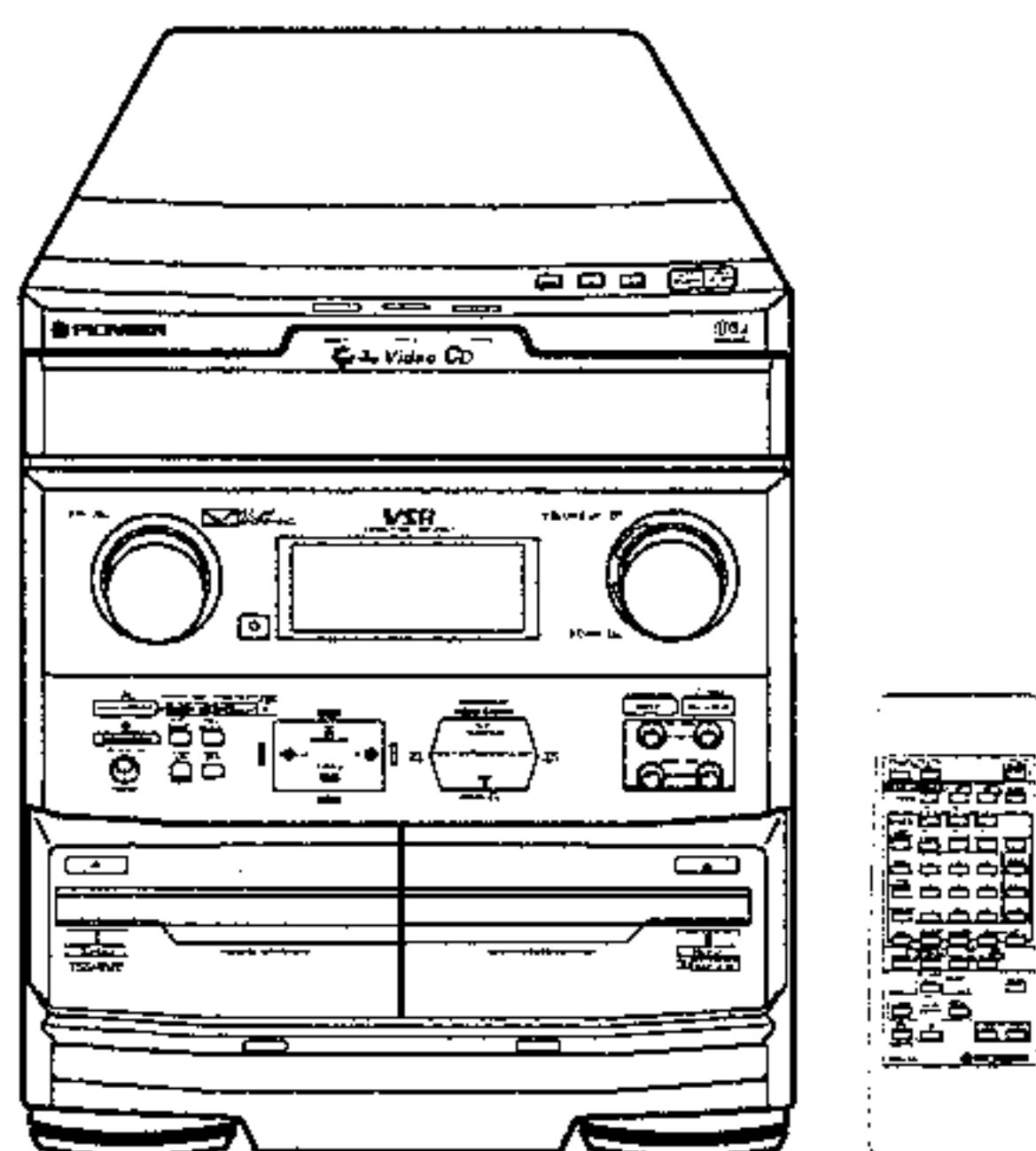


Service Manual

PIONEER®
The Art of Entertainment



ORDER NO.
ARP2974

STEREO CD/VCD CASSETTE DECK RECEIVER

XR-VS8

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	XR-VS8		
D/DF	O	AC110 – 127V/220 – 230V/240V	With the voltage selector
DAMXJ	O	AC110 – 127V/220 – 230V/240V	With the voltage selector
DDXJ	O	AC110 – 127V/220 – 230V/240V	With the voltage selector
DLXJ/NC	O	AC110 – 120V/220 – 230V/240V	With the voltage selector

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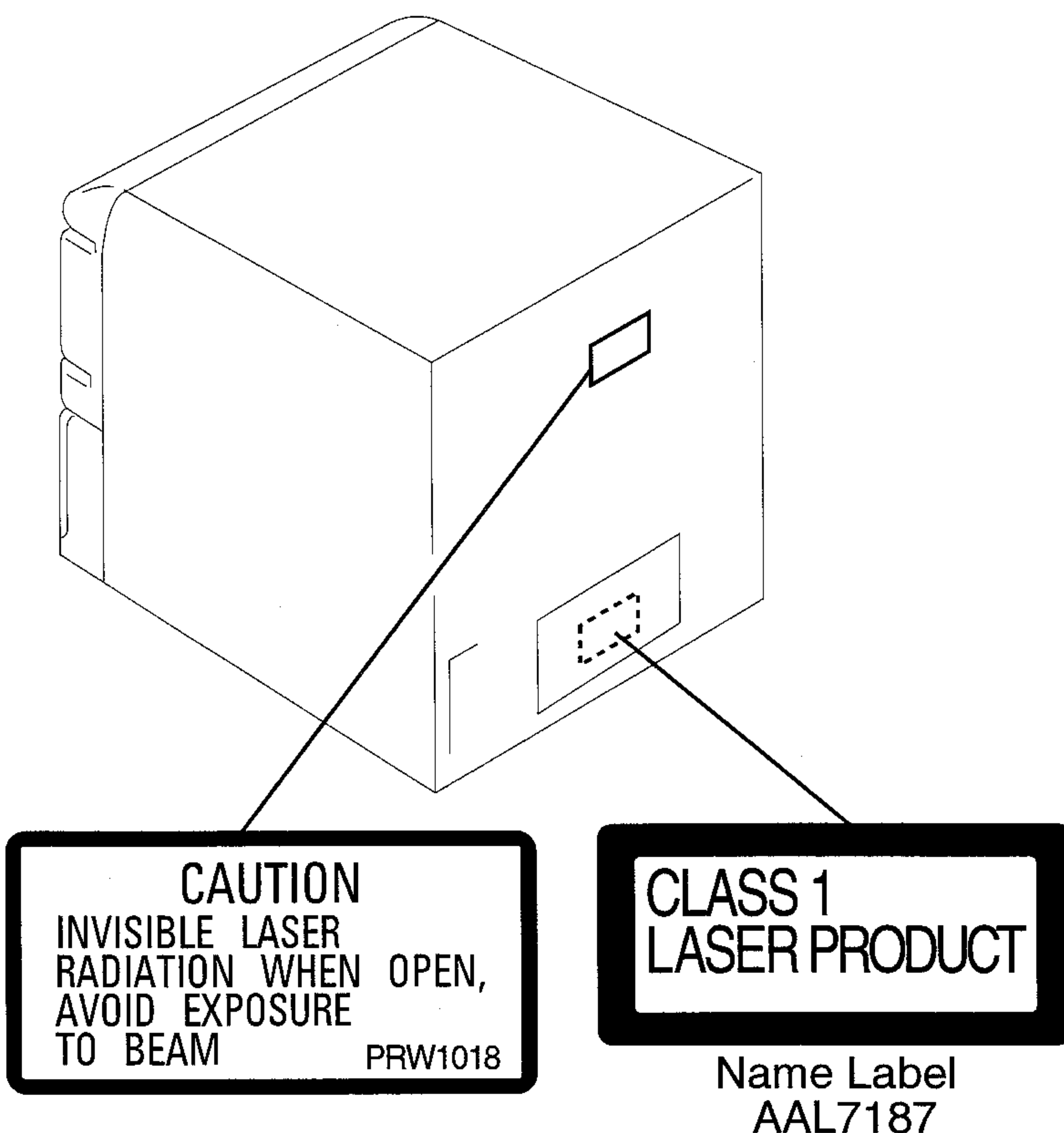
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium

PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

LABEL CHECK (For DLXJ/NC type)



Additional Laser Caution

1. Laser Interlock Mechanism

The position of the switch (S8501) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S8501) is pressed physically.

Thus, the interlock will no longer function if the switch (S8501) is released physically and deliberately.

The interlock also does not function in the test mode *. Laser diode oscillation will continue, if pin 62 of LA9240ML (IC8101) on the CD ASSY mounted on the \$M Loading Mechanism assembly is connected to GND, or else the terminals of Q8101 are shorted to each other (fault condition).

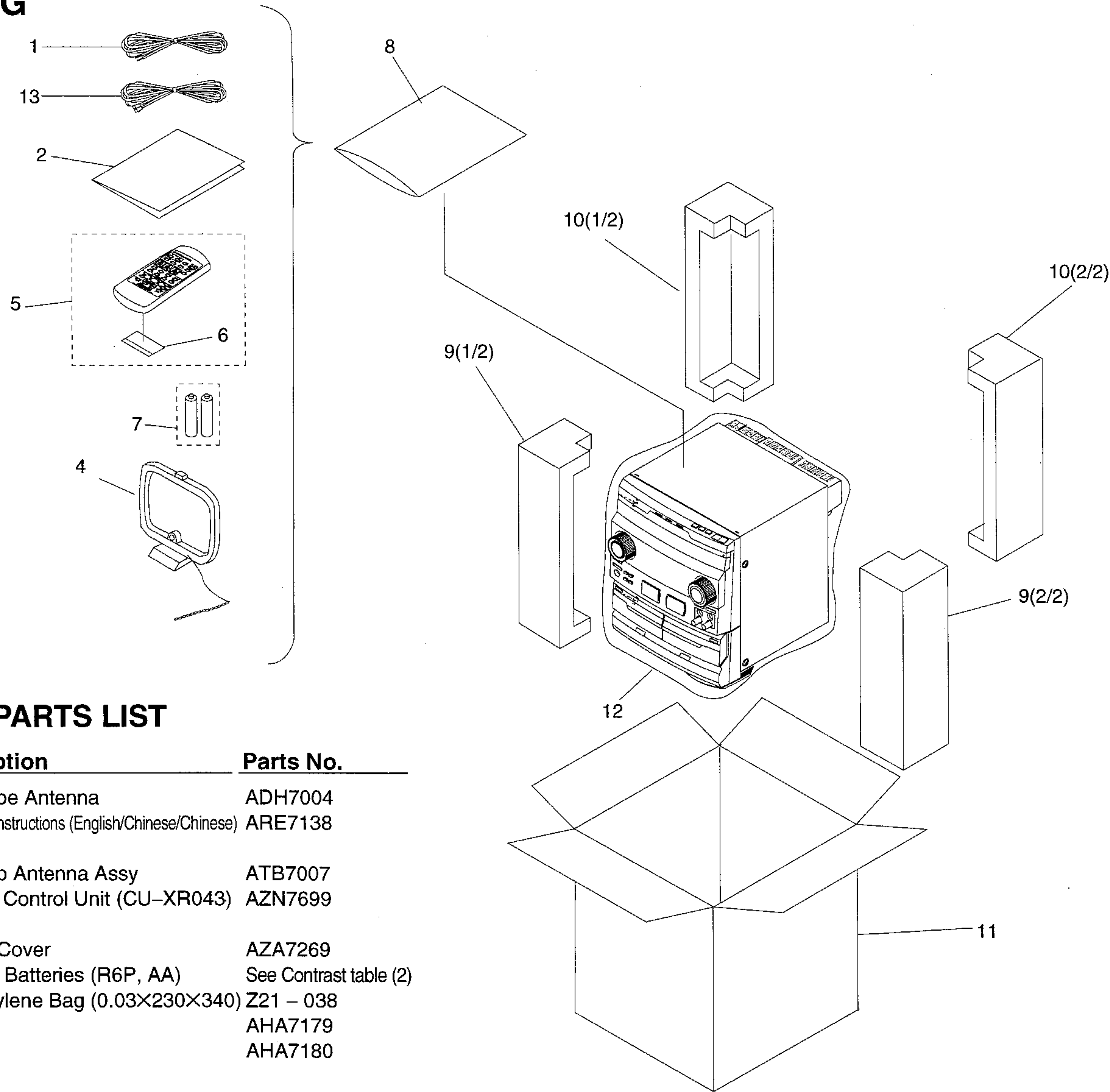
2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to page 59.

2. EXPLODED VIEWS 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.
• Screws adjacent to $\blacktriangledown$ mark on product are used for disassembly.

2.1 PACKING



(1) PACKING PARTS LIST

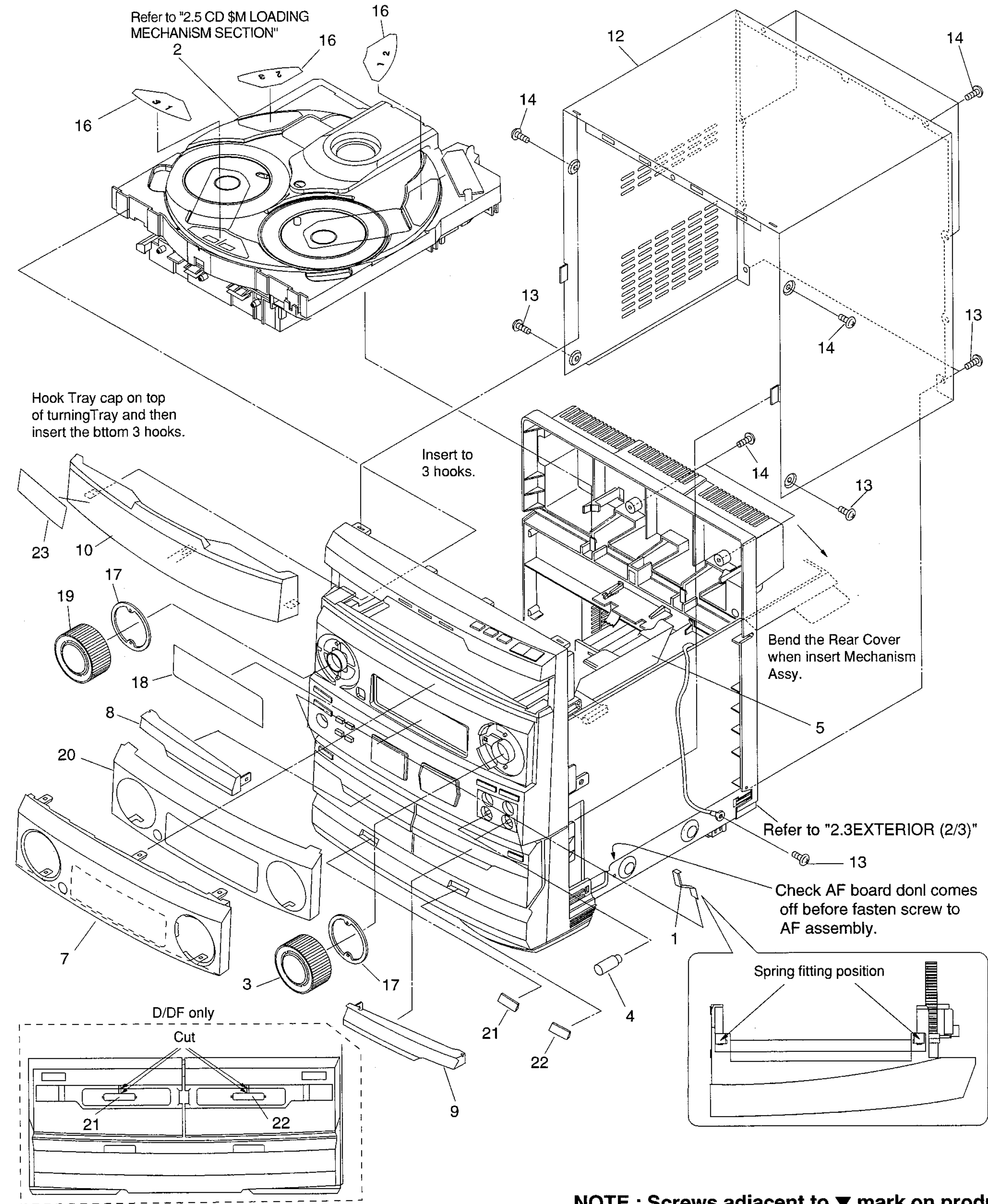
Mark	No.	Description	Parts No.
	1	FM T-type Antenna	ADH7004
	2	Operating Instructions (English/Chinese/Chinese)	ARE7138
	3	.....	
	4	AM Loop Antenna Assy	ATB7007
	5	Remote Control Unit (CU-XR043)	AZN7699
	6	Battery Cover	AZA7269
NSP	7	Dry Cell Batteries (R6P, AA)	See Contrast table (2)
	8	Polyethylene Bag (0.03×230×340)	Z21 – 038
	9	Pad F	AHA7179
	10	Pad R	AHA7180
	11	Packing Case	See Contrast table (2)
	12	Packing Sheet	AHG7049
	13	Video Cord	See Contrast table (2)

(2) CONTRAST TABLE

XR-VS8/D/DF, DDXJ, DLXJ/NC and DAMXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			XR-VS8				
			D/DF	DDXJ	DLXJ/NC	DAMXJ	
NSP	7 11 13	Dry cell Batteries(R6P.AA) Packing Case Video Cord(L=1.5m)	VEM1007 AHD7539 VDE1036	VEM – 013 AHD7501 VDE1034	VEM – 013 AHD7500 VDE1034	VEM – 013 AHD7500 VDE1034	

2.2 EXTERIOR (1/3)



NOTE : Screws adjacent to ▼ mark on product are used for disassembly. However, there is no indication on the hood installation screws of the Rear Cover.

(1) EXTERIOR (1/3) PARTS LIST

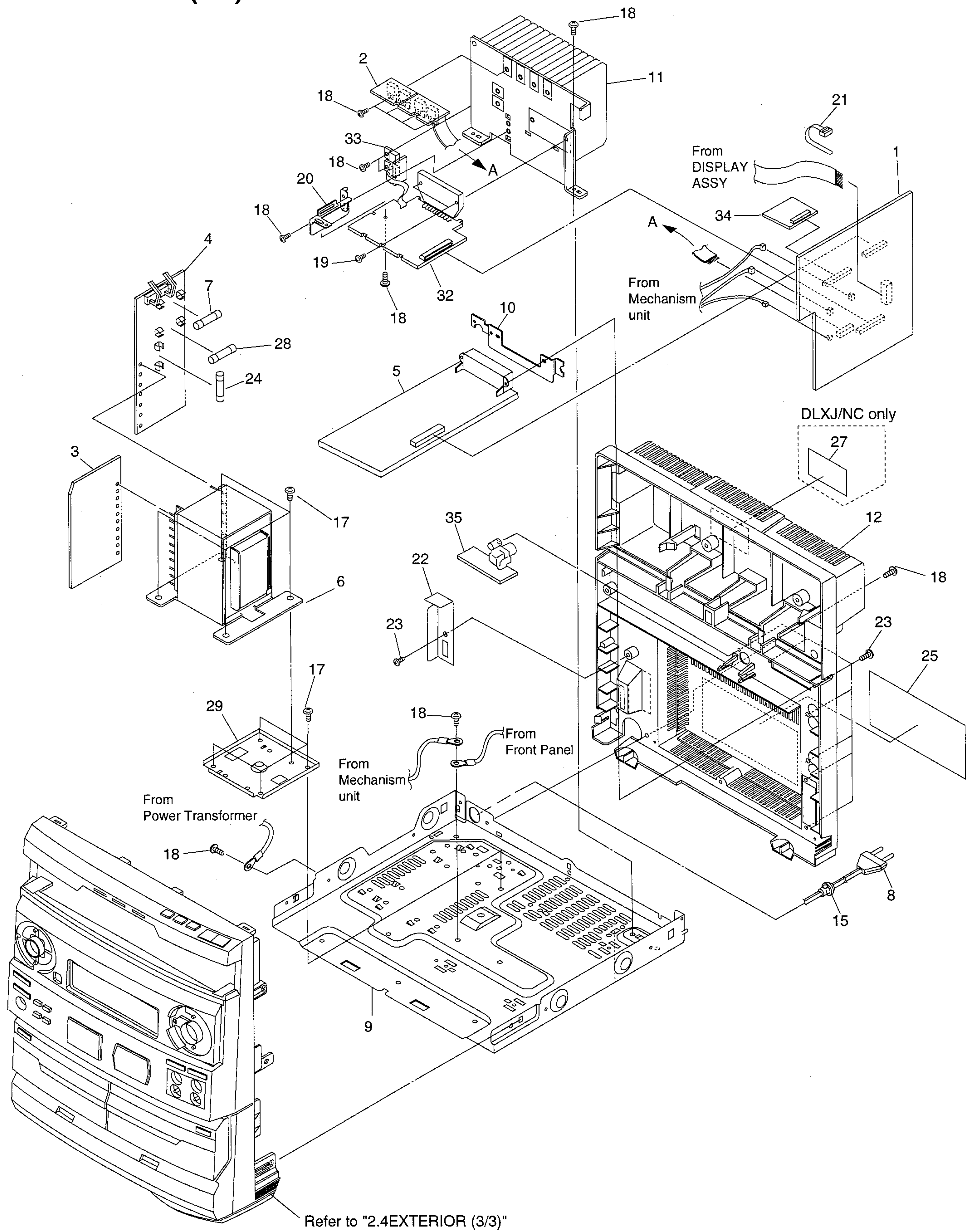
Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
NSP	1	Spring	RBK1004		16	Disc Label	See Contrast table (2)
	2	CD \$M Loading Mechanism	XXA3003		17	Knob Spacer	AAK7498
	3	VOL Knob	AAB7134		18	FL Filter	AAK7518
	4	MIC Knob	AAB7132		19	Jog Knob Assy	AXG7051
	5	30P F.F.C/30V	XDD3001		20	FL Cover	AAK7542
	6	.....			21	Azimuth Cover L	AAK7555
	7	FL Lens	AAK7513		22	Azimuth Cover R	AAK7556
	8	Deck Door Lens L	AAK7459	NSP	23	Getter	AAX7569
	9	Deck Door Lens R	AAK7460				
	10	Tray Cap	AAK7512				
	11	.....					
	12	Bonnet Case	AZN7703				
	13	Screw	VBZ30P080FZK				
	14	Screw	BPZ30P100FZK				
	15	.....					

(2) CONTRAST TABLE

XR-VS8/D/DF, DDXJ, DLXJ/NC and DAMXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			XR-VS8				
			D/DF	DDXJ	DLXJ/NC	DAMXJ	
	16	Disc Label	AAX7562	XAX3046	XAX3046	XAX3046	

2.3 EXTERIOR (2/3)



(1) EXTERIOR (2/3) PARTS LIST

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	AF Assy	AWZ8909		21	Binder	ZCA – SKB90BK
	2	REG. ASSY	AWZ8906		22	PVC Barrier	AEC7009
	3	SECONDARY ASSY	AWZ8911		23	Screw	BPZ30P100FZK
	4	PRIMARY ASSY	AWZ8910		24	Fuse (FU2)	AEK1055
	5	FM/AM TUNER MODULE	See Contrast table (2)	NSP	25	Name Label	See Contrast table (2)
△	6	Power Transformer (T1)	ATS7186		26	.....	
△	7	Fuse (FU1)	AEK1058		27	Caution Label	See Contrast table (2)
△	8	AC Power Cord	See Contrast table (2)	△	28	Fuse (FU3)	AEK1055
NSP	9	Chassis	ANA7051		29	Trans. Frame	ANG7171
	10	GND Plate	ANG7173		30	.....	
	11	Heat Sink	ANH7078		31	.....	
	12	Rear Cover	See Contrast table (2)		32	POWER ASSY	AWZ8919
	13	.....			33	FET ASSY	AWZ8921
	14	.....			34	Video CD Module	RD – DVK020 – P
	15	Strain relief	CM – 22B	NSP	35	VIDEO OUT ASSY	AWZ8918
	16	.....					
	17	Screw	ASZ40P060FMC				
	18	Screw	VBZ30P080FZK				
	19	Screw	BBZ30P180FMC				
	20	Bracket B	ANG7107				

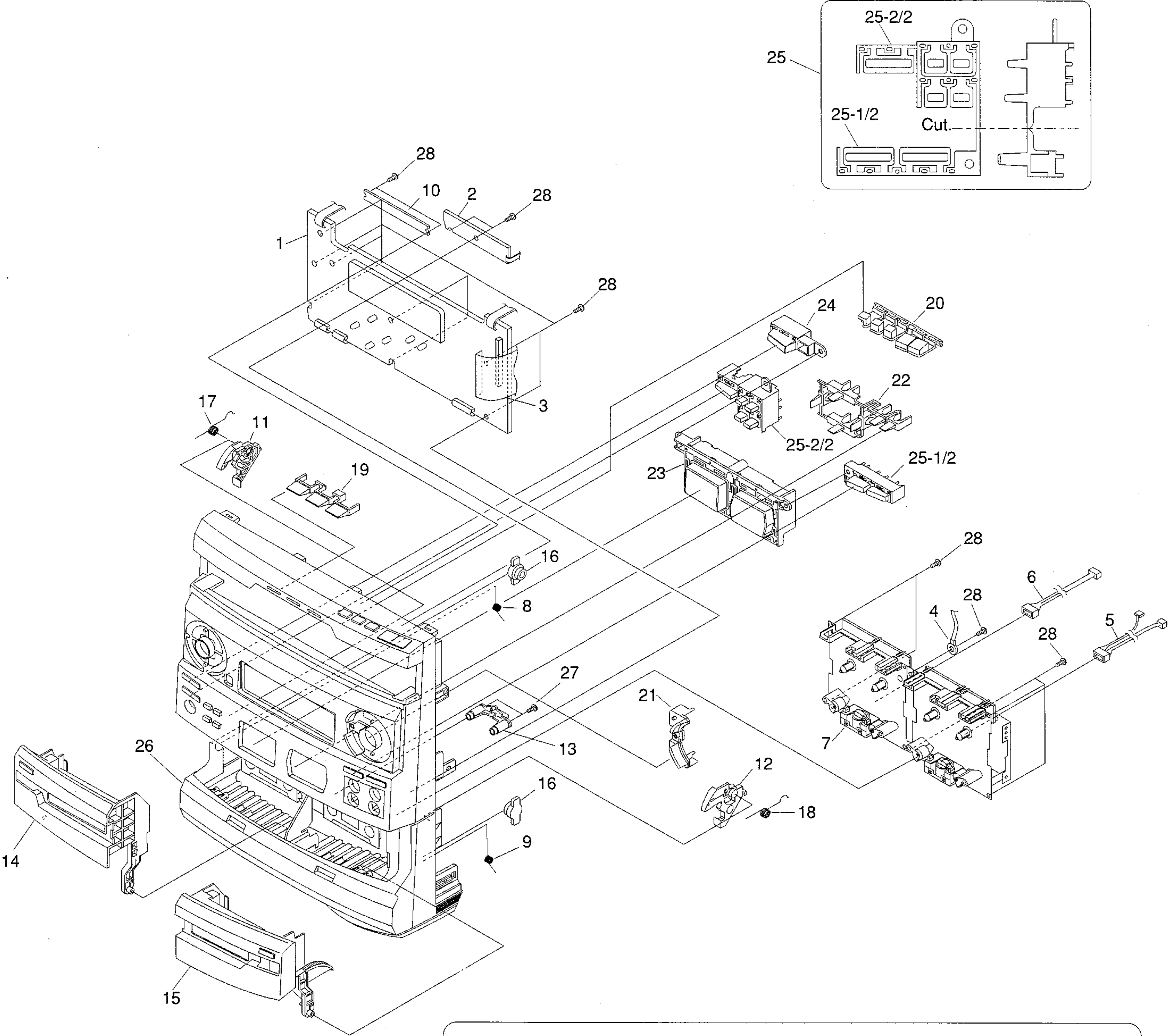
Note: The GND Plate (No.10) will tend to come off once it is removed, as the plate is fit with light pressure. If you have to remove the plate, secure it onto the Rear Cover with adhesive tape for reinstallation.

(2) CONTRAST TABLE

XR-VS8/D/DF, DDXJ, DLXJ/NC and DAMXJ are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.				Remarks
			XR-VS8				
			D/DF	DDXJ	DLXJ/NC	DAMXJ	
 NSP	5	FM/AM TUNER MODULE	AXQ7051	AXQ7061	AXQ7061	AXQ7061	
	8	AC Power Cord	PDG1062	ADG1157	PDG1058	PDG1062	
	12	Rear Cover	AMC7016	AMC7016	AMC7022	AMC7016	
	25	Name Label	AAL7190	AAL7189	AAL7187	AAL7188	
	27	Caution Label	Not used	Not used	PRW1018	Not used	

2.4 EXTERIOR (3/3)



Door spring fitting process.

1. Insert head of the spring to this groove.
2. Push this Position of the spring.
3. Insert bending position of the spring to this hole.

Hook the spring to actually position as shown after fit the Ratch mold.

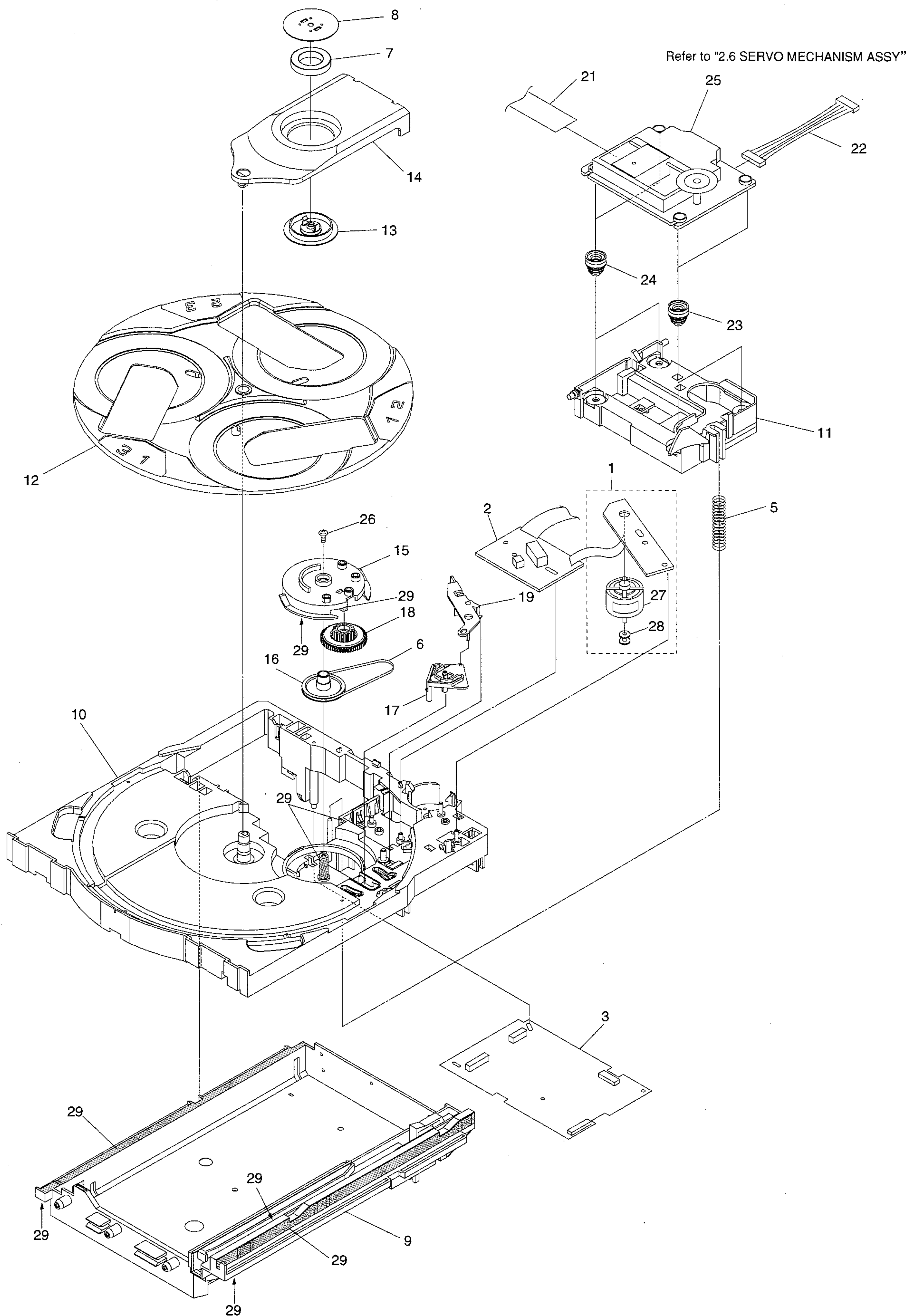
Hook temporary the spring to this position before fit to the panel.

● EXTERIOR (3/3) PARTS LIST

Mark	No.	Description	Parts No.
	1	DISPLAY ASSY	AWZ8917
NSP	2	CD SWITCH ASSY	AWZ8932
	3	35P F.F.C/60V	ADD7070
NSP	4	Earth Lead Wire	DEO15VEO
	5	Connector Assy 5P, (J3)	RKP1582
	6	Connector Assy 3P, (J4)	RKP1583
	7	Mechanism Unit	AYM7002
	8	Door Spring L	ABH7152
	9	Door Spring R	ABH7153
NSP	10	CD LED ASSY	AWZ8933
	11	Ratch Mold L	AMR7128
	12	Ratch Mold R	AMR7129
	13	Mechanism Support C	AMR7192
	14	Deck Door L	AAN7168
	15	Deck Door R	AAN7169

Mark	No.	Description	Parts No.
	16	Damper Assy	AXA7057
	17	Ratch Spring L	ABH7130
	18	Ratch Spring R	ABH7131
	19	CD Lens	AAK7455
	20	CD Button	AAD7402
	21	VOL Lens	AAK7456
	22	Function Lens	AAK7458
	23	Function Button	AAD7403
	24	SFC Button	AAD7405
	25	Power Button	AAD7404
	26	Front Panel	AMB7454
	27	Screw	BPZ30P100FMC
	28	Screw	BPZ30P100FZK

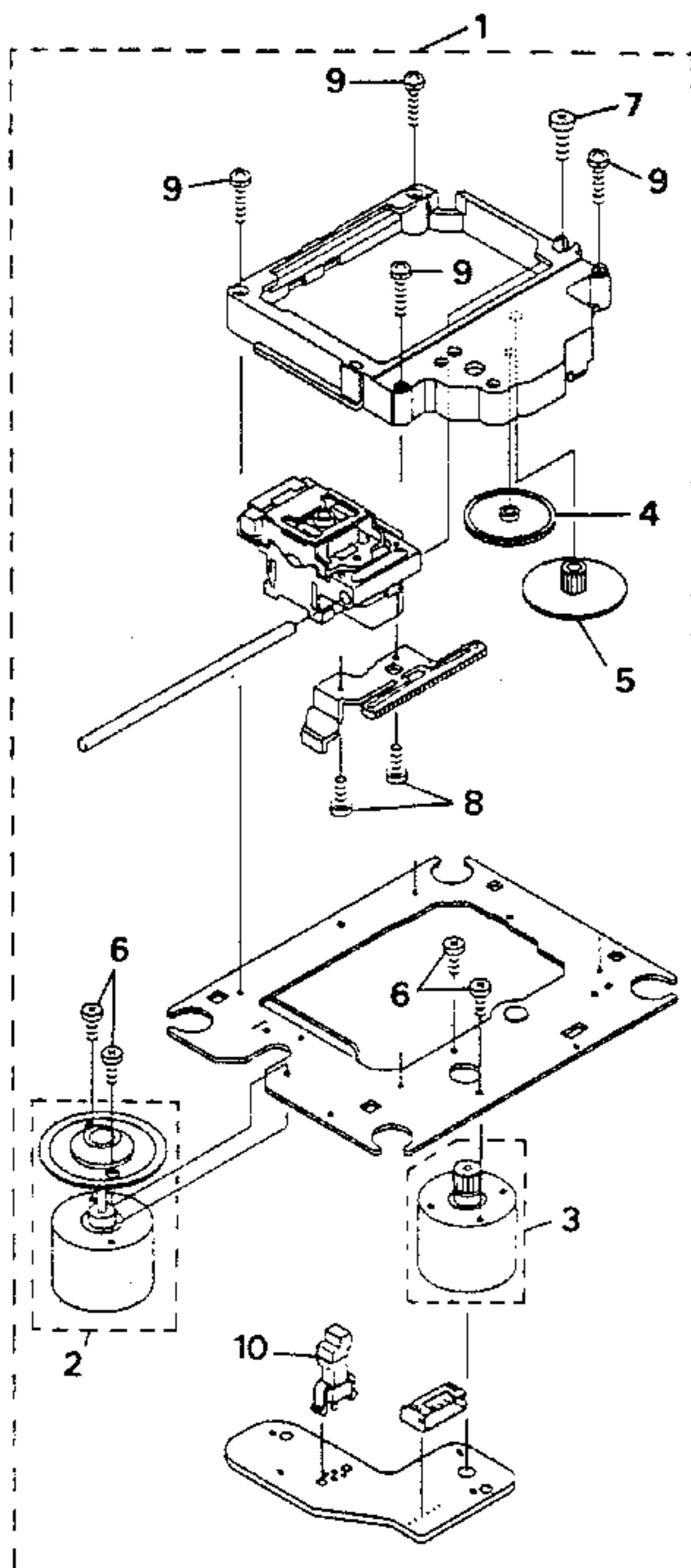
2.5 CD \$M LOADING MECHANISM SECTION



● CD \$M LOADING MECHANISM SECTION PARTS LIST

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	MOTOR ASSY	AWZ8746		16	Gear Pulley	ANW7094
	2	SW ASSY	AWZ8747		17	Lock Lever	ANW7095
	3	CD ASSY	AWZ8551		18	Planet Gear	ANW7096
	4	.....			19	Actuator	ANW7097
	5	Servo Spring	ABH7126		20	.....	
	6	Belt	AEB7072		21	15P F.F.C/30V	ADD7038
	7	Clamp Magnet	AMF7001		22	Connector Assy (6P)	ADE7010
	8	Yoke	ANB7067		23	Float Rubber A	AEB7063
	9	Mechanism Base	ANW7087		24	Float Rubber B	AEB7066
	10	Loading Tray	ANW7088		25	Servo Mechanism Assy	AXA7039
	11	Servo Base	ANW7089		26	Screw	IPZ30P080FMC
	12	Rotary Tray	ANW7113		27	Carriage Motor	VXM1033
	13	Clamper	ANW7091		28	Motor Pulley	PNW1634
	14	Clamper Holder	ANW7092		29	Ha Narl (For service)	GEM1016
	15	Main Cam	ANW7093				

2.6 SERVOMECHANISM ASSY

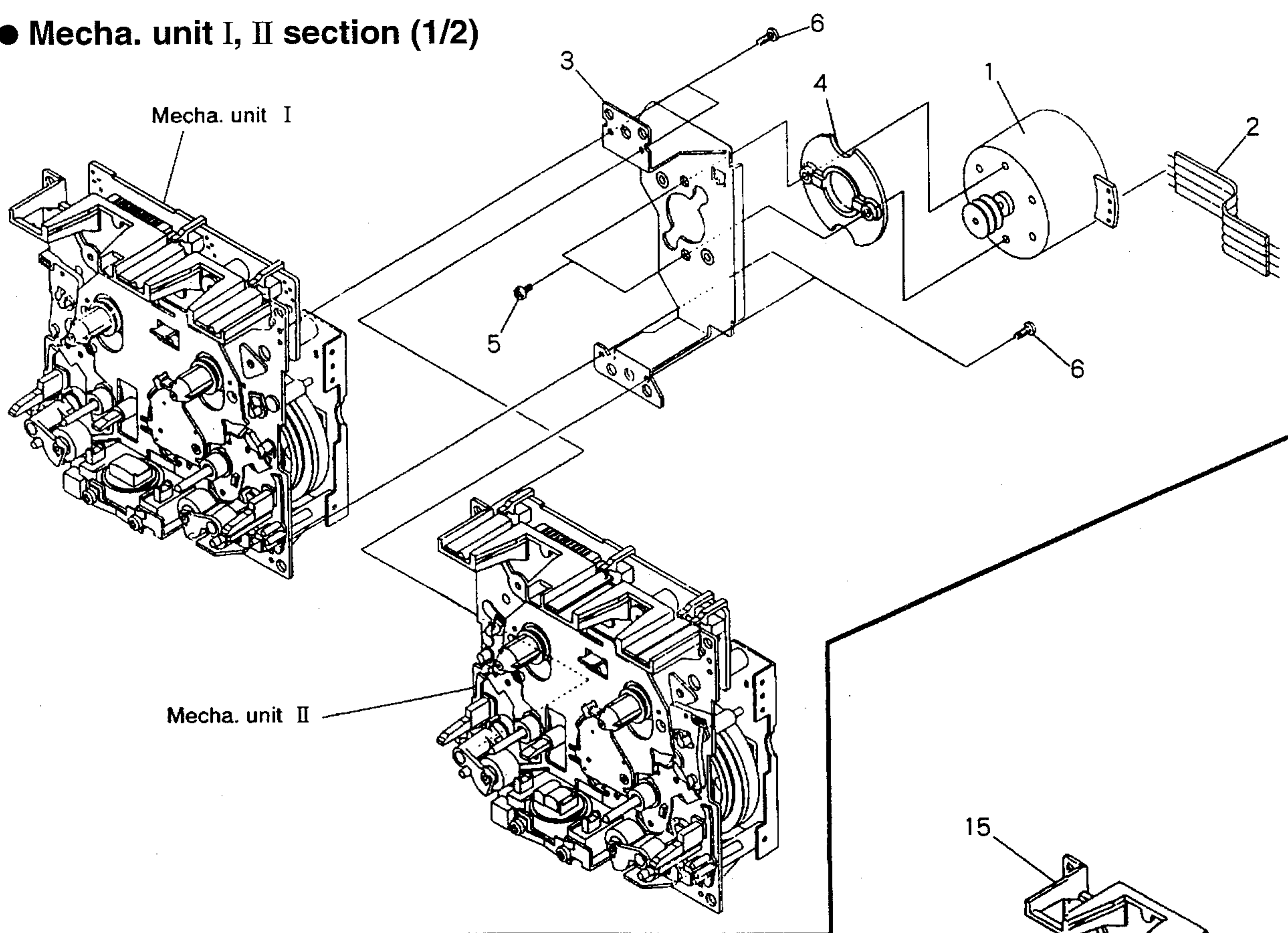


● SERVO MECHANISM ASSY PARTS LIST

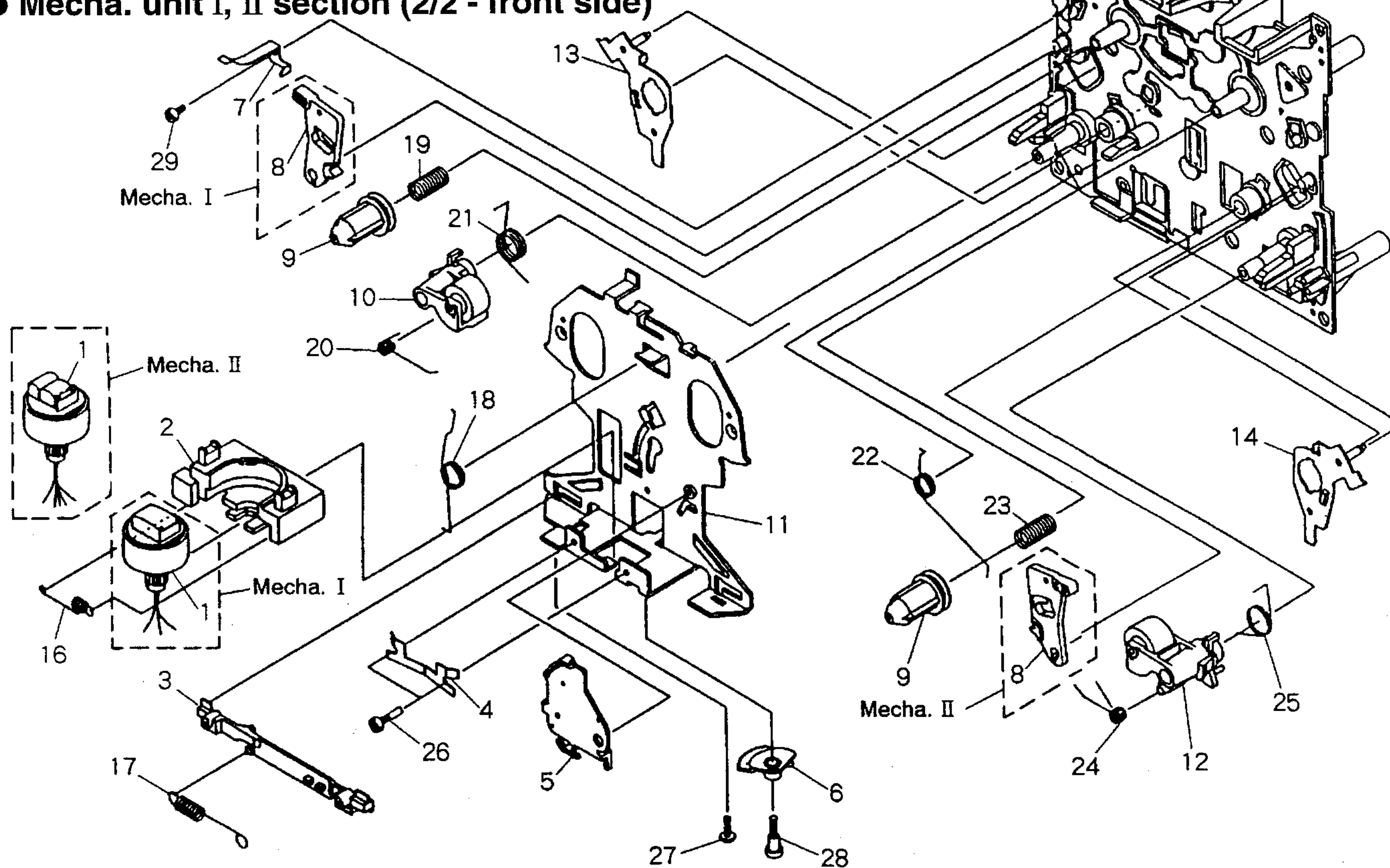
Mark	No.	Description	Parts No.
	1	Servo Mechanism	AXA7039
	2	SPINDLE MOTOR ASSY	AEA7009
	3	SLEAD MOTOR ASSY	AEA7010
	4	Gear A	AEA7013
	5	Gear B	AEA7014
	6	Screw	AEA7015
	7	Screw	AEA7016
	8	Screw	AEA7017
	9	Screw	AEA7018
	10	Leaf Switch	AEA7011

2.7 MECHANISM UNIT SECTION (1/2), (2/2) FRONT

● Mecha. unit I, II section (1/2)



● Mecha. unit I, II section (2/2 - front side)



