

 **PIONEER**[®]
The Art of Entertainment

*Service
Manual*

ORDER NO.
ARP2762

COMPACT DISC PLAYER

PD-77

HEM, SL

- Refer to the service manual ARP2298 for PD-75/HEM.
- This manual is applicable to PD-77/HEM and SL.

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	$\rightarrow 56 \times 10^1 \rightarrow 561$	RD1/8PM	5 6 1 J
47k Ω	$\rightarrow 47 \times 10^3 \rightarrow 473$	RD1/4PS	4 7 3 J
0.5 Ω	$\rightarrow 0R5$	RN2H	0 R 5 K
1 Ω	$\rightarrow 010$	RS1P	0 1 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	$\rightarrow 562 \times 10^1 \rightarrow 5621$	RN1/4PC	5 6 2 1 F
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PD-77/HEM, SL and PD-75/HEM have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		PD-75/HEM	PD-77/HEM	PD-77/SL	
⊙	MAIN BOARD assembly	PWZ1994	No.1
	MAIN BOARD assembly	.....	PWZ2631	PWZ2631
NSP	PRIMARY BOARD assembly	PWZ1988	.....	.....
	PRIMARY BOARD assembly	.....	PWZ1989	PWZ1989
⊙	ANALOG BOARD assembly	PWM1364	.....	.....
	ANALOG BOARD assembly	.....	PWM1804	PWM1804
Δ	Power transformer (T1 : 17VA)	PTT1163	PTT1163	PTT1164	
	Power transformer (T2 : 8VA)	PTT1167	PTT1167	PTT1168	
	Voltage selector (AC110/120 - 127/220/240V)	.....	.....	PSB1002
NSP	Digital button	PAC1530	PAC1649	PAC1649	
	Power button	PAC1539	PAC1650	PAC1650	
	Function button	PAC1609	PAC1619	PAC1619	
	Top panel	PAN1123	.....	.....
	Front panel	PAN1219	.....	.....
	Front panel	.....	PAN1270	PAN1270
	Front panel assembly	PEA1178	.....	.....
	Side sash	PAN1220	.....	.....
	SH screw	PBA1033	.....	.....
	Screw	PBA1038	.....	.....
	Bonnet	PYY1071	PEA1123	PEA1123	
	Side rubber	.....	PEB1239	PEB1239
	Side spacer	.....	PEB1240	PEB1240
	Side board (L)	PMM1039	.....	.....
	Side board (R)	PMM1040	.....	.....
Side sheet A	.....	PNM1222	PNM1222	
Wood collar	PNW1238	.....	.....
NSP	Function panel	PNW2065	PNW2252	PNW2252	
	Panel stabilizer	.....	PNW2253	PNW2253
	Tray plate assembly	PXA1395	PXA1486	PXA1486	
	Collar	.....	RAT1002	RAT1002
	Screw	.....	VBA1027	VBA1027

Mark	Symbol & Description	Part No.			Remarks
		PD-75/HEM	PD-77/HEM	PD-77/SL	
NSP	Name plate	AAM1001	.....	.....	No.8
	Badge	.....	RAN1011	RAN1011	
	Cushion (2)	.....	PEB1251	PEB1251	
	Wood spacer	PEC1001	.....	.....
NSP	Spacer	PNM1145	.....	.....
NSP	Rear base	PNA1542	PNA1917	PNA1916	No.9
NSP	Rapping cover	.....	.....	REB1069	
NSP	Lens holder	.....	PEB1200	PEB1200	No.10
NSP	Spacer	.....	PNM1135	PNM1135	No.11
NSP	Shield plate	.....	PNM1228	PNM1228	No.12
	CD packing case	PHG1733	PHG1870	PHG1870	
	Protector (F)	PHA1171	PHA1226	PHA1226	
	Protector (R)	PHA1172	PHA1227	PHA1227	
	Remote control unit	PWW1057	PWW1056	PWW1056	
	Operating instructions (English/French)	PRE1149	PRE1172	PRE1172	
	Operating instructions (German/Italian/ Dutch/Swedish/Spanish/Portuguese)	PRF1048	PRF1060	.....

Note: Refer to the exploded views for the remarks No.1 to No.12.

MAIN BOARD ASSEMBLY

PWZ2631 and PWZ1994 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		PWZ1994	PWZ2631	
	L3	LRA010K	LFA010K	
	L701, L702	LAUR22K	LAU010K	
	C70 - C73	CFTXA103J50	.....
	C115	CKCYF103Z50	CCCCH101J50	
	C164	CKCYF103Z50	.....
	C704	CCCSL100D50	.....
	R125	.....	RD1/6PM473J	
	C199	.....	CKDYF103Z50	

PRIMARY BOARD ASSEMBLY

PWZ1989 and PWZ1988 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		PWZ1988	PWZ1989	
	L311	PTL1002	.....
	C311	VCG - 048	RCG - 009	
	C312, C313	VCG - 048	.....

