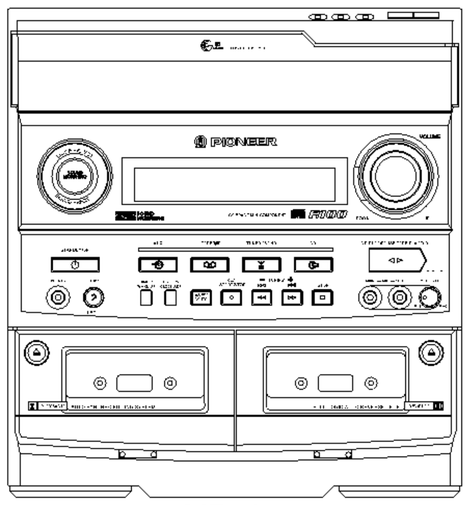
Service Manual

PIONEER®

The Art of Entertainment



● XR-A100

ORDER NO.
RRV1865

STEREO CD CASSETTE DECK RECEIVER

XR-A200
XR-A100

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–A200	XR–A100		
DDXJ	O	–	AC110–127V/220–230V/240V	With the voltage selector
DLXJ/NC	O	–	AC110–127V/220–230V/240V	With the voltage selector
DXJ/NC	O	–	AC110–127V/220–230V/240V	With the voltage selector
RDXJ	–	O	AC110–127V/220–240V	With the voltage selector
RLXJ/NC	–	O	AC110–127V/220–240V	With the voltage selector
RXJ/NC	–	O	AC110–127V/220–240V	With the voltage selector

CONTENTS

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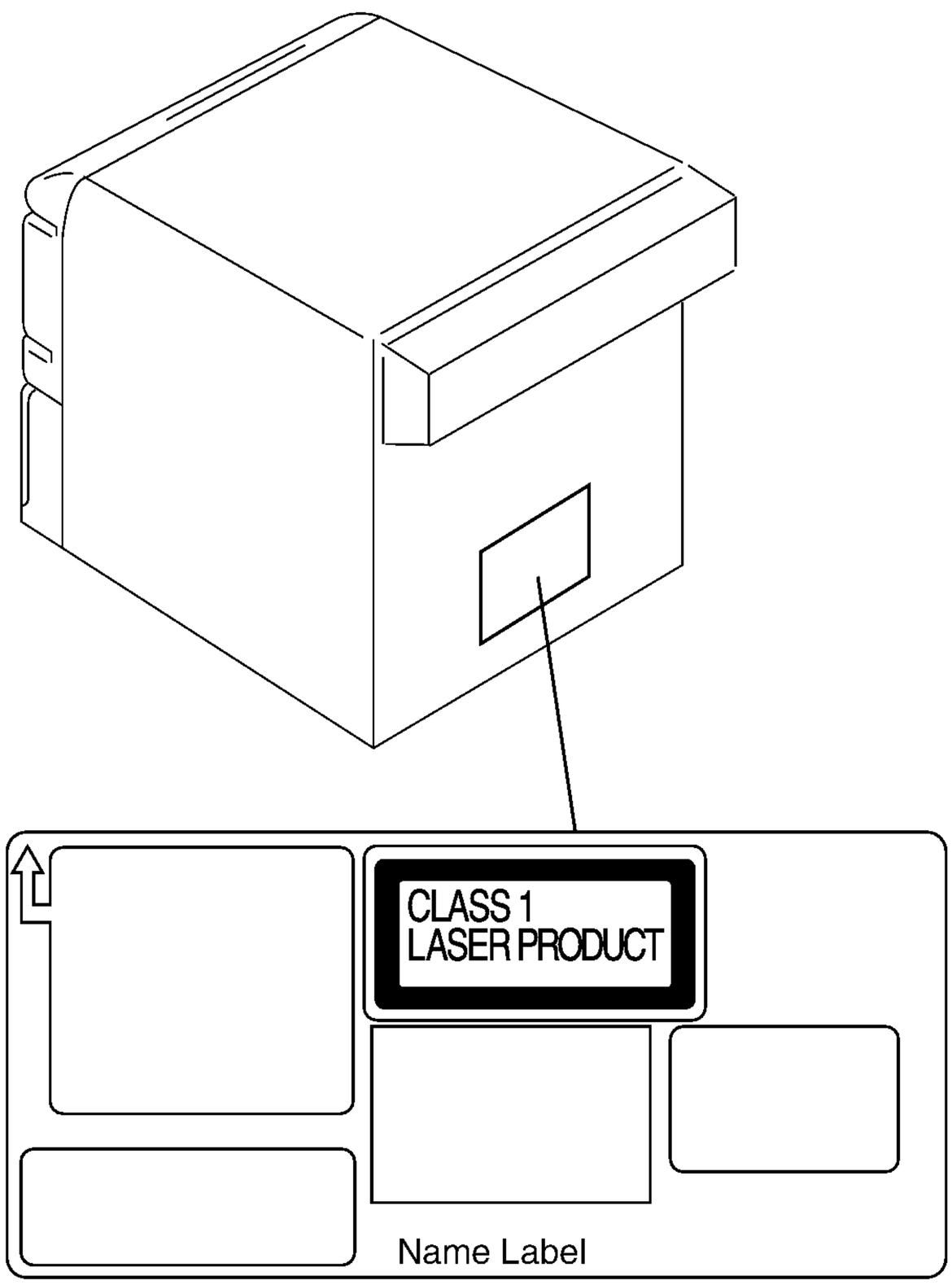
T - IZK OCT. 1997 Printed in Belgium

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 and RLXJ/NC types)



XAX3016 : DLXJ/NC Type
XAX3004 : RLXJ/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 deliberatery.
   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).

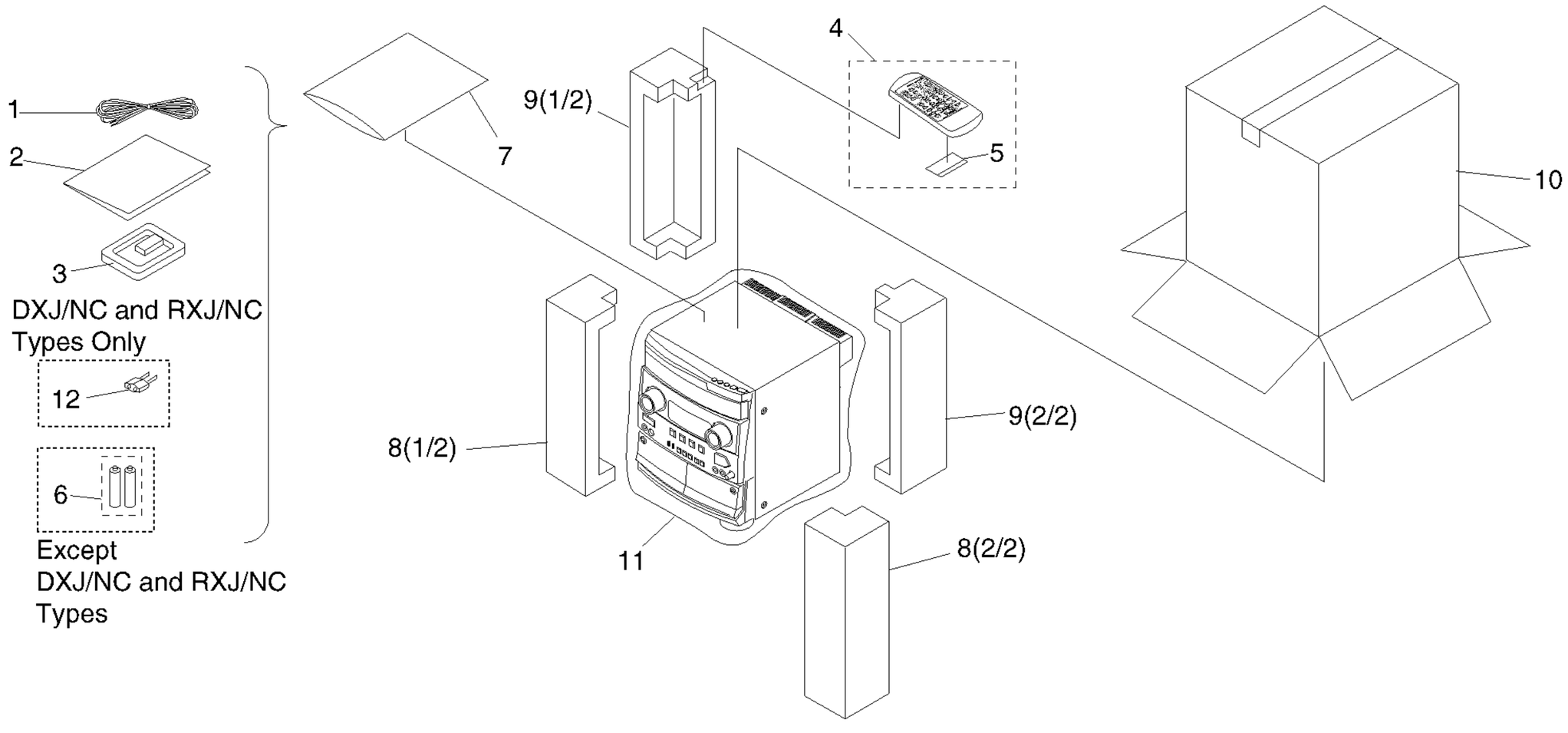
2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to page 54.

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 ⚠ 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 ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PACKING PARTS LIST

Mark	No.	Description	Part No.
	1	FM Antenna	ADH7004
	2	Operating Instructions	See Contrast table (2)
	3	AM Loop Antenna	XTB3001
	4	Remote Control Unit (CU-XR039)	XZN3003
	5	Battery Cover	AZA7204
NSP	6	Dry Cell Battery (R6P, AA)	See Contrast table (2)
	7	Polyethylene Bag (0.03 × 230 × 340)	Z21-038
	8	F Protector	XHA3001
	9	R Protector	XHA3002
	10	Packing Case	See Contrast table (2)
	11	Packing Sheet	AHG7003
⚠	12	Power-cord Plug Conversion Adapter	See Contrast table (2)

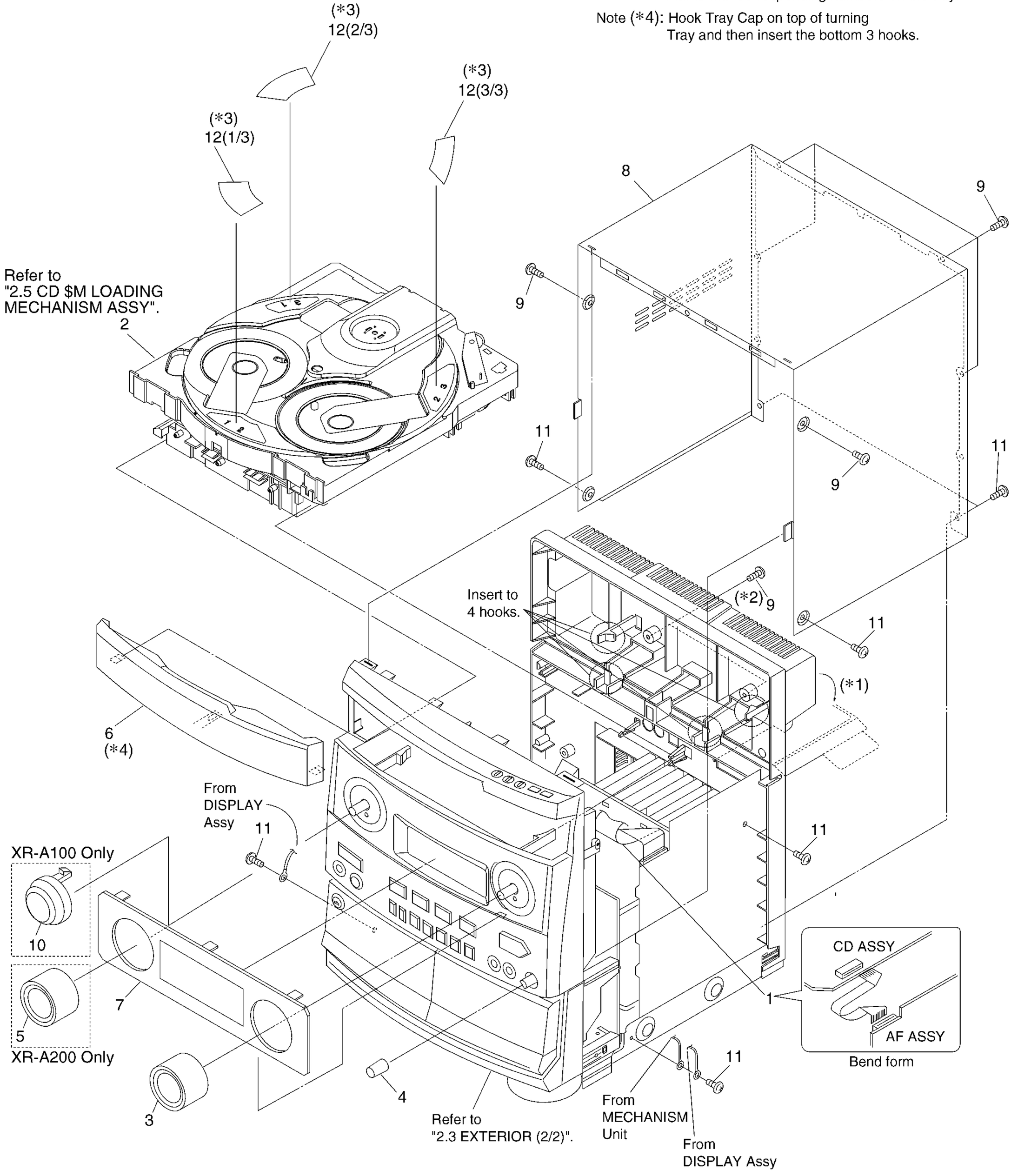
(2) CONTRAST TABLE

XR-A200/DDXJ, DLXJ/NC, DXJ/NC, XR-A100/RDXJ, RLXJ/NC and RXJ/NC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.						Remarks
			XR-A200 /DDXJ	XR-A200 /DLXJ/NC	XR-A200 /DXJ/NC	XR-A100 /RDXJ	XR-A100 /RLXJ/NC	XR-A100 /RXJ/NC	
	2	Operating Instructions (English/Spanish/Portuguese)	Not used	Not used	XRE3003	Not used	Not used	XRE3003	
	2	Operating Instructions (English/Spanish/Chinese)	XRE3004	Not used	Not used	XRE3004	Not used	Not used	
	2	Operating Instructions (English/Russian/Chinese)	Not used	XRE3002	Not used	Not used	XRE3002	Not used	
NSP	6	Dry Cell Battery (R6P, AA)	VEM-013	VEM-013	Not used	VEM-013	VEM-013	Not used	
	10	Packing Case	XHD3016	XHD3014	XHD3014	XHD3006	XHD3004	XHD3004	
⚠	12	Power-cord Plug Conversion Adapter	Not used	Not used	VKX1007	Not used	Not used	VKX1007	

2.2 EXTERIOR (1/2)

Note (*1): Bend the Rear Cover when insert Mechanism Assy.
Note (*2): ▼ mark, there is no indication on the hood installation screws of the Rear Cover.
Note (*3): Attach the stickers according to the engraved marks with corresponding numbers on the tray.
Note (*4): Hook Tray Cap on top of turning Tray and then insert the bottom 3 hooks.



(1) EXTERIOR (1/2) PARTS LIST

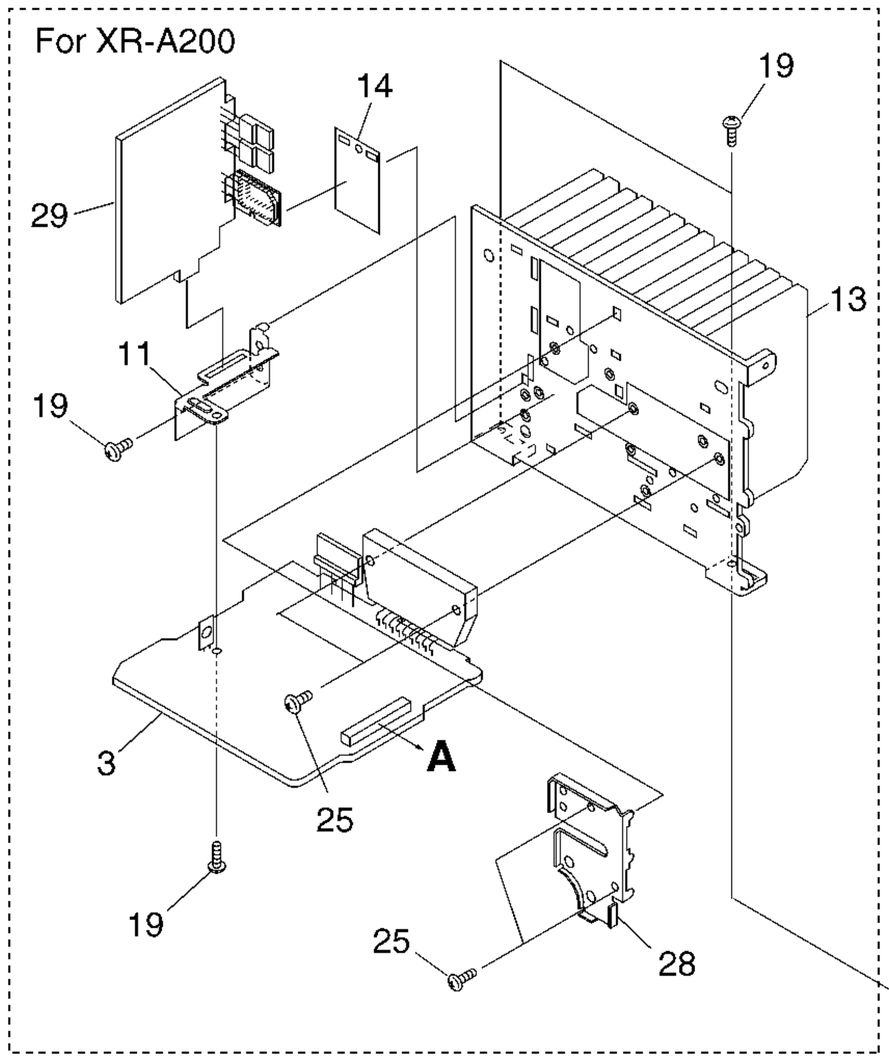
Mark	No.	Description	Part No.
	1	20P F.F.C/30V	ADD7041
NSP	2	CD $M Loading Mechanism Assy	XXA3002
	3	Volume Knob	XAA3003
	4	Mic Knob	XAB3001
	5	S.C Knob	See Contrast table (2)
	6	Tray Cap	See Contrast table (2)
	7	Display Panel	See Contrast table (2)
	8	Bonnet Case	XZN3001
	9	Screw	BPZ30P100FZK
	10	S.C Button	See Contrast table (2)
	11	Screw	VBZ30P080FZK
	12	Disc Label	XAX3046

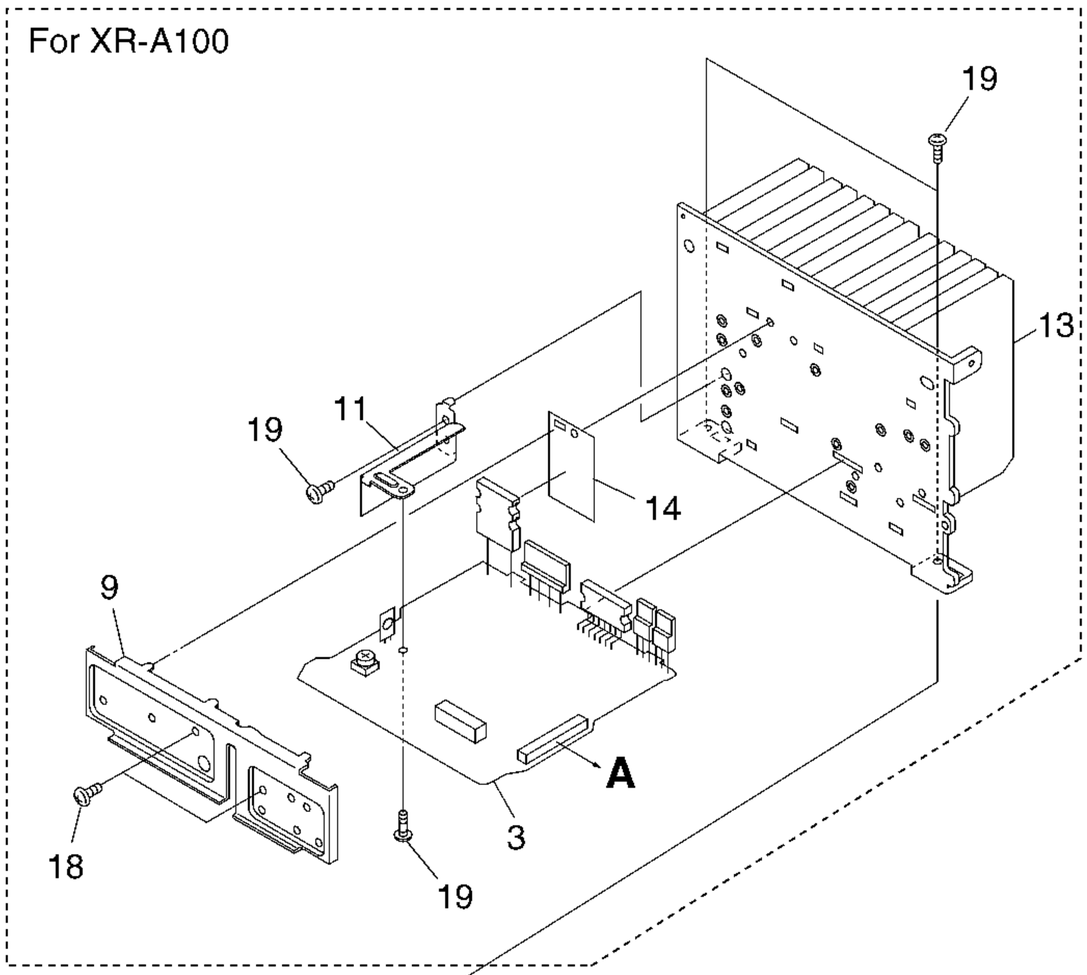
(2) CONTRAST TABLE

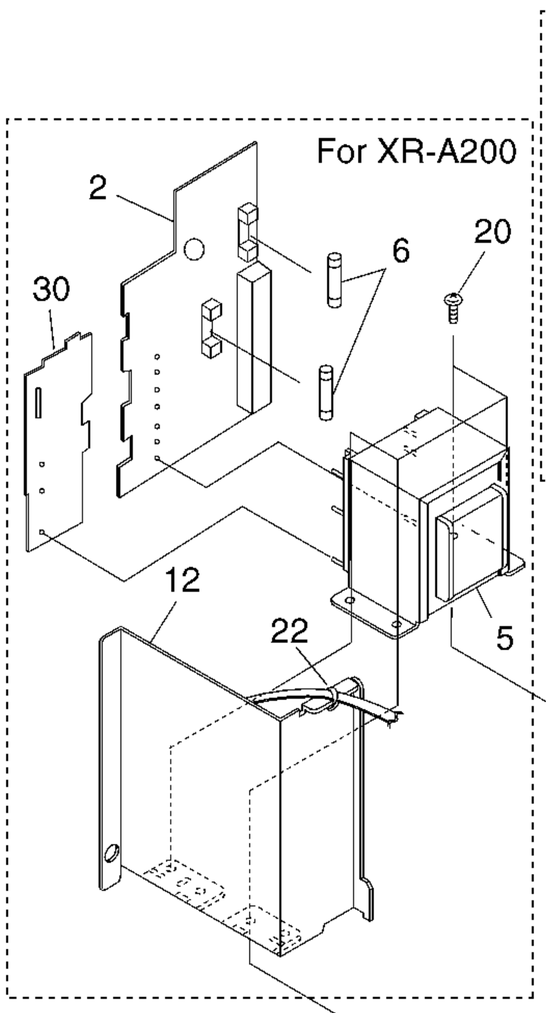
XR-A200/DDXJ, DLXJ/NC, DXJ/NC, XR-A100/RDXJ, RLXJ/NC and RXJ/NC are constructed the same except for the following :

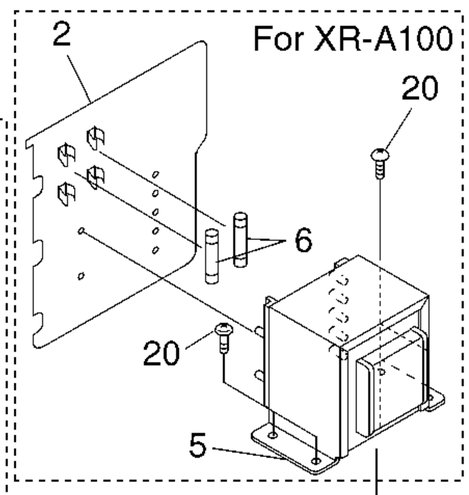
Mark	No.	Symbol and Description	Part No.						Remarks
			XR-A200 /DDXJ	XR-A200 /DLXJ/NC	XR-A200 /DXJ/NC	XR-A100 /RDXJ	XR-A100 /RLXJ/NC	XR-A100 /RXJ/NC	
	5	S.C Knob	XAA3004	XAA3004	XAA3004	Not used	Not used	Not used	
	6	Tray Cap	XAK3009	XAK3009	XAK3009	XAK3008	XAK3008	XAK3008	
	7	Display Panel	XAK3004	XAK3004	XAK3004	XAK3003	XAK3003	XAK3003	
	10	S.C Button	Not used	Not used	Not used	XAD3003	XAD3003	XAD3003	

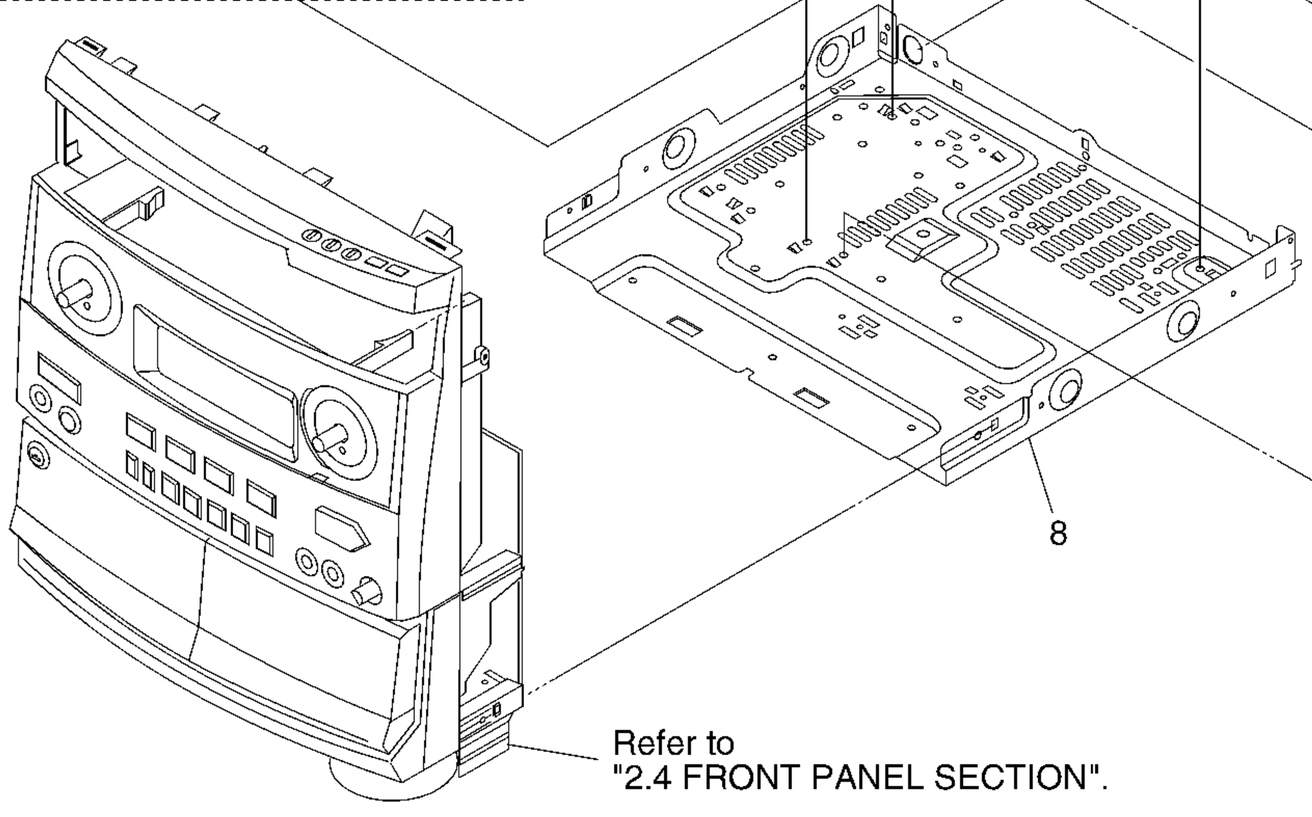
2.3 EXTERIOR (2/2)

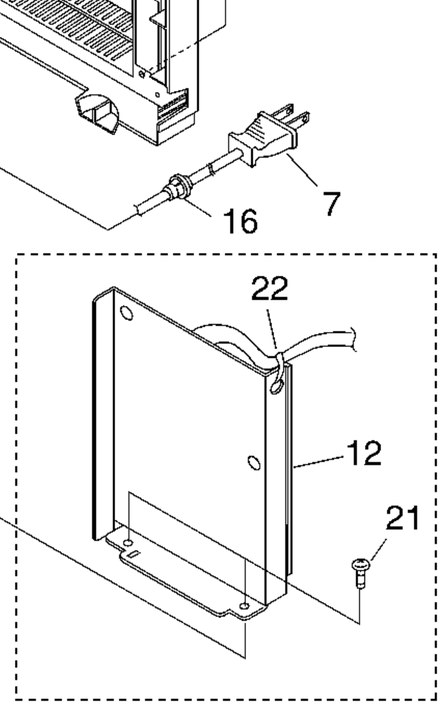












(1) EXTERIOR (2/2) PARTS LIST

Mark	No.	Description	Part No.
	1	AF Assy	See Contrast table (2)
	2	TRANS Assy	See Contrast table (2)
	3	POWER Assy	See Contrast table (2)
	4	FM/AM TUNER MODULE	AXQ7061
⚠	5	T1 Power Transformer	See Contrast table (2)
⚠	6	FU1, FU2 Fuse	See Contrast table (2)
⚠	7	AC Power Cord	See Contrast table (2)
NSP	8	Chassis	ANA7051
	9	Bracket A	See Contrast table (2)
	10	GND Plate	ANG7106
	11	Bracket B	ANG7107
	12	Shield Plate	See Contrast table (2)
	13	Heat Sink	See Contrast table (2)
	14	Mica Sheet	AEE7015
	15	Rear Cover	AMC7001
	16	Strain Relief	CM-22B
	17	Barrier	See Contrast table (2)
	18	Screw	BBZ30P120FMC
	19	Screw	VBZ30P080FZK
	20	Screw	ABA7031
	21	Screw	BCZ40P060FZK
	22	Binder	ZCA-SKB90BK
	23	• • • • •	
	24	Screw	BPZ30P100FZK
	25	Screw	BBZ30P160FMC
NSP	26	Name Label	See Contrast table (2)
	27	Voltage Label	See Contrast table (2)
	28	Bracket C	See Contrast table (2)
	29	POWER Assy 2	See Contrast table (2)
	30	TRANS 2 Assy	See Contrast table (2)
	31	PVC Barrier	See Contrast table (2)

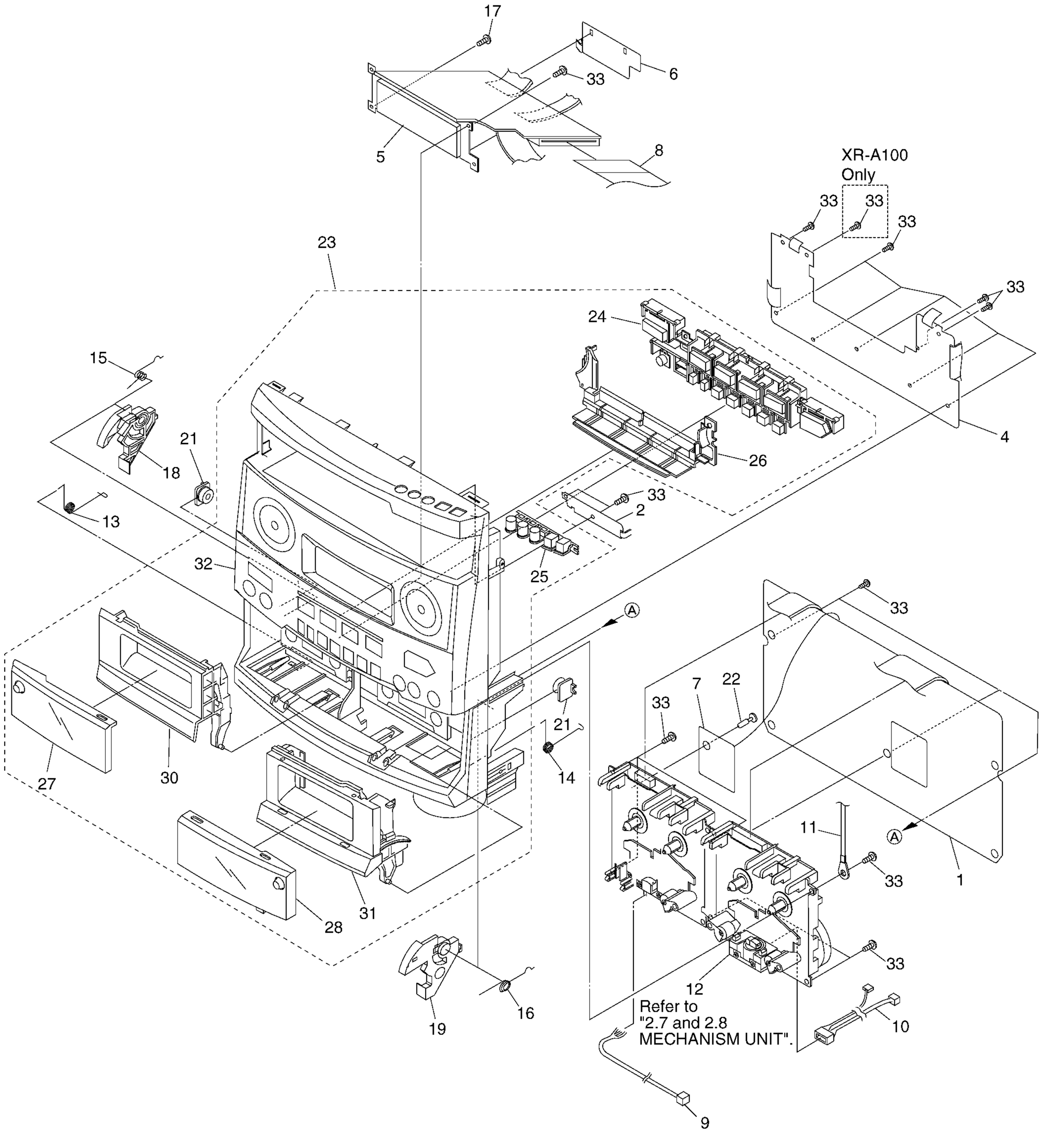
Note: The GND Plate (No.10) will tend to come off once it is removed, as the plate is fit with light pressure. If you have to remove the plate, secure it onto the Rear Cover with adhesive tape for reinstallation.

