2229 25400	VR B-50k	1
	4 1259 20370	Front End	1
	4 2279 20340	Ceramic Filter (10.7MHz)	3
	4 2279 20320	Low Pass Filter	1
	4 2359 22980	IC Socket 16P	1
	4 2569 21291	IF Trans AM (Black)	1
	4 2569 21310	IF Trans AM (Red)	1
	4 2569 21320	IF Trans FM (Quadrature)	1
	4 2589 20851	OSC Coil AM (Red)	1
L01	4 2539 20120	IF Trap	1
L02	4 2539 20370	10 μH ±10%	1
L03	4 2539 20380	18 μH ±5%	1
L04	4 2539 20430	Peaking Coil 10 μH	1
CAPACITORS			
C01,02 03	C1HBDM473W--	Semiconductor 0.047 μF 50V ±20%	3
C06,07	C1HYSZ473A--	Ceramic 0.047 μF 50V +80,–20%	2
C08	C1CUEX105A--	Alsicon 1 μF 16V +40,–20%	1
C09	C1CRE-475A--	Electrolytic 4.7 μF 16V	1
C10	C1HCSK331SL-	Ceramic 330pF 50V ±10%	1
C11,20	C1CUEX474A--	Alsicon 0.47 μF 16V +40,–20%	2
C12,13	C1CUEX224A--	Alsicon 0.22 μF 16V +40,–20%	2
C14	C1CRE-105A--	Electrolytic 1 μF 16V	1
C15	C1HYSZ473A--	Ceramic 0.047 μF 50V +80,–20%	1
C16	C1CRE-227A--	Electrolytic 220 μF 16V	1
C17	C1VRE-106A--	Electrolytic 10 μF 35V	1
C18,19	C1CUEX224A--	Alsicon 0.22 μF 16V +40,–20%	2
C21	C1HFRM473A--	Mylar 0.047 μF 50V ±20%	1
C22	C1HSEJ152A--	Styrol 1500pF 50V ±5%	1
C23,24	C1HFRK223A--	Mylar 0.022 μF 50V ±10%	2
C25,26	C1CUEX475A--	Alsicon 4.7 μF 16V +40,–20%	2
C27,28	C1ETRM475A--	Tantalum 4.7 μF 25V ±20%	2
C29	C1CRE-107A--	Electrolytic 100 μF 16V	1
C31	C1CRE-106A--	Electrolytic 10 μF 16V	1
C32,33	C1HFRM103A--	Mylar 0.01 μF 50V ±20%	2
C34	C1HSEJ341A--	Styrol 340pF 50V ±5%	1
C35	C1HCSJ150WK-	Ceramic 15pF 50V ±5%	1
C36	C1HFRM103A--	Mylar 0.01 μF 50V ±20%	1
C37	C1HYSZ473A--	Ceramic 0.047 μF 50V +80,–20%	1
C38,39	C1HFRM103A--	Mylar 0.01 μF 50V ±20%	2
C40	C1HFRM102A--	Mylar 0.001 μF 50V ±20%	1
C41	C1CUEX105A--	Alsicon 1 μF 16V +40,–20%	1
C42	C1CRE-475A--	Electrolytic 4.7 μF 16V	1
C43	C1HFRM273A--	Mylar 0.027 μF 50V ±20%	1
C44	C1HFRM683A--	Mylar 0.068 μF 50V ±20%	1
C45	C1HCSK470SL-	Ceramic 47pF 50V ±10%	1
C46	C1CRE-106A--	Electrolytic 10 μF 16V	1
C47,48	C1HYSZ223A--	Ceramic 0.022 μF 50V +80,–20%	2
C49	C1HCSJ150SL-	Ceramic 15pF 50V ±5%	1
SEMICONDUCTORS			
D01,02 03,04	205 5 9040 44210	Diode DS-442	4
IC01	206 5 0151 23010	IC LA1230	1
IC02	206 5 0743 35012	IC LA3350 PLL For MPX	1
IC03	IKK-HA1151--	IC HA1151	1
Q01	203 5 5100 53650	TR 2SC536E	1
Q02,03	203 5 5151 57079	TR 2SC1570LG	2
Q04	203 5 5500 93040	TR 2SC930D	1
RESISTORS			
R01	R2EDZJ331APA	Carbon 330 1/4W ±5%	1
R02	R2EDZJ104APA	Carbon 100k 1/4W ±5%	1
R03	R2EDZJ562APA	Carbon 5.6k 1/4W ±5%	1
R04	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%	1
R05	R2EDZJ101APA	Carbon 100 1/4W ±5%	1

