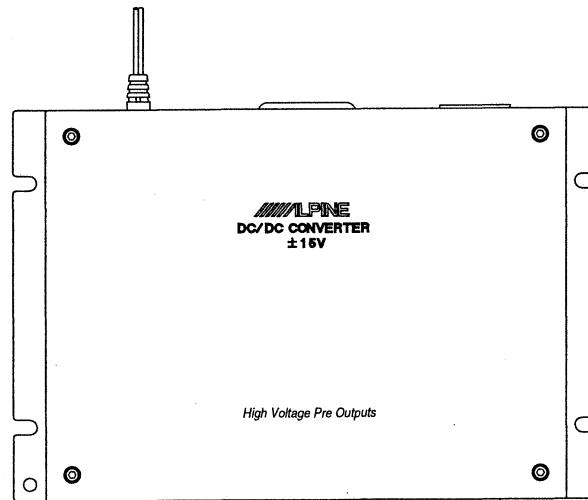
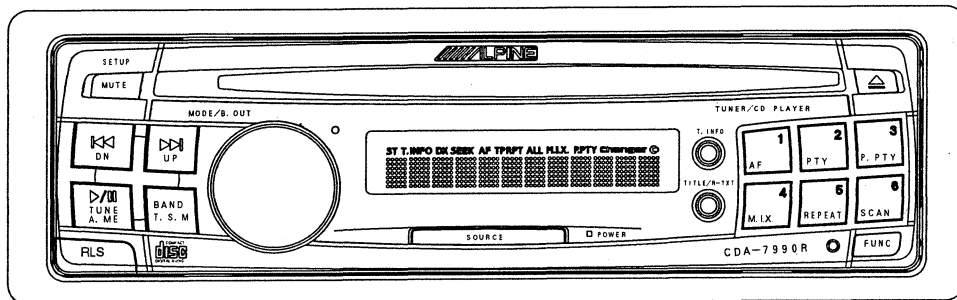


ALPINE SERVICE MANUAL

Tuner / CD Player



- The model is component system unit of CD Unit and DC/DC CONVERTER Unit.



CDA-7990R

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● CD Unit

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● DC/DC CONVERTER Unit

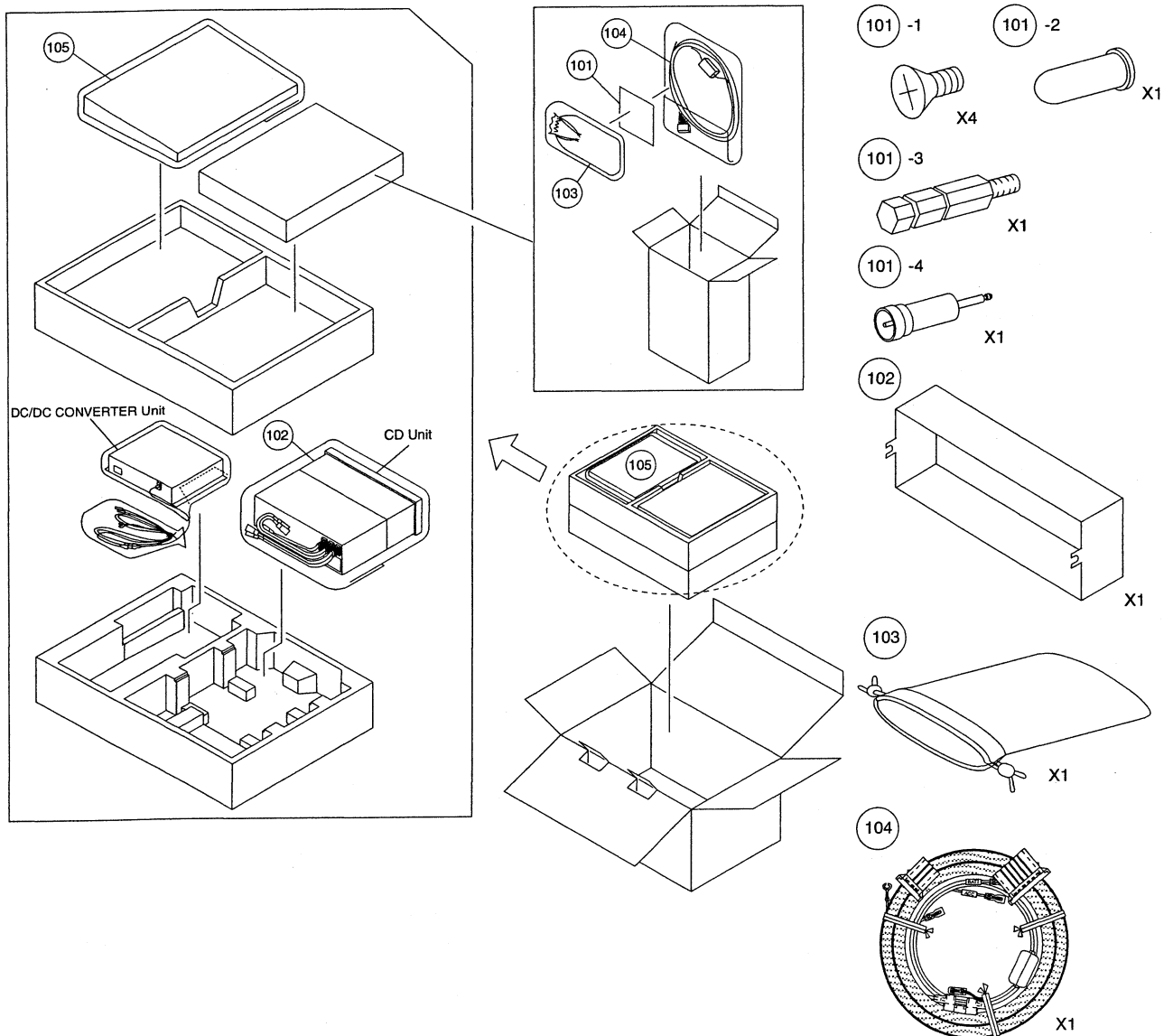
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NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Packing Assembly Parts List

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
101-1	03S72235F68	SCR,MCH M5X6 F CU	103	15B40489Y01	CARRYING,CASE
101-2	36A11113W01	CAP,RUBBER(A)	104	01T45096Y01	ASSY,WIRE PWR
101-3	03A11112W02	BOLT HEX M5(A)	105	68P30540Y84	O/M AOEU
101-4	01T15394Y02	ANT,JASO-ISO			
102	15D80814F01	CASE,INNER			

Packing Method View



CDA-7990R

Specifications

< FM RADIO >

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Mono, 30dB S/N, at 98.1MHz)	17.2dBf
-3dB Limiting Sensitivity (at 98.1MHz)	21.2dBf
Residual Noise (Ref. 400Hz (narrow), at 98.1MHz)	25±10dB
S/N Ratio (at 98.1MHz)	Mono : 60dB Stereo : 55dB
Image Rejection (at 106.1MHz)	40dB
IF Rejection (at 90.1MHz)	60dB
Distortion (Input 60dBμ, at 98.1MHz)	1%
Frequency Response (Ref. 400Hz, at 98.1MHz)	100Hz : 0±3dB 10kHz : -12±3dB
Stereo Separation (1kHz, at 98.1MHz)	20dB
PS Sensitivity (at 98.1MHz)	36.2dBf

< MW RADIO >

Intermediate Frequency	1st : 10.7MHz 2nd : 450kHz
Frequency Range	531~1,602kHz
Usable Sensitivity (20dB S/N, at 999kHz)	34dB
S/N Ratio (at 999kHz)	44dB
Image Rejection (at 1,404kHz)	50dB
IF Rejection (at 603kHz)	60dB
Distortion (at 999kHz)	1.5%
Frequency Response (Ref. 400Hz, at 999kHz)	100Hz : -3±4dB 4kHz : -11+6, -12dB

< LW RADIO >

Intermediate Frequency	1st : 10.7MHz 2nd : 450kHz
Frequency Range	153~281kHz
Usable Sensitivity (20dB S/N, at 216kHz)	42dB
S/N Ratio (at 216kHz)	44dB
Image Rejection (at 270kHz)	50dB
IF Rejection (at 162kHz)	60dB
Distortion (at 216kHz)	1.5%
Frequency Response (Ref. 400Hz, at 216kHz)	100Hz : -3±4dB 4kHz : -11+6, -12dB

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< CD SECTION >

System	Optical (Compact Disc System)
Quantizing Bit Number	16bit Linear system
Channels	2 Channels
Channel Balance (TCD-782, 1kHz)	0±3dB
Distortion (TCD-782, 1kHz)	0.01%
Frequency Response (TCD-782, Ref. 1kHz)	17Hz : 0±3dB 127Hz : 0±2dB 10.007kHz : 0±2dB 19.997kHz : 0±4dB
S/N Ratio (TCD-782)	95dB
Separation (TCD-782, 1kHz)	85dB
De-Emphasis (TCD-782, Ref. 1kHz)	4kHz : -20±3dB 16kHz : -20±3dB

< GENERAL >

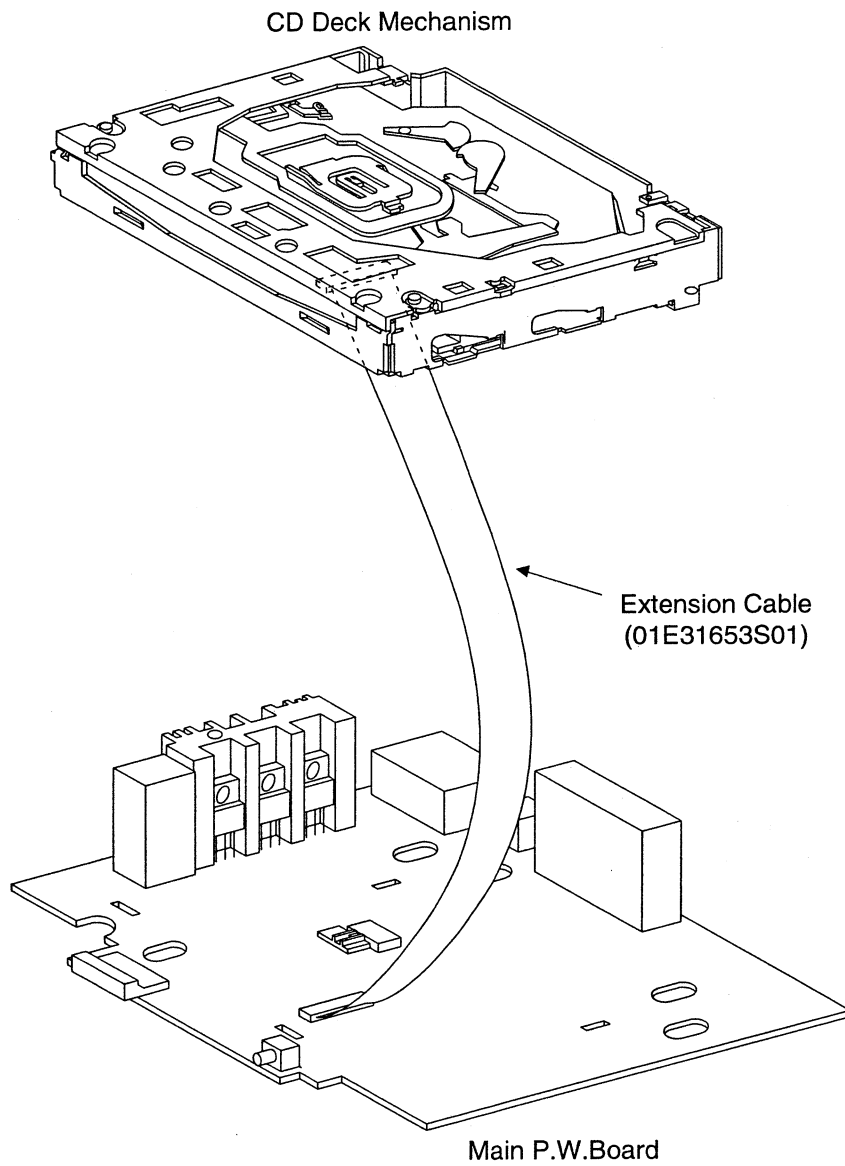
Power Supply	DC14.4V
Pre Output (VOL. MAX, TCD-782 (0dB, 1kHz)) /Impedance	13±1dBV/10k ohm
Dimensions (W×H×D)	(CD Unit) Chassis : 178×50×166.5mm Nose : 188×58×30.8mm (DC/DC CONVERTER Unit) 180×44×124mm
Weight	(CD Unit) 1.5kg (DC/DC CONVERTER Unit) 1,060g

NOTES : Due to Continuing product improvement, specifications and designs are subject to change without notice.

CDA-7990R

Extension Cable

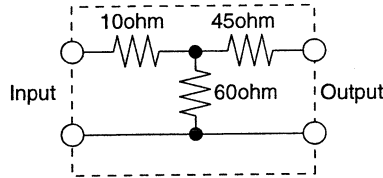
- When repairing or measuring the voltage of this unit, connect with the Extension Cable as shown in below.



Adjustment Procedures

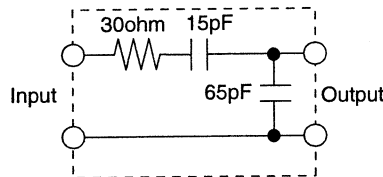
1. FM/MW/LW SECTION

(1) Dummy Antenna Circuit



For 50 ohm FM Signal Generator

Figure 1



For 50 ohm MW/LW Signal Generator

Figure 2

(2) Connections

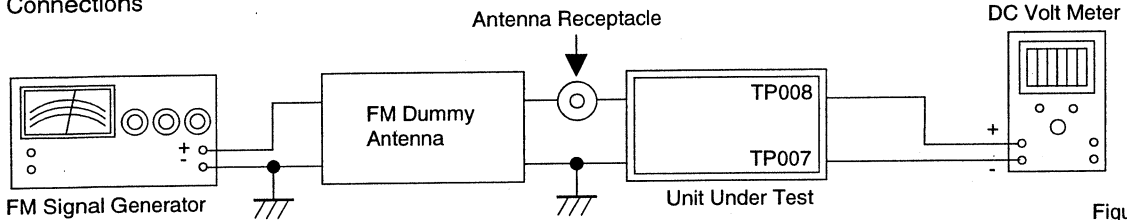


Figure 3

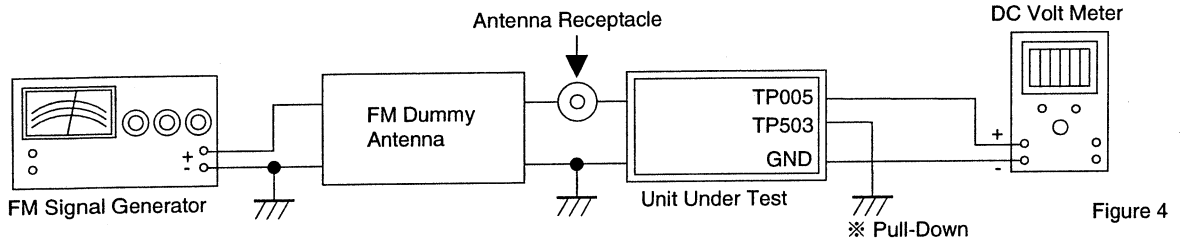


Figure 4

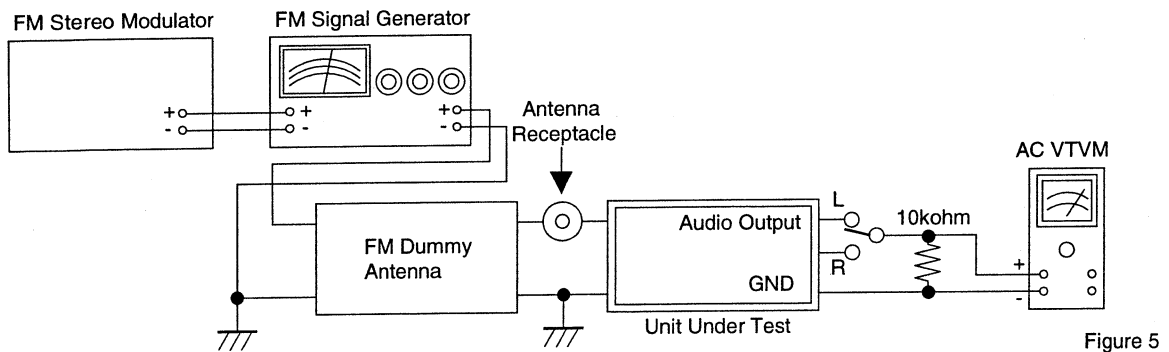


Figure 5

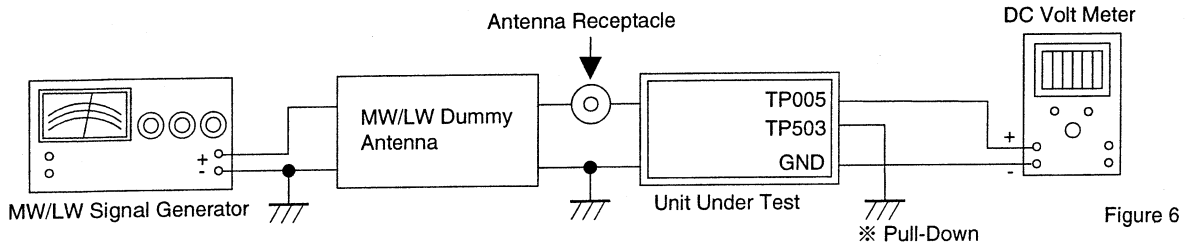


Figure 6

CDA-7990R

(3) Control Settings

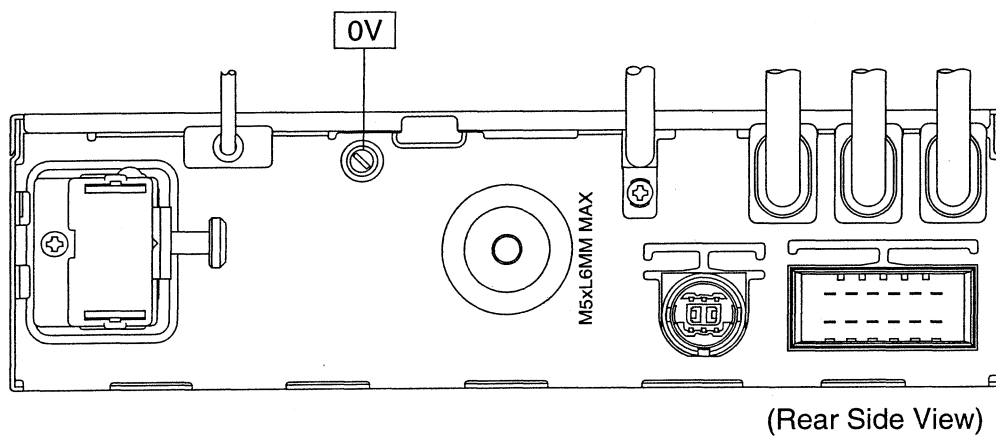
Power Switch ON
 FADER/BALANCE Control ELECTRICAL CENTER Position
 TREBLE/BASS Control ELECTRICAL CENTER Position
 Others OFF

(4) Adjustment Procedures

Step	Description	Connection	Signal Generator	Dial Control	Test Point / P.W.Board Coordinates	Adjustment	
1	IF Adjustment	Figure 3	98.1MHz, 72dB μ (Mod. OFF)	98.1MHz	TP007 (1-D) TP008 (1-C)	Adjust <input type="text" value="0V"/> to 0 \pm 30mV.	
2	Signal Meter Adjustment (FM)	Figure 4	(1)	98.1MHz, 51dB μ (Mod. OFF)	98.1MHz	TP005 (1-D) TP503 (1-C)	Auto Adjustment : After setting up of Signal Generator, short GND and TP503 (Pull-Down). (SPEC) TP005 : 3 \pm 0.1V \rightarrow OK (SPEC) TP005 : others 3 \pm 0.1V \rightarrow NG NOTE : NG : Proceed same Auto Adjustment of step (1) under step (2).
			(2)	98.1MHz, 48-46dB μ (Mod. OFF)	98.1MHz	TP005 (1-D) TP503 (1-C)	Proceed same Auto Adjustment of step (1) under step (2).
			(3)	98.1MHz, 51dB μ (Mod. OFF)	98.1MHz	TP005 (1-D) TP503 (1-C)	Proceed same Auto Adjustment of step (1) under step (3).
3	Separation Adjustment (FM)	Figure 5	(1)	98.1MHz, 72dB μ (Stereo, 1kHz, Lch Only)	98.1MHz	Audio Output	Adjust VR201 for Rch output to be minimum and confirm Lch and Rch output level difference maximum.
			(2)	98.1MHz, 72dB μ (Stereo, 1kHz, Rch Only)	98.1MHz	Audio Output	Proceed same adjustment under step (1) by alternating Lch and Rch.
4	Signal Meter Adjustment (MW)	Figure 6	(1)	999kHz, 32dB μ (Mod. OFF)	999kHz	TP005 (1-D) TP503 (1-C)	Auto Adjustment : After setting up of Signal Generator, short GND and TP503 (Pull-Down). (SPEC) TP005 : 1.4 \pm 0.1V \rightarrow OK (SPEC) TP005 : others 1.4 \pm 0.1V \rightarrow NG NOTE : NG : Proceed same Auto Adjustment of step (1) under step (2).
			(2)	999kHz, 27-29dB μ (Mod. OFF)	999kHz	TP005 (1-D) TP503 (1-C)	Proceed same Auto Adjustment of step (1) under step (2).
			(3)	999kHz, 32dB μ (Mod. OFF)	999kHz	TP005 (1-D) TP503 (1-C)	Proceed same Auto Adjustment of step (1) under step (3).

Step	Description	Connection	Signal Generator	Dial Control	Test Point / P.W.Board Coordinates	Adjustment
5	Signal Meter Adjustment (LW)	Figure 6	(1) 216kHz, 32dB μ (Mod. OFF)	216kHz	TP005 (1-D) TP503 (1-C)	Auto Adjustment : After setting up of Signal Generator, short GND and TP503 (Pull-Down). (SPEC) TP005 : 1.4 \pm 0.1V \rightarrow OK (SPEC) TP005 : others 1.4 \pm 0.1V \rightarrow NG NOTE : NG : Proceed same Auto Adjustment of step (1) under step (2).
			(2) 216kHz, 27~29dB μ (Mod. OFF)	216kHz	TP005 (1-D) TP503 (1-C)	Proceed same Auto Adjustment of step (1) under step (2).
			(3) 216kHz, 32dB μ (Mod. OFF)	216kHz	TP005 (1-D) TP503 (1-C)	Proceed same Auto Adjustment of step (1) under step (3).

Adjustment Locations

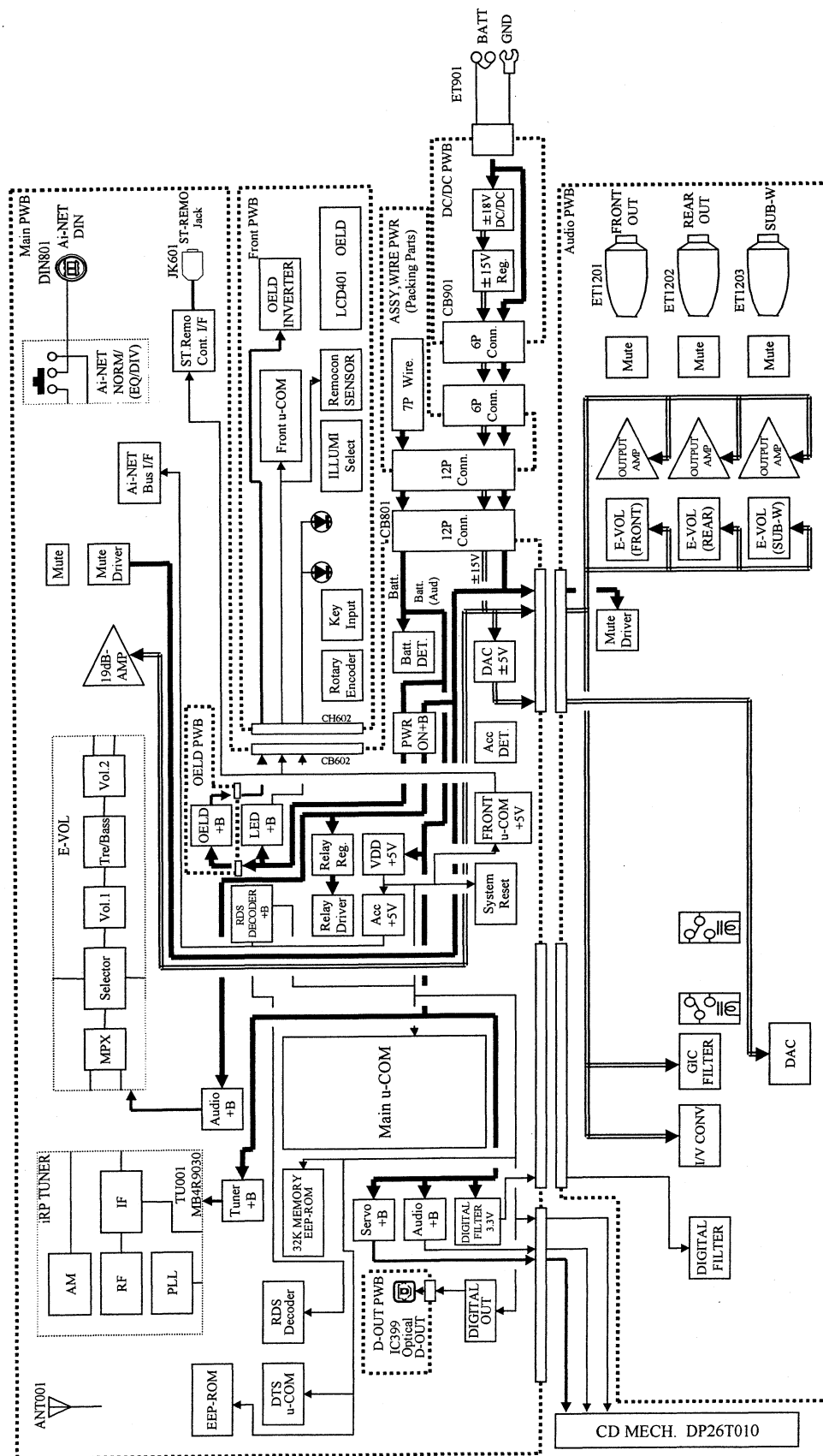


NOTE : For the Adjustment Parts and Test Points, refer to the Parts Layout on P.W.Boards and Wiring Diagram.

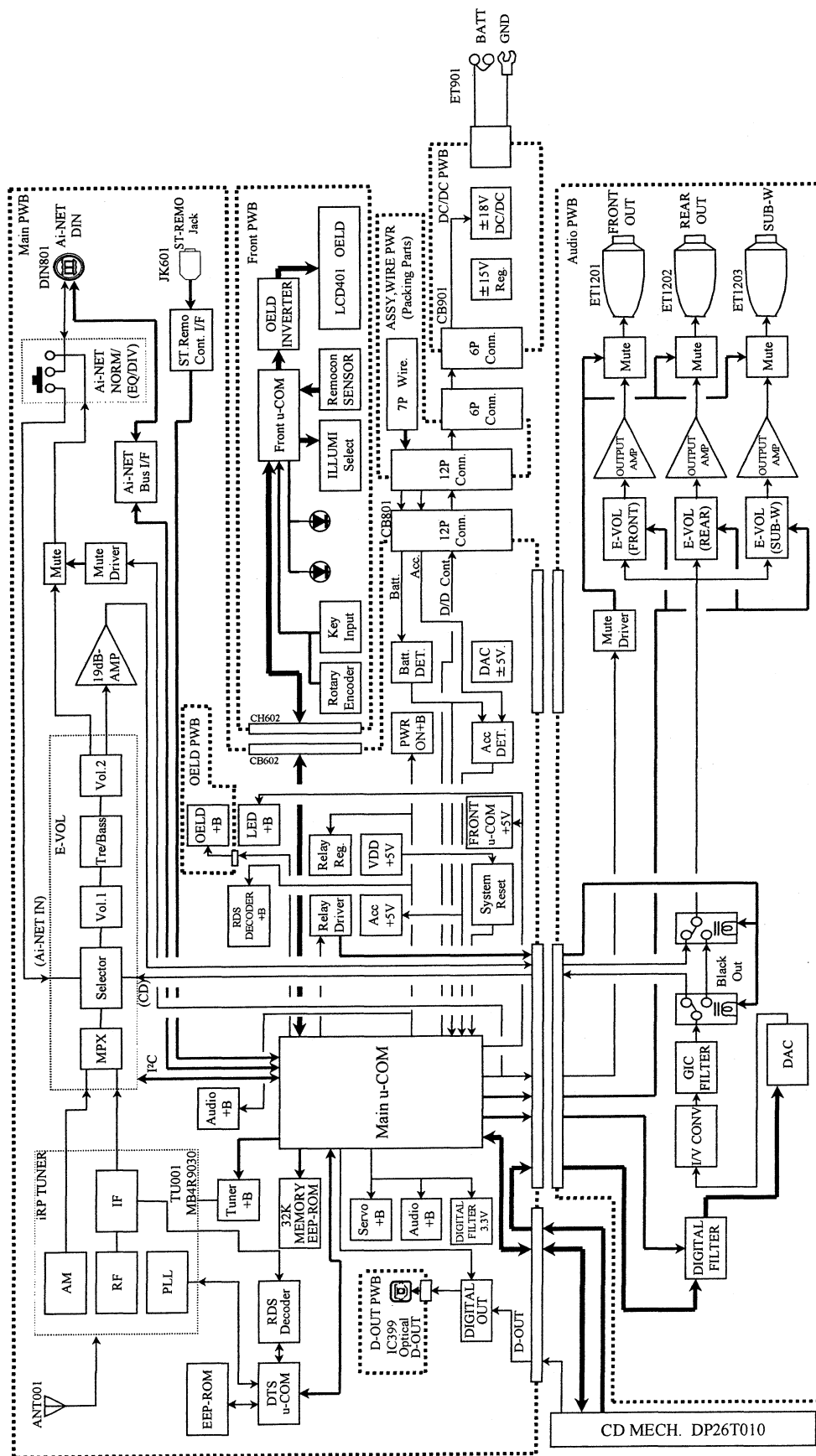
CDA-7990R

Block Diagram

(Power Supply Block)



(Signal Block)



● CD Unit

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NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

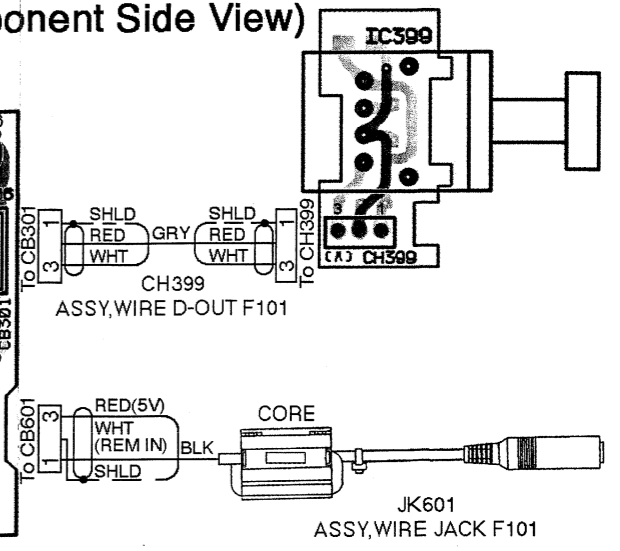
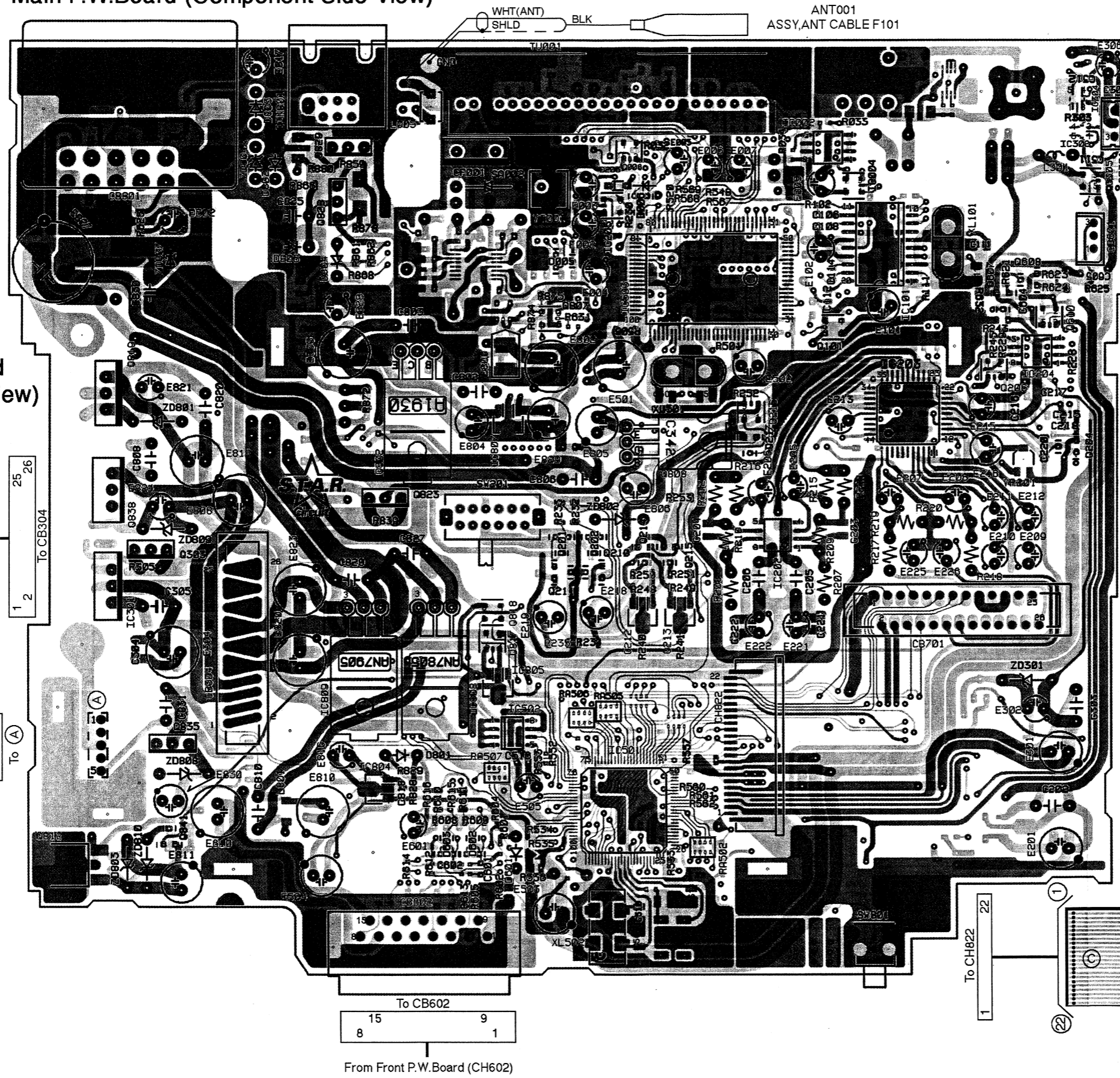
Parts Layout on P.W.Boards and Wiring Diagram (1/7)