(2) CONTRAST TABLE

XR-A200/DDXJ, DLXJ/NC, DXJ/NC, XR-A100/RDXJ, RLXJ/NC and RXJ/NC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.						Remarks
			XR-A200 /DDXJ	XR-A200 /DLXJ/NC	XR-A200 /DXJ/NC	XR-A100 /RDXJ	XR-A100 /RLXJ/NC	XR-A100 /RXJ/NC	
	1	AF Assy	XWM3011	XWM3011	XWM3011	XWM3001	XWM3001	XWM3001	
	2	TRANS Assy	XWZ3021	XWZ3021	XWZ3021	AWZ8533	AWZ8533	AWZ8533	
	3	POWER Assy	XWZ3011	XWZ3011	XWZ3011	AWZ8534	AWZ8534	AWZ8534	
⚠	5	T1 Power Transformer (AC110-127V/220-230V/240V)	XTS3001	XTS3001	XTS3001	Not used	Not used	Not used	
⚠	5	T1 Power Transformer (AC110-127V/220-240V)	Not used	Not used	Not used	ATS7139	ATS7139	ATS7139	
⚠	6	FU1, FU2 Fuse (1.25A)	REK1023	REK1023	REK1023	Not used	Not used	Not used	
⚠	6	FU1, FU2 Fuse (1.0A)	Not used	Not used	Not used	REK1022	REK1022	REK1022	
⚠	7	AC Power Cord	ADG1157	PDG1058	PDG1058	ADG1157	PDG1058	PDG1058	
	9	Bracket A	Not used	Not used	Not used	ANG7100	ANG7100	ANG7100	
	12	Shield Plate	ANG7132	ANG7132	ANG7132	ANG7118	ANG7118	ANG7118	
	13	Heat Sink	ANH7063	ANH7063	ANH7063	ANH7059	ANH7059	ANH7059	
	17	Barrier	Not used	Not used	Not used	ANK7029	ANK7029	ANK7029	
NSP	26	Name Label	XAX3018	XAX3016	XAX3017	XAX3006	XAX3004	XAX3005	
	27	Voltage Label	AAX7391	AAX7391	AAX7391	Not used	Not used	Not used	
	28	Bracket C	ANG7127	ANG7127	ANG7127	Not used	Not used	Not used	
	29	POWER Assy 2	XWZ3012	XWZ3012	XWZ3012	Not used	Not used	Not used	
	30	TRANS 2 Assy	XWZ3022	XWZ3022	XWZ3022	Not used	Not used	Not used	
	31	PVC Barrier	AEC7074	AEC7074	AEC7074	Not used	Not used	Not used	

2.4 FRONT PANEL SECTION



(1) FRONT PANEL SECTION PARTS LIST

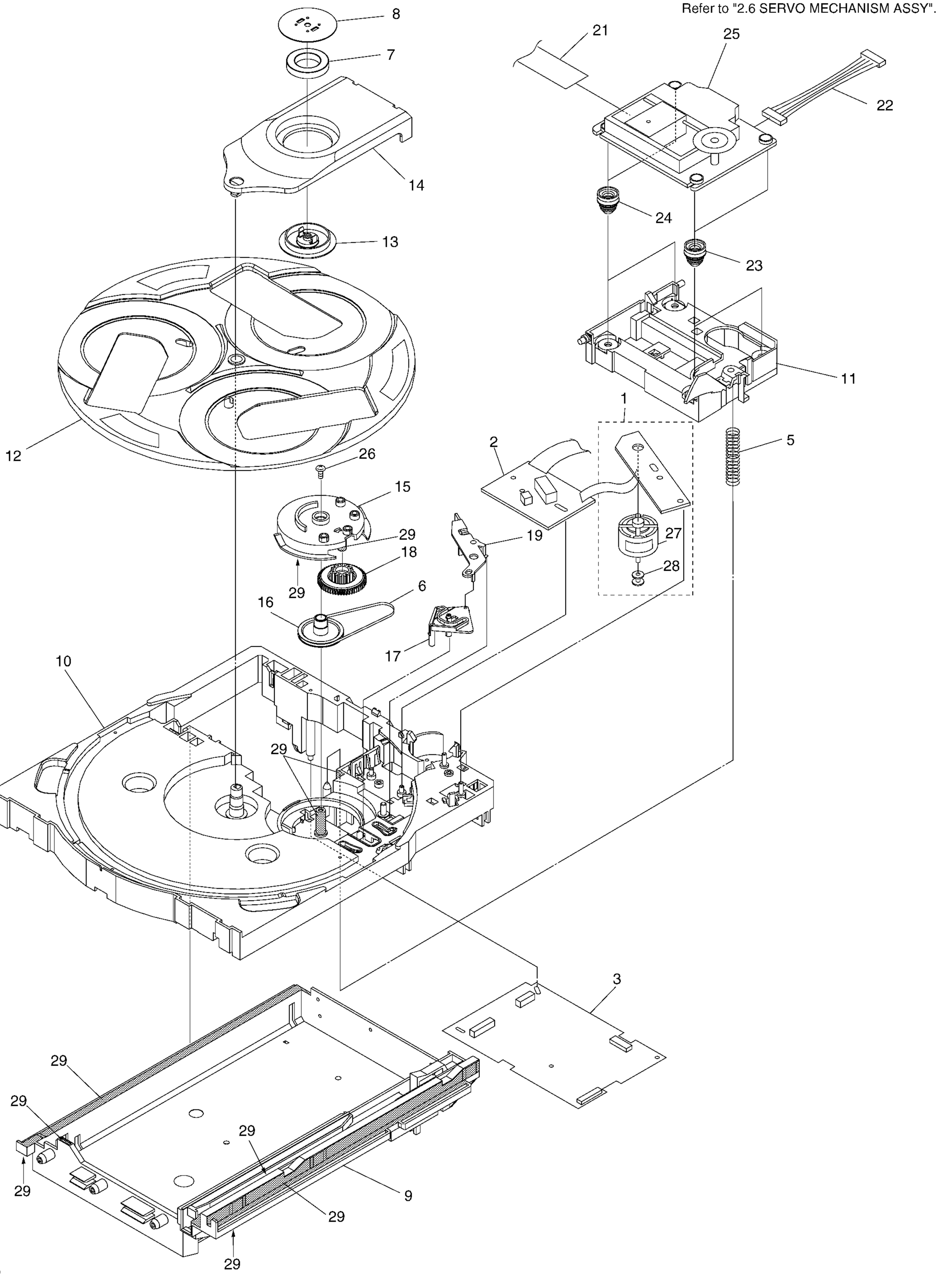
Mark	No.	Description	Part No.
	1	DECK Assy	XWZ3002
	2	CD SW Assy	XWZ3004
	3	•••••	
	4	DISPLAY Assy	See Contrast table (2)
	5	LCD Assy	See Contrast table (2)
	6	LAMP Assy	See Contrast table (2)
NSP	7	SHIELD Assy	XWZ3005
	8	Flexible Cable 40P20	ADD7059
	9	Connector Assy 3P	ADE7011
	10	Connector Assy 5P	ADE7012
NSP	11	Cord With Plug	DE015VE0
	12	Mechanism Unit	XYM3001
	13	Door Spring L	ABH7128
	14	Door Spring R	ABH7129
	15	Latch Spring L	ABH7130
	16	Latch Spring R	ABH7131
	17	Screw	BPZ30P100FZK
	18	Latch Mold L	AMR7128
	19	Latch Mold R	AMR7129
	20	•••••	
	21	Damper Assy	AXA7052
	22	Push Rivet	AEC7071
NSP	23	Front Panel Assy	See Contrast table (2)
	24	Function Button	XAD3001
	25	CD Button	XAD3002
	26	LT Conductor	XAK3001
	27	Door Window L	XAK3014
	28	Door Window R	XAK3015
	29	•••••	
	30	Door Pocket L	XAN3001
	31	Door Pocket R	XAN3002
	32	Front Panel	See Contrast table (2)
	33	Screw	BPZ30P080FMC

(2) CONTRAST TABLE

XR-A200/DDXJ, DLXJ/NC, DXJ/NC, XR-A100/RDXJ, RLXJ/NC and RXJ/NC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.						Remarks
			XR-A200 /DDXJ	XR-A200 /DLXJ/NC	XR-A200 /DXJ/NC	XR-A100 /RDXJ	XR-A100 /RLXJ/NC	XR-A100 /RXJ/NC	
	4	DISPLAY Assy	XWZ3023	XWZ3023	XWZ3023	XWZ3001	XWZ3001	XWZ3001	
	5	LCD Assy	XWZ3025	XWZ3025	XWZ3025	XWZ3006	XWZ3006	XWZ3006	
	6	LAMP Assy	XWZ3024	XWZ3024	XWZ3024	XWZ3008	XWZ3008	XWZ3008	
NSP	23	Front Panel Assy	XXG3003	XXG3003	XXG3003	XXG3002	XXG3002	XXG3002	
	32	Front Panel	XMB3003	XMB3003	XMB3003	XMB3002	XMB3002	XMB3002	

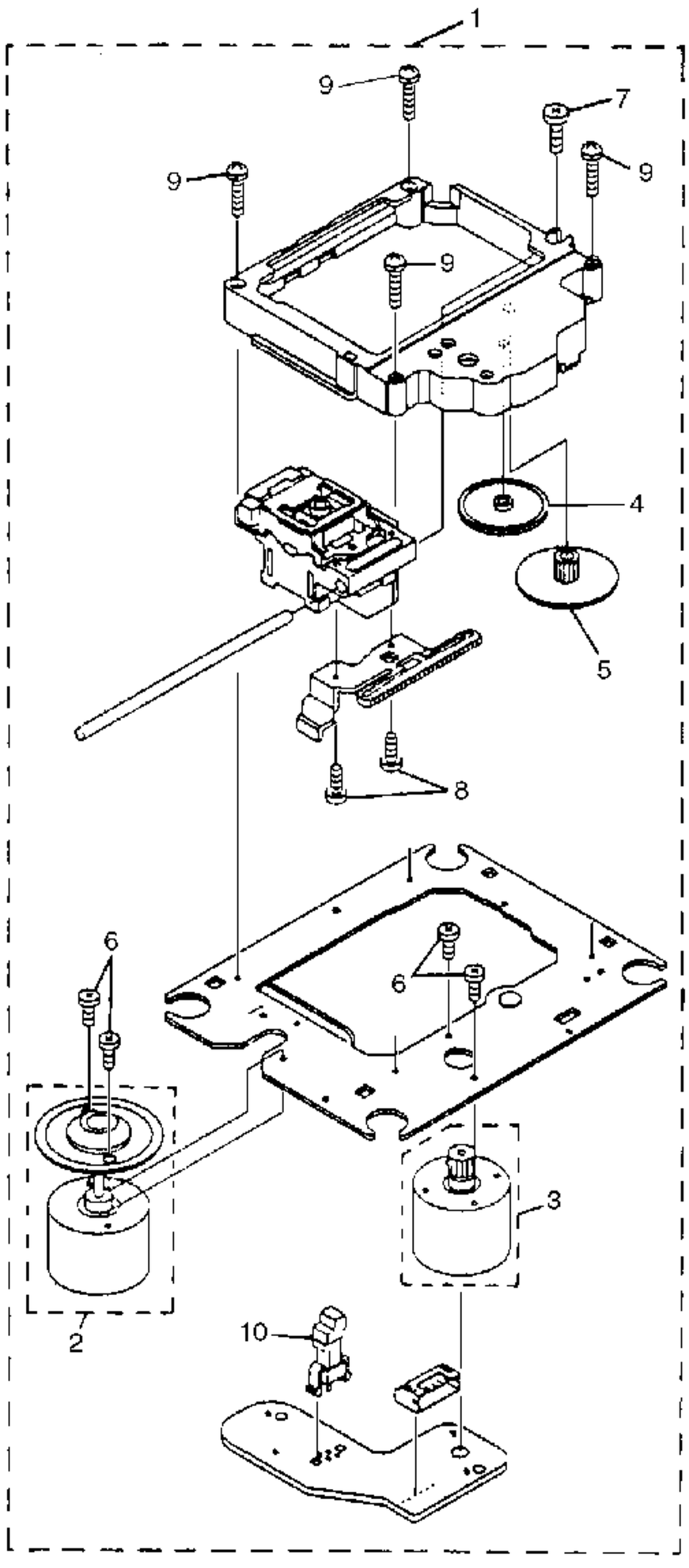
2.5 CD $M LOADING MECHANISM ASSY



● CD $M LOADING MECHANISM ASSY PARTS LIST

Mark	No.	Description	Part No.
	1	MOTOR Assy	AWZ8428
NSP	2	SW Assy	AWZ8429
	3	CD Assy	AWZ8427
	4	•••••	
	5	Servo Spring	ABH7126
	6	Belt	AEB7072
	7	Clamp Magnet	AMF7001
	8	Yoke	ANB7067
	9	Mecha Base	ANW7087
	10	Loading Tray	ANW7088
	11	Servo Base	ANW7089
	12	Rotary Tray	ANW7113
	13	Clamper	ANW7091
	14	Clamper Holder	ANW7092
	15	Main Cam	ANW7093
	16	Gear Pully	ANW7094
	17	Lock Lever	ANW7095
	18	Planet Gear	ANW7096
	19	Actuater	ANW7097
	20	•••••	
	21	15P F.F.C/30V	ADD7038
	22	Connector Assy (6P)	ADE7010
	23	Float Rubber A	AEB7063
	24	Float Rubber B	AEB7066
	25	Servo Mechanism Assy	AXA7039
	26	Screw	IPZ30P080FMC
	27	Carriage Motor	VXM1033
	28	Motor Pulley	PNW1634
	29	Ha Narl	GEM1016

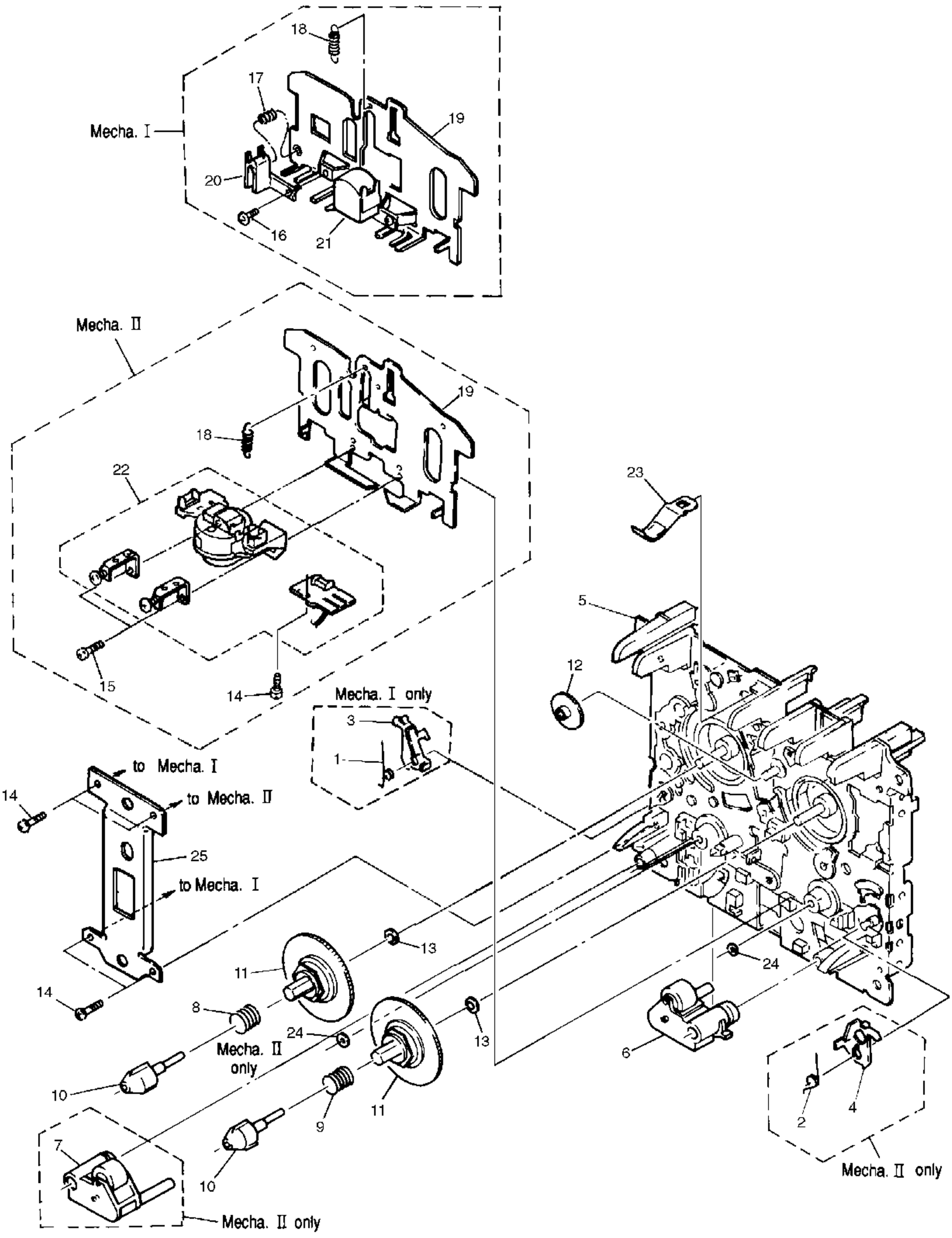
2.6 SERVO MECHANISM ASSY



● SERVO MECHANISM ASSY PARTS LIST

Mark	No.	Description	Part 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

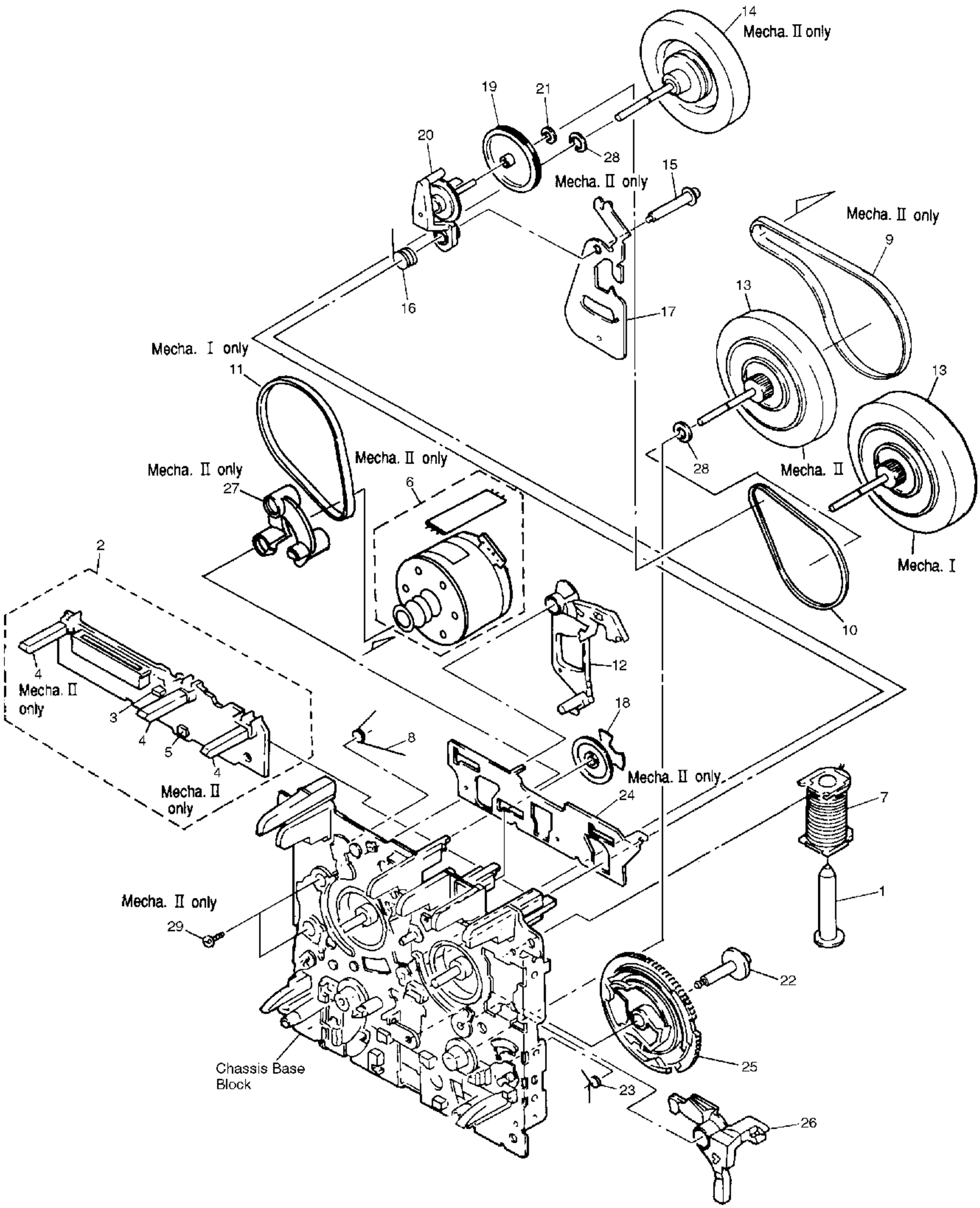
2.7 MECHANISM UNIT (FRONT SECTION)



• MECHANISM UNIT (FRONT SECTION) PARTS LIST

Mark	No.	Description	Part No.
	1	SP Interlock L (Mecha. I only)	RBH1385
	2	SP Interlock R (Mecha. II only)	RBH1386
	3	Arm Interlock L (Mecha. I only)	RNE1780
	4	Arm Interlock R (Mecha. II only)	RNE1781
	5	Chassis Base BLK (Mecha. I)	RXA1627
	5	Chassis Base BLK (Mecha. II)	RXA1626
	6	Roller Pinch BLK R (Mecha. I)	RXA1630
	6	Roller Pinch BLK R (Mecha. II)	RXA1628
	7	Roller Pinch BLK L (Mecha. II only)	RXA1629
	8	SP Reel (L)	RBH1388
	9	SP Reel (R)	RBH1389
	10	Reel Feather	RNK2072
	11	Reel Base	RNK2073
	12	Play Gear (A)	RNK2074
	13	Washer	WA41D065D025
	14	Screw	PCZ20P040FMC
	15	Screw	PMZ20P060FMC
	16	Screw M3 × 10	RBA1031
	17	Spring	RBH1076
	18	Spring HB	RBH1390
	19	Head Base (Mecha. I)	RNE1906
	19	Head Base (Mecha. II)	RNE1783
	20	Tape Guide (Mecha. I only)	RNK2077
	21	R/P Head (Mecha. I only)	XPB3001
	22	Plate HD BLK (Mecha. II only)	RXA1746
	23	SP Cassette	RNE1786
	24	Washer	WT15D040D050
	25	Mecha Bracket	RNE1907

2.8 MECHANISM UNIT (REAR SECTION)

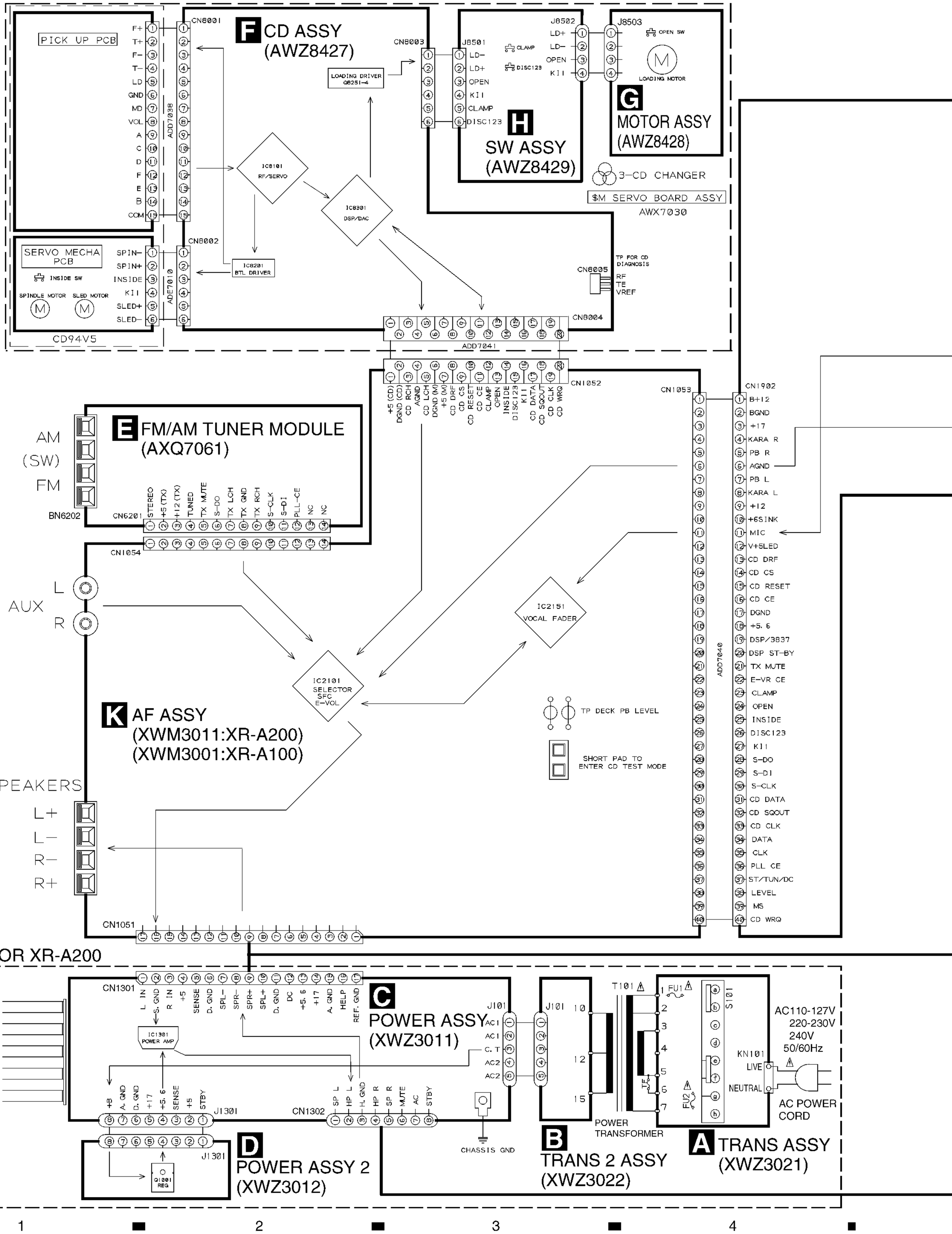


● MECHANISM UNIT (REAR SECTION) PARTS LIST

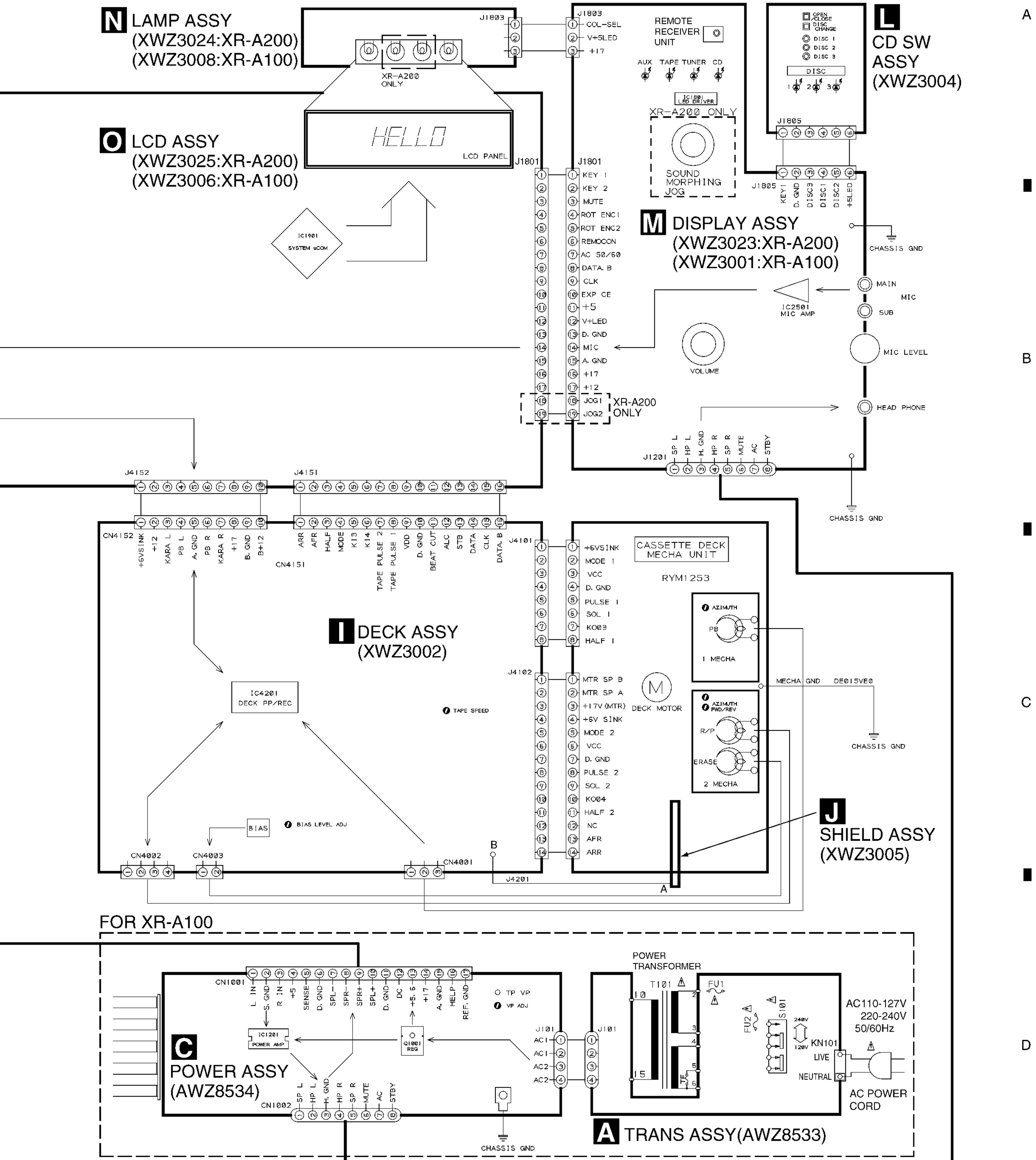
Mark	No.	Description	Part No.
	1	Plunger	PLA1288
	2	PCB Control BLK (Mecha. I)	RXA1742
	2	PCB Control BLK (Mecha. II)	RXA1743
	3	Switch	RSG1018
	4	SPLF	RSN1023
	5	Photo-Transistor	SPI33534FG
	6	MTR Main BLK (Mecha. II only)	RXM1086
	7	Solenoid BLK	XXP3001
	8	SP Brake	RBH1387
	9	Main Belt (Mecha. II only)	REB1157
	10	F/R Belt	REB1254
	11	Joint Belt (Mecha. I only)	REB1307
	12	Lever Brake	RNK2071
	13	Clutch ASSY BLK (Mecha. I)	RXA1744
	13	Clutch ASSY BLK (Mecha. II)	RXA1745
	14	ASSY F/W (Mecha. II only)	RXA1769
	15	Screw 2-6 × 3.5	RBA1120
	16	Cam SP	RBH1393
	17	Lever F/R	RNE1782
	18	FF Gear (A)	RNK2075
	19	F/R Pulley	RNK2076
	20	Clutch ASSY BLK	RXA1632
	21	Washer	WA17D040D025
	22	Screw 2-9 × 3.5	RBA1121
	23	SP Arm Play (Mecha. I)	RBH1391
	23	SP Arm Play (Mecha. II)	RBH1392
	24	Plate Slide (Mecha. II only)	RNE1785
	25	Cam Gear	RNK2078
	26	Arm Play	RNK2079
	27	Motor Spacer (Mecha. II only)	RNK2244
	28	Washer	WA26D045D025
	29	Screw	PMA26P140FMC

3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM



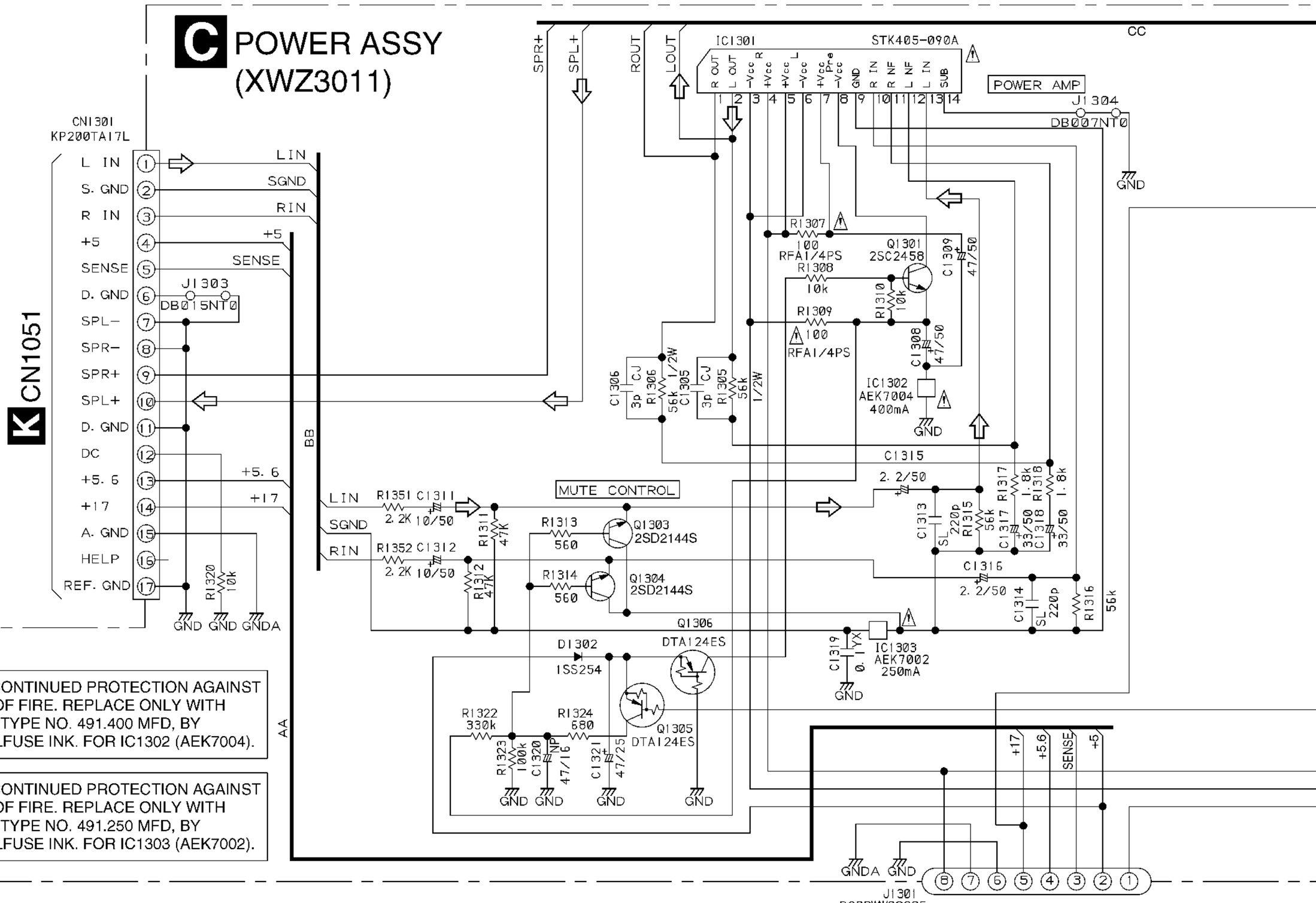
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".



FOR XR-A100

3.2 TRANS, TRANS 2, POWER ASSEMBLIES AND POWER ASSY 2 (XR-A200)

C POWER ASSY (XWZ3011)



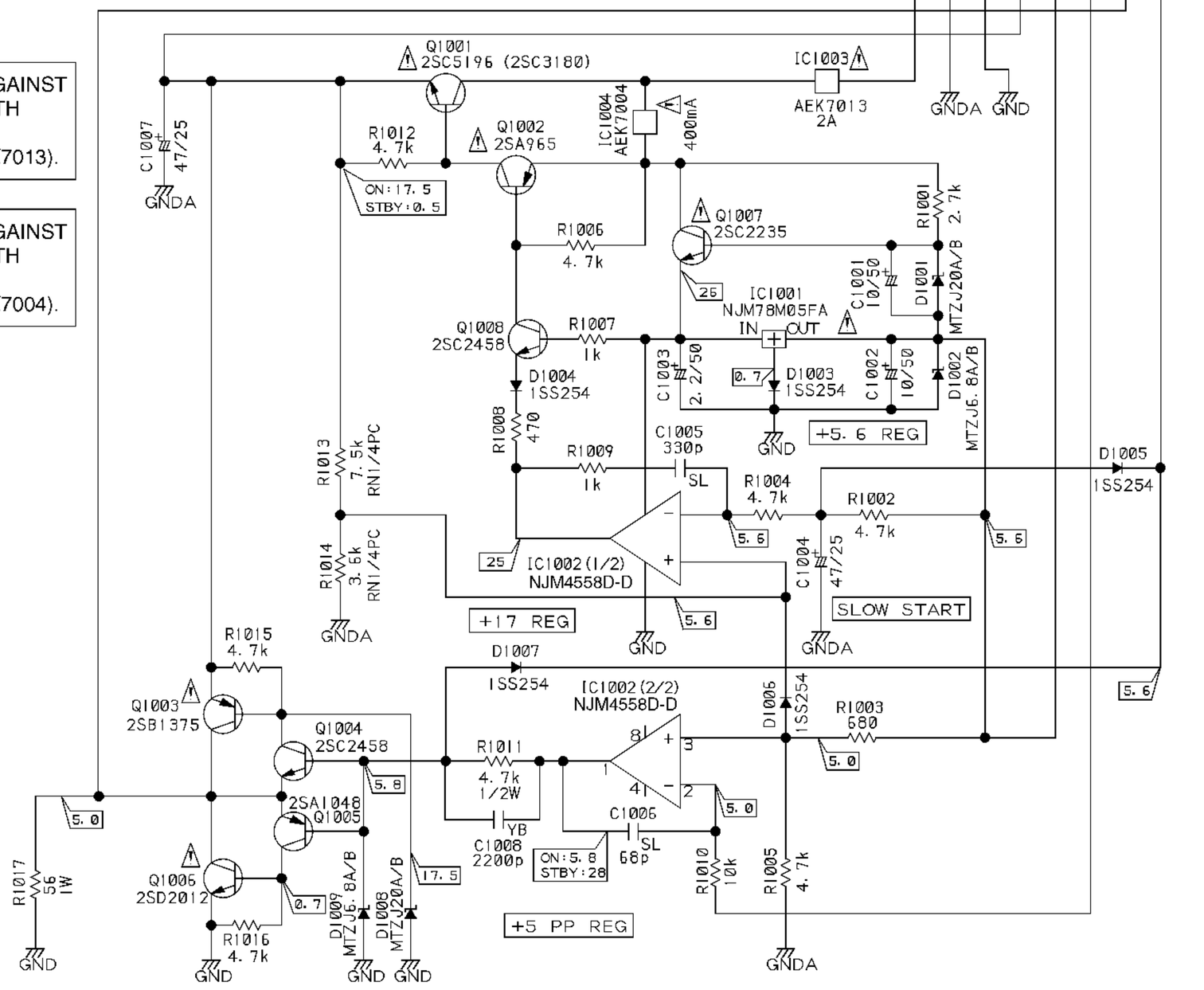
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.400 MFD, BY LITTELFUSE INK. FOR IC1302 (AEK7004).