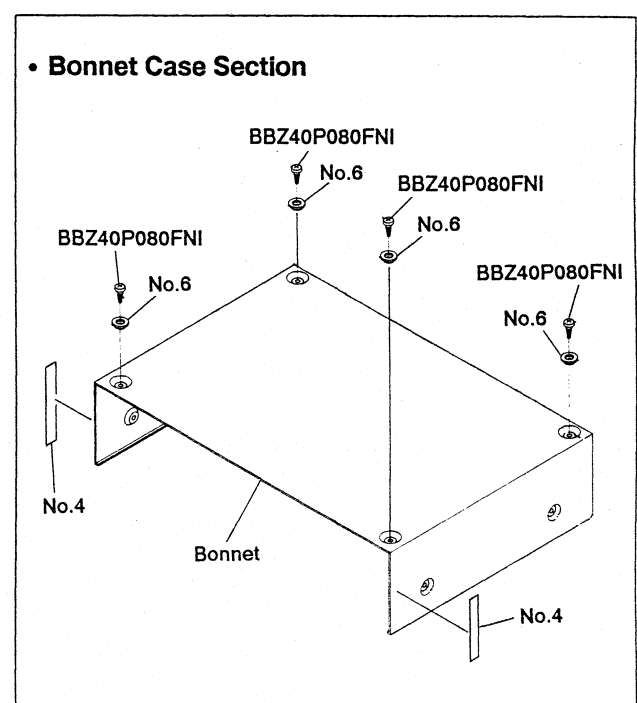
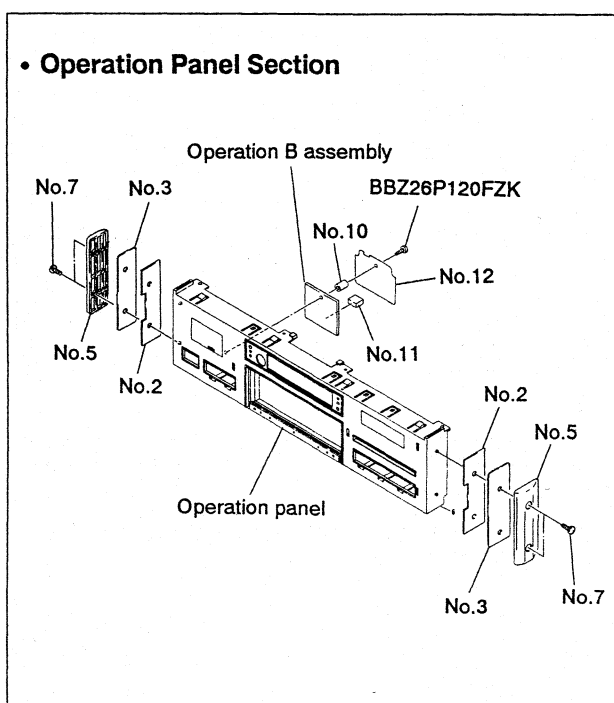
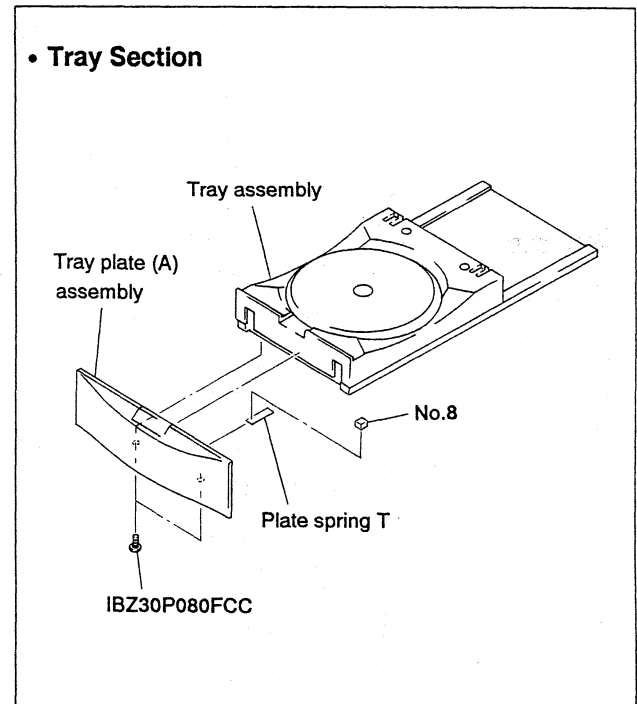
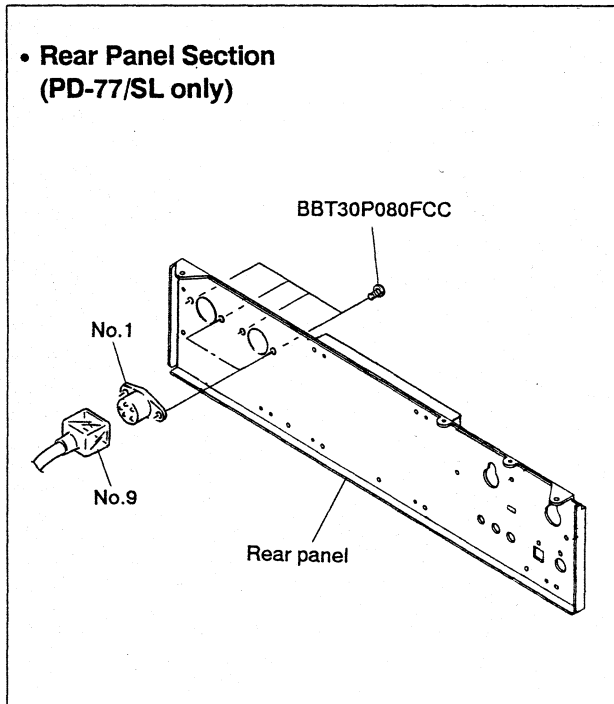
PCB PARTS LIST

Mark	No.	Description	Part No.
ANALOG BOARD ASSEMBLY			
SEMICONDUCTORS			
△		IC620, IC621	ICP-N15
		IC554, IC555, IC615	NJM5532DD
		IC501, IC502	NJM7805FA
		IC513	PD0116A
		IC522, IC523	PD2028B
		IC512	TC74HCU04AP
		Q625	2SA933S
		Q621, Q623	2SB715
△		Q617, Q622	2SB857
		Q626	2SC1740S
		Q554-Q557, Q562, Q563	2SC3068
△		Q619, Q624	2SD1133
		Q618, Q620	2SD755
		Q559, Q560	2SJ104
		Q558, Q561	2SK364
		Q522, Q523	DTA124ES
		Q521, Q524, Q525	DTC124ES
△		D610-D613, D620-D627	10DF2FA9
		D521, D550, D551, D570, D571	1SS292
△		D628-D631	HZ5CLL
COILS			
		L511, L512, L522, L523, L525-L527	LAU010K
		L513, L514, L564	PTH1006
		L551-L554	VTH1013
CAPACITORS			
		C517, C518, C538, C539	CCCCH120J50
		C540, C541	CCDCH101J50
		C505	CENA101M25
		C516, C519, C524, C528, C532, C535,	CENA102M16
		C556, C557, C576, C577, C589, C593,	
		C594, C597	
		C606, C607	CENA102M35
		C520	CEAS331M50
		C602, C603, C620, C621	CENA470M50
		C600, C601	CENA471M16
		C568-C571	CENA471M50
		C574, C575	CFTXA102J50
		C503, C504, C508, C511, C512, C515,	CFTXA103J50
		C578, C579, C584, C585, C599,	
		C608-C618, C624, C625	
		C501, C502, C506, C507, C526, C534,	CFTXA104J50
		C554, C555, C558, C559, C581, C590,	
		C595	
		C510, C514, C521, C546, C547, C586	CFTXA473J50
		C566, C567	CFTXA562J50
		C564, C565	CFTXA681J50
		C522, C530, C531, C591	CFTXA682J50
		C582, C583	CFTXA683J50
		C542, C543, C550, C551	CMA181J500
		C544, C545, C552, C553	CMA330J500
		C560-C563	CMA470J500

