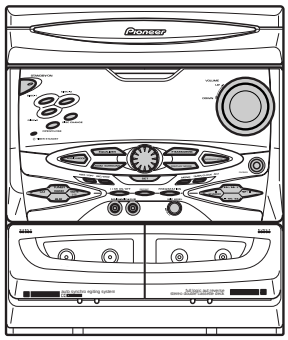
Service Manual



ORDER NO.
RRV2356

STEREO CD CASSETTE DECK RECEIVER

XR-A3800

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

Type	Model	Power Requirement	Remarks
	XR-A3800		
KUCXJ	○	AC120V	

CONTENTS

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T – ZZE AUG. 2000 Printed in Japan

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.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

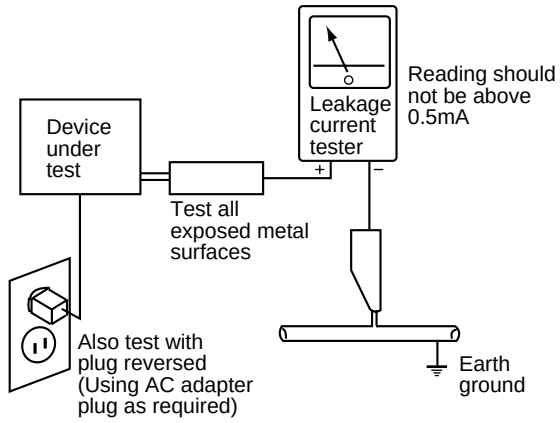
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

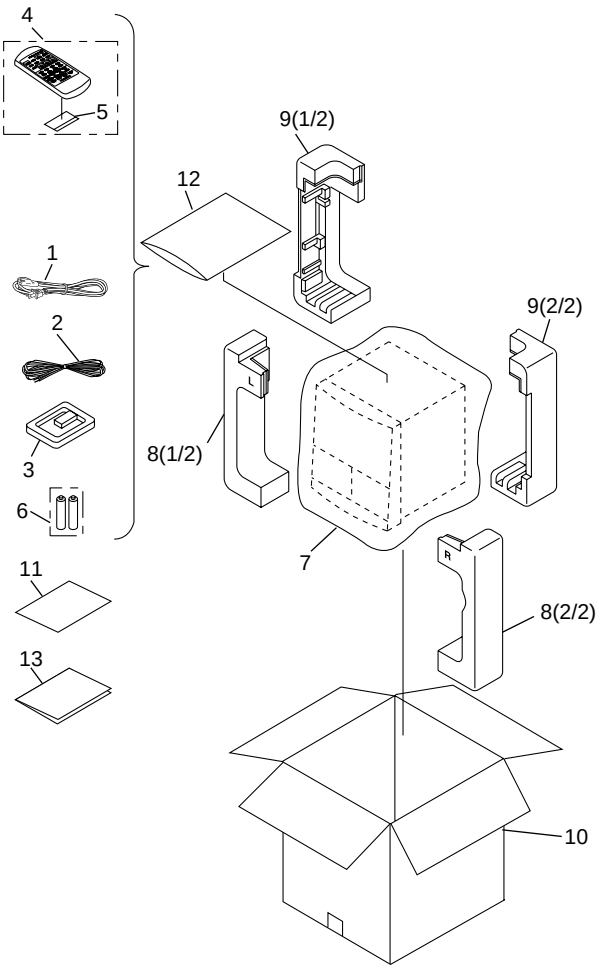
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

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.*

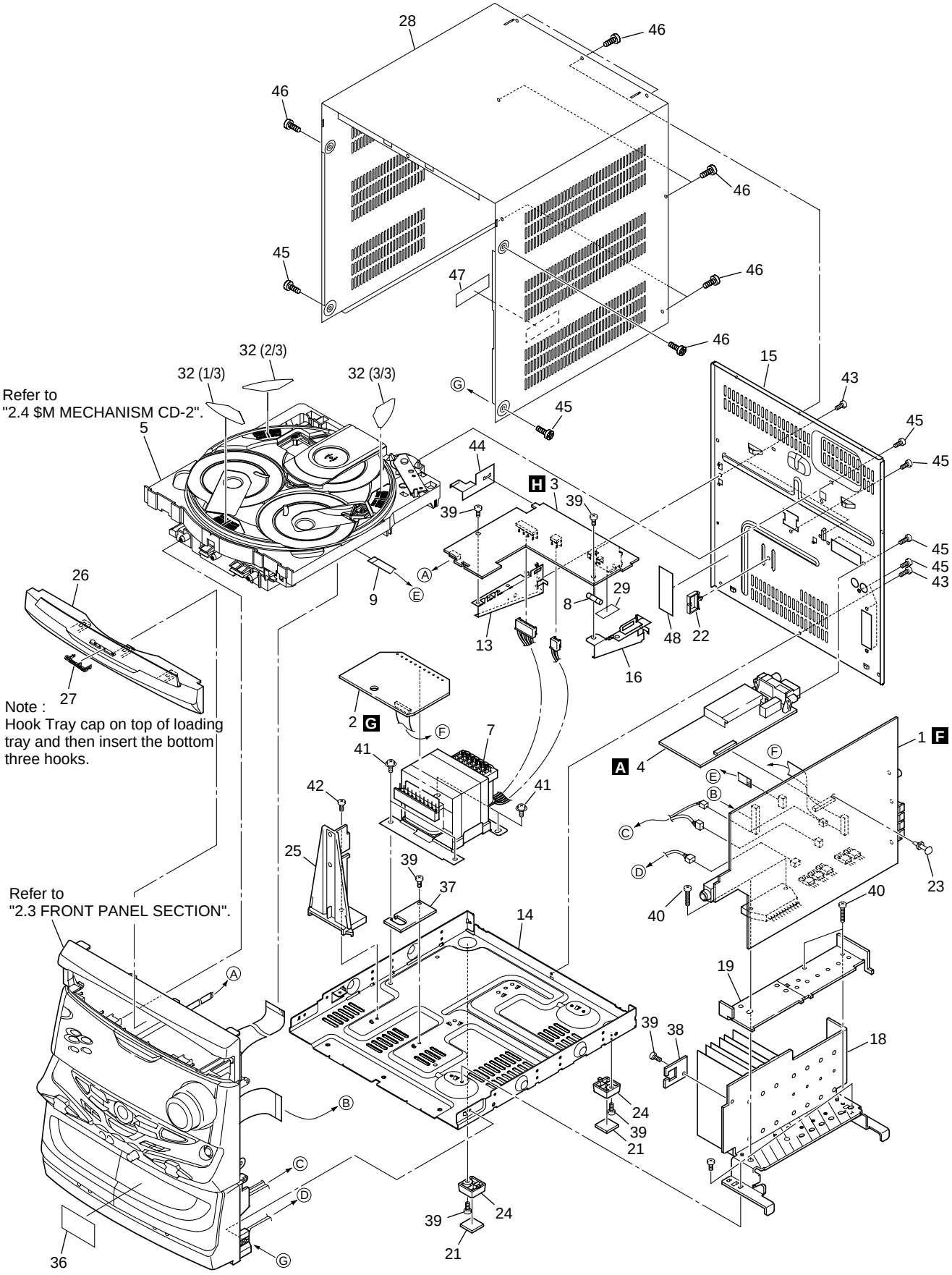
2.1 PACKING



• PACKING PARTS LIST

Mark	No.	Description	Part No.
⚠	1	Power Cord	ADG7022
	2	FM Antenna	ADH7004
	3	AM Loop Antenna	XTB3001
	4	Remote Control Unit	XZN3106
	5	Battery Cover	XZN3103
NSP	6	Dry Cell Battery (R6P, AA)	VEM-013
	7	Packing Sheet	AHG7053
	8	Front Pad	XHA3018
	9	Rear Pad	XHA3019
	10	Packing Case	XHD3118
NSP	11	Warranty Card	ARY7045
	12	Polyethylene Bag ($0.03 \times 230 \times 340$)	Z21-038
	13	Operating Instructions (English/French)	XRE3031

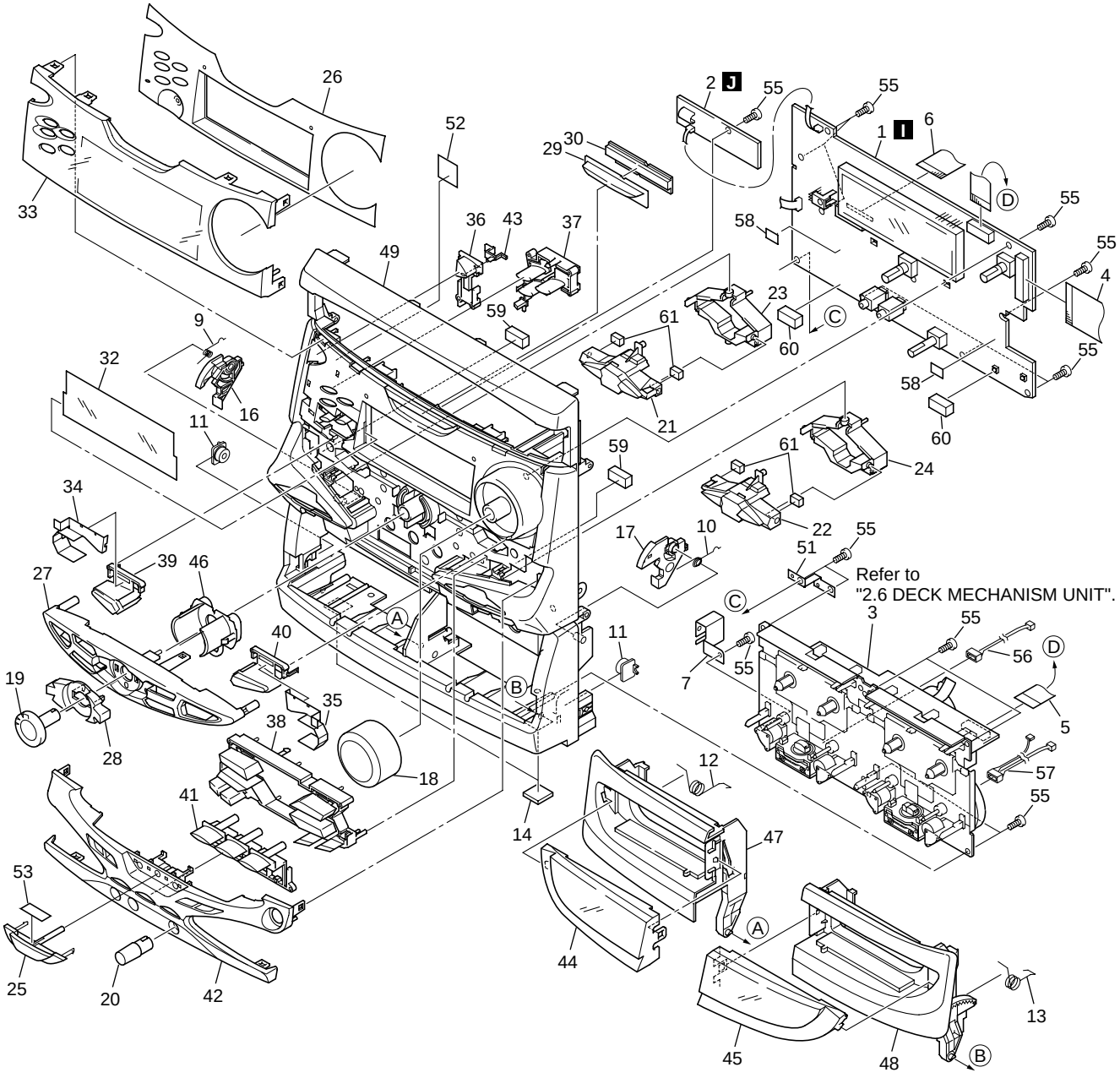
2.2 EXTERIOR SECTION



• EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	AF Assy	XWZ3288
	2	SECONDARY Assy	XWZ3289
	3	PRIMARY Assy	XWZ3296
	4	FM/AM TUNER Module	AXQ7065
NSP	5	$M MECHANISM CD-2	XXA3009
	6	• • • • •	
⚠	7	Power Transformer (T1)	XTS3041
⚠	8	Fuse (FU1: 5A)	REK1083
	9	Flexible Cable (08P)	XDD3048
	10	• • • • •	
	11	• • • • •	
	12	• • • • •	
	13	PCB Bracket	ANG7263
NSP	14	Chassis	XNA3005
	15	Rear Panel	XNC3054
	16	PCB Bracket	XNG3006
	17	• • • • •	
	18	Heat Sink	XNH3009
	19	Sub Heat Sink B	XNH3012
	20	• • • • •	
	21	Cushion Leg A	XEB3008
	22	Wire Clip A	XEC3003
	23	Card Spacer	XEC3008
	24	Leg	XMR3012
	25	SEC Holder A	XMR3034
	26	Tray Cap Assy	XAK3156
	27	Pioneer Badge	XAM3001
	28	Bonnet Case	XZN3098
NSP	29	Fuse Card	AAX7097
	30	• • • • •	
	31	• • • • •	
	32	Disc Label	XAX3127
	33	• • • • •	
	34	• • • • •	
	35	• • • • •	
NSP	36	Getter	XAX3164
NSP	37	DO NOT THROW Assy	• • • • •
NSP	38	CABLE HOLDER Assy	• • • • •
	39	Screw	BBZ30P080FMC
	40	Screw	BBZ30P180FMC
	41	Screw	ASZ40P060FMC
	42	Screw	BPZ30P080FMC
	43	Screw	VBZ30P080FZK
	44	Barier	XEC3013
	45	Screw	BPZ30P100FZK
	46	Screw	VBT30P080FZK
	47	65 Label	ARW7050
	48	Fuse Caution Label	XAX3204

2.3 FRONT PANEL SECTION

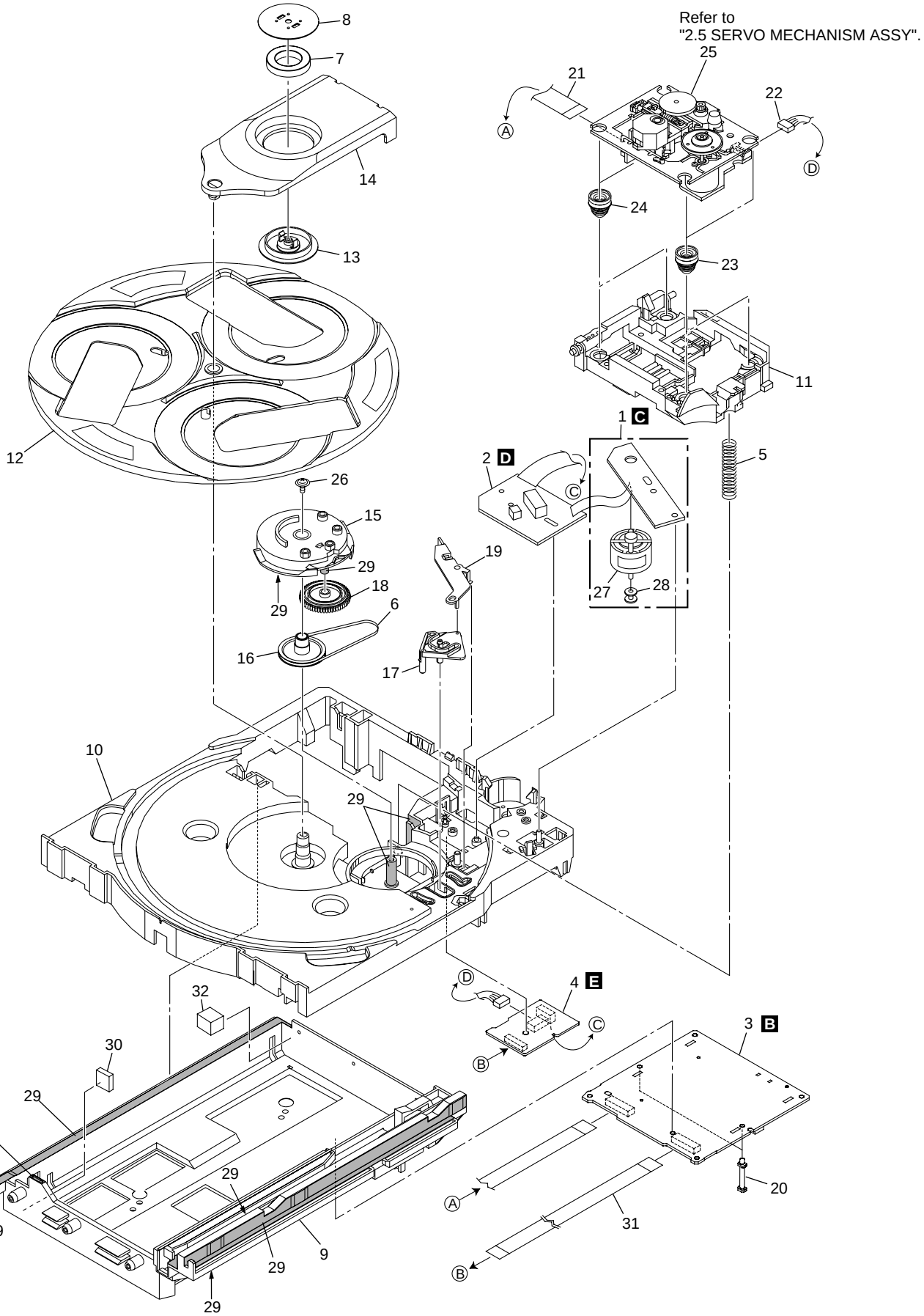


• FRONT PANEL SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	DISPLAY Assy	XWZ3295
	2	BLUE LED Assy	XWZ3292
	3	Deck Mechanism Unit	XYM3011
	4	Flexible Cable 27P	XDD3041
	5	Flexible Cable 13P	XDD3040
	6	Flexible Cable 19P	XDD3051
	7	GND Plate B	XNG3031
	8	• • • • •	
	9	Ratch Spring_L	ABH7130
	10	Ratch Spring_R	ABH7131
	11	Damper Assy	XXA3025
	12	Door Spring_L	XBH3010
	13	Door Spring_R	XBH3011
	14	Cushion Leg A	XEB3008
	15	• • • • •	
	16	Ratch Mold_L	XMR3001
	17	Ratch Mold_R	XMR3002
	18	Volume Knob	XAA3013
	19	JOG Knob	XAA3015
	20	MIC Knob	XAB3007
	21	FUNC Button L	XAD3076
	22	FUNC Button R	XAD3077
	23	FUNC Frame L	XAD3052
	24	FUNC Frame R	XAD3053
	25	CD ENT Button	XAD3055
	26	Display Panel	XAK3126
	27	EQ Panel	XAK3149
	28	JOG Lens	XAK3152
	29	V Lens	XAK3153
	30	LT Conductor	XAK3155

Mark	No.	Description	Part No.
	31	• • • • •	
	32	FL Filter	XAK3162
	33	FL Cover	XAK3164
	34	Cover Sheet L	XAK3184
	35	Cover Sheet R	XAK3185
	36	Power Button	XAD3044
	37	CD Button	XAD3045
	38	SC Button	XAD3060
	39	SC Button L	XAD3047
	40	SC Button R	XAD3048
	41	DOLBY Button	XAD3054
	42	Sub Panel	XAK3197
	43	ST Lens	XAK3151
	44	Deck Lens L	XAK3159
	45	Deck Lens R	XAK3160
	46	JOG Conductor	XAK3165
	47	Deck Door_L	XAN3021
	48	Deck Door_R	XAN3025
	49	Front Panel	XMB3026
	50	• • • • •	
	51	GND Plate A	XNG3030
	52	Spacer	XEB3012
	53	Spacer	XEB3013
	54	• • • • •	
	55	Screw	BPZ30P080FMC
	56	Connector Assy 3P	XDE3036
	57	Connector Assy 5P	XDE3038
	58	Spacer	XEC3014
	59	Cushion Spacer	XEB3015
	60	Cushion Spacer	XEB3016
	61	Cushion Spacer	XEB3017

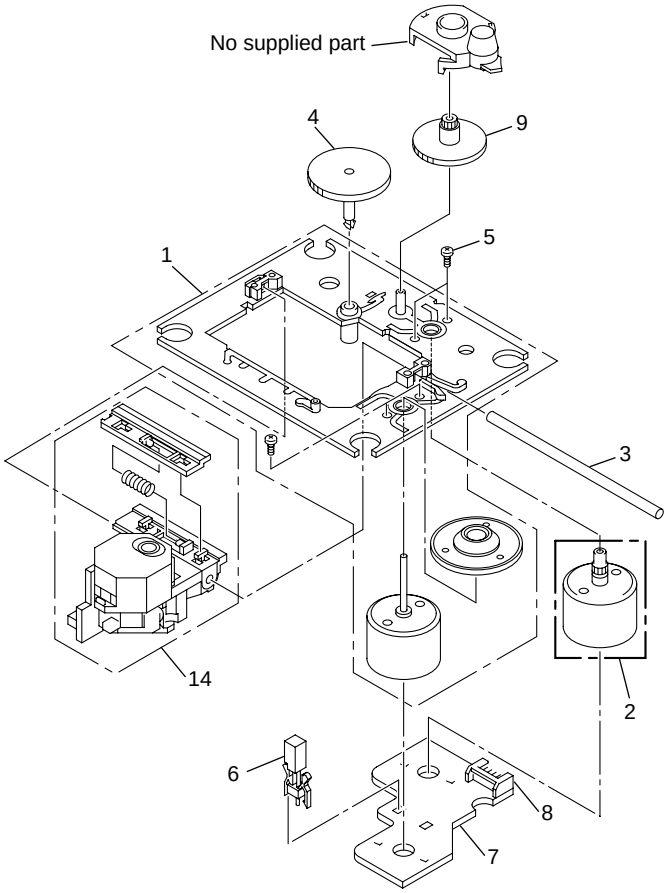
2.4 $M MECHANISM CD-2



(1) $M MECHANISM CD-2 PARTS LIST

Mark	No.	Description	Part No.
	1	MOTOR Assy	XWZ3230
	2	SW Assy	XWZ3231
	3	CD Assy	XWZ3229
	4	TRADE Assy	XWZ3232
	5	Servo Spring	ABH7126
	6	Belt	AEB7072
	7	Clamp Magnet	AMF7001
	8	Yoke	ANB7216
	9	Mecha Base	XNW3011
	10	Loading Tray	XNW3002
	11	Traverse Base	XNW3006
	12	Rotary Tray	ANW7124
	13	Clamper	XNW3007
	14	Clamper Holder	XNW3004
	15	Main Cam	ANW7093
	16	Gear Pulley	ANW7094
	17	Lock Lever	ANW7095
	18	Planet Gear	ANW7096
	19	Actuator	ANW7097
	20	Mini Card Spacer	AEC7143
	21	16P 200 Flexible Cable/60V	XDD3036
	22	Connector Assy (6P)	ADE7010
	23	Float Rubber A	AEB7063
	24	Float Rubber B	AEB7066
	25	Servo Mechanism Assy	XXA3010
	26	Screw	IPZ30P080FMC
	27	Carriage Motor	VXM1033
	28	Motor Pulley	PNW1634
	29	Ha Narl	GEM1016
	30	Cushion Rubber	XEB3005
	31	11P 185 Flexible Cable/30V	XDD3037
	32	Cushion Rubber	XEB3007