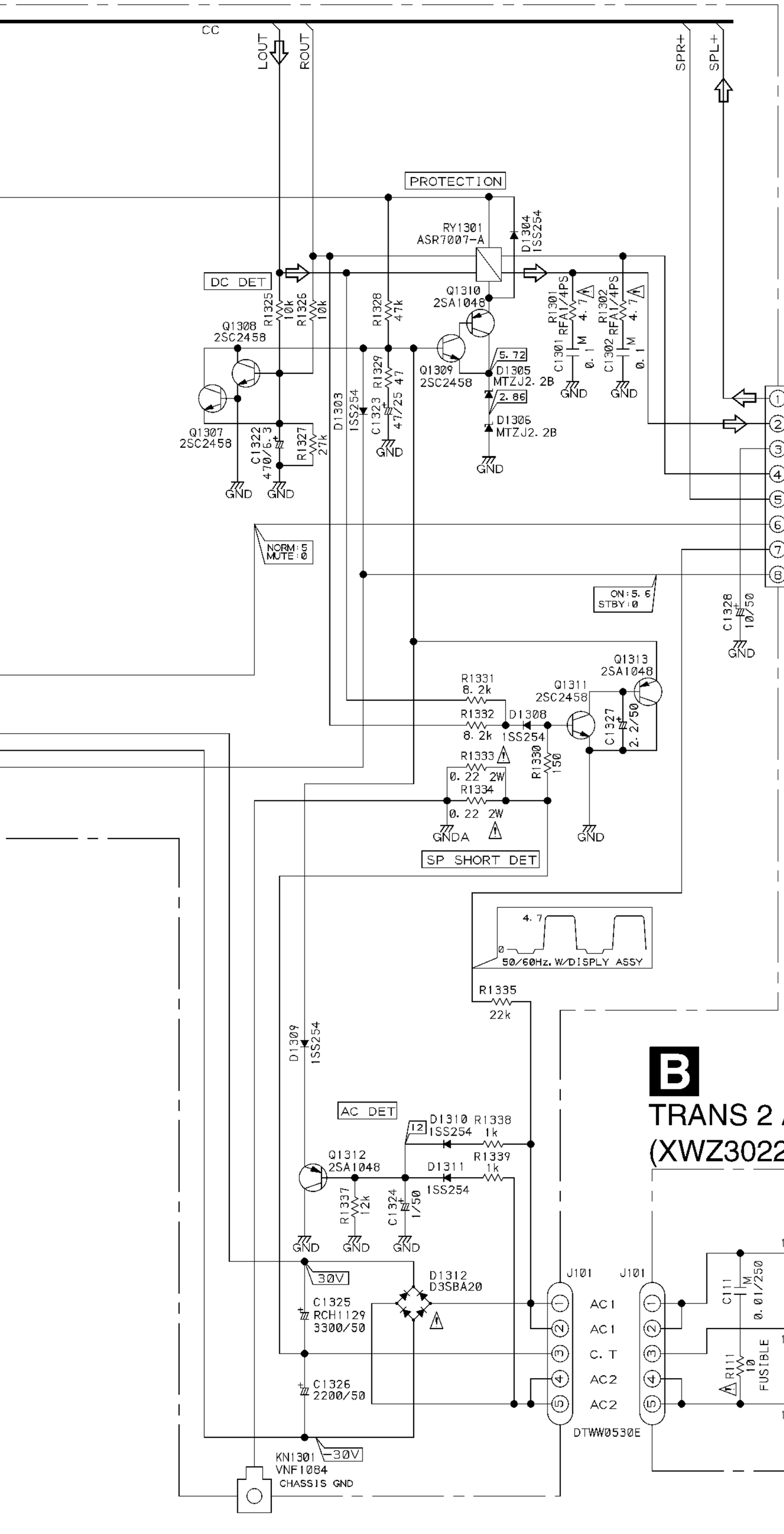
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.250 MFD, BY LITTELFUSE INK. FOR IC1303 (AEK7002).

D POWER ASSY 2(XWZ3012)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491002 MFD, BY LITTELFUSE INK. FOR IC1003 (AEK7013).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.400 MFD, BY LITTELFUSE INK. FOR IC1004 (AEK7004).





: AUDIO SIGNAL ROUTE

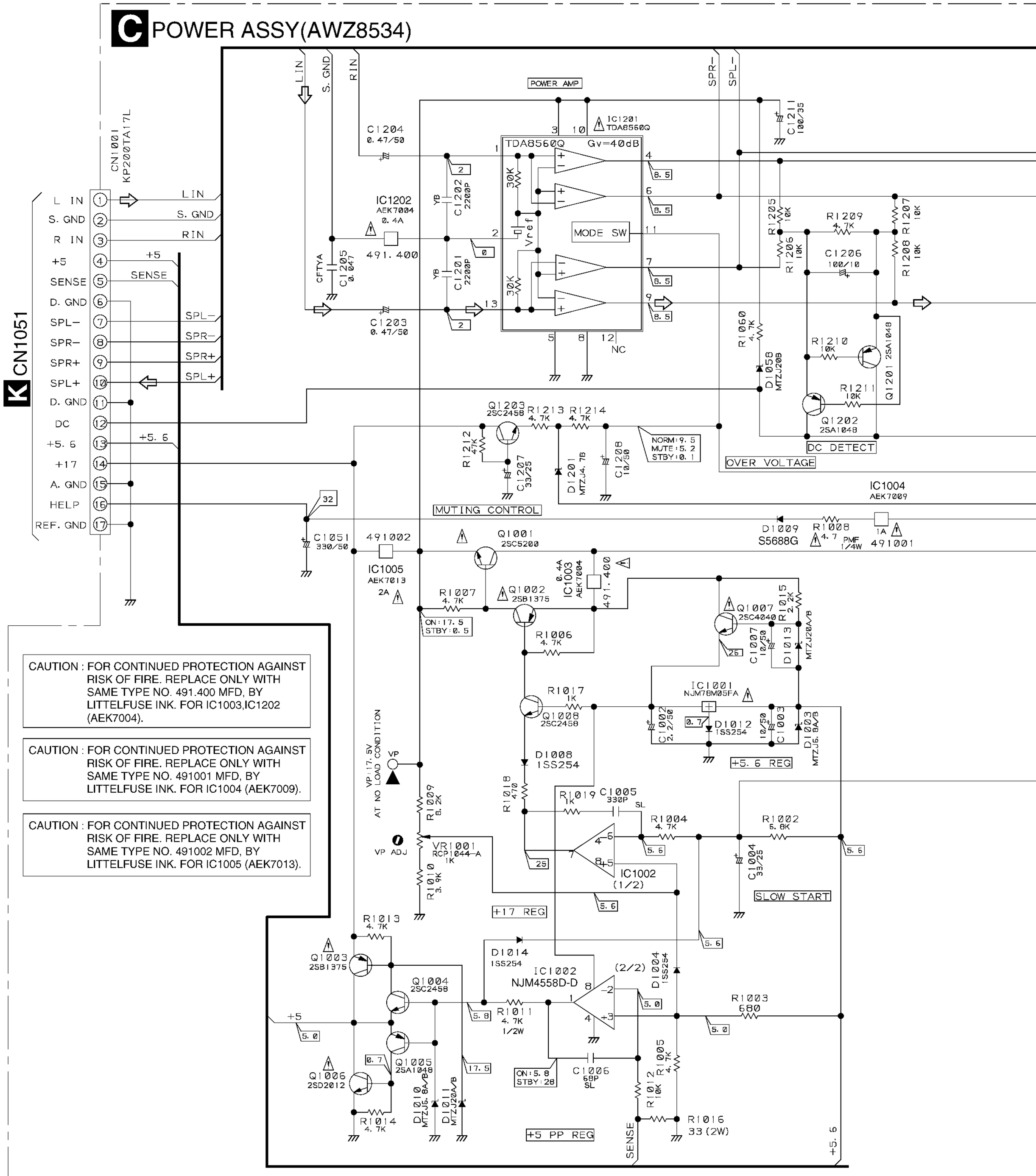
Notes:

1. Resistors
   Indicated in Ω, 1/4W, ±5% tolerance unless otherwise noted.
2. Capacitors
   Indicated in capacity (μF)/voltage (V) unless otherwise noted. Indication without voltage is 50V.
3. Voltage
   DC voltage (V) at no input signal.
4. Others
   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 indentical designation.

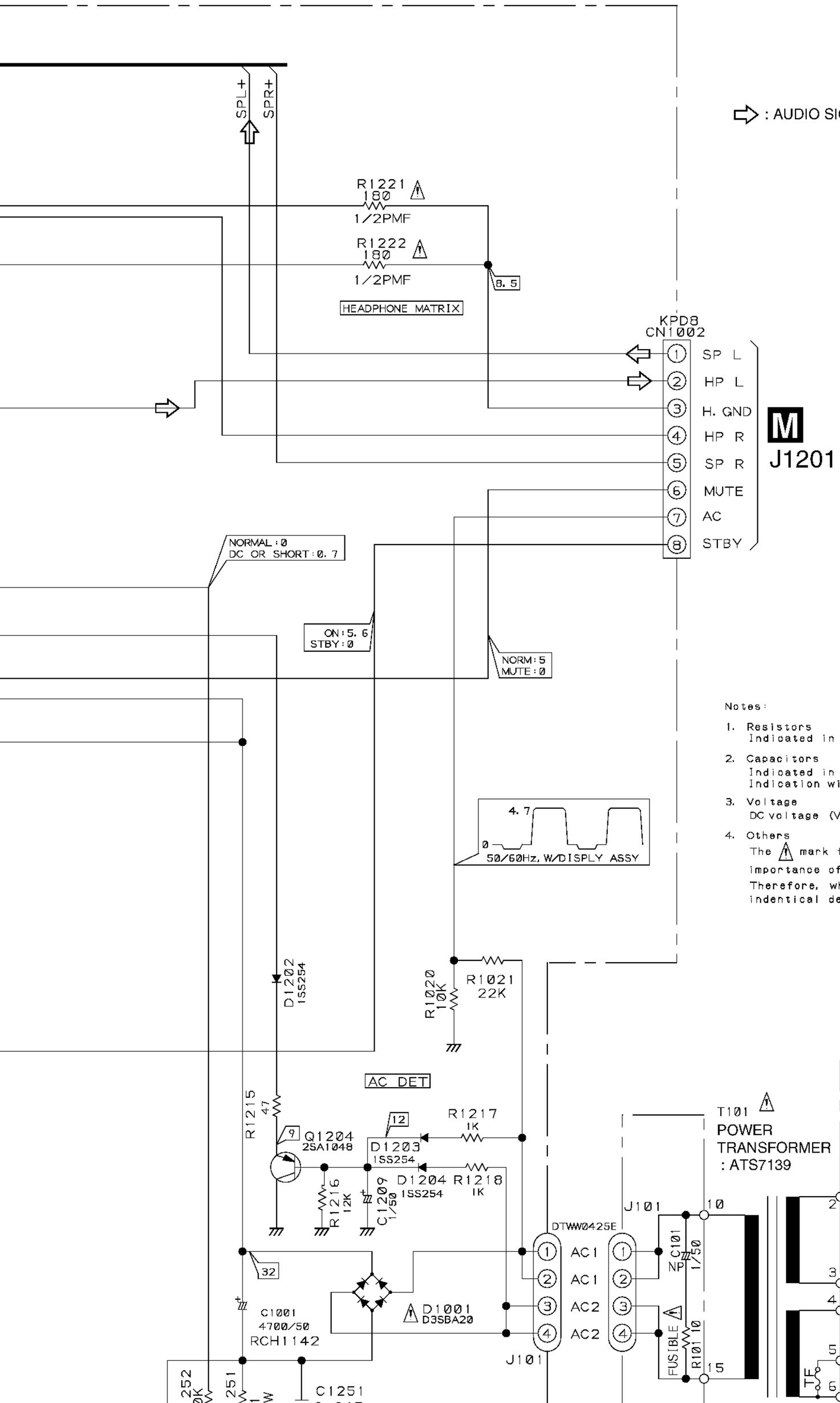
• NOTE FOR FUSE REPLACEMENT

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

3.3 TRANS AND POWER ASSEMBLIES (XR-A100)



: AUDIO SIGNAL ROUTE



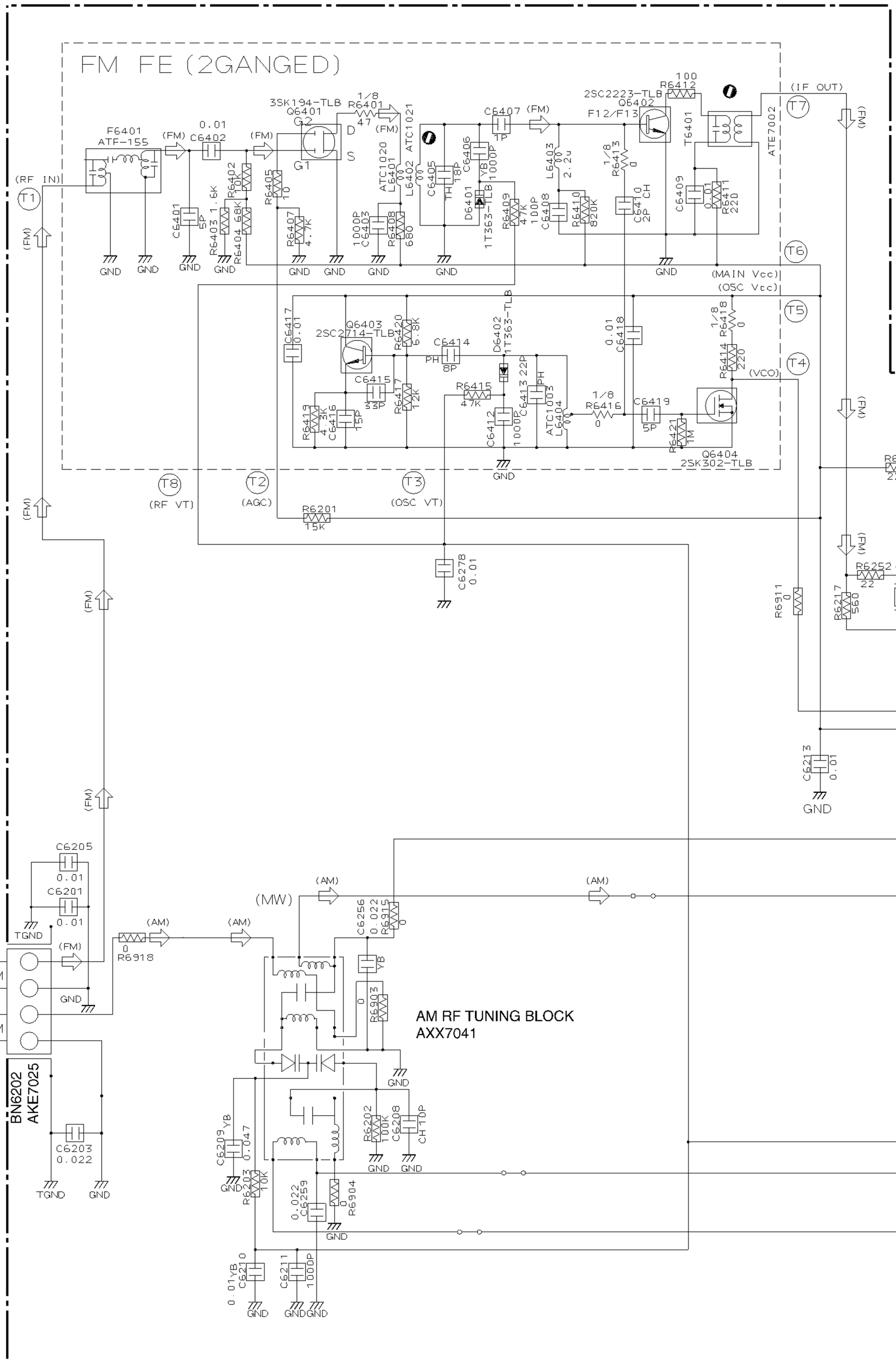
Notes:

1. Resistors
   Indicated in Ω, 1/4W, ±5% tolerance unless otherwise noted.
2. Capacitors
   Indicated in capacity(μF)/voltage(V) unless otherwise noted.
   Indication without voltage is 50V.
3. Voltage
   DC voltage (V) at no input signal.
4. Others
   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 indentical designation.

• NOTE FOR FUSE REPLACEMENT

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

3.4 FM/AM TUNER MODULE



FM/AM TUNER MODULE (AXQ7061)

SIGNAL ROUTE

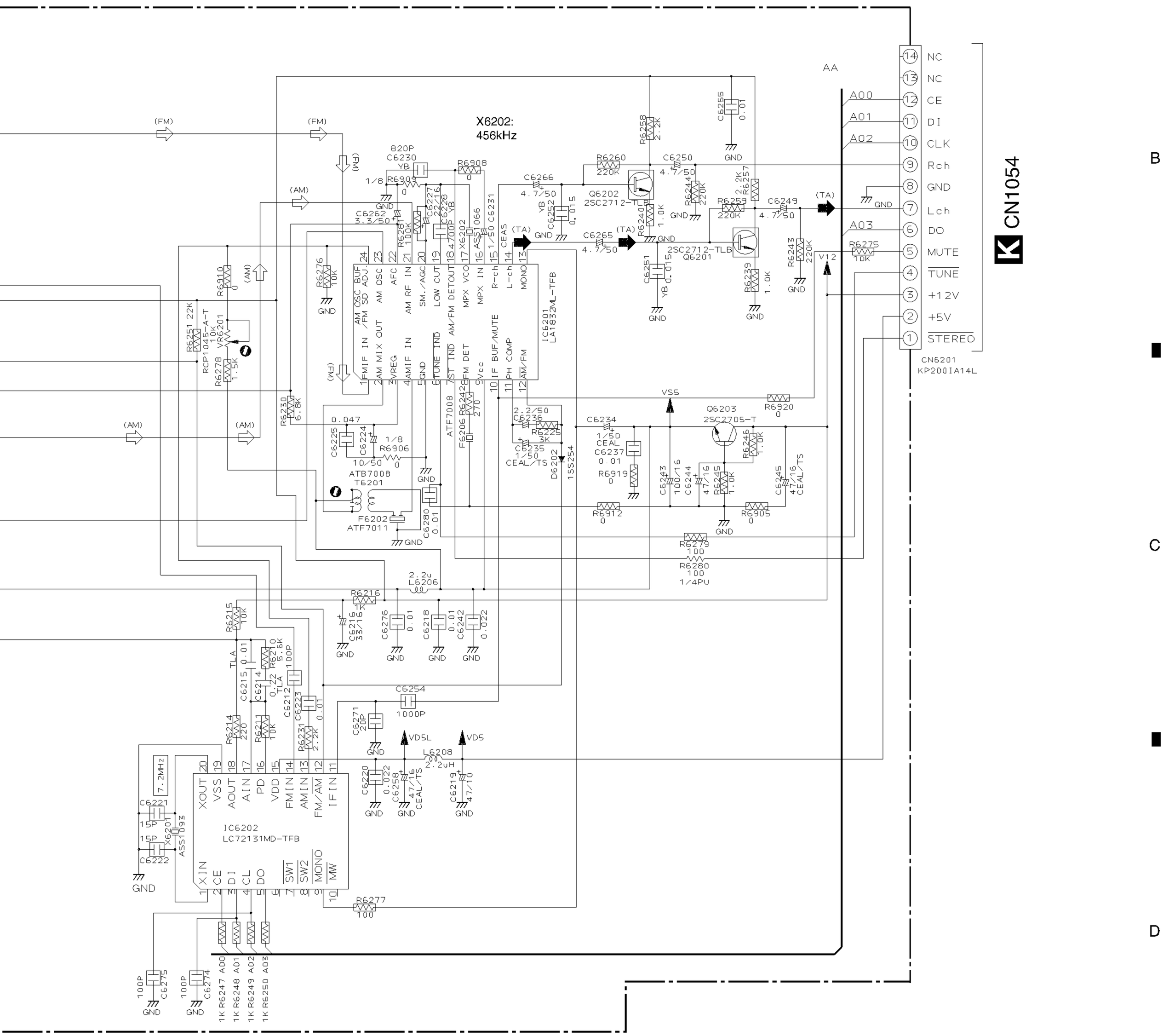
(AM) : AM SIGNAL ROUTE

(FM) : FM SIGNAL ROUTE

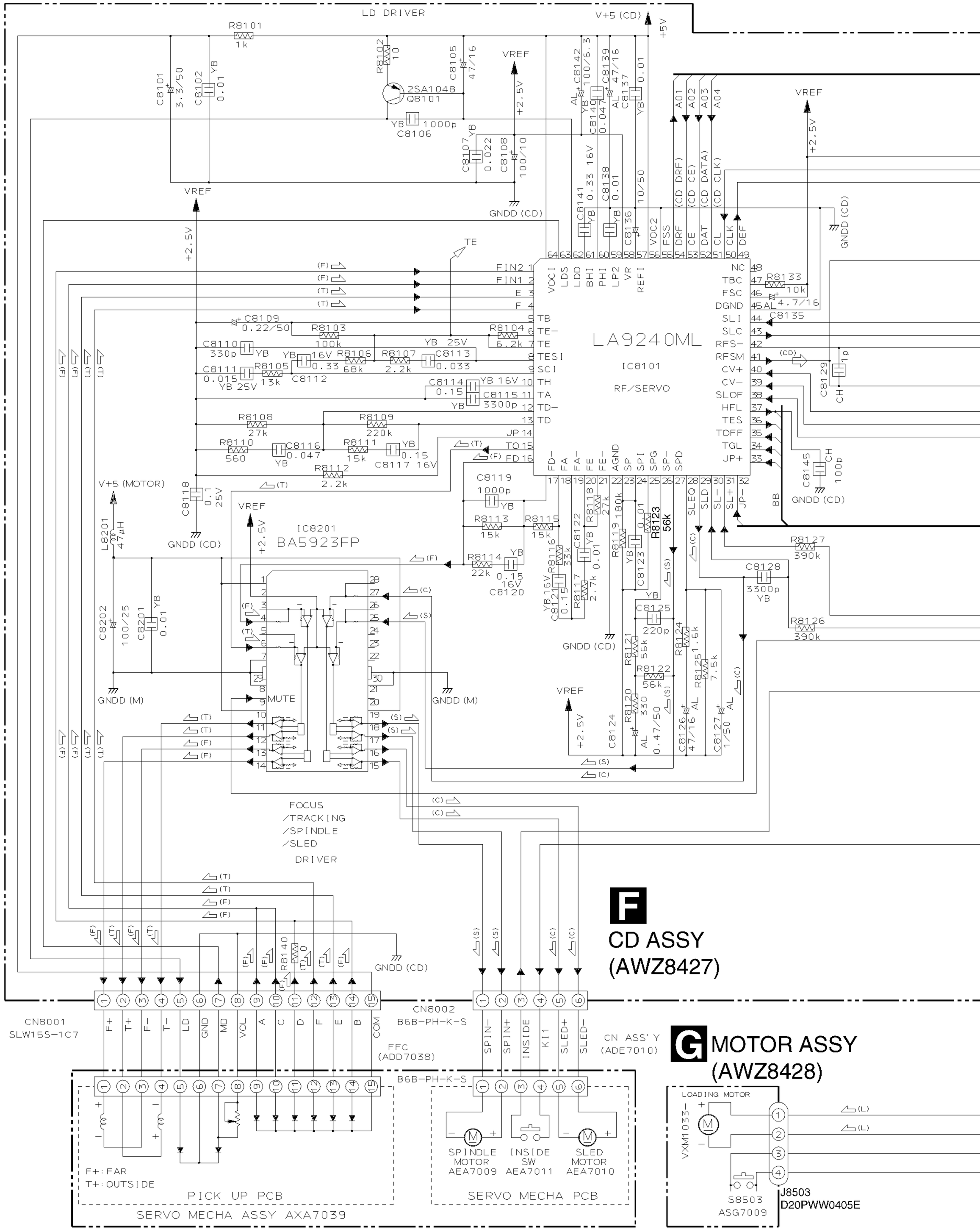
(TA) : TUNER AUDIO SIGNAL ROUTE

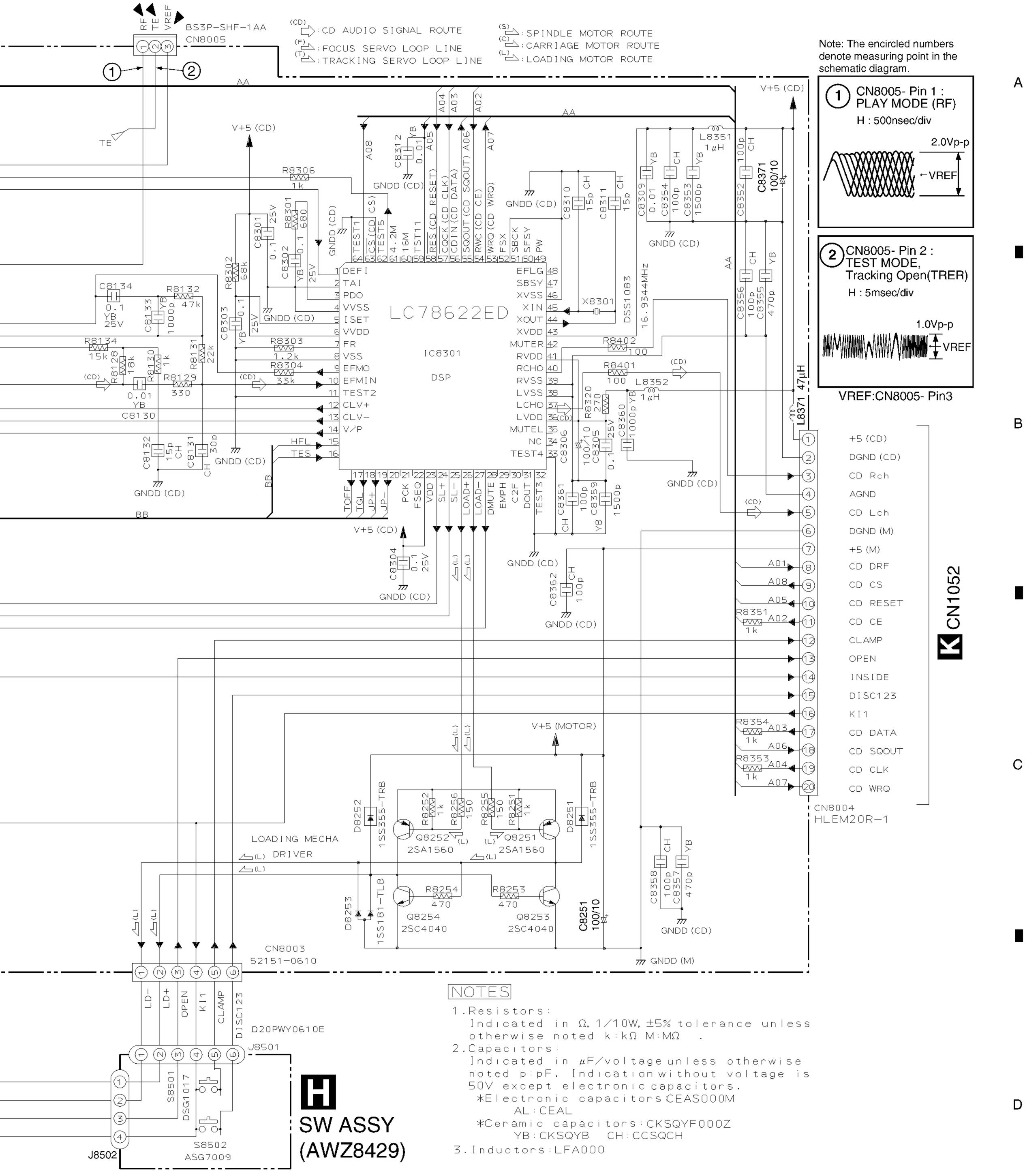
Notes

1. RESISTORS
   Indicated in Ω, 1/10W±5% Tolerance unless otherwise noted K:KΩ, M:MΩ.
2. CAPACITORS
   Indicated in Capacity(μF)/VOLTAGE(V) unless otherwise noted P:PF.



3.5 CD, MOTOR AND SW ASSEMBLIES





Note: The encircled numbers denote measuring point in the schematic diagram.

① CN8005- Pin 1 :
PLAY MODE (RF)
H : 500nsec/div
2.0Vp-p
←VREF

② CN8005- Pin 2 :
TEST MODE,
Tracking Open(TRER)
H : 5msec/div
1.0Vp-p
VREF

VREF:CN8005- Pin3

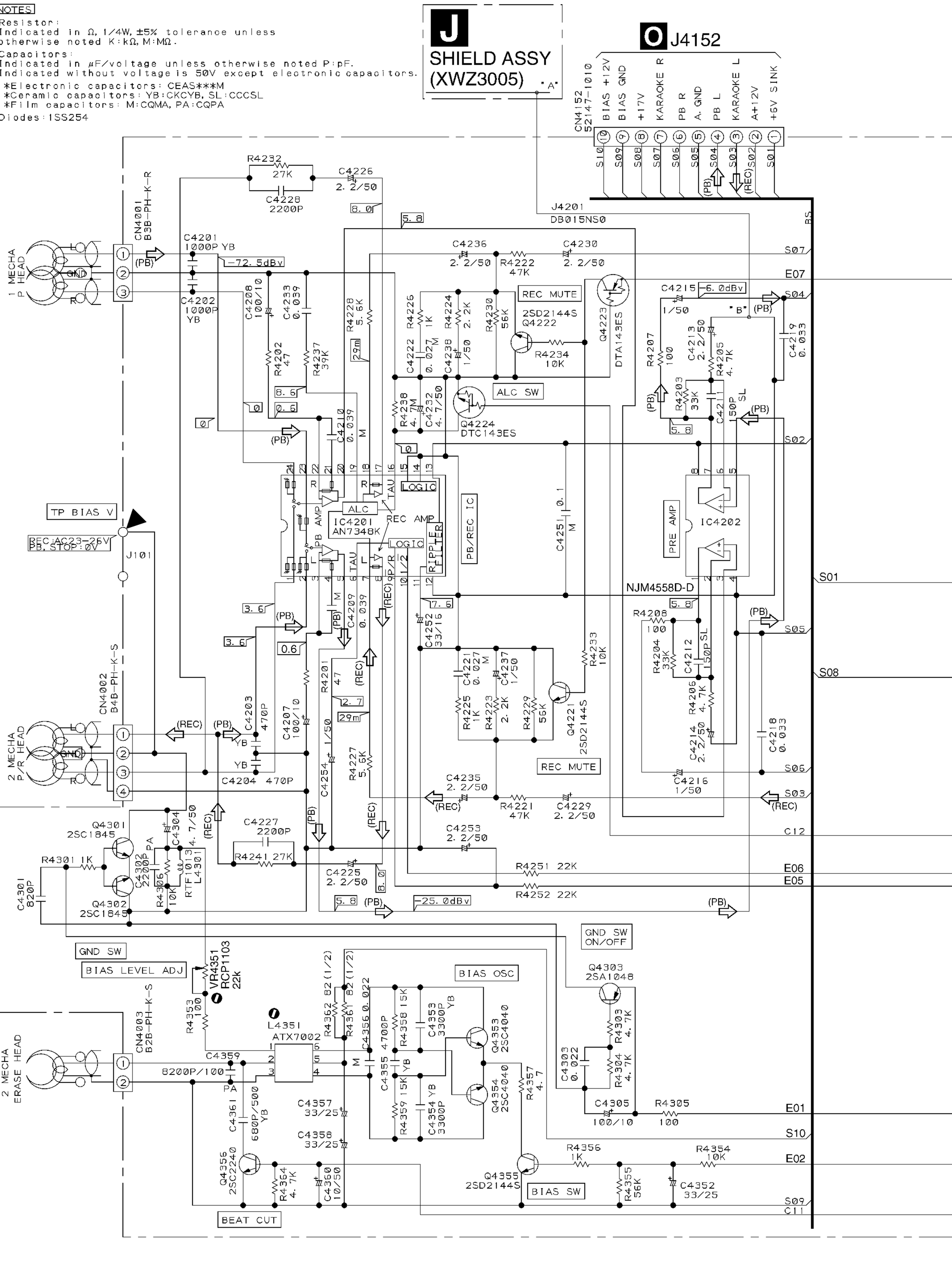
NOTES

1. Resistors:
Indicated in Ω, 1/10W, ±5% tolerance unless otherwise noted k:kΩ M:MΩ .
2. Capacitors:
Indicated in µF/voltage unless otherwise noted p:pF. Indication without voltage is 50V except electronic capacitors.
*Electronic capacitors:CEAS000M
AL:CEAL
*Ceramic capacitors:CKSQYF000Z
YB:CKSQYB CH:CCSQCH
3. Inductors:LFA000

3.6 DECK AND SHIELD ASSEMBLIES

NOTES

1. Resistor:
   Indicated in Ω, 1/4W, ±5% tolerance unless otherwise noted K:kΩ, M:MΩ.
2. Capacitors:
   Indicated in μF/voltage unless otherwise noted P:pF.
   Indicated without voltage is 50V except electronic capacitors.
   *Electronic capacitors: CEAS***M
   *Ceramic capacitors: YB:CKCYB, SL:CCCSL
   *Film capacitors: M:CQMA, PA:CQPA
3. Diodes: 1SS254



(PB) ⇨ : DECK PB SIGNAL ROUTE

(REC) ⇨ : DECK REC SIGNAL ROUTE

J4151

52147-1610
CN4151

ARR, AFR, HALF, MODE, K13, K14, PULSE 2, PULSE 1, VDD (+5V), D. GND, BEAT CUT ON/OFF, ALC ON/OFF, STB, DATA, CLK, S. DATA THUR

D4110, D4111

C01, C02, C03, C04, C05, C06, C07, C08, C11, C12, C16

BF

E07, E01, E02, E03, E04, E05, E06, E07

EXP. IC

IC4101
BU4094BC

VCC, OE, P/R, BIAS, MTR, SOL2, THUR, STB, DATA, CLK, R. MUTE, 1/2, P/R, SOL1, DATA, GND

R4153 2.2K, R4152 2.2K, R4151 2.2K

C4104 680P

R4115 1K

C4103 2200P YB

Q4112 DTA124ES — PULSE 2

Q4111 DTA124ES — PULSE 1

R4108 47K, R4107 47K

D4104

D4114, R4110 1.6K

SOL 1

Q4104 2SA1560

R4104 47K, R4103 1K (1/2)

Q4103 DTC143ES

D4115

D4112, D4113, D4302

TAPE SPEED

VR4101 RCP1140 10K

R4109 10K

D4301

C4102 33/25

R4114 3K

R4112 1.6K

D4303

MOTOR

Q4101 DTC143ES

R4101 1K (1/2)

R4102 47K

Q4102 2SA1560

Q4105 DTC143ES

R4105 1K (1/2)

