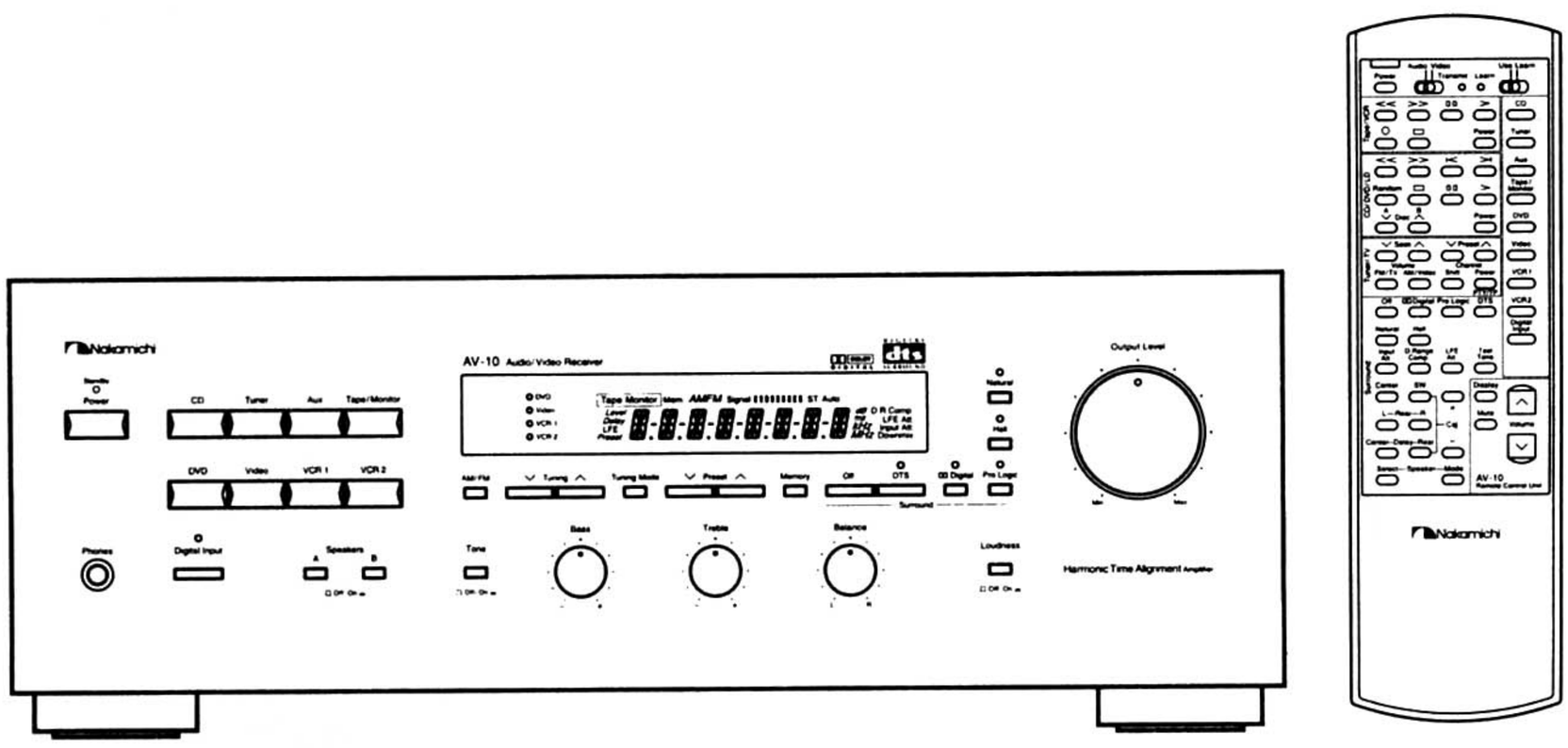
Service Manual

AV-10

Audio/Video Receiver



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1. GENERAL

1.1. Product Code

D136

1.2. Destinations

USA, CAN, OTR

Abbreviations

USA — U.S.A. OTR — Other
CAN — Canada

1.3. Cautions/Warnings

(1) Product Safety Notice

Parts marked with the symbol ⚠ in the schematic diagram have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer. It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

(2) Leakage Current Check/Resistance Check

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp, or if the resistance from chassis to either side of the power cord is less than 240 k ohms, the unit is defective.
WARNING — DO NOT return the unit to the customer until the problem is located and corrected.

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1-4. Package Ass'y and Accessory Ass'y

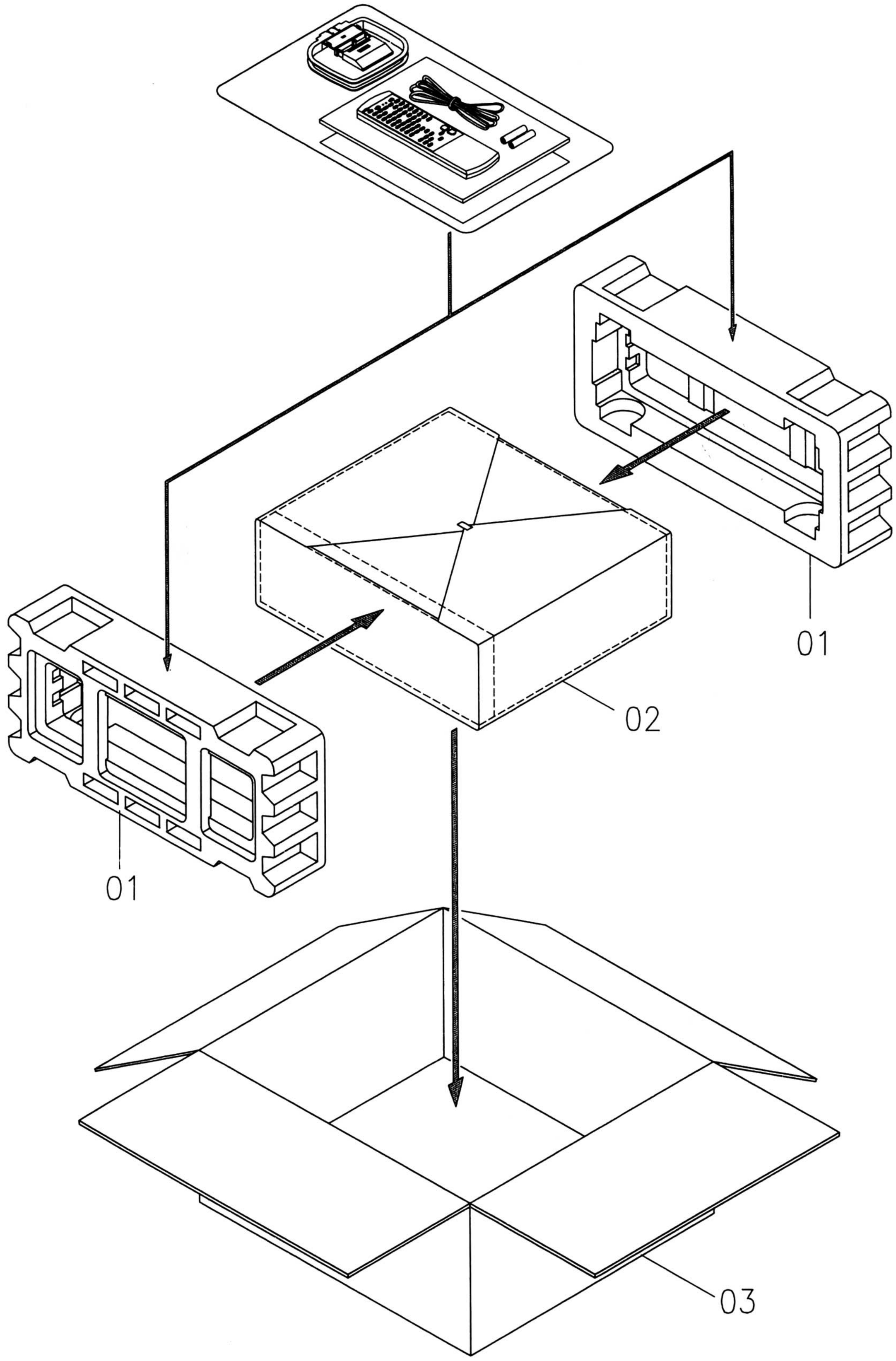

Fig. 1

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1-4. Package Ass'y and Accessory Ass'y

Package Ass'y

Ref. No.	Part No.	Description	Q'ty
01	900107975P	Snow box	2
02	900307975P	Soft sheet 700x1200	1
03	900207975P	Master carton	1

Accessory Ass'y

	RE66-D2	Remote control ass'y	1
	9080024600	Instruction book (E)	1
	9080024620	Instruction book (F/SP)	1
	4300103380	AM loop antenna ass'y	1
	4620320031	Battery R6P/SUM-3N	2
	5401160021	FM indoor antenna	1
	704975A013	Antenna adaptor YAE-21-0425	1
	9120005480	Warranty card	1
	9902304080	Poly bag 23x40 (I/B)	1

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2. REMOVAL PROCEDURES

2–1. Top Cover

Remove screws F01 (7 pcs.), then F02 (Top Cover) now can be removed. (See Fig. 2.1)

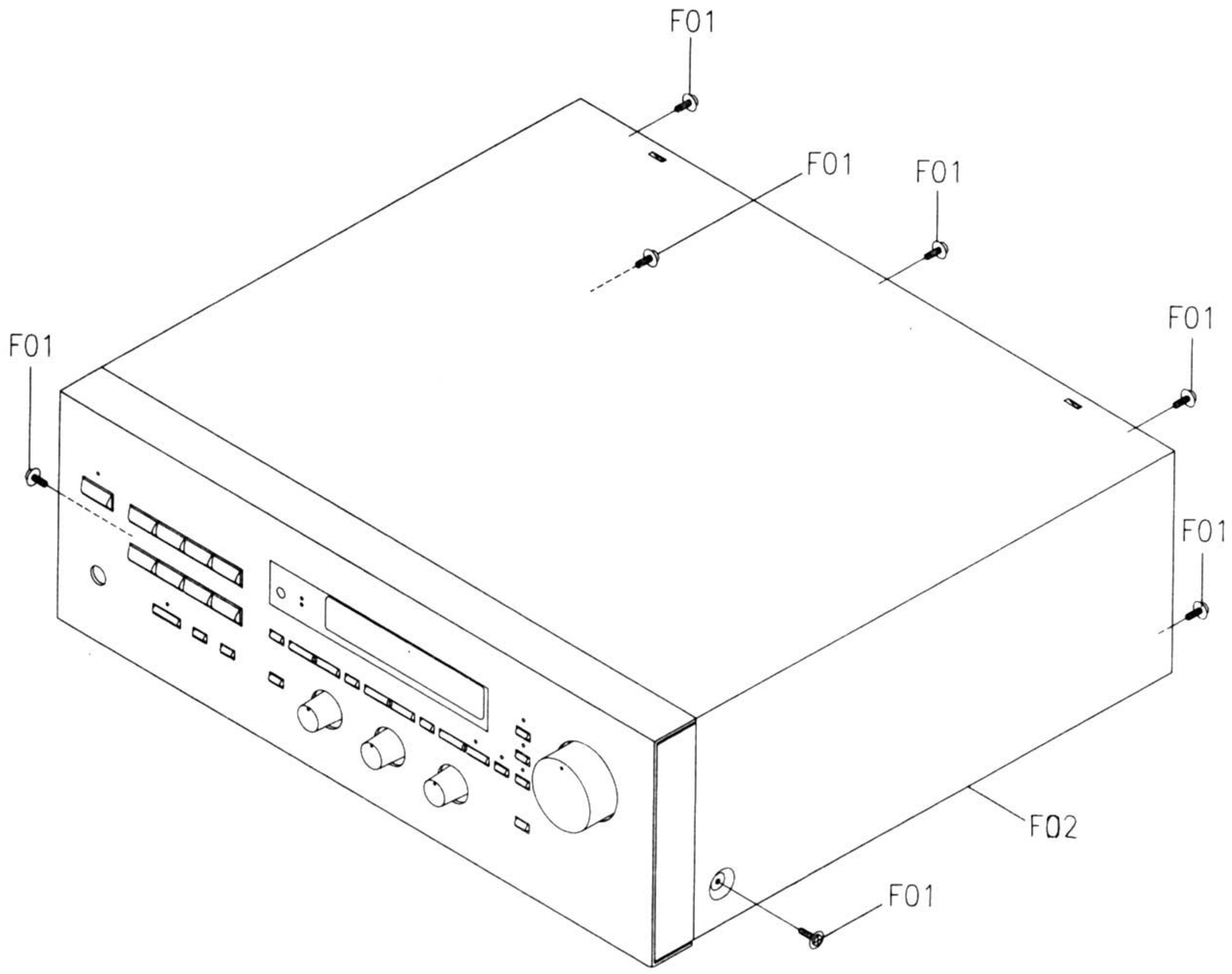

Fig. 2.1

2–2. Heat Sink Assembly

(1) Disconnect five wires from F03 (Heat Sink Assembly).
(2) Remove screws F04 (1 pcs.), F05 (1 pcs.) and F06 (4 pcs.).
(3) Now F03 (Heat Sink Assembly) can be taken out. (See Fig. 2.2)

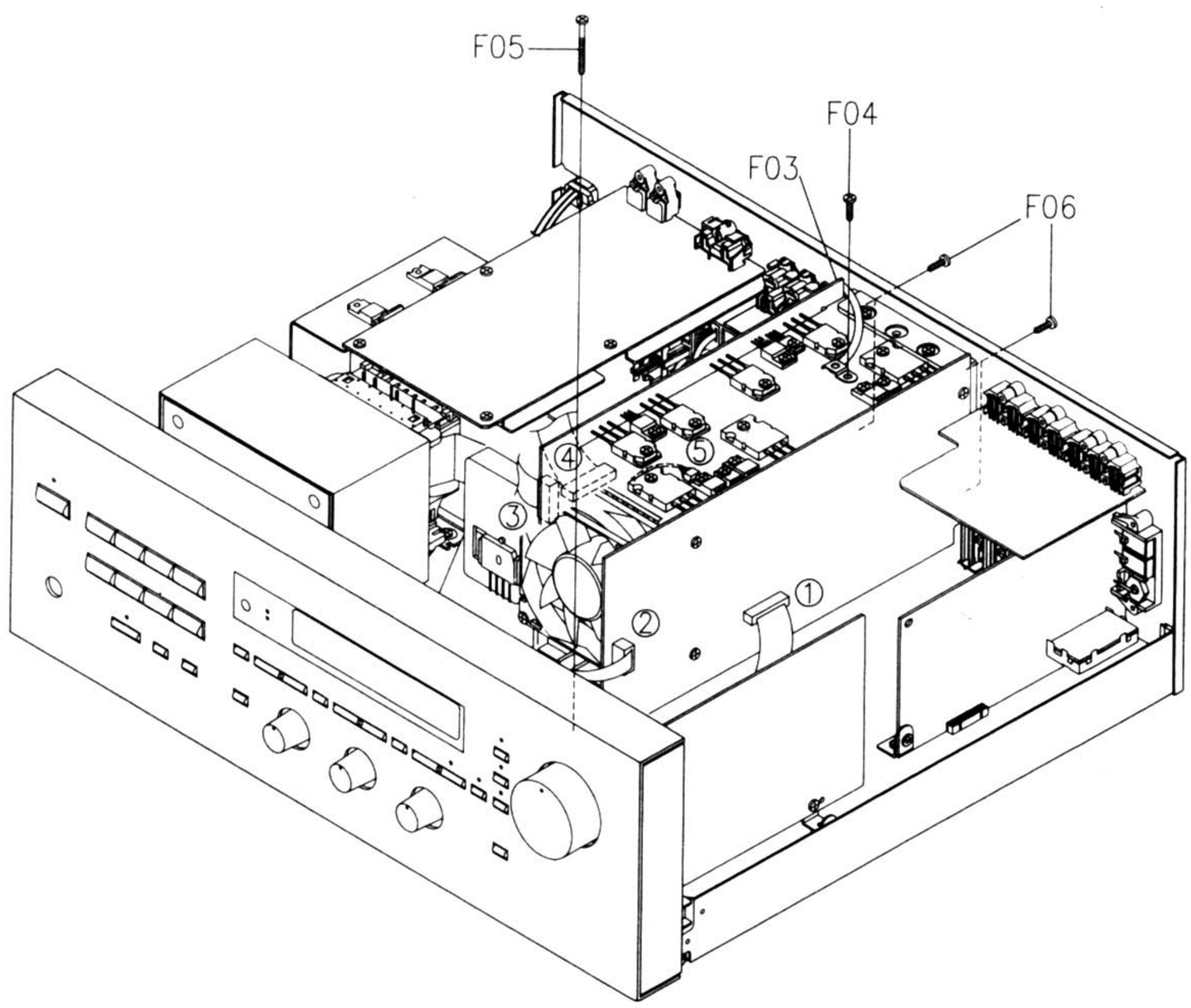

Fig. 2.2

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2–3. Front Panel Assembly

(1) Disconnect 8 wires from the PCB assembly.
(2) Remove screws F07 (1 pcs.), F08 (2 pcs.), F09 (2 pcs.), F10 (2 pcs.) and F11 (6 pcs.).
(3) Now F12 (Front Panel Assembly) can be removed. (See Fig. 2.3)

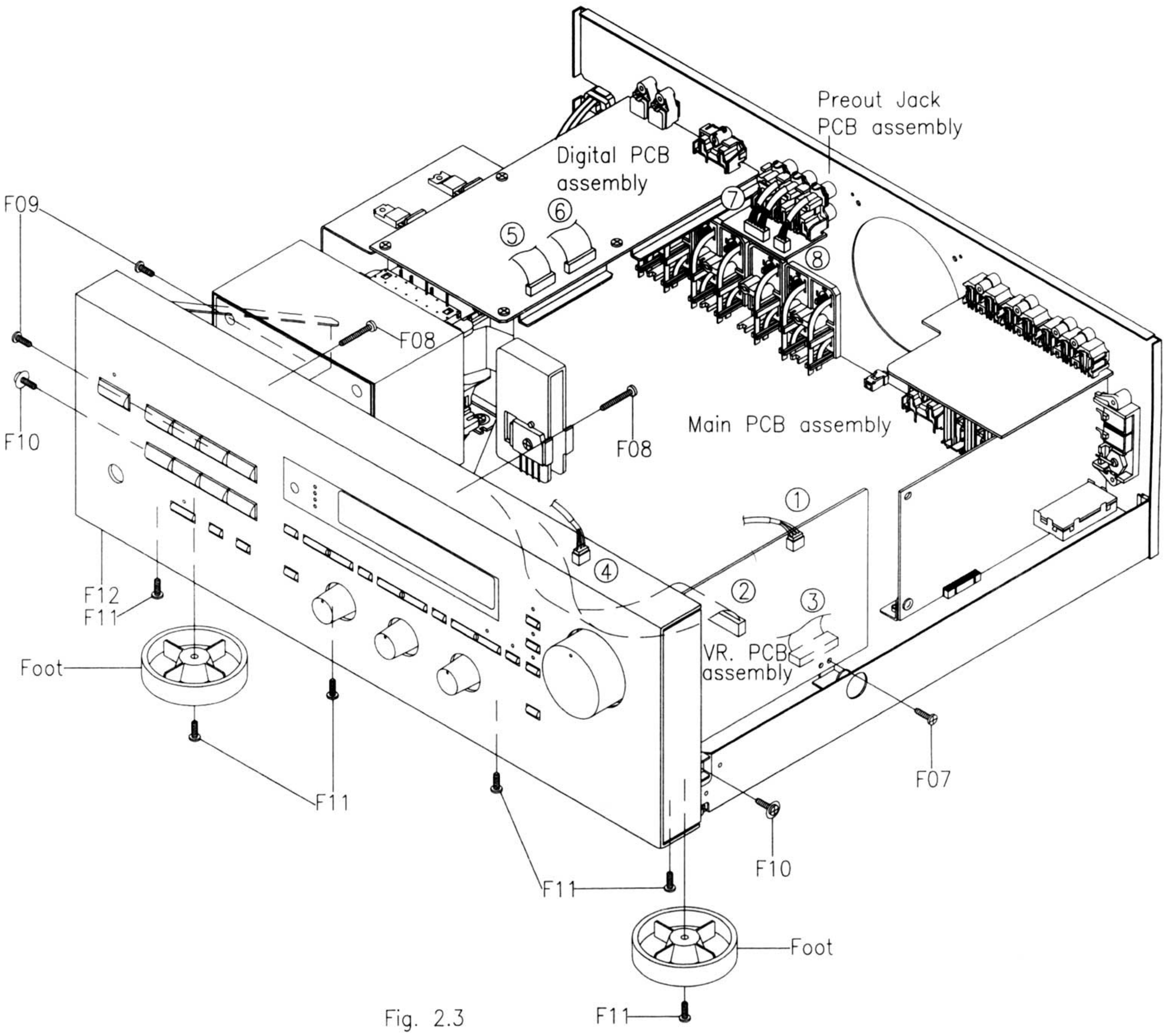


Fig. 2.3

2–4. Fuse

Replace the fuses (F402,F403) on the Fuse PCB assembly,
if they are blown out. (See Fig. 2.4)
Replace the fuses (F401/F404) on the Main PCB assembly,
if they are blown out. (See Fig. 2.5)
Replace the fuses (F405/F406) on the AC selector PCB assembly,
if they are blown out. (See Fig. 2.6)

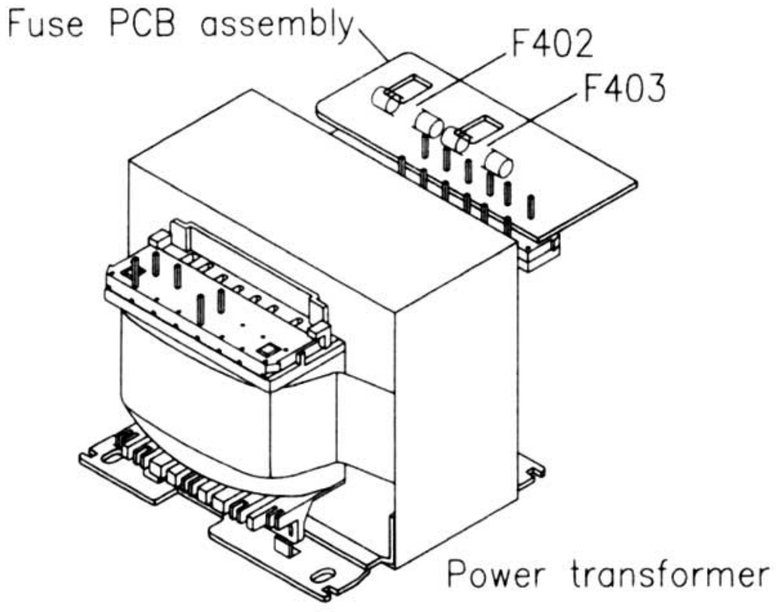
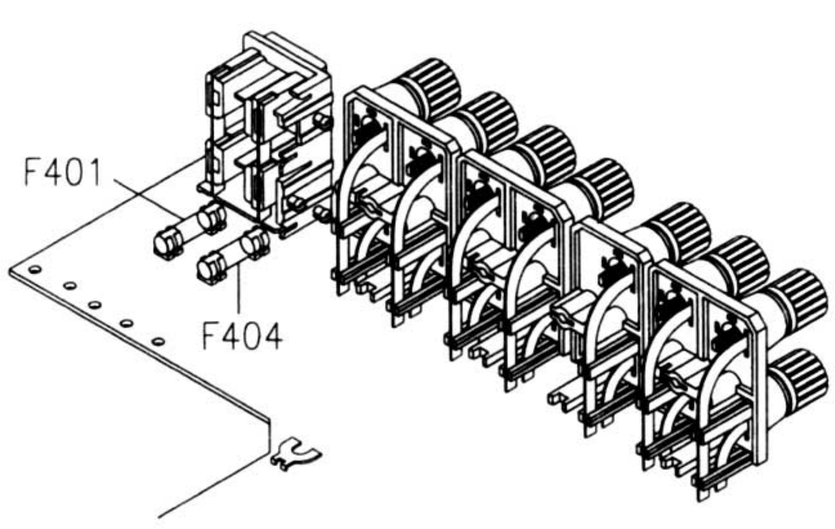


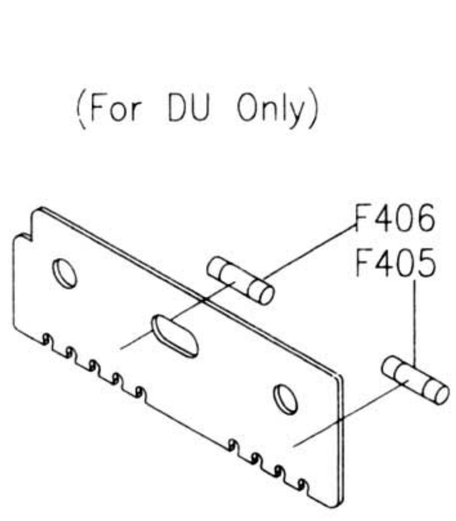
Fig. 2.4



Main PCB assembly

Fig. 2.5

(For DU Only)



AC selector PCB assembly

Fig. 2.6

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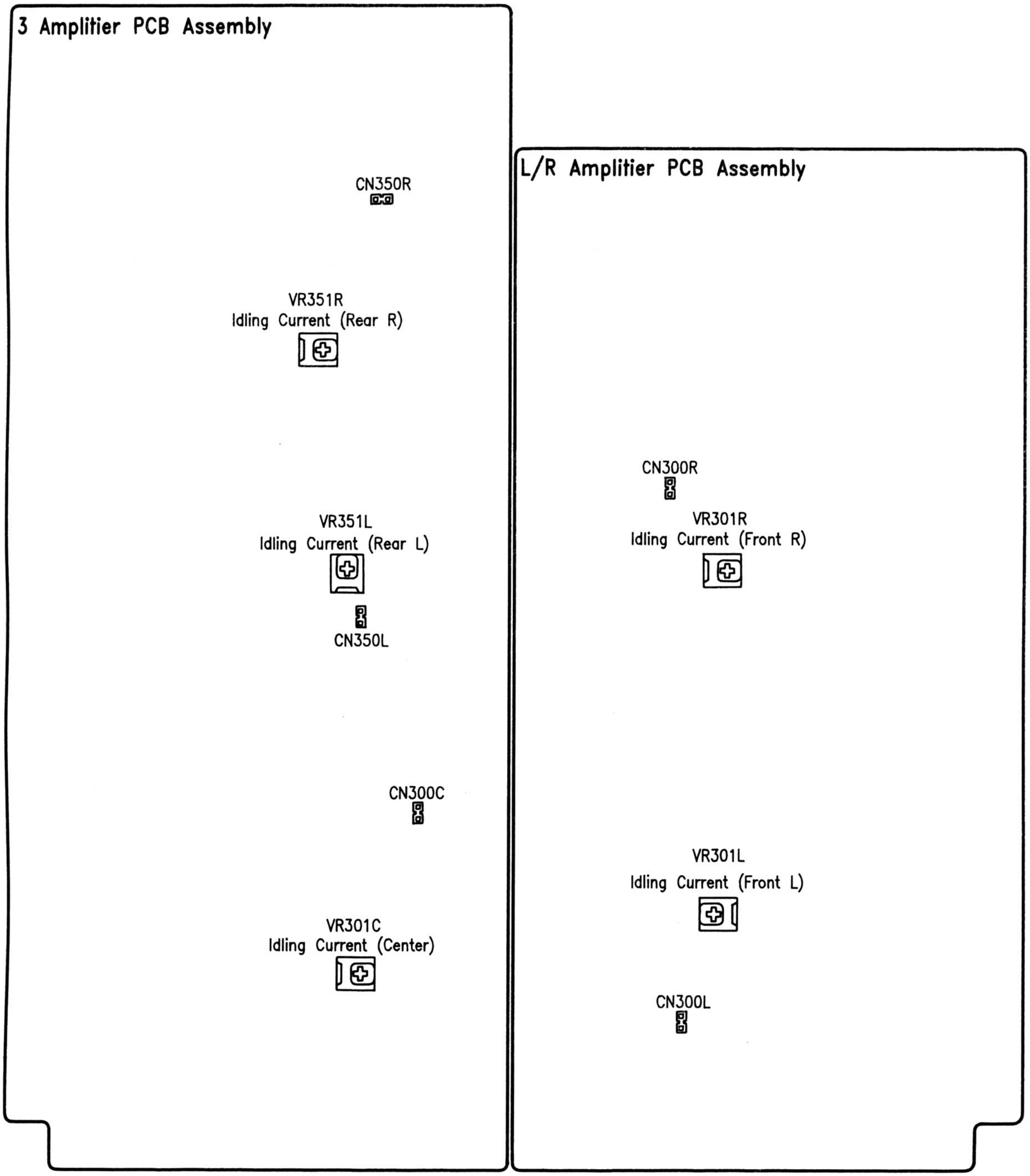
3. ELECTRICAL ADJUSTMENTS