2.5 SERVO MECHANISM ASSY

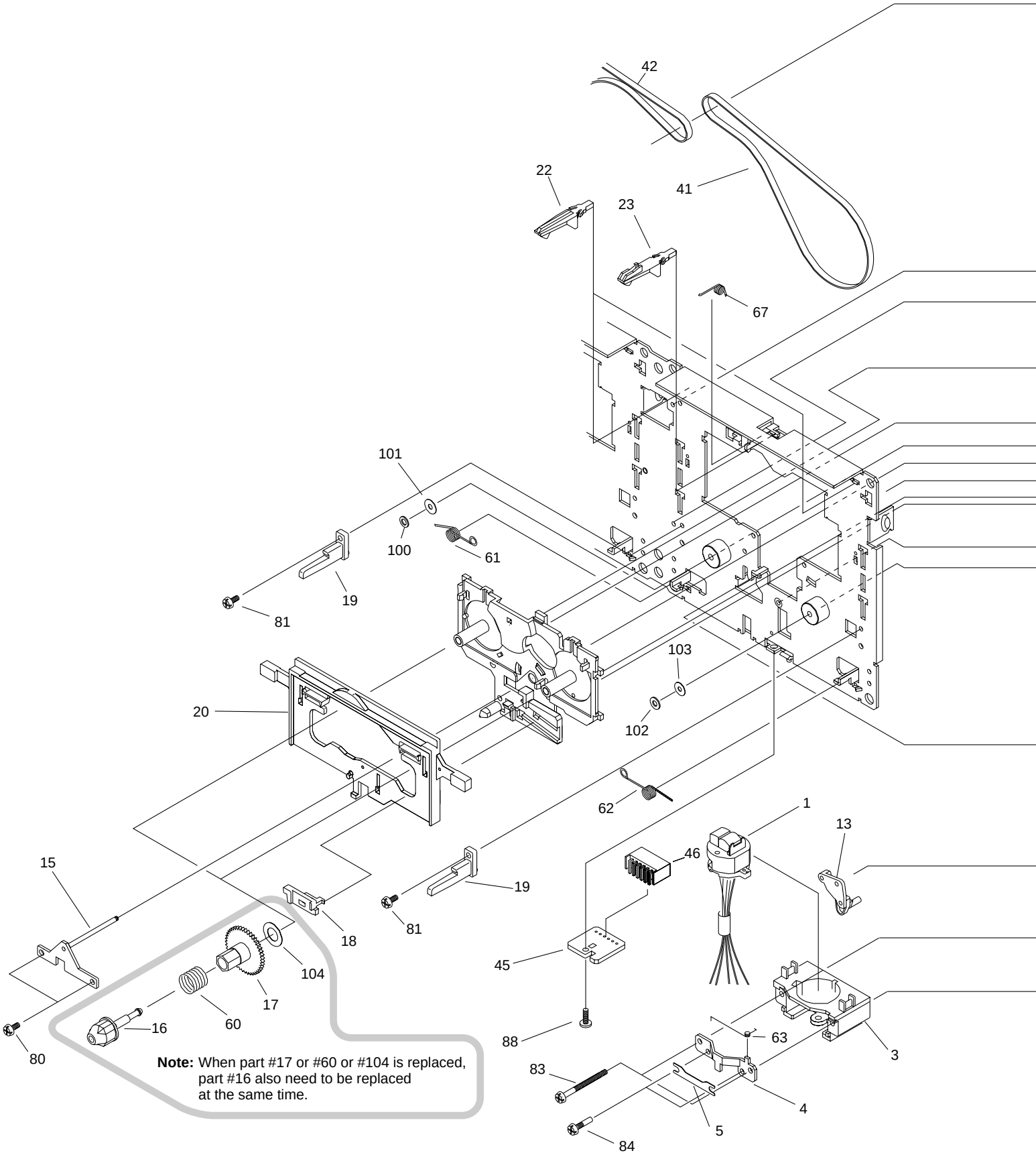


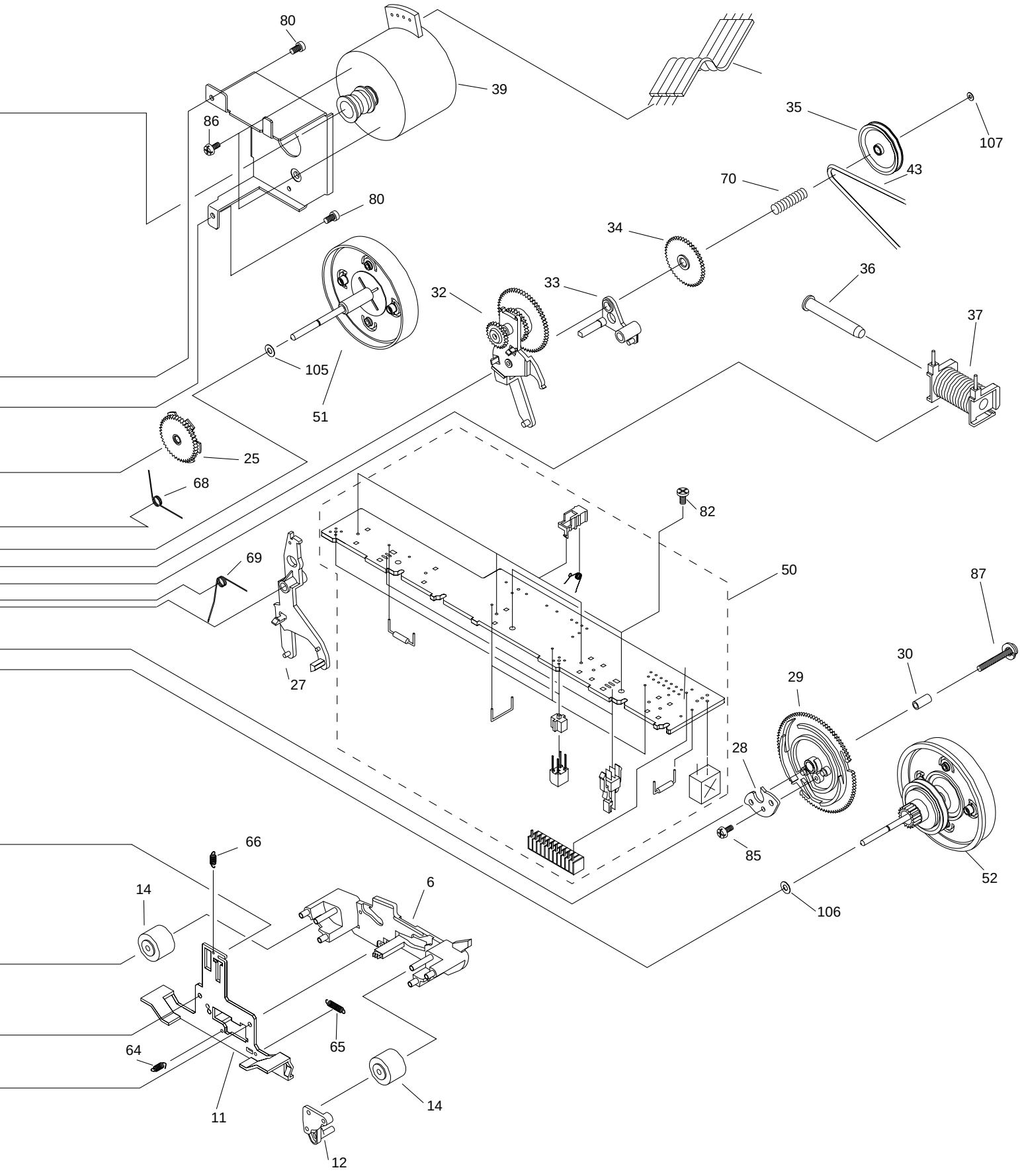
● SERVO MECHANISM ASSY PARTS LIST

Mark	No.	Description	Part No.
NSP	1	Motor Chassis Assy	• • • • •
	2	Motor Gear Assy	X-2625-769-(1)
	3	Sled Shaft	2-626-908-(01)
	4	Gear (A)(S)	2-625-188-(02)
NSP	5	Screw +P2*3	• • • • •
	6	Leaf Switch	1-572-085-(11)
	7	Motor(6p)(S)PCB	1-639-678-(12)
	8	Connector Pin 6p	1-564-722-(11)
	9	Gear(B)(RP)	2-627-003-(01)
	10	• • • • •	
	11	• • • • •	
	12	• • • • •	
	13	• • • • •	
	14	KSS-213C(Pick-up)	8-848-483-(05)

2.6 DECK MECHANISM UNIT

• DECK MECHANISM UNIT (1/2)

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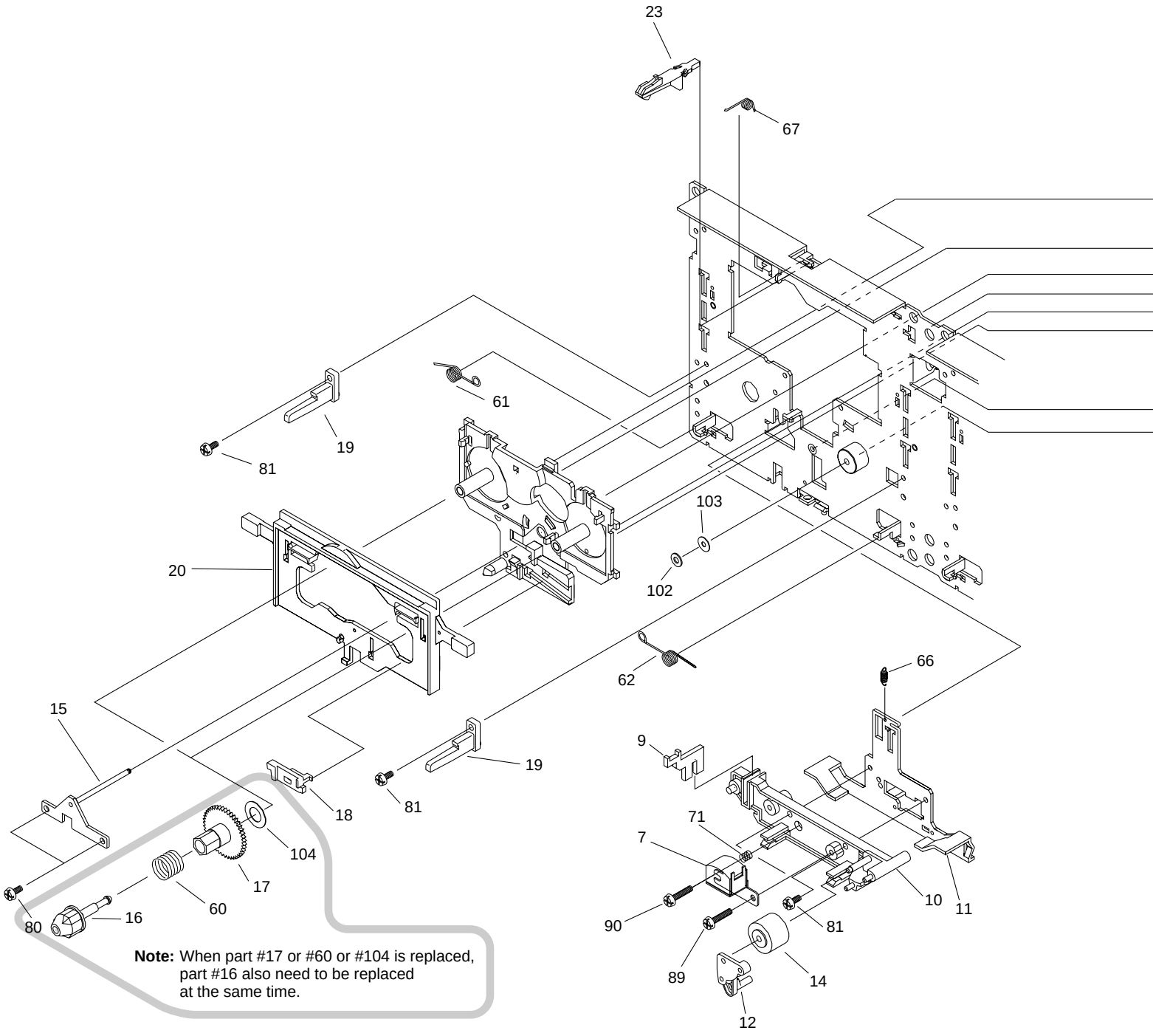
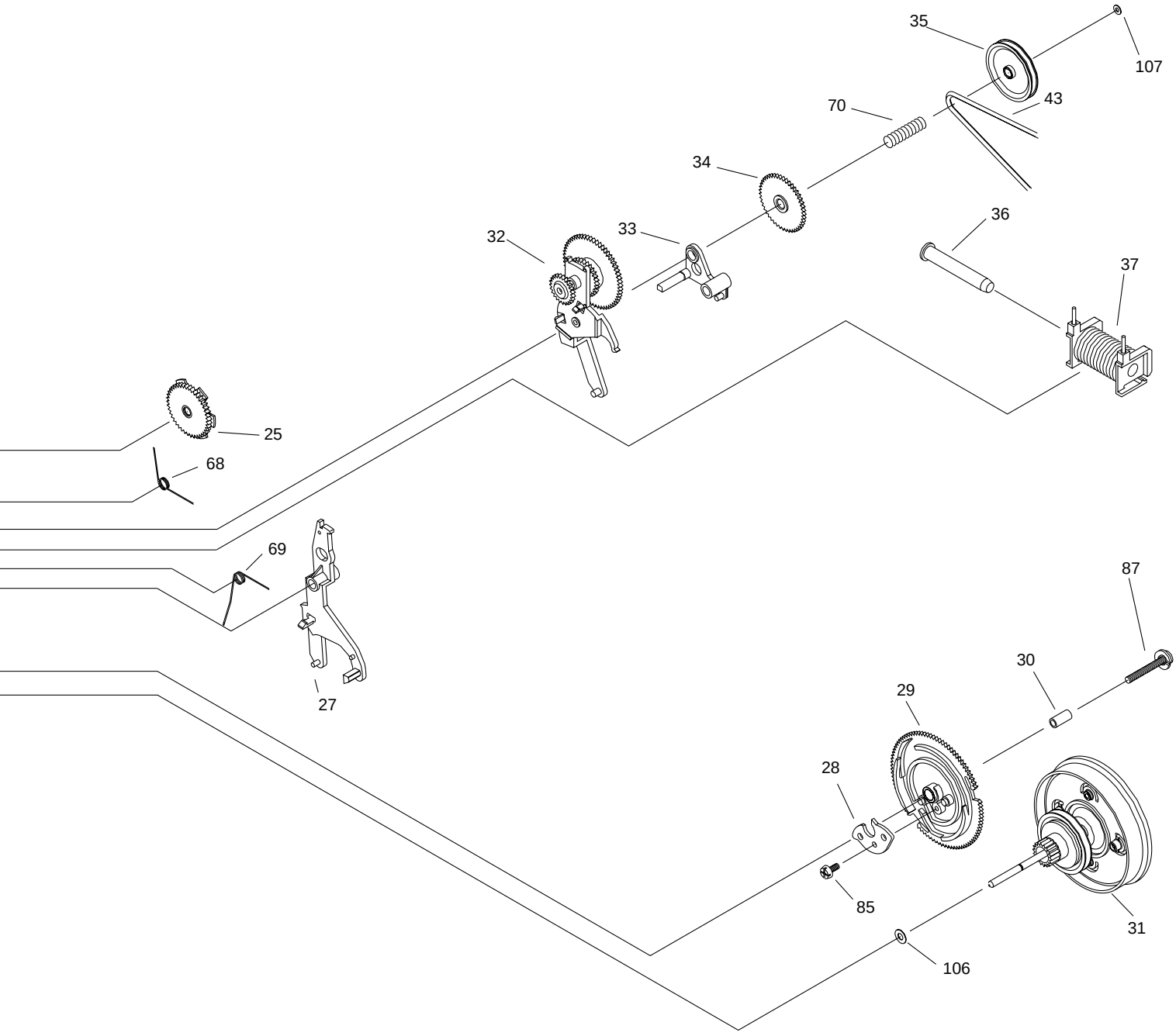
• DECK MECHANISM UNIT (2/2)

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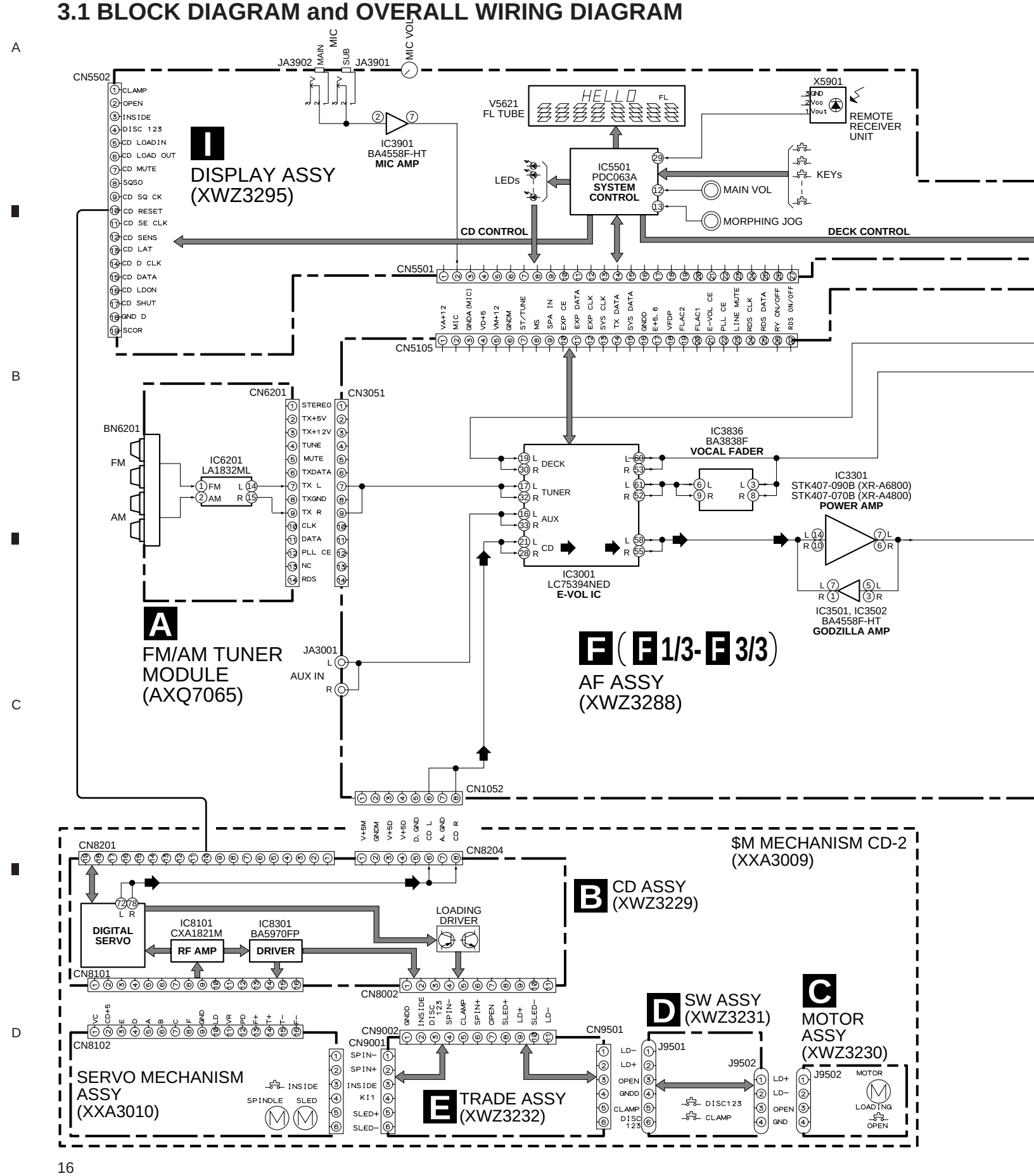
• DECK MECHANISM UNIT PARTS LIST

Mark	No.	Description	Part No.
	1	Assy'y HD Holder	50-093-4373
	3	Frame HD	50-219-3024
	4	Plate AZ	50-119-4046
	5	Spring AZ	50-160-4108
	6	Lever HD	50-259-3342
	7	R/P Head	TC881CB067B
	9	Guide Tape	50-219-4038
	10	Plate HD	50-093-3036
	11	Chassis HD	50-112-3045
	12	Cap Pinch R	50-219-4033
	13	Cap Pinch L	50-219-4034
	14	Roller Pinch	50-027-41054
	15	Ass'y Plate D	50-219-4311
	16	Cap Reel	50-228-4020
	17	Gear Reel	50-222-4006
	18	Lever ST	50-259-4041
	19	Guide C	50-219-4014
	20	Lever Brake	50-259-3251
	22	Arm SW	50-239-4027
	23	Arm CS	50-239-4026
	25	Ass'y Cover	50-093-4063
	27	Arm Trigger	50-268-3016
	28	Arm Cam	50-139-4292
	29	Gear Cam	50-221-3009
	30	Coller	03-300-4455
	31	Ass'y Flywheel RA	50-093-3360
	32	Ass'y Clutch	50-093-4069
	33	Arm UD A	50-239-4017
	34	Gear UD	50-222-4007
	35	Pulley D	50-223-4254
	36	Plunger	03-300-4442
	37	Ass'y Bobbin	50-093-4125
	39	Ass'y Motor	50-093-4316
	41	Belt BR	02-084-4205
	42	Belt AF	02-084-4202
	43	Belt FR	02-083-4188
	45	PCB HD	50-070-4057
	46	Housing	S5BPHKS
	50	Ass'y PCB	50-093-4057
	51	Ass'y Flywheel L	50-093-3315
	52	Ass'y Flywheel RB	50-093-3361

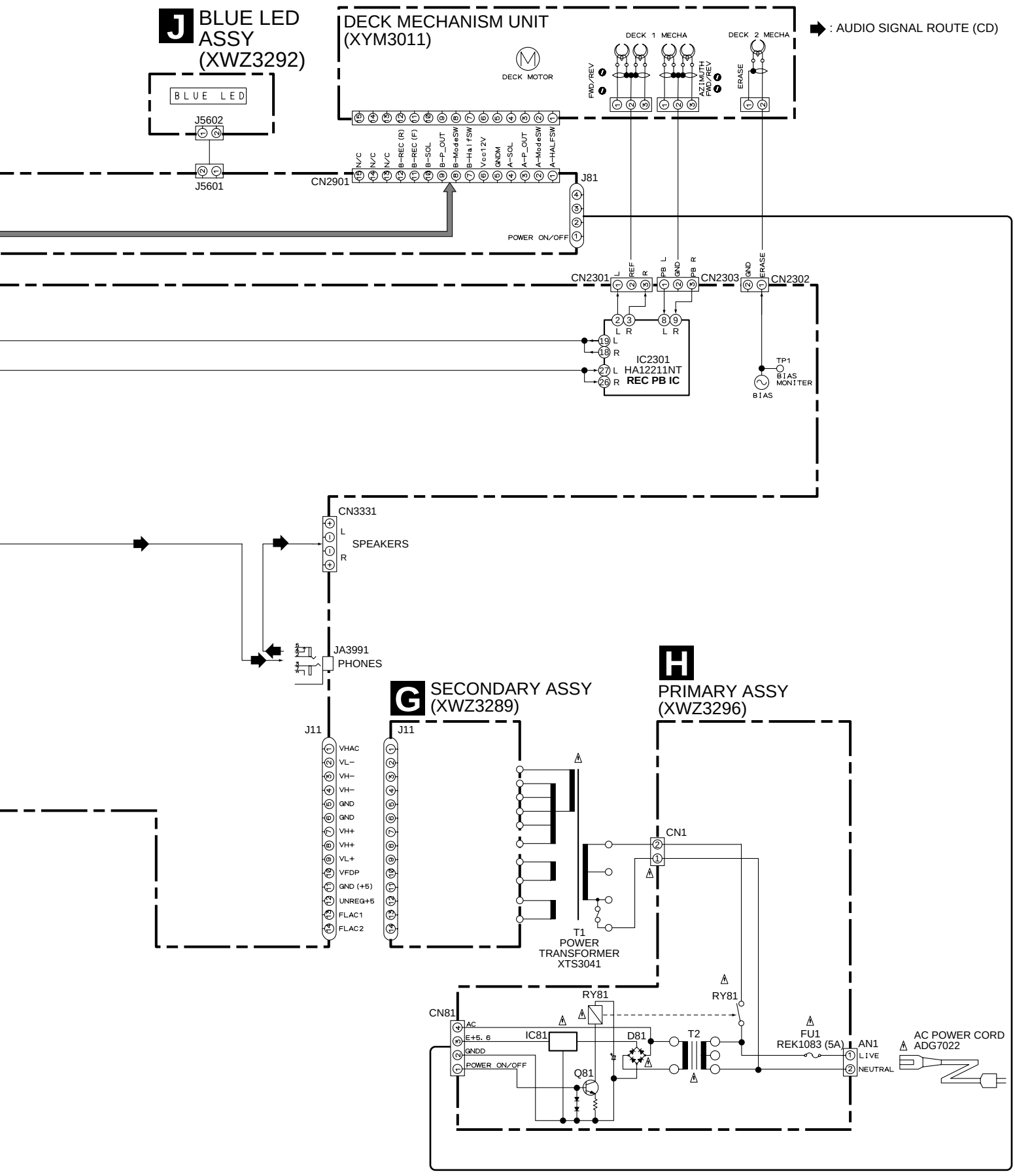
Mark	No.	Description	Part No.
	60	Spring	01-081-4601
	61	Spring	01-082-4652
	62	Spring	01-082-4651
	63	Spring	01-082-4650
	64	Spring	01-080-4649
	65	Spring	01-080-4607
	66	Spring	01-080-4635
	67	Spring	01-082-4654
	68	Spring	01-082-4598
	69	Spring	01-082-4597
	70	Spring	01-081-4657
	71	Spring	01-081-4605
	80	Screw	GSE10A2003
	81	Screw	GSE20A2005
	82	Screw	GSE10A2004
	83	Screw	GSD10A2018
	84	Screw	03-300-4056
	85	Screw	GSL10A1704
	86	Screw	GSP10A2603
	87	Screw	GSP11A2012
	88	Screw	GSE20A2004
	89	Screw	GSL20A2005
	90	Screw	03-300-4127
	100	Washer	GWN21X040040
	101	Washer	GWM19X055035S
	102	Washer	GWM19S035035
	103	Washer	GWM17S050035S
	104	Washer	GWM48X075010
	105	Washer	GWP23X040020
	106	Washer	GWP21X045020
	107	Washer	GWP12X030040S