R4106 47K

Q4106 2SA1560

SOL 2

MECHA I

D20PWY0815E
J4101

CN4153

+6V SINK, MODE 1, VCC, D. GND, PULSE 1, SOL 1, KO03, HALF 1

MECHA II

D20PWY1415E
J4102

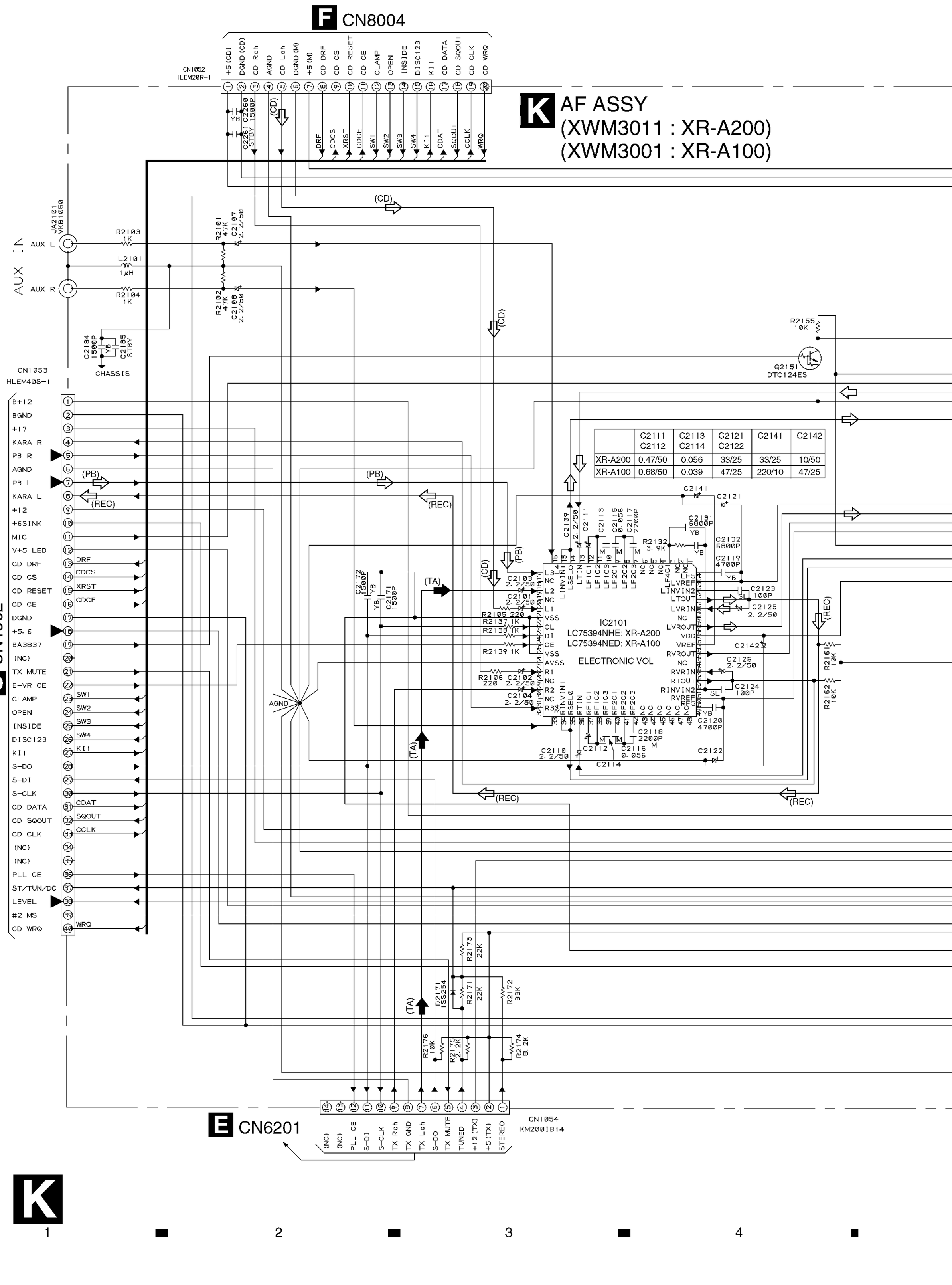
CN4154

MTR SP B, MTR SP A, +17V (MTR), +6V SINK, MODE 2, VCC, D. GND, PULSE 2, SOL 2, KO04, HALF 2, NC, AFR, ARR

C12, E06, E05, C06, C01, C02, E01, E02, C11

DECK ASSY(XWZ3002)

3.7 AF ASSY


F CN8004
+5 (CD)
DGND (CD)
CD Rch
AGND
CD Lch
DGND (M)
+5 (M)
CD DRF
CD CS
CD RESET
CD CE
CLAMP
OPEN
INSIDE
DISC123
KI1
CD DATA
CD SQOUT
CD CLK
CD WRQ
CN1052
HLEM20R-I
K AF ASSY
(XWM3011 : XR-A200)
(XWM3001 : XR-A100)
AUX IN
JA2101
VKB1050
AUX L
AUX R
R2103 1K
R2104 1K
L2101 1μH
R2101 47K
R2102 47K
C2107 2.2/50
C2108 2.2/50
C2260 1500P YB
C2261 STBY
C2184 1500P YB
C2185 STBY
CHASSIS
CN1053
HLEM40S-I
CN1902
B+12
BGND
+17
KARA R
PB R
AGND
PB L
KARA L
+12
+6SINK
MIC
V+5 LED
CD DRF
CD CS
CD RESET
CD CE
DGND
+5.6
BA3837
(NC)
TX MUTE
E-VR CE
CLAMP
OPEN
INSIDE
DISC123
KI1
S-DO
S-DI
S-CLK
CD DATA
CD SQOUT
CD CLK
(NC)
(NC)
PLL CE
ST/TUN/DC
LEVEL
#2 MS
CD WRQ
DRF
CDCS
XRST
CDCE
SW1
SW2
SW3
SW4
KI1
CDAT
SQOUT
CCLK
WRQ
(CD)
(PB)
(REC)
(TA)
R2155 10K
Q2151 DTC124ES
C2111 C2112
C2113 C2114
C2121 C2122
C2141 C2142
XR-A200 0.47/50 0.056 33/25 33/25 10/50
XR-A100 0.68/50 0.039 47/25 220/10 47/25
C2109 2.2/50
C2111
C2113
C2115 0.056
C2117 2200P
C2141
C2121
C2131 6800P YB
R2132 3.9K YB
C2132 6800P
C2119 4700P YB
C2123 100P SL
C2125 2.2/50
C2126 2.2/50
C2124 100P SL
C2120 4700P YB
C2118 2200P M
C2112
C2116 0.056
C2110 2.2/50
C2114
C2122
C2142
C2172 1500P YB
C2171 1500P YB
C2103 2.2/50
C2101 2.2/50
C2102 2.2/50
C2104 2.2/50
R2105 220
R2106 220
R2137 1K
R2138 1K
R2139 1K
IC2101
LC75394NHE: XR-A200
LC75394NED: XR-A100
ELECTRONIC VOL
R2161 10K
R2162 10K
AGND
R2173 22K
D2171 1SS254
R2171 22K
R2172 33K
R2176 10K
R2175 2.2K
R2174 8.2K
E CN6201
CN1054
KM200IB14
(NC)
(NC)
PLL CE
S-DI
S-CLK
TX Rch
TX GND
TX Lch
S-DO
TX MUTE
TUNED
+12 (TX)
+5 (TX)
STEREO

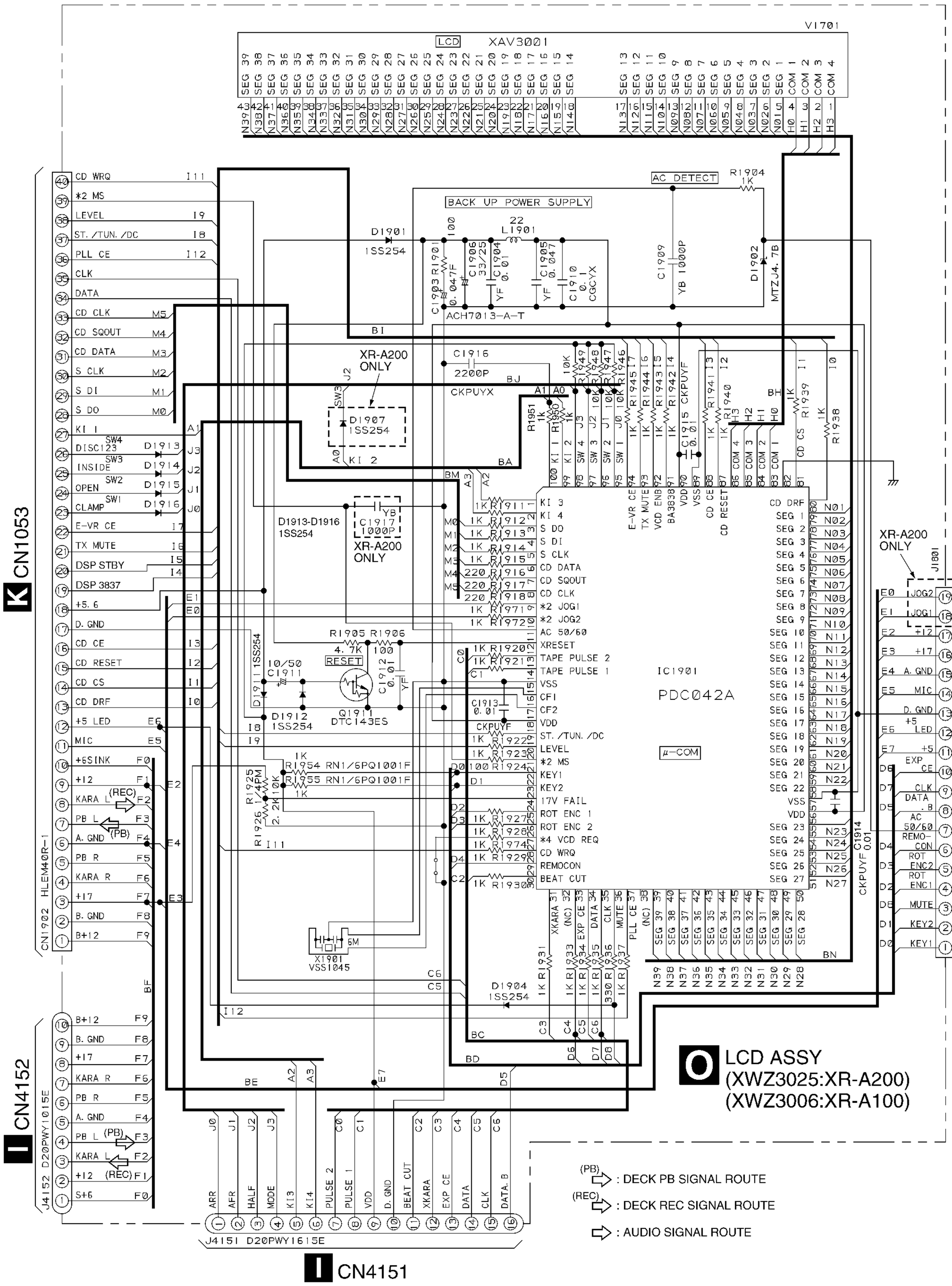
NOTES
1. Resistors:
Indicated in Ω, 1/4W, ±5% tolerance unless otherwise noted K:kΩ M:MΩ.
2. Capacitors:
Indicated in μF/voltage unless otherwise noted P:pF. Indication without voltage is 50V except electronic capacitors.
*Electronic capacitors:CEAS000M
*Ceramic capacitors:CKCYF000Z
YB:CKCYB YX:CGCYX SL:CCCSL
*Film capacitors
M:CQMA
3. Inductors:LAU000

⇨ : AUDIO SIGNAL ROUTE
(CD) ⇨ : CD AUDIO SIGNAL ROUTE
(TA) ➡ : TUNER AUDIO SIGNAL ROUTE
(PB) ⇨ : DECK PB SIGNAL ROUTE
(REC) ⇨ : DECK REC SIGNAL ROUTE

VOCAL FADER
IC2151 BA3837
VCC CONTC
MIC IN CONTB
LOUT CONTA
NC ROUT
NC LPF3
LIN LPF2
BIAS LPF1
GND RIN
C2156 2.2/50
C2151 2.2/50
R2151 6.2K
R2153 2K
C2153 33/25
R2154 2K
C2152 2.2/50
R2152 8.2K
C2154 0.047
C2155 0.22
XR-A200 ONLY
XR-A100 ONLY
R2135 1.8K
C2239 2.2/50
R2245 1.8K
R2247 6.8K
IC2203 (2/2)
NJM4558D-D
IC2203 (1/2)
Lch
Rch
C2240 2.2/50
R2244 1.8K
R2248 6.8K
R2136 1.8K
XR-A200 ONLY
XR-A100 ONLY
XR-A200 ONLY
J2001
D20PWW05115E
Ro Ri G Li Lo
XR-A100 ONLY
CN1201
AKE7035
SP L
SP L GND
SP R GND
SP R
SP OUT
CHASSIS
D2103 D2102 D2101
1SS254 1SS254 1SS254
XR-A100 ONLY
XR-A200 ONLY
R2164 1K
Q2161 2SC2458
C2163 2.2/50
R2162 1M
R2165 47K
R2166 33K
R2168 39K
D2161 1SS254
Q2162 2SC2458
R2167 820K
C2164 2.2/50
R2163 1K
R2181 100
C2161 10/50
C2162 1/50
R2169 47K
C2255 YB 1000P
D1055 MTZJ20A : XR-A200
MTZJ18B : XR-A100
CHASSIS
XR-A200 ONLY
2SC2458 Q1056 R1059 4.7K
C1058 10/50
D1056 MTZJ15A
D1055
IC1051 NJM78M12FA
+12V
C1057 10/50
C1056 10/50
D1051,D1052: S5688G
Q1051 2SA1550
D1052
C1052 4700P
D1051
D1053 MTZJ15A
R1055 1K
C1053 2200P
Q1052 2SC2458
R1051 10K
R1056 4.7K
Q1053 2SC2458
R1070 10K
R1053 10K
R1052 4.7K
XR-A100 ONLY
XR-A100 ONLY
XR-A100 ONLY
R1063 4.7
L1052 ATH-133
R1065 4.7
L1054 ATH-133
XR-A200 ONLY
C1062 1500P
C1070 1500P
C1063 1500P
C1057 1500P
C CN1301 : XR-A200
C CN1001 : XR-A100
+5V
D1057 S5688G
C1059 100/10
XR-A200 ONLY
XR-A100 ONLY
XR-A100 ONLY
C1055 470P
R1054 470
D1054 MTZJ11C
Q1055 2SC4040
Q1054 2SA1048
R1057 470
C1054 4700P
R2198 2.7K
R2199 2.7K
XR-A100 ONLY
CN1051
KM200TA17

1 REF GND
2 HELP
3 AGND
4 +17
5 +5.6
6 DC
7 DGND (UCOM, DSP)
8 SP L+
9 SP R+
10 SP R−
11 SP L−
12 DGND (CD MOTOR)
13 SENS
14 +5
15 R IN
16 SGND
17 L IN

3.8 CD SW, DISPLAY, LAMP AND LCD ASSEMBLIES



N LAMP ASSY
(XWZ3024:XR-A200)
(XWZ3008:XR-A100)

PL1903, 1904 : AEL7008 12V, 0.15A
(WITH GREEN CAP)

PL1901, 1902 : AEL7007
12V, 0.15A

PL1901 PL1902 PL1903 PL1904

D1841 1SS254
D1842 1SS254

XR-A100 ONLY

XR-A200 ONLY

R1842 4.7K
R1843 1K
R1841 470
Q1841 2SA1560
Q1842 2SC4040
R1845 150 2W

NOTES

1. Resistors:
   Indicated in Ω, 1/4W, ±5% tolerance unless otherwise noted K:kΩ, M:MΩ.
2. Capacitors:
   Indicated in μF/voltage unless otherwise noted P:pF. Indication without voltage is 50V except electronic capacitors.
   *Electronic capacitors:CEAS000M
   *Ceramic capacitors:
   YB:CKCYB YX:CKCYX YF:CKCYF

CD SW ASSY
S1830 : OPEN/CLOSE
S1831 : DISC CHANGE
S1832 : DISC 3
S1833 : DISC 2
S1834 : DISC 1

J1803 D20PWW0325E

REMOTE RECEIVER UNIT GP1U27X

C1807 0.01 CKPUYF
D1809 MTZJ6.8A/B
C1801 0.01 CKPUYF

IC1801 BU2092F
1 GND
2 DATA
3 CLK
4 CE
5 Q0
6 Q1
7 Q2
8 Q3
9 Q4
18 VDD
17 XOE
16 Q11
15 Q10
14 Q9
13 COL-SEL
12 ST-BY
11 Q6
10 Q5

C1804 1000P YB
R1807 1K
D1808 MTZJ6.8A/B
R1806 100
R1801 180

D1801-D1804 SLP9118C51H
D1801 CD
D1802 TUN
D1803 TAPE
D1804 AUX

M DISPLAY ASSY
(XWZ3023:XR-A200)
(XWZ3001:XR-A100)

BK
K3 K0 K1 K2
L0

J1801 D20PWW1920E : XR-A200
D20PWW1720E : XR-A100

19 JOG2
18 JOG1
17 +12
16 +17
15 A.GND
14 MIC
13 D.GND
12 +5 LED
11 +5
10 EXP CE K0
9 CLK K1
8 DATA.B K2
7 AC 50/60 L1
6 REMOCON K3
5 ROT ENC2 K5
4 ROT ENC1 K4
3 MUTE
2 KEY2
1 KEY1

L2552 1μH

XR-A200 ONLY
R1816 47K
R1817 47K
R1811 47K
R1810 47K
K4
K5
JOG
S1802 ASX7017
S1801 ASX7017
MAIN VOLUME

J1805
R1830 330
R1831 560
R1832 820
R1833 1.8K
OPEN/CLOSE S1830
CHANGE S1831
DISC3 S1832
DISC2 S1833
DISC1 S1834
S1830-S1834 : ASG1051

D1807 SLP7118C51H
D1806 SLP3118C51H
D1805 SLP9118C51H
R1802 180
R1803 220
R1804 270
DISC1 DISC2 DISC3

J1805 D20PWW0615E

L CD SW ASSY
(XWZ3004)

S1811-S1825 : ASG1051
R1828 100 CD S1821
R1812 120 TUNER S1822
R1813 150 TAPE S1823
R1814 180 AUX S1824
R1815 270 SFC S1825
XR-A100 ONLY

R1819 100 POWER S1811
R1820 120 P.BASS S1812
R1821 150 CLOCK/ADJ S1813
R1822 180 TIMER S1814
R1823 270 ASES/COPY S1815
R1824 330 REC S1816
R1825 560 S1817
R1826 820 S1818
R1827 1.8K STOP S1819 S1820

BL

MIC AMP
IC2501 NJM4558LD
10K R2508
C2506 33/25 JA
R2509 10K
47K R2506
CKPUYB C2501
330P
100K R2504
C2504 0.047 CGCYX
R2507 750
M C2507 0.1
R2510 100
5.8V
2.2/50 C2502 JA
2.2/50 C2503 JA
VR2501 VCS1021 10K
R2505 1K
C2508 2.2/50 JA

DTWY0835E J1201
L0 ST-BY 8
L1 AC 50/60 7
L2 MUTE 6
SP R 5
HP R 4
H.GND 3
HP L 2
SP L 1

C CN1302 : XR-A200
C CN1002 : XR-A100

R2501 3.3K
C2505 4.7/50 JA
L2551 1μH
JA2501 AKN7004
R2502 3.3K
JA2502 AKN7004
CKPUYB C2554 1000P
CKPUYB C2555 1000P

	R1201,R1202
XR-A200	330
XR-A100	150

"E" J9998
"F" J9999
J9998, J9999 DE020WE0

CHASSIS
CHASSIS

MIC1
MIC2
HEAD PHONE

L1250 1μH CKPUYF0.01
C1203
R1202 PMF
C1202
R1201 PMF
CKPUYF0.01
JA1201 AKN7005

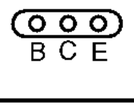
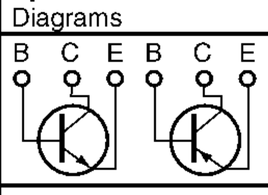
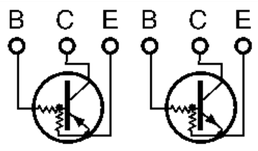
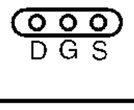
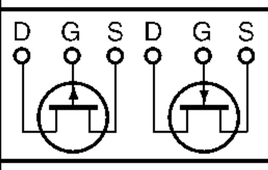
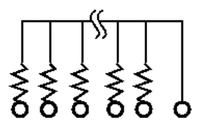
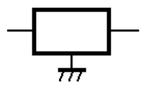
DISPLAY ASSY
S1801 : VOLUME (DOWN-UP)
S1802 : S.M.JOG (XR-A200 ONLY)
S1811 : STANDBY/ON
S1812 : P.BASS (DEMO)
S1813 : TIMER/WAKE-UP
S1814 : DISPLAY/CLOCK ADJ
S1815 : ASES/COPY
S1816 : REC START/STOP
S1817 : (–) ▶▶| (GREEN)] TUNING
S1818 : (+) |◀◀ (AMBER)]
S1819 : STOP (DUAL)
S1820 : ◀▶ CD-PLAY/PAUSE TAPE-PLAY/DIR
S1821 : CD
S1822 : TUNER/BAND
S1823 : TAPE I/II
S1824 : AUX (ILLUMINATION)
S1825 : SFC (XR-A100 ONLY)

L **M** **N**

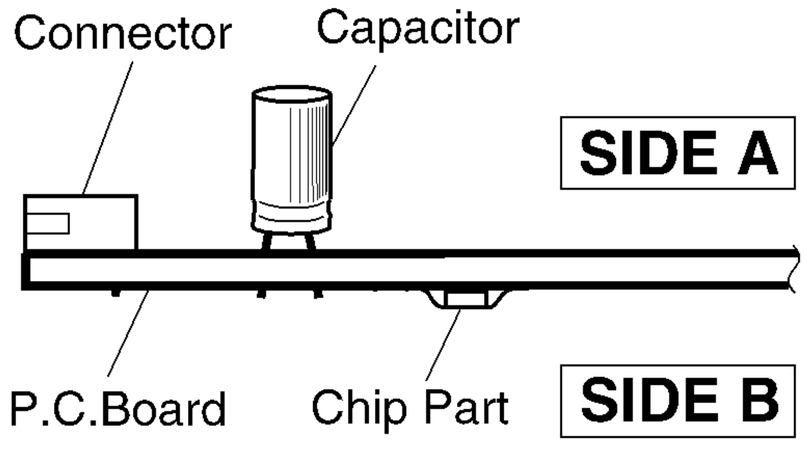
4. PCB CONNECTION DIAGRAM

NOTE FOR PCB DIAGRAMS :

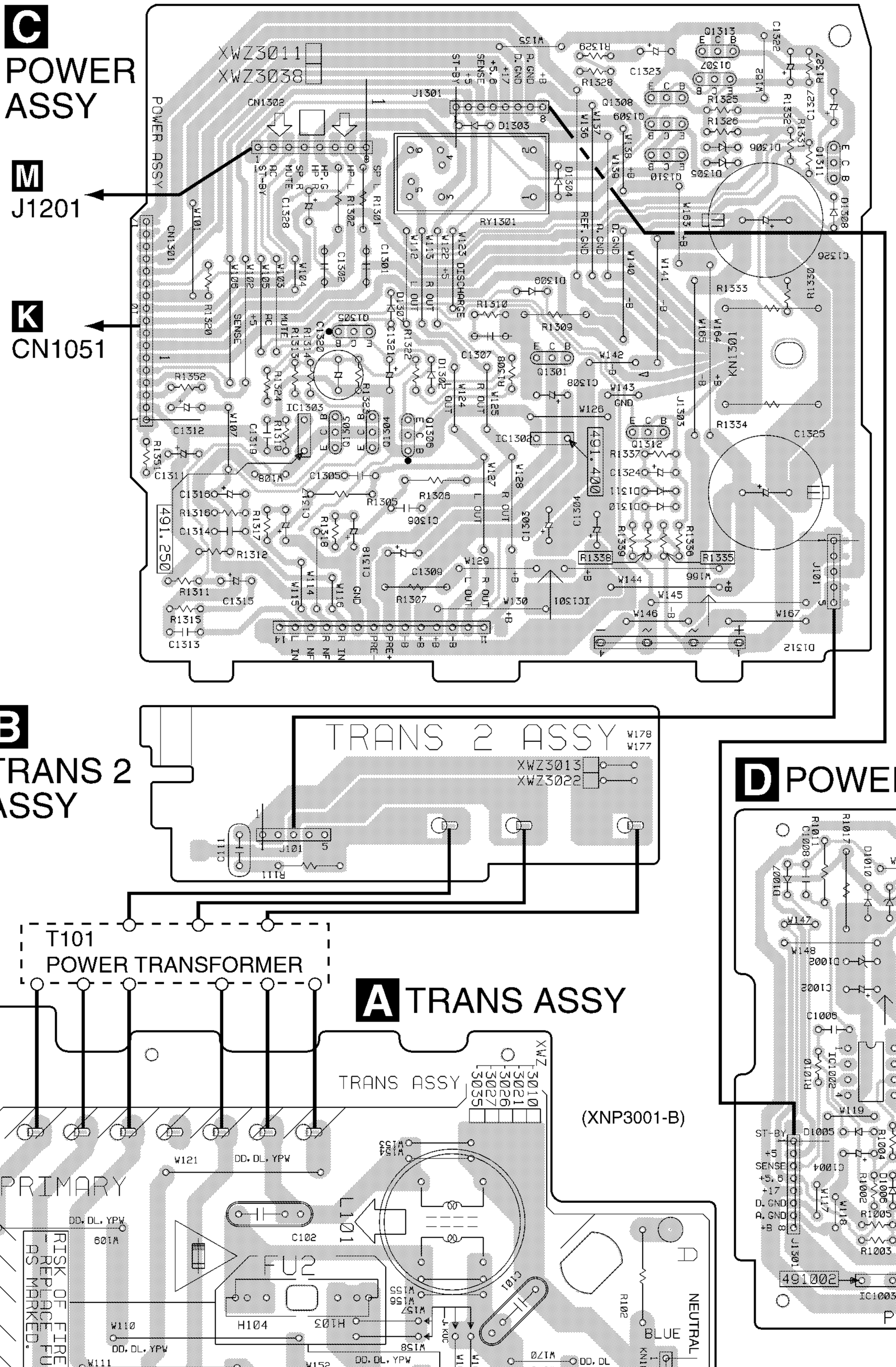
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destinations.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. View point of PCB diagrams.



4.1 TRANS, TRANS 2, POWER ASSEMBLIES AND POWER ASSY 2 (XR-A200)



(XR-A200) A B C D

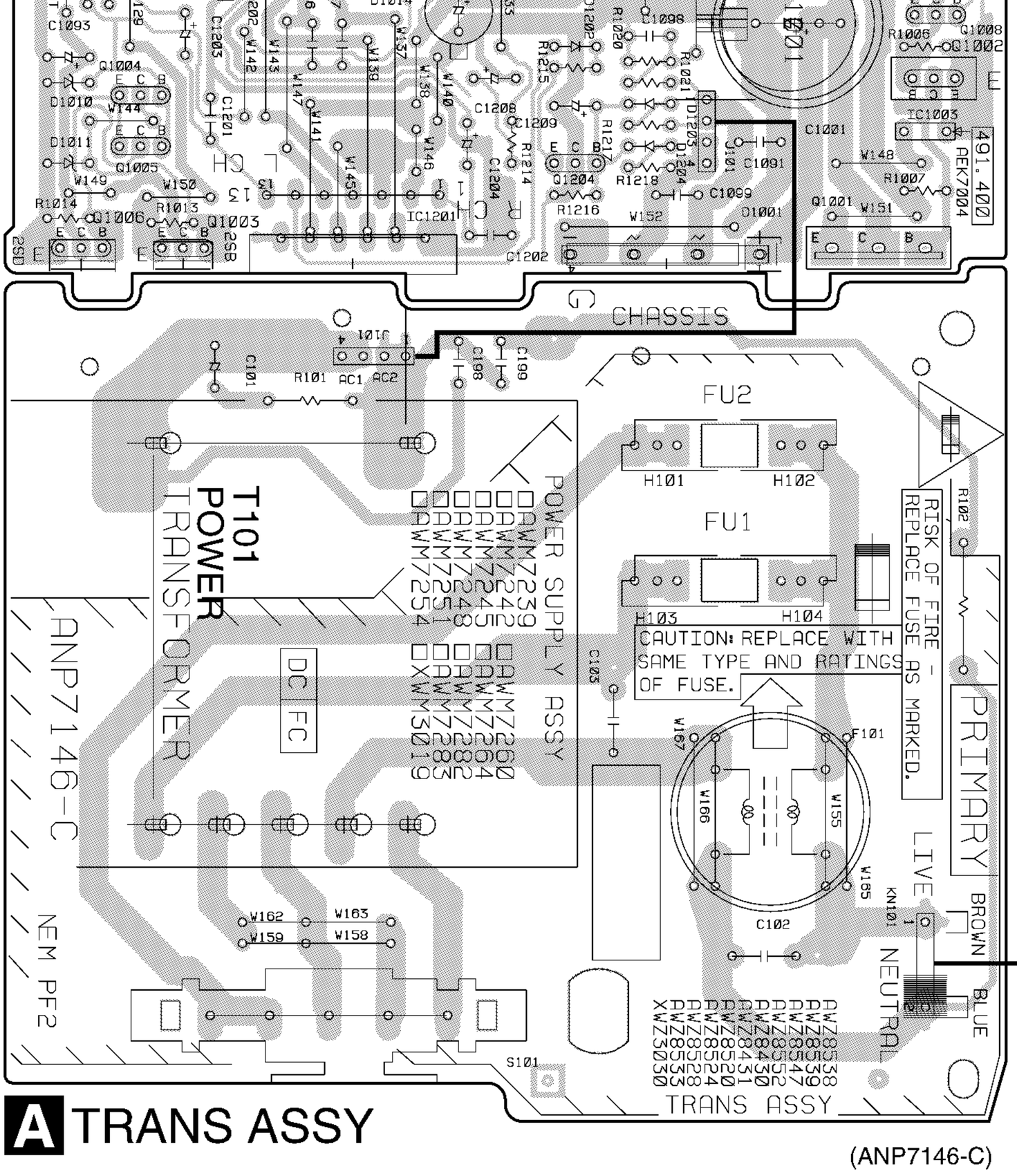
4.2 TRANS AND POWER ASSEMBLIES (XR-A100)

C POWER ASSY

M J1201

K CN1051

IC1002
VR1001 IC1001 IC1005
Q1007
IC1004 Q1203 | Q1201 IC1202 Q1008
Q1002
IC1003 Q1204 Q1006 | Q1003 IC1201 Q1001



A TRANS ASSY

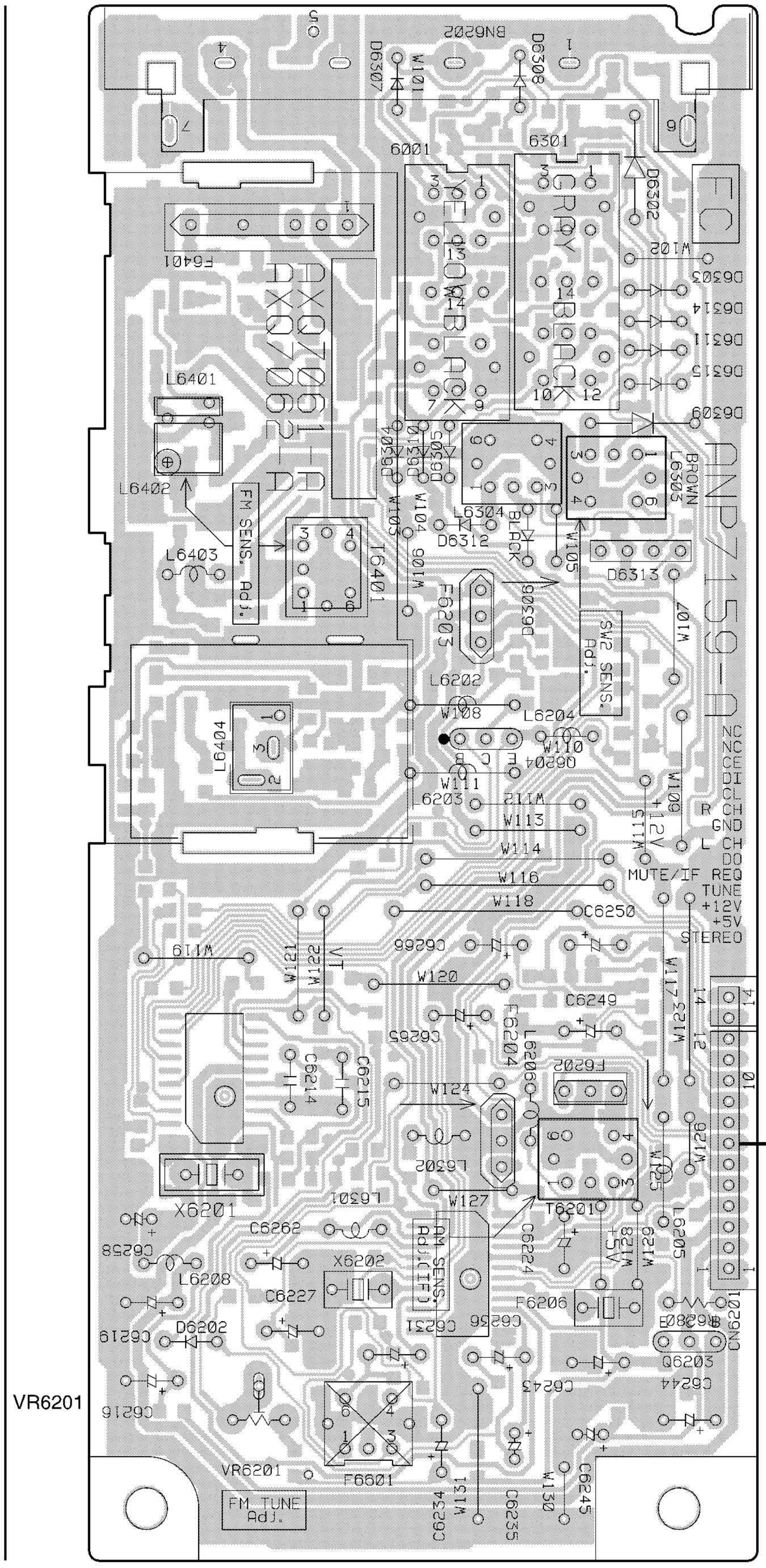
(ANP7146-C)