Ref.No.	Parts No.	Description	Q'ty
R06	R2EDZJ563APA	Carbon 56k 1/4W ±5%	1
R07	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%	1
R08	R2EDZJ473APA	Carbon 47k 1/4W ±5%	1
R09	R2EDZJ154APA	Carbon 150k 1/4W ±5%	1
R10	R2EDZJ332APA	Carbon 3.3k 1/4W ±5%	1
R11	R2EDZJ822APA	Carbon 8.2k 1/4W ±5%	1
R12	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%	1
R13,14	R2EDZJ332APA	Carbon 3.3k 1/4W ±5%	2
R15,16	R2EDZJ334APA	Carbon 330k 1/4W ±5%	2
R17,18	R2EDZJ563APA	Carbon 56k 1/4W ±5%	2
R19,20	R2EDZJ392APA	Carbon 3.9k 1/4W ±5%	2
R21,22	R2EDZJ471APA	Carbon 470 1/4W ±5%	2
R23,24	R2EDZJ103APA	Carbon 10k 1/4W ±5%	2
R25	R2EDZJ101APA	Carbon 100 1/4W ±5%	1
R26	R2EDZJ103APA	Carbon 10k 1/4W ±5%	1
R27	R2EDZJ101APA	Carbon 100 1/4W ±5%	1
R28	R2EDZJ470APA	Carbon 47 1/4W ±5%	1
R29	R2EDZJ151APA	Carbon 150 1/4W ±5%	1
R30	R2EDZJ392APA	Carbon 3.9k 1/4W ±5%	1
R31	R2EDZJ151APA	Carbon 150 1/4W ±5%	1
R32,33	R2EDZJ103APA	Carbon 10k 1/4W ±5%	2
R34	R2EDZJ272APA	Carbon 2.7k 1/4W ±5%	1
R35	R2EDZJ332APA	Carbon 3.3k 1/4W ±5%	1
R36	R2EDZJ472APA	Carbon 4.7k 1/4W ±5%	1
R37	R2EDZJ103APA	Carbon 10k 1/4W ±5%	1
R38	R2EDZJ224APA	Carbon 220k 1/4W ±5%	1
R39	R2EDSJ391A	Carbon 390 1/4W ±5%	1
R40	R2EDZJ224APA	Carbon 220k 1/4W ±5%	1
R41	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%	1
R42	R2EDZJ562APA	Carbon 5.6k 1/4W ±5%	1
R43	R2EDZJ101APA	Carbon 100 1/4W ±5%	1
R44	R2EDZJ222APA	Carbon 2.2k 1/4W ±5%	1
R45	R2EDZJ471APA	Carbon 470 1/4W ±5%	1
R46	R2EDZJ182APA	Carbon 1.8k 1/4W ±5%	1
R47	R2EDSJ391A	Carbon 390 1/4W ±5%	1
R48	R2EDZJ473APA	Carbon 47k 1/4W ±5%	1
R51	R2EDPJ102A	Carbon 1k 1/4W ±5%	1
MUTING P.C.B. ASSY			
	131 0 4001 91700	Muting P.C.B. Assy	1
VR01	4 2229 25100	VR 47kB	1
CAPACITORS			
C01	C1HRE-105A--	Electorlytic 1 μF 50V	1
C02	C1CRE-106A--	Electrolytic 10 μF 50V +80,–20%	1
C03	C1HYDZ473A--	Ceramic 0.047 μF 50V +80,–20%	1
C04	C1HCDK101SL--	Ceramic 100pF 50V ±20%	1
SEMICONDUCTORS			
D01	205 5 9040 44210	Diode DS-442	1
D02	202 5 9110 18820	Diode IS188FM1	1
Q01	203 5 5100 53650	TR 2SC536E	1
Q02	203 5 5151 57070	TR 2SC1570G	1
RESISTORS			
R02	R2EDSJ103A	Carbon 10k 1/4W ±5%	1
R03	R2EDSJ472A	Carbon 4.7k 1/4W ±5%	1
R04	R2EDSJ471A	Carbon 470k 1/4W ±5%	1
R05	R2EDSJ224A	Carbon 220k 1/4W ±5%	1
R06	R2EDSJ564A	Carbon 560k 1/4W ±5%	1
R07	R2EDSJ332A	Carbon 3.3k 1/4W ±5%	1
SWITCH P.C.B. ASSY			
	131 0 4001 90800	Switch P.C.B. Assy	1
	4 2312 00620	Switch Lever	2
C01	C1HFRM223A--	Mylar 0.022 μF 50V ±20%	1

