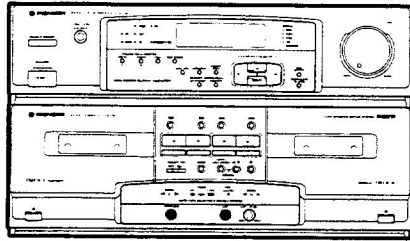


Service Manual

PIONEER
The Art of Entertainment



ORDER NO.
ARP2653

DOUBLE DECK AMPLIFIER

DC-J210 DC-J110

DC-J210 AND DC-J110 HAVE THE FOLLOWING :

Type	Model		Power Requirement	Remarks
	DC-J210	DC-J110		
SD	○	○*1	AC110V, 120*1-127V, 220V, 240V (Switchable)	*1 120V
SL	—	○	AC110V, 120V, 220V, 240V (Switchable)	
YPW	○	○	AC240V only	

- This manual is applicable to the following : DC-J210/SD and YPW ; DC-J110/SD, SL and YPW.
- For the following : DC-J210/YPW ; DC-J110/SD, SL and YPW, refer to page 59.
- These products are systems components.
Each of these products does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system component (s), otherwise damage may result.

CONTENTS

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DG FEB. 1993 Printed in Japan

1. EXPLODED VIEWS, PACKING AND PARTS LIST

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.

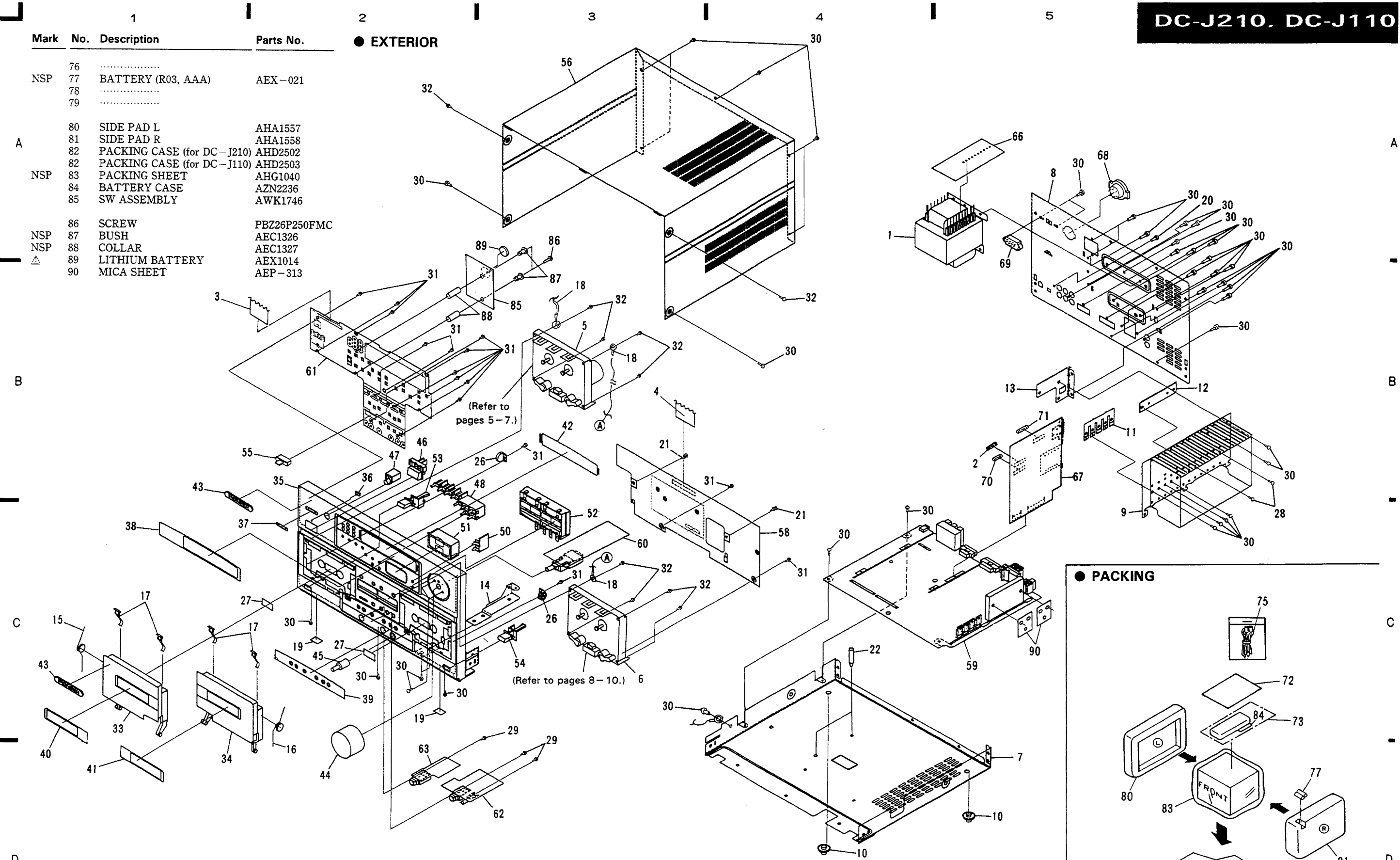
1.1 EXTERIOR AND PACKING

Parts list

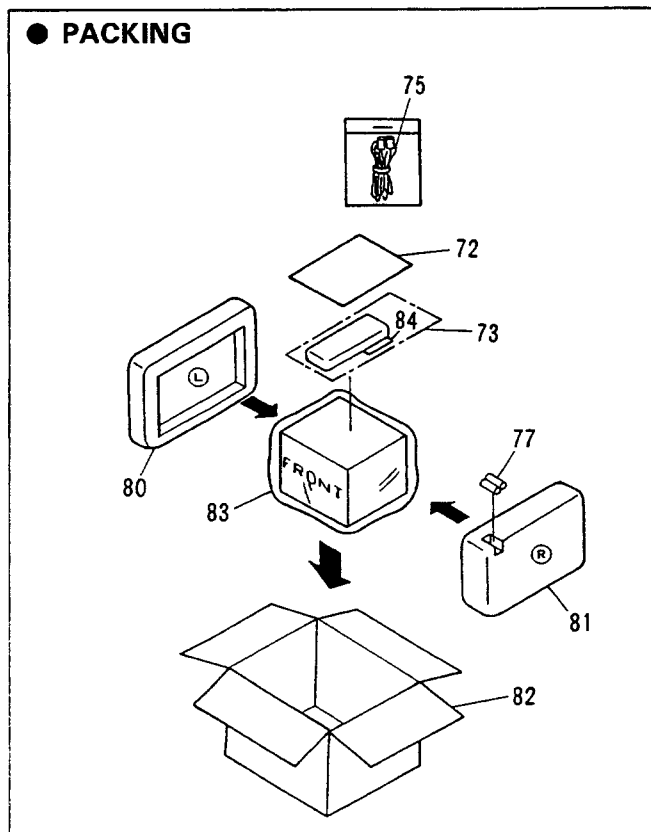
Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
Δ	1	POWER TRANSFORMER (T102 for DC-J210)	ATS1468	39	DECORATIVE PLATE (DECK)	AAK2398	
Δ	1	POWER TRANSFORMER (T102 for DC-J110)	ATS1470	40	DECORATIVE PLATE (DOOR L)	AAK2400	
Δ	2	FUSE (T1.6A/250V, FU1102) (for DC-J210)	AEK-510	41	DECORATIVE PLATE (DOOR R)	AAK2402	
Δ	2	FUSE (T800mA/250V, FU1102) (for DC-J110)	AEK-507	42	FL FILTER (PVC)	AAK2482	
Δ NSP	3	FLAT CABLE (J112)	ADD1112	43	BADGE (ABS)	AAM1047	
Δ	4	FLAT CABLE (J105)	ADD1116	44	VOL KNOB	AAB1337	
	5	1 MECHA UNIT	EXK2026	45	MIC KNOB	AAB1339	
	6	2 MECHA UNIT	EXK2056	46	POWER BUTTON	AAD2370	
	7	CHASSIS (MTL)	ANA1201	47	FUNCTION BUTTON	AAD2372	
	8	REAR PANEL (MTL)	ANC2005	48	BUTTON (GEQ)	AAD2373	
	9	HEAT SINK (AL) (for DC-J210)	ANH1425	49	.....	
	9	HEAT SINK (AL) (for DC-J110)	ANH1408	50	AUDITION BUTTON	AAD2375	
	10	LEG ASSEMBLY	AEC1049	51	CURSOR BUTTON	AAD2377	
NSP	11	HOLDER	ANG1561	52	DECK BUTTON	AAD2379	
NSP	12	HOLDER	ANG1600	53	EJECT BUTTON L	AAD2380	
	13	HEAT SINK HOLDER (MTL)	ANG1777	54	EJECT BUTTON R	AAD2381	
	14	PCB HOLDER A (MTL)	ANG1778	55	SLIDE KNOB	AAE1160	
	15	DOOR SPRING L	ABH1085	56	BONNET CASE (MTL)	ANE1388	
	16	DOOR SPRING R	ABH1086	57	.....	
	17	KEEP PLATE	ABK1017	58	TAPE ASSEMBLY	AWV1318	
NSP	18	EARTH LEAD	ADB1006	59	AF ASSEMBLY (for DC-J210)	AWZ4650	
NSP	19	CUSHION	AEB1194	59	AF ASSEMBLY (for DC-J110)	AWZ4647	
	20	SCREW	ABA-222	60	VOLUME ASSEMBLY	AWZ4653	
	21	NYLON RIVET	AEC1160	61	DISPLAY ASSEMBLY	AWZ4657	
NSP	22	PCB SUPORT (H20)	AEC1200	62	MIC ASSEMBLY	AWZ4663	
	23	.....		63	HEADPHONE ASSEMBLY	AWZ4666
	24	.....		64	.....	
	25	.....		NSP 65	.....	
	26	DAMPER ASSEMBLY	AXA1008	NSP 66	TRANS CONNECT ASSEMBLY	AWZ4672	
	27	SHEET	AAX1301	67	SUB TRANS ASSEMBLY	AWZ4680	
	28	SCREW (3×18)	ABA1018	Δ 68	VOLTAGE SELECTOR (S1) [AC110/120-127 (120 for SL) /220/240V]	AKX-507	
	29	SCREW (2.6×8)	ABA1095	Δ 69	VOLTAGE SELECTOR (S2) (AC110-127/220-240V)	AKX1004	
	30	SCREW	BBZ30P080FZK	Δ 70	FUSE (T1.6A/250V, FU1103) (for DC-J210)	AEK-510	
	31	SCREW	BPZ26P080FMC	Δ 70	FUSE (T800mA/250V, FU1103) (for DC-J110)	AEK-507	
	32	SCREW	VPZ30P080FZK	Δ 71	FUSE (T2.5A/250V, FU1101)	AEK-512	
	33	CASSETTE DOOR L (PLS)	AAN1365	72	OPERATING INSTRUCTIONS (English)	ARB1410	
	34	CASSETTE DOOR R (PLS)	AAN1376	73	REMOTE CONTROL UNIT (CU-DC030)	AXD1337	
	35	FRONT PANEL (PLS) (for DC-J210)	AMB2092	74	.....	
	35	FRONT PANEL (PLS) (for DC-J110)	AMB2095	75	AC POWER CORD	ADG1129	
	36	LENS (POWER)	AAK2442				
	37	FILTER (PLS)	AAK2376				
	38	DECORATIVE PLATE (AMP)	AAK2441				

Mark	No.	Description	Parts No.
	76	.....
NSP	77	BATTERY (R03, AAA)	AEX-021
	78	.....
	79	.....
A	80	SIDE PAD L	AHA1557
	81	SIDE PAD R	AHA1558
	82	PACKING CASE (for DC-J210)	AHD2502
	82	PACKING CASE (for DC-J110)	AHD2503
NSP	83	PACKING SHEET	AHG1040
	84	BATTERY CASE	AZN2236
	85	SW ASSEMBLY	AWK1746
	86	SCREW	PBZ26P250FMC
NSP	87	BUSH	AEC1326
NSP	88	COLLAR	AEC1327
△	89	LITHIUM BATTERY	AEX1014
	90	MICA SHEET	AEP-313

● EXTERIOR



NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.



DC-J210, DC-J110

1.2 CASSETTE 1MECHA UNIT

Note:
When removing the chassis unit to replace the arm unit (EXX1003; No. 55-1/2, 2/2), the chassis unit can be easily removed by cutting the (A) part of No.55 (1/2) with a nippers, etc. (see following illustration).

A

B

C

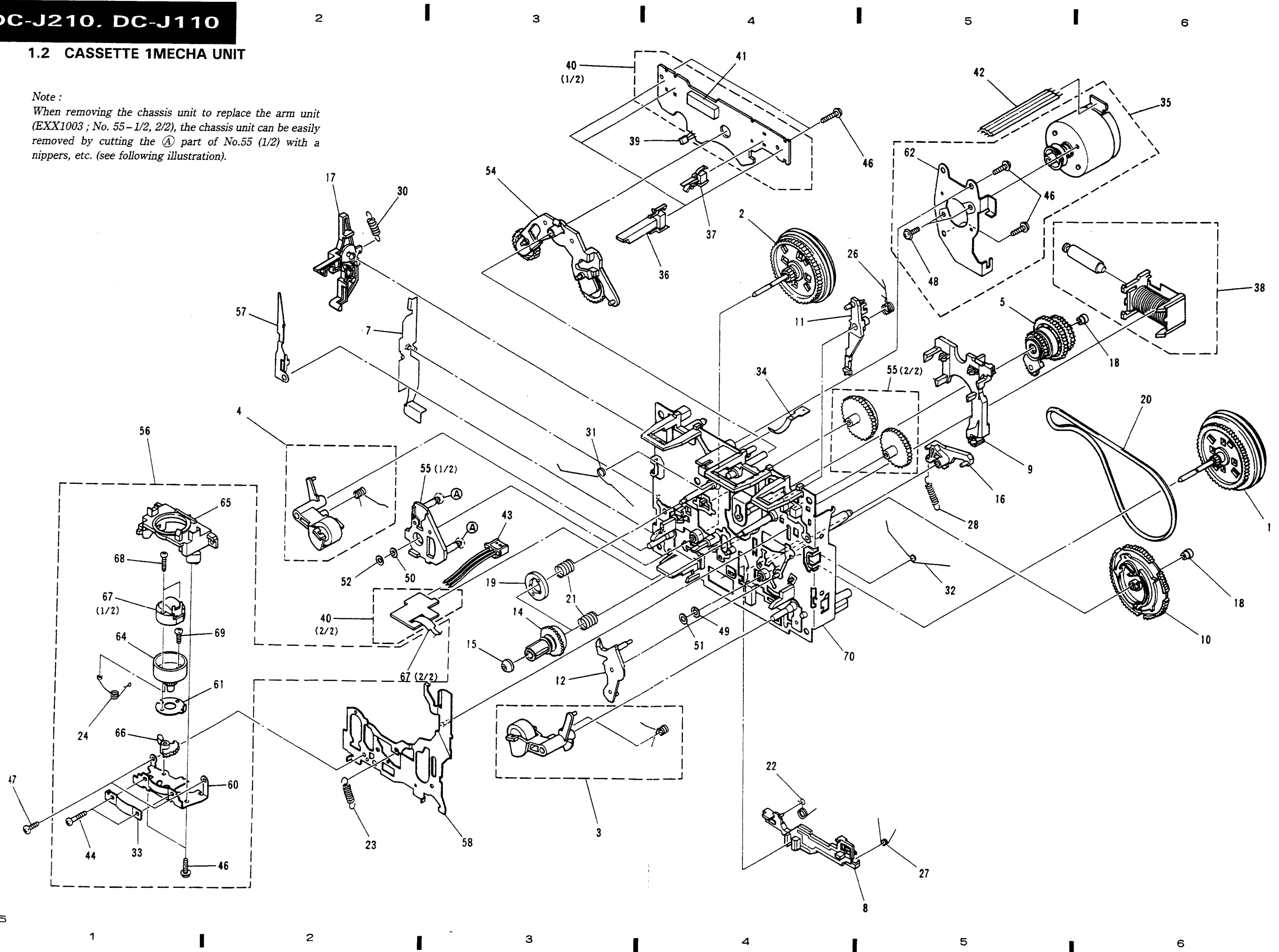
D

A

B

C

D



Parts list

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	FLYWHEEL UNIT (FWD)	EXA1222		46	SCREW (M2×8)	ATZ20P080FMC
	2	FLYWHEEL UNIT (RVS)	EXA1223		47	SCREW	BSZ20P050FMC
	3	ROLLER UNIT (FWD)	EXA1224		48	SCREW	PMS26P025FUC
	4	ROLLER UNIT (RVS)	EXA1225		49	WASHER	EBF1008
	5	LIMITER UNIT	EXA1226		50	WASHER	EBF1009
	6	.....			51	WASHER	EBF1010
	7	EJECT LEVER L2	AZN2063		52	WASHER	EBF1011
	8	LEVER	ENV1305		53	.....
	9	BRAKE	ENV1317		54	ARM UNIT	EXX1006
	10	GEAR	ENV1318		55	ARM UNIT	EXX1003
	11	LOCK ARM	ENV1159		56	P HEAD ASSEMBLY	EXX1008
	12	NR ARM	ENV1163		57	ARM	ENC1288
	13	.....			58	HEAD BASE UNIT	EXA1230
	14	REEL	ENV1335		59	.....
	15	REEL BUSH	ENV1338	NSP	60	BRACKET	ENC1284
	16	ARM	ENV1330	NSP	61	PLATE	ENC1285
	17	EJECT LEVER L1	AZN2108	NSP	62	BRACKET	ENC1199
	18	BUSH	ENV1184		63	.....
	19	MAGNET	ENV1336	NSP	64	HOLDER	ENV1161
	20	BELT	ENT1023	NSP	65	HOLDER	ENV1301
	21	SPRING	EBH1424	NSP	66	GEAR	ENV1177
	22	SPRING	EBH1401	NSP	67	P HEAD UNIT	EXA1110
	23	SPRING	EBH1203	NSP	68	SCREW	JGZ14P085FNI
	24	SPRING	EBH1402	NSP	69	SCREW	JGZ14P040FNI
	25	.....		NSP	70	CHASSIS UNIT	.....
	26	SPRING	EBH1406				
	27	SPRING	EBH1407				
	28	SPRING	EBH1408				
	29	.....				
	30	SPRING	EBH1409				
	31	SPRING	EBH1410				
	32	SPRING	EBH1256				
	33	SPRING	EBL1013				
	34	SPRING	EBL1014				
	35	MOTOR UNIT	EXA1241				
	36	SWITCH (Detect)	ESN1009				
	37	SWITCH (Mode)	ESN1010				
	38	SOLENOID	EXP1005				
	39	HALL IC	DN6847SE				
	40	COMPLEX PCB	ENX1020				
	41	CONNECTOR (10P)	EKS1013				
	42	LEAD WIRE (4P)	EDD1003				
	43	CONNECTOR (3P)	EDE1009				
	44	SCREW (AZIMUTH)	EBA1020				
	45	.....				