Main P.W.Board (Component Side View)

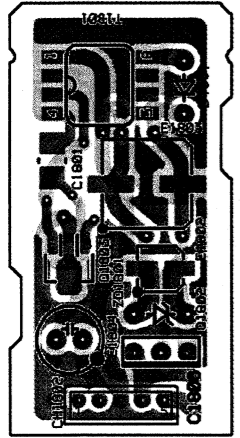
D-OUT P.W.Board (Component Side View)

1
2
3
4
5

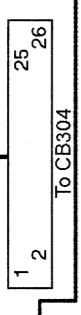
A | B | C | D | E | F | G



OELD P.W.Board (Component Side View)

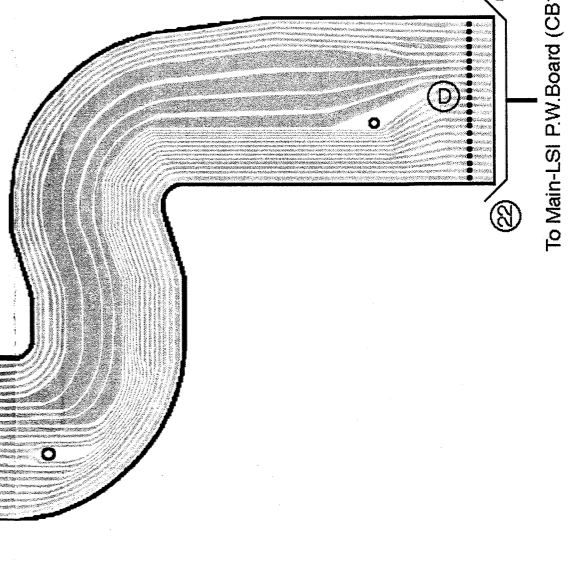


From Audio P.W. Board (CH1304)



To CB701
From Audio P.W. Board (CH1701)

FPC-F02224-F1 P.W.Board (Foil Side View)



To Main-LSI P.W. Board (CB101)

To CB602
From Front P.W. Board (CH602)

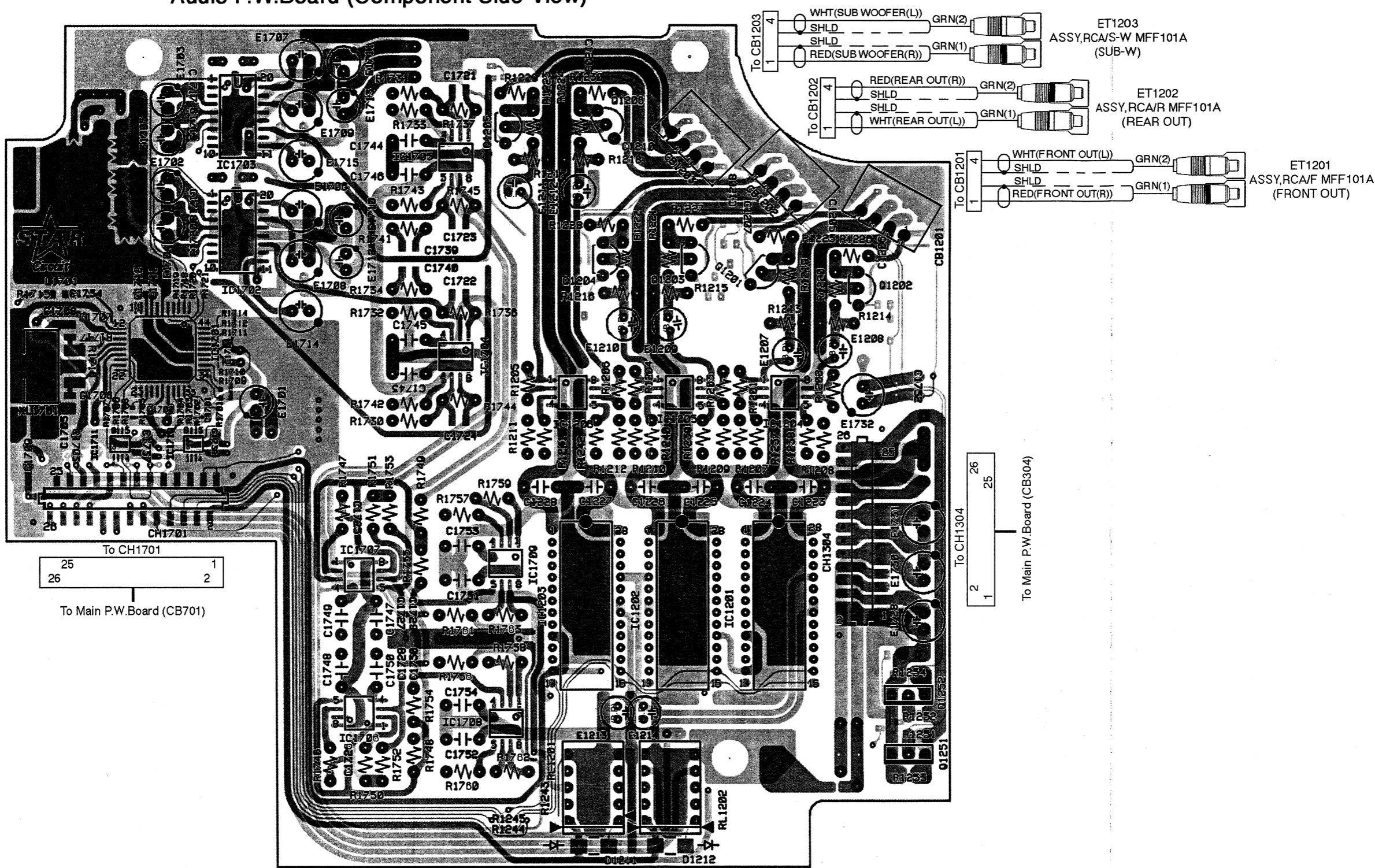
To CH822

Dark Gray : Component Side Pattern
Gray : Foil Side Pattern

Parts Layout on P.W.Boards and Wiring Diagram (3/7)

1
2
3
4
5

Audio P.W.Board (Component Side View)



Dark Gray : Component Side Pattern
Gray : Foil Side Pattern

A

B

C

D

E

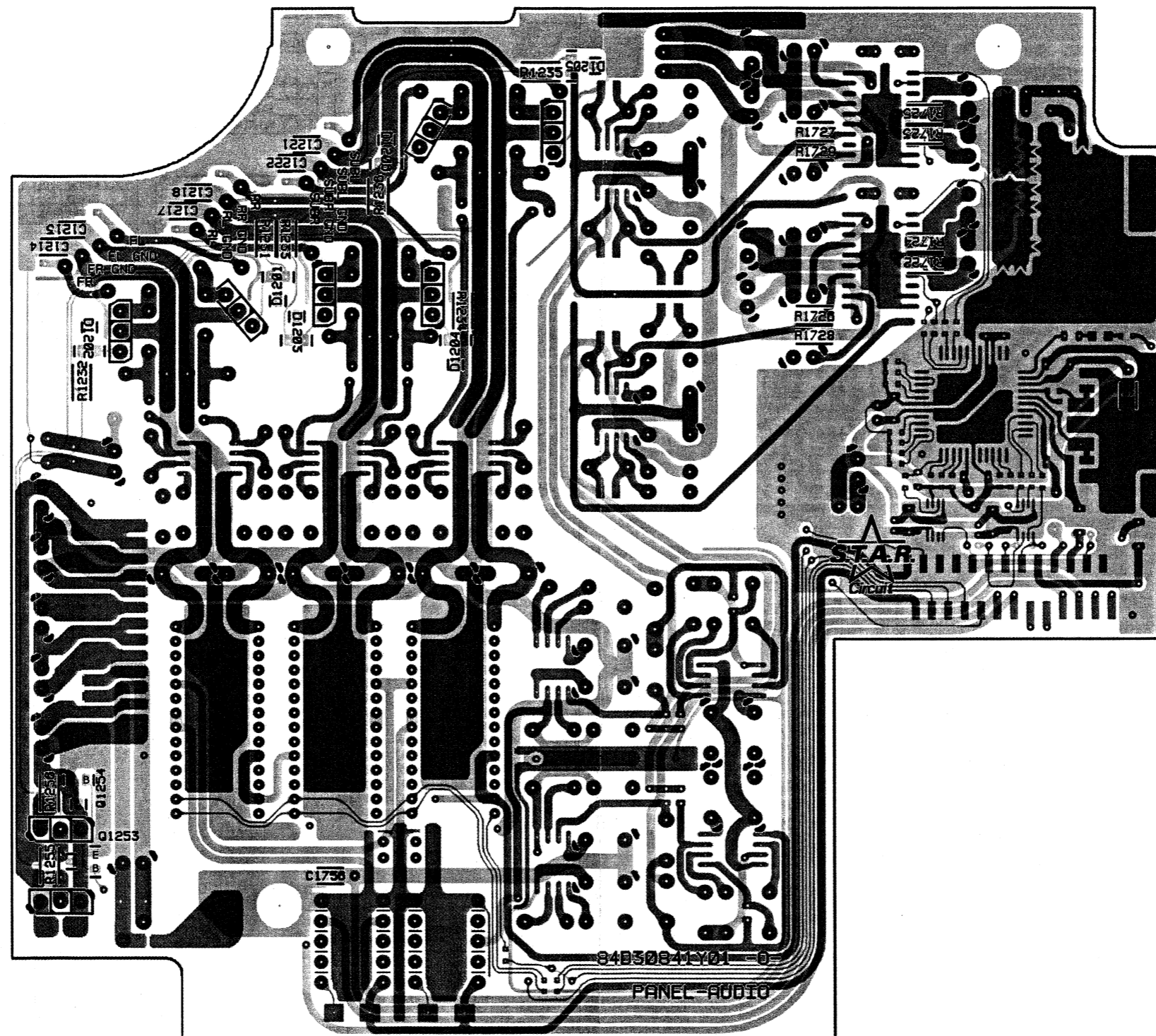
F

G

Parts Layout on P.W.Boards and Wiring Diagram (4/7)

1
2
3
4
5

Audio P.W.Board (Foil Side View)



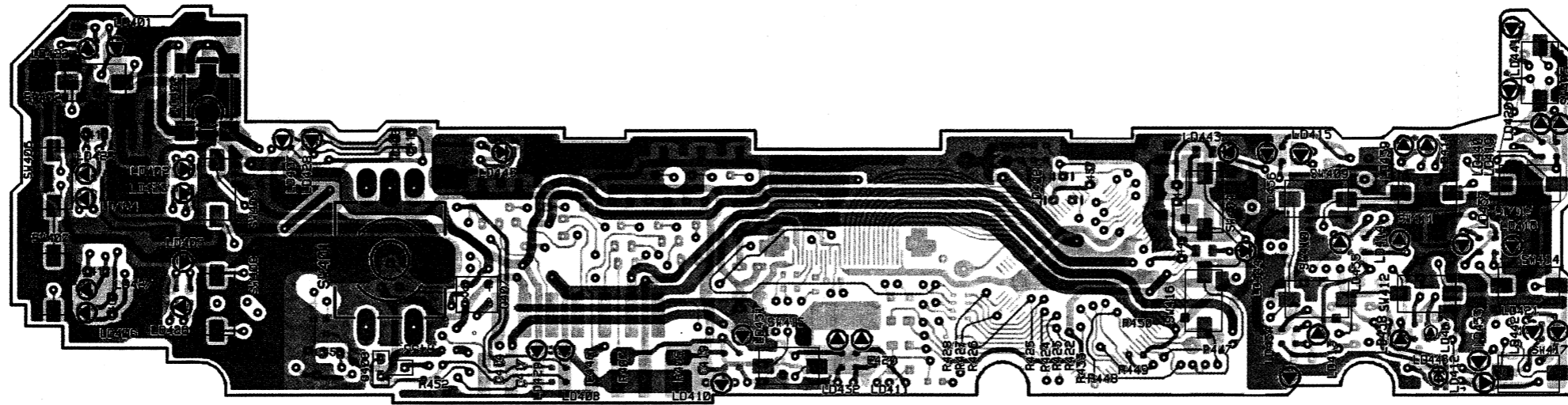
A | B | C | D | E | F | G

Dark Gray : Component Side Pattern
Gray : Foil Side Pattern

Parts Layout on P.W.Boards and Wiring Diagram (5/7)

1

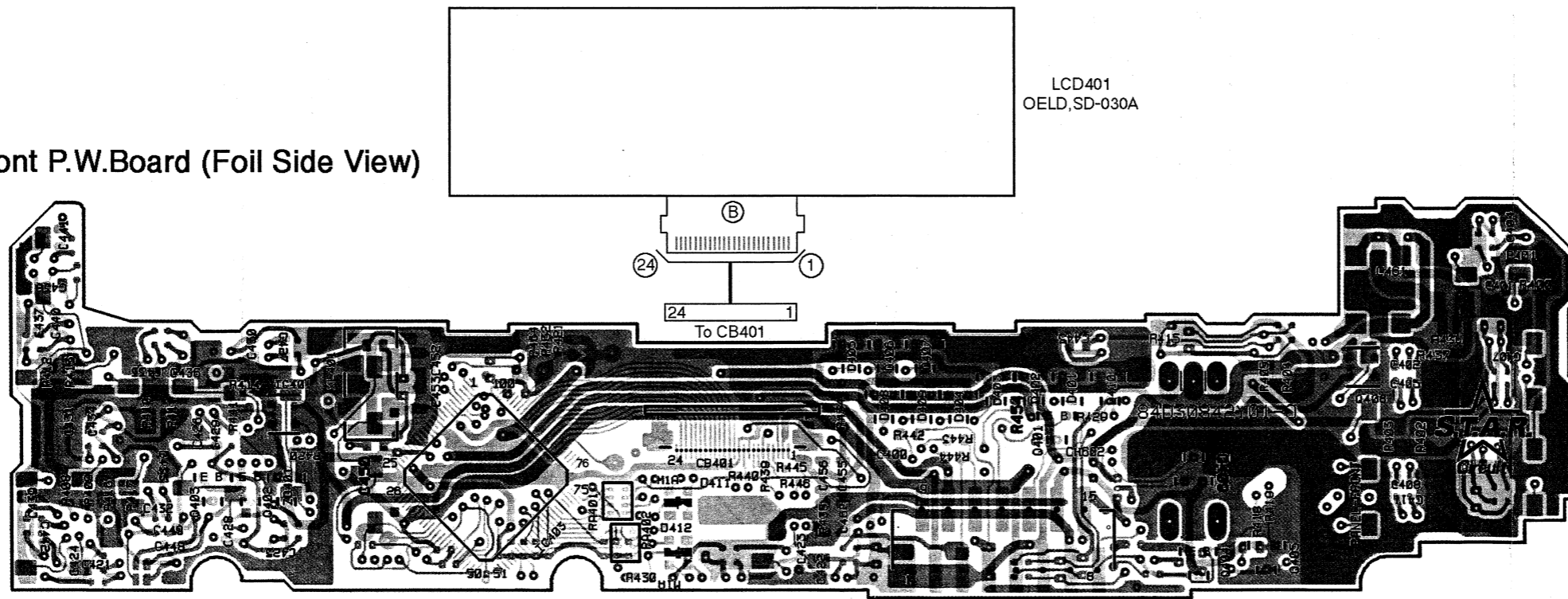
Front P.W.Board (Component Side View)



2

3

Front P.W.Board (Foil Side View)



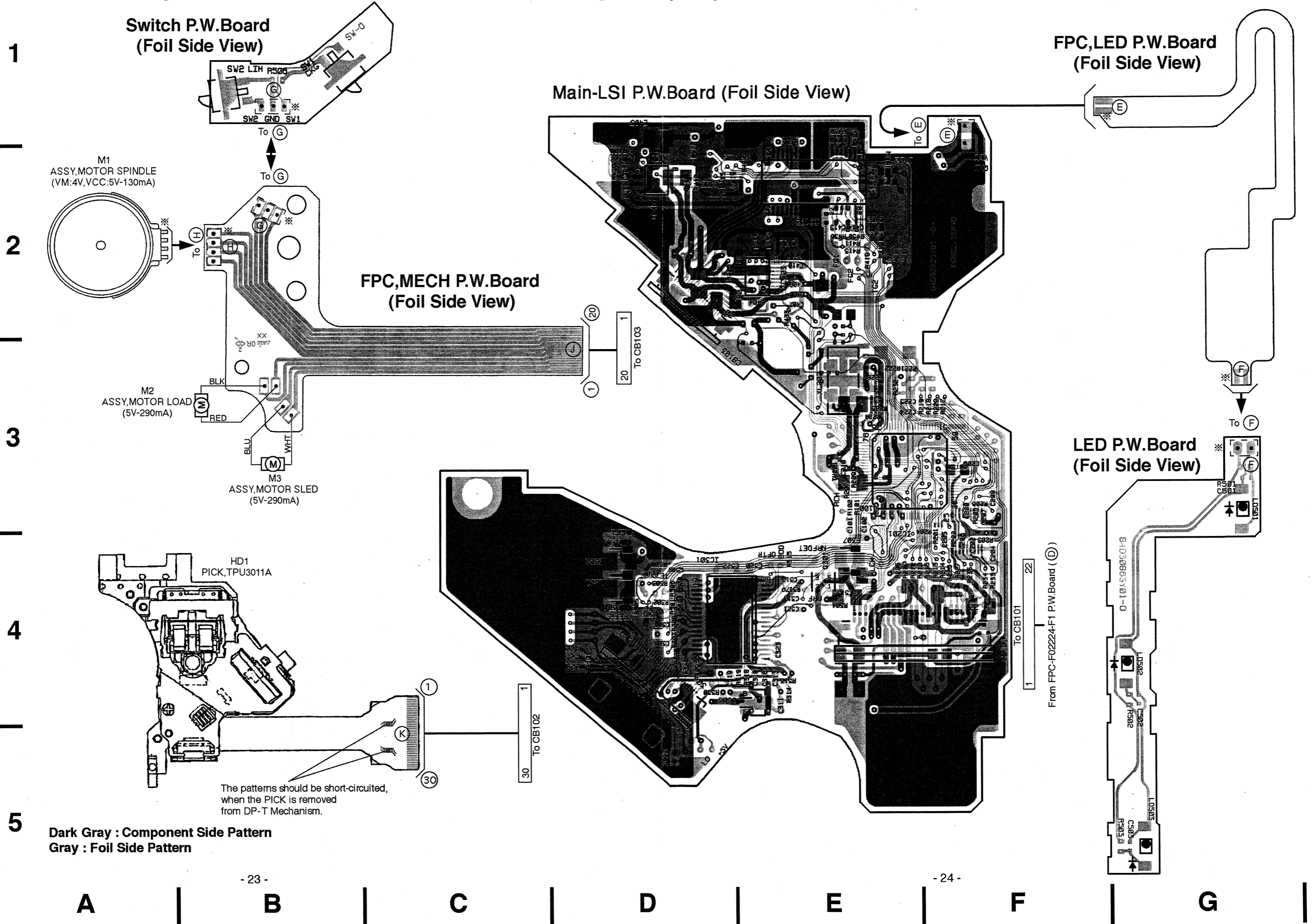
4

5

Dark Gray : Component Side Pattern
Gray : Foil Side Pattern



Parts Layout on P.W.Boards and Wiring Diagram (6/7)



Dark Gray : Component Side Pattern
Gray : Foil Side Pattern

Parts Layout on P.W.Boards and Wiring Diagram (7/7)

1

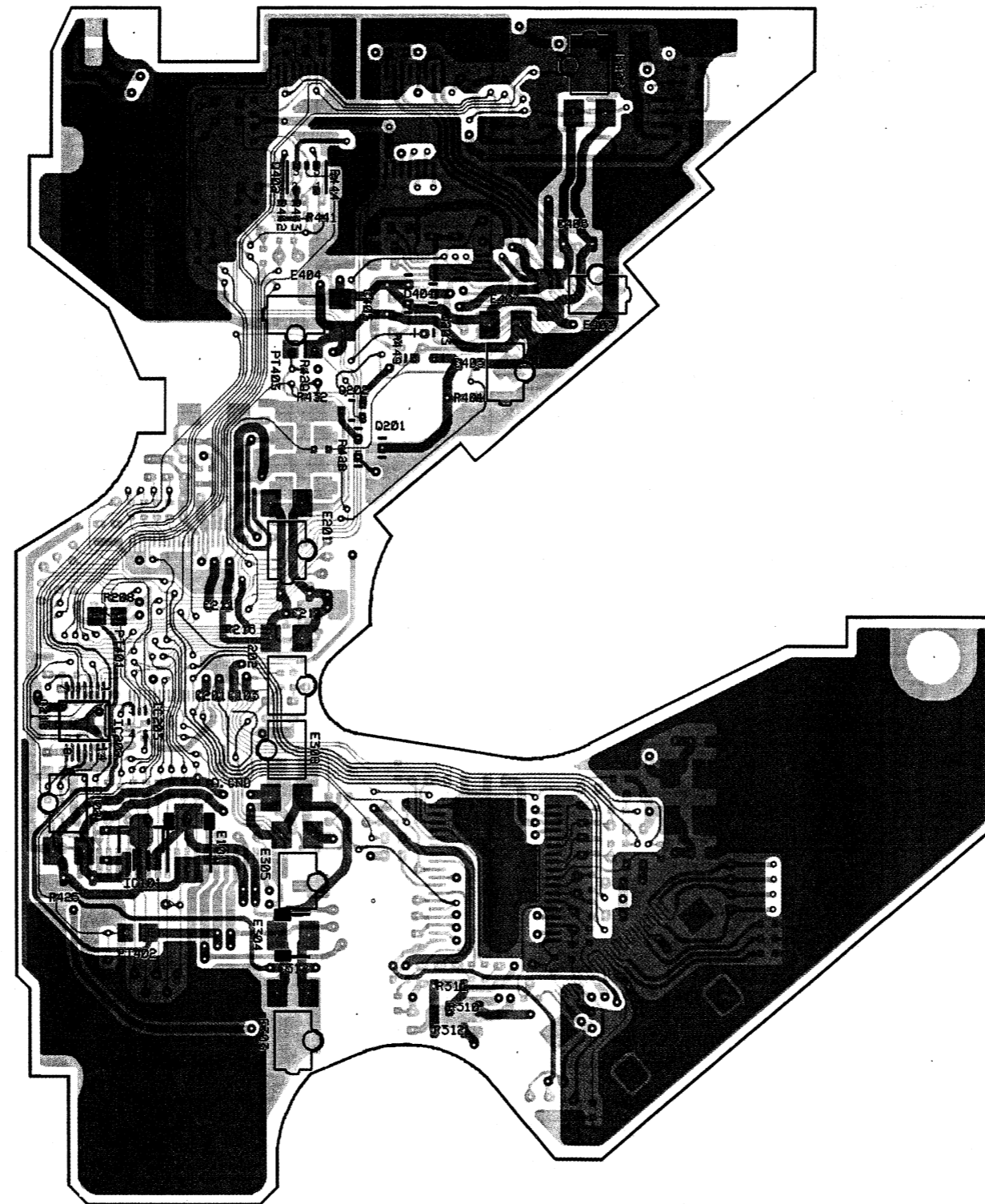
2

3

4

5

Main LSI P.W.Board (Component Side View)



Dark Gray : Component Side Pattern
Gray : Foil Side Pattern

A

B

C

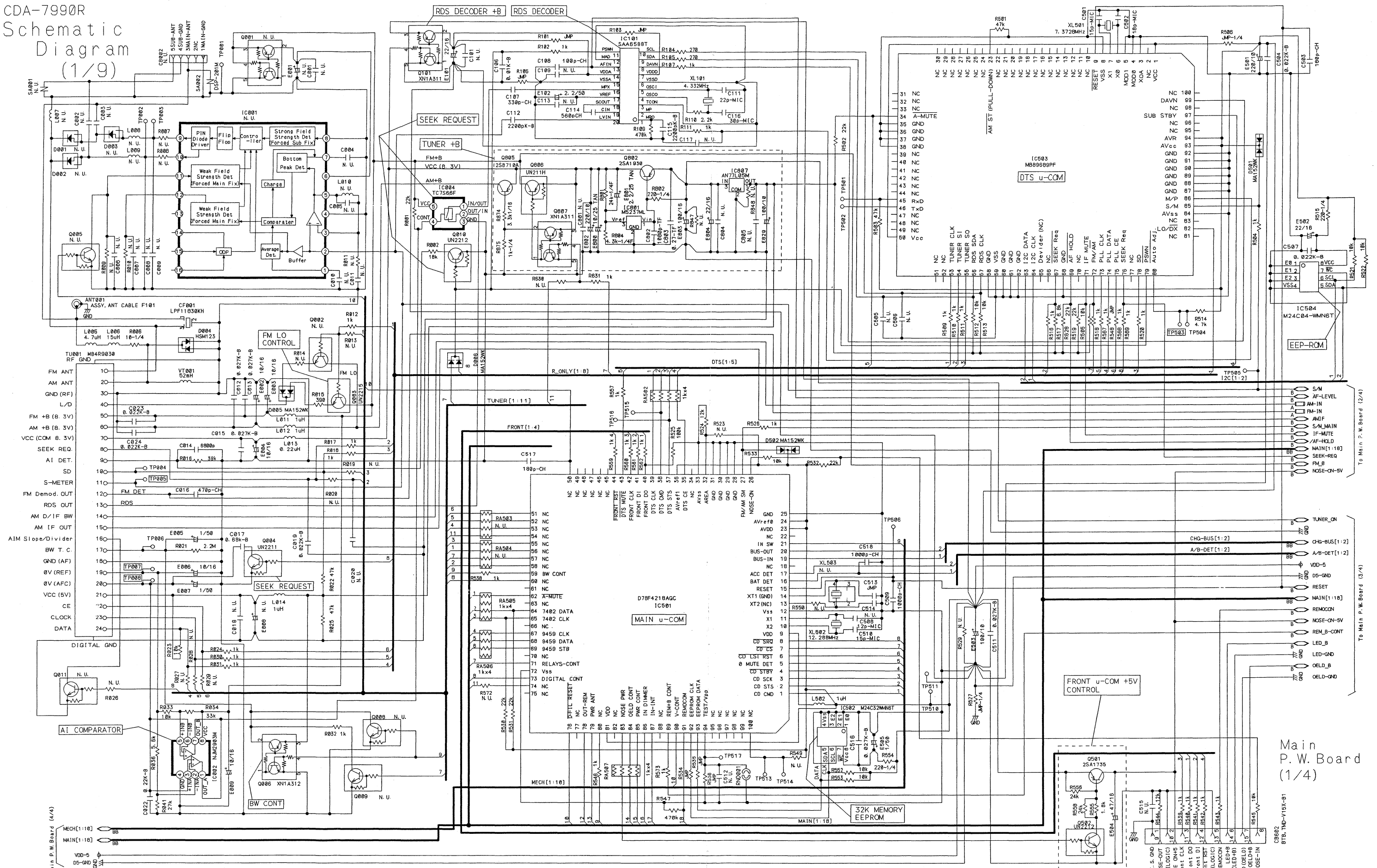
D

E

F

G

CDA-7990R
Schematic
Diagram
(1/9)

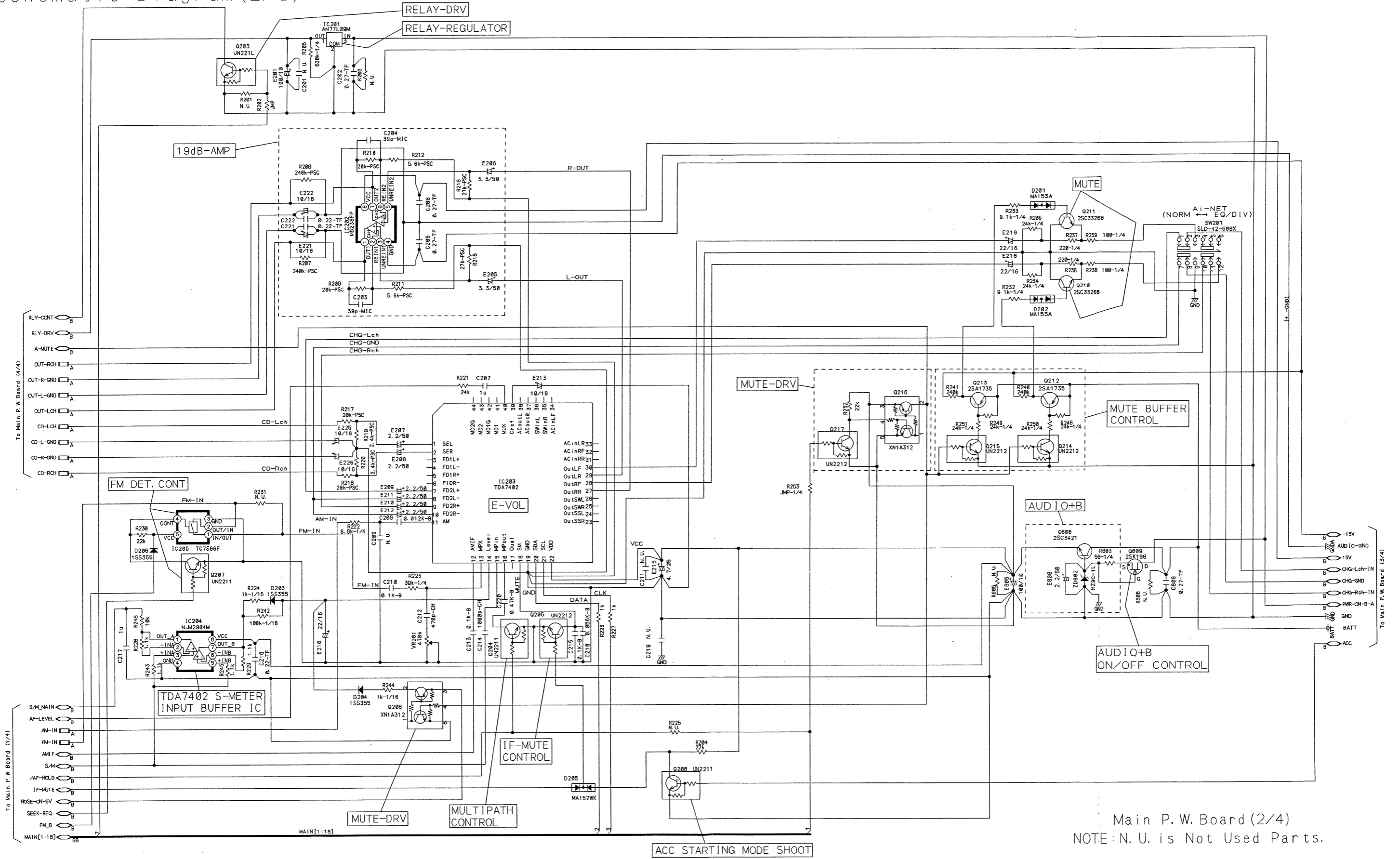


NOTE: N. U. is Not Used Parts.