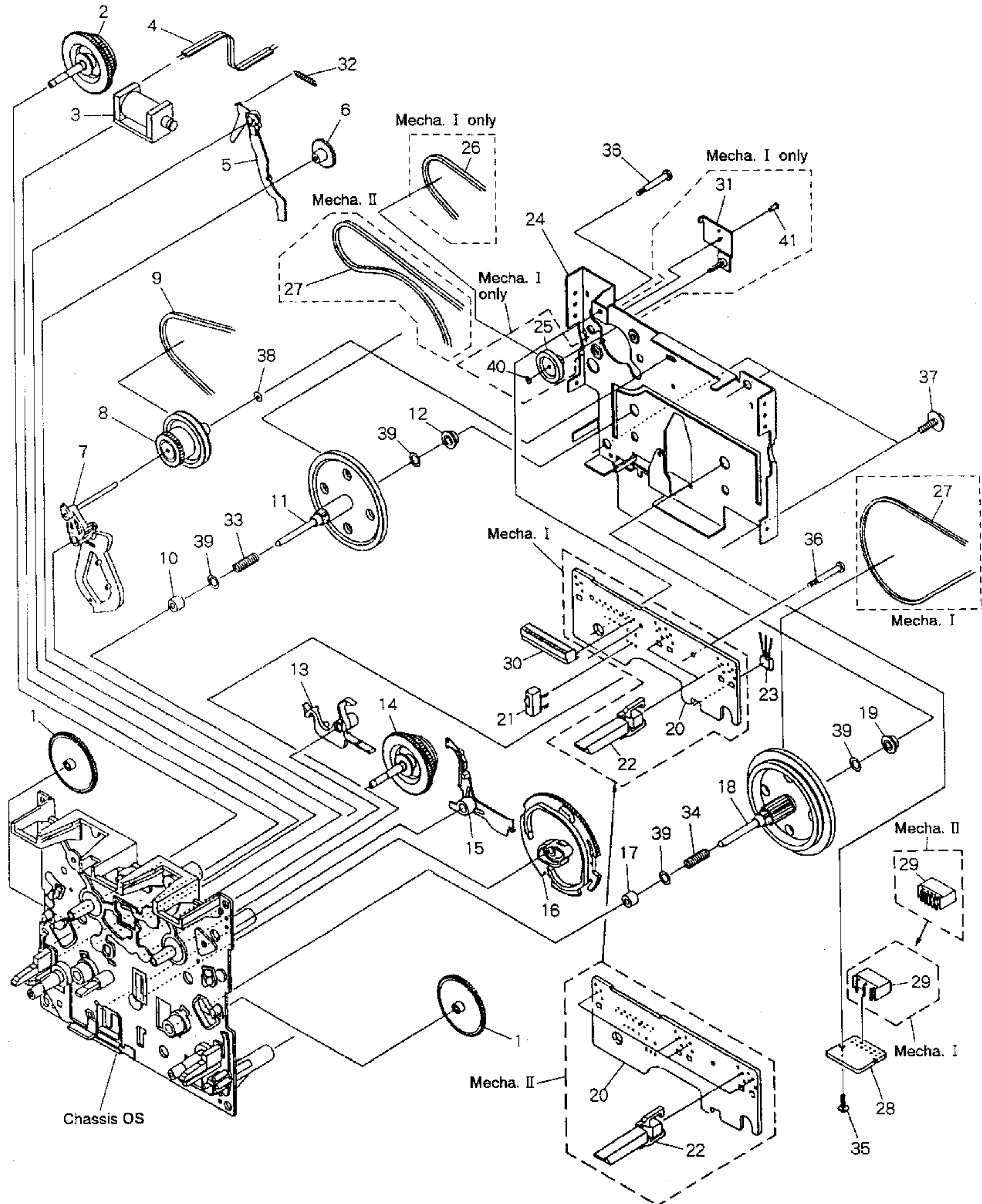
● MECHANISM UNIT SECTION (1/2) PARTS LIST

Mark No.	Description	Parts No.
NSP	1 Assy Motor	RXM1080
	2 Jumper Cable	RDD1012
	3 Bracket Motor	RNE1830
	4 Spacer	RNK1822
	5 Screw	RBA1100
6	Screw	PCZ20P040FMC

● MECHANISM UNIT SECTION (2/2) FRONT PARTS LIST

Mark No.	Description	Parts No.
1	Assy Holder Head (Mecha. I)	RXA1400
1	Assy Holder Head (Mecha. II)	RXA1664
2	Frame Head	RNK1715
3	Lever Head	RNK1716
4	Spring Azimuth	RBK1006
5	Assy Arm Assist	RXA1401
6	Gear Arm Head	RNK1717
7	Spring Cassette	RBK1039
8	Eject Lock	RNK1718
9	Cap Reel	RNK1719
10	Assy Pinch Arm L	RXA1403
11	Chassis Head	RNE1437
12	Assy Pinch Arm R	RXA1404
13	Arm Play L	RNK1866
14	Arm Play R	RNK1868
15	Chassis OS	RXA1411
16	Spring	RBH1282
17	Spring	RBH1283
18	Spring	RBH1284
19	Spring	RBH1286
20	Spring	RBH1288
21	Spring	RBH1291
22	Spring	RBH1285
23	Spring	RBH1287
24	Spring	RBH1289
25	Spring	RBH1290
26	Screw (azimuth)	RBA1023
27	Screw	RBA1027
28	Screw	RBA1030
29	Screw	PCZ20P040FMC

2.8 MECHANISM UNIT SECTION (2/2) REAR



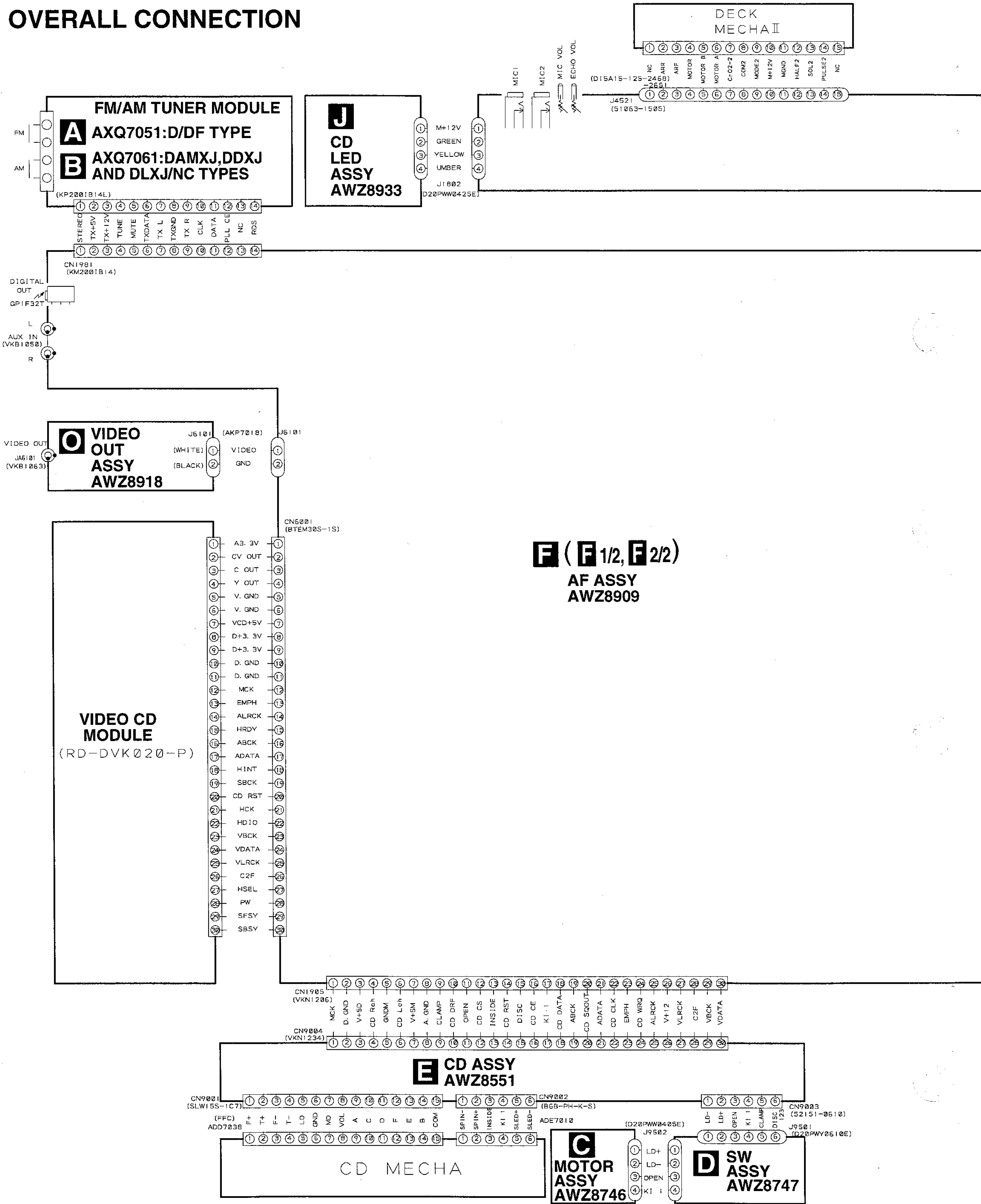
● MECHANISM UNIT SECTION (2/2) REAR PARTS LIST

Mark No.	Description	Parts No.
1	Gear Play	RNK1867
2	Assy Sub Reel L	RXA1407
3	Solenoid	RXP1020
4	Wire	RDC1006
5	Arm RVS	RNK1721
6	Gear FF	RNK1723
7	Assy Arm FR	RXA1412
8	Assy Pulley FR	RXA1413
9	Belt FR	REB1292
10	Metal	RNG1048
11	Assy Flywheel L	RXA1690
12	Metal	RNG1005
13	Arm Brake	RNK1724
14	Assy Sub Reel R	RXA1408
15	Arm Trigger	RNK1722
16	Gear Cam	RNK1725
17	Metal	RNG1049
18	Assy Flywheel R	RXA1691
19	Metal	RNG1004
20	P.C. Board	RNP1610
21	Switch Mode	RSN1020
22	Switch (LEAF)	RSN1019
23	Hall IC	DN6851A
24	Bracket FW (Mecha. I)	RNE1854
24	Bracket FW (Mecha. II)	RNE1438
25	Pulley (Mecha. I only)	RNK2132
26	Belt FW (Mecha. II only)	REB1291
27	Belt Main (Mecha. I)	REB1290
27	Belt Main (Mecha. II)	REB1289
28	P.C. Board	RNP1348
29	Housing (Mecha. I)	RKP1396
29	Housing (Mecha. II)	RKP1397
30	Connector (Mecha. I)	RKP1713
30	Connector (Mecha. II)	RKP1714
31	Assy Holder (Mecha. I only)	RXA1689
32	Spring	RBH1292
33	FWR SP (Spring)	RBH1061
34	Spring	RBH1325
35	Screw	PCZ20P040FMC
36	Screw	RBA1093
37	Screw	RBA1094
38	Washer	RBF1046
39	Washer	WA26D047D013
40	Washer (Mecha. I only)	WT13D030D025
41	Screw (Mecha. I only)	RBA1118

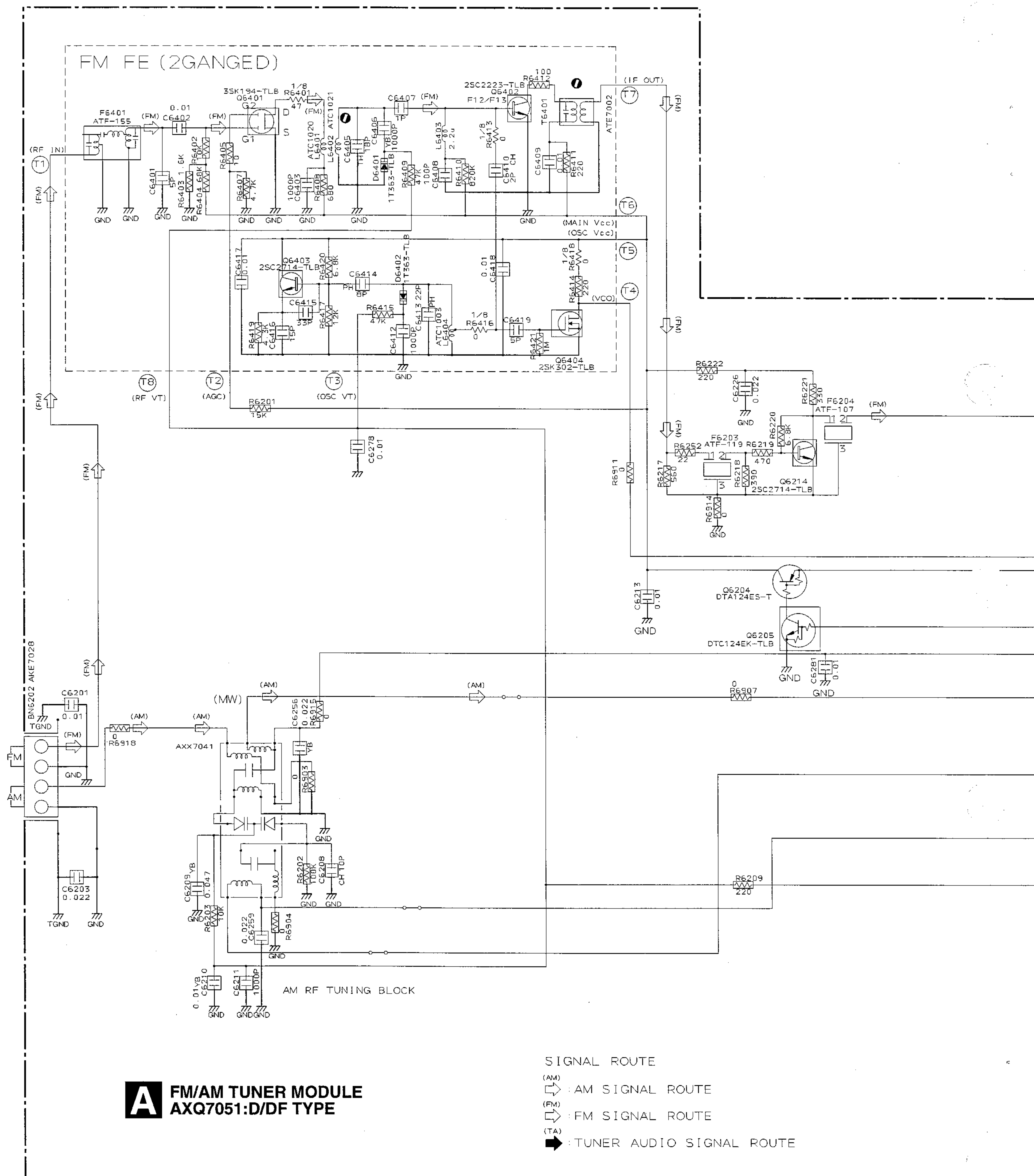
3. SCHEMATIC DIAGRAM

Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST"

3.1 OVERALL CONNECTION



3.2 FM/AM TUNER MODULE (D/DF TYPE)



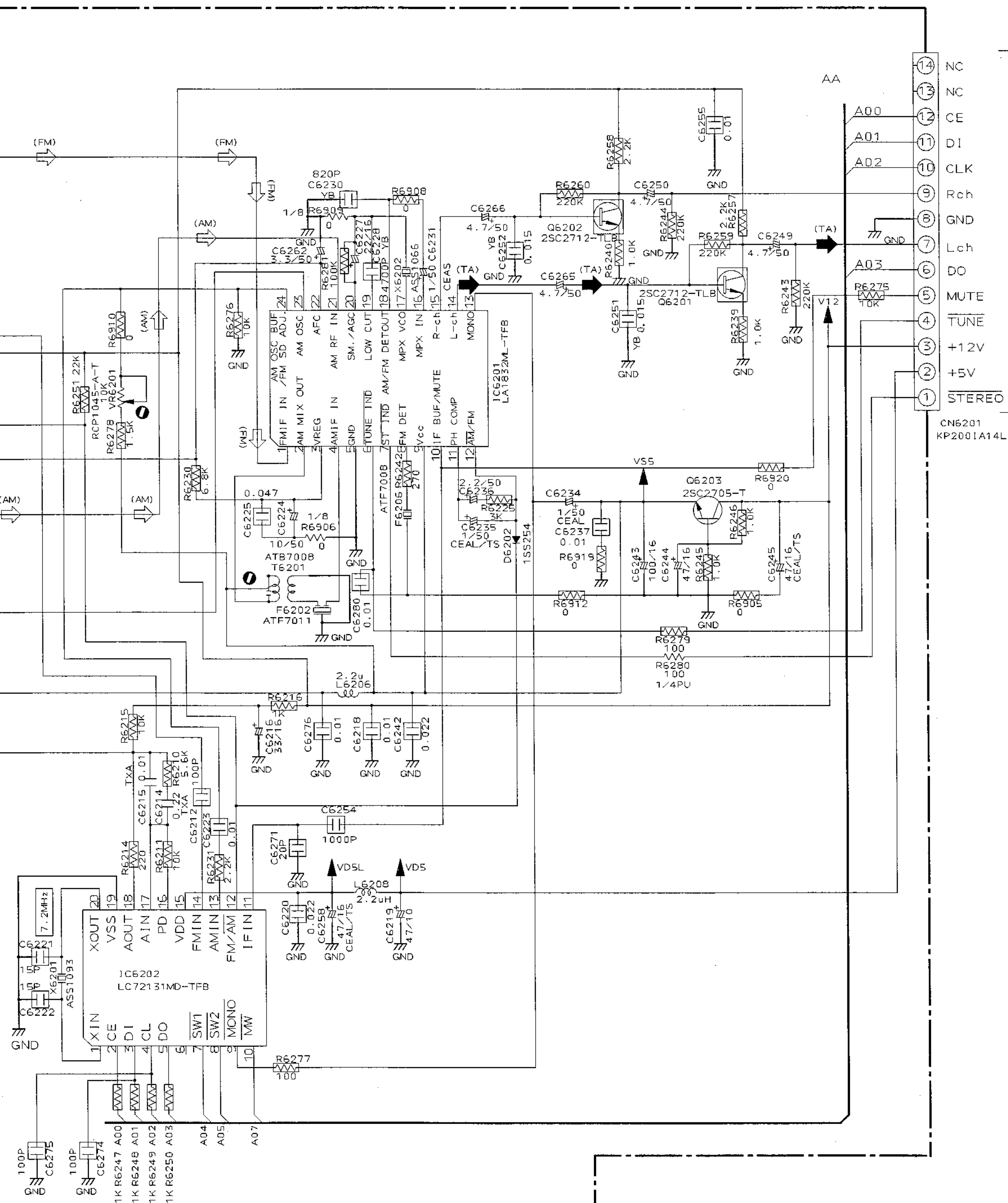
Notes

1.RESISTORS

Indicated in Ω , $1/10W \pm 5\%$ Tolerance unless otherwise noted K:K Ω , M:M Ω .

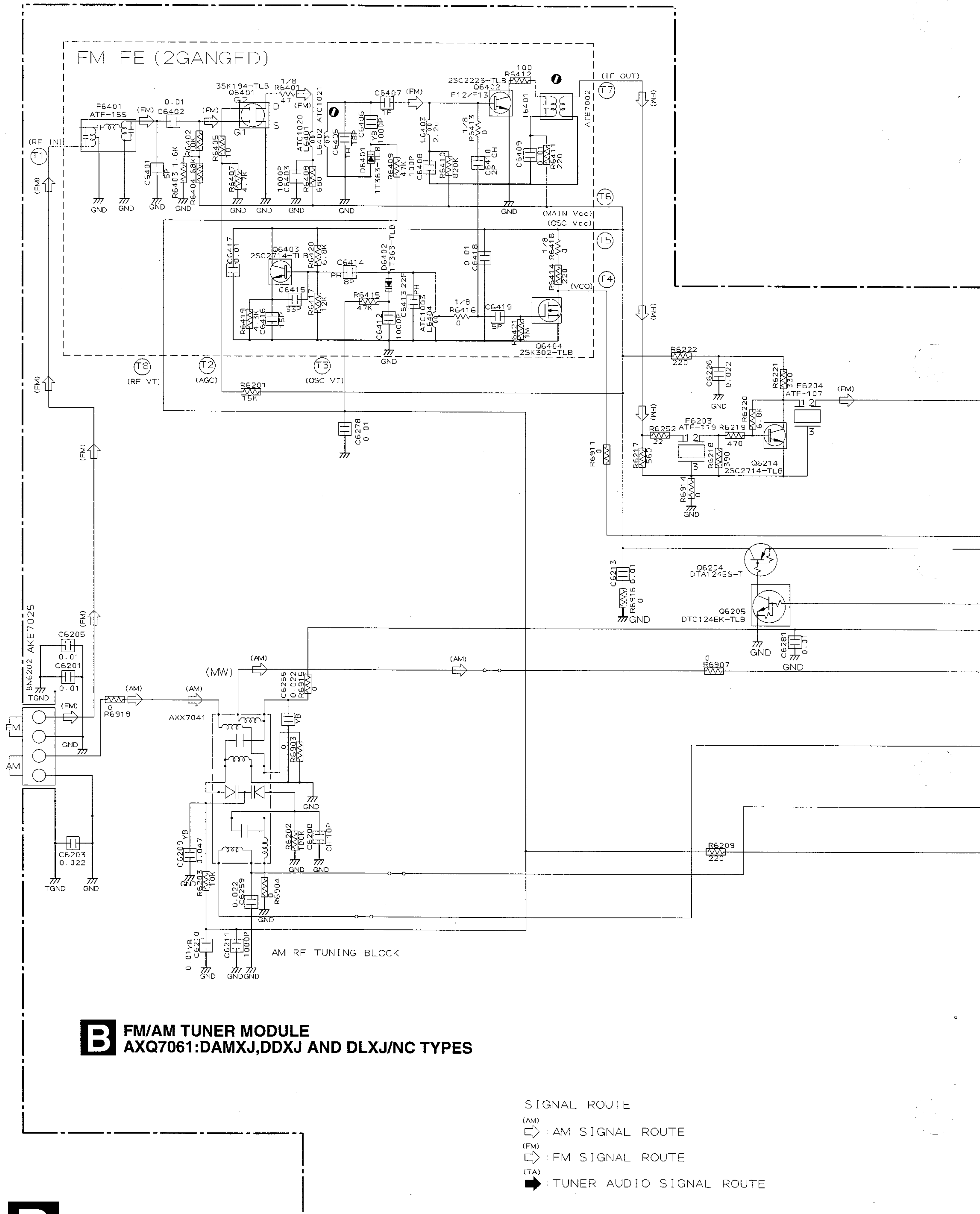
2.CAPACITORS

Indicated in Capacity (μF)/VOLTAGE (V) unless otherwise noted P:PF.



F 2/2 CN1981

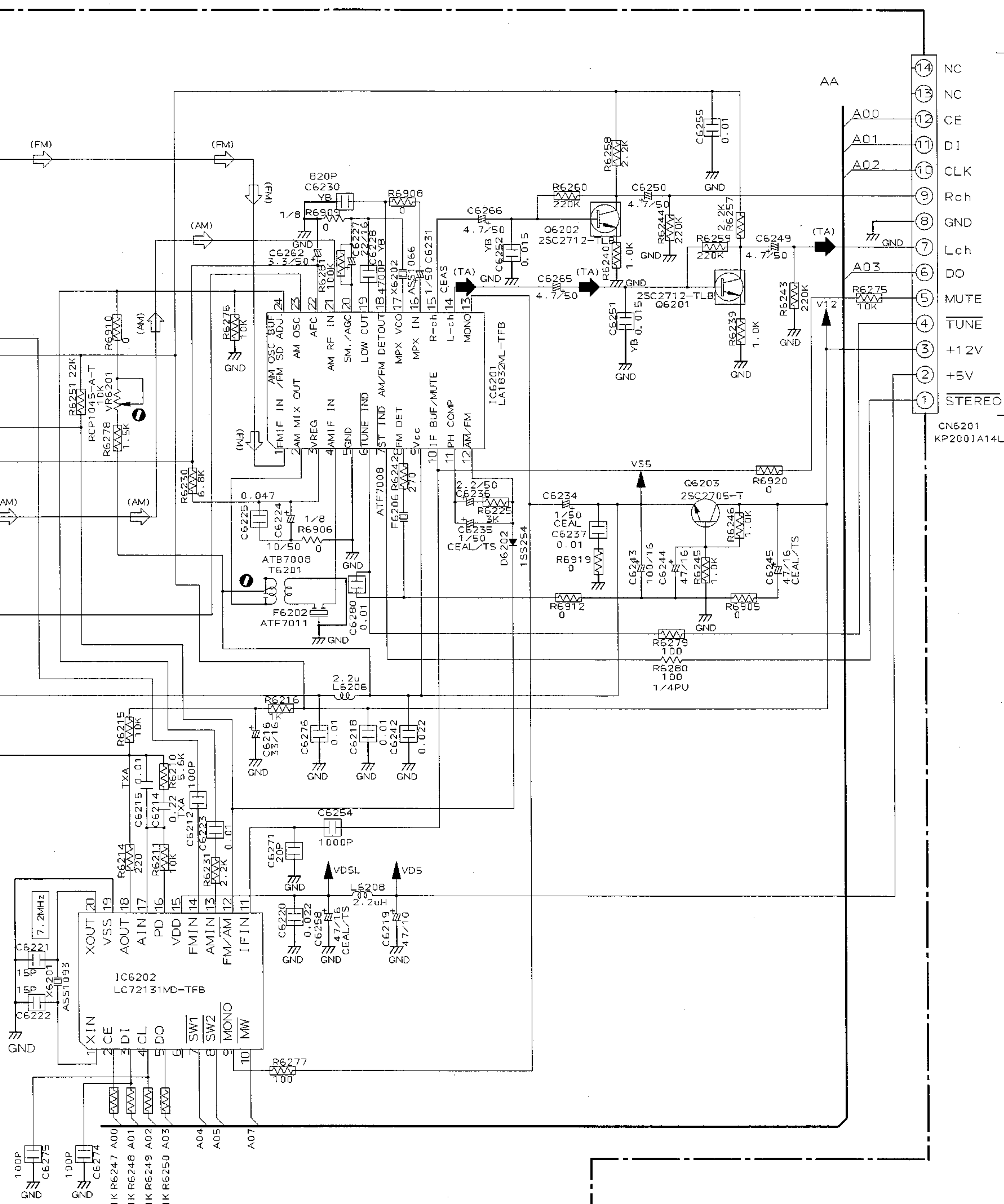
3.3 FM/AM TUNER MODULE (DAMXJ, DDXJ AND DLXJ/NC TYPES)



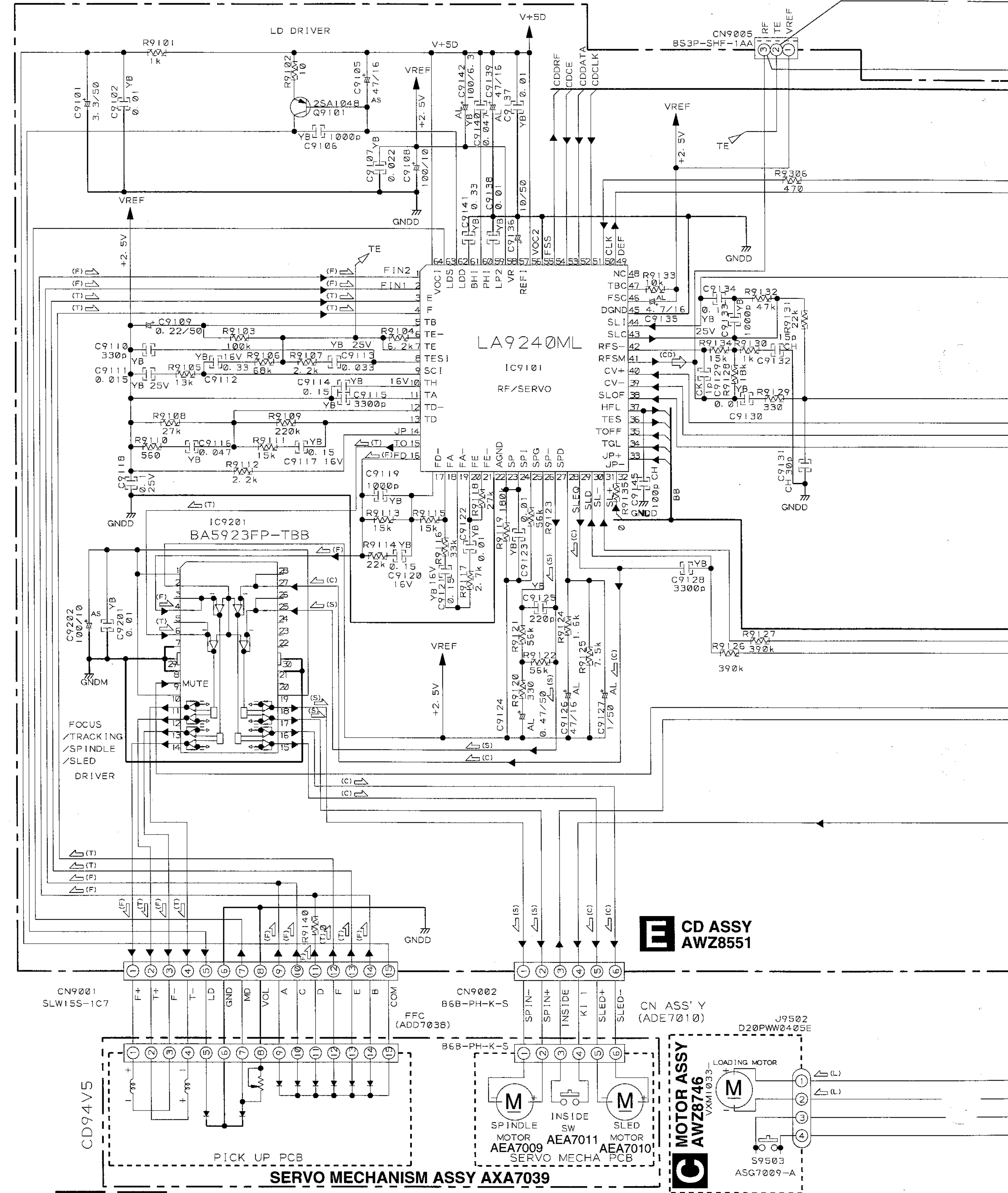
1. RESISTORS

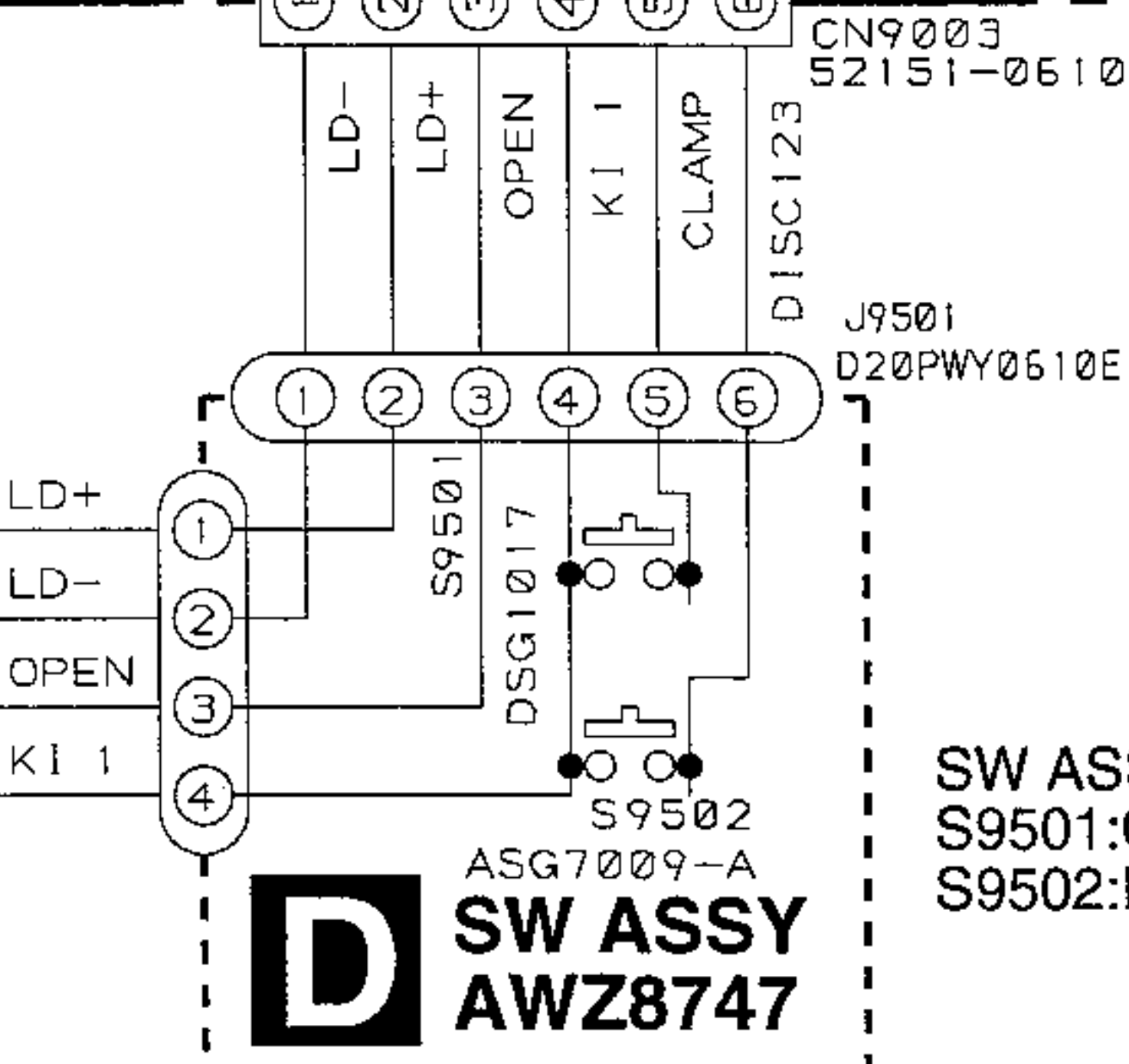
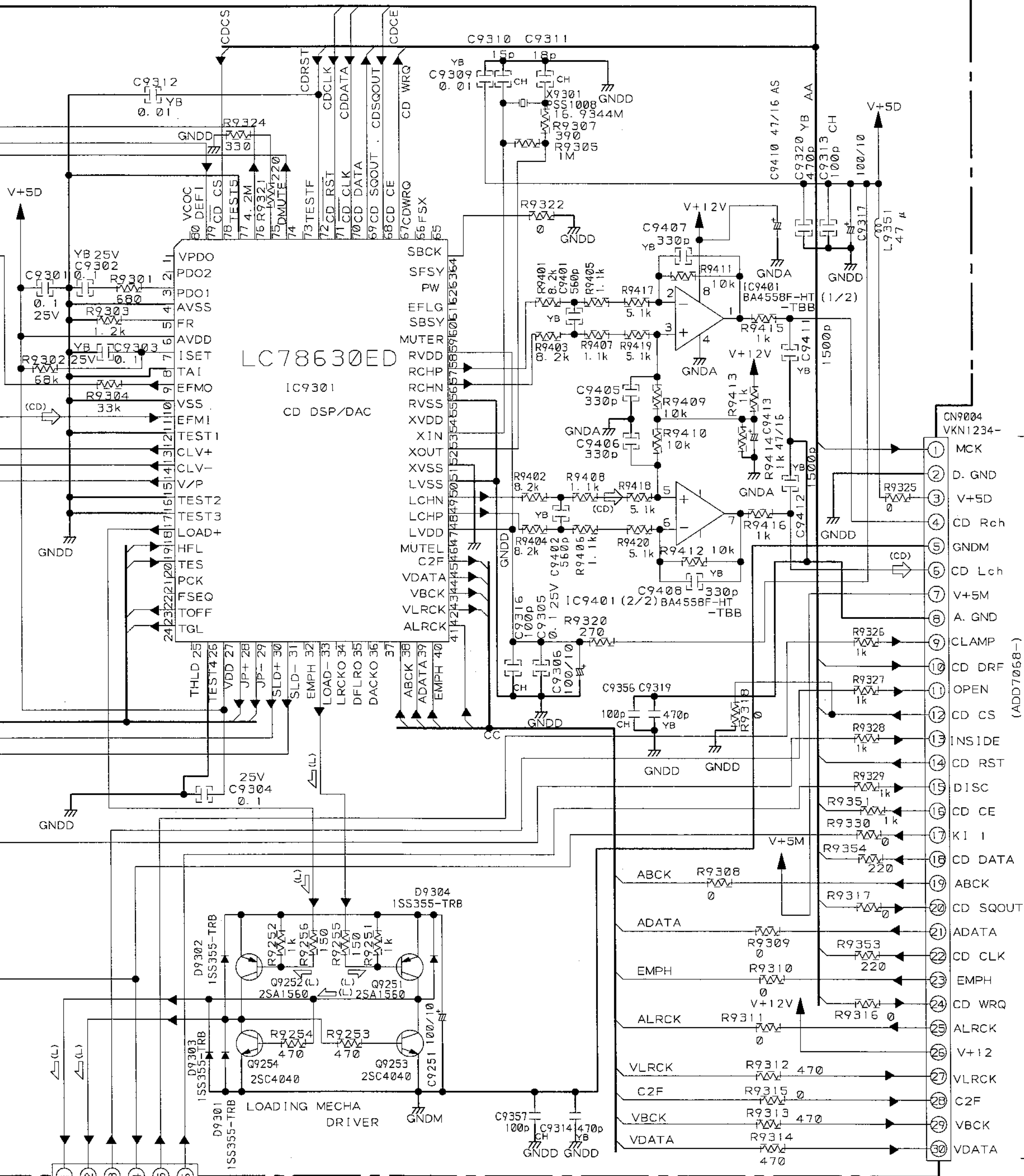
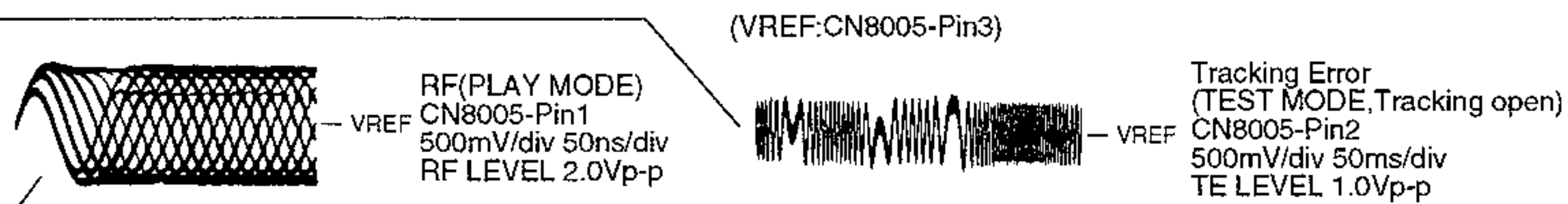
2. CAPACITORS

Indicated in Capacity (μ F)/VOLTAGE (V) unless otherwise noted P:PF.



3.4 MOTOR ASSY, SW ASSY AND CD ASSY





SIGNAL ROUTE

(CD) : CD AUDIO SIGNAL ROUTE

(F) : FOCUS SERVO LOOP LINE

(T) : TRACKING SERVO LOOP LINE

(S) : SPINDLE MOTOR ROUTE

(C) : CARRIAGE MOTOR ROUTE

(L) : LOADING MOTOR ROUTE

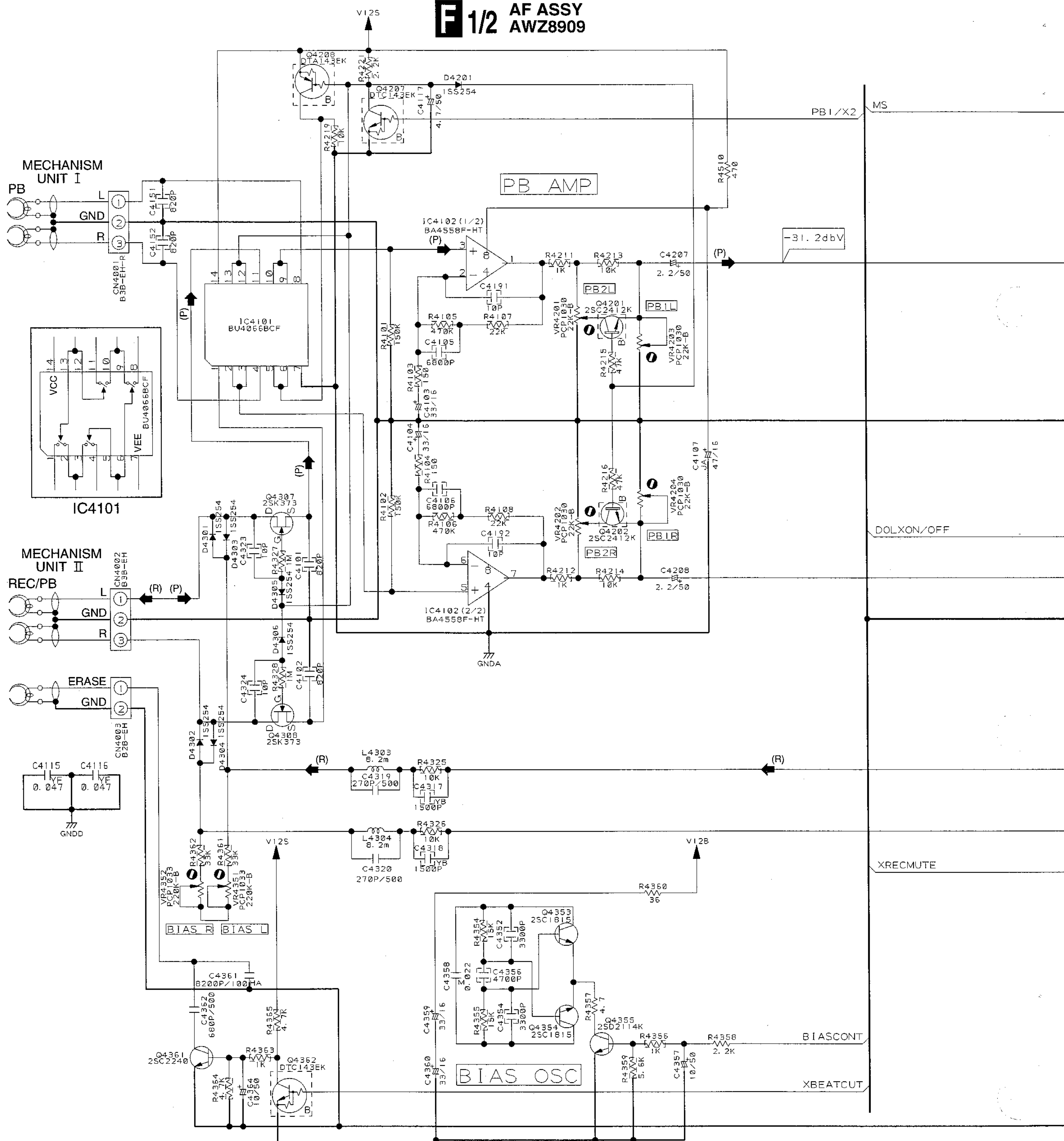
NOTES

- Resistors:
Indicated in Ω , 1/10W, $\pm 5\%$ tolerance unless otherwise noted k: k Ω M: M Ω
- Capacitors:
Indicated in μ F/voltage unless otherwise noted p: pF. Indication without voltage is 50V except electronic capacitors.
*Electronic capacitors: CEAT000M
AL: CEAL
*Ceramic capacitors: CKSQYF000Z
YB: CKSQYB CH: CCSQCH

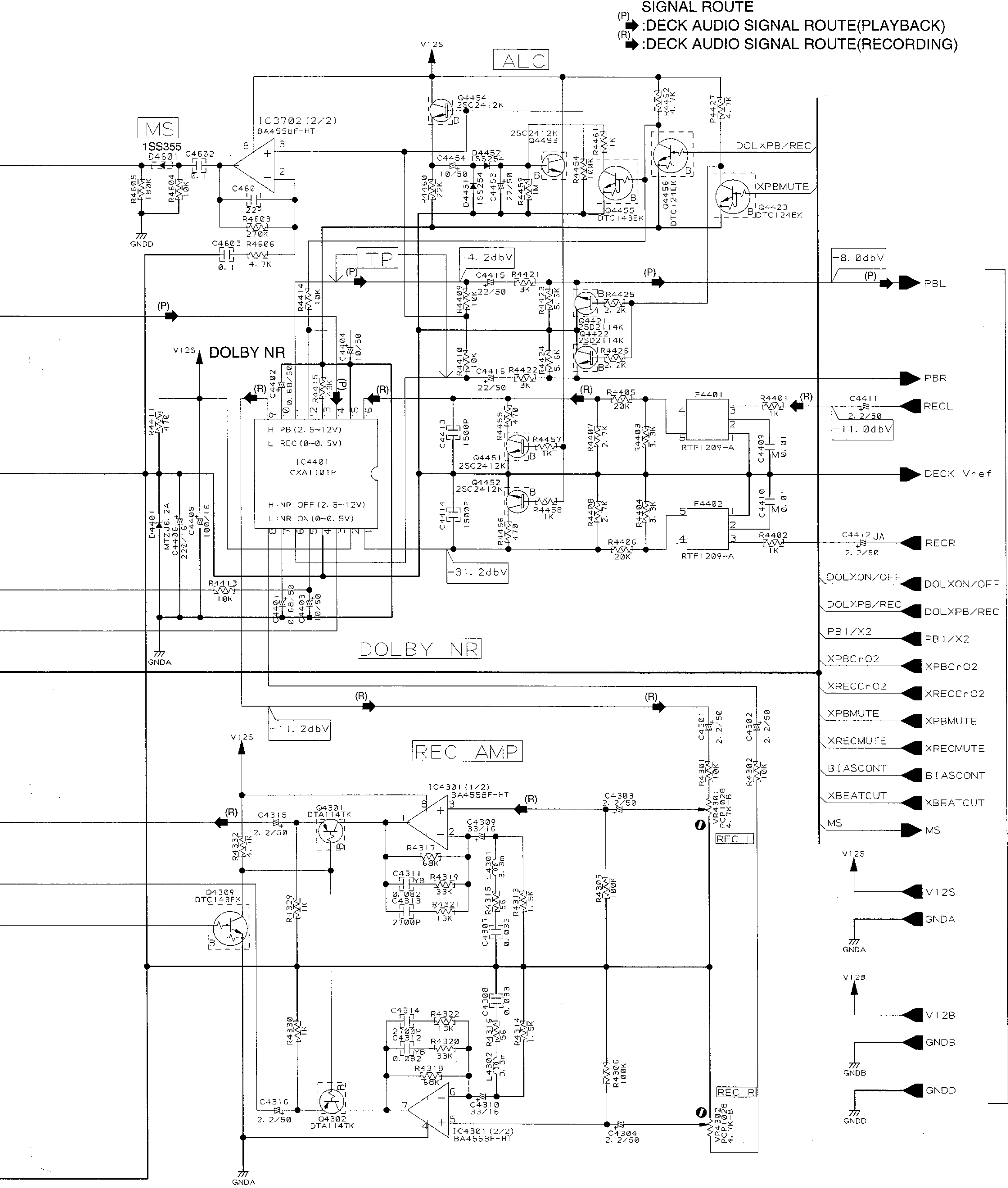
F 2/2 CN1905

3.5 AF ASSY(1/2)

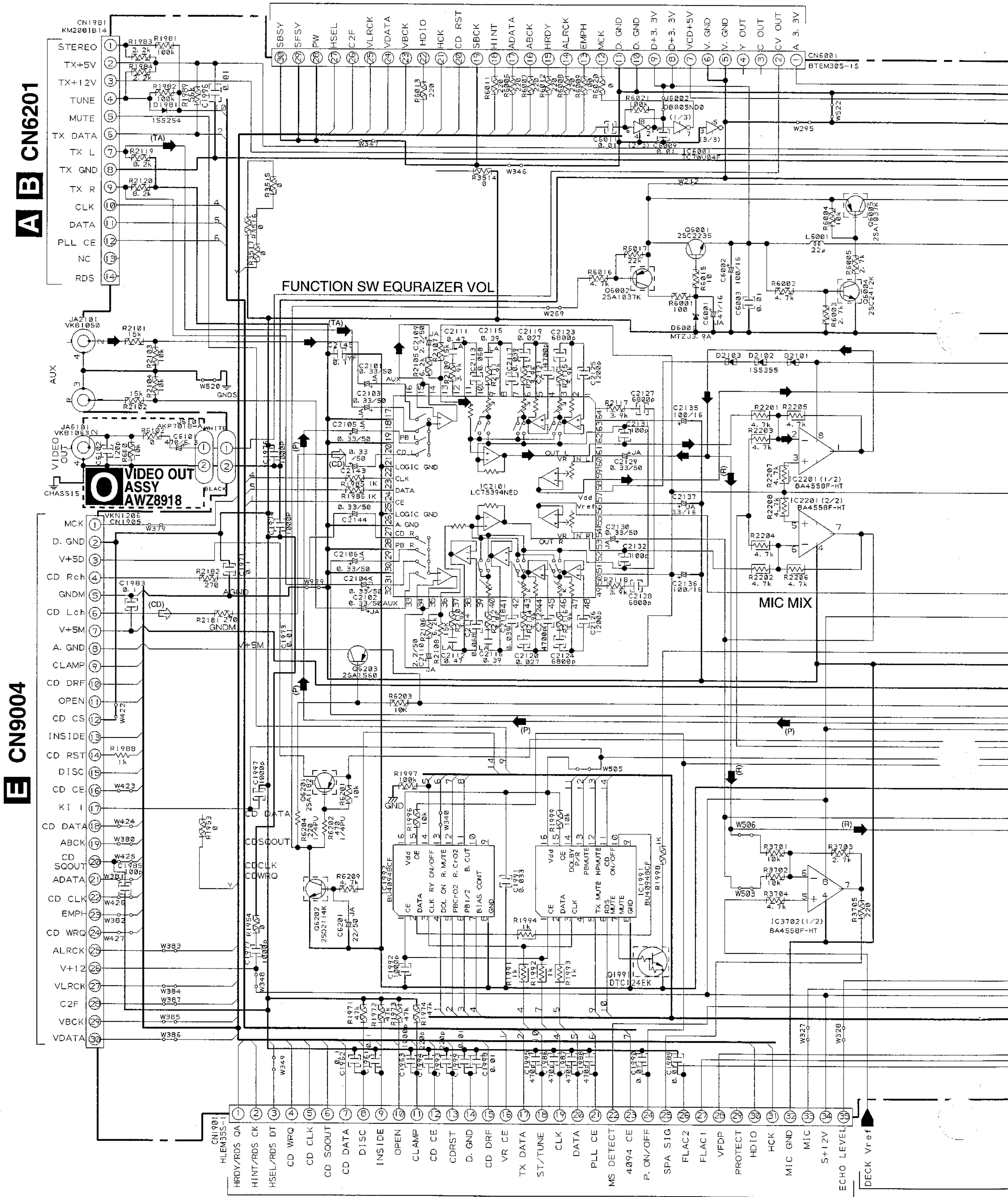
F 1/2 AF ASSY
AWZ8909



SIGNAL ROUTE
(P) : DECK AUDIO SIGNAL ROUTE (PLAYBACK)
(R) : DECK AUDIO SIGNAL ROUTE (RECORDING)