SIDE A

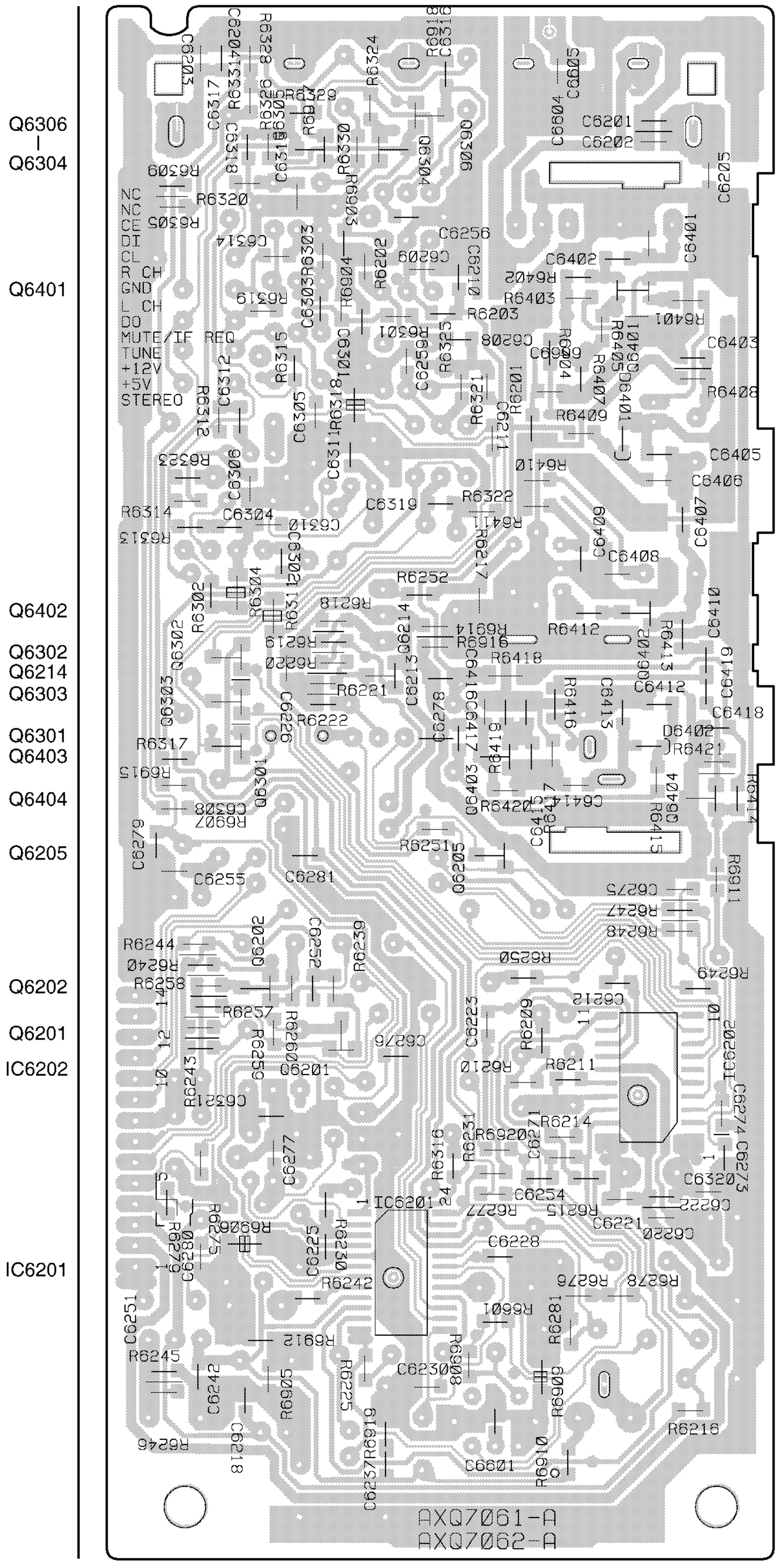
34 **A** **C** **(XR-A100)**

4.3 FM/AM TUNER MODULE

E FM/AM TUNER MODULE



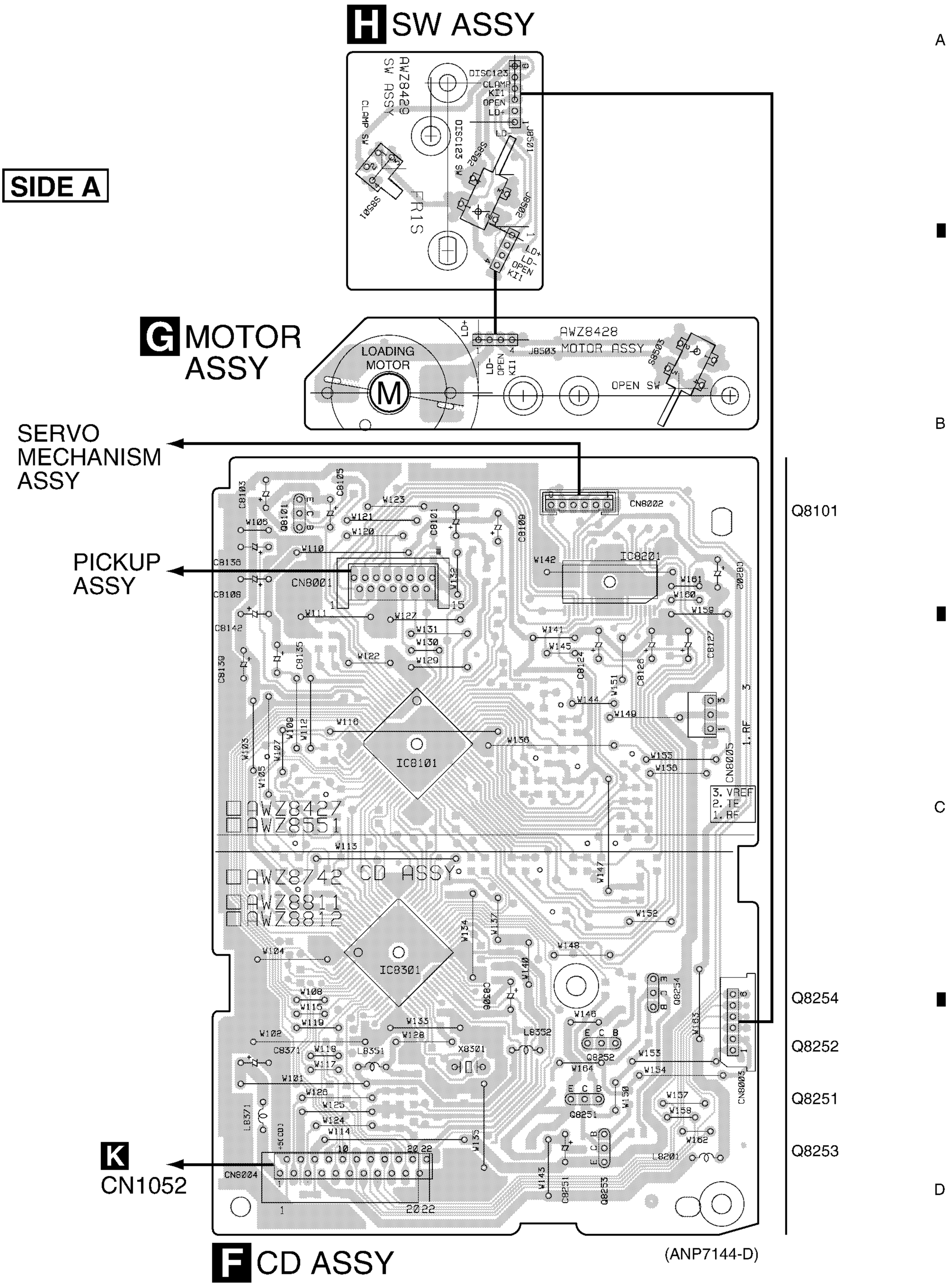
E FM/AM TUNER MODULE



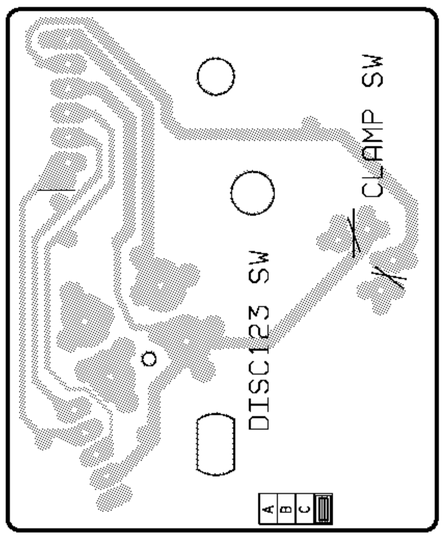
(ANP7159-A)

SIDE B

4.4 CD, MOTOR AND SW ASSEMBLIES

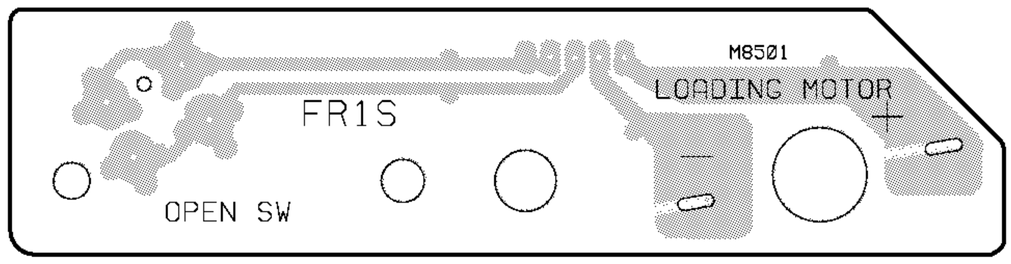


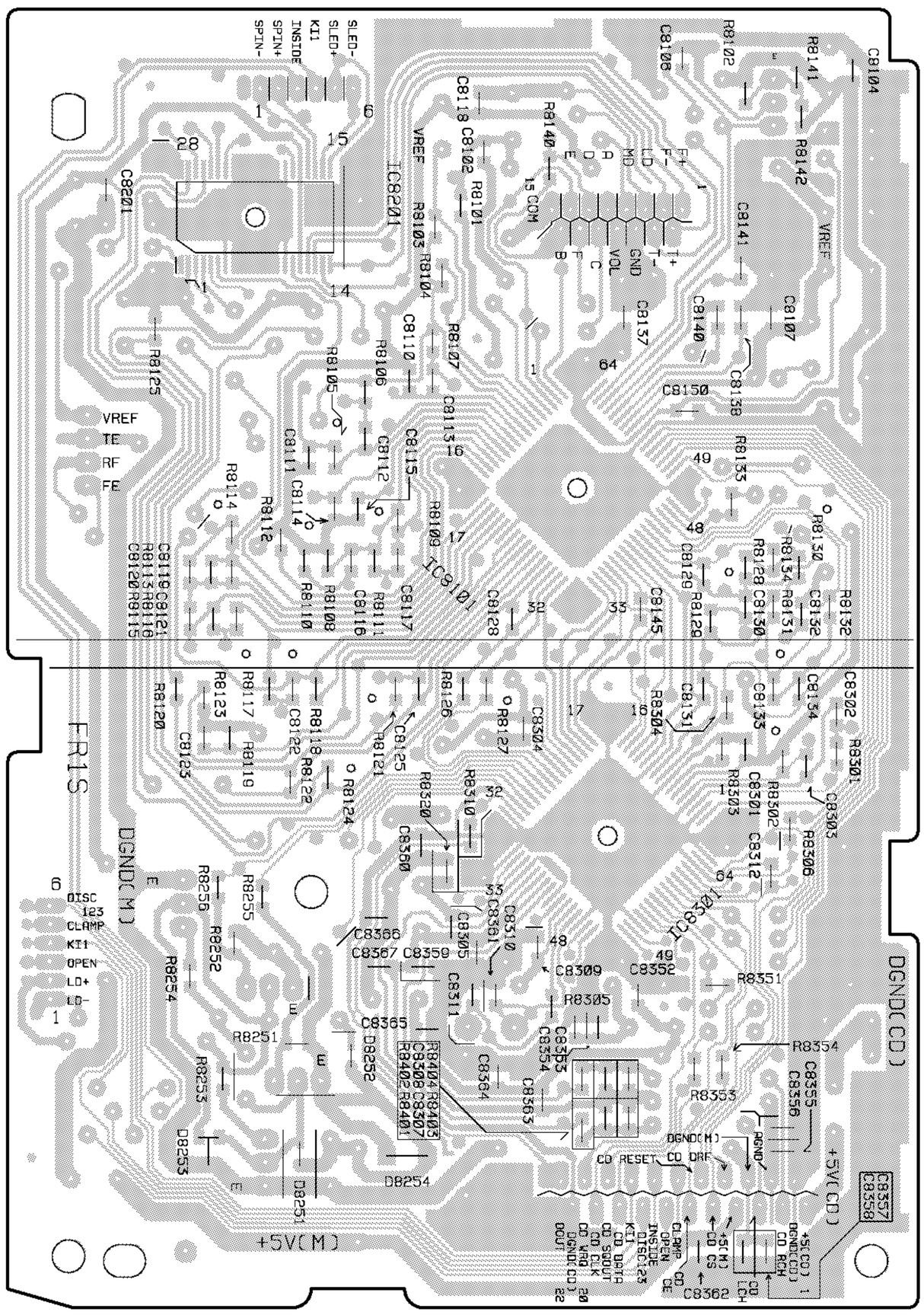
H SW ASSY



SIDE B

G MOTOR ASSY

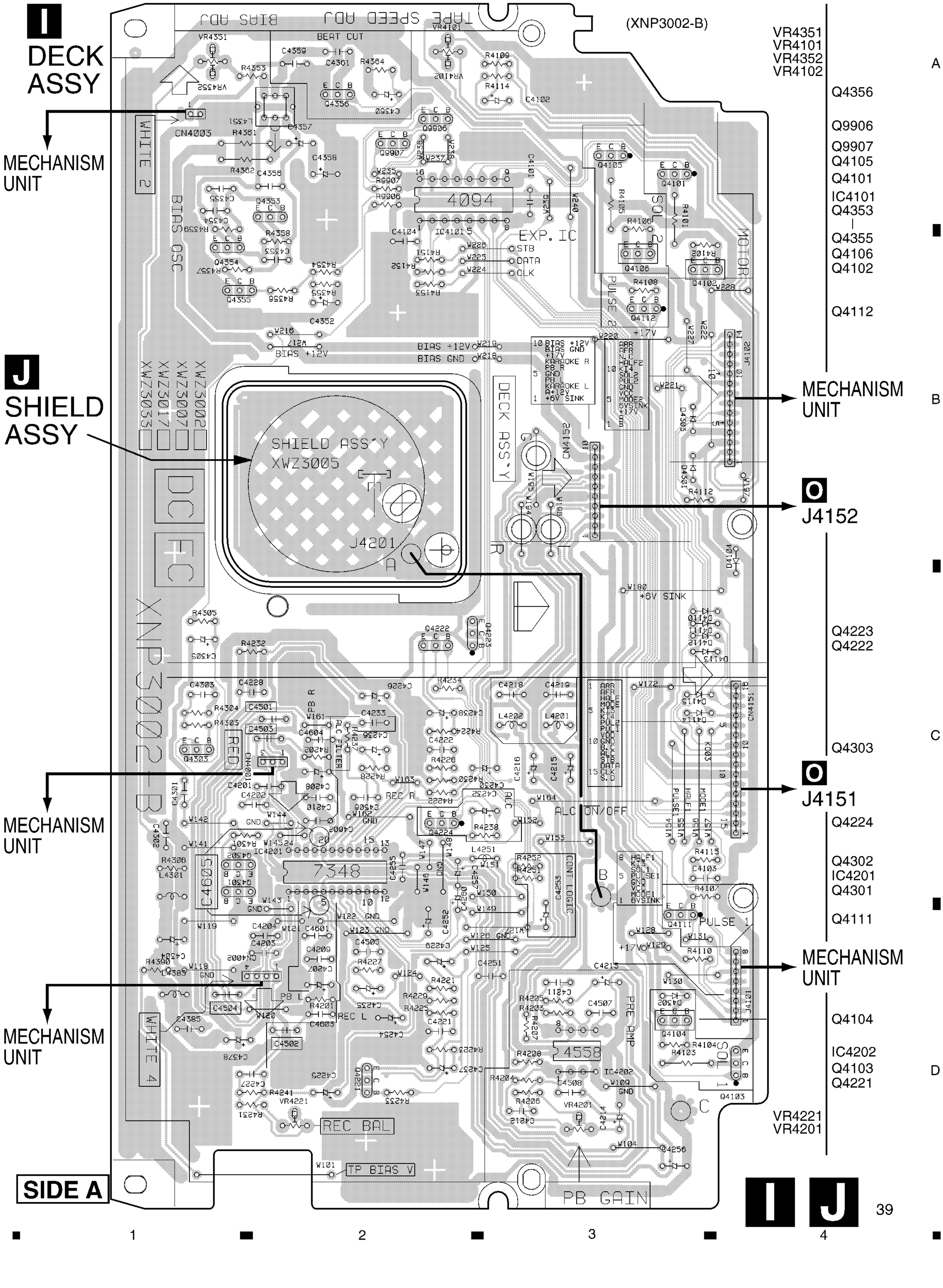




(ANP7144-D)

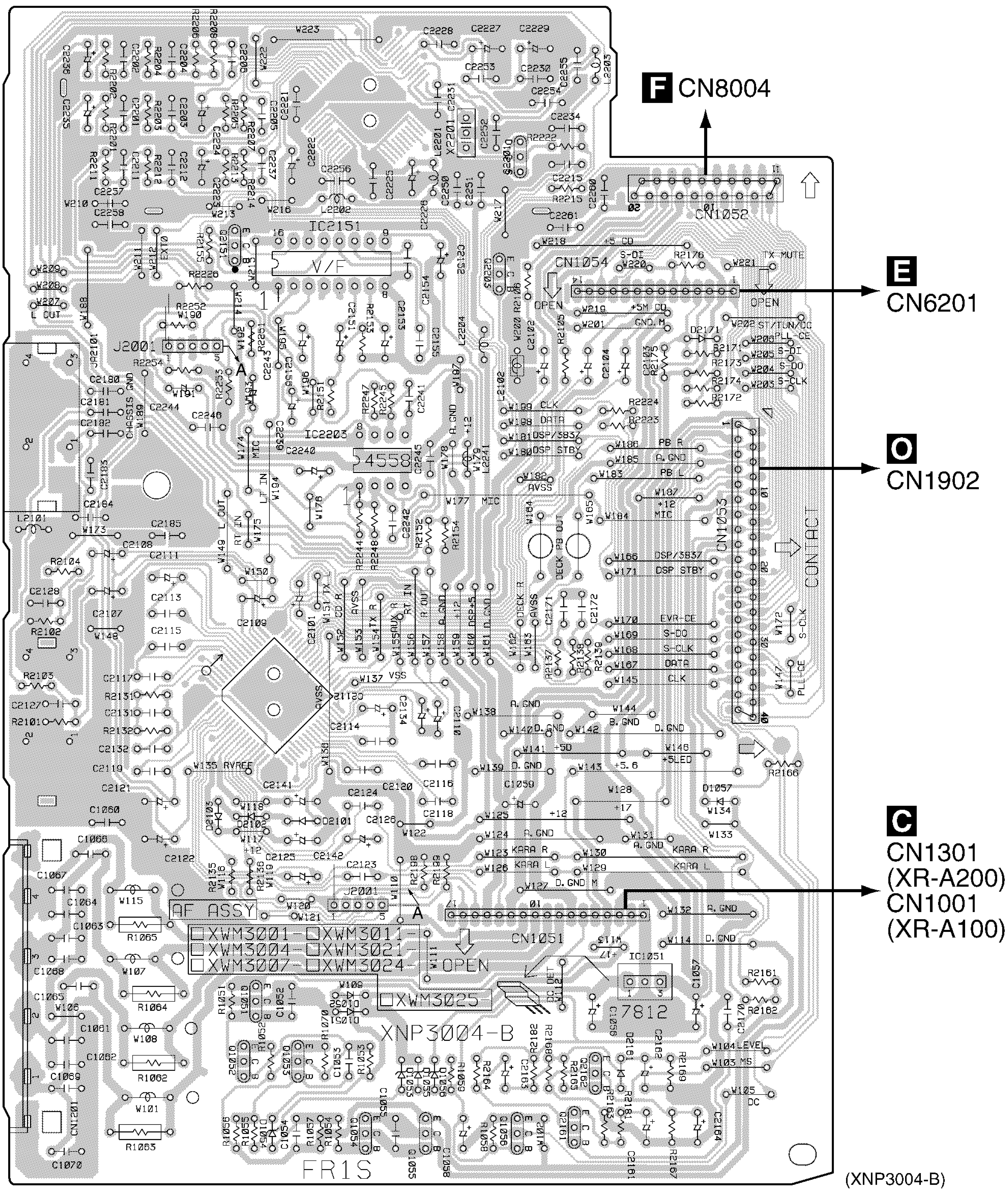
F CD ASSY

4.5 DECK AND SHIELD ASSEMBLIES



4.6 AF ASSY

K AF ASSY

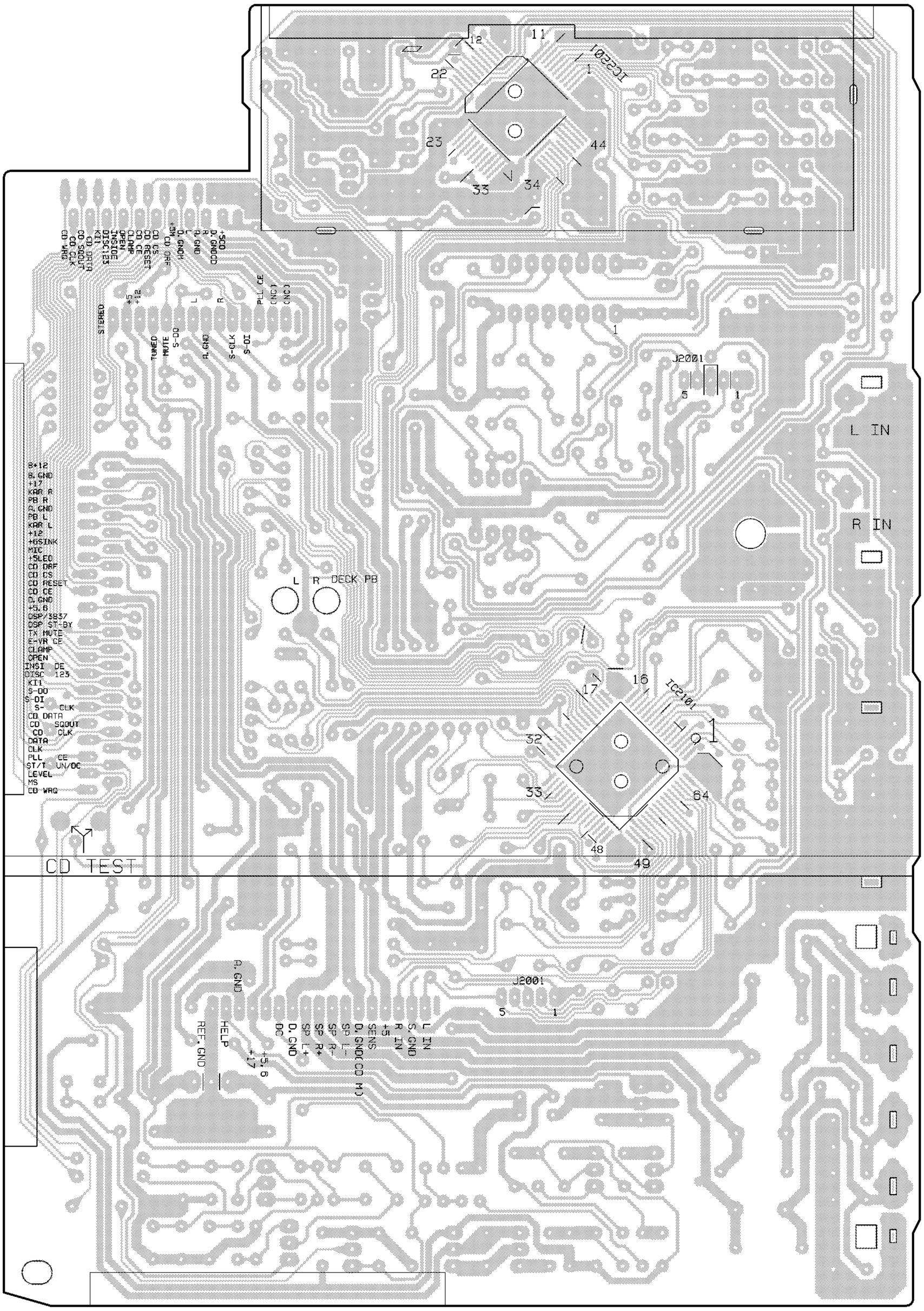


(XNP3004-B)

Q2151 IC2151 IC2203 Q2203 Q2201
Q1051–Q1056 Q2161 Q2162 IC1051

SIDE A

KAF ASSY

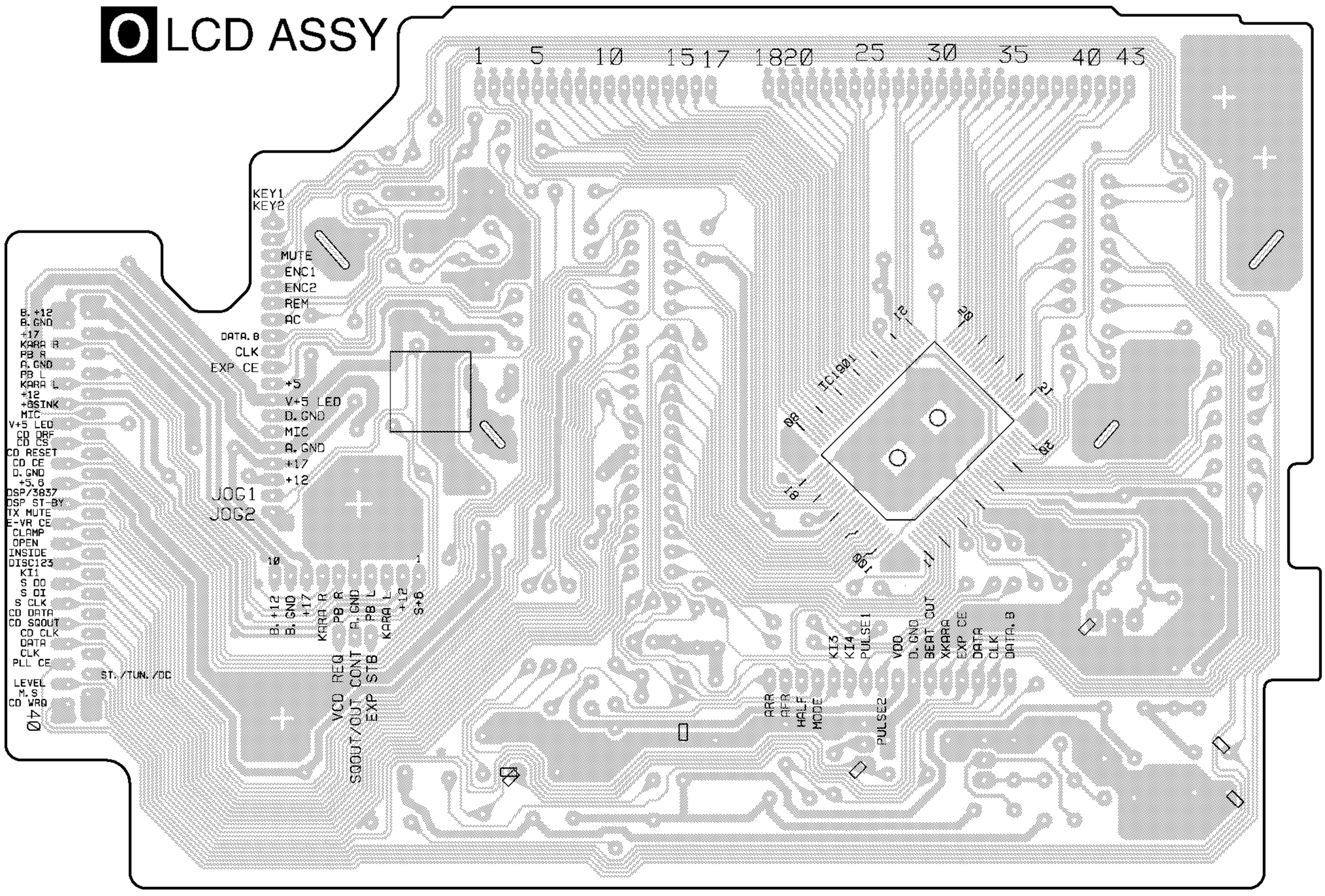


IC2201 IC2101

SIDE B

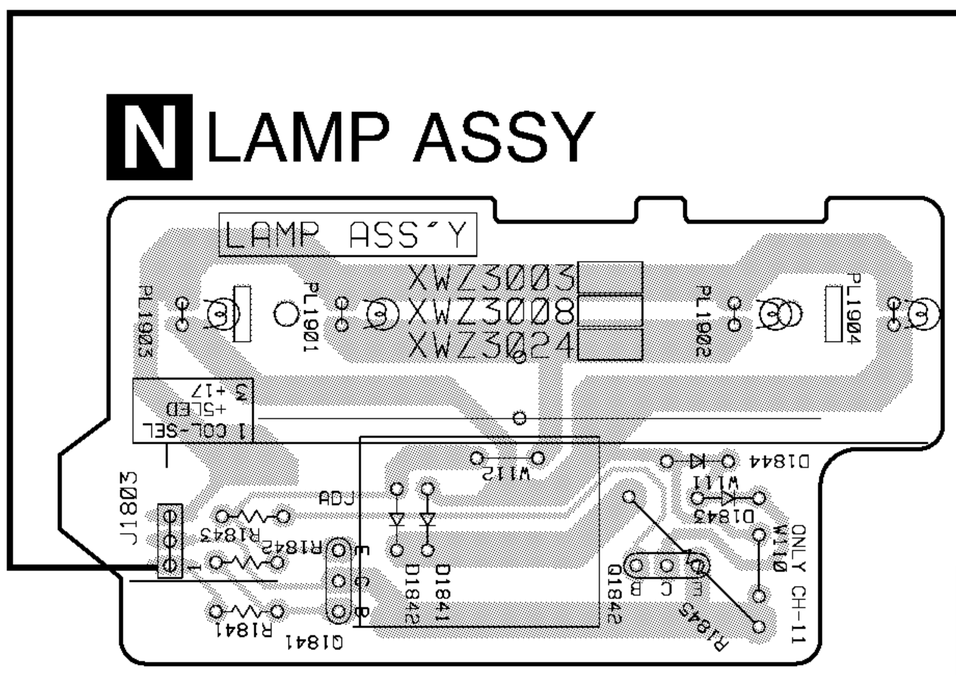
4.7 CD SW, DISPLAY, LAMP AND LCD ASSEMBLIES

O LCD ASSY



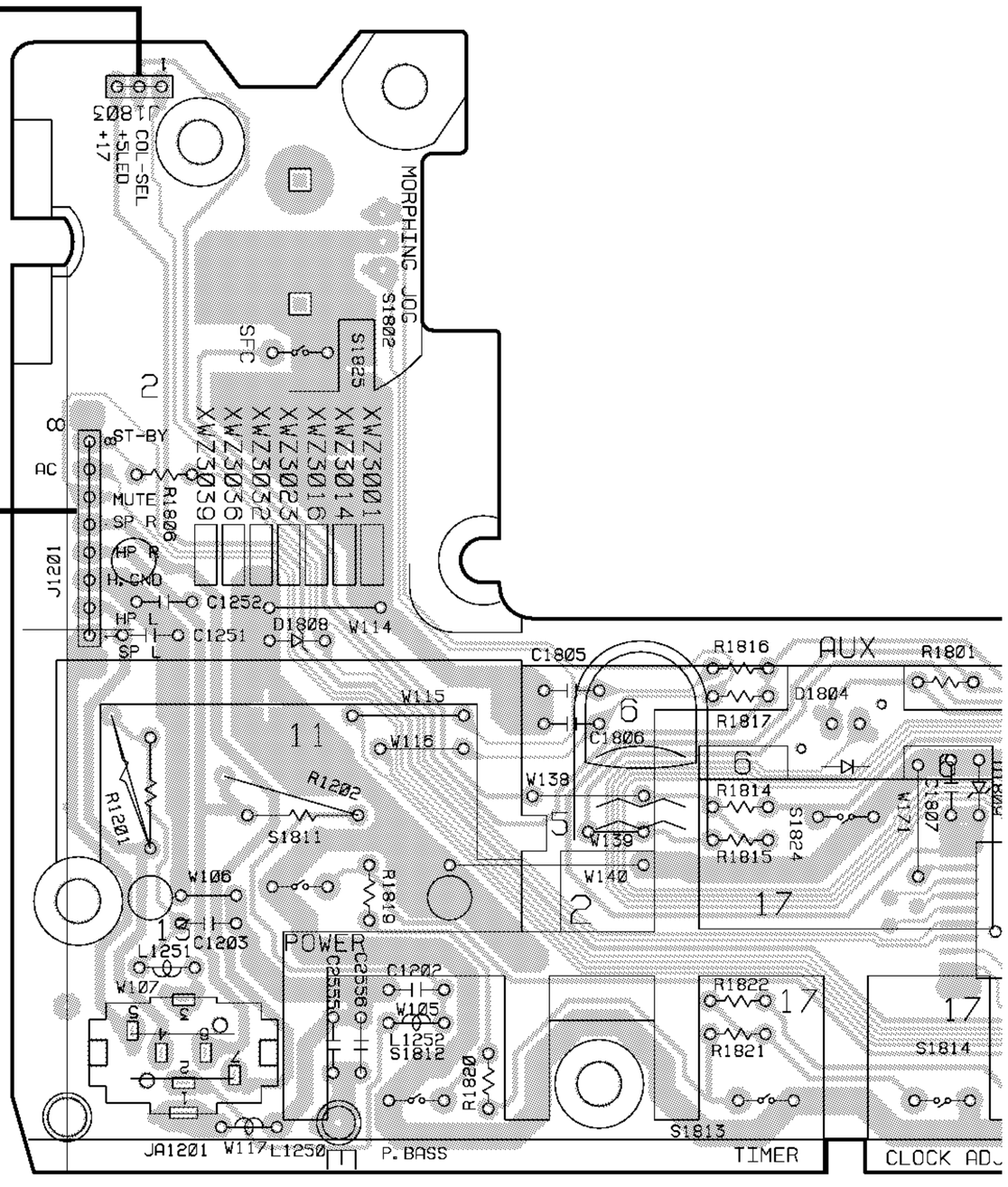
SIDE B

N LAMP ASSY



(XNP3002-B)

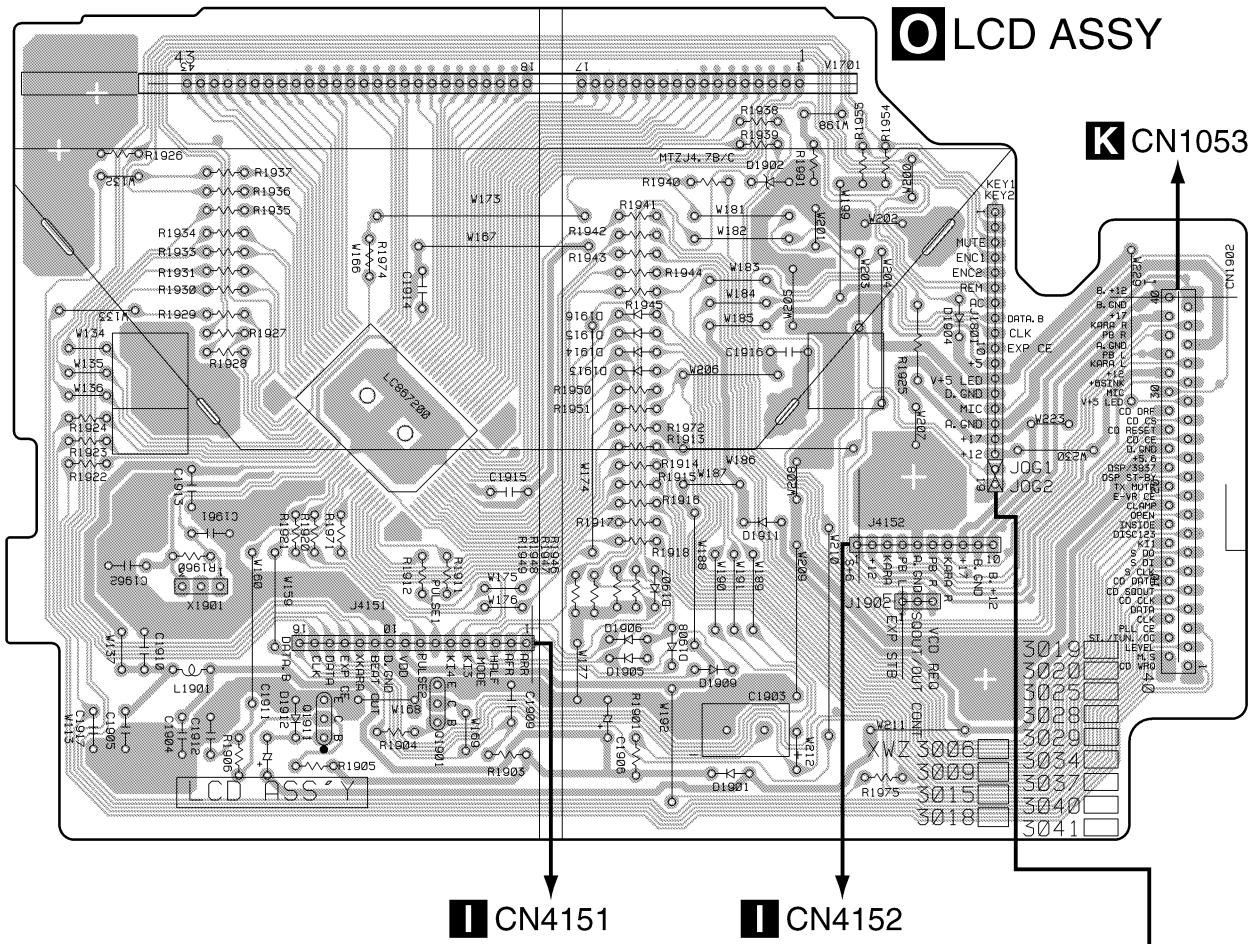
C CN1302
(XR-A200)
CN1002
(XR-A100)