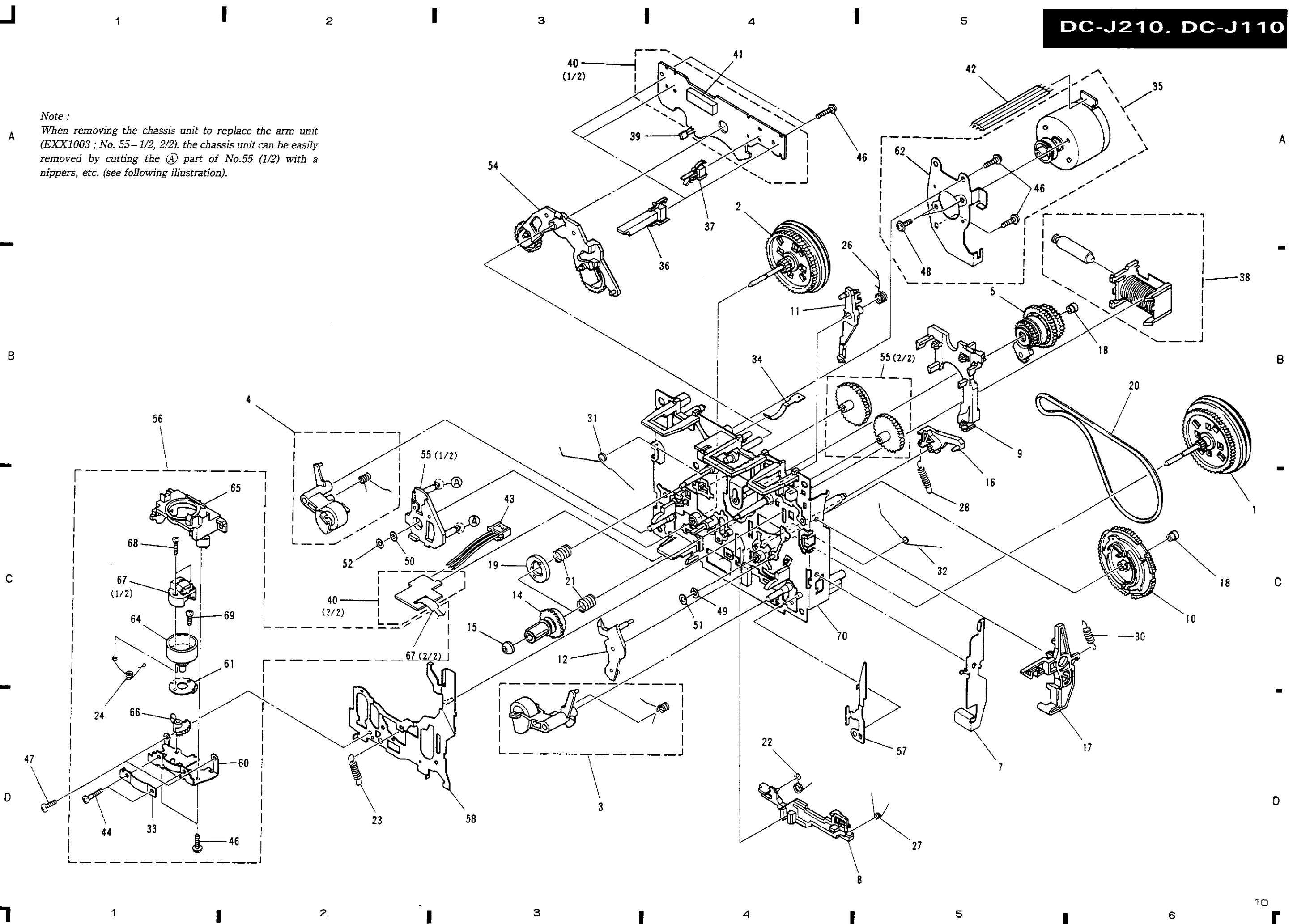
DC-J210, DC-J110

1.3 CASSETTE 2 MECHA UNIT

Parts list

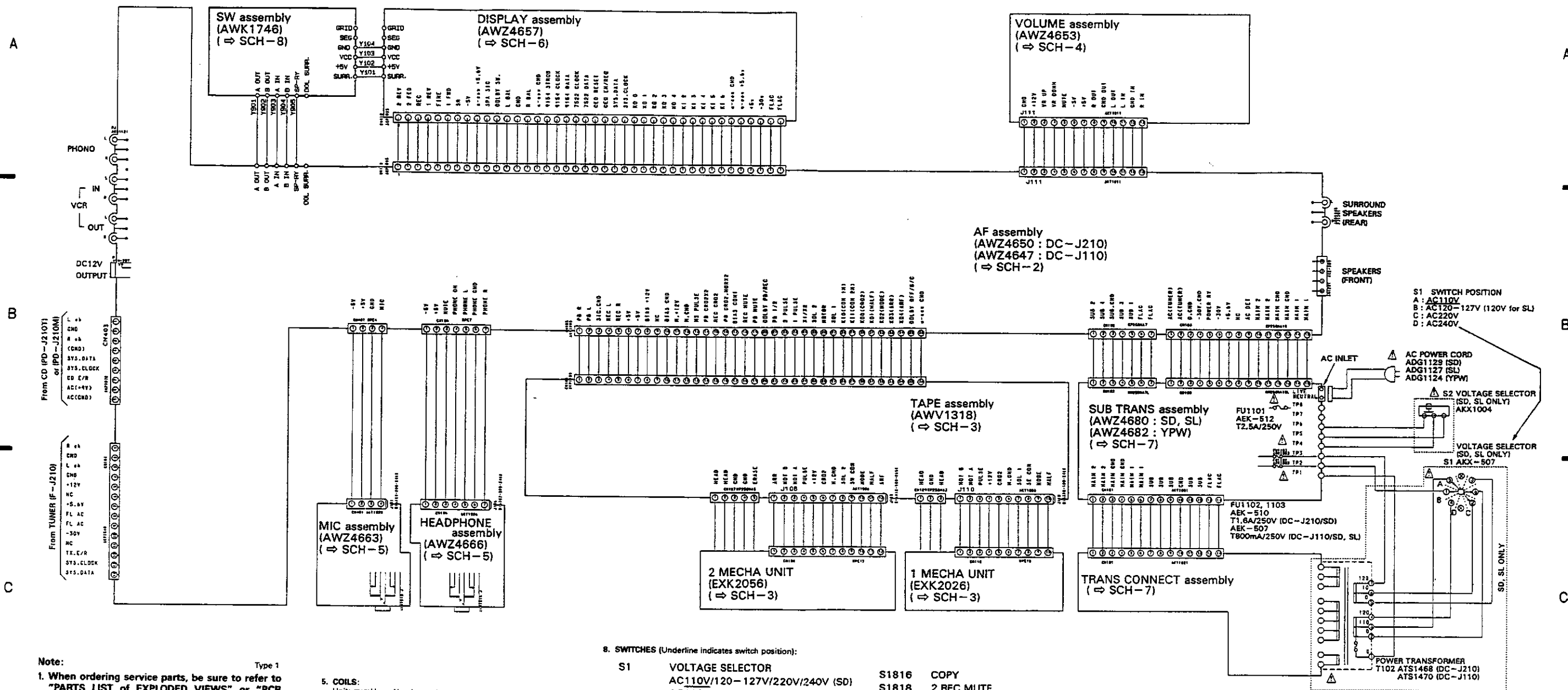
Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	FLYWHEEL UNIT (FWD)	EXA1222		46	SCREW (M2×8)	ATZ20P080FMC
	2	FLYWHEEL UNIT (RVS)	EXA1223		47	SCREW	BSZ20P050FMC
	3	ROLLER UNIT (FWD)	EXA1224		48	SCREW	PMS26P025FUC
	4	ROLLER UNIT (RVS)	EXA1225		49	WASHER	EBF1008
	5	LIMITER UNIT	EXA1226		50	WASHER	EBF1009
	6	.....			51	WASHER	EBF1010
	7	EJECT LEVER R2	AZN2064		52	WASHER	EBF1011
	8	NR LEVER	ENV1305		53	.....
	9	BRAKE	ENV1317		54	ARM UNIT	EXX1006
	10	CAM GEAR	ENV1318		55	ARM UNIT	EXX1003
	11	LOCK ARM	ENV1159		56	R/P HEAD ASSEMBLY	EXX1013
	12	NR ARM	ENV1163		57	ARM	ENC1289
	13	.....			58	HEAD BASE UNIT	EXA1230
	14	REEL	ENV1335		59	.....
	15	REEL BUSH	ENV1338	NSP	60	BRACKET	ENC1284
	16	ARM	ENV1330	NSP	61	PLATE	ENC1285
	17	EJECT LEVER R1	AZN2109	NSP	62	BRACKET	ENC1289
	18	BUSH	ENV1184		63	.....
	19	MAGNET	ENV1336	NSP	64	HOLDER	ENV1161
	20	BELT	ENT1023	NSP	65	HOLDER	ENV1301
	21	SPRING	EBH1424	NSP	66	GEAR	ENV1177
	22	SPRING	EBH1401	NSP	67	R/P HEAD UNIT	EXA1234
	23	SPRING	EBH1203	NSP	68	SCREW	JGZ14P085FNI
	24	SPRING	EBH1402	NSP	69	SCREW	JGZ14P040FNI
	25	.....		NSP	70	CHASSIS UNIT	.....
	26	SPRING	EBH1406				
	27	SPRING	EBH1407				
	28	SPRING	EBH1408				
	29	.....				
	30	SPRING	EBH1409				
	31	SPRING	EBH1410				
	32	SPRING	EBH1256				
	33	SPRING	EBL1013				
	34	SPRING	EBL1014				
	35	MOTOR UNIT	EXA1241				
	36	SWITCH (Detect)	ESN1009				
	37	SWITCH (Mode)	ESN1010				
	38	SOLENOID	EXP1005				
	39	HALL IC	DN6847SE				
	40	SUB COMPLEX PCB	ENX1019				
	41	CONNECTOR (15P)	EKS1012				
	42	LEAD WIRE (4P)	EDD1003				
	43	CONNECTOR (5P)	EDE1008				
	44	SCREW (AZIMUTH)	EBA1020				
	45	.....				

Note :
When removing the chassis unit to replace the arm unit (EXX1003 ; No. 55-1/2, 2/2), the chassis unit can be easily removed by cutting the (A) part of No.55 (1/2) with a nippers, etc. (see following illustration).



2. SCHEMATIC AND PCB CONNECTION DIAGRAMS

2.1 OVERALL SCHEMATIC DIAGRAM



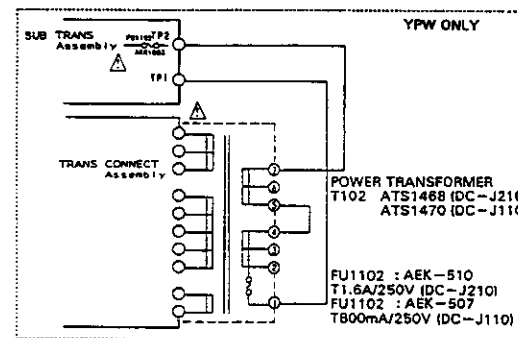
- Note:** Type 1
- When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".
 - Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
 - RESISTORS:**
Unit: k: kΩ, M: MΩ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/8W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
 - CAPACITORS:**
Unit: p: pF or μF unless otherwise noted.
Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.

- COILS:**
Unit: m: mH or μH unless otherwise noted.
- VOLTAGE AND CURRENT:**
 - V: Signal voltage at rated output.
 - V: DC voltage (V) at no input signal unless otherwise noted. Value in () is DC voltage at rated power.
 - ⊙ mA or — mA: DC current at no input signal unless otherwise noted.
- OTHERS:**
 - : Signal route.
 - ⊙: Adjusting point.
 - ▽: Measurement point.
 - △: The 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.

8. SWITCHES (Underline indicates switch position):

- | | | | |
|----|--|-------|--|
| S1 | VOLTAGE SELECTOR
AC110V/120-127V/220V/240V (SD)
AC110V/120V/220V/240V (SL) | S1816 | COPY |
| S2 | VOLTAGE SELECTOR
AC110-127V/220-240V | S1818 | 2 REC MUTE |
| | | S1819 | ASES |
| | | S1820 | 2 REC PAUSE |
| | | S1901 | DOLBY NR ON/OFF |
| | | S3801 | GEQ FREQ UP |
| | | S3802 | GEQ LEVEL DOWN |
| | | S3806 | SURROUND & WIDE |
| | | S3807 | GEQ LEVEL UP |
| | | S3808 | GEQ FREQ DOWN |
| | | S3809 | GEQ MODE |
| | | S3810 | PRESET/PGM |
| | | S3811 | GEQ ON/OFF |
| | | S3813 | SFC MOVIE/A
(SFC : SOUND FIELD CONTROL) |
| | | S3814 | SFC DISCO/B |
| | | S3815 | SFC HALL/C |
| | | S3816 | SFC MEMO |
| | | S3817 | SFC OFF |
- DISPLAY assembly**
- | | |
|-------|------------------------------------|
| S1801 | SMART OPERATION START/SET (AI BGM) |
| S1802 | FUNCTION (DEMO) |
| S1804 | SMART OPERATION MEMORY (AI MEMORY) |
| S1805 | POWER |
| S1806 | 1 REV |
| S1807 | 1 PLAY |
| S1808 | 1 STOP |
| S1809 | 2 REW |
| S1810 | 2 FF |
| S1811 | 1 REW |
| S1812 | 1 FF |
| S1813 | 2 STOP |
| S1814 | 2 REV |
| S1815 | 2 PLAY |

9. For SCH-□ on the schematic diagram
 • SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)



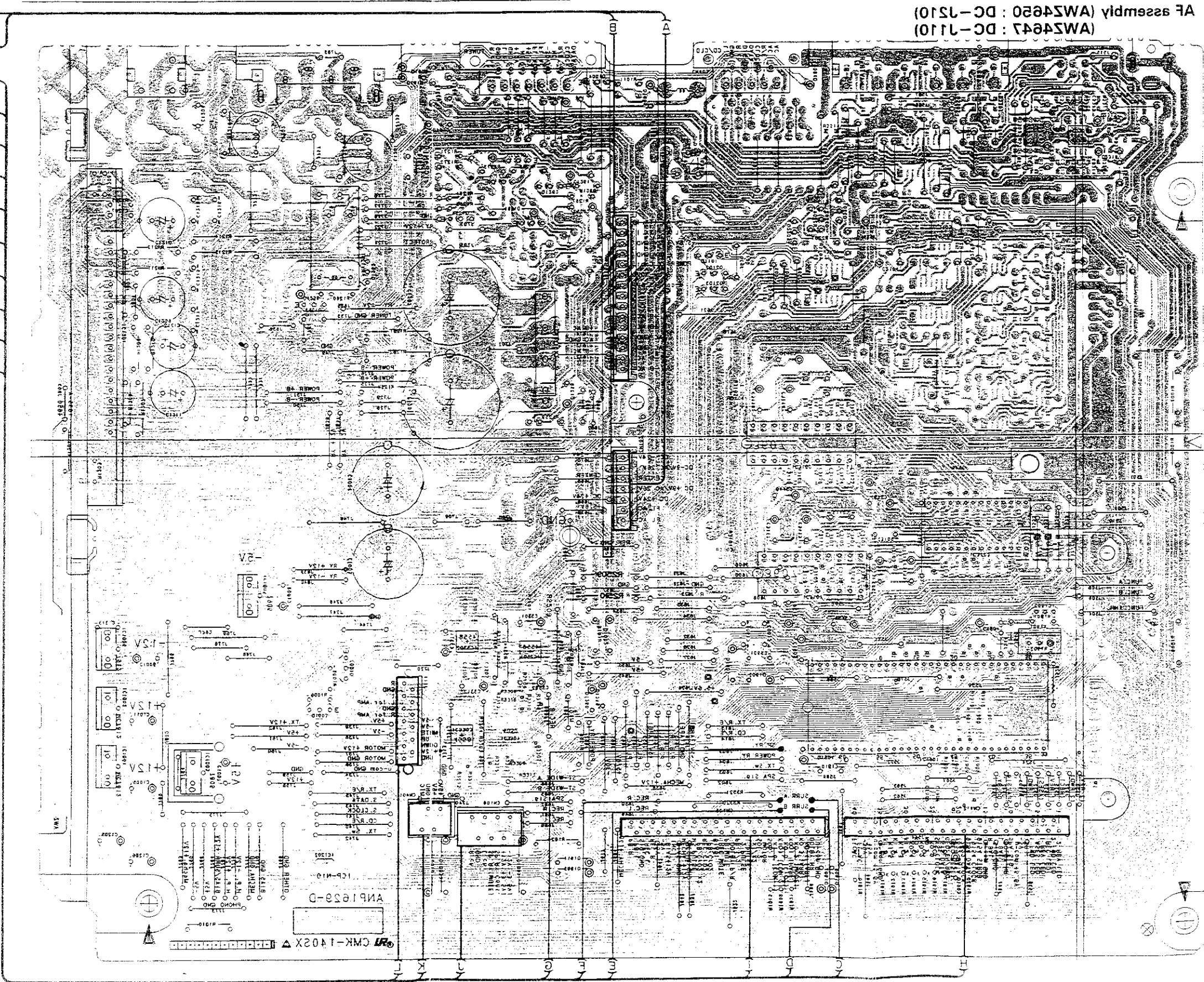
SCH-1 OVERALL SCHEMATIC DIAGRAM

OVERALL SCHEMATIC DIAGRAM **SCH-1**

This PCB connection diagram is viewed from the foil side.

IC1501 IC1502 IC1503 IC1504 IC1505 IC1506 IC1507 IC1508 IC1509 IC1510 IC1511 IC1512 IC1513 IC1514 IC1515 IC1516 IC1517 IC1518 IC1519 IC1520 IC1521 IC1522 IC1523 IC1524 IC1525 IC1526 IC1527 IC1528 IC1529 IC1530 IC1531 IC1532 IC1533 IC1534 IC1535 IC1536 IC1537 IC1538 IC1539 IC1540 IC1541 IC1542 IC1543 IC1544 IC1545 IC1546 IC1547 IC1548 IC1549 IC1550 IC1551 IC1552 IC1553 IC1554 IC1555 IC1556 IC1557 IC1558 IC1559 IC1560 IC1561 IC1562 IC1563 IC1564 IC1565 IC1566 IC1567 IC1568 IC1569 IC1570 IC1571 IC1572 IC1573 IC1574 IC1575 IC1576 IC1577 IC1578 IC1579 IC1580 IC1581 IC1582 IC1583 IC1584 IC1585 IC1586 IC1587 IC1588 IC1589 IC1590 IC1591 IC1592 IC1593 IC1594 IC1595 IC1596 IC1597 IC1598 IC1599 IC1600

AF assembly (AW24647 : DC-1110)
AW24650 : DC-1510



- (A) To SUB TRANS assembly CN105
- (B) To SUB TRANS assembly CN103
- (C) A IN (Y903)
- (D) B IN (Y904)
- (E) B OUT (Y905) To SW assembly
- (F) A OUT (Y901)
- (G) SP-RY (Y902)
- (H) To DISPLAY assembly CN115
- (I) To TAPE assembly CN106
- (J) To HEADPHONE assembly CN108
- (K) To MIC assembly CN401
- (L) To VOLUME assembly 1111

A

B

C

D

E

F

G

H

I

J

K

1

2

3

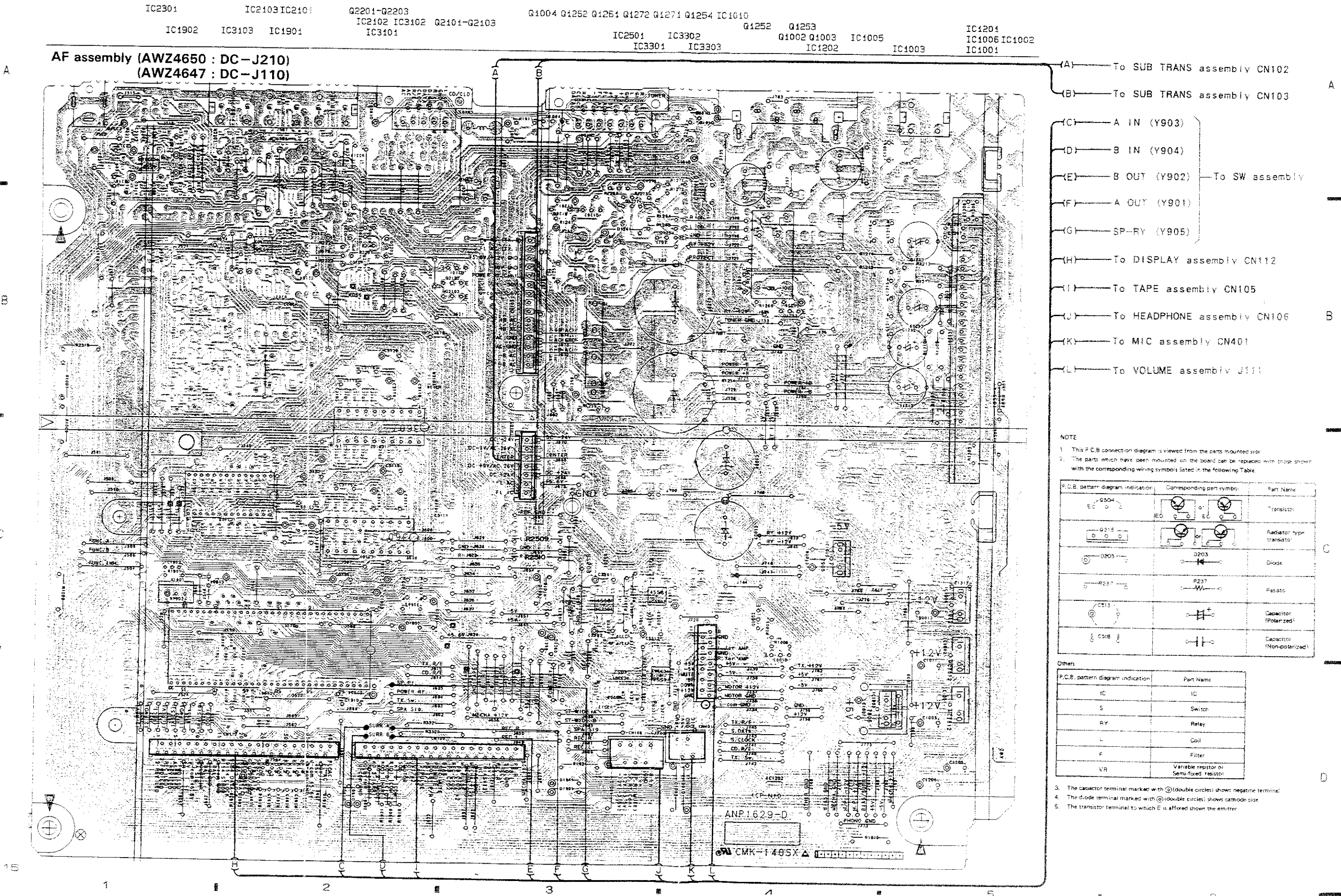
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5

DC-J210, DC-J110

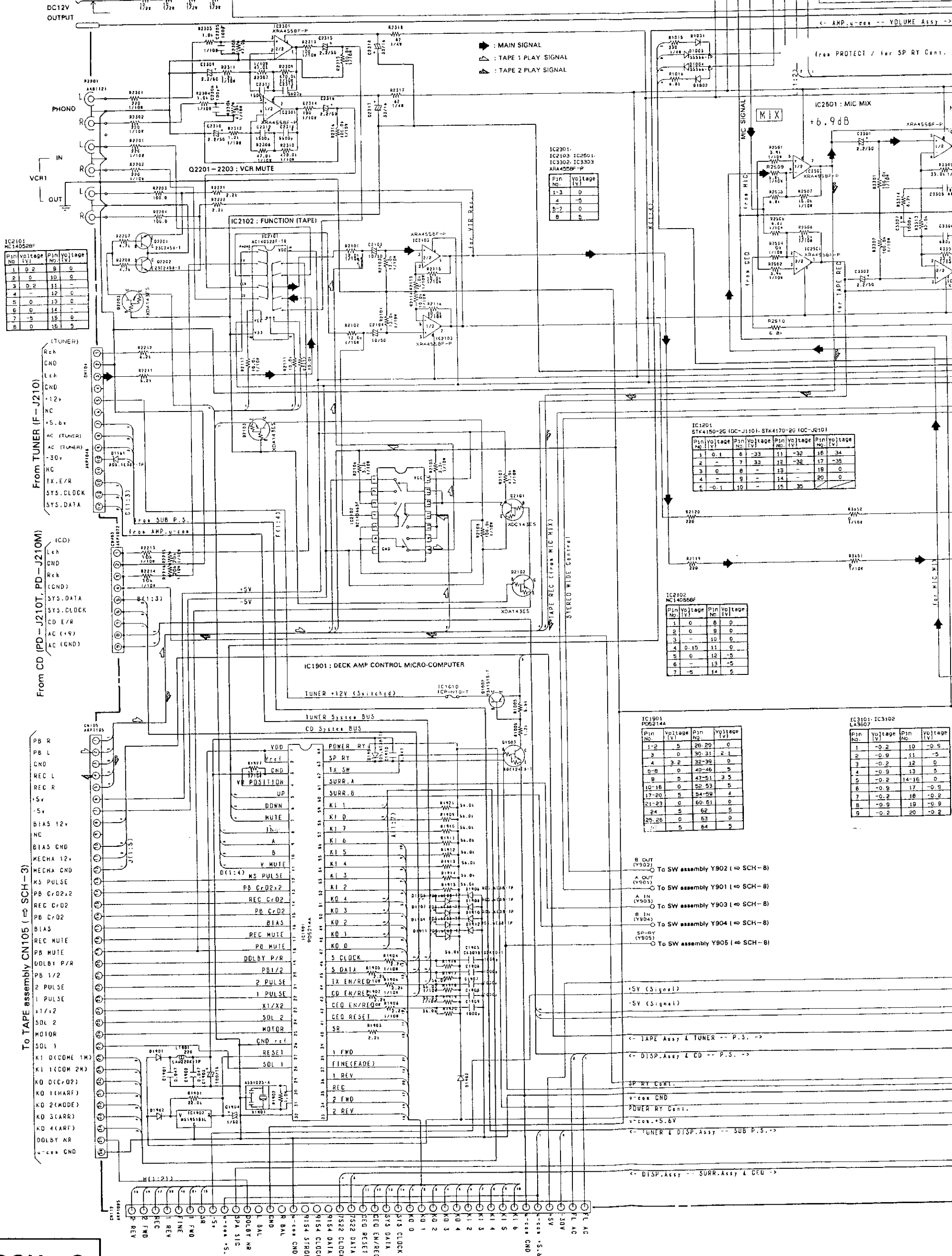
2.2 AF ASSEMBLY

This PCB connection diagram is viewed from the parts mounted side.