TO VIDEO CD MODULE



- SIGNAL ROUTE
- ➔ : AUDIO SIGNAL ROUTE
 - (TA) ➔ : TUNER AUDIO SIGNAL ROUTE
 - (P) ➔ : DECK AUDIO SIGNAL ROUTE(PLAYBACK)
 - (R) ➔ : DECK AUDIO SIGNAL ROUTE(RECORDING)
 - (CD) ➔ : CD(VCD) AUDIO SIGNAL ROUTE

K J1232

F 2/2 AF ASSY
AWZ8909

BUS BOOST

MIC ECHO

VFDP

G CN1202

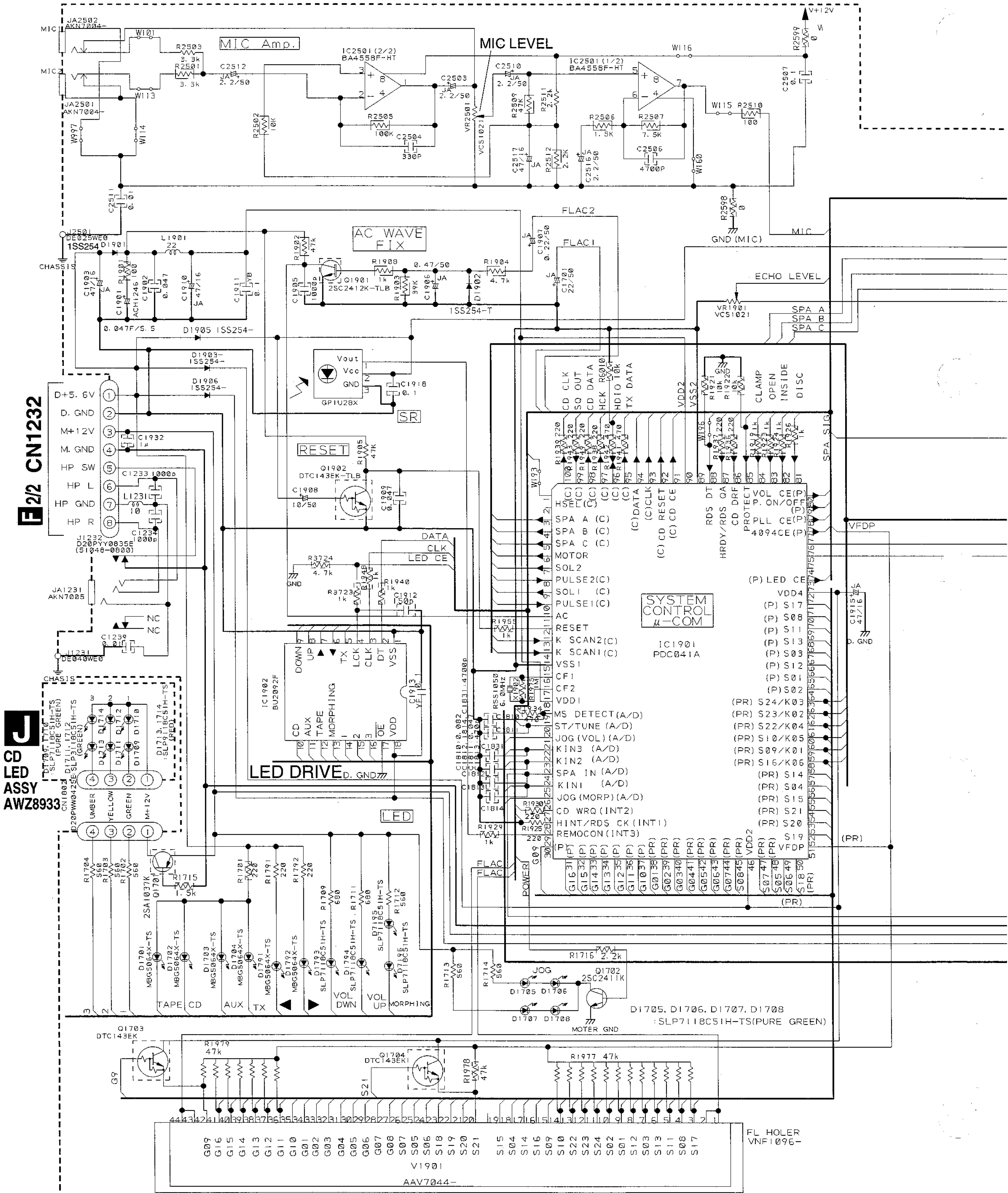
H J1051

M J1001

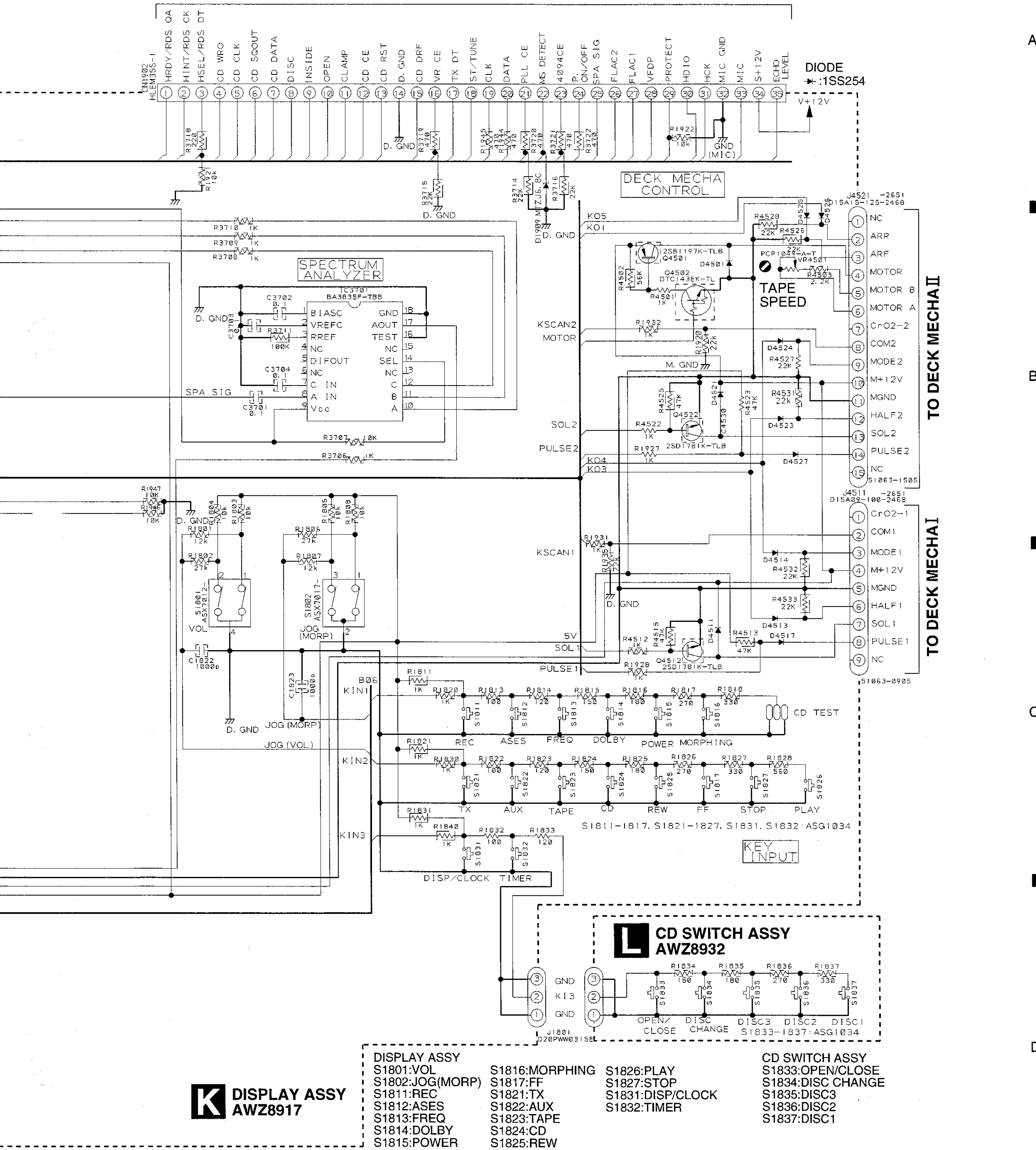
F 2/2



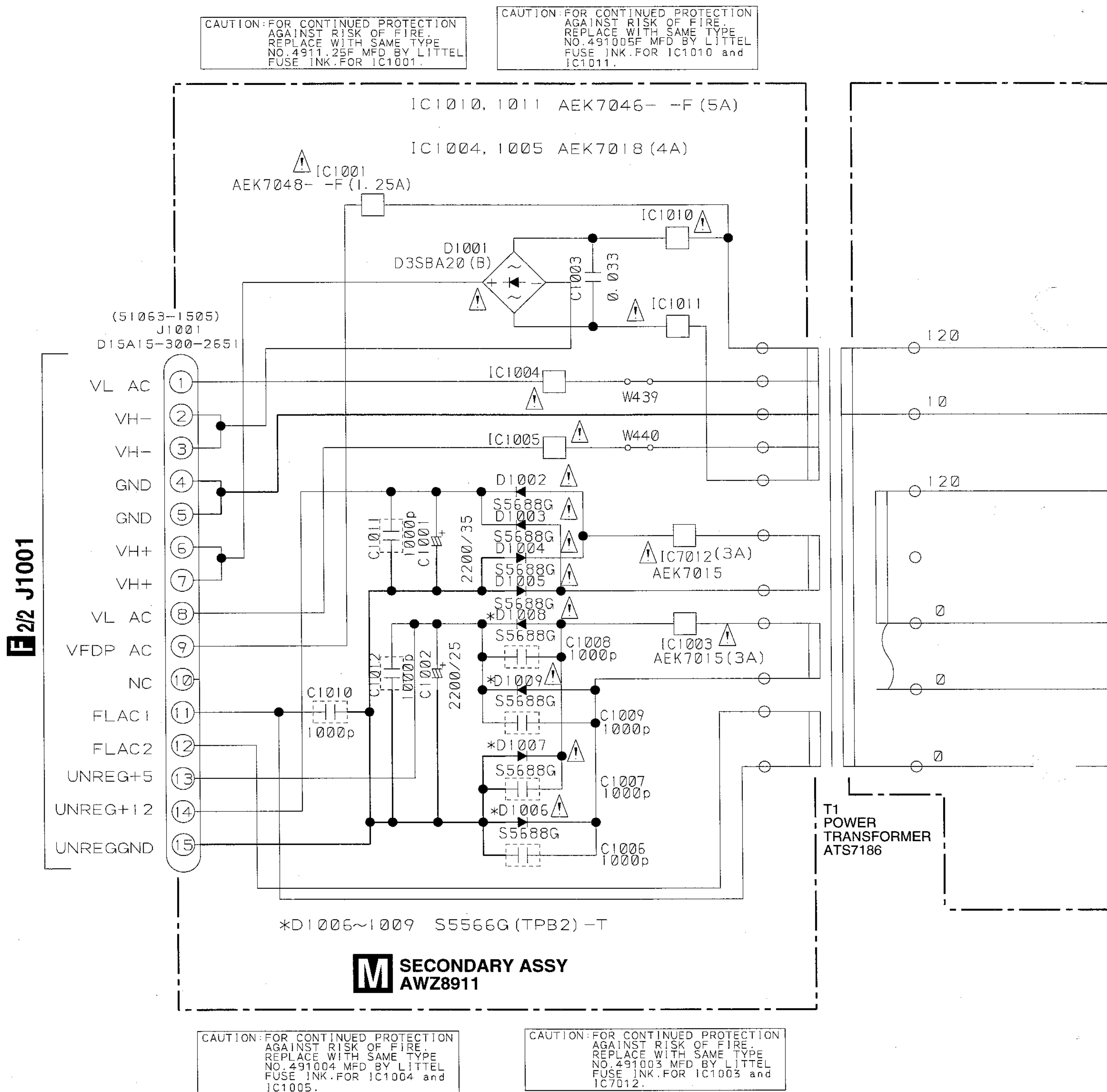
3.8 DISPLAY ASSY, CD SWITCH ASSY AND CD LED ASSY



F 2/2 CN1901

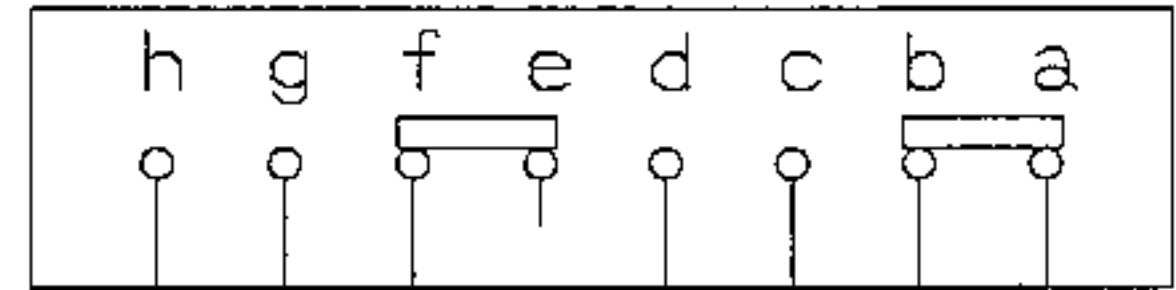


3.9 PRIMARY ASSY AND SECONDARY ASSY



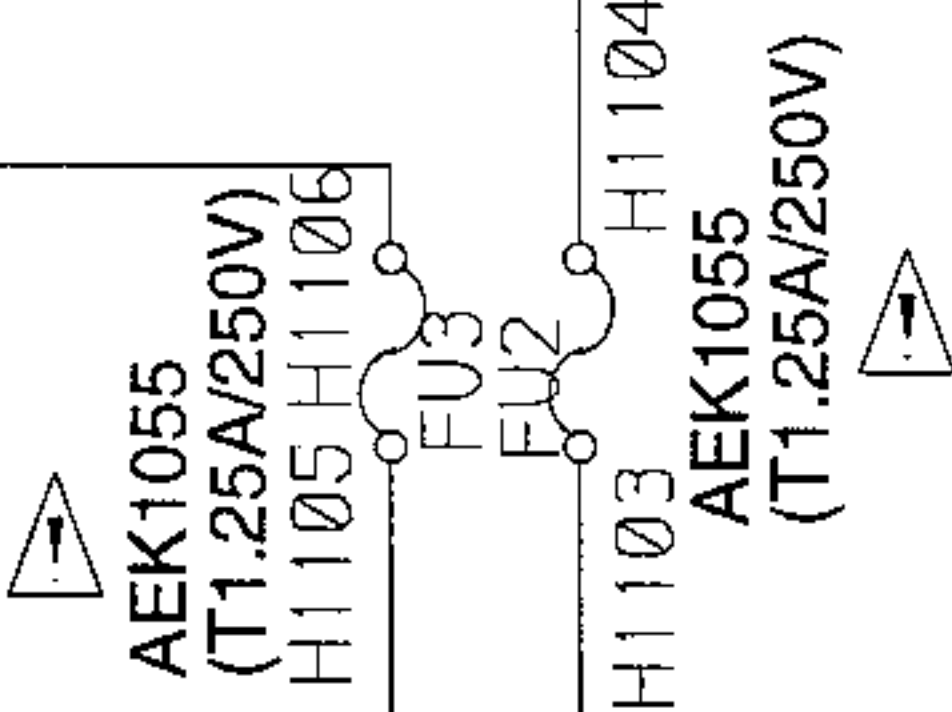
N PRIMARY ASSY
AWZ8910

S1101
AC110-127V/220-230V/240V(D/DF,DAMXJ AND DDXJ TYPES)
AC110-120V/220-230V/240V(DLXJ/NC TYPE)
AKX7006



H1101~H1106:AKR1003-

J1101



L1101

FU1
H1102 H1101
AEK1058
(T2.5A/250V)

CN1101
PKC1006-

① LIVE
② NEUTRAL

AC POWER CORD
ADG1157
AC110-127V/220-230V/240V
50/60Hz
DDXJ TYPE

PDG1062
AC110-127V/220-230V/240V
50/60Hz
D/DF AND DAMXJ TYPES

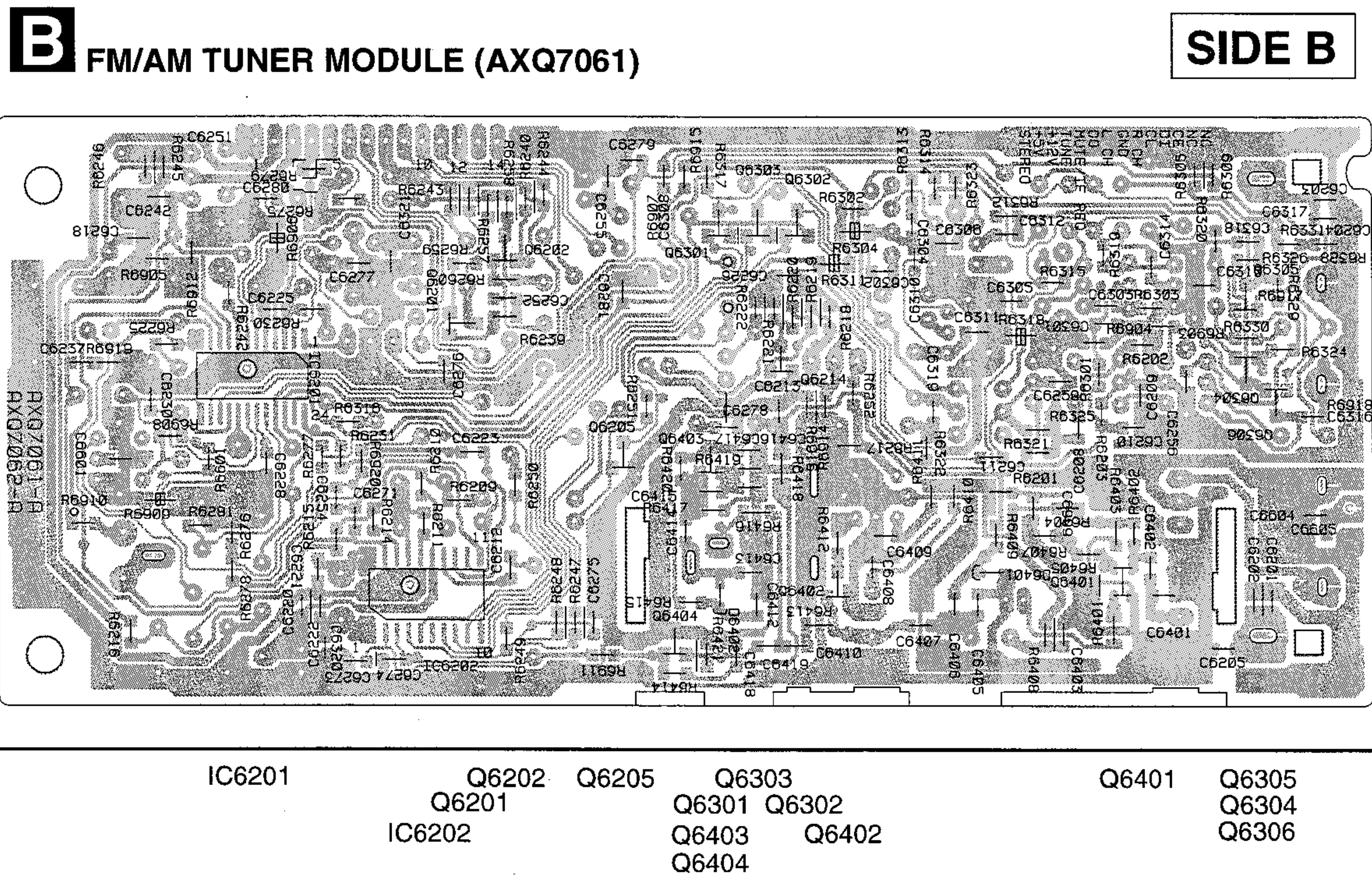
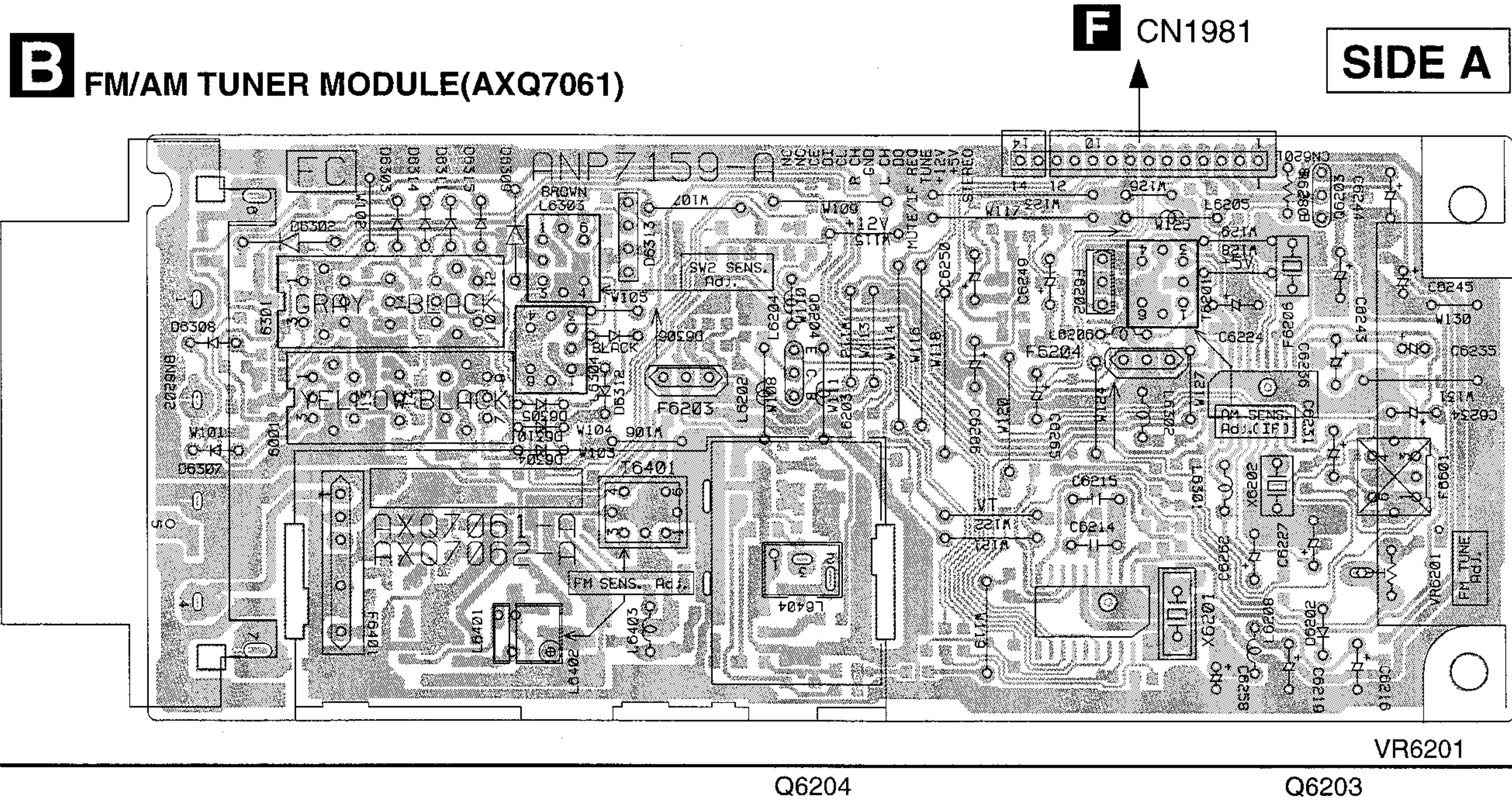
PDG1058
AC110-120V/220-230V/240V
50/60Hz
DLXJ/NC TYPE

W450

● NOTE FOR FUSE REPLACEMENT

CAUTION — FOR CONTINUED PROTECTION AGAINST RISK OF FIRE,
REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

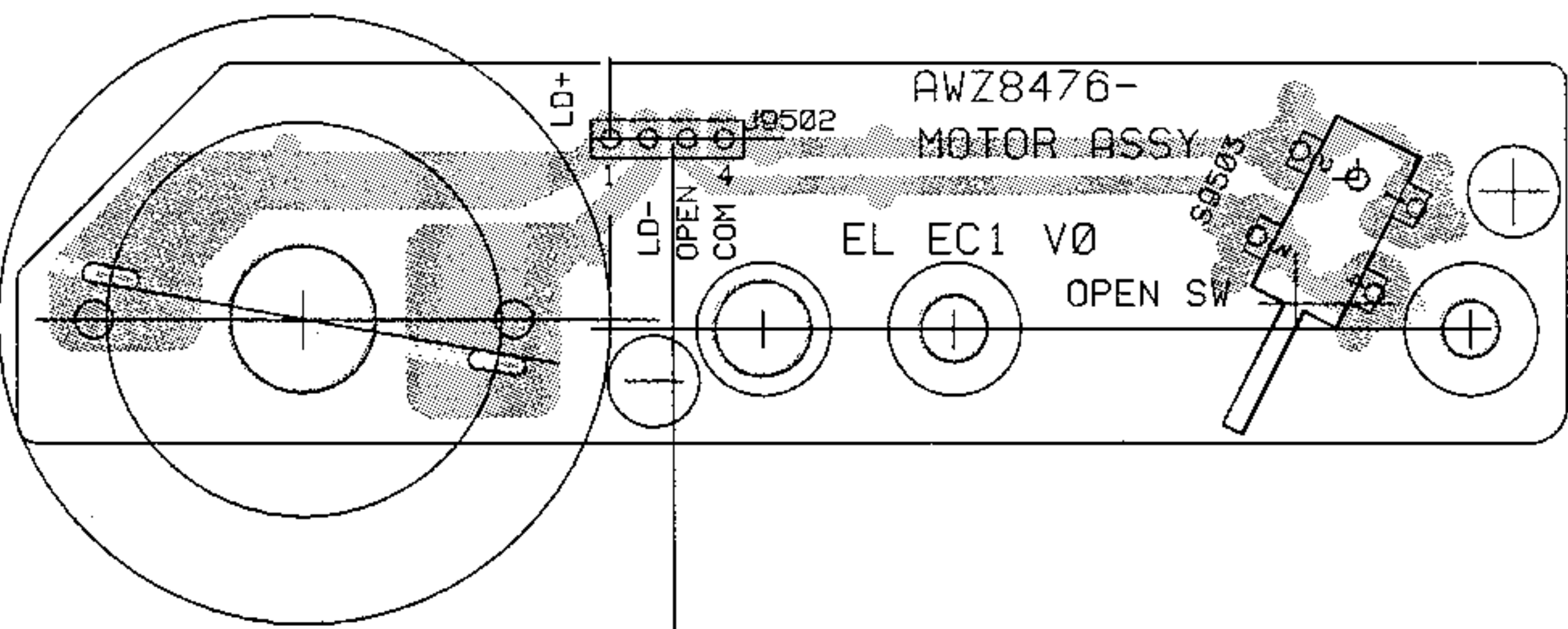
4.2 FM/AM TUNER MODULE (DAMXJ, DDXJ AND DLXJ/NC TYPES)



ANP7159-A

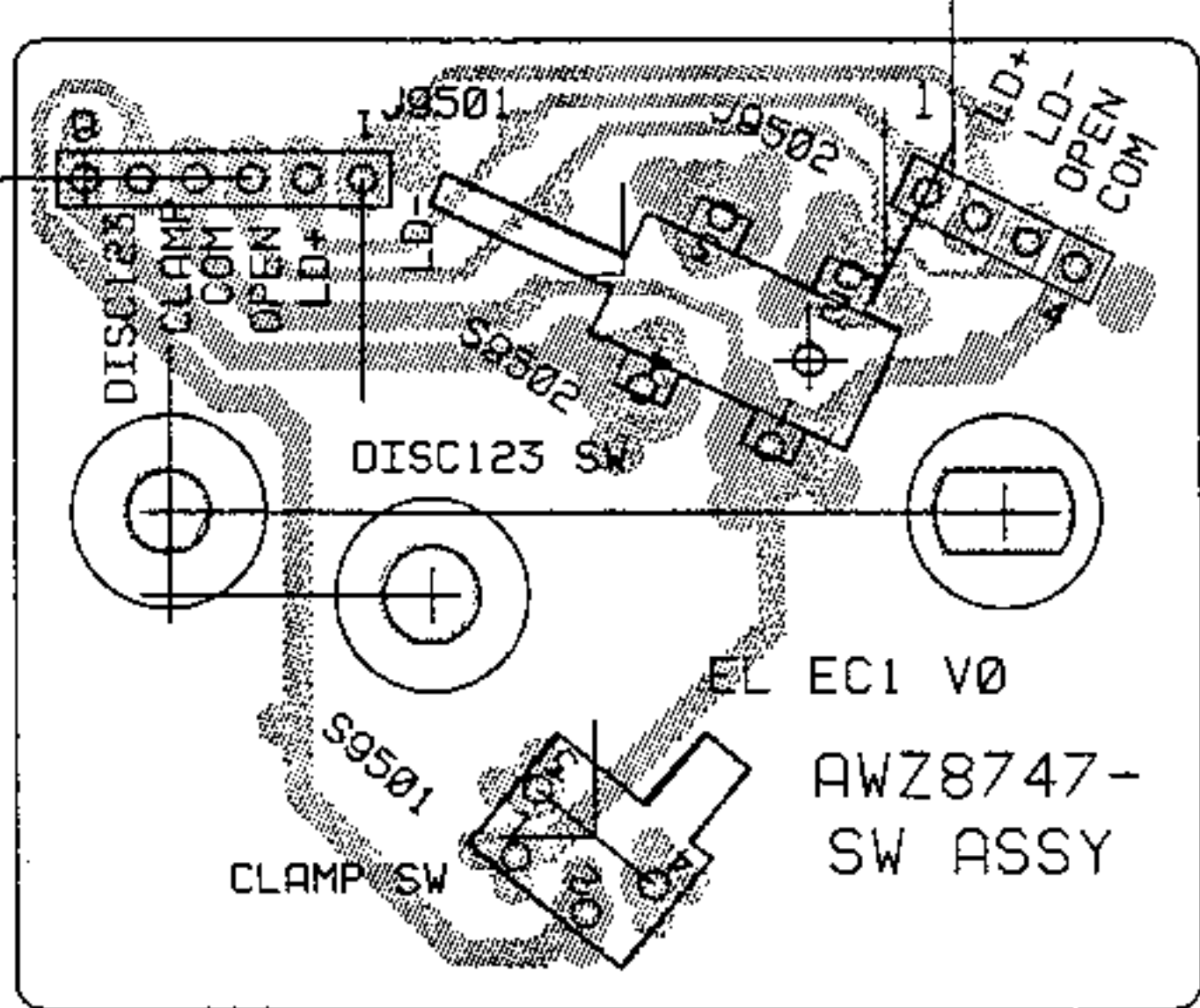
4.3 MOTOR ASSY, SW ASSY AND CD ASSY

C MOTOR ASSY



SIDE A

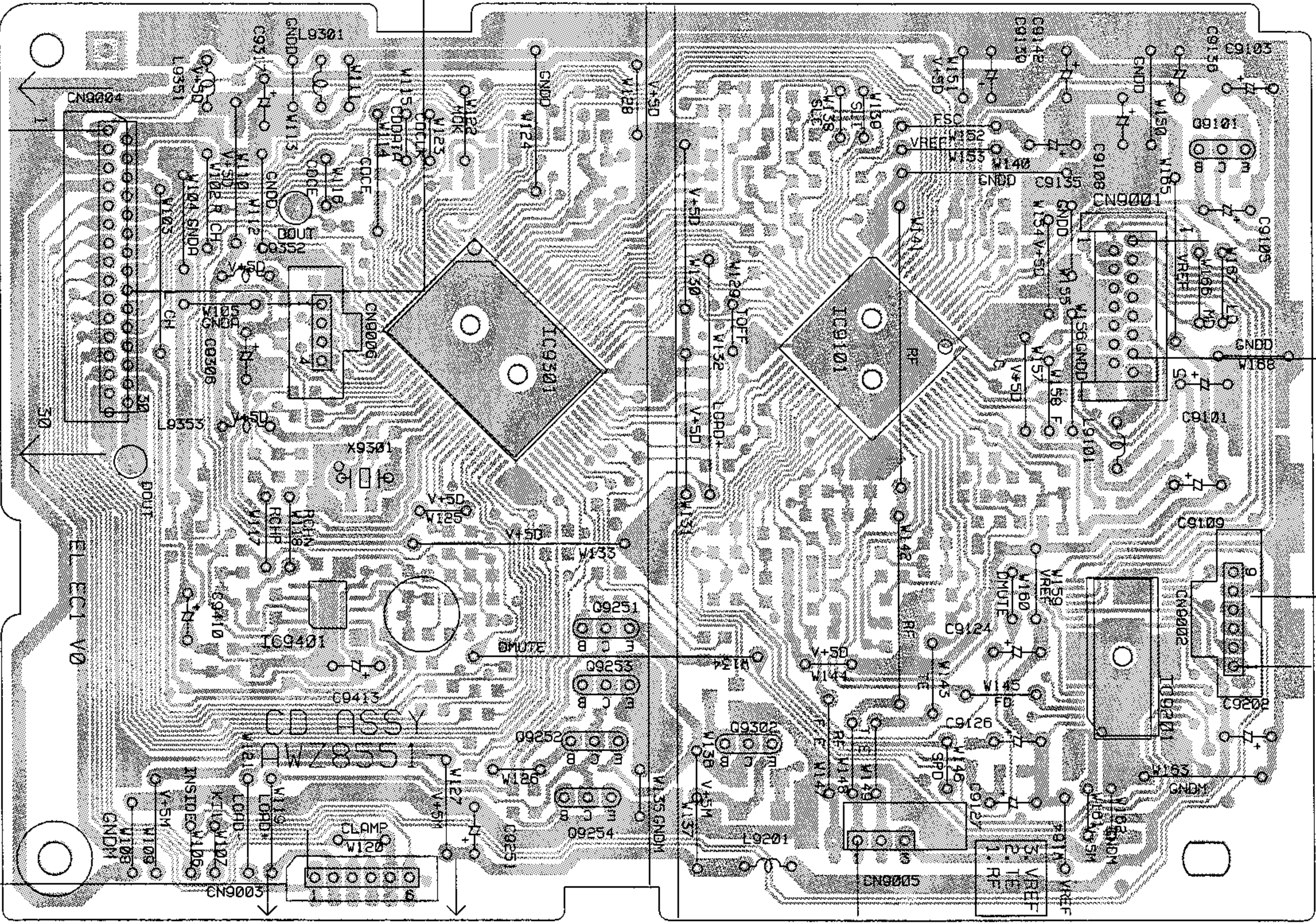
D SW ASSY



E CD ASSY

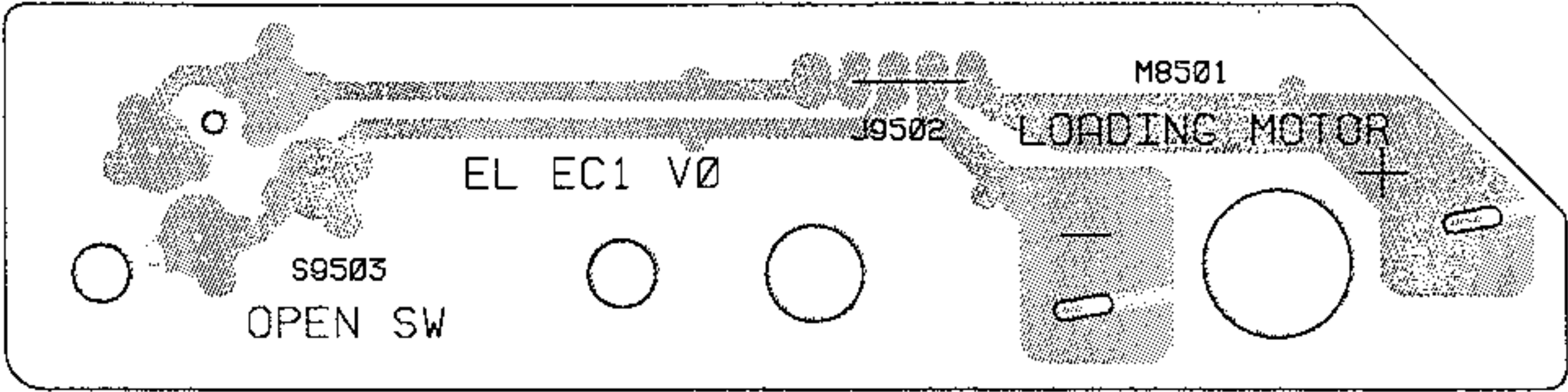
F CN1905

TO CD MECHA ASSY



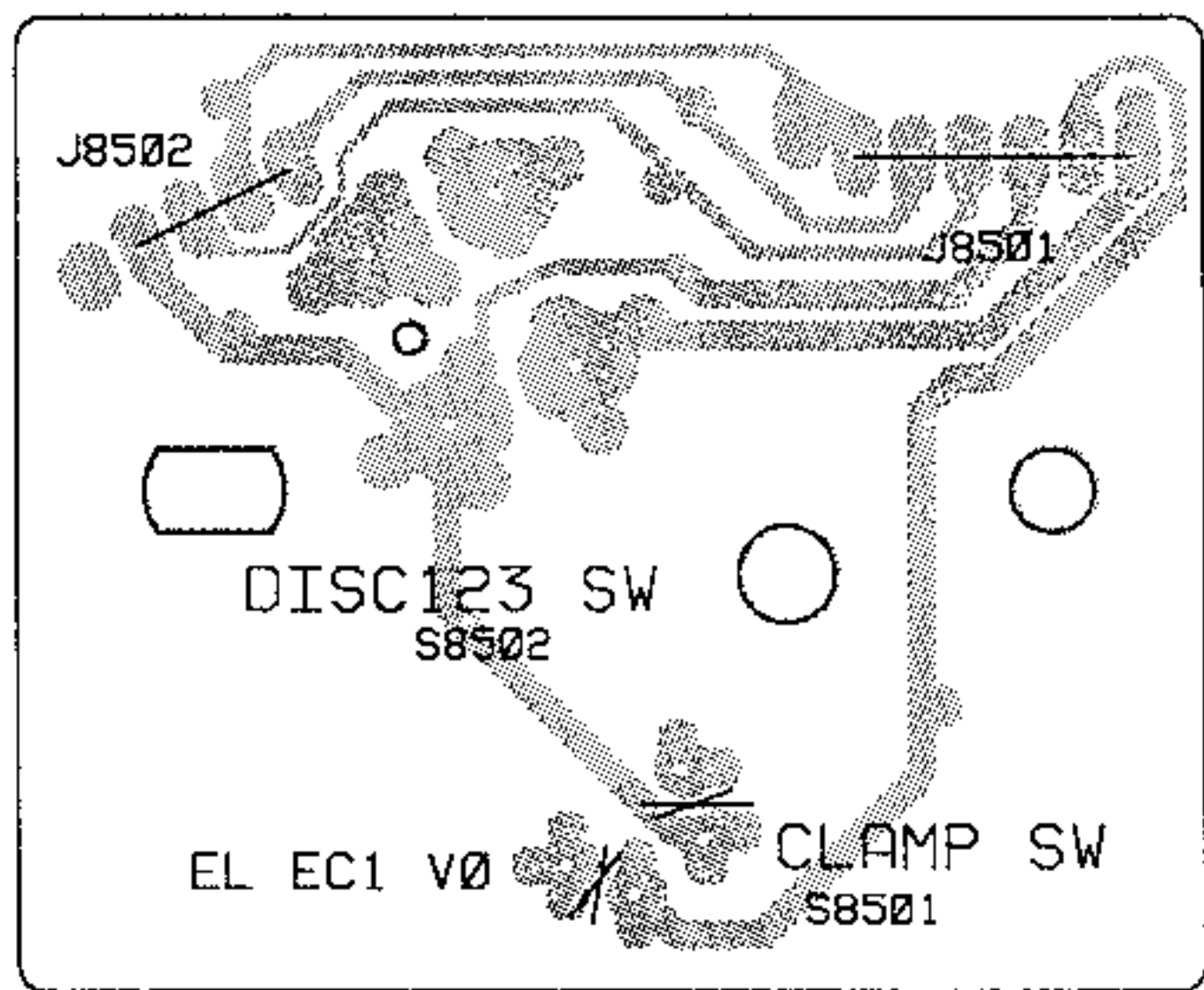
IC9401 IC9301 Q9251 Q9302 IC9101 IC9201 Q9101
Q9253 Q9252 Q9254 ANP7164-B