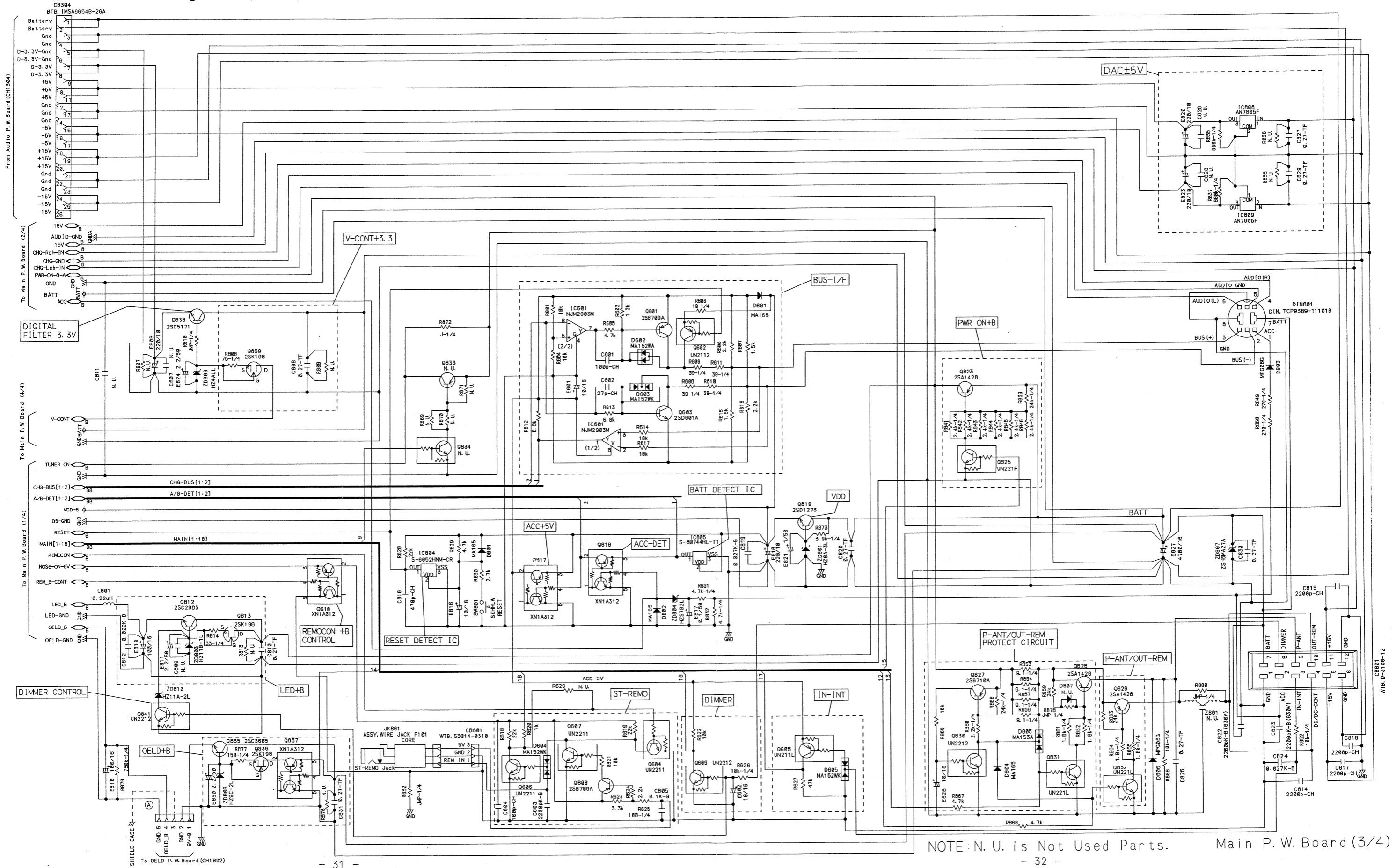
Main
P.W. Board
(1/4)

From Front P.W. Board (CH602)

Schematic Diagram (2/9)

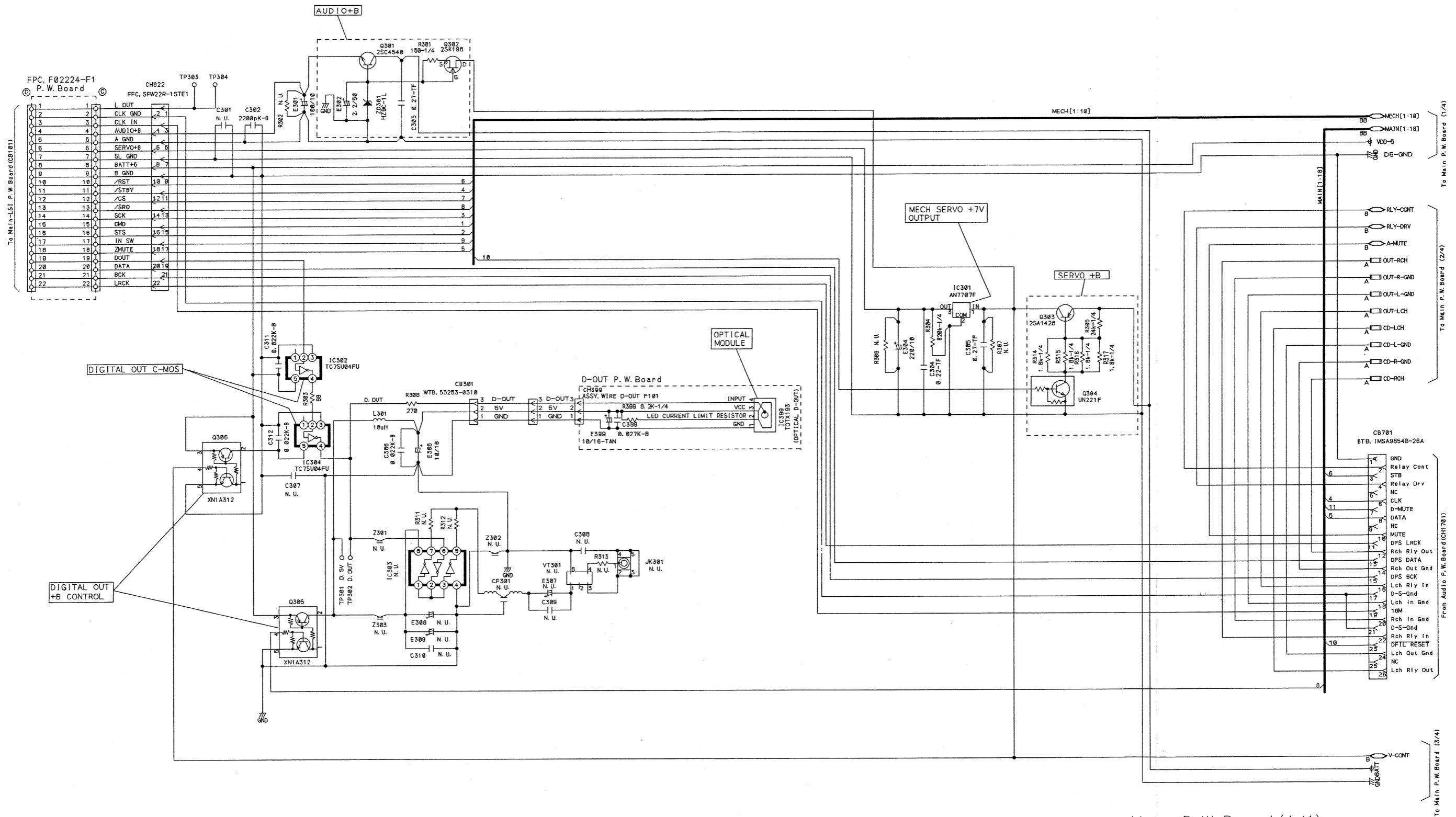


CDA-7990R
Schematic Diagram (3/9)



NOTE: N. U. is Not Used Parts. Main P.W. Board (3/4)

Schematic Diagram (4/9)

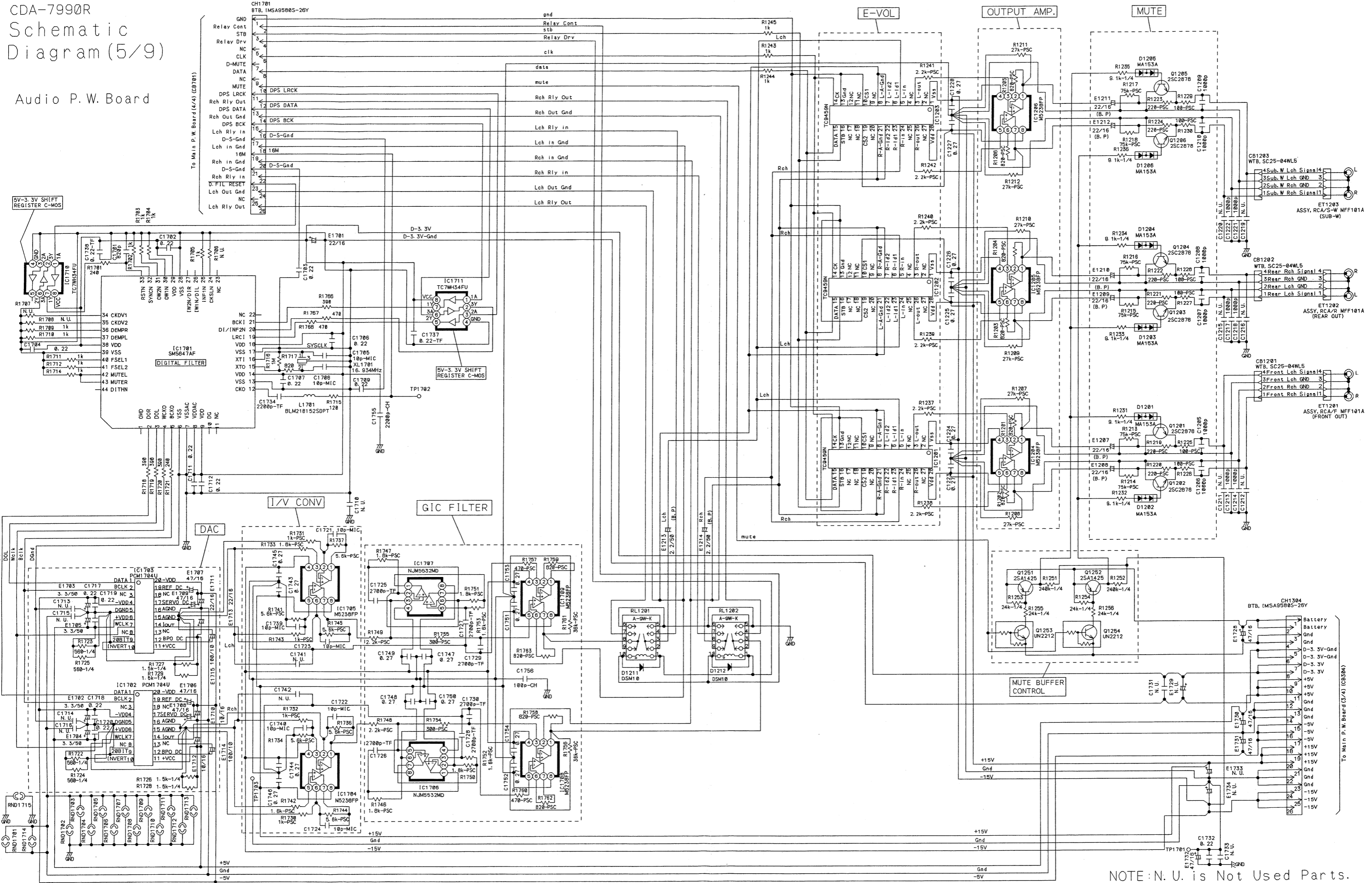


Main P.W. Board (4/4)

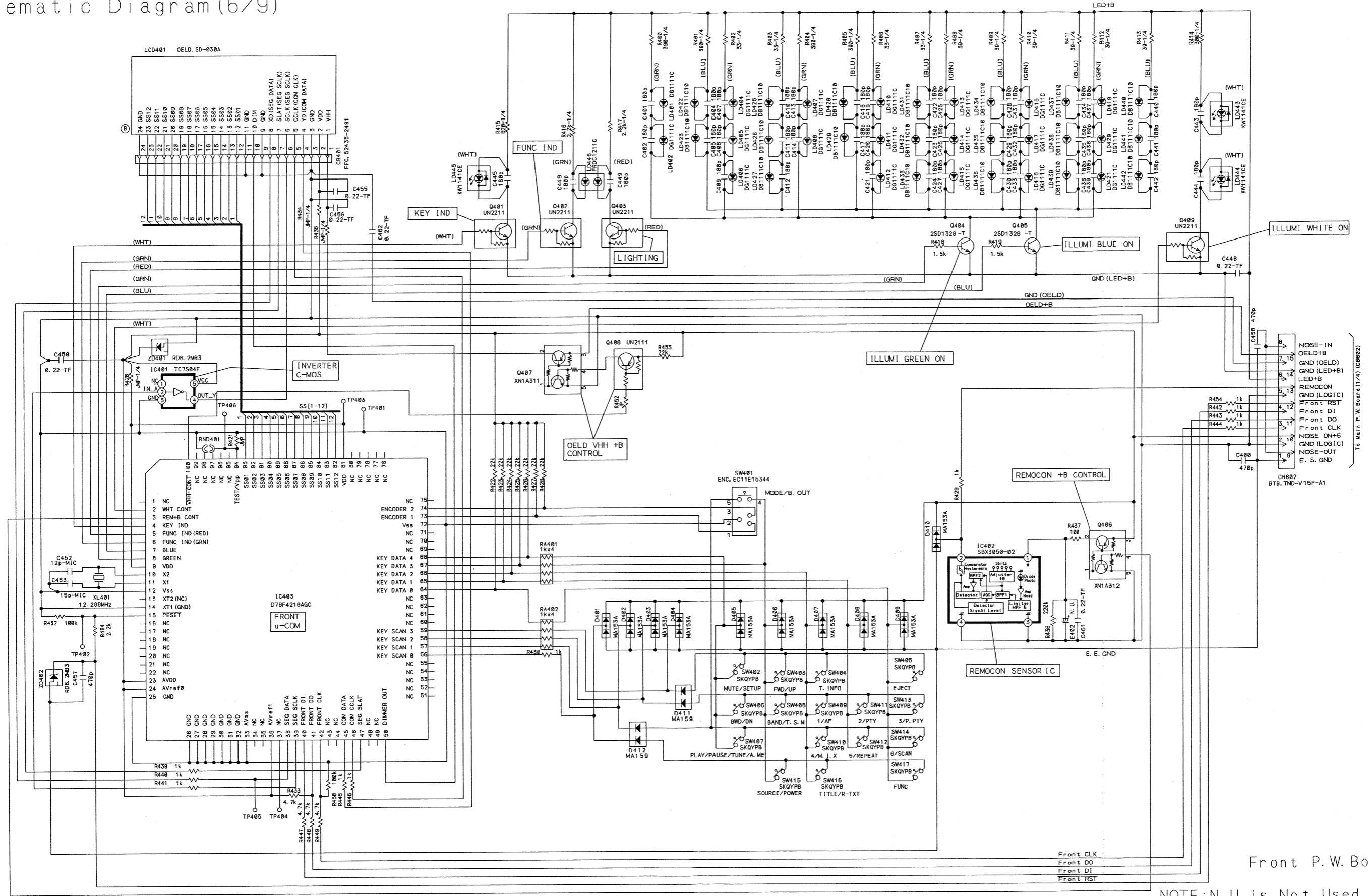
NOTE: N. U. is Not Used Parts.

CDA-7990R
Schematic
Diagram (5/9)

Audio P. W. Board



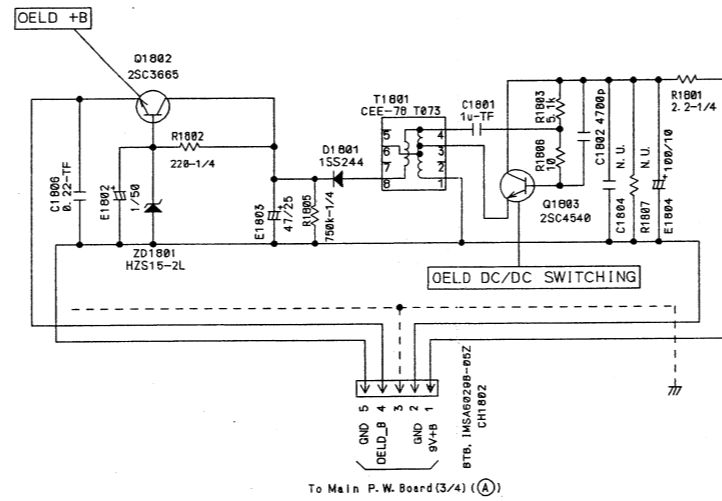
Schematic Diagram (6/9)



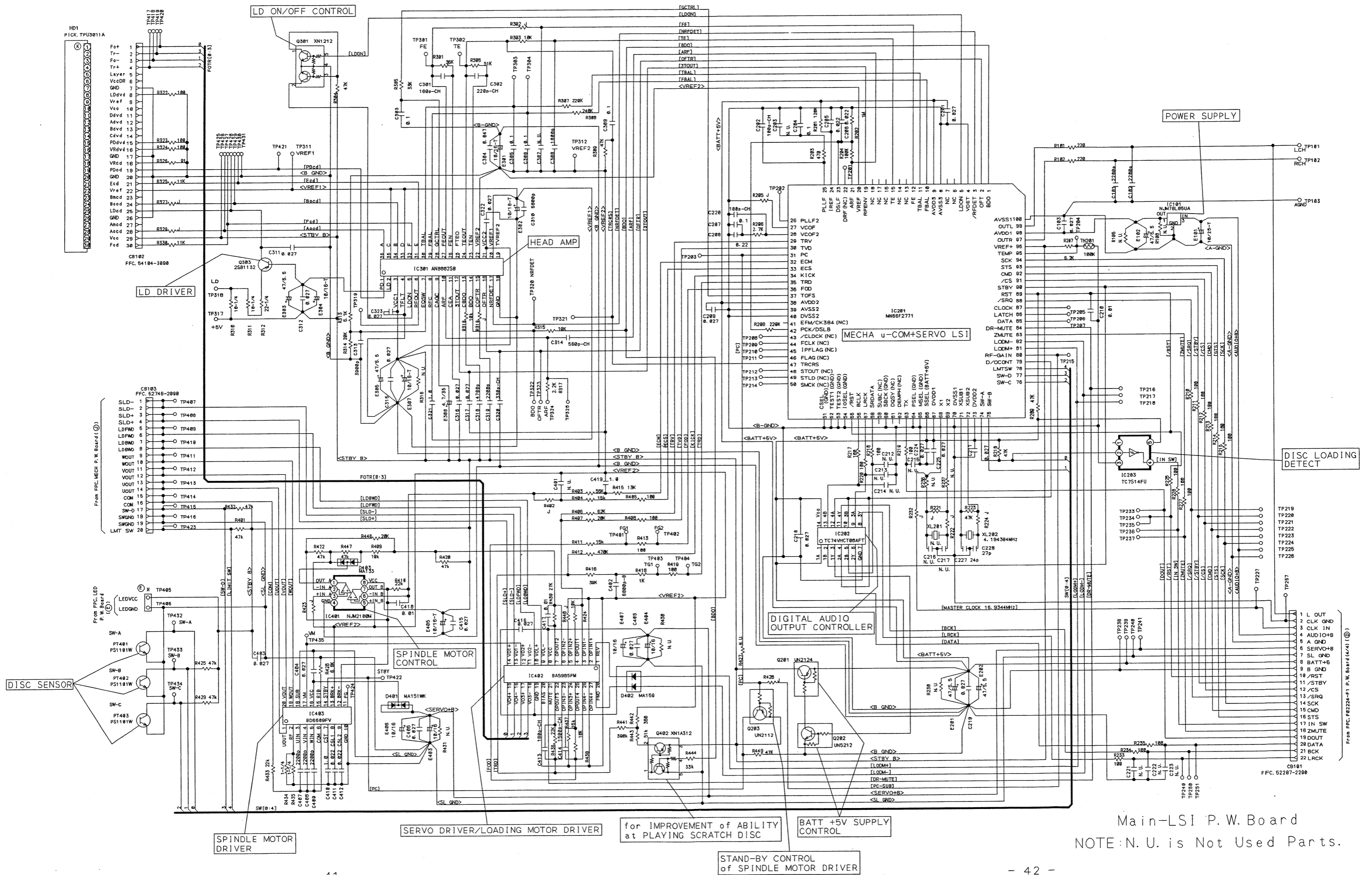
Front P.W. Board

NOTE: N. U. is Not Used Parts.

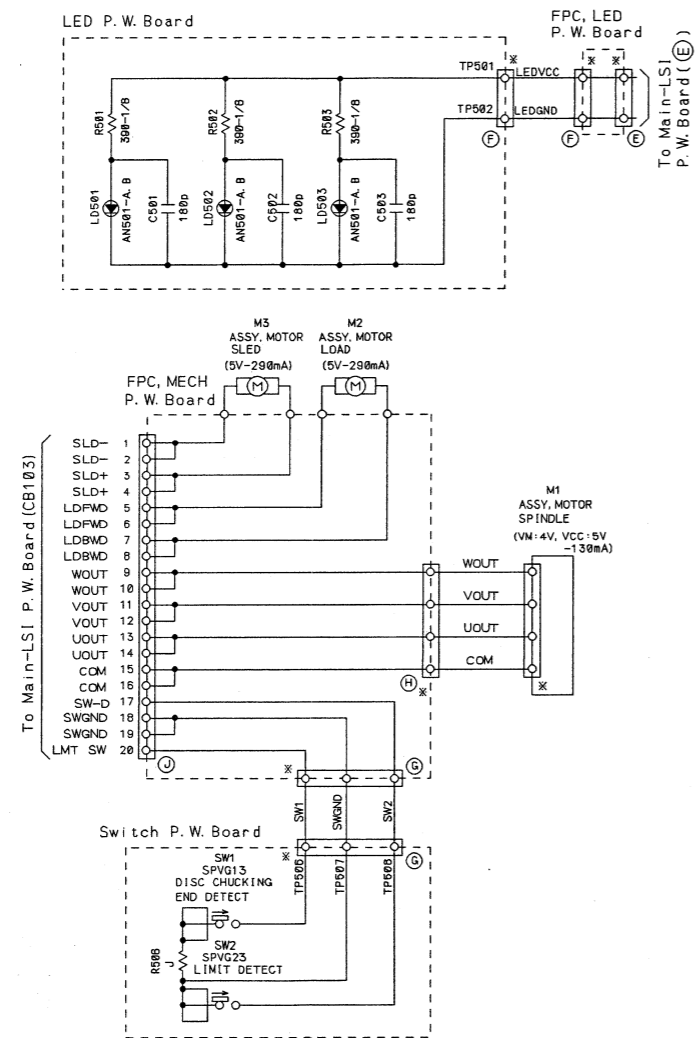
Schematic Diagram (7/9)



OELD P.W. Board
 NOTE: N. U. is Not Used Parts.



Schematic Diagram (9/9)



Terminal Voltage of IC/TR

IC002	
1	8.23
2	4.07
3	4.96
4	0
5	5.68
6	4.96
7	8.23
8	8.25

IC004	
1	4.91
2	4.9
3	0
4	8.23
5	8.25

IC101			
1	0	11	0
2	0	12	0
3	0	13	2.49
4	CLK	14	4.95
5	CLK	15	0
6	0	16	2.44
7	4.95	17	2.46
8	4.95	18	2.48
9	PS	19	2.42
10	PS	20	2.48

IC201	
1	8.91
2	0
3	14.05

IC203							
1	3.96	12	4.08	23	NC	34	NC
2	4.02	13	4.1	24	NC	35	NC
3	NC	14	4.36	25	NC	36	NC
4	NC	15	0	26	NC	37	NC
5	NC	16	1.4	27	4.22	38	NC
6	NC	17	NC	28	4.22	39	4.22
7	4.17	18	3.61	29	4.22	40	4.22
8	4.17	19	0	30	4.22	41	NC
9	4.17	20	PS	31	NC	42	NC
10	4.17	21	PS	32	NC	43	NC
11	4.15	22	8.47	33	NC	44	NC

IC202	
1	0
2	0
3	0
4	-15.68
5	0
6	0
7	0
8	15.21

IC204	
1	4.54
2	4.56
3	4.56
4	0
5	4.56
6	4.56
7	4.56
8	8.45

IC205	
1	2.88
2	2.88
3	0
4	8.03
5	8.03

IC301		
1	13.96/0	CD/RADIO
2	0	
3	7.11/0	CD/RADIO

IC302		
1	NC	
2	0	
3	0	
4	5.13/0	D-OUT ON/OFF
5	5.13	

IC304		
1	NC	
2	5.14/0	D-OUT ON/OFF
3	0	
4	2.47/0	D-OUT ON/OFF
5	5.13/0	D-OUT ON/OFF

IC399		
1	0	
2	PS	D-OUT ON
3	4.96	D-OUT ON/OFF
4	PS	D-OUT ON

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IC 401	
1	NC
2	PS
3	0
4	PS
5	5.14

IC 402		
1	5.12/0	REMOCON ON/OFF
2	PS	at receiving REMOCON
3	0	
4	0	

IC 502	
1	0
2	0
3	0
4	0
5	PS
6	PS
7	0
8	5.15

IC 504	
1	0
2	0
3	0
4	0
5	CLK
6	CLK
7	0
8	5.15

IC 601	
1	PS
2	PS
3	PS
4	0
5	2.53
6	PS
7	5.08
8	5.08

IC 801	
1	13.4
2	0
3	1.26

IC 804		
1	0/5.11	RESET ON/OFF
2	0/5.12	RESET ON/OFF
3	0	

IC 805		
1	0/4.79	BATT ON/OFF
2	0/5.12	BATT ON/OFF
3	0	

IC 807	
1	5
2	0
3	14.05

IC 808	
1	15.28
2	0
3	4.91

IC 809	
1	0
2	-15.78
3	-5.03

IC 1201			
1	-15.75	15	5.15
2	NC	16	0
3	0	17	NC
4	NC	18	NC
5	0	19	0
6	NC	20	NC
7	0	21	0
8	0	22	0
9	NC	23	NC
10	0	24	0
11	NC	25	NC
12	NC	26	0
13	0	27	NC
14	5.14	28	15.28

IC 1202			
1	-15.78	15	5.08
2	NC	16	0
3	0	17	NC
4	NC	18	NC
5	0	19	0
6	NC	20	NC
7	0	21	0
8	0	22	0
9	NC	23	NC
10	15.28	24	0
11	NC	25	NC
12	NC	26	0
13	0	27	NC
14	5.15	28	15.19

I C 4 0 3					
1	NC		51	NC	
2	5.01/0	POWER ON/OFF	52	NC	
3	5.01/0	REMOCON ON/OFF	53	NC	
4	5/0	B-OUT ON/OFF	54	NC	
5	5/0	RED Lighting ON/Lighting OFF	55	NC	
6	5/0	GREEN Lighting ON/Lighting OFF	56	PS	
7	5/0	BLUE Lighting ON/Lighting OFF	57	PS	
8	5/0	GREEN Lighting ON/Lighting OFF	58	PS	
9	5.06		59	PS	
10	CLK		60	NC	
11	CLK		61	NC	
12	0		62	NC	
13	NC		63	NC	
14	0		64	PS	
15	4.62		65	PS	
16	NC		66	PS	
17	NC		67	PS	
18	NC		68	PS	
19	NC		69	NC	
20	NC		70	NC	
21	NC		71	NC	
22	NC		72	0	
23	5.05		73	PS	
24	5.05		74	PS	
25	0		75	NC	
26	0		76	NC	
27	0		77	NC	
28	0		78	NC	
29	0		79	NC	
30	0		80	NC	
31	0		81	5.12	
32	0		82	PS	
33	0		83	PS	
34	NC		84	PS	
35	NC		85	PS	
36	5.05		86	PS	
37	NC		87	PS	
38	PS		88	PS	
39	PS		89	PS	
40	PS		90	PS	
41	PS		91	PS	
42	PS		92	PS	
43	NC		93	PS	
44	NC		94	0	
45	PS		95	NC	
46	PS		96	NC	
47	PS		97	NC	
48	NC		98	NC	
49	NC		99	NC	
50	0/4.61	DIMMER ON/OFF	100	2.31→5.0/0	POWER OFF/ON

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I C 5 0 1					
1	PS		51	NC	
2	5.12		52	NC	
3	5.12		53	NC	
4	5.12		54	NC	
5	0/5.12	Obit mute ON/OFF	55	NC	
6	5.12		56	NC	
7	5.12		57	NC	
8	0/5.10		58	NC	
9	5.13		59	PS	
10	CLK		60	NC	
11	CLK		61	NC	
12	0		62	5.13/0	VOL MIN/MAX
13	NC		63	NC	
14	0		64	PS	
15	0/4.83	RESET ON/OFF	65	PS	
16	4.78/0	BATT ON/OFF	66	NC	
17	4.81/0	ACC ON/OFF	67	PS	
18	NC		68	PS	
19	PS		69	PS	
20	PS		70	NC	
21	PS		71	0/5.10	CD/RADIO
22	NC		72	0	
23	5.15		73	5.13/0	D-OUT ON/OFF
24	5.15		74	NC	
25	0		75	NC	
26	2.54/5.04	NOSE ON/NOSE OFF	76	5.17/0	CD/RADIO
27	0~4.45		77	NC	
28	0		78	5.15/0	POWER ON/POWER OFF
29	0		79	5.18/0	POWER ON/POWER OFF
30	0		80	0/5.02	CD/RADIO
31	0		81	5.17	
32	0		82	NC	
33	0		83	5.15/0	NOSE ON/NOSE OFF
34	NC		84	5.17/0	POWER ON/POWER OFF
35	5.15		85	5.12/0	POWER ON/POWER OFF
36	5.15		86	0/5.09	DIMMER ON/OFF
37	PS		87	5.07/0	IN INT ON/OFF
38	PS		88	NC	
39	PS		89	5.12/0	REM CONT ON/OFF
40	PS		90	5.12/0	CD/RADIO
41	PS		91	4.81/0	REM CONT ON/OFF
42	PS		92	PS	
43	4.95/0	Normal/FM SEEK	93	PS	
44	5.16		94	0	
45	NC		95	NC	
46	NC		96	NC	
47	NC		97	NC	
48	NC		98	NC	
49	NC		99	NC	
50	NC		100	NC	

I C 5 0 3					
1	5.12		51	NC	
2	NC		52	NC	
3	0		53	PS	
4	0		54	PS	
5	0		55	PS	
6	CLK		56	PS	
7	CLK		57	PS	
8	0		58	0	
9	5.12/0	Normal/RESET ON	59	0	
10	NC		60	0	
11	NC		61	0	
12	NC		62	0	
13	NC		63	5.12	
14	NC		64	5.12	
15	NC		65	NC	
16	NC		66	NC	
17	NC		67	5/0	Normal/SEEK
18	NC		68	0	
19	NC		69	1.92/0	Normal/SEEK
20	NC		70	NC	
21	NC		71	0	
22	NC		72	2.98/0/0	FM/MW/LW
23	0		73	5.12/PS	Normal/FM SEEK
24	NC		74	5.12/PS	Normal/FM SEEK
25	NC		75	0/PS	Normal/FM SEEK
26	NC		76	0/4.86	Normal/FM SEEK
27	NC		77	NC	
28	NC		78	0/PS	Normal/FM SEEK
29	NC		79	4.80/2.03	Normal/FM SEEK
30	NC		80	5.12	
31	NC		81	NC	
32	NC		82	0/5.12	Normal/LOCAL SEEK
33	NC		83	NC	
34	5.12/0	Normal/FM SEEK	84	0	
35	0		85	0~4.57	
36	0		86	0	
37	0		87	0	
38	0		88	0	
39	NC		89	0	
40	NC		90	0	
41	NC		91	0	
42	NC		92	0	
43	NC		93	5.12	
44	NC		94	5.12	
45	5.12		95	NC	
46	5.11		96	NC	
47	NC		97	5.12	
48	NC		98	NC	
49	NC		99	5	
50	5.12		100	NC	

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I C 1 2 0 3			
1	-15.68	15	5.1
2	NC	16	0
3	0	17	NC
4	NC	18	NC
5	0	19	15.2
6	NC	20	NC
7	0	21	0
8	0	22	0
9	NC	23	NC
10	0	24	0
11	NC	25	NC
12	NC	26	0
13	0	27	NC
14	5.1	28	15.21

I C 1 2 0 4			
1	0		
2	0		
3	0		
4	-15.71		
5	0		
6	0		
7	0		
8	15.21		

I C 1 2 0 5			
1	0		
2	0		
3	0		
4	-15.71		
5	0		
6	0		
7	0		
8	15.23		

I C 1 2 0 6			
1	0		
2	0		
3	0		
4	-15.71		
5	0		
6	0		
7	0		
8	15.23		

I C 1 7 0 1					
1	NC	16	CLK	31	0
2	PS	17	0	32	0
3	PS	18	3.13	33	3.13
4	PS	19	PS	34	NC
5	PS	20	PS	35	NC
6	0	21	PS	36	0
7	0	22	NC	37	0
8	3.13	23	NC	38	3.13
9	3.13	24	NC	39	0
10	NC	25	0	40	0
11	NC	26	NC	41	0
12	CLK	27	NC	42	0
13	0	28	0	43	0
14	3.13	29	3.13	44	NC
15	CLK	30	0		