To HEADPHONE assembly CN106 (⇨ SCH-5)
 To MIC assembly CN401 (⇨ SCH-5)

AF assembly (AWZ4650 : DC-J210)
 (AWZ4647 : DC-J110)



IC2101
MC14056BF

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.2	8	0
2	0	10	0
3	0.2	11	-
4	-	12	C
5	0	13	0
6	0	14	-
7	-5	15	0
8	0	16	2

IC2901
IC2103 IC2501
IC3302 IC3303
ARA455BF-P

Pin No.	Voltage (V)
1-3	0
4	-5
5	0
6	0
7	0
8	5

IC1201
STK4150-2G (DC-J110), STK4170-2G (DC-J210)

Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.1	6	-33	11	-32	16	34
2	-	7	33	12	-32	17	-35
3	0	8	-	13	-	18	0
4	-	9	-	14	-	19	0
5	-0.1	10	-	15	35	20	0

IC2102
MC14056BF

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	8	0
2	0	9	0
3	-	10	0
4	0.15	11	0
5	0	12	-5
6	-	13	-5
7	-5	14	5

IC1901
P06214A

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1-2	5	26-29	0
3	0	30-31	2.1
4	3.2	32-35	0
5-B	0	40-46	5
9	5	47-51	3.5
10-16	0	52-53	5
17-20	5	54-55	4
21-23	0	60-61	0
24	5	62	5
25-26	0	63	0
27	5	64	5

IC3101-IC3102
LA9607

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	-0.2	10	-0.5
2	-0.9	11	-5
3	-0.2	12	0
4	-0.9	13	5
5	-0.2	14-16	0
6	-0.9	17	-0.9
7	-0.2	18	-0.2
8	-0.9	19	-0.9
9	-0.2	20	-0.2

From TUNER (IF-J210)
 GND
 Lch
 CND
 +12V
 NC
 +5.6V
 AC (TUNER)
 AC (TUNER)
 -30V
 NC
 EX.E/R
 SYS.CLOCK
 SYS.DATA

From CD (PD-J210T, PD-J210M)
 Lch
 CND
 Rch
 (GND)
 SYS.DATA
 SYS.CLOCK
 CD E/R
 AC (+9)
 AC (GND)

To TAPE assembly CN105 (⇨ SCH-3)
 PB R
 PB L
 CND
 REC L
 REC R
 +5V
 BIAS 12V
 NC
 MECHA 12V
 MECHA CND
 MS PULSE
 PB CrD2+2
 REC CrD2
 PB CrD2
 BIAS
 REC MUTE
 PB MUTE
 DDLBY P/R
 PB 1/2
 2 PULSE
 1 PULSE
 1/1/2
 MOTOR
 SOL 2
 SOL 1
 K1 (DCOM 1M)
 K1 (DCOM 2M)
 K0 (CrD2)
 K0 (HARF)
 K0 2(MODE)
 K0 3(ARR)
 K0 4(ARR)
 DDLBY NR
 v-ccn CND

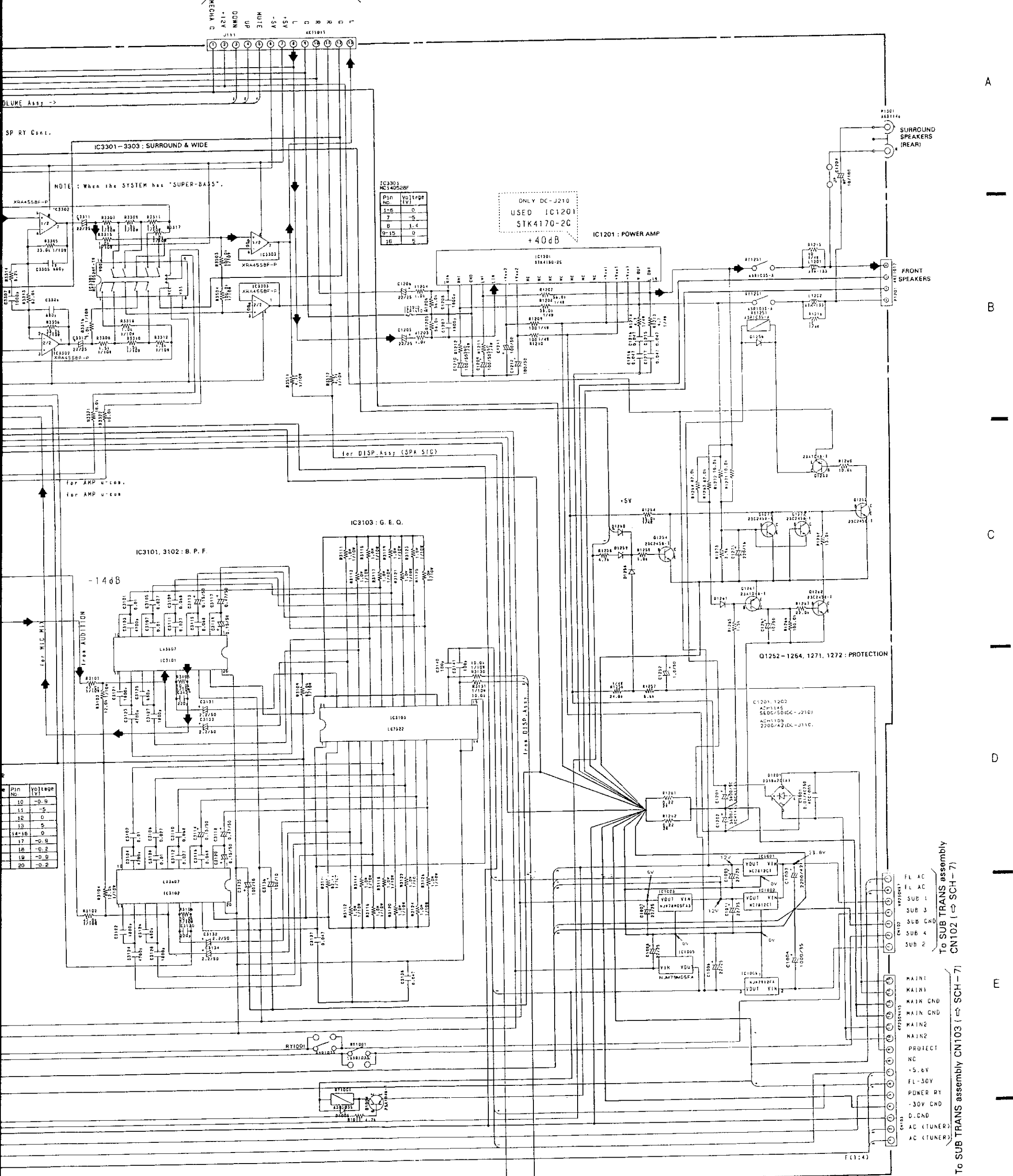
SCH-2

AF ASSEMBLY

To DISPLAY assembly CN112 (⇨ SCH-6)

(SCH-5)

To VOLUME assembly J111 (SCH-4)



Pin No.	Voltage (V)
1-6	0
7	-5
8	1.4
9-15	0
16	5

Pin No.	Voltage (V)
10	-0.9
11	-5
12	0
13	5
14-16	0
17	-0.9
18	-0.9
19	0
20	-0.9

A
B
C
D
E
F

SCH-2

AF ASSEMBLY

To SUB TRANS assembly CN102 (SCH-7)
To SUB TRANS assembly CN103 (SCH-7)

2.3 TAPE ASSEMBLY, 1 MECHA UNIT AND 2 MECHA UNIT

To AF assembly CN105 (→ SCH-2)

A

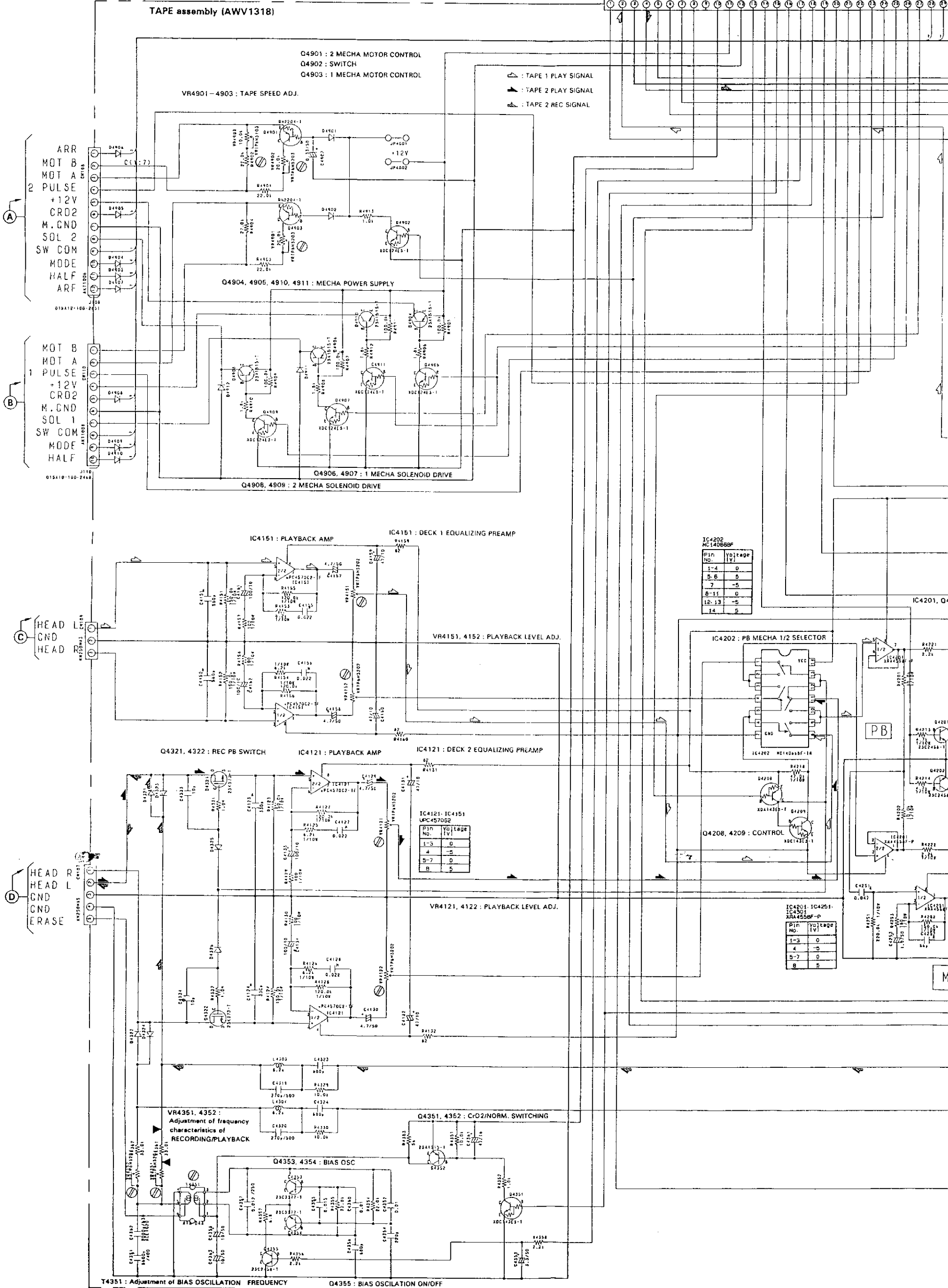
B

C

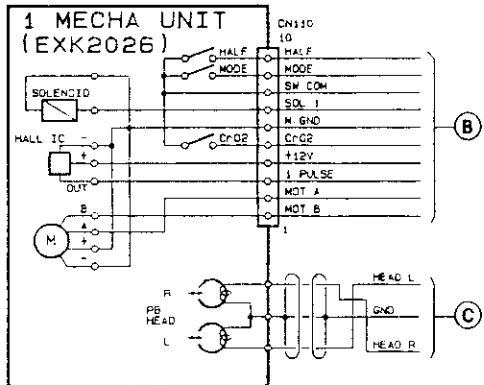
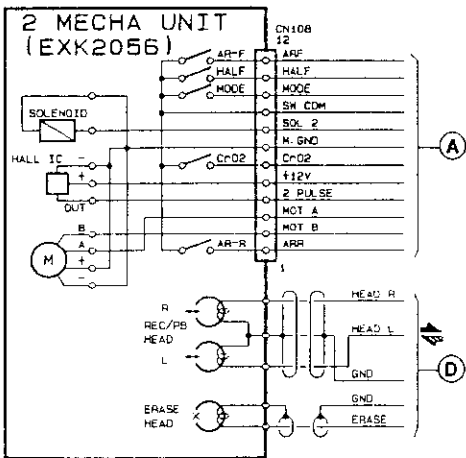
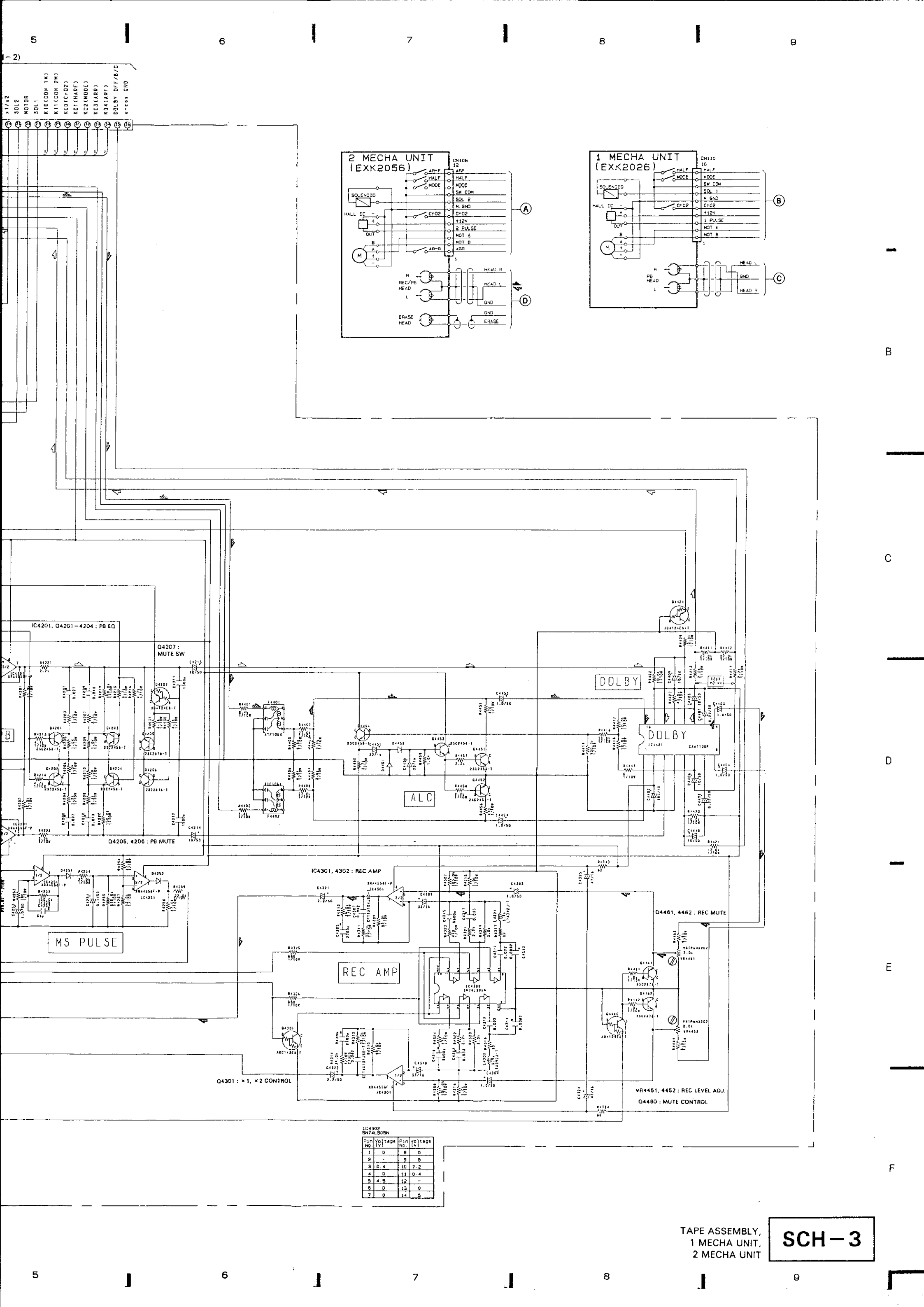
D

E

F



SCH-3 TAPE ASSEMBLY, 1 MECHA UNIT, 2 MECHA UNIT



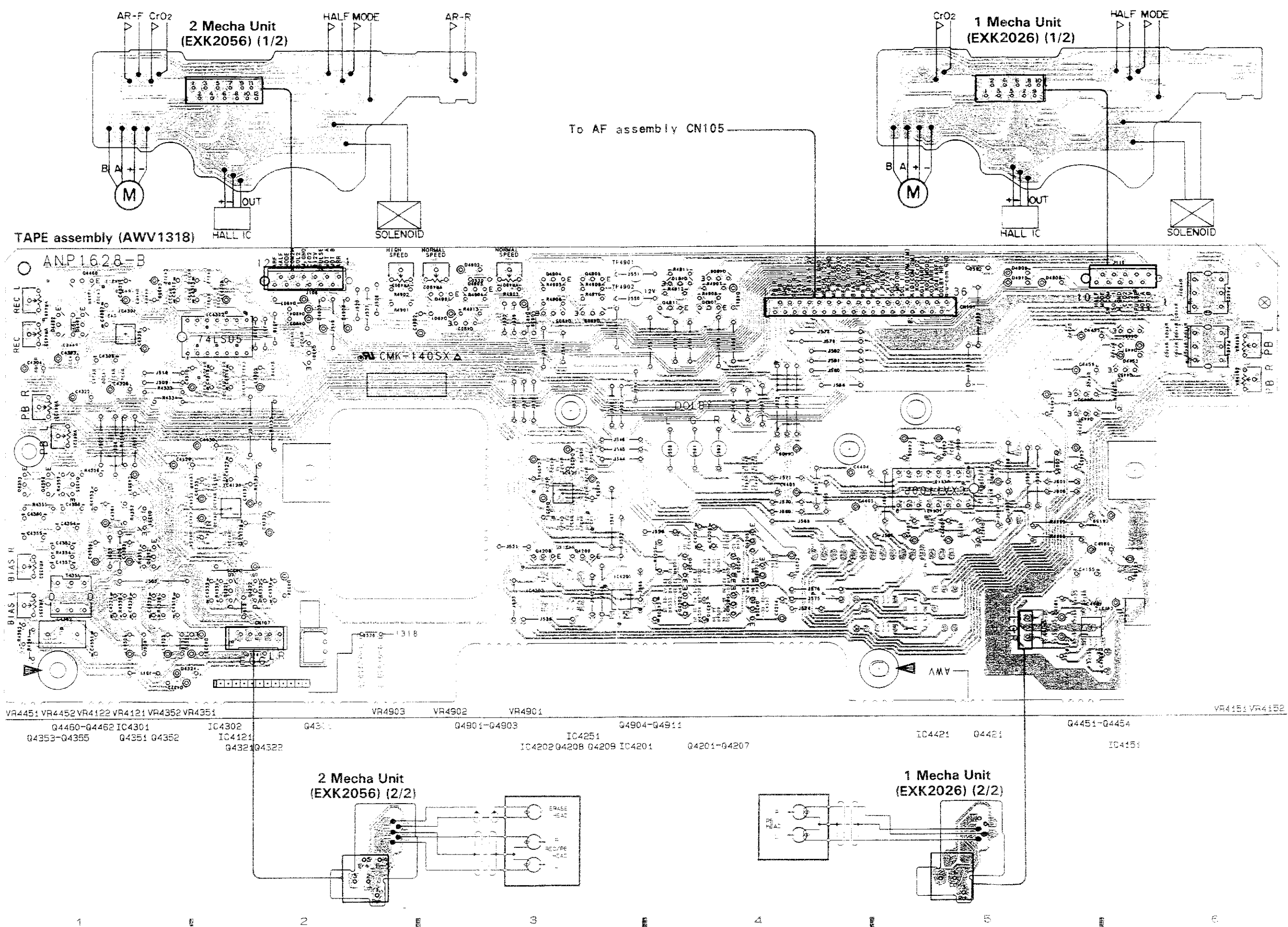
IC4302
SN74LS05N

Pin No.	Voltage	Pin No.	Voltage
1	0	8	0
2	-	9	5
3	0.4	10	2.2
4	0	11	0.4
5	4.5	12	-
6	0	13	0
7	0	14	5

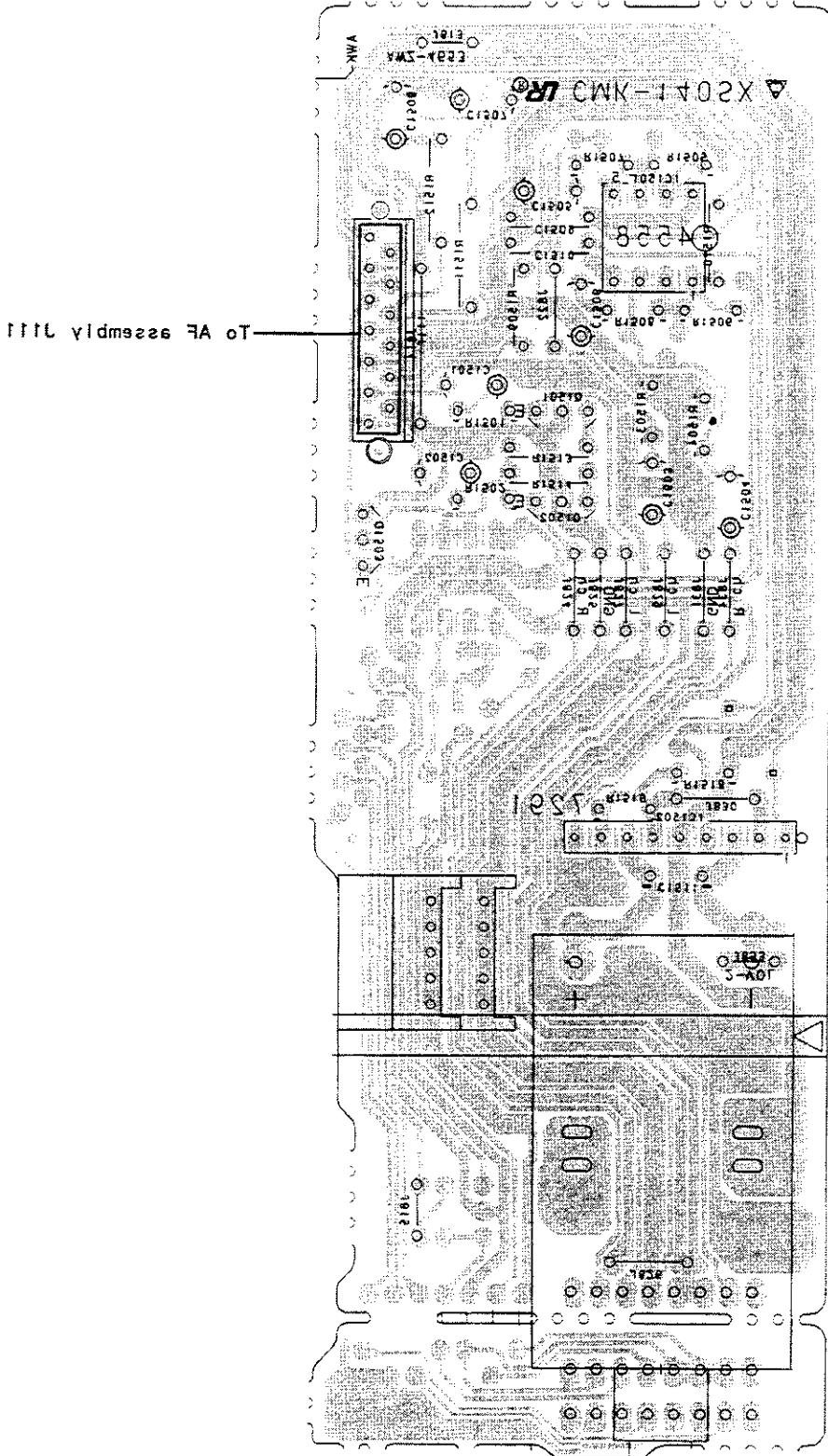
TAPE ASSEMBLY,
1 MECHA UNIT,
2 MECHA UNIT

SCH-3

This PCB connection diagram is viewed from the parts mounted side.