- NOTE FOR SCHEMATIC DIAGRAMS**
(Type 4)
- When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".
 - Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
 - RESISTORS:**
Unit: k Ω , M Ω , or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ or $\pm 5\%$ unless otherwise noted.
 - CAPACITORS:**
Unit: pF or μF unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.
Ratings: capacitor (μF) / voltage (V) unless otherwise noted.
 - COILS:**
Unit: m: mH or μH unless otherwise noted.
 - VOLTAGE AND CURRENT:**
□ : DC voltage (V) in PLAY mode unless otherwise noted.
◁ mA or - mA : DC current in PLAY mode unless otherwise noted.
Value in () is DC current in STOP mode.
 - OTHERS:**
● : Signal route.
⊙ : Adjusting point.
▲ (Red) : Measurement point.
● (The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.)

- SWITCHES** (Underline indicates switch position):
S401 : TRACK SEARCH
S402 : PAUSE (II)
S403 : PLAY (▶)
S404 : OPEN/CLOSE (▲)
S405 : STOP (■)
 - OPERATION A BOARD ASSEMBLY**
S406 : DISPLAY OFF
S407 : OUTPUT
 - OPERATION B BOARD ASSEMBLY**
S408 : OUTPUT
9. **SCH-□ ON THE SCHEMATIC DIAGRAM:**
● SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