I C 1 7 0 2			
1	PS	11	4.91
2	PS	12	2.56
3	NC	13	NC
4	-5.02	14	0
5	0	15	0
6	4.91	16	0
7	PS	17	-2.44
8	NC	18	NC
9	0	19	-2.44
10	0	20	-5.02

I C 1 7 0 3			
1	1.48	11	4.91
2	1.53	12	2.78
3	NC	13	NC
4	-5.02	14	0
5	0	15	0
6	4.91	16	0
7	1.47	17	-2.44
8	NC	18	NC
9	0	19	-2.42
10	0	20	-5.02

IC1704	
1	0
2	0
3	0
4	-15.74
5	0
6	0
7	0
8	15.26

IC1705	
1	0
2	0
3	0
4	-15.75
5	0
6	0
7	0
8	15.26

IC1706	
1	0
2	0
3	0
4	-15.77
5	0
6	0
7	0
8	15.27

IC1707	
1	0
2	0
3	0
4	-15.63
5	0
6	0
7	0
8	15.18

IC1708	
1	0
2	0
3	0
4	-15.65
5	0
6	0
7	0
8	15.18

IC1709	
1	0
2	0
3	0
4	-15.65
5	0
6	0
7	0
8	15.18

IC1710	
1	5.09
2	NC
3	0
4	0
5	NC
6	0
7	3.11
8	3.11

IC1711	
1	PS
2	PS
3	PS
4	0
5	PS
6	PS
7	PS
8	3.12

	E	C	B	MODE
Q 0 0 3	0/4.32	8.25	0/5.07	Normal/LOCAL SEEK
Q 0 0 4	0	0	0/2.61	Normal/SEEK
Q 0 1 0	0	0	4.76/2.01	Normal/SEEK
Q 2 0 3	0	0/8.91	5.00/0	TUNER/CD
Q 2 0 4	0	PS	1.93/0	TUNER/CD
Q 2 0 5	0	3.63	0	IF MUTE
Q 2 0 7	0	8.01/0	0/4.75	Normal/SEEK
Q 2 0 8	0	0	4.05	ACC ON/OFF
Q 2 1 0	PS	0	PS	
Q 2 1 1	PS	0	PS	
Q 2 1 2	13.31	-15.38	13.27	
Q 2 1 3	13.31	-15.38	13.27	

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	E	C	B	MODE
Q 2 1 4	0	0/13.25	0/8.44	Normal/MUTE ON
Q 2 1 5	0	0/13.25	0/8.44	Normal/MUTE ON
Q 2 1 7	0	0/4.32	0/4.93	Normal/MUTE ON
Q 3 0 1	0/8.35	13.4	0/8.99	TUNER/CD
Q 3 0 3	13.47/12.71	0/13.44	13.51/13.46	TUNER/CD
Q 3 0 4	0	13.48/0	0/5.04	TUNER/CD
Q 4 0 1	0	0/8.49	5	B-OUT ON/OFF
Q 4 0 2	0	0/8.85	4.98/0	GREEN ON/RED ON
Q 4 0 3	0	9.42/0	0/4.98	GREEN ON/RED ON
Q 4 0 4	0	7.13/0	0/0.73	BLUE ON/GREEN ON
Q 4 0 5	0	0/7.13	0.73/0	BLUE ON/GREEN ON
Q 4 0 8	1.46	1.43	0	VHH-CONT
Q 4 0 9	0	0	5.03	VHH-CONT
Q 5 0 1	5.13	0	4.42/5.14	NOSE ON/NOSE OFF
Q 5 0 2	0	0/5.14	4.91/0	NOSE ON/NOSE OFF
Q 6 0 1	4.95	PS	4.92/PS	Normal/CHG
Q 6 0 2	4.98	PS/0	4.99/0	Normal/RESET
Q 6 0 3	0	PS	0/PS	Normal/CHG
Q 6 0 4	0	PS/0	PS/0	REM CONT ON/OFF
Q 6 0 5	4.91	4.88/0	3.01/4.91	IN INT ON/OFF
Q 6 0 6	0	4.8/0	PS/0	REM CONT ON/OFF
Q 6 0 7	0	PS	0	
Q 6 0 8	5.07	0	5.07	
Q 6 0 9	0	0/4.91	0/7.3	DIMMER ON/OFF
Q 8 0 2	13.4/0	8.31/0	12.8/0	TUNER/CD
Q 8 0 5	8.31	0/8.23	8.2/7.6	FM /MW, LW
Q 8 0 6	8.31	8.25/0	0/8.3	FM /MW, LW
Q 8 0 8	8.43/0	13.5/13.75	9.08/0	POWER ON/OFF
Q 8 1 2	10.9/0	13.42/0	11.5/0	POWER ON/OFF
Q 8 1 9	5.05/5.06	13.44/13.4	5.65/5.64	POWER ON/OFF
Q 8 2 3	12.65/13.72	13.4/0	13.45/13.74	POWER ON/OFF
Q 8 2 5	0	0/13.72	4.22/0	POWER ON/OFF
Q 8 2 7	14.18	0/14.17	14.11/13.44	P-ANT OUT-REM/500mA >
Q 8 2 8	14.19	14.16/0	13.48/14.17	P-ANT OUT-REM/500mA >
Q 8 2 9	14.1	14.1/0	13.4/14.2	P-ANT OUT-REM/500mA >
Q 8 3 0	14.21	14.11/0	0/9.72	P-ANT OUT-REM/500mA >
Q 8 3 1	0	0/14.17	5.4/0.74	P-ANT OUT-REM/500mA >
Q 8 3 2	0	0/14.17	5.5/0.7	P-ANT OUT-REM/500mA >
Q 8 3 5	9.48/0	13.45/13.71	8.85/0	POWER ON/OFF
Q 8 3 8	0/3.11	13.53/13.45	0/3.70	TUNER/CD
Q 8 4 1	0	0/1.7	7.25/0	DIMMER ON/OFF
Q 1 2 0 1	PS	0	0.7	
Q 1 2 0 2	PS	0	0.7	
Q 1 2 0 3	PS	0	0.7	
Q 1 2 0 4	PS	0	0.7	

	S	D	G	MODE
Q 3 0 2	0/9.16	0/13.3	0/9.03	TUNER/CD
Q 8 0 9	9.21/0	13.4/0	9.09/0	POWER ON/OFF
Q 8 1 3	11.6/0	13.4/0	11.5/0	POWER ON/OFF
Q 8 3 6	9.69/0	13.43/0	9.47/0	POWER ON/OFF
Q 8 3 9	0/3.82	0/13.41	0/3.70	TUNER/CD

REF No.	E	C	B	MODE
Q1205	PS	0	0.7	
Q1206	PS	0	0.7	
Q1251	13.4/12.8	0.7	13.43/13.51	Normal/MUTE ON
Q1252	13.4/12.8	0.7	13.43/13.51	Normal/MUTE ON
Q1253	0	13.36/0	0/8.43	Normal/MUTE ON
Q1254	0	13.36/0	0/8.43	Normal/MUTE ON
Q1802	14.95	15.53	14.31	
Q1803	0	8.73	PS	

REF No.	1	2	3	4	5	MODE
Q006	NC	2.2/0	5.05	0	0	FM/MW
Q101	NC	8.2	5.1	8.3	0	RDS+B
Q206	NC	5.03	5.05	8.41	0	
Q216	NC	8.42	8.45	4.33	0	
Q305	NC	5/0	5	5/0	0	D-OUT ON/OFF
Q306	NC	5/0	5	5/0	0	REMOCON ON/OFF
Q406	NC	5.02/0	5.07	5.02/0	0	REMOCON ON/OFF
Q407	NC	14.35	14.47	1.43	0	VHH-CONT
Q610	NC	5/0	5	5/0	0	D-OUT ON/OFF
Q807	0/8.3	8.21/1.78	8.28	4.31/0	0	FM/MW
Q817	NC	4.98	5.13	4.79	0	ACC+5V
Q818	NC	4.74	4.75	4.1	0	ACC-DET
Q837	NC	13.51	13.53	4.86	0	OELD +B

[Measuring Conditions]

- Power Supply Voltage : DC14.1V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between GND
- Measuring Conditions : FM : 98.1MHz
MW : 999KHz
LW : 216KHz
CD : at playing Disc

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(CD Deck Mechanism)

IC101	
1	4.8882
2	0.016
3	7.9677

IC202					
1	H	6	L	11	L
2	H	7	0.0022	12	L
3	H	8	L	13	H or L
4	L	9	H or L	14	4.988
5	H or L	10	L		

IC201									
1	L	27	0.0023	53	L	79	L		
2	L	28	2.0107	54	L	80	L		
3	L	29	2.3631	55	H	81	L		PLAY
4	L	30	2.3805	56	H or L		L→H→L	H : 1.590s	LOAD
5	H	31	L	57	H or L	82	L→H→L	H : 47.7ms	EJECT
6	NC	32	2.3608	58	H or L		L		PLAY
7	NC	33	2.0987	59	NC	83	L→H→L	H : 48.0ms	LOAD
8	0.002	34	2.2695	60	L		L→H→L	H : 1.60s	EJECT
9	4.9825	35	2.3671	61	NC	84	L		
10	2.7311	36	2.3955	62	NC	85	H		
11	2.3019	37	2.0909	63	L	86	L		
12	2.3176	38	4.9824	64	L	87	L		
13	NC	39	0.0024	65	L	88	L		
14	NC	40	0.0023	66	H	89	H		
15	2.355	41	NC	67	4.9823	90	H		
16	NC	42	H or L	68	H or L	91	H		
17	NC	43	NC	69	H or L	92	H or L		
18	NC	44	NC	70	0.002	93	H or L		
19	2.3768	45	NC	71	H or L	94	H or L		
20	2.3781	46	NC	72	H or L	95	H or L		
21	2.5395	47	2.3661	73	4.9824	96	4.175		
22	NC	48	NC	74	H	97	4.7473		
23	2.5544	49	NC	75	H	98	2.44	TCD-782 Tr.No.8	PLAY
24	1.1936	50	NC	76	H	99	4.8908		
25	1.6944	51	L	77	L	100	2.4357	TCD-782 Tr.No.8	PLAY
26	0.0708	52	L	78	H		-0.0143		

IC203	
1	NC
2	H
3	0.0022
4	L
5	4.9861

IC401	
1	1.397
2	2.402
3	2.3766
4	0.0019
5	2.3764
6	2.3772
7	2.8204
8	4.7448

IC301					
1	0.174	13	3.1975	25	NC
2	2.8657	14	H or L	26	2.3737
3	4.7447	15	2.8665	27	2.3258
4	0.0015	16	L	28	2.265
5	2.3624	17	L	29	2.416
6	2.6425	18	0.0015	30	2.3708
7	1.9003	19	NC	31	2.4045
8	2.6367	20	2.3958	32	2.404
9	1.4892	21	4.744	33	2.3956
10	1.6054	22	2.3766	34	2.5778
11	2.8003	23	2.3695	35	2.3955
12	2.3748	24	2.3486	36	2.57

IC402				
1	L		13	3.1936
2	2.3765		14	3.202
3	2.3796		15	3.1576
4	2.3765		16	3.2409
5	2.3765		17	3.2307
6	2.377		18	3.1703
7	1.5582		19	0.0003
8	6.843		20	2.3766
9	0.024	PLAY	21	H
	0.024	LOAD	22	2.3866
	L→H→L	EJECT H : 1.534s (5.6V)	23	2.3764
10	0.0246	PLAY	24	2.372
	L→H→L	LOAD H : 1.745s (5.5V)	25	2.3638
	0.0246	EJECT	26	2.3775
11	NC		27	2.3766
12	0.5002		28	L

IC403	
1	0.2916
2	0.0195
3	0.2656
4	0.2792
5	0.2788
6	0.2807
7	0.4285
8	1.753
9	1.5681
10	0.0013
11	NC
12	2.8066
13	2.3763
14	H
15	0.2387
16	6.2051
17	0.4711
18	0.0011
19	0.2534
20	0.2533

	B	E	C
Q201	0.0358	4.9848	4.756
Q202	4.9781	0.0018	0.0306
Q203	4.8501	0.0441	4.8335
Q303	2.886	3.5413	1.8397

	1	2	3	4	5
Q301	2.3546	0.0056	4.9225	0.0014	0.0056
Q402	NC	4.8201	-0.0022	0.0115	4.8411

[Measuring Conditions]

- Power Supply Voltage : DC14.1V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between GND
- Measuring Conditions : It is usually measured by using the PF power supply jig under the play condition.

A measurement voltage is written down about the analog, a power supply, a ground terminal.

The fixed voltage of H/L is as the following about the digital terminal toward the power supply voltage VDD.

	Minimum	Maximum
H	0.7VDD	VDD
L	VSS	0.3VSS

And, the terminals that H/L always changes are "H or L" and an entry.

CDA-7990R

Description of IC Terminal

D78F4216AGC : IC403

No.	Symbol	I/O	Terminal Description
1	NC	—	No connect terminal.
2	WHT CONT	0	At the time of black-out, white LED switching control output terminal.
3	REM+B CONT	0	Remocon Eye power supply control output terminal.
4	KEY IND	0	Key indicator movement output terminal.
5	FUNC IND(RED)	0	Function indicator switching control output terminal.
6	FUNC IND(GRN)		
7	BLUE	0	Blue color lighting control signal switching control output terminal.
8	GREEN	0	Green color lighting control signal switching control output terminal.
9	VDD	—	Power supply terminal.
10	X2	—	Crystal oscillator connect terminal for Main system clock. (12.288MHz)
11	X1		
12	VSS	—	GND connect terminal.
13	XT2(NC)	—	No connect terminal.
14	XT1(GND)	—	GND connect terminal.
15	RESET	—	Front reset terminal.
16	NC	—	No connect terminal.
17			
22			
23	AVDD	—	Analog power supply terminal.
24	AVREF0	—	Standard voltage input terminal.
25	GND	—	GND connect terminal.
27			
32			
33	AVSS		
34	NC	—	No connect terminal.
35			
36	AVREF1	—	Standard voltage input terminal.
37	NC	—	No connect terminal.
38	SEG DATA	0	Data line signal output terminal of OELD segment driver.
39	SEG SCLK	0	Data clock signal output terminal of OELD segment driver.
40	FRONT DI	I	Serial data signal input terminal from Main μ -COM.
41	FRONT DO	0	Serial data signal output terminal to Main μ -COM.
42	FRONT CLK	I	Serial sync. signal input terminal from Main μ -COM.
43	NC	—	No connect terminal.
44			
45	COM DATA	0	Scanning line start signal output terminal of OELD common driver.
46	COM CCLK	0	Scanning line shift clock signal output terminal of OELD common driver.
47	SEG SLAT	0	Data latch signal output terminal of OELD segment driver.
48	NC	—	No connect terminal.
49			
50	DIMMER OUT	0	Control signal output terminal for Dimmer.
51	NC	—	No connect terminal.
52			
55			
56	KEY SCAN 0	0	Scan line #0 signal output terminal of Key matrix.
57	KEY SCAN 1	0	Scan line #1 signal output terminal of Key matrix.

No.	Symbol	I/O	Terminal Description
58	KEY SCAN 2	0	Scan line #2 signal output terminal of Key matrix.
59	KEY SCAN 3	0	Scan line #3 signal output terminal of Key matrix.
60	NC	—	No connect terminal.
61			
63			
64	KEY DATA 0	1	Data line #0 signal input terminal of Key matrix.
65	KEY DATA 1		Data line #1 signal input terminal of Key matrix.
66	KEY DATA 2		Data line #2 signal input terminal of Key matrix.
67	KEY DATA 3		Data line #3 signal input terminal of Key matrix.
68	KEY DATA 4		Data line #4 signal input terminal of Key matrix.
69	NC	—	No connect terminal.
70			
71			
72	VSS	—	GND connect terminal.
73	ENCODER 1	1	Rotary encoder input signal terminal.
74	ENCODER 2		
75	NC	—	No connect terminal.
76			
80			
81	VDD	—	Power supply terminal.
82	SS12	0	OELD static segments control output terminal. (DISC mark)
83	SS11		OELD static segments control output terminal. (Changer)
84	SS10		OELD static segments control output terminal. (P.PTY)
85	SS09		OELD static segments control output terminal. (MIX)
86	SS08		OELD static segments control output terminal. (ALL)
87	SS07		OELD static segments control output terminal. (RPT)
88	SS06		OELD static segments control output terminal. (TP)
89	SS05		OELD static segments control output terminal. (SEEK)
90	SS04		OELD static segments control output terminal. (AF)
91	SS03		OELD static segments control output terminal. (DX)
92	SS02		OELD static segments control output terminal. (T.INFO)
93	SS01		OELD static segments control output terminal. (ST)
94	TEST/Vpp		—
95	NC	—	No connect terminal.
99			
100	VHH-CONT	0	VHH control output terminal of OELD.

D78F4218AGC : IC501

No.	Symbol	I/O	Terminal Description
1	CD CMD	0	Command signal output terminal of CD Mechanism μ -COM.
2	CD STS	1	Status signal input terminal of CD Mechanism μ -COM.
3	CD SCK	0	Clock signal output terminal of CD Mechanism μ -COM.
4	CD STBY	0	Stand-by signal output terminal of CD Mechanism μ -COM.
5	0 MUTE DET	1	OMute signal input terminal from CD.

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No.	Symbol	I/O	Terminal Description
6	CD LSI RST	0	Reset signal output terminal to CD Mechanism μ -COM.
7	CD CS	0	Chip select signal output terminal to CD Mechanism μ -COM.
8	CD SRQ	1	Communication request signal input terminal from CD Mechanism μ -COM.
9	VDD	—	Power supply terminal.
10	X2	—	Crystal oscillator connect terminal for Main system clock. (12.288MHz)
11	X1		
12	VSS	—	GND connect terminal.
13	XT2(NC)	—	No connect terminal.
14	XT1(GND)	—	GND connect terminal.
15	RESET	—	Reset signal terminal.
16	BAT-DET	1	BATT detection signal input terminal.
17	ACC-DET	1	ACC detection signal input terminal.
18	NC	—	No connect terminal.
19	BUS-IN	1	Ai-NET BUS-DATA signal input terminal.
20	BUS-OUT	0	Ai-NET BUS-DATA signal output terminal.
21	IN SW	1	DISC loading detection switch signal input terminal.
22	NC	—	No connect terminal.
23	AVDD	—	Analog power supply terminal.
24	AVREF0	—	Standard voltatge input terminal.
25	GND	—	GND connect terminal.
26	NOSE-ON	1	Nose installation detection signal input terminal.
27	FM/AM SM	1	FM/AM signal meter signal input terminal.
28	GND	—	GND connect terminal.
29			
31			
32	AREA	1	Area setting signal input terminal.
33	AVSS	—	GND connect terminal.
34	NC	—	No connect terminal.
35	DTS CE	0	Chip enable signal output terminal to DTS μ -COM.
36	AVREF1	—	Standard voltatge input terminal.
37	DTS STS	1	System status signal input terminal from DTS μ -COM.
38	DTS CMD	0	Serial data signal output terminal to DTS μ -COM.
39	DTS CLK	0	Serial clock signal output terminal to DTS μ -COM.
40	FRONT D0	1	Serial data signal input terminal from Front μ -COM.
41	FRONT D1	0	Serial data signal output terminal to Front μ -COM.
42	FRONT CLK	0	Clock signal output terminal to Front μ -COM.
43	DTS MUTE	1	MUTE signal input terminal from DTS μ -COM.
44	FRONT RST	0	RESET signal output terminal to Front μ -COM.
45	NC	—	No connect terminal.
46			
58	NC	—	No connect terminal.
59			
59	BW CONT	0	Tuner Wide/Narrow control output terminal.
60	NC	—	No connect terminal.
61			
62	A-MUTE	0	Audio mute output terminal.
63	NC	—	No connect terminal.
64	7402 DATA	I/O	Serial data signal input/output terminal of E-VOL(TDA7402).
65	7402 CLK	0	Serial clock signal output terminal of E-VOL(TDA7402).

No.	Symbol	I/O	Terminal Description
66	NC	—	No connect terminal.
67	9459 CLK	0	Serial clock signal output terminal of E-VOL(TC9459N).
68	9459 DATA	0	Serial data signal output terminal of E-VOL(TC9459N).
69	9459 STB	0	Strobe signal output terminal of E-VOL(TC9459N).
70	NC	—	No connect terminal.
71	RELAYS-CONT	0	RELAYS switching control output terminal.
72	VSS	—	GND connect terminal.
73	DIGITAL CONT	0	Digital-Out switching control output terminal.
74	NC	—	No connect terminal.
75			
76	D · FIL RESET	0	Digital filter active Lo reset output terminal.
77	NC	—	No connect terminal.
78	OUT-REM	0	Remote ON output terminal.
79	PWR ANT	0	Power antenna output terminal.
80	NC	—	No connect terminal.
81	VDD	—	Power supply terminal.
82	NC	—	No connect terminal.
83	NOSE PWR	0	Nose ON Power signal output terminal.
84	OELD CONT	0	OELD power supply control signal output terminal.
85	PWR CONT	0	POWER ON power supply control signal output terminal.
86	IN DIMMER	1	Dimmer detection input terminal.
87	IN-INT	1	IN INT detection input terminal.
88	NC	—	No connect terminal.
89	REM+B CONT	0	Remote control power supply switching control terminal.
90	V-CONT	0	CD power supply control signal output terminal.
91	RECOM	1	Remote control data input terminal.
92	EEPROM CLK	0	Serial clock signal output terminal of EEPROM.
93	EEPROM DATA	I/O	Serial data signal input/output terminal of EEPROM.
94	TEST/Vpp	—	GND connect terminal.
95	NC	—	No connect terminal.
?			
100			

MB89689PF : IC503

No.	Symbol	I/O	Terminal Description
1	VCC	—	+5V connect terminal.
2	NC	—	No connect terminal.
3	X0A	—	GND connect terminal.
4	MOD0		
5	MOD1		
6	X0	0	Crystal oscillator connect terminal for Main system clock.(8MHz)
7	X1	1	
8	VSS	—	GND connect terminal.
9	RESET	1	Reset signal input terminal. (L : RESET)
10	NC	—	No connect terminal.
?			
22			

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No.	Symbol	I/O	Terminal Description
23	AM ST (PULL-DOWN)	—	Pull-down connect terminal.
24	NC	—	No connect terminal.
33			
34	A-MUTE	0	Tuner mute signal output terminal. (L : MUTE ON)
35	GND	—	GND connect terminal.
38			
39	NC	—	No connect terminal.
44			
45	RXD	1	RDS monitor input terminal. (Pull-up connect)
46	TXD	0	RDS monitor output terminal.
47	NC	—	No connect terminal.
49			
50	VCC	—	Power supply connect terminal.
51	NC	—	No connect terminal.
52			
53	TUNER CLK	1	Clock signal input terminal from Main μ -COM.
54	TUNER SI	1	Serial input terminal from Main μ -COM.
55	TUNER SO	0	Serial output terminal to Main μ -COM.
56	RDS SDA	I/O	RDS I2C data input/output terminal.
57	RDS CLK	0	RDS I2C clock output terminal.
58	GND	—	GND connect terminal.
59	VSS		
60	GND		
62			
63	I2C DATA	I/O	EEP-ROM data input/output terminal.
64	I2C CLK	0	EEP-ROM clock output terminal.
65	Devicer (NC)	—	No connect terminal.
66	NC		
67	SEEK Req	0	Seek speed control terminal. (L : TUNER/during SEEK)
68	GND	—	GND connect terminal.
69	AF HOLD	0	AF HOLD output terminal. (L : Tuner set up HOLD)
70	NC	—	No connect terminal.
71	IF MUTE	0	IF Mute control terminal. (Pull-up connect)
72	FM/AM	0	FM/AM switching terminal. (H : FM)
73	PLL CLK	0	PLL clock output terminal.
74	PLL DATA	I/O	PLL data input/output terminal. (Pull-up connect)
75	PLL CE	0	PLL CE output terminal.
76	SEEK Req	0	Seek speed control terminal. (H : TUNER/during SEEK)
77	NC	—	No connect terminal.
78	SD	1	SD input terminal. (H : Tuner/Station ON)
79	PSWN	1	Audio signal level detection terminal from RDS Decoder (SAA6588T). (L : No Station)
80	Auto Adj.	1	Auto Adjustment terminal. (L : Auto Adjustment start)
81	NC	—	No connect terminal.

No.	Symbol	I/O	Terminal Description
82	LO/DX	0	Local Seek/DX Seek switching terminal. (H : Tuner/Local Seek)
83	NC	—	No connect terminal.
84	AVSS	—	GND connect terminal.
85	S/M	I	Field strength input terminal. (A/D, Tuner)
86	M/P	I	Multipath detection input terminal. (A/D, SAA6588T)
87	GND	—	GND connect terminal.
91			
92			
93	AVCC	—	Analog power supply terminal.
94	AVR		
95	NC	—	No connect terminal.
96			
97	SUB STBY	I	Stand-by input terminal from Main μ -COM.
98	NC	—	No connect terminal.
99	DAVN	I	RDS data available input terminal. (SAA6588T)
100	NC	—	No connect terminal.

MN66F2771 : IC201 (DP26T010)

No.	Symbol	I/O	Terminal Description
1	BDO	I	Drop-Out signal input terminal. H:Drop-Out
2	OFT	I	Off Track signal input terminal. H:Off Track
3	/RFDET	I	RF detect signal input terminal. L:detection
4	VDET	I	Vibration detect signal input terminal. H:detection
5	LDON	0	Laser ON signal output terminal. H:ON
6	NC	—	No connect terminal.
7			
8	AVSS3	—	GND connect terminal for analog circuit.
9	AVDD3	—	Power supply terminal for analog circuit.
10	FBAL	0	Focus Balance adjustment output terminal.
11	TBAL	0	Tracking Balance adjustment output terminal.
12	FE	I	Focus Error signal input terminal. (Analog input)
13	NC	—	No connect terminal.
14			
15	TE	I	Tracking Error signal input terminal. (Analog input)
16	NC	—	No connect terminal.
17			
18			
19	RFENV	I	RF Envelope signal input terminal. (Analog input)
20	VREF	I	VREF input terminal.
21	ARF	I	RF signal input terminal. (for DSL)
22	DRF(NC)	I	Bias terminal for DSL. (No connect)
23	DSLRF	I/O	Roop Filter terminal for DSL.
24	IREF	I	Reference current input terminal.
25	PLLF	I/O	Roop Filter terminal for PLL.
26	PLLF2	I/O	Characteristic Roop Filter switching terminal for PLL.
27	VCOF	I/O	Roop Filter terminal for VCO.

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No.	Symbol	I/O	Terminal Description
28	VCOF2	I/O	Digital Servo Processor (33.8688MHz)/Roop Filter terminal for VCO.
29	TRV	0	Traverse compulsion sending output terminal.
30	TVD	0	Traverse drive output terminal.
31	PC	0	Spindle Motor ON output terminal.
32	ECM	0	Spindle Motor driving signal terminal.(compulsion mode output) 3-State
33	ECS	0	Spindle Motor driving signal terminal.(Servo Error signal output)
34	KICK	0	Kick Pulse output terminal. 3-State
35	TRD	0	Tracking Drive output terminal.
36	FOD	0	Focus Drive output terminal.
37	TOFS	0	Tracking Offset adjustment output terminal.
38	AVDD2	-	Power supply terminal for analog circuit. (DSL,PLL,AD and DA block)
39	AVSS2	-	GND connect terminal for analog circuit. (DSL,PLL,AD and DA block)
40	DVSS2	-	GND connect terminal for digital circuit.
41	EFM / CK384(NC)	0	EFM signal output terminal at IOSEL=L. (No connect)
42	PCK / DSLB	0	PLL Sampling Clock output terminal.(fPCK=4.3218MHz) at default:PLL Sampling Clock output/ at fulfillment command:DSL Balance output
43	/CLDCK(NC)	0	Sub Code Frame Clock signal output terminal. (fCLDCK=7.35KHz) (No connect)
44	FCLK(NC)	0	Crystal Frame Clock signal output terminal. (fFCLK=7.35KHz) (No connect)
45	IPFLAG(NC)	0	Interpolation Flag signal output terminal. H:Interpolation (No connect)
46	FLAG(NC)	0	Flag signal output terminal. (No connect)
47	TRCRS	I	Track Cross signal input terminal.
48	STOUT(NC)	0	Serial Data output terminal for monitor signal. (SENSE,NFLOCK,NTLOCK...etc.) (No connect)
49	STLD(NC)	0	Load signal output terminal for monitor signal. (No connect)
50	SMCK(NC)	0	Bit Clock signal output terminal for monitor signal. (fSMCK=4.2336MHz) (No connect)
51	CSEL(GND)	I	Apointment terminal of oscillator frequency. (L : OSC freq.=16.9344MHz, usually : L) (GND connect)
52	TEST1(GND)	I	Test1 terminal. usually : L (GND connect)
53	TEST2(GND)	I	Test2 terminal. usually : L (GND connect)
54	IOSEL(GND)	I	Input mode set up terminal of DAC outer data for audio. (GND connect)
55	/RST	I	Reset input terminal from CD Signal Processor LSI block. (L:Reset)
56	BCLK	0	Bit Clock output terminal for SRDATA.
57	LRCK	0	L/R discrimination signal output terminal.
58	SRDATA	0	Serial Data output terminal.
59	SUBC(NC)	0	Sub code serial output terminal. (No connect)
60	SBCK(GND)	I	Clock input terminal for sub code serial output. (GND connect)
61	DOSY(NC)	0	Sub code block clock signal terminal. (No connect)
62	DEMPH(NC)	0	De-Emphasis detect signal output terminal. (No connect)
63	TX	0	Digital Audio interface signal output terminal.
64	PSEL(GND)	I	Test terminal at IOSEL=L. (usually : L) (GND connect)
65	MSEL(GND)	I	SMCK output / Frequency switching terminal at IOSEL=L. (GND connect)
66	SSEL(BATT+5V)	I	Test terminal at IOSEL=L. (usually : H) (GND connect)
67	DVDD1	-	Power supply terminal for Digital circuit.
68	X1	I	Main Clock input terminal. (f=16.9344MHz)
69	X2	0	Main Clock output terminal. (f=16.9344MHz)
70	DVSS1	-	GND connect terminal for Digital circuit.
71	XSUB1	I	Clock input terminal for μ -COM. f=6.7~1.0MHz
72	XSUB2	0	Clock output terminal for μ -COM. f=6.7~1.0MHz

No.	Symbol	I/O	Terminal Description
73	DVDD2	-	Power supply terminal for Digital circuit.
74	SW-A	I	Mecha. Control SW input terminal. (L:SW ON)
75	SW-B		
76	SW-C		
77	SW-D		
78	LMTSW	I	Pick-Up inner detect SW input terminal. (L:detector)
79	D/O-CONT	0	Digital Audio Data control output terminal. (H:D/O ON)
80	RF-GAIN	0	Spindle motor ON output terminal.
81	LODM+	0	Loading Motor control terminal.
82	LODM-		
83	ZMUTE	0	Zero MUTE signal output terminal.
84	DR-MUTE	0	Servo Driver MUTE signal output terminal. (L:DR MUTE ON)
85	DATA	0	DATA output terminal for Error monitor.
86	LATCH	0	LATCH output terminal for Error monitor.
87	CLOCK	0	CLOCK output terminal for Error monitor.
88	/SRQ	0	Status Request signal output terminal.
89	RST	I	μ -COM block reset terminal.
90	STBY	I	STBY signal input terminal.
91	/CS	I	Chip select signal input terminal.
92	CMD	I	Command input terminal.
93	STS	0	Status output terminal.
94	SCK	I	Serial Clock input terminal.
95	TEMP	I	Temperature detect input terminal.
96	VREF+	-	Power supply terminal for A/D converter.
97	OUTR	0	Rch Audio output terminal.
98	AVDD1	-	Power supply terminal for analog circuit. (for Audio output block (for using both as Lch and Rch))
99	OUTL	0	Lch Audio output terminal.
100	AVSS1	-	GND connect terminal for analog circuit. (for Audio output block (for using both as Lch and Rch))