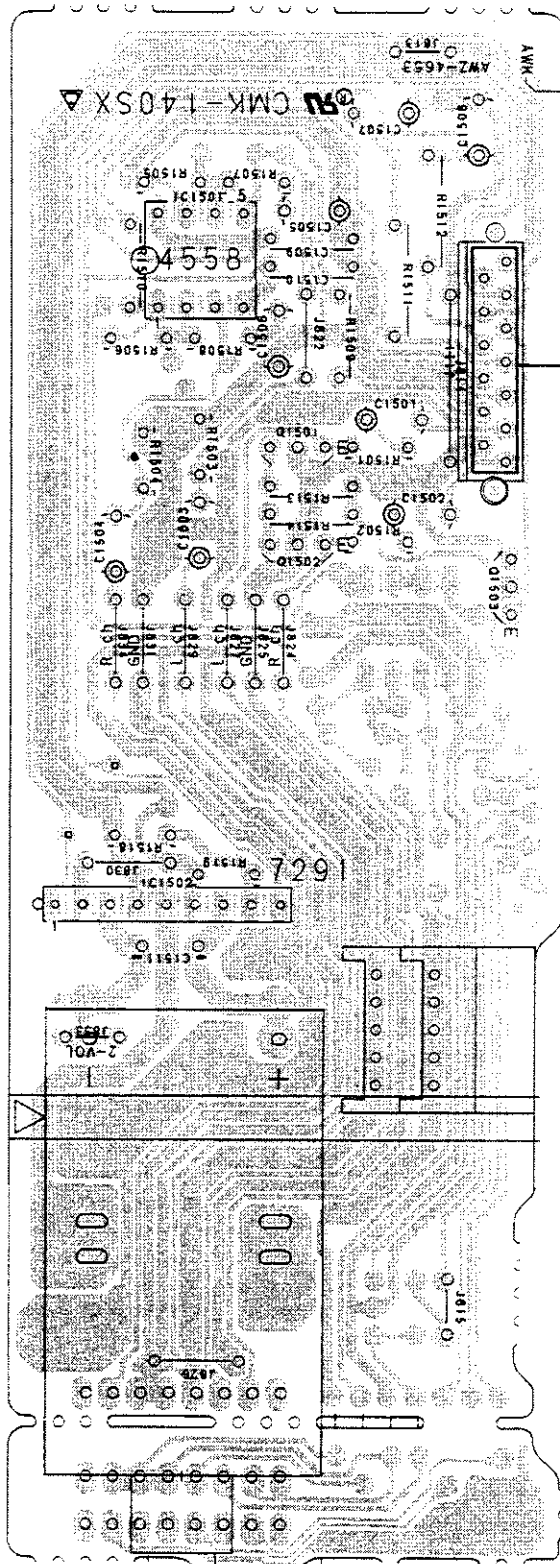
VOLUME assembly (W54623)



This PCB connection diagram is viewed from the foil side.

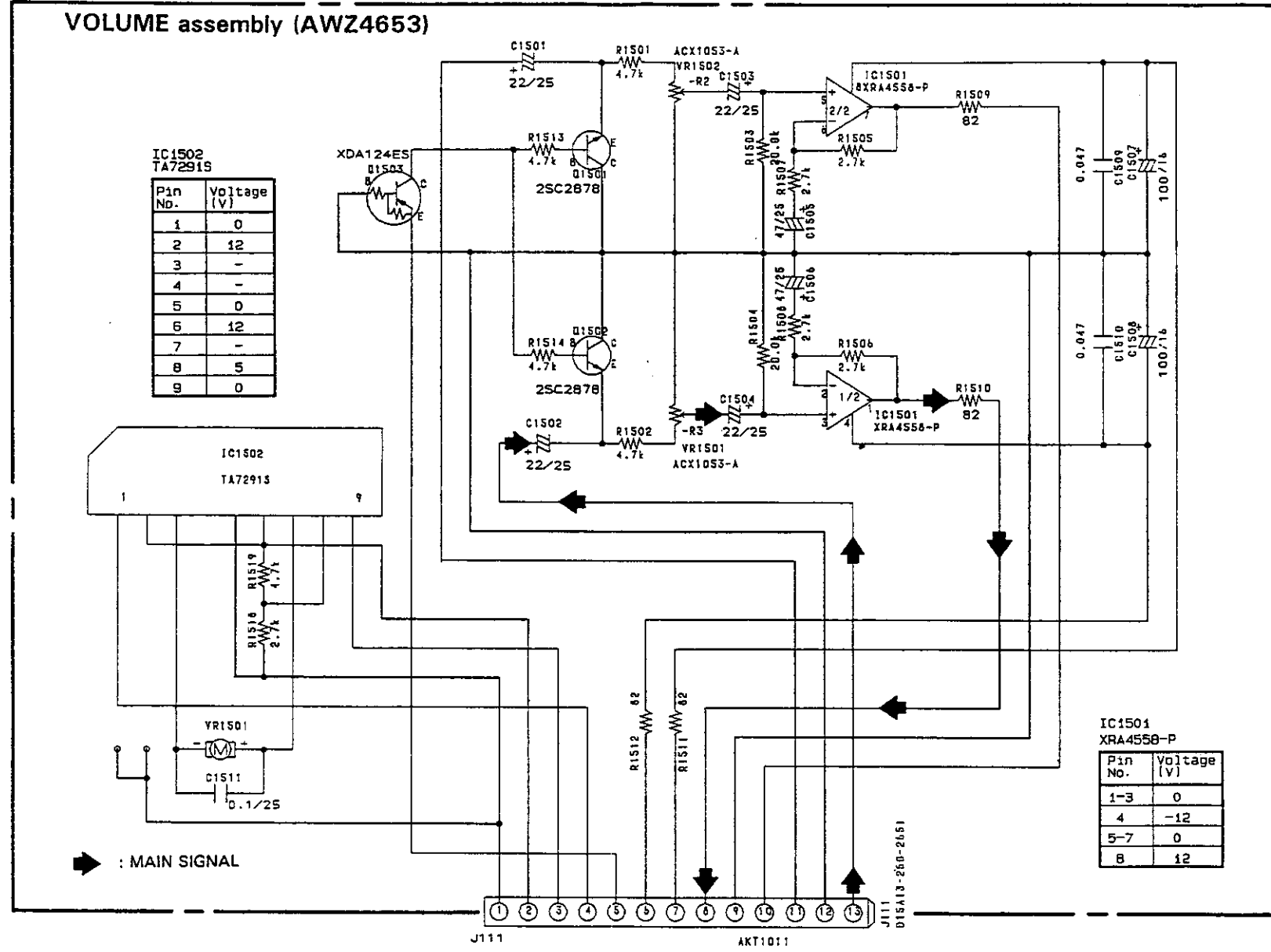
2.4 VOLUME ASSEMBLY

VOLUME assembly (AWZ4653)



To AF assembly J111

This PCB connection diagram is viewed from the parts mounted side.



GND +12V VR UP DOWN MUTE -5V +5V L OUT GND R OUT R IN GND L IN
To AF assembly J111 (⇔ SCH-2)

SCH-4

VOLUME ASSEMBLY

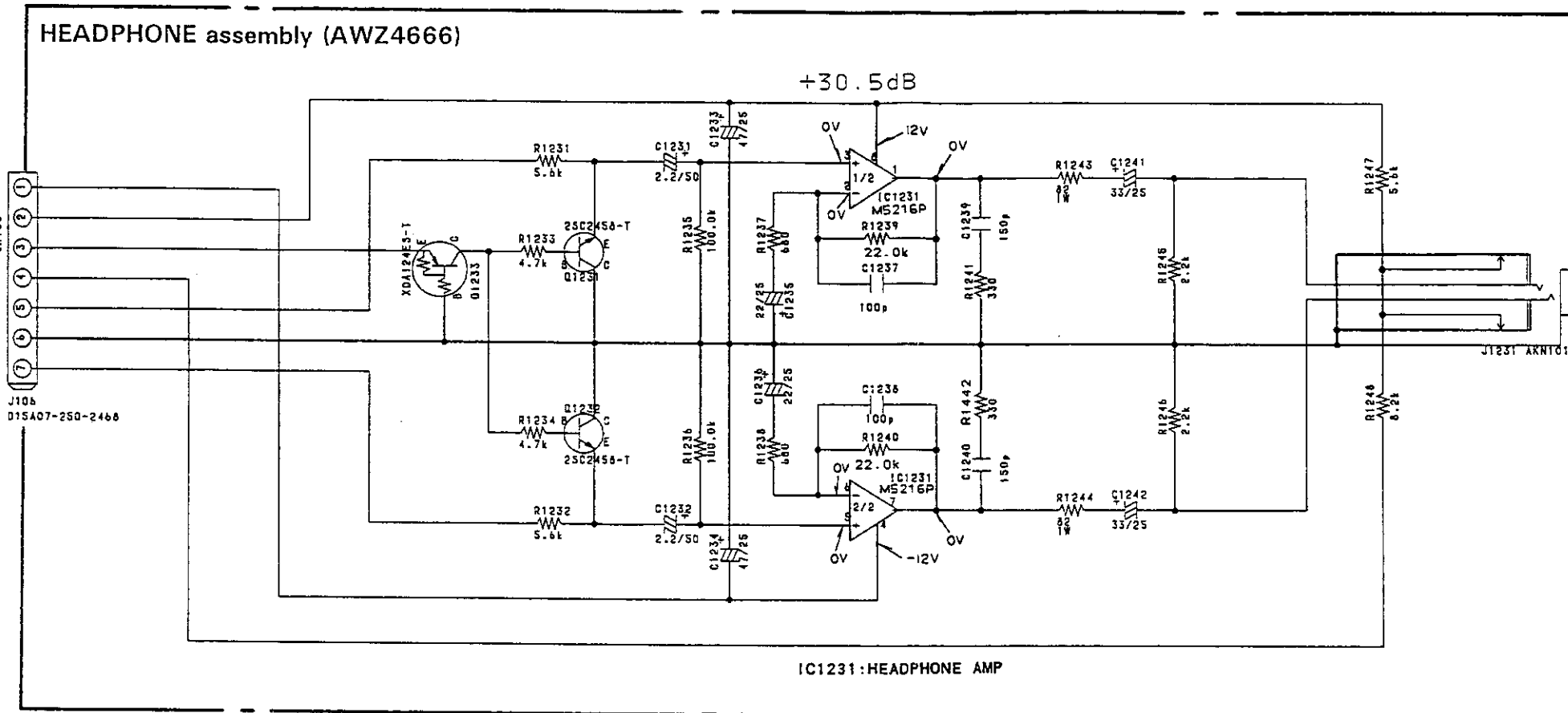
SCH-4

VOLUME ASSEMBLY

2.5 HEADPHONE ASSEMBLY AND MIC ASSEMBLY

A

To AF assembly CN106 (⇨ SCH-2)



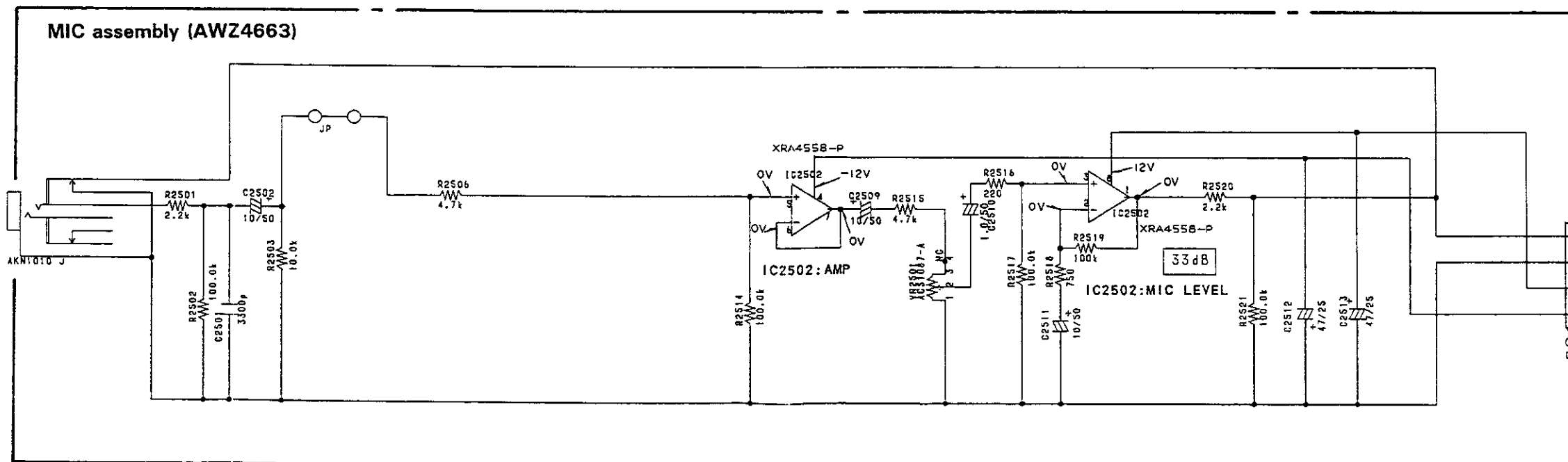
A

B

B

C

MIC 1



C

To AF assembly CN401 (⇨ SCH-2)

D

D

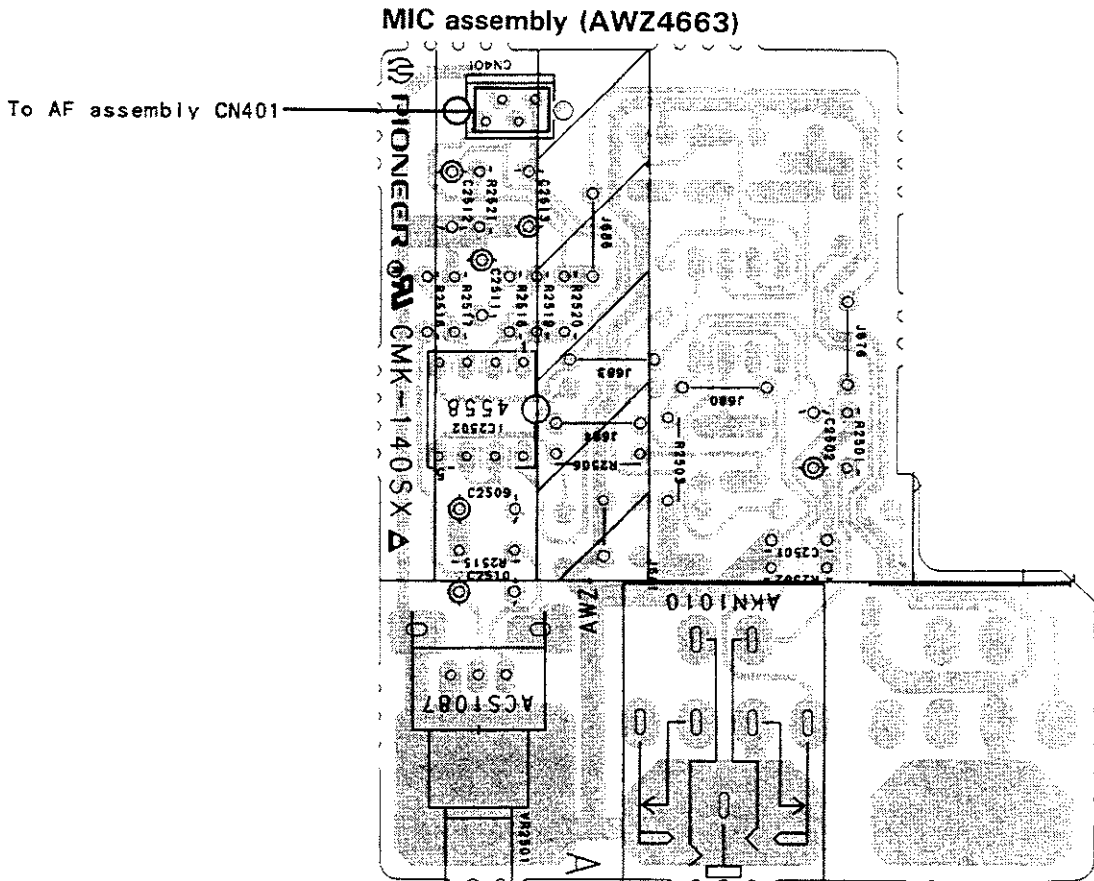
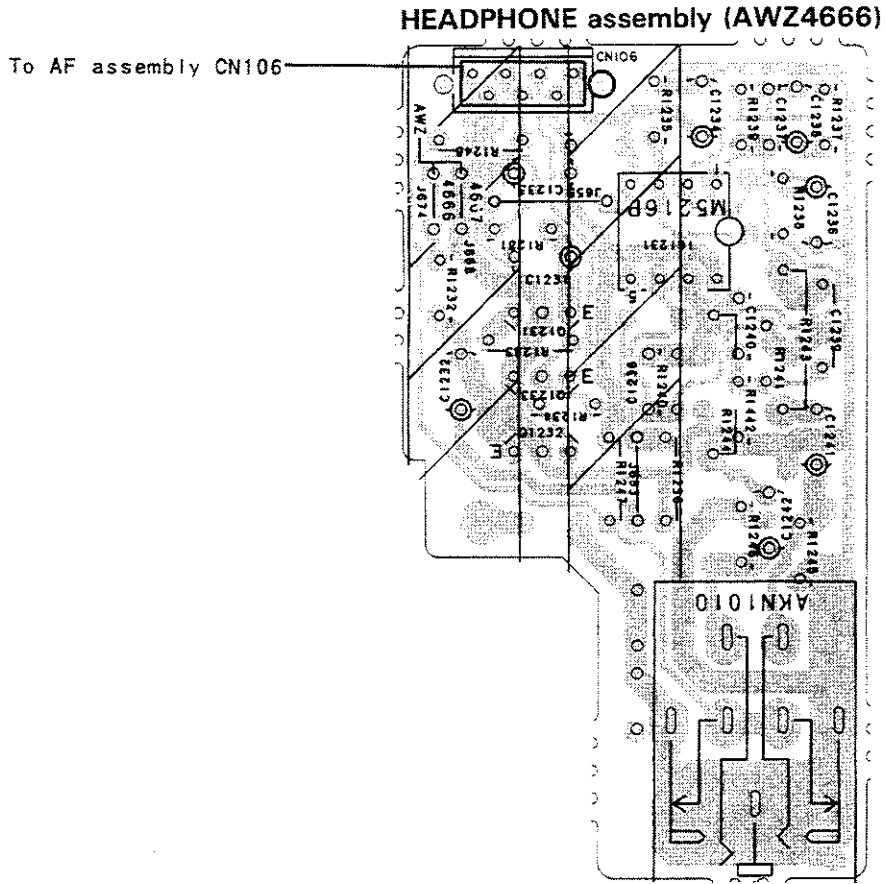
SCH-5

HEADPHONE ASSEMBLY, MIC ASSEMBLY

HEADPHONE ASSEMBLY, MIC ASSEMBLY

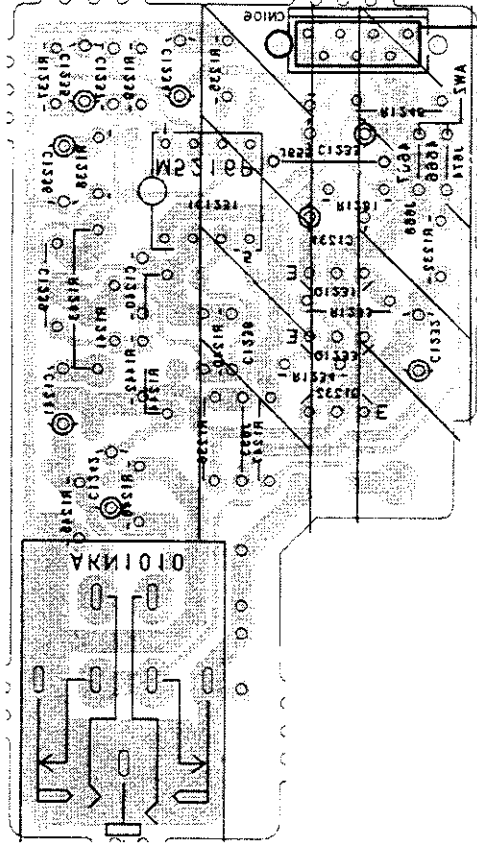
SCH-5

This PCB connection diagram is viewed from the parts mounted side.



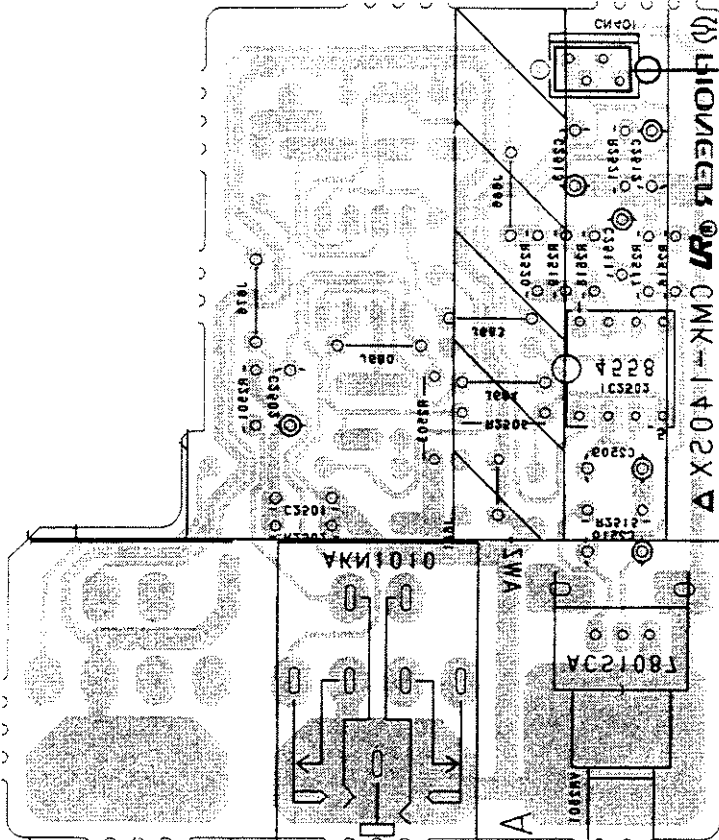
This PCB connection diagram is viewed from the foil side.