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

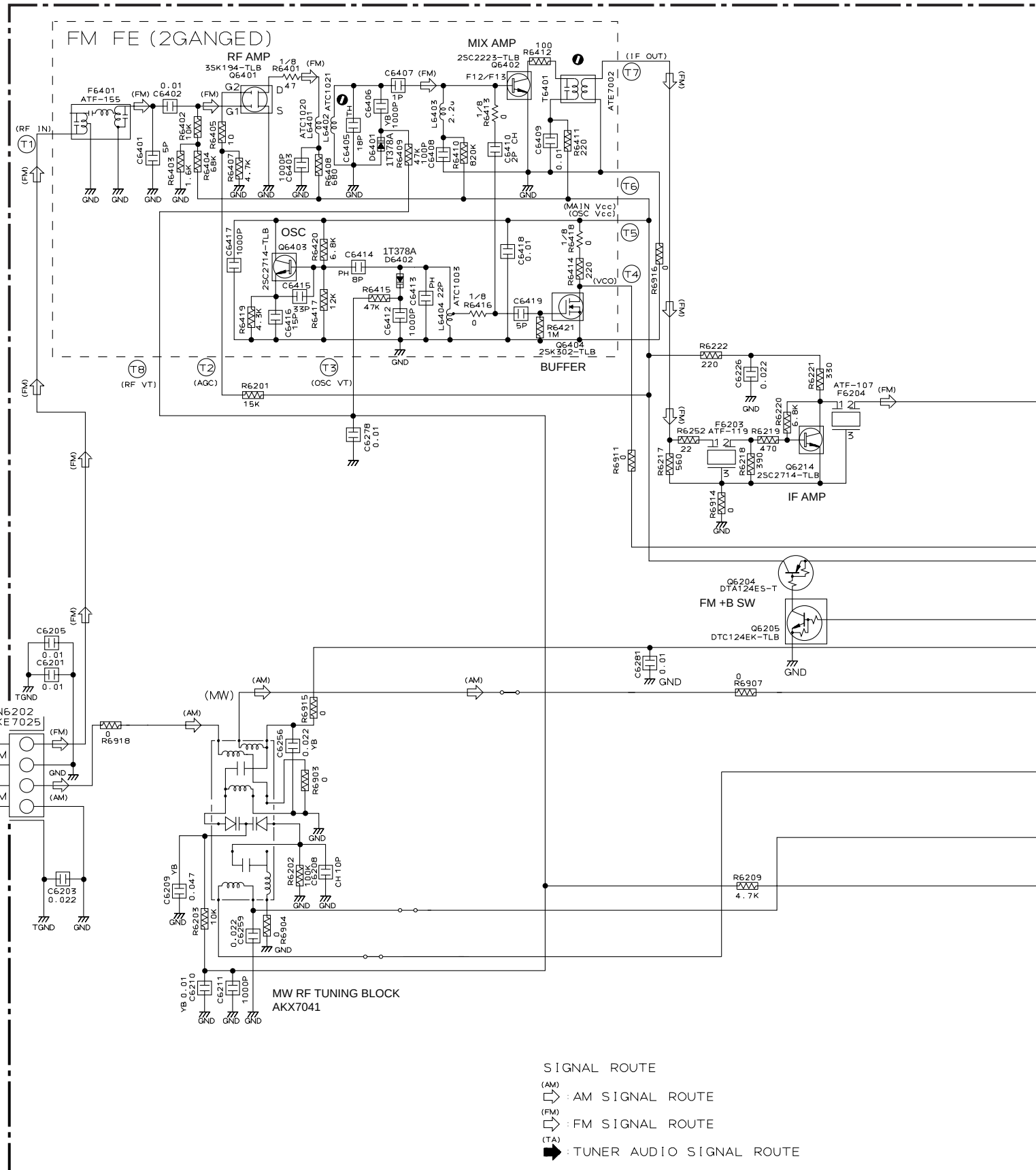
3.1 BLOCK DIAGRAM and OVERALL WIRING DIAGRAM



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



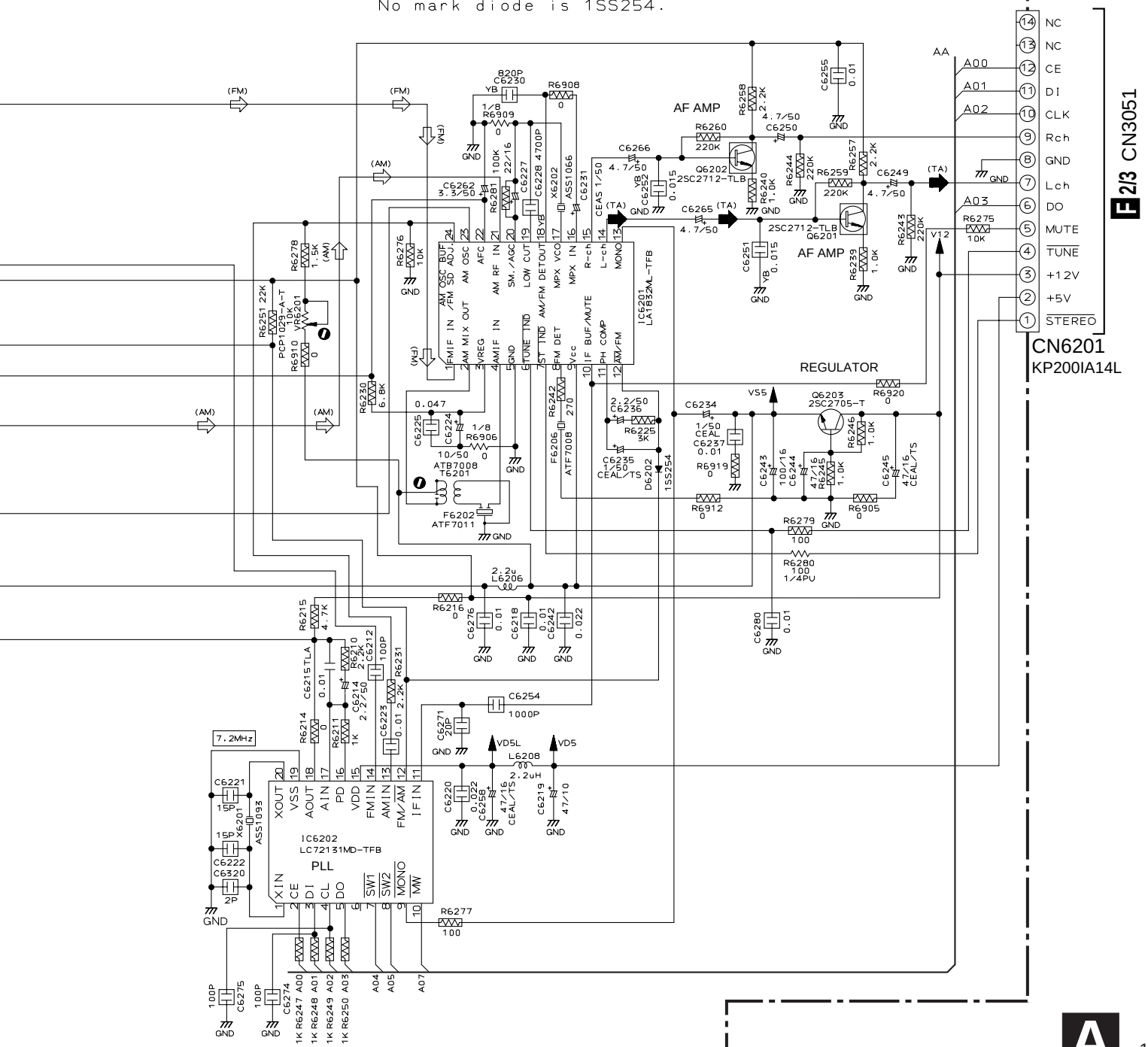
3.2 FM/AM TUNER MODULE



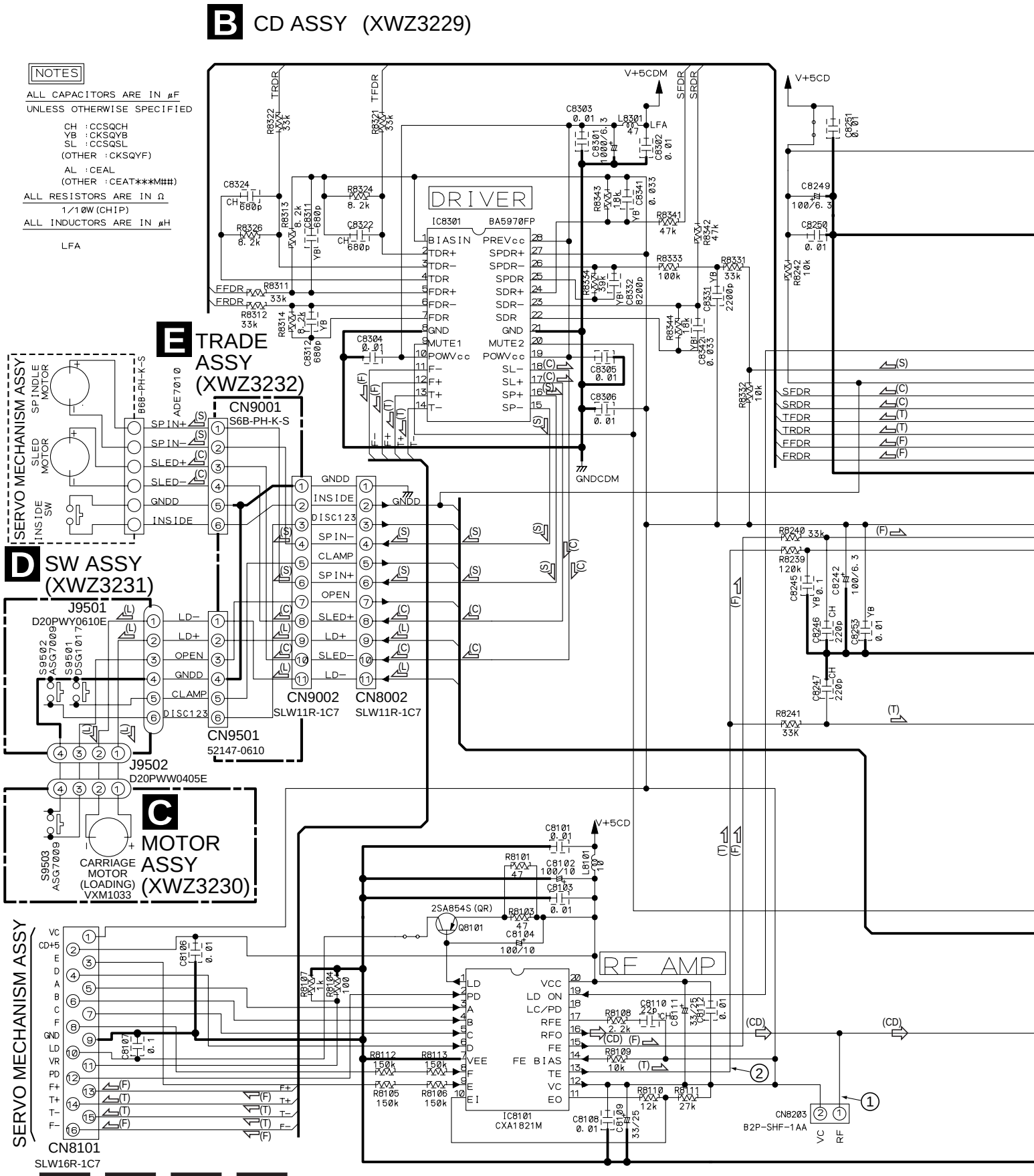
AF FM/AM TUNER MODULE (AXQ7065)

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. DIODES
   No mark diode is 1SS254.



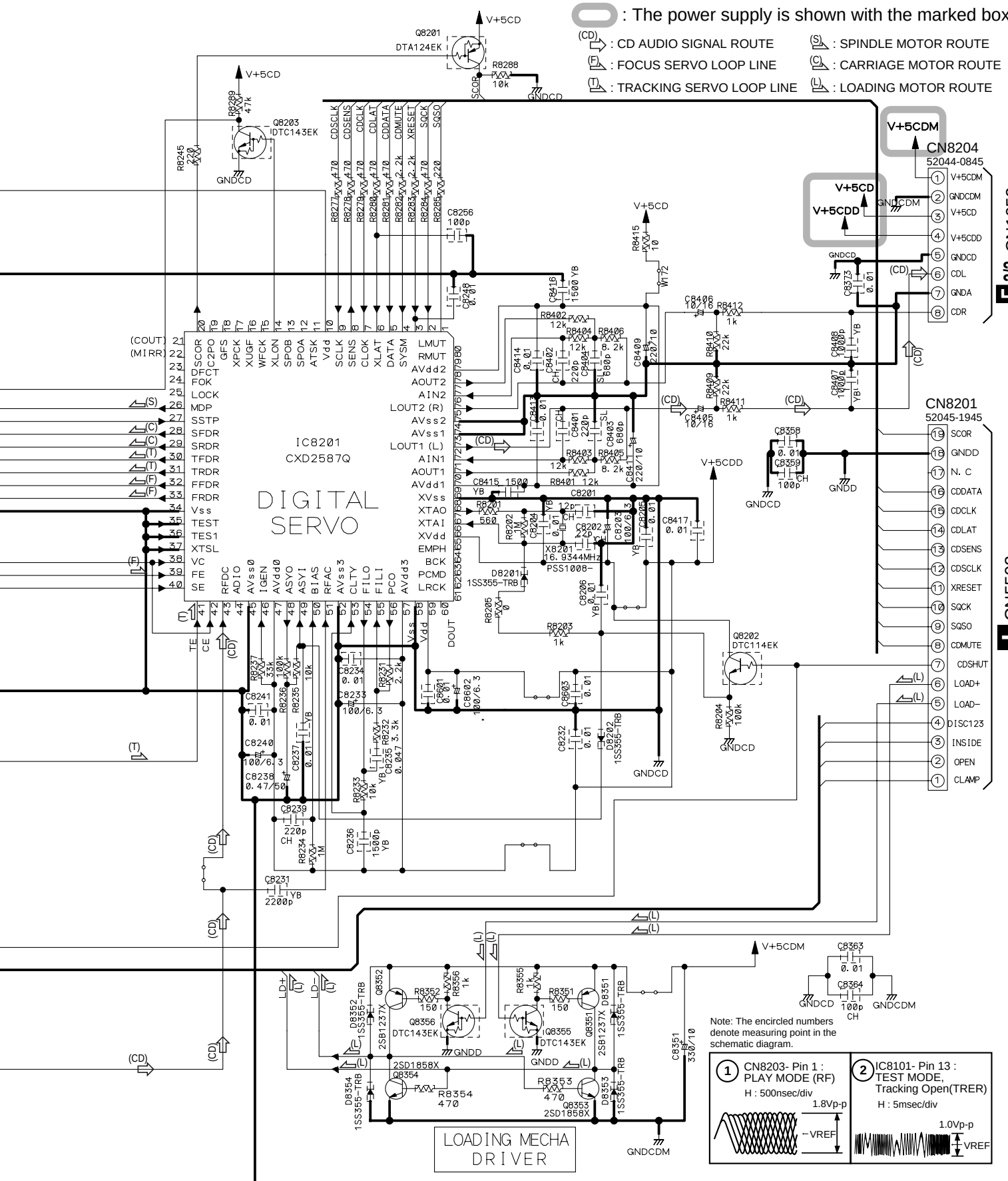
3.3 CD, MOTOR, SW and TRADE ASSYS



B C D E

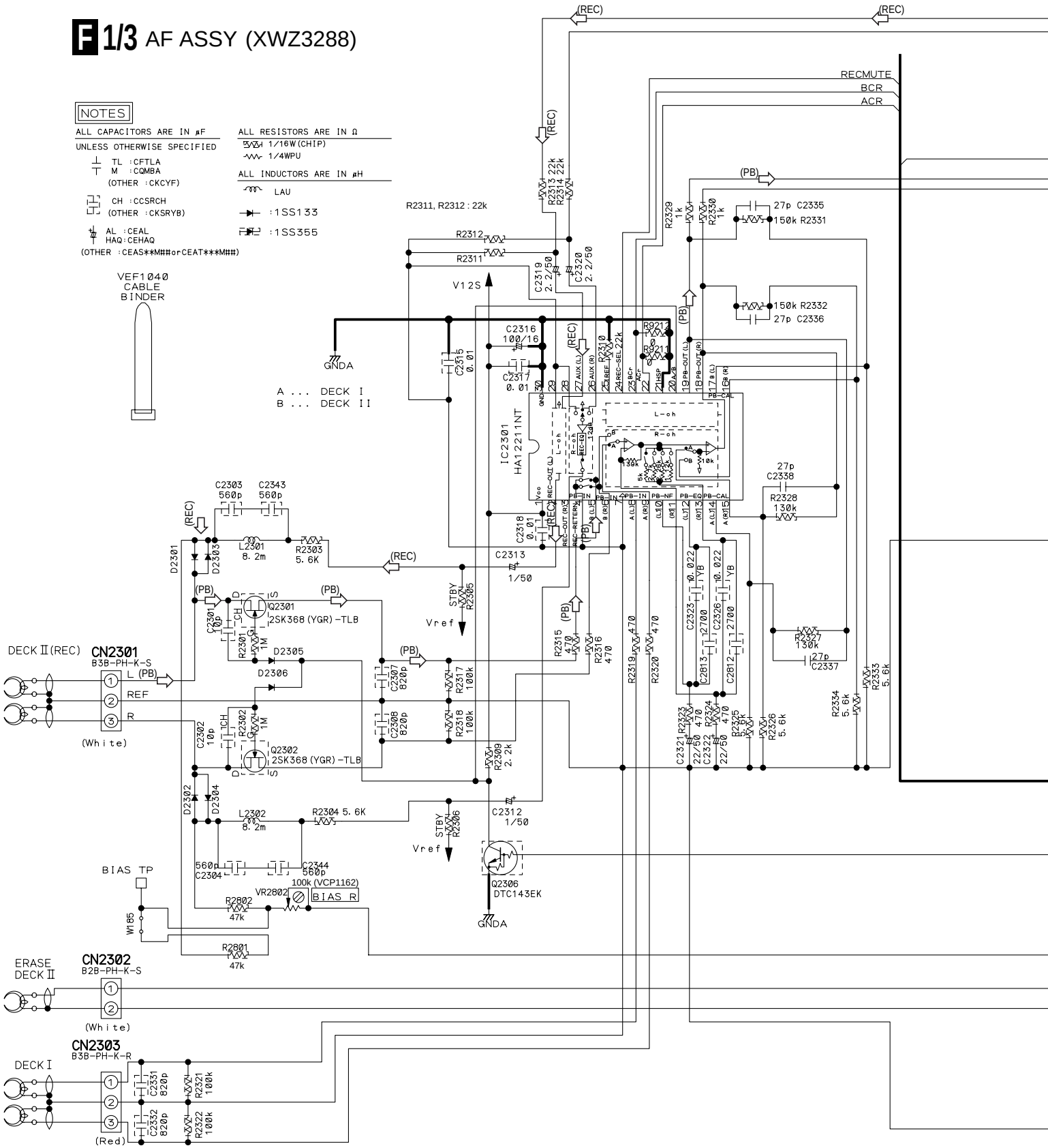
: The power supply is shown with the marked box.

(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



3.4 AF ASSY (1/3)

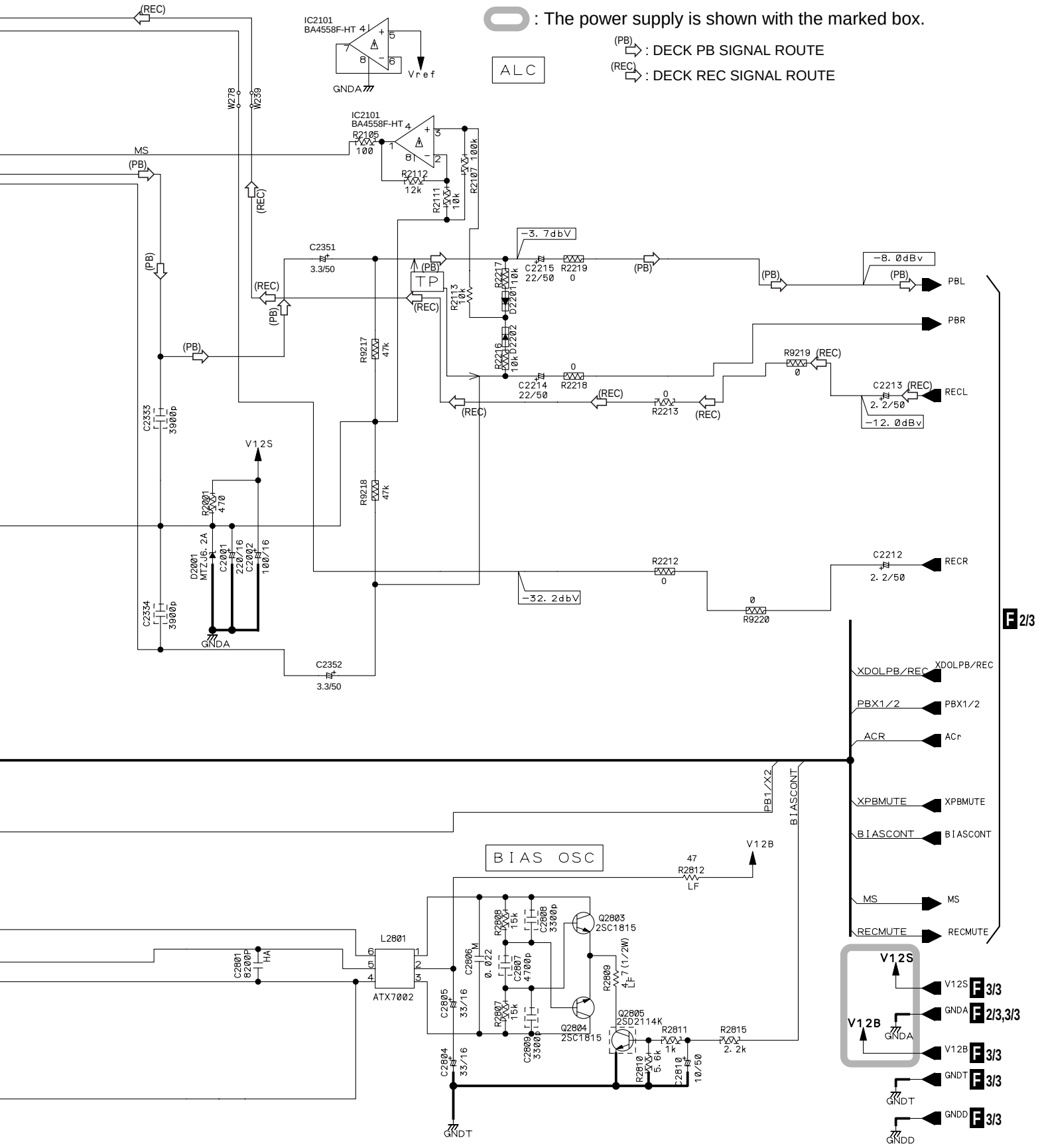
F 1/3 AF ASSY (XWZ3288)



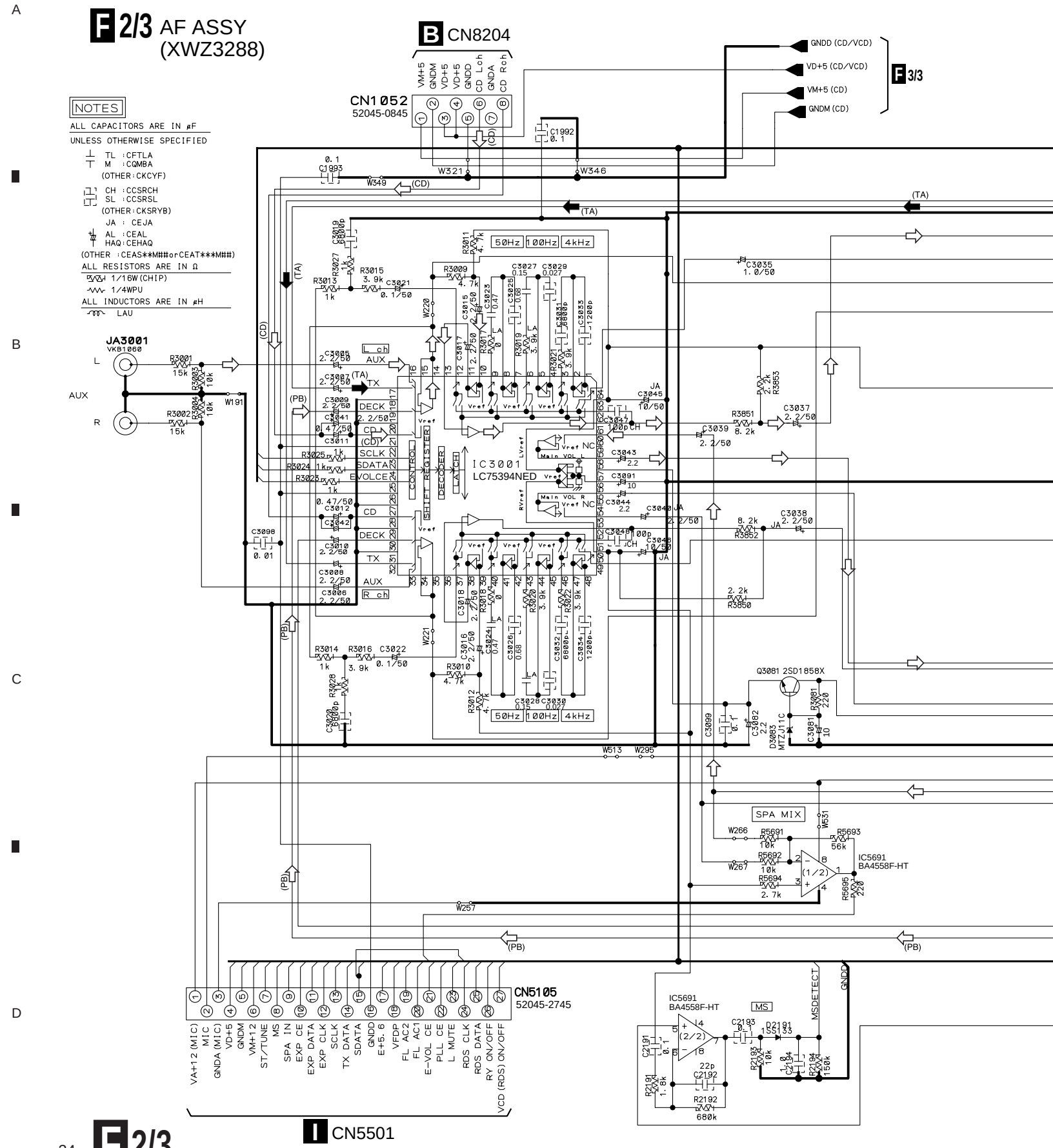
: The power supply is shown with the marked box.