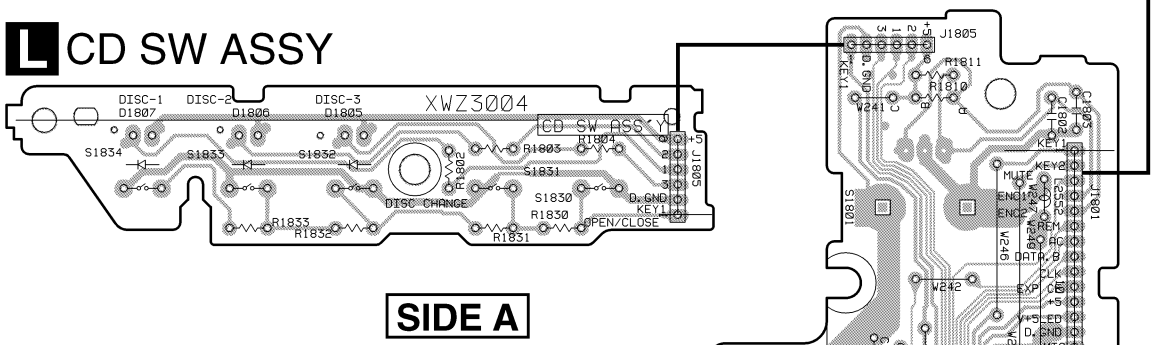
SIDE A

M **N** **O**

O LCD ASSY

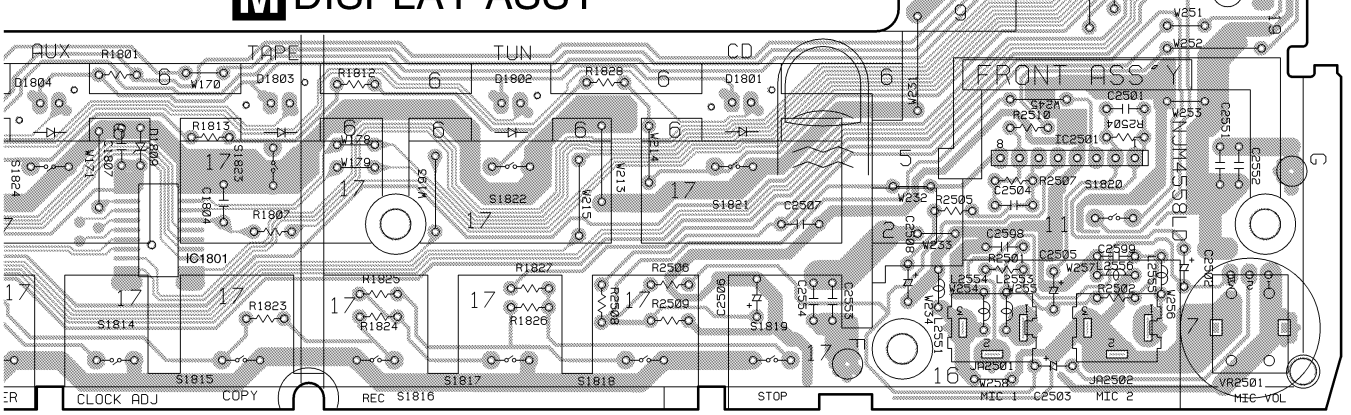


L CD SW ASSY



SIDE A

M DISPLAY ASSY



5. PCB PARTS LIST

NOTES: ●*Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
●*The ⚠ 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 ..... RD1/4PU [5][6][1] J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU [4][7][3] J
0.5 Ω → R50 ..... RN2H [R][5][0] K
1 Ω → 1R0 ..... RS1P [1][R][0] K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC [5][6][2][1] F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.		Remarks
		XR-A200	XR-A100	
	FM AM TUNER MODULE	AXQ7061	AXQ7061	
	AF ASSY	XWM3011	XWM3001	
NSP	POWER SUPPLY ASSY	XWM3012	AWM7251	
	├POWER ASSY	XWZ3011	AWZ8534	
	├POWER ASSY 2	XWZ3012	Not used	
	├TRANS ASSY	XWZ3021	AWZ8533	
	└TRANS 2 ASSY	XWZ3022	Not used	
NSP	COMPLEX ASSY	XWM3013	XWM3002	
	├DECK ASSY	XWZ3002	XWZ3002	
	├CD SW ASSY	XWZ3004	XWZ3004	
NSP	├SHIELD ASSY	XWZ3005	XWZ3005	
	├DISPLAY ASSY	XWZ3023	XWZ3001	
	├LAMP ASSY	XWZ3024	XWZ3008	
	└LCD ASSY	XWZ3025	XWZ3006	
NSP	$M SERVO BOARD ASSY	AWX7030	AWX7030	
	├CD ASSY	AWZ8427	AWZ8427	
	├MOTOR ASSY	AWZ8428	AWZ8428	
NSP	└SW ASSY	AWZ8429	AWZ8429	

A TRANS ASSY (XWZ3021)

Mark	No.	Description	Part No.
		SWITCH	
	S101		AKX7006
		OTHERS	
	H101-H104	FUSE CLIP	AKR7001
		TERMINAL	RKC-061
		RESISTOR	
	R101		RF1/4PS100J
		OTHERS	
	H101-H104	FUSE CLIP	AKR1004
		TERMINAL	RKC-061

A TRANS ASSY (AWZ8533)

Mark	No.	Description	Part No.
		SWITCH	
	S101		AKX7004
		CAPACITOR	
	C101		CEANP1R0M50

B TRANS 2 ASSY

Mark	No.	Description	Part No.
		CAPACITOR	
	C111		CQMA103K2E
		RESISTOR	
	R111		RF1/4PS100J

Mark	No.	Description	Part No.
		C POWER ASSY (XWZ3011)	
		SEMICONDUCTORS	
⚠	IC1303	(250mA,125V)	AEK7002
⚠	IC1302	(400mA,125V)	AEK7004
	IC1301		STK405-090A
	Q1310,Q1312,Q1313		2SA1048
	Q1301,Q1307-Q1309,Q1311		2SC2458
	Q1303,Q1304		2SD2144S
	Q1305,Q1306		DTA124ES
	D1302-D1304,D1308-D1311		1SS254
	D1312		D3SBA20
	D1305,D1306		MTZJ2.2B
		RELAY	
	RY1301		ASR7007
		CAPACITORS	
	C1305,C1306		CCCCJ3R0C50
	C1313,C1314		CCCSL221J50
	C1320		CEANP470M16
	C1311,C1312,C1328		CEAT100M50
	C1324		CEAT1R0M50
	C1326		CEAT222M50
	C1315,C1316,C1327		CEAT2R2M50
	C1317,C1318		CEAT330M50
	C1321,C1323		CEAT470M25
	C1308,C1309		CEAT470M50
	C1322		CEAT471M6R3
	C1319		CGCYX104K25
	C1301,C1302		CQMBA104J50
	C1325(3300µF,50V)		RCH1129
		RESISTORS	
	R1305,R1306		RD1/2PM563J
	R1307,R1309		RFA1/4PS101J
	R1301,R1302		RFA1/4PS4R7J
	R1333,R1334		RS2LMFR22J
	Other Resistors		RD1/4PU□□□J
		OTHERS	
	CN1301	17P SOCKET	KP200TA17L
	KN1301	EARTH METAL FITTING	VNF1084
		C POWER ASSY (AWZ8534)	
		SEMICONDUCTORS	
⚠	IC1003,IC1202	FUSE IC (400mA,125V)	AEK7004
⚠	IC1004	FUSE IC (1A,125V)	AEK7009
⚠	IC1005	FUSE IC (2A,125V)	AEK7013
	IC1002		NJM4558D-D
	IC1001		NJM78M05FA
	IC1201		TDA8560Q
	Q1005,Q1201,Q1202,Q1204		2SA1048
	Q1002,Q1003		2SB1375
	Q1004,Q1008,Q1203		2SC2458
	Q1007		2SC4040
	Q1001		2SC5200(P)
	Q1006		2SD2012
	D1004,D1008,D1012,D1014		1SS254
	D1202-D1204		1SS254
	D1001		D3SBA20
	D1011,D1013,D1058		MTZJ20A
	D1201		MTZJ4.7B
	D1003,D1010		MTZJ6.8A
	D1009		S5688G
		CAPACITORS	
	C1005		CCCSL331J50
	C1006		CCCSL680J50
	C1003,C1007,C1208		CEAS100M50
	C1206		CEAS101M10
	C1211		CEAS101M35
	C1209		CEAS1R0M50
	C1002		CEAS2R2M50
	C1004,C1207		CEAS330M25
	C1051		CEAS331M50
	C1203,C1204		CEASR10M50
	C1201,C1202		CKCYB222K50
	C1205,C1251		CKCYF473Z50
	C1001(4700µF,50V)		RCH1142
		RESISTORS	
	R1011		RD1/2PM472J
	R1221,R1222		RD1/2PMF181J
	R1008		RD1/4PMF4R7J
	R1251		RS1LMF1R0J
	R1016		RS2LMF330J
	VR1001(1kΩ)		RCP1044
	Other Resistors		RD1/4PU□□□J
		OTHERS	
	CN1001	17P SOCKET	KP200TA17L
	KN1001	EARTH METAL FITTING	VNF1084
		D POWER ASSY 2	
		SEMICONDUCTORS	
⚠	IC1004	(400mA,125V)	AEK7004
⚠	IC1003	(2A,125V)	AEK7013
	IC1002		NJM4558D-D
	IC1001		NJM78M05FA
	Q1005		2SA1048
	Q1002		2SA965
	Q1003		2SB1375
	Q1007		2SC2235
	Q1004,Q1008		2SC2458
	Q1001		2SC5196(P)
	Q1006		2SD2012
	D1003-D1007		1SS254
	D1001,D1008		MTZJ20A
	D1002,D1009		MTZJ6.8A
		CAPACITORS	
	C1005		CCCSL331J50
	C1006		CCCSL680J50
	C1001,C1002		CEAT100M50
	C1003		CEAT2R2M50
	C1004,C1007		CEAT470M25
	C1008		CKCYB222K50

Mark	No.	Description	Part No.
RESISTORS			
	R1011		RD1/2PM472J
	R1014		RN1/4PC3601F
	R1013		RN1/4PC7501F
	R1017		RS1LMF560J
	Other Resistors		RD1/4PU□□□J

E FM/AM TUNER MODULE

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
	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)	RCP1045
	Other Resistors	RS1/10S□□□J

OTHERS

	BN6202	AKE7025
	4P ANTENNA TERMINAL PLATE	
	X6202 CERAMIC RESONATOR (456kHz)	ASS1066
	X6201 CRYSTAL RESONATOR (7.2000MHz)	ASS1093
	CN6201 14P SOCKET	KP200IA14L
	AM RF TUNING BLOCK	AXX7041

F CD ASSY

SEMICONDUCTORS

	IC8201	BA5923FP
	IC8101	LA9240ML
	IC8301	LC78622ED
	Q8101	2SA1048
	Q8251,Q8252	2SA1560
	Q8253,Q8254	2SC4040
	D8253	1SS181
	D8251,D8252	1SS355

COILS

	L8351,L8352	LFA1R0K
	L8201,L8371	LFA470J

CAPACITORS

	C8145,C8352,C8354,C8356,C8358	CCSQCH101J50
	C8361,C8362	CCSQCH101J50
	C8132,C8310,C8311	CCSQCH150J50
	C8131	CCSQCH300J50
	C8129	CCSQCK1R0C50
	C8142	CEAL101M6R3
	C8127	CEAL1R0M50
	C8126,C8139	CEAL470M16
	C8135	CEAL4R7M16
	C8124	CEALR47M50

Mark	No.	Description	Part No.
	C8136		CEAS100M50
	C8108,C8251,C8306,C8371		CEAS101M10
	C8202		CEAS101M25
	C8101		CEAS3R3M50
	C8105		CEAS470M16
	C8109		CEASR22M50
	C8106,C8119,C8133,C8360		CKSQYB102K50
	C8102,C8122,C8123,C8130		CKSQYB103K50
	C8137,C8138,C8201,C8309,C8312		CKSQYB103K50
	C8134,C8302,C8303		CKSQYB104K25
	C8353,C8359		CKSQYB152K50
	C8111		CKSQYB153K25
	C8114,C8117,C8120,C8121		CKSQYB154K16
	C8125		CKSQYB221K50
	C8107		CKSQYB223K50
	C8110		CKSQYB331K50
	C8115,C8128		CKSQYB332K50
	C8113		CKSQYB333K25
	C8112,C8141		CKSQYB334K16
	C8355,C8357		CKSQYB471K50
	C8116,C8140		CKSQYB473K50
	C8118,C8301,C8304,C8305		CKSQYF104Z25
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	CN8003		52151-0610
	6PJUMPER CONNECTOR		
	CN8002 KR CONNECTOR		B6B-PH-K-S
	CN8005 3P SIDE POST		BS3P-SHF-1AA
	X8301 CERAMIC RESONATOR (16.9344MHz)		DSS1083
	CN8004 FFC CONNECTOR 20P		HLEM20R-1
	CN8001		SLW15S-1C7
	1.0mm PITCH FFC CONNECTOR		

G MOTOR ASSY

SWITCH		
	S8503	ASG7009
OTHERS		
	MOTOR PULLEY	PNW1634
	CARRIAGE MOTOR	VXM1033

H SW ASSY

SWITCHES		
	S8502	ASG7009
	S8501	DSG1017
OTHERS		
	J8501	D20PWY0610E
	2mm PITCH JUMPER WIRE 6P	

Mark	No.	Description	Part No.

I DECK ASSY

SEMICONDUCTORS		
	IC4201	AN7348K
	IC4101	BU4094BC
	IC4202	NJM4558D-D
	Q4303	2SA1048
	Q4102,Q4104,Q4106	2SA1560
	Q4301,Q4302	2SC1845
	Q4356	2SC2240
	Q4353,Q4354	2SC4040
	Q4221,Q4222,Q4355	2SD2144S
	Q4111,Q4112	DTA124ES
	Q4223	DTA143ES
	Q4101,Q4103,Q4105,Q4224	DTC143ES
	D4104,D4110-D4115,D4301-D4303	1SS254
COILS		
	L4351	ATX7002
	L4301	RTF1013
CAPACITORS		
	C4211,C4212	CCCSL151J50
	C4360	CEAT100M50
	C4207,C4208,C4305	CEAT101M10
	C4215,C4216,C4237,C4238,C4254	CEAT1R0M50
	C4213,C4214,C4225,C4226	CEAT2R2M50
	C4229,C4230,C4235,C4236,C4253	CEAT2R2M50
	C4102,C4252,C4352,C4357,C4358	CEAT330M25
	C4232,C4304	CEAT4R7M50
	C4218,C4219	CGCYX333K25
	C4201,C4202	CKCYB102K50
	C4227,C4228	CKCYB152K50
	C4103	CKCYB222K50
	C4353,C4354	CKCYB332K50
	C4203,C4204	CKCYB471K50
	C4355	CKCYB472K50
	C4361	CKCYB681K2H
	C4104	CKCYB681K50
	C4301	CKCYB821K50
	C4303	CKCYF223Z50
	C4251	CQMBA104J50
	C4356	CQMBA223J50
	C4221,C4222	CQMBA333J50
	C4209,C4210,C4233	CQMBA393J50
	C4302	CQPA222J2A
	C4359	CQPA822J2A
RESISTORS		
	R4101,R4103,R4105	RD1/2PM102J
	R4361,R4362	RD1/2PM820J
	VR4351(22kΩ)	RCP1103
	VR4101(10kΩ)	RCP1140
	Other Resistors	RD1/4PU□□□J
OTHERS		
	CN4152	52147-1010
	10P JUMPER CONNECTOR	
	CN4151	52147-1610
	16P JUMPER CONNECTOR	
	CN4003 KR CONNECTOR	B2B-PH-K-S
	CN4001 KR CONNECTOR	B3B-PH-K-R
	CN4002 KR CONNECTOR	B4B-PH-K-S

Mark	No.	Description	Part No.

J SHIELD ASSY

No service part

K AF ASSY (XWM3011)

SEMICONDUCTORS

	IC2151	BA3837
	IC2101	LC75394NHE
	IC2203	NJM4558D-D
	IC1051	NJM78M12FA
	Q1056,Q2161,Q2162	2SC2458
	Q2151	DTC124ES
	D2161,D2171	1SS254
	D1056	MTZJ15A
	D1055	MTZJ20A

COILS

	L1052,L1054	ATH-133
	L2101	LAU1R0J

CAPACITORS

	C2123,C2124	CCCSL101J50
	C1056-C1058,C2142,C2161	CEAT100M50
	C1059	CEAT101M10
	C2162	CEAT1R0M50
	C2101-C2104,C2107-C2110	CEAT2R2M50
	C2125,C2126,C2151,C2152,C2156	CEAT2R2M50
	C2163,C2164,C2239,C2240	CEAT2R2M50
	C2121,C2122,C2141,C2153	CEAT330M25
	C2111,C2112	CEATR47M50
	C2255	CKCYB102K50
	C1062,C1063,C1067,C1070	CKCYB152K50
	C2171,C2172,C2184,C2260	CKCYB152K50
	C2119,C2120	CKCYB472K50
	C2131,C2132	CKCYB682K50
	C2155	CQMA224J50
	C2117,C2118	CQMBA222J50
	C2154	CQMBA473J50
	C2113-C2116	CQMBA563J50

RESISTORS

	R1063,R1065	RD1/4PMF4R7J
	Other Resistors	RD1/4PU□□□J

OTHERS

	CN1201	4P SPEAKER TERMINAL	AKE7035
	CN1052	FFC CONNECTOR 20P	HLEM20R-1
	CN1053	FFC CONNECTOR 40P	HLEM40S-1
	CN1054	14P PLUG	KM200IB14
	CN1051	17P PLUG	KM200TA17
	JA2101	2P PIN JACK	VKB1050

K AF ASSY (XWM3001)

SEMICONDUCTORS

	IC2151	BA3837
	IC2101	LC75394NED
	IC1051	NJM78M12FA
	Q1054	2SA1048
	Q1051	2SA1560
	Q1052,Q1053,Q1056,Q2161	2SC2458
	Q1055	2SC4040
	Q2151	DTC124ES
	D2101-D2103,D2161,D2171	1SS254
	D1054	MTZJ11C
	D1053,D1056	MTZJ15A
	D1055	MTZJ18B
	D1051,D1052,D1057	S5688G

COIL

	L2101	LAU1R0J

CAPACITORS

	C2123,C2124	CCCSL101J50
	C2111,C2112	CEASR68M50
	C1056-C1058,C2161	CEAT100M50
	C1059	CEAT101M10
	C2162	CEAT1R0M50
	C2141	CEAT221M10
	C2101-C2104,C2107-C2110	CEAT2R2M50
	C2125,C2126,C2151,C2152,C2156	CEAT2R2M50
	C2163	CEAT2R2M50
	C2153	CEAT330M25
	C2121,C2122,C2142	CEAT470M25
	C2255	CKCYB102K50
	C1062,C1063,C1067,C1070	CKCYB152K50
	C2171,C2172,C2184,C2260	CKCYB152K50
	C1053	CKCYB222K50
	C1055	CKCYB471K50
	C1052,C1054,C2119,C2120	CKCYB472K50
	C2131,C2132	CKCYB682K50
	C2155	CQMA224J50
	C2117,C2118	CQMBA222J50
	C2113,C2114	CQMBA393J50
	C2154	CQMBA473J50
	C2115,C2116	CQMBA563J50

RESISTORS

	All Resistors	RD1/4PU□□□J

OTHERS

	CN1201	4P SPEAKER TERMINAL	AKE7035
	CN1052	FFC CONNECTOR 20P	HLEM20R-1
	CN1053	FFC CONNECTOR 40P	HLEM40S-1
	CN1054	14P PLUG	KM200IB14
	CN1051	17P PLUG	KM200TA17
	JA2101	2P PIN JACK	VKB1050

L CD SW ASSY

SEMICONDUCTORS

	D1806	SLP3118C51H
	D1807	SLP7118C51H
	D1805	SLP9118C51H

SWITCHES

	S1830-S1834	ASG1051

RESISTORS

	All Resistors	RD1/4PU□□□J

Mark No. Description Part No.

M DISPLAY ASSY

(1) CONTRAST TABLE

XWZ3023 and XWZ3001 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		XWZ3023	XWZ3001	
	S1802	ASX7017	Not used	
	S1825	Not used	ASG1051	
	R1201, R1202	RS1LMF331J	RD1/2PMF151J	
	R1816, R1817	RD1/4PU473J	Not used	

(2) PARTS LIST FOR XWZ3023

SEMICONDUCTORS

IC1801	BU2092F
IC2501	NJM4558LD
D1808,D1809	MTZJ6.8A
D1801-D1804	SLP9118C51H

COILS

L1250,L2551,L2552	LAU1R0K

SWITCHES

S1811-S1824	ASG1051
S1801,S1802	ASX7017

CAPACITORS

C2502,C2503,C2508	CEJA2R2M50
C2506	CEJA330M25
C2505	CEJA4R7M50
C2504	CGCYX473K25
C1804	CKCYB102K50
C2554,C2555	CKPUYB102K50
C2501	CKPUYB331K50
C1202,C1203,C1801,C1807	CKPUYF103Z25
C2507	CQMBA104J50

RESISTORS

R1201,R1202	RS1LMF331J
VR2501(10kΩ)	VCS1021
Other Resistors	RD1/4PU□□□J

OTHERS

JA2501,JA2502 SR JACK	AKN7004
JA1201 STEREO MINI JACK	AKN7005
REMOTE RECEIVER UNIT	GP1U27X

N LAMP ASSY

(1) CONTRAST TABLE

XWZ3024 and XWZ3008 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		XWZ3024	XWZ3008	
	Q1841	2SA1560	Not used	
	Q1842	2SC4040	Not used	
	D1841, D1842	1SS254	Not used	
	R1841	RD1/4PU471J	Not used	
	R1842	RD1/4PU472J	Not used	
	R1843	RD1/4PU102J	Not used	
	R1845	RS2LMF151J	Not used	
	PL1901, PL1902 Sub Mliniture Lamp (0.15A,12V)	AEL7007	Not used	

Mark No. Description Part No.

(2) PARTS LIST FOR XWZ3024

SEMICONDUCTORS

Q1841	2SA1560
Q1842	2SC4040
D1841,D1842	1SS254

RESISTORS

R1845	RS2LMF151J
Other Resistors	RD1/4PU□□□J

OTHERS

PL1901,PL1902	SUB MINIATURE LAMP (0.15A,12V)	AEL7007
PL1903,PL1904	SUB MINIATURE LAMP (0.15A,12V)	AEL7008

O LCD ASSY

(1) CONTRAST TABLE

XWZ3025 and XWZ3006 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		XWZ3025	XWZ3006	
	D1907	1SS254	Not used	
	C1917	CKCYB102K50	Not used	

(2) PARTS LIST FOR XWZ3025

SEMICONDUCTORS

IC1901	PDC042A
Q1911	DTC143ES
D1901,D1904,D1907,D1911-D1916	1SS254
D1902	MTZJ4.7B

COIL

L1901	LAU220J

CAPACITORS

C1903(0.047F)	ACH7013
C1911	CEAT100M50
C1906	CEAT330M25
C1910	CGCYX104K25
C1909,C1917	CKCYB102K50
C1904,C1912	CKCYF103Z50
C1905	CKCYF473Z50
C1913-C1915	CKPUYF103Z25
C1916	CKPUYX222M16

RESISTORS

R1925	RD1/4PM103J
R1954,R1955	RN1/4PC1001F
Other Resistors	RD1/4PU□□□J

OTHERS

CN1902	FFC CONNECTOR 40P	HLEM40R-1
X1901	CERAMIC RESONATOR (6.00MHz)	VSS1045
	LT FILTER	XAK3010
V1701	LCD DISPLAY	XAV3001

6. ADJUSTMENT

6.1 TUNER SECTION

■ FM Tuner Section

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

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.

Note:
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.

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.

Note (∗1): For the area using 10kHz step, frequencies should be 1000kHz.

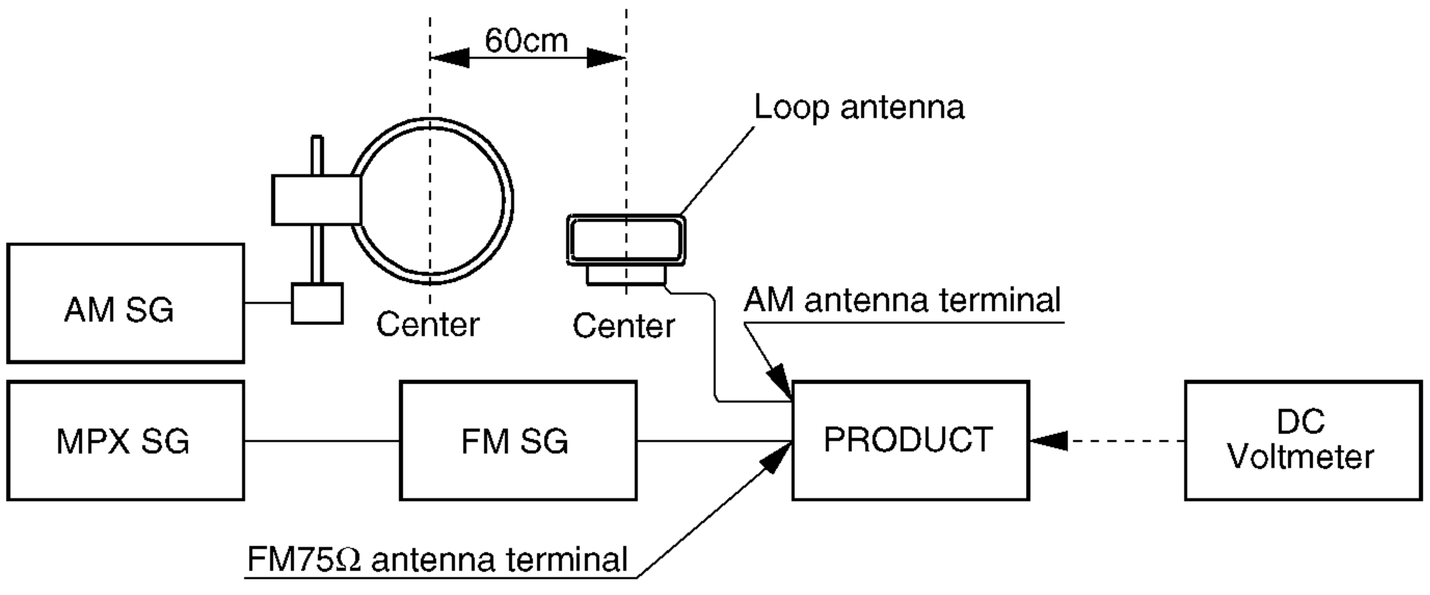


Fig. 1 AM and FM Adjustment Wiring Diagram

FM/AM TUNER MODULE

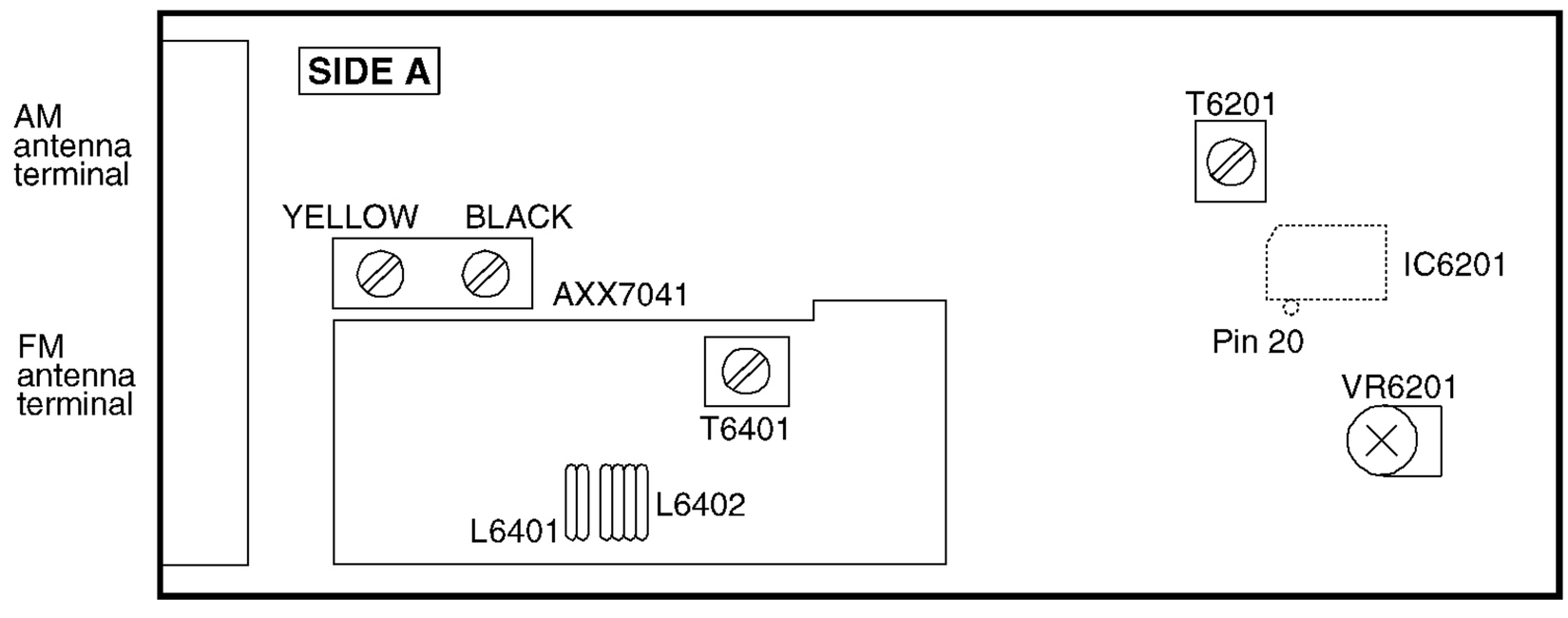


Fig. 2 Adjustment Point

6.2 CASSETTE DECK SECTION

● Adjustment points and test points are shown in Fig. 4 and Fig. 5.

■ Mechanical Adjustment

● Test tape: NCT-111 (3kHz, 30min).

1. Tape Speed Adjustment

No.	Mode	Test Tape	Adjusting Points	Measurement Points	Adjustment Procedure	Remarks
1	Deck I PLAY	NCT-111 (Playback : 3kHz)	VR4101 (DECK Assy)	PB OUT 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 check
STD-632 : Normal blank tape
(5) Provide yourself with the following measuring devides:
- AC voltmeter (Noisemeter : filter off)
- AC millivoltmeter
- Low-frequency oscillator
- Attenuator
- Oscilloscope

(6) Adjust both right and left channels unless otherwise specified.
(7) 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.
(8) Always follow the indicated adjustment order. Otherwise, a complete adjustment may not be achieved.

Playback Adjustment (Decks I and II)

(1) Head Azimuth Adjustment

Recording Adjustment (Deck II)

(1) Bias Oscillation Frequency Adjustment
(2) Recording Bias Adjustment
(3) 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.

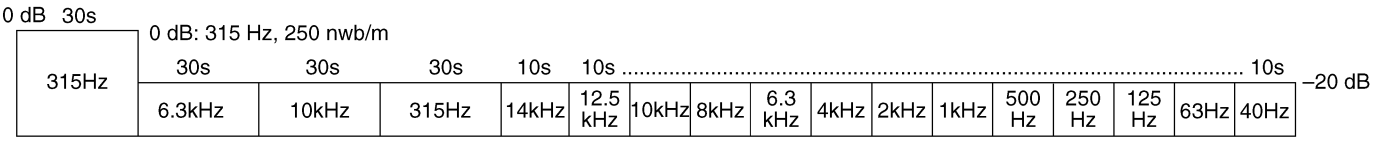


Fig. 3 STD-331E Test Tape

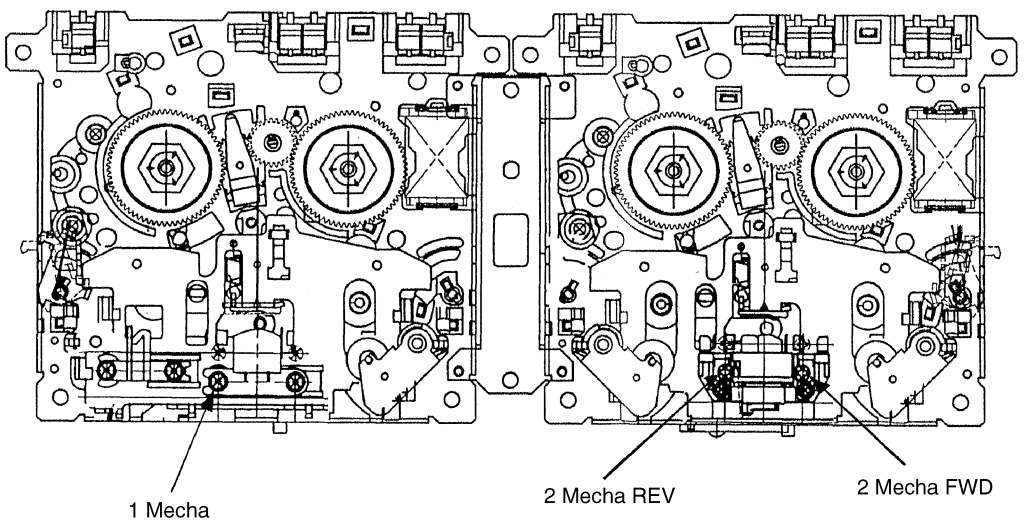


Fig. 4 Head Azimuth Adjustment Screw

■ 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. 4)	DECK PB OUT (L, Rch) (AF Assy)	Max. playback signal level	After adjustment, apply silicon bond to the head azimuth adjustment screw.
			Deck II				

■ 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 ± 2kHz.	If the ASES/COPY button for four seconds while the power is in STAND BY mode, the frequency will decrease 2-3 kHz.
			DECK II	L4351 (DECK Assy)	Between Ⓐ point in Fig. 5 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 → PLAY	Load the STD-632 test tape. Record the 315Hz and 10kHz signals at 25.2dBV input level and playback.	Deck I	————	DECK PB OUT (L, Rch) (AF Assy)	Repeat adjustment until playback level of the 10kHz signal is within 0 ± 0.5dB from that of the 315Hz signal.	
			DECK II	VR4351 (DECK Assy)			
2	REC	Load the STD-632 test tape and record (No signal)	Deck II	VR4351 (DECK Assy)	TP BIAS V POINT (DECK Assy)	23V-26V	

(3) ALC Operation Check

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.	Input signal level	DECK PB OUT (L, Rch) (AF Assy)	-8.2dBV	
2			Set to a level +10dB adove the input level at step1.		Confirm that the reading is -3.2 ± 2.5dBV	

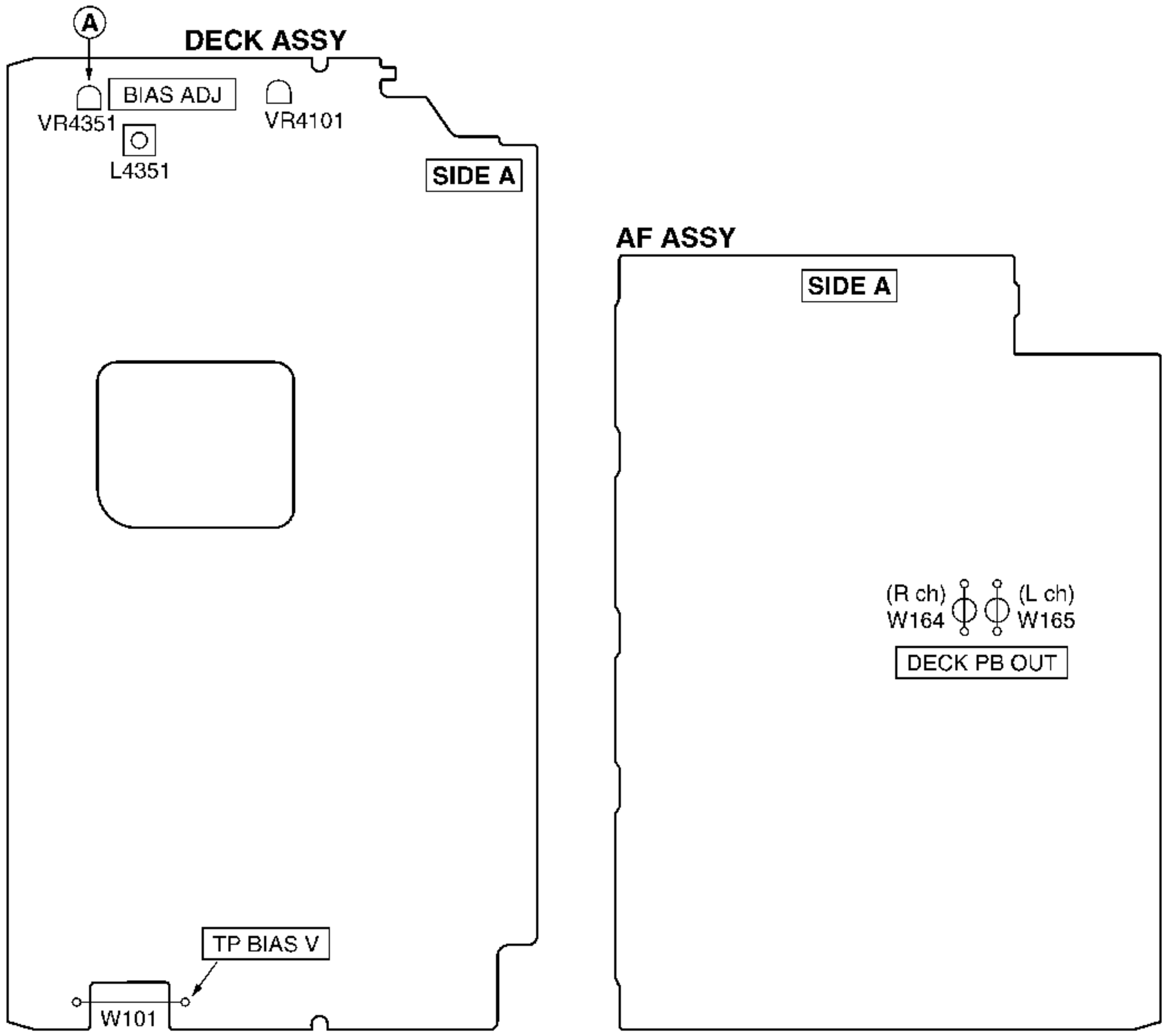


Fig. 5 Adjustment Points

6.3 POWER SECTION (XR-A100 Only)

■ Adjustment of Vp

Adjust VR1001 in the POWER Assy so that the voltage of Vp checking point W104 is 17.5 ± 0.1V.