● EXPLODED VIEWS

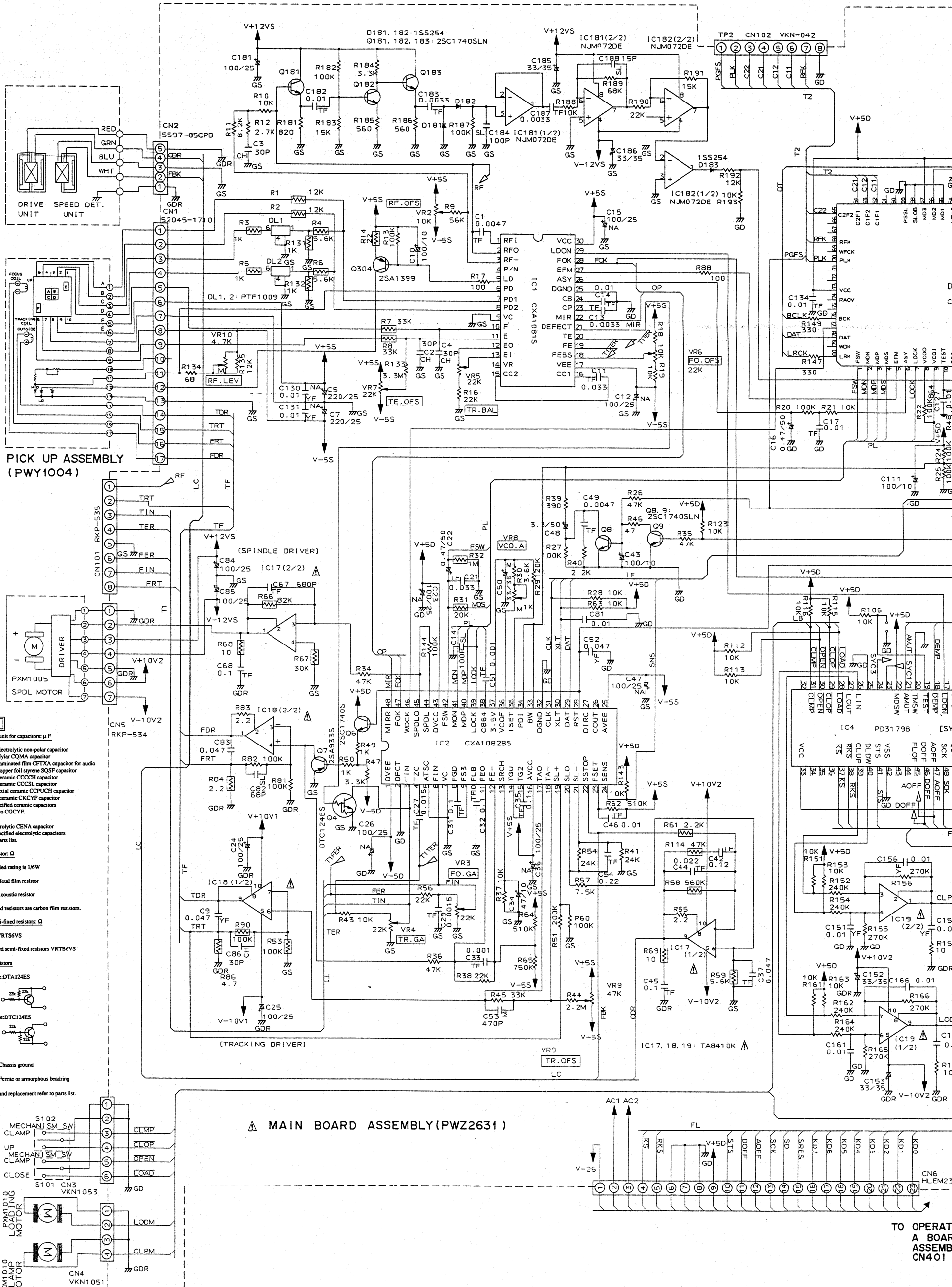


Part No.	Mark No.	Description	Part No.
	C527, C529		CQMA473J50
	C587, C588 (C=220, V(AC)=35)		PCH1099
	C604, C605 (C=2200, V(AC)=35)		PCH1102
	C523 (C=0.01, V(DC)=50)		PCL1029
	C572, C573 (C=22, V(DC)=50)		VCH1091
	RESISTORS		
	R502, R512-R514		RDM1/4PM471J
	R571, R574		RDM1/2P105J
	R579, R581		RDM1/2P122J
	R576, R577 (1.6K)		RDM1/2P162J
	R570, R573 (220 Ω)		RDM1/2P221J
	R582, R583		RDM1/2P223J
	R578, R580		RDM1/2P242J
	R588, R589		RDM1/2P101J
	R584, R585 (180 Ω)		RDM1/2P181J
	R590, R591		RDM1/2P511J
	R568, R569 (750 Ω)		RDM1/2P751J
	R651-R654 (4.7 Ω)		RDR1/2PM4R7J
	R645, R646 (1.3k Ω)		RDR1/4PM132J
	R544, R545, R550, R551, R556-R559 (15K)		RDR1/4PM153J
	R564-R567 (18K)		RDR1/4PM183J
	R529 (22K)		RDR1/4PM223J
	R528, R530 (47K)		RDR1/4PM473J
	R659, R660 (5.1K)		RDR1/4PM512J
	R540-R543, R552-R555, R655, R656 (7.5K)		RDR1/4PM752J
	R546-R549, R560-R563 (8.2K)		RDR1/4PM822J
	R657, R658 (9.1K)		RDR1/4PM912J
	R647, R648		RNI/4PQ3001F
	R649, R650		RNI/4PQ4301F
	R505, R522, R524 (10K)		RS1LMF103J
	OTHER RESISTORS		RD1/6PM□□□J
	OTHERS		
	CN501 CONNECTOR (10P)		KPC10
	X512 CRYSTAL RESONATOR(16.9344MHz)		PSS1011
	JA551 PIN JACK (1P)		RKB1010
	JA552 PIN JACK (1P)		RKB1011
	SCREW		IBZ30P100FCC