3-1-1 Parts Location for adjustment



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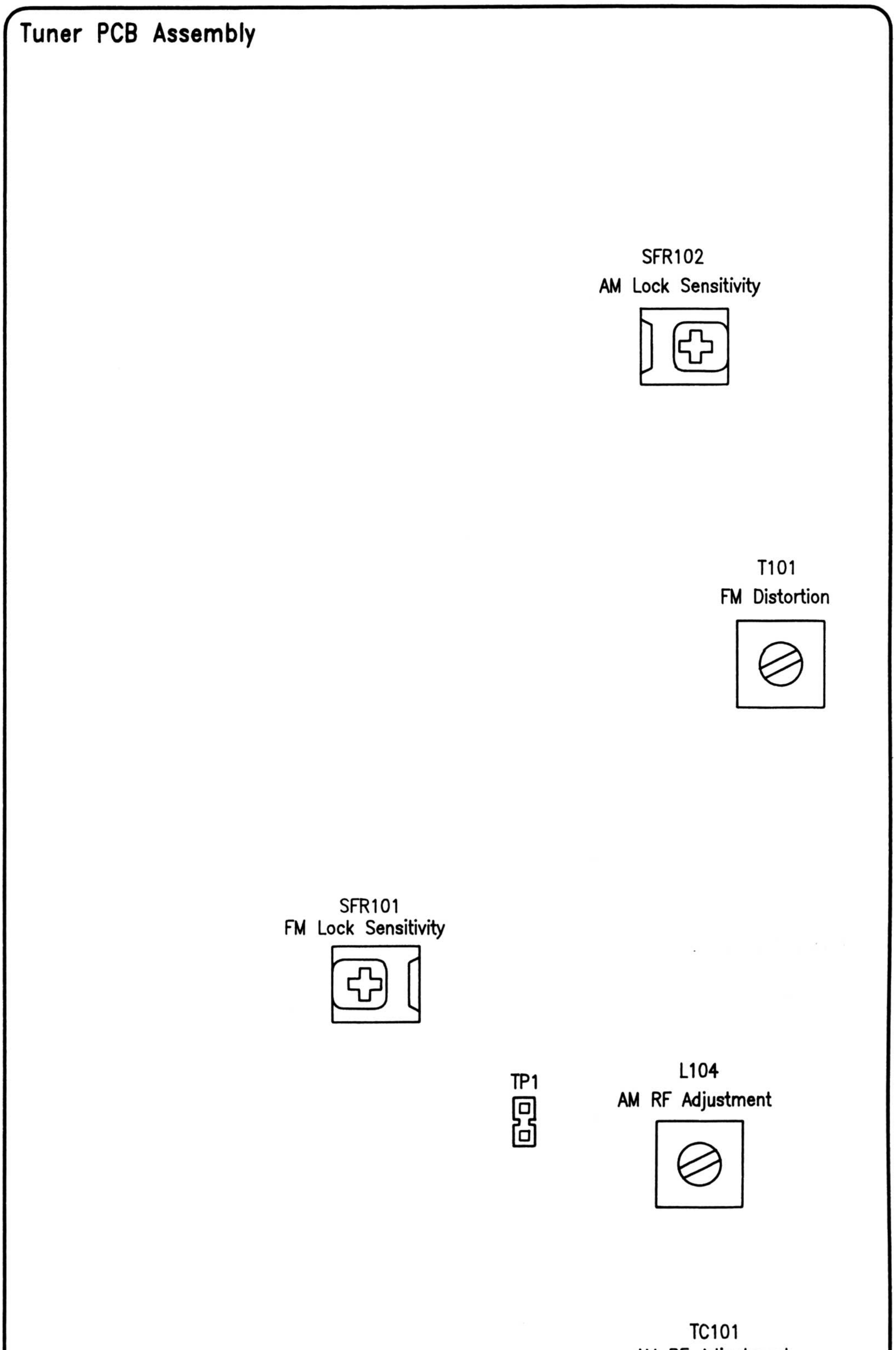
3-1-2 Parts Location for adjustment

Tuner PCB Assembly



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3-2 Adjustment Procedures

3-2-1. Power Amplifier Section

Step	Item	Signal Source	Output Connection	Adjust-ment	Remarks
1	Preparation				1. Insert shorting plugs into each input jacks (Front L/R, Center, and Rear L/R). 2. Remove the Top Cover.
2	Idling Current Adj.		DC Millivol-tmeter be-tween pins of Test point	VR351R (Rear R)	1. Connect the DC millivoltmeter between pins of CN350R. 2. Adjust VR351R to obtain 1-1.5mV on the DC millivoltmeter.
				VR301R (Fornt R)	1. Connect the DC millivolmeter between pins of CN300R. 2. Adjust VR301R to obtain 1-1.5mV on the DC millivolmeter.
				VR301C (Center)	1. Connent the DC millivoltmeter between pins of CN300C. 2. Adjust VR301C to obtain 1-1.5mV on the DC millivoltmeter.
				VR301L (Front L)	1. Connect the DC millivoltmeter between pins of CN300L. 2. Adjust VR301L to obtain 1-1.5mV on the DC millivoltmeter.
				VR351L (Rear L)	1. Connect the DC millivoltmeter between pins of CN350L. 2. Adjust VR351L to obtain 1-1.5mV on the DC millivoltmeter.

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3-2-2 FM Tuner Section (UL)

1) FM RF Adjustment

Signal Source	FM SG. (1 kHz, ±75 kHz dev.)		Alignment Indicator	Frequency Setting	Adjustment	Remarks
	Frequency (MHz)	Level (dBf)				
FM signal generator connected to antenna terminal. Matching network used.	No Input	——	DC meter connected TP1	87.5 MHz	——	DC Meter to indicator 2.1V±0.2V
	No Input	——		107.9 MHz	——	DC Meter to indicator 7.4V±0.6V
	Repeat adjustments as necessary to obtain frequency range.					
	90	21 (300 ohm RF In)	VTVM & scope across sp. jack (Using 8 ohm resistive load)	90 MHz	——	Adjust for maximum output waveform
	106	21 (300 ohm RF In)		106 MHz	——	
	Repeat adjustments as necessary to minimize tracking error.					

2) FM Distortion Adjustment

Signal Source	Signal Generator Frequency	Alignment Indicator	Adjustment	Remarks
FM signal generator connected to Ext. Ant. terminal. Matching network used.	98 MHz DEV. ±75 KHz, 66 dBf.	Distortion meter connected to speaker terminals.	T101	1. Set to mono mode. 2. Distortion to the minimum. (<0.6%)

3) FM Lock Sensitivity Adjustment

Signal Source	Signal Generator Frequency	Alignment Indicator	Adjustment	Remarks
FM signal generator connected to Ext. Ant. terminal. Matching network used.	1. 98 MHz MOD. 22.5 KHz ,23 dBf. 2. 98 MHz MOD. 22.5 KHz ,20 dBf.	VTVM connected to speaker terminals.	SFR101	1. Set in auto mode. 2. Let the "MUTE" indicator distinguish. 3. Decrease RF level to 20 dBf, let the "MUTE" light up. 4. Check the sensitivity as 25 ± 6 dBf.

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3-2-3 FM Tuner Section (DU)

1) FM RF Adjustment

Signal Source	FM SG. (1 kHz, ±75 kHz dev.)		Alignment Indicator	Frequency Setting	Adjustment	Remarks
	Frequency (MHz)	Level (dBf)				
FM signal generator connected to antenna terminal. Matching network used.	No Input	——	DC meter connected TP1	87.5 MHz	Check	DC Meter to indicator 2.1V±0.2V
	No Input	——		108 MHz	Check	DC Meter to indicator 7.4V±0.6V
	Repeat adjustments as necessary to obtain frequency range.					
	90	14 (75 ohm RF In)	VTVM & scope across sp. jack (Using 8 ohm resistive load)	90 MHz	Check	Adjust for maximum output waveform
	106	14 (75 ohm RF In)		106 MHz	Check	
	Repeat adjustments as necessary to minimize tracking error.					

2) FM Distortion Adjustment

Signal Source	Signal Generator Frequency	Alignment Indicator	Adjustment	Remarks
FM signal generator connected to Ext. Ant. terminal. Matching network used.	98 MHz DEV. ±75 KHz, 66 dBf.	Distortion meter connected to speaker terminals.	T101	1. Set to mono mode. 2. Distortion to the minimum. (< 0.6%)

3) FM Lock Sensitivity Adjustment

Signal Source	Signal Generator Frequency	Alignment Indicator	Adjustment	Remarks
FM signal generator connected to Ext. Ant. terminal. Matching network used.	1. 98 MHz MOD. 22.5 KHz ,23 dBf. 2. 98 MHz MOD. 22.5 KHz ,20 dBf.	VTVM connected to speaker terminals.	SFR101	1. Set in auto mode. 2. Let the "MUTE" indicator distinguish. 3. Decrease RF level to 20 dBf, let the "MUTE" light up. 4. Check the sensitivity as 25 ± 6 dBf.

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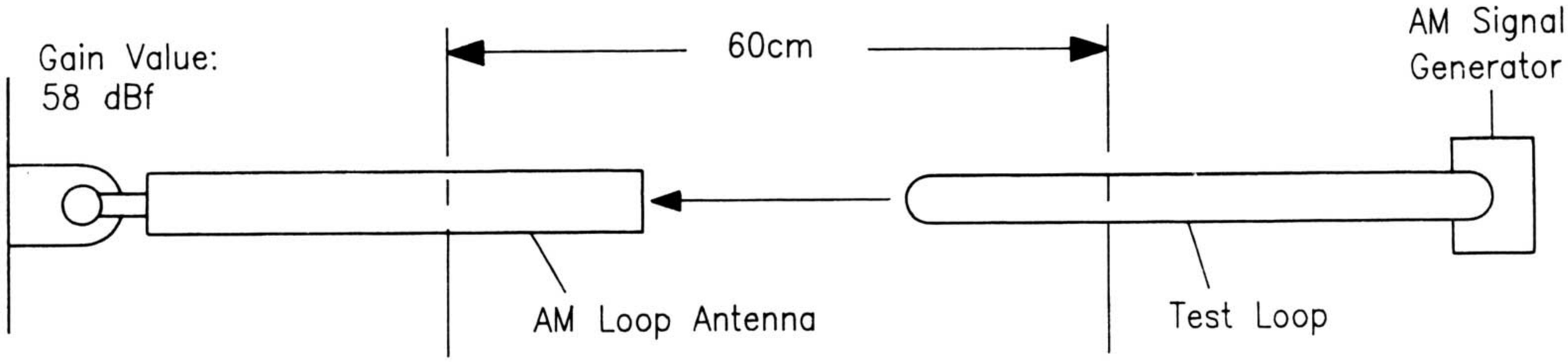
3-2-4. AM Tuner Section

1) AM RF Adjustment (Set AM frequency step sw. to 9 kHz step for DU version)

Signal Source	AM SG. 400 Hz 30% MOD.		Alignment Indicator	Frequency Setting	Adjustment	Remarks
	Frequency (kHz)	Level (dBf)				
AM signal generator connected to a standard radiating loop	No Input	—	DC meter connected TP1	530 kHz	L104	DC Meter 1.0V±0.05V
	No Input	—		1710 kHz	——	DC Meter 7.6V±0.4V
	Repeat adjustments as necessary to obtain frequency range.					
	600	84	VTVM & scope across sp. jack (Using 8 ohm resistive load)	600 kHz	L103	Adjust for maximum output waveform
	1400	84		1400 kHz	TC101	
	Repeat adjustments as necessary to minimize tracking error.					



AM Measuring Diagram

2) AM Lock Sensitivity Adjustment

Signal Source	Signal Generator Frequency	Alignment Indicator	Adjustment	Remarks
AM signal generator connected to Ext. Ant. terminal. Matching network used.	1. 1000 KHz, 80 dBu. 2. 1000 KHz, 77 dBu.	VTVM connected to speaker terminals.	SFR102	1. Let the l'st LED of the signal meter light up. 2. Decrease the RF level to 77 dBu, let the LED distinguish. 3. Check the sensitivity as 76 ± 8 dBu.

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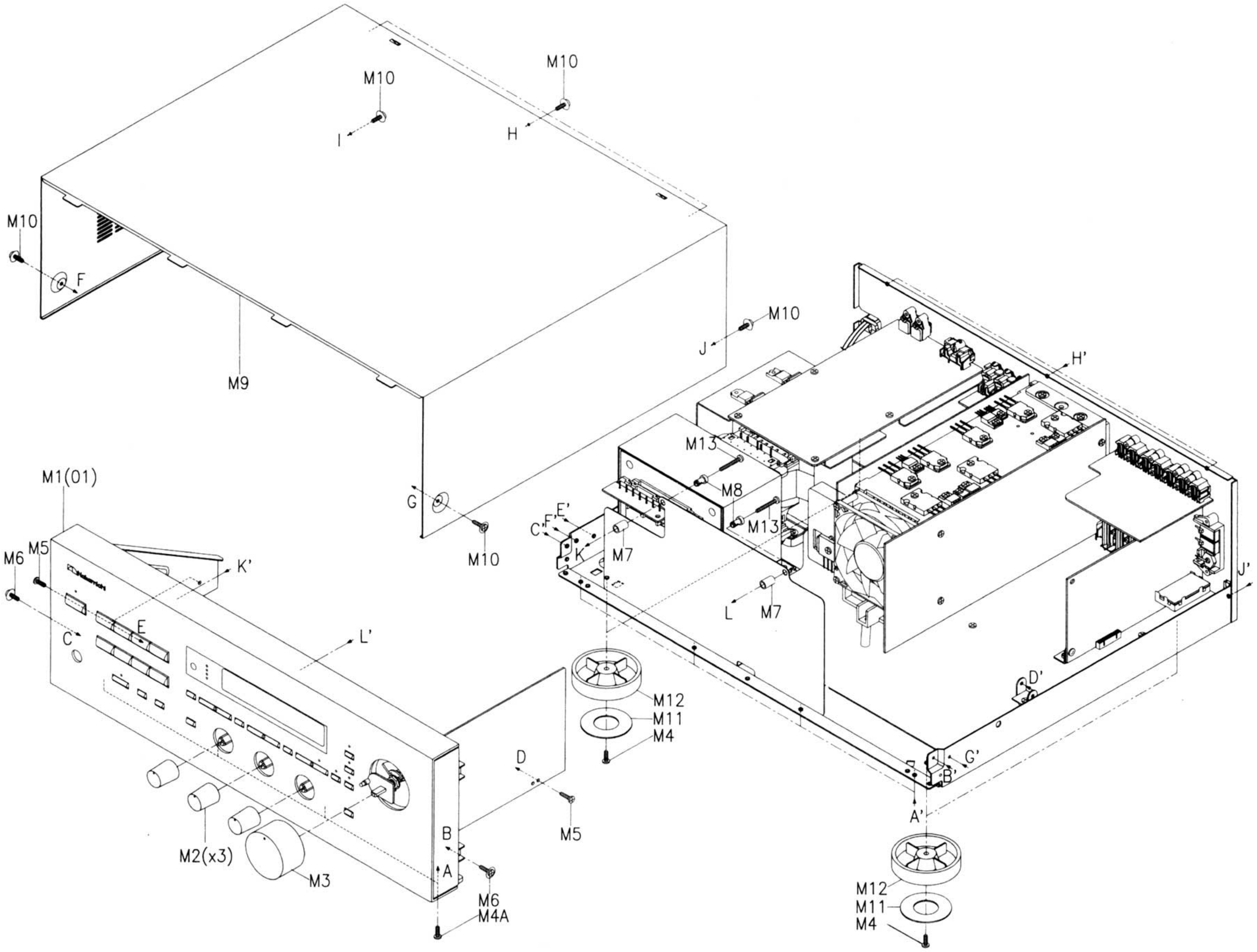
4. MECHANISM ASS'Y AND PARTS LIST

4-1. Synthesis



4-1. Synthesis

Ref. No.	Part Number	Description	Q'ty	Ref. No.	Part Number	Description	Q'ty
M1	B985A81001	Front panel ass'y (01) (For UL)	1	M5	8941300600	9 (Taptite-B) BID3006 ZN3A	3
	B985A87001	Front panel ass'y (01) (For DU)	1	M6	8961300600	9 (Taptite-B) CUP3006 ZN3A	2
M2	101007975A	Balance knob (For UL)	3	M7	201707975P	Spacer supports (RS-105)	2
	101207981A	Balance knob (For DU)	3	M8	201607975P	Spacer supports (RS-1)	2
M3	000107975A	Volume knob ass'y (For UL)	1	M9	101207975P	Top cover (For UL)	1
					100807984A	Top cover (For DU)	1
	000107981A	Volume knob ass'y (For DU)	1	M10	8962300800	9 (Taptite-B) CUP3008 ZN3K	7
M4	8941300800	9 (Taptite-B) BID3008 ZN3A	4	M11	JS27593800	Foot sheet (20)	4
				M12	JS85047200	55 foot A	4
M4A	0E03936A	BT3x8 Bind+ BLK C BID3022 ZN3A	4	M13	8741302200	7 (Taptite-P)	2

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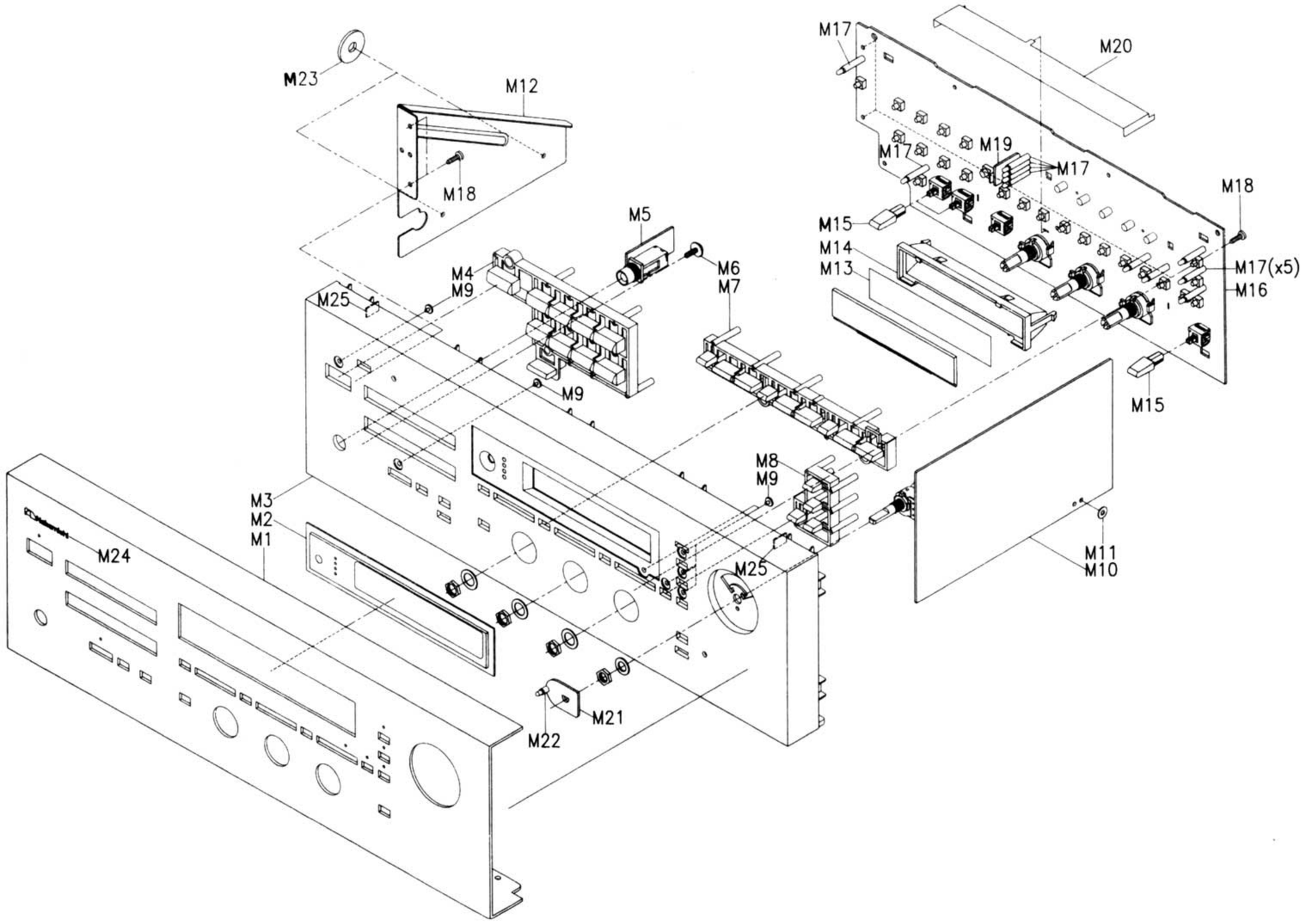
4-2. Front Panel Assembly (01)



4-2. Front Panel Assembly (01)

Ref. No.	Part Number	Description	Q'ty	Ref. No.	Part Number	Description	Q'ty
M1	100107985A	Front panel	1	M10	C147269720	VR PCB ass'y	1
M2	101207975A	Tuning window	1	M11	W149320805	Fiber washer (3.2x8x0.5)	1
M3	100227975A	Front chassis (For UL)	1	M12	201207975P	Front panel bracket	1
	101707981A	Front chassis (For DU)	1	M13	100907975P	Display plate	1
				M14	2M975A0010	Display holder	1
M4	100507985A	Function button (For UL)	1	M15	100907975A	Push button (For UL)	4
					101307981A	Push button (For DU)	4
	100607985A	Function button (For DU)	1	M16	C143267910	Front PCB ass'y (For UL)	1
M5	C043267930	Headphone PCB ass'y	1		C143267913	Front PCB ass'y (For DU)	1
M6	8741301014	7 (Taptite-P) BID3010 WF14 ZN3A	1	M17	2014072115	LED holder (2 PIN)	11
				M18	8741301000	7 (Taptite-P) BID3010 ZN3A	6
M7	100607975A	Tuning button (For UL)	1	M19	C043267920	Sensor PCB ass'y	1
	100907984A	Tuning button (For DU)	1	M20	201307975P	Shield plate (A)	1
				M21	C047269760	LED PCB ass'y	1
M8	100817975A	Natural button (For UL)	1	M22	2017001005	LED holder	1
				M23	201807975P	Sponge (SIDE)	2
	100707984A	Natural button (For DU)	1	M24	101007985A	Badge (For UL)	1
					101107985A	Badge (For DU)	1
M9	1047071600	Indicator	7	M25	202007975P	PVC space	2

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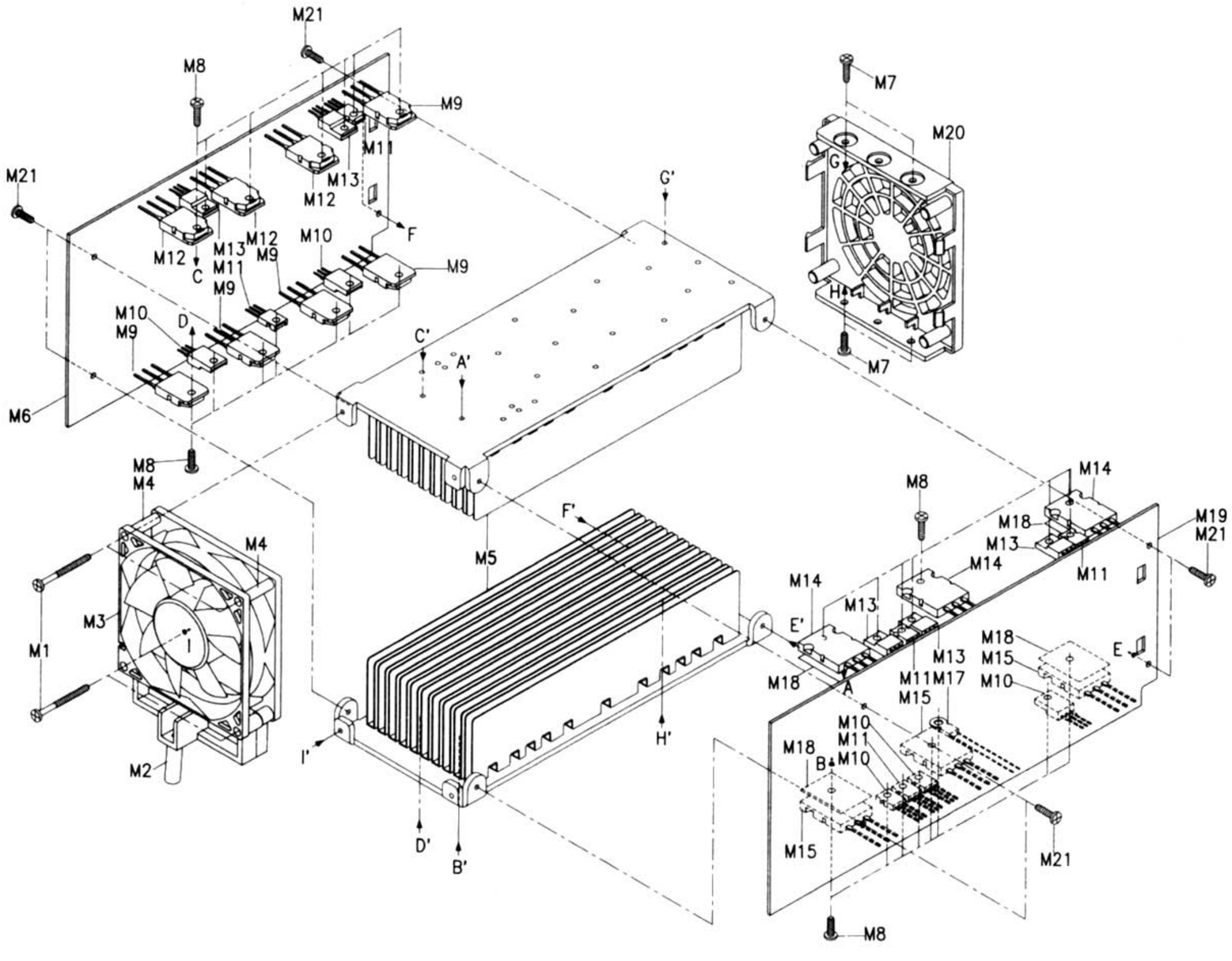
4-3. Heat Sink Assembly (02)



4-3. Heat Sink Assembly (02)

Ref. No.	Part Number	Description	Q'ty	Ref. No.	Part Number	Description	Q'ty
M1	8941303000	9 (Taptite-B) BID3030 ZN3A	4	M12	410001962Y,0,R	TR 2SA1962Y,0 [Q310L/R,Q312L/R]	4
M2	200707975P	Heat sink holder	1	M13	4100018370	TR 2SA1837 [Q308C,Q308L/R, Q358L/R]	5
M3	722974P001	DC fan CHA8012B	1				
M4	2061079607	Spacer supports	2				
M5	000117975P	Heat sink ass'y	2	M14	4100019870,R	TR 2SA19870,R [Q312C,Q360L/R]	3
M6	C142267810	L/R amp PCB ass'y	1				
M7	8941300800	9 (Taptite-B) BID3008 ZN3A	4	M15	4100253590,R	2SC53590,R [Q311C,Q359L/R]	3
M8	8941301000	9 (Taptite-B) BID3010 ZN3A	30	M17	7132110001	Thermistor PTH9M04BH471TS2F333	1
M9	410025242Y,0,R	TR 2SC5242Y,0,R [Q309L/R,Q311L/R]	4	M18	2000001130	Desc. mica 4Q (18x23)	2
M10	4100247930	TR 2SC47930 [Q307C,Q307L/R, Q357L/R]	5	M19	C142267820	3 amp PCB assembly	1
				M20	1K53K79607	Block holder	1
M11	410023421Y,0	TR 2SC3421Y,0 [Q306C,Q306L/R,Q356L ,Q356R]	5	M21	8941300600	9 (Taptite-B) BID3006 ZN3A	8