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.

AM-FM RF/IF MPX P.C.BOARD

(BOTTOM VIEW)

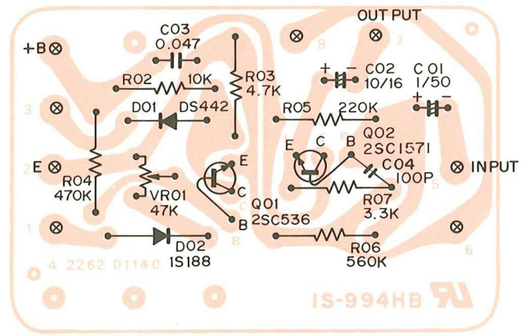


TRANSISTOR DC VOLATGES				
SYMBOL No.	DEVICE	B	C	E
Q01	2SC536E	1.0V	0.55V	0.5V
Q02	2SC1570LH	1.4V	4.8V	0.7V
Q03	2SC1570LH	1.4V	4.8V	0.7V
Q04	2SC930D	2.0V	11.2V	1.4V

IC PIN NUMBERS VOLTAGES															
DEVICE \ PIN No	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC01 LA1230	2.8V	2.8V	2.8V	0V	1.9V	5.7V	5.7V	5.7V	5.7V	5.7V	12.0V	3.7V	0.2V	0V	5.0V	0V
IC02 LA3350	10.3V	2.7V	4.8V	7.8V	7.8V	10V	0V	0.26V	6.3V	0.5V	1.7V	2.0V	2.0V	2.1V	2.1V	2.9V
IC03 HA1151	1.0V	10.6V	8.5V	10.7V	3.5V	1.3V	2.0V	6.4V	0V	11.2V	1.5V	0.7V	1.3V	0V		

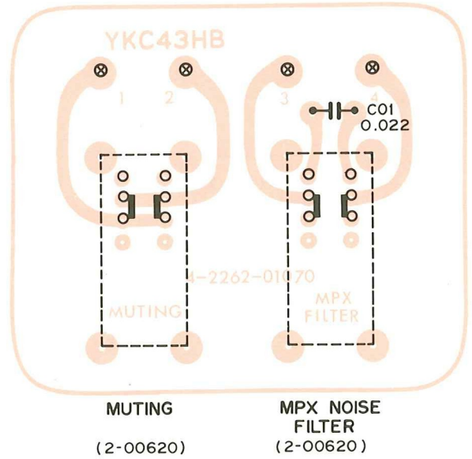
MUTING P.C.BOARD

(BOTTOM VIEW)