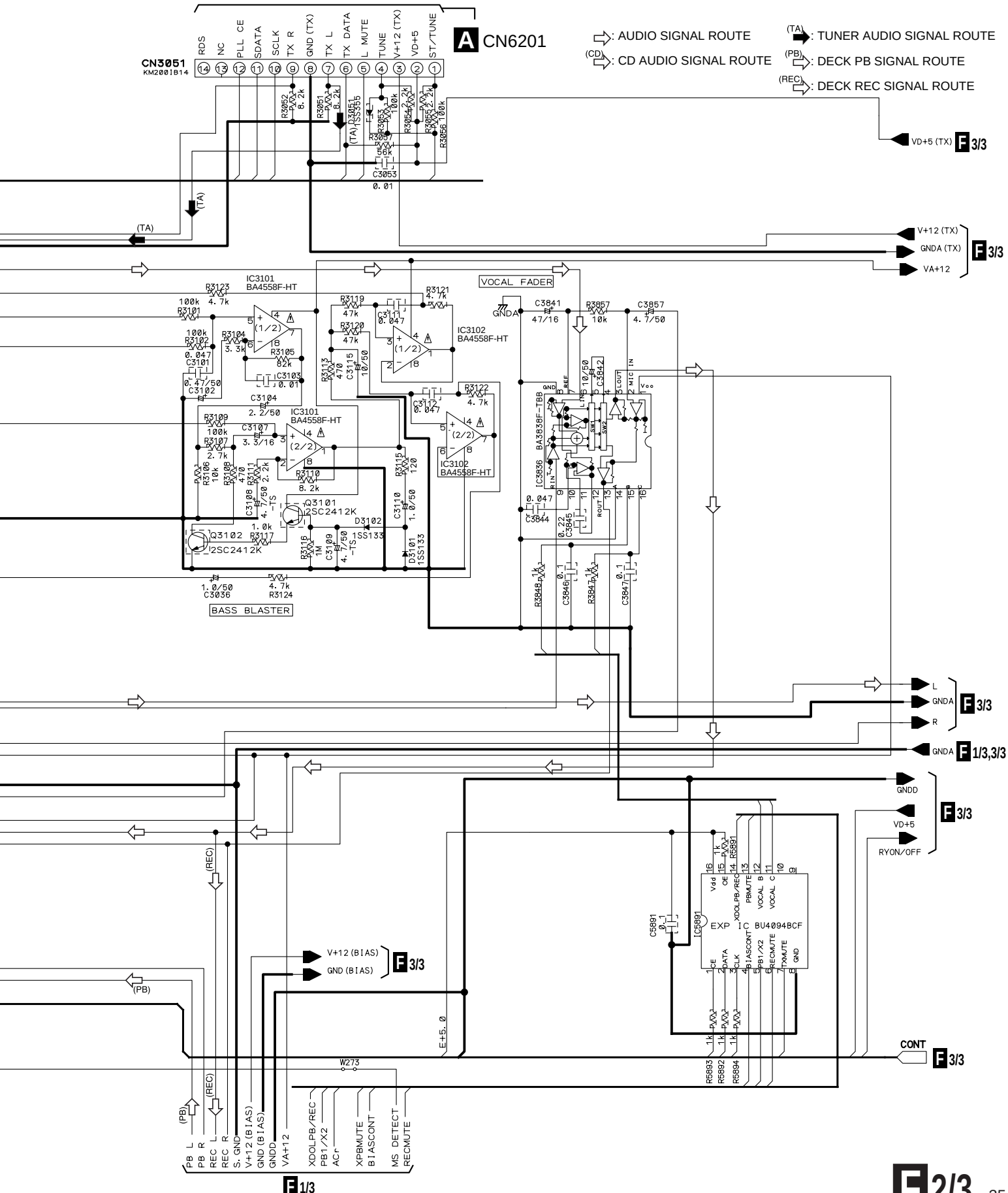
(PB) : DECK PB SIGNAL ROUTE

(REC) : DECK REC SIGNAL ROUTE

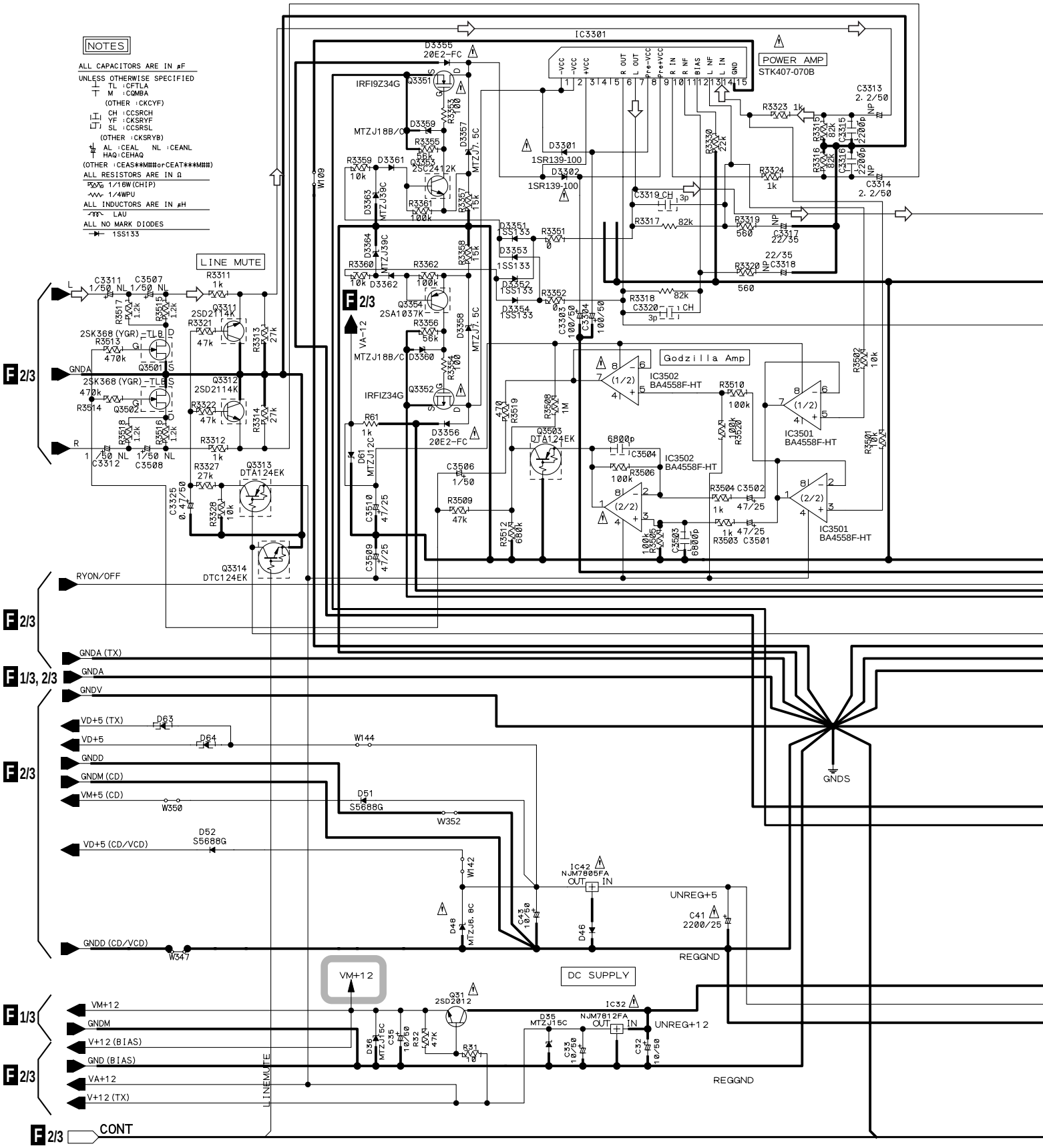


3.5 AF ASSY (2/3)


F 2/3 AF ASSY
(XWZ3288)
B CN8204
CN1052
52045-0845
GNDD (CD/VCD)
VD+5 (CD/VCD)
VM+5 (CD)
GNDM (CD)
F 3/3
NOTES
ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED
TL :CFTLA
M :CQMBA
(OTHER:CKCYF)
CH :CCSRCH
SL :CCSRSL
(OTHER:CKSRYB)
JA : CEJA
AL :CEAL
HAQ:CEHAQ
(OTHER :CEAS**M###orCEAT***M##)
ALL RESISTORS ARE IN Ω
1/16W(CHIP)
1/4WPU
ALL INDUCTORS ARE IN μH
LAU
JA3001
VKB1060
IC3001
LC75394NED
SHIFT REGISTER
CONTROL
DECODER
LATCH
50Hz
100Hz
4kHz
SPA MIX
IC5691
BA4558F-HT
Q3081 2SD1858X
CN5105
52045-2745
CN5501
MS
MSDETECT


A CN6201
CN3051
KM2001B14
RDS
NC
PLL CE
SDATA
SCLK
TX R
GND (TX)
TX L
TX DATA
L MUTE
TUNE
V+12 (TX)
VD+5
ST/TUNE
: AUDIO SIGNAL ROUTE
: CD AUDIO SIGNAL ROUTE
: TUNER AUDIO SIGNAL ROUTE
: DECK PB SIGNAL ROUTE
: DECK REC SIGNAL ROUTE
VD+5 (TX) F 3/3
V+12 (TX)
GNDA (TX)
VA+12
F 3/3
IC3101
BA4558F-HT
IC3102
BA4558F-HT
VOCAL FADER
BASS BLASTER
BA3838F-TBB
IC3836
Q3101
2SC2412K
Q3102
2SC2412K
D3102
1SS133
D3101
1SS133
L
GNDA
R
F 3/3
GNDA F 1/3,3/3
GNDD
VD+5
RYON/OFF
F 3/3
IC5891
EXP
BU4094BCF
(REC)
(PB)
V+12 (BIAS)
GND (BIAS)
F 3/3
W273
CONT
F 3/3
PB L
PB R
REC L
REC R
S. GND
V+12 (BIAS)
GND (BIAS)
GNDD
VA+12
XDOLPB/REC
PB1/X2
ACr
XPBMUTE
BIASCONT
MS DETECT
RECMUTE
F 1/3

3.6 AF (3/3) and SECONDARY ASSYS



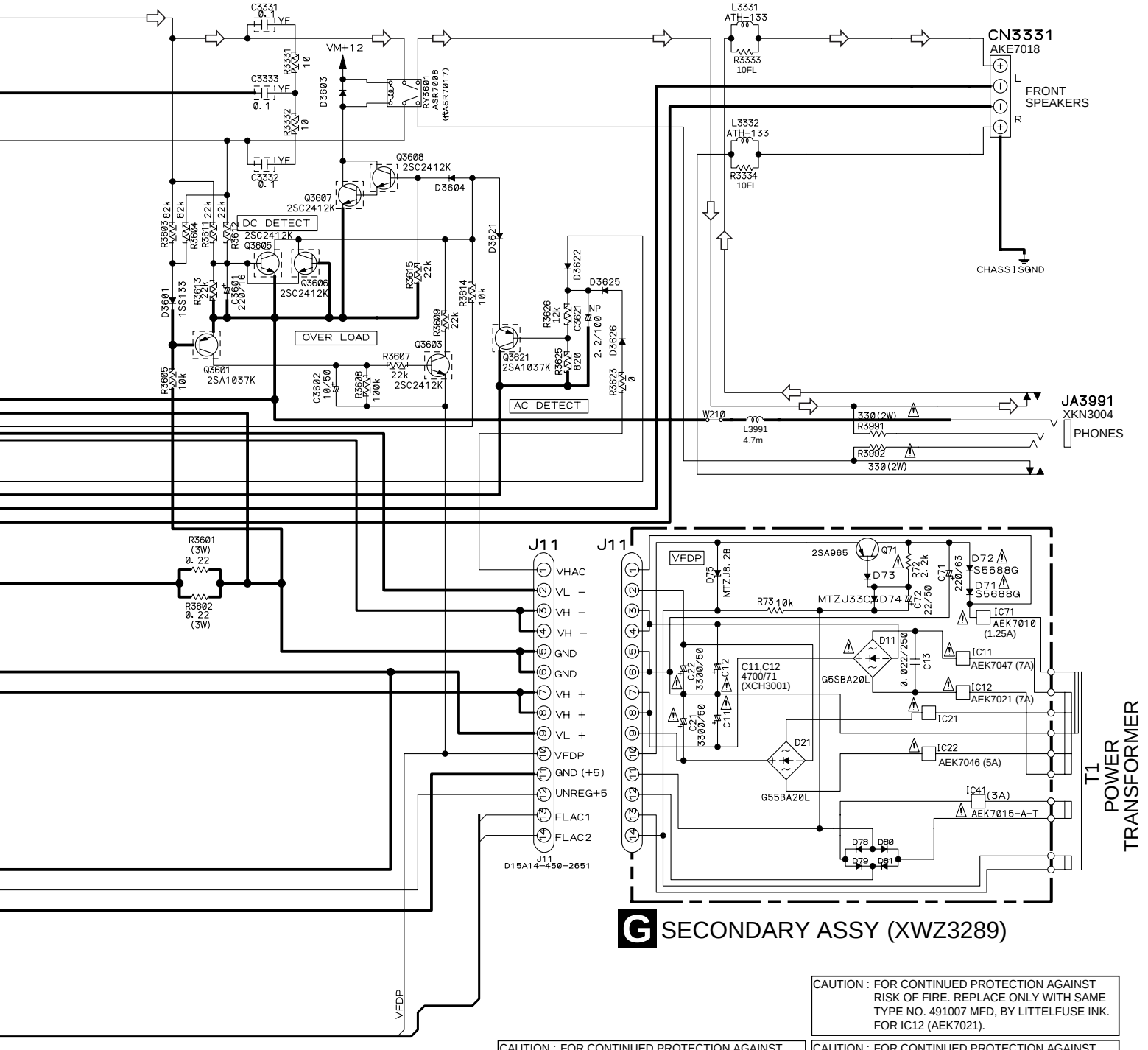
: The power supply is shown with the marked box.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491003 MFD, BY LITTELFUSE INK. FOR IC41 (AEK7015).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 4911.25 MFD, BY LITTELFUSE INK. FOR IC71 (AEK7010).

⇨: AUDIO SIGNAL ROUTE

F 3/3 AF ASSY (XWZ3288)



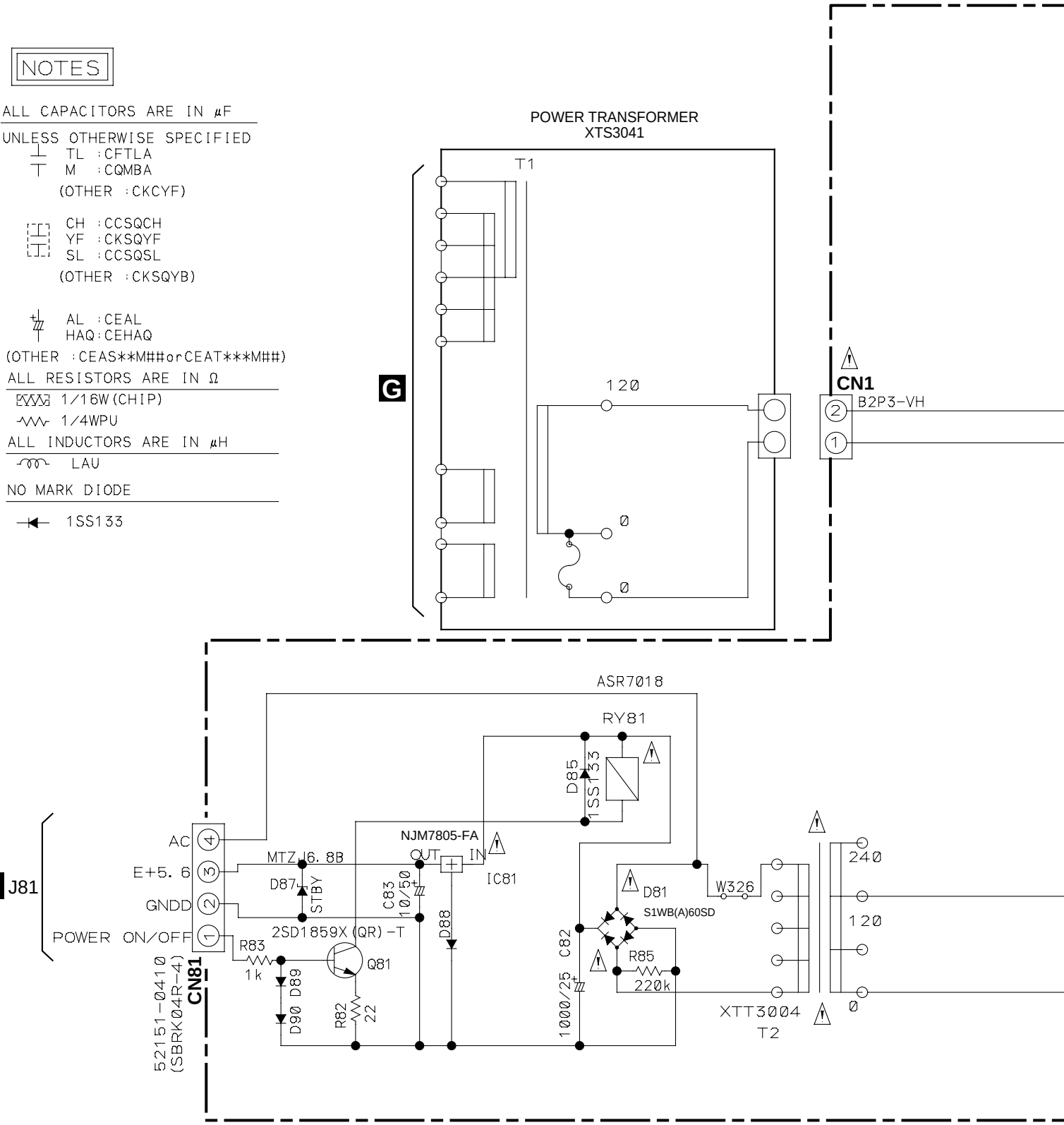
G SECONDARY ASSY (XWZ3289)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491007 MFD, BY LITTELFUSE INK. FOR IC12 (AEK7021).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491007 MFD, BY LITTELFUSE INK. FOR IC11 (AEK7047).

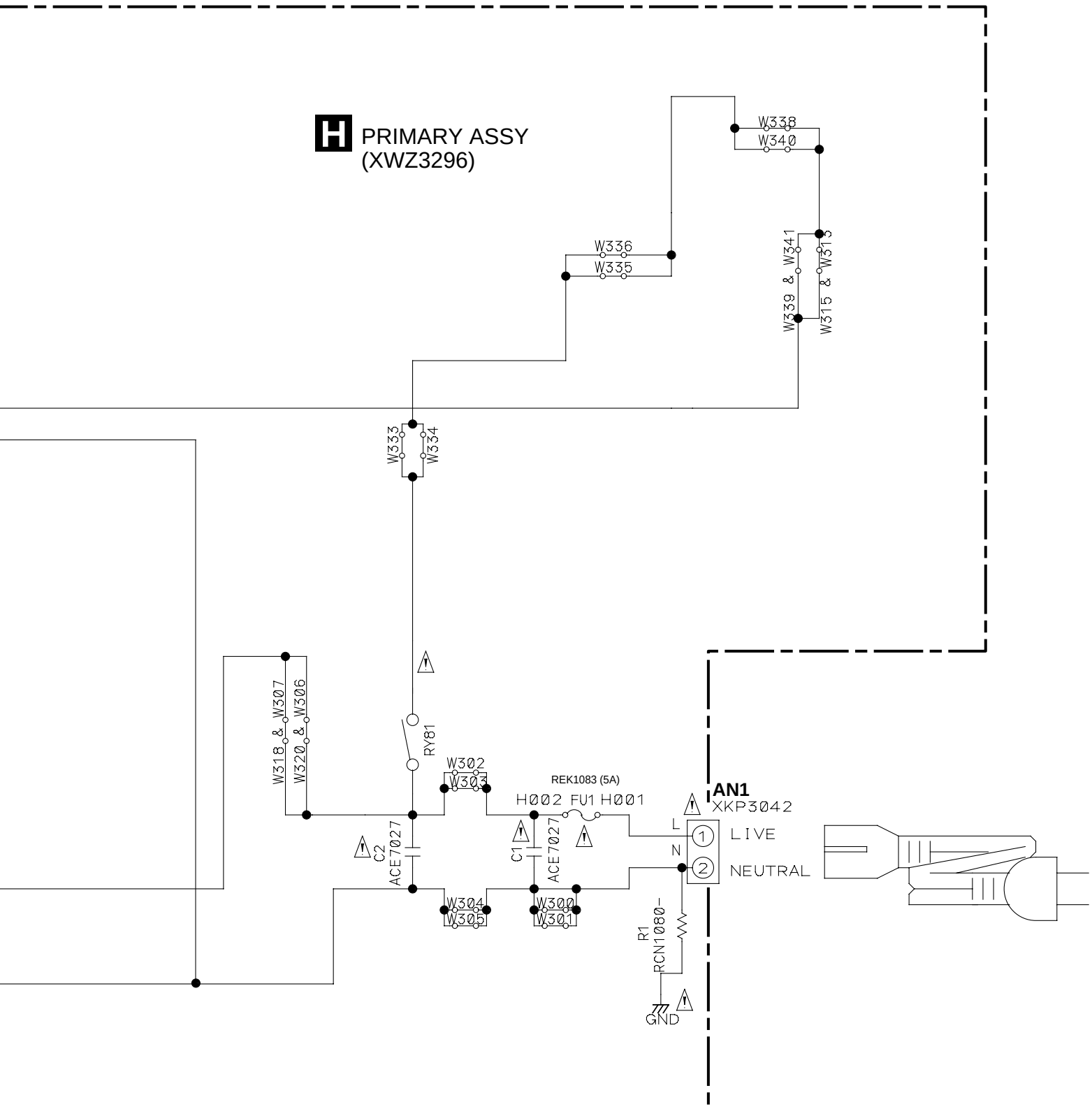
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491005 MFD, BY LITTELFUSE INK. FOR IC21 and IC22 (AEK7046).