C MOTOR ASSY

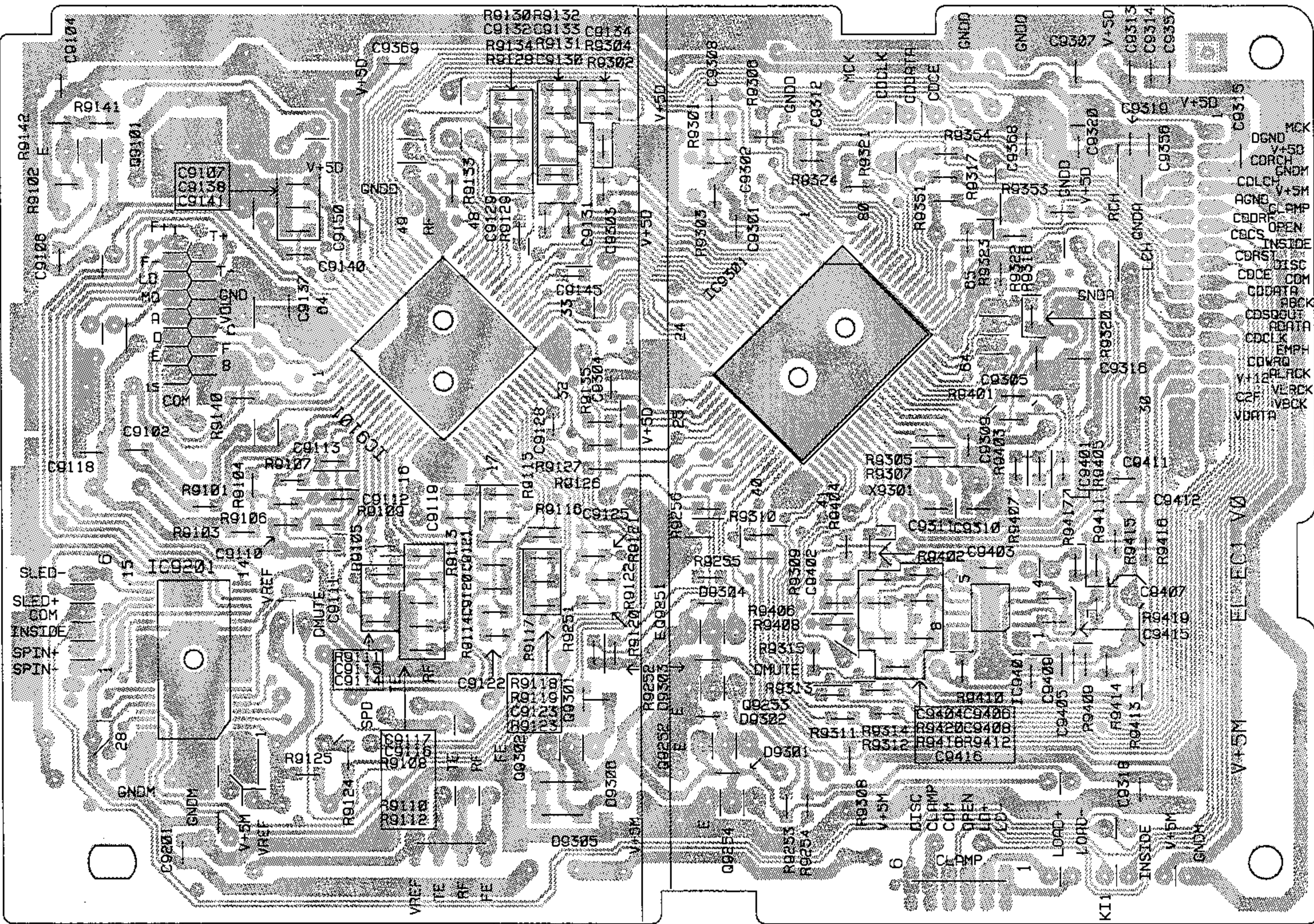


SIDE B

D SW ASSY



E CD ASSY



IC9201 IC9101 Q9301 Q9251 Q9253 IC9301
Q9101 Q9302 Q9252 Q9254

ANP7164-B

4.4 AF ASSY, REG ASSY, SECONDARY ASSY AND FET ASSY

A

B

C

D

F AF ASSY

A B CN6201

Q623

Q4308 IC4401
Q4307 Q6001

Q4361
Q4354 Q4353

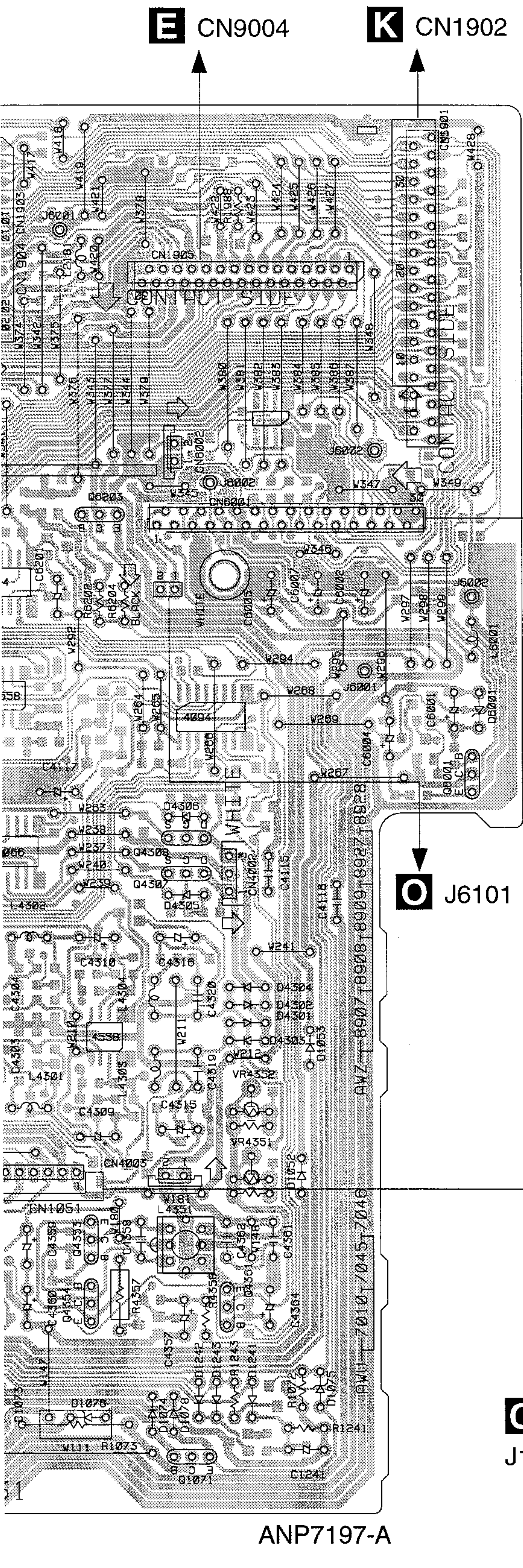
Q1071

VR4203
VR4352 VR4201 VR4204
VR4351 VR4301 VR4302 VR4202

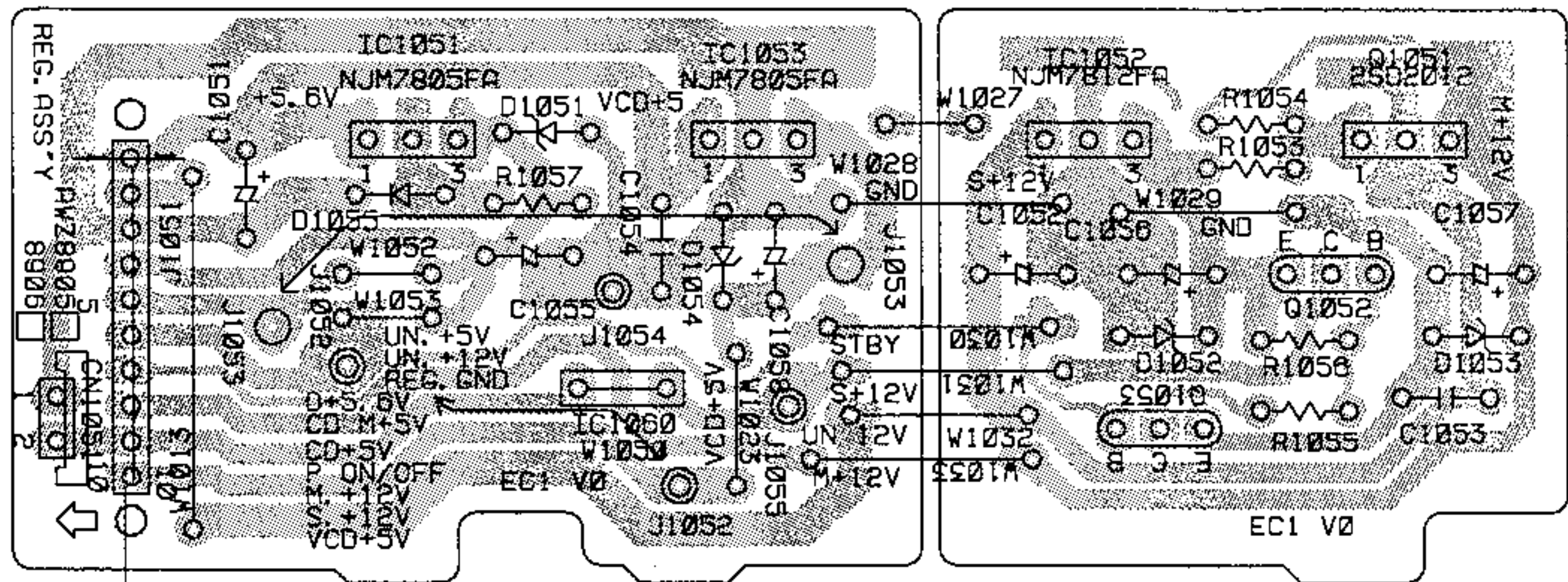
AWM-□7307-□7308-□7309-□7310-□7312-□7313-□7350-□7351

K J1232

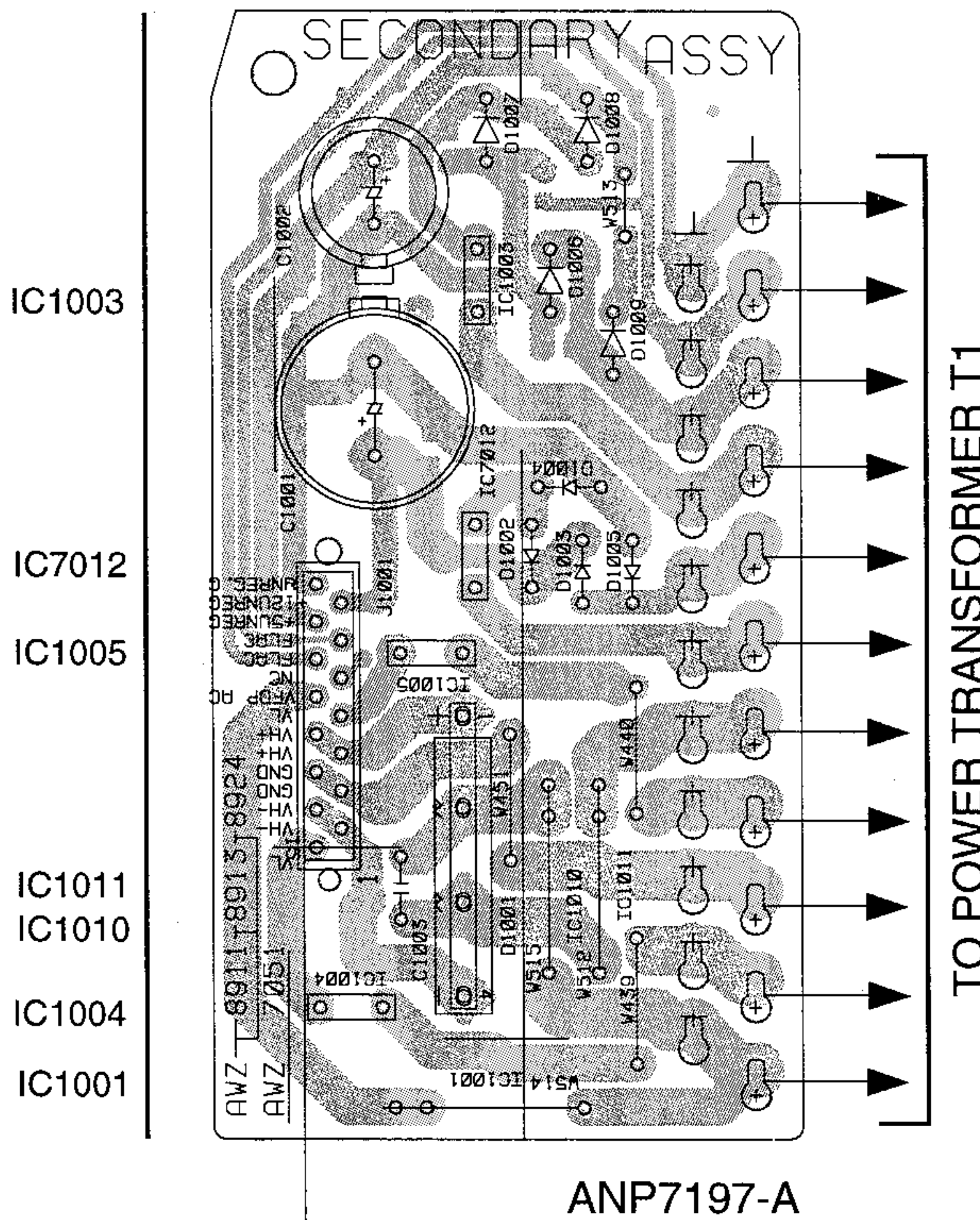
G CN1202



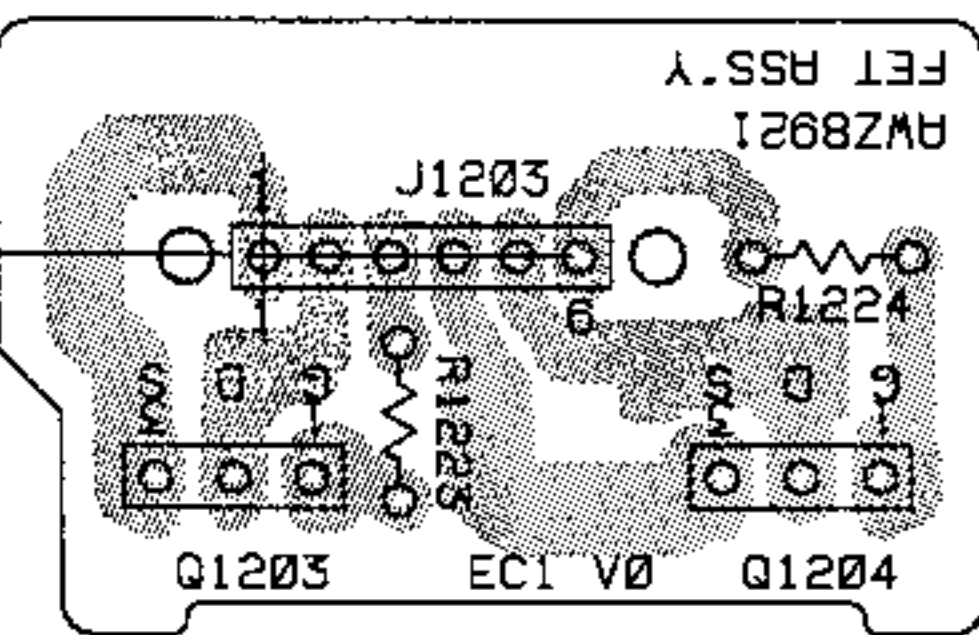
H REG ASSY

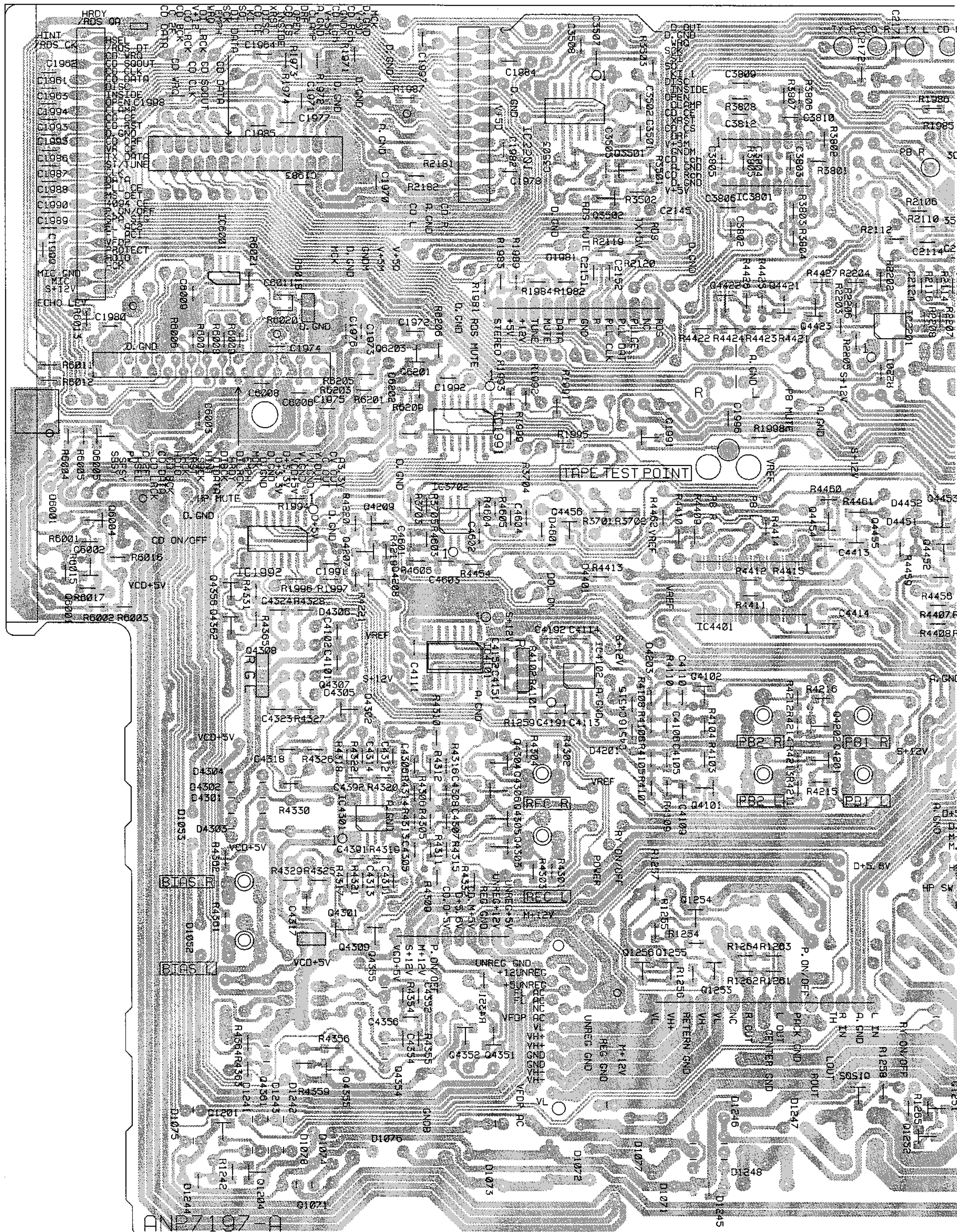


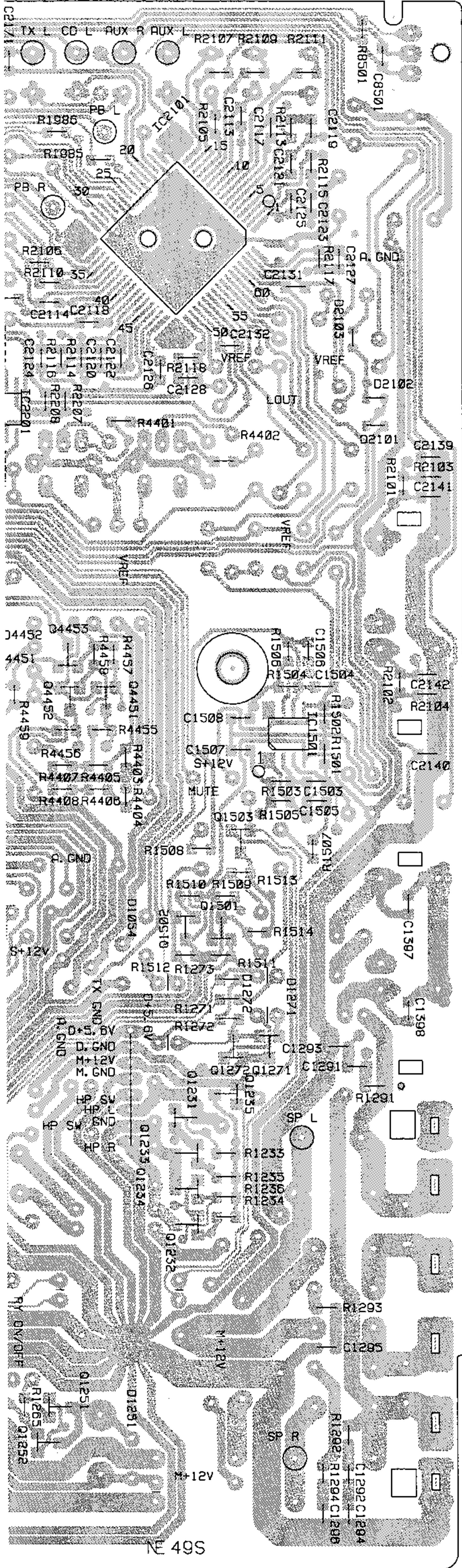
M SECONDARY ASSY



I FET ASSY

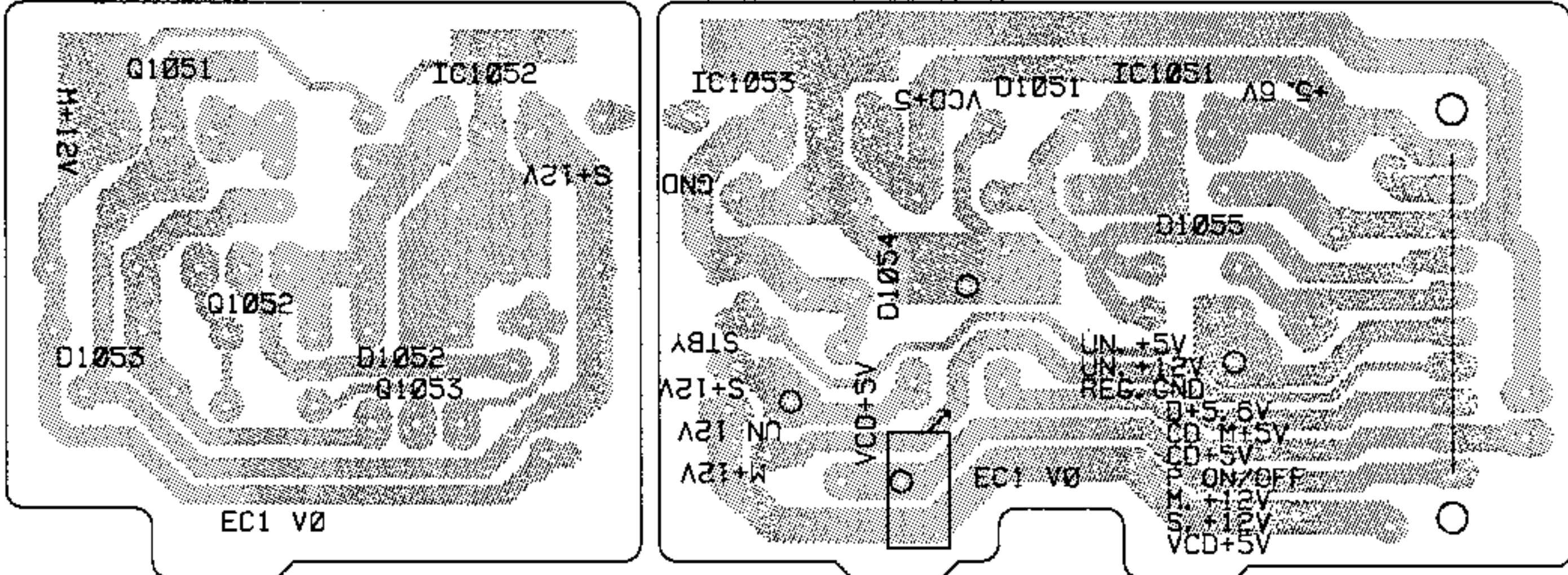


[illegible]