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4-4. Bottom Chassis Assembly (03)

Ref. No.	Part Number	Description	Q'ty
M1	200117975P	Bottom chassis	1
M2	2125079993	Spacer supporter	9
M4	8941300800	9 (Taptite-B) BID3008 ZN3A	5
M5	B985A81003	Heat sink Ass'y (02)	1
M6	200907975P	Thermistor holder	1
M7	8941303000	9 (Taptite-B) BID3030 ZN3A	1
M8	C147269710	Main PCB Ass'y (For UL)	1
	C147269713	Main PCB Ass'y (For DU)	1
M9	8941301800	9 (Taptite-B) BID3018 ZN3A	9
M10	200807975P	IC heat sink	1
M11	2000001209	Earth washer 4.2Qx8Q	1
M12	5266400B20	Fuse UL/CSA (For UL) 4A/125V (F404)	1
	5267400B62	Fuse BS T4AL250V (F404) (For DU)	1
M13	52661A0L20	Fuse UL/CSA (For UL) 10A/125V (F401)	1
	52671A0B62	Fuse BS T10AL250V (F401) (For DU)	1
M14	705985P081	Power transformer EI-114 (For UL)	1
	705985P087	Power transformer EI-114 (For DU)	1
M15	C047269730	Power PCB Ass'y	1
M16	8641400808	6 (Taptite-S) BID4008 ZN3A SWQ8	8
M17	420D862296	Power transformer EI-86 (For UL)	1
	420F869209	Power transformer EI-86 (For DU)	1
M18	C147269740	Fuse PCB Ass'y	1
M19	5266200B20	Fuse UL/CSA 2A/125V (F402,403) (For UL)	2
	5267200B62	Fuse BS T2AL250V (F402,403,406) (For DU)	3
M20	2011079510	PCB holder	1
M21	2000000145	P-rivet 3x4.5	1
M22	C142264800	Tuner PCB Ass'y	1
M23	2010079510	Earth terminal	1
M24	4580000021	Cord stopper 2271	1
M25	100307985A	Rear panel (For UL)	1
	101207985A	Rear panel (For DU)	1
M26	8742301000	7 (Taptite-P) BID3010 ZN3K	24
M26A	8742301600	7 (Taptite-P) BID3016 ZN3K	4
M27	463157M065	AC cord 6.5FT BLK SPT-2 (For UL)	1
	463131M065	AC cord 6.5FT BLK SPT-2 (For DU)	1
M28	8942300600	9 (Taptite-B) BID3006 ZN3K (For UL)	3
	8942300600	9 (Taptite-B) BID3006 ZN3K (For DU)	7
M29	C147269770	RCA Jack PCB Ass'y	1
M30	201507975P	Shield plate (B)	1
M31	8941300600	9 (Taptite-B) BID3006 ZN3A (For UL)	2
	8941300600	9 (Taptite-B) BID3006 ZN3A (For DU)	6
M32	201407975P	Volume PCB holder	1
M33	101307975P	Foot rubber	1
M34	C142268800	Digital PCB Ass'y	1
M35	201207985A	Digital PCB bracket	1
M36	2MCOMM0030	Fiber washer (0.25)	5
M37	C047269750	TR. PCB Ass'y	1
M38	C047269780	TR. Q403 PCB Ass'y	1
M39	C142267720	Preout jack PCB Ass'y	1
M40	C142267710	S. video PCB Ass'y	1
M41	C144270800	AC selector PCB Ass'y (For DU)	1
M42	5267500B62	Fuse BS T5AL250V (F405) (For DU)	1
M43	200107975A	AC switch bracket (For DU)	1
M44	200207975A	AC slide plate (For DU)	1

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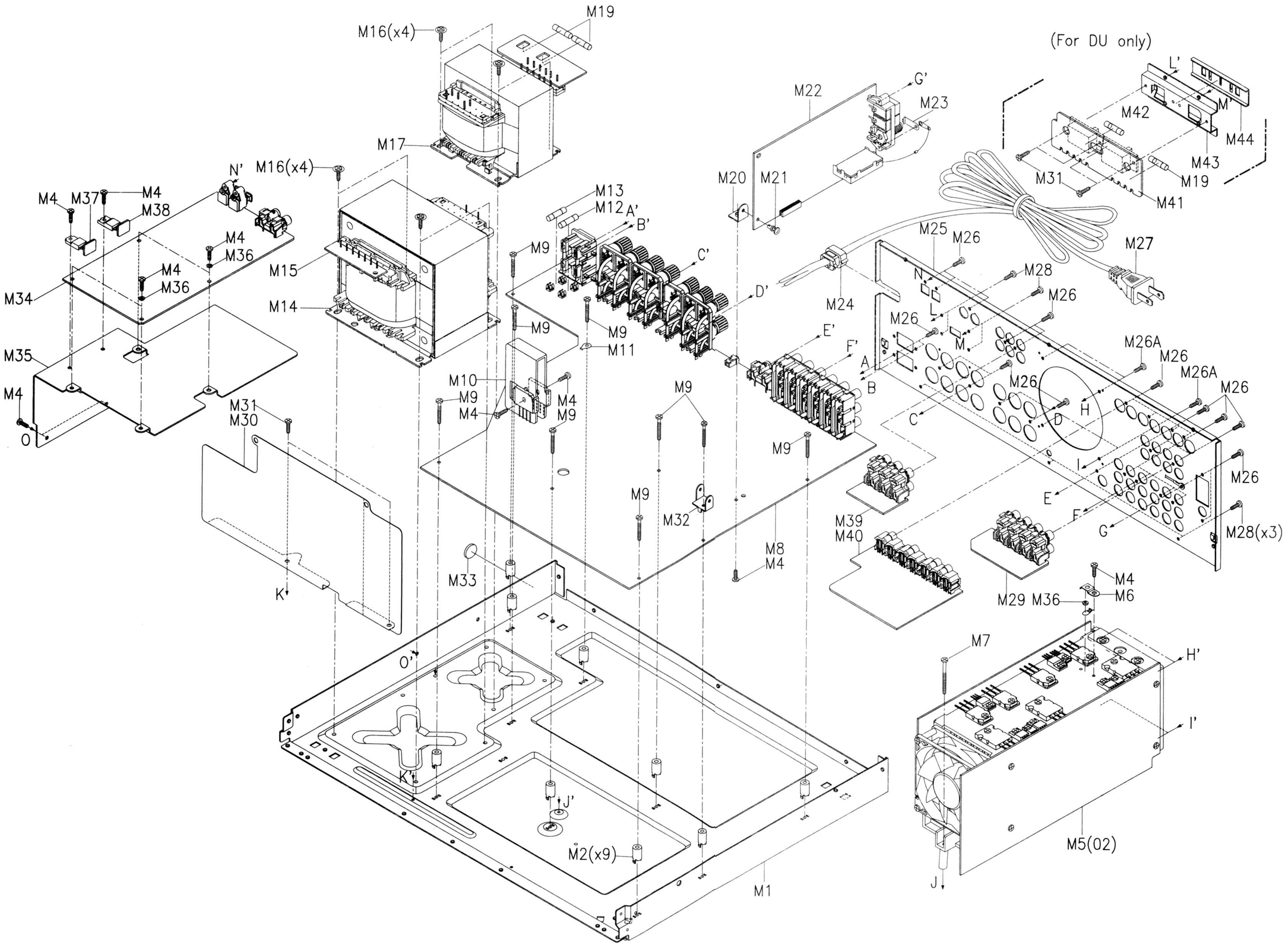
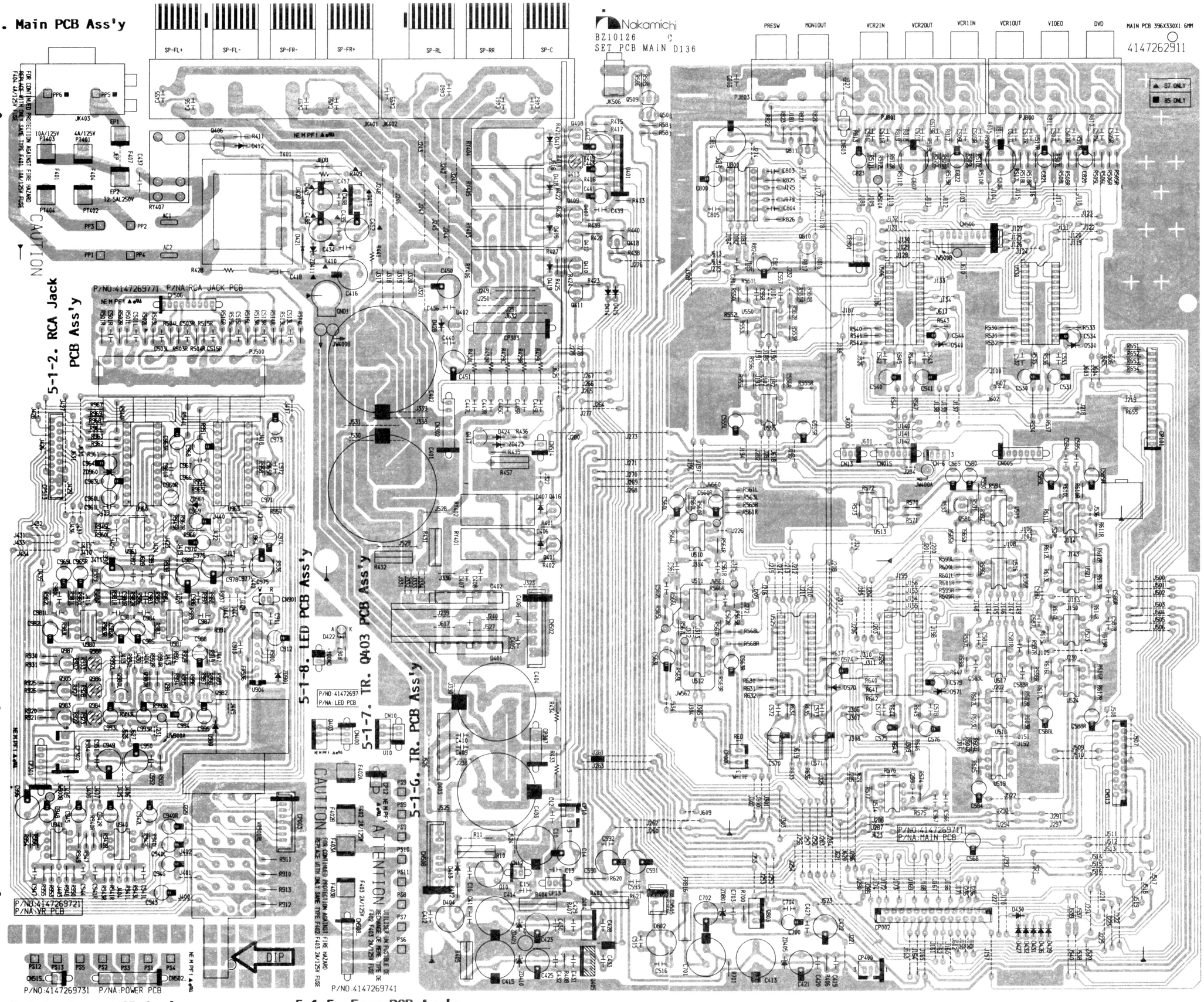
4-4. Bottom Chassis Assembly (03)



5. MOUNTING DIAGRAMS AND PARTS LIST

5-1. P C Boards-Component Side

5-1-1. Main PCB Ass'y



5-1-2. RCA Jack PCB Ass'y

5-1-3. VR. PCB Ass'y

5-1-8. LED PCB Ass'y

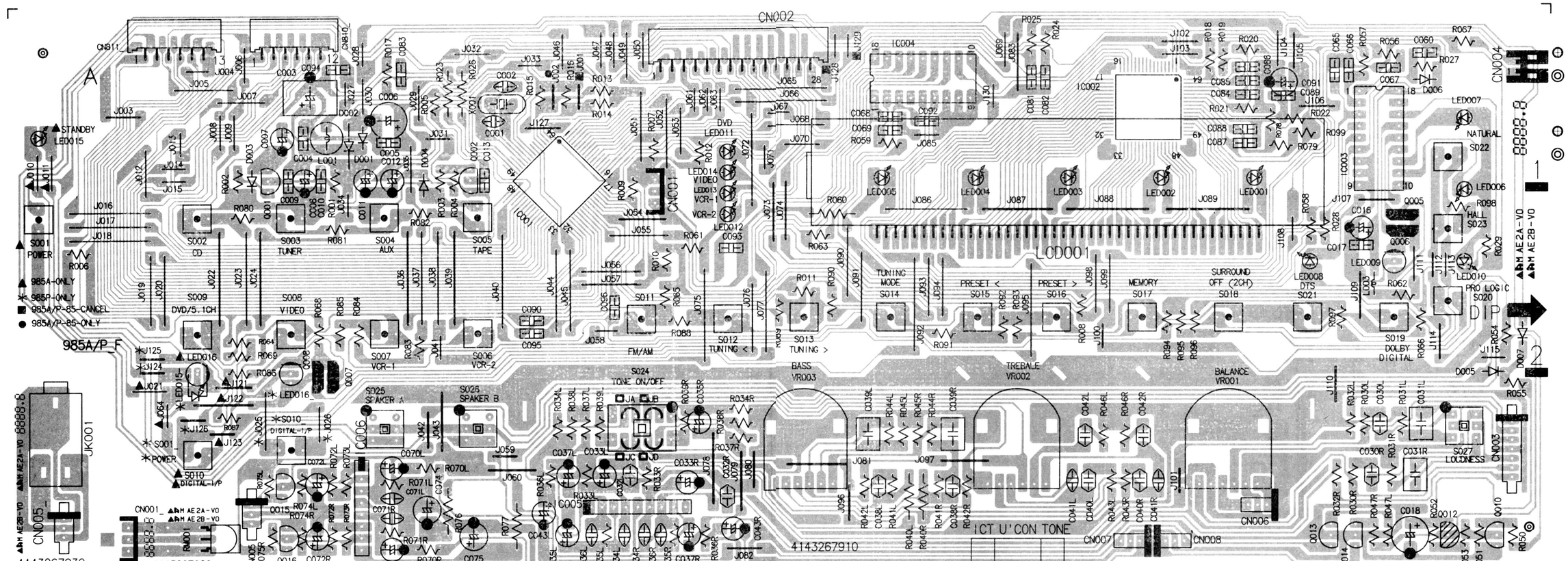
5-1-7. TR. Q403 PCB Ass'y

5-1-6. JR. PCB Ass'y

5-1-4. Power PCB Ass'y

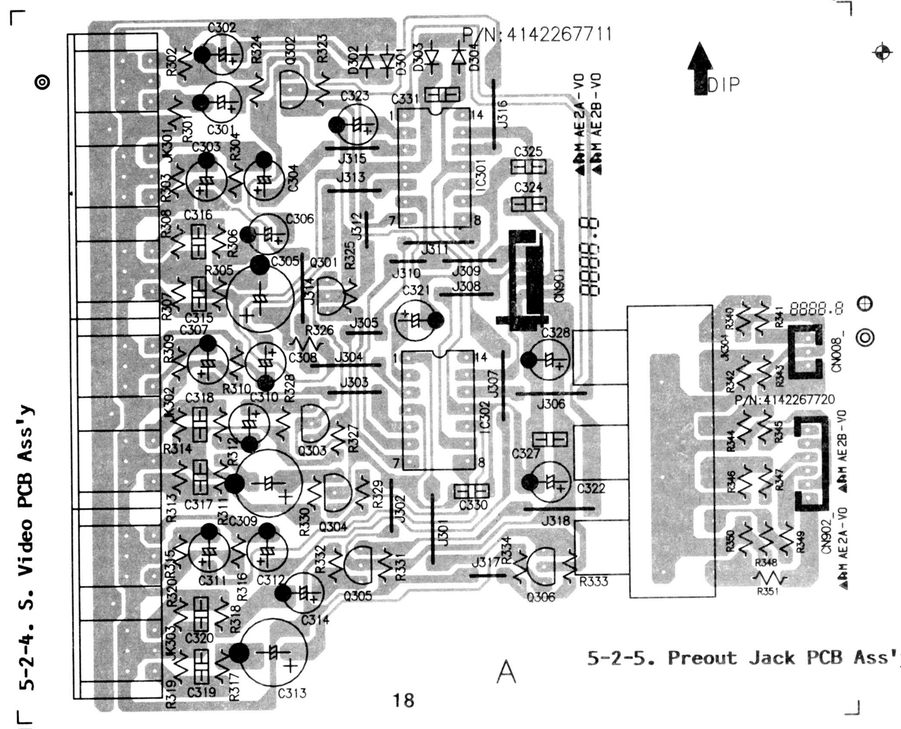
5-1-5. Fuse PCB Ass'y

5-2-1. Front PCB Ass'y



5-2-2. H/P PCB Ass'y

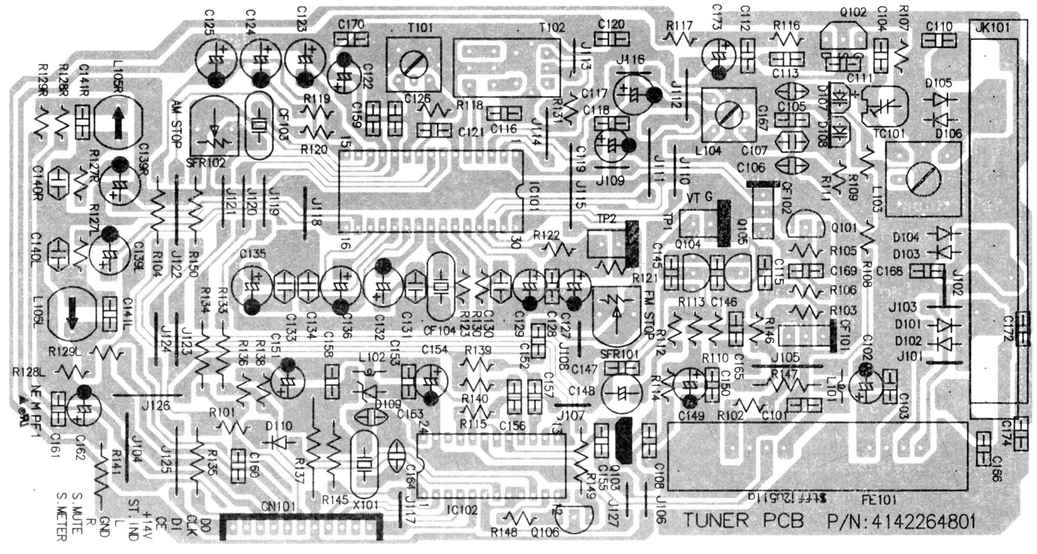
5-2-3. Sensor PCB Ass'y



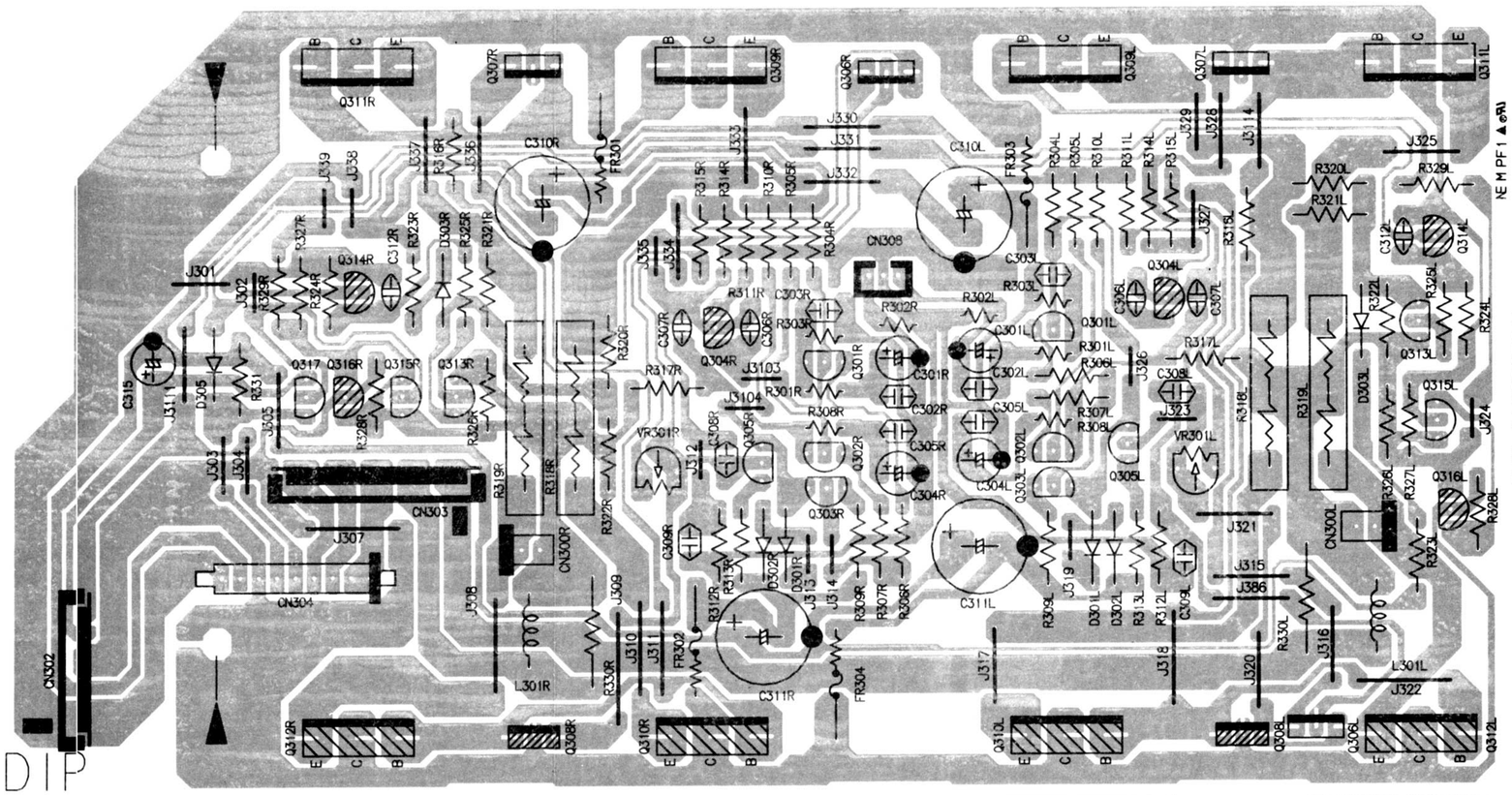
5-2-4. S. Video PCB Ass'y

5-2-5. Preout Jack PCB Ass'y

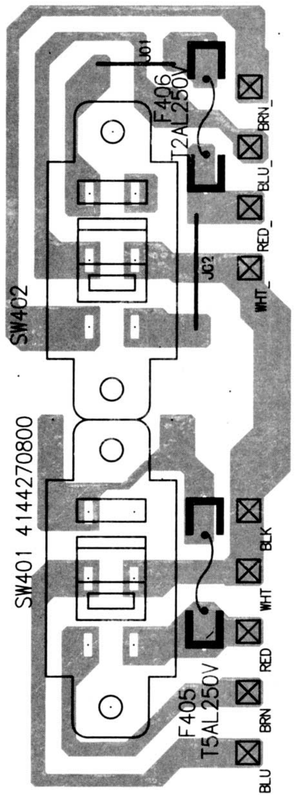
5-2-6. Tuner PCB Ass'y



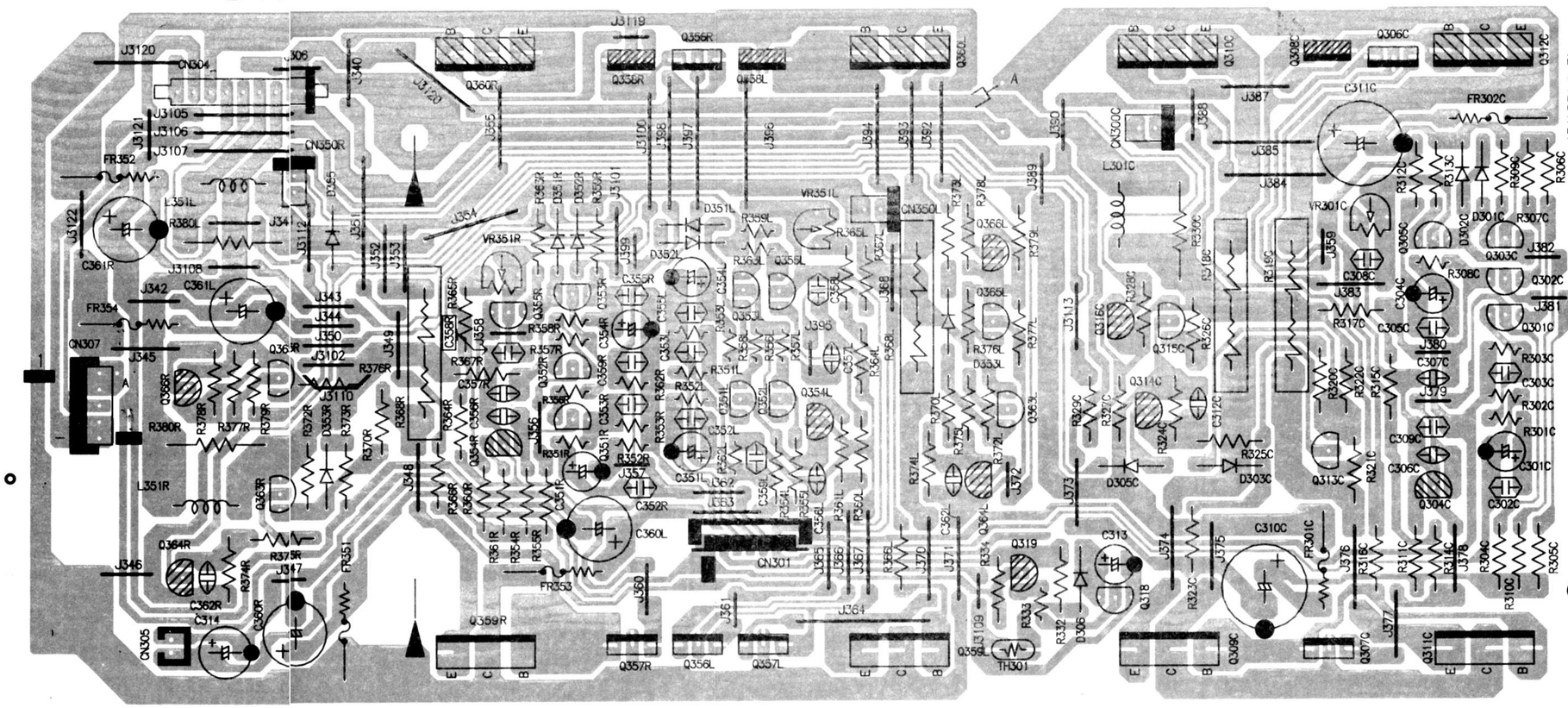
5-3-1. L/R AMP. Ass'y



5-3-3. AC Selector PCB Ass'y (For DU)