SWITCH P.C.BOARD

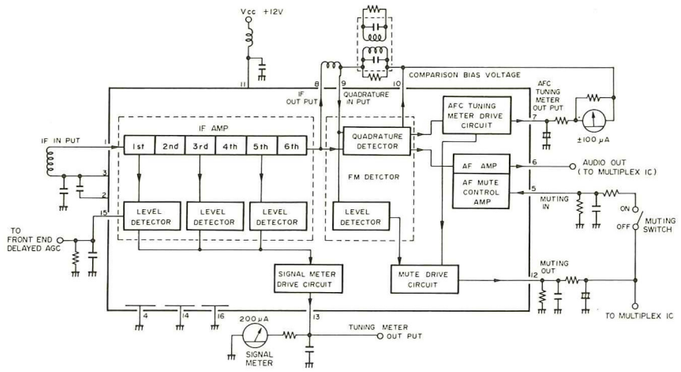
(BOTTOM VIEW)



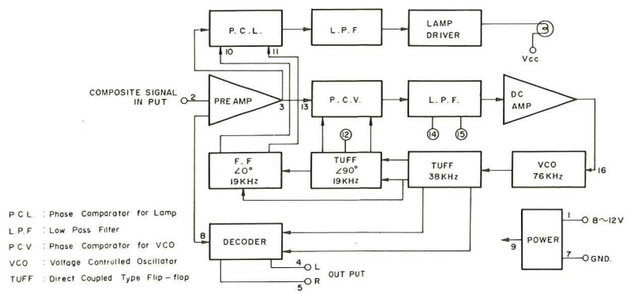
MUTING (2-00620)

MPX NOISE FILTER (2-00620)