ANP7197-A

H REG ASSY

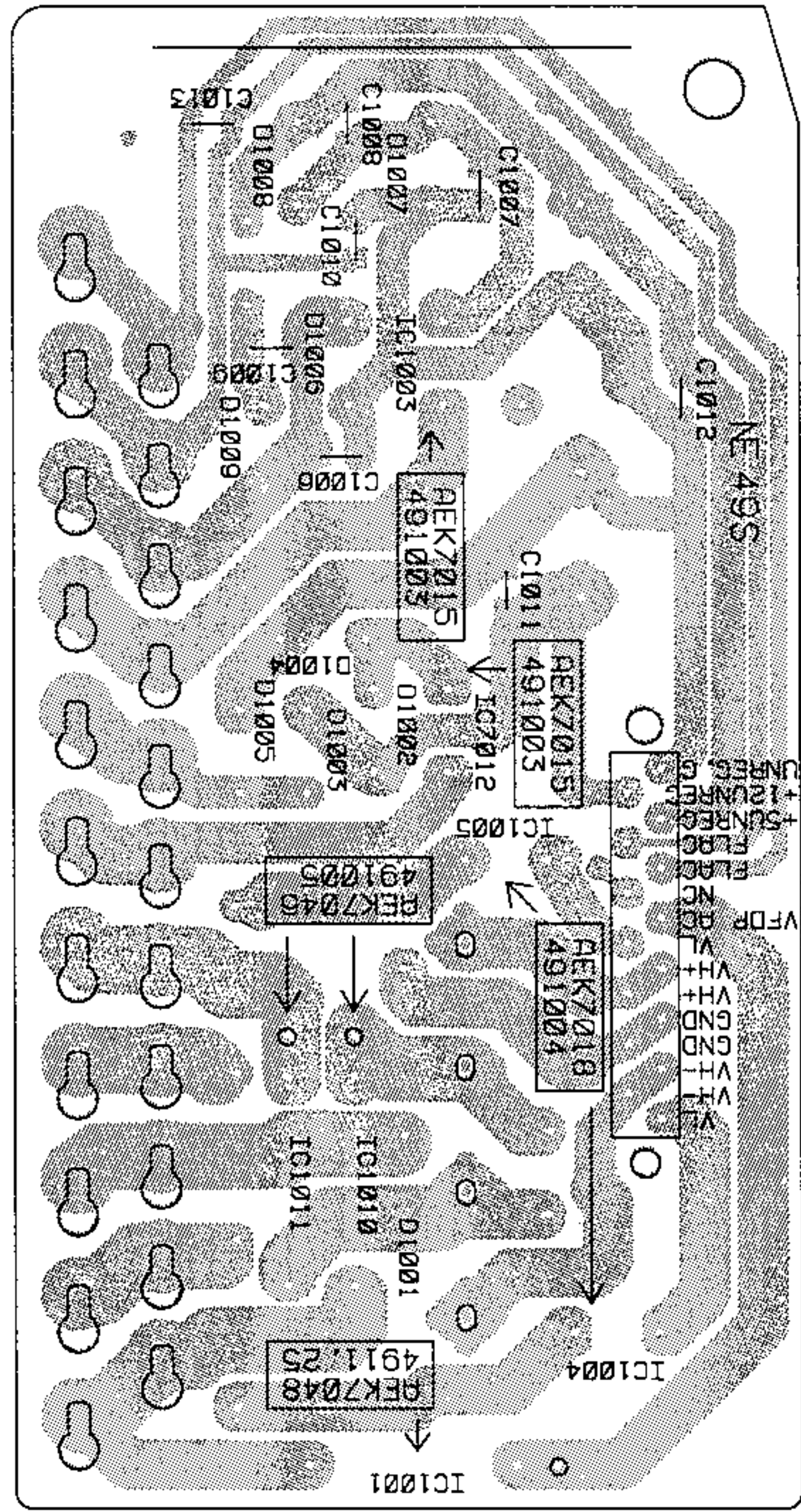


Q1051 IC1052 IC1053 IC1051
Q1052 Q1053

SIDE B

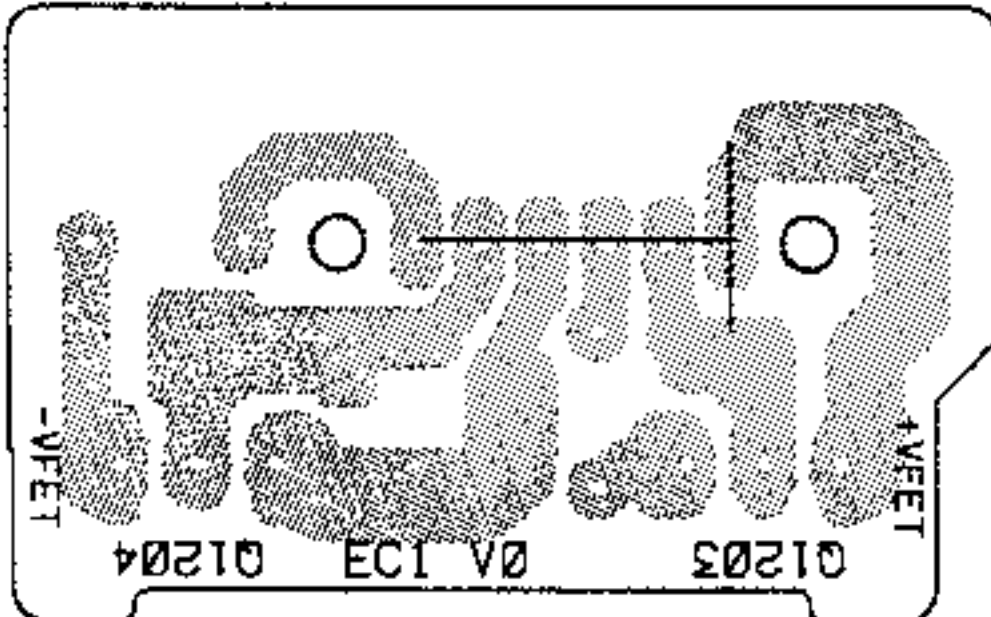
ANP7198-B

M SECONDARY ASSY



ANP7197-A

I FET ASSY



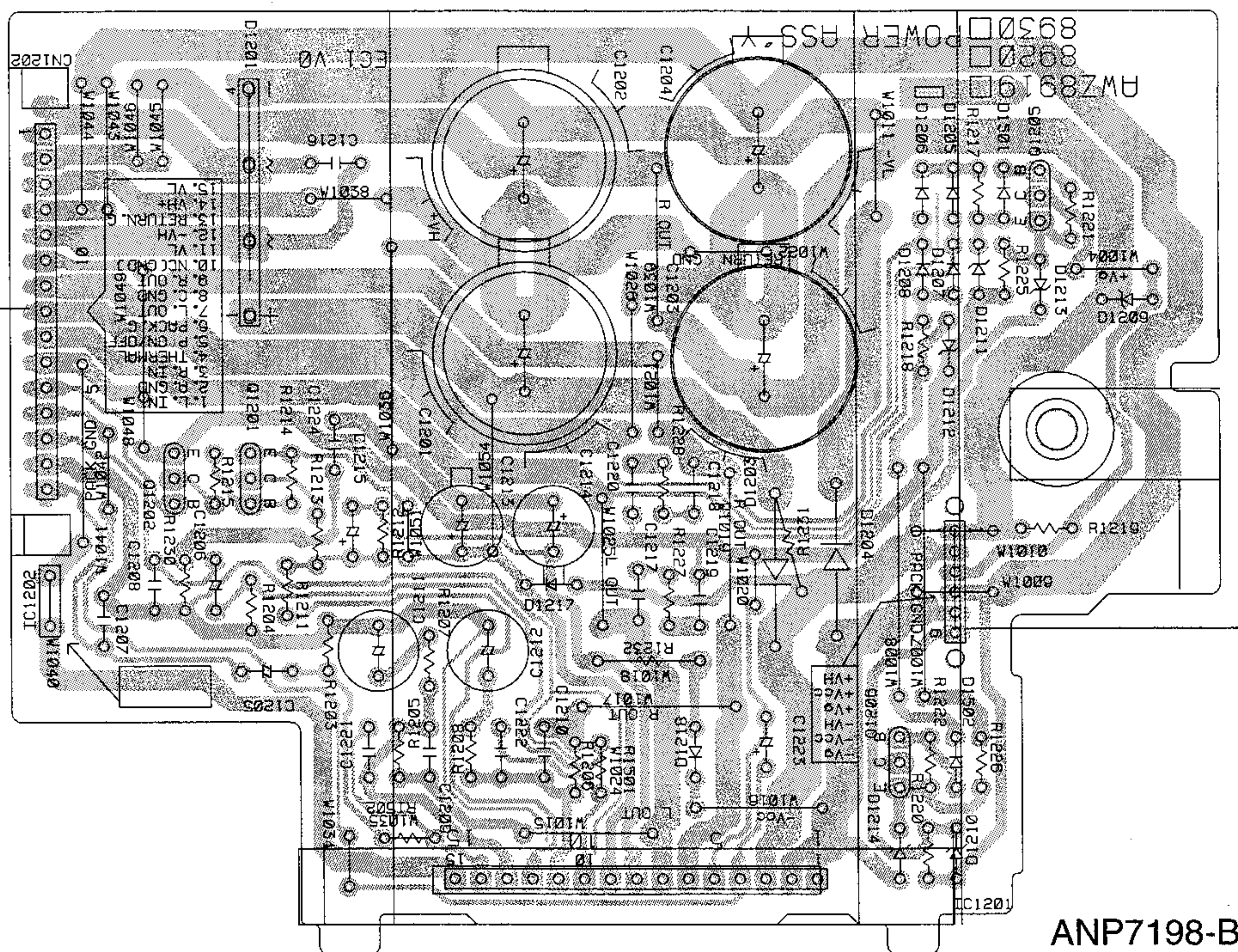
ANP7198-B

4.5 POWER ASSY, CD SWITCH ASSY, CD LED ASSY AND VIDEO OUT ASSY

G POWER ASSY

SIDE A

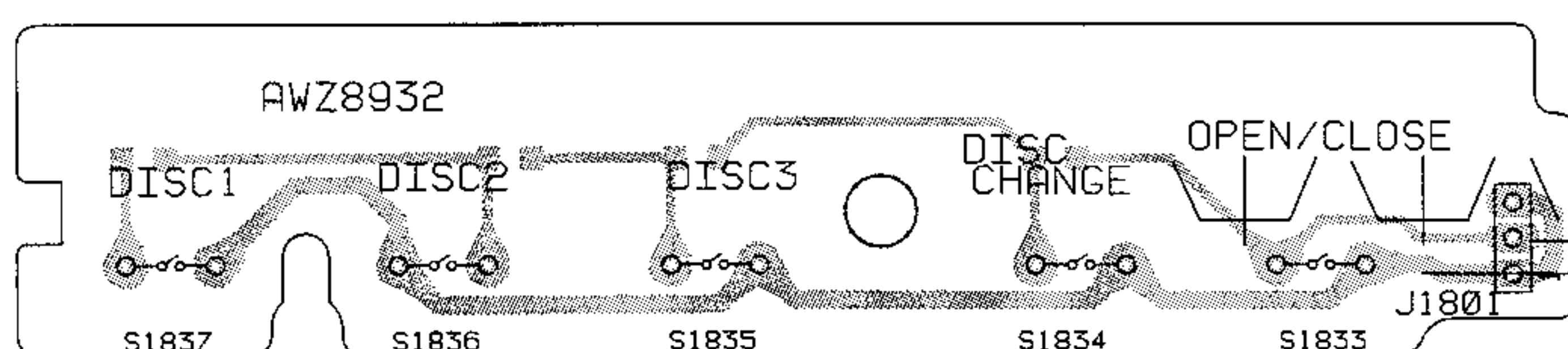
F
CN1201



I
J1203

IC1202 Q1202
Q1201
Q1206 Q1205
IC1201

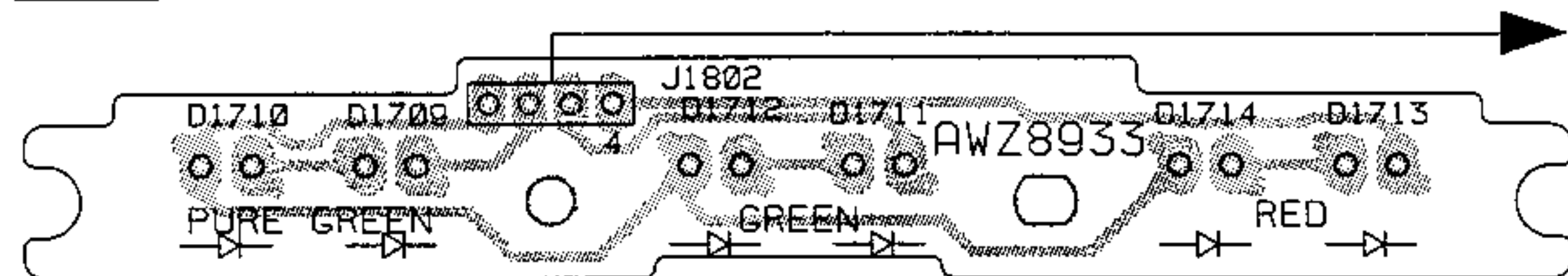
L CD SWITCH ASSY



K
J1801

J CD LED ASSY

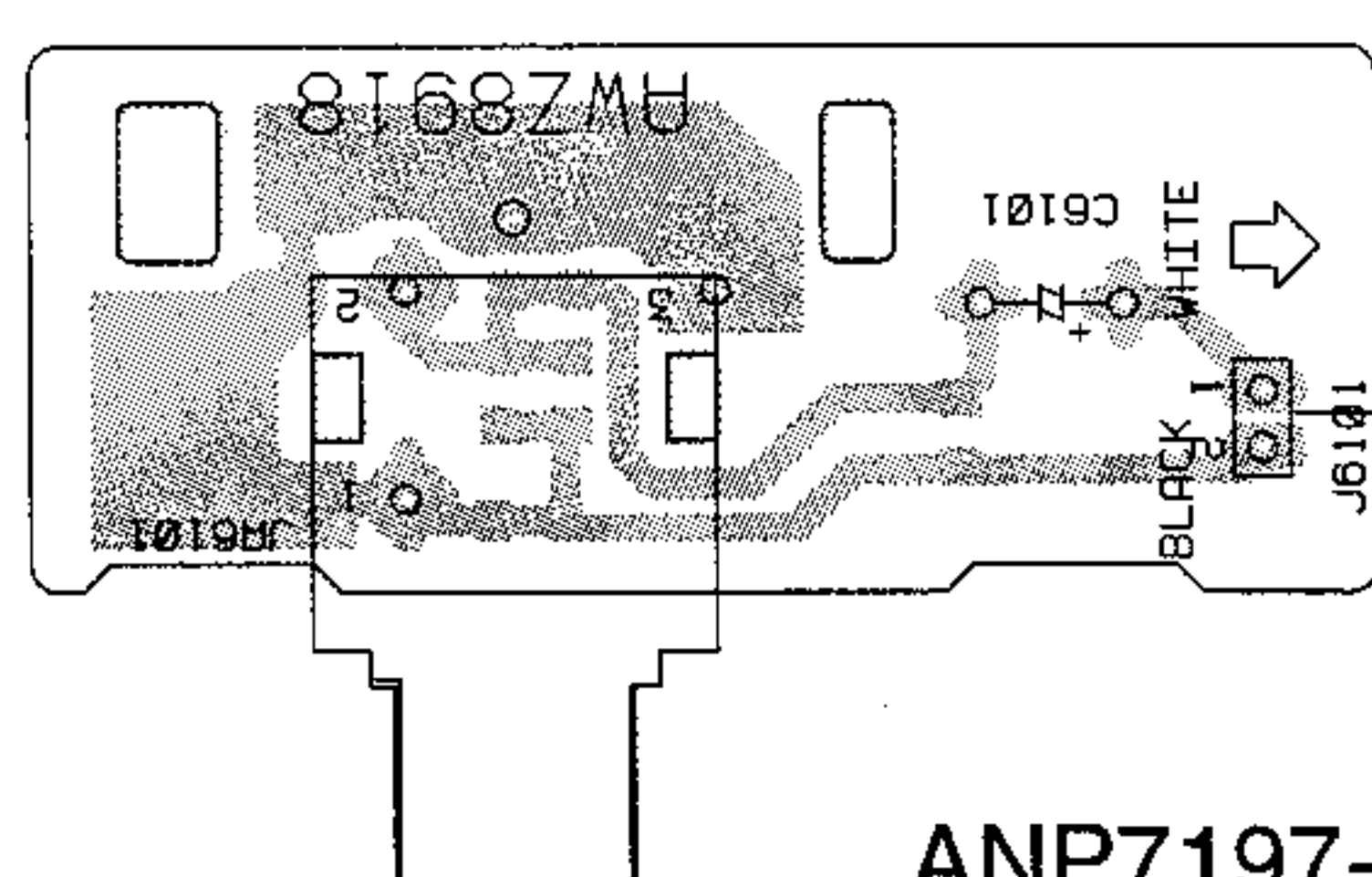
ANP7197-A



K
J1802

ANP7197-A

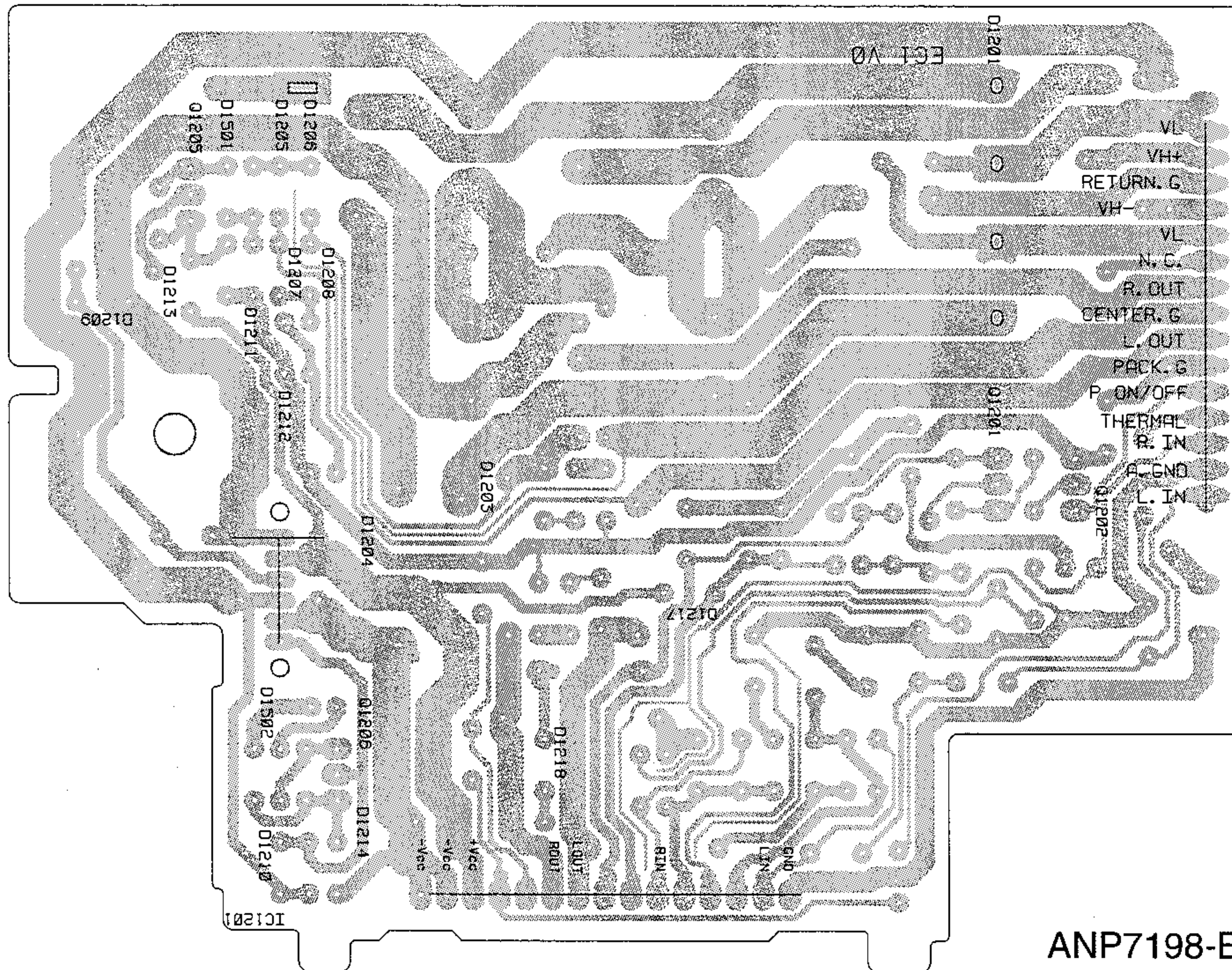
O VIDEO OUT ASSY



F
J6101

ANP7197-A

G POWER ASSY


SIDE B

ANP7198-B

Q1205

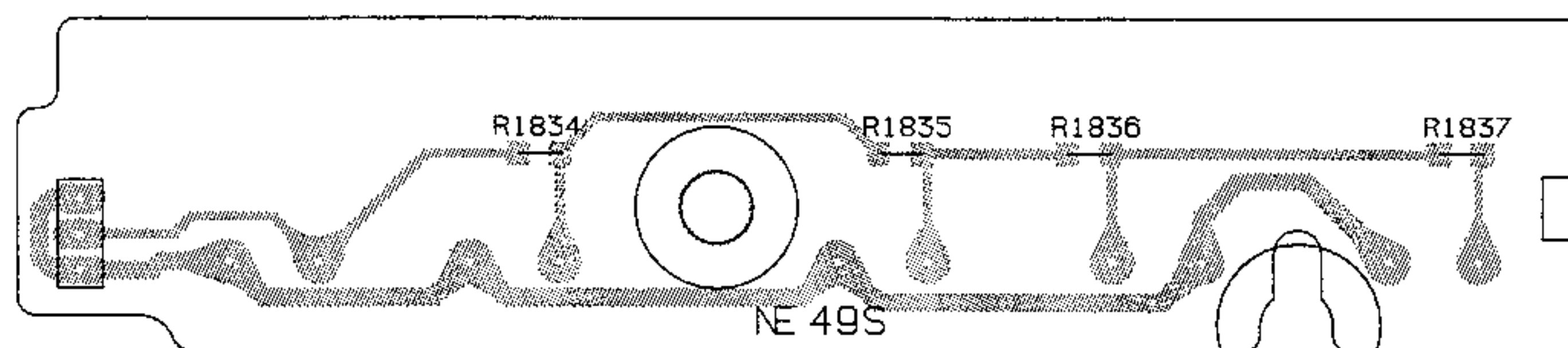
Q1206

IC1201

Q1201

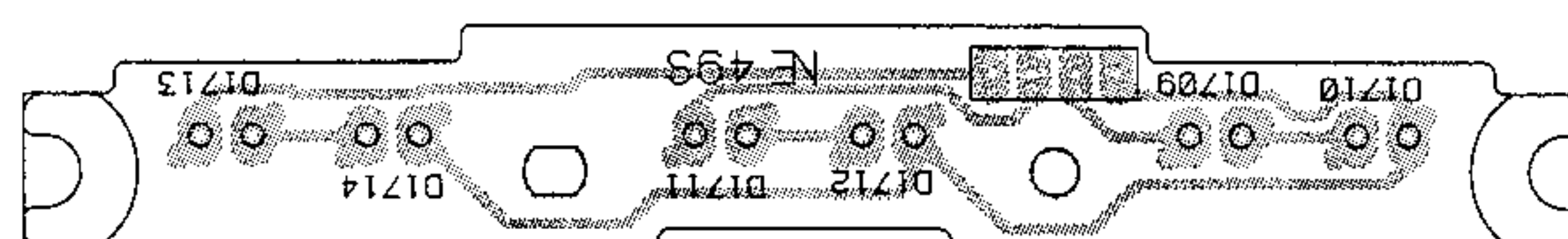
Q1202

L CD SWITCH ASSY



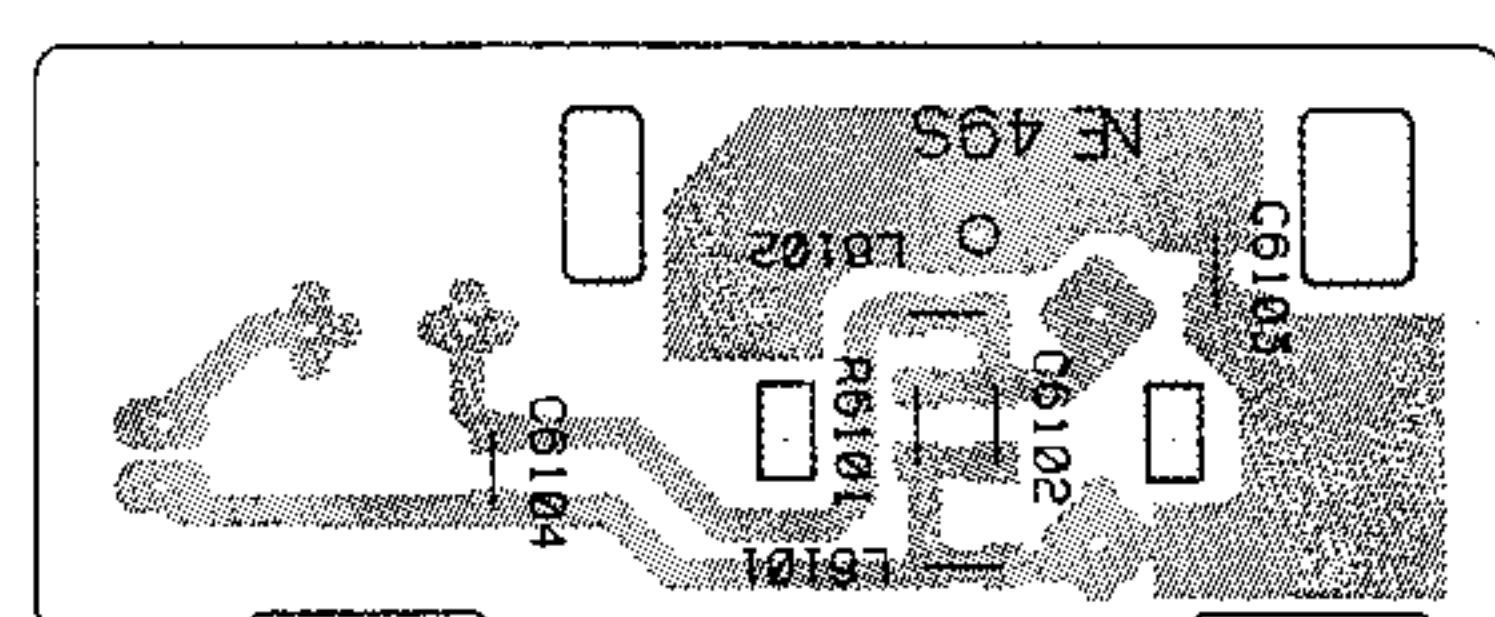
ANP7197-A

J CD LED ASSY



ANP7197-A

O VIDEO OUT ASSY



ANP7197-A

Q1702

Q1701

Q1901

Q4512

Q4513

Q1902

Q1703

IC1902

IC3701

Q4523

Q1740

IC1901

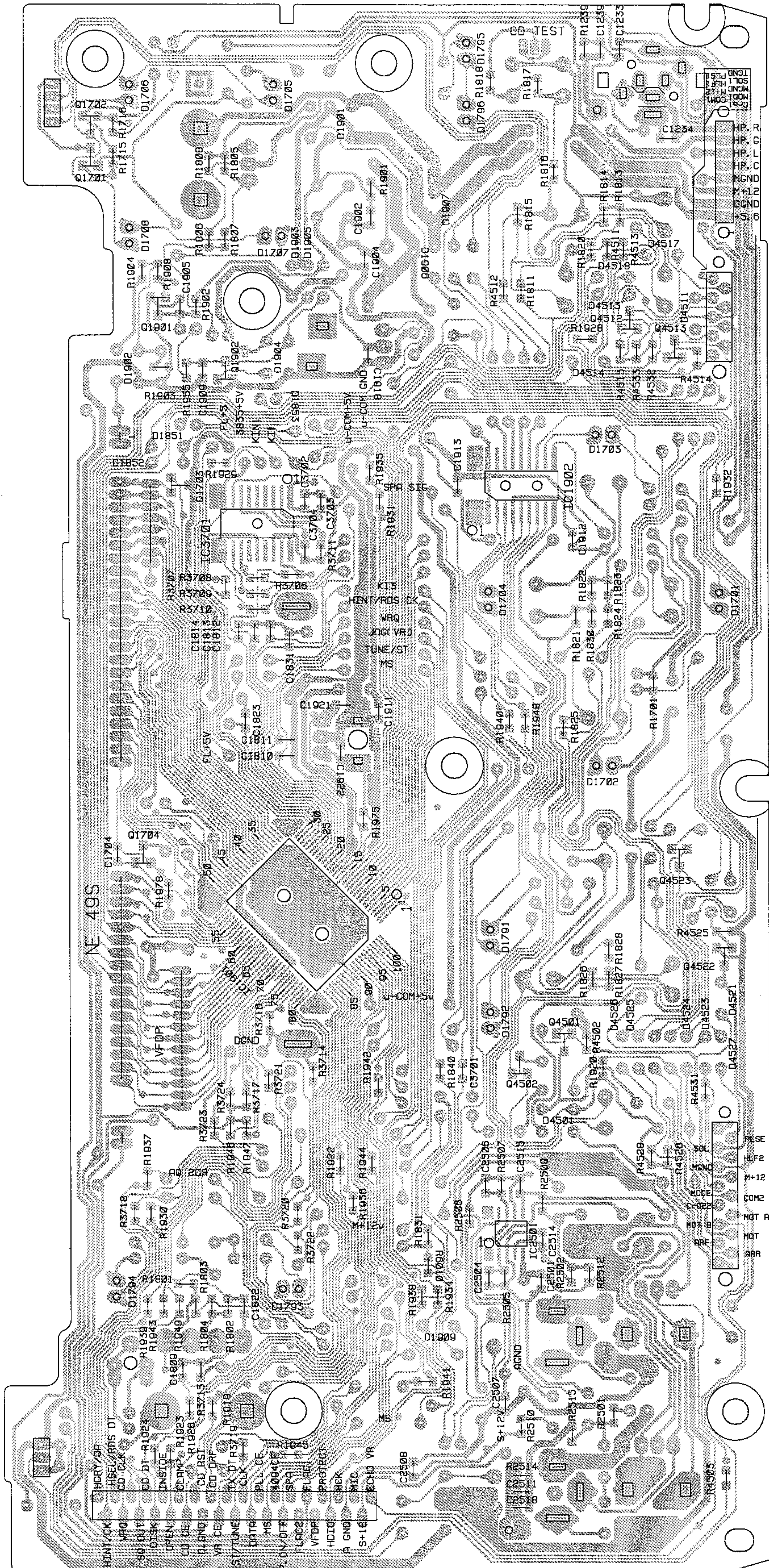
Q4522

Q4501

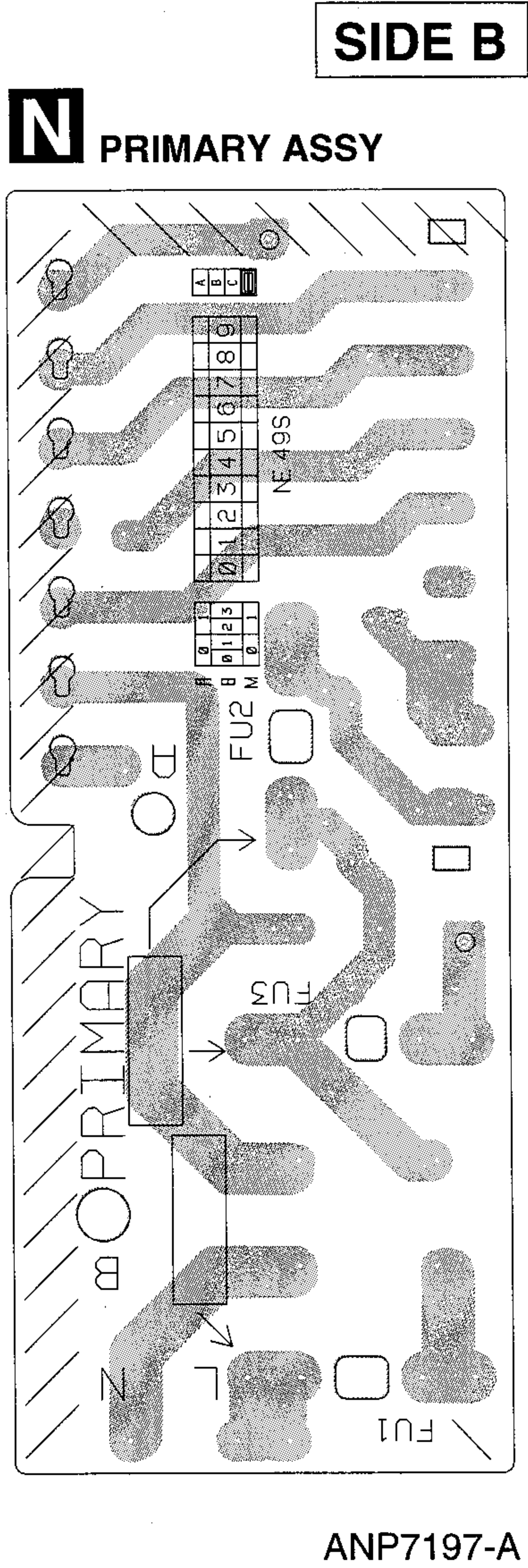
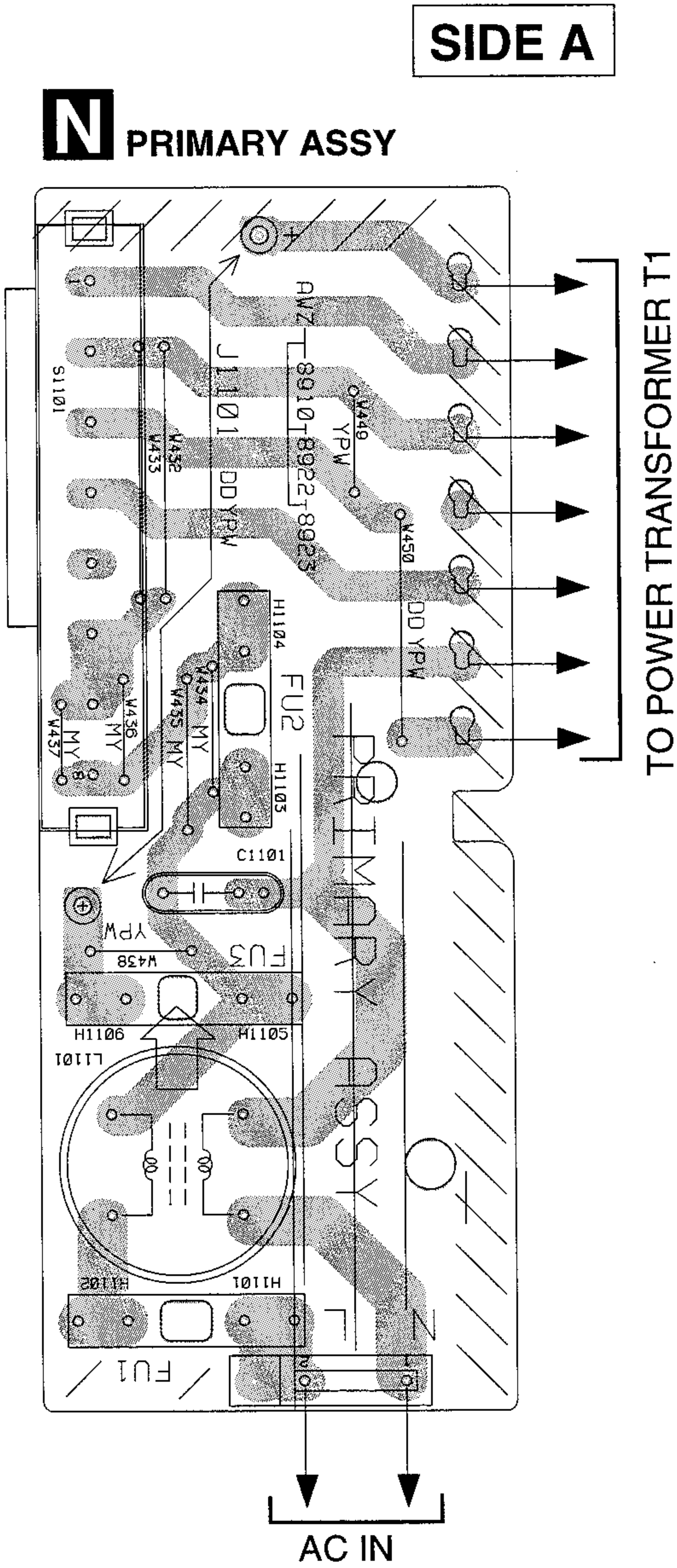
Q4502

IC2501

SIDE B



4.7 PRIMARY ASSY



5. 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.
- 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 → 56 × 10¹ → 561 RD1/4PU561J
- 47k Ω → 47 × 10³ → 473 RD1/4PU473J
- 0.5 Ω → 0R5 RN2H0R5K
- 1 Ω → 1R0 RS1P1R0K
- Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
- 5.62k Ω → 562 × 10¹ → 5621 RN1/4PC5621F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.				Remarks
		XR-VS8/D/DF	XR-VS8/DAMXJ	XR-VS8/DDXJ	XR-VS8/DLXJ/NC	
NSP	POWER ASSY	AWK7419	AWK7419	AWK7419	AWK4719	
	└ REG ASSY	AWZ8906	AWZ8906	AWZ8906	AWZ8906	
	└ POWER ASSY	AWZ8919	AWZ8919	AWZ8919	AWZ8919	
	└ FET ASSY	AWZ8921	AWZ8921	AWZ8921	AWZ8921	
NSP	COMPLEX ASSY	AWM7310	AWM7310	AWM7310	AWM7310	
	└ SECONDARY ASSY	AWZ8911	AWZ8911	AWZ8911	AWZ8911	
	└ AF ASSY	AWZ8909	AWZ8909	AWZ8909	AWZ8909	
	└ PRIMARY ASSY	AWZ8910	AWZ8910	AWZ8910	AWZ8910	
	└ DISPLAY ASSY	AWZ8917	AWZ8917	AWZ8917	AWZ8917	
NSP	└ CD SWITCH ASSY	AWZ8932	AWZ8932	AWZ8932	AWZ8932	
NSP	└ CD LED ASSY	AWZ8933	AWZ8933	AWZ8933	AWZ8933	
NSP	└ VIDEO OUT ASSY	AWZ8918	AWZ8918	AWZ8918	AWZ8918	
	FM/AM TUNER MODULE	AXQ7051	AXQ7061	AXQ7061	AXQ7061	
NSP	\$M SERVO BOARD ASSY	AWX7034	AWX7034	AWX7034	AWX7034	
	└ MOTOR ASSY	AWZ8746	AWZ8746	AWZ8746	AWZ8746	
	└ SW ASSY	AWZ8747	AWZ8747	AWZ8747	AWZ8747	
	└ CD ASSY	AWZ8551	AWZ8551	AWZ8551	AWZ8551	

Mark	No.	Description	Parts No.
H		REG. ASSY	
		SEMICONDUCTORS	
Δ		IC1051, IC1053	NJM7805FA
Δ		IC1052	NJM7812FA
		Q1052	2SA1515
Δ		Q1051	2SD2012
		Q1053	DTC143ES
		D1055	1SS254
		D1052, D1053	MTZJ15C
		D1051, D1054	MTZJ6.8C
		CAPACITORS	
		C1055 – C1058	CEAT100M50
		C1051, C1052	CEAT1R0M50
		C1060	CEAT470M10
		RESISTORS	
		All Resistors	RD1/4PU□□□J
		OTHERS	
		1051 Cable Holder(10P)	51048 – 1000

Mark	No.	Description	Parts No.
G		POWER ASSY	
		SEMICONDUCTORS	
Δ		IC1201	STK407 – 050
		Q1201, Q1206	2SA1048
		Q1205	2SC2458
		Q1202	DTC124ES
Δ		D1217, D1218	1SR139 – 100
		D1205 – D1208, D1501, D1502	1SS254
Δ		D1203, D1204	20E2 – FC
Δ		D1201	D3SBA20(B)
		D1213, D1214	MTZJ10C
		D1209, D1210	MTZJ18B/C
		D1211, D1212	MTZJ33C
		CAPACITORS	
		C1201, C1202	ACH7070
		C1203, C1204	ACH7071
		C1209, C1210	CCCSL3R0C50
		C1211, C1212	CEANP220M35
		C1205, C1206	CEANP2R2M50

Mark No.	Description	Parts No.
	C1213, C1214	CEAT101M50
	C1215	CEAT330M50
	C1217 – C1220	CGCYF104Z50
	C1224	CKCYB102K50
	C1207, C1208	CKCYF222Z50

C1216	CQMA103K2E
RESISTORS	
All Resistors	RD1/4PU□□□J

OTHERS		
1204	Cable Holder(6P)	51048 – 0600
CN1202	B TO B CONNECTOR 15P	RKP1806

I FET ASSY

SEMICONDUCTORS		
△ Q1203	IRFI9Z34G	
△ Q1204	IRFIZ34G	

RESISTORS		
All Resistors	RD1/4PU□□□J	

OTHERS		
1203	Cable Holder(6P)	51048 – 0600
J1203	JUMPER WIRE(6P)	D20PYY0610E

M SECONDARY ASSY

SEMICONDUCTORS		
△ IC1003, IC7012	AEK7015	
△ IC1004, IC1005	AEK7018	
△ IC1010, IC1011	AEK7046	
△ IC1001	AEK7048	
△ D1001	D3SBA20(B)	
△ D1006 – D1009	S5566G(TPB2)	
△ D1002 – D1005	S5688G	

CAPACITORS		
C1002	CEAT222M25	
C1001	CEAT222M35	
C1006 – C1012	CKSQYB102K50	
C1003	CQMA333K2E	

OTHERS	CABLE HOLDER(15P)	51063 – 1505
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F AF ASSY

SEMICONDUCTORS		
IC1501, IC2201, IC3702, IC4102, IC4301	BA4558F – HT	
IC4101	BU4066BCF	
IC1991, IC1992	BU4094BCF	
IC3801	BU9253AS	
IC4401	CXA1101P	
IC2101	LC75394NED	
IC6001	TC7WU04F	
Q1204, Q1254, Q6002, Q6005	2SA1037K	
Q6201	2SA1182	
Q6203	2SA1560	

Mark No.	Description	Parts No.
	Q1071	2SA1837
	Q4353, Q4354	2SC1815
	Q6001	2SC2235
	Q4361	2SC2240
	Q1202, Q1251 – Q1253, Q1255, Q1256	2SC2412K

Q4201, Q4202, Q4451 – Q4454, Q6004	2SC2412K
Q1231 – Q1234, Q1501, Q1502, Q4355	2SD2114K
Q4421, Q4422, Q6202	2SD2114K
Q4307, Q4308	2SK373
Q4301, Q4302	DTA114TK

Q1503	DTA124EK
Q1235, Q4208	DTA143EK
Q1201, Q1991, Q4423, Q4456	DTC124EK
Q4207, Q4309, Q4362, Q4455	DTC143EK
D1054, D1074, D1241 – D1243	1SS254

D1246 – D1248, D1251, D1253, D1981	1SS254
D4201, D4301 – D4306, D4451, D4452	1SS254
D2101 – D2103, D4601	1SS355
D1053	ERA83 – 006
D6001	MTZJ3.9A

D1073	MTZJ33C
D4401	MTZJ6.2A
D1075	MTZJ8.2B
△ D1071, D1072	S5688G

COILS AND FILTERS		
L1201, L1202 (1μH)	ATH – 133	
L4351 (4.05mH)	ATX7002	
L3801	LAU100J	
L6001	LFA220J	
L4301, L4302	LTA332J	
L4303, L4304	LTA822J	
F4401, F4402	RTF1209	

SWITCHES AND RELAYS		
RY1251	ASR7007	

CAPACITORS		
C4319, C4320	CCCSL271K2H	
C4191, C4192, C4323, C4324	CCSQCH100D50	
C1985, C2131, C2132	CCSQCH101J50	
C4601	CCSQCH220J50	
C1993, C1994	CCSQCH221J50	

C4101, C4102, C4151, C4152	CCSQCH821J50
C3805	CCSQSL101J50
C1241	CEANP2R2M2A
C1243	CEANP3R3M63
C1231, C1232, C3801, C3808	CEANP4R7M50

C4401, C4402	CEASR68M50
C1252, C4357, C4364, C4403, C4404	CEAT100M50
C4454	CEAT100M50
C1513, C2135, C2136, C3807, C4405	CEAT101M16
C6002, C6005, C6007	CEAT101M16

C1072	CEAT101M2A
C1071	CEAT220M2A
C1073, C3813, C4415, C4416, C4453	CEAT220M50
C1253, C4406	CEAT221M16
C4117	CEAT4R7M50

Mark No.	Description	Parts No.
	C6201	CEJA220M50
	C1501, C1502, C1509, C1510	CEJA2R2M50
	C2109, C2110, C4207, C4208	CEJA2R2M50
	C4301 – C4304, C4315, C4316	CEJA2R2M50
	C4411, C4412	CEJA2R2M50
	C2137, C4103, C4104, C4309, C4310	CEJA330M16
	C4359, C4360	CEJA330M16
	C4107, C6001	CEJA470M16
	C2101 – C2106, C2129, C2130	CEJAR33M50
	C2143, C2144	CEJAR33M50
	C1514, C3811	CEJAR47M50
	C2115, C2116	CFTLA394J50
	C2111, C2112	CFTLA474J50
	C4362	CKCYB681J2H
	C4115, C4116	CKCYF473Z50
	C1963, C1974, C1976, C1977, C1992	CKSQYB102K50
	C1397, C1398, C1973, C1989, C1990	CKSQYB103K50
	C1996 – C1999, C3804, C3809, C3810	CKSQYB103K50
	C3812, C6003, C6008, C6009, C6011	CKSQYB103K50
	C1961, C1962, C1971, C1983	CKSQYB104K25
	C4602, C4603, C6006	CKSQYB104K25
	C2125, C2126	CKSQYB122K50
	C3802	CKSQYB123K50
	C4317, C4318, C4413, C4414	CKSQYB152K50
	C4313, C4314	CKSQYB272K50
	C2119, C2120	CKSQYB273K50
	C4352, C4354	CKSQYB332K50
	C1505, C1506, C1991, C4307, C4308	CKSQYB333K50
	C2117, C2118	CKSQYB393K50
	C1986 – C1988, C1995	CKSQYB471K50
	C2121, C2122, C3803, C4356	CKSQYB472K50
	C1507, C1508	CKSQYB563K25
	C2123, C2124, C2127, C2128	CKSQYB682K50
	C4105, C4106	CKSQYB682K50
	C2113, C2114	CKSQYB683K25
	C4311, C4312	CKSQYB823K25
	C2145, C3806	CKSQYF104Z50
	C4361	CQHA822J2A
	C4409, C4410	CQMBA103J50
	C4358	CQMBA223J50
RESISTORS		
	R1071	RD1/2LMF562J
	R1223, R1224	RD1/4LMF100J
	R4360	RD1/4LMF360J
	R4357	RD1/4LMF4R7J
	R1243, R1988	RD1/4PU102J
	R1072	RD1/4PU103J
	R1081	RD1/4PU122J
	R1253	RD1/4PU152J
	R2108	RD1/4PU153J
	R1241	RD1/4PU183J
	R6204	RD1/4PU221J
	R4358	RD1/4PU222J
	R1245	RD1/4PU392J
	R4510, R6202	RD1/4PU471J
	R1246	RD1/4PU562J

Mark No.	Description	Parts No.
	R1231, R1232	RS2LMF331J
	R1251, R1252	RS2LMFR22J
	VR4301, VR4302 (4.7kΩ/0.1W)	PCP1028
	VR4201 – VR4204 (22kΩ/0.1W)	PCP1030
	VR4351, VR4352 (220kΩ/0.1W)	PCP1033
	Other Resistors	RS1/10S□□□J

OTHERS

	CABLE HOLDER(15P)	51063 – 1505
CN1232	8P JUMPER CONNECTOR	52147 – 0810
CN1051	10PJUMPER CONNECTOR	52147 – 1010
CN1203	SPEAKER TERMINAL 4 – P	AKE7035
CN4003	2P TOP POST	B2B – EH
CN4002	3P TOP POST	B3B – EH
CN4001	3P TOP POST(RED)	B3B – EH – R
CN6001	B TO B CONNCTOR	BTEM30S – 1S
CN1901	35P CONNECTOR	HLEM35S – 1
CN1981	14P PLUG	KM200IB14
CN1201	B TO B CONNECTOR 15P	RKP1788
JA1301, JA2101	2P JACK	VKB1050
CN1905	30P CONNECTOR	VKN1206

N PRIMARY ASSY**COILS AND FILTERS**

△	L1101	(0.8mH/AC250V)	ATF – 151
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SWITCHES AND RELAYS

S1101	AKX7006
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CAPACITORS

△	C1101	(10000pF/AC250V)	ACG7020
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OTHERS

H1101 – H1106	FUSE CLIP	AKR1003
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K DISPLAY ASSY**SEMICONDUCTORS**

IC3701	BA3835F
IC2501	BA4558F – HT
IC1902	BU2092F
IC1901	PDC041A
Q1701	2SA1037K
Q4501	2SB1197K
Q1702	2SC2411K
Q1901	2SC2412K
Q4512, Q4522	2SD1781K
Q1703, Q1704, Q1902, Q4502	DTC143EK
D1901 – D1903, D1905, D1906, D4501	1SS254
D4511, D4513, D4514, D4517, D4521	1SS254
D4523 – D4527	1SS254
D1701 – D1704, D1791, D1792	MBG5064X
D1909	MTZJ6.8C
D1705 – D1708, D1793 – D1796	SLP7118C51H

COILS AND FILTERS

L1231	LAU100J
L1901	LAU220J

Mark No.	Description	Parts No.
SWITCHES AND RELAYS		
S1811 – S1817, S1821 – S1827		ASG1034
S1831, S1832		ASG1034
S1801		ASX7012
S1802		ASX7017
CAPACITORS		
C1901		ACH1246
C1912		CCSQCH151J50
C2504		CCSQSL331J50
C1908		CEAT100M50
C1701		CEJA220M50
C2503, C2510, C2512, C2516		CEJA2R2M50
C1903, C1910, C1915, C2517		CEJA470M16
C1907		CEJAR22M50
C1906		CEJAR47M50
C1233, C1234, C1822, C1823, C1905		CKSQYB102K50
C1239, C2511		CKSQYB103K50
C1911, C1918, C2507, C3701 – C3704		CKSQYB104K25
C1813		CKSQYB471K50
C1812, C1814, C1831, C2506		CKSQYB472K50
C1811		CKSQYB473K50
C1810		CKSQYB823K25
C1913		CKSQYF104Z50
C1932		CKSQYF105Z16
C1902, C1909		CKSQYF473Z50
RESISTORS		
R1977		RA12T473J
R1979		RA7T473J
R1832		RD1/4PU101J
R1927, R4501, R4522		RD1/4PU102J
R1833		RD1/4PU121J
R1791, R1792, R1925		RD1/4PU221J
R2511		RD1/4PU222J
R4527		RD1/4PU223J
R2503		RD1/4PU332J
R1905, R4523		RD1/4PU473J
R1702 – R1704, R1712 – R1714		RD1/4PU561J
R1709, R1711		RD1/4PU681J
VR4501 (3.3kΩ/0.1W)		PCP1049
VR1901, VR2501 (10kΩ – B)		VCS1021
	Other Resistors	RS1/10S□□□J
OTHERS		
	CABLE HOLDER(8P)	51048 – 0800
	CABLE HOLDER(9P)	51063 – 0905
	CABLE HOLDER(15P)	51063 – 1505
V1901	FL TUBE	AAV7044
JA2501, JA2502	JACK	AKN7004
JA1231	MINITURE JACK	AKN7005
	REMOTE RECEIVER UNIT	GP1U28X
CN1902	35P CONNECTOR	HLEM35S – 1
	FL HOLDER(FE)	VNF1096
X1902	CERAMIC RESONATOR(6.00MHz)	RSS1050
L CD SWITCH ASSY		
SWITCHES AND RELAYS		
S1833 – S1837		ASG1034

Mark No.	Description	Parts No.
RESISTORS		
	All Resistors	RS1/10S□□□J
OTHERS		
J1801	3P JUMPER WIRE	D20PWW0315E
J CD LED ASSY		
SEMICONDUCTORS		
D1711, D1712		SLP3118C51H
D1709, D1710		SLP7118C51H
D1713, D1714		SLP9118C51H
O VIDEO OUT ASSY		
CAPACITORS		
C6102		CCSQSL121J50
C6101		CEAT471M6R3
RESISTORS		
	All Resistors	RS1/10S□□□J
OTHERS		
J6101	CONNECTOR ASSY 2P	AKP7018
JA6101	1P JACK	VKB1063
A FM/AM TUNER MODULE (AXQ7051)		
SEMICONDUCTORS		
IC6201		LA1832ML
IC6202		LC72131MD
Q6402		2SC2223
Q6203		2SC2705
Q6201, Q6202		2SC2712
Q6214, Q6403		2SC2714
Q6404		2SK302
Q6401		3SK194
Q6204		DTA124ES
Q6205		DTC124EK
D6202		1SS254
D6401, D6402		1T363
COILS AND FILTERS		
L6404		ATC1003
L6401		ATC1020
L6402		ATC1021
F6204		ATF – 107
F6203		ATF – 119
F6401		ATF – 155
F6206		ATF7008
F6202		ATF7011
L6206, L6208, L6403		LAU2R2J
TRANSFORMERS		
T6201		ATB7008
T6401		ATE7002
CAPACITORS		
C6208		CCSQCH100D50
C6212, C6274, C6275, C6408		CCSQCH101J50
C6221, C6222, C6416		CCSQCH150J50
C6271		CCSQCH200J50
C6415		CCSQCH330J50

Mark No.	Description	Parts No.
C6401, C6419		CCSQCH5R0C50
C6407		CCSQCK1R0C50
C6410		CCSQCK2R0C50
C6413		CCSQPH220J50
C6414		CCSQPH8R0D50
C6405		CCSQTH180J50
C6234, C6235		CEAL1R0M50
C6245		CEAL470M16
C6224		CEAS100M50
C6243		CEAS101M16
C6231		CEAS1R0M50
C6227		CEAS220M16
C6236		CEAS2R2M50
C6216		CEAS330M16
C6262		CEAS3R3M50
C6219		CEAS470M10
C6244		CEAS470M16
C6249, C6250, C6265, C6266		CEAS4R7M50
C6258		CEJA470M16
C6215		CFTLA103J50
C6214		CFTLA224J50
C6211, C6254, C6403, C6406, C6412		CKSQYB102K50
C6201, C6205, C6210, C6213, C6237		CKSQYB103K50
C6276, C6278, C6280, C6281, C6402		CKSQYB103K50
C6409, C6417, C6418		CKSQYB103K50
C6251, C6252		CKSQYB153K50
C6203, C6259		CKSQYB223K50
C6228		CKSQYB472K50
C6209		CKSQYB473K50
C6230		CKSQYB821K50
C6218, C6223, C6255		CKSQYF103Z50
C6220, C6226, C6242, C6256		CKSQYF223Z50
C6225		CKSQYF473Z50

RESISTORS

R6280		RD1/4PU101J
R6413, R6416, R6418, R6906, R6909		RS1/8S0R0J
R6401		RS1/8S470J
VR6201	(10kΩ/0.1W)	RCP1045
	Other Resistors	RS1/10S□□□J

OTHERS

BN6202	TERMINAL 4 – P	AKE7028
X6202	CRYSTAL RESONATOR(456kHz)	ASS1066
X6201	CRYSTAL RESONATOR(7.2MHz)	ASS1093
CN6201	14P SOCKET	KP200IA14L

B FM/AM TUNER MODULE (AXQ7061)**SEMICONDUCTORS**

IC6201	LA1832ML
IC6202	LC72131MD
Q6402	2SC2223
Q6203	2SC2705
Q6201, Q6202	2SC2712
Q6214, Q6403	2SC2714
Q6404	2SK302
Q6401	3SK194
Q6204	DTA124ES
Q6205	DTC124EK

Mark No.	Description	Parts No.
D6202		1SS254
D6401, D6402		1T363
COILS AND FILTERS		
L6404		ATC1003
L6401		ATC1020
L6402		ATC1021
F6204		ATF – 107
F6203		ATF – 119
F6401		ATF – 155
F6206		ATF7008
F6202	(455kHz)	ATF7011
L6206, L6208, L6403		LAU2R2J
TRANSFORMERS		
T6201		ATB7008
T6401		ATE7002
CAPACITORS		
C6208		CCSQCH100D50
C6212, C6274, C6275, C6408		CCSQCH101J50
C6221, C6222, C6416		CCSQCH150J50
C6271		CCSQCH200J50
C6415		CCSQCH330J50
C6401, C6419		CCSQCH5R0C50
C6407		CCSQCK1R0C50
C6410		CCSQCK2R0C50
C6413		CCSQPH220J50
C6414		CCSQPH8R0D50
C6405		CCSQTH180J50
C6234, C6235		CEAL1R0M50
C6245		CEAL470M16
C6224		CEAS100M50
C6243		CEAS101M16
C6231		CEAS1R0M50
C6227		CEAS220M16
C6236		CEAS2R2M50
C6216		CEAS330M16
C6262		CEAS3R3M50
C6219		CEAS470M10
C6244		CEAS470M16
C6249, C6250, C6265, C6266		CEAS4R7M50
C6258		CEJA470M16
C6215		CFTLA103J50
C6214		CFTLA224J50
C6211, C6254, C6403, C6406, C6412		CKSQYB102K50
C6201, C6205, C6210, C6213, C6237		CKSQYB103K50
C6276, C6278, C6280, C6281, C6402		CKSQYB103K50
C6409, C6417, C6418		CKSQYB103K50
C6251, C6252		CKSQYB153K50
C6203, C6259		CKSQYB223K50
C6228		CKSQYB472K50
C6209		CKSQYB473K50
C6230		CKSQYB821K50
C6218, C6223, C6255		CKSQYF103Z50
C6220, C6226, C6242, C6256		CKSQYF223Z50
C6225		CKSQYF473Z50

Mark No. Description Parts No.

RESISTORS

R6280		RD1/4PU101J
R6413, R6416, R6418, R6906, R6909		RS1/8S0R0J
R6401		RS1/8S470J
VR6201	(10kΩ/0.1W)	RCP1045
	Other Resistors	RS1/10S□□□J

OTHERS

BN6202	TERMINAL 4 – P	AKE7025
X6202	CRYSTAL RESONATOR (456kHz)	ASS1066
X6201	CRYSTAL RESONATOR (7.2MHz)	ASS1093
CN6201	14P SOCKET	KP200IA14L

C MOTOR ASSY

SWITCHES AND RELAYS

S9503		ASG7009
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OTHERS

MOTOR PULLEY	PNW1634
SLIDER MOTOR	VXM1033

D SW ASSY

SWITCHES AND RELAYS

S9502	ASG7009
S9501	DSG1017
J9501	D20PWY0610E

E CD ASSY

SEMICONDUCTORS

IC9401	BA4558F – HT
IC9201	BA5923FP
IC9101	LA9240ML
IC9301	LC78630ED
Q9101	2SA1048
Q9251, Q9252	2SA1560
Q9253, Q9254	2SC4040
D9301 – D9304	1SS355

COILS AND FILTERS

L9351	LFA470J
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CAPACITORS

C9145, C9313, C9316, C9356, C9357	CCSQCH101J50
C9132, C9310	CCSQCH150J50
C9311	CCSQCH180J50
C9131	CCSQCH300J50
C9129	CCSQCK1R0C50
C9142	CEAL101M6R3
C9127	CEAL1R0M50
C9126, C9139	CEAL470M16
C9135	CEAL4R7M16
C9124	CEALR47M50
C9136	CEAT100M50
C9108, C9202, C9251, C9306, C9317	CEAT101M10
C9101	CEAT3R3M50
C9105, C9410, C9413	CEAT470M16
C9109	CEATR22M50

Mark No. Description Parts No.

C9106, C9119, C9133	CKSQYB102K50
C9102, C9122, C9123, C9130	CKSQYB103K50
C9137, C9138, C9201, C9309, C9312	CKSQYB103K50
C9134, C9302, C9303	CKSQYB104K25
C9411, C9412	CKSQYB152K50

C9111	CKSQYB153K25
C9114, C9117, C9120, C9121	CKSQYB154K16
C9125	CKSQYB221K50
C9107	CKSQYB223K50
C9110, C9405 – C9408	CKSQYB331K50

C9115, C9128	CKSQYB332K50
C9113	CKSQYB333K25
C9112, C9141	CKSQYB334K16
C9314, C9319, C9320	CKSQYB471K50
C9116, C9140	CKSQYB473K50

C9401, C9402	CKSQYB561K50
C9118, C9301, C9304, C9305	CKSQYF104Z25

RESISTORS

All Resistors	RS1/10S□□□J
---------------	-------------

OTHERS

CN9003	6PJUMPER CONNECTOR	52151 – 0610
CN9002	CONNECTOR	B6B – PH – K – S
CN9005	3P SIDE POST	BS3P – SHF – 1AA
CN9001	CONNECTOR	SLW15S – 1C7
CN9004	30P CONNECTOR	VKN1234
X9301	XTAL RES (OSC) (16.9344MHz)	PSS1008

6. ADJUSTMENTS

6.1 TUNER SECTION

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1-1.
- For AXQ7051 and AXQ7061

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Front End Sensitivity	98	0-30	98MHz	L6402 T6401	Adjust so that the DC voltage between the IC6201-Pin 20 and GND becomes at maximum level.
2	TUNED IND. Lighting Level	98	18±2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Notes:

- Before adjusting, make sure there is no gap between L6401 and L6402. If there is a gap between them, bring them into contact with each other first, and then make adjustments.

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1-1.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	Front End Sensitivity	999*1	35-45	999kHz*1	T6201	Adjust so that the DC voltage between the IC6201-Pin 20 and GND becomes at maximum level.

*1: For the area using 10kHz step, frequencies should be 1000 kHz

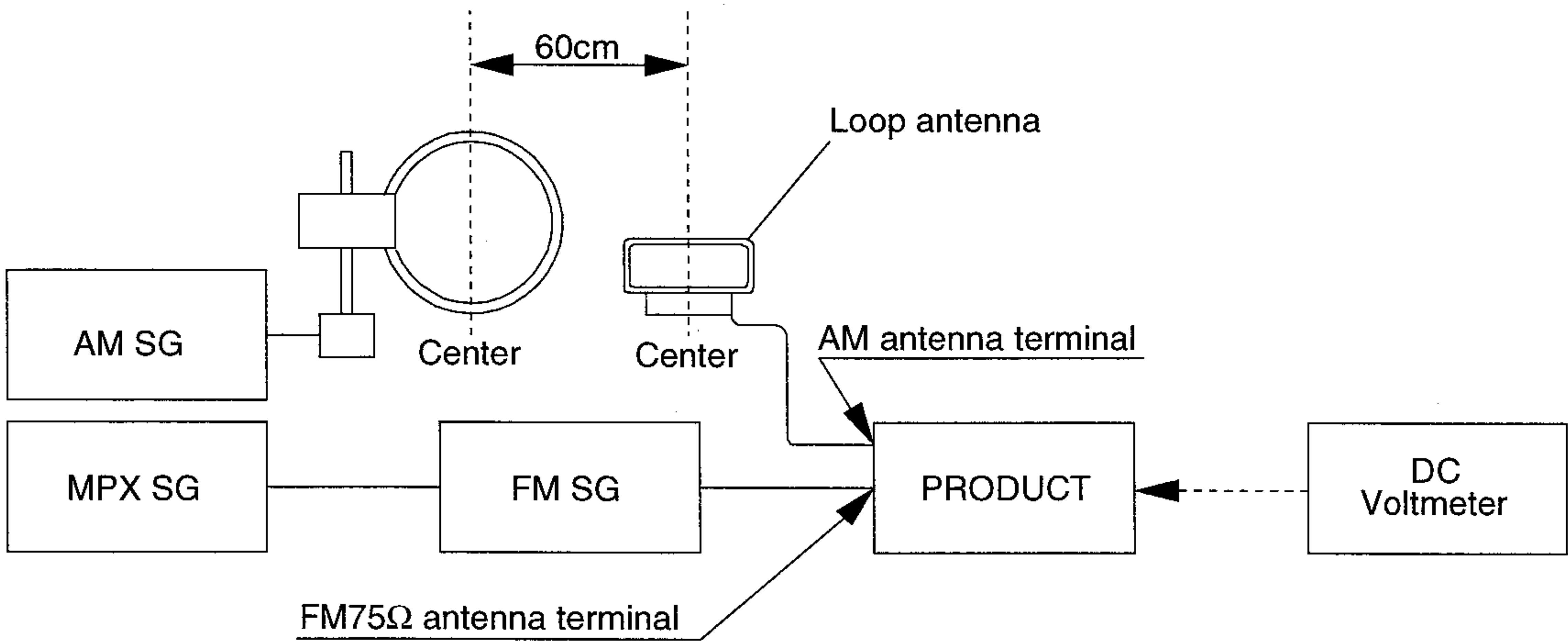


Fig. 1-1 AM and FM Adjustment Wiring Diagram

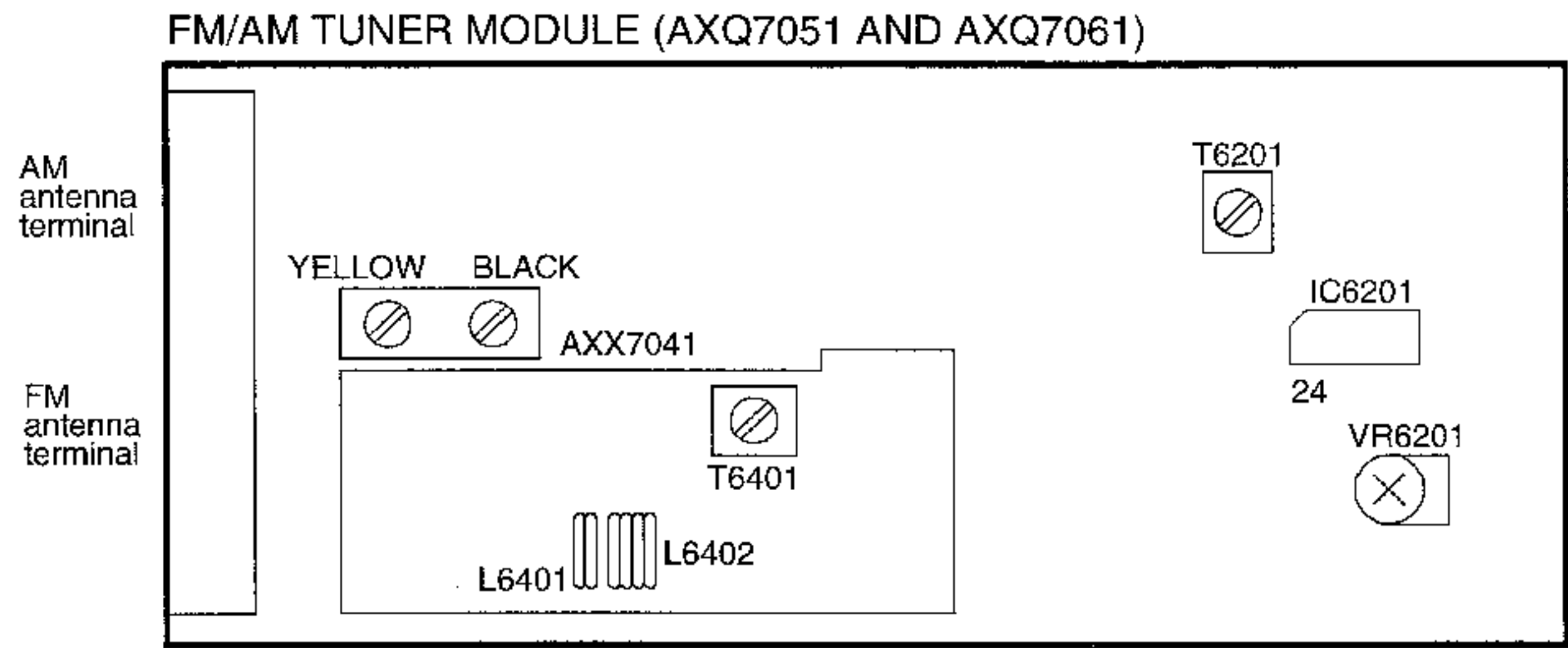
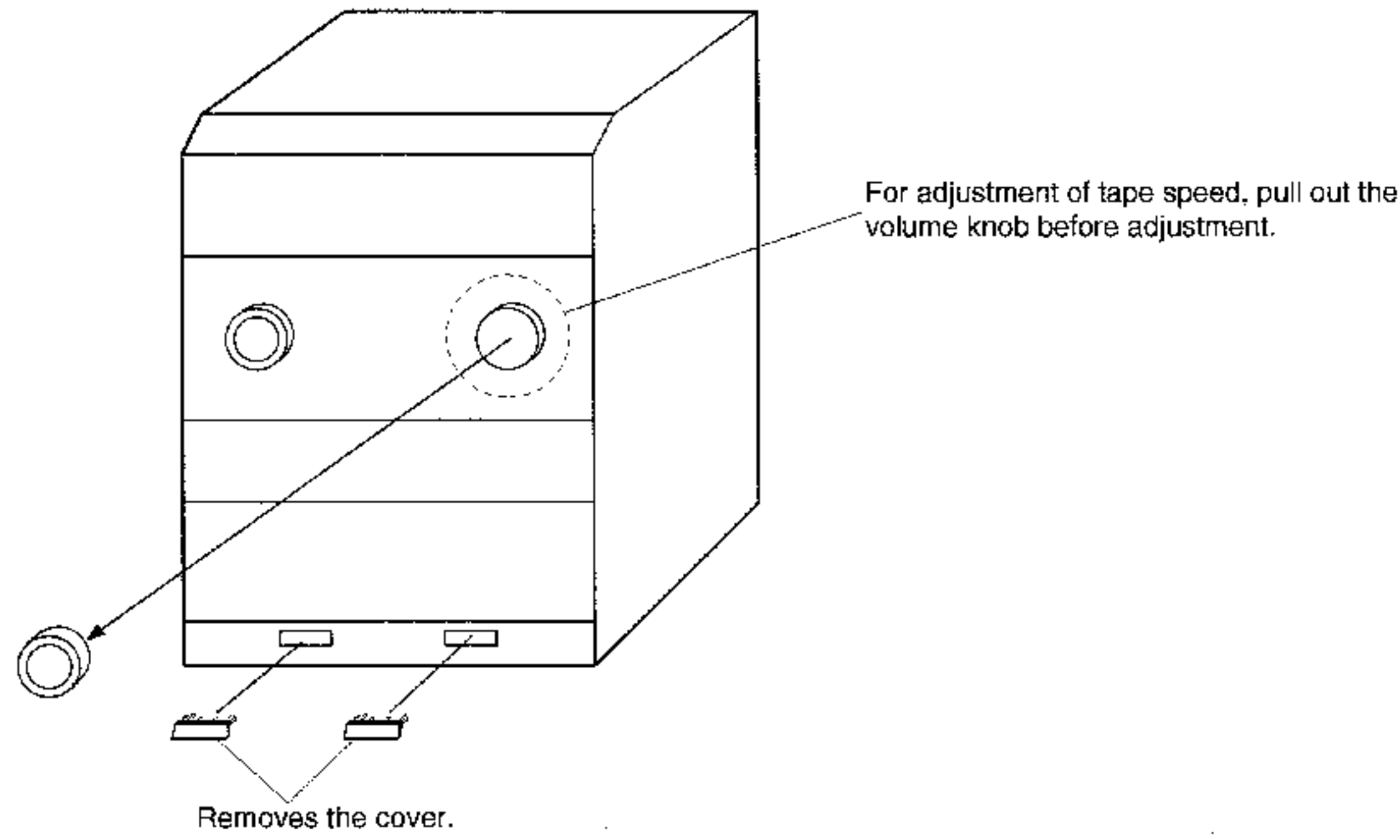


Fig. 1-2 Adjustment Points

6.2 CASSETTE DECK SECTION

- Adjustment points and test points are shown in Fig. 2-2 and Fig. 2-4.



■ Mechanical Adjustment

- Test tape: NCT-111 (3kHz, 30min).
- Remove the Volume knob.

(1) Tape Speed Adjustment

No.	Mode	Test Tape	Adjusting Points	Measurement Points	Adjustment Procedure	Remarks
1	Deck I PLAY	NCT-111 (Playback: 3kHz)	DISPLAY ASSY VR4501	TAPE TEST POINT (Rch) (AF Assy)	Press the PLAY SW and adjust so that the reading becomes 3000Hz ±20Hz. Confirm that wow & flutter level is below 0.2% (in the reverse direction, confirm that the reading is within 3000Hz ±60Hz).	

■ Electrical Adjustment

Check the following before starting.

- (1) Confirm that the tape speed adjustment has been completed.
- (2) Clean the heads and demagnetize them using a head eraser.
- (3) Set the measurement level to 0 dBV = 1 Vrms.
- (4) Use the specified tape for adjustment. Use the labeled (A) side of the test tape.
STD-331E: For playback adjustment
STD-632: Normal blank tape
- (5) Provide yourself with the following measuring devices:
 - AC millivoltmeter
 - Low-frequency oscillator
 - Attenuator
 - Oscilloscope
- (6) Adjust both right and left channels unless otherwise specified.
- (7) Turn the DOLBY NR switch off unless otherwise specified.
- (8) Warm up the unit for several minutes before adjustment.
In particular, be sure to warm up the unit in the REC/PLAY mode for 3 to 5 minutes before starting recording/playback frequency characteristics adjustment.
- (9) Always follow the indicated adjustment order.

Otherwise, a complete adjustment may not be achieved.

Playback Adjustment (Decks I and II)

- (1) Head Azimuth Adjustment
- (2) Playback Level Adjustment

Recording Adjustment (Deck II)

- (1) Bias Oscillation Frequency Adjustment
- (2) Recording Bias Adjustment
- (3) Recording Level Adjustment.
- (4) ALC Operation Check

** 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.*

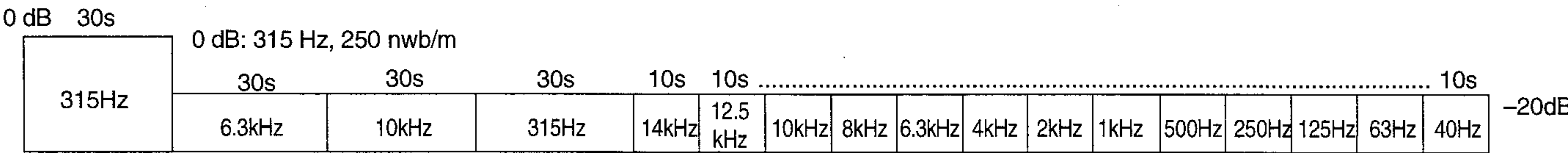


Fig. 2-1 STD-331E Test Tape

■ Playback Adjustment

(1) Head Azimuth Adjustment ● Do not switch between forward and reverse operation with the screwdriver inserted.