3.7 PRIMARY ASSY

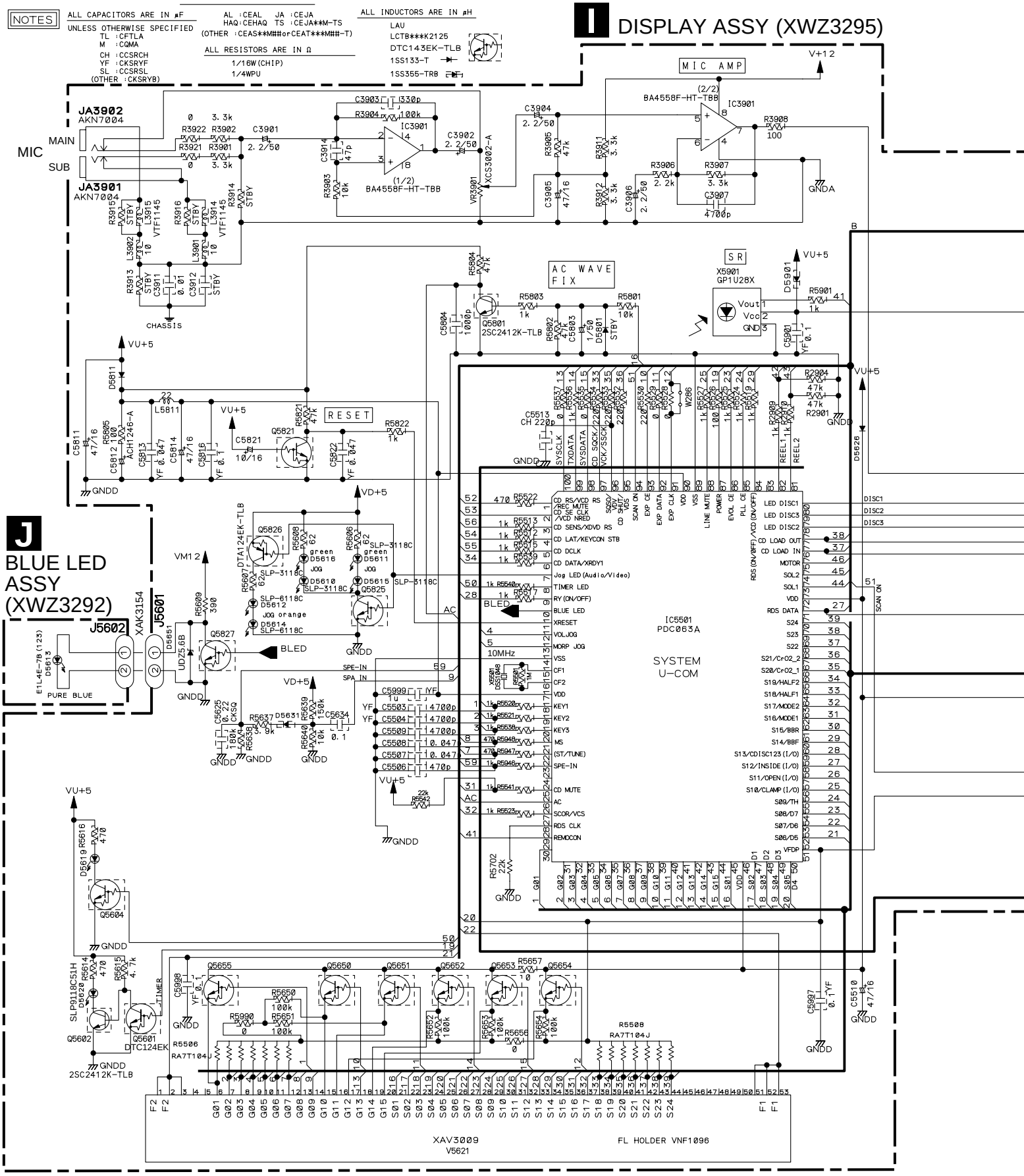


• NOTE FOR FUSE REPLACEMENT

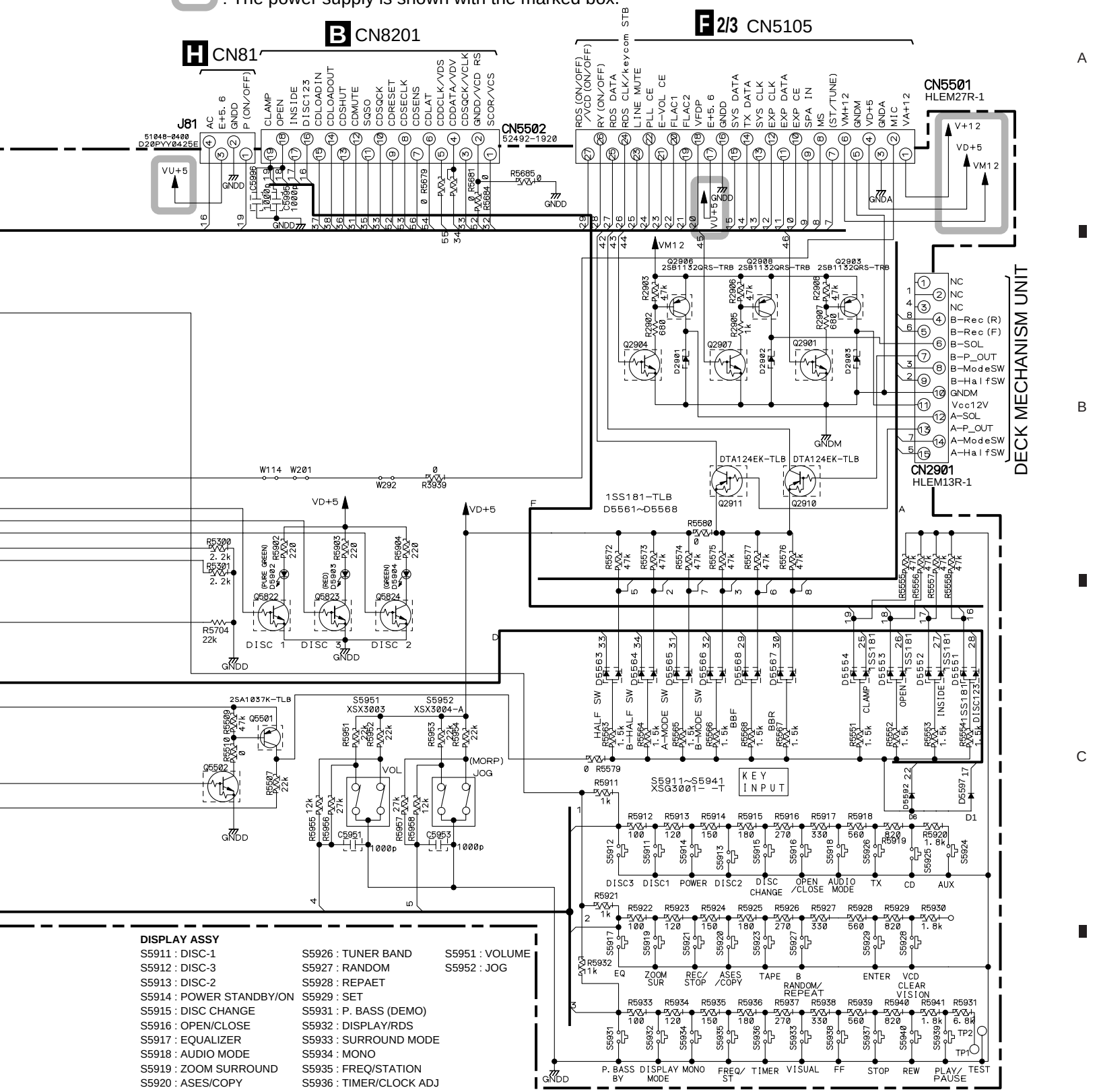
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.



3.8 DISPLAY and BLUE LED ASSYS



: The power supply is shown with the marked box.



DISPLAY ASSY

S5911 : DISC-1	S5926 : TUNER BAND	S5951 : VOLUME
S5912 : DISC-3	S5927 : RANDOM	S5952 : JOG
S5913 : DISC-2	S5928 : REPAET	
S5914 : POWER STANDBY/ON	S5929 : SET	
S5915 : DISC CHANGE	S5931 : P. BASS (DEMO)	
S5916 : OPEN/CLOSE	S5932 : DISPLAY/RDS	
S5917 : EQUALIZER	S5933 : SURROUND MODE	
S5918 : AUDIO MODE	S5934 : MONO	
S5919 : ZOOM SURROUND	S5935 : FREQ/STATION	
S5920 : ASES/COPY	S5936 : TIMER/CLOCK ADJ	
S5921 : REC/STOP	S5937 : ■ ST. MEMORY	
S5923 : TAPE I / II	S5938 : ▶▶I / ▶▶ • +	
S5924 : AUX	S5939 : ◀ ▶ / ❚❚	
S5925 : CD	S5940 : – • I◀◀ / ◀◀	

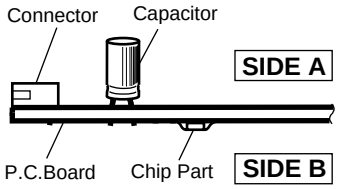
4. PCB CONNECTION DIAGRAM

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
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	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.

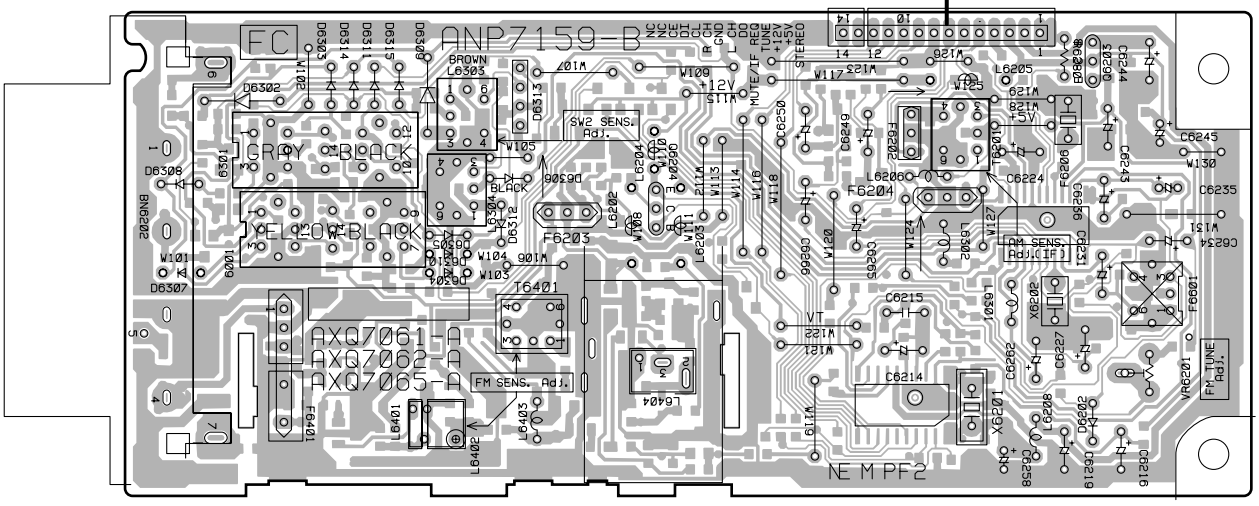


4.1 FM/AM TUNER MODULE

AF FM/AM TUNER MODULE

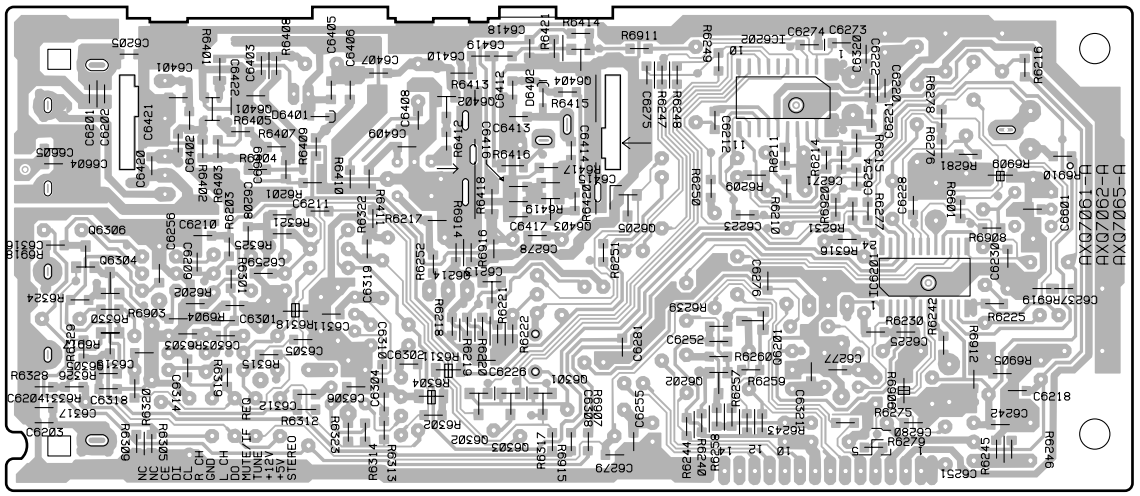
F CN3051

SIDE A

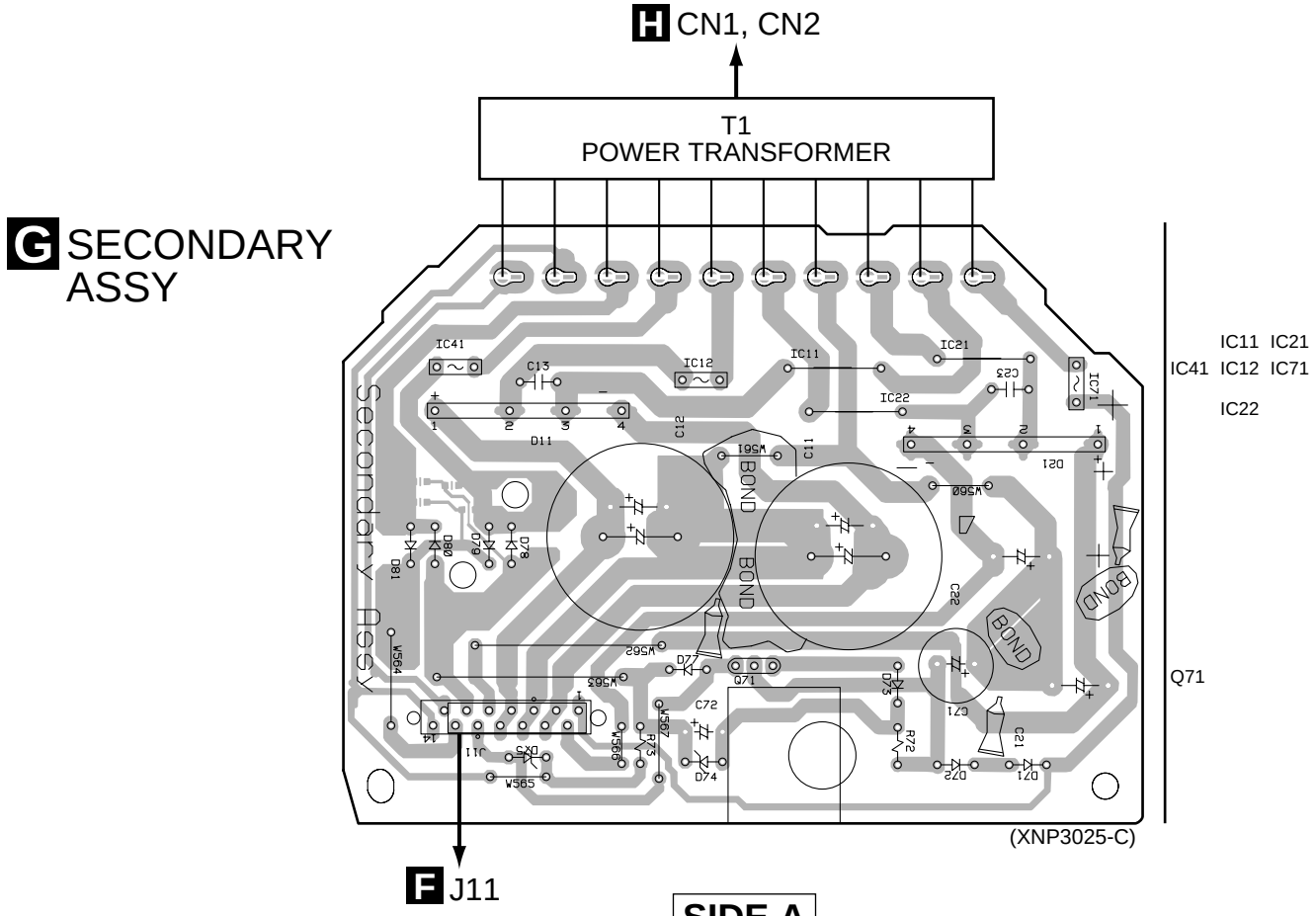


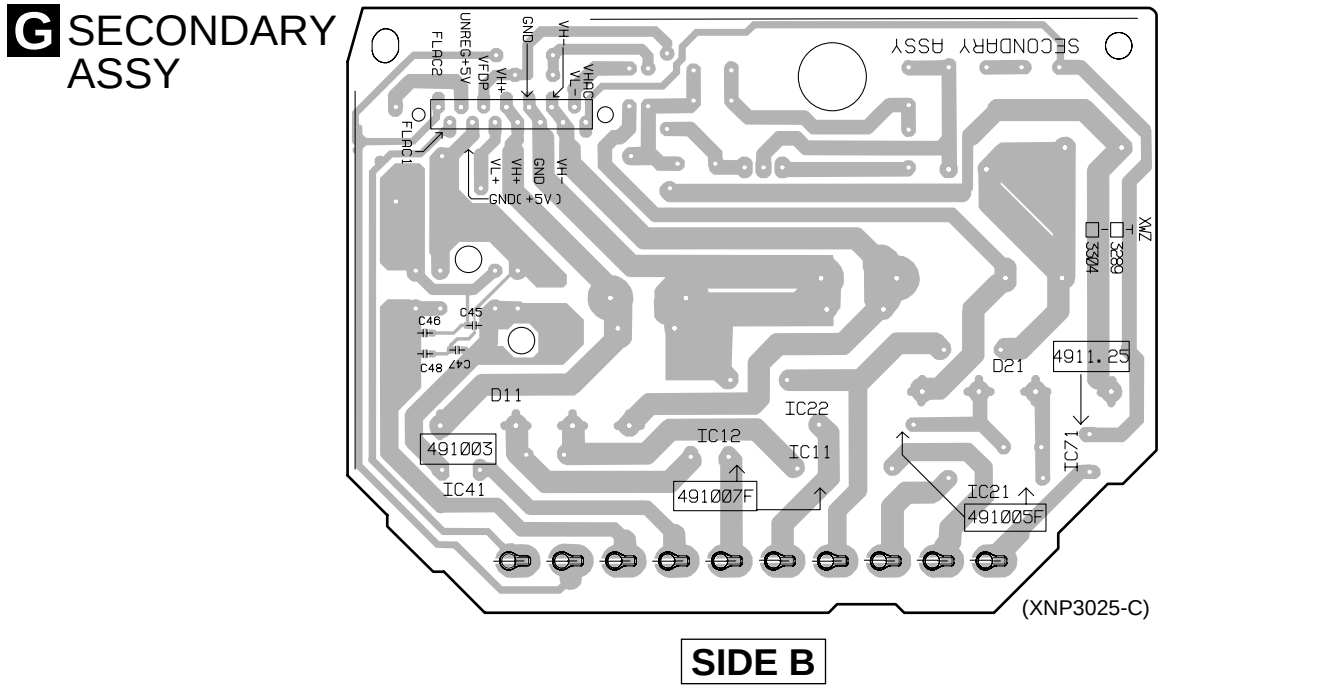
AF FM/AM TUNER MODULE

SIDE B

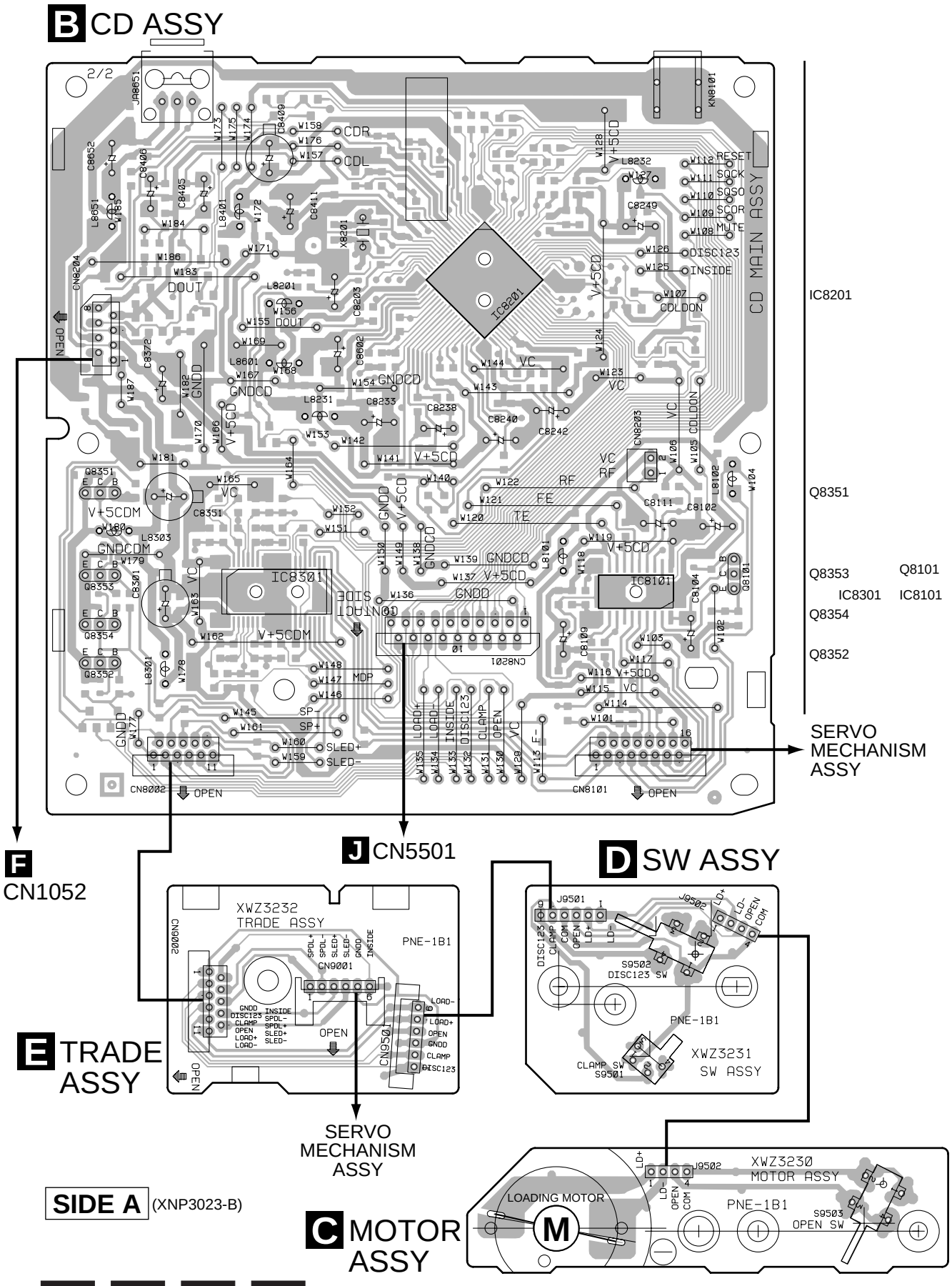


4.2 SECONDARY ASSY



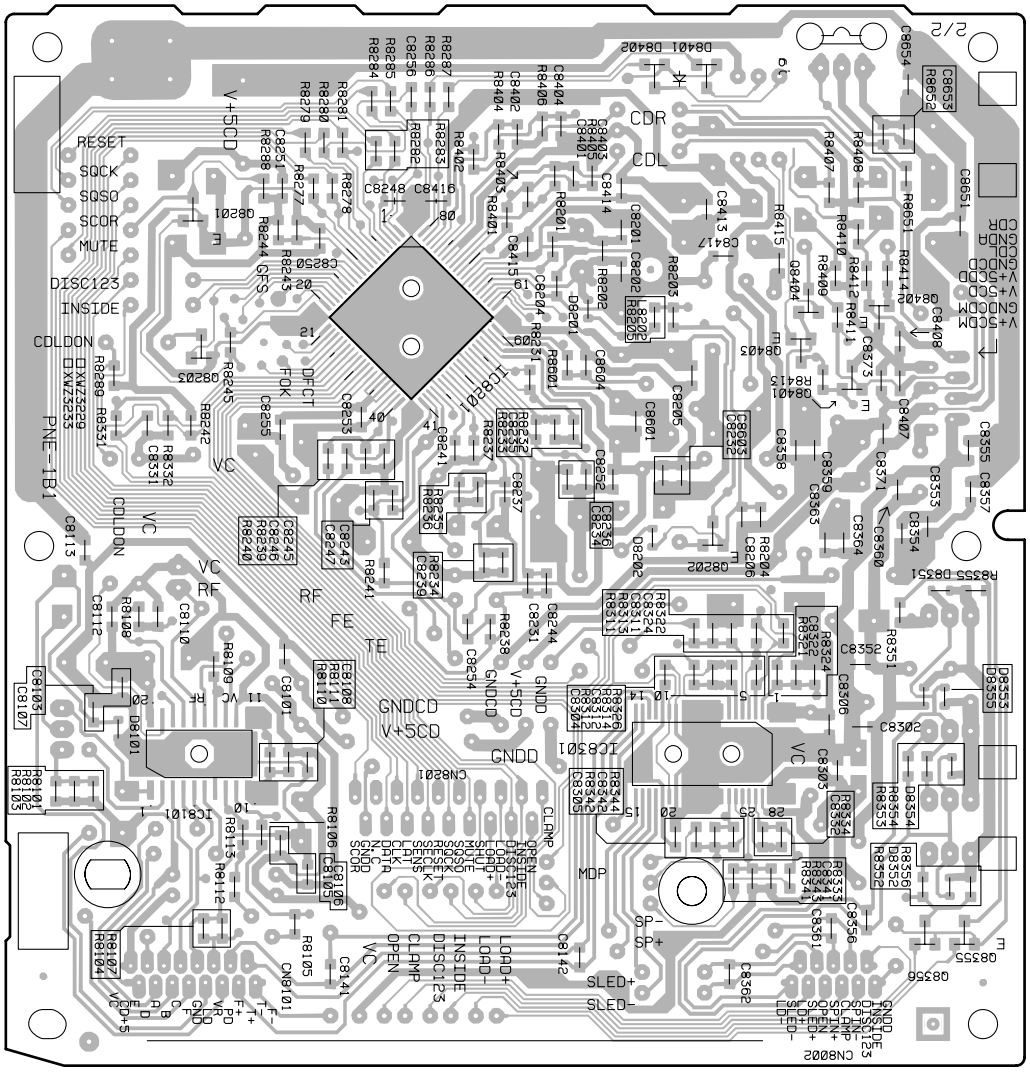


4.3 CD, MOTOR, SW and TRADE ASSYS

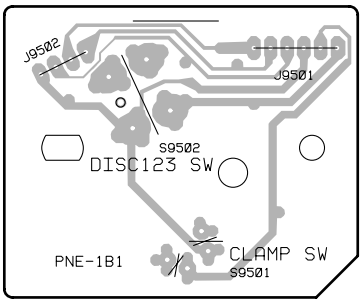


B CD ASSY

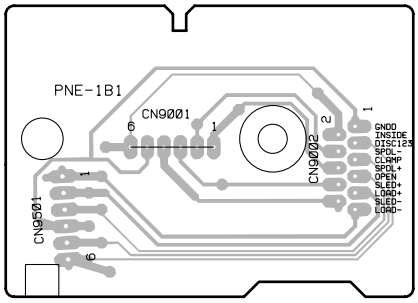
Q8021
Q8404 Q8024
Q8203 Q8403 Q8401
Q8202
Q8356 Q8355