HEADPHONE assembly (AW2466)



To AF assembly CM108

MIC assembly (AW2463)

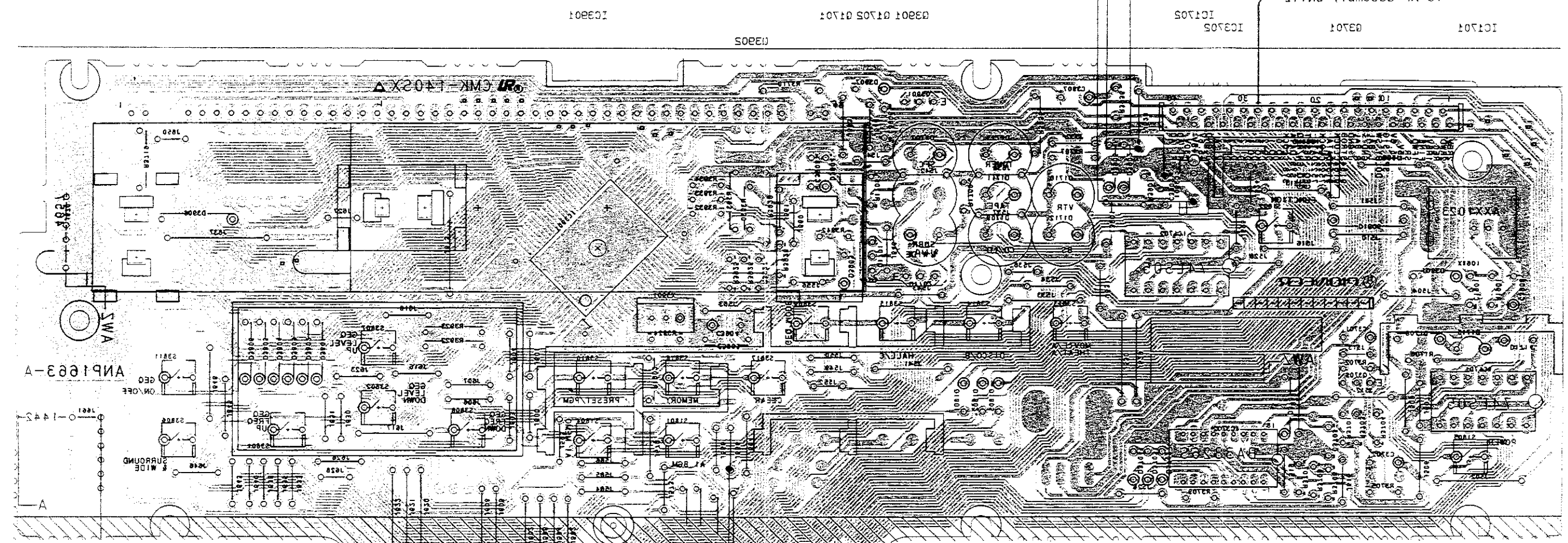


To AF assembly CM401

S.6 DISPLAY ASSEMBLY

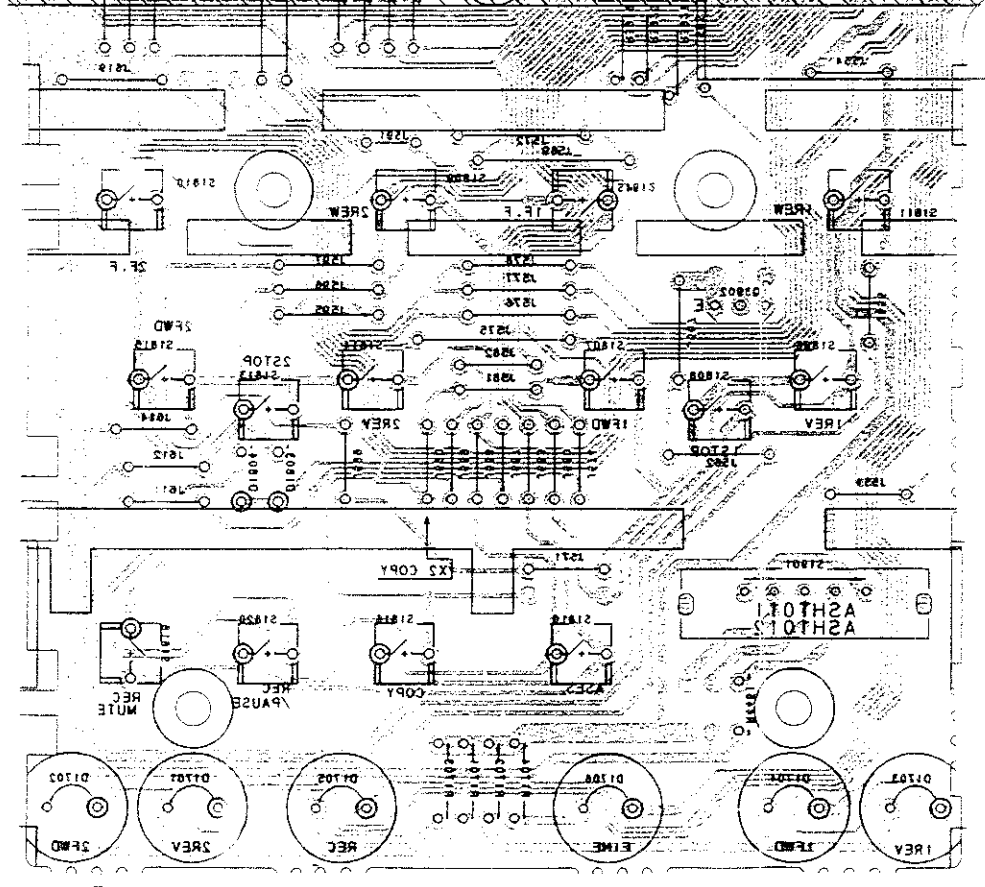
GND (Y104)
VCC (Y103)
-5V (Y102)
To SW assembly

To AF assembly CN15



DISPLAY assembly (AW24627)

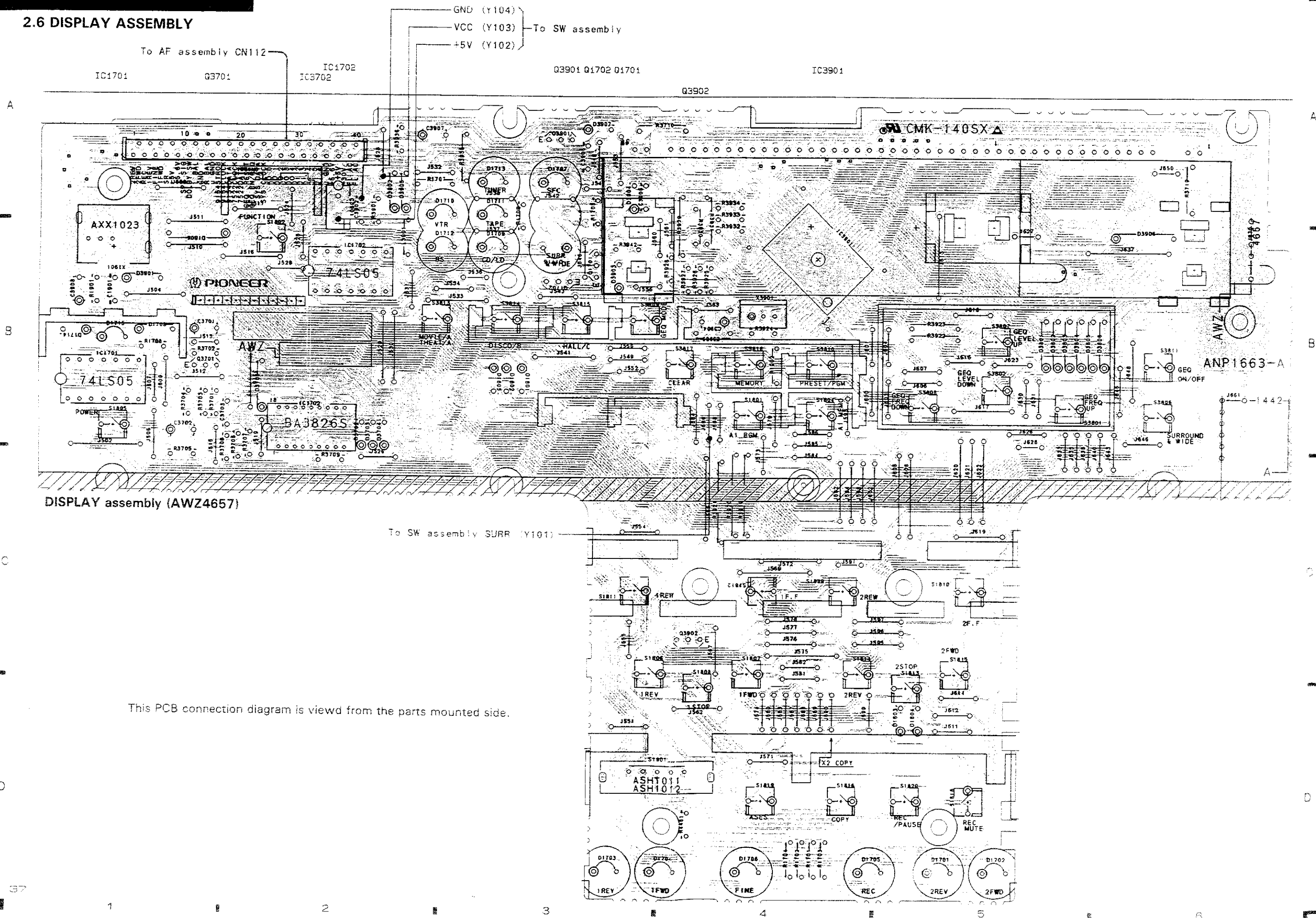
To SW assembly SURR (Y101)



This PCB connection diagram is viewed from the foil side.

DC-J210, DC-J110

2.6 DISPLAY ASSEMBLY



This PCB connection diagram is viewed from the parts mounted side.

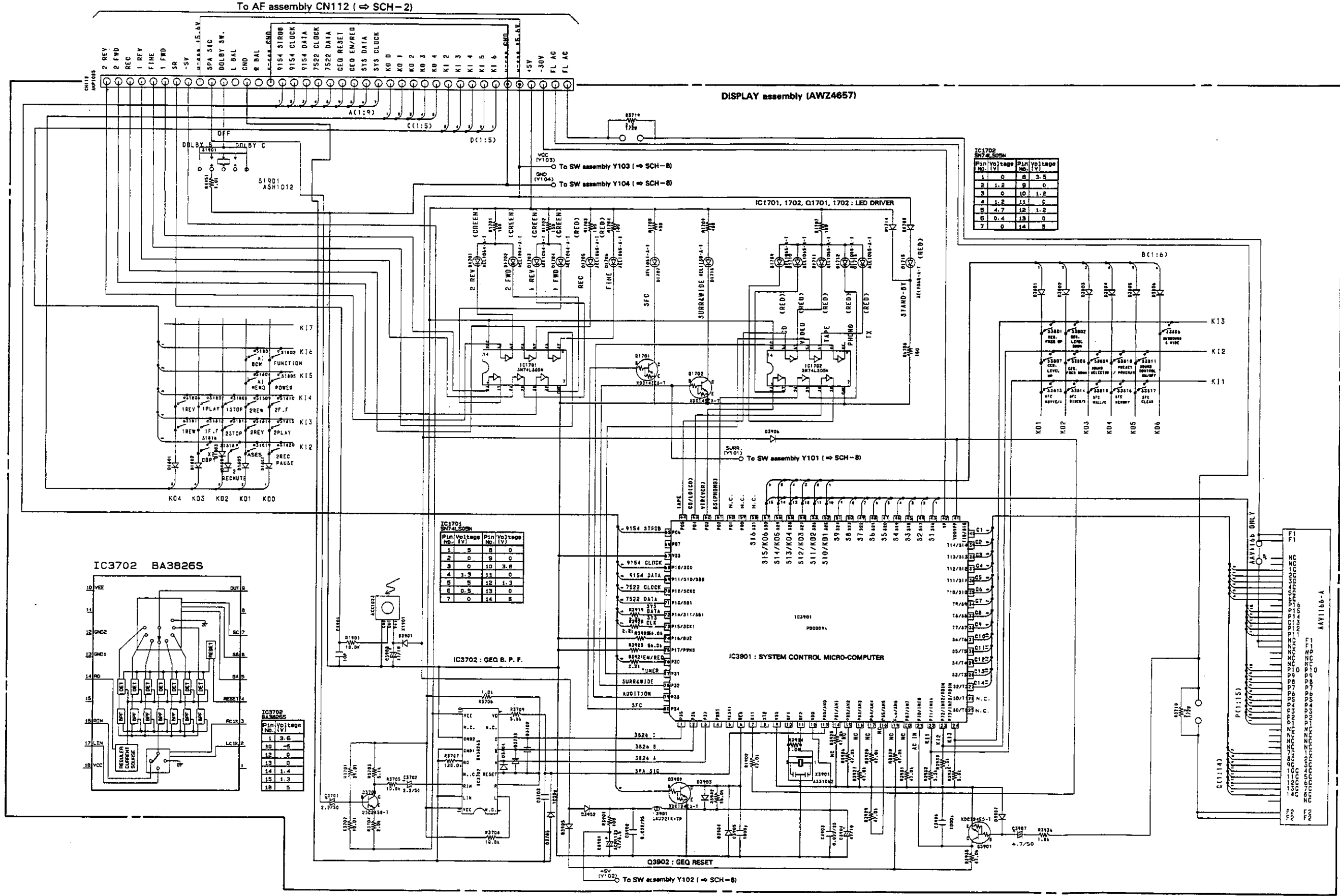
1

2

3

4

5



SCH-6

DISPLAY ASSEMBLY

SCH-6

DISPLAY ASSEMBLY

1

2

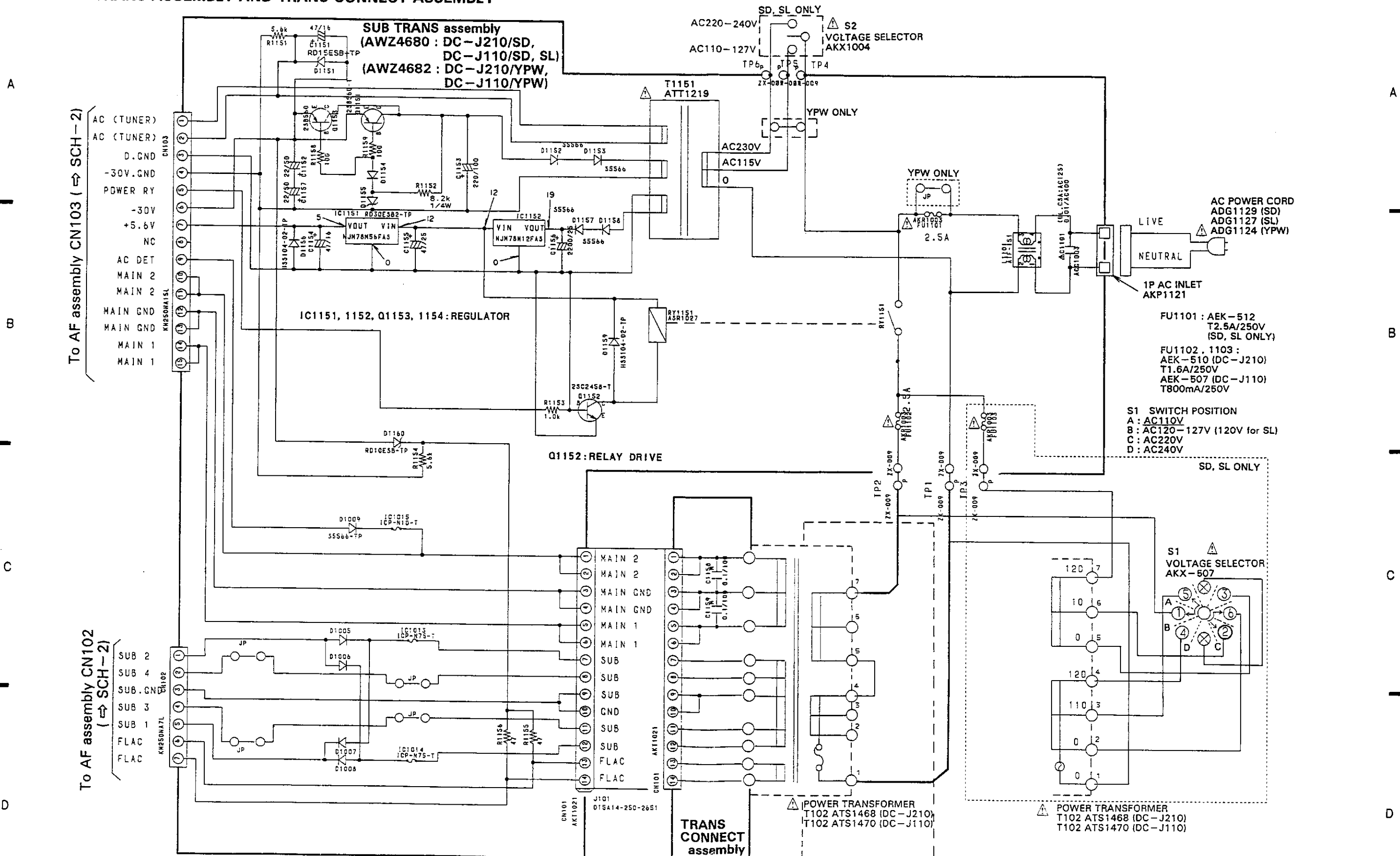
3

4

5

6

2.7 SUB TRANS ASSEMBLY AND TRANS CONNECT ASSEMBLY



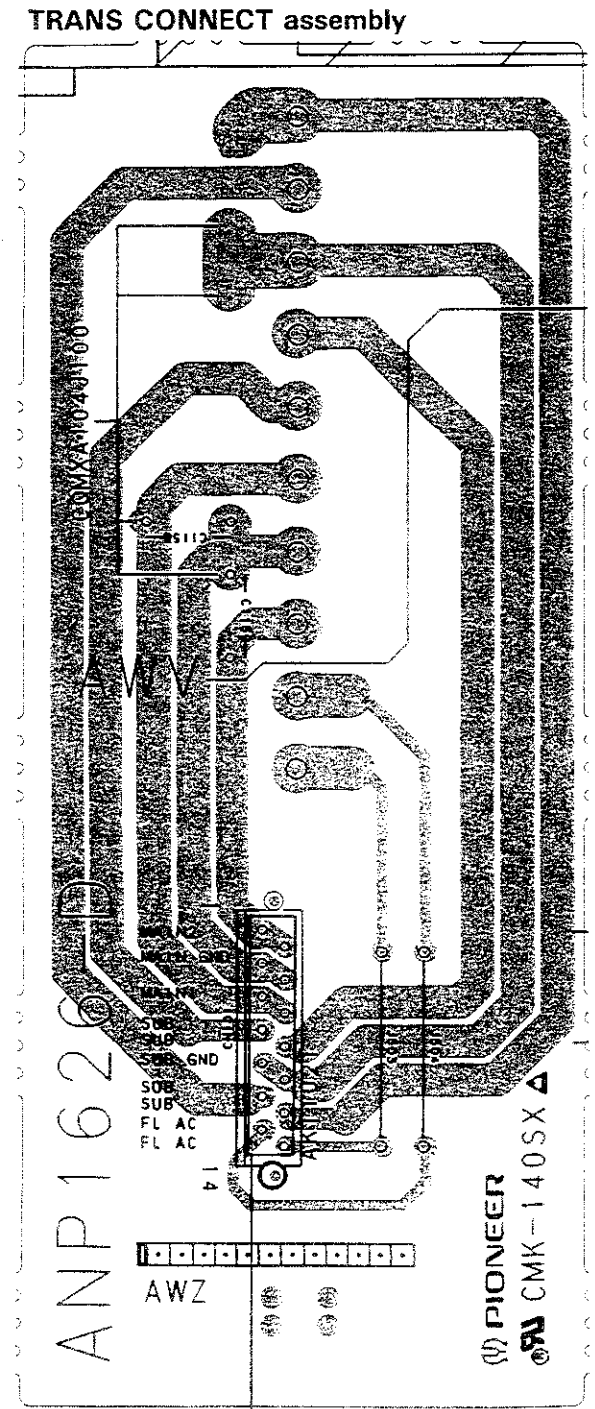
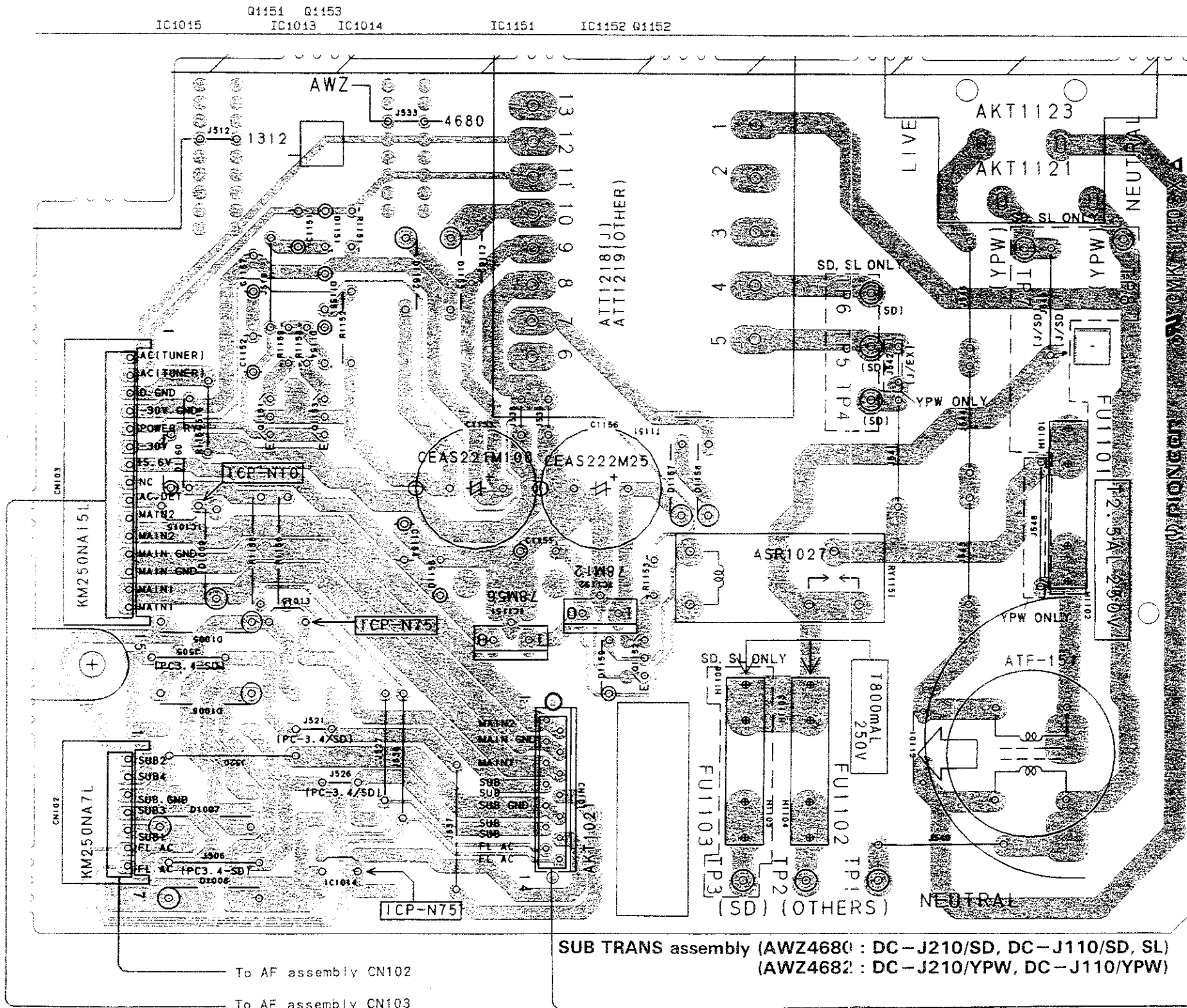
SCH-7