Step	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	PLAY	STD-331E test tape (Playback: 10kHz, -20dB)	Deck I	Head azimuth adjustment screw (Fig. 2-2)	TAPE TEST POINT (L, Rch) (AF Assy)	Max. playback signal level	After adjustment, apply silicon bond to the head azimuth adjustment screw.
			Deck II				

2. Playback Level Adjustment ● Since this adjustment determines playback Dolby NR level, perform it carefully.

Step	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	PLAY	STD-331E test tape (Playback: 315Hz, 0dB)	Deck I	VR4201 (Lch) VR4202 (Rch)	TAPE TEST POINT (L, Rch) (AF Assy)	- 4.2 dBV	
			Deck II	VR4203 (Lch) VR4204 (Rch)			

Note: Please execute playback level adjustment always in the order of deck I → deck II.
When deck I has been adjusted, always adjust deck II also.

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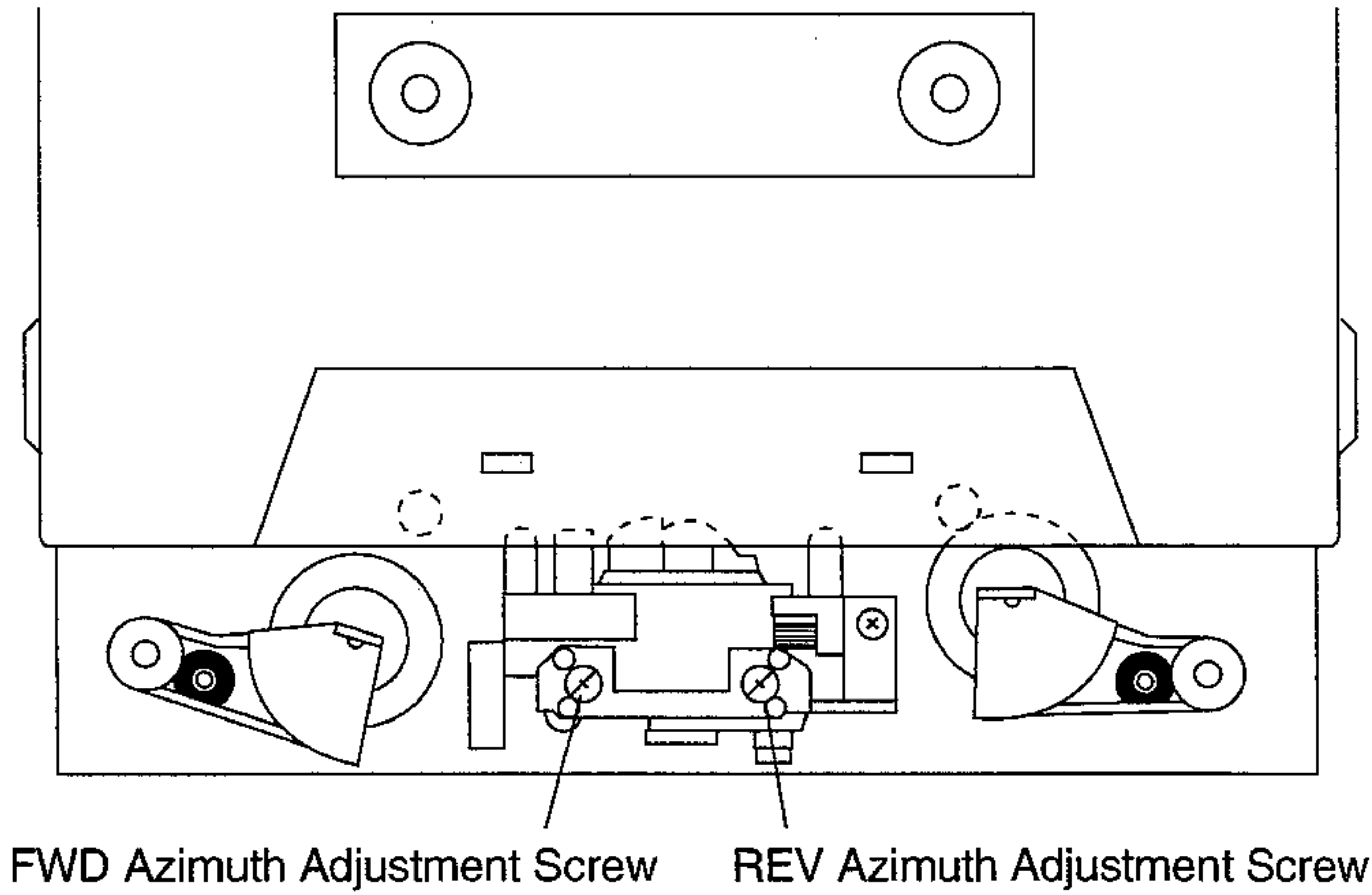


Fig. 2-2 Head Azimuth Adjustment

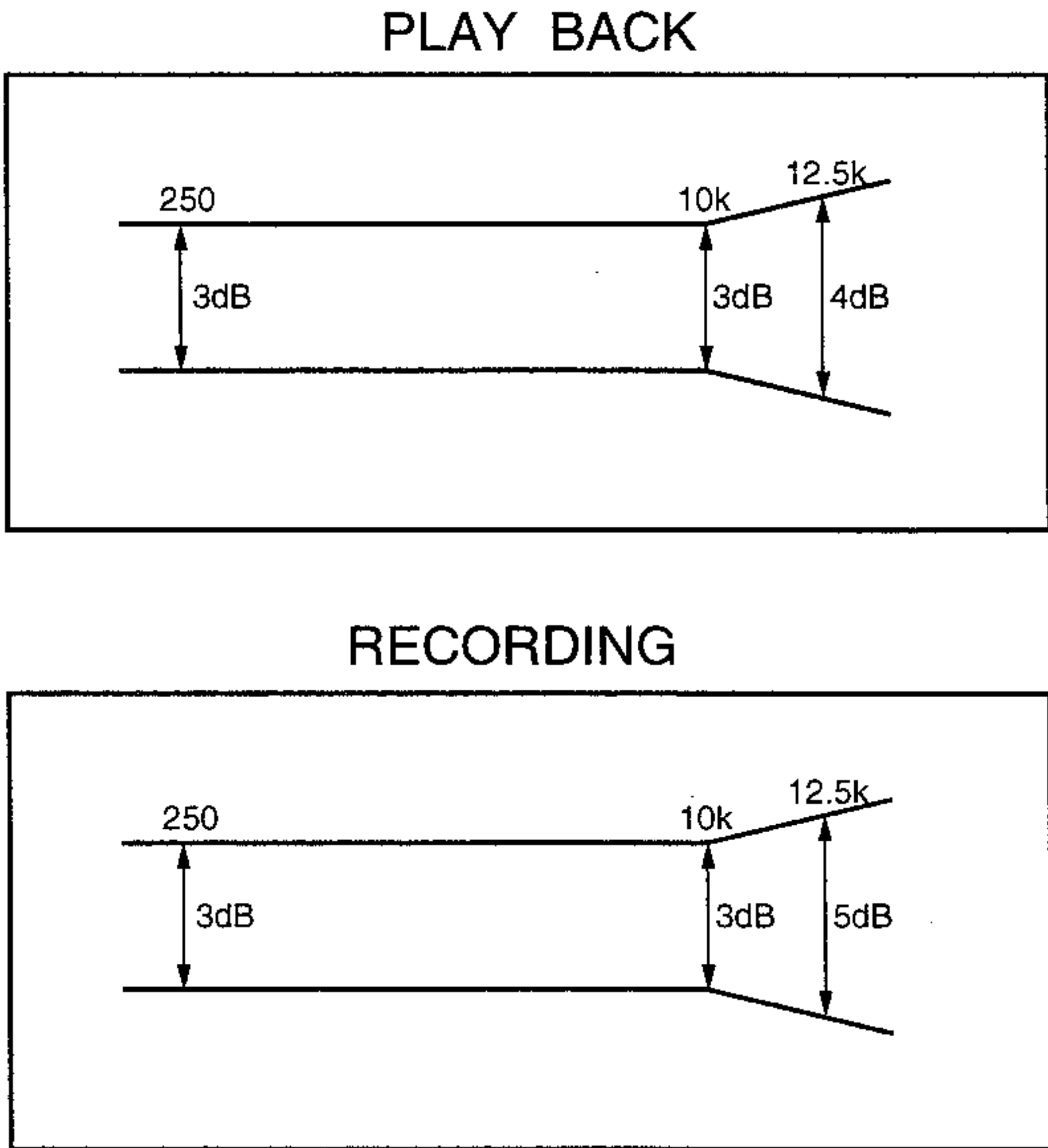


Fig. 2-3 Frequency Characteristics

■ Recording Adjustment

(1) Bias Oscillation Frequency Adjustment

Step	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	REC	Load the STD-632 test tape and set the recording mode.	Deck I	_____	_____	Oscillation frequency to be 105.0kHz $\pm$ 2kHz.	When the power is turned ON while the MONO button is depressed, the frequency will decrease 2 – 3 kHz.
			DeckII	L4351	Between ① point in Fig. 2-4 and GND.		

(2) Recording Bias Adjustment ● Since this adjustment affects recording bias, prevent distortion from increasing due to underbias.

Step	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	REC	Input a 315Hz signal to the AUX terminal and set the input selector to AUX.	Deck I	_____	TAPE TEST POINT (L, Rch) (AF Assy)	– 24.2 dBV	
			Deck II	Input signal level			
2	REC → PLAY	Load the STD-632 test tape and record/playback the 315Hz and 10kHz signals. (see the Note below)	Deck I	_____	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat adjustment until playback level of the 10kHz signal is within 0 $\pm$ 0.5dB from that of the 315Hz signal.	
			Deck II	VR4351 (Lch) VR4352 (Rch)			

Note: Set the 10kHz input signal level to the same value as the 315Hz input signal level of step 1.

(3) Recording Level Adjustment

Step	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	REC	Input a 315Hz signal to the AUX terminal and set the input selector to AUX.	Deck I	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	– 8.2 dBV	
			Deck II				
2	REC → PLAY	STD-632 test tape and record/playback the 315Hz signal.	Deck I	_____	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes -8.2dBV.	
			Deck II	VR4301 (Lch) VR4302 (Rch)			

(4) ALC Operation Check

Step	Mode	Input Signal/Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	REC/ PAUSE	Input a 315Hz signal to the AUX terminal and set the input selector to AUX.	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	– 8.2 dBV	
2			Set to a level +10 dB above the input level at step 1.		Confirm that the reading is –3.2±2.5dBV.	

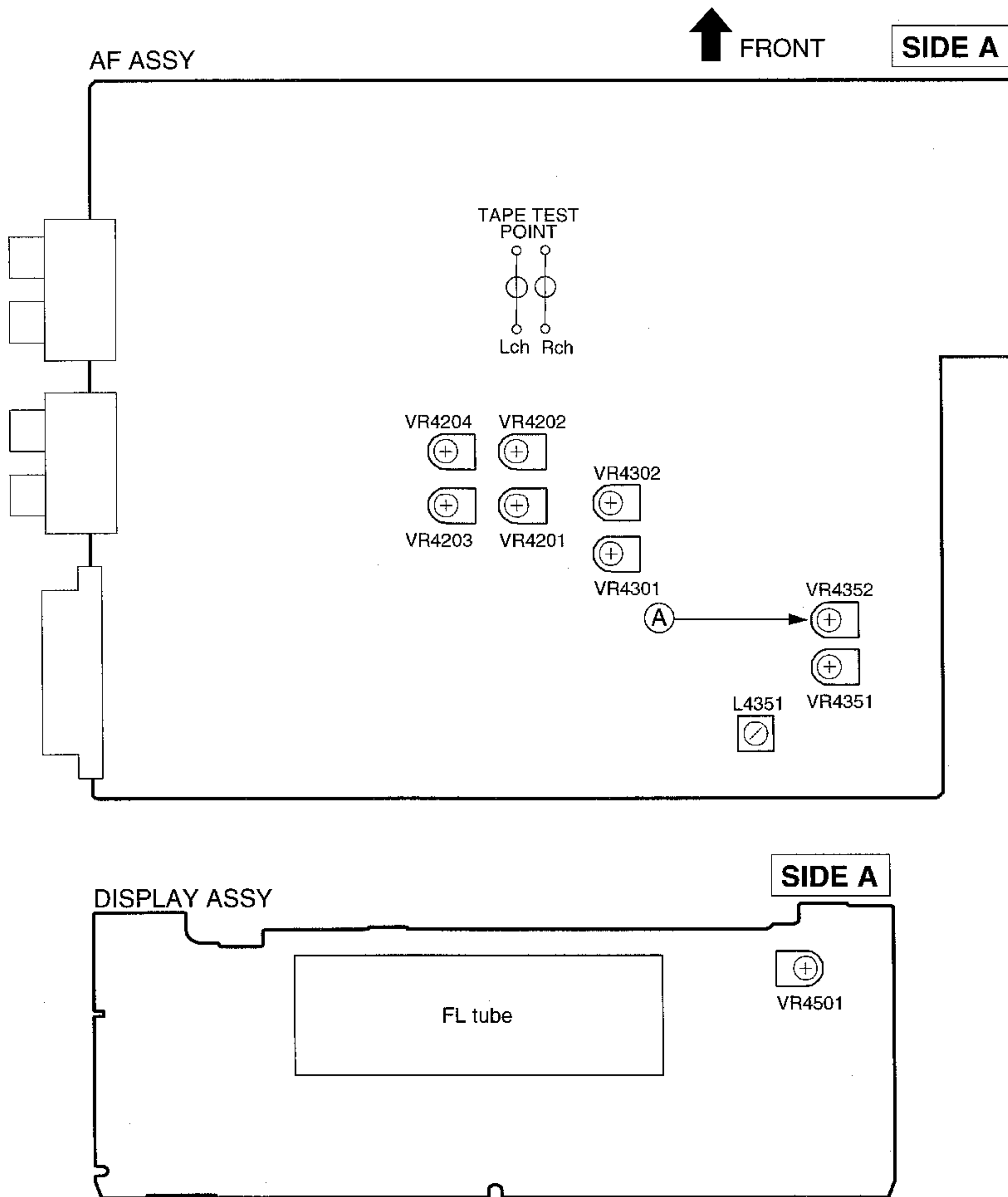


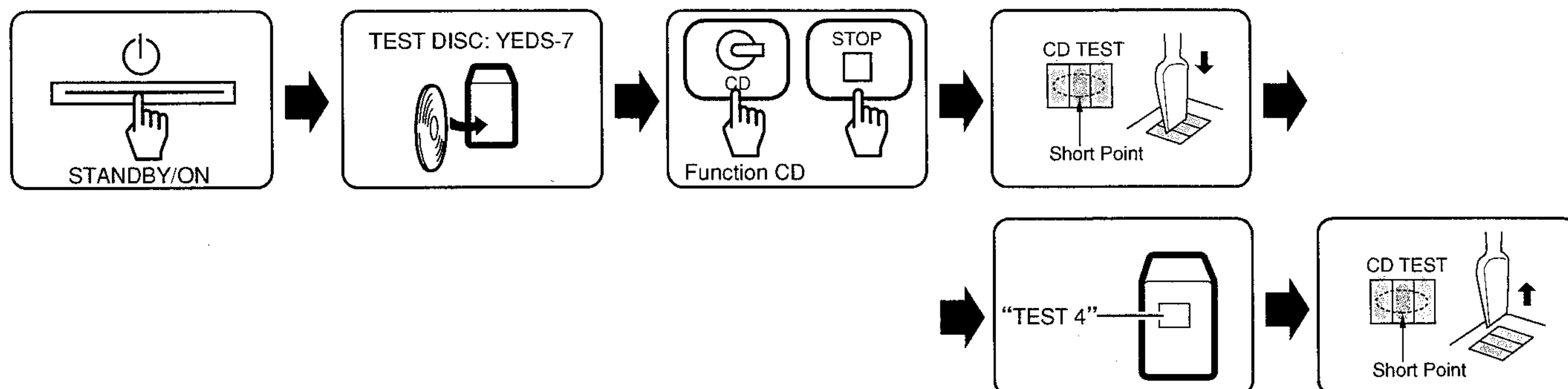
Fig. 2-4 Adjustment and Measurement points

6.3 TEST MODE

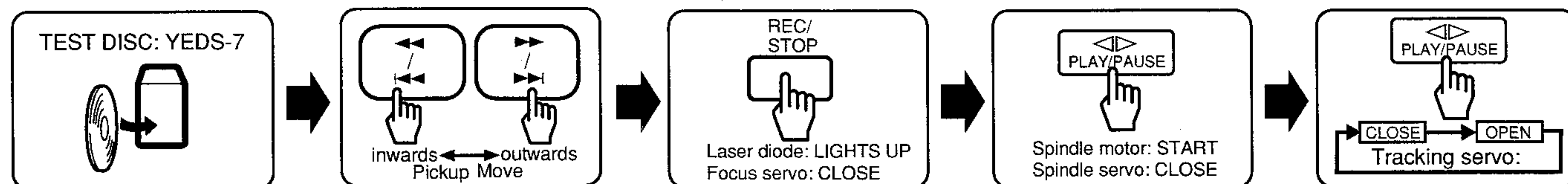
NOTE: There is no information to be shown in this CD adjustment.

■ How to Start/Cancel Test Mode (テストモードの設定/解除)

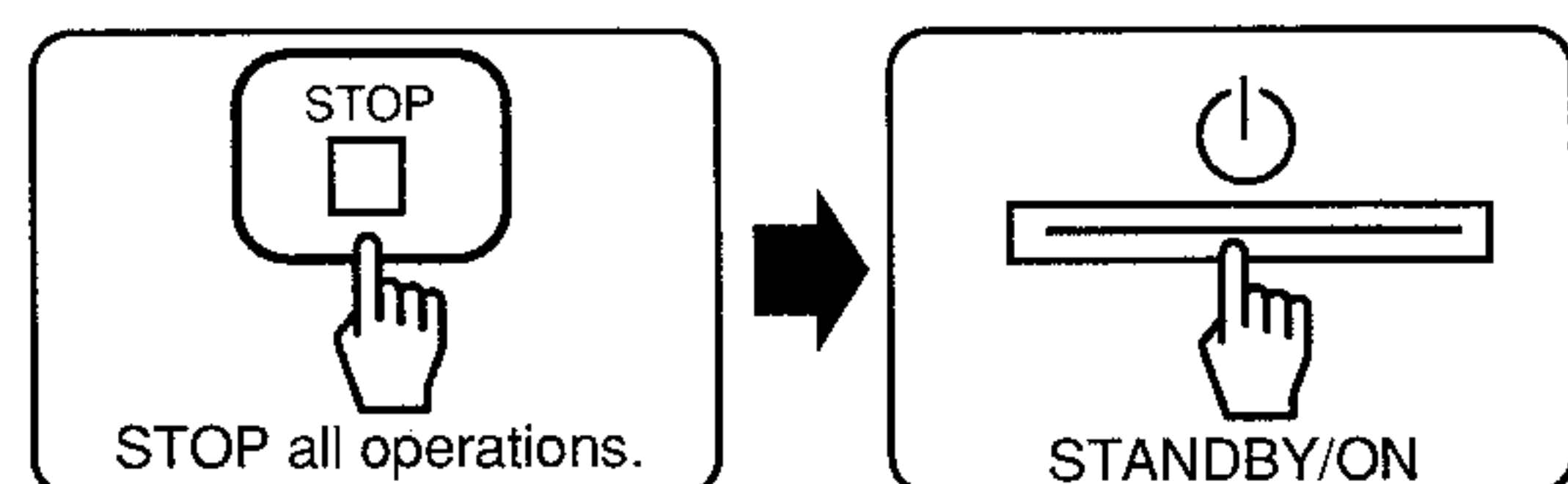
TEST MODE: ON



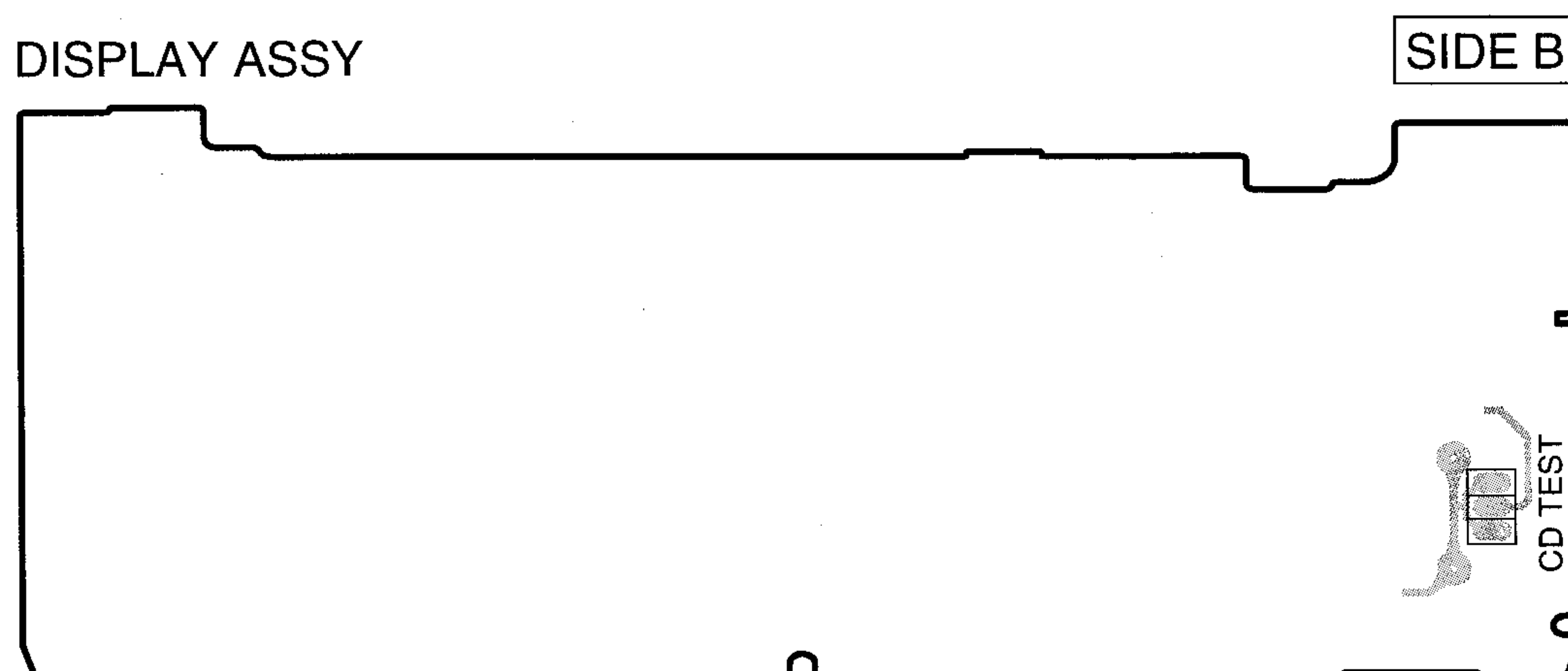
TEST MODE: PLAY



TEST MODE: STOP → CANCEL



■ Test Point (テストポイントの位置)



7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

- PDC041A (IC1901 : DISPLAY ASSY)
- SYSTEM CONTROL MICROCOMPUTER

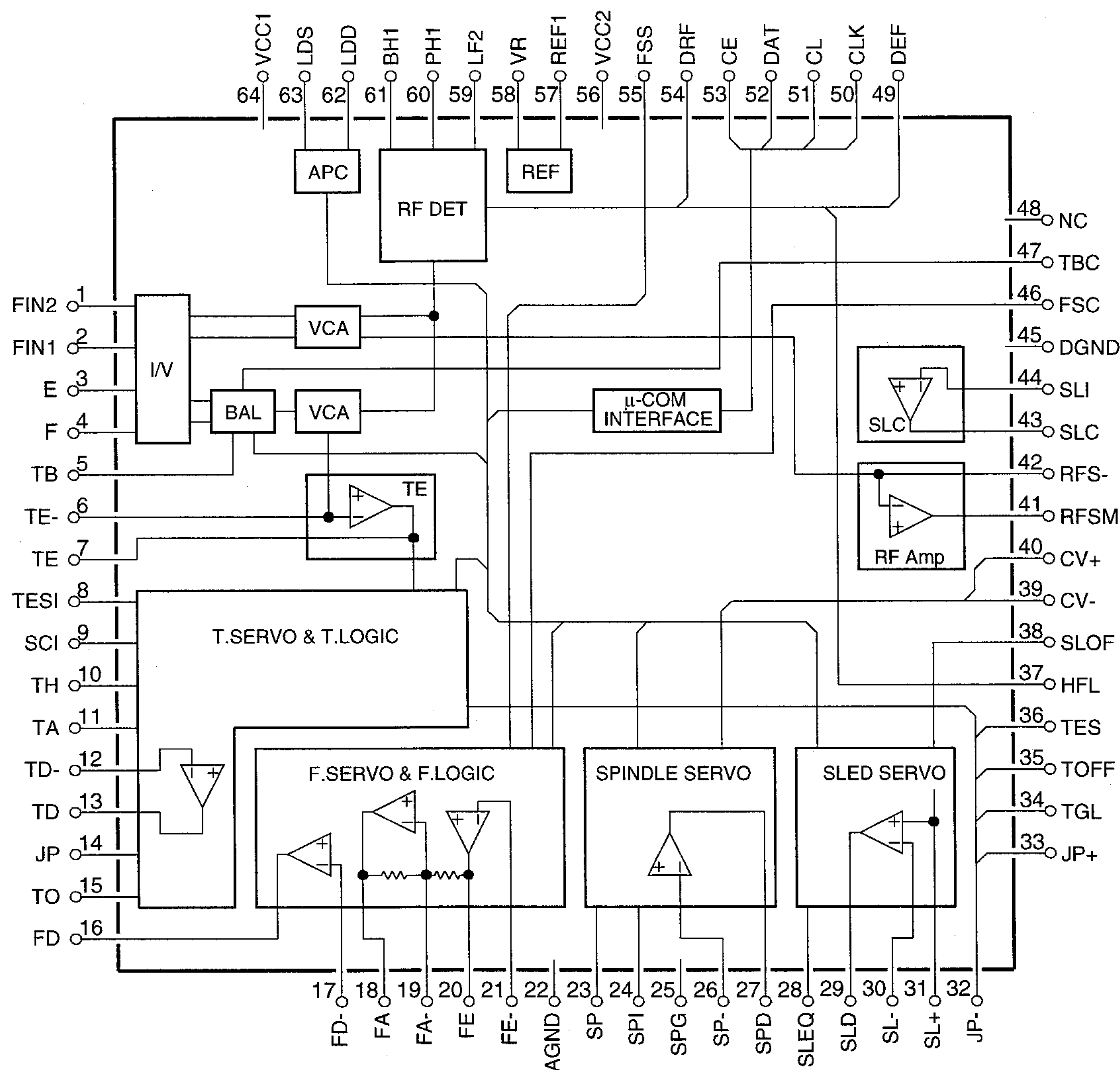
- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

● Pin Function

No.	Name	I/O	Function
1	HSEL	O	VCD module I/F address/data switching output
2		O	Not Used
3	SPA A	O	Spectrum analyzer BA3835 output A
4	SPA B	O	Spectrum analyzer BA3835 output B
5	SPA C	O	Spectrum analyzer BA3835 output C
6	MOTOR	O	DECK mechanism motor control output
7	SOL2	O	DECK 2 mechanism solenoid control output
8	PULSE2	I	DECK 2 mechanism reel pulse input
9	SOL1	O	DECK 1 mechanism solenoid control output
10	PULSE1	I	DECK 1 mechanism reel pulse input
11	AC	I	AC pulse input
12	RESET	I	Microprocessor reset input
13	KSCAN2	I	KEY Scan 2 input
14	KSCAN1	I	KEY Scan 1 input
15	VSS1	I	Microprocessor GND terminal
16	CF1	I	Microprocessor clock input, connection to 6.00 MHz oscillator
17	CF2	O	Microprocessor clock output, 6.00 MHz oscillator connection
18	VDD1	I	Microprocessor positive power terminal +5V
19	MS	I	MS A/D input from tape deck
20	ST/TUNE	I	Tuner STEREO/TUNE identification A/D input
21	JOG(VOL)	I	Volume JOG pulse A/D input
22	KIN3	I	KEY A/D Input 3
23	KIN2	I	KEY A/D Input 2
24	SPA IN	I	Spectrum analyzer BA3835 level A/D input
25	KIN1	I	KEY A/D input 1
26	JOG(MORP)	I	Morphing JOG pulse A/D input
27	CD WRQ	I	CD WRQ interrupt input
28	HINT/RDS CK	I	VCD module HINT interrupt input or RDS clock interrupt input
29	REMOCON	I	Remote controller pulse interrupt input
30	G09	O	FL display control grid output G09
31	G16	O	FL display control grid output G16
32	G15	O	FL display control grid output G15
33	G14	O	FL display control grid output G14
34	G13	O	FL display control grid output G13
35	G12	O	FL display control grid output G12
36	G11	O	FL display control grid output G11
37	G10	O	FL display control grid output G10
38	G01	O	FL display control grid output G01
39	G02	O	FL display control grid output G02
40	G03	O	FL display control grid output G03
41	G04	O	FL display control grid output G04
42	G05	O	FL display control grid output G05
43	G06	O	FL display control grid output G06
44	G07	O	FL display control grid output G07
45	G08	O	FL display control grid output G08

No.	Name	I/O	Function
46	VDD2	I	Microprocessor positive power terminal +5V
47	S07	O	FL display control segment output S07
48	S05	O	FL display control segment output S05
49	S06	O	FL display control segment output S06
50	S18	O	FL display control segment output S018
51	VFDP	I	Negative power terminal for FL control terminal
52	S19	O	FL display control segment output S19
53	S20	O	FL display control segment output S20
54	S21	O	FL display control segment output S21
55	S15	O	FL display control segment output S15
56	S04	O	FL display control segment output S04
57	S14	O	FL display control segment output S14
58	S16/K06	O	FL display control segment output S16 or KEY scan output K06
59	S09/K01	O	FL display control segment output S09 or KEY scan output K01
60	S10/K05	O	FL display control segment output S10 or KEY scan output K05
61	S22/K04	O	FL display control segment output S22 or KEY scan output K04
62	S23/K02	O	FL display control segment output S23 or KEY scan output K02
63	S24/K03	O	FL display control segment output S24 or KEY scan output K03
64	S02	O	FL display control segment output S02
65	S01	O	FL display control segment output S01
66	S12	O	FL display control segment output S12
67	S03	O	FL display control segment output S03
68	S13	O	FL display control segment output S13
69	S11	O	FL display control segment output S11
70	S08	O	FL display control segment output S08
71	S17	O	FL display control segment output S17
72	VDD4	I	Microprocessor positive power terminal +5V
73	LED CE	O	LED driver IC BU2092 LCK I/F latch pulse output
74		O	Not Used
75		O	
76		O	
77	4094 CE	O	Port expansion IC BU4094 CE I/F chip enable output
78	PLL CE	O	Tuner module I/F chip enable output
79	P.ON/OFF	O	System power control output
80	VOL CE	O	LC75394 CE chip enable
81	DISC	I	CD mechanism disc position detection SW input
82	INSIDE	I	CD mechanism slider position detection SW input
83	OPEN	I	CD mechanism open/close position detection SW input
84	CLAMP	I	CD mechanism disc clamp detection SW input
85		I	Not Used
86	CD DRF	I	CD RF level detection input
87	HDRY	I	VCD module I/F BUSY input
88	RDS DT	I	RDS data input
89	VSS2	I	Microprocessor GND terminal
90	VDD2	I	Microprocessor positive power terminal
91	CD CE	O	CD I/F chip enable output
92	CD RESET	O	CD reset output
93	CLK	O	Common I/F clock output for tuner module, BU75394, port expansion IC BU4094 and LED driver BU2092
94	DATA	O	Common I/F data output for tuner module, BU75394, port expansion IC BU4094 and LED driver BU2092
95	TX DATA	I	Tuner module I/F data input
96	HDIO	I/O	VCD module I/F data input/output
97	HCK	O	VCD module I/F clock output
98	CD DATA	O	CD I/F data output
99	SQ OUT	I	CD I/F data input
100	CD CLK	O	CD I/F clock output

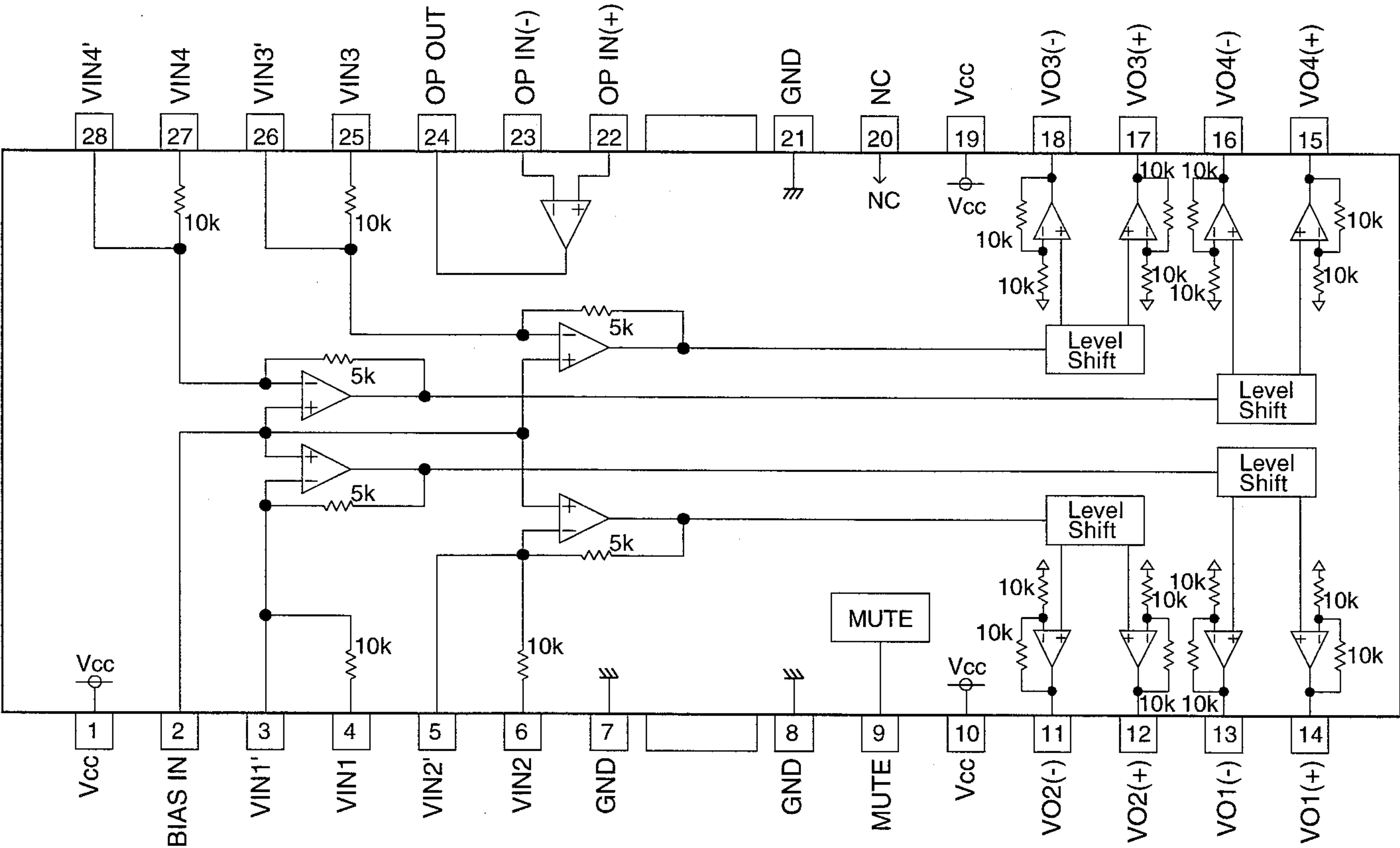
- LA9240ML (IC9101 : CD ASSY)
- SERVO SIGNAL PROCESSOR IC FOR CD PLAYER
- Block Diagram



● Pin Function			
No.	Name	I/O	Function
1	FIN2	I	Pin for connection of the photodiode of the pickup. Generates RF signal by addition with the FIN1 pin, and FE signal by subtraction.
2	FIN1	I	Pin for connection of the photodiode of the pickup.
3	E	I	Pin for connection of the photodiode of the pickup. Generates TE signal by subtraction with the F pin.
4	F	I	Pin for connection of the photodiode of the pickup.
5	TB	I	Pin for DC component input of TE signal.
6	TE-	I	Pin to connect resistance for gain setting of TE signal between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES (Track Error Sense) comparator input pin. Passes and inputs TE signal through the band-pass filter.
9	SCI	I	Input pin for shock detection.
10	TH	I	Pin for setting tracking gain time constant.
11	TA	O	TA amplifier output pin.
12	TD-	I	Pin to form the tracking phase compensation constant between the TD and VR pins.
13	TD	O	Pin for setting tracking phase compensation.
14	JP	I	Pin for setting tracking jump signal (kick pulse) amplitude.

No.	Name	I/O	Function
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD-	I	Pin to form the focusing phase compensation constant between the FD and FA pins.
18	FA	O	Pin to form the focusing phase compensation constant between the FD- and FA- pins.
19	FA-	I	Pin to form the focusing phase compensation constant between the FA and FE pins.
20	FE	O	Output pin of FE signal.
21	FE-	I	Pin to connect the resistance for gain setting of FE signal between the FE pin.
22	AGND	-	GND for analog signal.
23	SP	O	Single end output of CV+/CV- pin input signal.
24	SPI	I	Spindle amplifier input.
25	SPG	I	Resistance connection pin for gain setting in 12-cm mode for spindle.
26	SP-	I	Pin for connection of spindle phase compensation constant, as well as with the SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin for connection of thread phase compensation constant.
29	SLD	O	Thread control signal output pin.
30	SL-	I	Pin to input thread feeding signal from the microprocessor.
31	SL+	I	Pin to input thread feeding signal from the microprocessor.
32	JP+	I	Pin to input tracking jump signal from DSP.
33	JP+	I	Pin to input tracking jump signal from DSP.
34	TGL	I	Pin to input tracking gain control signal from DSP. Tracking is set to gain low when TGL is "H".
35	TOFF	I	Pin to input tracking OFF control signal from DSP. Tracking is OFF when TOFF is "H".
36	TES	O	Pin to output TES signal to DSP.
37	HFL	I	High Frequency Level to be used for judgment whether the phase of the main beam is on the bit or mirror.
38	SLOF	I	Thread servo OFF control input pin.
39	CV-	I	Pin to input CLV error signal from DSP.
40	CV+	I	Pin to input CLV error signal from DSP.
41	RFSM	O	RF output pin.
42	RFS-	I	Pin for RF gain setting and EFM signal 3T compensation constant setting, as well as with the RFSM pin.
43	SLC	O	Slice Level Control. Output pin to control the level of data slice by DSP of RF waveforms.
44	SLI	I	Input pin to control the level of data slice by DSP.
45	DGND	-	GND pin of the digital system.
46	FSC	O	Output pin for focus search smoothing capacitor.
47	TBC	I	Tracking Balance Control. Pin to set EF balance variable range.
48	NC	-	No Connect.
49	DEF	O	Pin to output defect detection of disc.
50	CLK	I	Reference clock input pin. Frequency of 4.23MHz is input from DSP.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	Detect RF. RF level detection output.
55	FSS	I	Focus Search Select. Pin to switch focus search mode (switching between ũsearch and +search for the reference voltage).
56	VCC2	-	VCC pin for the servo and digital systems.
57	REFI	I	Pin for connection of reference voltage bypass capacitor.
58	VR	O	Reference voltage output pin.
59	LF2	I	Pin for setting defect detection time constant of disc.
60	PH1	I	Pin to connect capacitor for peak hold of RF signal.
61	BH1	I	Pin to connect capacitor for bottom hold of RF signal.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	-	VCC pin for the RF system.

- BA5923FP (IC9201 : CD ASSY)
- POWER DRIVER IC FOR CD PLAYER
- Block Diagram



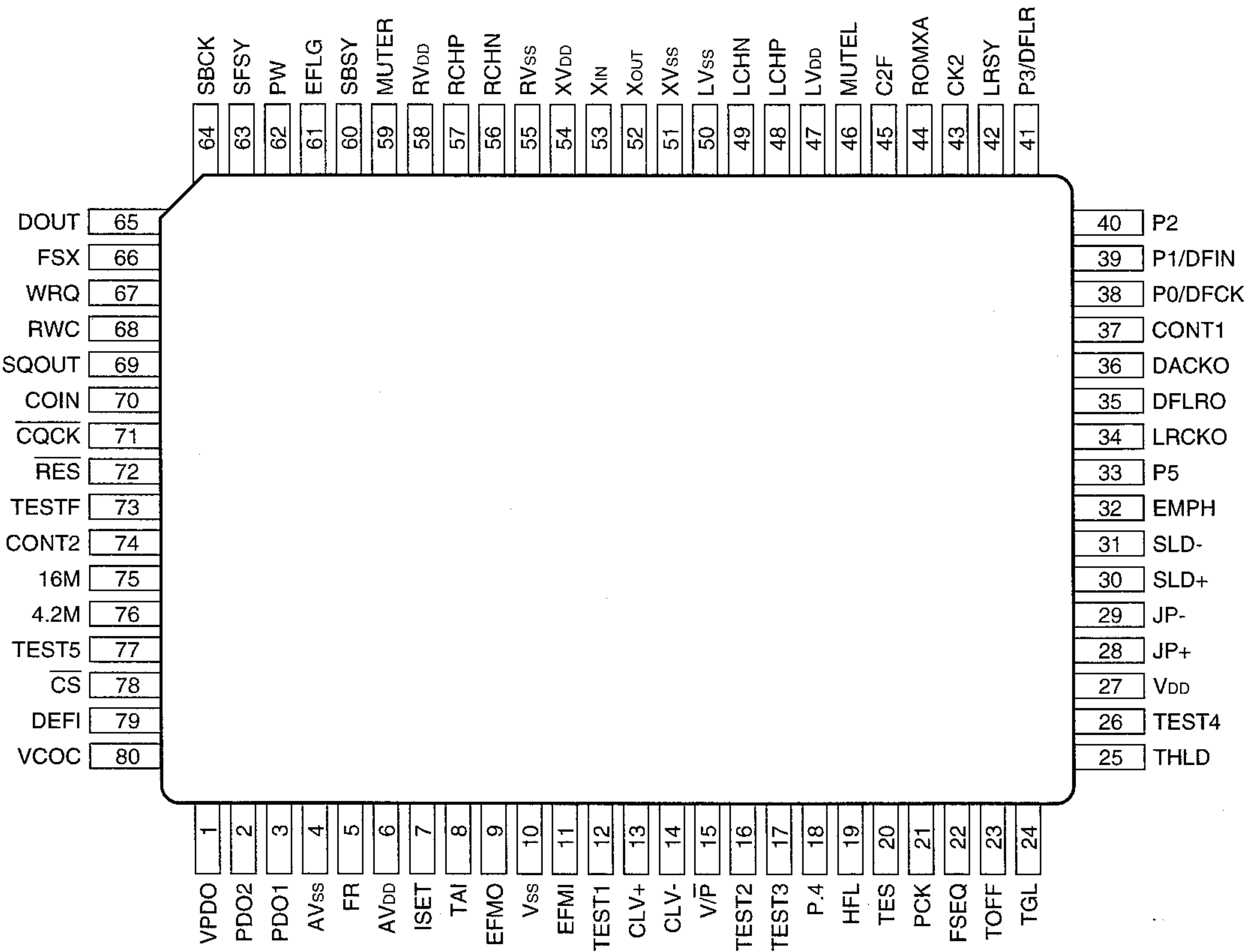
● Pin Function

No.	Name	I/O	Function
1	Vcc	-	Vcc
2	BIAS IN	I	Bias amplifier input.
3	VIN1'	I	Driver CH1 input, gain adjustment pin.
4	VIN1	I	Driver CH1 input.
5	VIN2'	I	Driver CH2 input, gain adjustment pin.
6	VIN2	I	Driver CH2 input.
7	GND	-	Substrate Ground.
8	GND	-	Ground
9	MUTE	I	Driver mute control input.
10	Vcc	-	Vcc
11	VO2 (-)	O	Driver CH2 inverted output.
12	VO2 (+)	O	Driver CH2 noninverted output.
13	VO1 (-)	O	Driver CH1 inverted output.
14	VO1 (+)	O	Driver CH1 noninverted output.

No.	Name	I/O	Function
15	VO4 (+)	O	Driver CH4 noninverted output.
16	VO4 (-)	O	Driver CH4 inverted output.
17	VO3 (+)	O	Driver CH3 noninverted output.
18	VO3 (-)	O	Driver CH3 inverted output.
19	Vcc	-	Vcc
20	NC	-	
21	GND	-	Substrate Ground.
22	OP IN (+)	I	Op-amp input, positive.
23	OP IN (-)	I	Op-amp input, negative.
24	OP OUT	O	Op-amp output.
25	VIN3	I	Driver CH3 input.
26	VIN3'	I	Driver CH3 input, gain adjustment pin.
27	VIN4	I	Driver CH4 input.
28	VIN4'	I	Driver CH4 input, gain adjustment pin.

Note) Symbol of+ and - (output of DRIVERS) means polarity to input pin.
(For example if voltage of pin4 is high, pin14 is high.)