2. SCHEMATIC AND PCB DIAGRAMS

1. MAIN, PICK UP, OPERATION A, OPERATION B AND PRIMARY BOARD ASSEMBLIES

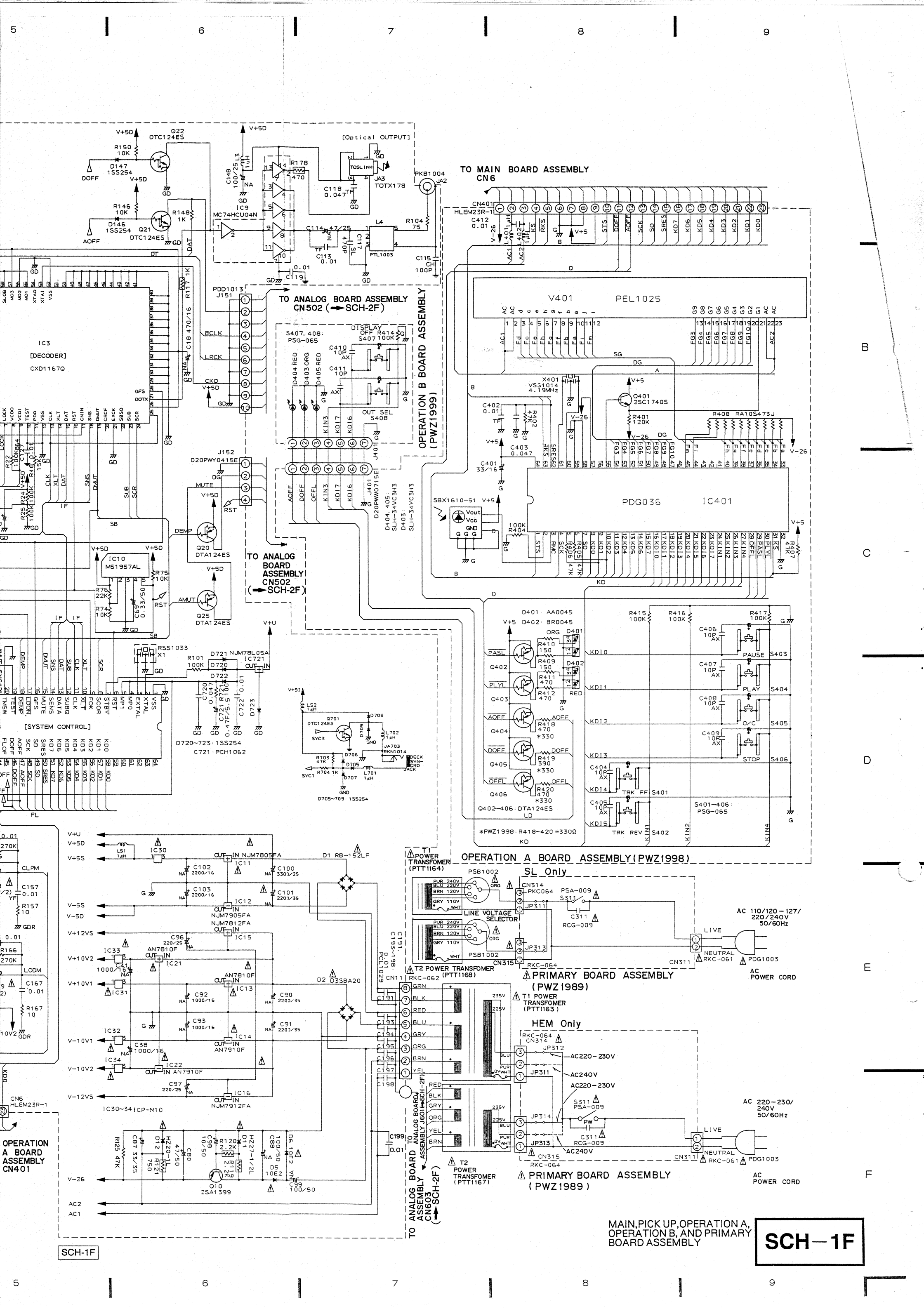
A
B
C
D
E
F



SCH-1F

MAIN, PICK UP, OPERATION A, OPERATION B, AND PRIMARY BOARD ASSEMBLY

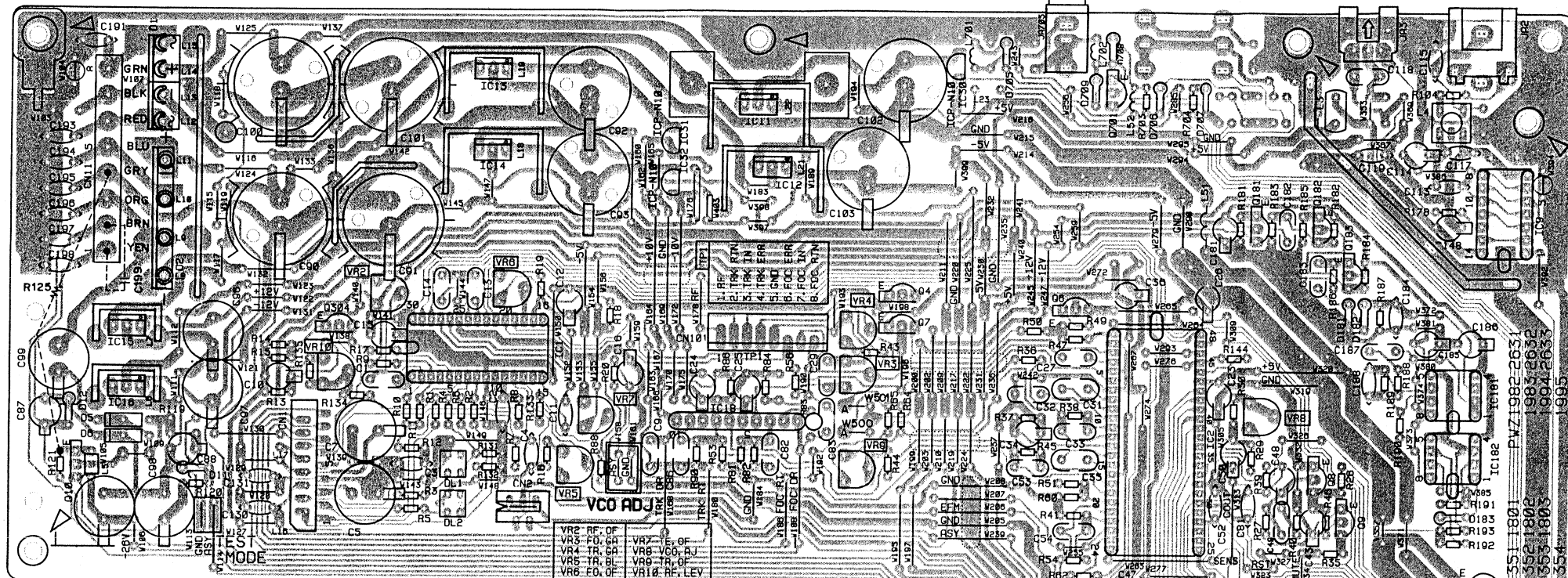
TO OPERATE BOARD ASSEMBLY CN401



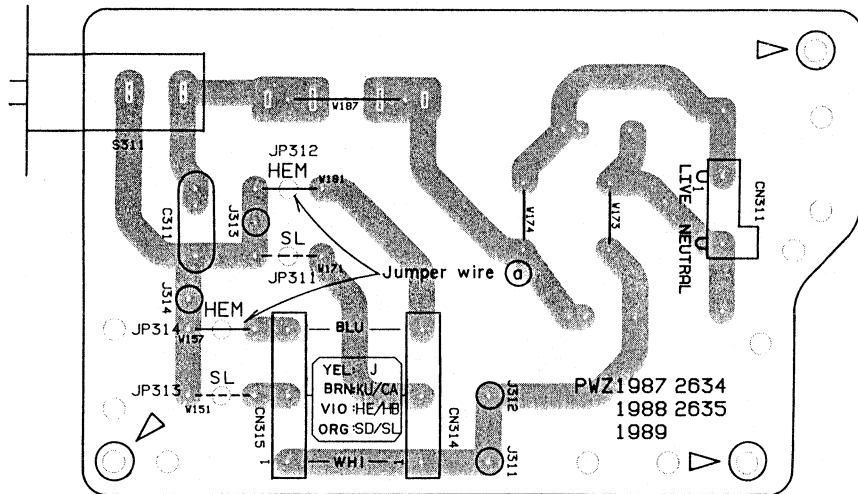
MAIN, PICK UP, OPERATION A, OPERATION B, AND PRIMARY BOARD ASSEMBLY

• View from component side

MAIN BOARD ASSEMBLY



PRIMARY BOARD ASSEMBLY



Line Voltage Selection

- Line voltage can be changed with the follows:
1. Disconnect the AC power cord.
 2. Remove the Top cover.
 3. Change the position of the jumper wire @ as follows.