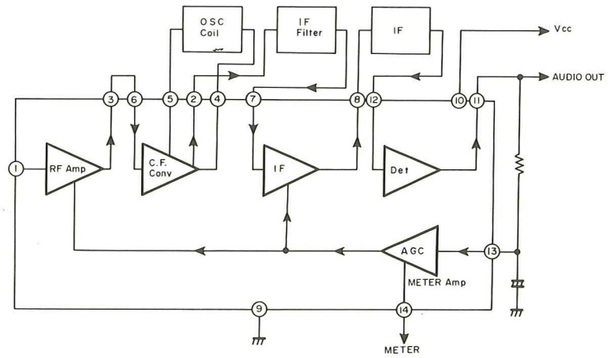
FM IF IC LA1230 SIGNAL FLOW



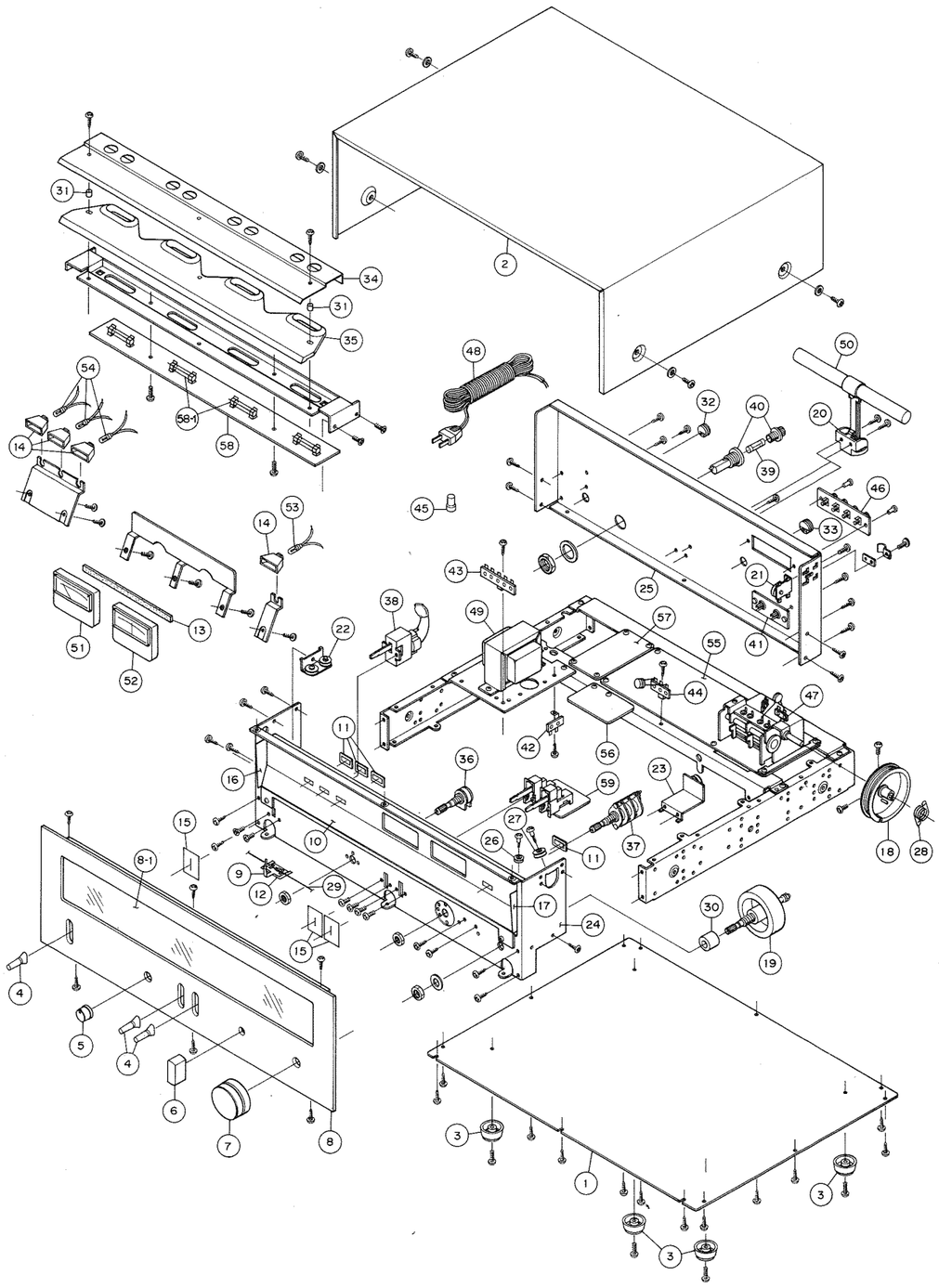
FM MPX IC LA3350 SIGNAL FLOW



AM RF IF IC HA1151 SIGNAL FLOW



EXPLODED VIEW OF CABINET AND CHASSIS



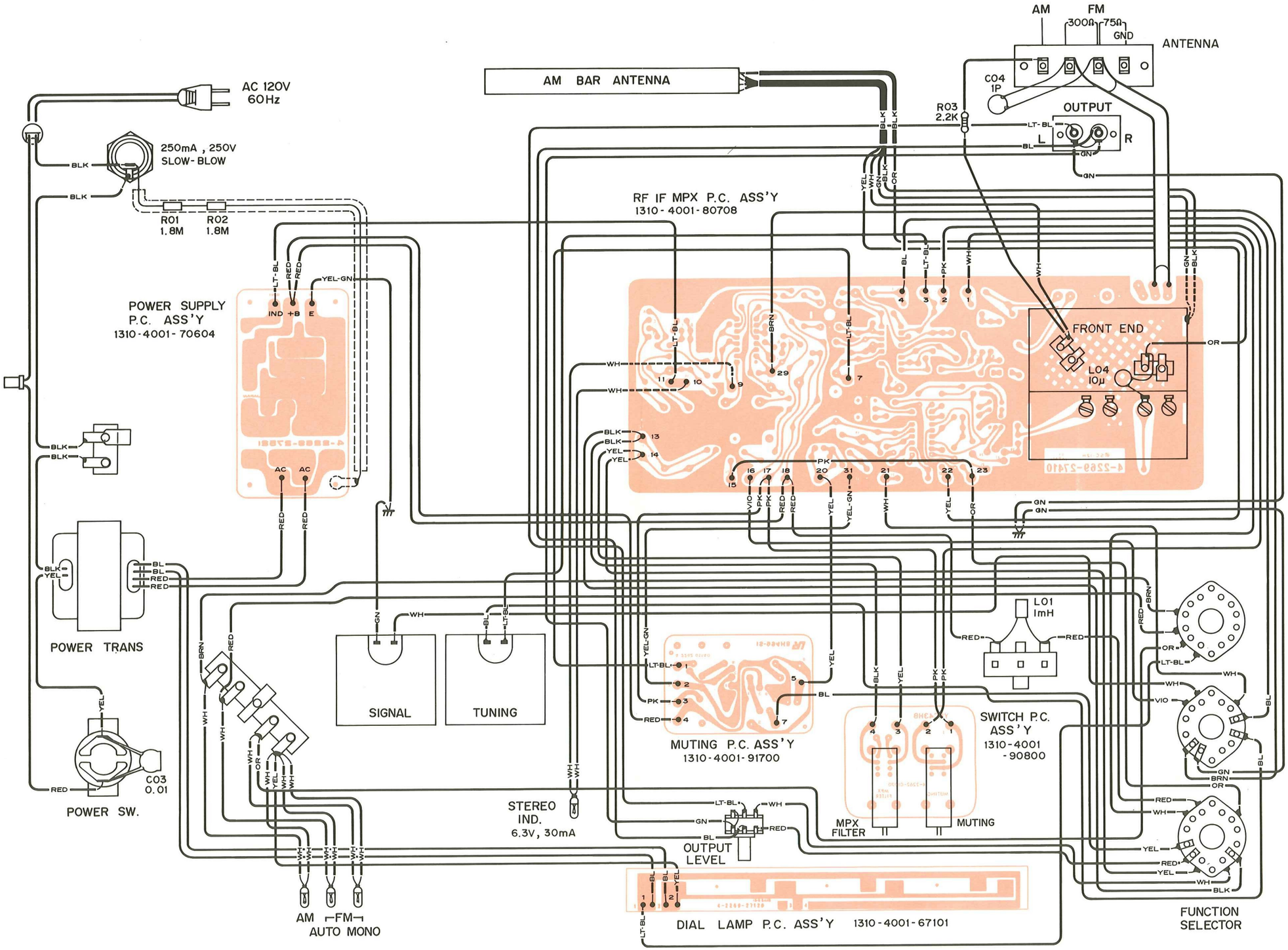
PARTS LIST

Ref.No.	Parts No.	Description	Q'ty
PACKING PARTS LIST			
	131 6 1139 58023	Box Corrugate-EXP	1
	131 6 2119 01441	Bag Polyethylene-EXP	1
	131 6 3009 20560	Pad (Right & Left)	2
ACCESSORY PARTS LIST			
	4 2449 20230	Antenna FM	1
	131 0 4004 11501	W Pin Cord	1
	131 6 2719 10600	Bag Fan	1
	131 6 4119 66501	Explanatory Booklet	1
CABINET PARTS LIST			
1	131 2 1105 16200	Plate Bottom	1
2	131 2 1410 14402	Cover	1
3	131 2 1801 13200	Leg	4