- LC78630ED (IC9301 : CD ASSY)
- SIGNAL PROCESSOR AND SERVO CONTROL IC FOR CD PLAYER
- Pin Assignment



● Pin Function

No.	Name	I/O	Function	
1	VPDO	O	Variable pitch PLL charge pump output.	
2	PDO2	O	Double-speed and quad-speed mode bitclock playback PLL charge pump output.	
3	PDO1	O	Normal-speed mode bitclock playback PLL charge pump output.	
4	AVss		Analog system ground. Normally 0V.	
5	FR		Built-in VCO frequency range setting resistor connection.	
6	AVDD		Analog system power supply.	
7	ISET		PDO1 and PDO2 output current setting resistor connection.	
8	TAI	I	Test input. A pull-down resistor is built in.	
9	EFMO	O	EFM signal output	
10	Vss		Digital system ground. Normally 0V.	
11	EFMI	I	EFM signal input	
12	TEST1	I	Test input. A pull-down resistor is built in.	
13	CLV+	O	Spindle servo control output. CLV outputs a high level for acceleration, and CLV-outputs a high level for deceleration.	
14	CLV-	O		
15	V/P	O	Rough servo/phase control automatic switching monitor output. A high-level output indicates rough servo, and a low-level output indicates phase control.	
16	TEST2	I	Test input. A pull-down resistor is built in.	
17	TEST3	I		
18	P4	I/O	I/O port	
19	HFL	I	Track detection signal input. This is a Schmitt input.	
20	TES	I	Tracking error signal input. This is a Schmitt input.	
21	PCK	O	EFM data playback bit clock monitor. Outputs 4.3218 MHz when the phase is locked.	
22	FSEO	O	Synchronization signal detection output. Outputs a high level when the synchronization signal detected from the EFM signal matches the internally generated synchronization signal.	
23	TOFF	O	Tracking off output	
24	TGL	O	Tracking gain switching output. Increase the gain when this pin outputs a low level.	
25	THLD	O	Tracking hold output.	
26	TEST4	I	Test input. A pull-down resistor is built in.	
27	VDD		Digital system power supply.	
28	JP+	O	Track jump output. JP outputs a high level both for acceleration during outward direction jumps and for deceleration during inward direction jumps. JP- outputs a high level both for acceleration during inward direction jumps and for deceleration during outward direction jumps.	
29	JP-	O		
30	SLD+	O	Sled output. This pin can be set to 1 of 4 levels by commands sent from the system control microprocessor.	
31	SLD-	O		
32	EMPH	O	De-emphasis monitor. A high level indicates that a disk requiring de-emphasis is being played.	
33	P5	I/O	I/O port	
34	LRCKO	O	Digital filter outputs	LR clock output
35	DFLRO	O		LR data output. The digital filters can be turned off with the DFOFF command.
36	DACKO	O		Bit clock output
37	CONT1	O	Output port	
38	P0/DFCK	I/O	I/O port or digital filter bit clock input	
39	P1/DFIN	I/O	I/O port or digital filter data input	
40	P2	I/O	I/O port. Used as the de-emphasis filter on/off swithching pin in anti shock mode.	
41	P3/DFLR	I/O	Port output or digital filter LR clock input	
42	LRSY	O	ROMXA pins	LR clock output
43	CK2	O		Bit clock output. The polarity can be inverted with the CK2CON command.
44	ROMXA	O		Interpolated data output. Data that has not been interpolated can be output by issuing the ROMXA command.
45	C2F	O		C2 flag output
46	MUTEL	O	One-bit D/A converter pins	Left channel mute output
47	LVDD			Left channel power supply.
48	LCHP	O		Left channel P output
49	LCHN	O		Left channel N output
50	LVss			Left channel ground. Normally 0V.
51	XVss		Crystal oscillator ground. Normally 0V.	
52	XOUT	O	16.9344 MHz crystal oscillator connections. Use a 33.8688 MHz crystal oscillator for quad-speed playback.	
53	XIN	I		
54	XVDD		Crystal oscillator power supply.	
55	RVss		One-bit D/A converter pins	Right channel ground. Normally 0V.
56	RCHN	O		Right channel N output
57	RCHP	O		Right channel P output
58	RVDD			Right channel power supply.
59	MUTER	O		Right channel mute output
60	SBSY	O	Subcode block synchronization signal output	

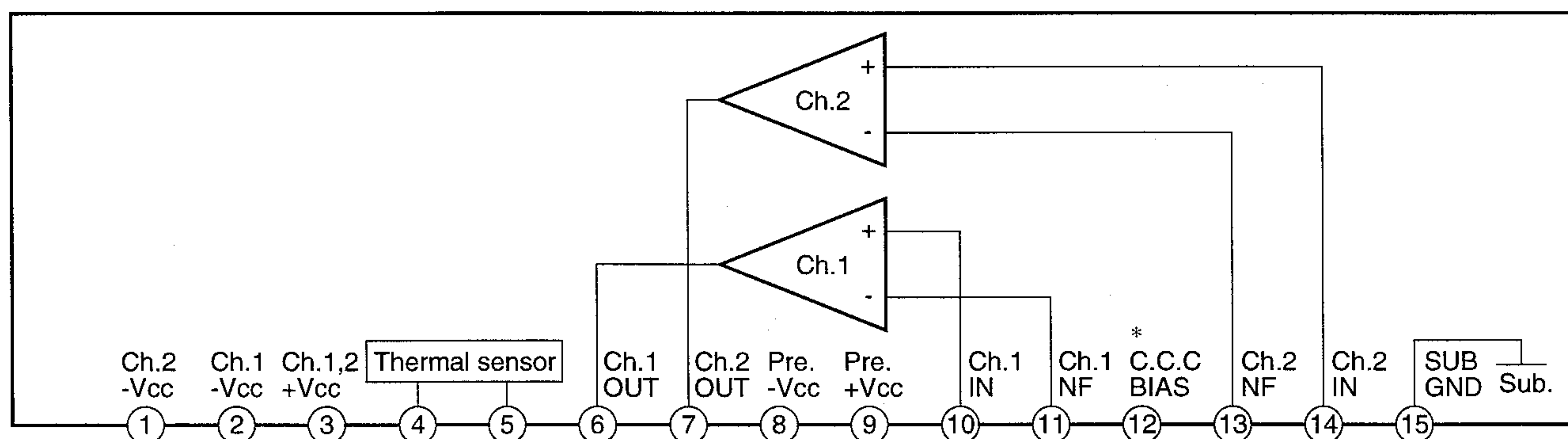
No.	Name	I/O	Function
61	EFLG	O	C1 and C2 error correction state monitor
62	PW	O	Subcode P.Q.R.S.T.U. and W output
63	SFSY	O	Subcode frame synchronization signal output. Falls when the subcode output goes to the standby state.
64	SBCK	I	subcode readout clock input. This is a Schmitt input.
65	DOUT	O	Digital output
66	FSX	O	Outputs a 7.35 kHz synchronization signal generated by dividing the crystal oscillator frequency.
67	WRQ	O	Subcode Q output standby output
68	RWC	I	Read/write control input
69	SQOUT	O	Subcode Q output
70	COIN	I	Input for commands from the control microprocessor
71	$\overline{\text{CQCK}}$	I	Command input acquisition clock. Also used as the SQOUT subcode readout clock input. This is a Schmitt input.
72	RES	I	Chip reset input. This pin must be set low temporarily when power is first applied.
73	TESTF	O	Test output
74	CONT2	O	Output port
75	16M	O	16.9344 MHz output. 33.8688 MHz output in 4 × playback mode
76	4.2M	O	4.2336 MHz output
77	TEST5	I	Test input. A pull-down resistor is built in.
78	$\overline{\text{CS}}$	I	Chip select input. A pull-down resistor is built in.
79	DEFI	I	Detect detection signal input.
80	VCOC	I	Variable pitch VCO control input.

■ STK407-050 (IC1201 : POWER ASSY)

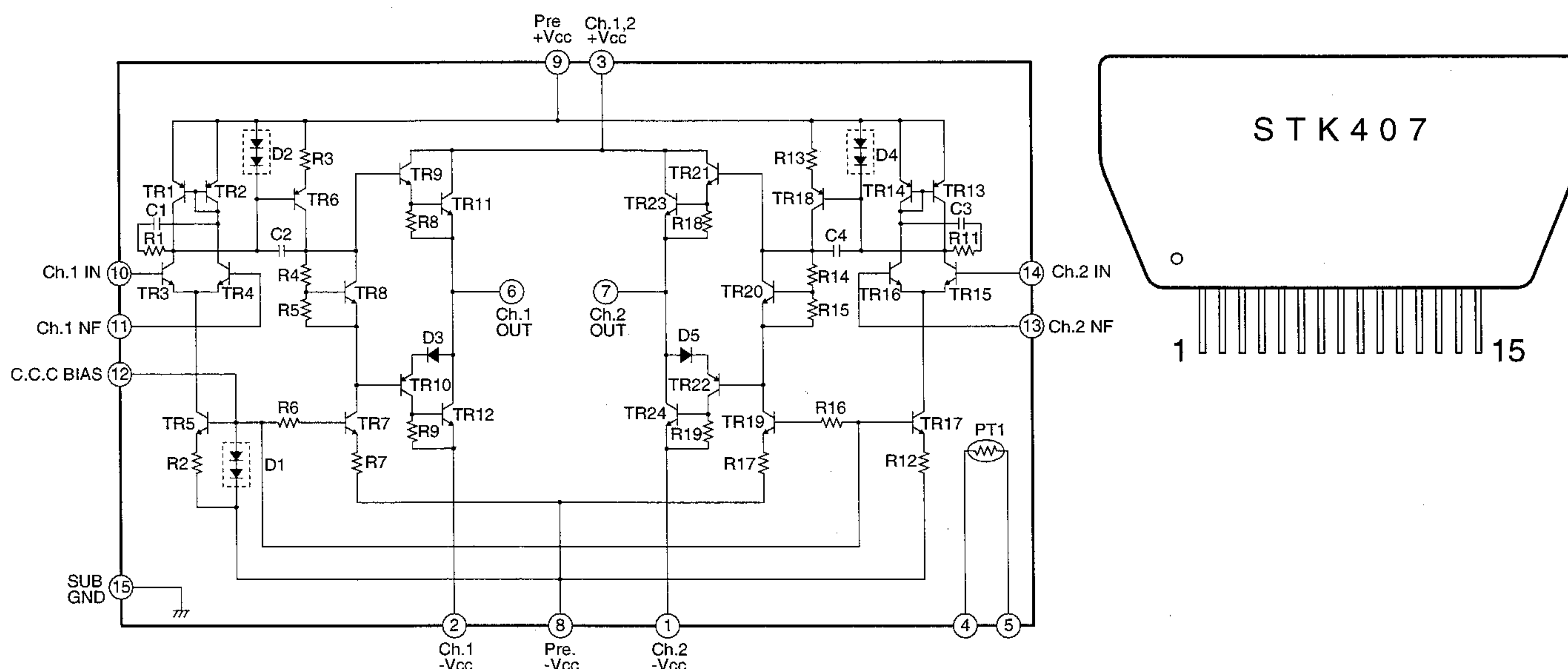
● 2 CHANNEL AF POWER AMP

● Block Diagram

* C.C.C. : CONSTANT CURRENT CIRCUIT



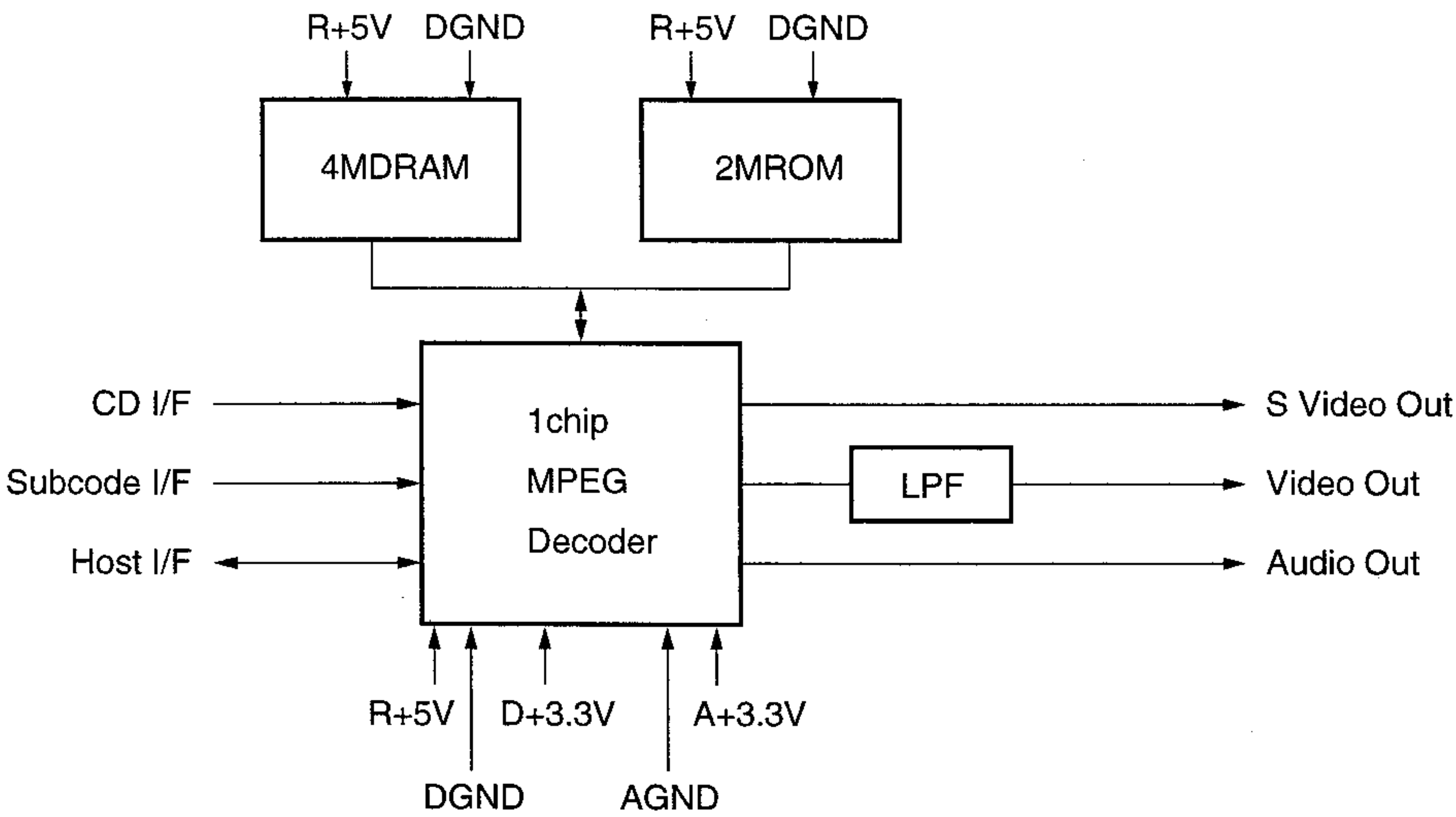
● Pin Assignment



■ RD-DVK020-P (VIDEO CD MODULE)

● VIDEO CD MODULE

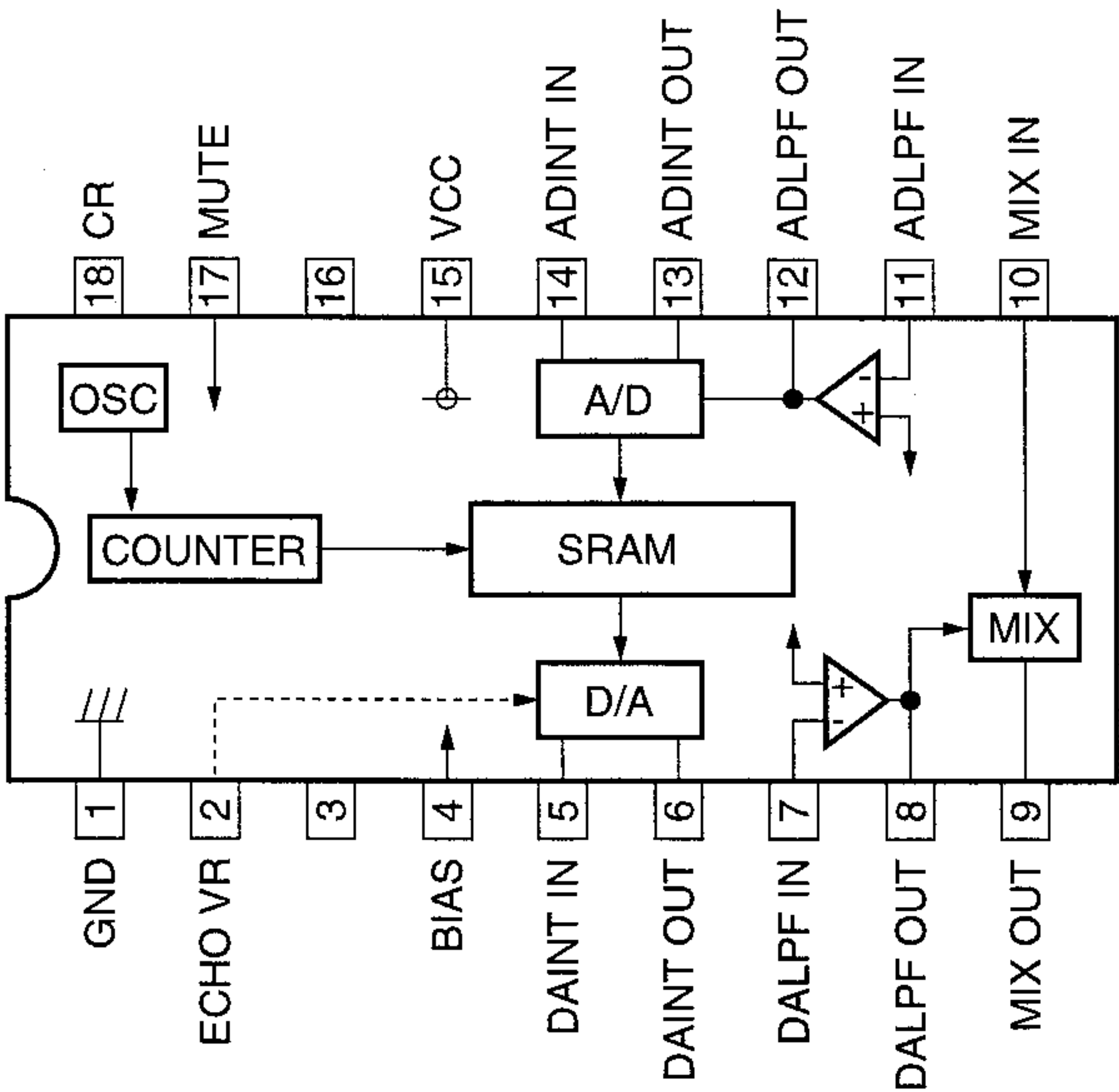
● Block Diagram



● Pin Function (Connection terminal specification)

No.	Name	I/O	Function
1	A +3.3V		+3.3V power supply for analog video
2	CVOUT	O	Composite video output
3	COUT	O	C video output(s)
4	YOUT	O	Y video output(s)
5	VGND		Analog video ground
6	VGND		
7	R +5V		Digital +5V power supply
8	D +3.3V		Digital +3.3V power supply
9	D +3.3V		
10	DGND		Digital ground
11	DGND		
12	XCK	I	Audio external frequency clock
13	EMPH	O	Audio emphasis output
14	DILRCK	O	Audio left right clock
15	HRDY	O	Host data ready
16	DISCK	O	Audio bit clock
17	DIDATA	O	Audio data serial bus
18	HINT	O	Host interrupt
19	SBCK	O	Subcode clock for CD-G
20	VRST	I	Hardware reset
21	HCK	I	Host clock
22	HDIO	I/O	Host serial data bus
23	CDSCK	I	CD bit clock
24	CDDATA	I	CD data
25	CDLRCK	I	CD left right clock
26	IPFLG	I	CD data error flag(C2P0)
27	HSEL	I	Host address/data select
28	SUBC	I	Subcode data for CD-G
29	CLDCK	I	Subcode frame sync for CD-G
30	BLKCK	I	Subcode block sync for CD-G

- BU9253AS (IC3801:AF ASSY)
- DIGITAL DELAY LSI FOR AUDIO (ECHO IC)
- Block Diagram



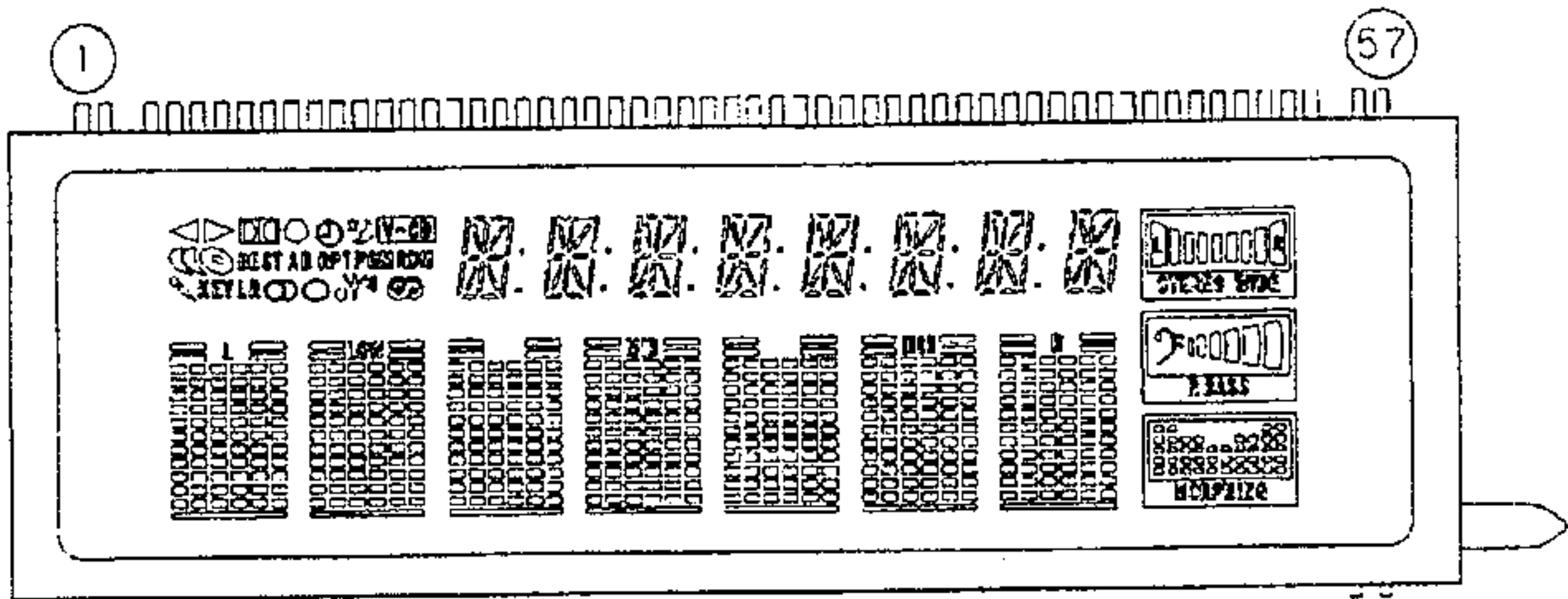
● Pin Function

No.	Name	I/O	Function
1	GND	-	Ground pin
2	ECHO VR	Hi_I	Echo level DC control
3	NC1	-	Non Connection
4	BIAS	-	Analog part DC bias
5	DAINT IN	Hi_I	DA side Integrator input
6	DAINT OUT	Lo_O	DA side Integrator output
7	DALPF IN	Hi_I	DA side LPF input
8	DALPF OUT	Lo_O	DA side LPF output
9	MIX OUT	Lo_O	Mix AMP output for original tone & echo tone
10	MIX IN	Hi_I	Mix AMP input pin for original tone
11	ADLPF IN	Hi_I	AD side LPF input
12	ADLPF OUT	Lo_O	AD side LPF output
13	ADINT OUT	Lo_O	AD side Integrator output
14	ADINT IN	Hi_I	AD side Integrator input
15	VCC	-	Vcc pin
16	NC2	-	Non Connection
17	MUTE	Hi_I	Mute control
18	CR	-	CR pin for Oscillator

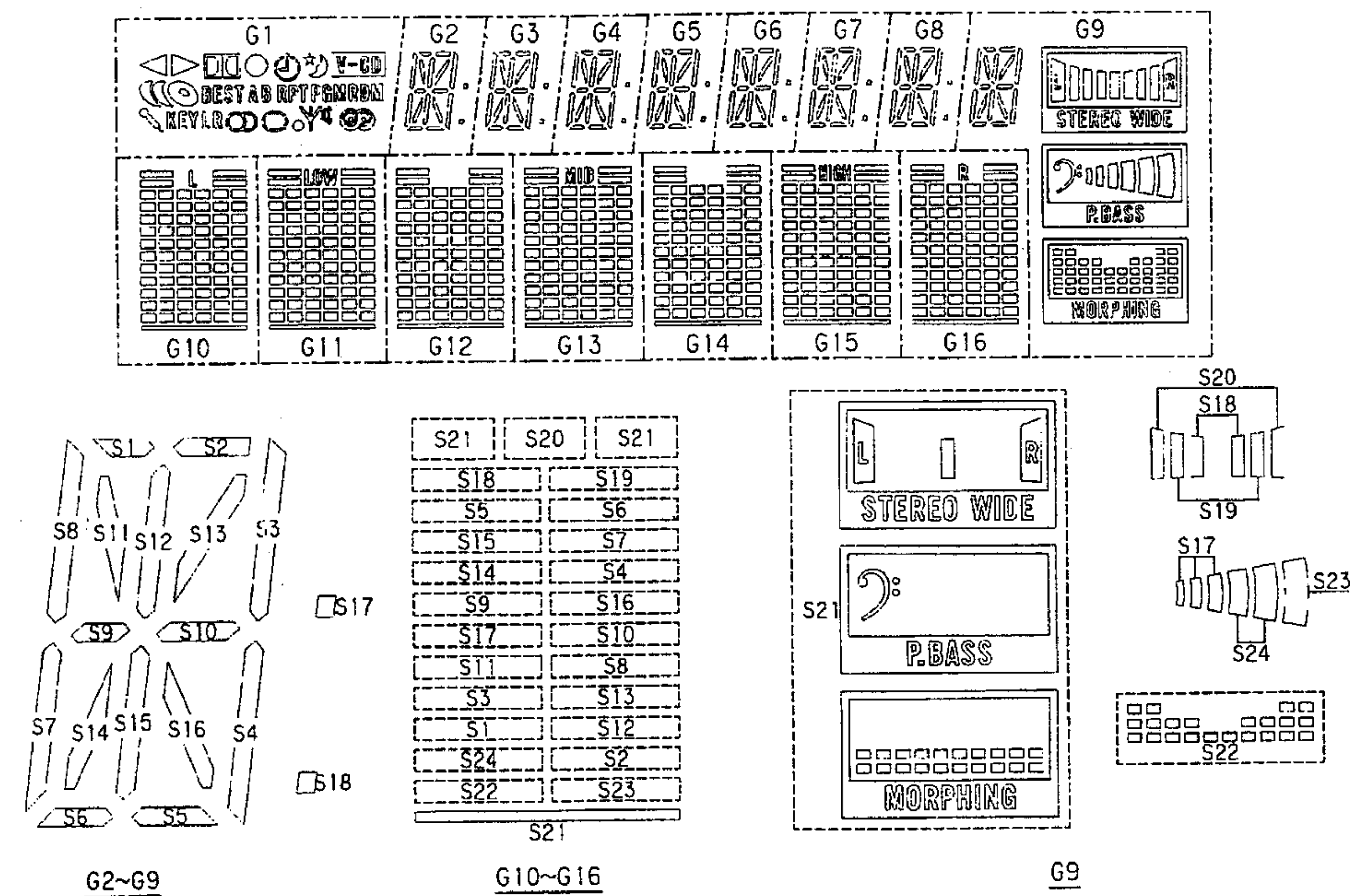
7.1.2 DISPLAY

■ AAV7044 (V1901 : DISPLAY ASSY)

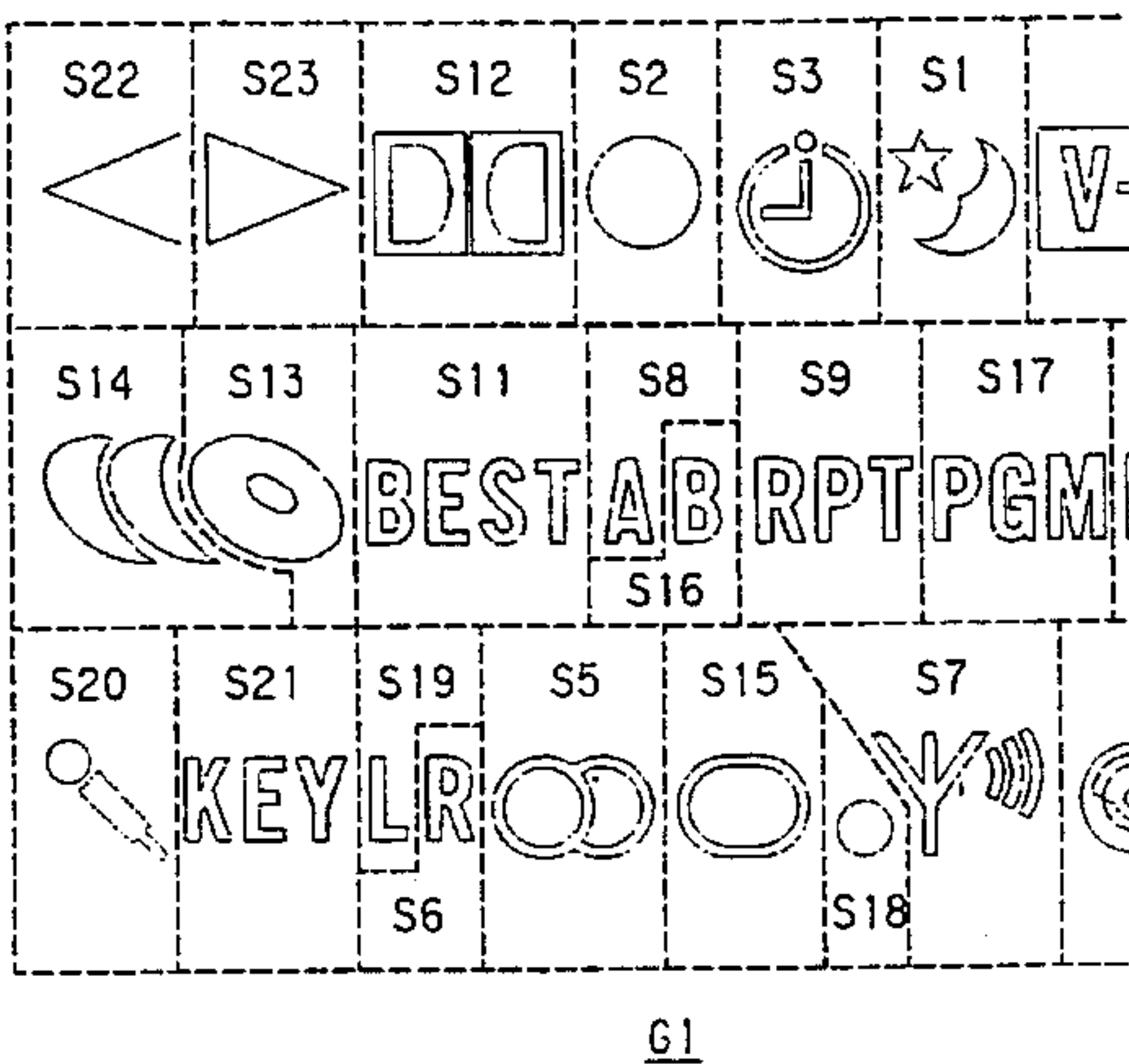
- FL TUBE
- Pin Assignment



● Anode and Grid Assignment



	G1	G2~G8	G9	G10	G11
S1	S1	S1	S1	S1	S1
S2	S2	S2	S2	S2	S2
S3	S3	S3	S3	S3	S3
S4	S4	S4	S4	S4	S4
S5	S5	S5	S5	S5	S5
S6	S6	S6	S6	S6	S6
S7	S7	S7	S7	S7	S7
S8	S8	S8	S8	S8	S8
S9	S9	S9	S9	S9	S9
S10	S10	S10	S10	S10	S10
S11	S11	S11	S11	S11	S11
S12	S12	S12	S12	S12	S12
S13	S13	S13	S13	S13	S13
S14	S14	S14	S14	S14	S14
S15	S15	S15	S15	S15	S15
S16	S16	S16	S16	S16	S16
S17	S17	S17	S17	S17	S17
S18	S18	S18	S18	S18	S18
S19	S19	S19	S19	S19	S19
S20	S20	S20	S20	S20	S20
S21	S21	S21	S21	S21	S21
S22	S22	S22	S22	S22	S22
S23	S23	S23	S23	S23	S23
S24	S24	S24	S24	S24	S24



● Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Assignment	F1	F1	NP	NL	G9	G16	G15	G14	G13	G12	G11	G10	G1	G2	G3	G4	G5	G6	G7	G8	S7	S5	S6

Pin No.	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
Assignment	S18	S19	S20	S21	NL	NL	NL	NL	NL	NL	NL	NL	S15	S4	S14	S16	S9	S10	S22	S23	S24	S2	S1

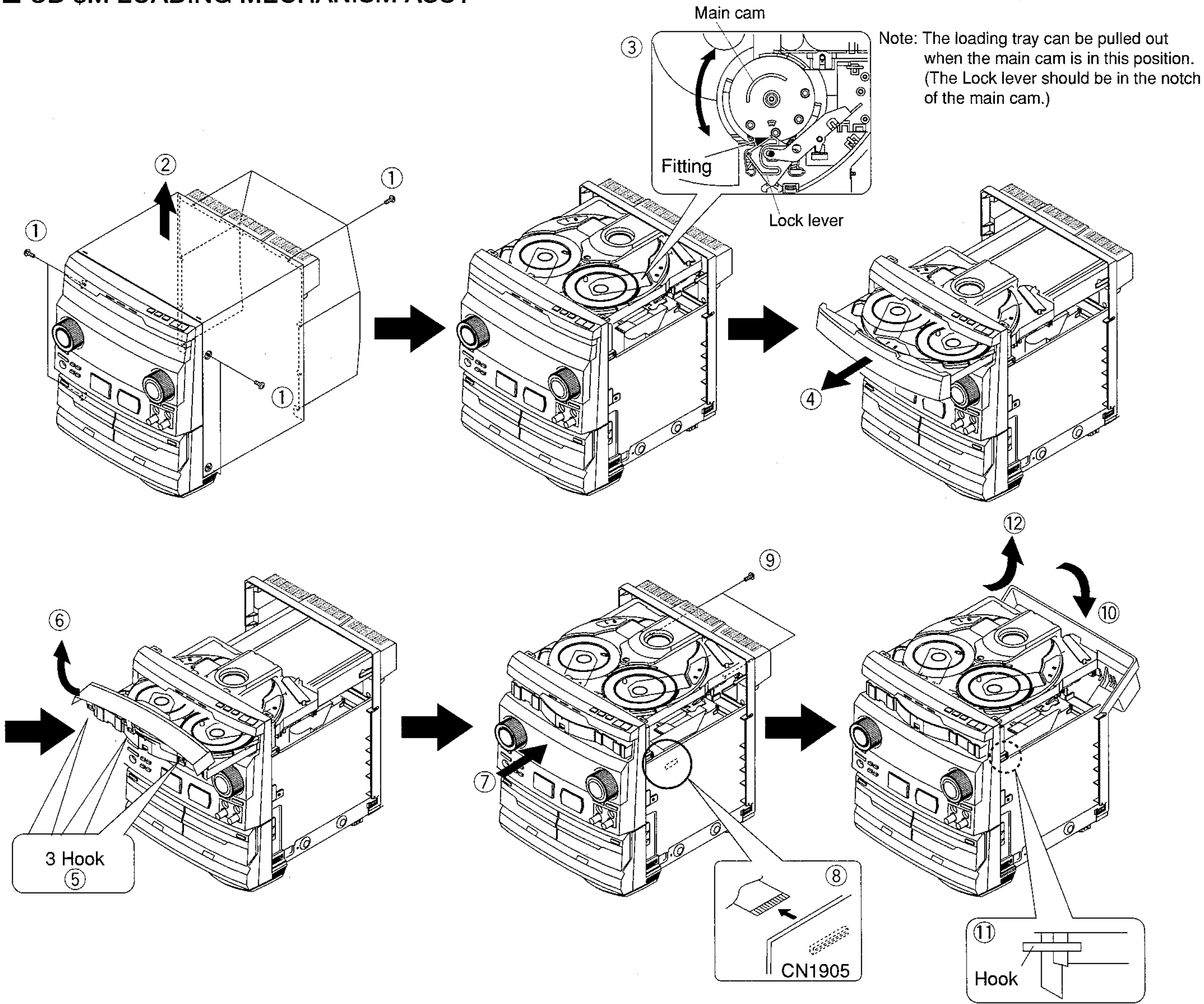
Pin No.	47	48	49	50	51	52	53	54	55	56	57
Assignment	S12	S3	S13	S11	S8	S17	NL	NL	NP	F2	F2

F1,F2:Filament G1~G16:Grid S1~S24:Anode NP:No Pin NL:No Lead

7.2 DIAGNOSIS

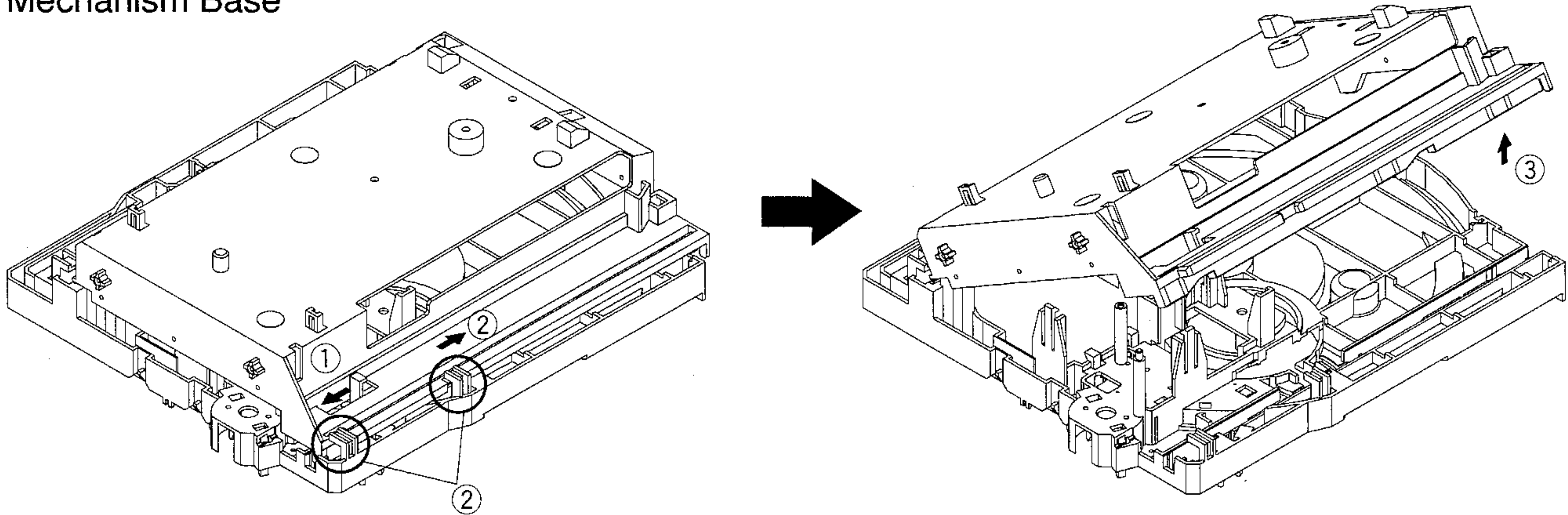
7.2.1 DISASSEMBLY

■ CD \$M LOADING MECHANISM ASSY



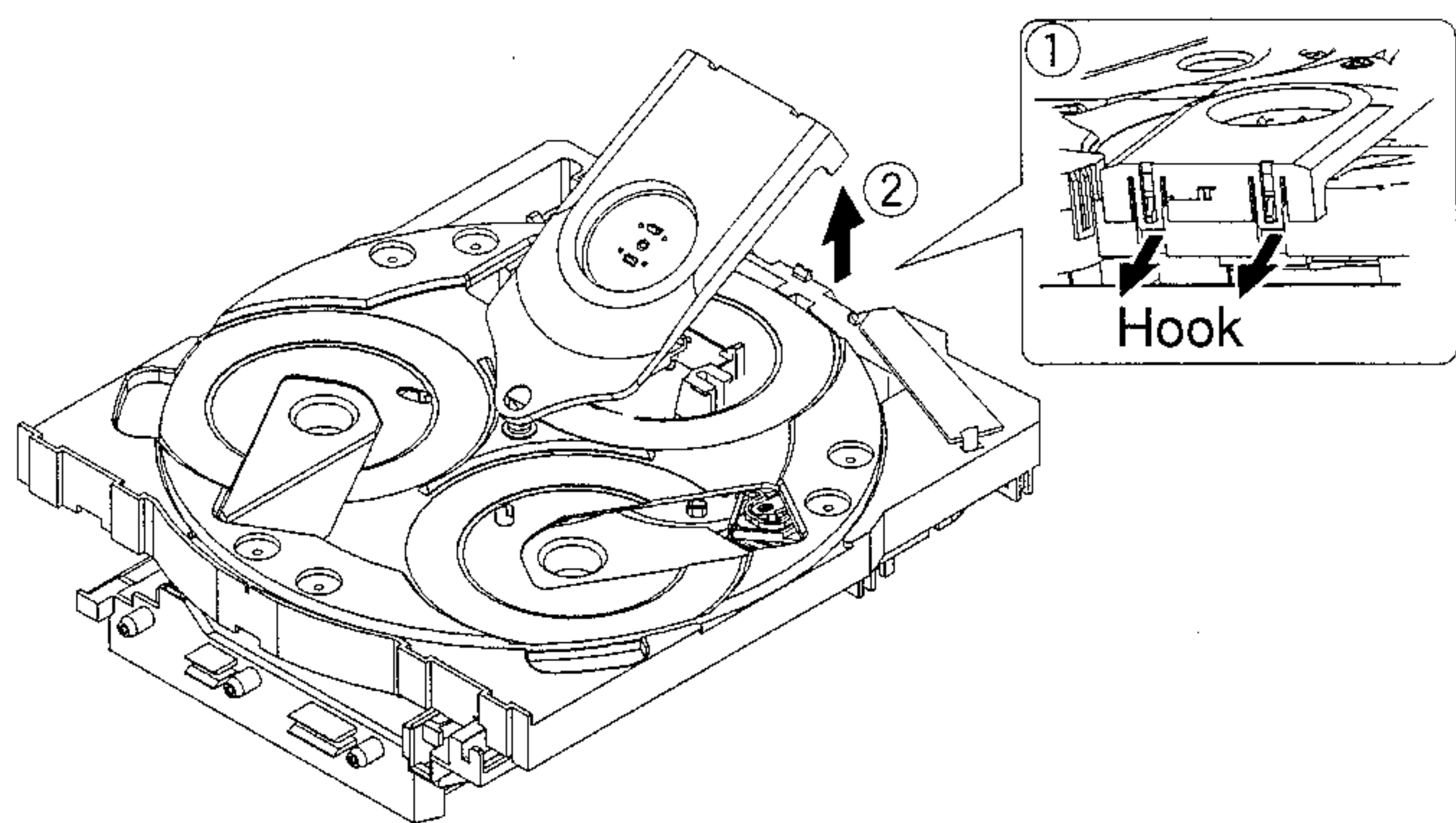
■ CD \$M LOADING MECHANISM ASSY ADDITIONAL TO JOB