SUB TRANS ASSEMBLY, TRANS CONNECT ASSEMBLY

SCH-7

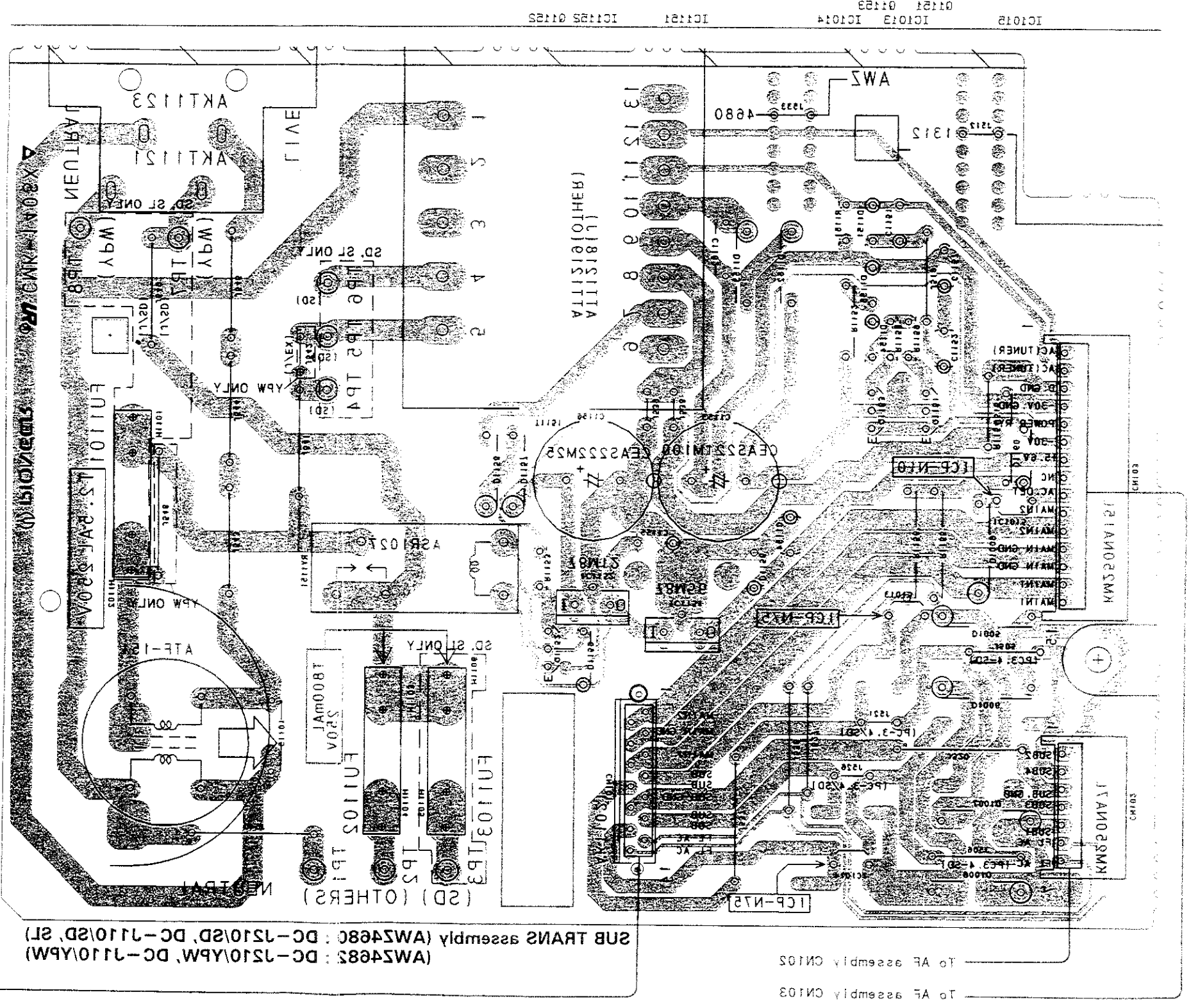
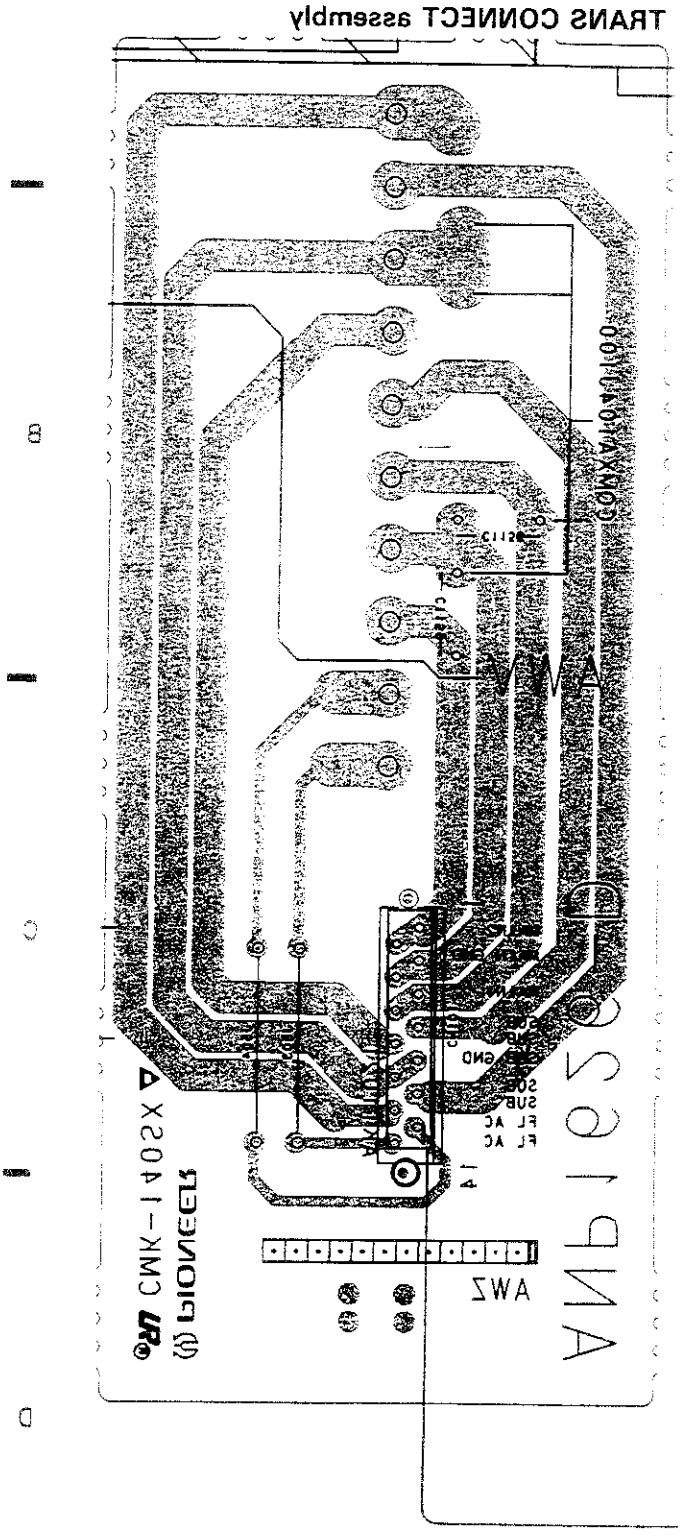
SUB TRANS ASSEMBLY, TRANS CONNECT ASSEMBLY

This PCB connection diagram is viewed from the parts mounted side.



This PCB connection diagram is viewed from the foil side.

A

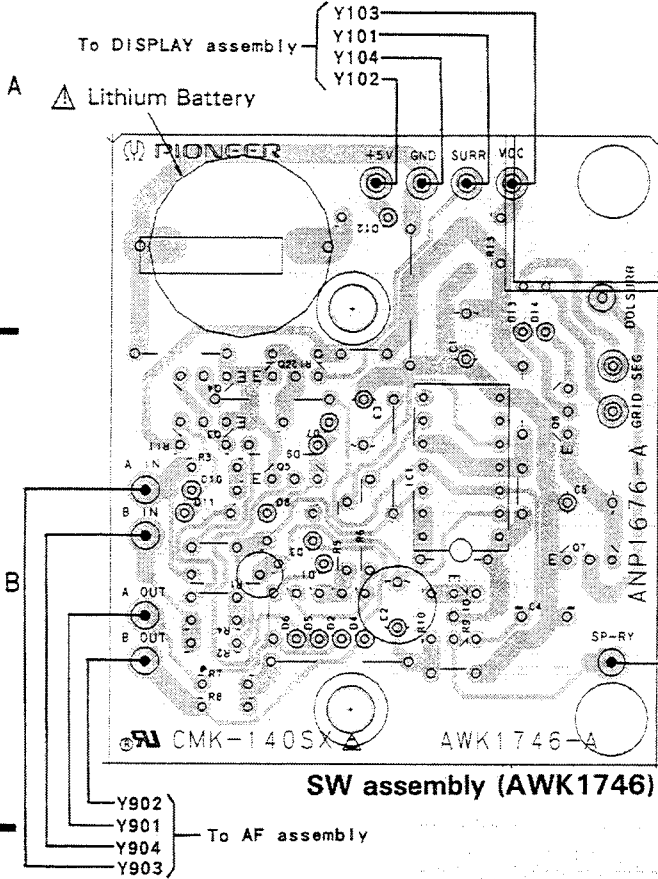


To AF assembly C103
 To AF assembly C105

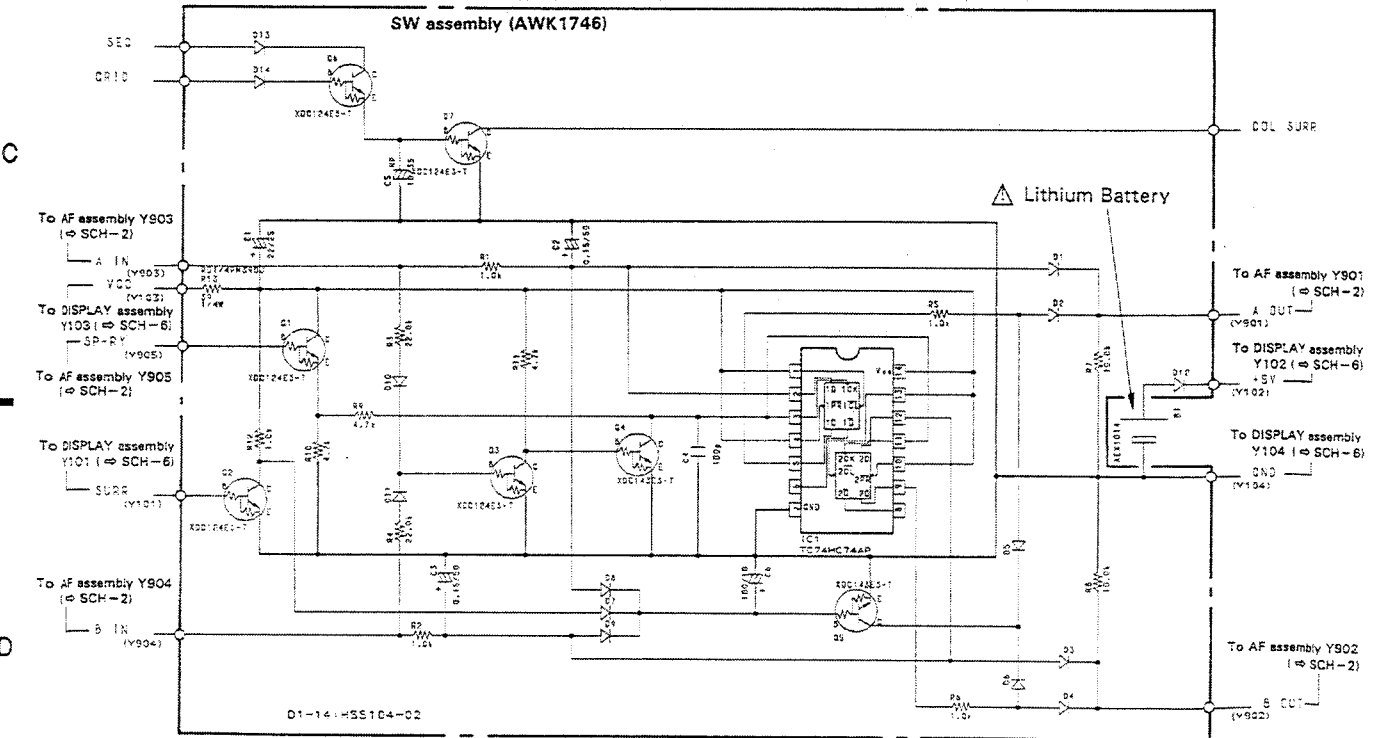
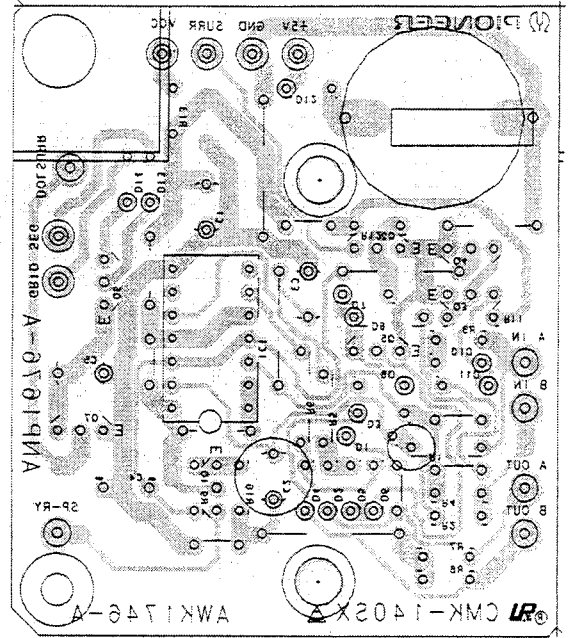
(AW2482 : DC-7510YBW, DC-7110YBW)
 (AW2483 : DC-7510SD, DC-7110SD, SL)

2.8 SW ASSEMBLY

This PCB connection diagram is viewed from the parts mounted side.



This PCB connection diagram is viewed from the foil side.

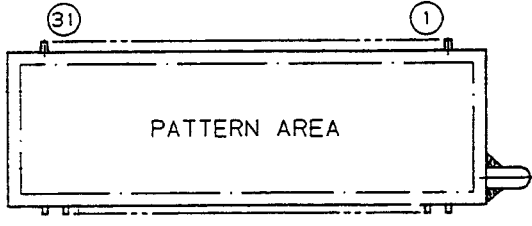
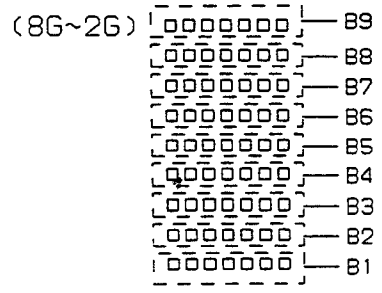
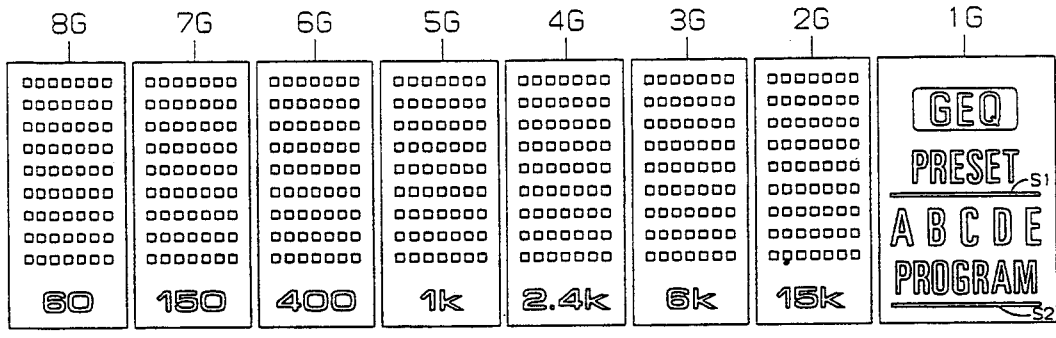


SCH-8

DC-J210, DC-J110

■ AAV1166 (V3901 : DISPLAY ASSEMBLY)

- FL Tube
- Grid Assignment



● Pin Connection

PIN NO.	3	3	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1
CONNECTION	F	F	N	N	N	N	N	N	N	N	P	P	P	P	P	P	P	P	P	P	P	P	N	N	N	N	F	F	F	F	
	2	2	P	C	G	G	G	G	G	G	G	C	C	C	C	C	1	2	3	4	5	6	7	8	9	0	C	C	P	1	1

- NOTE
- 1) F1, F2 --- Filament
 - 2) NP ----- No pin
 - 3) NC ----- No connection
 - 4) 1G~8G --- Grid
 - 5) DL ----- Datum Line

● Anode Connection

	8G	7G	6G	5G	4G	3G	2G	1G
P1	60	150	400	1k	2.4k	6k	15k	S2
P2	B1	B1	B1	B1	B1	B1	B1	PROGRAM
P3	B2	B2	B2	B2	B2	B2	B2	A
P4	B3	B3	B3	B3	B3	B3	B3	B
P5	B4	B4	B4	B4	B4	B4	B4	C
P6	B5	B5	B5	B5	B5	B5	B5	D
P7	B6	B6	B6	B6	B6	B6	B6	E
P8	B7	B7	B7	B7	B7	B7	B7	S1
P9	B8	B8	B8	B8	B8	B8	B8	PRESET
P10	B9	B9	B9	B9	B9	B9	B9	GEO

3. PCB PARTS LIST

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%).

560Ω → 56 × 10¹ → 561 RD1/8PM 5 6 1 J
 47kΩ → 47 × 10³ → 473 RD1/4PS 4 7 3 J
 0.5Ω → 0R5 RN2H 0 R 5 K
 1Ω → 010 RS1P 0 1 0 K

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

5.62kΩ → 562 × 10¹ → 5621 RM1/4PC 5 6 2 1 F

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES							
		AF ASSEMBLY (for DC-J210)	AWZ4650		D1201		D3SBA20 (A)
		AF ASSEMBLY (for DC-J110)	AWZ4647		D1001, D1002, D1005, D1256,		HSS104-02
		VOLUME ASSEMBLY	AWZ4653		D1258-D1261, D1901-D1903		
		DISPLAY ASSEMBLY	AWZ4657		D1161		RD5.1ESB2
NSP		MIC ASSEMBLY	AWZ4663		D1904-D1912		RD5.6ESB
		HEADPHONE ASSEMBLY	AWZ4666		D1003, D1004, D1257		S5566
NSP		TRANS CONNECT ASSEMBLY	AWZ4672	RELAYS			
		SUB TRANS ASSEMBLY	AWZ4680		RY1001, RY1251		ASR1035
		TAPE ASSEMBLY	AWV1318	COILS			
		SW ASSEMBLY	AWK1746		L1201, L1202		ATH-133
					L1901		LAU221K
AF ASSEMBLY				CAPACITORS			
SEMICONDUCTORS					C1003 (2200/42)		ACH1109
	IC1010, IC1202		ICP-N10		C1201, C1202 (5600/50)(for DC-J210)		ACH1145
	IC3101, IC3102		LA3607		C1201, C1202 (2200/42)(for DC-J110)		ACH1109
	IC3103		LC7522		C2305, C2306		CCSQCH101J50
	IC1902		M51951BSL		C3307		CCSQCH102J50
	IC2101, IC3301		MC14052BF		C3129, C3130		CCSQCH221J50
	IC2102		MC14066BF		C3125, C3126, C3305, C3306		CCSQCH681J50
	IC1001, IC1002		MC7812CT		C3140, C3141		CCSLSL101J50
	IC1003		NJM78M05FAS		C1204		CEANP100M100
	IC1006		NJM7912FA		C1252, C1904		CEAS010M50
	IC1005		NJM79M05FA		C1261, C2103, C2104		CEAS100M50
	IC1901		PD5214A		C3135, C3136		CEAS101M10
	IC1201 (for DC-J210)		STK4170-2G		C1903		CEAS101M16
	IC1201 (for DC-J110)		STK4150-2G		C1209-1212		CEAS101M50
	IC2103, IC2301, IC2501, IC3302,		XRA4558F-P		C1004		CEAS102M35
	IC3303				C1005, C1006, C1011, C1205, C1206,		CEAS220M25
	Q1004, Q1253, Q1261		2SA1048		C3311, C3312		
	Q1002		2SA1515		C1271		CEAS221M16
	Q1252, Q1254, Q1262, Q1271, Q1272,		2SC2458		C2309, C2310, C2315, C2316,		CEAS2R2M50
	Q2201, Q2202				C3131-C3134, C3301, C3302		
	Q2102, Q2103, Q2203		XDA143ES		C2317, C2318		CEAS330M25
	Q1003		XDC124ES		C3113, C3114, C3119, C3120		CEASR15M50
	Q2101		XDC143ES		C3117, C3118		CEASR47M50
					C1007, C1008		CEHAQ220M16
					C1901, C1902, C1910		CKCYF473250

DC-J210, DC-J110

Mark	No.	Description	Parts No.
	C3109, C3110, C3115, C3116 C1207, C1208 C1905-C1909		CKCYX683M25 CKPUYX182M16 CKSQYB102K50
	C2311, C2312 C3121, C3122, C3127, C3128 C3105, C3106, C3111, C3112 C3103, C3104, C3123, C3124 C2313, C2314		CKSQYB152K50 CKSQYB182K50 CKSQYB273K50 CKSQYB472K50 CKSQYB562K50
	C3101, C3102, C3107, C3108 C3137, C3138, C3142 C1215-C1218		CKSQYF103Z50 CKSQYF473Z50 CQMA473J50