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Electrical Parts List

Capacitor : μ F=microfarads,pF=picofarads

Abbreviations		
RES.= Resistor	CAP.= Capacitor	
C.F.= Carbon Film	ELY.= Electrolytic	
M.F.= Metal Film	CER.= Ceramic	
M.O.= Metal OxideFilm	MYL.= Mylar	
M.P.= Metal Plate	TAN.= Tantalum	
TR. = Transistor	POLY.= Polystyrol	
TRANS.= Transformer	PP. = Polypropylene	
CP. = Chip	PLT.= Polyethylene	
	PF. = Polyester Film	
Symbol No.	Part No.	Description
Main P.W. Board		
IC's		
IC002	51T93332F01	IC, NJM2903M-TE3 -SE2
IC004	51T15731W10	TC7S66F-TE85L -CP
IC101	51T15132Y02	SAA6588T -SE9
IC201	51T75197W09	AN77L09M-TX -NE2
IC202	51T80136F06	M5238FP-722-74A -SE2
IC203	51T35457Y01	TDA7402 -QT
IC204	51T93333F01	NJM2904M-TE3 -SE2
IC205	51T15731W10	TC7S66F-TE85L -CP
IC301	51T75191W05	AN7707F +
IC302	51T35039Y01	TC7SU04FU-TE85L -CP
IC304	51T35039Y01	TC7SU04FU-TE85L -CP
IC501	51T35568Y26	MTP, D78F4218AGC
IC502	51T15017Y01	M24C32WMN6T -SE2
IC503	51T15161Y03	IC, MB89689PF-G150-QT
IC504	51T25160Y01	M24C04-WMN6T -SE2
IC601	51T93332F01	IC, NJM2903M-TE3 -SE2
IC801	51T45035W02	M5237ML -E2
IC804	51T95014F13	S-8052HNM-CR-T1 -SE2
IC805	51T95563W01	S-80744HL-T1 -NE2
IC807	51T75197W05	AN77L05M-TX -NE2
IC808	51T35546Y01	AN7805F -DB
IC809	51T35547Y01	AN7905F -DB
Transistors/FET's		
Q003	48T64222F05	TR ,UN2215 10 -TX
Q004	48T64222F01	TR ,UN2211 10-10 -TX
Q006	48T45594W12	TR ,XN1A312 -TX-CP
Q010	48T64222F02	TR ,UN2212 22-22 -TX
Q101	48T45594W16	TR, XN1A311-TX -CP
Q203	48T64222F12	TR, UN221L-TX -CP
Q204	48T64222F01	TR ,UN2211 10-10 -TX
Q205	48T64222F02	TR ,UN2212 22-22 -TX
Q206	48T45594W12	TR ,XN1A312 -TX-CP

Symbol No.	Part No.	Description
Q207	48T64222F01	TR ,UN2211 10-10 -TX
Q208	48T64222F01	TR ,UN2211 10-10 -TX
Q210	48T35551Y03	TR, 2SC3326B-TE85L-CP
Q211	48T35551Y03	TR, 2SC3326B-TE85L-CP
Q212	48T95196W01	TR, 2SA1735-TE12L -E2
Q213	48T95196W01	TR, 2SA1735-TE12L -E2
Q214	48T64222F02	TR ,UN2212 22-22 -TX
Q215	48T64222F02	TR ,UN2212 22-22 -TX
Q216	48T45594W12	TR ,XN1A312 -TX-CP
Q217	48T64222F02	TR ,UN2212 22-22 -TX
Q301	48T95329W01	TR, 2SC4540-TE12L -E2
Q302	48T52443F03	FET, 2SK198-Q-TX -CP
Q303	48T35677Y03	TR, 2SA1428-Y -RD
Q304	48T64222F11	TR, UN221F-TX -CP
Q305	48T45594W12	TR ,XN1A312 -TX-CP
Q306	48T45594W12	TR ,XN1A312 -TX-CP
Q501	48T95196W01	TR, 2SA1735-TE12L -E2
Q502	48T64222F02	TR ,UN2212 22-22 -TX
Q601	48T52437F05	TR ,2SB709A-S /TX-CP
Q602	48T64221F02	TR ,UN2112 22-22 -TX
Q603	48T52438F04	TR ,2SD601A-S /TX-CP
Q604	48T64222F01	TR ,UN2211 10-10 -TX
Q605	48T64221F11	TR, UN211L-TX -CP
Q606	48T64222F01	TR ,UN2211 10-10 -TX
Q607	48T64222F01	TR ,UN2211 10-10 -TX
Q608	48T52437F05	TR ,2SB709A-S /TX-CP
Q609	48T64222F02	TR ,UN2212 22-22 -TX
Q610	48T45594W12	TR ,XN1A312 -TX-CP
Q802	48T35671Y01	TR, 2SA1930 -DB
Q805	48T35548Y04	TR, 2SB710A-S-TX -CP
Q806	48T64221F13	TR, UN211H-TX -CP
Q807	48T45594W16	TR, XN1A311-TX -CP
Q808	48T69176F02	TR ,2SC3421-Y
Q809	48T52443F03	FET, 2SK198-Q-TX -CP
Q812	48T35675Y03	TR, 2SC2983-Y-16L -E5
Q813	48T52443F03	FET, 2SK198-Q-TX -CP
Q817	48T45594W12	TR ,XN1A312 -TX-CP
Q818	48T45594W12	TR ,XN1A312 -TX-CP
Q819	48T35738Y03	TR, 2SD1273-P -DB
Q823	48T35677Y03	TR, 2SA1428-Y -RD
Q825	48T64222F11	TR, UN221F-TX -CP
Q827	48T35548Y04	TR, 2SB710A-S-TX -CP
Q828	48T35677Y03	TR, 2SA1428-Y -RD
Q829	48T35677Y03	TR, 2SA1428-Y -RD
Q830	48T64222F02	TR ,UN2212 22-22 -TX
Q831	48T64222F12	TR, UN221L-TX -CP

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
0832	48T64222F12	TR, UN221L-TX -CP	L012	24T16403W15	CO1, IND. 1R0-M K -CP
0835	48T35678Y03	TR, 2SC3665-Y -RD	L013	24T16403W07	CO1, IND. R22-M K -CP
0836	48T52443F03	FET, 2SK198-Q-TX -CP	L014	24T16403W15	CO1, IND. 1R0-M K -CP
0837	48T45594W12	TR, XN1A312 -TX-CP	L301	24T65053W22	IND, LAL02VD 100K -R5
0838	48T35674Y01	TR, 2SC5171 -DB	L502	24T16403W15	CO1, IND. 1R0-M K -CP
0839	48T52443F03	FET, 2SK198-Q-TX -CP	L801	24T16403W07	CO1, IND. R22-M K -CP
0841	48T64222F02	TR, UN2212 22-22 -TX	VT001	24T35286Y01	IND, MG56 523J -DB
Diodes			Crystals		
D004	48T15437Y01	D10, HSM123-TL -CP	XL101	91T85169W18	XTL, HC-49 4.332M -R5
D005	48T25651W02	D10, MA152WK-TX -CP	XL501	91T85169W44	XTL, HC-49 7.3728M-R5
D006	48T25651W02	D10, MA152WK-TX -CP	XL502	91T95084W02	XTL, CS20 12.288M -E9
D201	48T94335F02	D10, MA153A-TX -CP	Switches		
D202	48T94335F02	D10, MA153A-TX -CP	SW201	40T45282W02	SW, SLIDE SLD-42-508X (Ai-NET-NORM/(EQ/DIV))
D203	48T25665Y01	D10, 1SS355-TE17 -CP	SW801	40T16096W03	SW, TACT SKHHLW(RESET)
D204	48T25665Y01	D10, 1SS355-TE17 -CP	Filter		
D205	48T25651W02	D10, MA152WK-TX -CP	CF001	91T75257W02	LPF, LPF11830KH-3C-DB
D206	48T25665Y01	D10, 1SS355-TE17 -CP	Surge Protector		
D501	48T25651W02	D10, MA152WK-TX -CP	SA002	48T81909F01	PTT, DSP-201M -A1
D502	48T25651W02	D10, MA152WK-TX -CP	Capacitors		
D601	48T44813F03	D10, MA165 -R5	C012	08T15399W04	CAP, CER. 273K-B1H -CP
D602	48T25651W01	D10, CP MA152WA	C013	08T15399W04	CAP, CER. 273K-B1H -CP
D603	48T25651W02	D10, MA152WK-TX -CP	C014	08S65128F67	CAP, CER. 682K-B1H -CP
D604	48T25651W02	D10, MA152WK-TX -CP	C015	08T15399W04	CAP, CER. 273K-B1H -CP
D605	48T25651W02	D10, MA152WK-TX -CP	C016	08S82122F53	CAP, CER. 471J-CH1H-CP
D801	48T44813F03	D10, MA165 -R5	C017	08S60102F46	CAP, CER. 684K-B1E -CP
D802	48T44813F03	D10, MA165 -R5	C019	08T15399W01	CAP, CER. 223K-B1H -CP
D803	48T85270W02	D10, MPG06G -H5	C022	08T55487W02	CAP, CER. 224K-B1C -CP
D804	48T44813F03	D10, MA165 -R5	C023	08T15399W01	CAP, CER. 223K-B1H -CP
D805	48T94335F02	D10, MA153A-TX -CP	C024	08T15399W01	CAP, CER. 223K-B1H -CP
D806	48T85270W02	D10, MPG06G -H5	C106	08S65128F69	CAP, CER. 103K-B1H -CP
ZD301	48T52741F25	D10, ZEN. HZ9C-1L -A1	C107	08S82122F49	CAP, CER. 331J-CH1H-CP
ZD801	48T52741F03	D10, ZEN HZ6A-3L -A1	C108	08S82122F37	CAP, CER. 101J-CH1H-CP
ZD802	48T52741F25	D10, ZEN. HZ9C-1L -A1	C111	08T35739Y19	CAP, UC 22RJ-2A -CP
ZD803	48T52741F31	D10, ZEN HZ11B-1L -A1	C112	08S65128F61	CAP, CER. 222K-B1H -CP
ZD804	48T83128F14	D10, ZEN HZS 7B2L -A5	Coils		
ZD807	48T25064Y02	D10, ZEN ZSH5MA27A-ED	L005	24T65172W17	IND, LEM4532 4R7K -E2
ZD808	48T52741F26	D10, ZEN HZ9C-2L -A1	L006	24T16403W29	CO1, IND. 15R-M -CP
ZD809	48T45255Y07	D10, ZEN HZ4ALL -A1	L011	24T16403W15	CO1, IND. 1R0-M K -CP
ZD810	48T52741F29	D10, ZEN HZ11A-2L -A1			

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Symbol No.	Part No.	Description
C114	08S82122F55	CAP, CER. 561J-CH1H-CP
C115	08S65128F61	CAP, CER. 222K-B1H -CP
C116	08T35739Y22	CAP, UC 30RJ-2A -CP
C202	08T55390W34	CAP, TF 274J-1H -R5
C203	08T35739Y25	CAP, UC 39RJ-2A -CP
C204	08T35739Y25	CAP, UC 39RJ-2A -CP
C205	08T55390W34	CAP, TF 274J-1H -R5
C206	08T55390W34	CAP, TF 274J-1H -R5
C207	08T15349Y01	CAP, CER 105K-B1A -CP
C208	08S65128F70	CAP, CER. 123K-B1H -CP
C210	08S35374W01	CAP, CER 104K-B1E-CP
C212	08S82122F53	CAP, CER. 471J-CH1H-CP
C213	08S35374W01	CAP, CER 104K-B1E-CP
C214	08S82122F61	CAP, CER. 102J-CH1H-CP
C215	08S35374W01	CAP, CER 104K-B1E-CP
C216	08T25628Y03	CAP, TF 224M-1C -CP
C217	08T15349Y01	CAP, CER 105K-B1A -CP
C218	08T15399W06	CAP, CER 563K-B1H -CP
C220	08S60102F44	CAP, CER 474K-B1E -CP
C221	08T25628Y03	CAP, TF 224M-1C -CP
C222	08T25628Y03	CAP, TF 224M-1C -CP
C302	08S65128F61	CAP, CER. 222K-B1H -CP
C303	08T55390W34	CAP, TF 274J-1H -R5
C304	08T25628Y03	CAP, TF 224M-1C -CP
C305	08T55390W34	CAP, TF 274J-1H -R5
C306	08T15399W01	CAP, CER. 223K-B1H -CP
C311	08T15399W01	CAP, CER. 223K-B1H -CP
C312	08T15399W01	CAP, CER. 223K-B1H -CP
C501	08T35739Y15	CAP, UC 15RJ-2A -CP
C502	08T35739Y17	CAP, UC 18RJ-2A -CP
C503	08S82122F43	CAP, CER. 181J-CH1H-CP
C504	08T15399W01	CAP, CER. 223K-B1H -CP
C507	08T15399W01	CAP, CER. 223K-B1H -CP
C508	08T35739Y13	CAP, UC 12RJ-2A -CP
C509	08S82122F61	CAP, CER. 102J-CH1H-CP
C510	08T35739Y15	CAP, UC 15RJ-2A -CP
C511	08T15399W04	CAP, CER. 273K-B1H -CP
C516	08T15399W04	CAP, CER. 273K-B1H -CP
C517	08S82122F43	CAP, CER. 181J-CH1H-CP
C518	08S82122F61	CAP, CER. 102J-CH1H-CP
C601	08S82122F37	CAP, CER. 101J-CH1H-CP
C602	08S82122F23	CAP, CER. 27RJ-CH1H-CP
C603	08S65128F61	CAP, CER. 222K-B1H -CP
C604	08S82122F37	CAP, CER. 101J-CH1H-CP
C605	08S35374W01	CAP, CER 104K-B1E-CP
C802	08T55390W05	CAP, PF 102J-1H -R5
C803	08T55390W34	CAP, TF 274J-1H -R5
C806	08T55390W34	CAP, TF 274J-1H -R5
C808	08T55390W34	CAP, TF 274J-1H -R5

Symbol No.	Part No.	Description
C810	08T55390W34	CAP, TF 274J-1H -R5
C812	08T15399W01	CAP, CER. 223K-B1H -CP
C814	08S82122F69	CAP, CER 222J-CH1H-CP
C815	08S82122F69	CAP, CER 222J-CH1H-CP
C816	08S82122F69	CAP, CER 222J-CH1H-CP
C817	08S82122F69	CAP, CER 222J-CH1H-CP
C818	08S82122F53	CAP, CER. 471J-CH1H-CP
C819	08T15399W04	CAP, CER. 273K-B1H -CP
C820	08T55390W34	CAP, TF 274J-1H -R5
C822	08T95466W01	CAP, CER 222K-B2J -CP
C823	08T95466W01	CAP, CER 222K-B2J -CP
C824	08T15399W04	CAP, CER. 273K-B1H -CP
C825	08T55390W34	CAP, TF 274J-1H -R5
C827	08T55390W34	CAP, TF 274J-1H -R5
C829	08T55390W34	CAP, TF 274J-1H -R5
C830	08T55390W34	CAP, TF 274J-1H -R5
C831	08T55390W34	CAP, TF 274J-1H -R5
E002	23T75462W08	CAP, PA 10R-1C-5L-R2
E003	23T75462W08	CAP, PA 10R-1C-5L-R2
E004	23T75462W08	CAP, PA 10R-1C-5L-R2
E005	23T75462W22	CAP, PA 1R0-1H-5L-R2
E006	23T75462W08	CAP, PA 10R-1C-5L-R2
E007	23T75462W22	CAP, PA 1R0-1H-5L-R2
E009	23T75462W08	CAP, PA 10R-1C-5L-R2
E101	23T75462W09	CAP, PA 22R-1C-5L-R2
E102	23T75462W23	CAP, PA 2R2-1H-5L-R2
E201	23T75462W06	CAP, PA 101-1A-5L-R2
E205	23T75462W24	CAP, PA 3R3-1H-5L-R2
E206	23T75462W24	CAP, PA 3R3-1H-5L-R2
E207	23T75462W23	CAP, PA 2R2-1H-5L-R2
E208	23T75462W23	CAP, PA 2R2-1H-5L-R2
E209	23T75462W23	CAP, PA 2R2-1H-5L-R2
E210	23T75462W23	CAP, PA 2R2-1H-5L-R2
E211	23T75462W23	CAP, PA 2R2-1H-5L-R2
E212	23T75462W23	CAP, PA 2R2-1H-5L-R2
E213	23T75462W08	CAP, PA 10R-1C-5L-R2
E215	23T75462W30	CAP, PA 4R7-1E-5L-R2
E216	23T75462W09	CAP, PA 22R-1C-5L-R2
E218	23T75462W09	CAP, PA 22R-1C-5L-R2
E219	23T75462W09	CAP, PA 22R-1C-5L-R2
E221	23T75462W08	CAP, PA 10R-1C-5L-R2
E222	23T75462W08	CAP, PA 10R-1C-5L-R2
E225	23T75462W08	CAP, PA 10R-1C-5L-R2
E226	23T75462W08	CAP, PA 10R-1C-5L-R2
E301	23T75462W06	CAP, PA 101-1A-5L-R2
E302	23T75462W23	CAP, PA 2R2-1H-5L-R2
E304	23T75462W07	CAP, PA 221-1A-5L-R2
E306	23T75462W08	CAP, PA 10R-1C-5L-R2
E501	23T75462W07	CAP, PA 221-1A-5L-R2

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
E502	23T75462W09	CAP, PA 22R-1C-5L-R2	R033	06T25277Y81	RES, RK 103J 1/16 -CP
E503	23T75462W06	CAP, PA 101-1A-5L-R2	R034	06T25277Y93	RES, RK 333J 1/16 -CP
E504	23T75462W11	CAP, PA 47R-1C-5L-R2	R036	06T25277Y75	RES, RK 562J 1/16 -CP
E505	23T75462W22	CAP, PA 1R0-1H-5L-R2	R041	06T25277Y91	RES, RK 273J 1/16 -CP
E601	23T75462W08	CAP, PA 10R-1C-5L-R2	R101	06T25279Y04	RES, RK JUMPER1/16-CP
E602	23T75462W08	CAP, PA 10R-1C-5L-R2	R102	06T25277Y57	RES, RK 102J 1/16 -CP
E610	23T75462W12	CAP, PA 101-1C-5L-R2	R103	06T25279Y04	RES, RK JUMPER1/16-CP
E800	23T15765Y88	CAP, TAN 10R-1E-E -E1	R104	06T25277Y43	RES, RK 271J 1/16 -CP
E801	23T15765Y84	CAP, TAN 2R2-1E-A -CP	R105	06T25277Y43	RES, RK 271J 1/16 -CP
E802	23T75462W07	CAP, PA 221-1A-5L-R2	R106	06T25279Y04	RES, RK JUMPER1/16-CP
E803	23T75462W12	CAP, PA 101-1C-5L-R2	R107	06T25277Y57	RES, RK 102J 1/16 -CP
E804	23T75462W09	CAP, PA 22R-1C-5L-R2	R109	06T25278Y22	RES, RK 474J 1/16 -CP
E805	23T75462W06	CAP, PA 101-1A-5L-R2	R110	06T25277Y65	RES, RK 222J 1/16 -CP
E806	23T75462W23	CAP, PA 2R2-1H-5L-R2	R111	06T25277Y57	RES, RK 102J 1/16 -CP
E808	23T75462W07	CAP, PA 221-1A-5L-R2	R202	06T25279Y04	RES, RK JUMPER1/16-CP
E810	23T75462W12	CAP, PA 101-1C-5L-R2	R204	06T25277Y89	RES, RK 223J 1/16 -CP
E811	23T75462W23	CAP, PA 2R2-1H-5L-R2	R205	06T75434W17	RES, RK 624J 1/4 -CP
E816	23T75462W08	CAP, PA 10R-1C-5L-R2	R207	06T00188L23	RES, RD 244J 1/6 -A5
E817	23T75462W17	CAP, PA R10-1H-5L-R2	R208	06T00188L23	RES, RD 244J 1/6 -A5
E818	23T75462W07	CAP, PA 221-1A-5L-R2	R209	06T00187L96	RES, RD 203J 1/6 -A5
E820	23T75462W07	CAP, PA 221-1A-5L-R2	R210	06T00187L96	RES, RD 203J 1/6 -A5
E821	23T75462W22	CAP, PA 1R0-1H-5L-R2	R211	06T00187L83	RES, PSC. 562-J-1/6-A5
E823	23T75462W07	CAP, PA 221-1A-5L-R2	R212	06T00187L83	RES, PSC. 562-J-1/6-A5
E824	23T75462W23	CAP, PA 2R2-1H-5L-R2	R215	06T00187L99	RES, RD 273J 1/6 -A5
E827	23T35505W09	CAP, ELY 472-1C +	R216	06T00187L99	RES, RD 273J 1/6 -A5
E828	23T75462W08	CAP, PA 10R-1C-5L-R2	R217	06T00187L96	RES, RD 203J 1/6 -A5
E829	23T75462W06	CAP, PA 101-1A-5L-R2	R218	06T00187L96	RES, RD 203J 1/6 -A5
E830	23T75462W23	CAP, PA 2R2-1H-5L-R2	R219	06T00187L74	RES, PSC. 242-J-1/6-A5
			R220	06T00187L74	RES, PSC. 242-J-1/6-A5
			R221	06T25277Y90	RES, RK 243J 1/16 -CP
			R222	06T75433W69	RES, RK 682J 1/4 -CP
			R223	06T75433W87	RES, RK 393J 1/4 -CP
			R224	06T25277Y57	RES, RK 102J 1/16 -CP
			R226	06T25277Y57	RES, RK 102J 1/16 -CP
			R227	06T25277Y57	RES, RK 102J 1/16 -CP
			R228	06T25277Y58	RES, RK 112J 1/16 -CP
			R229	06T25277Y58	RES, RK 112J 1/16 -CP
			R230	06T25277Y89	RES, RK 223J 1/16 -CP
			R232	06T75433W72	RES, RK 912J 1/4 -CP
			R233	06T75433W72	RES, RK 912J 1/4 -CP
			R234	06T75433W82	RES, RK 243J 1/4 -CP
			R235	06T75433W82	RES, RK 243J 1/4 -CP
			R236	06T75433W33	RES, RK 221J 1/4 -CP
			R237	06T75433W33	RES, RK 221J 1/4 -CP
			R238	06T75433W25	RES, RK 101J 1/4 -CP
			R239	06T75433W25	RES, RK 101J 1/4 -CP
			R240	06T25278Y15	RES, RK 244J 1/16 -CP
			R241	06T25278Y15	RES, RK 244J 1/16 -CP
			R242	06T25278Y06	RES, RK 104J 1/16 -CP
Resistors					
C513	06T75432W50	RES, RK JUMPER1/10-CP			
R001	06T25277Y89	RES, RK 223J 1/16 -CP			
R002	06T25277Y87	RES, RK 183J 1/16 -CP			
R006	06S70072F05	RES, CP .10R-J-1/4-CP			
R012	06T25277Y57	RES, RK 102J 1/16 -CP			
R015	06T25277Y47	RES, RK 391J 1/16 -CP			
R016	06T25277Y95	RES, RK 393J 1/16 -CP			
R017	06T25277Y57	RES, RK 102J 1/16 -CP			
R018	06T25277Y57	RES, RK 102J 1/16 -CP			
R021	06T25279Y03	RES, RK 225J 1/16 -CP			
R022	06T25277Y97	RES, RK 473J 1/16 -CP			
R023	06T25277Y81	RES, RK 103J 1/16 -CP			
R024	06T25277Y57	RES, RK 102J 1/16 -CP			
R025	06T25277Y97	RES, RK 473J 1/16 -CP			
R030	06T25277Y57	RES, RK 102J 1/16 -CP			
R031	06T25277Y57	RES, RK 102J 1/16 -CP			
R032	06T25277Y57	RES, RK 102J 1/16 -CP			

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Symbol No.	Part No.	Description
R243	06T25277Y58	RES, RK 112J 1/16 -CP
R244	06T25277Y57	RES, RK 102J 1/16 -CP
R245	06T25277Y58	RES, RK 112J 1/16 -CP
R246	06T25277Y81	RES, RK 103J 1/16 -CP
R248	06T75433W82	RES, RK 243J 1/4 -CP
R249	06T75433W82	RES, RK 243J 1/4 -CP
R250	06T75433W82	RES, RK 243J 1/4 -CP
R251	06T75433W82	RES, RK 243J 1/4 -CP
R252	06T25277Y89	RES, RK 223J 1/16 -CP
R253	06T75434W26	RES, RK JUMPER 1/4-CP
R301	06T75433W29	RES, RK 151J 1/4 -CP
R303	06T25277Y29	RES, RK 68RJ 1/16 -CP
R304	06T75434W20	RES, RK 824J 1/4 -CP
R305	06T75433W82	RES, RK 243J 1/4 -CP
R308	06T25277Y43	RES, RK 271J 1/16 -CP
R314	06T75433W55	RES, RK 182J 1/4 -CP
R315	06T75433W55	RES, RK 182J 1/4 -CP
R316	06T75433W55	RES, RK 182J 1/4 -CP
R317	06T75433W55	RES, RK 182J 1/4 -CP
R501	06T25277Y97	RES, RK 473J 1/16 -CP
R502	06T25277Y89	RES, RK 223J 1/16 -CP
R503	06T25277Y97	RES, RK 473J 1/16 -CP
R504	06T25277Y57	RES, RK 102J 1/16 -CP
R505	06T25277Y81	RES, RK 103J 1/16 -CP
R506	06T75434W26	RES, RK JUMPER 1/4-CP
R509	06T25277Y57	RES, RK 102J 1/16 -CP
R510	06T25277Y57	RES, RK 102J 1/16 -CP
R511	06T25277Y57	RES, RK 102J 1/16 -CP
R512	06T25277Y81	RES, RK 103J 1/16 -CP
R513	06T25277Y81	RES, RK 103J 1/16 -CP
R514	06T25277Y73	RES, RK 472J 1/16 -CP
R515	06T75433W33	RES, RK 221J 1/4 -CP
R516	06T25277Y57	RES, RK 102J 1/16 -CP
R517	06T25277Y77	RES, RK 682J 1/16 -CP
R518	06T25277Y57	RES, RK 102J 1/16 -CP
R519	06T25277Y89	RES, RK 223J 1/16 -CP
R520	06T25277Y57	RES, RK 102J 1/16 -CP
R521	06T25277Y81	RES, RK 103J 1/16 -CP
R522	06T25277Y81	RES, RK 103J 1/16 -CP
R524	06T25277Y83	RES, RK 123J 1/16 -CP
R525	06T25278Y06	RES, RK 104J 1/16 -CP
R526	06T25277Y57	RES, RK 102J 1/16 -CP
R527	06T75434W26	RES, RK JUMPER 1/4-CP
R530	06T25277Y89	RES, RK 223J 1/16 -CP
R531	06T25277Y89	RES, RK 223J 1/16 -CP
R532	06T25277Y89	RES, RK 223J 1/16 -CP
R533	06T25277Y81	RES, RK 103J 1/16 -CP
R534	06T25279Y04	RES, RK JUMPER1/16-CP
R535	06T25279Y04	RES, RK JUMPER1/16-CP

Symbol No.	Part No.	Description
R536	06T25279Y04	RES, RK JUMPER1/16-CP
R538	06T25277Y57	RES, RK 102J 1/16 -CP
R539	06T75431W59	RES, RK 102J 1/10 -CP
R540	06T75431W59	RES, RK 102J 1/10 -CP
R541	06T75431W59	RES, RK 102J 1/10 -CP
R542	06T75431W59	RES, RK 102J 1/10 -CP
R543	06T75431W59	RES, RK 102J 1/10 -CP
R544	06T25277Y83	RES, RK 123J 1/16 -CP
R545	06T25277Y81	RES, RK 103J 1/16 -CP
R546	06T25277Y57	RES, RK 102J 1/16 -CP
R547	06T25278Y22	RES, RK 474J 1/16 -CP
R548	06T25279Y04	RES, RK JUMPER1/16-CP
R552	06T25277Y81	RES, RK 103J 1/16 -CP
R553	06T25277Y81	RES, RK 103J 1/16 -CP
R554	06T75433W33	RES, RK 221J 1/4 -CP
R555	06T25277Y63	RES, RK 182J 1/16 -CP
R556	06T25277Y90	RES, RK 243J 1/16 -CP
R557	06T25277Y57	RES, RK 102J 1/16 -CP
R558	06T25277Y90	RES, RK 243J 1/16 -CP
R559	06T25277Y57	RES, RK 102J 1/16 -CP
R560	06T25277Y57	RES, RK 102J 1/16 -CP
R561	06T25277Y57	RES, RK 102J 1/16 -CP
R562	06T25277Y57	RES, RK 102J 1/16 -CP
R567	06T25277Y57	RES, RK 102J 1/16 -CP
R568	06T25277Y57	RES, RK 102J 1/16 -CP
R569	06T25277Y57	RES, RK 102J 1/16 -CP
R573	06T25277Y57	RES, RK 102J 1/16 -CP
R601	06T25277Y81	RES, RK 103J 1/16 -CP
R602	06T25277Y59	RES, RK 122J 1/16 -CP
R603	06T75433W01	RES, RK 10RJ 1/4 -CP
R604	06T25277Y81	RES, RK 103J 1/16 -CP
R605	06T25277Y73	RES, RK 472J 1/16 -CP
R606	06T25277Y65	RES, RK 222J 1/16 -CP
R607	06T25277Y61	RES, RK 152J 1/16 -CP
R608	06T75433W15	RES, RK 39RJ 1/4 -CP
R609	06T75433W15	RES, RK 39RJ 1/4 -CP
R610	06T75433W15	RES, RK 39RJ 1/4 -CP
R611	06T75433W15	RES, RK 39RJ 1/4 -CP
R612	06T25277Y77	RES, RK 682J 1/16 -CP
R613	06T25277Y77	RES, RK 682J 1/16 -CP
R614	06T25277Y81	RES, RK 103J 1/16 -CP
R615	06T25277Y61	RES, RK 152J 1/16 -CP
R616	06T25277Y65	RES, RK 222J 1/16 -CP
R617	06T25277Y81	RES, RK 103J 1/16 -CP
R618	06T25277Y89	RES, RK 223J 1/16 -CP
R619	06T25277Y89	RES, RK 223J 1/16 -CP
R620	06T25277Y57	RES, RK 102J 1/16 -CP
R621	06T25277Y81	RES, RK 103J 1/16 -CP
R622	06T25277Y81	RES, RK 103J 1/16 -CP

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R623	06T25277Y69	RES, RK 332J 1/16 -CP	R873	06T75433W63	RES, RK 392J 1/4 -CP
R624	06T25277Y65	RES, RK 222J 1/16 -CP	R874	06T25277Y69	RES, RK 332J 1/16 -CP
R625	06T75433W25	RES, RK 101J 1/4 -CP	R875	06T75433W49	RES, RK 102J 1/4 -CP
R626	06T75433W73	RES, RK 103J 1/4 -CP	R877	06T75433W29	RES, RK 151J 1/4 -CP
R627	06T25277Y97	RES, RK 473J 1/16 -CP	R878	06T75434W26	RES, RK JUMPER 1/4-CP
R628	06T25277Y89	RES, RK 223J 1/16 -CP	R879	06T75434W19	RES, RK 754J 1/4 -CP
R631	06T25277Y57	RES, RK 102J 1/16 -CP	R880	06T75434W26	RES, RK JUMPER 1/4-CP
R632	06T75434W26	RES, RK JUMPER 1/4-CP	RA502	06S45591W06	RES, ARY MNR102J 4-CP
R801	06S45348Y17	RES, RK 243F 1/4 -CP	RA505	06S45591W06	RES, ARY MNR102J 4-CP
R802	06T75433W33	RES, RK 221J 1/4 -CP	RA506	06S45591W06	RES, ARY MNR102J 4-CP
R803	06T75433W19	RES, RK 56RJ 1/4 -CP	RA507	06S45591W06	RES, ARY MNR102J 4-CP
R804	06S45348Y08	RES, RK 432F 1/4 -CP	VR201	18T55283W23	VAR, RH03APA 474 -CP
R808	06T75433W22	RES, RK 75RJ 1/4 -CP			
R810	06T75434W26	RES, RK JUMPER 1/4-CP			
R814	06T75433W13	RES, RK 33RJ 1/4 -CP			
R828	06T25277Y89	RES, RK 223J 1/16 -CP	Connectors		
R829	06T25277Y73	RES, RK 472J 1/16 -CP	CB301	09T25436Y03	WTB, 53253-0310 -DB
R830	06T25277Y67	RES, RK 272J 1/16 -CP	CB304	09T45099Y26	BTB, IMSA9854B-26A-DB
R831	06T75433W65	RES, RK 472J 1/4 -CP	CB601	09T81032F03	WTB, 53014-0310 -DS
R832	06T75433W65	RES, RK 472J 1/4 -CP	CB701	09T45099Y26	BTB, IMSA9854B-26A-DB
R835	06T75434W18	RES, RK 684J 1/4 -CP	CH822	09T25261Y22	FFC, SFW22R-1STE1 -EQ
R837	06T75434W18	RES, RK 684J 1/4 -CP			
R839	06T75433W82	RES, RK 243J 1/4 -CP			
R841	06T75433W58	RES, RK 242J 1/4 -CP			
R842	06T75433W58	RES, RK 242J 1/4 -CP			
R843	06T75433W58	RES, RK 242J 1/4 -CP	Audio P.W. Board		
R844	06T75433W58	RES, RK 242J 1/4 -CP			
R845	06T75433W58	RES, RK 242J 1/4 -CP	IC's		
R846	06T75433W58	RES, RK 242J 1/4 -CP	IC1201	51T35481Y01	TC9459N -DS
R849	06T75433W35	RES, RK 271J 1/4 -CP	IC1202	51T35481Y01	TC9459N -DS
R850	06T75433W35	RES, RK 271J 1/4 -CP	IC1203	51T35481Y01	TC9459N -DS
R852	06T75433W73	RES, RK 103J 1/4 -CP	IC1204	51T80136F06	M5238FP-722-74A -SE2
R853	06T75434W29	RES, RK 9R1J 1/4 -CP	IC1205	51T80136F06	M5238FP-722-74A -SE2
R854	06T75434W29	RES, RK 9R1J 1/4 -CP	IC1206	51T80136F06	M5238FP-722-74A -SE2
R855	06T25277Y81	RES, RK 103J 1/16 -CP	IC1701	51T35407Y01	SM5847AF -QT
R856	06T75433W82	RES, RK 243J 1/4 -CP	IC1702	51T35406Y01	PCM1704U-K/2K -SE9
R857	06T75434W29	RES, RK 9R1J 1/4 -CP	IC1703	51T35406Y01	PCM1704U-K/2K -SE9
R858	06T75434W29	RES, RK 9R1J 1/4 -CP	IC1704	51T80136F06	M5238FP-722-74A -SE2
R859	06T25277Y90	RES, RK 243J 1/16 -CP	IC1705	51T80136F06	M5238FP-722-74A -SE2
R860	06T75433W57	RES, RK 222J 1/4 -CP	IC1706	51T69242F03	NJM5532MD -TE3-SE03
R861	06T75433W55	RES, RK 182J 1/4 -CP	IC1707	51T69242F03	NJM5532MD -TE3-SE03
R862	06T75433W55	RES, RK 182J 1/4 -CP	IC1708	51T80136F06	M5238FP-722-74A -SE2
R863	06T25277Y90	RES, RK 243J 1/16 -CP	IC1709	51T80136F06	M5238FP-722-74A -SE2
R864	06T75433W55	RES, RK 182J 1/4 -CP	IC1710	51T25069Y01	TC7WH34FU-TE12L -SE1
R865	06T75433W55	RES, RK 182J 1/4 -CP	IC1711	51T25069Y01	TC7WH34FU-TE12L -SE1
R866	06T75433W73	RES, RK 103J 1/4 -CP			
R867	06T25277Y73	RES, RK 472J 1/16 -CP			
R868	06T25277Y73	RES, RK 472J 1/16 -CP			
R872	06T75434W26	RES, RK JUMPER 1/4-CP			