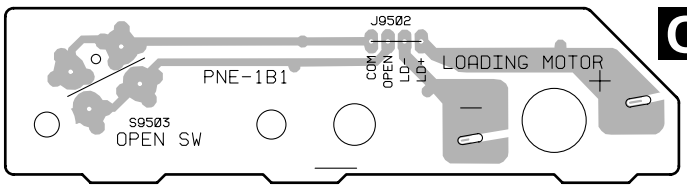
D SW ASSY



E TRADE ASSY

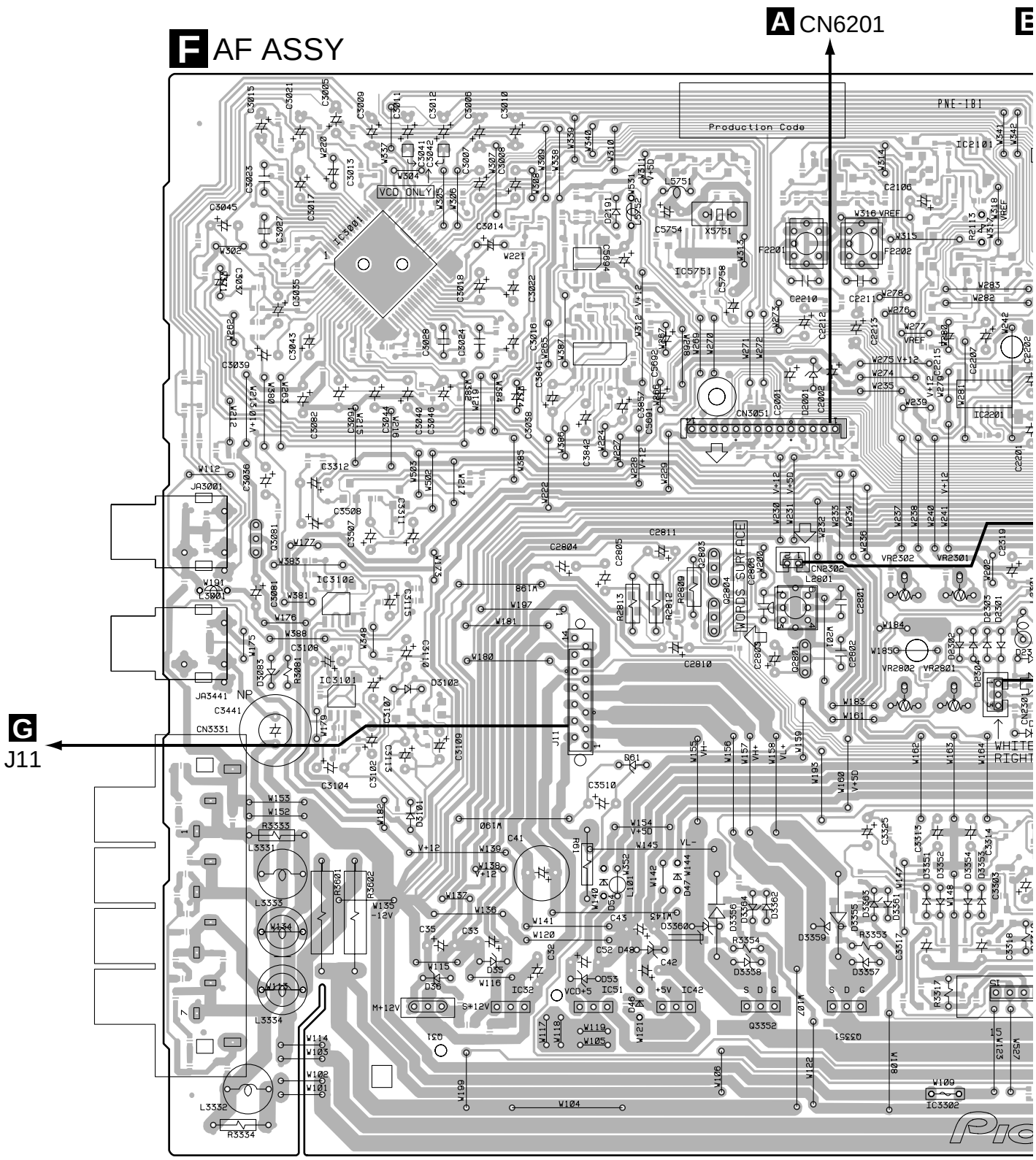


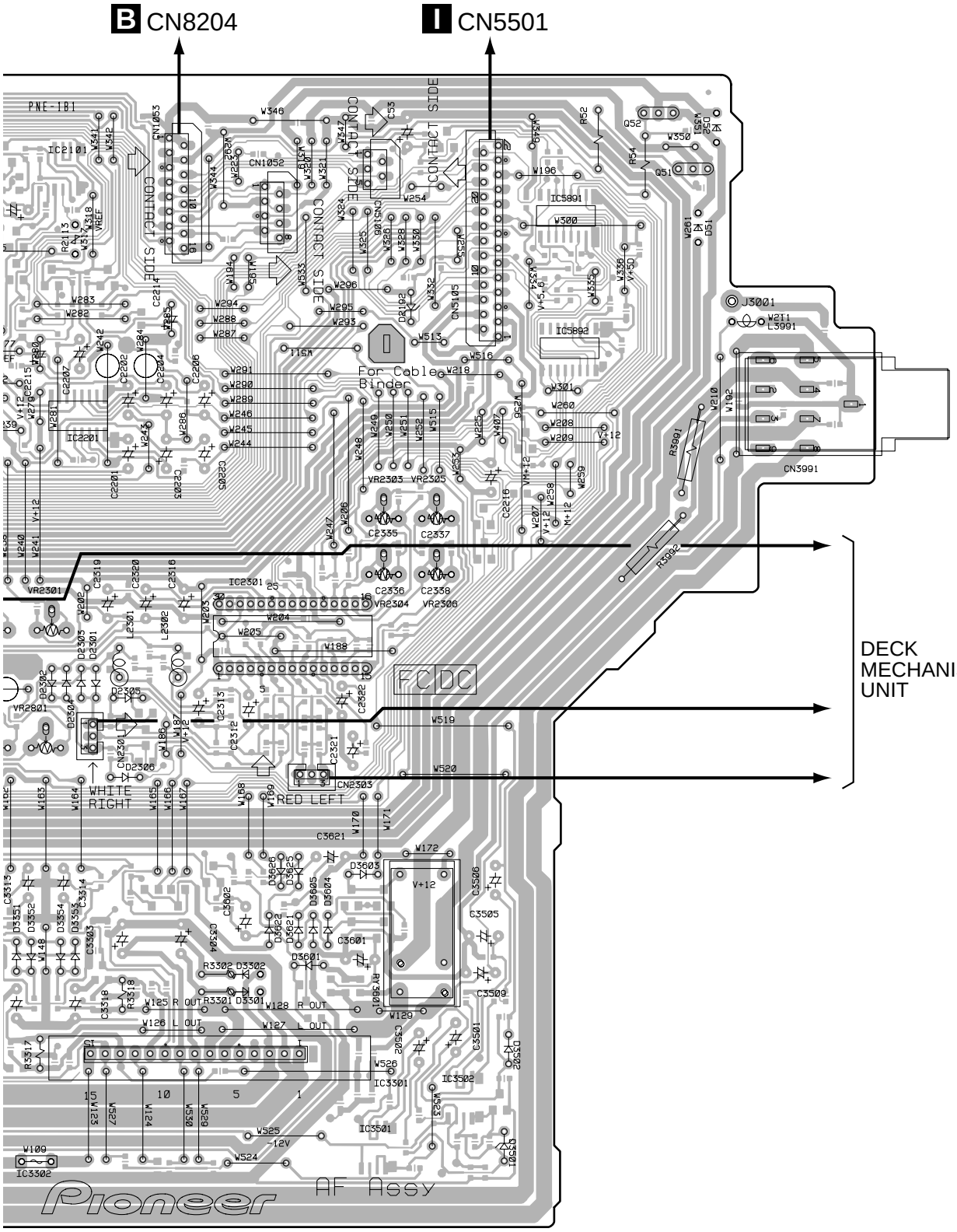
C MOTOR ASSY



SIDE B (XNP3023-B)

4.4 AF ASSY


F AF ASSY
A CN6201
B
G
J11
Production Code
PNE-1B1
VCD ONLY
WORDS SURFACE
WHITE
RIGHT
VR2302 VR2301
VR2802 VR2801
Q3081
Q2803
Q2804
Q2801
Q31
IC32
IC51
IC42
Q3352
Q3351
IC3302



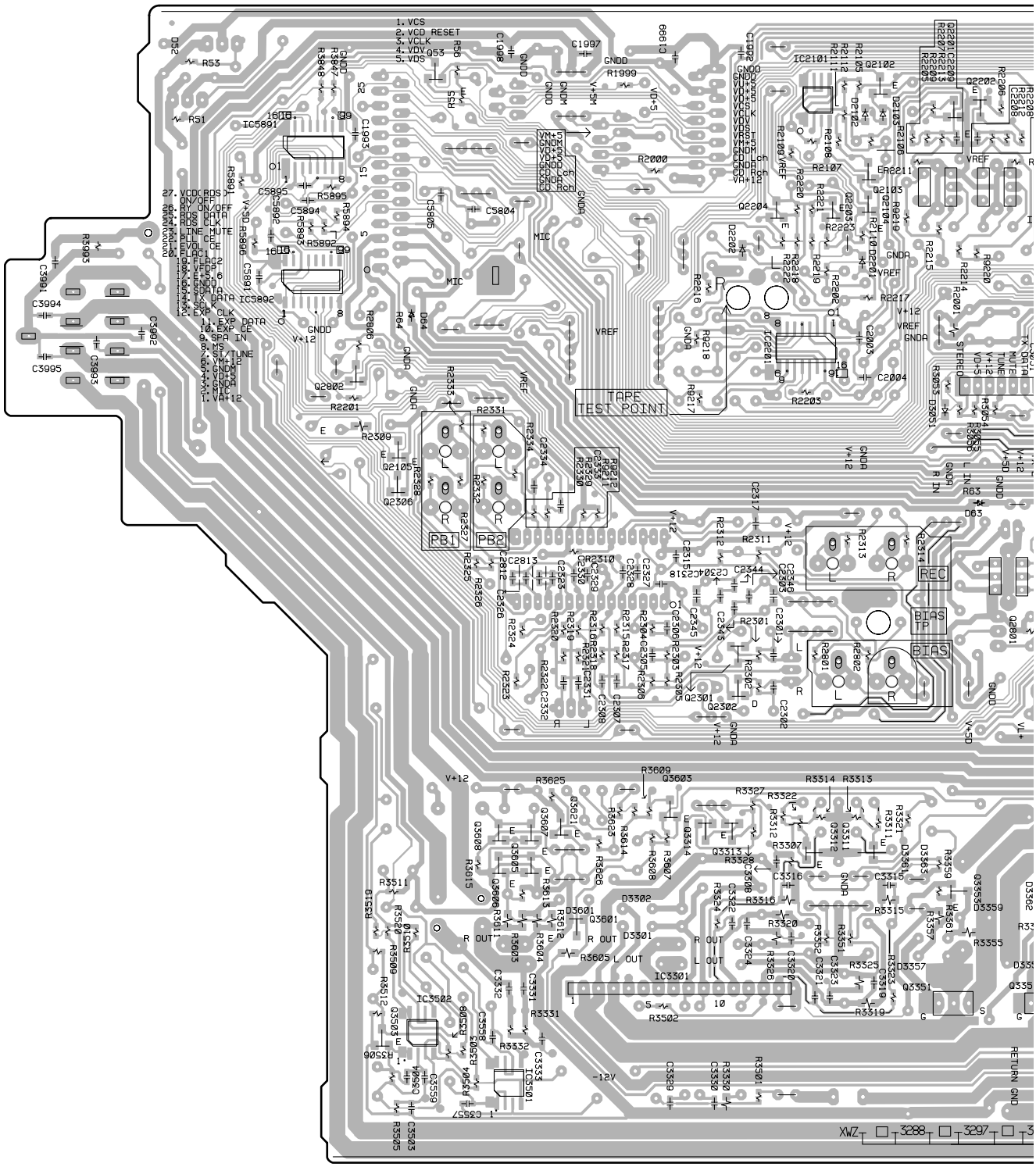
02 VR2301
02 VR2801

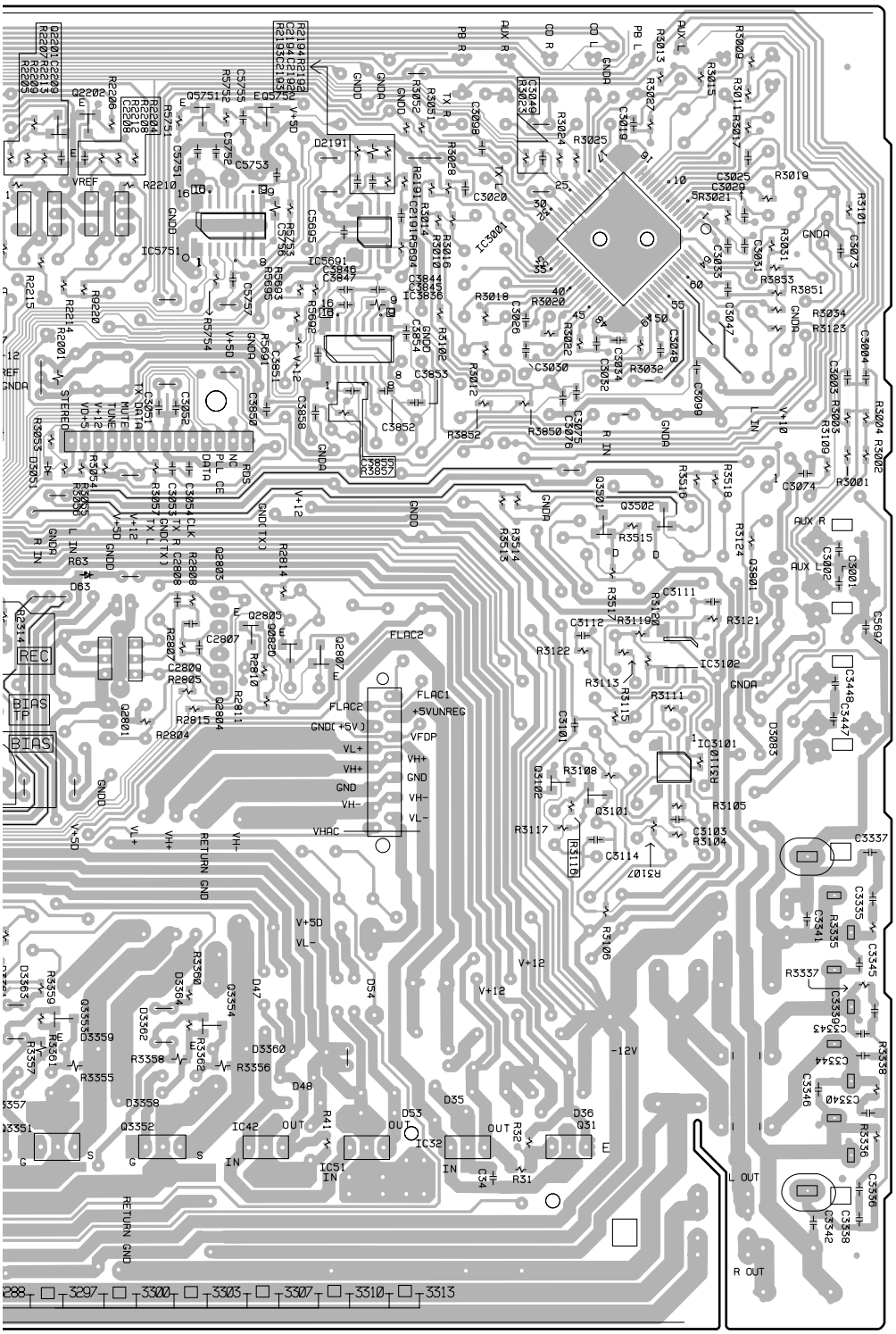
VR2303 VR2305
VR2304 VR2306

(XNP3025-C)

SIDE A

F AF ASSY


TAPE TEST POINT
PB1
PB2
REC
BIAS TP
BIAS
IC5891
IC5892
Q53
IC2101
Q2102-Q2104
Q2202
Q2204
Q2203
Q2802
Q3621
Q3603
IC2201
Q3311
Q3353
Q2105
Q3605-Q3608
Q2301
Q3312
Q3351
Q2306
IC3501
Q3601
IC3301
Q2302
Q3503
IC3502
Q3314
Q3313

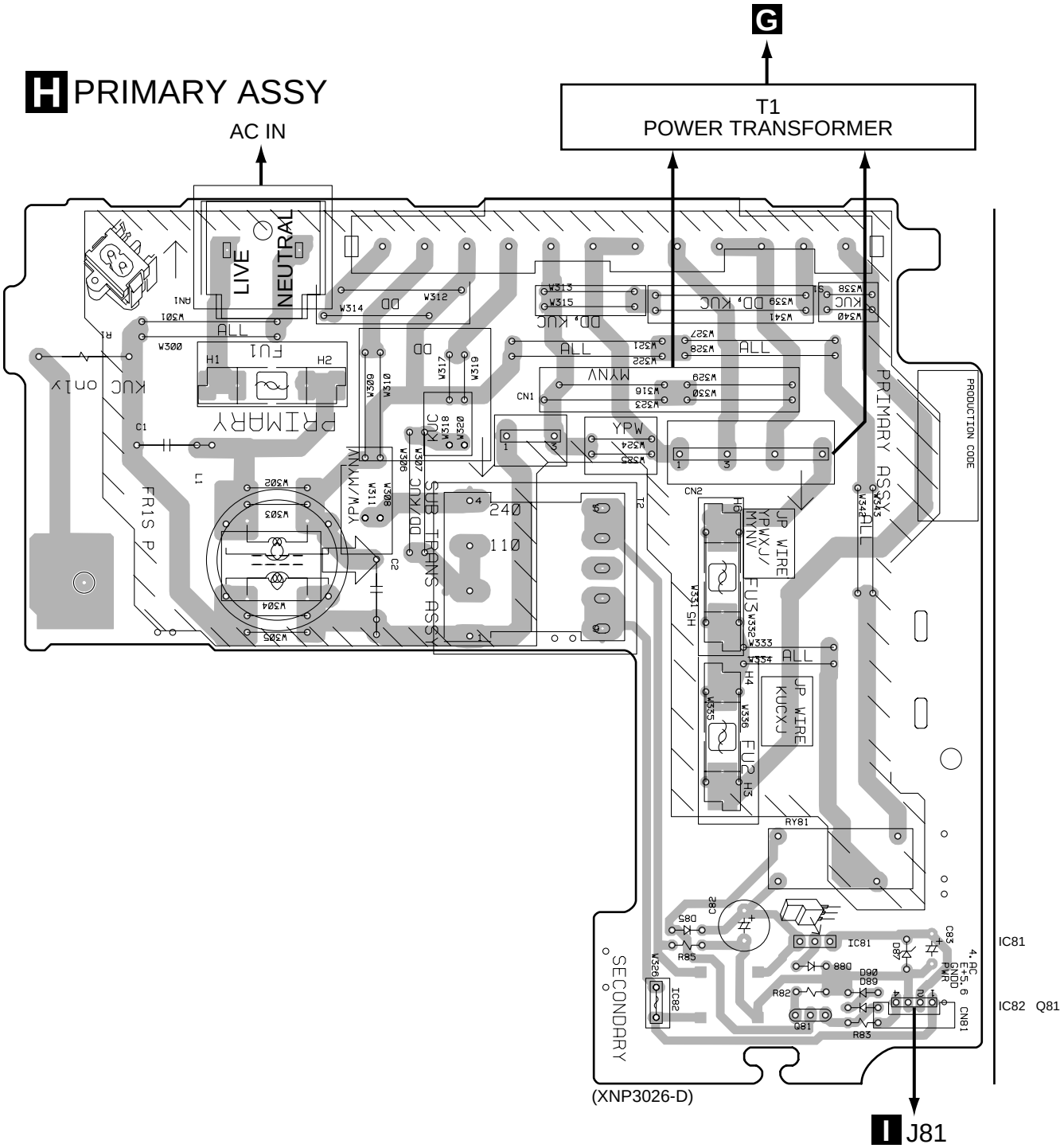


(XNP3025-C)

SIDE B

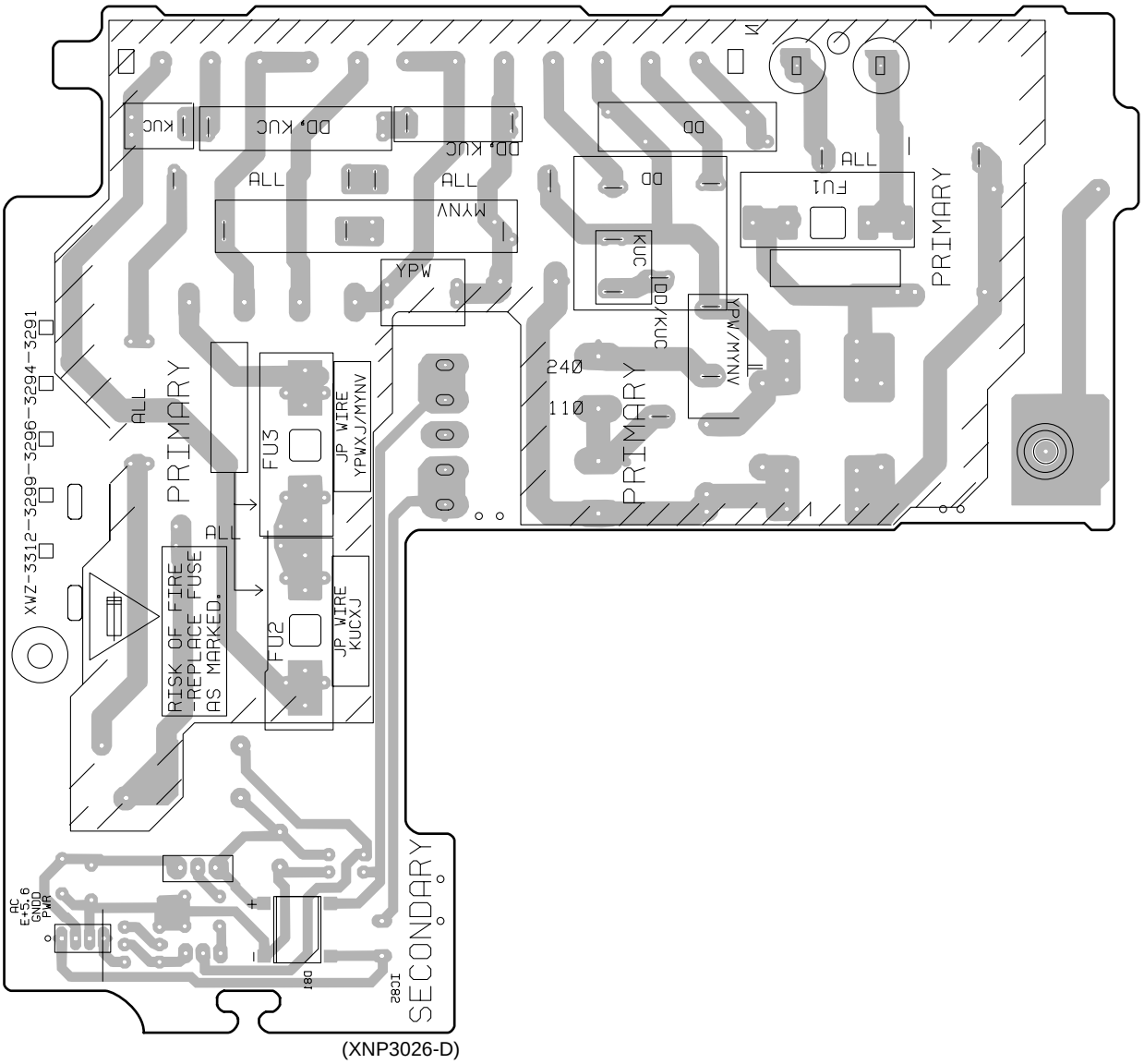
04 Q2202 Q5751 Q5752 IC3001
IC5751 Q3501 Q3502
Q3353 Q3354 Q2804-Q2807 Q3102 Q3101 IC3102
Q3351 Q3352 IC42 IC51 IC32 Q31 IC3101

4.5 PRIMARY ASSY



SIDE A

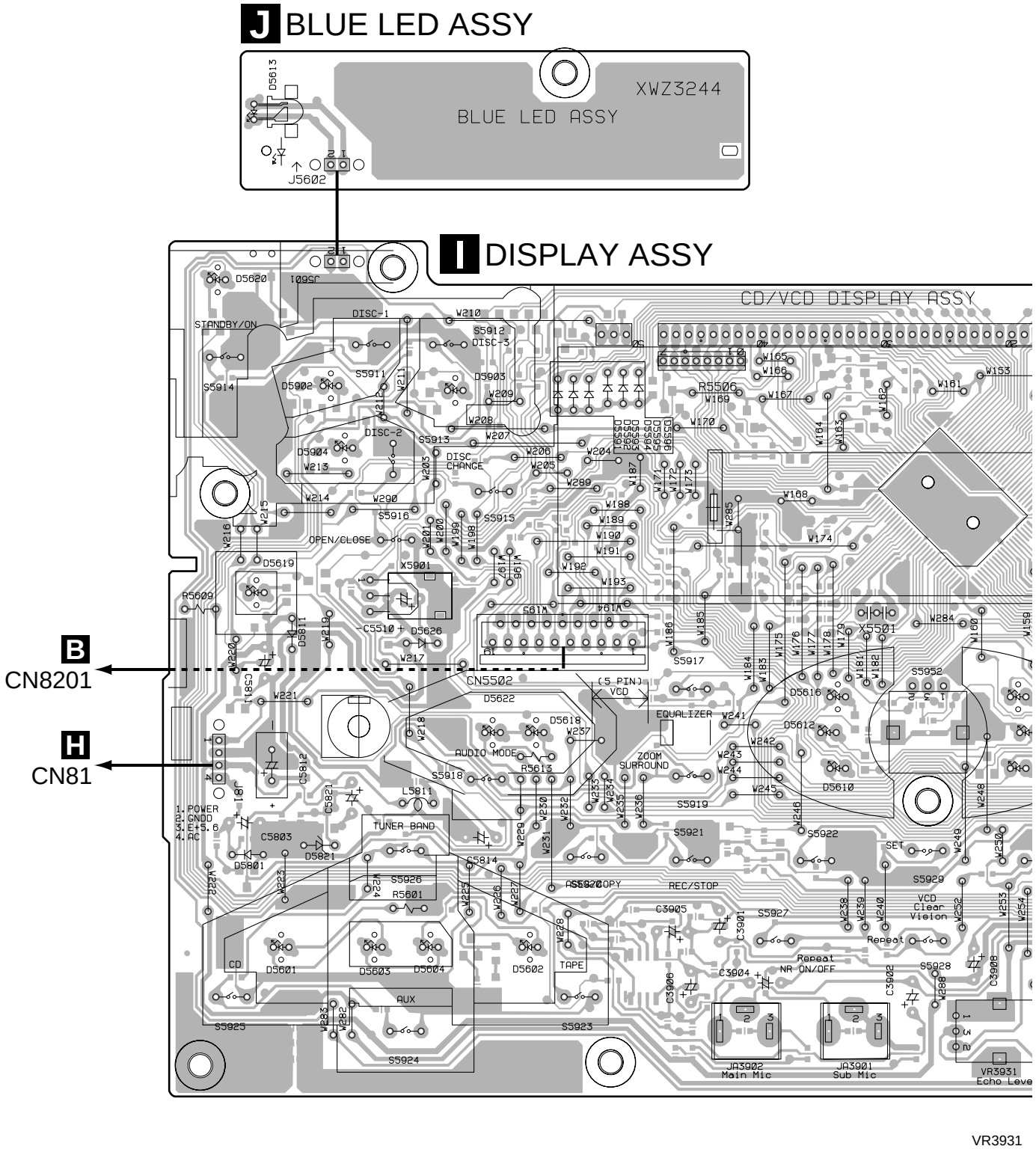
H PRIMARY ASSY



(XNP3026-D)