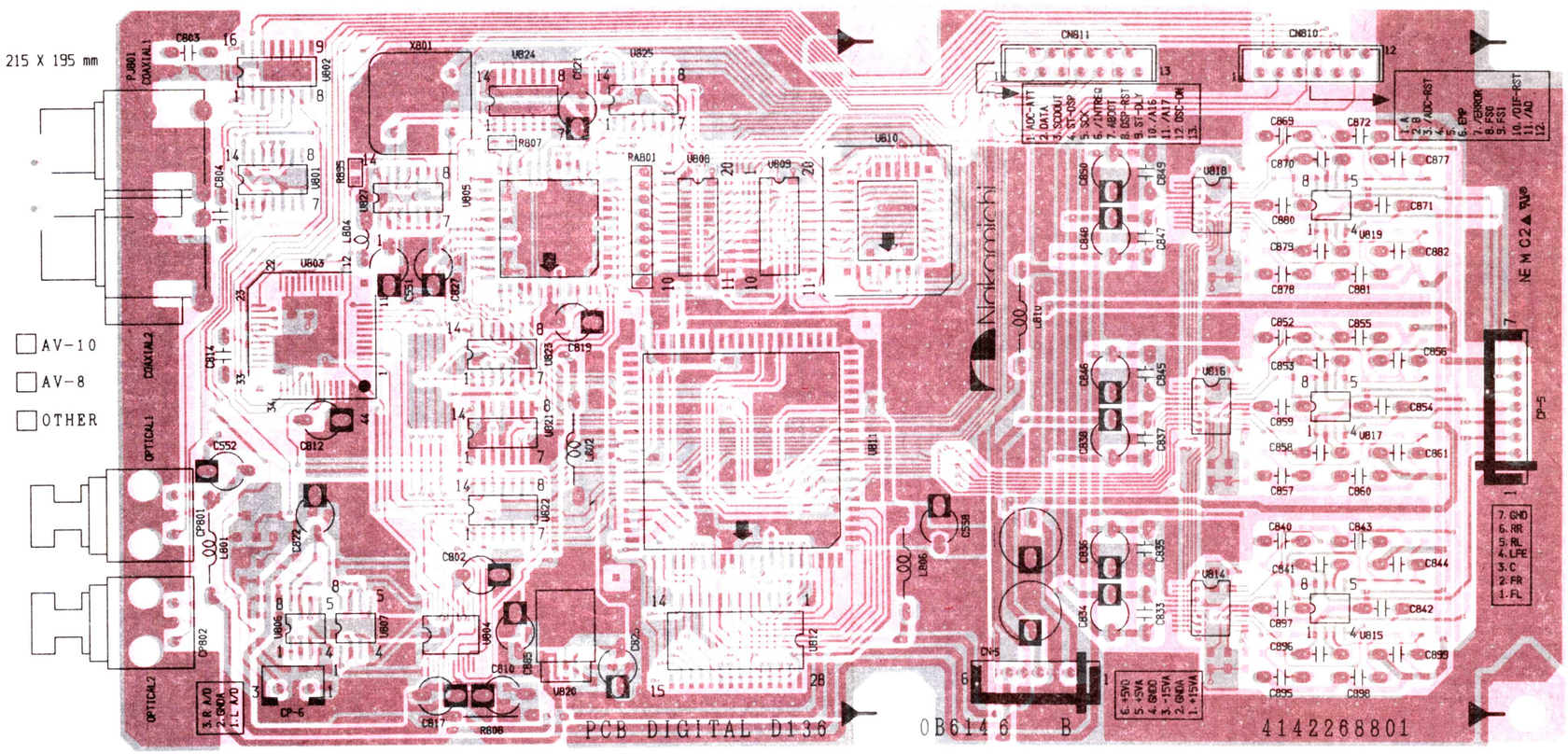


5-3-2. 3 AMP. PCB Ass'y



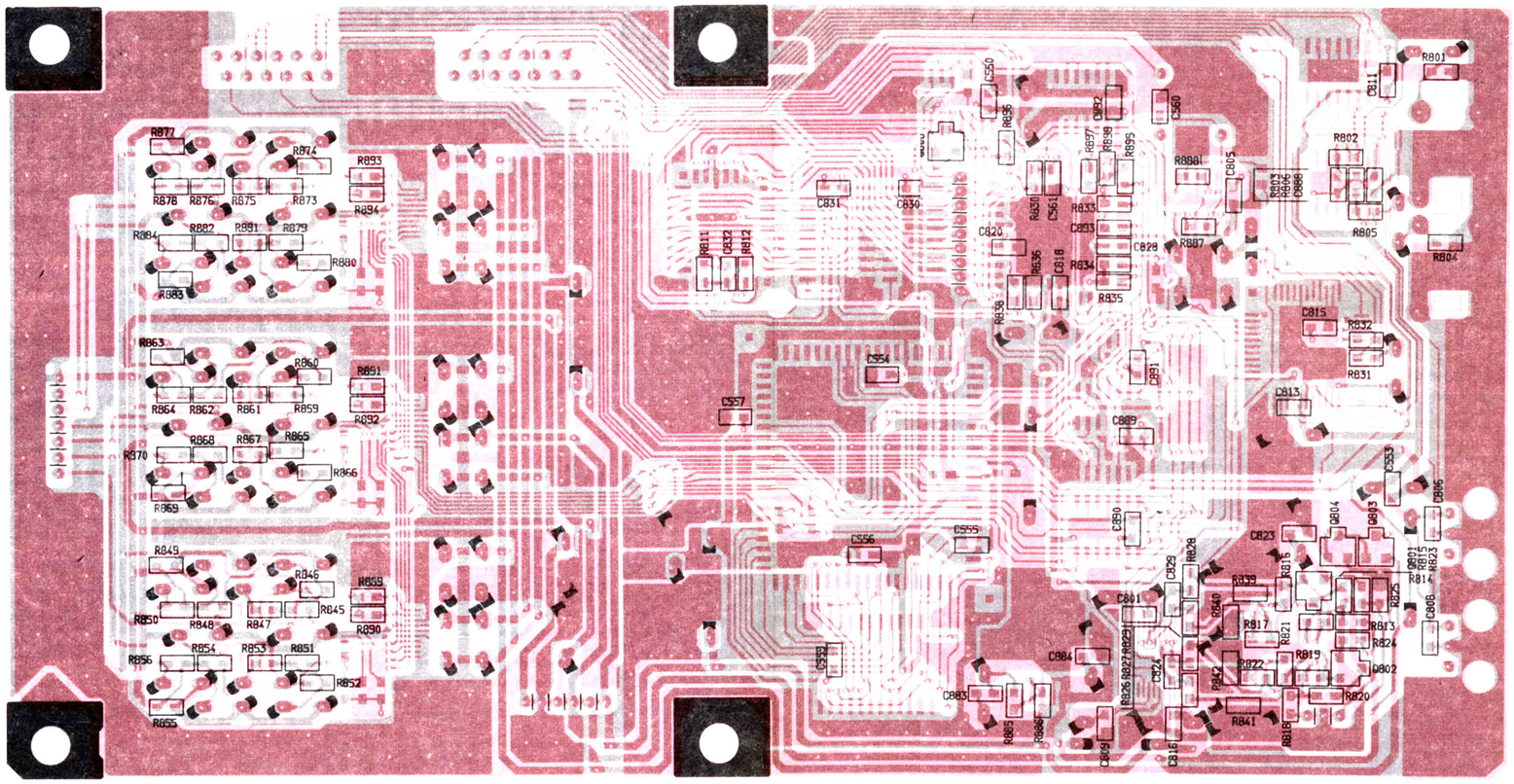
5-4. P C Board-Component Side

5-4-1. Digital PCB Ass'y



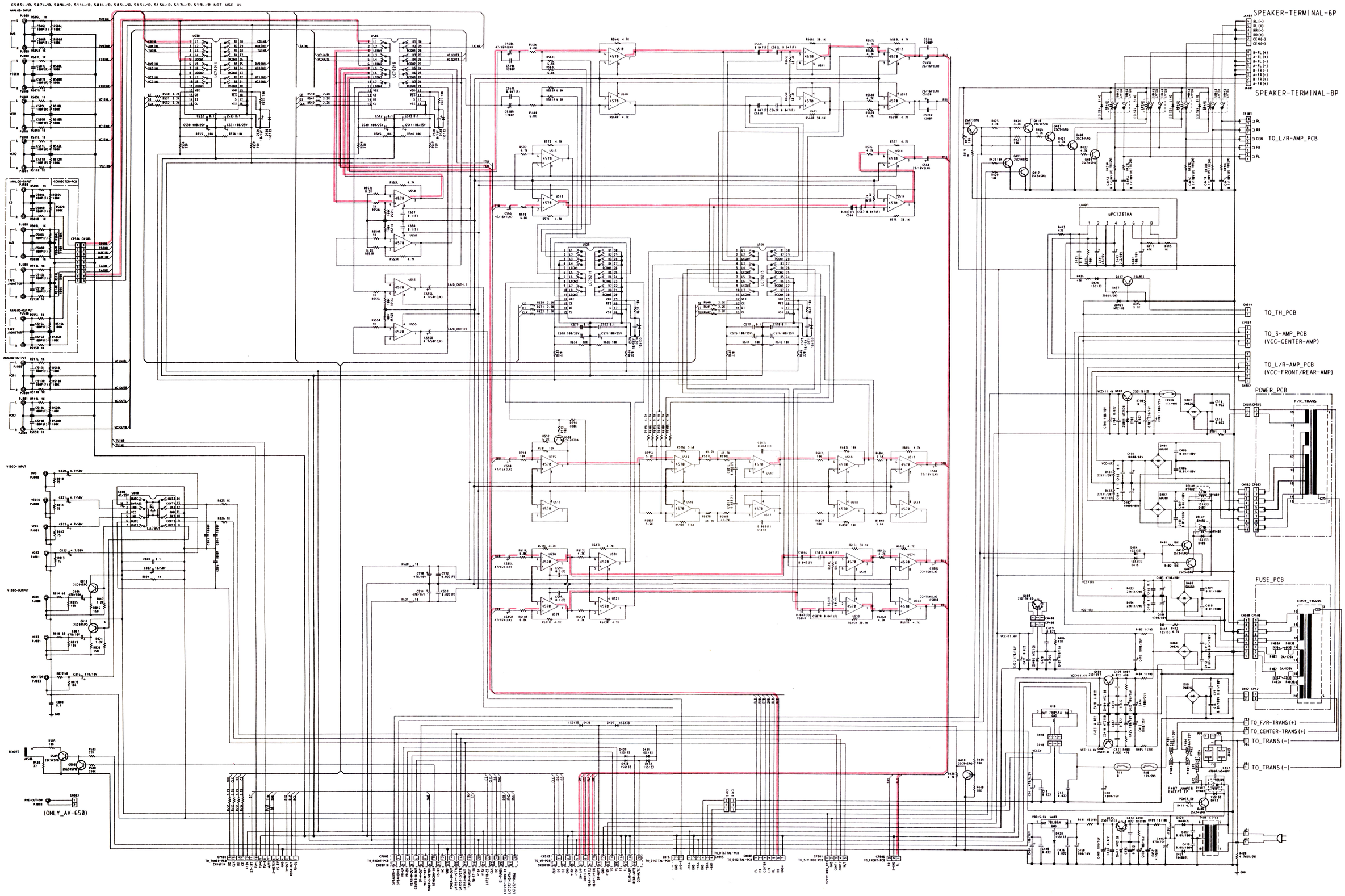
BZ10125 B

5-5. P C Board-Solder Side

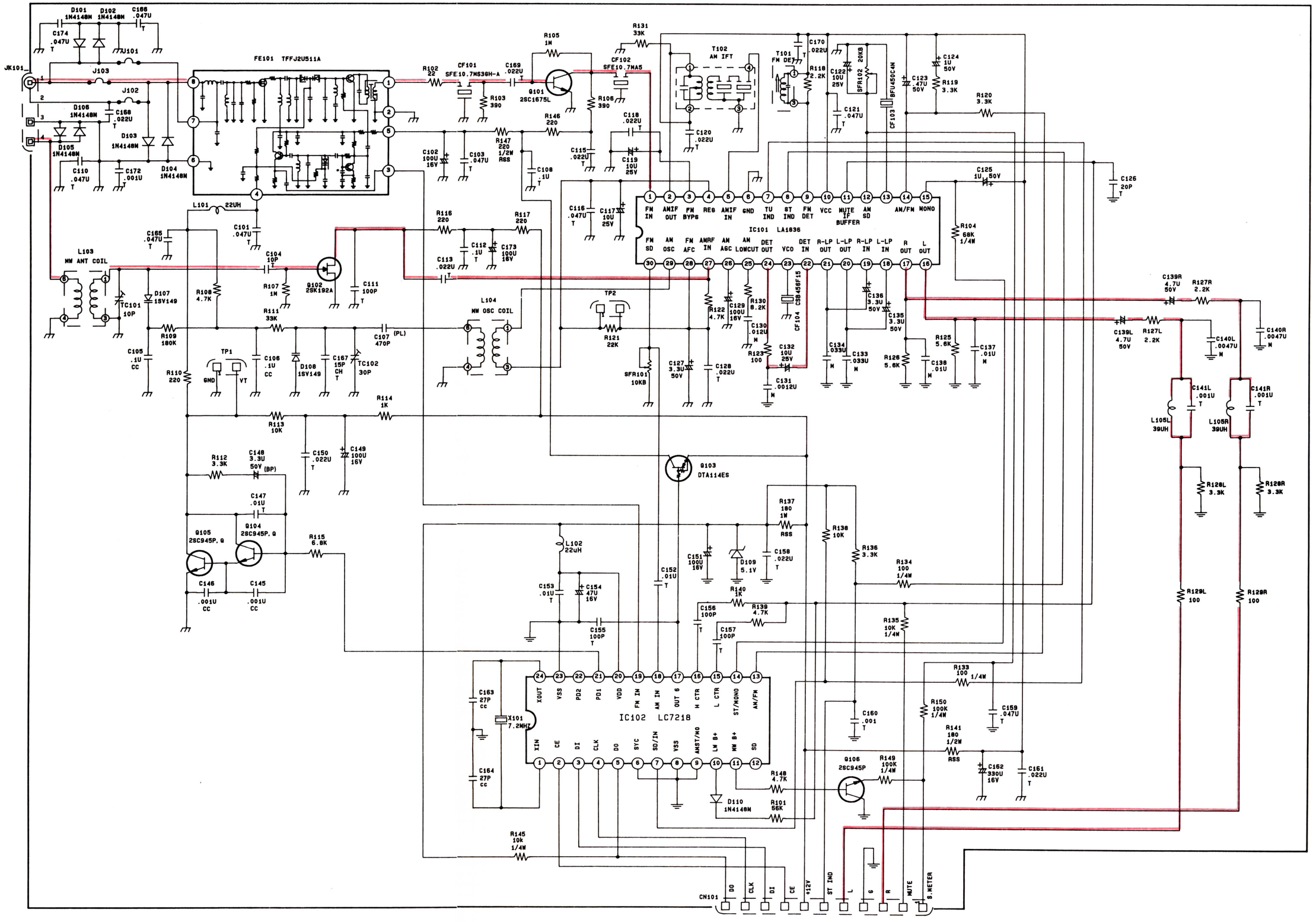


5-5-1. Digital PCB Ass'y

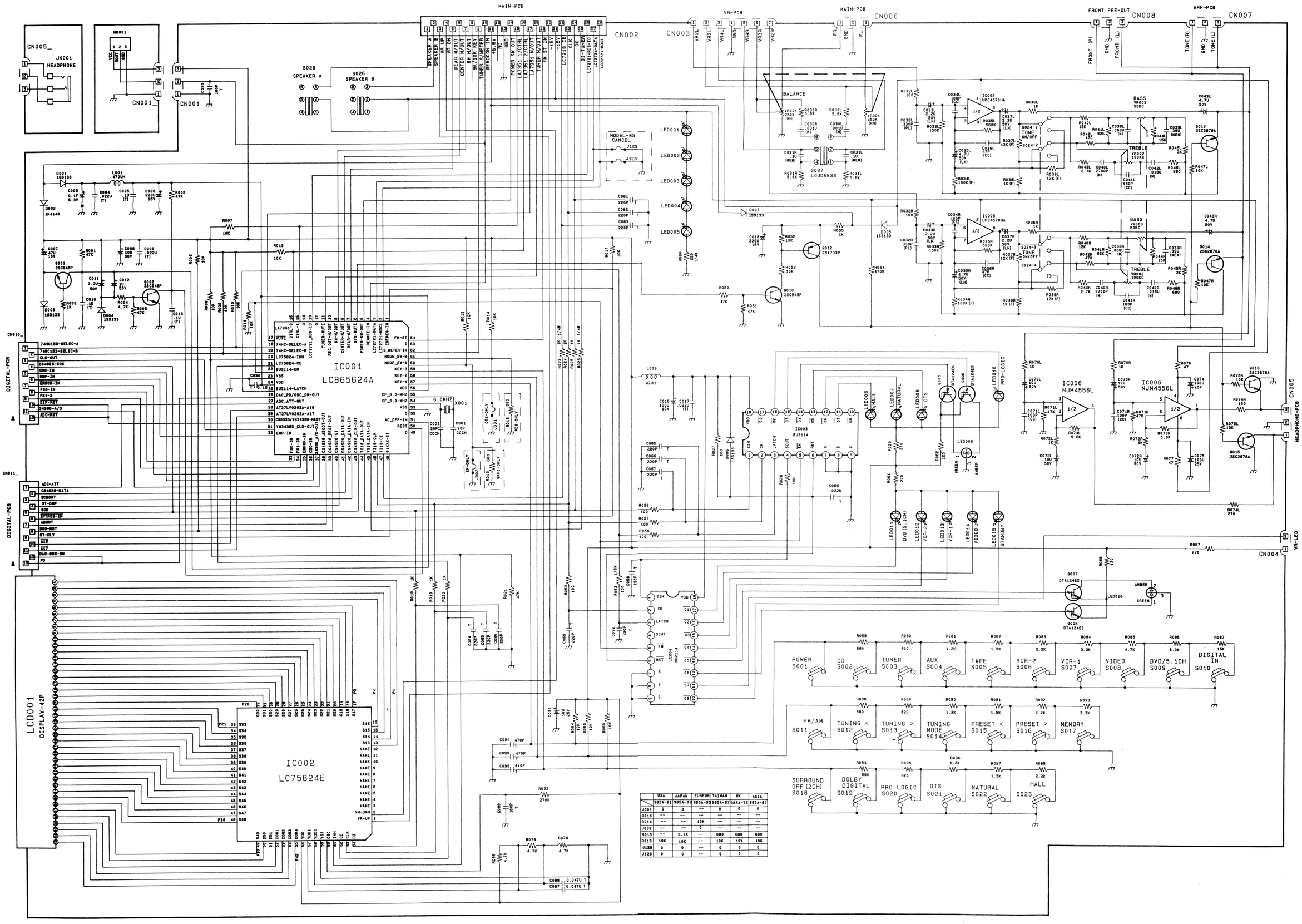
Schematic Diagram-Main Sections



Schematic Diagram – Tuner Section

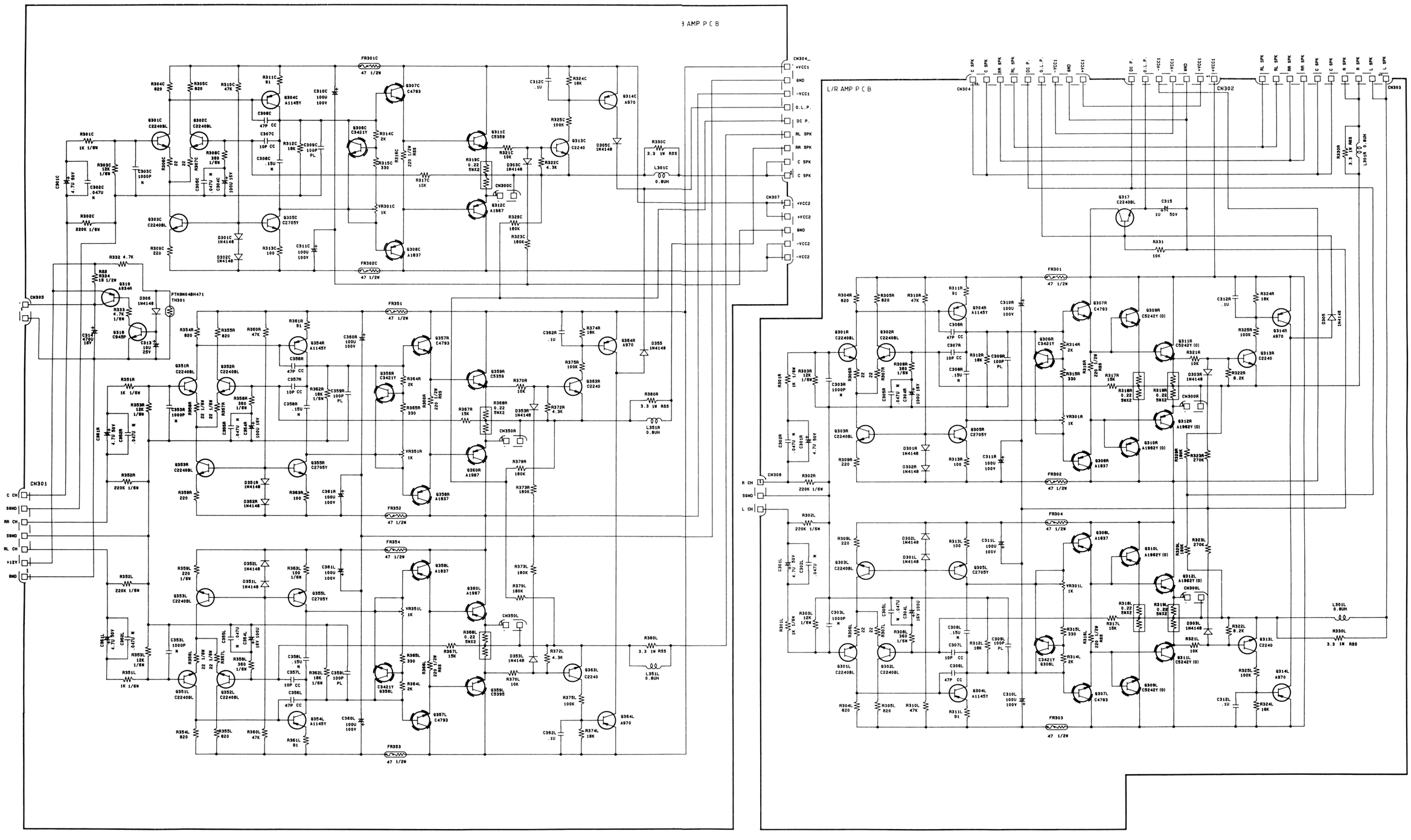


Schematic Diagram-Front Sections



	USA	JAPAN	EUROPE	TAIWAN	HK	ASIA
	985A-81	985A-83	985A-85	985A-87	985A-75	985A-87
J001	0	0	--	0	0	0
R016	--	--	--	--	--	--
R014	--	--	10K	--	--	--
J002	--	--	0	--	--	--
R015	--	2.7K	--	680	680	680
R013	15K	10K	--	10K	10K	10K
J128	0	0	--	0	0	0
J129	0	0	--	0	0	0

Schematic Diagram-AMP. Sections


3 AMP P C B
L/R AMP P C B
CN301
CN302
CN303
CN304
CN305
CN307
CN308
CN350
CN350L
CN300
CN300L
C CH
SGND
RR CH
RL CH
+12V
GND
R CH
L CH
+VCC1
GND
-VCC1
O.L.P.
DC P.
RL SPK
RR SPK
C SPK
+VCC2
-VCC2
R SPK
L SPK
FR301
FR302
FR303
FR304
FR351
FR352
FR353
FR354
47 1/2W
PTH9N04BH471
TH301
L301C
L301R
L351R
L351L
0.8UH
VR301C
VR351R
VR351L
1K
YR301L
D301C
D302C
D305C
D306
D355
D303L
1N4148
R330C
R330R
R330L
R351R
R351L
R353L
R380R
R380L
3.3 1W RSS
R331
10K
R332 4.7K
R333
4.7K 1/8W
R334
18 1/2W
R352R
R352L
220K 1/6W
R302C
R302R
R302L
220K 1/6W
R303C
R303R
R303L
12K 1/8W
R317C
R317R
R317L
15K
R322C
R322R
R322L
4.3K
R323C
R323R
R323L
180K
R324C
R324R
R324L
18K
R325C
R325R
R325L
100K
R326C
R326R
R326L
270K
R328C
R328R
R328L
180K
R329C
R329R
R329L
180K
R351C
R351L
1K 1/8W
R354C
R354R
R354L
820
R355C
R355R
R355L
820
R356C
R356R
R356L
22 1/8W
R357C
R357R
R357L
22 1/8W
R358C
R358R
R358L
360 1/8W
R359C
R359R
R359L
220 1/8W
R360C
R360R
R360L
47K
R361C
R361R
R361L
91
R362C
R362R
R362L
18K 1/8W
R363C
R363R
R363L
100 1/8W
R364C
R364R
R364L
2K
R365C
R365R
R365L
330
R366C
R366R
R366L
220 1/2W RSS
R367C
R367R
R367L
15K
R368C
R368R
R368L
0.22 5WX2
R369C
R369R
R369L
0.22 5WX2
R370C
R370R
R370L
10K
R371C
R371R
R371L
180K
R372C
R372R
R372L
4.3K
R373C
R373R
R373L
180K
R375C
R375R
R375L
100K
R379C
R379R
R379L
180K
R308C
R308R
R308L
360 1/8W
R309C
R309R
R309L
220 1/8W
R310C
R310R
R310L
47K
R311C
R311R
R311L
91
R312C
R312R
R312L
18K
R313C
R313R
R313L
100 1/6W
R315C
R315R
R315L
330
R316C
R316R
R316L
220 1/2W RSS
R317C
R317R
R317L
15K
R318C
R318R
R318L
0.22 5WX2
R319C
R319R
R319L
0.22 5WX2
R321C
R321R
R321L
10K
R322C
R322R
R322L
6.2K
R323C
R323R
R323L
270K
R324C
R324R
R324L
18K
R325C
R325R
R325L
100K
R326C
R326R
R326L
270K
R328C
R328R
R328L
180K
R329C
R329R
R329L
180K
R330C
R330R
R330L
3.3 1W RSS
C301C
C301R
C301L
4.7U 50V
C302C
C302R
C302L
.047U M
C303C
C303R
C303L
1000P M
C304C
C304R
C304L
.047U M
100U 16V
C305C
C305R
C305L
C306C
C306R
C306L
47P CC
C307C
C307R
C307L
10P CC
C308C
C308R
C308L
.15U M
C309C
C309R
C309L
100P PL
C310C
C310R
C310L
100U 100V
C311C
C311R
C311L
C312C
C312R
C312L
.1U
C313C
C313R
C313L
C2240
C314C
C314R
C314L
A970
C315
1U 50V
C317
C2240BL
C318C
C318R
C318L
C319
A934R
C321C
C321R
C321L
C322C
C322R
C322L
C325C
C325R
C325L
C326C
C326R
C326L
C327C
C327R
C327L
C328C
C328R
C328L
C329C
C329R
C329L
C330C
C330R
C330L
C331C
C331R
C331L
C332C
C332R
C332L
C333C
C333R
C333L
C334C
C334R
C334L
C335C
C335R
C335L
C336C
C336R
C336L
C337C
C337R
C337L