RESISTORS

R1007-R1010 R1254 R1256 R1015 R1213, R1214	RD1/2PMFL100J RD1/4PM153J RD1/4PM243J RD1/4PM331J RD1/4PM4R7J
R1211, R1212 R1207, R1208 R2317, R2318 R1215, R1216 R1209, R1210	RD1/4PM561J RD1/4PM563J RD1/4PM820J RD1/4PMFL100J RD1/4PMFL101J
R3651, R3652 R2313, R2314 R2303, R2304, R3315-R3318 R1927, R2113-R2117, R2213, R2214, R3105, R3106, R3130, R3131	RS1/10S000J RS1/10S101J RS1/10S102J RS1/10S103J
R2108, R2315, R2316, R3301, R3302, R3503, R3504 R3111-R3126 R2311, R2312 R2101, R2102, R3103, R3104 R2103, R2104	RS1/10S104J RS1/10S105J RS1/10S122J RS1/10S123J RS1/10S133J
R3307-R3312 R2507, R2508 R2215, R2216 R2201, R2202, R2301, R2302 R1904-R1908	RS1/10S152J RS1/10S153J RS1/10S203J RS1/10S221J RS1/10S222J
R2105, R2106 R3305, R3306 R2501, R2502 R2109, R2110, R3511, R3512 R2107, R2305-R2308, R3101, R3102	RS1/10S332J RS1/10S333J RS1/10S392J RS1/10S472J RS1/10S473J
R2309, R2310 R1918, R1919 R2503, R2504, R2506 R3109, R3110 R1261, R1262	RS1/10S474J RS1/10S563J RS1/10S682J RS1/10S823J RS2LMFR22J
Other Resistors	RD1/8PM□□□□J

OTHERS

X1901 (8.00MHz)	ASS1015
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Mark	No.	Description	Parts No.
	CN403 CN112 CN105 CN401 CN106	9P SOCKET 40P SOCKET 36P SOCKET 4P JUMPER CONNECTOR 7P JUMPER CONNECTOR	AKP1072 AKP1085 AKP1105 KPE4 KPE7
		6P PIN JACK 2P PIN JACK 4P SPEAKER TERMINAL MINI JACK 14P SOCKET	AKB1121 AKB1146 AKE1012 AKN-203 AKP1048
		SCREW	BBZ30P080FZK

VOLUME ASSEMBLY

SEMICONDUCTORS

IC1502 IC1501	TA7291S XRA4558-P
Q1501, Q1502 Q1503	2SC2878 XDA124ES

CAPACITORS

C1507, C1508 C1501-C1504 C1505, C1506 C1511 C1509, C1510	CEAS101M16 CEAS220M25 CEAS470M25 CKDYX104M25 CKPUYF473Z16
--	---

RESISTORS

VR1501 (100k-4B×2)	ACX1053
R1511, R1512	RD1/4PM820J
Other Resistors	RD1/8PM□□□□J

DISPLAY ASSEMBLY

SEMICONDUCTORS

IC3702 IC3901 IC1701, IC1702	BA3826S PDC009A SN74LS05N
Q3701 Q3901, Q3902 Q1701, Q1702	2SC2458 XDC124ES XDC143ES
D1701-D1704, D1707, D1716 D1705, D1706, D1709-D1713, D1715 D1708, D1714, D1801-D1806, D3702-D3705, D3801-D3806, D3901-D3907	AEL1064 AEL1065 HSS104-02

SWITCHES

S1801, S1802, S1804-S1816, S1818-S1820, S3801, S3802, S3806-S3811, S3813-S3817 S1901	ASG1034 ASH1012
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Mark	No.	Description	Parts No.
COIL			
	L3901		LAU221K
CAPACITORS			
	C3901		ACH1135
	C1901		CCCSL100D50
	C3907		CEAS100M50
	C3904, C3908		CEAS470M10
	C3701, C3702		CEJA2R2M50
	C3906		CKCYB102K50
	C3703, C3905		CKPUYB102K50
	C3902, C3903		CKPUYF223Z25
RESISTORS			
	R3710, R3719		RD1/2PM2R2J
	Other Resistors		RD1/8PM□□□J
OTHERS			
	X3901 (12MHz)		ASS1062
	CN1901 40P SOCKET		AKP1085
	V3901 FL TUBE		AAV1166
	REMOTE CONTROL		AXX1023
	SENSOR UNIT		
MIC ASSEMBLY			
SEMICONDUCTORS			
	IC2502		XRA4558-P
CAPACITORS			
	C2510		CEAS010M50
	C2502, C2511		CEAS100M50
	C2512, C2513		CEAS470M25
	C2509		CEJA100M50
	C2501		CKPUYX332M16
RESISTORS			
	VR2501 (10k-B)		ACS1087
	Other Resistors		RD1/8PM□□□J
OTHERS			
	MIC JACK		AKN1010
HEADPHONE ASSEMBLY			
SEMICONDUCTORS			
	IC1231		M5216P
	Q1231, Q1232		2SC2458
	Q1233		XDA124ES

Mark	No.	Description	Parts No.
CAPACITORS			
	C1235, C1236		CEAS220M25
	C1231, C1232		CEAS2R2M50
	C1241, C1242		CEAS330M25
	C1233, C1234		CEAS470M25
	C1237, C1238		CKPUYB101K50
	C1239, C1240		CKPUYB151K50
RESISTORS			
	R1243, R1244		RS1LMF820J
	Other Resistors		RD1/8PM□□□J
OTHERS			
	HEADPHONE JACK		AKN1010
TRANS CONNECT ASSEMBLY			
CAPACITORS			
	C1158, C1159		CQMXA104J100
SUB TRANS ASSEMBLY			
SEMICONDUCTORS			
	IC1015		ICP-N10
	IC1013, IC1014		ICP-N75
	IC1152		NJM78M12FAS
	IC1151		NJM78M56FAS
	Q1151, Q1153		2SB560
	Q1152		2SC2458
	D1154, D1156, D1159		HSS104-02
	D1160		RD10ESB
	D1151		RD15ESB
	D1155		RD36ESB2
	D1005-D1009, D1152, D1153, D1157, D1158		S5566
RELAY			
	RY1151		ASR1027
COILS & TRANSFORMERS			
	L1101		ATF-151
	T1151		ATT1219
CAPACITORS			
	C1101 (0.01/400)		ACG1003
	C1152, C1157		CEAS220M50
	C1153		CEAS221M100
	C1156		CEAS222M25
	C1151, C1154		CEAS470M16
	C1155		CEAS470M25

DC-J210, DC-J110

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
RESISTORS							
	R1152		RD1/4PM273J		C4353		CEAS3R3M50
	R1155, R1156		RD1/4PM470J		C4131, C4132, C4159, C4160		CEAS470M10
	Other Resistors		RD1/8PM□□□J		C4325, C4326, C4361		CEAS470M16
					C4129, C4130, C4157, C4158		CEAS4R7M50
OTHERS							
	CN 1P AC INLET		AKP1121		C4407, C4408		CEASR22M50
TAPE ASSEMBLY							
SEMICONDUCTORS							
	IC4421		CXA1100P		C4902		CEASR33M50
	IC4202		MC14066BF		C4307, C4308		CFTXA823J50
	IC4302		SN74LS05N		C4323, C4324, C4356		CKCYB681K50
	IC4121, IC4151		UPC4570G2		C4352, C4360		CKCYF103Z50
	IC4201, IC4251, IC4301		XRA4558F - P				
	Q4352, Q4904, Q4906, Q4908, Q4910		2SA1515		C4211, C4212		CKSQYB152K50
	Q4201 - Q4204, Q4355,		2SC2458		C4311, C4312		CKSQYB223K50
	Q4451 - Q4454				C4305, C4306		CKSQYB272K50
	Q4205, Q4206, Q4461, Q4462		2SC2878		C4251		CKSQYB473K50
	Q4353, Q4354		2SC3377		C4315, C4316		CKSQYB562K50
	Q4321, Q4322		2SK373				
	Q4901, Q4903		RN2204		C4357		CQMA123K250
	Q4207, Q4421, Q4460		XDA124ES		C4355		CQMA153J50
	Q4208		XDA143ES		C4209, C4210		CQMA183J50
	Q4902, Q4905, Q4907, Q4909, Q4911		XDC124ES		C4127, C4128, C4155, C4156		CQMA223J50
	Q4209, Q4301, Q4351		XDC143ES		C4207, C4208		CQMA273J50
	D4251, D4252, D4321 - D4326, D4451,		HSS104 - 02				
	D4452, D4901 - D4912						
COILS & TRANSFORMER							
	F4401, F4402		ATF1064		C4317, C4318		CQMA333J50
	T4351		ATX - 043		C4351		CQMA562K400
	L4301, L4302		LTA392J		C4313, C4314		CQMA822J50
	L4303, L4304		LTA822J		RESISTORS		
CAPACITORS							
	C4362 (2000p/630)		ACE1020		VR4903		VRTP6HS103
	C4333, C4334		CCCSL100D50		VR4121, VR4122, VR4151, VR4152,		VRTP6HS202
	C4354		CCCSL221J50		VR4451, VR4452		
	C4319, C4320		CCDSL271K500		VR4901, VR4902		VRTP6HS203
	C4123, C4124		CCSQCH331J50		VR4351, VR4352		VRTP6HS204
	C4252		CCSQCH560J50				
	C4151, C4152		CCSQCH561J50		R4449		RS1/10S000J
	C4253, C4303, C4304, C4403, C4404,		CEAS010M50		R4129, R4130, R4157, R4158		RS1/10S101J
	C4453, C4454		CEAS0R1M50		R4315, Q4316, R4461, R4462		RS1/10S102J
	C4254		CEAS100M50		R4201, R4202, R4409, R4416 - R4418,		RS1/10S103J
	C4213, C4214, C4358, C4363, C4405,		CEAS101M10		R4420, R4422		
	C4406, C4409, C4410		CEAS220M16		R4307, R4308, R4419		RS1/10S104J
	C4133, C4134, C4161, C4162, C4402		CEAS2R2M50				
	C4455, C4456		CEAS330M16		R4205, R4206, R4209, R4210, R4459		RS1/10S105J
	C4321, C4322				R4203, R4204		RS1/10S122J
	C4309, C4310				R4257, R4421		RS1/10S123J
					R4127, R4128, R4155, R4156		RS1/10S124J
					R4123, R4124, R4151, R4152, R4219,		RS1/10S154J
					R4220, R4252		
					R4253		RS1/10S181J
					R4222, R4321, R4322, R4413, R4414,		RS1/10S222J
					R4458		
					R4254, R4259		RS1/10S223J
					R4251		RS1/10S224J
					R4401, R4402		RS1/10S242J
					R4407, R4408, R4411, R4412		RS1/10S273J
					R4319, R4320		RS1/10S302J
					R4207, R4208		RS1/10S332J
					R4311, R4312		RS1/10S333J
					R4403, R4404		RS1/10S362J
					R4313, R4314		RS1/10S393J
					R4427		RS1/10S433J
					R4323, R4324, R4455, R4456		RS1/10S471J

Mark	No.	Description	Parts No.
	R4213 - R4216, R4231, R4450 R4218, R4230, R4256, R4258		RS1/10S472J RS1/10S473J
	R4255 R4125, R4126, R4153, R4154 R4325, R4326 R4405, R4406, R4463, R4464 R4309, R4310 R4317, R4318		RS1/10S514J RS1/10S622J RS1/10S681J RS1/10S682J RS1/10S683J RS1/10S820J
	Other Resistors		RD1/8PM□□□J
OTHERS			
	CN 36P SOCKET		AKP1105
SW ASSEMBLY			
SEMICONDUCTORS			
	IC1		TC74HC74AP
	Q1 - Q3, Q6, Q7 Q4, Q5		XDC124ES XDC143ES
	D1 - D14		HSS104 - 02
CAPACITORS			
	C4		CCCSL101J50
	C5		CEANP100M35
	C2, C3		CEASR15M50
	C6		CEAS101M10
	C1		CEAS220M25
RESISTORS			
	R13		RD1/4PM390J
	Other Resistors		RD1/8PM□□□J

4. ADJUSTMENTS

4.1 ADJUSTMENT OF MECHANICAL SECTION

- The adjustment location and the measuring location, refer to Fig. 4-4.
- Set the function switch to "TAPE".
- Test tape : STD-301 (3kHz 30min)

1. Adjustment of tape speed							
No.	Mode	Input signal & Test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1	PLAY	Playback the STD-301 tape to 3kHz.	Deck I	TAPE assembly VR4901	JP-L (Lch)	Press the PLAY button and adjust the frequency to 3010Hz \pm 10Hz. Make sure that the wow and flutter is 3010Hz \pm 55Hz.	
2	PLAY (Double speed mode)			—		Press the PLAY button in double speed mode and confirm that the frequency is 6000Hz \pm 1000Hz. Note down the figure.	Release the double speed mode after adjustment.
3	PLAY (Double speed mode)		Deck II	TAPE assembly VR4903	JP-L (Lch)	Press the PLAY button in double speed mode and adjust the frequency to be within \pm 30Hz of the figure recorded at step No. 2.	Release the double speed mode after adjustment.
4	PLAY			TAPE assembly VR4902		Press the PLAY button and adjust the frequency to 3010Hz \pm 10Hz. Make sure that the wow and flutter is 3010Hz \pm 55Hz.	

Double-speed mode : The double-speed mode can be entered by short circuiting the line between TP4901 and TP4902. The mode is canceled by opening the short circuited line and switching the power to OFF.

4.2 ADJUSTMENT OF ELECTRICAL SECTION

■ Check and conduct the following before adjusting the electric section.

1. Adjustment of tape speed has been completed.
2. Clean and demagnetize the head using a head eraser.
3. When measured, the level should be 0dBV = 1Vrms.
4. Use side A of the specified tape for adjustment.
 STD-331E : For adjustment of playback system.
 STD-631 : NORMAL blank tape
5. Prepare the following measuring devices :
 - AC millivoltmeter
 - Low-frequency oscillator
 - Attenuator
 - Oscilloscope
6. Adjust both L and R channels, unless specified otherwise.
7. Set the DOLBY NR switches to OFF, unless specified otherwise.
8. Warm up the unit for several minutes before adjustment. Especially before adjusting the frequency characteristics of recording and playback, warm up for 3 to 5 minutes in REC/PLAY mode.
9. Make sure to follow the proper order of the adjustment procedure. Any change in the order may cause an improper result.

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■ List of Adjustment

Deck I

1. Head azimuth adjustment
2. Playback level adjustment

Deck II

1. Head azimuth adjustment
2. Playback level adjustment
3. Bias oscillation frequency adjustment
4. Recording level adjustment
5. Adjustment of frequency characteristics of recording/playback

**As the reference recording level is 250nwb/m for STD-331E, the recording level will be higher by 4 dB for STD-331B (160nwb/m). When adjusting, pay carefull attention to the type of tape used.*

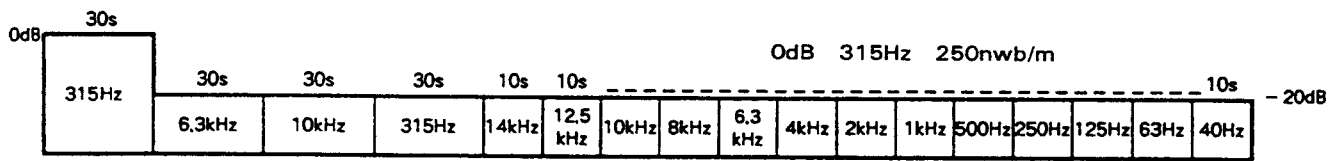
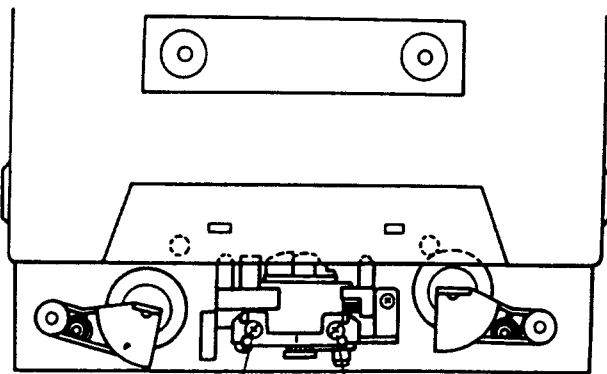


Fig. 4-1 Test Tape STD-331E

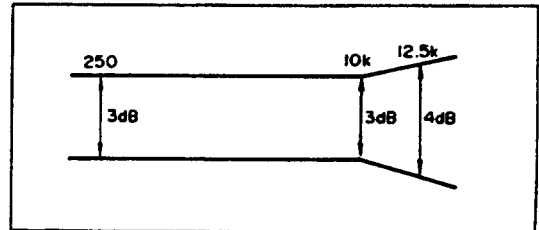


REV azimuth adjustment screw FWD azimuth adjustment screw

NOTE : Before adjusting, remove the deck panel.

Fig. 4-2 Head Azimuth Adjustment

PLAY BACK



RECORDING

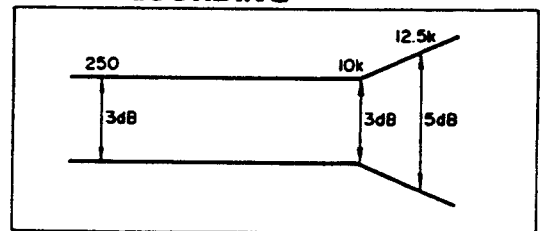


Fig. 4-3 Frequency Characteristics

Head Adjustment of Deck I

- Deck I is provided with an automatic tape selector mechanism.
- Note : Do not switch over FWD and REV while the screw driver is inserted.

1. Head Azimuth Adjustment

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD-331E (10kHz, -20dB).	Head azimuth adjustment screw (Fig. 4-2)	TAPE assembly JP-L (Lch) JP-R (Rch)	Maximum playback signal level.	Lock the screw with screw lock after completing adjustment.

2. Playback Level Adjustment

- Be sure to make a careful adjustment, as the adjustment determines the DOLBY NR level for playback.

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD-331E (315Hz, 0dB).	TAPE assembly VR4151 (Lch) VR4152 (Rch)	TAPE assembly JP-L (Lch) JP-R (Rch)	-6.3dBV	

Head Adjustment of Deck II

- Deck II is provided with an automatic tape selector mechanism.
- Note : Do not switch over FWD and REV while the screw driver is inserted.

1. Head Azimuth Adjustment

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD-331E (10kHz, -20dB).	Head azimuth adjustment screw (Fig. 4-2)	TAPE assembly JP-L (Lch) JP-R (Rch)	Maximum playback signal level.	Lock the screw with screw lock after completing adjustment.

2. Playback Level Adjustment

- Be sure to make a careful adjustment, as the adjustment determines the DOLBY NR level for playback.

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	PLAY	Playback the test tape STD-331E (315Hz, 0dB).	TAPE assembly VR4121 (Lch) VR4122 (Rch)	TAPE assembly JP-L (Lch) JP-R (Rch)	-6.3dBV	

3. Bias Oscillation Frequency Adjustment

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	REC	Load the test tape STD-631 and set to record mode.	TAPE assembly T4351	Area between ㉠ and ㉡ (TAPE assembly) shown in Fig. 4-4.	The oscillation frequency is 105kHz \pm 5kHz.	

4. Recording Level Adjustment

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	REC	Apply a signal of 315Hz to the VCR input terminal and set the function to "VCR".	Input signal level	TAPE assembly JP-L (Lch) JP-R (Rch)	-10.3dBV	
2	NORM	REC/PLAY	Record and playback the test tape STD-631 (315Hz).	TAPE assembly VR4451 (Lch) VR4452 (Rch)	TAPE assembly JP-L (Lch) JP-R (Rch)	Repeat the recording/playback, and make adjustment so that the playback level of 315Hz is -10.3dBV.	

5. Adjustment of Frequency Characteristics of Recording/playback

- As this procedure is for adjustment of the recording bias, be careful not to increase the distortion by underadjusting the bias.

Pro-cedure	Tape selector (Auto)	Mode	Input signal/test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1	NORM	REC	Apply a signal of 315Hz to the VCR input terminal and set the function to "VCR".	Input signal level	TAPE assembly JP-L (Lch) JP-R (Rch)	-30.3dBV	
2	NORM	REC/ PLAY	Record and playback the test tape STD-631 (315Hz and 10kHz).	TAPE assembly VR4351 (Lch) VR4352 (Rch)	TAPE assembly JP-L (Lch) JP-R (Rch)	Repeat the recording/playback, and make adjustment so that the playback level of 10kHz remains $0 \pm 0.5\text{dB}$ in relation to 315Hz.	