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Symbol No.	Part No.	Description
Transistors		
Q1201	48T35513Y01	TR, 2SC2878-B -RD
Q1202	48T35513Y01	TR, 2SC2878-B -RD
Q1203	48T35513Y01	TR, 2SC2878-B -RD
Q1204	48T35513Y01	TR, 2SC2878-B -RD
Q1205	48T35513Y01	TR, 2SC2878-B -RD
Q1206	48T35513Y01	TR, 2SC2878-B -RD
Q1251	48T35676Y03	TR, 2SA1425-Y -RD
Q1252	48T35676Y03	TR, 2SA1425-Y -RD
Q1253	48T64222F02	TR ,UN2212 22-22 -TX
Q1254	48T64222F02	TR ,UN2212 22-22 -TX
Diodes		
D1201	48T94335F02	D10, MA153A-TX -CP
D1202	48T94335F02	D10, MA153A-TX -CP
D1203	48T94335F02	D10, MA153A-TX -CP
D1204	48T94335F02	D10, MA153A-TX -CP
D1205	48T94335F02	D10, MA153A-TX -CP
D1206	48T94335F02	D10, MA153A-TX -CP
D1211	48T15512W01	DIODE, CP DSM10 -E2
D1212	48T15512W01	DIODE, CP DSM10 -E2
Relays		
RL1201	80T25747W05	RELAY, A-9W-K -DS
RL1202	80T25747W05	RELAY, A-9W-K -DS
Crystal		
XL1701	91T55371W92	XTL, AT-51 16.934M-EA
Filter		
L1701	24T95457W19	FBI, BLM21B152SDPT-CP
Capacitors		
C1205	08T55401W01	CAP, TF, 102J-1H-J1-CP
C1206	08T55401W01	CAP, TF, 102J-1H-J1-CP
C1207	08T55401W01	CAP, TF, 102J-1H-J1-CP
C1208	08T55401W01	CAP, TF, 102J-1H-J1-CP
C1209	08T55401W01	CAP, TF, 102J-1H-J1-CP
C1210	08T55401W01	CAP, TF, 102J-1H-J1-CP

Symbol No.	Part No.	Description
C1213	08S82122F61	CAP, CER, 102J-CH1H-CP
C1214	08S82122F61	CAP, CER, 102J-CH1H-CP
C1217	08S82122F61	CAP, CER, 102J-CH1H-CP
C1218	08S82122F61	CAP, CER, 102J-CH1H-CP
C1221	08S82122F61	CAP, CER, 102J-CH1H-CP
C1222	08S82122F61	CAP, CER, 102J-CH1H-CP
C1223	08T55390W34	CAP, TF 274J-1H -R5
C1224	08T55390W34	CAP, TF 274J-1H -R5
C1225	08T55390W34	CAP, TF 274J-1H -R5
C1226	08T55390W34	CAP, TF 274J-1H -R5
C1227	08T55390W34	CAP, TF 274J-1H -R5
C1228	08T55390W34	CAP, TF 274J-1H -R5
C1701	08T55401W13	CAP, TF 821J-1H -CP
C1702	08T25628Y03	CAP, TF 224M-1C -CP
C1703	08T25628Y03	CAP, TF 224M-1C -CP
C1704	08T25628Y03	CAP, TF 224M-1C -CP
C1705	08T35739Y11	CAP, UC 10RC-2A -CP
C1706	08T25628Y03	CAP, TF 224M-1C -CP
C1707	08T25628Y03	CAP, TF 224M-1C -CP
C1708	08T35739Y11	CAP, UC 10RC-2A -CP
C1709	08T25628Y03	CAP, TF 224M-1C -CP
C1711	08T25628Y03	CAP, TF 224M-1C -CP
C1712	08T25628Y03	CAP, TF 224M-1C -CP
C1717	08T25628Y03	CAP, TF 224M-1C -CP
C1718	08T25628Y03	CAP, TF 224M-1C -CP
C1719	08T25628Y03	CAP, TF 224M-1C -CP
C1720	08T25628Y03	CAP, TF 224M-1C -CP
C1721	08T35739Y11	CAP, UC 10RC-2A -CP
C1722	08T35739Y11	CAP, UC 10RC-2A -CP
C1723	08T35739Y11	CAP, UC 10RC-2A -CP
C1724	08T35739Y11	CAP, UC 10RC-2A -CP
C1725	08T55401W18	CAP, TF 272J-1H -CP
C1726	08T55401W18	CAP, TF 272J-1H -CP
C1727	08T55401W18	CAP, TF 272J-1H -CP
C1728	08T55401W18	CAP, TF 272J-1H -CP
C1729	08T55401W18	CAP, TF 272J-1H -CP
C1730	08T55401W18	CAP, TF 272J-1H -CP
C1732	08T25628Y03	CAP, TF 224M-1C -CP
C1734	08T55401W17	CAP, TF, 222J-1H-J1-CP
C1737	08T25628Y03	CAP, TF 224M-1C -CP
C1738	08T25628Y03	CAP, TF 224M-1C -CP
C1739	08T35739Y11	CAP, UC 10RC-2A -CP
C1740	08T35739Y11	CAP, UC 10RC-2A -CP
C1743	08T55390W34	CAP, TF 274J-1H -R5
C1744	08T55390W34	CAP, TF 274J-1H -R5
C1745	08T55390W34	CAP, TF 274J-1H -R5
C1746	08T55390W34	CAP, TF 274J-1H -R5
C1747	08T55390W34	CAP, TF 274J-1H -R5
C1748	08T55390W34	CAP, TF 274J-1H -R5

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
C1749	08T55390W34	CAP, TF 274J-1H -R5	R1211	06T00187L99	RES, RD 273J 1/6 -A5
C1750	08T55390W34	CAP, TF 274J-1H -R5	R1212	06T00187L99	RES, RD 273J 1/6 -A5
C1751	08T55390W34	CAP, TF 274J-1H -R5	R1213	06T00188L11	RES, RD 753J 1/6 -A5
C1752	08T55390W34	CAP, TF 274J-1H -R5	R1214	06T00188L11	RES, RD 753J 1/6 -A5
C1753	08T55390W34	CAP, TF 274J-1H -R5	R1215	06T00188L11	RES, RD 753J 1/6 -A5
C1754	08T55390W34	CAP, TF 274J-1H -R5	R1216	06T00188L11	RES, RD 753J 1/6 -A5
C1755	08S82122F69	CAP, CER 222J-CH1H-CP	R1217	06T00188L11	RES, RD 753J 1/6 -A5
C1756	08S82122F37	CAP, CER. 101J-CH1H-CP	R1218	06T00188L11	RES, RD 753J 1/6 -A5
E1207	23051196W03	CAP, SME 22R-1C-BP +	R1219	06T00187L49	RES, PSC. 221-J-1/6-A5
E1208	23051196W03	CAP, SME 22R-1C-BP +	R1220	06T00187L49	RES, PSC. 221-J-1/6-A5
E1209	23051196W03	CAP, SME 22R-1C-BP +	R1221	06T00187L49	RES, PSC. 221-J-1/6-A5
E1210	23051196W03	CAP, SME 22R-1C-BP +	R1222	06T00187L49	RES, PSC. 221-J-1/6-A5
E1211	23051196W03	CAP, SME 22R-1C-BP +	R1223	06T00187L49	RES, PSC. 221-J-1/6-A5
E1212	23051196W03	CAP, SME 22R-1C-BP +	R1224	06T00187L49	RES, PSC. 221-J-1/6-A5
E1213	23051196W04	CAP, SME 2R2-1H-BP +	R1225	06T00187L41	RES, PSC. 101-J-1/6-A5
E1214	23051196W04	CAP, SME 2R2-1H-BP +	R1226	06T00187L41	RES, PSC. 101-J-1/6-A5
E1701	23T75462W09	CAP, PA 22R-1C-5L-R2	R1227	06T00187L41	RES, PSC. 101-J-1/6-A5
E1702	23T75462W24	CAP, PA 3R3-1H-5L-R2	R1228	06T00187L41	RES, PSC. 101-J-1/6-A5
E1703	23T75462W24	CAP, PA 3R3-1H-5L-R2	R1229	06T00187L41	RES, PSC. 101-J-1/6-A5
E1704	23T75462W24	CAP, PA 3R3-1H-5L-R2	R1230	06T00187L41	RES, PSC. 101-J-1/6-A5
E1705	23T75462W24	CAP, PA 3R3-1H-5L-R2	R1231	06T75433W72	RES, RK 912J 1/4 -CP
E1706	23T75462W11	CAP, PA 47R-1C-5L-R2	R1232	06T75433W72	RES, RK 912J 1/4 -CP
E1707	23T75462W11	CAP, PA 47R-1C-5L-R2	R1233	06T75433W72	RES, RK 912J 1/4 -CP
E1708	23T75462W11	CAP, PA 47R-1C-5L-R2	R1234	06T75433W72	RES, RK 912J 1/4 -CP
E1709	23T75462W11	CAP, PA 47R-1C-5L-R2	R1235	06T75433W72	RES, RK 912J 1/4 -CP
E1710	23T75462W08	CAP, PA 10R-1C-5L-R2	R1236	06T75433W72	RES, RK 912J 1/4 -CP
E1711	23T75462W09	CAP, PA 22R-1C-5L-R2	R1237	06T00187L73	RES, PSC. 222-J-1/6-A5
E1712	23T75462W08	CAP, PA 10R-1C-5L-R2	R1238	06T00187L73	RES, PSC. 222-J-1/6-A5
E1713	23T75462W09	CAP, PA 22R-1C-5L-R2	R1239	06T00187L73	RES, PSC. 222-J-1/6-A5
E1714	23T75462W06	CAP, PA 101-1A-5L-R2	R1240	06T00187L73	RES, PSC. 222-J-1/6-A5
E1715	23T75462W06	CAP, PA 101-1A-5L-R2	R1241	06T00187L73	RES, PSC. 222-J-1/6-A5
E1728	23T75462W11	CAP, PA 47R-1C-5L-R2	R1242	06T00187L73	RES, PSC. 222-J-1/6-A5
E1730	23T75462W11	CAP, PA 47R-1C-5L-R2	R1243	06T25277Y57	RES, RK 102J 1/16 -CP
E1731	23T75462W11	CAP, PA 47R-1C-5L-R2	R1244	06T25277Y57	RES, RK 102J 1/16 -CP
E1732	23T75462W11	CAP, PA 47R-1C-5L-R2	R1245	06T25277Y57	RES, RK 102J 1/16 -CP
Resistors			R1251	06T75434W07	RES, RK 244J 1/4 -CP
R1201	06T00187L63	RES, PSC. 821-J-1/6-A5	R1252	06T75434W07	RES, RK 244J 1/4 -CP
R1202	06T00187L63	RES, PSC. 821-J-1/6-A5	R1253	06T75433W82	RES, RK 243J 1/4 -CP
R1203	06T00187L63	RES, PSC. 821-J-1/6-A5	R1254	06T75433W82	RES, RK 243J 1/4 -CP
R1204	06T00187L63	RES, PSC. 821-J-1/6-A5	R1255	06T75433W82	RES, RK 243J 1/4 -CP
R1205	06T00187L63	RES, PSC. 821-J-1/6-A5	R1256	06T75433W82	RES, RK 243J 1/4 -CP
R1206	06T00187L63	RES, PSC. 821-J-1/6-A5	R1701	06T25277Y42	RES, RK 241J 1/16 -CP
R1207	06T00187L99	RES, RD 273J 1/6 -A5	R1702	06T25277Y57	RES, RK 102J 1/16 -CP
R1208	06T00187L99	RES, RD 273J 1/6 -A5	R1703	06T25277Y57	RES, RK 102J 1/16 -CP
R1209	06T00187L99	RES, RD 273J 1/6 -A5	R1704	06T25277Y57	RES, RK 102J 1/16 -CP
R1210	06T00187L99	RES, RD 273J 1/6 -A5	R1705	06T25277Y57	RES, RK 102J 1/16 -CP
			R1709	06T25277Y57	RES, RK 102J 1/16 -CP
			R1710	06T25277Y57	RES, RK 102J 1/16 -CP
			R1711	06T25277Y57	RES, RK 102J 1/16 -CP

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Symbol No.	Part No.	Description
R1712	06T25277Y57	RES, RK 102J 1/16 -CP
R1714	06T25277Y57	RES, RK 102J 1/16 -CP
R1715	06T25277Y35	RES, RK 121J 1/16 -CP
R1716	06T25279Y01	RES, RK 105J 1/16 -CP
R1717	06T25277Y55	RES, RK 821J 1/16 -CP
R1718	06T25277Y47	RES, RK 391J 1/16 -CP
R1719	06T25277Y47	RES, RK 391J 1/16 -CP
R1720	06T25277Y47	RES, RK 391J 1/16 -CP
R1721	06T25277Y42	RES, RK 241J 1/16 -CP
R1722	06T75433W43	RES, RK 561J 1/4 -CP
R1723	06T75433W43	RES, RK 561J 1/4 -CP
R1724	06T75433W43	RES, RK 561J 1/4 -CP
R1725	06T75433W43	RES, RK 561J 1/4 -CP
R1726	06T75433W53	RES, RK 152J 1/4 -CP
R1727	06T75433W53	RES, RK 152J 1/4 -CP
R1728	06T75433W53	RES, RK 152J 1/4 -CP
R1729	06T75433W53	RES, RK 152J 1/4 -CP
R1730	06T00187L65	RES, PSC. 102-J-1/6-A5
R1731	06T00187L65	RES, PSC. 102-J-1/6-A5
R1732	06T00187L65	RES, PSC. 102-J-1/6-A5
R1733	06T00187L70	RES, RD 162J 1/6 -A5
R1734	06T00187L83	RES, PSC. 562-J-1/6-A5
R1736	06T00187L83	RES, PSC. 562-J-1/6-A5
R1737	06T00187L83	RES, PSC. 562-J-1/6-A5
R1741	06T00187L83	RES, PSC. 562-J-1/6-A5
R1742	06T00187L70	RES, RD 162J 1/6 -A5
R1743	06T00187L65	RES, PSC. 102-J-1/6-A5
R1744	06T00187L83	RES, PSC. 562-J-1/6-A5
R1745	06T00187L83	RES, PSC. 562-J-1/6-A5
R1746	06T00187L71	RES, PSC. 182-J-1/6-A5
R1747	06T00187L71	RES, PSC. 182-J-1/6-A5
R1748	06T00187L73	RES, PSC. 222-J-1/6-A5
R1749	06T00187L73	RES, PSC. 222-J-1/6-A5
R1750	06T00187L71	RES, PSC. 182-J-1/6-A5
R1751	06T00187L71	RES, PSC. 182-J-1/6-A5
R1752	06T00187L70	RES, RD 162J 1/6 -A5
R1753	06T00187L70	RES, RD 162J 1/6 -A5
R1754	06T00187L52	RES, PSC. 301-J-1/6-A5
R1755	06T00187L52	RES, PSC. 301-J-1/6-A5
R1756	06T00188L03	RES, RD 363J 1/6 -A5
R1757	06T00187L57	RES, PSC. 471-J-1/6-A5
R1758	06T00187L63	RES, PSC. 821-J-1/6-A5
R1759	06T00187L63	RES, PSC. 821-J-1/6-A5
R1760	06T00187L57	RES, PSC. 471-J-1/6-A5
R1761	06T00188L03	RES, RD 363J 1/6 -A5
R1762	06T00187L63	RES, PSC. 821-J-1/6-A5
R1763	06T00187L63	RES, PSC. 821-J-1/6-A5
R1766	06T25277Y47	RES, RK 391J 1/16 -CP
R1767	06T25277Y49	RES, RK 471J 1/16 -CP

Symbol No.	Part No.	Description
R1768	06T25277Y49	RES, RK 471J 1/16 -CP
Connectors		
CB1201	09T45155Y04	WTB, SC25-04WL5 -DB
CB1202	09T45155Y04	WTB, SC25-04WL5 -DB
CB1203	09T45155Y04	WTB, SC25-04WL5 -DB
CH1304	09T45028Y26	BTB, IMSA9580S-26Y-EQ
CH1701	09T45028Y26	BTB, IMSA9580S-26Y-EQ
Front P.W.Board		
IC's		
IC401	51T15731W05	TC7S04F-TE85L -CP
IC402	51T35614Y01	SBX3050-02 -NE5
IC403	51T35566Y19	MTP, D78F4216AGC
Transistors		
Q401	48T64222F01	TR ,UN2211 10-10 -TX
Q402	48T64222F01	TR ,UN2211 10-10 -TX
Q403	48T64222F01	TR ,UN2211 10-10 -TX
Q404	48T63788F04	TR ,CP. 2SD1328-T -TX
Q405	48T63788F04	TR ,CP. 2SD1328-T -TX
Q406	48T45594W12	TR ,XN1A312 -TX-CP
Q407	48T45594W16	TR ,XN1A311-TX -CP
Q408	48T64221F01	TR ,UN2111 10-10 -TX
Q409	48T64222F01	TR ,UN2211 10-10 -TX
Diodes		
D401	48T94335F02	D10, MA153A-TX -CP
D402	48T94335F02	D10, MA153A-TX -CP
D403	48T94335F02	D10, MA153A-TX -CP
D404	48T94335F02	D10, MA153A-TX -CP
D405	48T94335F02	D10, MA153A-TX -CP
D406	48T94335F02	D10, MA153A-TX -CP
D407	48T94335F02	D10, MA153A-TX -CP
D408	48T94335F02	D10, MA153A-TX -CP
D409	48T94335F02	D10, MA153A-TX -CP
D410	48T94335F02	D10, MA153A-TX -CP
D411	48T81063F01	D10, CP. MA159 / TX-CP
D412	48T81063F01	D10, CP. MA159 / TX-CP
ZD401	48T62934F26	D10, ZEN. RD6. 2MB3 -CP

Symbol No.	Part No.	Description
ZD402	48T62934F26	D10, ZEN. RD6. 2MB3 -CP
LED's		
LD401	48T25534Y05	LED, GRN DG1111C -CP
LD402	48T25534Y05	LED, GRN DG1111C -CP
LD404	48T25534Y05	LED, GRN DG1111C -CP
LD405	48T25534Y05	LED, GRN DG1111C -CP
LD406	48T25534Y05	LED, GRN DG1111C -CP
LD407	48T25534Y05	LED, GRN DG1111C -CP
LD408	48T25534Y05	LED, GRN DG1111C -CP
LD410	48T25534Y05	LED, GRN DG1111C -CP
LD411	48T25534Y05	LED, GRN DG1111C -CP
LD412	48T25534Y05	LED, GRN DG1111C -CP
LD413	48T25534Y05	LED, GRN DG1111C -CP
LD414	48T25534Y05	LED, GRN DG1111C -CP
LD415	48T25534Y05	LED, GRN DG1111C -CP
LD416	48T25534Y05	LED, GRN DG1111C -CP
LD417	48T25534Y05	LED, GRN DG1111C -CP
LD418	48T25534Y05	LED, GRN DG1111C -CP
LD419	48T25534Y05	LED, GRN DG1111C -CP
LD420	48T25534Y05	LED, GRN DG1111C -CP
LD421	48T25534Y05	LED, GRN DG1111C -CP
LD422	48T25534Y09	LED, BLU DB1111C10-CP
LD423	48T25534Y09	LED, BLU DB1111C10-CP
LD425	48T25534Y09	LED, BLU DB1111C10-CP
LD426	48T25534Y09	LED, BLU DB1111C10-CP
LD427	48T25534Y09	LED, BLU DB1111C10-CP
LD428	48T25534Y09	LED, BLU DB1111C10-CP
LD429	48T25534Y09	LED, BLU DB1111C10-CP
LD431	48T25534Y09	LED, BLU DB1111C10-CP
LD432	48T25534Y09	LED, BLU DB1111C10-CP
LD433	48T25534Y09	LED, BLU DB1111C10-CP
LD434	48T25534Y09	LED, BLU DB1111C10-CP
LD435	48T25534Y09	LED, BLU DB1111C10-CP
LD436	48T25534Y09	LED, BLU DB1111C10-CP
LD437	48T25534Y09	LED, BLU DB1111C10-CP
LD438	48T25534Y09	LED, BLU DB1111C10-CP
LD439	48T25534Y09	LED, BLU DB1111C10-CP
LD440	48T25534Y09	LED, BLU DB1111C10-CP
LD441	48T25534Y09	LED, BLU DB1111C10-CP
LD442	48T25534Y09	LED, BLU DB1111C10-CP
LD443	48T25583Y03	LED, WHT KW1141CE -CP
LD444	48T25583Y03	LED, WHT KW1141CE -CP
LD445	48T25583Y03	LED, WHT KW1141CE -CP
LD446	48T15110Y07	LED, R/G FRDC1211C-CP

Symbol No.	Part No.	Description
Switches		
SW402	40T25004Y01	SW, TACT SKQYPB -E2 (MUTE/SETUP)
SW403	40T25004Y01	SW, TACT SKQYPB -E2 (FWD/UP)
SW404	40T25004Y01	SW, TACT SKQYPB -E2 (T. INFO)
SW405	40T25004Y01	SW, TACT SKQYPB -E2 (EJECT)
SW406	40T25004Y01	SW, TACT SKQYPB -E2 (BWD/DN)
SW407	40T25004Y01	SW, TACT SKQYPB -E2 (PLAY/PAUSE/TUNE/A. ME)
SW408	40T25004Y01	SW, TACT SKQYPB -E2 (BAND/T. S. M)
SW409	40T25004Y01	SW, TACT SKQYPB -E2 (1/AF)
SW410	40T25004Y01	SW, TACT SKQYPB -E2 (4/M. I. X.)
SW411	40T25004Y01	SW, TACT SKQYPB -E2 (2/PTY)
SW412	40T25004Y01	SW, TACT SKQYPB -E2 (5/REPEAT)
SW413	40T25004Y01	SW, TACT SKQYPB -E2 (3/P. PTY)
SW414	40T25004Y01	SW, TACT SKQYPB -E2 (6/SCAN)
SW415	40T25004Y01	SW, TACT SKQYPB -E2 (SOURCE/POWER)
SW416	40T25004Y01	SW, TACT SKQYPB -E2 (TITLE/R-TXT)
SW417	40T25004Y01	SW, TACT SKQYPB -E2 (FUNC)
Crystal		
XL401	91T95084W02	XTL, CS20 12.288M -E9
Capacitors		
C400	08S82122F53	CAP, CER. 471J-CH1H-CP
C401	08T55401W05	CAP, TF 181J-1H -CP
C402	08T55401W05	CAP, TF 181J-1H -CP
C404	08T55401W05	CAP, TF 181J-1H -CP
C405	08T55401W05	CAP, TF 181J-1H -CP
C407	08T55401W05	CAP, TF 181J-1H -CP
C408	08T55401W05	CAP, TF 181J-1H -CP
C409	08T55401W05	CAP, TF 181J-1H -CP
C410	08T55401W05	CAP, TF 181J-1H -CP
C411	08T55401W05	CAP, TF 181J-1H -CP
C412	08T55401W05	CAP, TF 181J-1H -CP
C413	08T55401W05	CAP, TF 181J-1H -CP
C414	08T55401W05	CAP, TF 181J-1H -CP
C416	08T55401W05	CAP, TF 181J-1H -CP
C417	08T55401W05	CAP, TF 181J-1H -CP
C419	08T55401W05	CAP, TF 181J-1H -CP
C420	08T55401W05	CAP, TF 181J-1H -CP
C421	08T55401W05	CAP, TF 181J-1H -CP
C422	08T55401W05	CAP, TF 181J-1H -CP
C423	08T55401W05	CAP, TF 181J-1H -CP
C424	08T55401W05	CAP, TF 181J-1H -CP

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Symbol No.	Part No.	Description
C425	08T55401W05	CAP, TF 181J-1H -CP
C426	08T55401W05	CAP, TF 181J-1H -CP
C427	08T55401W05	CAP, TF 181J-1H -CP
C428	08T55401W05	CAP, TF 181J-1H -CP
C429	08T55401W05	CAP, TF 181J-1H -CP
C430	08T55401W05	CAP, TF 181J-1H -CP
C431	08T55401W05	CAP, TF 181J-1H -CP
C432	08T55401W05	CAP, TF 181J-1H -CP
C433	08T55401W05	CAP, TF 181J-1H -CP
C434	08T55401W05	CAP, TF 181J-1H -CP
C435	08T55401W05	CAP, TF 181J-1H -CP
C436	08T55401W05	CAP, TF 181J-1H -CP
C437	08T55401W05	CAP, TF 181J-1H -CP
C438	08T55401W05	CAP, TF 181J-1H -CP
C439	08T55401W05	CAP, TF 181J-1H -CP
C440	08T55401W05	CAP, TF 181J-1H -CP
C441	08T55401W05	CAP, TF 181J-1H -CP
C442	08T55401W05	CAP, TF 181J-1H -CP
C443	08T55401W05	CAP, TF 181J-1H -CP
C444	08T55401W05	CAP, TF 181J-1H -CP
C445	08T55401W05	CAP, TF 181J-1H -CP
C446	08T25628Y03	CAP, TF 224M-1C -CP
C448	08T55401W05	CAP, TF 181J-1H -CP
C449	08T55401W05	CAP, TF 181J-1H -CP
C450	08T25628Y03	CAP, TF 224M-1C -CP
C452	08T35739Y13	CAP, UC 12RJ-2A -CP
C453	08T35739Y15	CAP, UC 15RJ-2A -CP
C455	08T25628Y03	CAP, TF 224M-1C -CP
C456	08T25628Y03	CAP, TF 224M-1C -CP
C457	08S82122F53	CAP, CER. 471J-CH1H-CP
C458	08S82122F53	CAP, CER. 471J-CH1H-CP
C461	08T25628Y03	CAP, TF 224M-1C -CP
C462	08T25628Y03	CAP, TF 224M-1C -CP
Resistors		
R400	06T75433W39	RES, RK 391J 1/4 -CP
R401	06T75433W39	RES, RK 391J 1/4 -CP
R402	06T75433W13	RES, RK 33RJ 1/4 -CP
R403	06T75433W13	RES, RK 33RJ 1/4 -CP
R404	06T75433W39	RES, RK 391J 1/4 -CP
R405	06T75433W39	RES, RK 391J 1/4 -CP
R406	06T75433W13	RES, RK 33RJ 1/4 -CP
R407	06T75433W13	RES, RK 33RJ 1/4 -CP
R408	06T75433W15	RES, RK 39RJ 1/4 -CP
R409	06T75433W15	RES, RK 39RJ 1/4 -CP
R410	06T75433W15	RES, RK 39RJ 1/4 -CP
R411	06T75433W15	RES, RK 39RJ 1/4 -CP

Symbol No.	Part No.	Description
R412	06T75433W15	RES, RK 39RJ 1/4 -CP
R413	06T75433W15	RES, RK 39RJ 1/4 -CP
R414	06T75433W36	RES, RK 301J 1/4 -CP
R415	06T75433W47	RES, RK 821J 1/4 -CP
R416	06T75433W57	RES, RK 222J 1/4 -CP
R417	06T75433W57	RES, RK 222J 1/4 -CP
R418	06T25277Y61	RES, RK 152J 1/16 -CP
R419	06T25277Y61	RES, RK 152J 1/16 -CP
R420	06T75434W26	RES, RK JUMPER 1/4-CP
R421	06T25279Y04	RES, RK JUMPER1/16-CP
R422	06T25277Y89	RES, RK 223J 1/16 -CP
R423	06T25277Y89	RES, RK 223J 1/16 -CP
R424	06T25277Y89	RES, RK 223J 1/16 -CP
R425	06T25277Y89	RES, RK 223J 1/16 -CP
R426	06T25277Y89	RES, RK 223J 1/16 -CP
R427	06T25277Y89	RES, RK 223J 1/16 -CP
R428	06T25277Y89	RES, RK 223J 1/16 -CP
R429	06T75431W59	RES, RK 102J 1/10 -CP
R430	06T25277Y57	RES, RK 102J 1/16 -CP
R432	06T25278Y06	RES, RK 104J 1/16 -CP
R433	06T25277Y73	RES, RK 472J 1/16 -CP
R434	06T75434W26	RES, RK JUMPER 1/4-CP
R435	06T75434W26	RES, RK JUMPER 1/4-CP
R436	06T25278Y14	RES, RK 224J 1/16 -CP
R437	06T25277Y33	RES, RK 101J 1/16 -CP
R439	06T25277Y57	RES, RK 102J 1/16 -CP
R440	06T25277Y57	RES, RK 102J 1/16 -CP
R441	06T25277Y57	RES, RK 102J 1/16 -CP
R442	06T75431W59	RES, RK 102J 1/10 -CP
R443	06T75431W59	RES, RK 102J 1/10 -CP
R444	06T75431W59	RES, RK 102J 1/10 -CP
R445	06T25277Y57	RES, RK 102J 1/16 -CP
R446	06T25277Y57	RES, RK 102J 1/16 -CP
R447	06T25277Y73	RES, RK 472J 1/16 -CP
R448	06T25277Y73	RES, RK 472J 1/16 -CP
R449	06T25277Y73	RES, RK 472J 1/16 -CP
R450	06T25278Y06	RES, RK 104J 1/16 -CP
R452	06T25279Y04	RES, RK JUMPER1/16-CP
R453	06T25277Y89	RES, RK 223J 1/16 -CP
R454	06T75431W59	RES, RK 102J 1/10 -CP
R464	06T25277Y65	RES, RK 222J 1/16 -CP
RA401	06S45591W06	RES, ARY MNR102J 4-CP
RA402	06S45591W06	RES, ARY MNR102J 4-CP
Connector		
CB401	09T15107Y24	FFC, 52435-2491 -ED

Symbol No.	Part No.	Description
OELD P.W. Board		
Transistors		
Q1802	48T35678Y03	TR, 2SC3665-Y -RD
Q1803	48T95329W01	TR, 2SC4540-TE12L -E2
Diodes		
D1801	48T35355Y01	D10, 1SS244 -A5
ZD1801	48T25766W46	D10, ZEN. HZS15-2L -R5
Transformer		
T1801	25T35480Y02	TRANS, CEE-78 T073-EA
Capacitors		
C1801	08T25628Y02	CAP, TF 105M-1C -CP
C1802	08S65128F65	CAP, CER. 472K-B1H -CP
C1806	08T25628Y03	CAP, TF 224M-1C -CP
E1802	23T95564W42	CAP, FC 1R0-1H-B -E2
E1803	23T95564W16	CAP, FC 47R-1E-E -E6
E1804	23T75462W06	CAP, PA 101-1A-5L-R2
Resistors		
R1801	06T75434W22	RES, RK 2R2J 1/4 -CP
R1802	06T75433W33	RES, RK 221J 1/4 -CP
R1803	06T75431W76	RES, RK 512J 1/10 -CP
R1805	06T75434W19	RES, RK 754J 1/4 -CP
R1806	06T75431W11	RES, RK 10RJ 1/10 -CP
Connector		
CH1802	09T95017W05	BTB, IMSA6029B-05Z-DB
D-OUT P.W. Board		
Capacitors		
C399	08T15399W04	CAP, CER. 273K-B1H -CP
E399	23T15765Y76	CAP, TAN 10R-1C-A -CP