SIDE B

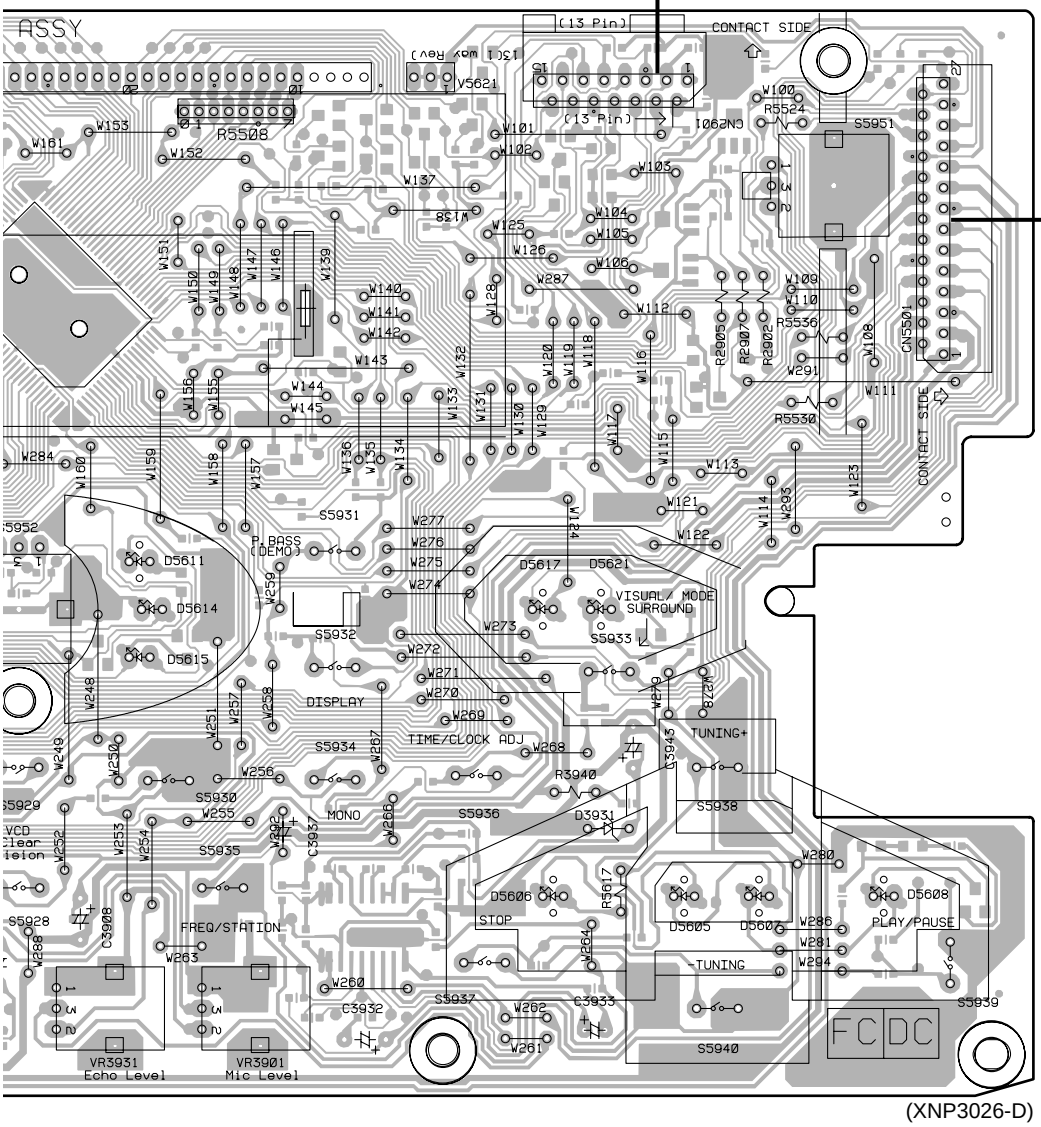
4.6 DISPLAY and BLUE LED ASSYS



VR3931

DECK MECHANISM UNIT

F CN5105

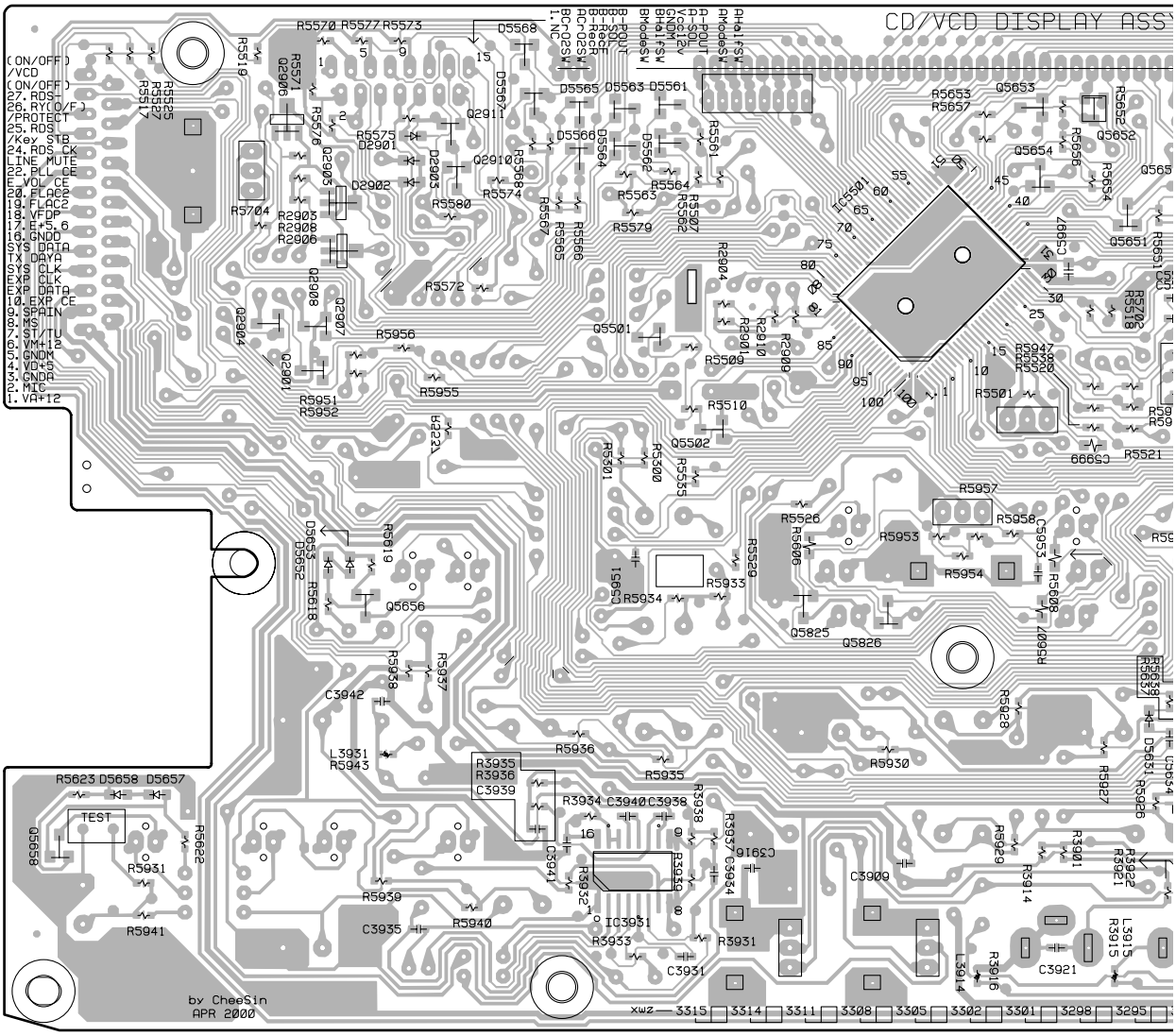


(XNP3026-D)

SIDE A

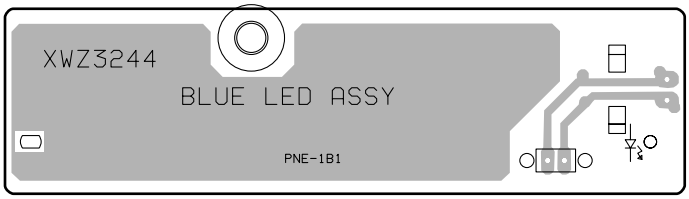
VR3931 VR3901

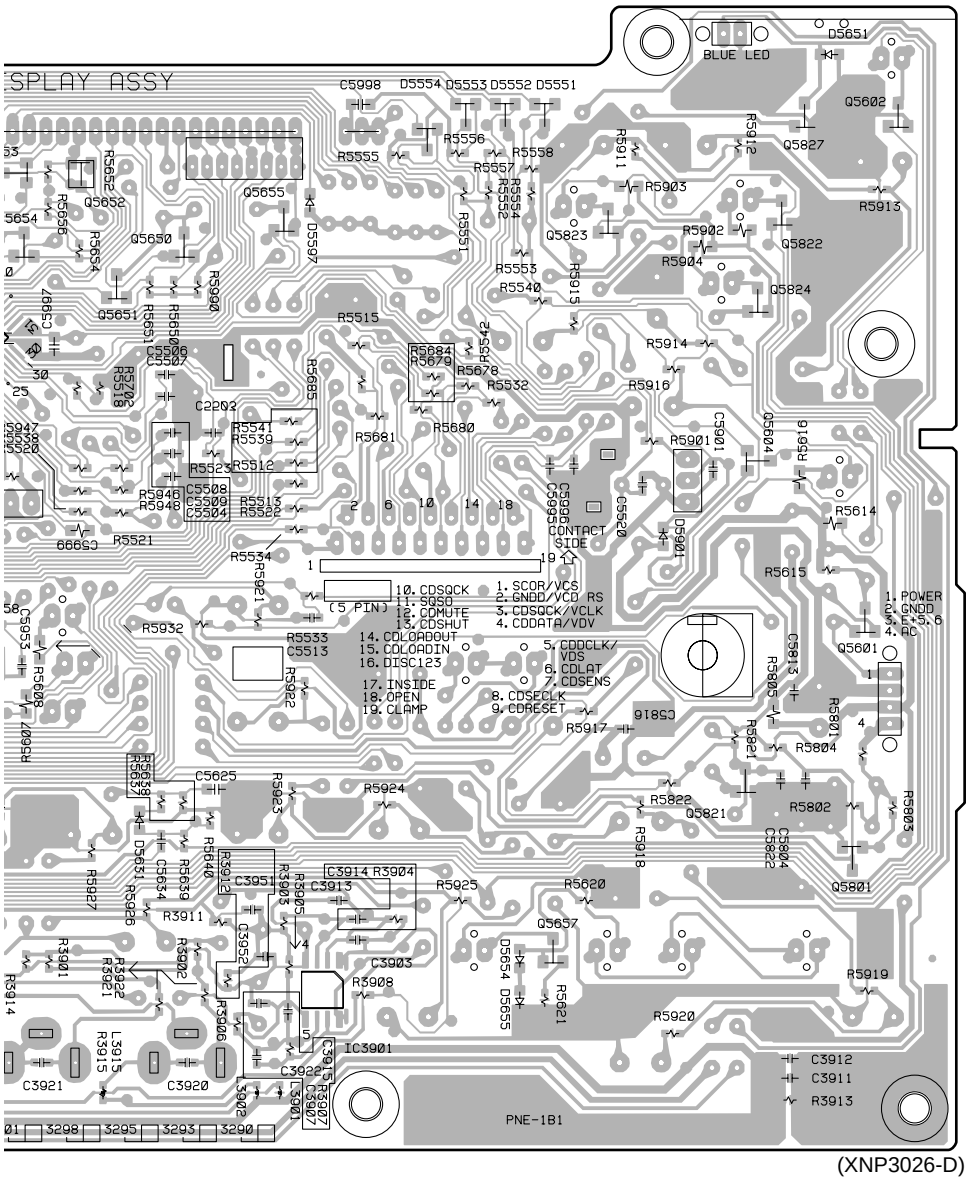
DISPLAY ASSY



Q2906 Q2911 IC5501 Q5650-Q565
Q2904 Q2903 Q2910 Q5501
Q5658 Q2908 IC3931 Q5502 Q5825 Q5826
Q2907
Q5556

J BLUE LED ASSY





(XNP3026-D)

SIDE B

Q5650-Q5655 Q5823 Q5827 Q5602 Q5822

IC3901 Q5657 Q5824 Q5601 Q5604 Q5801 Q5821

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*

Mark	No.	Description	Part No.

LIST OF ASSEMBLIES

	FM/AM TUNER MODULE	AXQ7065
NSP	$M SERVO MECHANISM ASSY	
	├CD ASSY	XWZ3229
	├MOTOR ASSY	XWZ3230
	├SW ASSY	XWZ3231
	└TRADE ASSY	XWZ3232
	MAIN ASSY	
	├AF ASSY	XWZ3288
	└SECONDARY ASSY	XWZ3289
	COMPLEX ASSY	
	├PRIMARY ASSY	XWZ3296
	├DISPLAY ASSY	XWZ3295
	└BLUE LED ASSY	XWZ3292

A 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	1T378A

COILS AND FILTERS

L6404 COIL	ATC1003
L6401 COIL	ATC1020
L6402 COIL	ATC1021
F6204 CERAMIC FILTER	ATF-107
F6203 CERAMIC FILTER	ATF-119
F6401 CERAMIC FILTER	ATF-155
F6206 CERAMIC DISCLI.	ATF7008
F6202 CERAMIC FILTER	ATF7011
L6206, L6208, L6403	LAU2R2J

TRANSFORMERS

T6201	ATB7008
T6401	ATE7002

CAPACITORS

C6208	CCSQCH100D50
C6212, C6274, C6275, C6408	CCSQCH101J50
C6412	CCSQCH102J50
C6221, C6222, C6416	CCSQCH150J50
C6271	CCSQCH200J50
C6415	CCSQCH330J50
C6406	CCSQCH331J50
C6401, C6419	CCSQCH5R0C50
C6407	CCSQCK1R0C50
C6410	CCSQCK2R0C50
C6413	CCSQRH180J50
C6414	CCSQRH8R0D50
C6405	CCSQTH150J50
C6234, C6235	CEAL1R0M50
C6245	CEAL470M16
C6224	CEAT100M50
C6243	CEAT101M16
C6231	CEAT1R0M50
C6227	CEAT220M25
C6214, C6236	CEAT2R2M50
C6262	CEAT3R3M50
C6219	CEAT470M10
C6244	CEAT470M16
C6249, C6250, C6265, C6266	CEAT4R7M50
C6258	CEJA470M16
C6215	CFTLA103J50
C6211, C6254, C6403, C6417	CKSQYB102K50
C6201, C6205, C6210, C6237, C6276	CKSQYB103K50
C6278, C6280, C6281, C6402, C6409	CKSQYB103K50
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	Part No.
RESISTORS			
	R6280		RD1/4PU101J
	R6413, R6416, R6418, R6906, R6909		RS1/8S0R0J
	R6401		RS1/8S470J
	VR6201 (10kΩ)		PCP1029
	Other Resistors		RS1/10S□□□J
OTHERS			
	BN6202	TERMINAL 4-P	AKE7051
	X6202 (456kHz)		ASS1066
	X6201 (7.2000MHz)		ASS1093
	CN6201	14P SOCKET	KP200IA14L

B CD ASSY

SEMICONDUCTORS

	IC8301	BA5970FP
	IC8101	CXA1821M
	IC8201	CXD2587Q
	Q8101	2SA854S
	Q8351, Q8352	2SB1237X
	Q8353, Q8354	2SD1858X
	Q8201	DTA124EK
	Q8202	DTC114EK
	Q8203, Q8355, Q8356	DTC143EK
	D8201, D8202, D8351–D8354	1SS355

COILS AND FILTERS

	L8101	LFA100J
	L8301	LFA470J

CAPACITORS

	C8256, C8359, C8364	CCSQCH101J50
	C8201	CCSQCH120J50
	C8110, C8202	CCSQCH220J50
	C8239, C8246, C8247, C8401, C8402	CCSQCH221J50
	C8322, C8324	CCSQCH681J50
	C8403, C8404	CCSQSL681J50
	C8405, C8406	CEAT100M50
	C8102, C8104	CEAT101M10
	C8203, C8233, C8240, C8242, C8249	CEAT101M6R3
	C8602	CEAT101M6R3
	C8301	CEAT102M6R3
	C8409, C8411	CEAT221M10
	C8109, C8111	CEAT330M25
	C8351	CEAT331M10
	C8238	CEATR47M50
	C8407, C8408	CKSQYB102K50
	C8204–C8206, C8237, C8253, C8373	CKSQYB103K50
	C8107, C8245	CKSQYB104K25
	C8236, C8415, C8416	CKSQYB152K50
	C8231, C8331	CKSQYB222K50
	C8341, C8342	CKSQYB333K50
	C8235	CKSQYB473K50
	C8311, C8312	CKSQYB681K50
	C8332	CKSQYB822K50
	C8101, C8103, C8106, C8108, C8112	CKSQYF103Z50
	C8232, C8234, C8241, C8248	CKSQYF103Z50
	C8250, C8251, C8302–C8306, C8358	CKSQYF103Z50
	C8363, C8413, C8414, C8417, C8601	CKSQYF103Z50
	C8603	CKSQYF103Z50

Mark	No.	Description	Part No.
RESISTORS			
	R8343, R8344		RS1/10S1802F
	R8341, R8342		RS1/10S4702F
	Other Resistors		RS1/10S□□□J
OTHERS			
	X8201 (16.9344MHz)		PSS1008
	CN8204	8P CONNECTOR	52044-0845
	CN8201	19P CONNECTOR	52045-1945
	CN8203	2P TOP POST	B2P-SHF-1AA
	CN8002	CONNECTOR	SLW11R-1C7
	CN8101	CONNECTOR	SLW16R-1C7

C MOTOR ASSY

SWITCHES AND RELAYS

	S9503	ASG7009

OTHERS

	J9502 4P JUMPER WIRE	D20PWW0405E
	MOTOR PULLEY	PNW1634
	SLIDER MOTOR	VXM1033

D SW ASSY

SWITCHES AND RELAYS

	S9502	ASG7009
	S9501	DSG1017

OTHERS

	J9501 JUMPER WIRE	D20PWY0610E

E TRADE ASSY

OTHERS

	CN9501 6P JUMPER CONNECTOR	52147-0610
	CN9001 CONNECTOR	S6B-PH-K-S
	CN9002 CONNECTOR	SLW11R-1C7

F AF ASSY

SEMICONDUCTORS

⚠	IC3501,IC3502	AN4558S
⚠	IC3836	BA3838F
⚠	IC2101,IC3101,IC3102	BA4558F-HT
	IC5691	BA4558F-HT
	IC5891	BU4094BCF
	IC2301	HA12211NT
	IC3001	LC75394NED
⚠	IC42	NJM7805FA
⚠	IC32	NJM7812FA
⚠	IC3301	STK407-070B
	Q3354, Q3601, Q3621	2SA1037K
	Q2803, Q2804	2SC1815
	Q3101, Q3102, Q3353, Q3603	2SC2412K
	Q3605–Q3608	2SC2412K
	Q3081	2SD1858X

Mark	No.	Description	Part No.
⚠	Q31		2SD2012
	Q2805, Q3311, Q3312		2SD2114K
	Q2301, Q2302, Q3501, Q3502		2SK368
	Q3313, Q3503		DTA124EK
	Q3314		DTC124EK
	Q2306		DTC143EK
⚠	Q3351		IRFI9Z34G
⚠	Q3352		IRFIZ34G
⚠	D3301, D3302		1SR139-100
⚠	D2191		1SS133
	D2301–D2306		1SS133
⚠	D3101, D3102		1SS133
	D3351–D3354, D3361, D3362, D3601		1SS133
	D3603, D3604, D3621, D3622		1SS133
	D3625, D3626		1SS133
⚠	D46		1SS133
	D2201, D2202, D3051, D63, D64		1SS355
⚠	D3355, D3356		20E2-FC
	D3083		MTZJ11C
	D61		MTZJ12C
	D35, D36		MTZJ15C
	D3359, D3360		MTZJ18B
	D3363, D3364		MTZJ39C
	D2001		MTZJ6.2A
	D48		MTZJ6.8C
	D3357, D3358		MTZJ7.5C
	D51, D52		S5688G

COILS AND FILTERS

	L3331, L3332 COIL	ATH-133
	L2801 OSC TRANSFORMER	ATX7002
	L2301, L2302	LTA822J
	L3991 AXIAL INDUCTOR	XTL3001

SWITCHES AND RELAYS

	RY3601	ASR7008

CAPACITORS

	C2335–C2338	CCCCH270J50
	C2301, C2302	CCSRCH100D50
	C3047, C3048	CCSRCH101J50
	C2192	CCSRCH220J50
	C3319, C3320	CCSRCJ3R0C50
	C3311, C3312, C3507, C3508	CEANL1R0M50
	C3317, C3318	CEANP220M35
	C3621	CEANP2R2M2A
	C3313, C3314	CEANP2R2M50
	C2810, C3045, C3081, C3091, C3115	CEAT100M50
	C32, C33, C35, C3602, C3842	CEAT100M50
	C43, C5691, C5692	CEAT100M50
	C2002, C2316	CEAT101M16
	C3303, C3304	CEAT101M50
	C2312, C2313, C3035, C3036, C3110	CEAT1R0M50
	C3506	CEAT1R0M50
	C2214, C2215, C2321, C2322	CEAT220M50
	C2001, C3601	CEAT221M16
⚠	C41	CEAT222M25
	C2212, C2213, C2319, C2320	CEAT2R2M50
	C3005–C3010, C3015–C3018, C3037	CEAT2R2M50
	C3039, C3043, C3044, C3082, C3104	CEAT2R2M50
	C2804, C2805	CEAT330M16
	C2351, C2352, C3107	CEAT3R3M50
	C3841	CEAT470M16
	C3501, C3502, C3509, C3510	CEAT470M25
	C3108, C3109, C3857	CEAT4R7M50
	C3021, C3022	CEATR10M50
	C3011, C3012, C3102, C3325	CEATR47M50
	C3046	CEJA100M50
	C3038, C3040	CEJA2R2M50
	C3027, C3028	CFTLA154J50
	C3023, C3024	CFTLA474J50
	C2194	CKSQYB105K10
	C3845	CKSQYB224K16
	C2315, C2317, C2318, C3053, C3098	CKSRYB103K50
	C3103	CKSRYB103K50
	C2191, C2193, C3099, C3846, C3847	CKSRYB104K16
	C5891	CKSRYB104K16
	C3033, C3034	CKSRYB122K50
	C3315, C3316	CKSRYB222K50
	C2323, C2326	CKSRYB223K50
	C2812, C2813	CKSRYB272K50
	C3029, C3030	CKSRYB273K16
	C2808, C2809	CKSRYB332K50
	C2333, C2334	CKSRYB392K50
	C2807	CKSRYB472K50
	C3101, C3111, C3112, C3844	CKSRYB473K16
	C2303, C2304, C2343, C2344	CKSRYB561K50
	C3019, C3020, C3031, C3032	CKSRYB682K50
	C3503, C3504	CKSRYB682K50
	C3025, C3026	CKSRYB683K16
	C2307, C2308, C2331, C2332	CKSRYB821K50
	C3331–C3333	CKSRYF104Z25
	C2801	CQHA822J2A
	C2806	CQMBA223J50

RESISTORS

	R2812	RD1/2LMF470J
	R2809	RD1/2LMF4R7J
	R3333, R3334	RD1/4LMF100J
	R3353, R3354	RD1/4PU101J
	R2113	RD1/4PU103J
	R3081	RD1/4PU221J
	R2351, R2352	RD1/4PU473J
	R3317, R3318	RD1/4PU823J
	R3605	RS1/10S103J
	R3357, R3358	RS1/10S153J
	R2309	RS1/10S222J
	R3330, R3611, R3612	RS1/10S223J
	R2001	RS1/10S471J
	R3319, R3320	RS1/10S561J
	R3355, R3356	RS1/10S563J
	R3315, R3316, R3603, R3604	RS1/10S823J
	R61	RS1LMF821J
⚠	R3991, R3992	RS2LMF331J
	R3601, R3602	RS3LMFR22J
	VR2802 (100kΩ)	VCP1162
	Other Resistors	RS1/16S□□□J

OTHERS

	CABLE HOLDER(14P)	51063-1405
CN1052	CONNECTOR	52045-0845
CN5105	27P CONNECTOR	52045-2745
CN3331	SPEAKER TERMINAL 4-P	AKE7018
CN2302	CONNECTOR POST	B2B-PH-K-S

Mark	No.	Description	Part No.
	CN2303	CONNECTOR	B3B-PH-K-R
	CN2301	CONNECTOR POST	B3B-PH-K-S
	J11	JUMPER WIRE	D15A14-450-2651
	CN3051	14P PLUG	KM200IB14
		PCB BINDER	VEF1040
	JA3001	JACK	VKB1060
	JA3991	H.P JACK	XKN3004

G SECONDARY ASSY

SEMICONDUCTORS

	IC71	AEK7010
	IC41	AEK7015
	IC12	AEK7021
	IC21, IC22	AEK7046
	IC11	AEK7047
	Q71	2SA965
	D73	1SS133
	D11, D21	G5SBA20L
	D74	MTZJ33C
	D75	MTZJ8.2B
	D71, D72, D78–D81	S5688G

CAPACITORS

	C11, C12 (2200µF/63V)	ACH7071
	C72	CEAT220M50
	C71	CEAT221M63
	C21, C22	CEAT332M50
	C13	CQMA223K2E

RESISTORS

	All Resistors	RD1/4PU□□□J

OTHERS

	CABLE HOLDER(14P)	51063-1405

H PRIMARY ASSY

SEMICONDUCTORS

⚠	IC81	NJM7805FA
	Q81	2SD1859X
	D85, D88–D90	1SS133
⚠	D81	S1WB(A)60SD

TRANSFORMERS

⚠	T2	XTT3004

SWITCHES AND RELAYS

	RY81	ASR7018

CAPACITORS

	C1, C2 (0.01µF)	ACE7027
	C83	CEAT100M50
⚠	C82	CEAT102M25

RESISTORS

	R1 (2.2MΩ,1/2W)	RCN1080
	Other Resistors	RD1/4PU□□□J

Mark	No.	Description	Part No.