● Mechanism Base

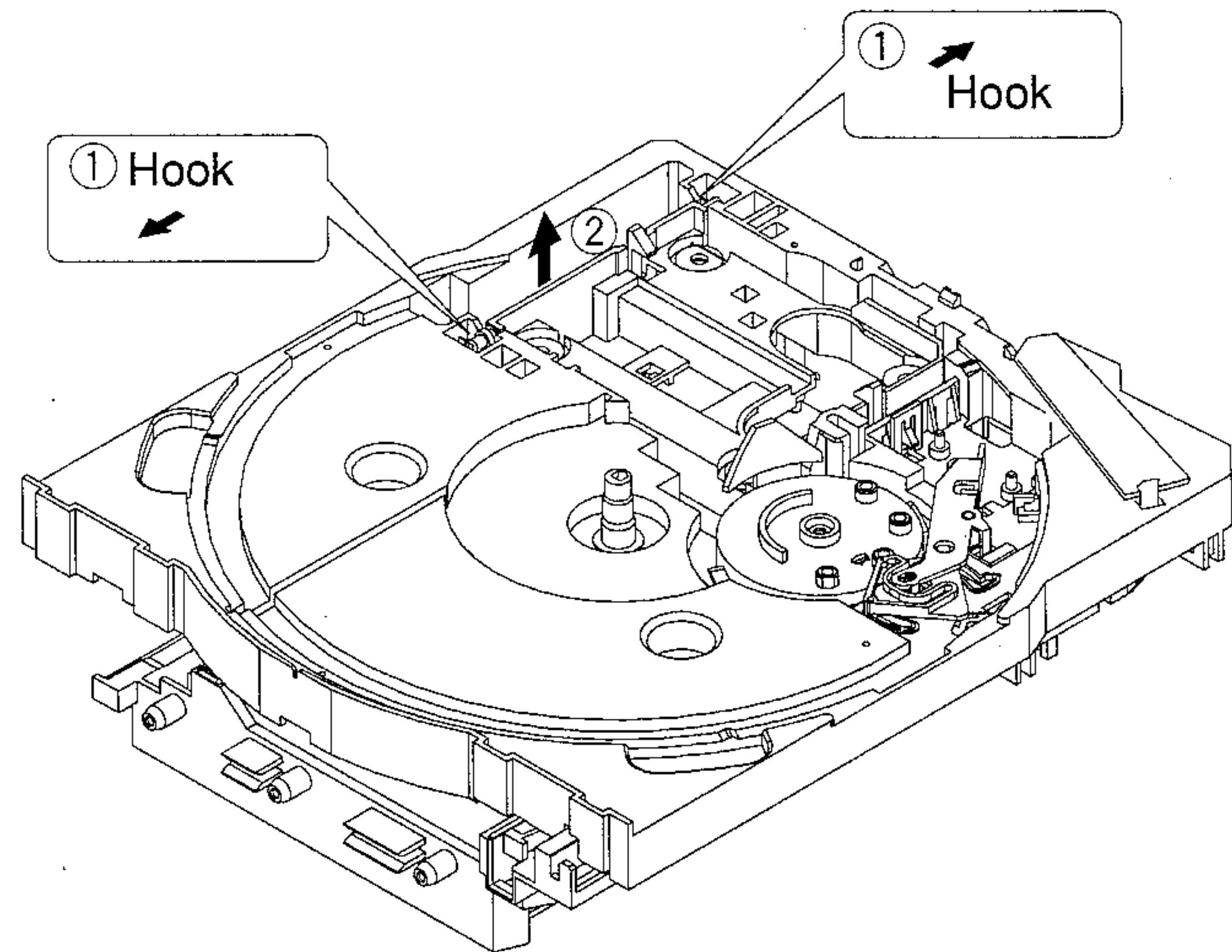


XR-VS8

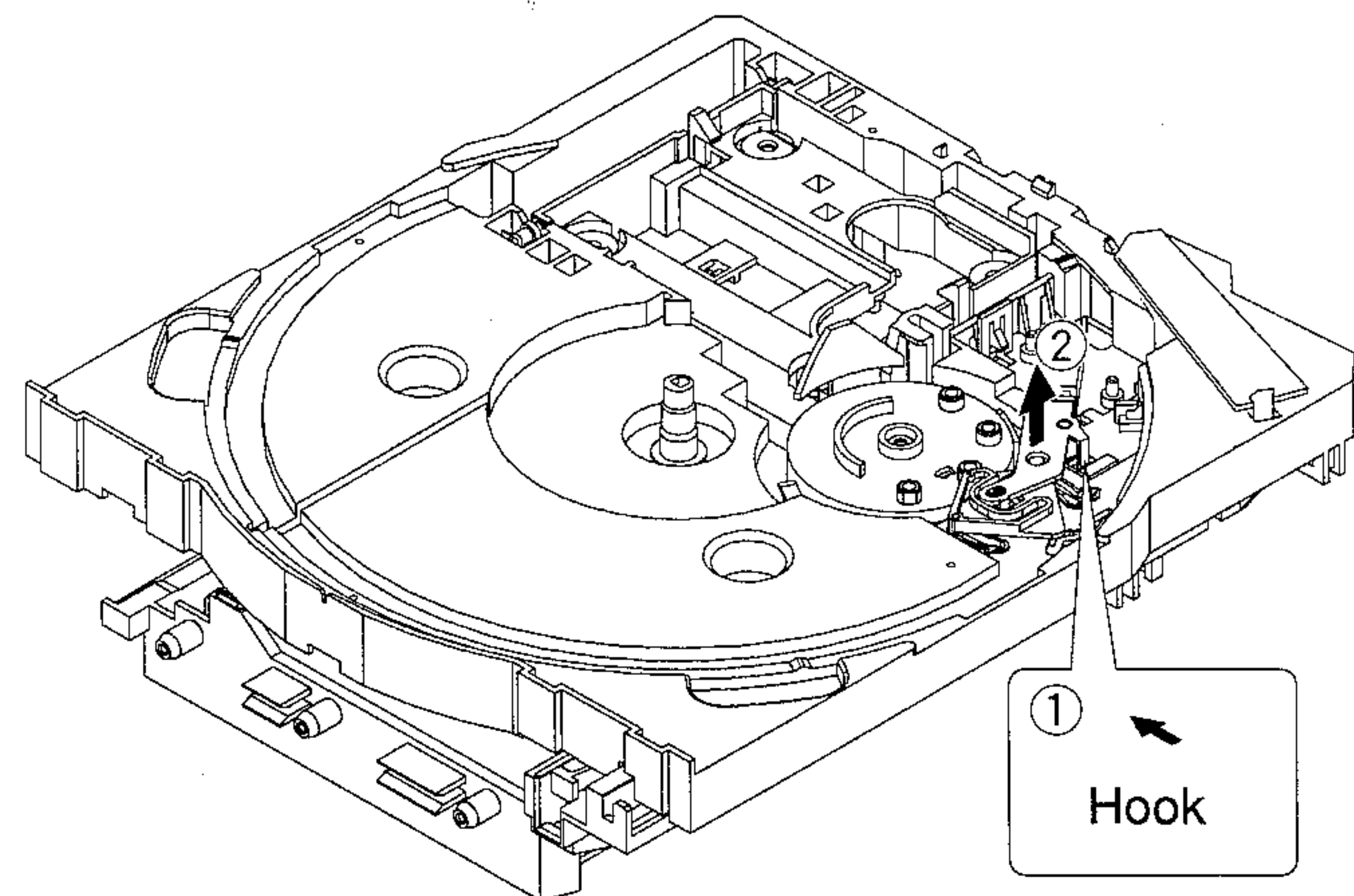
● Clamper Holder



● Servo Base

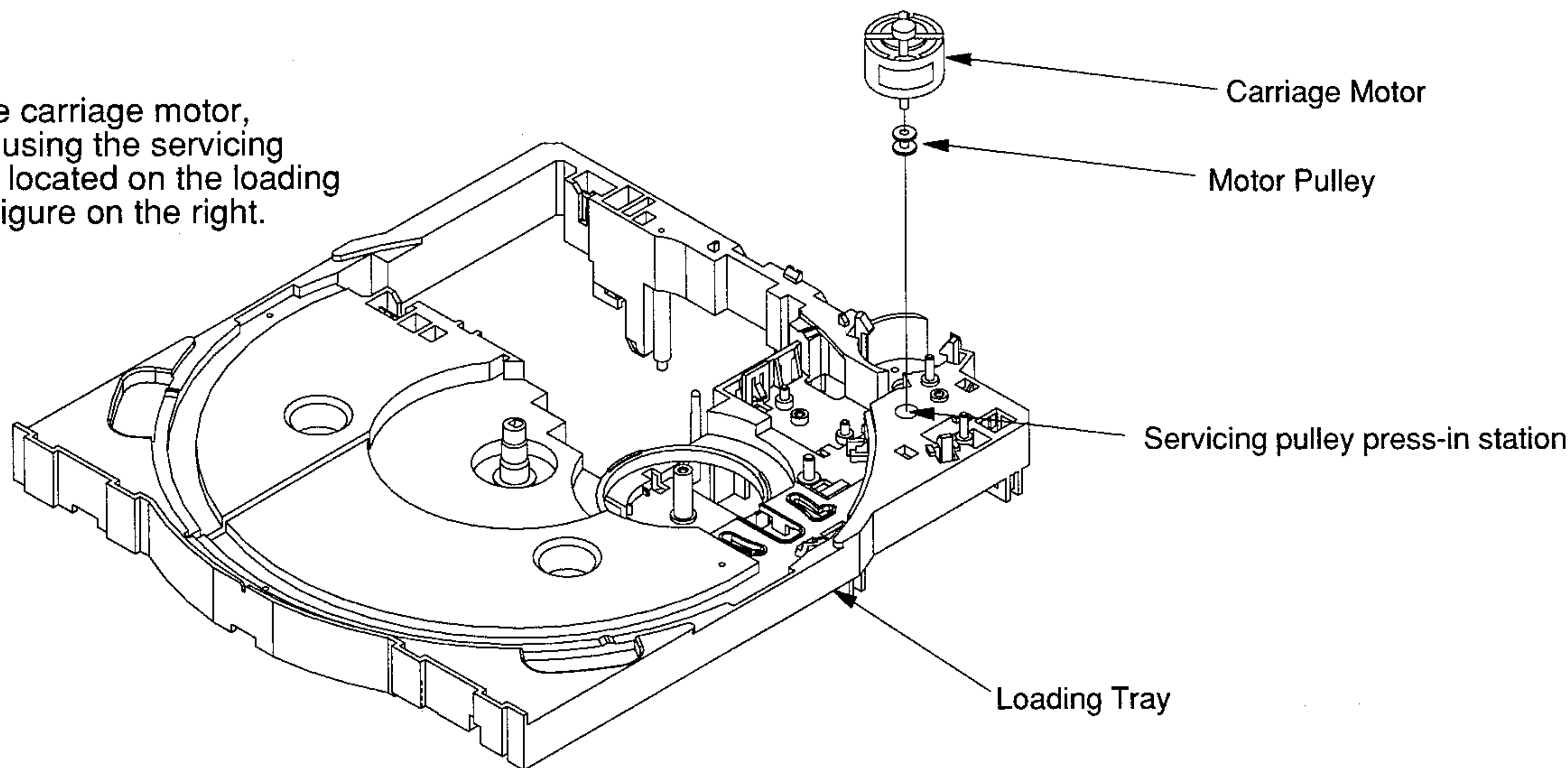


● Actuator



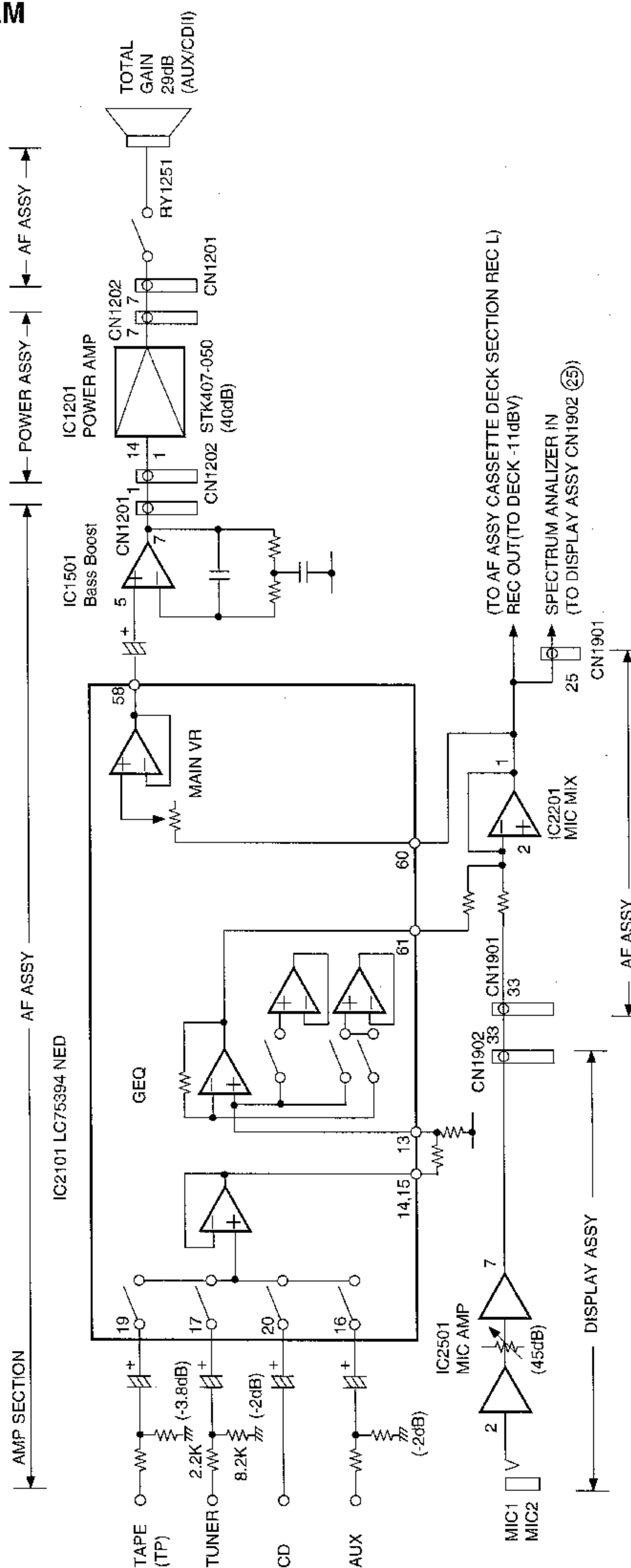
■ FITTING THE PULLEY INTO THE CARRIAGE MOTOR

For replacement of the carriage motor, fit the motor pulley by using the servicing pulley press-in station located on the loading tray, as shown in the figure on the right.

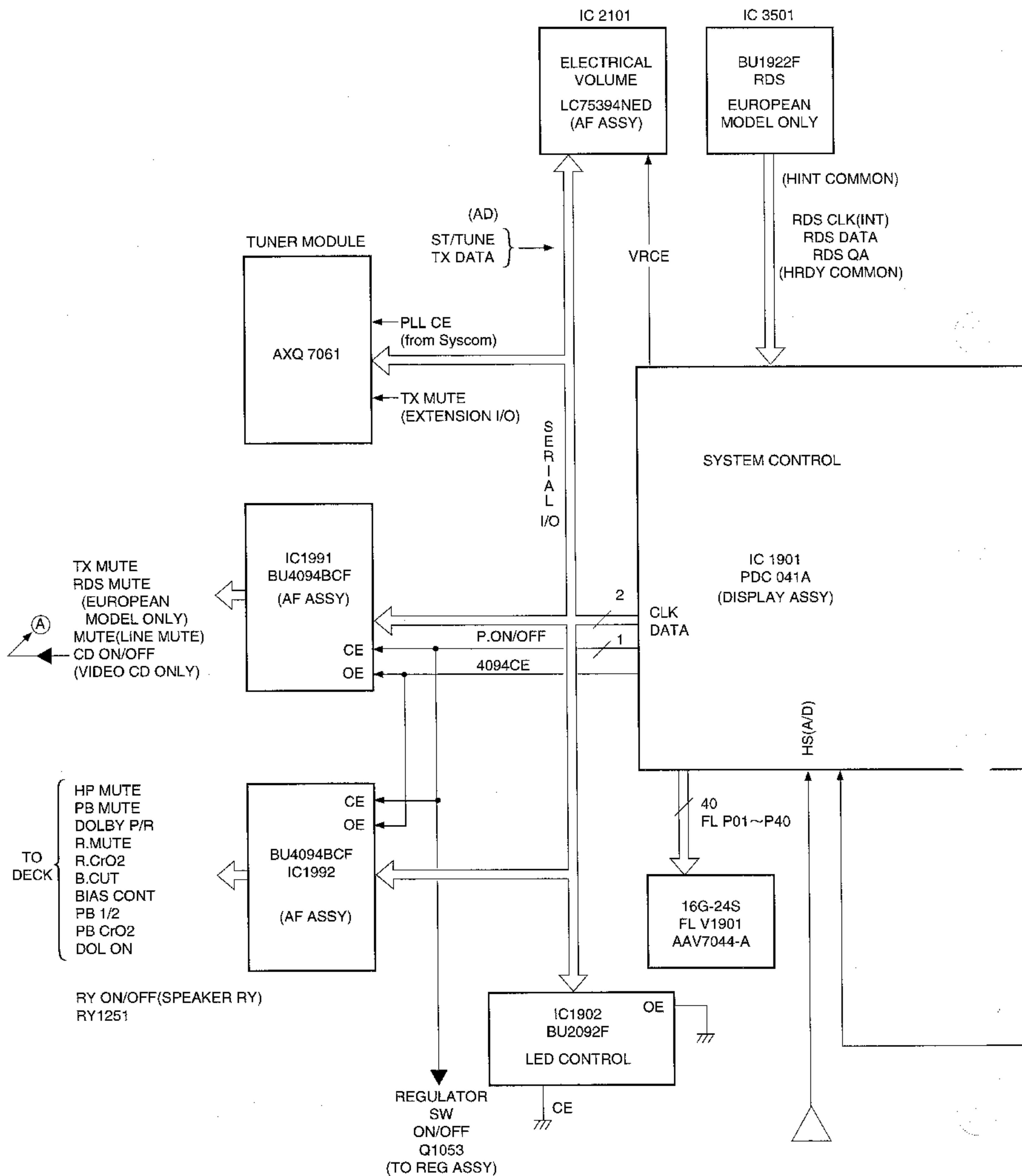


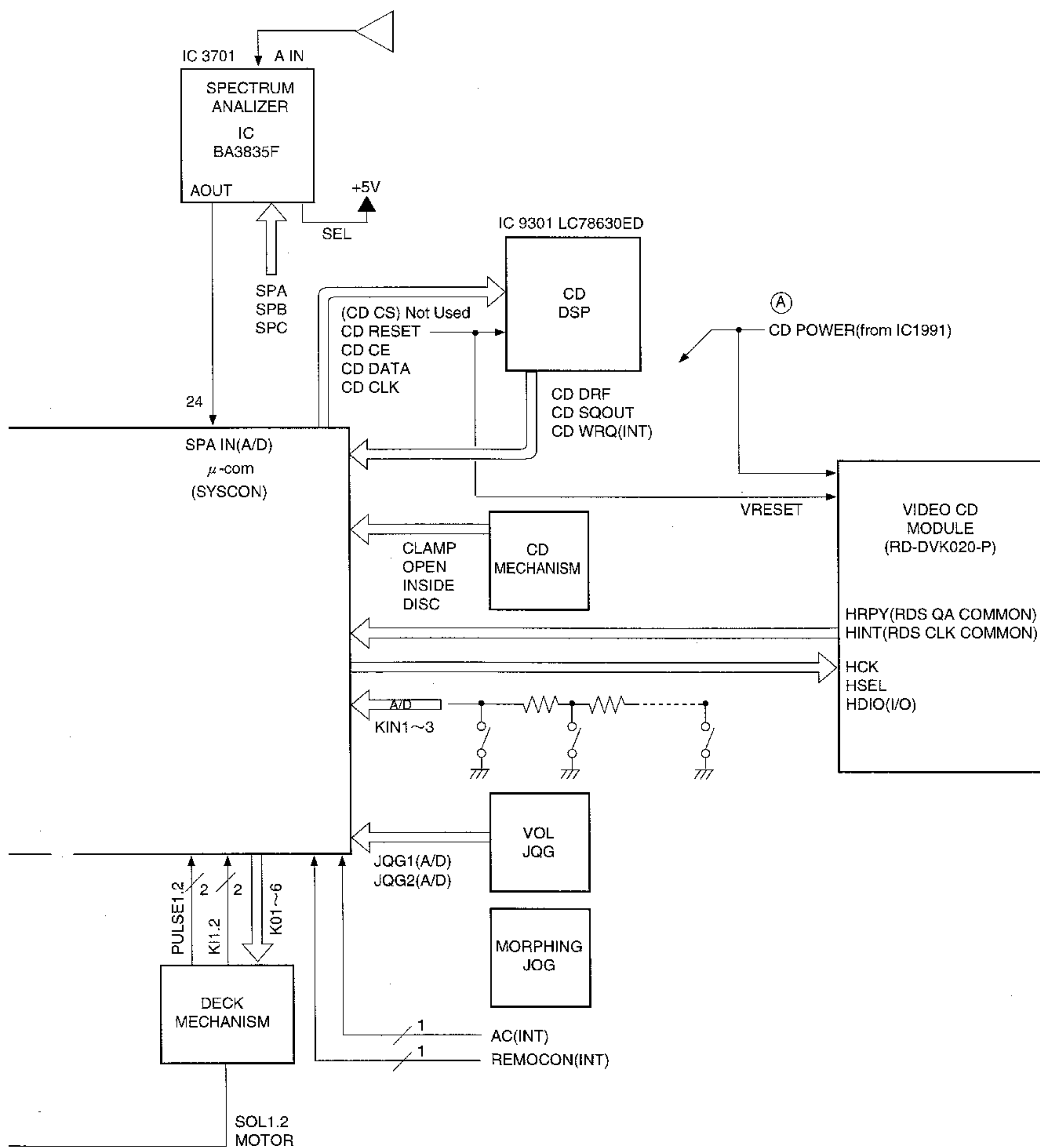
7.3 BLOCK DIAGRAM

7.3.1 OVERALL DIAGRAM

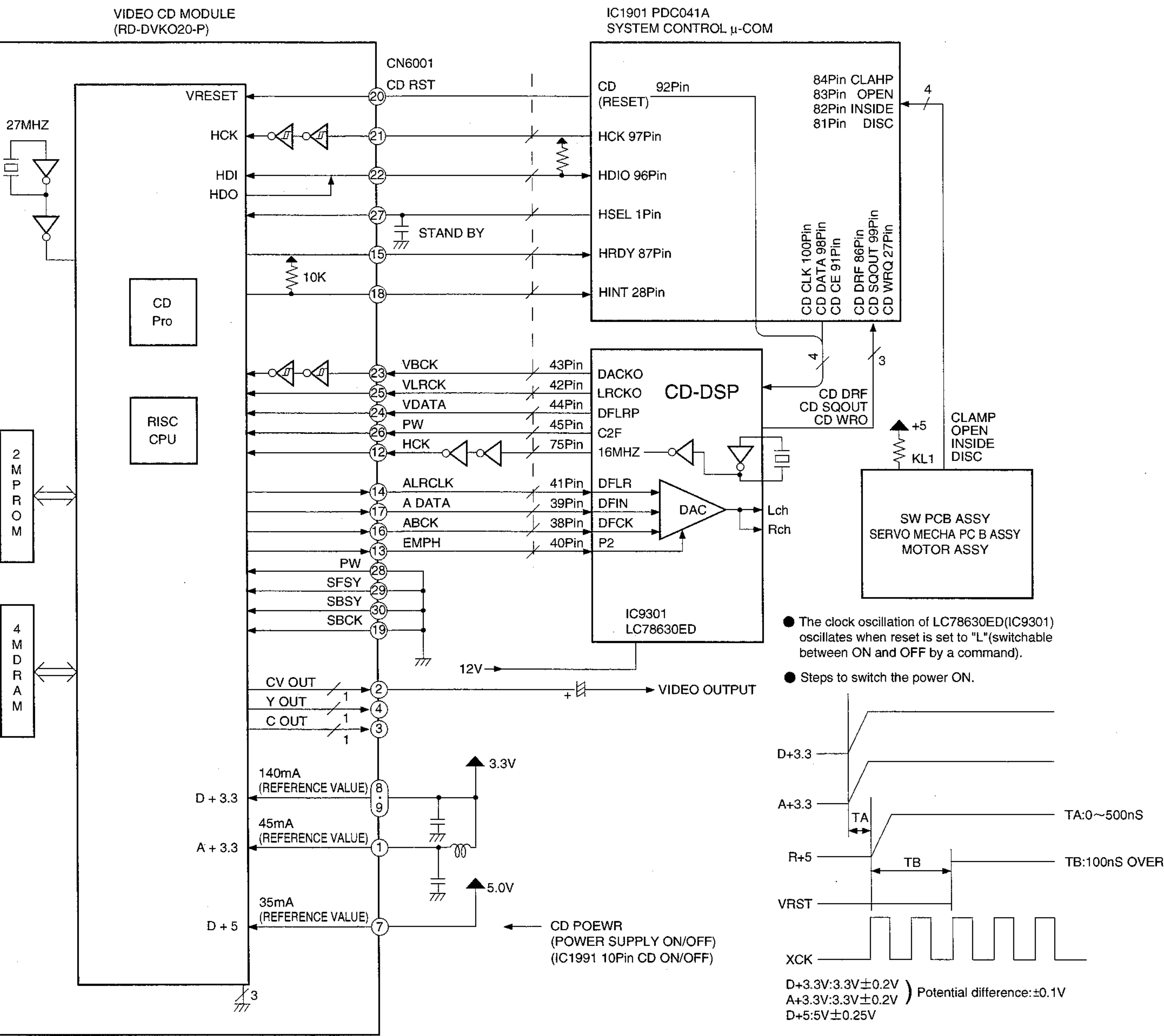


7.3.2 MICROCOMPUTER CONNECTION DIAGRAM

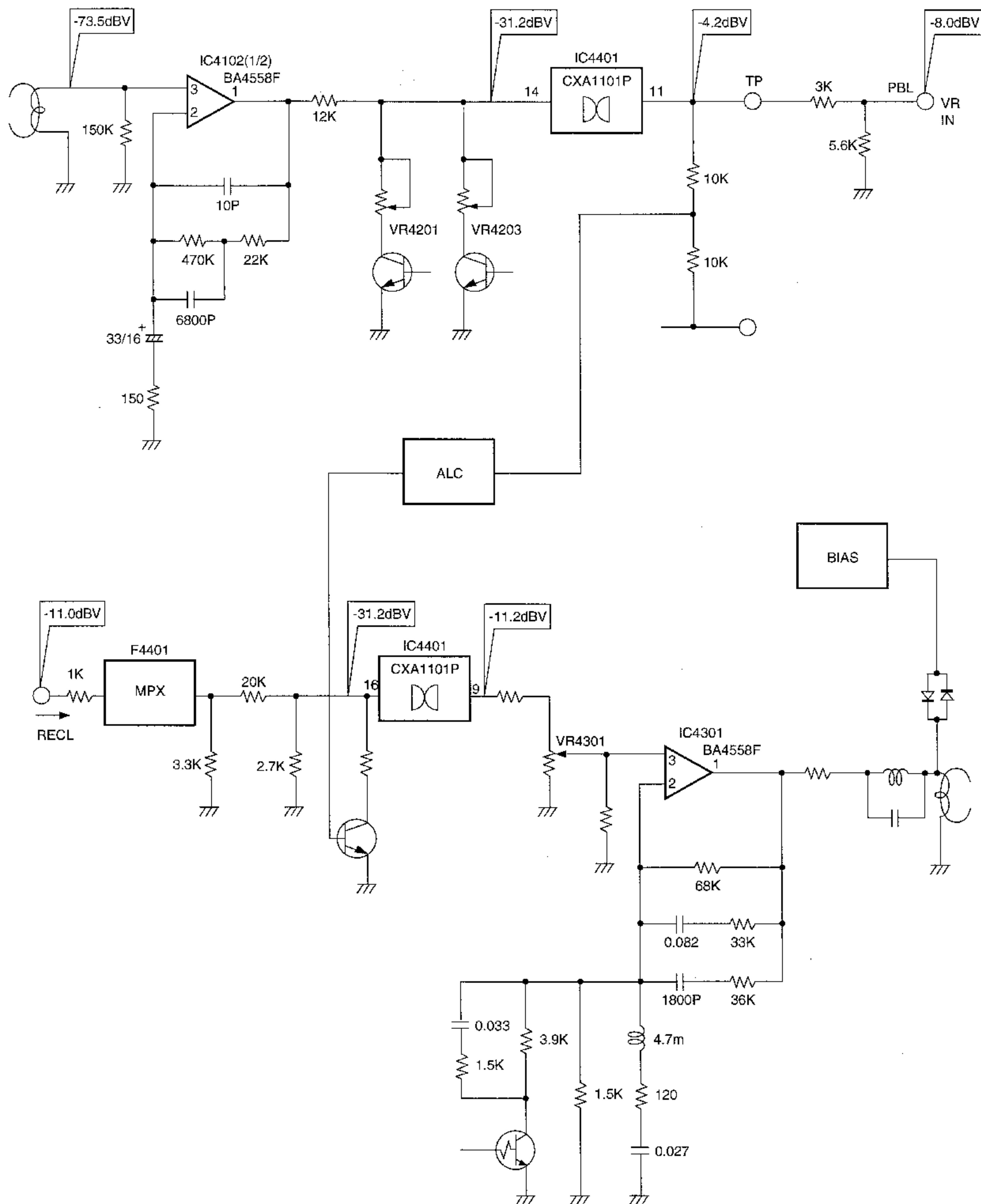




7.3.3 SYSTEM CONTROL BLOCK (VIDEO CD SECTION)

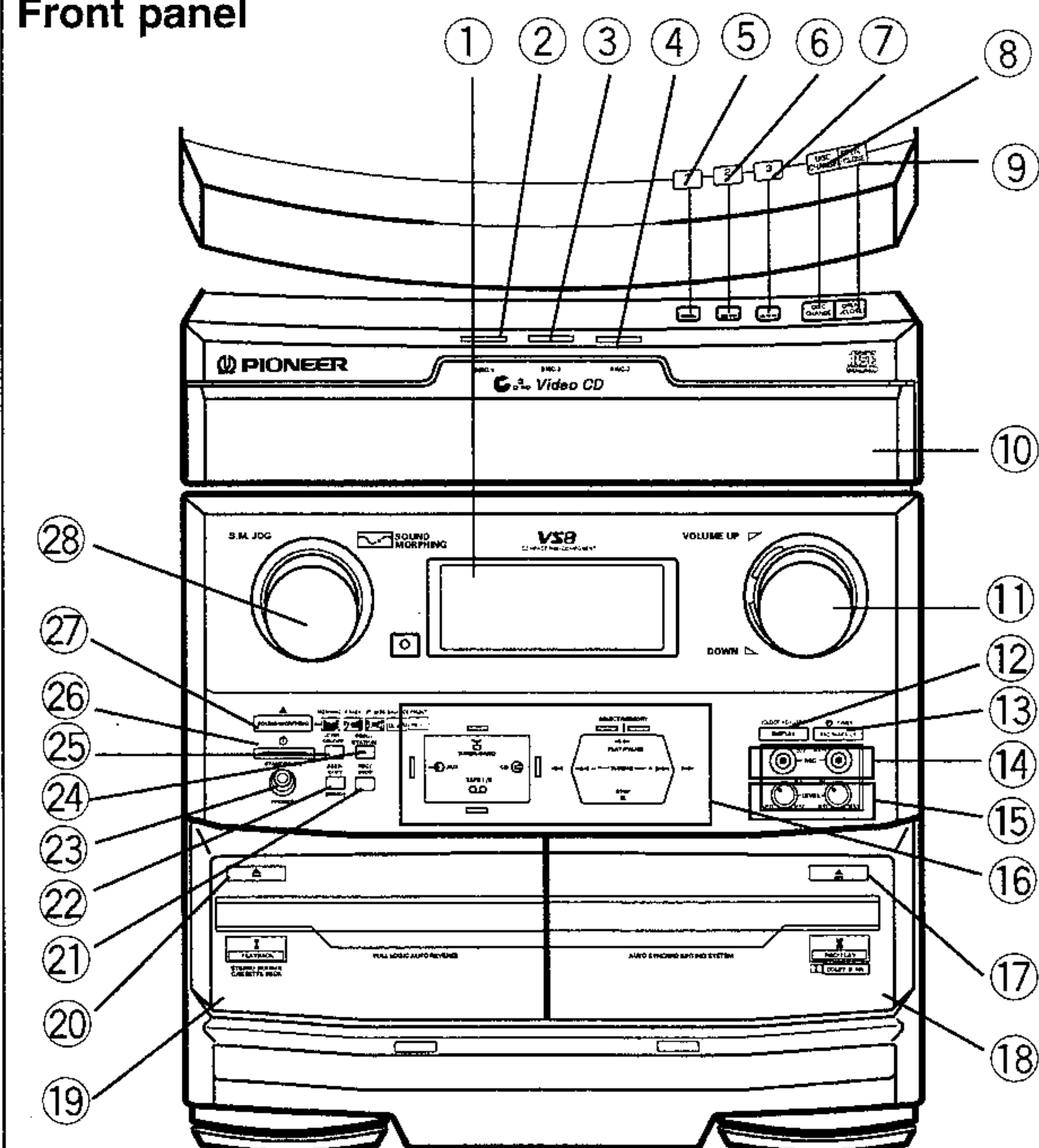


7.3.4 CASSETTE DECK BLOCK (AF ASSY)

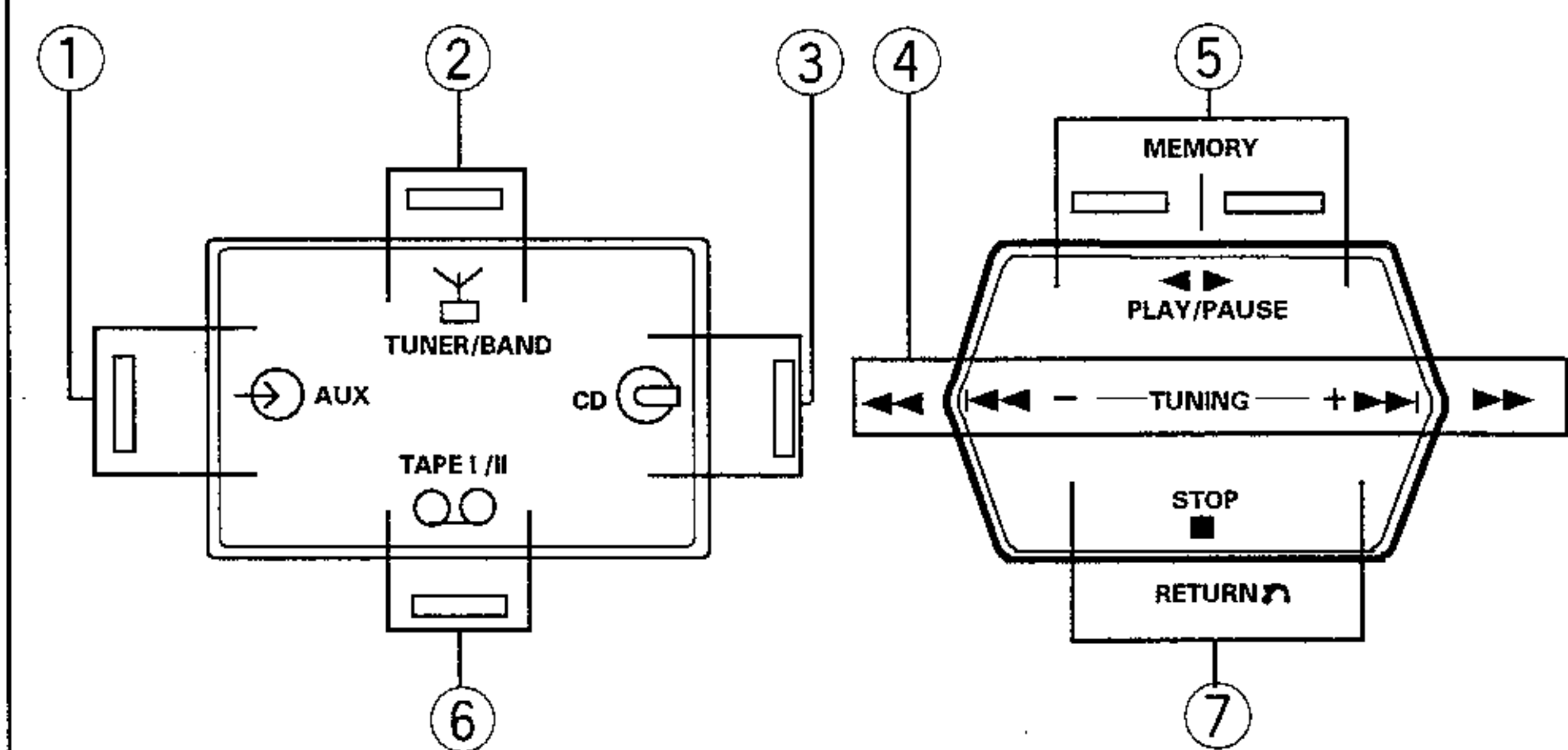


8. PANEL FACILITIES AND SPECIFICATIONS

The illustration shows XR-VS8
Front panel



Function button section



- ① **AUX function button and indicator**
- ② **TUNER/BAND function button and indicator**
- ③ **CD function button and indicator**
- ④ **TUNING [◀◀, ◀◀ (-), (+) ▶▶, ▶▶] buttons**
- ⑤ **PLAY/PAUSE MEMORY button and indicator (◀▶)**
- ⑥ **TAPE (I/II) function button and indicator**
- ⑦ **STOP/RETURN button (■/↺)**

- **Roles of the common operation buttons (The rules of the buttons vary depending on the input functions as shown below.)**

During CD input

- PLAY/PAUSE: Play/pause button
 STOP/RETURN: Stop button/RETURN for VCD playback.
 (+) ▶▶, ▶▶: Fast forward/track search button
 ◀◀, ◀◀ (-): Fast reverse/track search button

During cassette deck input

- PLAY/PAUSE: Play button/Tape transport direction
 STOP: Stop button
 (+) ▶▶, ▶▶: Fast forward button/Music search button
 ◀◀, ◀◀ (-): Rewind button/Music search button

- ① **Display**
- ② **DISC-1 indicator**
- ③ **DISC-2 indicator**
- ④ **DISC-3 indicator**
- ⑤ **DISC 1 select button**
- ⑥ **DISC 2 select button**
- ⑦ **DISC 3 select button**
- ⑧ **DISC CHANGE button**
- ⑨ **OPEN/CLOSE button**
- ⑩ **CD disc tray**
- ⑪ **Volume control (VOLUME)**
- ⑫ **DISPLAY(CLOCK ADJUST) button**
- ⑬ **TIMER REC/WAKE-UP button**
- ⑭ **MIC jack**
- ⑮ **MIC LEVEL & ECHO LEVEL control**
- ⑯ **Function buttons & common OPERATION buttons**
- ⑰ **TAPE II Eject button (▲)**
- ⑱ **TAPE II cassette door**
- ⑲ **TAPE I cassette door**
- ⑳ **TAPE I Eject button (▲)**
- ㉑ **REC/STOP button**
- ㉒ **ASES/COPY (DEMO) button**
- ㉓ **PHONES jack (Headphones)**
- ㉔ **FREQ/STATION button**
- ㉕ **DOLBY NR ON/OFF button**
 Each time this button is pressed, DOLBY NR system turns ON and OFF.
- ㉖ **STANDBY/ON Switch**
 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.
- ㉗ **SOUND MORPHING buttons**
- ㉘ **SOUND MORPHING jog**

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

During tuner operation

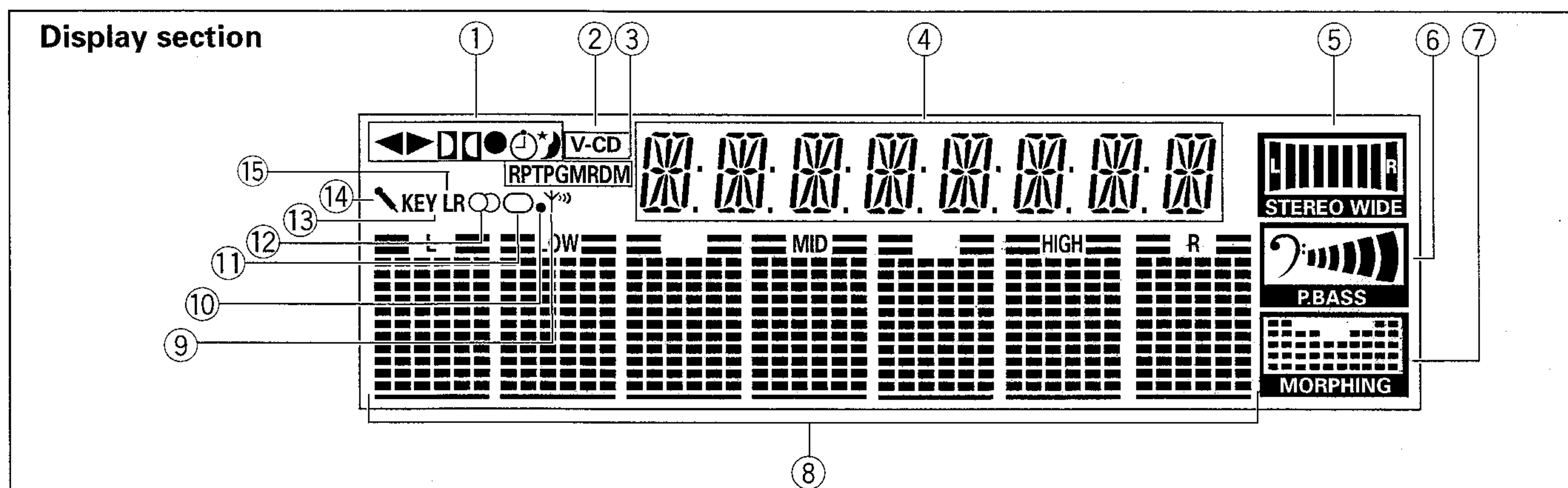
- (+) ▶▶, ▶▶: Frequency & Station + (up) button
 ◀◀, ◀◀ (-): Frequency & Station - (down) button
 MEMORY: Station Memory button

■ Auto Function

This model is equipped with an "Auto Function" operation, so when the function button for CD, TAPE, AUX, TUNER/BAND (BAND with the remote control unit) or PLAY/PAUSE is pressed, the function switches automatically. Use the AUX function button on the remote control unit to select the component connected to the AUX-IN jacks, since the Auto Function is not effective for this.

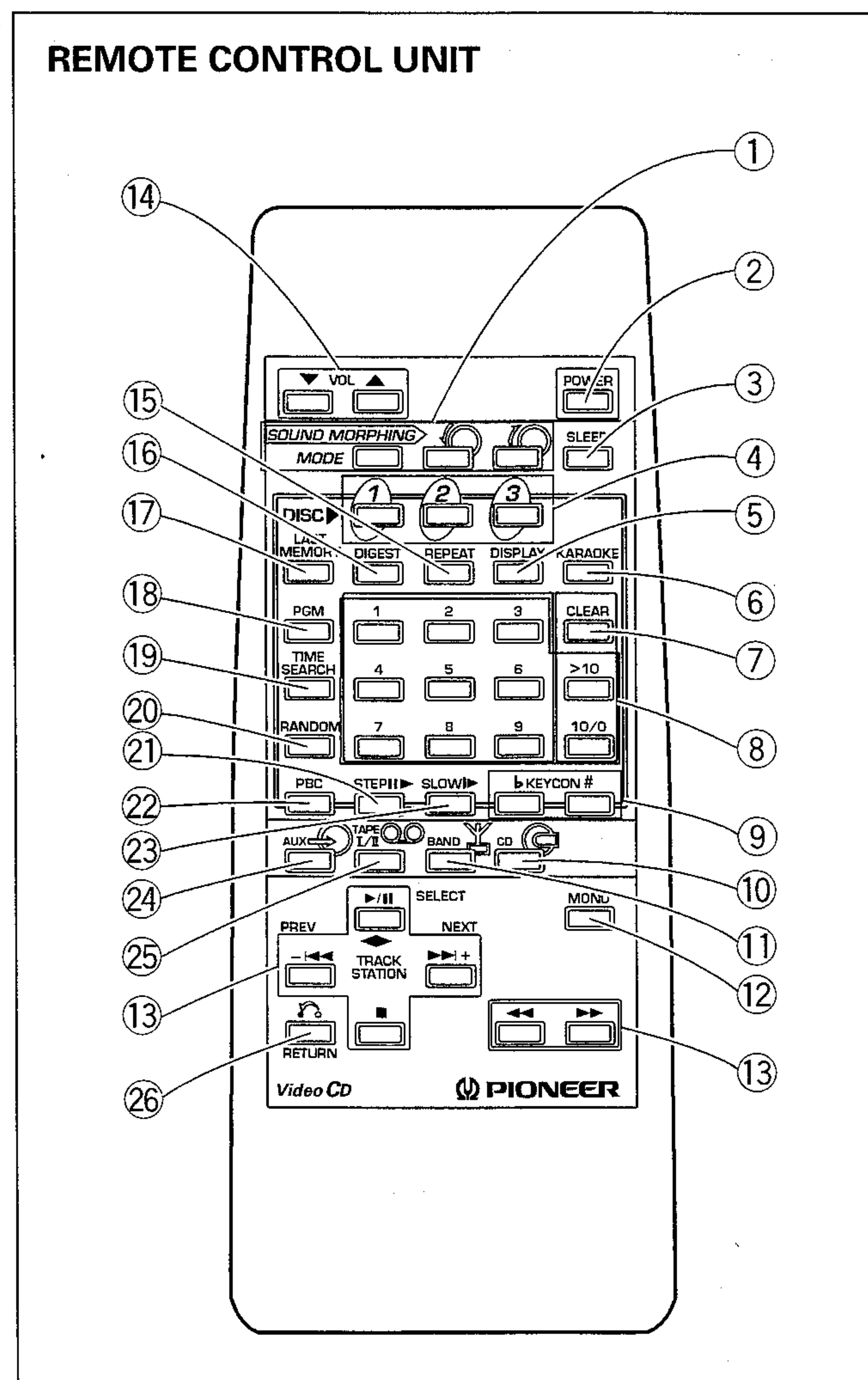
NOTE:

The function cannot be switched during recording and tape copying.



- ① ◀▶ Lights to indicate the recording direction of the cassette deck II.
 □□ Lights when Dolby* NR is ON
 ● Lights during recording on a cassette deck.
 ⌚ Lights when the timer function is activated
 ★ Lights when the sleep time is activated.
- ② Lights during VCD playback.
- ③ RPT.... Lights when the REPEAT button of the remote control unit pressed.
 PGM... Lights when the PGM button of the remote control unit pressed.
 RDM... Lights when the RANDOM button of the remote control unit pressed.

- ④ Displays the frequency and major operating modes.
 ⑤ Lights when ST. WIDE is set.
 ⑥ Lights when P. BASS is set.
 ⑦ Lights when MORPHING is set.
 ⑧ Displays the level meter or spectrum analyzer.
 ⑨ Lights during radio reception.
 ⑩ Lights when the beat cut function is used.
 ⑪ Lights when the MONO button of the remote control unit is pressed.
 ⑫ Lights during FM stereo reception.
 ⑬ Lights during key control operation.
 ⑭ Lights when karaoke mode.
 ⑮ Displays the audio mode.



- ① SOUND MORPHING MODE buttons & SOUND MORPHING JOG control button
 ② POWER button
 ③ SLEEP timer button
 ④ DISC select button (1-3)
 ⑤ DISPLAY button
 ⑥ KARAOKE button
 ⑦ CLEAR button
 ⑧ Number button
 ⑨ KEYCON (b, #) button
 ⑩ CD function button
 ⑪ BAND button
 Use to switch between FM and AM bands.
 FM ←
 → AM
- ⑫ MONO button
 ⑬ CD/TAPE/STATION (up,down) operation buttons
 ● CD operation buttons
 (Play/Pause II/▶, Track search ◀◀▶▶, Stop ■)
 ● TAPE operation buttons
 (Play ◀▶, Music Search ◀◀▶▶, Stop ■, Fast ◀◀▶▶)
 ● TUNER operation buttons
 + ... Stations change in order in the upward direction.
 - ... Stations change in order in the downward direction.
 ◀◀...Frequency down
 ▶▶...Frequency up
- ⑭ VOLUME ▲ (up), ▼ (down) button
 ⑮ REPEAT button
 ⑯ DIGEST button
 ⑰ LAST MEMORY button
 ⑱ PGM button
 ⑲ TIME SEARCH button
 ⑳ RANDOM button
 ㉑ STEP II▶ button
 ㉒ PBC button
 ㉓ SLOW▶ button
 ㉔ AUX function button
 ㉕ TAPE (I/II) function button
 ㉖ RETURN button

XR-VS8

STEREO CD/VCD CASSETTE DECK RECEIVER

Amplifier section

<XR-VS8>

[FRONT]

Continuous Power Output (RMS) 70 W + 70 W
(1 kHz, T.H.D. 10%, 6 Ω)

● Above specifications are for when power supply is 230 V.

FM/AM Tuner section

FM tuner section

Frequency Range 87.5 MHz to 108 MHz
Antenna input 75 Ω unbalanced

AM tuner section

Frequency Range
With 9 kHz step 531 kHz to 1,602kHz
With 10 kHz step 530 kHz to 1,700 kHz
Antenna Loop antenna

Miscellaneous

Power Requirements AC 110 – 127, 220 – 230, 240 V
50/60 Hz (DD, D/DF model only)
AC 110 – 120, 220 – 230, 240 V
50/60 Hz (DL model only)
Power Consumption 125 W

CD section

Type Compact disc digital audio system
Wow and Flutter Limit of measurement
(± 0.001 % W.PEAK) or less (EIAJ)

Cassette deck section

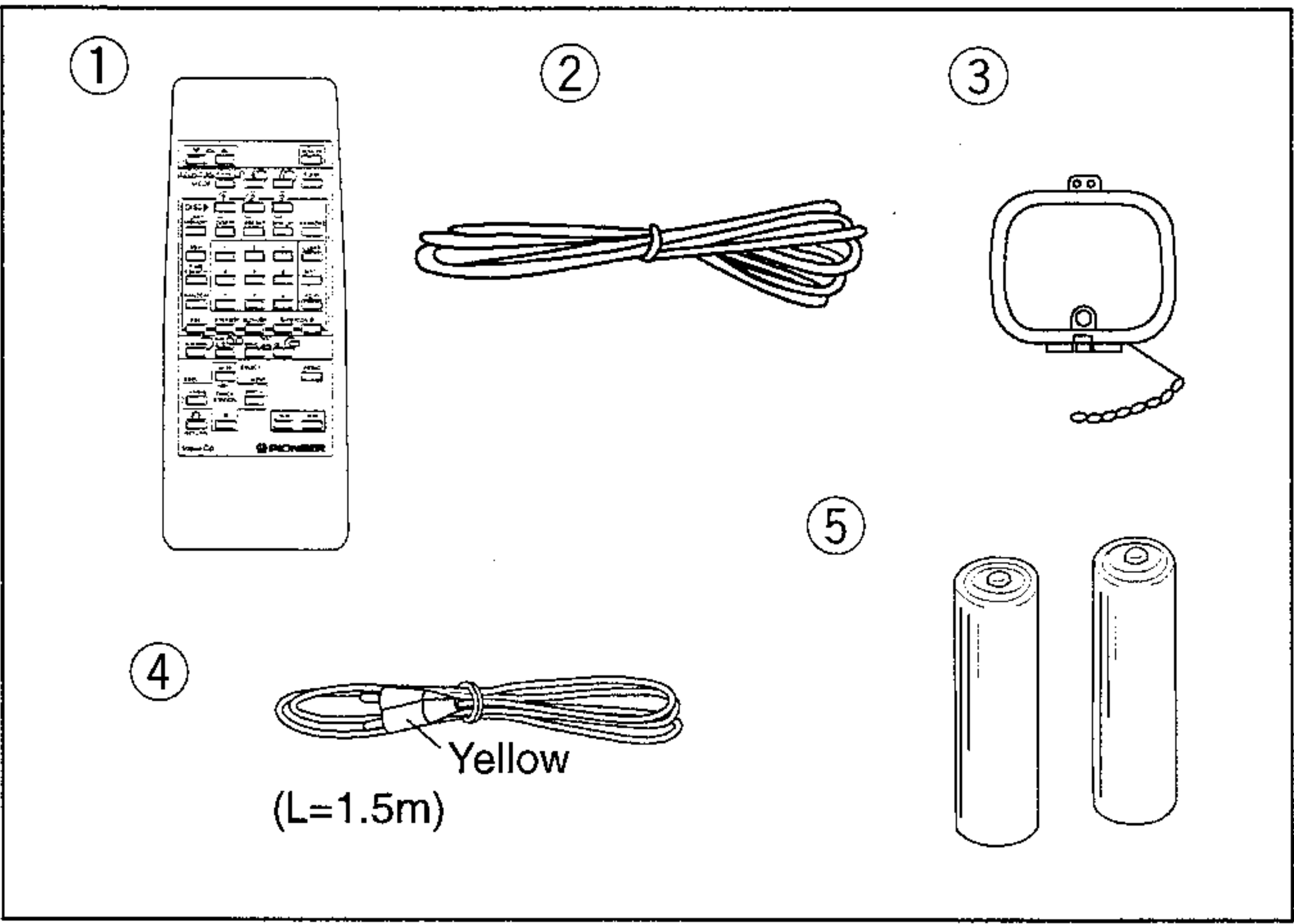
Systems 4 track, 2-channel stereo
Heads Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor DC servo motor x 1
Tape type TYPE I (Normal) tape
Dimensions 270 (W) x 310 (H) x 344 (D) mm
Weight (without package) 7.6 kg

Accessories

Operating instructions 1
Remote control unit 1
FM antenna 1
AM loop antenna 1
Size AA/R6P dry cell batteries 2
Video cord 1

NOTE:

Specifications and design subject to possible modification without notice due to improvement.



- ① Remote control unit x 1 : AZN7699 (CU-XR043)
② FM antenna x 1 : ADH7004
③ AM loop antenna x 1 : ATB7007
④ Video cord : VDE1036 (D/DF type)
VDE1034 (DDXJ, DLXJ/NC and DAMXJ)
⑤ AA/R6P dry cell batteries x 2