APPEARANCE PARTS LIST			
4	131 0 1001 37605	Knob Assy (Power, MPX Filter, Muting)	3
5	131 0 1001 42201	Knob Assy (Output Level)	1
6	131 0 1001 42501	Knob Assy (Function)	1
7	131 0 1001 44601	Knob Assy (Tuning)	1
8	131 0 1016 27002	Panel Decorate Assy	1
8-1	131 2 1205 19300	Decorate Plate Dial	1
9	131 0 3011 18000	Pointer Assy	1
10	131 2 1201 31002	Plate Dial	1
11	131 2 1503 12601	Decorate Sign	4
CHASSIS PARTS LIST			
12	131 2 5205 16000	Cushion (Pointer)	1
13	131 2 5205 18500	Cushion (Meter)	1
14	131 2 6111 15900	Bushing (Stereo Function IND)	4
15	131 2 6113 24100	Shelter (Lever Switches)	3
16	131 2 6113 29300	Shelter (Panel Front Left)	1
17	131 2 6113 29301	Shelter (Panel Front Right)	1
18	131 0 3002 11100	Drum Assy	1
19	131 0 3003 20400	Shaft Dial Assy	1
20	131 0 3008 11800	Support Antenna Assy	1
21	131 0 3020 05800	Pulley Assy (Panel Rear)	1
22	131 0 3020 10000	Pulley Assy (Panel Front Left)	1
23	131 0 3020 10100	Pulley Assy (Panel Front)	1
24	131 2 3305 23600	Panel Front	1
25	131 2 3306 21312	Panel Rear	1
26	131 2 4107 10200	Pulley (Small)	1
27	131 2 4107 10300	Pulley (Large)	1
28	131 2 4111 00400	Spring Rope (Drum Assy)	1
29	131 2 4112 10200	Rope 0.5	1
30	131 2 4208 25001	Spacer (Shaft Dial Assy)	1
31	131 2 4209 10500	Sleeve (Filter, Dial)	2
32	131 2 6111 11300	Bushing (AC Cord)	1
33	131 2 6111 14200	Bushing (AM Antenna)	1
34	131 2 6306 10901	Reflector (Filter)	1
35	131 2 6308 16501	Filter (Plate Dial Lamp)	1