Schematic Diagram-VR Section

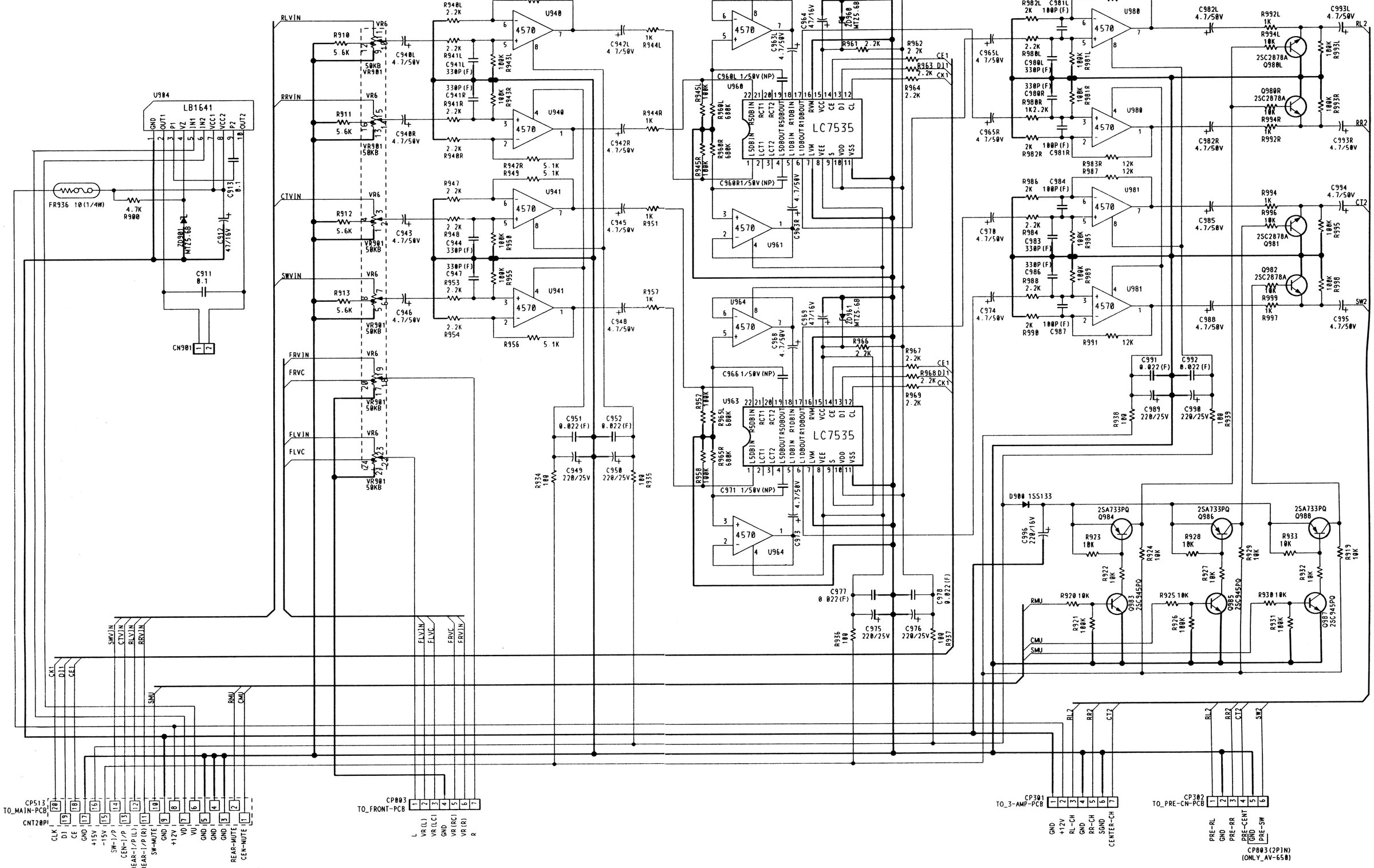
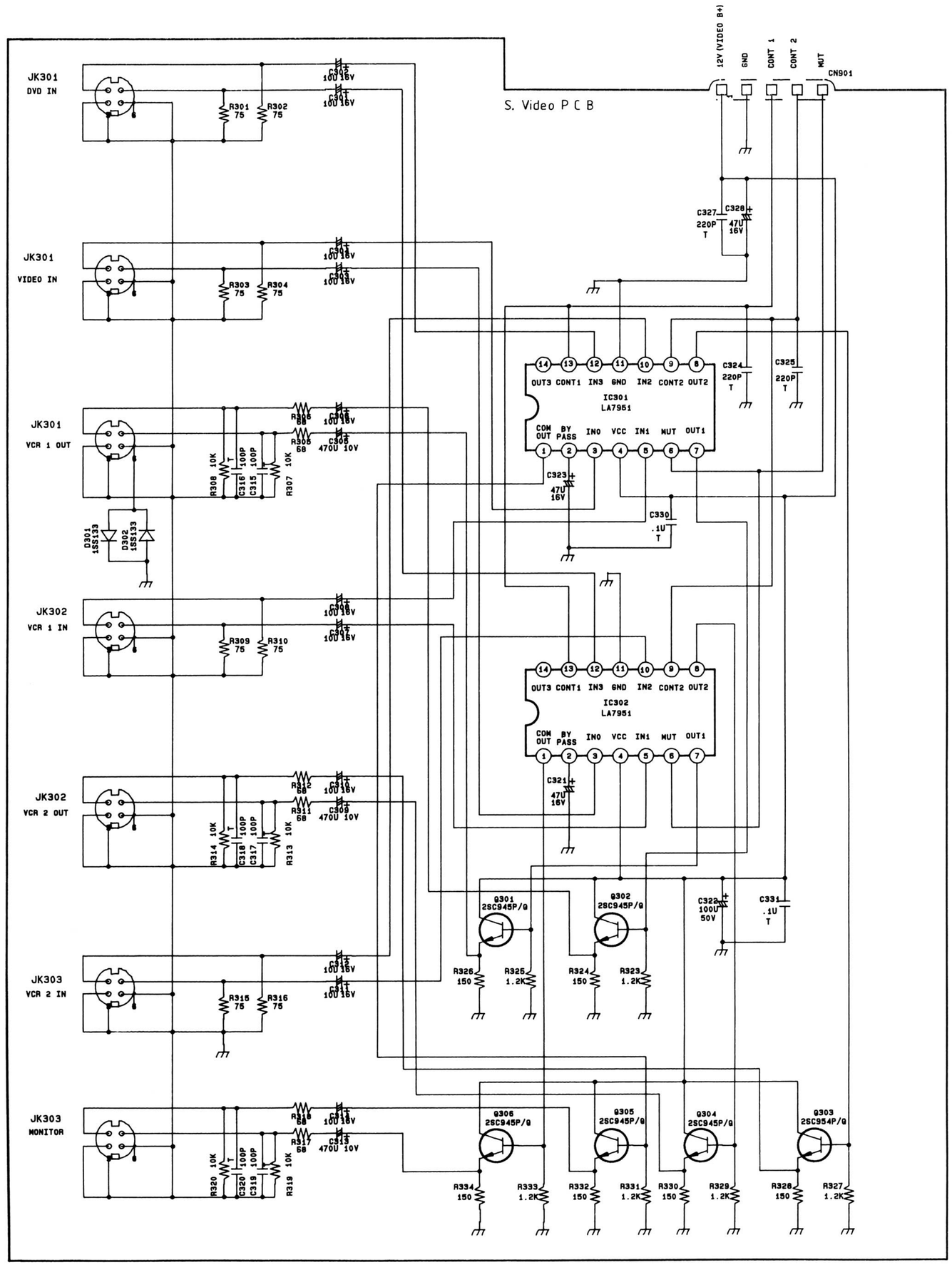
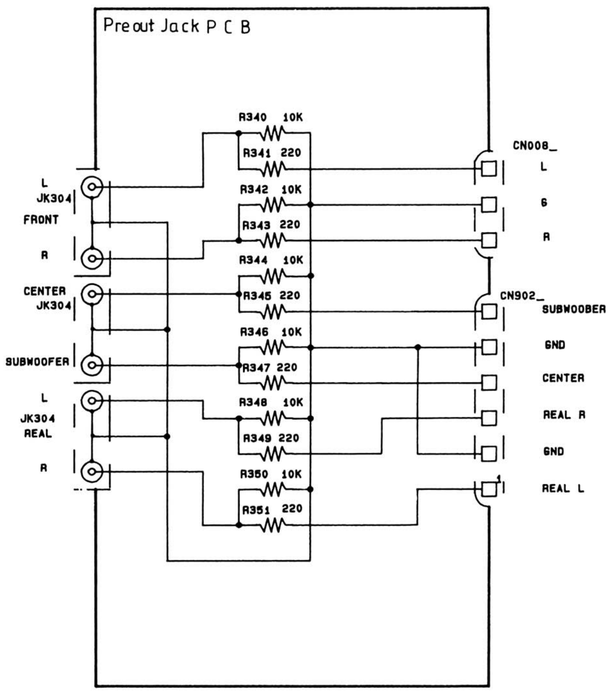
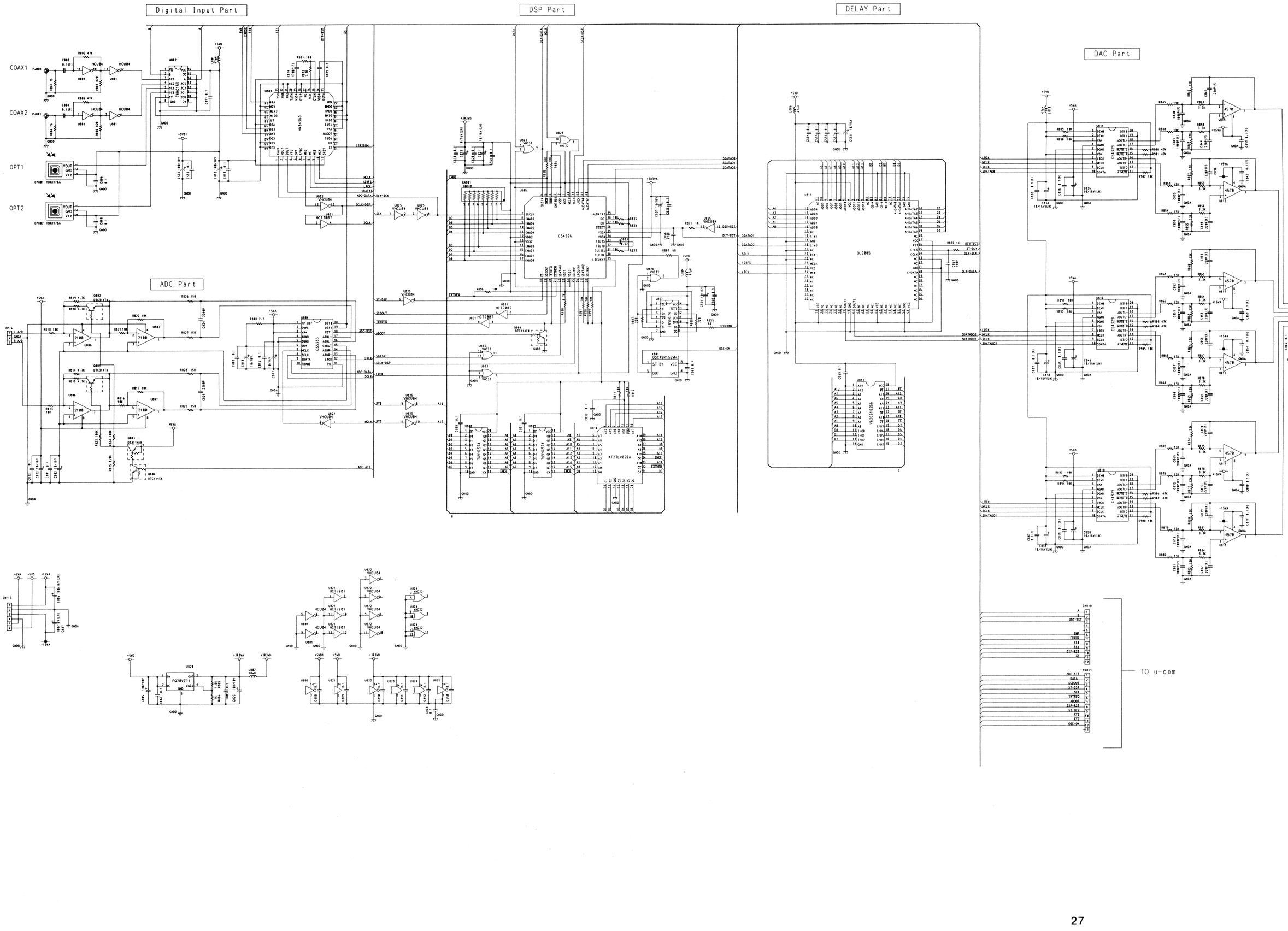


Diagram-S. Video/Preout Jack Sections





Schematic Diagram-Digital Section



NOTES: Abbreviations
TR-Transistor, SID-Silicon Diode, ZD-Zener Diode, RK-Carbon Resistor
RSS/RSN-Metal Film Resistor, RC-Cement Resistor, CE-Electrolytic Capacitor
CM-Mylar Capacitor, CG-Gold Capacitor, CC-Ceramic Capacitor, CKF-Ceramic Capacitor
CMEM-Metalized Polyester Capacitor, CPL-Polystylene Capacitor, C-Mica Capacitor
CML-Multi-layer Ceramic Capacitor, Parts Marked With * Show Chip Parts.

Front P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C143267910	Front P.C.B. Ass'y (For UL)
	C143267913	Front P.C.B. Ass'y (For DU)
	4143267910	Front P.C.B.
IC001	415286524X	IC LC865624A-XXX
IC002	415275824E	IC LC75824E
IC003,004	4159021140	IC BU2114
IC005	4151045708	IC UPC4570HA
IC006	41594556AL	NJM4556AL
	or 415904556L	NJM4556L
Q001,002	410520945P,Q	2SC945P,Q
Q005-008	4109101245	DTA124ES
Q010	410520945P,Q	2SC945P,Q
Q012	410500733P,Q	2SA733P,Q
Q013-016	410522878A	2SC2878A
X001	410090600M	Crystal 6.00MHz
D001	4121901330	Sid 1SS133
D002	4138104002	Sid IN4002L
D003-007	4121901330	Sid 1SS133
LCD001	4110440257	LCD Display DLC-A1996PN
LED001-005	412064240D	LED 5Q EL424-6USOD/S283 (AMBER)
LED006-008	4120612543	LED 3Q EL1254SOT (ORG)
LED009	412063VGNW	LED 3Q L-3VGNW (AMBER/GREEN)
LED010-015	4120612543	LED 3Q EL1254SOT (ORG)
LED016	412063VGNW	LED 3Q L-3VGNW (AMBER/GREEN)
VR001	5020125160	VR 250KMN
VR002	5020252307	VR 100KCx2
VR003	5020254158	VR 50KCx2
S001-023	4400000160	Tact SW. SKHVBL3720-CP
S024	4430402700	Push SW. SPEA12MC04-CP5
S025-027	4430206415	Push SW. SEA12MC001-CP
L001	4328247186	Motor Choke 470uH "K"
L003	4325047093	Peaking Coil 47uH
R001	4050147355	RK 47K 1/6W J
R002	4050110255	RK 1K 1/6W J
R003	4050147355	RK 47K 1/6W J
R004	4050147255	RK 4.7K 1/6W J
R005	4050147355	RK 47K 1/6W J
R006-013	4050110355	RK 10K 1/6W J
R017	4050110355	RK 10K 1/6W J
R018-020	4050110255	RK 1K 1/6W J
R021	4050147355	RK 47K 1/6W J
R022	4050127455	RK 270K 1/6W J
R023	4050410255	RK 1K 1/4W J
R024,025	4050110255	RK 1K 1/6W J
R026	4050410255	RK 1K 1/4W J
R027,028	4050110155	RK 100 1/6W J
R029	4050127155	RK 270 1/6W J
R030L,R	4050156255	RK 5.6K 1/6W J
R031L,R	4050156255	RK 5.6K 1/6W J
R032L,R	4050110155	RK 100 1/6W J
R033L,R	4050115455	RK 150K 1/6W J
R034L,R	4050110475	RK 100K 1/6W J 1%
R035L,R	4050156455	RK 560K 1/6W J
R036L,R	4050110255	RK 1K 1/6W J
R037L,R	4050112375	RK 12K 1/6W J 1%
R038L,R	4050110275	RK 1K 1/6W J 1%
R039L,R	4050112375	RK 12K 1/6W J 1%

Schematic Ref. No.	Part No.	Description
R040L,R	4050412355	RK 12K 1/4W J
R041L,R	4050182355	RK 82K 1/6W J
R042L,R	4050147155	RK 470 1/6W J
R043L,R	4050127255	RK 2.7K 1/6W J
R044L,R	4050115355	RK 15K 1/6W J
R045L,R	4050120255	RK 2K 1/6W J
R046L,R	4050168155	RK 680 1/6W J
R047L,R	4050110355	RK 10K 1/6W J
R050,051	4050147355	RK 47K 1/6W J
R052,053	4050110355	RK 10K 1/6W J
R054	4050147455	RK 470K 1/6W J
R055	4050110255	RK 1K 1/6W J
R056-059	4050110155	RK 100 1/6W J
R060	4050422155	RK 220 1/4W J
R061	4050127155	RK 270 1/6W J
R062	4050112155	RK 120 1/6W J
R063	4050110155	RK 100 1/6W J
R064-066	4050110355	RK 10K 1/6W J
R068	4050112155	RK 120 1/6W J
R069	4050168155	RK 680 1/6W J
R070L,R	4050110255	RK 1K 1/6W J
R071L,R	4050147355	RK 47K 1/6W J
R072L,R	4050110255	RK 1K 1/6W J
R073L,R	4050156255	RK 5.6K 1/6W J
R074L,R	4050110155	RK 100 1/6W J
R075L,R	4050110355	RK 10K 1/6W J
R076,077	4050447055	RK 47 1/4W J
R078,079	4050147255	RK 4.7K 1/6W J
R080	4050182155	RK 820 1/6W J
R081	4050112255	RK 1.2K 1/6W J
R082	4050115255	RK 1.5K 1/6W J
R083	4050122255	RK 2.2K 1/6W J
R084	4050133255	RK 3.3K 1/6W J
R085	4050147255	RK 4.7K 1/6W J
R086	4050182255	RK 8.2K 1/6W J
R087	4050115355	RK 15K 1/6W J
R088	4050168155	RK 680 1/6W J
R089	4050182155	RK 820 1/6W J
R090	4050112255	RK 1.2K 1/6W J
R091	4050115255	RK 1.5K 1/6W J
R092	4050122255	RK 2.2K 1/6W J
R093	4050133255	RK 3.3K 1/6W J
R094	4050168155	RK 680 1/6W J
R095	4050182155	RK 820 1/6W J
R096	4050112255	RK 1.2K 1/6W J
R097	4050115255	RK 1.5K 1/6W J
R098	4050122255	RK 2.2K 1/6W J
R099	4050147255	RK 4.7K 1/6W J
C001,002	5121200552	CC 20p 50V J (CH)
C003	2000001014	CG .1F 5.5V Z (Gold)
C004	7308622345	CML .022u 25V Z
C005	7306610445	CML .1u 50V Z
C006	5153221216	CE 220u 16V M
C007	5153470210	CE 47u 10V M
C008	5153100250	CE 10u 50V M
C009	7308622345	CML .022u 25V Z
C010	7306610445	CML .1u 50V Z
C011	5157229250	CE 2.2u 50V M (LN)
C012	5153109250	CE 1u 50V M
C013	7306610445	CML .1u 50V Z
C016	5153101210	CE 100u 10V M
C017	7308622345	CML .022u 25V Z
C018	5153221216	CE 220u 16V M
C030L,R	5116102550	CM .001u 50V J
C031L,R	5113104563	CMEM .1u 63V J

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Schematic Ref. No.	Part No.	Description
C032L,R	5091331513	CPL 330p 100V J
C033L,R	5157229250	CE 2.2u 50V M (LN)
C034L,R	5128101552	CC 100p 50V J
C035L,R	5153479250	CE 4.7u 50V M
C036L,R	5128470552	CC 47p 50V J
C037L,R	5157229250	CE 2.2u 50V M (LN)
C038L,R	5116683550	CM .068u 50V J
C039L,R	5113394563	CMEM .39u 63V J
C040L,R	5116272550	CM .0027u 50V J
C041L,R	5128181552	CC 180p 50V J
C042L,R	5116183550	CM .018u 50V J
C043L,R	5153479250	CE 4.7u 50V M
C066-069	7306522115	CML 220p 50V K
C070L,R	5153100250	CE 10u 50V M
C071L,R	5128101552	CC 100p 50V J
C072L,R	5153100250	CE 10u 50V M
C074,075	5153101225	CE 100u 25V M
C081-086	7306522115	CML 220p 50V K
C087,088	7306647345	CML .047u 50V Z
C089	7306510115	CML 100p 50V K
C090	7306610445	CML .1u 50V Z
C091	5153100250	CE 10u 50V M
C093	7306510115	CML 100p 50V K
C094-096	7306547115	CML 470p 50V K
C003(-) to (MC)	5116104550	CM .1u 50V J
IC003,004 Pin3 to Pin 9	7306547115	CML 470p 50V K (For UL)
IC003,004 Pin6 to Pin 9	7308622345	CML .022u 25V Z (For UL)
CN002	4492800265	FFC 28P Side Base
CN003	4490700261	Wire Holder 7P20
CN004	4490201005	PH 2P Side Base
CN005	4490300261	Wire Holder 3P20
CN810-	4491200265	FFC 12P Side Base
CN811-	4491300265	FFC 13P Side Base

Tuner P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C142264800	Tuner P.C.B. Ass'y
	4142264800	Tuner P.C.B.
IC101	4152018360	IC LA1836
IC102	4152072180	IC LC7218
Q101	410521675L	TR 2SC1675L
Q102	41065192AY	FET 2SK192AY
Q103	4109101145	TR DTA114ES
Q104-106	410520945P,Q	TR 2SC945P,Q
X101	410090720M	Crystal 7.2MHz
D103-106	4121901330	Sid 1SS133
D107,108	4120115612	RD KV1561A-2
D109	412150051B	ZD MTZ5.1B
D110	4121901330	Sid 1SS133
L101,102	4325022093	P. Coil 22uH
L103	4300103280	AM Ant Coil TWS-358-762
L104	4330101830	MW Osc Coil TWS-358-673
L105L,R	4329239311	Inductance 39uH
T101	4340201430	FM Det TWS-358-675
T102	4160500199	Ceramic Filter TWS-358-679
CF101	4160220044	Ceramic Filter SFE10.7MS3GYM RED
CF102	4160200003	Ceramic Filter SFE10.7MA5 RED
CF103	4160500148	Ceramic Filter BFU450C4N
CF104	4160500203	Resonator CSB456F15
JK101	4560002087	4P Ant. Terminal AJ-2019-040

Schematic Ref. No.	Part No.	Description
FE101	71602U511A	FM Front End TFFJ2U511A
SFR101	5226103177	Semi VR 10KX
SFR102	5226203177	Semi VR 20KX
R101	4050156255	RK 5.6K 1/6W J
R102	4050122055	RK 22 1/6W J
R103	4050139155	RK 390 1/6W J
R104	4050468355	RK 68K 1/4W J
R105	4050110555	RK 1M 1/6W J
R106	4050139155	RK 390 1/6W J
R107	4050110555	RK 1M 1/6W J
R108	4050147255	RK 4.7K 1/6W J
R109	4050118455	RK 180K 1/6W J
R110	4050122155	RK 220 1/6W J
R111	4050133355	RK 33K 1/6W J
R112	4050133255	RK 3.3K 1/6W J
R113	4050110355	RK 10K 1/6W J
R114	4050110255	RK 1K 1/6W J
R115	4050168255	RK 6.8K 1/6W J
R116,117	4050122155	RK 220 1/6W J
R118	4050139255	RK 3.9K 1/6W J
R119,120	4050133255	RK 3.3K 1/6W J
R121	4050122355	RK 22K 1/6W J
R122	4050147255	RK 4.7K 1/6W J
R123	4050110155	RK 100 1/6W J
R127L,R	4050133255	RK 3.3K 1/6W J
R128L,R	4050133255	RK 3.3K 1/6W J
R129L,R	4050110155	RK 100 1/6W J
R130	4050182255	RK 8.2K 1/6W J
R131	4050133355	RK 33K 1/6W J
R133,134	4050410155	RK 100 1/4W J
R135	4050456255	RK 5.6K 1/4W J
R136	4050133255	RK 3.3K 1/6W J
R137	4271018155	RSS 180 1W J
R138	4050110355	RK 10K 1/6W J
R139	4050147255	RK 4.7K 1/6W J
R140	4050110255	RK 1K 1/6W J
R141	4270218155	RSS 180 1/2W J
R145	4050410355	RK 10K 1/4W J
R146	4050147155	RK 470 1/6W J
R147	4270222155	RSS 220 1/2W J
R148	4050147255	RK 4.7K 1/6W J
R149,150	4050410455	RK 100K 1/4W J
TC101	5010100045	C Trimmer 10P VCT51C554A
C101	7306647345	CML 0.047u 50V Z
C102	5153101216	CE 100u 16V M
C103	7306647345	CML 0.047u 50V Z
C104	7306910055	CML 10P 50V J
C105,106	5104104402	CC 0.1u 50V Z
C107	5091471513	CPL 470P 100V J
C108	7306610445	CML 0.1u 50V Z
C111	7306510115	CML 100P 50V K
C112	7306610445	CML 0.1u 50V Z
C113	7308622345	CML 0.022u 25V Z
C115	7308622345	CML 0.022u 25V Z
C116	7306647345	CML 0.047u 50V Z
C117	5153100250	CE 10u 50V M
C118	7308622345	CML 0.022u 25V Z
C119	5153100250	CE 10u 50V M
C120	7308622345	CML 0.022u 25V Z
C121	7306647345	CML 0.047u 50V Z
C122	5153100250	CE 10u 50V M
C123	5153478250	CE 0.47u 50V M
C124,125	5153109250	CE 1u 50V M
C126	7306910055	CML 10P 50V J
C127	5153339250	CE 3.3u 50V M
C128	7308622345	CML 0.022u 25V Z
C129	5153101216	CE 100u 16V M
C130	5116123511	CM 0.012u 100V J

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Schematic Ref. No.	Part No.	Description
C131	5116122511	CM 0.0012u 100V J
C132	5153100250	CE 10u 50V M
C133,134	5116333511	CM 0.033u 100V J
C135,136	5153339250	CE 3.3u 50V M
C139L,R	5153479250	CE 4.7u 50V M
C140L,R	5116472511	CM 0.0047u 100V J
C141L,R	7306510215	CML 0.001u 50V K
C145,146	7306510215	CML 0.001u 50V K
C147	7307110315	CML 0.01u 16V Z
C148	5163339250	CE 3.3u 50V M (NON)
C149	5153101216	CE 100u 16V M
C150	7308622345	CML 0.022u 25V Z
C151	5153101216	CE 100u 16V M
C152,153	7307110315	CML 0.01u 16V Z
C154	5153470216	CE 47u 16V M
C155-157	7306510115	CML 100P 50V K
C158	7308622345	CML 0.022u 25V Z
C159	7306647345	CML 0.047u 50V Z
C160	7306510215	CML 0.001u 50V K
C161	7308622345	CML 0.022u 25V Z
C162	5153331216	CE 330u 16V M
C163,164	5121270552	CC 27P 50V J (CH)
C165	7306647345	CML 0.047u 50V Z
C167	7306015055	CML 15p 50V J
C168-170	7308622345	CML 0.022u 25V Z
C171	7306647345	CML 0.047u 50V Z
C172	7306510215	CML 0.001u 50V K
C173	5153101216	CE 100u 16V M
CN101	4491100317	Socket 11P
TP1	4494000297	40P Pin Header
	4562030003	Egg Terminal 3Q

S. Video P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C142267710	S. Video P.C.B. Ass'y
	4142267710	S. Video P.C.B.
IC301,302	4152079510	IC LA7951
IC301	4121901330	Sid 1SS133 (T. Up)
Q301-306	410520945P,Q	2SC945P,Q
D301,302	4121901330	1SS133
JK301	4500900470	3P Y/C Con. Jack YKF-515516
JK302,303	4500900469	2P Y/C Con. Jack YKF-515512
R301-304	4050175055	RK 75 1/6W J
R305,306	4050168055	RK 68 1/6W J
R307,308	4050110355	RK 10K 1/6W J
R309,310	4050175055	RK 75 1/6W J
R311,312	4050168055	RK 68 1/6W J
R313,314	4050110355	RK 10K 1/6W J
R315,316	4050175055	RK 75 1/6W J
R317,318	4050168055	RK 68 1/6W J
R319,320	4050110355	RK 10K 1/6W J
R323	4050112255	RK 1.2K 1/6W J
R324	4050115155	RK 150 1/6W J
R325	4050112255	RK 1.2K 1/6W J
R326	4050115155	RK 150 1/6W J
R327	4050112255	RK 1.2K 1/6W J
R328	4050115155	RK 150 1/6W J
R329	4050112255	RK 1.2K 1/6W J
R330	4050115155	RK 150 1/6W J
R331	4050112255	RK 1.2K 1/6W J
R332	4050115155	RK 150 1/6W J
R333	4050112255	RK 1.2K 1/6W J
R334	4050115155	RK 150 1/4W J
C301-304	5153100216	CE 10u 16V M
C305	5153471210	CE 470u 10V M

Schematic Ref. No.	Part No.	Description
C306-308	5153100216	CE 10u 16V M
C309	5153471210	CE 470u 10V M
C310-312	5153100216	CE 10u 16V M
C313	5153471210	CE 470u 10V M
C314	5153100216	CE 10u 16V M
C315-320	7306510115	CML 100p 50V K
C321	5153470216	CE 47u 16V M
C322	5153101216	CE 100u 16V M
C323	5153470216	CE 47u 16V M
C324,325	7306522115	CML 220p 50V K
C327	7306522115	CML 220p 50V K
C328	5153470216	CE 47u 16V M
C330,331	7306610445	CML .1u 50V Z
CN901	4490500270	FTW 5P Top Base