Adjustment can be made when no load is applied while the power is turned ON and no signal is sent, as well as for the GND voltage or for the chassis.

Adjustment is required when the 5volte regurator, IC1001(NJM78M05FA) in the POWER Assy are replaced.

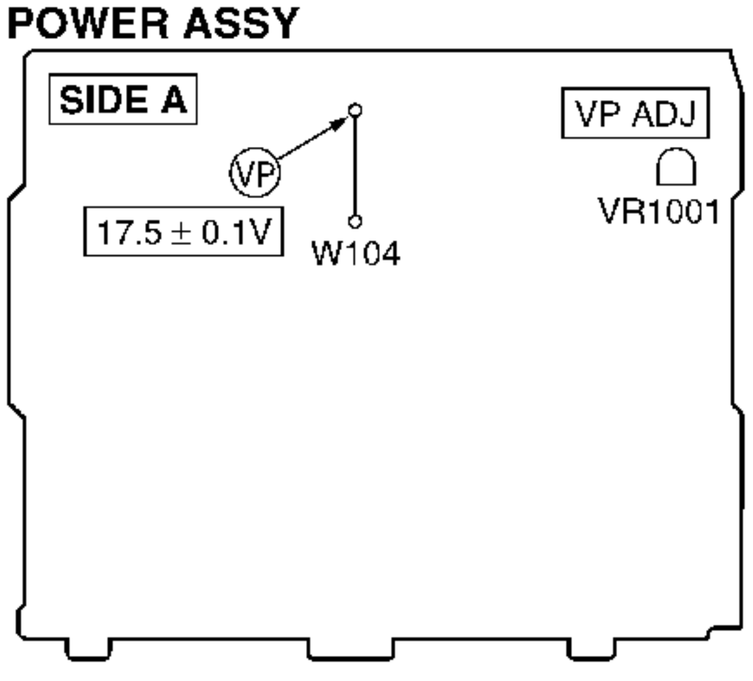


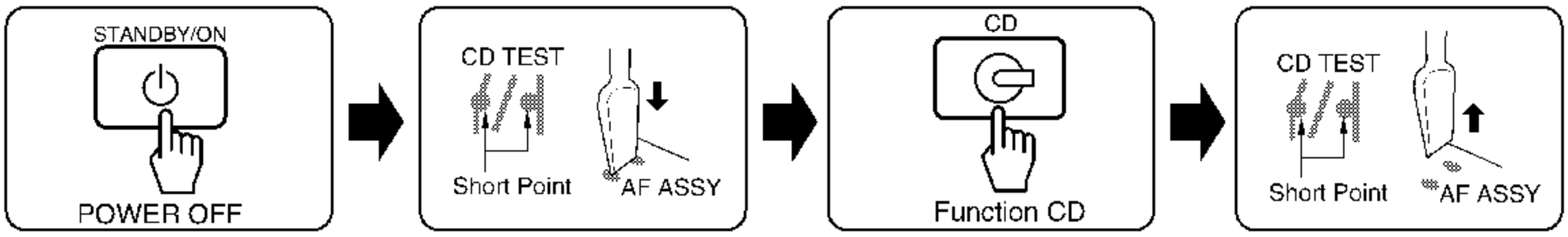
Fig. 6 Adjustment of Vp

6.4 TEST MODE

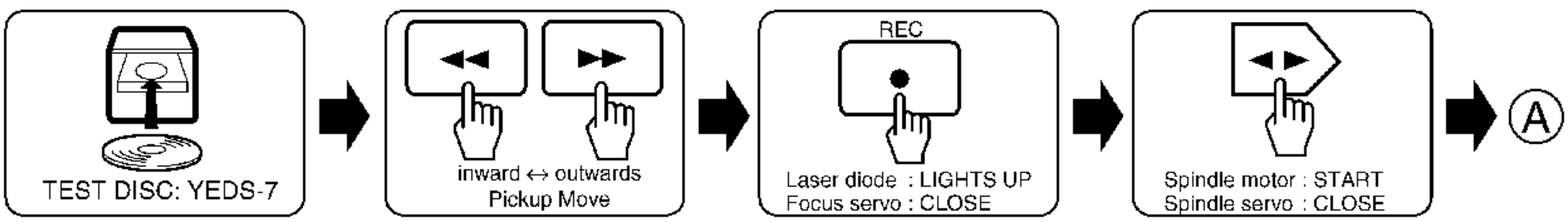
NOTE: There is no information to be shown in this CD adjustment.

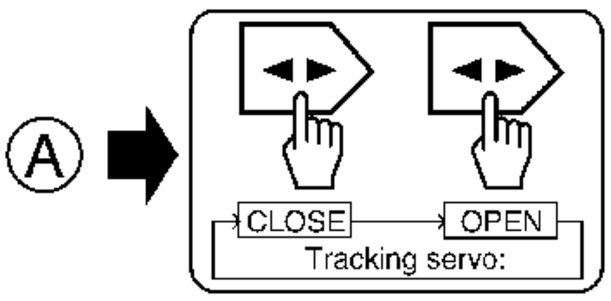
■ How to Start/Cancel Test Mode

TEST MODE : ON

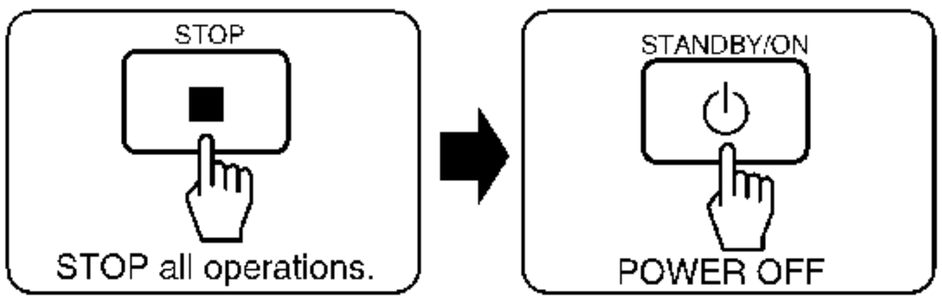


TEST MODE : PLAY

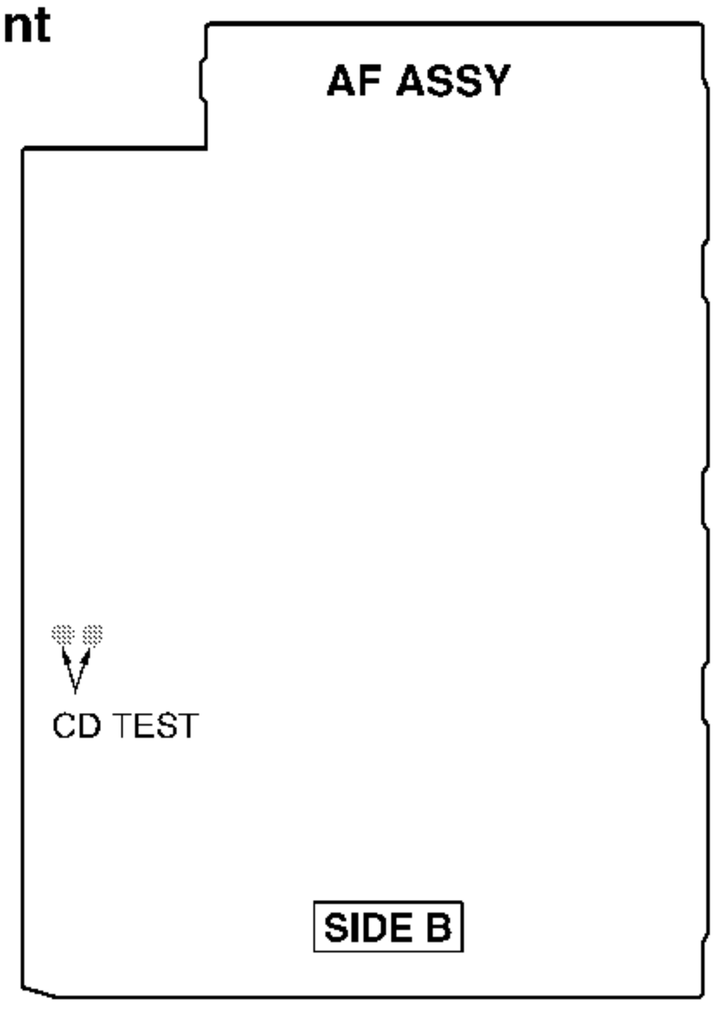




TEST MODE : STOP → CANCEL



■ Test Point



7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

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

■ PDC042A (LCD ASSY : IC1901)

• System Control Microcomputer

●Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	KI 3	O	Key scan output	36	MUTE	O	Power amp mute
2	KI 4			37	PLL CE	O	Tuner PLL enable
3	S DO	O	Serial data output (E– VR/TX)	38	N. C.	–	Not used
4	S DI	I	Serial data input (TX)	39	SEG39	O	LCD segment
5	S CLK	O	Serial clock (E– VR/TX)	40	SEG38		
6	CD DATA	O	Serial data output (CD)	41	SEG37		
7	CD SQOUT	I	Sub Q 80-bit input	42	SEG36		
8	CD CLK	O	Serial clock (CD)	43	SEG35		
9	JOG1 (A200) N. C. (A100)	I	Morphing jog pulse input 1 (A200) Not used (A100)	44	SEG34		
10	JOG2 (A200) N. C. (A100)	I	Morphing jog pulse input 2 (A200) Not used (A100)	45	SEG33		
11	AC50/60	I	AC pulse judgement	46	SEG32		
12	XRESET	I	"L" reset (microcomputer)	47	SEG31		
13	TAPE PULSE2	I	Tape 2 reel pulse signal	48	SEG30		
14	TAPE PULSE1	I	Tape 1 reel pulse signal	49	SEG29		
15	Vss	–	GND	50	SEG28		
16	CF1	I	Ceramic resonator (6MHz)	51	SEG27		
17	CF2	O		52	SEG26		
18	VDD	–	V+5V	53	SEG25		
19	ST. /TUN. /DC.	I	A/D port for TX & DC level	54	SEG24		
20	LEVEL	I	A/D port for level meter	55	SEG23		
21	MS (A200) N. C. (A100)	I	A/D port for TAPE MS (A200) Not used (A100)	56	VDD	–	V+5V
22	KEY1	I	A/D port for key input	57	Vss	–	GND
23	KEY2			58	SEG22	O	LCD segment
24	17V FAIL	I	A/D port for voltage detection	59	SEG21		
25	ROT ENC1	I	Volume jog pulse 1	60	SEG20		
26	ROT ENC2	I	Volume jog pulse 2	61	SEG19		
27	N. C.	–	Not used	62	SEG18		
28	CD WRQ	I	Sub Q stand-by	63	SEG17		
29	REMOCON	I	Remote control signal input	64	SEG16		
30	BEAT CUT	O	Beat cut control	65	SEG15		
31	XKARA	O	ALC control	66	SEG14		
32	N. C.	–	Not used	67	SEG13		
33	EXP CE	O	(LED/DECK) enable for IC1801/4101	68	SEG12		
34	DATA	O	Serial output for expansion IC	69	SEG11		
35	CLK	O	Serial clock for expansion IC	70	SEG10		

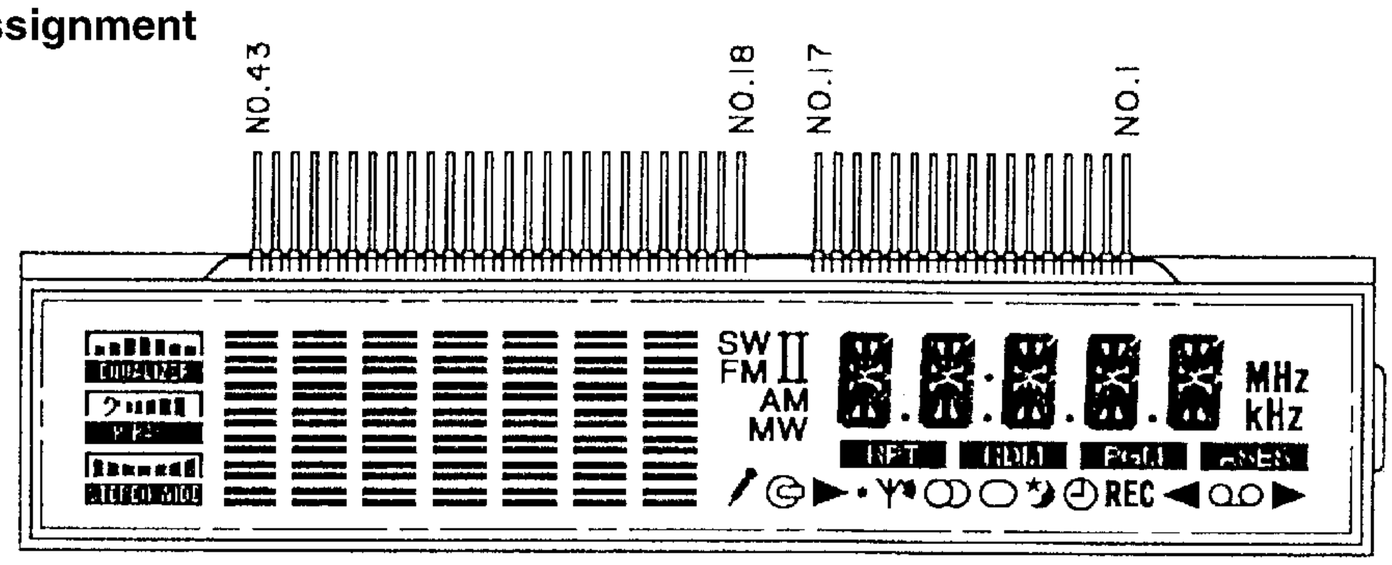
No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
71	SEG9	O	LCD segment	86	COM4	O	LCD common
72	SEG8			87	CD RESET	O	CD reset
73	SEG7			88	CD CE	O	CD enable
74	SEG6			89	Vss	–	GND
75	SEG5			90	VDD	–	V+5V
76	SEG4			91	BA3838	O	Vocal fader IC control
77	SEG3			92	N. C.	–	Not used
78	SEG2			93	TX MUTE	O	IF buffer ON/OFF
79	SEG1			94	E-VR CE	O	Pre-amp enable for VOL IC
80	CD DRF	I	Focus (RF– LEVEL) OK	95	SW1	I	Key scan input
81	CD CS	I	(CD-DSP chip select) (Built-in pull-down at DSP side)	96	SW2		
82	GND	–	GND	97	SW3		
83	COM1	O	LCD common	98	SW4		
84	COM2			99	KI2	O	Key scan output
85	COM3			100	KI1		

7.1.2 DISPLAY

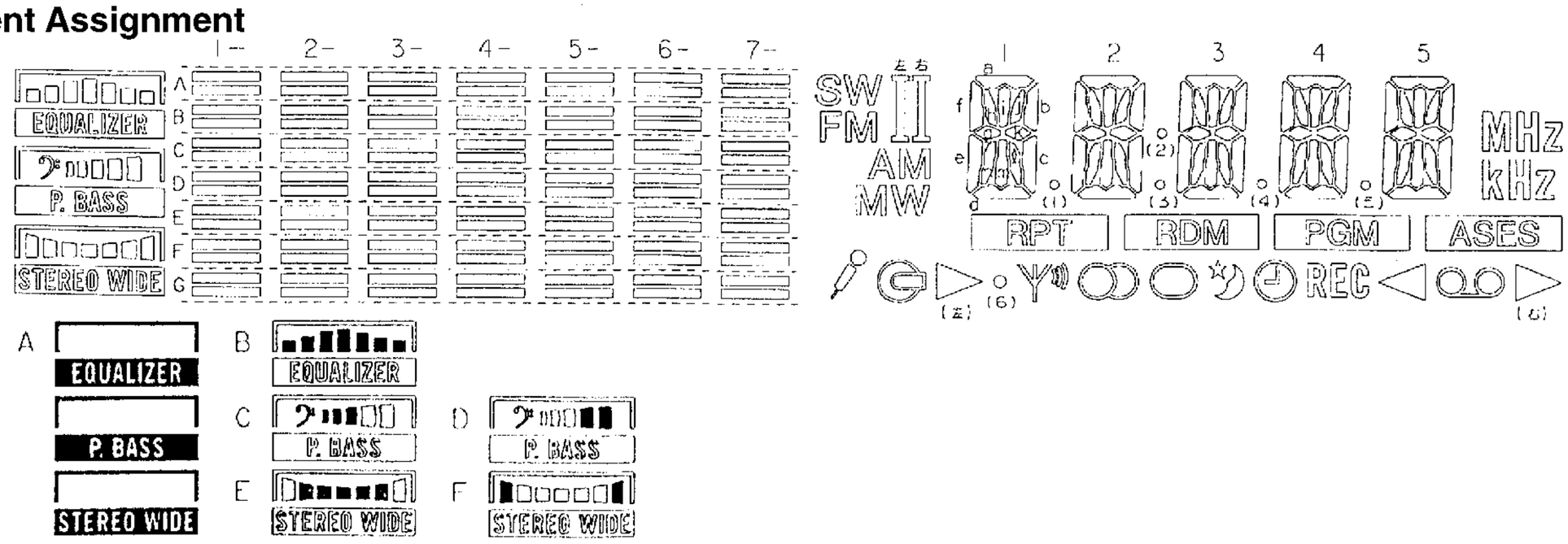
■ XAV3001 (LCD ASSY : V1701)

- LCD Display

●Pin Assignment



●Segment Assignment



●Pin Connection

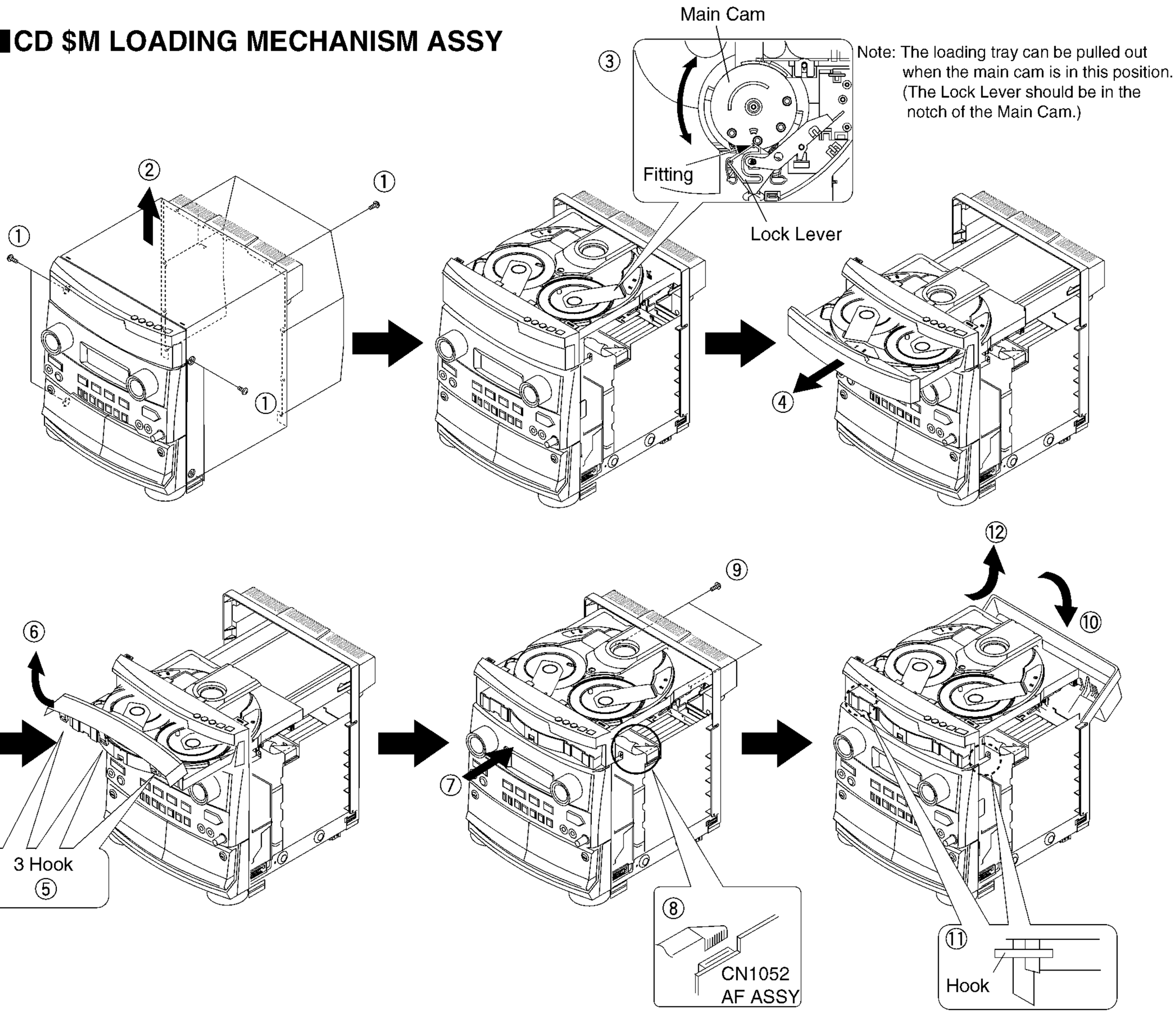
NO.	COM.1	COM.2	COM.3	COM.4
1				COM.4
2			COM.3	
3		COM.2		
4	COM.1			
5	MHz	KHz	ASES	▷(右)
6	5b	5k	5c	∞
7	5j	5i	5m	5l
8	5a	5h	5g	5n
9	○(5)	5f	5e	5d
10	4b	4k	4c	PGM
11	4j	4i	4m	4l
12	4a	4h	4g	4n
13	○(4)	4f	4e	4d
14	3b	3k	3c	REC
15	3j	3i	3m	3l
16	3a	3h	3g	3n
17	◔	3f	3e	3d

NO.	COM.1	COM.2	COM.3	COM.4
18	♪	○(2)	○(3)	RDM
19	2b	2k	2c	∞
20	2j	2i	2m	2l
21	2a	2h	2g	2n
22	○(1)	2f	2e	2d
23	1b	1k	1c	RPT
24	1j	1i	1m	1l
25	1a	1h	1g	1n
26		1f	1e	1d
27	‖(右)	MW	▷(左)	○(6)
28	‖(左)	AM	◔	♈
29	SW	FM	𝒻	○
30	7-A	7-B	7-C	7-D
31	6-A	6-B	6-C	6-D
32	5-A	5-B	5-C	5-D
33	4-A	4-B	4-C	4-D
34	3-A	3-B	3-C	3-D
35	2-A	2-B	2-C	2-D
36	1-A	1-B	1-C	1-D
37	F	4-G	4-F	4-E
38	E	3-G	3-F	3-E
39	B	1-G	1-F	1-E
40	A	2-G	2-F	2-E
41	C	7-G	7-F	7-E
42	D	6-G	6-F	6-E
43	◁	5-G	5-F	5-E

7.2 DIAGNOSIS

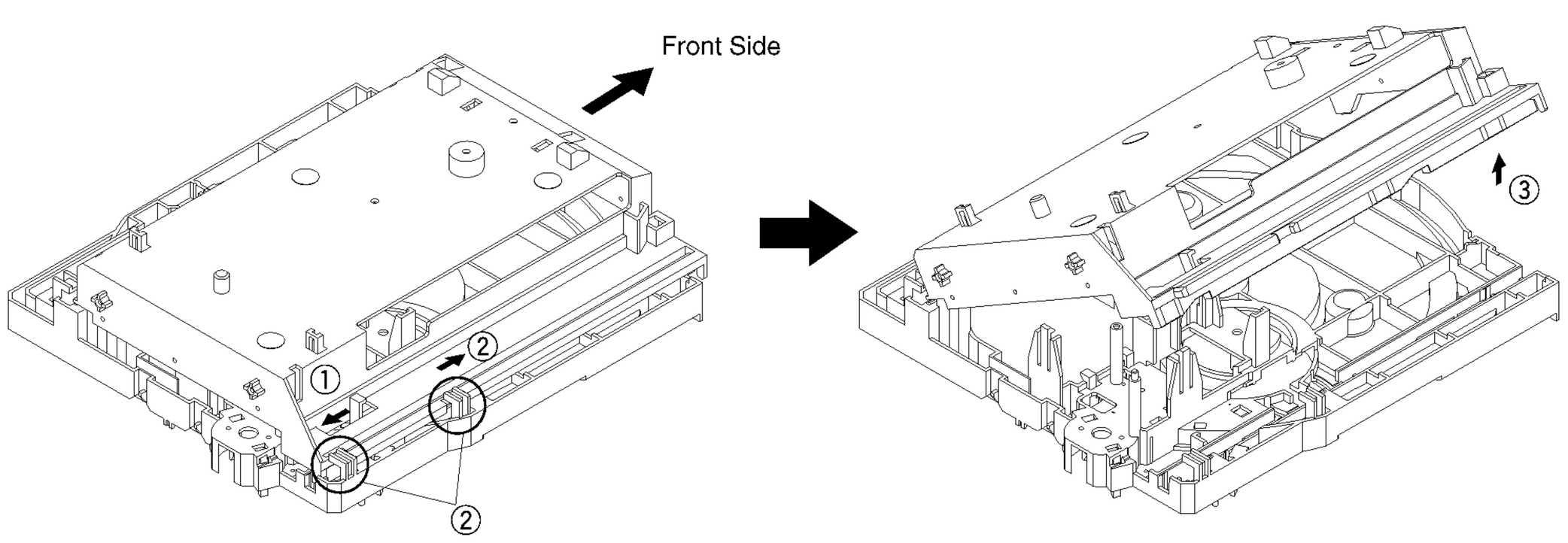
7.2.1 DISASSEMBLY

■CD $M LOADING MECHANISM ASSY

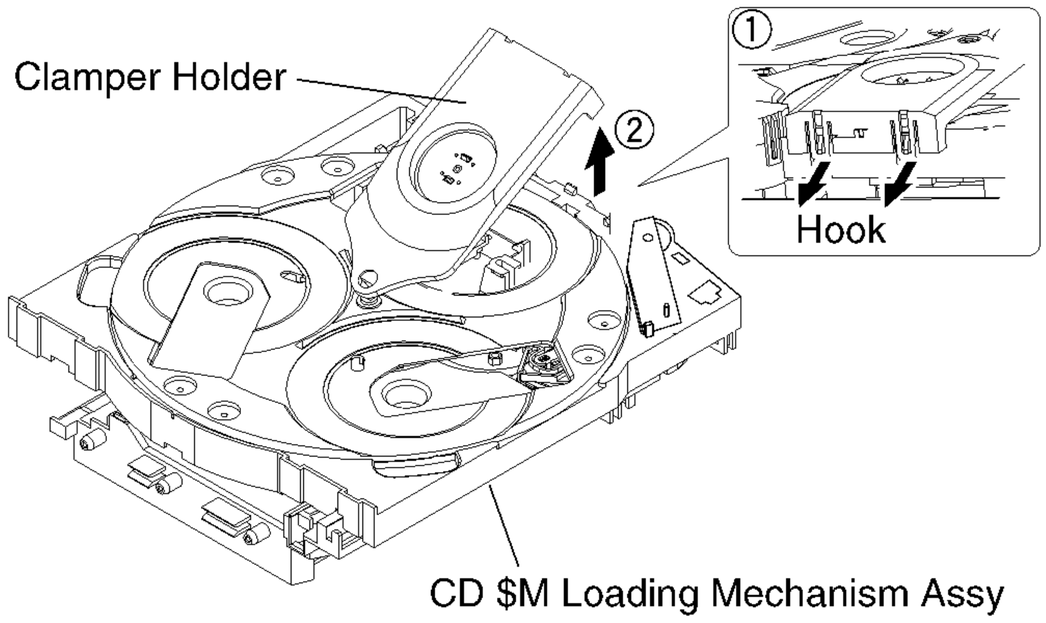


■CD $M LOADING MECHANISM ASSY ADDITIONAL TO JOB

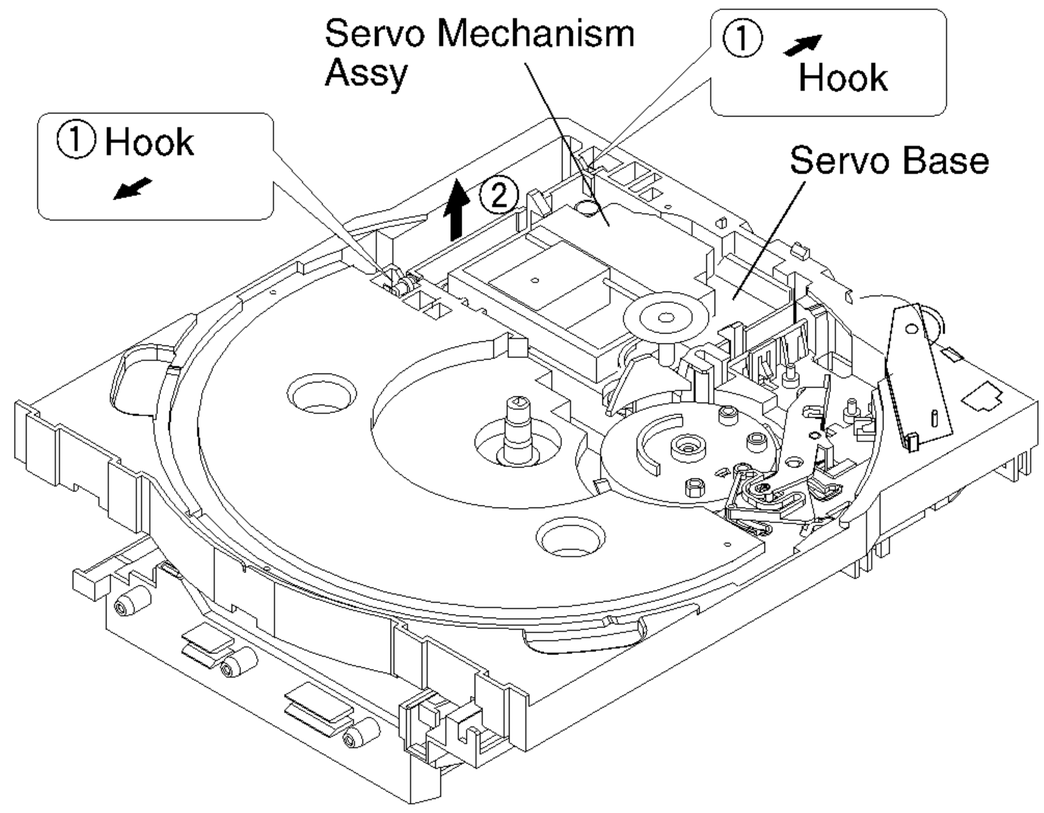
- **Mechanism Base (Bottom View)**



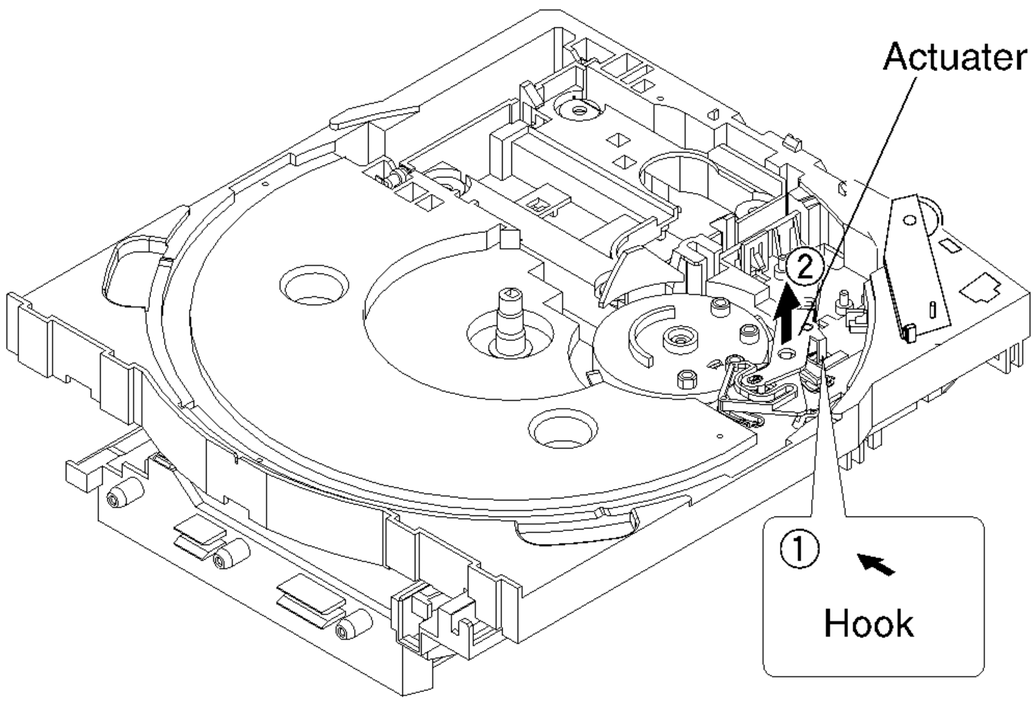
● **Clamper Holder**



● **Servo Base**

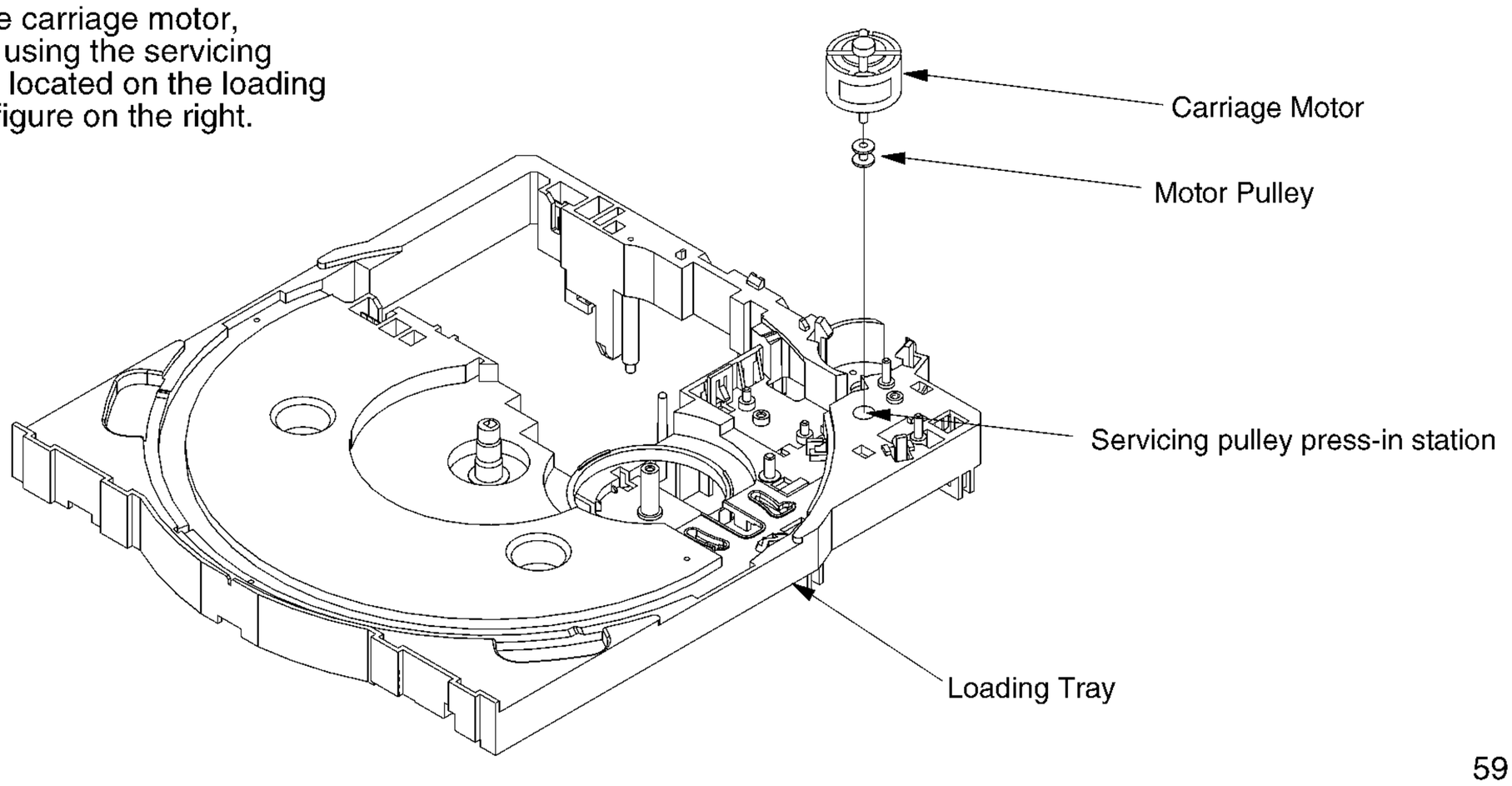


● **Actuater**



■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.