Symbol No.	Part No.	Description
Resistor		
R399	06T75433W71	RES, RK 822J 1/4 -CP
Main-LSI P.W. Board		
IC's		
IC101	51T11054W02	NJM78L05UA-TE1 -NE2
IC201	51T45332Y02	MN66F2771 -QT
IC202	51T15194Y01	TC74VHCT08AFT-EL-SE5
IC203	51T35316Y01	TC7S14FU-TE85L -CP
IC301	51T35372Y01	AN8882SB-E1 -SEA
IC401	51T16025W01	IC, NJM2100M-TE3-SE03
IC402	51T25503Y01	BA5985FM-E2 -SEA
IC403	51T35257Y01	BD6609FV-E2 -SE2
Transistors/Photo Transistors		
PT401	48T35389Y01	PHT, TR PS1101W-TR-CP
PT402	48T35389Y01	PHT, TR PS1101W-TR-CP
PT403	48T35389Y01	PHT, TR PS1101W-TR-CP
Q201	48T25462Y01	TR, UN2124-TX -CP
Q202	48T45251W03	TR, UN5212 22-22 -CP
Q203	48T64221F02	TR, UN2112 22-22 -TX
Q301	48T45594W08	TR, XN1212 -TX-CP
Q303	48T80611F01	CP, 2SB1132-QR-101-E3
Q402	48T45594W12	TR, XN1A312 -TX-CP
Diodes		
D401	48T52446F01	D10, MA151WK S0/TX-CP
D402	48T81063F01	D10, CP, MA159 / TX-CP
D403	48T15707Y01	D10, MA133-TX -CP
Crystal		
XL202	91T95084W17	XTL, CS20 4.194304-E9
Thermistor		
TH201	48T25250Y01	TMT, ERTJ1VV104J -CP

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Symbol No.	Part No.	Description
Capacitors		
C101	08S65128F61	CAP, CER. 222K-B1H -CP
C102	08S65128F61	CAP, CER. 222K-B1H -CP
C103	08T15399W04	CAP, CER. 273K-B1H -CP
C201	08T15399W04	CAP, CER. 273K-B1H -CP
C202	08S82122F37	CAP, CER. 101J-CH1H-CP
C204	08S35374W01	CAP, CER 104K-B1E-CP
C205	08S65128F78	CAP, CER. 223K-B1H -CP
C206	08S65128F78	CAP, CER. 223K-B1H -CP
C207	08S35374W01	CAP, CER 104K-B1E-CP
C208	08T55487W02	CAP, CER. 224K-B1C -CP
C209	08T15399W04	CAP, CER. 273K-B1H -CP
C210	08S65128F69	CAP, CER. 103K-B1H -CP
C211	08T15399W04	CAP, CER. 273K-B1H -CP
C218	08T15399W04	CAP, CER. 273K-B1H -CP
C219	08T15399W04	CAP, CER. 273K-B1H -CP
C220	08S82122F37	CAP, CER. 101J-CH1H-CP
C224	08T15399W04	CAP, CER. 273K-B1H -CP
C225	08T15399W04	CAP, CER. 273K-B1H -CP
C227	08T35739Y20	CAP, UC 24RJ-2A -CP
C228	08T35739Y21	CAP, UC 27RJ-2A -CP
C301	08S82122F42	CAP, CER. 161J-CH1H-CP
C302	08S82122F45	CAP, CER. 221J-CH1H-CP
C303	08S35374W01	CAP, CER 104K-B1E-CP
C304	08T15399W03	CAP, CER. 473K-B1H -CP
C305	08S35374W01	CAP, CER 104K-B1E-CP
C306	08S35374W01	CAP, CER 104K-B1E-CP
C308	08S65128F60	CAP, CER. 182K-B1H -CP
C309	08S35374W01	CAP, CER 104K-B1E-CP
C310	08S65128F66	CAP, CER. 562K-B1H -CP
C311	08T15399W04	CAP, CER. 273K-B1H -CP
C312	08T15399W04	CAP, CER. 273K-B1H -CP
C313	08S65128F64	CAP, CER. 392K-B1H -CP
C314	08S82122F55	CAP, CER. 561J-CH1H-CP
C315	08T15399W04	CAP, CER. 273K-B1H -CP
C316	08T15399W04	CAP, CER. 273K-B1H -CP
C317	08T15399W04	CAP, CER. 273K-B1H -CP
C318	08S65128F65	CAP, CER. 472K-B1H -CP
C319	08S65128F61	CAP, CER. 222K-B1H -CP
C320	08S12453W04	CAP, CER 331G-CH1H-CP
C321	08T15349Y01	CAP, CER 105K-B1A -CP
C322	08T15399W04	CAP, CER. 273K-B1H -CP
C323	08T15399W04	CAP, CER. 273K-B1H -CP
C402	08S65128F67	CAP, CER. 682K-B1H -CP
C403	08T15399W04	CAP, CER. 273K-B1H -CP
C404	08T15399W04	CAP, CER. 273K-B1H -CP
C405	08T15399W04	CAP, CER. 273K-B1H -CP
C406	08T15399W04	CAP, CER. 273K-B1H -CP

Symbol No.	Part No.	Description
C407	08S65128F61	CAP, CER. 222K-B1H -CP
C408	08S65128F61	CAP, CER. 222K-B1H -CP
C409	08S65128F61	CAP, CER. 222K-B1H -CP
C410	08T15349Y01	CAP, CER 105K-B1A -CP
C411	08S65128F78	CAP, CER. 223K-B1H -CP
C412	08S65128F78	CAP, CER. 223K-B1H -CP
C413	08S82122F43	CAP, CER. 181J-CH1H-CP
C414	08S82122F65	CAP, CER. 152J-CH1H-CP
C415	08T15399W04	CAP, CER. 273K-B1H -CP
C416	08T15399W04	CAP, CER. 273K-B1H -CP
C417	08S65128F69	CAP, CER. 103K-B1H -CP
C418	08S65128F69	CAP, CER. 103K-B1H -CP
C419	08T15349Y01	CAP, CER 105K-B1A -CP
E101	23S55311W56	CAP, TAN 10R-1E-C -E2
E102	23T85373W03	CAP, ECAR 47R-05-C-E5
E201	23T85373W03	CAP, ECAR 47R-05-C-E5
E202	23T85373W03	CAP, ECAR 47R-05-C-E5
E301	23S55311W35	CAP, TAN 10R-1C-B -CP
E302	23S55311W35	CAP, TAN 10R-1C-B -CP
E303	23T85373W03	CAP, ECAR 47R-05-C-E5
E304	23S55311W35	CAP, TAN 10R-1C-B -CP
E305	23T85373W03	CAP, ECAR 47R-05-C-E5
E307	23S55311W35	CAP, TAN 10R-1C-B -CP
E308	23T85373W06	CAP, RA 4R7-1V-B -E5
E403	23T85373W05	CAP, ECAR 10R-1C-C-E5
E404	23T85373W05	CAP, ECAR 10R-1C-C-E5
E405	23S55311W35	CAP, TAN 10R-1C-B -CP
E406	23T85373W05	CAP, ECAR 10R-1C-C-E5
E407	23T85373W05	CAP, ECAR 10R-1C-C-E5
Resistors		
R101	06T25277Y41	RES, RK 221J 1/16 -CP
R102	06T25277Y41	RES, RK 221J 1/16 -CP
R201	06T25278Y08	RES, RK 124J 1/16 -CP
R202	06T25279Y01	RES, RK 105J 1/16 -CP
R203	06T25277Y49	RES, RK 471J 1/16 -CP
R204	06T25278Y06	RES, RK 104J 1/16 -CP
R205	06T25279Y04	RES, RK JUMPER1/16-CP
R206	06T25277Y67	RES, RK 272J 1/16 -CP
R207	06T25277Y79	RES, RK 822J 1/16 -CP
R208	06T25278Y14	RES, RK 224J 1/16 -CP
R209	06T25277Y97	RES, RK 473J 1/16 -CP
R210	06T25277Y33	RES, RK 101J 1/16 -CP
R211	06T25277Y33	RES, RK 101J 1/16 -CP
R212	06T25277Y33	RES, RK 101J 1/16 -CP
R213	06T25277Y33	RES, RK 101J 1/16 -CP
R214	06T25277Y33	RES, RK 101J 1/16 -CP

Symbol No.	Part No.	Description
R215	06T25277Y33	RES. RK 101J 1/16 -CP
R216	06T25277Y97	RES. RK 473J 1/16 -CP
R217	06T25277Y33	RES. RK 101J 1/16 -CP
R218	06T25277Y33	RES. RK 101J 1/16 -CP
R219	06T25277Y33	RES. RK 101J 1/16 -CP
R220	06T25277Y33	RES. RK 101J 1/16 -CP
R221	06T25279Y04	RES. RK JUMPER1/16-CP
R222	06T25279Y04	RES. RK JUMPER1/16-CP
R223	06T25277Y97	RES. RK 473J 1/16 -CP
R224	06T25279Y04	RES. RK JUMPER1/16-CP
R225	06T25277Y33	RES. RK 101J 1/16 -CP
R226	06T25277Y33	RES. RK 101J 1/16 -CP
R227	06T25277Y33	RES. RK 101J 1/16 -CP
R232	06T25279Y04	RES. RK JUMPER1/16-CP
R233	06T25277Y33	RES. RK 101J 1/16 -CP
R234	06T25277Y33	RES. RK 101J 1/16 -CP
R235	06T25277Y33	RES. RK 101J 1/16 -CP
R301	06T25277Y94	RES. RK 363J 1/16 -CP
R302	06T25279Y04	RES. RK JUMPER1/16-CP
R303	06T25277Y81	RES. RK 103J 1/16 -CP
R304	06T25277Y97	RES. RK 473J 1/16 -CP
R305	06T25277Y93	RES. RK 333J 1/16 -CP
R306	06T25277Y98	RES. RK 513J 1/16 -CP
R307	06T25278Y14	RES. RK 224J 1/16 -CP
R308	06T25278Y15	RES. RK 244J 1/16 -CP
R309	06T25277Y97	RES. RK 473J 1/16 -CP
R310	06T75433W01	RES. RK 10RJ 1/4 -CP
R311	06T75433W01	RES. RK 10RJ 1/4 -CP
R312	06T75433W09	RES. RK 22RJ 1/4 -CP
R313	06T25277Y74	RES. RK 512J 1/16 -CP
R314	06T25277Y88	RES. RK 203J 1/16 -CP
R315	06T25277Y81	RES. RK 103J 1/16 -CP
R317	06T25277Y65	RES. RK 222J 1/16 -CP
R318	06T25277Y81	RES. RK 103J 1/16 -CP
R319	06T25279Y04	RES. RK JUMPER1/16-CP
R322	06T25277Y33	RES. RK 101J 1/16 -CP
R323	06T25277Y33	RES. RK 101J 1/16 -CP
R324	06T25277Y33	RES. RK 101J 1/16 -CP
R325	06T25277Y82	RES. RK 113J 1/16 -CP
R326	06T25277Y32	RES. RK 91RJ 1/16 -CP
R327	06T25279Y04	RES. RK JUMPER1/16-CP
R329	06T25279Y04	RES. RK JUMPER1/16-CP
R330	06T25277Y82	RES. RK 113J 1/16 -CP
R401	06T25277Y97	RES. RK 473J 1/16 -CP
R402	06T25279Y04	RES. RK JUMPER1/16-CP
R403	06T25277Y99	RES. RK 563J 1/16 -CP
R404	06T25277Y85	RES. RK 153J 1/16 -CP
R405	06T25277Y33	RES. RK 101J 1/16 -CP
R406	06T25278Y01	RES. RK 623J 1/16 -CP

Symbol No.	Part No.	Description
R407	06T25277Y88	RES. RK 203J 1/16 -CP
R408	06T25277Y33	RES. RK 101J 1/16 -CP
R409	06T25277Y81	RES. RK 103J 1/16 -CP
R410	06T25277Y89	RES. RK 223J 1/16 -CP
R411	06T25277Y85	RES. RK 153J 1/16 -CP
R412	06T25278Y22	RES. RK 474J 1/16 -CP
R413	06T25277Y33	RES. RK 101J 1/16 -CP
R415	06T25277Y84	RES. RK 133J 1/16 -CP
R416	06T25277Y95	RES. RK 393J 1/16 -CP
R418	06T25277Y57	RES. RK 102J 1/16 -CP
R419	06T25277Y33	RES. RK 101J 1/16 -CP
R420	06T25277Y97	RES. RK 473J 1/16 -CP
R422	06T25277Y97	RES. RK 473J 1/16 -CP
R423	06T25279Y04	RES. RK JUMPER1/16-CP
R424	06T25277Y81	RES. RK 103J 1/16 -CP
R425	06T25277Y97	RES. RK 473J 1/16 -CP
R426	06T25277Y77	RES. RK 682J 1/16 -CP
R428	06T25279Y04	RES. RK JUMPER1/16-CP
R429	06T25277Y97	RES. RK 473J 1/16 -CP
R432	06T25277Y97	RES. RK 473J 1/16 -CP
R433	06T25277Y89	RES. RK 223J 1/16 -CP
R434	06S70072F90	RES. CP . 1R0-J-1/4-CP
R435	06S70072F90	RES. CP . 1R0-J-1/4-CP
R436	06T25277Y89	RES. RK 223J 1/16 -CP
R437	06T25277Y85	RES. RK 153J 1/16 -CP
R438	06T25277Y81	RES. RK 103J 1/16 -CP
R439	06T25277Y91	RES. RK 273J 1/16 -CP
R440	06T25279Y04	RES. RK JUMPER1/16-CP
R441	06T25278Y20	RES. RK 394J 1/16 -CP
R442	06T25277Y46	RES. RK 361J 1/16 -CP
R443	06T25277Y98	RES. RK 513J 1/16 -CP
R444	06T25277Y93	RES. RK 333J 1/16 -CP
R447	06T25277Y97	RES. RK 473J 1/16 -CP
R448	06T25277Y88	RES. RK 203J 1/16 -CP
R449	06T25277Y97	RES. RK 473J 1/16 -CP
Connectors		
CB101	09T45435W22	FFC. 52207-2290 -EQ
CB102	09T15697Y30	FFC. 54104-3090 -EQ
CB103	09T15108Y20	FFC. 52746-2090 -E9

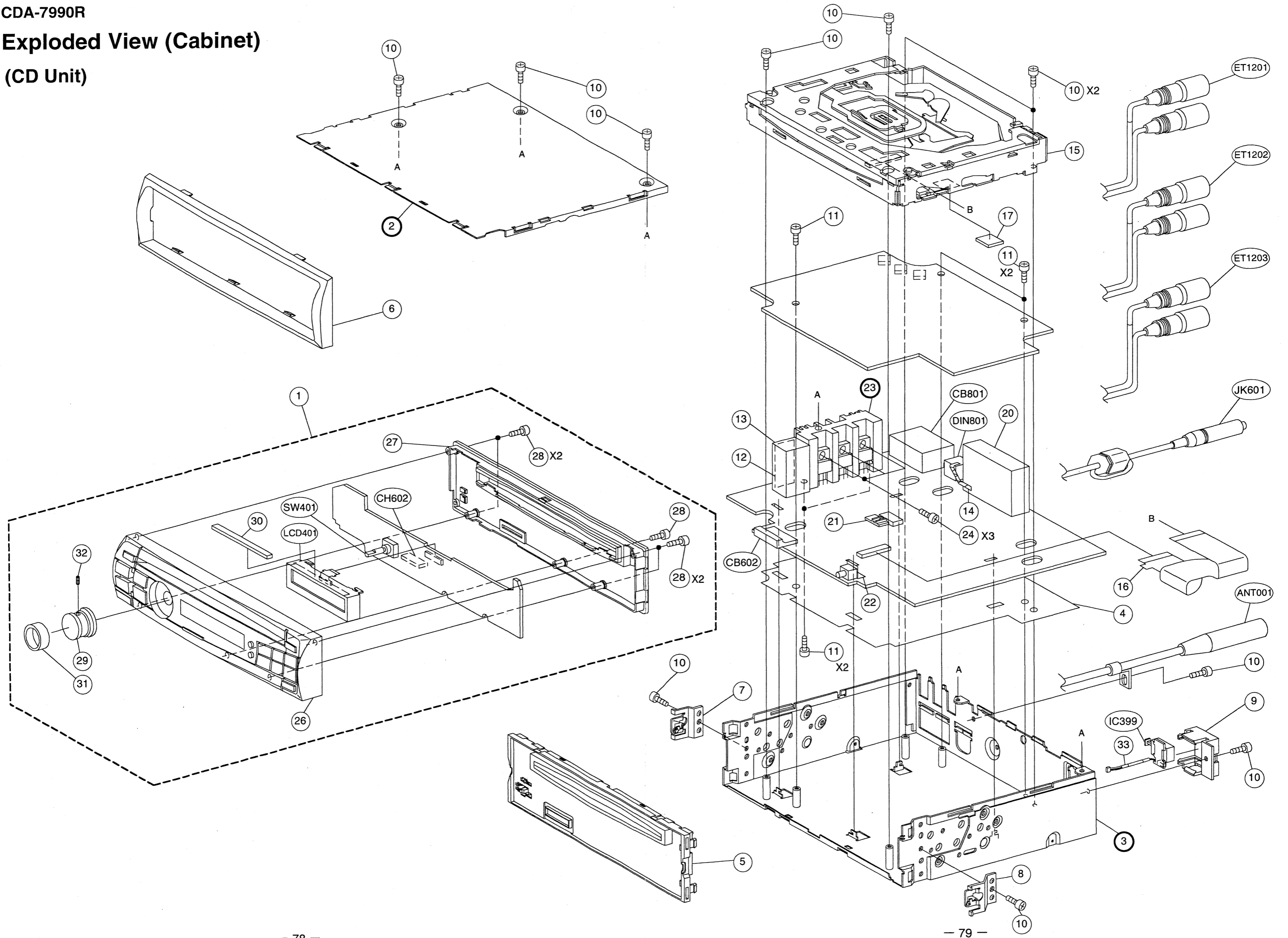
Symbol No.	Part No.	Description
LED P. W. Board		
LED's		
LD501	48T16057W03	LED. AN501-A. B
LD502	48T16057W03	LED. AN501-A. B
LD503	48T16057W03	LED. AN501-A. B
Capacitors		
C501	08S45677W42	CAP. CER. 181J-CH1H-CP
C502	08S45677W42	CAP. CER. 181J-CH1H-CP
C503	08S45677W42	CAP. CER. 181J-CH1H-CP
Resistors		
R501	06S64995F43	RES. RK 391J 1/8 -CP
R502	06S64995F43	RES. RK 391J 1/8 -CP
R503	06S64995F43	RES. RK 391J 1/8 -CP
Switch P. W. Board		
Resistor		
R506	06S64996F39	RES. RK JUMPER 1/8-CP
Miscellaneous		
ANT001	01T15513W32	ASSY. ANT CABLE F101
CB602	09T15299Y15	BTB. TMD-V15X-B1 -DB
CB801	09T35375Y62	WTB. D-3100-12 -DS
CH602	09T15298Y15	BTB. TMD-V15P-A1 -B
DIN801	09T45092Y01	DIN. TCP9389-111018DB
ET1201	01T45098Y05	ASSY. RCA/F MFF101A (FRONT OUT)
ET1202	01T45098Y04	ASSY. RCA/R MFF101A (REAR OUT)
ET1203	01T45098Y06	ASSY. RCA/S-W MFF101A (SUB-W)
IC399	51T75111W01	TOTX193 -DS (OPTICAL D-OUT)
JK601	01T75188W19	ASSY. WIRE JACK F101
LCD401	01T35692Y01	OELD. SD-030A
SW401	40T35666Y04	ENC. EC11E15344 -DB (MODE/B. OUT)

Symbol No.	Part No.	Description
DP26T010		
HD1	88T35463Y01	PICK. TPU3011A
M1	01V36200Y59	ASSY. MOTOR SPINDLE (VM: 4V, VCC: 5V-130mA)
M2	01V34900Y73	ASSY. MOTOR LOAD (5V-290mA)
M3	01V36200Y60	ASSY. MOTOR SLED (5V-290mA)
SW1	40T15494Y02	SW. DETCT SPVG13 -E6 (DISC CHUCKING END DETECT)
SW2	40T15494Y01	SW. DETCT SPVG23 -E6 (LIMIT DETECT)

CDA-7990R

Exploded View (Cabinet)

(CD Unit)



Cabinet Assembly Parts List

NOTE: Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
1		01V41600Y87	ASSY, NOSE UNIT F101R				
4		14B31780Y01	INSULATOR, MAIN				
5		13C10783Y03	FRONT, ESC ASSY				
6		33C40490Y01	FACE, PLATE				
7		07D91595W01	BKT, SIDE ASSY				
8		07D91595W02	BKT, SIDE(R) ASSY				
9		15B71937W01	COVER, CONN. D-OUT				
10		03S38013W51	SCR, T-TITE M2. 6X6 CP				
11		03S44205G62	SCR, T-TITE M2. 6X5				
12		14S30726Y52	INS, CVR 16X38XT0. 25				
13		15B40432Y01	CASE, SHIELD				
14		30A41363Y01	SHIELD, EARTH TA 30				
15		81D31459Y01	DP26T010, CD MECH				
16		84T45201Y01	FPC-F02224-F1				
17		75S50638W35	CUSHION, RUBBER				
20		77B30901Y01	MB4R9030, FM/AM UNIT (TU001)				
21		36A70327W01	KNOB, SLIDE				
22		15A41378Y01	COVER, SW				
24		03S30688Y05	SCR, MCH M3X8 BI SU				
26		13C31766Y03	NOSE, PIECE ASSY				
27		13D31779Y01	NOSE, BOTTOM				
28		03S68555F54	SCR, WAVE M2X11				
29		36B41494Y01	KNOB, RTLY				
30		75T25010Y38	CUSHION, SHLDD6-3-60D				
31		75T45475Y01	CUSHION, RUBBER				
32		03S40015G14	SCR, SET M3X6				
33		01T75451W19	ASSY, WIRE D-OUT F101 (CH399)				

CDA-7990R

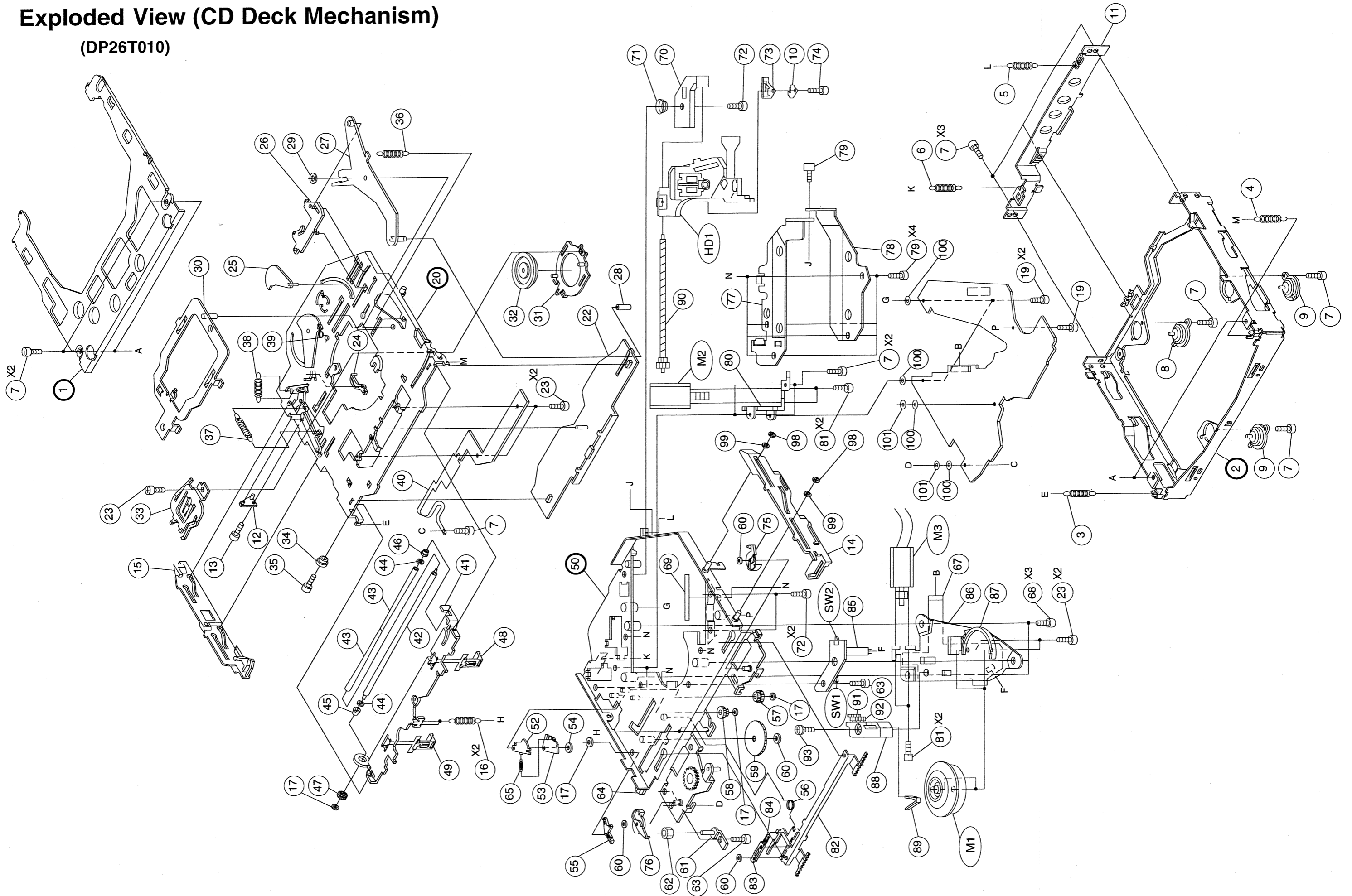
CD Deck Mechanism Assembly Parts List

NOTE: Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
3		41B31430Y01	SPRING, PULL	54		04B41345P24	WASH, 2. 1X5X0. 35
4		41B31430Y02	SPRING, PULL	55		01A31151Y01	ASSY, RIV. ARM TIMING
5		41B31430Y03	SPRING, PULL	56		41A31432Y01	SPRING, SLIDER
6		41B31430Y04	SPRING, PULL	57		44B30944Y01	GEAR, (B)
7		03S94385F19	SCR, NYLOK M2X2. 5	58		44B30945Y01	GEAR, (C)
8		75C31436Y01	DAMPER, DV-T	59		44B30946Y01	GEAR, (D)
9		75C31436Y03	DAMPER, DV-T	60		04B41345P12	WASH, L. 1. 7X3. 5X0. 35
10		07A40502Y01	BKT, SPRING NUT	61		01A31145Y01	ASSY, RIV. BKT. GEAR-E
11		07C30910Y01	BKT, CHASSIS-B	62		44B30947Y01	GEAR, (E)
12		01A31147Y01	ASSY, RIV. LEV. CLP (B)	63		03S94385F07	SCR, NYLOK M2X2
13		03A41113Y01	SCR, MCH M1. 7X0. 35	64		44B30948Y01	GEAR, (F)
14		45B30959Y01	SLIDER, LOCK (R)	65		41B31430Y08	SPRING, PULL
15		45B30960Y01	SLIDER, LOCK (L)	67		84T35623Y01	FPC, MECH
16		41B31430Y09	SPRING, PULL	68		03A31494Y01	SCREW, DRIVE
17		04B41345P18	WASH, 1. 2X2. 5X0. 35	69		47A31437Y01	SHAFT, PICK
19		03S38013W25	SCREW, T-TITE M2X4	70		07B30988Y01	BKT, ADJUST
22		15D30952Y01	GUIDE, TOP DVT	71		41A31434Y01	SPRING, COMP-DRIVE
23		03S94385F28	SCR, NYLOK M1. 7X2	72		03A31102Y01	SCREW, ADJUST
24		45A30962Y01	LEVER, ACTUATOR	73		41B31853Y01	SPRING, NUT F-1
25		45B30961Y01	LEVER, STP-DISC (R)	74		03S94385F01	SCR, NYLOK M1. 7X2. 3
26		45A30878Y01	LEVER, LOCK	75		45B30957Y01	ARM, LOCK (R)
27		01A31152Y01	ASSY, RIV. LEVER DISC	76		45B30958Y01	ARM, LOCK (L)
28		43A31103Y01	BUSH, LEVER DISC	77		07B30890Y02	COVER, SHAFT-MAIN
29		04B41345P14	WASH, L. 2. 1X4X0. 25	78		07B30891Y02	COVER, SHAFT-SUB
30		01B31146Y01	ASSY, RIV. SLIDER CLP	79		03S94385F88	SCR, NYLOK M2X2
31		01A31150Y01	ASSY, RIV. HOLDER CLP	80		07B30872Y01	BKT, MOTOR LOAD
32		43B30963Y01	TABLE, CLAMPER	81		03S40014G97	SCR, MCH M1. 4X2. 5
33		07B30884Y01	PLATE, CLAMP	82		01B31144Y01	ASSY, RIV. SLIDER LD
34		43A31157Y01	BUSH, ARM GUIDE	83		44B30951Y01	RACK
35		03S94385F02	SCR, NYLOK M1. 7X3	84		41A31433Y01	SPRING, COMP-LOAD
36		41B31430Y05	SPRING, PULL	85		30T15126W17	WIRE, PC JOINT 3P
37		41B31430Y06	SPRING, PULL	86		07B30887Y02	BKT, MOTOR-SPINDLE
38		41B31430Y07	SPRING, PULL	87		07B30989Y01	COVER, MOTOR
39		41A31431Y01	SPRING, LEVER	88		07B30964Y01	BKT, SLED
40		84T35622Y01	FPC, LED	89		41A30889Y01	SPRING, SHAFT
41		01A31143Y02	ASSY, RIV. ARM GUIDE	90		01V36900Y80	ASSY, SHAFT SCR F-1
42		47A31156Y01	SHAFT, ROLLER	91		44A30966Y01	GEAR, MIDDLE
43		49A31435Y01	ROLLER, DV-T	92		44A30967Y01	GEAR, IDLER
44		04S40075G09	WASH, 2. 6X4. 7X0. 25	93		03S40014G84	SCREW, MACHINE M2X6. 5
45		43A30955Y01	BUSH, ROLLER (R)	98		04B41345P15	WASH, 1. 2X3. 5X0. 35
46		43A30956Y01	BUSH, ROLLER (L)	99		04A40504Y02	WASHER, 1. 5X3X0. 3
47		44A30949Y01	GEAR, (G)	100		14A40070Y01	INSULATOR, DPT-1
48		44A30953Y01	ARM, FRONT (R)	101		14A40071Y01	INSULATOR, DPT-2
49		44A30954Y01	ARM, FRONT (L)				
52		45A30882Y01	ARM, LINK (A)				
53		45A30883Y01	ARM, LINK (B)				

Exploded View (CD Deck Mechanism)

(DP26T010)



● DC/DC CONVERTER Unit

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NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Parts Layout on P.W.Board and Wiring Diagram

1

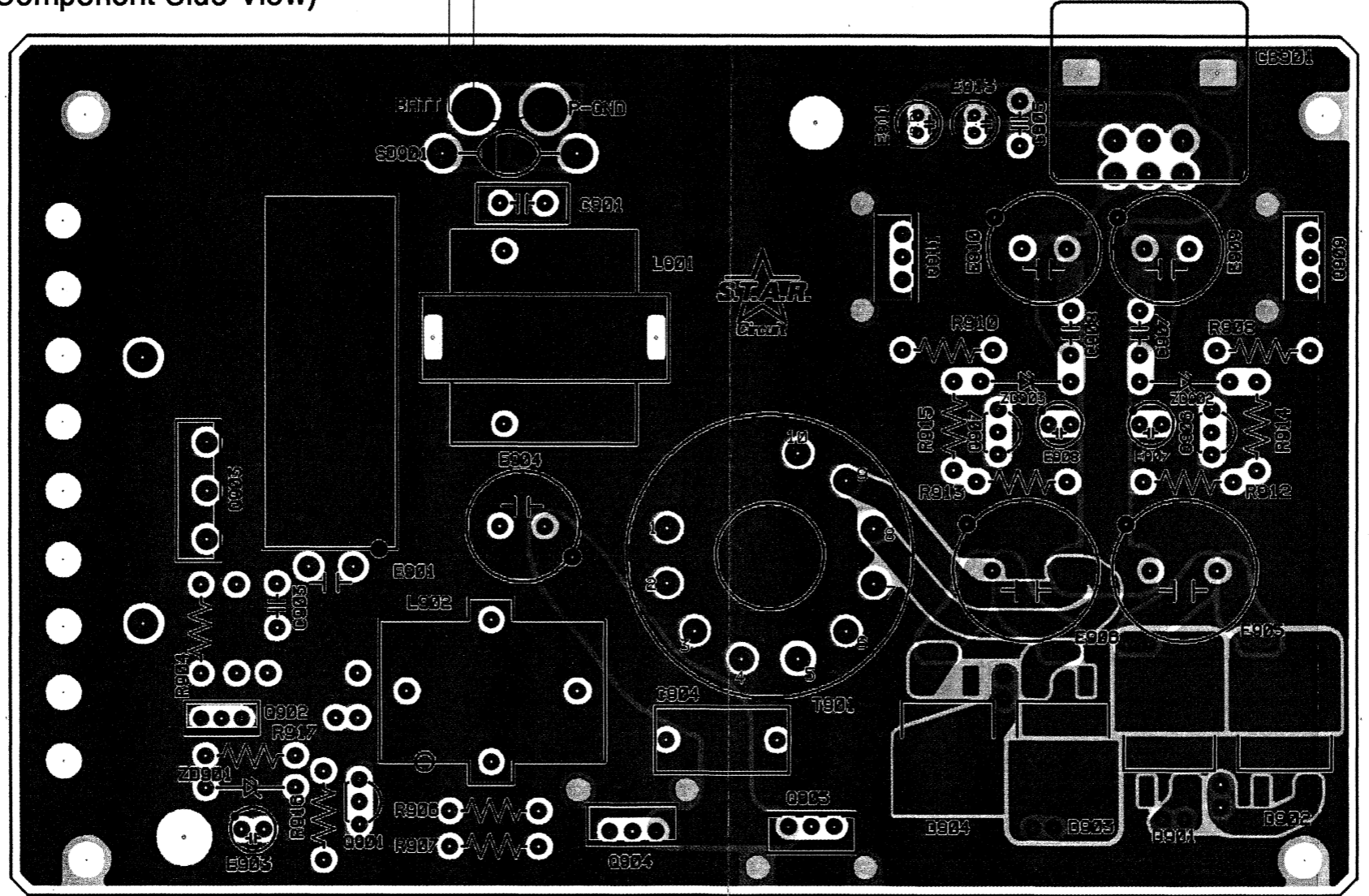
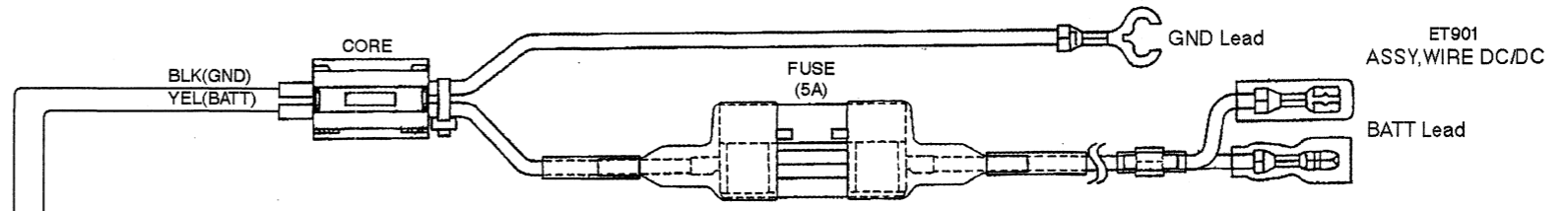
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3

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5

DC/DC CONVERTER P.W.Board
(Component Side View)



Dark Gray : Component Side Pattern
Gray : Foil Side Pattern

A

B

C

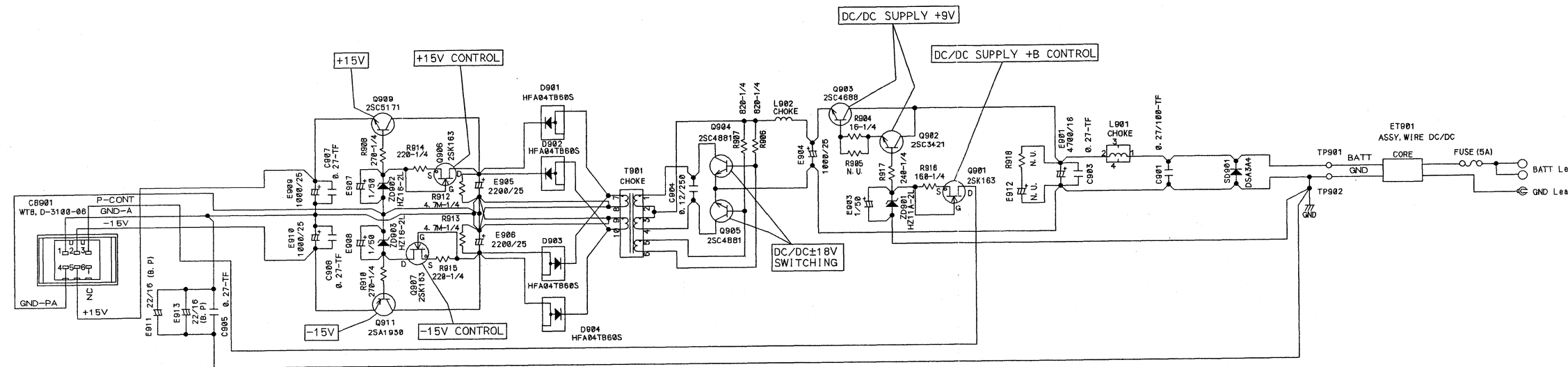
D

E

F

G

CDA-7990R
Schematic Diagram



DC/DC CONVERTER P. W. Board
NOTE: N. U. is Not Used Parts.