Preout Jack P.B.C. Ass'y

Schematic Ref. No.	Part No.	Description
	C142267720	Preout Jack P.B.C. Ass'y
	4142267720	Preout Jack P.B.C.
R340	4050110355	RK 10K 1/6W J
R341	4050122155	RK 220 1/6W J
R342	4050110355	RK 10K 1/6W J
R343	4050122155	RK 220 1/6W J
R344	4050110355	RK 10K 1/6W J
R345	4050122155	RK 220 1/6W J
R346	4050110355	RK 10K 1/6W J
R347	4050122155	RK 220 1/6W J
R348	4050110355	RK 10K 1/6W J
R349	4050122155	RK 220 1/6W J
R350	4050110355	RK 10K 1/6W J
R351	4050122155	RK 220 1/6W J
S-GND	5116104550	CM .1u 50V J
JK304	4500800473	6P RCA Jack RJ-1074-25-0300A
CN008-	4490301004	PH 3P Top Base
CN902-	4490601004	PH 6P Top Base

L/R Amp. P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C142267810	L/R Amp. P.C.B. Ass'y
	4142267810	L/R Amp. P.C.B.
Q301L,R	4105222402	TR 2SC2240BL
Q302L,R	4105222402	TR 2SC2240BL
Q303L,R	4105222402	TR 2SC2240BL
Q304L,R	410501145Y,0	TR 2SA1145Y,0
Q305L,R	410522705Y,0	TR 2SC2705Y,0
Q313L,R	4105222402	TR 2SC2240BL
Q314L,R	4105009702	TR 2SA970BL
Q317	4105222402	TR 2SC2240BL
D301L,R	4121141480	Sid 1N4148
D302L,R	4121141480	Sid 1N4148
D303L,R	4121141480	Sid 1N4148
D305	4121141480	Sid 1N4148
L301L,R	4298822034	Audio Coil 0.8uH
VR301L,R	5226102177	Semi VR 1KX
R301L,R	4050110255	RK 1K 1/6W J
R302L,R	4050122455	RK 220K 1/6W J
R303L,R	4050112355	RK 12K 1/6W J
R304L,R	4050482155	RK 820 1/4W J
R305L,R	4050482155	RK 820 1/4W J
R306L,R	4050422055	RK 22 1/4W J
R307L,R	4050422055	RK 22 1/4W J
R308L,R	4050136155	RK 360 1/6W J

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Schematic Ref. No.	Part No.	Description
R309L,R	4050422155	RK 220 1/4W J
R310L,R	4050447355	RK 47K 1/4W J
R311L,R	4050491055	RK 91 1/4W J
R312L,R	4050418355	RK 18K 1/4W J
R313L,R	4050410155	RK 100 1/4W J
R314L,R	4050420255	RK 2K 1/4W J
R315L,R	4050433155	RK 330 1/4W J
R316L,R	4270222155	RSS 220 1/2W J
R317L,R	4050315355	RK 15K 1/4W J
R318L,R	7195022852	RC 0.22x2 5W J
R319L,R	7195022852	RC 0.22x2 5W J
R321L,R	4050410355	RK 10K 1/4W J
R322L,R	4050482255	RK 8.2K 1/4W J
R323L,R	4050427455	RK 270K 1/4W J
R324L,R	4050418355	RK 18K 1/4W J
R325L,R	4050410455	RK 100K 1/4W J
R329L,R	4050418455	RK 180K 1/4W J
R330L,R	4171033955	RSN 3.3 1W J
R331	4050410355	RK 10K 1/4W J
FR301-304	4180247057	Fuse Resistor 47 1/2W
C301L,R	5153479250	CE 4.7u 50V M
C302L,R	5116473511	CM 0.047u 100V J
C303L,R	5116102511	CM 0.001u 100V J
C304L,R	5153101216	CE 100u 16V M
C305L,R	5116473511	CM 0.047u 100V J
C306L,R	5128470552	CC 47P 50V J
C307L,R	5128100852	CC 10P 50V D
C308L,R	5113154563	CMEM 0.15u 63V J
C309L,R	5091101513	CPL 100p 100V J
C310L,R	5154101201	CE 100u 100V M
C311L,R	5154101201	CE 100u 100V M
C312L,R	5104104452	CC 0.1u 50V Z
C315	5153109250	CE 1u 50V M
CN300L,R	4494000297	40P Pin Header
CN302	4490700210	FTW 7P Top Base
CN303	4491000210	FTW 10P Top Base
CN304	4490900268	Wire Holder 9P25
CN308	4490301004	PH 3P Top Base

3 Amp. P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C142267820	3 Amp. P.C.B. Ass'y
	4142267820	3 Amp. P.C.B.
Q301C	4105222402	TR 2SC2240BL
Q302C	4105222402	TR 2SC2240BL
Q303C	4105222402	TR 2SC2240BL
Q304C	410501145Y,0	TR 2SA1145Y,0
Q305C	410522705Y,0	TR 2SC2705Y,0
Q313C	4105222402	TR 2SC2240BL
Q314C	4105009702	TR 2SA970BL
Q318	410520945P,Q	TR 2SC945P,Q
Q319	410500934R	TR 2SA934R
Q351L,R	4105222402	TR 2SC2240BL
Q352L,R	4105222402	TR 2SC2240BL
Q353L,R	4105222402	TR 2SC2240BL
Q354L,R	410501145Y,0	TR 2SA1145Y,0
Q355L,R	410522705Y,0	TR 2SC2705Y,0
Q363L,R	4105222402	TR 2SC2240BL
Q364L,R	4105009702	TR 2SA970BL
D301C	4121141480	Sid 1N4148
D302C	4121141480	Sid 1N4148
D303C	4121141480	Sid 1N4148
D305C	4121141480	Sid 1N4148
D306	4121141480	Sid 1N4148
D351L,R	4121141480	Sid 1N4148
D352L,R	4121141480	Sid 1N4148
D353L,R	4121141480	Sid 1N4148
D355	4121141480	Sid 1N4148

Schematic Ref. No.	Part No.	Description
L301C	4298822034	Audio Coil 0.8uH
L351L,R	4298822034	Audio Coil 0.8uH
VR301C	5226102177	Semi VR 1KX
VR351L,R	5226102177	Semi VR 1KX
FR301C	4180247057	Fuse Resistor 47 1/2W
FR302C	4180247057	Fuse Resistor 47 1/2W
FR351-354	4180247057	Fuse Resistor 47 1/2W
R301C	4050110255	RK 1K 1/6W J
R302C	4050122455	RK 220K 1/6W J
R303C	4050112355	RK 12K 1/6W J
R304C	4050482155	RK 820 1/4W J
R305C	4050482155	RK 820 1/4W J
R306C,307C	4050422055	RK 22 1/4W J
R308C	4050136155	RK 360 1/6W J
R309C	4050422155	RK 220 1/4W J
R310C	4050447355	RK 47K 1/4W J
R311C	4050491055	RK 91 1/4W J
R312C	4050418355	RK 18K 1/4W J
R313C	4050410155	RK 100 1/4W J
R314C	4050420255	RK 2K 1/4W J
R315C	4050433155	RK 330 1/4W J
R316C	4270222155	RSS 220 1/2W J
R317C	4050415355	RK 15K 1/4W J
R319C	7195022852	RC 0.22x2 5W J
R321C	4050410355	RK 10K 1/4W J
R322C	4050443255	RK 4.3K 1/4W J
R323C	4050418455	RK 180K 1/4W J
R324C	4050418355	RK 18K 1/4W J
R325C	4050410455	RK 100K 1/4W J
R329C	4050418455	RK 180K 1/4W J
R330C	4171033955	RSN 3.3 1W J
R332	4050447255	RK 4.7K 1/4W J
R333	4050147255	RK 4.7K 1/6W J
R334	4270218055	RSS 18 1/2W J
R351L,R	4050110255	RK 1K 1/6W J
R352L,R	4050122455	RK 220K 1/6W J
R353L,R	4050112355	RK 12K 1/6W J
R354L,R	4050482155	RK 820 1/4W J
R355L,R	4050482155	RK 820 1/4W J
R356L,R	4050122055	RK 22 1/6W J
R357L,R	4050122055	RK 22 1/6W J
R358L,R	4050136155	RK 360 1/6W J
R359L	4050122155	RK 220 1/6W J
R359R	4050422155	RK 220 1/4W J
R360L,R	4050447355	RK 47K 1/4W J
R361L,R	4050491055	RK 91 1/4W J
R362L,R	4050118355	RK 18K 1/6W J
R363L	4050110155	RK 100 1/6W J
R363R	4050410155	RK 100 1/4W J
R364L,R	4050420255	RK 2K 1/4W J
R365L,R	4050433155	RK 330 1/4W J
R366L,R	4270222155	RSS 220 1/2W J
R367L,R	4050415355	RK 15K 1/4W J
R368L,R	7195022852	RC 0.22x2 5W J
R370L,R	4050410355	RK 10K 1/4W J
R372L,R	4050443255	RK 4.3K 1/4W J
R373L,R	4050418455	RK 180K 1/4W J
R374L,R	4050418355	RK 18K 1/4W J
R375L,R	4050410455	RK 100K 1/4W J
R379L,R	4050418455	RK 180K 1/4W J
R380L,R	4171033955	RSN 3.3 1W J
C301C	5153479250	CE 4.7u 50V M
C302C	5116473511	CM 0.047u 100V J
C303C	5116102511	CM 0.001u 100V J
C304C	5153101216	CE 100u 16V M
C305C	5116473511	CM 0.047u 100V J
C306C	5128470552	CC 47P 50V J
C307C	5128100852	CC 10P 50V D
C308C	5113154563	CMEM 0.15u 63V J
C309C	5091101513	CPL 100p 100V J
C310C,311C	5154101201	CE 100u 100V M

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Schematic Ref. No.	Part No.	Description
C312C	5104104452	CC 0.1u 50V Z
C313	5153100250	CE 10u 50V M
C314	5153471216	CE 470u 16V M
C351L,R	5153479250	CE 4.7u 50V M
C352L,R	5116473511	CM 0.047u 100V J
C353L,R	5116102511	CM 0.001u 100V J
C354L,R	5153101216	CE 100u 16V M
C355L,R	5116473511	CM 0.047u 100V J
C356L,R	5128470552	CC 47P 50V J
C357L,R	5128100852	CC 10P 50V D
C358L,R	5113154563	CMEM 0.15u 63V J
C359L,R	5091101513	CPL 100p 100V J
C360L,R	5154101201	CE 100u 100V M
C361L,R	5154101201	CE 100u 100V M
C362L,R	5104104452	CC 0.1u 50V Z
CN300C	4494000297	40P Pin Header
CN301	4490700270	FTW 7P Top Base
CN304-	4490900268	Wire Holder 9P25
CN305	4490201004	PH 2P Top Base
CN307	4490500210	FTW 5P Top Base
CN350L,R	4494000297	40P Pin Header

Main P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C147269710	Main P.C.B. Ass'y (For UL)
	C147269713	Main P.C.B. Ass'y (For DU)
	4147269710	Main P.C.B.
U401	4151012378	IC UPC1237HA
U402	4151078005	IC UPC78L05J
U506	4152078213	IC LC78213
U510-521	415104570C	IC UPC4570C
U523,524	415104570C	IC UPC4570C
U525	4152078210	IC LC7821
U526	4152078213	IC LC78213
U530	4152078210	IC LC7821
U550	415104570C	IC UPC4570C
U555	415104570C	IC UPC4570C
U800	4152079510	IC LA7951
Q401	410520945P,Q	TR 2SC945P,Q
Q404	4100316670	TR 2SD1667
Q405	4100011340	TR 2SB1134
Q406-412	410520945P,Q	TR 2SC945P,Q
Q413	410500733P,Q	TR 2SA733P,Q
Q415	410031761E	TR 2SD1761E (For DU)
Q416	410520945P,Q	TR 2SC945P,Q
Q417	4100009530	TR 2SA9530 (For UL)
Q418	410520945P,Q	TR 2SC945P,Q
Q508,509	410520945P,Q	TR 2SC945P,Q
Q580	410522878A	TR 2SC2878A
Q803	410031761E	TR 2SD1761E
Q810,811	410520945P,Q	TR 2SC945P,Q
D10	413022W02G	RD 2W02G
D401,402	41300GBU8D	RD GBU8D
D403	41300GBU6D	RD GBU6D
D404	413022W02G	RD 2W02G
ZD405	41215J120B	ZD MTZJ12B
D406,407	4121901330	Sid 1SS133
ZD409,410	41215J150B	ZD MTZJ15B
ZD411	41215J120B	ZD MTZJ12B (For DU)
D412-419	4121901330	Sid 1SS133
D420,421	4138104002	Sid 1N4002L
ZD423	41215J110B	ZD MTZJ11B
D424	4121901330	Sid 1SS133
D426,432	4121901330	Sid 1SS133
D530	4121901330	Sid 1SS133
D540	4121901330	Sid 1SS133
D570,571	4121901330	Sid 1SS133

Schematic Ref. No.	Part No.	Description
ZD801	41215J120B	ZD MTZJ12B
D802	413022W02G	RD 2W02G
PJ800,801	4500800446	9P RCA Jack
PJ803	4500800432	1P RCA Jack
JK401	4560008113	8P SP. Jack
JK402	4560006115	6P SP. Jack
JK403	4570101460	AC Outlet CCT1304-0211
JK506	4500100448	REM Jack 3.5mm
RY401,402	4390000067	Relay SDT-SS-112DM
RY403-406	4395555564	Relay OSA-SS-212DM5
RY407	4390000066	Relay OSZ-SH-112DM8
T401	420D351132	Power Transformer EI-35 (For UL)
T401	420D419181	Power Transformer EI-41x23 (For DU)
THR1	7138801010	Thermistor 50KD-5
R10	4180247857	Fuse Resistor 0.47 1/2W
R401,402	4050110355	RK 10K 1/6W J
R403-405	4271010955	RSS 1 1W J
R406-408	4050147155	RK 470 1/6W J
R409	4271010055	RSS 10 1W J (For DU)
R410	4271010255	RSS 1K 1W J (For DU)
R411,412	4050147255	RK 4.7K 1/6W J
R413	4050147355	RK 47K 1/6W J
R415	4050110255	RK 1K 1/6W J
R416	4050110455	RK 100K 1/6W J
R417	4050147355	RK 47K 1/6W J
R418	4050110155	RK 100 1/6W J
R419	4050110255	RK 1K 1/6W J
R420	4050110355	RK 10K 1/6W J
R421,422	4050147255	RK 4.7K 1/6W J
R423	4050110355	RK 10K 1/6W J
R424,426	4050147255	RK 4.7K 1/6W J
R427	4050110355	RK 10K 1/6W J
R428	405024755T	RK 4.7M 1/2W J (For UL)
R429C	4272010055	RSS 10 2W J
R429L,R	4272010055	RSS 10 2W J
R430L,R	4272010055	RSS 10 2W J
R431-434	4270222355	RSS 22K 1/2W J
R435	4050191255	RK 9.1K 1/6W J
R436	4050147355	RK 47K 1/6W J
R438	4050147255	RK 4.7K 1/6W J
R439,440	4050110355	RK 10K 1/6W J
R441	4271010055	RSS 10 1W J
R457	4170439155	RSN 390 1/4W J (For UL)
	4270215255	RSS 1.5K 1/2W J (For DU)
R505L,R	4050110255	RK 1K 1/6W J
R506L,R	4050110455	RK 100K 1/6W J
R507L,R	4050110255	RK 1K 1/6W J
R508L,R	4050110455	RK 100K 1/6W J
R509L,R	4050110255	RK 1K 1/6W J
R510L,R	4050110455	RK 100K 1/6W J
R511L,R	4050110255	RK 1K 1/6W J
R512L,R	4050110455	RK 100K 1/6W J
R517L,R	4050110255	RK 1K 1/6W J
R518L,R	4050110455	RK 100K 1/6W J
R519L,R	4050110255	RK 1K 1/6W J
R520L,R	4050110455	RK 100K 1/6W J
R530-532	4050122255	RK 2.2K 1/6W J
R533	4050110355	RK 10K 1/6W J
R534	4050422155	RK 220 1/4W J
R535,536	4050110355	RK 10K 1/6W J
R537	4050422155	RK 220 1/4W J
R540-542	4050122255	RK 2.2K 1/6W J
R543	4050110355	RK 10K 1/6W J
R544	4050422155	RK 220 1/4W J
R545,546	4050110355	RK 10K 1/6W J
R547	4050422155	RK 220 1/4W J
R550L,R	4050110255	RK 1K 1/6W J
R551L,R	4050110455	RK 100K 1/6W J
R552L,R	4050182255	RK 8.2K 1/6W J
R553L,R	4050147255	RK 4.7K 1/6W J

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Schematic Ref. No.	Part No.	Description
R555L,R	4050110255	RK 1K 1/6W J
R556L,R	4050110455	RK 100K 1/6W J
R560L,R	4050168255	RK 6.8K 1/6W J
R561L,R	4050168255	RK 6.8K 1/6W J
R563L,R	4050168155	RK 680 1/6W J
R560L,R	4050168155	RK 680 1/6W J
R564L,R	4050147255	RK 4.7K 1/6W J
R565L,R	4070106043	RN 60.4K 1/6W J 1%
R566L,R	4070103013	RN 30.1K 1/6W J 1%
R567L	4050147255	RK 4.7K 1/6W J
R567R	4050447255	RK 4.7K 1/4W J
R568L,R	4050147255	RK 4.7K 1/6W J
R569L,R	4050147255	RK 4.7K 1/6W J
R570	4050168255	RK 6.8K 1/6W J
R571-573	4050147255	RK 4.7K 1/6W J
R574	4070106043	RN 60.4K 1/6W J 1%
R575	4070103013	RN 30.1K 1/6W K 1%
R576,577	4050147255	RK 4.7K 1/6W J
R580	4050122455	RK 220K 1/6W J
R583	4050122355	RK 22K 1/6W J
R585	4050110155	RK 100 1/6W J
R586	4050122055	RK 22 1/6W J
R590	4050110355	RK 10K 1/6W J
R591	4050162255	RK 6.2K 1/6W J
R592	4050113355	RK 13K 1/6W J
R593	4050110355	RK 10K 1/6W J
R594	4050182455	RK 820K 1/6W J
R595L,R	4050456255	RK 5.6K 1/4W J
R596L,R	4050156255	RK 5.6K 1/6W J
R597L,R	4070104123	RN 41.2K 1/6W J 1%
R598L,R	4070104123	RN 41.2K 1/6W J 1%
R599L,R	4050147255	RK 4.7K 1/6W J
R600L,R	4050147255	RK 4.7K 1/6W J
R601L,R	4050191255	RK 9.1K 1/6W J
R602L,R	4050110355	RK 10K 1/6W J
R603L,R	4050110355	RK 10K 1/6W J
R604L,R	4050156255	RK 5.6K 1/6W J
R605	4050147255	RK 4.7K 1/6W J
R605L,R	4050147255	RK 4.7K 1/6W J
R610L,R	4050168255	RK 6.8K 1/6W J
R611L,R	4050147255	RK 4.7K 1/6W J
R612L,R	4050147255	RK 4.7K 1/6W J
R613L,R	4050147255	RK 4.7K 1/6W J
R614L,R	4070106043	RN 60.4K 1/6W J 1%
R615L,R	4070103013	RN 30.1K 1/6W J 1%
R616L,R	4050147255	RK 4.7K 1/6W J
R617L,R	4050147255	RK 4.7K 1/6W J
R620,621	4271010055	RSS 10 1W J
R630-632	4050122255	RK 2.2K 1/6W J
R633	4050422155	RK 220 1/4W J
R634,635	4050110355	RK 10K 1/6W J
R636	4050422155	RK 220 1/4W J
R637	4050110355	RK 10K 1/6W J
R640-642	4050122255	RK 2.2K 1/6W J
R643	4050422155	RK 220 1/4W J
R644,645	4050110355	RK 10K 1/6W J
R646	4050422155	RK 220 1/4W J
R647	4050110355	RK 10K 1/6W J
R651-654	4050122255	RK 2.2K 1/6W J
R655	4050110255	RK 1K 1/6W J
R700	4050110255	RK 1K 1/6W J
R701	4050110055	RK 10 1/6W J
R810-813	4050175055	RK 75 1/6W J
R814	4050168055	RK 68 1/6W J
R815	4050110355	RK 10K 1/6W J
R816	4050115155	RK 150 1/6W J
FR816	4180210957	Fuse R. 1 1/2W (For UL)
	4180410957	Fuse R. 1 1/4W (For DU)
R817	4050112255	RK 1.2K 1/6W J
R818	4050168055	RK 68 1/6W J
R819	4050110355	RK 10K 1/6W J
R820	4050115155	RK 150 1/6W J
R821	4050112255	RK 1.2K 1/6W J
R822	4050468055	RK 68 1/4W J
R823	4050110355	RK 10K 1/6W J
R824-826	4050110255	RK 1K 1/6W J
R882	4050468055	RK 68 1/4W J
C10	5154102225	CE 1000u 25V M
C12,13	7308622345	CML .022u 25V Z
C14	5153471210	CE 470u 10V M
C15,16	5116103511	CM .01u 100V J
C401,402	5155103280	CE 10000u 80V (TSW) M
C403,404	5155472280	CE 4700u 80V (TSW) M
C405-412	5116103511	CM .01u 100V J
C413-415	5154102225	CE 1000u 25V M
C416	5153471225	CE 470u 25V M
C417,418	5116103511	CM .01u 100V J
C419,420	7308622345	CML .022u 25V Z
C421,422	5153471216	CE 470u 16V M
C423	5153101216	CE 100u 16V M
C425	5153101216	CE 100u 16V M
C427-433	7308622345	CML .022u 25V Z
C434,435	7308622345	CML .022u 25V Z (For DU)
C436	7308622345	CML .022u 25V Z
C437	5100472243	CC .0047u AC400V Spark "K" Z
C438	7308622345	CML .022u 25V Z (For DU)
C439	7307110315	CML .01u 16V K
C440	7308622345	CML .022u 25V Z
C441	5153470225	CE 47u 25V M
C442	5153101216	CE 100u 16V M
C443	5153229250	CE 2.2u 50V M
C445C	5116104511	CM .1u 100V J
C445L,R	5116104511	CM .1u 100V J
C447L,R	5116104511	CM .1u 100V J
C449	5153101216	CE 100u 16V M (For DU)
C450,451	5153101216	CE 100u 16V M
C452	5153470250	CE 47u 50V M (For DU)
C463-466	5116104511	CM .1u 100V J
C488	5153101216	CE 100u 16V M (For DU)
C515,516	7308622345	CML .022u 25V Z
C520L,R	5116122550	CM .0012u 50V J
C521L,R	5116122550	CM .0012u 50V J
C530,531	5153101225	CE 100u 25V M
C532,533	7306610445	CML .1u 50V Z
C534	5153100250	CE 10u 50V M
C540,541	5153101225	CE 100u 25V M
C542,543	7306610445	CML .1u 50V Z
C544	5153100250	CE 10u 50V M
C555L,R	5153479250	CE 4.7u 50V M
C557,VIDEO GND	5116104550	CM .1u 50V J
C560L,R	5153470216	CE 47u 16V M
C561L,R	5116473550	CM .047u 50V J
C562L,R	5116473550	CM .047u 50V J
C563L,R	5153220216	CE 22u 16V M
C565	5153470216	CE 47u 16V M
C566,567	5116473550	CM .047u 50V J
C568	5153220216	CE 22u 16V M
C570,571	5153101225	CE 100u 25V M
C572,573	7306610445	CML .1u 50V Z
C574	5153100250	CE 10u 50V M
C575,576	5153101225	CE 100u 25V M
C577,578	7306610445	CML .1u 50V Z
C579	5153100250	CE 10u 50V M
C580	5153470216	CE 47u 16V M
C581L,R	5116333550	CM .033u 50V J
C583L,R	5116683550	CM .068u 50V J
C584	5153220216	CE 22u 16V M
C585L,R	5153470216	CE 47u 16V M
C586L,R	5116473550	CM .047u 50V J
C587L,R	5116473550	CM .047u 50V J
C588L,R	5153220216	CE 22u 16V M
C590,591	5153471216	CE 470u 16V M
C592,593	5116223550	CM .022u 50V M
C594,595	5116104550	CM .1u 50V J
C700	5153101216	CE 100u 16V M

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Schematic Ref. No.	Part No.	Description
C701	5154102225	CE 1000u 25V M
C702	5153221216	CE 220u 16V M
C703,704	7308622345	CML .022u 25V Z
C800	5153470225	CE 47u 25V M
C801	7306610445	CML .1u 50V Z
C802	5153100250	CE 10u 50V M
C803-805	7306510215	CML .001u 50V K
C806,807	5153471210	CE 470u 10V M
C816	5153471210	CE 470u 10V M
C820-823	5153479250	CE 4.7u 50V M
J190-J191	7306610445	CML .1u 50V Z (T. Up)
CN12	4490200270	FTW 2P Top Base
CN13	4490300261	Wire Holder 3P20
CN005	4490700261	Wire Holder 7P20
CN015	4490600261	Wire Holder 6P20
CN302	4490700268	Wire Holder 7P25
CN502	4491000270	FTW 10P Top Base
CN506	4490900270	FTW 9P Top Base
CN508	4490900270	FTW 9P Top Base
CN513	4492000263	FFC 20P Top Base
CN514	4490200261	Wire Holder 2P20
CN515	4490200270	FTW 2P Top Base
CP13	4490300261	Wire Holder 3P20
CP002	4492800263	FFC 28P Top Base
CP006	4490301004	PH 3P Top Base
CP10,Q403	4490300270	FTW 3P Top Base
CP103	4491100316	11P Header IMSA-9115B-11
CP303	4491000268	Wire Holder 10P25
CP307	4490500268	Wire Holder 5P25
CP901	4490500261	Wire Holder 5P20
PP1-4	2000000478	Terminal Pin "K"
AC1,2	2000000843	Terminal Pin "L"
PT401-404	4692000034	Fuse Holder PFC5000-0202T

Digital P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C142268800	Digital P.C.B. Ass'y
	4142268800	Digital P.C.B.
U801	415374U046	IC TC74HCU04AF
U802	4153741536	IC TC74HC153AF
U803	415Y03436D	IC YM3436D
U804	4159053350	IC CS5335
U805	4159049260	IC CS4926
U806,807	415902100M	IC NJM2100M-T1
U808,809	415374574F	IC TC74VHC574F
U810	415902702A	IC AT27LV020A
U811	415Q020050	IC QL2005
U812	4159062057	IC V62C518256
U814	4159043290	IC CS4329
U815	4151045707	IC UPC4570G2
U816	4159043290	IC CS4329
U817	4151045707	IC UPC4570G2
U818	4159043290	IC CS4329
U819	4151045707	IC UPC4570G2
U820	415902VZ11	IC PQ20VZ11
U821	4153747007	IC TC74HCT7007F
U822	415374V04F	IC TC74VHCU04F
U823,824	415374V32F	IC TC74VHC32F
U825	415374V04F	IC TC74VHCU04F
U827	415374V74F	IC TC74VHC74F
Q801,802	SA500314TK	TR DTC314TK *
Q803	SA40114EKA	TR DTA114EKA *
Q804,806	SA50114EKA	TR DTC114EKA *
X801	4100949152	Crystal 49.152MHz
PJ801	4500800472	2P RCA Jack YKC21-3044
RA801	408H10359A	R-Array 10KX8
CP801,802	714985A081	Photo-Receiver TORX178A
L801	4325A47091	Peaking coil 47uH
L802	4325A10091	Peaking Coil 10uH