7.2.2 TROUBLESHOOTING

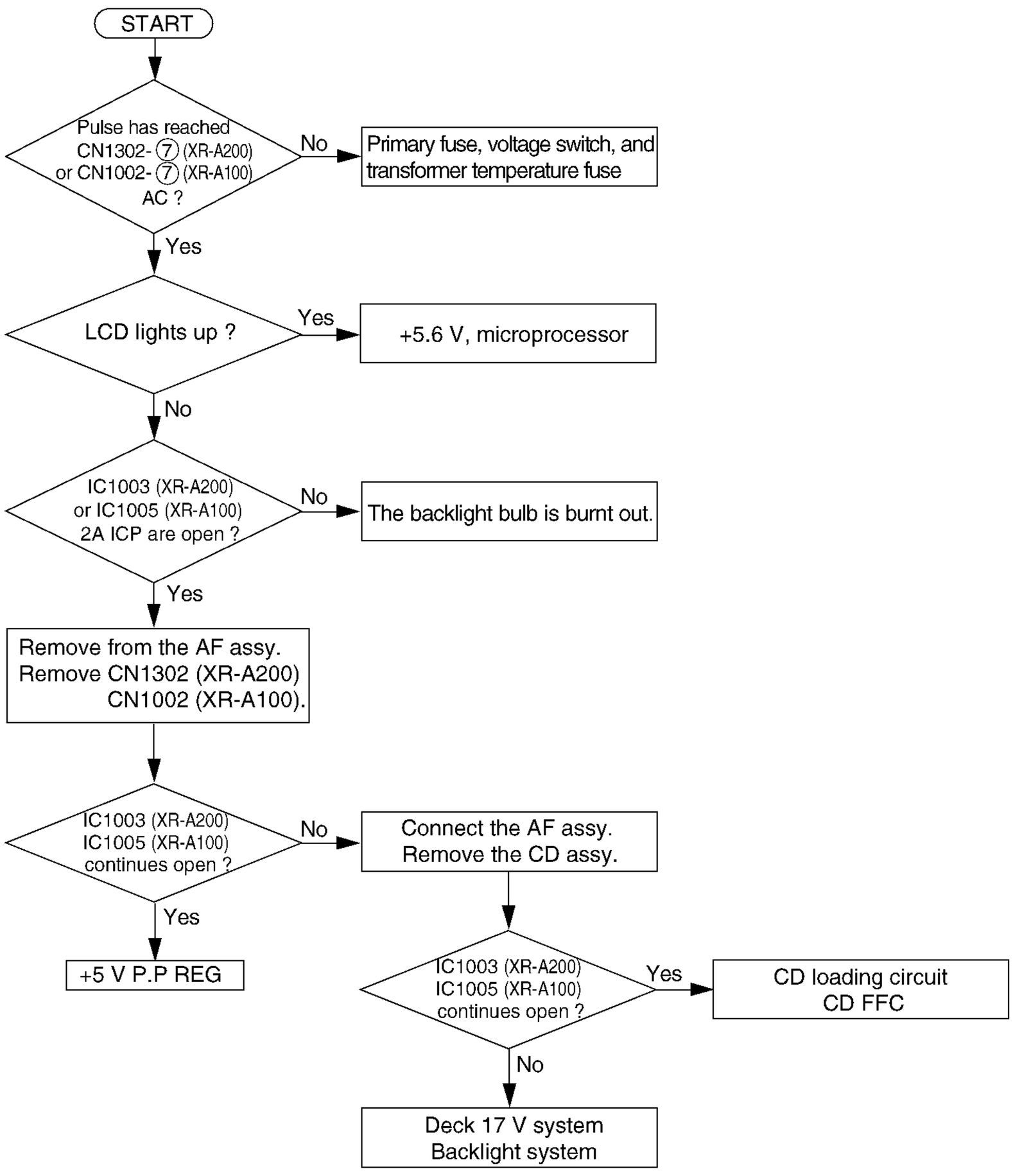
Note Do not short-circuit IC1003, IC1004 and IC1005 (ICP) for diagnosis. If the regulator is damaged by short circuit in ICP, the parts will be damaged to a wide extent of setting, making repair difficult.

■ List of Error Codes

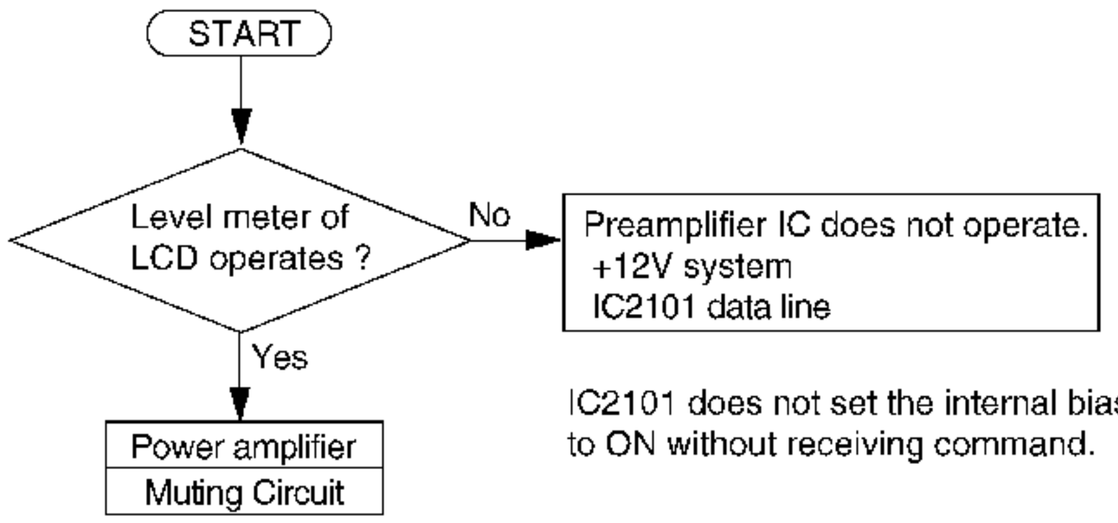
An error code will be displayed in the LCD.

ERROR CODE	CAUSE	POINT TO BE CHECKED
E.1 : DC DET	DC appears in the SP terminal. Vp +17.5V is over 20V. Current passes toward the chassis.	Defective IC1302, IC1303 (XR-A200) or IC1201 (XR-A100) Improper operation of the regulator.→ See "Adjustment of Vp cannot made". Mica Sheet, 1Ω/1W (Power assy R1251) may be open. (XR-A100 only)
E.2 : Vp	Vp is below 6V or over 20V.	Regulator Adjustment of Vp (XR-A100 only) (Refer to page 53).
E.3 : DECK I E.4 : DECK II	Initialization could not be made.	Output of +17V and +6V SINK may be improper. Reel pulse may be improper. Deck mechanism lock (Lights up E.3 and E.4.)

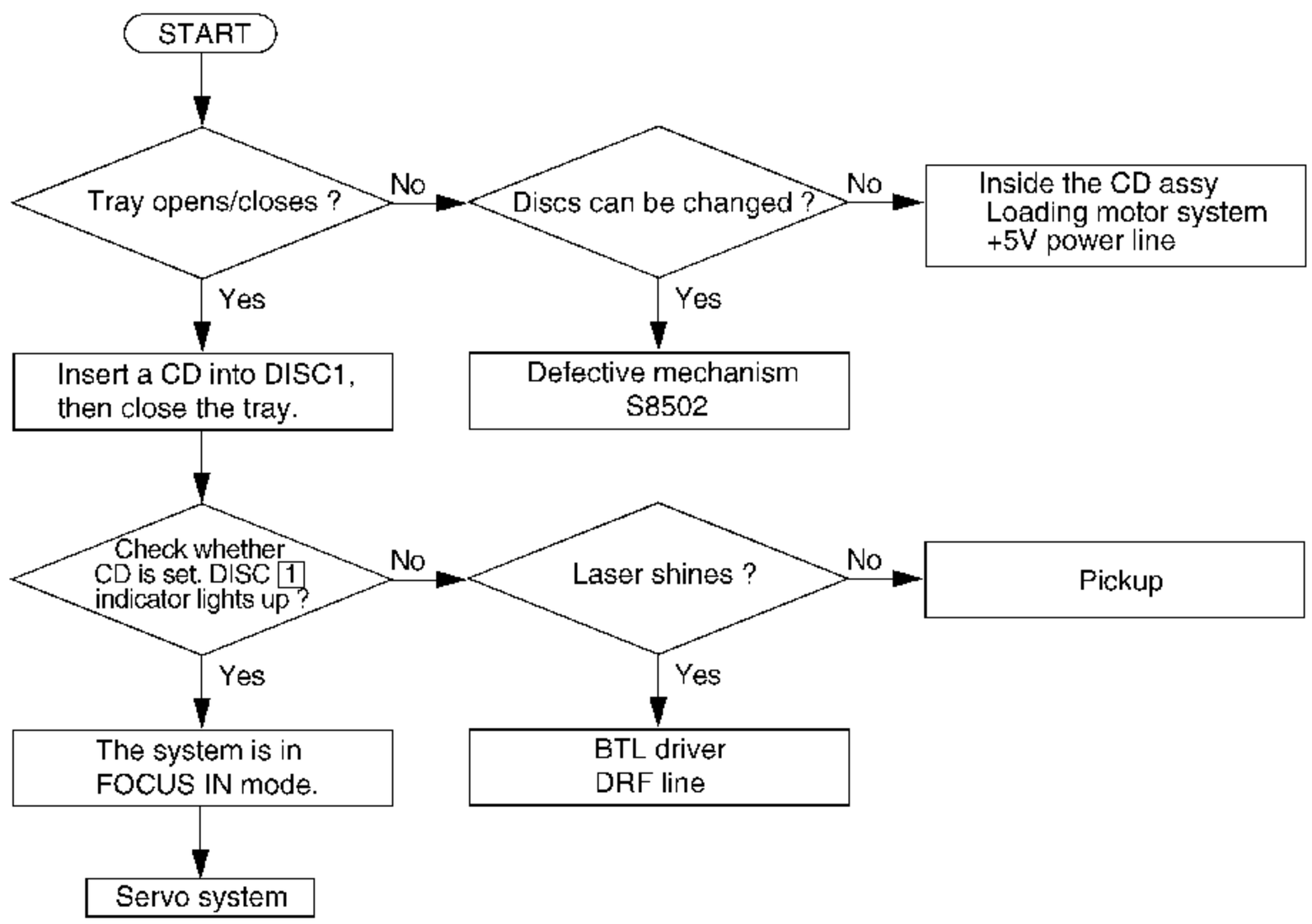
■ The Power of The System Does Not Turn to ON. The Backlight Does Not Light Up.



■ No Sound is Output.



■ The System Does Not Playback CD.



* CN8005 of the CD Assy shows RF OUT and a tracking error. Use them for diagnosis.
No adjustment is required for the CD Assy.
Disconnect the AC plug from the outlet and reset the microprocessor every time diagnosis is made. If the system microprocessor determines a malfunction in CD, no command will be sent to the CD Assy thereafter.

■ IC1004 (XR-A200) or IC1003 (XR-A100) (ICP of 400mA) is Broken.

• The +5.6V line is short-circuited. The 40-core FFC is not inserted straight.
• The 6.8V Zener diode of the +5.6V line is short-circuited.
  D1003 in the Power assy
  D1809 in the LED assy
• If the ICP is broken after disconnecting the Power assy from AF assy, IC1001 (78M05) or its surrounding parts may be malfunctioning.
• The ICP is also broken by short circuit of IC1002 (4558).
• The ICP is also broken by B-E short circuit of Q1001 (power TR, 2SC5196/5200).

The stereo set does not operate at all if the IC1004 (XR-A200) or IC1003 (XR-A100) is broken.

■ The Power of µ-COM Does Not Switch ON. Nothing is Displayed on The LCD.

• AC power is not supplied to the AC50/60Hz line of IC1901.
• Zener D1902 in the LCD assy is short-circuited because the headphone parallel jumper is inserted incorrectly (incorrect direction).
• Is +5.6V supplied?
• Is $\overline{\text{XRESET}}$ set to "H"? Is resetting completed?

■ IC1005 (ICP of 2A) is Broken, Although The Microprocessor is Operating. (XR-A100 Only)

• Does the ICP break after disconnecting from the AF Assy?
  Yes → Inside the Power assy
  No → Outside the Power assy
↓
• Connect only the AF Assy. (Disconnect the headphone parallel jumper. CN1002)
  If the ICP still breaks, AF Assy may have short-circuited, or a malfunction may have occurred in the front of +12V REG.
↓
• Connect the 40-core FFC. Be sure that the flexible substrate is inserted correctly.
  If the ICP still breaks, short circuit may have occurred in the complex (solenoid, motor, electrostatic Zener, LED assy, and +5.6 V line).
↓
• Connect the CD assy.
  If the ICP still breaks, short circuit may have occurred in the CD assy or the FFC of CD.
↓
In such a case, the 5V PP REG is short-circuited. Check for short circuit in Q1003-1006 and D1011. (Because of the structure of the circuitry, short circuit is difficult to be detected by a tester. Replacing the circuitry as a whole will result in faster solution.)

NOTE If the headphone parallel jumper is removed, +17V voltage is supplied to µ-COM in standby mode. The power amplifier and all power sources will turn to ON. However, an IC that does not operated without serial data cannot be diagnosed.

■ Although Sound is Output, Discontinuance Occurs at Full Power. (XR-A100 Only)

• Vp is adjusted to high level. (The protective function for the power-amplifier ICs turns to ON.)
• Dedicated speakers for the system are not used. The protective circuit turns to ON during clipping if speakers with high inductance are used even though they have high impedance.
• IC1201 (TDA8560Q) is malfunctioning. → Replace the IC.
• LPF(C1201, C1202 [2200pF]) of IC1201, are not installed.If they are not installed, the system interferes with the preamplifier IC and causes oscillation, resulting in muted IC1201.
• Check for short circuit of the negative (–) terminals of L/R if the measuring instrument is connected to the SP terminal. If line noise from the measuring instrument is added, the power amplifier IC mutes and causes cracking noise.
• The power amplifier or +17V REG oscillates. Check Pin7 of IC1002 (4558) for major oscillation waveform appearing at the same time as with the cracking noise.

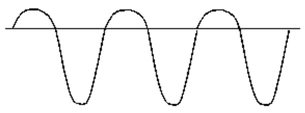
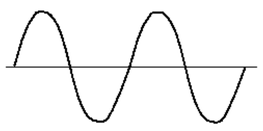
NOTE The power amplifier IC tends to cause discontinuance of sound with a slight oscillation or high-frequency noise.

■ Large Popping Noise is Output Only from The Headphone When Turning The Power to ON/OFF. (XR-A100 Only)

• The following headphone matrix resistors may be incorrect or disconnected.
R1221 and R1222 (POWER Assy)
R1201 and R1202 (DISPLAY Assy)
• H.GND of J1201 is disconnected.

■ The Following Symptoms Occur If IC1202 (0.4A) is Broken. (XR-A100 Only)

For SIG GND

• The top and bottom portions of waveforms () have different gain.
Proper waveforms () are obtained with load resistance.

• This ICP is broken when +B is supplied to the heat sink because micanite is not installed, or when IC1201 power amplifier ICs are malfunctioning.

■ If Mica Sheet for The Power Transformer is not Installed ?

● FOR XR-A100
• +UNREG will be supplied to R1251 (1Ω,1W) of the POWER Assy, making the resistor open (or increasing the resistance value).
• Current will be supplied to the rear part of IC1201 of the Power amplifier from the heat sink, resulting in incomplete functioning of the IC. At the worst, ICP, Zener diode, etc. will be destroyed.
• Power transformer Q1001 will not be destroyed.
• If a power source without breaker is used, the system stops demonstration mode 1 to 2 seconds after the power is turned ON, and forcedly enters standby mode. Error code E.2 (or E.1) lights up.

● FOR XR-A200
• Set IC1003 to open.

NOTE Mica Sheet is placed higher than the heat-sink bracket. Thus, whether Mica Sheet is installed or not can be checked without removing the bracket.

■ Adjustment of Vp Cannot Be Made. Cannot Change from +17V.

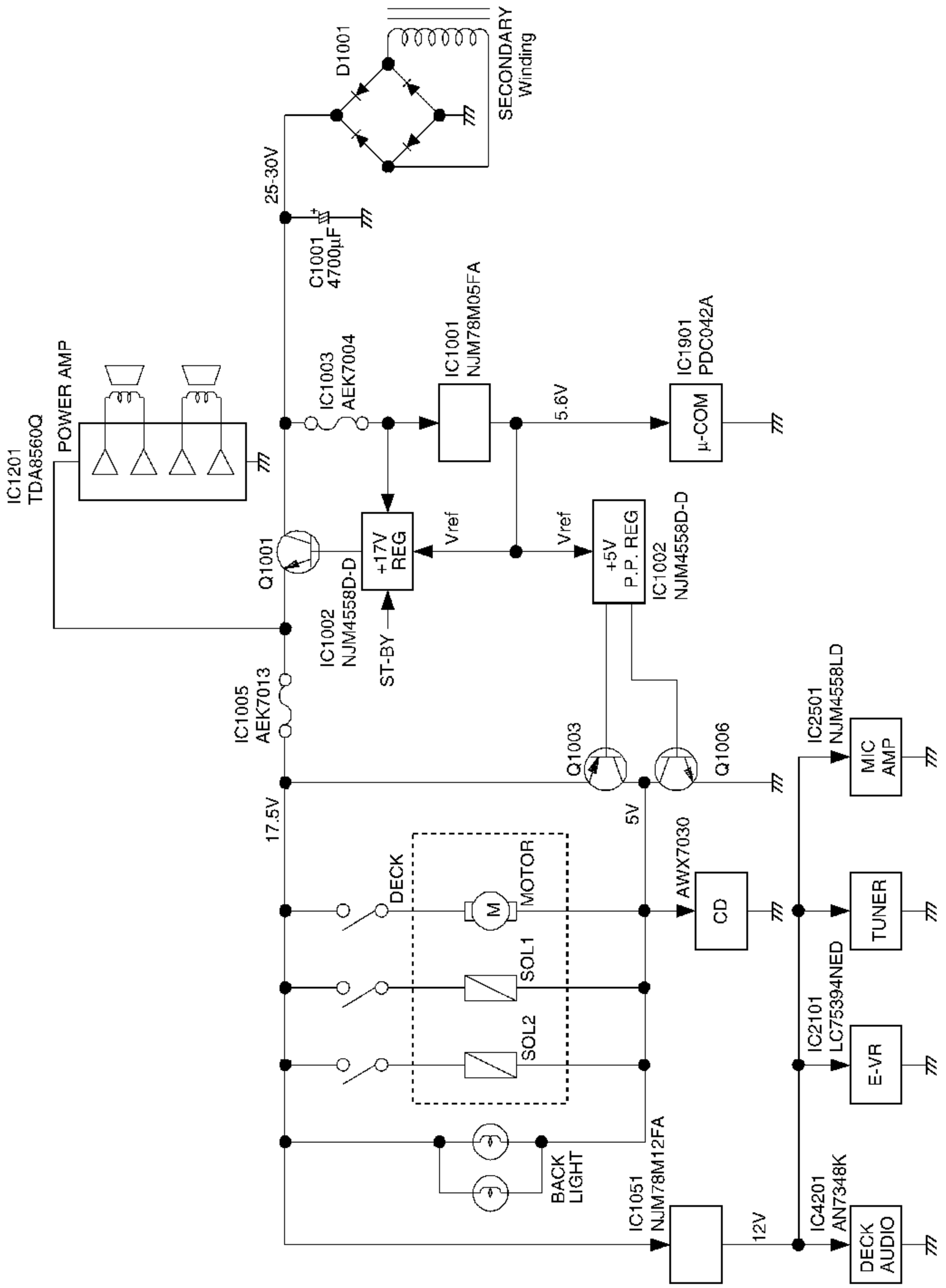
• If +5.6V (for μ-COM) correctly output? → Correct the 5.6V system.
• Is 5.6V supplied to Pin 6 of IC1002 (4558)? This IC is Vref of +17V.
• Check the voltage of Pin7 of IC1002 (4558).
Cannot be changed from the Pin 8 side. → Short circuit in Q1001, Q1002, D1008, or Q1008
Cannot be changed form the Pin 4 side. → Q1001, Q1002, D1008, R1018, or Q1008 is open.
Check whether UNREG voltage is supplied.

Otherwise, IC1002 is malfunctioning.
• Check for short circuit in D1014.
• IC1081 (LED driver in the LED Assy) is not functioning completely. Lift the ST-BY pin of CN1002 to adjust the IC.
• Check if R1251 (1W, 1W) is open. Chassis GND may be lifted. (XR-A100 only)
• If Vp is dislocated extremely, the microprocessor gives instruction to the system to enter standby mode. Error code E.2 lights up.
If this is troublesome, leave ST-BY of CN1302 (XR-A200) or CN1002 (XR-A100) open so that +17V is maintained during standby mode.

NOTE Vp adjustment is completed in the Power assy. Therefore, it checking can be made by removing the headphone parallel jumper (the system will not enter standby mode) and AF Assy.

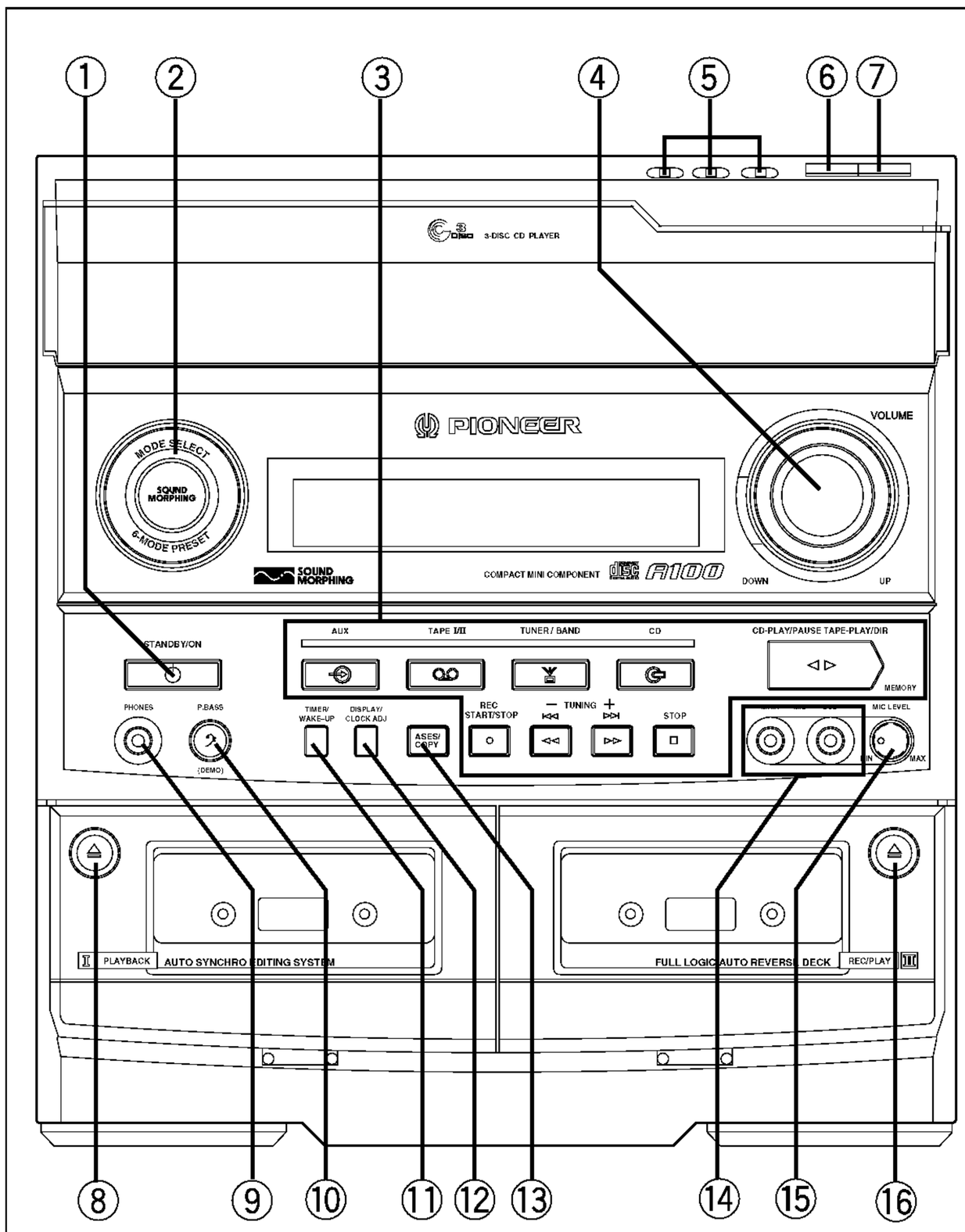
7.3 BLOCK DIAGRAM

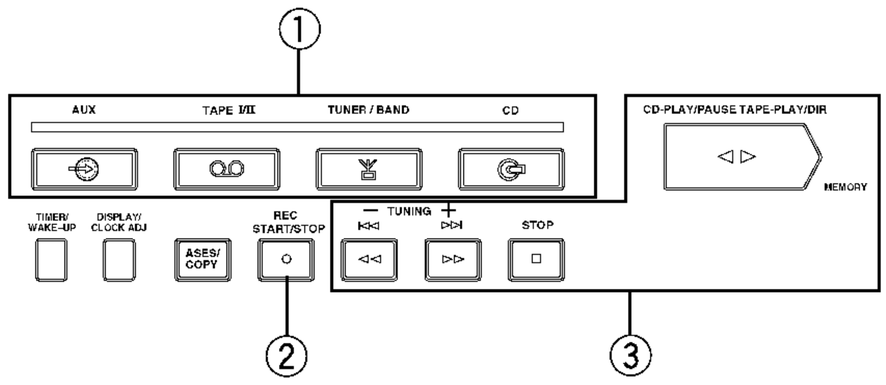
• POWER SUPPLY MAP (For XR-A100)



8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES





● Illustration shows model XR-A100.

① **STANDBY/ON button**

② **SOUND MORPHING MODE button (XR-A100)**
S.M. (SOUND MORPHING) JOG (XR-A200)

③ **Function button section**

④ **VOLUME control**

⑤ **DISC select buttons (1 – 3)**

⑥ **DISC CHANGE button**

⑦ **CD OPEN/CLOSE button**

⑧ **DECK I EJECT (▲)**

⑨ **Headphones jack (PHONES)**

⑩ **P.BASS (DEMO) button**

⑪ **TIMER/WAKE-UP button**

⑫ **DISPLAY/CLOCK ADJ button**

⑬ **ASES/COPY button**

⑭ **MIC (MAIN, SUB) jacks**

⑮ **MIC LEVEL control**

⑯ **DECK II EJECT (▲)**

Function button section

① **FUNCTION buttons**

② **REC START/STOP button**

③ **Common operation buttons**

● **The roles of the buttons vary depending on the input functions.**

During CD input:

◄ ► : Play/Pause
■ : Stop
►►/►►| : Fast forward/Track search
◄◄/|◄◄ : Fast reverse/Track search

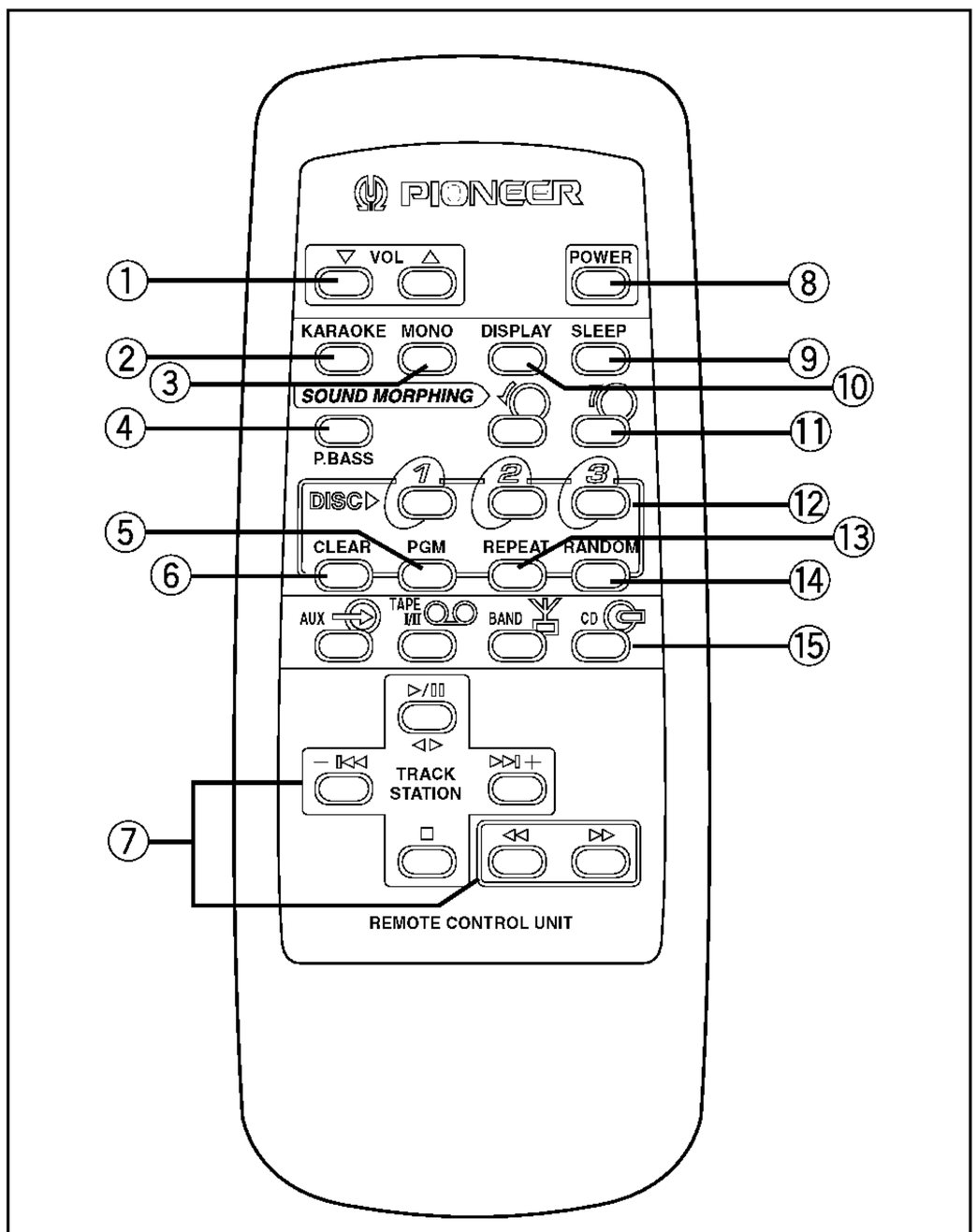
During cassette deck input:

◄ ► : Play/Tape transport direction
■ : Stop
►► : Fast forward
◄◄ : Rewind
►►| : Music search + (XR-A200 only)
|◄◄ : Music search – (XR-A200 only)

During tuner input:

◄ ► : Station memory
– : Frequency & Station down
+ : Frequency & Station up

Remote control unit



① **VOLUME buttons**
② **KARAOKE button**
③ **MONO button**
④ **P.BASS button**
⑤ **PGM button**
⑥ **CLEAR button**
⑦ **Common operation buttons**
The roles of the buttons vary depending on the input functions.

During CD input:
- ►/II : Play/Pause
- ■ : Stop
- ►►| : Track search
- |◄◄ : Track search
- ►► : Fast forward
- ◄◄ : Fast reverse

During cassette deck input:
- ◄ ► : Play/Tape transport direction
- ■ : Stop
- ►►| : Music search + (XR-A200 only)
- |◄◄ : Music search – (XR-A200 only)
- ►► : Fast forward
- ◄◄ : Rewind

During tuner input:
- ►►| : Station up
- |◄◄ : Station down
- ►► : Frequency up
- ◄◄ : Frequency down

⑧ **POWER button**
⑨ **SLEEP button**
⑩ **DISPLAY button**
⑪ **SOUND MORPHING buttons**
⑫ **DISC select buttons**
⑬ **REPEAT button**
⑭ **RANDOM button**
⑮ **FUNCTION buttons**

■ SPECIFICATIONS

STEREO CD CASSETTE DECK RECEIVER
XR-A100, XR-A200

Amplifier Section
Continuous power output (RMS)
XR-A100 ..... 33 W + 33 W (1 kHz, T.H.D. 10 %, 4 Ω)
XR-A200 ..... 50 W + 50 W (1 kHz, T.H.D. 10 %, 6 Ω)

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 1,602 kHz
With 10 kHz step ..... 530 kHz to 1,700 kHz
Antenna ..... Loop antenna

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

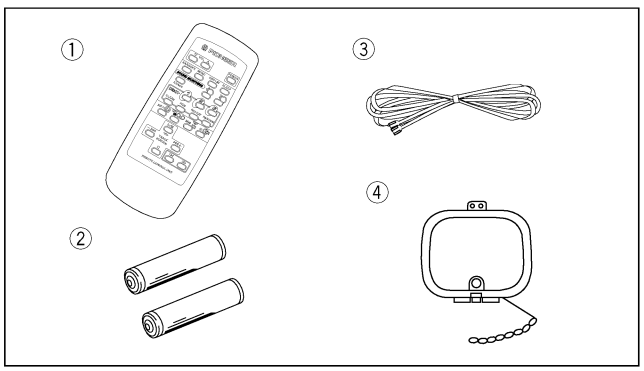
Cassette Deck Section
Systems ..... 4-track, 2-channel stereo
Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor ..... DC servo motor x 1
Tape type ..... TYPE I (Normal) tape

Miscellaneous
Power Requirements
XR-A100 ..... AC 110-127/220-240 V (switchable), 50/60 Hz
XR-A200 ..... AC 110-127/220-230/240V (switchable), 50/60 Hz
Power Consumption
XR-A100 ..... 210 W
XR-A200 ..... 230 W
Dimensions ..... 270 (W) x 300 (H) x 324 (D) mm
Weight (without package)
XR-A100 ..... 6.4 kg
XR-A200 ..... 6.9 kg

Accessories
Operating Instructions 1
Remote Control Unit 1
Dry Cell Batteries (AA/R6P) 2
FM Antenna 1
AM Loop Antenna 1

NOTE:
Specifications and design are subject to possible modifications without notice, due to improvements.

● ACCESSORIES



① Remote control unit x 1 : XZN3003 (CU-XR039)
② AA/R6P dry cell batteries x 2
③ FM antenna x 1 : ADH7004
④ AM loop antenna x 1 : XTB3001