Terminal Voltage of IC/TR

	S	D	G
Q 9 0 1	11.8	13.21	10.99
Q 9 0 6	16.38	19.27	15.87
Q 9 0 7	-18.83	-15.89	-19.32

	E	C	B
Q 9 0 2	10.33	13.51	10.95
Q 9 0 3	9.46	13.51	10.16
Q 9 0 4	0	9.41	PS
Q 9 0 5	0	9.41	PS
Q 9 0 9	15.11	19.42	15.76
Q 9 1 1	-15.32	-19.46	-15.94

[Measuring Conditions]

- Power Supply Voltage : DC14.1V
- Measuring Meter : Digital Multi Meter
- Measuring Point Reference : Between GND
- Measuring Conditions : FM : 98.1MHz
MW : 999KHz
LW : 216KHz
CD : at playing Disc

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Electrical Parts List

Capacitor : μ F=microfarads,pF=picofarads

Abbreviations		
RES. = Resistor	CAP. = Capacitor	
C.F. = Carbon Film	ELY. = Electrolytic	
M.F. = Metal Film	CER. = Ceramic	
M.O. = Metal Oxide Film	MYL. = Mylar	
M.P. = Metal Plate	TAN. = Tantalum	
TR. = Transistor	POLY. = Polystyrol	
TRANS. = Transformer	PP. = Polypropylene	
CP. = Chip	PLT. = Polyethylene	
	PF. = Polyester Film	
Symbol No.	Part No.	Description
DC/DC CONVERTER P.W.Board		
Transistors/FET's		
Q901	48T74193F05	FET, 2SK163-M1 -RD
Q902	48T69176F02	TR, 2SC3421-Y
Q903	48T35680Y01	TR, 2SC4688 -DB
Q904	48T35673Y01	TR, 2SC4881 -DB
Q905	48T35673Y01	TR, 2SC4881 -DB
Q906	48T74193F05	FET, 2SK163-M1 -RD
Q907	48T74193F05	FET, 2SK163-M1 -RD
Q909	48T35674Y01	TR, 2SC5171 -DB
Q911	48T35671Y01	TR, 2SA1930 -DB
Diodes		
D901	48T45103Y01	D10, HFA04TB60S -EA
D902	48T45103Y01	D10, HFA04TB60S -EA
D903	48T45103Y01	D10, HFA04TB60S -EA
D904	48T45103Y01	D10, HFA04TB60S -EA
SD901	48T68580F03	D10, SI DSA3A4-F5
ZD901	48T52741F29	D10, ZEN HZ11A-2L -A1
ZD902	48T52741F50	D10, ZEN HZ16-2L -A1
ZD903	48T52741F50	D10, ZEN HZ16-2L -A1
Coils		
L901	25T96111F01	CHOKE, COIL
L902	25T35690Y01	CHOKE, GLA03-0270D-DB
Transformer		
T901	25T35728Y01	CHOKE, DTSD14H0108-DB

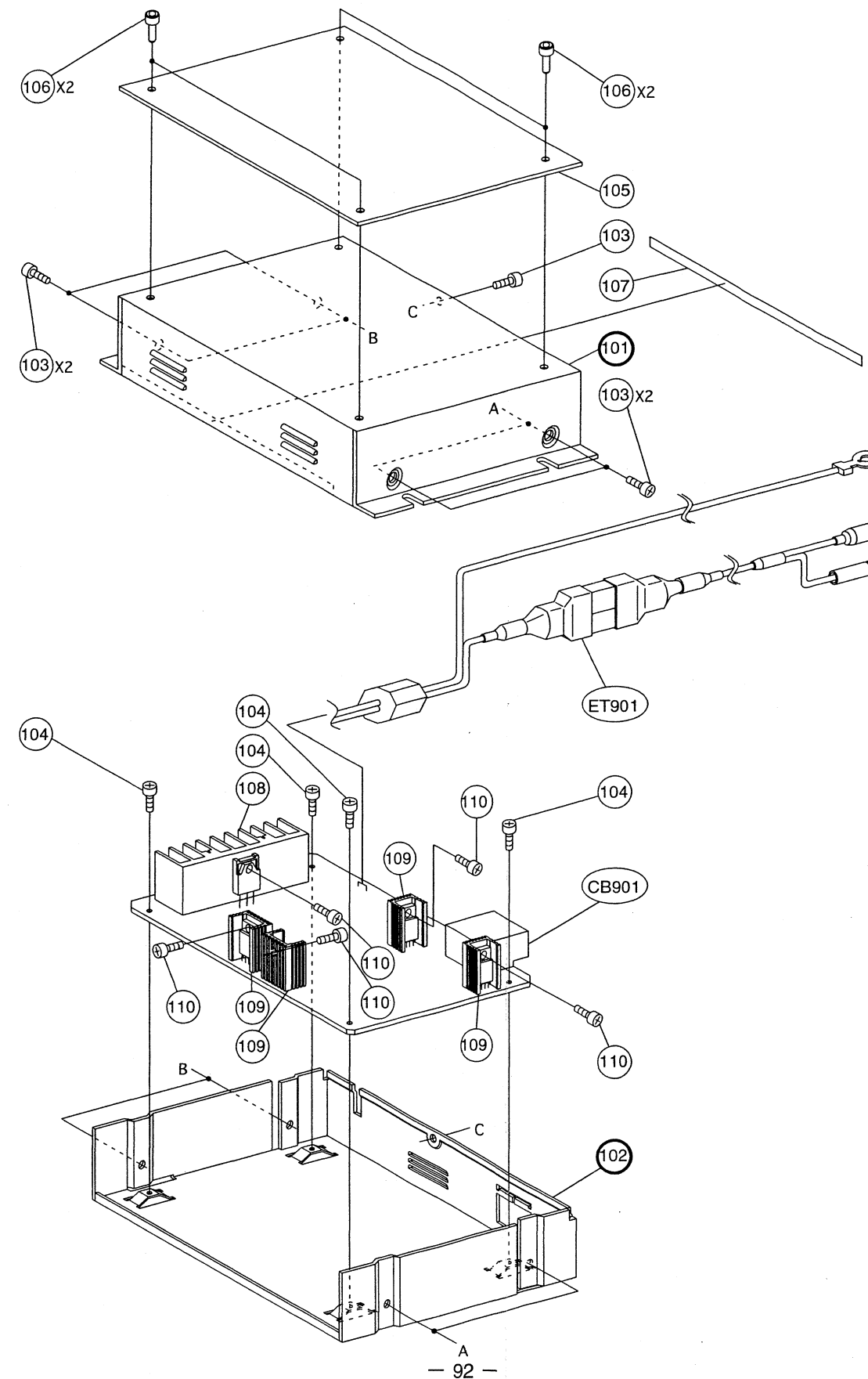
Symbol No.	Part No.	Description
Capacitors		
C901	08T35737Y06	CAP, TF 274J-2A -R5
C903	08T55390W34	CAP, TF 274J-1H -R5
C904	08T45212Y04	CAP, MDD 124K-2E -DB
C905	08T55390W34	CAP, TF 274J-1H -R5
C907	08T55390W34	CAP, TF 274J-1H -R5
C908	08T55390W34	CAP, TF 274J-1H -R5
E901	23T35505W10	CAP, ELY 472-1C +
E903	23T45365W11	CAP, SME 1R0-1H -R2
E904	23T00134L46	CAP, SME. 102-1E +
E905	23T00134L47	CAP, SME. 222-1E +
E906	23T00134L47	CAP, SME. 222-1E +
E907	23T45365W11	CAP, SME 1R0-1H -R2
E908	23T45365W11	CAP, SME 1R0-1H -R2
E909	23T00134L46	CAP, SME. 102-1E +
E910	23T00134L46	CAP, SME. 102-1E +
E911	23Q51196W03	CAP, SME 22R-1C-BP +
E913	23Q51196W03	CAP, SME 22R-1C-BP +
Resistors		
R904	06T00126L22	RES, RD 16RJ 1/4 -A1
R906	06T00126L63	RES, RD 821J 1/4 -A1
R907	06T00126L63	RES, RD 821J 1/4 -A1
R908	06T00126L51	RES, RD 271J 1/4 -A1
R910	06T00126L51	RES, RD 271J 1/4 -A1
R912	06T00127L54	RES, RD 475J 1/4 -A1
R913	06T00127L54	RES, RD 475J 1/4 -A1
R914	06T00126L49	RES, PSN. 221-J-1/4-A1
R915	06T00126L49	RES, PSN. 221-J-1/4-A1
R916	06T00126L46	RES, RD 161J 1/4 -A1
R917	06T00126L50	RES, RD 241J 1/4 -A1
Miscellaneous		
CB901	09T35375Y56	WTB, D-3100-06 -DS
ET901	01T45097Y02	ASSY, WIRE DC/DC

Cabinet Assembly Parts List

NOTE: Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
103		03S38013W51	SCR,T-TITE M2.6X6 CP				
104		03S44205G62	SCR,T-TITE M2.6X5				
105		33B41132Y01	PLATE,PANEL				
106		03B41190Y01	SCR,BOLT 6K M2.5X4				
107		14S31545Y14	INS,CVR 155X6XT0.5				
108		07T45101Y01	OSH-7030S-SP				
109		07T71443F08	OSH,1025S SPL				
110		03S30688Y05	SCR,MCH M3X8 BI SU				

Exploded View (Cabinet) (DC/DC CONVERTER Unit)



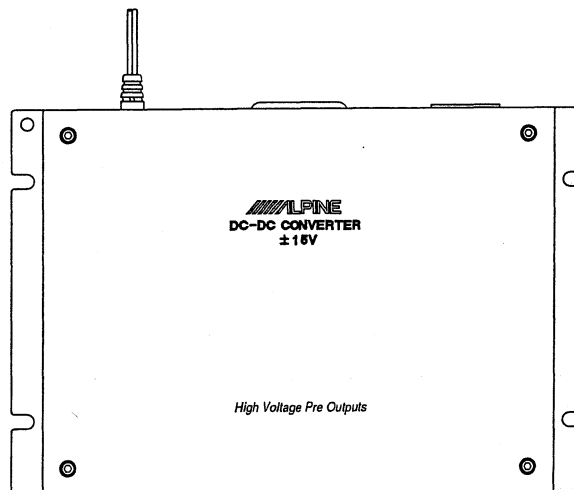
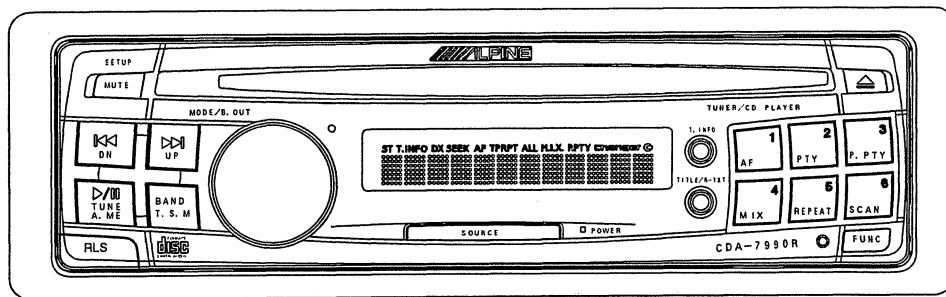
ALPINE SERVICE MANUAL

Tuner / CD Player



— REVISED —

- The model is component system unit of CD Unit and DC/DC CONVERTER Unit.
- This service manual mentions only the change part of CDA-7990R (68E31567S01).
Applicable model Serial NO. : 10310601~
Refer to CDA-7990R (68E31567S01) for the part which isn't mentioned.



CDA-7990R

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● CD Unit

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● DC/DC CONVERTER Unit

Schematic Diagram (Only Difference)	10
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Specifications
Extension Cable
Adjustment Procedures
Adjustment Locations
Block Diagram

● CD Unit

Schematic Diagram
Terminal Voltage of IC/TR
Description of IC Terminal
Exploded View (Cabinet)
Cabinet Assembly Parts List

● DC/DC CONVERTER Unit

Parts Layout on P.W.Board and Wiring Diagram
Terminal Voltage of IC/TR
Electrical Parts List
Cabinet Assembly Parts List
Exploded View (Cabinet)

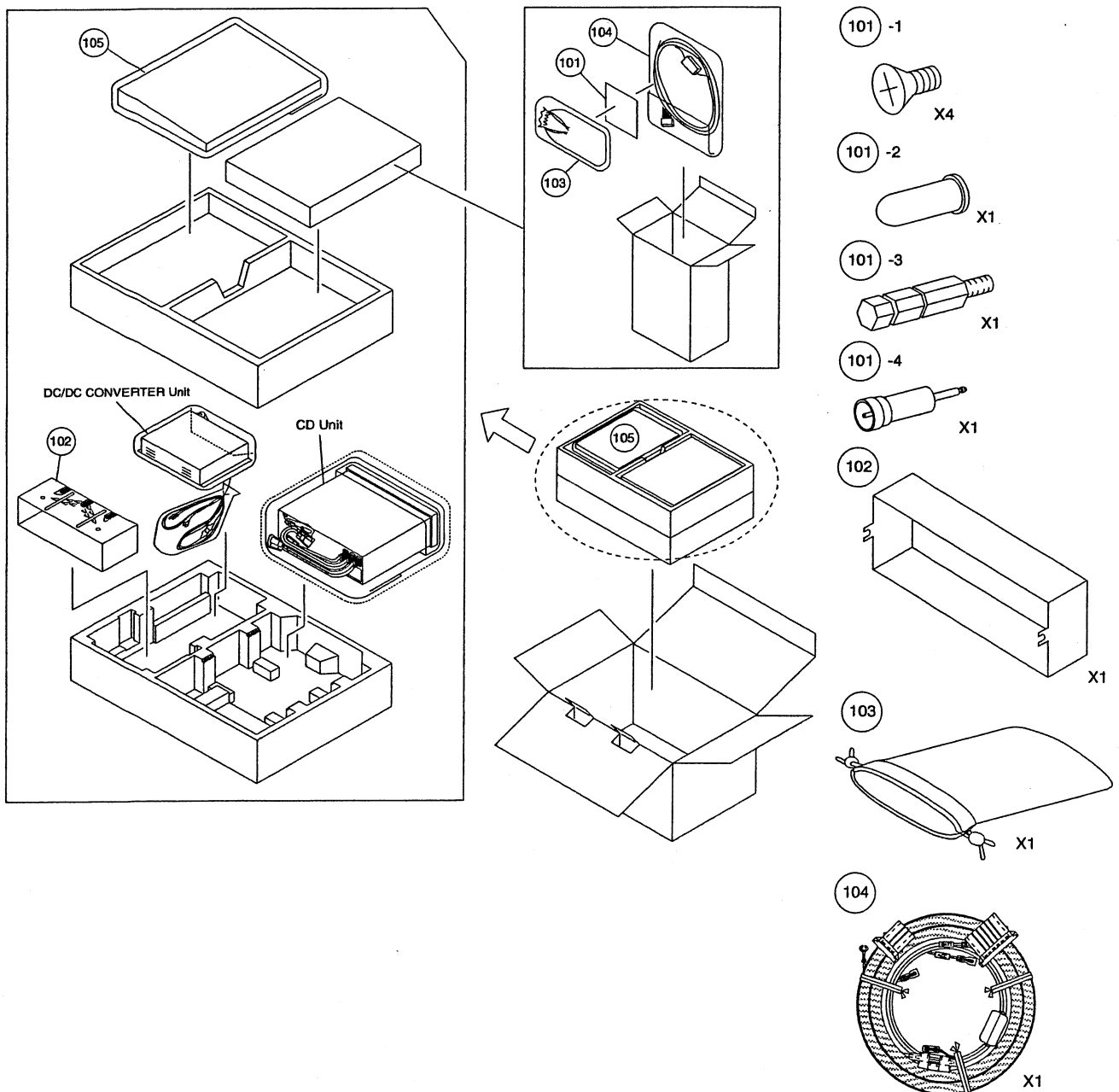
Refer to the Service
Manual • CDA-7990R
(Part No. 68E31567S01).

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Packing Assembly Parts List

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
101-1	03S72235F68	SCR,MCH M5X6 F CU	103	15B40489Y01	CARRYING,CASE
101-2	36A11113W01	CAP,RUBBER(A)	104	01T45096Y01	ASSY,WIRE PWR
101-3	03A11112W02	BOLT HEX M5(A)	105	68P41262Y68	O/M AOEU
101-4	01T15394Y02	ANT,JASO-ISO			
102	15D80814F03	CASE,INNER			

Packing Method View



● CD Unit

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Exploded View (CD Deck Mechanism) (DP26T010)	8

Schematic Diagram
Terminal Voltage of IC/TR
Description of IC Terminal
Exploded View (Cabinet)
Cabinet Assembly Parts List

Refer to the Service Manual •
CDA-7990R (Part No. 68E31567S01).

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

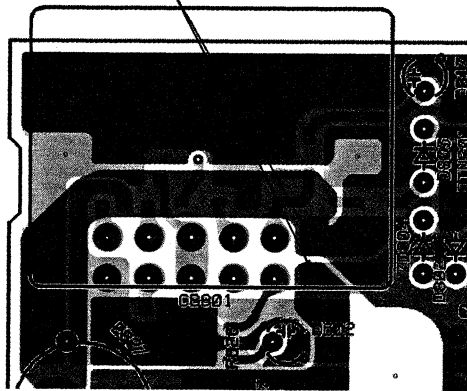
Parts Layout on P.W.Boards (Only Difference)

1

NOTE : Refer to the Service Manual - CDA-7990R(68E31567S01)
for description not mentioned in this manual.

2

Changed



3

4

5

Dark Gray : Component Side Pattern
Gray : Foil Side Pattern

A

B

C

Electrical Parts List (Only Difference)

NOTE : For the parts not mentioned, refer to the Service Manual for CDA-7990R (Part No. 68E31567S01).

CDA-7990R			CDA-7990R -REVISED-		
Model	Part No.	Description	Part No.	Description	
Main P.W. Board					
IC's			IC's		
IC202	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
IC203	51T35457Y01	TDA7402 -QT	51T35457Y02	TDA7402 -QT	
IC501	51T35568Y26	MTP,D78F4218AGC	51T35568Y01	MTP,D78F4218AGC -QT	
Audio P.W. Board					
IC's			IC's		
IC1204	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
IC1205	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
IC1206	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
IC1704	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
IC1705	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
IC1708	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
IC1709	51T80136F06	M5238FP-722-74A -SE2	51T80136F04	IC ,M5238FP-74A-SE03	
Main-LSI P.W. Board					
IC			IC		
IC201	51T45332Y02	MN66F2771 -QT	51T45332Y04	MN66F2771FA2 -QT	
Transistor			Transistor		
Q201	48T25462Y01	TR, UN2124-TX -CP	48T94875F06	DTB, CP-113ZK-96	
Resistor			Resistor		
R406	06T25278Y01	RES, RK 623J 1/16 -CP	06T25278Y06	RES, RK 104J 1/16 -CP	
Miscellaneous					
SW401	40T35666Y04	ENC, EC11E15344 -DB (MODE/B. OUT)	40T35666Y07	ENC, EC11E15344 -DB (MODE/B. OUT)	

CDA-7990R

CD Deck Mechanism Assembly Parts List

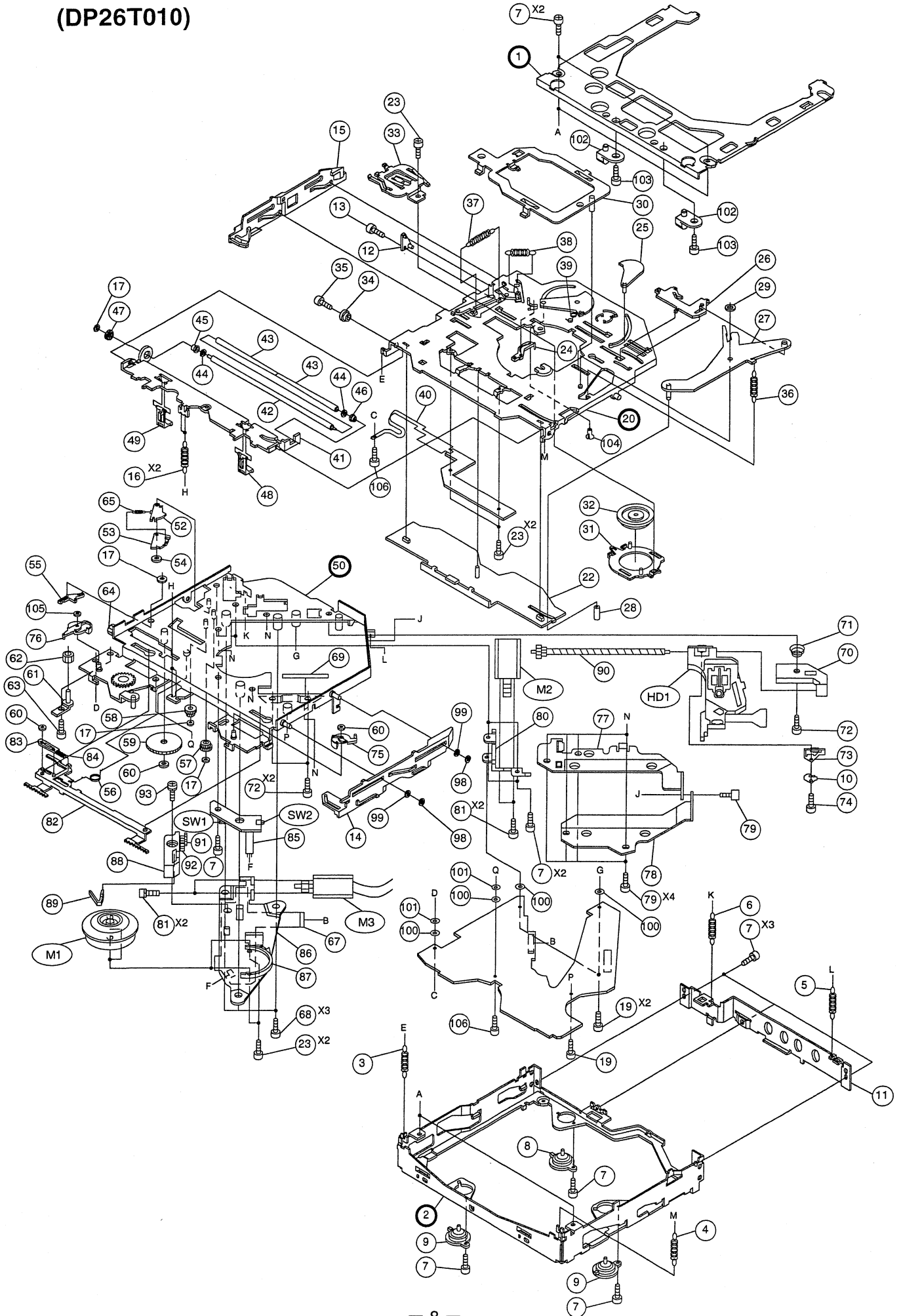
NOTE: Parts without part number are not supplied.

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
3		41B31430Y01	SPRING, PULL	55		01A31151Y01	ASSY, RIV. ARM TIMING
4		41B31430Y02	SPRING, PULL	56		41A31432Y01	SPRING, SLIDER
5		41B31430Y03	SPRING, PULL	57		44B30944Y01	GEAR, (B)
6		41B31430Y04	SPRING, PULL	58		44B30945Y01	GEAR, (C)
7		03S94385F19	SCR, NYLOK M2X2.5	59		44B30946Y01	GEAR, (D)
8		75C31436Y01	DAMPER, DV-T	60		04B41345P12	WASH, L. 1.7X3.5X0.35
9		75C31436Y03	DAMPER, DV-T	61		01A31145Y01	ASSY, RIV. BKT. GEAR-E
10		07A40502Y01	BKT, SPRING NUT	62		44B30947Y01	GEAR, (E)
11		07C30910Y02	BKT, CHASSIS-B	63		03S94385F07	SCR, NYLOK M2X2
12		01A31147Y01	ASSY, RIV. LEV. CLP (B)	64		44B30948Y01	GEAR, (F)
13		03A41113Y01	SCR, MCH M1.7X0.35	65		41B31430Y08	SPRING, PULL
14		45B30959Y01	SLIDER, LOCK (R)	67		84T35623Y01	FPC, MECH
15		45B30960Y01	SLIDER, LOCK (L)	68		03A31494Y01	SCREW, DRIVE
16		41B31430Y09	SPRING, PULL	69		47A31437Y01	SHAFT, PICK
17		04B41345P18	WASH, 1.2X2.5X0.35	70		07B30988Y01	BKT, ADJUST
19		03S38013W25	SCREW, T-TITE M2X4	71		41A31434Y01	SPRING, COMP-DRIVE
22		15D30952Y01	GUIDE, TOP DVT	72		03A31102Y01	SCREW, ADJUST
23		03S94385F28	SCR, NYLOK M1.7X2	73		41B31853Y01	SPRING, NUT F-1
24		45A30962Y01	LEVER, ACTUATOR	74		03A40577Y01	SCREW, H2 M1.7X3
25		45B30961Y01	LEVER, STP-DISC (R)	75		45B30957Y01	ARM, LOCK (R)
26		45A30878Y01	LEVER, LOCK	76		45B30958Y01	ARM, LOCK (L)
27		01A31152Y01	ASSY, RIV. LEVER DISC	77		07B30890Y02	COVER, SHAFT-MAIN
28		43A31103Y01	BUSH, LEVER DISC	78		07B30891Y02	COVER, SHAFT-SUB
29		04B41345P14	WASH, L. 2.1X4X0.25	79		03S94385F88	SCR, NYLOK M2X2
30		01B31146Y01	ASSY, RIV. SLIDER CLP	80		07B30872Y01	BKT, MOTOR LOAD
31		01A31150Y01	ASSY, RIV. HOLDER CLP	81		03S40014G97	SCR, MCH M1.4X2.5
32		43B30963Y01	TABLE, CLAMPER	82		01B31144Y01	ASSY, RIV. SLIDER LD
33		07B30884Y01	PLATE, CLAMP	83		44B30951Y01	RACK
34		43A31157Y01	BUSH, ARM GUIDE	84		41A31433Y01	SPRING, COMP-LOAD
35		03S94385F02	SCR, NYLOK M1.7X3	85		30T15126W17	WIRE, PC JOINT 3P
36		41B31430Y05	SPRING, PULL	86		07B30887Y02	BKT, MOTOR-SPINDLE
37		41B31430Y06	SPRING, PULL	87		07B30989Y01	COVER, MOTOR
38		41B31430Y07	SPRING, PULL	88		07B30964Y01	BKT, SLED
39		41A31431Y01	SPRING, LEVER	89		41A30889Y01	SPRING, SHAFT
40		84T35622Y01	FPC, LED	90		01V36900Y80	ASSY, SHAFT SCR F-1
41		01A31143Y02	ASSY, RIV. ARM GUIDE	91		44A30966Y01	GEAR, MIDDLE
42		47A31156Y01	SHAFT, ROLLER	92		44A30967Y01	GEAR, IDLER
43		49A31435Y01	ROLLER, DV-T	93		03S40014G84	SCREW, MACHINE M2X6.5
44		04S40075G09	WASH, 2.6X4.7X0.25	98		04B41345P15	WASH, 1.2X3.5X0.35
45		43A30955Y01	BUSH, ROLLER (R)	99		04A40504Y02	WASHER, 1.5X3X0.3
46		43A30956Y01	BUSH, ROLLER (L)	100		14A40070Y01	INSULATOR, DPT-1
47		44A30949Y01	GEAR, (G)	101		14A40071Y01	INSULATOR, DPT-2
48		44A30953Y01	ARM, FRONT (R)	102		07A41797Y01	BKT, STOPPER DISC (F)
49		44A30954Y01	ARM, FRONT (L)	103		03S94385F01	SCR, NYLOK M1.7X2.3
52		45A30882Y01	ARM, LINK (A)	104		43A41839Y01	ROLLER, STP-DISC
53		45A30883Y01	ARM, LINK (B)	105		04B41345P27	WASH, L. 1.7X4.6X0.5
54		04B41345P24	WASH, 2.1X5X0.35	106		03S94385F09	SCR, NYLOK M2X3 P2

Exploded View (CD Deck Mechanism)

CDA-7990R

(DP26T010)



● DC/DC CONVERTER Unit

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Electrical Parts List	
Cabinet Assembly Parts List	
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Schematic Diagram (Only Difference)

NOTE: Refer to the Service Manual CDA-7990R
(Part No. 68E31567S01) for description not mentioned
in this manual.