Schematic Ref. No.	Part No.	Description
L804	4325047093	Peaking Coil 47uH
L806	4325A47091	Peaking coil 47uH
L810	4325A47091	Peaking coil 47uH
R801	4050A7505D	RK 75 1/10W J *
R802	4050A4735D	RK 47K 1/10W J *
R803	4050A8215D	RK 820 1/10W J *
R804	4050A7505D	RK 75 1/10W J *
R805	4050A4735D	RK 47K 1/10W J *
R806	4050A8215D	RK 820 1/10W J *
R807	4050A6805D	RK 68 1/10W J *
R808	4050422955	RK 2.2 1/4W J
R811-813	4050A1035D	RK 10K 1/10W J *
R814,815	4050A4725D	RK 4.7K 1/10W *
R816-818	4050A1035D	RK 10K 1/10W J *
R819,820	4050A4725D	RK 4.7K 1/10W *
R821,822	4050A1035D	RK 10K 1/10W J *
R823,824	4050A1045D	RK 100K 1/10W J *
R825	4050A8245D	RK 820K 1/10W J *
R826-829	4050A1515D	RK 150 1/10W J *
R830	4050A4725D	RK 4.7K 1/10W *
R831	4050A1015D	RK 100 1/10W J *
R832	4050A3325D	RK 3.3K 1/10W J *
R833-836	4050A1035D	RK 10K 1/10W J *
R838	4050A1035D	RK 10K 1/10W J *
R845,846	4050A1335D	RK 13K 1/10W J *
R847	4050A3325D	RK 3.3K 1/10W J *
R848,849	4050A1335D	RK 13K 1/10W J *
R850	4050A3325D	RK 3.3K 1/10W J *
R851,852	4050A1335D	RK 13K 1/10W J *
R853	4050A3325D	RK 3.3K 1/10W J *
R854,855	4050A1335D	RK 13K 1/10W J *
R856	4050A3325D	RK 3.3K 1/10W J *
R859,860	4050A1335D	RK 13K 1/10W J *
R861	4050A3325D	RK 3.3K 1/10W J *
R862,863	4050A1335D	RK 13K 1/10W J *
R864	4050A3325D	RK 3.3K 1/10W J *
R865,866	4050A1335D	RK 13K 1/10W J *
R867	4050A3325D	RK 3.3K 1/10W J *
R868,869	4050A1335D	RK 13K 1/10W J *
R870	4050A3325D	RK 3.3K 1/10W J *
R871,872	4050110255	RK 1K 1/6W J
R873,874	4050A1335D	RK 13K 1/10W J *
R875	4050A3325D	RK 3.3K 1/10W J *
R876,877	4050A1335D	RK 13K 1/10W J *
R878	4050A3325D	RK 3.3K 1/10W J *
R879,880	4050A1335D	RK 13K 1/10W J *
R881	4050A3325D	RK 3.3K 1/10W J *
R882,883	4050A1335D	RK 13K 1/10W J *
R884	4050A3325D	RK 3.3K 1/10W J *
R885	4050A1625D	RK 1.6K 1/10W J *
R886	4050A1025D	RK 1K 1/10W J *
R887,888	4050A2215D	RK 220 1/10W J *
R889-894	4050A1035D	RK 10K 1/10W J *
R895	4050A6805D	RK 68 1/10W J *
R896-899	4050A1035D	RK 10K 1/10W J *
C550	510410442D	CC .1u 25V *
C551	5153100216	CE 10u 16V M
C552	5153101210	CE 100u 10V M
C553-557	510410442D	CC .1u 25V *
C558	5153100216	CE 10u 16V M
C559-561	510410442D	CC .1u 25V *
C865	7306610445	CML .1u 50V Z
C801	510410442D	CC .1u 25V *
C802	5153100216	CE 10u 16V M
C803,804	5096104582	CPL .1u 50V J
C805,806	510410442D	CC .1u 25V *
C808,809	510410442D	CC .1u 25V *
C810	5153100216	CE 10u 16V M
C811	510410442D	CC .1u 25V *
C812	5153101210	CE 100u 10V M
C813	510410442D	CC .1u 25V *

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Schematic Ref. No.	Part No.	Description
C814	5116472550	CM .0047u 50V J
C815,816	510410442D	CC .1u 25V *
C817	5153100216	CE 10u 16V M
C818	510410442D	CC .1u 25V *
C819	5153100216	CE 10u 16V M
C820	510410442D	CC .1u 25V *
C821,822	5153100216	CE 10u 16V M
C823	510410442D	CC .1u 25V *
C824	510122215D	CC .0022u 50V *
C825	5153101210	CE 100u 10V M
C827	5153100216	CE 10u 16V M
C828	510410442D	CC .1u 25V *
C829	510122215D	CC .0022u 50V *
C830-832	510410442D	CC .1u 25V *
C833	5096104582	CPL .1u 50V J
C834	5157100216	CE 10u 16V M (LN)
C835	5096104582	CPL .1u 50V J
C836	5157100216	CE 10u 16V M (LN)
C837	5096104582	CPL .1u 50V J
C838	5157100216	CE 10u 16V M (LN)
C840	5116102550	CM .001u 50V J
C841	5116221M50	CM 220p 50V J
C842	5096104582	CPL .1u 50V J
C843	5116102550	CM .001u 50V J
C844	5116221M50	CM 220p 50V J
C845	5096104582	CPL .1u 50V J
C846	5157100216	CE 10u 16V M (LN)
C847	5096104582	CPL .1u 50V J
C848	5157100216	CE 10u 16V M (LN)
C849	5096104582	CPL .1u 50V J
C850	5157100216	CE 10u 16V M (LN)
C852	5116102550	CM .001u 50V J
C853	5116221M50	CM 220p 50V J
C854	5096104582	CPL .1u 50V J
C855	5116102550	CM .001u 50V J
C856	5116221M50	CM 220p 50V J
C857	5116102550	CM .001u 50V J
C858	5116221M50	CM 220p 50V J
C859	5096104582	CPL .1u 50V J
C860	5116102550	CM .001u 50V J
C861	5116221M50	CM 220p 50V J
C865	7306610445	CML .1u 50V Z
C866	7306547115	CML 470p 50V K
C867	7306510115	CML 100p 50V K
C868	7306610445	CML .1u 50V Z
C869	5116102550	CM .001u 50V J
C870	5116221M50	CM 220p 50V J
C871	5096104582	CPL .1u 50V J
C872	5116102550	CM .001u 50V J
C877	5116221M50	CM 220p 50V J
C878	5116102550	CM .001u 50V J
C879	5116221M50	CM 220p 50V J
C880	5096104582	CPL .1u 50V J
C881	5116102550	CM .001u 50V J
C882	5116221M50	CM 220p 50V J
C883	510410442D	CC .1u 25V *
C884	510410442D	CC .1u 25V *
C885	5153101210	CE 100u 10V M
C886,887	5157101250	CE 100u 50V M (LN)
C888-892	510410442D	CC .1u 25V *
C893	510422442D	CC .22u 25V *
C895	5116102550	CM .001u 50V J
C896	5116221M50	CM 220p 50V J
C897	5096104582	CPL .1u 50V J
C898	5116102550	CM .001u 50V J
C899	5116221M50	CM 220p 50V J
CN-15-	4490600270	FTW 6P Top Base
CP-5-	4490700270	FTW 7P Top Base
CP-6-	4490301004	PH 3P Top Base
CN810	4491200263	FFC 12P Top Base
CN811	4491300263	FFC 13P Top Base
	4562030003	Egg Terminal Q3.0
	4573201760	IC Socket 32P PLCC (For U810)

Variable Resistor P.B.C. Ass'y

Schematic Ref. No.	Part No.	Description
	C147269720	VR. P.C.B. Ass'y
	4147269720	VR. P.C.B.
U904	4152016410	IC LB1641
U940,941	415104570C	IC UPC4570C
U960	4152075350	IC LC7535
U961	415104570C	IC UPC4570C
U963	4152075350	IC LC7535
U964	415104570C	IC UPC4570C
U980,981	415104570C	IC UPC4570C
Q980L,R	410522878A	TR 2SC2878A
Q981,982	410522878A	TR 2SC2878A
Q983	410520945P,Q	TR 2SC945P,Q
Q984	410500733P,Q	TR 2SA733P,Q
Q985	410520945P,Q	TR 2SC945P,Q
Q986	410500733P,Q	TR 2SA733P,Q
Q987	410520945P,Q	TR 2SC945P,Q
Q988	410500733P,Q	TR 2SA733P,Q
ZD901	41215J056B	ZD MTZJ5.6B
ZD960,961	41215J056B	ZD MTZJ5.6B
D980	4121901330	Sid 1SS133
R933(-)-R939(+)	4121901330	Sid 1SS133
VR901	5025254308	Semi VR 50KB
R910-913	4050156255	RK 5.6K 1/6W J
R919,920	4050110355	RK 10K 1/6W J
R921	4050110455	RK 100K 1/6W J
R922-925	4050110355	RK 10K 1/6W J
R926	4050110455	RK 100K 1/6W J
R927-930	4050110355	RK 10K 1/6W J
R931	4050110455	RK 100K 1/6W J
R932,933	4050110355	RK 10K 1/6W J
R934-936	4050110155	RK 100 1/6W J
FR936	4180410057	Fuse Resistor 10 1/4W
R937,938	4050410155	RK 100 1/4W J
R939	4050110155	RK 100 1/6W J
R940L,R	4050122255	RK 2.2K 1/6W J
R941L,R	4050122255	RK 2.2K 1/6W J
R942L,R	4050151255	RK 5.1K 1/6W J
R943L,R	4050110455	RK 100K 1/6W J
R944L,R	4050410255	RK 1K 1/4W J
R945L,R	4050110455	RK 100K 1/6W J
R947,948	4050122255	RK 2.2K 1/6W J
R949	4050151255	RK 5.1K 1/6W J
R950	4050110455	RK 100K 1/6W J
R951	4050410255	RK 1K 1/4W J
R952	4050110455	RK 100K 1/6W J
R953,954	4050122255	RK 2.2K 1/6W J
R955	4050110455	RK 100K 1/6W J
R956	4050151255	RK 5.1K 1/6W J
R957	4050410255	RK 1K 1/4W J
R958	4050110455	RK 100K 1/6W J
R960L,R	4050168455	RK 680K 1/6W J
R961	4050122255	RK 2.2K 1/6W J
R962,963	4050422255	RK 2.2K 1/4W J
R964	4050122255	RK 2.2K 1/6W J
R965L,R	4050168455	RK 680K 1/6W J
R966-969	4050122255	RK 2.2K 1/6W J
R980L	4050122255	RK 2.2K 1/6W J
R980R	4050422255	RK 2.2K 1/4W J
R981L,R	4050110455	RK 100K 1/6W J
R982L,R	4050120255	RK 2K 1/6W J
R983L,R	4050112355	RK 12K 1/6W J
R984	4050422255	RK 2.2K 1/4W J
R985	4050110455	RK 100K 1/6W J
R986	4050120255	RK 2K 1/6W J
R987	4050112355	RK 12K 1/6W J
R988	4050122255	RK 2.2K 1/6W J
R989	4050110455	RK 100K 1/6W J

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Schematic Ref. No.	Part No.	Description
R900	4050147255	RK 4.7K 1/6W J
R990	4050120255	RK 2K 1/6W J
R991	4050112355	RK 12K 1/6W J
R992L,R	4050110255	RK 1K 1/6W J
R993L,R	4050110455	RK 100K 1/6W J
R994	4050110255	RK 1K 1/6W J
R994L,R	4050110355	RK 10K 1/6W J
R995	4050110455	RK 100K 1/6W J
R996	4050110355	RK 10K 1/6W J
R997	4050110255	RK 1K 1/6W J
R998	4050110455	RK 100K 1/6W J
R999	4050110355	RK 10K 1/6W J
C911	7306610445	CML .1u 50V Z
C912	5153470216	CE 47u 16V M
C913	7306610445	CML .1u 50V Z
C940L,R	5153479250	CE 4.7u 50V M
C941L,R	5091331513	CPL 330p 100V J
C942L,R	5153479250	CE 4.7u 50V M
C943	5153479250	CE 4.7u 50V M
C944	5091331513	CPL 330p 100V J
C945,946	5153479250	CE 4.7u 50V M
C947	5091331513	CPL 330p 100V J
C948	5153479250	CE 4.7u 50V M
C949,950	5153221225	CE 220u 25V M
C951,952	7308622345	CML .022u 25V Z
C960L,R	5165109250	CE 1u 50V M (NON)
C963L,R	5153479250	CE 4.7u 50V M
C964	5153470216	CE 47u 16V M
C965L,R	5153479250	CE 4.7u 50V M
C966	5165109250	CE 1u 50V M (NON)
C968	5153479250	CE 4.7u 50V M
C969	5153470216	CE 47u 16V M
C970	5153479250	CE 4.7u 50V M
C971	5165109250	CE 1u 50V M (NON)
C973,974	5153479250	CE 4.7u 50V M
C975,976	5153221225	CE 220u 25V M
C977,978	7308622345	CML .022u 25V Z
C980L,R	5091331513	CPL 330p 100V J
C981L,R	5091101513	CPL 100p 100V J
C982L,R	5153479250	CE 4.7u 50V M
C983	5091331513	CPL 330p 100V J
C984	5091101513	CPL 100p 100V J
C985	5153479250	CE 4.7u 50V M
C986	5091331513	CPL 330p 100V J
C987	5091101513	CPL 100p 100V J
C988	5153479250	CE 4.7u 50V M
C989,990	5153221225	CE 220u 25V M
C991,992	7308622345	CML .022u 25V Z
C993L,R	5153479250	CE 4.7u 50V M
C994,995	5153479250	CE 4.7u 50V M
CP301 Pin (-) - R923 (+)	5153221216	CE 220u 16V M
CP003	4490700270	FTW 7P Top Base
CP301	4490700261	Wire Holder 7P20
CP513	4492000263	FFC 20P Top Base
CN901	4490200261	Wire Holder 2P20

Fuse P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C147269740	Fuse P.C.B. Ass'y
	4147269740	Fuse P.C.B.
CN508-	4490900261	Wire Holder 9P20
CP12	4490200261	Wire Holder 2P20
	4692000034	Fuse Holder PFC5000-0202T (F402A/B,F403A/B)

RCA Jack P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C147269770	RCA Jack P.C.B. Ass'y
	4147269770	RCA Jack P.C.B.
PJ500	4500800444	8P RCA Jack
R501L,R	4050110255	RK 1K 1/6W J
R502L,R	4050110455	RK 100K 1/6W J
R503L,R	4050110255	RK 1K 1/6W J
R504L,R	4050110455	RK 100K 1/6W J
R513L,R	4050110255	RK 1K 1/6W J
R514L,R	4050110455	RK 100K 1/6W J
R515L,R	4050110255	RK 1K 1/6W J
R516L,R	4050110455	RK 100K 1/6W J
CP506	4490900261	Wire Holder 9P20

Sensor P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C043267920	Sensor P.C.B. Ass'y
	4143267920	Sensor P.C.B.
RM001	714SPS4471	Remote Receiver SPS-447-1
CN001-	4494000314	40P Side Pin Header

Headphone P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C043267930	Headphone P.C.B. Ass'y
	4143267930	Headphone P.C.B.
JK001	4500700390	Headphone Jack JY-6317-01-030G2
CN005-	4490300261	Wire Holder 3P20

Transistor P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C047269750	Transistor P.C.B. Ass'y
	4147269750	Transistor P.C.B.
U10	41597805FA	IC NJM7805FA
CN10	4490300261	Wire Holder 3P20

Transistor Q403 P.C.B. Ass,y

Schematic Ref. No.	Part No.	Description
	C047269780	Trans. Q403 P.C.B. Ass'y
	4147269780	Trans. Q403 P.C.B.
Q-DUMMY	410031761E	TR 2SD1761E
CN-DUMMY	4490300261	Wire Holder 3P20

LED P.C.B. Ass'y

Schematic Ref. No.	Part No.	Description
	C047269760	LED P.C.B. Ass'y
	4147269760	LED P.C.B.
D422	4120612543	LED 3Q EL1254SOT (ORG)
CN004-422	4050127155	RK 270 1/6W J (T. Up)

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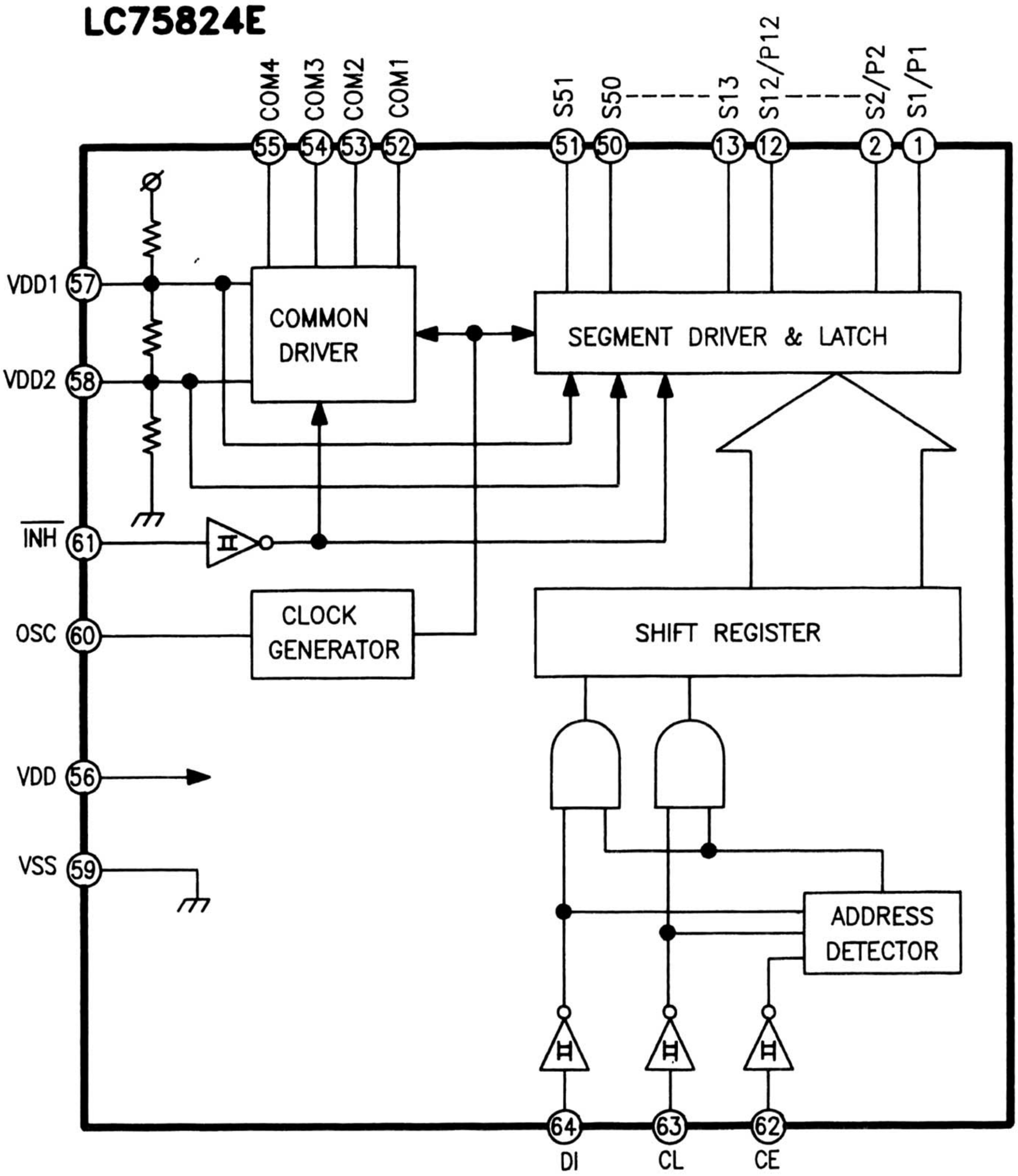
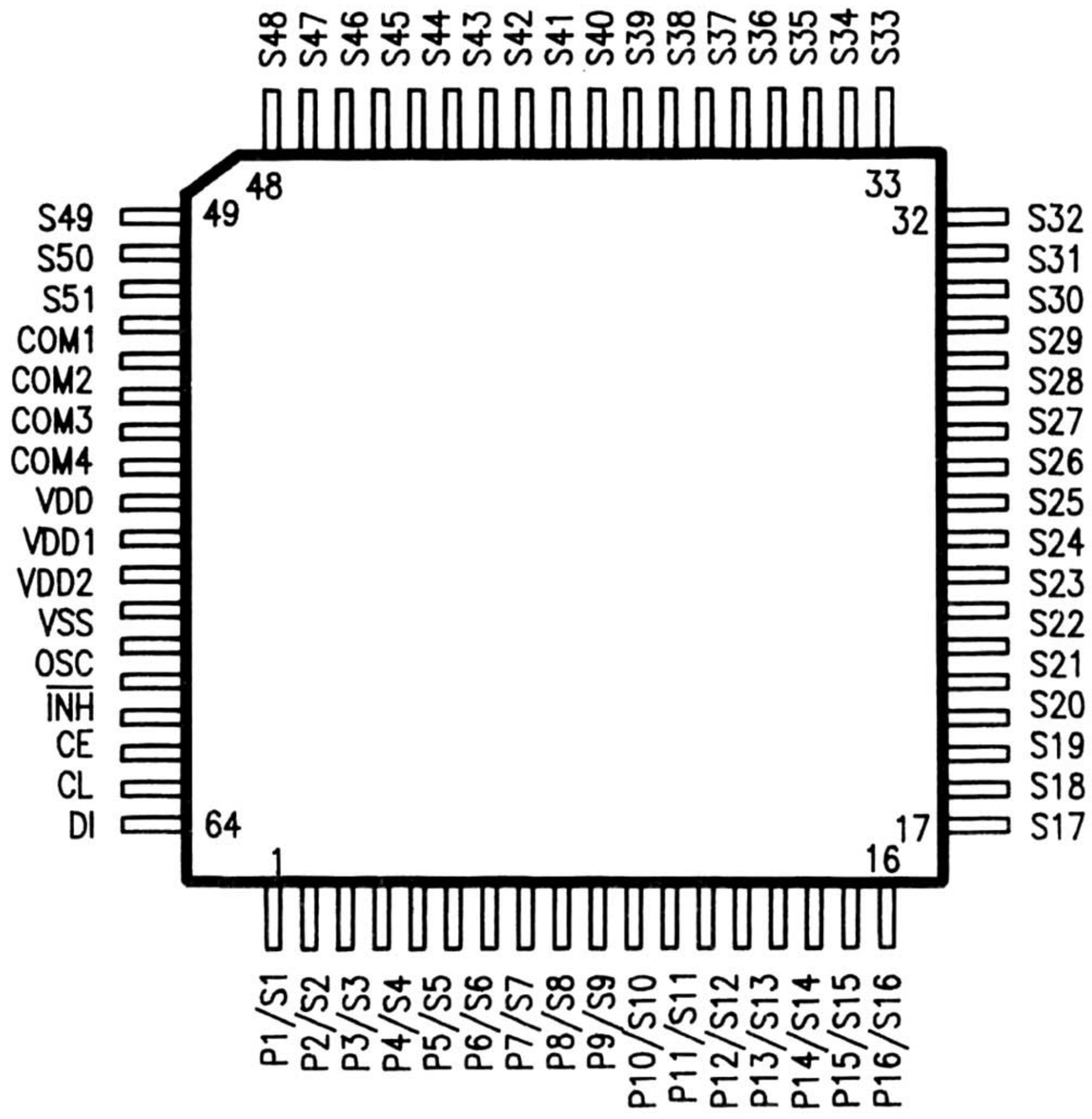
6. IC BLOCK DIAGRAMS

LC75824E





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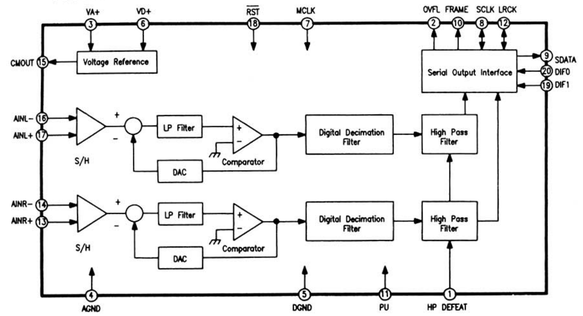
CS5335



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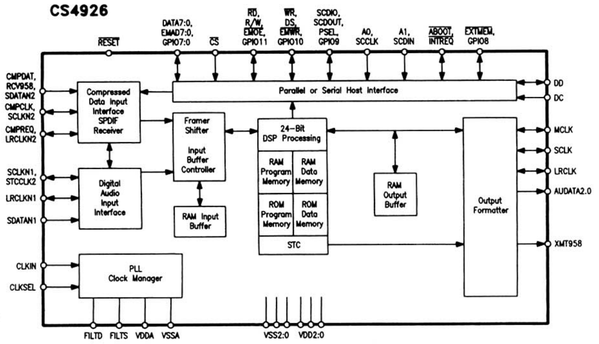

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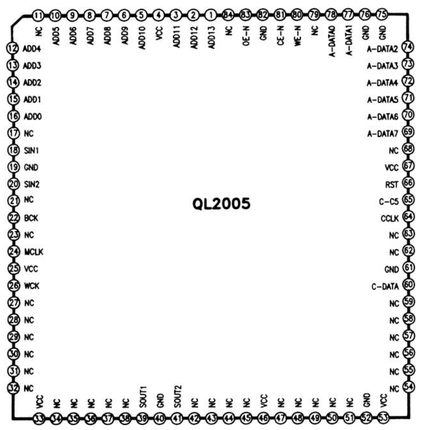

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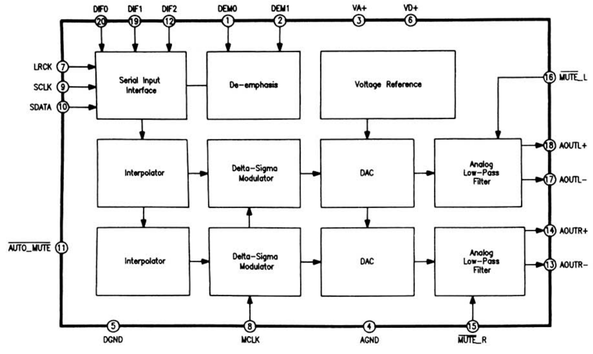

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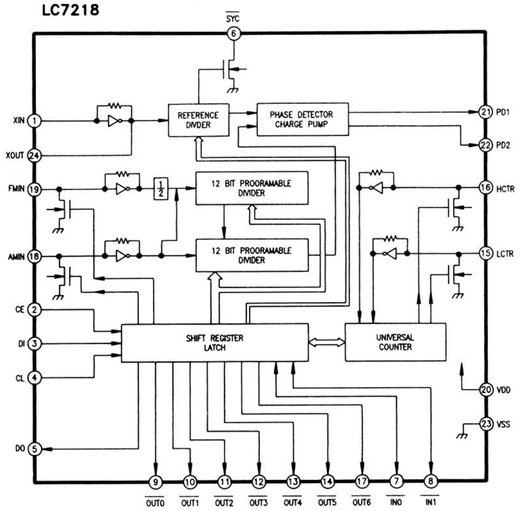

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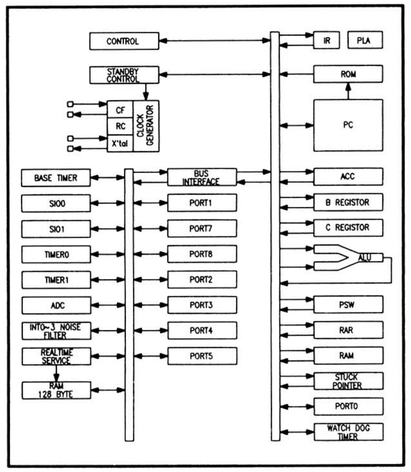

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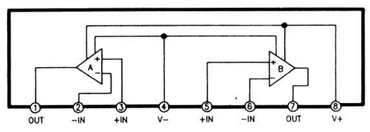

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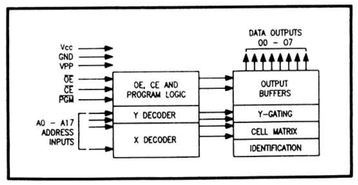

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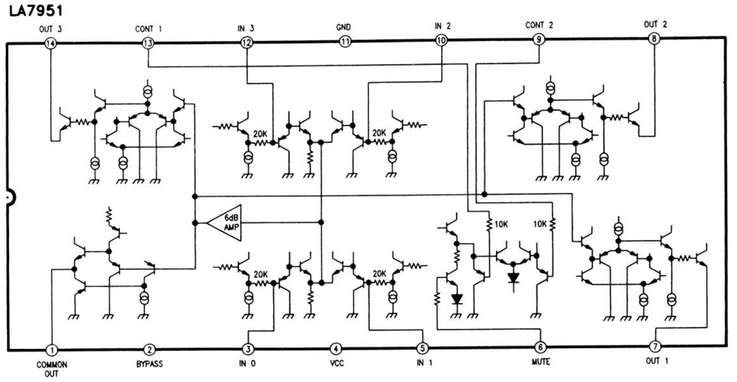