Voltage	Jumper wire @ position
220V	JP312, JP314
240V	JP311, JP313

4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label

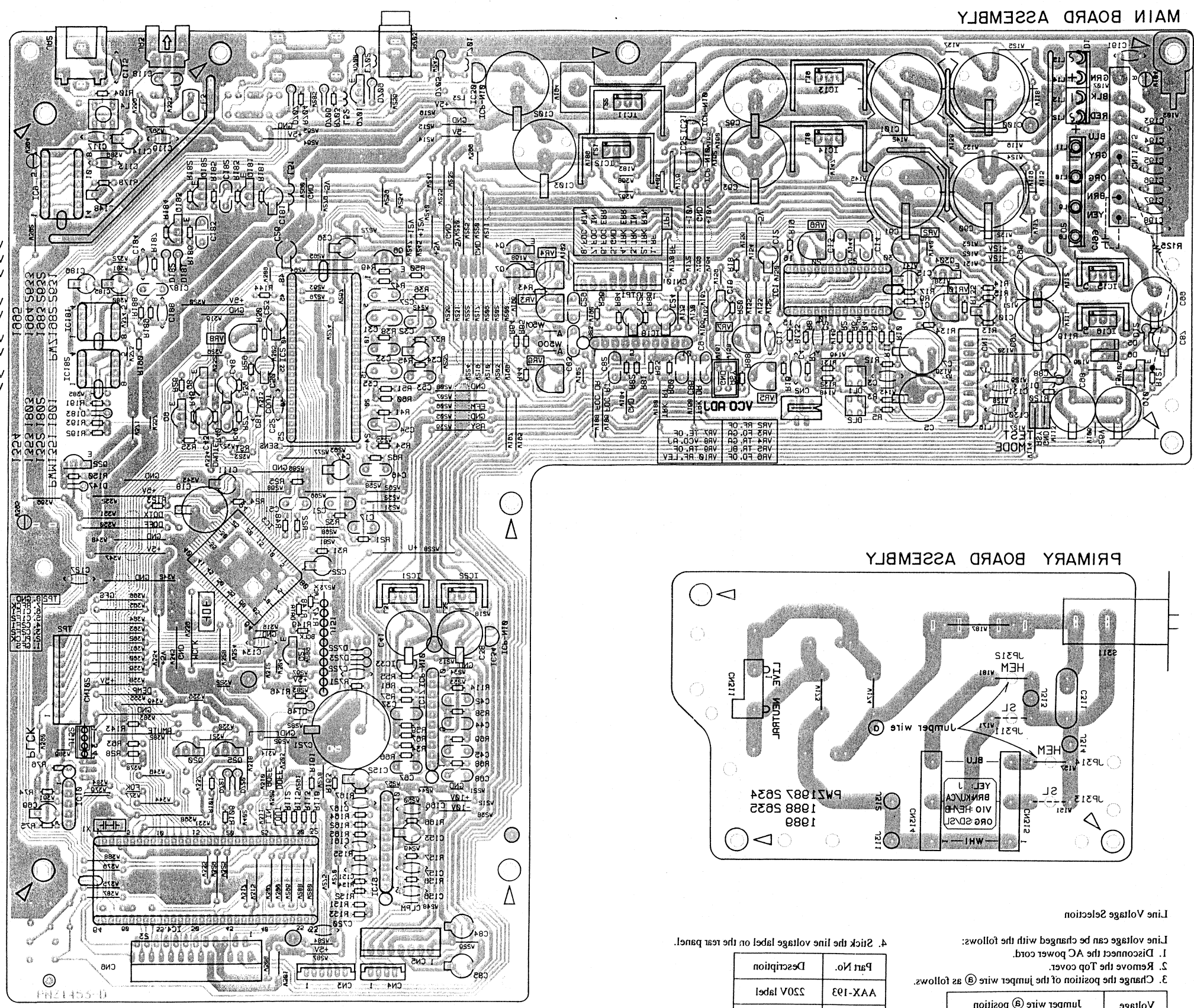
P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		FET
		Diode
		Zener diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
		Styrol capacitor
		Electrolytic capacitor (Non polarized)
		Electrolytic capacitor (Noiseless)
		Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with shows negative terminal.
4. The diode marked with shows cathode side.
5. The transistor terminal marked with shows emitter.

- IC13 IC30 A
- IC11 Q701
- IC31 IC12
- IC14 IC9
- Q181 Q183
- Q182 Q6
- VR2 Q4
- VR6 Q7
- VR4 Q304
- VR10 IC15
- VR3 IC1
- VR7 IC16
- VR8 IC18
- VR5 IC2
- VR9 Q10
- Q8
- Q9
- Q22
- IC3
- IC22
- IC21
- IC34
- IC33 Q21
- IC17
- Q25
- Q20
- IC10
- IC19
- IC4

PNP1186-F

• View from soldering side



IC13 IC30
IC11 Q301
IC31
IC14
IC15
IC35
IC9
Q185
Q183
Q4
Q6
VR5
VR6
VR4 Q304
IC12
VR10
VR3
VR16 IC181
VR1
VR7
VR8
VR5
VR2
Q10
Q8
Q9
Q55
IC3
IC31
IC55
IC34
IC33 Q51
IC15
Q52
Q50
IC10
IC18
IC4
IC14
IC10
IC18
IC4
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IC12
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IC18
IC15
IC14
IC11
IC13
IC30

A
B
C
D

PD-77

Line Voltage Selection	Part No.	Description
340V	AX-192	340V label
320V	AX-193	320V label

Line Voltage Selection	Part No.	Description
340V	AX-192	340V label
320V	AX-193	320V label

- Change the position of the jumper wire (B) as follows.
- Remove the top cover.
- Disconnect the AC power cord.

4. Stick the line voltage label on the test panel.

Line Voltage Selection

Line voltage can be changed with the follows:

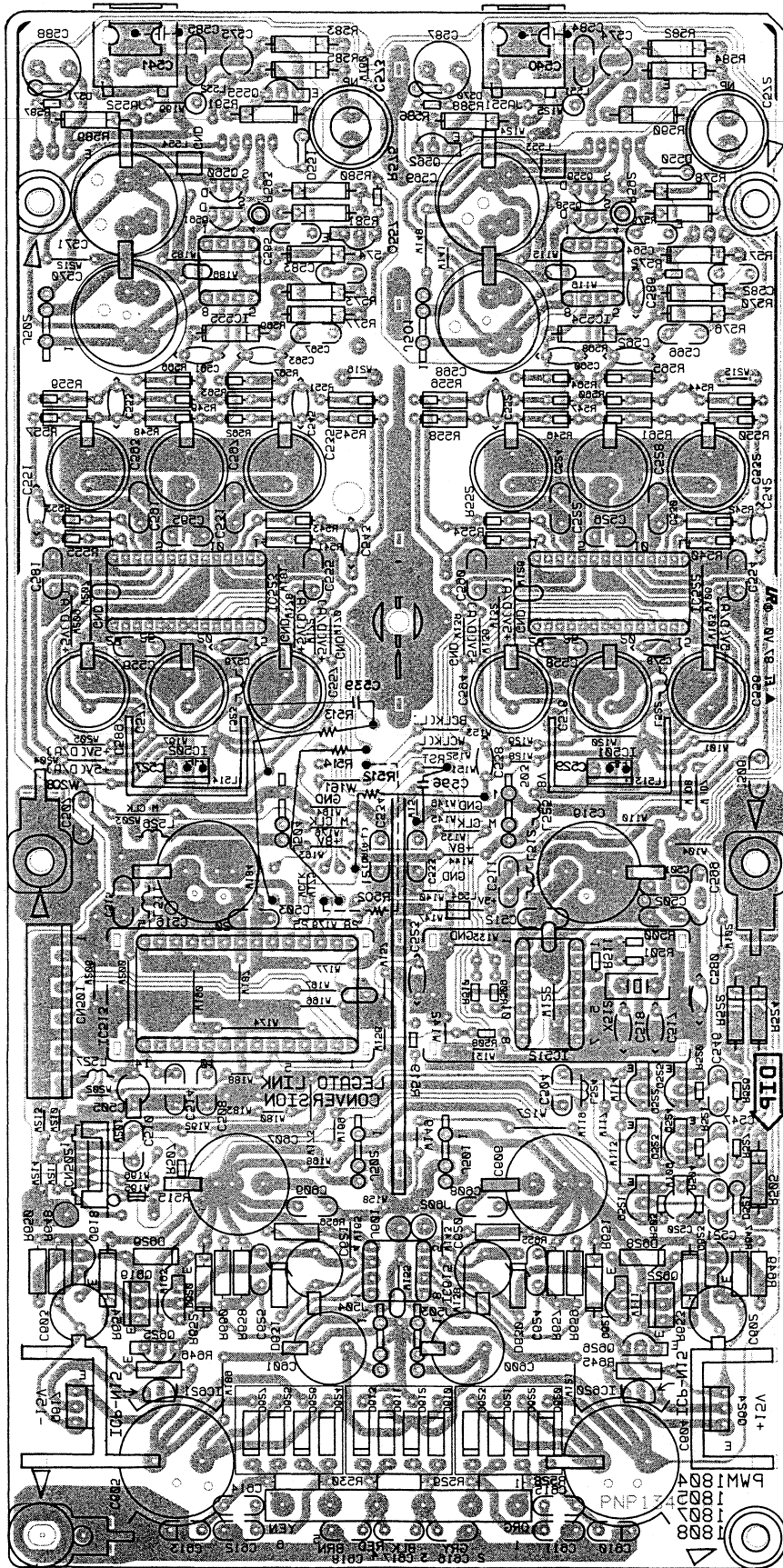
PD-77

A
B
C
D

5. ANALOG BOARD ASSEMBLY

• View from soldering side

ANALOG BOARD ASSEMBLY



- 0252
- 0255
- 0258
- 0260
- 0261
- 0262
- 0263
- 0264
- 0265
- 0266
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- 0272
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- 0399
- 0400

PNP1341-A

A

B

C

D

3

5

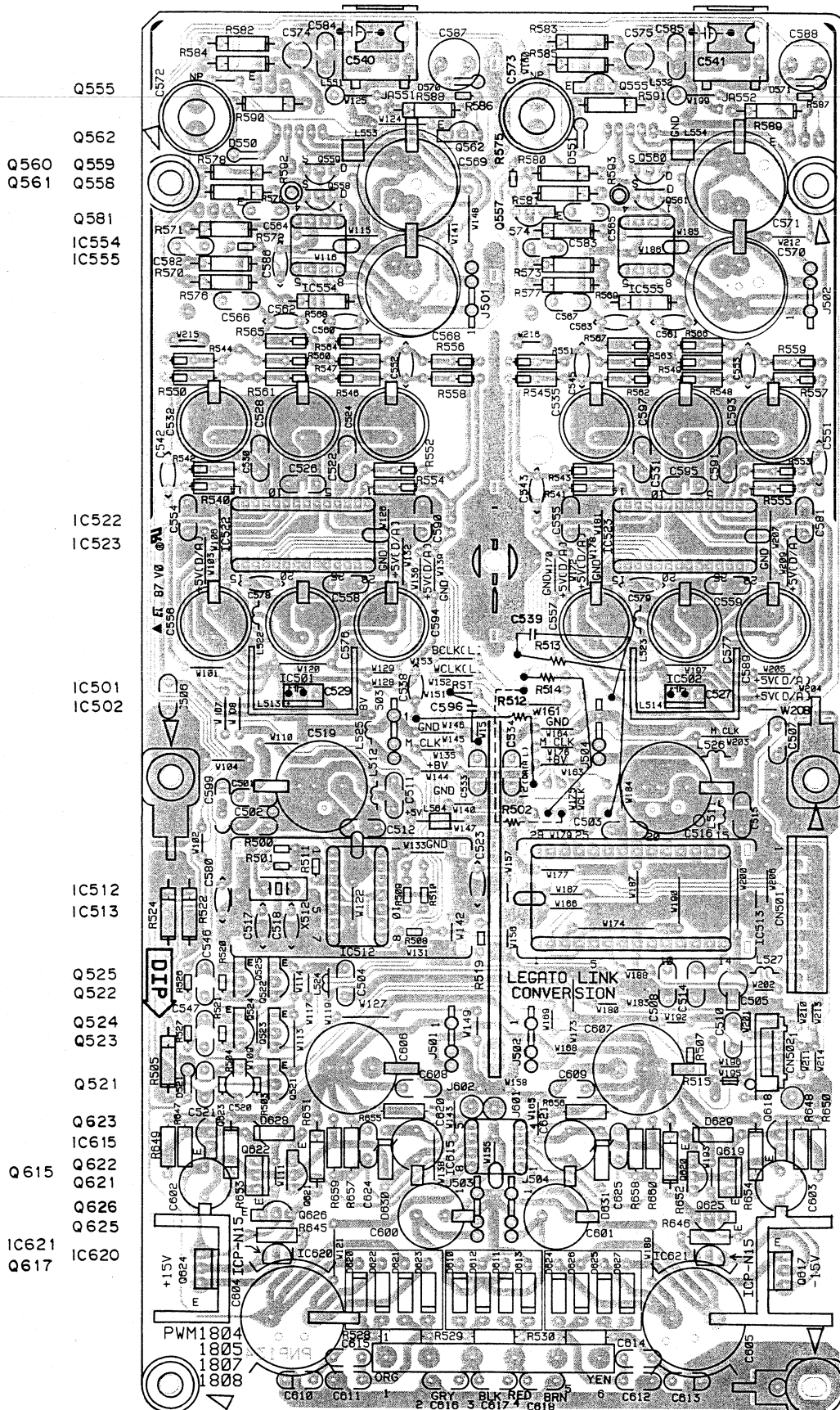
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13