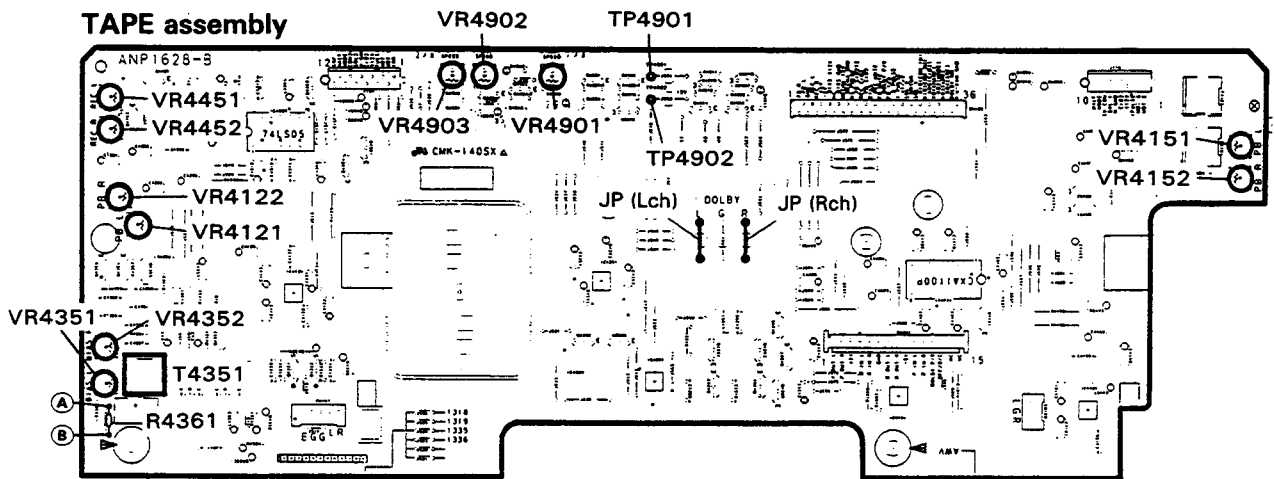
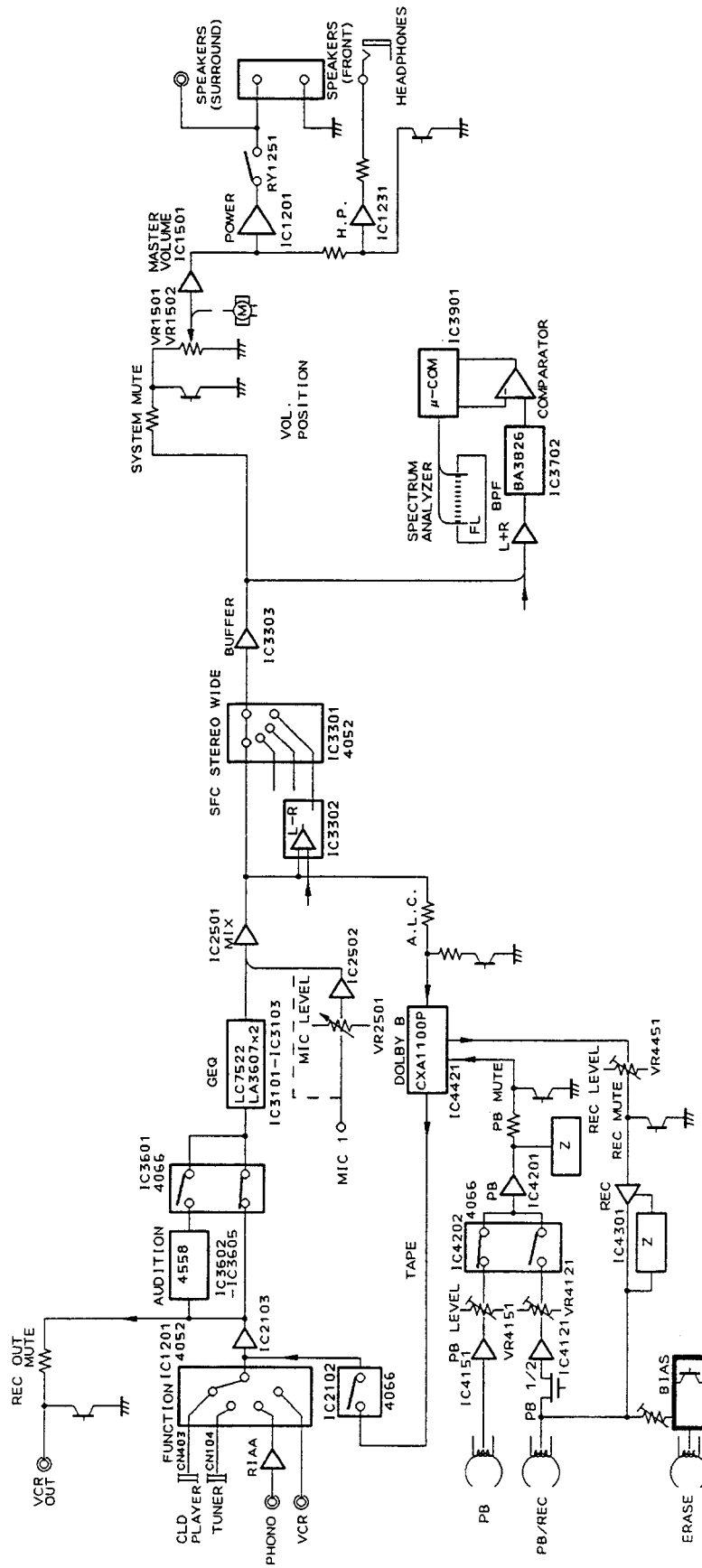


Fig. 4-4 Adjustment Points

5. BLOCK DIAGRAM



6. FOR DC – J210/YPW, DC – J110/SD, SL AND YPW TYPES

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.

CONTRAST OF MISCELLANEOUS PARTS

DC – J210/YPW, DC – J110/SD, SL, YPW and DC – J210/SD have the same construction except for the following :

Mark	Symbol & Description	Part No.					Remarks
		DC – J210/ SD	DC – J210/ YPW	DC – J110/ SD	DC – J110/ SL	DC – J110/ YPW	
	AF assembly	AWZ4650	AWZ4650	AWZ4647	AWZ4647	AWZ4647	*1
	SUB TRANS assembly	AWZ4680	AWZ4682	AWZ4680	AWZ4680	AWZ4682	
Δ	S1 Voltage selector (AC110V/120 – 127V/220V/240V)	AKX – 507	.....	AKX – 507	AKX – 507	.....
Δ	S Voltage selector (AC110 – 127V/220V – 240V)	AKX1004	.....	AKX1004	AKX1004	.....
Δ	T102 Power transformer	ATS1468	ATS1468	ATS1470	ATS1470	ATS1470	
Δ	FU1101 Fuse (T2.5A/250V)	AEK – 512	.....	AEK – 512	AEK – 512	.....
Δ	FU1102 Fuse (T1.6A/250V)	AEK – 510	AEK – 510	.....	.....	.....
Δ	FU1102 Fuse (T800mA/250V)	.....	.....	AEK – 507	AEK – 507	AEK – 507	
Δ	FU1103 Fuse (T1.6A/250V)	AEK – 510	.....	.....	.....	.....
Δ	FU1103 Fuse (T800mA/250V)	.....	.....	AEK – 507	AEK – 507	.....
Δ	AC Power cord	ADG1129	ADG1124	ADG1129	ADG1127	ADG1124	
	Rear panel	ANC2005	ANC2006	ANC2005	ANC2083	ANC2006	
	Front panel	AMB2092	AMB2092	AMB2095	AMB2095	AMB2095	
	Heat sink	ANH1425	ANH1425	ANH1408	ANH1408	ANH1408	
	Packing case	AHD2502	AHD2502	AHD2503	AHD2503	AHD2503	

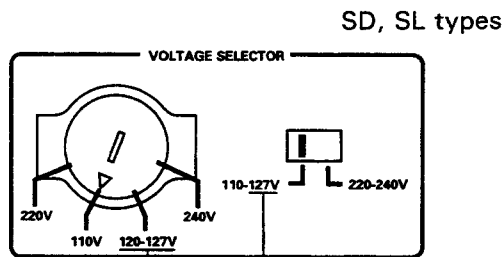
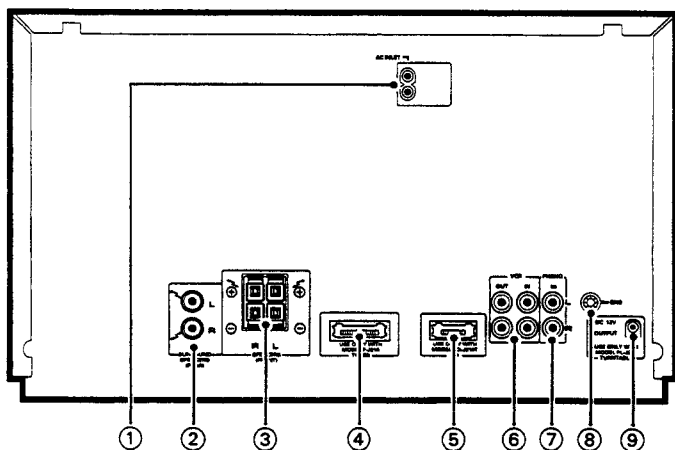
*1 : Although AWZ4682 and AWZ4680 are different in part number, they have the same service parts.

AF ASSEMBLY

AWZ4647 and AWZ4650 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ4650	AWZ4647	
	IC1201	STK4170 – 2G	STK4150 – 2G	
	C1201, C1202 (5600/50)	ACH1145	.....
	C1201, C1202 (2200/42)	.....	ACH1109	

7. PANEL FACILITIES



(YPW type)

Double Deck Amplifier: DC-J210/DC-J110

① AC INLET jack

Connect the power cord here.

② SURROUND SPEAKERS jacks

Connect the surround speaker systems.

NOTE:

Connect a speaker system having a nominal impedance of 16 Ω or more.

③ SPEAKERS terminals

L: Connect the left speaker systems as seen from the listening position.

R: Connect the right speaker system as seen from the listening position.

NOTE:

Connect a speaker system having a nominal impedance ranging from 6 Ω to 16 Ω.

④ TUNER jacks

Connect the tuner flat cable here.

⑤ CD jacks

Connect to a compact disc player PD-J210T or PD-J215M flat cable.

⑥ VCR IN/OUT jacks

IN : Connect to audio output jacks of VCR.

OUT: Connect to audio input jacks of VCR.

⑦ PHONO input jacks

Connect the audio cord of the turntable to these jacks.

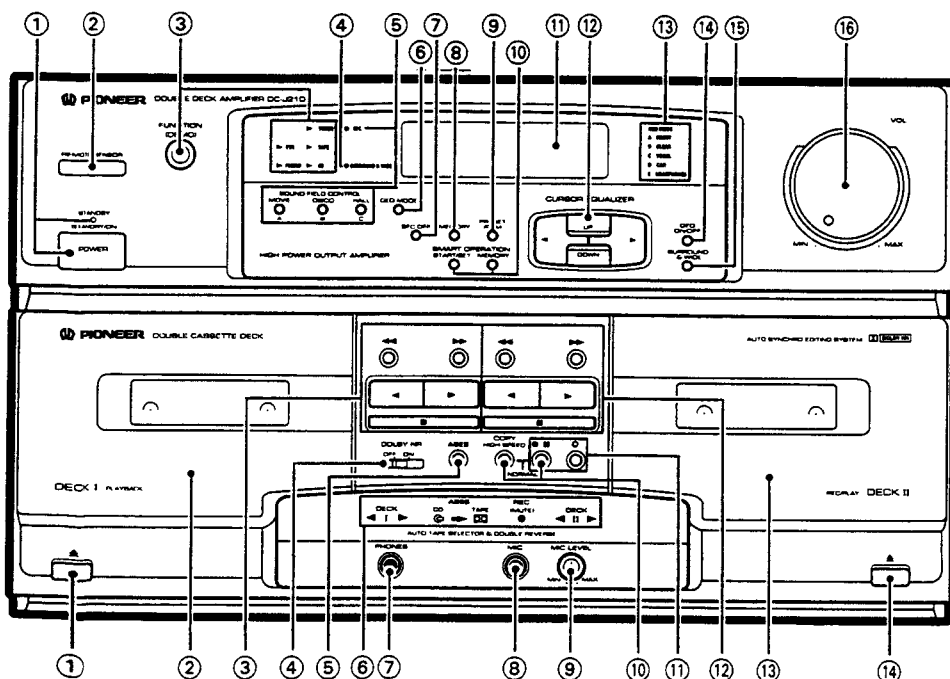
⑧ Ground terminal (GND)

Connect the ground cord of the turntable here (except for PL-J210).

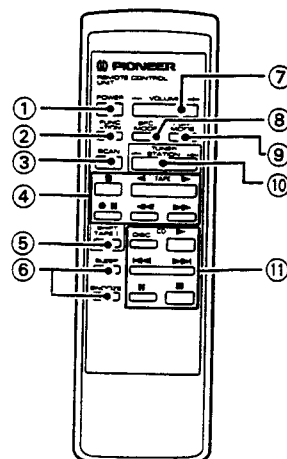
⑨ TURNTABLE (DC 12V OUTPUT) jack

This jack supplies power to the turntable PL-J210.

Connect the power supply cord of the turntable to this jack.



DC-J210/DC-J110
(The illustration of the double deck amplifier shows the Model DC-J210.)



Double Deck Amplifier: DC-J210/DC-J110

- This unit has an automatic tape type selector.
- Tapes can be played back on deck I; tapes can be played back and recorded on deck II.
- Sound can be recorded as adjusted by the graphic equalizer.
- Use a TYPE I (normal) or TYPE II (HIGH/CrO₂) tape.

■ Amplifier section

① POWER STANDBY/ON switch/STANDBY indicator

This is the switch for electric power.

ON : When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational.

A minute flow of power feeds the unit to maintain operation readiness.

When the STANDBY indicator is on, the unit is in STANDBY.

② REMOTE SENSOR window

③ FUNCTION (DEMO) button and indicators

Use to select the input source. Each time the button is pressed, the input source changes in the order:

→ CD → VCR → PHONO → TUNER → TAPE

As each source is selected, the corresponding indicator lights.

④ SURROUND & WIDE indicator

This lights when SURROUND & WIDE is on.

⑤ SOUND FIELD CONTROL buttons and indicator (MOVIE/A, DISCO/B, HALL/C)

These buttons are used when selecting one of the preset sound fields (MOVIE, DISCO, HALL), or one of your own original memory settings (PROGRAM A, B, C). The SFC indicator lights when this setting is selected.

⑥ GEQ MODE button

Use to recall preset equalization settings. Also use to program into memory desired sound field settings.

⑦ SFC OFF button

Press to reset the sound field control to no effect. Then, the SURROUND and WIDE to off, and set the graphic equalizer to its flat setting.

⑧ MEMORY button

Use to memorize your desired sound field control settings.

⑨ PRESET/PGM (PROGRAM) button

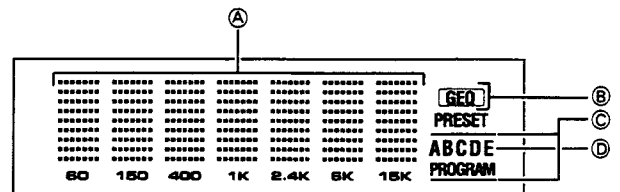
Use to switch between preset sound field control settings and your own personally created sound field setting.

⑩ SMART OPERATION buttons

START/SET: Use when programming memory and operating SMART OPERATION.

MEMORY : Use when programming SMART OPERATION into memory.

⑪ Display section



Ⓐ Visual display of spectrum analyzer and graphic equalizer.

Ⓑ This lights when the GEQ ON/OFF button is ON.

Ⓒ These underlines indicate the memory (PRESET or PROGRAM) that can be recalled with the PRESET/PGM or GEQ MODE button.

Ⓓ Display of the memory being recalled with the GEQ MODE button (A, B, C, D or E lights) or SOUND FIELD CONTROL buttons (A, B or C lights).

⑫ CURSOR EQUALIZER buttons

Use to adjust graphic equalizer settings.

◀, ▶ : Use these to change the frequency range to be adjusted.

UP, DOWN: Use these to adjust the degree of equalization.

⑬ Preset equalizer indicators

Lights when the desired preset equalizer is selected.

⑭ GEQ ON/OFF button

This switches the graphic equalizer ON/OFF. When it's ON, the GEQ indicator in the display section lights.

⑮ SURROUND & WIDE button

By turning this button ON, you can enjoy surround reproduction when rear speakers are used.

By turning this button ON, you can enjoy WIDE (stereo wide) reproduction with greater left-right spread when rear speakers are not used.

Each time the button is pressed the function changes in the following order:

→ WIDE 1 → WIDE 2 → WIDE 3 → off

The sense of left-right breadth increases as the numbers increase from 1 to 3.

NOTE:

In the case of monaural source, SURROUND & WIDE effects cannot be obtained.

⑯ VOL. (Volume) control

■ Cassette deck section

① Deck I eject button (▲)

② Deck I cassette door

③ Deck I operation buttons

- ▶ (Play) : For playing back a tape in the forward mode.
- ◀ (Play) : For playing back a tape in the reverse mode.
- (Stop) : For stopping the tape.
- ▶▶ (Fast): Fast forward in forward mode, rewind in reverse mode.
Music search (MS) starts if this is pressed during playback.
- ◀◀ (Fast): Rewind in forward mode, fast forward in reverse mode.
Music search (MS) starts if this is pressed during playback.

④ DOLBY* NR switch

Set this switch to the ON position to activate the DOLBY NR system.

- Tapes recorded using Dolby noise reduction should always be played back with the noise reduction system on. Sound quality will be adversely affected if played back with the system off, or if tapes recorded using a different noise reduction system are played back with the Dolby NR system on.
- It is recommended that tapes recorded with Dolby B type NR be so marked on the label. This will help prevent incorrect setting of the noise reduction switch during playback.

*

- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"DOLBY" and the double-D symbol DD are trademarks of Dolby Laboratories Licensing Corporation.*

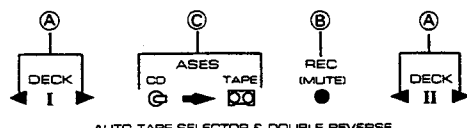
⑤ ASES button

Used for automatically recording a CD on cassette tape.

NOTE:

- *FINE is the mode when performing CD player EDIT (Computer Allocated Program Editing).*
- *The NORMAL mode provides a blank space of about five seconds between songs.*

⑥ Operation indicators



- Ⓐ **Direction** (◀, ▶): Indicates direction of tape travel during recording or playback. Flashes slowly in Pause mode. Flashes rapidly during Music Search (MS).
- Ⓑ **REC (MUTE)**: Lights when recording. It flashes during tape copying.
- Ⓒ **ASES**: Lights during the A.S.E.S. mode.

⑦ PHONES (Headphones) jack

For stereo headphones.

NOTE:

There is no output from the speakers when headphones are plugged into PHONES jack.

⑧ MIC (Microphone) jack

This is a standard jack for connecting a microphone.

⑨ MIC LEVEL control

Used for adjusting the volume of microphone.

⑩ COPY buttons

Used for tape copying. To select normal speed, press the recording pause button (●II) followed by the HIGH SPEED button.

HIGH SPEED: Copying at about twice normal tape speed. (Copies can be made in about half the NORMAL time.)

NORMAL : Copying from the Deck I tape to the Deck II tape at normal recording/playback speed.

⑪ Deck II control buttons

- II (Rec pause): When pressed once, sets unit to recording pause mode. The REC indicator lights and the direction indicators (◀ and ▶) flash. Recording begins when you press the play button (▶ or ◀).
When pressed while the tape is traveling, the unit will enter the pause mode.
- (Mute) : Used for creating a blank space between songs.

⑫ Deck II operation buttons

Same as Deck I operation buttons ③.

⑬ Deck II cassette door

⑭ Deck II eject button (▲)

Remote Control Unit

① **POWER button**

② **FUNCTION button**

Use to select the input source. Each time the button is pressed, the input source changes in the order:

→ CD → VCR → PHONO → TUNER → TAPE →

As each source is selected, the corresponding indicator lights.

③ **SCAN button**

Use when you wish to scan the radio stations stored in the memory. Each station will be received for about five seconds before moving automatically to the next station.

④ **TAPE II operation buttons**

Same as Deck II operation buttons and Deck II control buttons on the cassette deck amplifier (except Mute).

⑤ **SHIFT TAPE I button**

To operate Deck I, press the desired deck operation while pressing this button.

⑥ **Timer operation buttons**

SLEEP : Sets the sleep timer.

SNOOZE : Turns off power if pressed after timer playback begins. Timer playback begins again approx. 5 minutes later.

The amplifier input selector automatically switches to the music source being operated when you press the CD playback (▶), cassette deck playback (◀, ▶), or tuner station controls.

⑦ **VOLUME + (UP)/- (DOWN) buttons**

When pressed, VOLUME on the amplifier is actually moved by a motor.

⑧ **SFC MODE button**

Use to select one of the preset sound fields. Each time the button is pressed, one of the preset sound fields will be selected, in the following order:

→ MOVIE → DISCO → HALL →
off* ←

*Set SURROUND & WIDE to off, and set the graphic equalizer to its flat setting.

⑨ **PGM (PROGRAM) MODE button**

This button is used when selecting one of your own personally created sound fields. Each time the button is pressed, one of the sound fields will be selected, in the following order:

→ A → B → C →
off* ←

*Set SURROUND & WIDE to off, and set the graphic equalizer to its flat setting.

⑩ **TUNER STATION - (DOWN)/ + (UP) buttons**

• Used for locating Stations (see pages 15, 16).

+ (UP) : Stations change in order in the upward direction

- (DOWN): Stations change in order in the downward direction.

⑪ **CD operation buttons**

Perform the connections so that the CD player is operated by the remote control unit.

▶ : Play

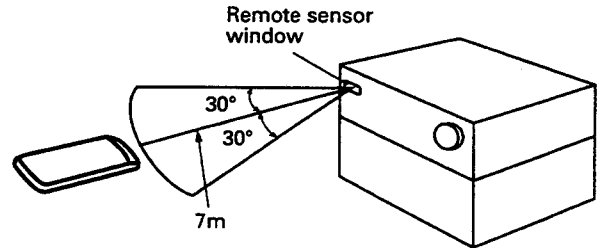
DISC : DISC selection

■ : Stop

⏸ : Pause

◀▶ : Track search

Range of remote control



When the remote control unit is pointed at the remote sensor window on the amplifier section and any of its buttons is pressed, the tuner and other components can be operated by remote control.

Distance: Within a range of approx. 7 meters (23 feet) from the remote sensor window.

Angle: Within approx. 30 degrees from the center of the remote sensor window.

Remote control will not be possible if there is an obstacle between the remote control unit itself and the remote sensor window.

Performance of the remote control unit is adversely affected by strong fluorescent light. Keep such lights away, especially from the sensor window.

8. SPECIFICATIONS

Double deck amplifier: DC-J210/DC-J110

Amplifier Section

[DC-J210]

Continuously Average Power Output is 50 Watts* per channel, min., at 8 ohms from 40 Herz to 20,000 Herz, with no more than 5% ** total harmonic distortion.

[DC-J110]

Continuously Average Power Output is 25 Watts* per channel, min., at 8 ohms from 40 Herz to 20,000 Herz, with no more than 5% ** total harmonic distortion.

- Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers.

- Specifications and design subject to possible modification without notice due to improvements.

**Measured By Audio Spectrum Analyzer.

Music power (DIN)

[DC-J210] 105 W+105 W (1kHz, T.H.D. 1%, 8Ω)

[DC-J110] 82 W+82 W (1kHz, T.H.D. 1%, 8Ω)

Graphic equalizer frequency band60 Hz, 150 Hz,
400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz, ±7 dB

Total Harmonic Distortion

[DC-J210] No more than 0.2%
(40 Hz to 20,000 Hz, 35 W, 8Ω)**

[DC-J110] No more than 0.2%
(40 Hz to 20,000 Hz, 22.5 W, 8Ω)**

Cassette Deck Section

Systems4 track, 2-channel stereo

HeadsRecording/playback head x 1
Playback head x 1
Erasing head x 1

MotorDC servo 2 speed motor x 2

Wow and FlutterNo more than 0.09% (W.PEAK)

Fast Winding TimeApproximately 105 seconds
(C-60 tape)

Frequency Response (-20 dB recording):

TYPE I (Normal) tape35 Hz to 14,000 Hz ±6 dB

TYPE II (HIGH/CrO₂) tape35 Hz to 15,000 Hz ±6 dB

Signal-to-Noise ratio

Dolby NR OFF56 dB

Noise Reduction Effect

Dolby B-type NR ONMore than 5 dB (at 5 kHz)

Furnished Parts

Operating Instructions1

Remote Control Unit1

Dry Cell Batteries ("AAA" (IEC R03/UM-4)2

Power cord1

Miscellaneous

Power requirements

Australian modelAC 240 Volts-, 50/60 Hz

Singapore model
.....AC 110/120/220/240 V (switchable), 50/60 Hz

Other models
.....AC 110/120-127/220/240 V (switchable), 50/60 Hz

Power Consumption:

[DC-J210]400 W

[DC-J110]275 W

Dimensions360 (W) x 210 (H) x 344 (D) mm

Weight (without package)

[DC-J210]9.5 kg

[DC-J110]8 kg