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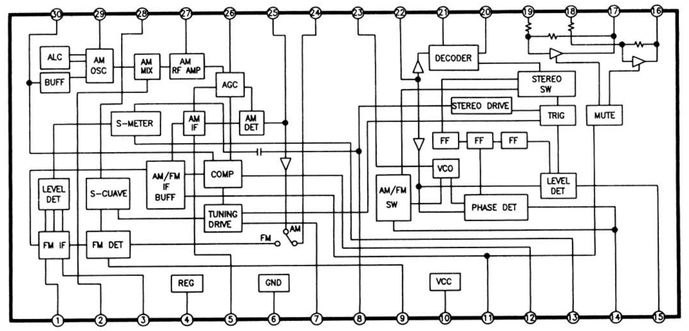

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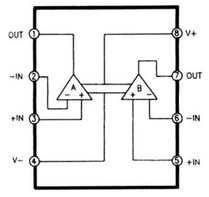

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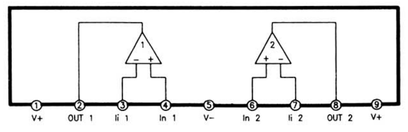

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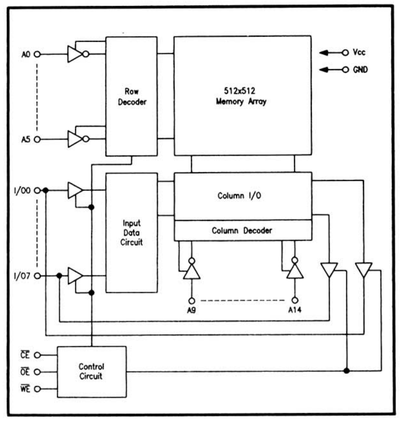

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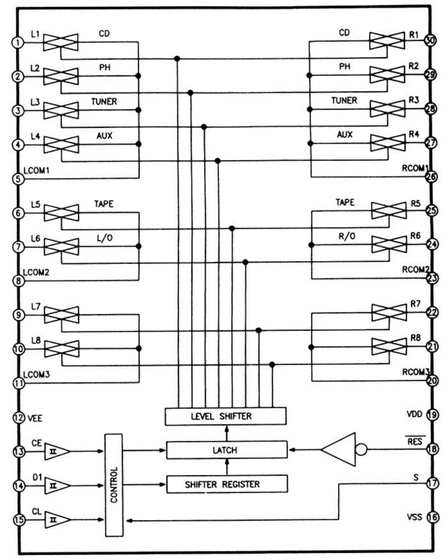

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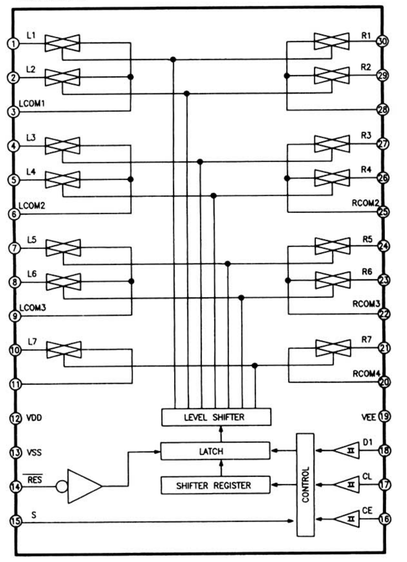

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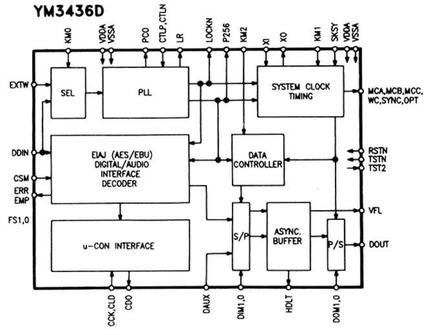
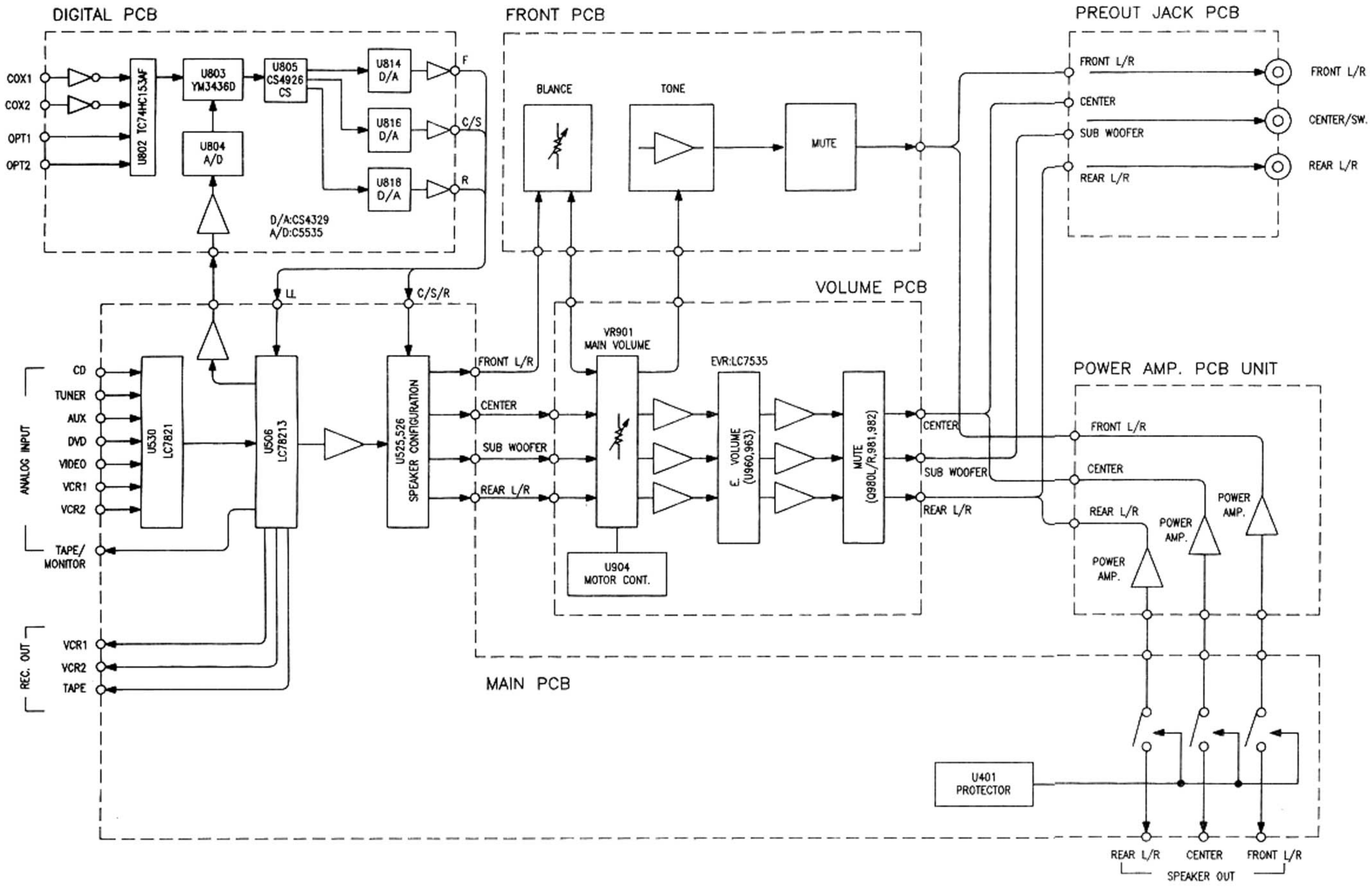
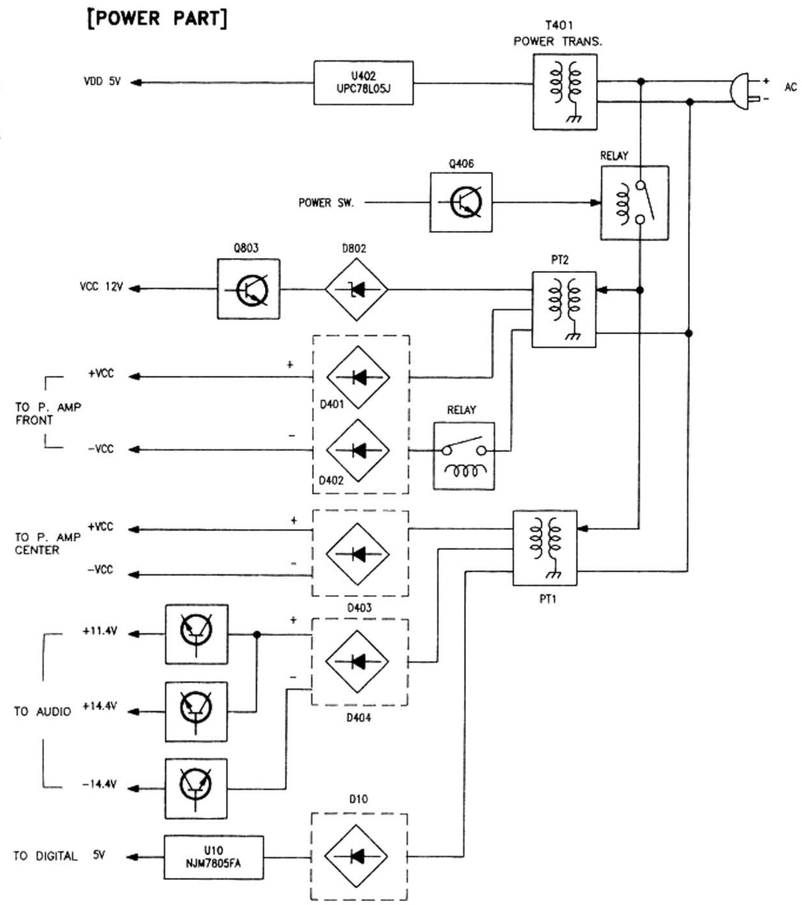


7. BLOCK DIAGRAM

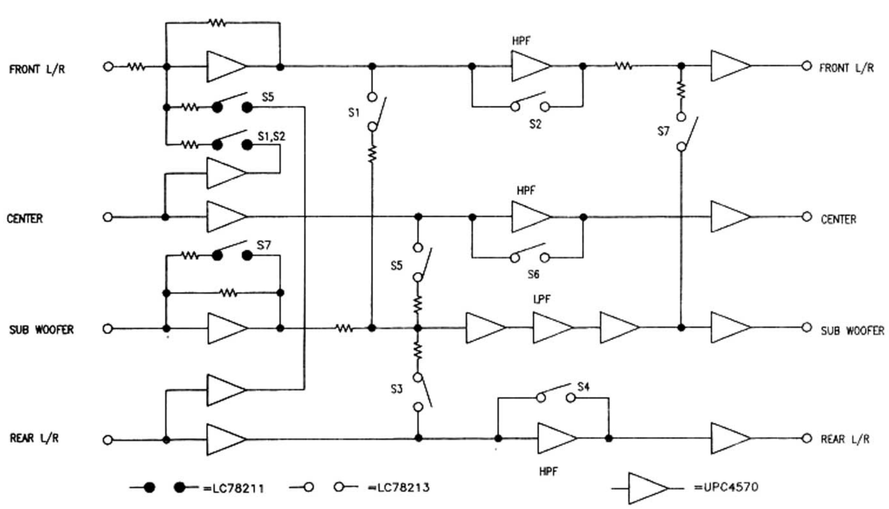
[AUDIO PART]



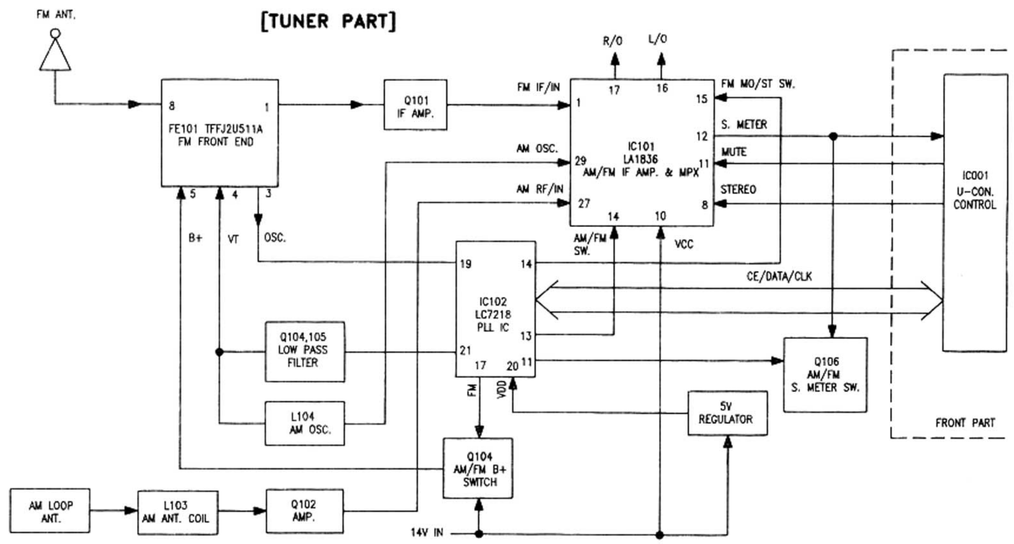
[POWER PART]



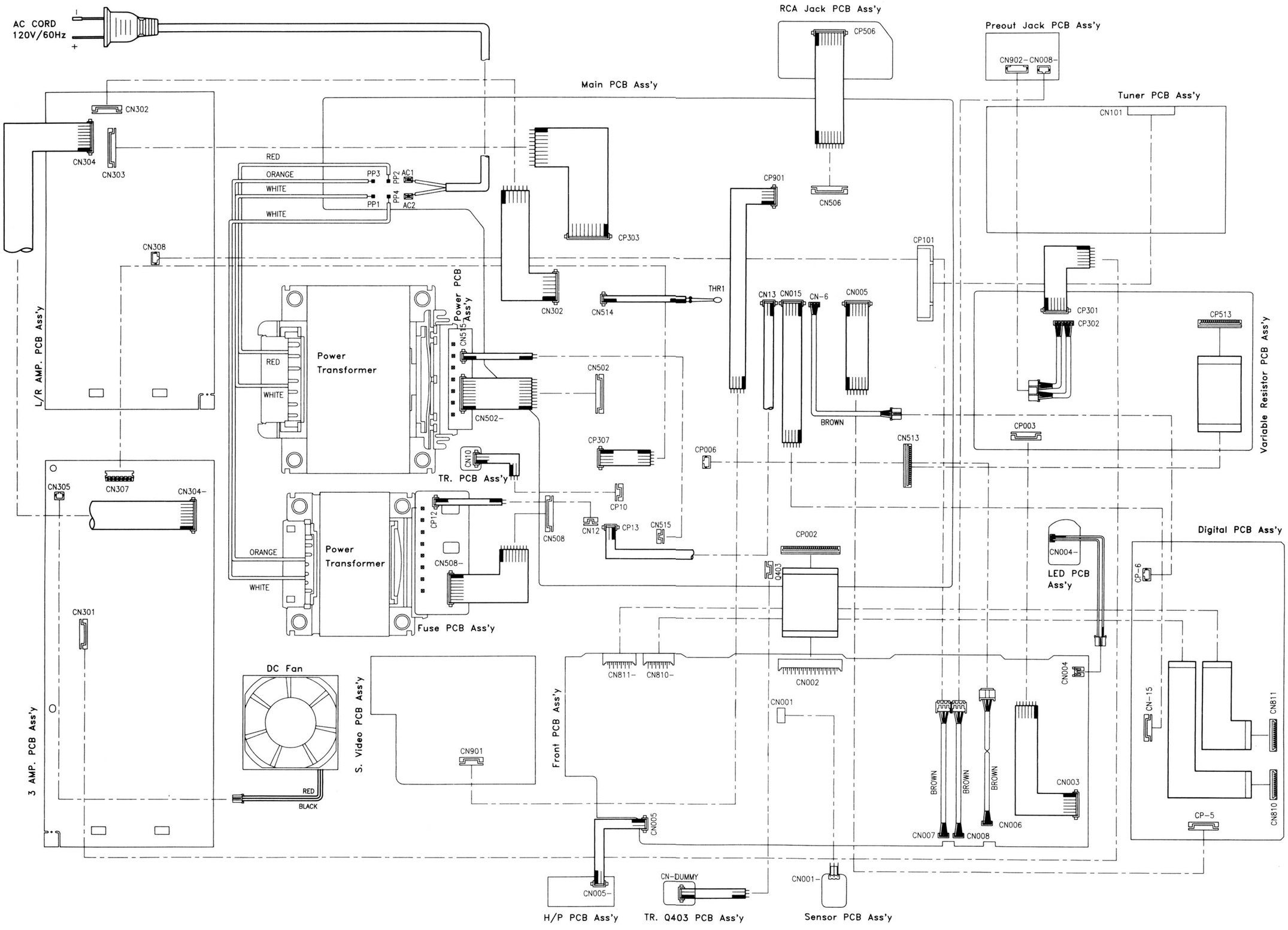
[SPEAKER CONFIGURATION]



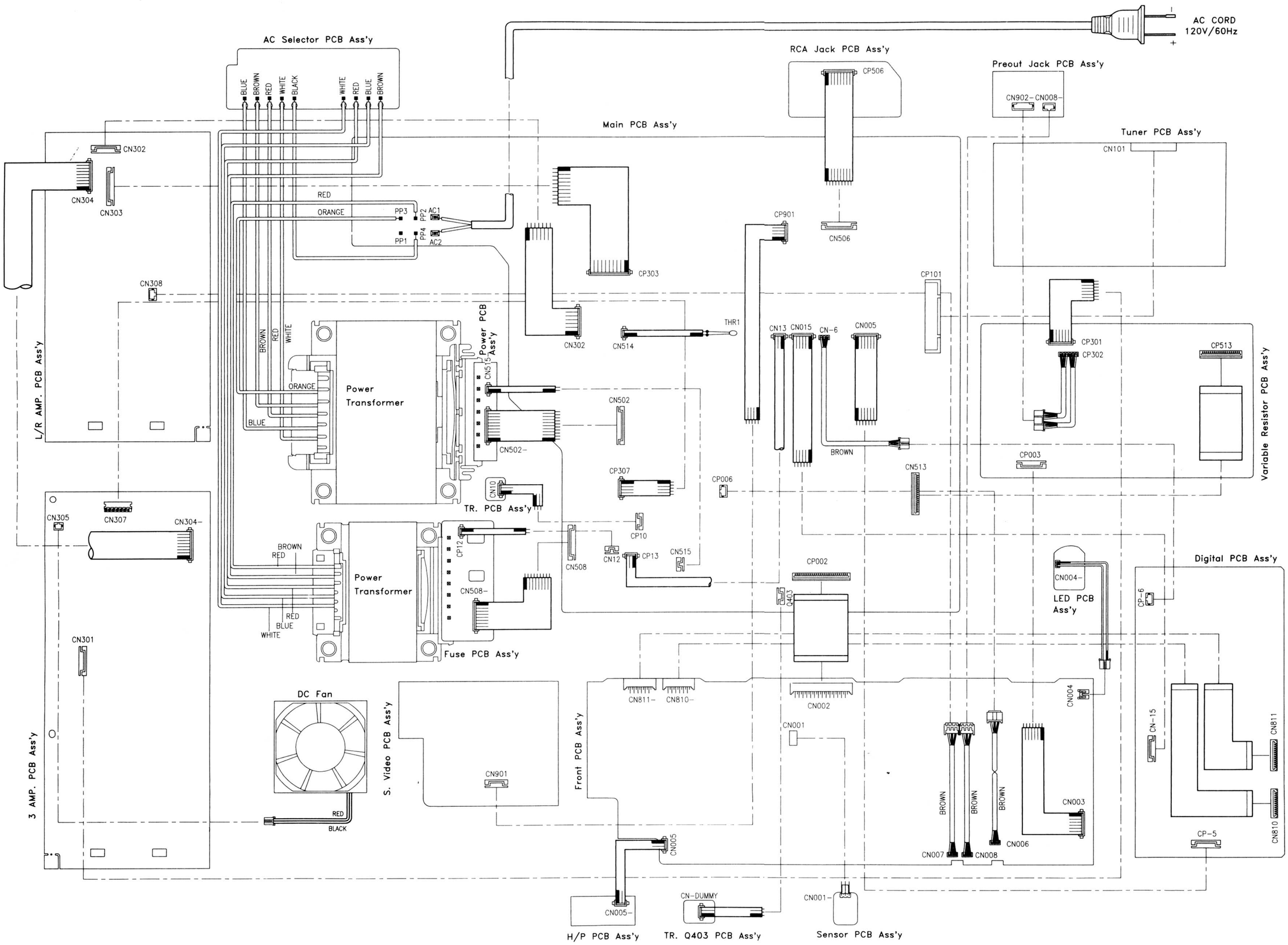
[TUNER PART]



8. WIRING DIAGRAM (For UL)



8. WIRING DIAGRAM (For DU)



9. SPECIFICATIONS

[Control Amplifier Section]

Analog Audio Section

Inputs.....7 (CD, AUX, Tape, VCR1,2)
Recording Outputs.....3 (Tape, VCR1,2)
Pre Outputs.....
...6 channel (Front L/R, Center, Rear L/R, Subwoofer)
Input Sensitivity/Impedance.....150 mV/47 kohms
Rated Output Level/Impedance
  Pre output.....1 V/1 kohm
  Recording Output.....150mV/1 kohm
  Subwoofer Output.....1 V/1 kohm
Maximum Output Level.....8V
Total Hamonic Distortion.....
.....Less than 0.01% (20-20,000 Hz)
Frequency Response.....10-50,000 Hz +0, -3 dB
Signal-to-Noise Ratio.....
.....Better than 80 dB (A-WTD, input shorted)
Channel Separation.....
.....Better than 60 dB (1 kHz, input shorted)
Tone Controls
  Bass.....20 Hz ± 10 dB
  Treble.....20 kHz ± 10 dB
Loudness.....20 Hz +10 dB, 20 kHz +6 dB

Digital Audio Section

Inputs
  Optical.....2 (OPTICAL 1,2)
  Coaxial.....2 (COAXIAL 1,2)
Digital Signal Supported
  Format.....DTS/AC-3/PCM
  Quantization.....16-bit/20-bit/24-bit
  Sampling Frequency.....32 kHz/44.1 kHz/48 kHz
Input Impedance.....75 ohms
Output Level.....
.....2 V/1 kohms (After D/A conversion, at 0 dB)
Tatal Harmonic Distortion.....
.....Less than 0.005% (1 kHz, at 0 dB)
Frequency Response.....10-20,000 Hz +0, -0.5 dB
Signal-to-Noise Ratio.....Better than 90 dB
Dynamic Range.....95 dB
Channel Separation.....Better than 90 dB

Video Section

Inputs
  Composite Video....4 (DVD, Video, VCR1,2), Coaxial
  S-Video (Y/C).....
  .....4 (DVD, Video, VCR1,2), S-Video jack
Outputs
  Composite Video.....3 (VCR1,2, Monitor)
  S-Video (Y/C).....3 (VCR1,2, Monitor)
Video Signal Level/Impedance
  Composite Video.....1 Vp-p/75 ohms
  S-Video.....1 Vp-p/75 ohms (Y-Signal)
    0.286 Vp-p/75 ohms (C-Signal)
Frequency Response
  Composite Video.....5 Hz - 10 MHz +0, -3 dB
  S-Video.....5 Hz - 10 MHz +0, -3 dB

Surround Section

Surround Mode.....
.....5 (DTS, Dolby Digital, Pro Logic, Natural, Hall)
Speaker/Subwoofer Mode Settings and Signal Characteristics
  Front L/R channels
    Speaker Mode.....LARGE: Full range signal
      SMALL: High pass filter action (fc:80 Hz, 12 dB/oct)
      NONE : No center speaker
  Subwoofer channel
    SW Mode.....YES: Low pass filter active (fc: 80 Hz, 12 dB/oct) +LFE signal (DTS/Dolby Digital)
      NO: No subwoofer
Channel Level Calibration Range
  Center.....-10 to +10 dB
  Rear L/R.....-10 to +10 dB
  Subwoofer.....-10 to +10 dB
Delay Time Calibration Range
  Center....0 to +5 ms (DTS/Dolby Digital/Pro Logic)
  Rear L/R.....
  .....0 to +15ms (DTS/Dolby Digital/Natural/Hall)
    +15 to +30 ms (Pro Logic)

Others

System Remote Outputs.....1-1/8" stereo mini jack for controlling Nakamichi cassette decks

[Power Amplifier Section]

Outputs.....
....5 speaker terminals (Front L/R, Center, Rear L/R)
Continuous Sine Wave Power Output
  Stereo.....120 W x2
    (8 ohms, 20 - 20,000 Hz, 0.1% THD)
  Surround.....100 W x5
    (8 ohms, 20 - 20,000 Hz, 0.1% THD)
Dynamic Output Power.....150 W x5 (8 ohms)
Power Bandwidth.....10 - 40,000 Hz
    (Half rated power, 0.1% THD)
Total Harmonic Distortion.....
.....Less than 0.1% (Rated power, 20 - 20,000 Hz)
Intermodulation Distortion.....
.....Less than 0.1% (Rated power, 60 Hz:7 kHz, 4:1)
Output Current Capability.....
.....20 A peak (Per channel, two channels driven)
Headphone Output.....90 mW (40 ohms)

[Tuner Section]

FM Section

(All RF levels in microvolts given re 75-ohm antenna input. Modulation: Mono 100%, Stereo Pilot: 10%, Stereo Audio Signal: 90%)
Frequency Range
  U.S.A./Canada.....87.5 - 107.9 MHz in 200 kHz steps
  Other Area.....87.5 - 108.0 MHz in 50 kHz steps
IHF Usable Sensitivity.....12 dBf/2.2 uV (Mono, IHF)

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50 dB Quieting Sensitivity.....Mono: 17 dBf/3.9 uV
Stereo: 38.5 dBf/46.1 uV
Signal-to-Noise Ratio.....
.....Mono : Better than 74 dB at 65 dBf
Stereo: Better than 68 dB at 65 dBf
Frequency Response.....30 - 15,000 Hz +1, -3 dB
Total Harmonic Distortion.....
.....Mono: Less than 0.3% (1 kHz)
Stereo: Less than 0.3% (1 kHz)
Capture Ratio.....2.0 dB
Alternate Channel Selectivity.....
.....Better than 45 dB (±400 kHz)
Stereo Separation.....
.....Better than 35 dB (100 Hz/1 kHz/ 10kHz)
Spurious Response.....Better than 80 dB
Image Rejection.....Better than 40 dB
IF Rejection.....Better than 70 dB
AM Suppression.....Better than 60 dB

AM Section

(Modulation: 400 Hz, 30%)
Frequency Range
U.S.A./Canada.....530 - 1,710 kHz in 10 kHz steps
Other Area.....531 - 1,602 kHz in 9 kHz steps
Sensitivity.....55 dBu/m
Signal-to-Noise Ratio...Better than 50 dB at 90 dBu/m
Total Harmonic Distortion.....
.....Less than 0.5% at 90 dBu/m
Selectivity.....Better than 20 dB (± 10 kHz)

[General]

Power Source.....120V AC, 60 Hz
AC 110 - 120V or AC 220 - 240V, 50/60 Hz
(According to country of sale)
Power Consumption.....1100W max.
Convenience Outlets.....Switched x2, total 200W max.
Dimensions.....430 (W) x 140 (H) x 370 (D) mm
16-15/16 (W) x 5-1/2 (H) x 14-9/16 (D) inches
Weight.....Approx. 16 kg/35 lbs. 3 oz.
Supplied Accessories.....
....IEC R6 (size AA) batteries for remote control (2)
AM loop antenna (1)
Dipole antenna (1)
Antenna adaptor (1)
System remote cable (1)

[Remote Control Unit]

Principle.....Infrared pulse system
Power Supply.....3V DC (1.5V x2)
Dimensions.....67 (W) x 19 (H) x 225 (D) mm
2-5/8 (W) x 3/4 (H) x 8-7/8 (D) inches
Weight.....Approx. 150 g/5 oz. (including batteries)

* Dimensions do not include protruding parts. Height is the panel hight.
Specifications and design are subject to change for further improvement without notice.
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