2. ANALOG BOARD ASSEMBLY

• View from component side

ANALOG BOARD ASSEMBLY



- Q555
- Q562
- Q560
- Q561
- Q559
- Q558
- Q581
- IC554
- IC555
- IC522
- IC523
- IC501
- IC502
- IC512
- IC513
- Q525
- Q522
- Q524
- Q523
- Q521
- Q623
- IC615
- Q615
- Q622
- Q621
- Q626
- Q625
- IC621
- Q617
- IC620

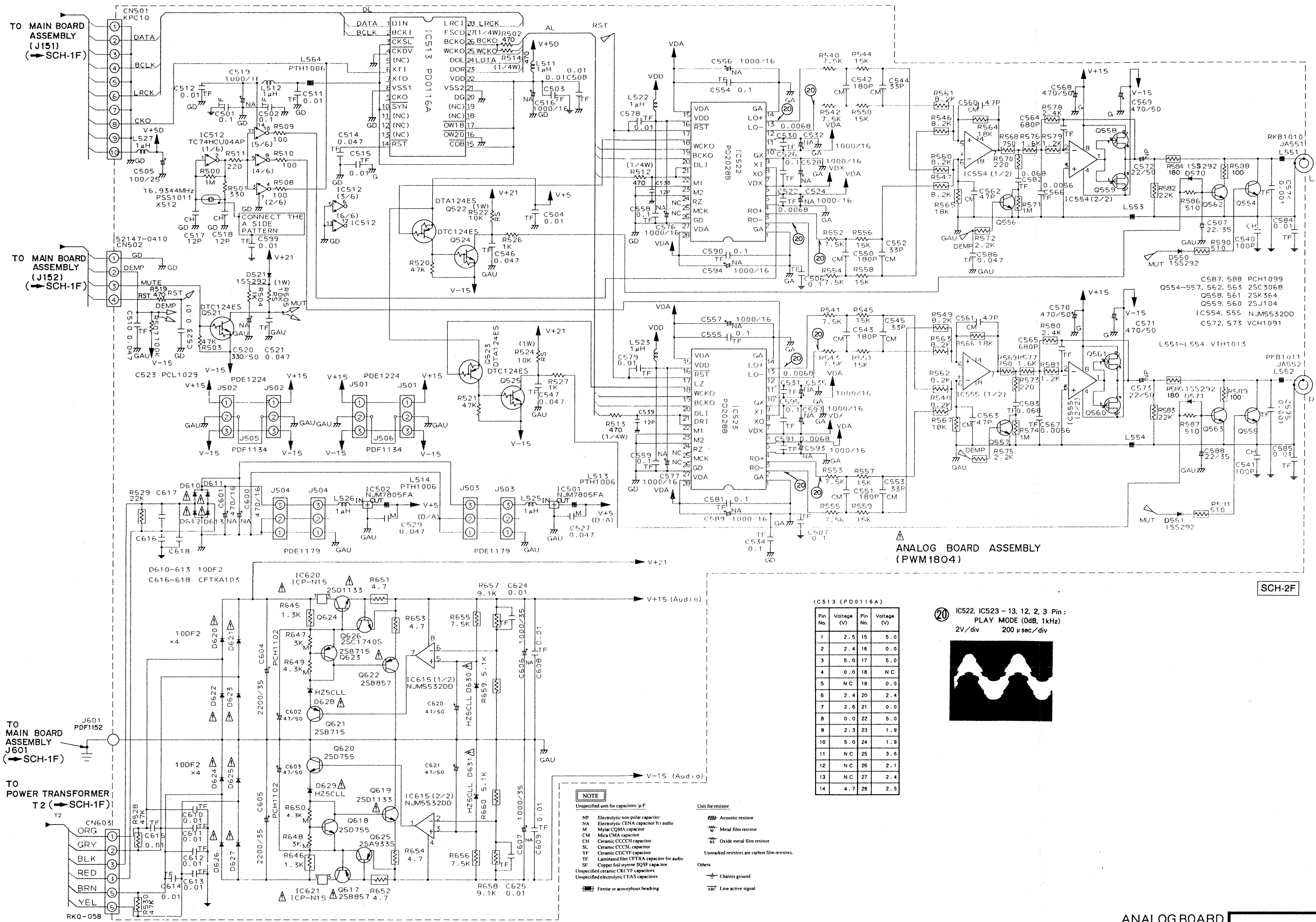
A

B

C

D

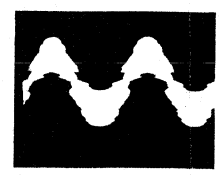
PNP1341-A



IC513 (P0116A)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	2.5	15	5.0
2	2.4	16	0.0
3	5.0	17	5.0
4	0.0	18	NC
5	NC	19	0.0
6	2.4	20	2.4
7	2.6	21	0.0
8	0.0	22	5.0
9	2.3	23	1.9
10	5.0	24	1.9
11	NC	25	3.6
12	NC	26	2.1
13	NC	27	2.4
14	4.7	28	2.5

IC522, IC523 - 13, 12, 2, 3 Pin:
PLAY MODE (0dB, 1kHz)
2V/div 200 μsec/div



- NOTE**
- Unspecified units for capacitors: μF
 - NP Electrolytic non-polar capacitor
 - NA Electrolytic CERA capacitor for audio
 - M Mylar CQMA capacitor
 - CM Mica CMA capacitor
 - CH Ceramic CCCC capacitor
 - SL Ceramic CCCC capacitor
 - YF Ceramic CCCC capacitor
 - TF Laminated film CFXA capacitor for audio
 - SF Copper foil styrene SQSF capacitor
 - Unspecified ceramic CCCC capacitors
 - Unspecified electrolytic CEAS capacitors
 - Teristic or anorthous heading
- Unit for resistor**
- Acoustic resistor
 - Metal film resistor
 - Oxide metal film resistor
 - Unmarked resistors are carbon film resistors.
 - Others
 - Chassis ground
 - Low active signal

SCH-2F

SCH-2F

ANALOG BOARD ASSEMBLY