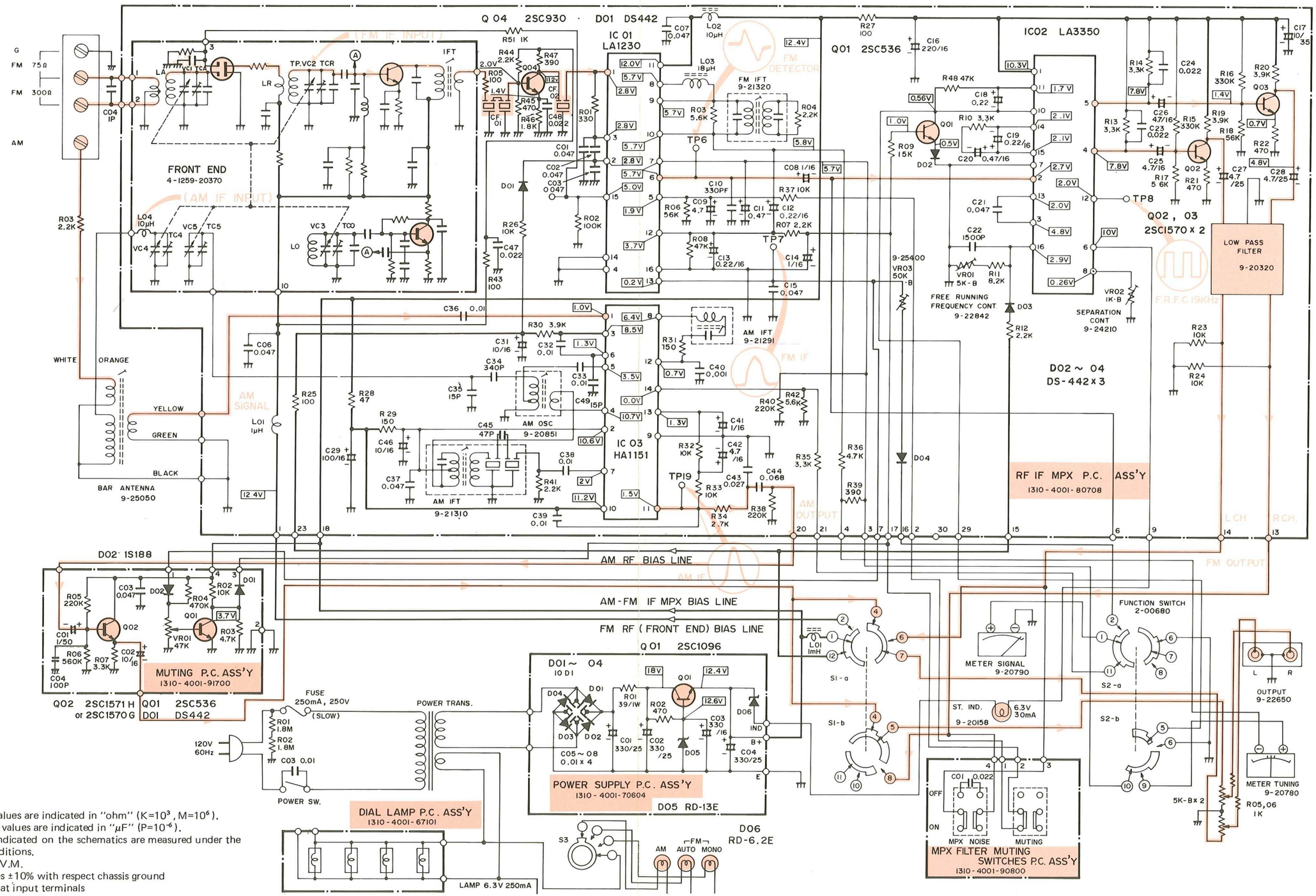
Ref.No.	Parts No.	Description	Q'ty
ELECTRICAL PARTS LIST			
36	4 2222 00020	VR 5kBx2 (Output Level)	1
37	4 2312 00680	Switch Rotary (Function)	1
38	4 2319 24383	Switch Lever 2P (AC Power)	1
39	4 2349 21280	Fuse 0.25A (AC Line)	1
40	4 2359 21110	Fuse Holder (AC Line)	1
41	4 2359 22650	Socket Output 2P	1
42	4 2379 20110	Terminal Lug, 1-1P (AC Line)	1
43	4 2379 20121	Terminal Lug, 1-4P (Lamp)	1
44	4 2379 20140	Terminal Lug, 1-2P (L01)	1
45	4 2379 20930	Terminal (AC Line)	1
46	4 2379 21460	Terminal 4P (Antenna Connector)	1
47	4 2379 21880	Terminal 1-1PL (Front End R03)	1
48	4 2439 20394	Power Cord	1
49	4 2519 23961	Power Trans	1
50	4 2579 25050	Bar Antenna AM	1
51	4 5112 00040	Meter Signal	1
52	4 5112 00050	Meter Tuning	1
53	4 6129 20158	Pilot Lamp, ST IND 6V 25mA	1
54	4 6129 20730	Small Lamp, 6.3V 80mA	3
55	131 0 4001 80708	RF-IF/MPX P.C.B. Assy	1
56	131 0 4001 91700	Muting P.C.B. Assy	1
57	131 0 4001 70604	Power Supply P.C.B. Assy	1
58	131 0 4001 67101	Dial Lamp P.C.B. Assy	1
58-1	4 6129 20280	Pilot Lamp, 6.3V 250mA	4
59	131 0 4001 90800	Switch P.C.B. Assy	1
L01	4 2539 20170	Chok Coil	1
C02	C2HYDP103A--	Ceramic 0.01 μF 500V +100,–0%	1
C04	C1HCDC010SL-	Ceramic 1pF 50V ±0.25%	1
R01,02	R2HCPK185A	Solid 1.8M 1/2W ±10%	2
R03	R2HDPJ222A	Carbon 2.2k 1/2W ±5%	1
R04,05	R2EDPJ102A	Carbon 1k 1/4W ±5%	2

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.

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^{-6}).
3. All voltages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10% with respect chassis ground
   c. No signals at input terminals
   d. AC input at 120 volts 60Hz
4. This is a fundamental schematics diagram. Some products may be modified without notice.

NOTES

SANYO ELECTRIC INC.,
1200 West Artesia Blvd., P.O. Box 5177 Compton, California 90220

Jan./'78/7100 Printed in Japan