OTHERS

	H1, H2	FUSE CLIP	AKR7001
	CN1	CONNECTOR	B2P3-VH
	AN1	AC INLET 1P	XKP3042

I DISPLAY ASSY

SEMICONDUCTORS

	IC3901	BA4558F-HT
	IC5501	PDC063A
	Q5501	2SA1037K
	Q2903, Q2906, Q2908	2SB1132
	Q5602, Q5801	2SC2412K
	Q2910, Q2911, Q5826	DTA124EK
	Q5601	DTC124EK
	Q2901, Q2904, Q2907, Q5502, Q5604	DTC143EK
	Q5650–Q5655, Q5821–Q5825, Q5827	DTC143EK
	D5626, D5811	1SS133
	D5551–D5554, D5563–D5568	1SS181
	D2901–D2903, D5597, D5631, D5901	1SS355
	D5610, D5611, D5615, D5616, D5904	SLP3118C51H
	D5612, D5614	SLP6118C51H
	D5902	SLP7118C51H
	D5619, D5620, D5903	SLP9118C51H
	D5651	UDZS5.6B

COILS AND FILTERS

	L3901, L3902	CHIP COIL	LCTB100K1608
	L3914, L3915	CHIP SOLID INDUCTOR	VTL1145
	L5811	AXIAL INDUCTOR	XTL3004

SWITCHES AND RELAYS

	S5911–S5921, S5923–S5929	XSG3001
	S5931–S5940	XSG3001
	S5951	XSX3003
	S5952	XSX3004

CAPACITORS

	C5812 (0.047µF/5.5V)	ACH1246
	C3903	CCSRCH331J50
	C5821	CEAL100M16
	C5803	CEJA1R0M50
	C3901, C3902, C3904, C3906	CEJA2R2M50
	C3905, C5510, C5811, C5814	CEJA470M16
	C5997, C5998	CKSQYB104K25
	C5999	CKSQYB105K10
	C5625	CKSQYF224Z25
	C5804, C5951, C5953	CKSRYB102K50
	C3911, C5995, C5996	CKSRYB103K50
	C5816	CKSRYB104K16
	C5506	CKSRYB471K50
	C3907, C5503, C5504, C5509	CKSRYB472K50
	C5507, C5508	CKSRYB473K16
	C5634, C5901	CKSRYF104Z25
	C5813, C5822	CKSRYF473Z50

RESISTORS

	R5506, R5508	RA7T104J
	R2905, R5524, R5536	RD1/4PU102J
	R5530	RD1/4PU221J
	R5609	RD1/4PU391J
	R2902, R2907	RD1/4PU681J

Mark	No.	Description	Part No.
	R5805		RS1/10S101J
	R5902–R5904		RS1/10S221J
	R5614, R5616		RS1/10S471J
	R5606–R5608		RS1/10S620J
	VR3901 (10k-X1)		XCS3002
	Other Resistors		RS1/16S□□□J

OTHERS

	X5501 (10MHz)	DSS1048
	2P CABLE HOLDER	51048-0200
	4P CABLE HOLDER	51048-0400
	CN5502 CONNECTOR 19P	52492-1920
	JA3901,JA3902 JACK	AKN7004
	J5601 JUMPER WIRE	D20PYY0210E
	J81 JUMPER WIRE	D20PYY0425E
	5901 REMOTE RECEIVER UNIT	GP1U28X
	CN2901 CONNECTOR	HLEM13R-1
	CN5501 CONNECTOR	HLEM27R-1
	5621 FL HOLDER	VNF1096
	V5621 FL TUBE	XAV3009

J BLUE LED ASSY

SEMICONDUCTORS

	D5613	E1L4E-7B(123)

OTHERS

	2P CABLE HOLDER	51048-0200
	LED HOLDER	XAK3154

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 to 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. strats 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 to 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, frequency should be 1000kHz.

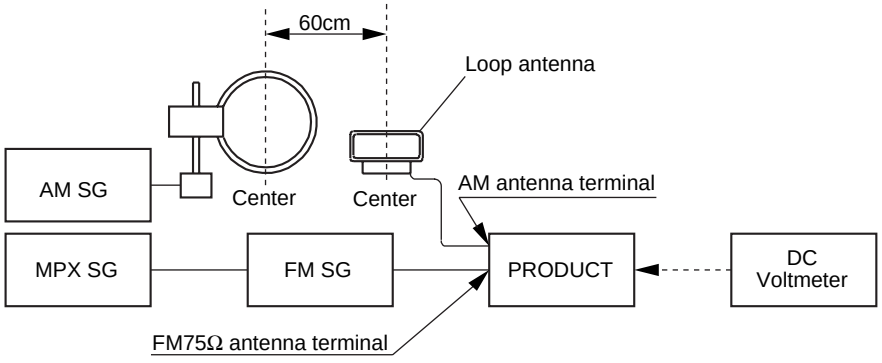


Fig.1 AM and FM Adjustment Wiring Diagram

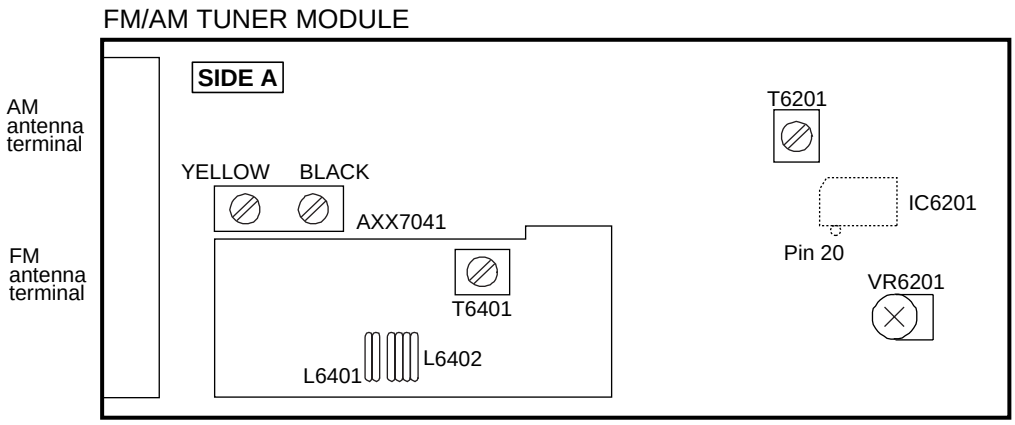


Fig.2 Adjustment Point

6.2 CASSETE DECK SECTION

■ 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)	ADJ. VR on CASSETTE MECHA (Fig. 8)	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 0.3% (in the reverse direction, confirm that the reading is within 3000Hz ± 60Hz).	

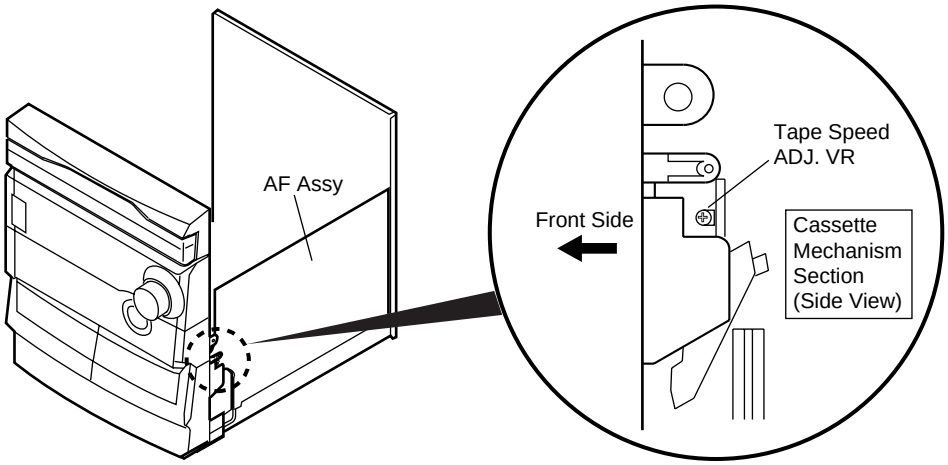


Fig.8 Tape Speed ADJ. Point

■ 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

∗ 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.

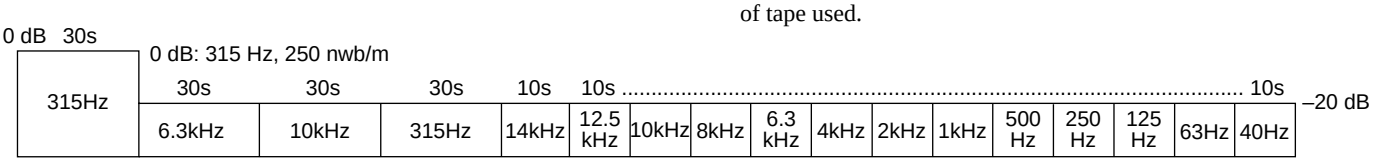


Fig.9 STD-331E Test Tape

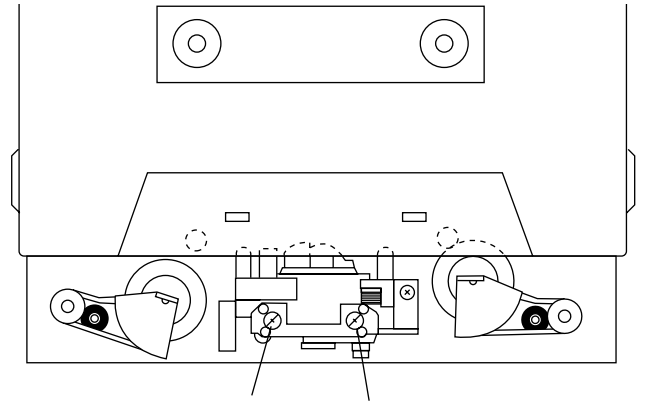


Fig.10 Head Azimuth Adjustment Screw

■ 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 Deck II	Head azimuth adjustment screw (Fig. 10)	TAPE TEST POINT (L, Rch) (AF Assy)	Max. playback signal level	After adjustment, apply silicon bond to the head azimuth adjustment screw.

■ 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.	
			Deck II	L2801 (AF Assy)	Between Ⓐ point Fig. 11 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	Load the STD-632 test tape and record (No signal)	Deck II	VR2802 (AF Assy)	BIAS TP POINT (AF Assy)	24V to 27V	
2	REC → PLAY	Load the STD-632 test tape. Record the 315Hz and 10kHz signals at –25dBV input level (check Ⓑ point) and playback.	Deck I	————	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat adjustment until playback level of the 10kHz signal is within 0 ± 1.0dB from that of the 315Hz signal.	
			Deck II	VR2802 (AF Assy)			

Note : No connecting to BIAS TP POINT at Step 2 REC → PLAY.

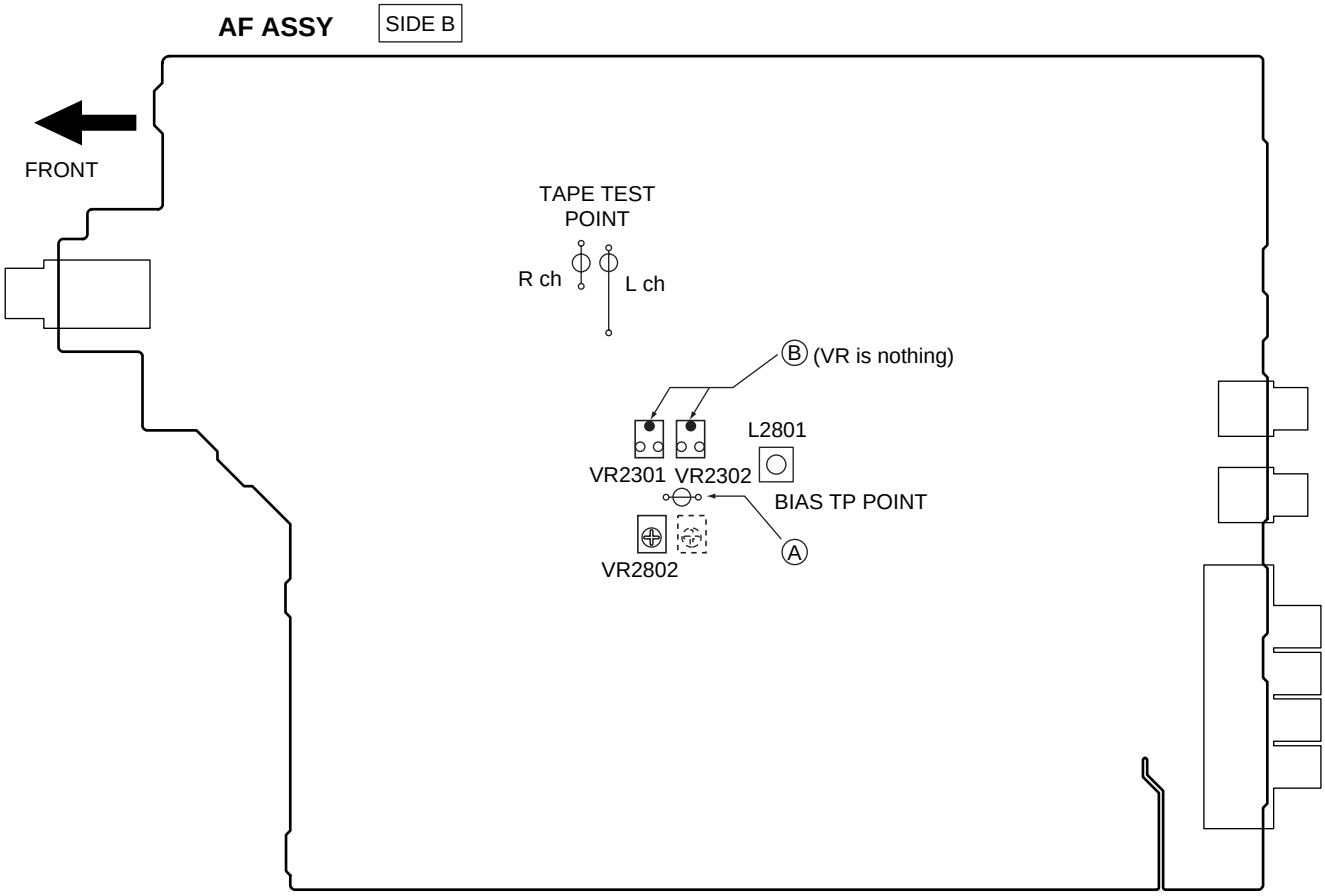


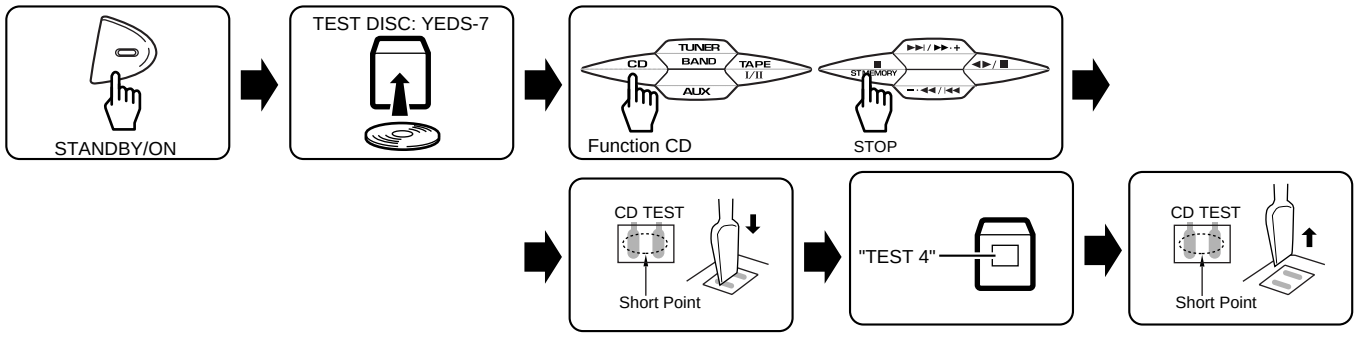
Fig.11 Adjustment and Measurement Points

6.3 TEST MODE

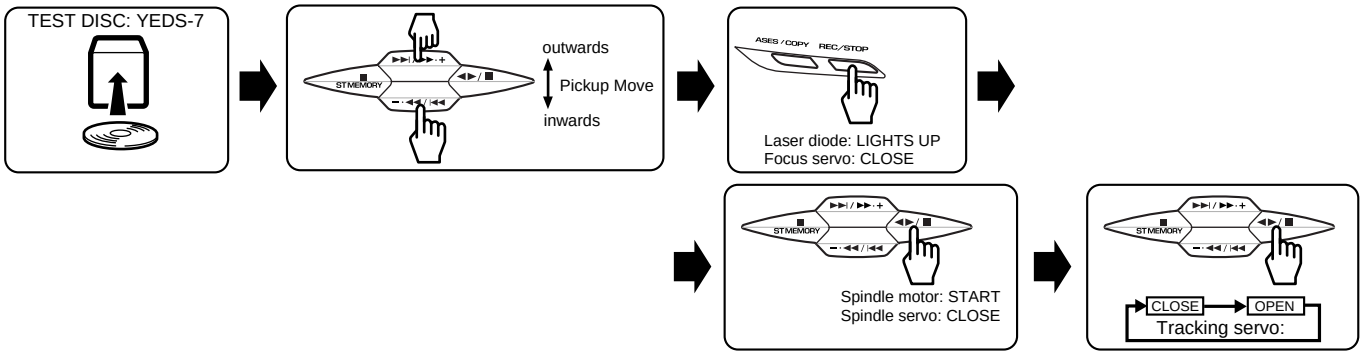
NOTE: There is no information to be shown in this CD adjustment.

■ How to Start/Cancel Test Mode

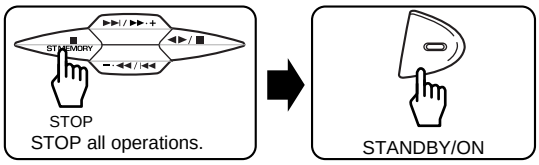
TEST MODE : ON



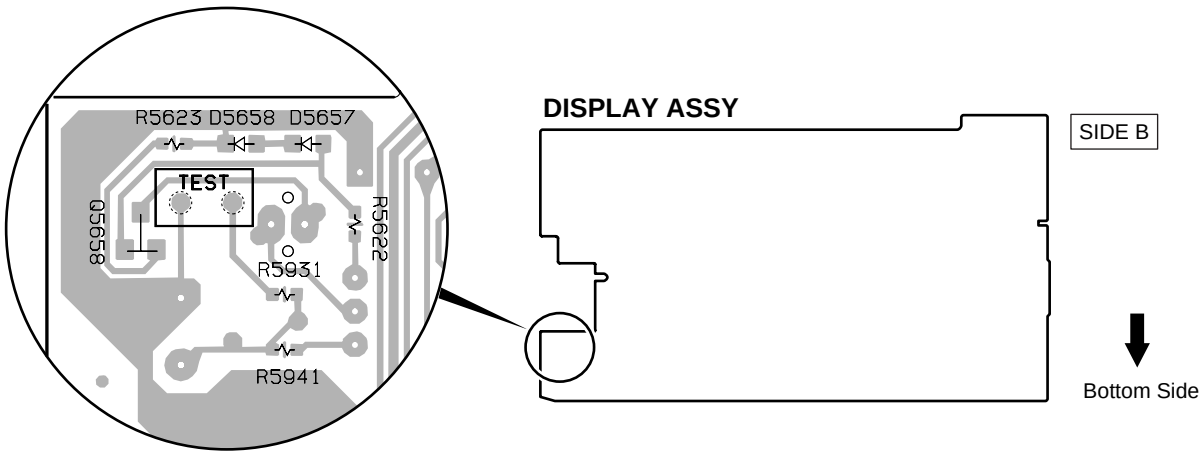
TEST MODE : PLAY



TEST MODE : STOP CANCEL



■ Test Point

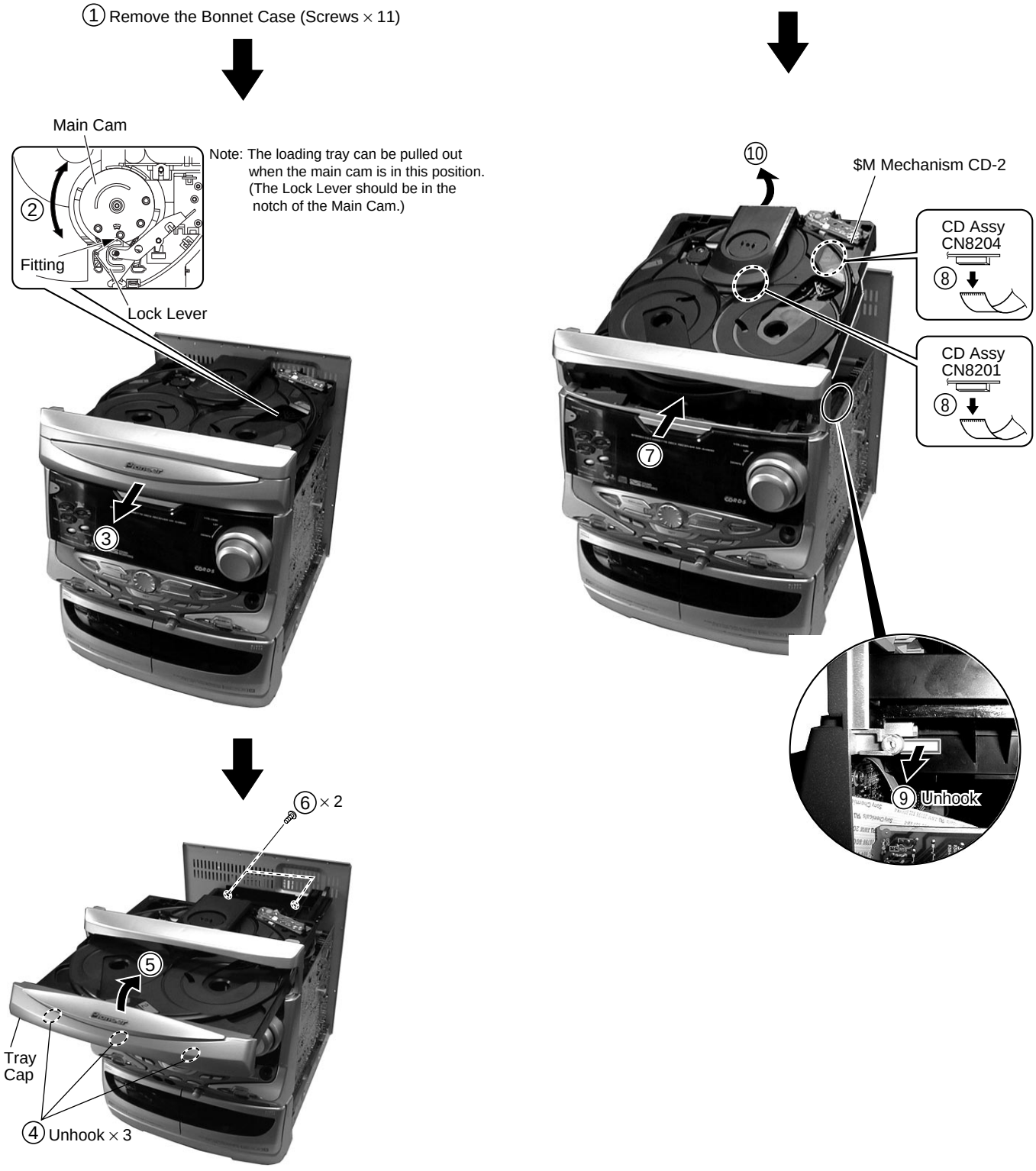


7. GENERAL INFORMATION

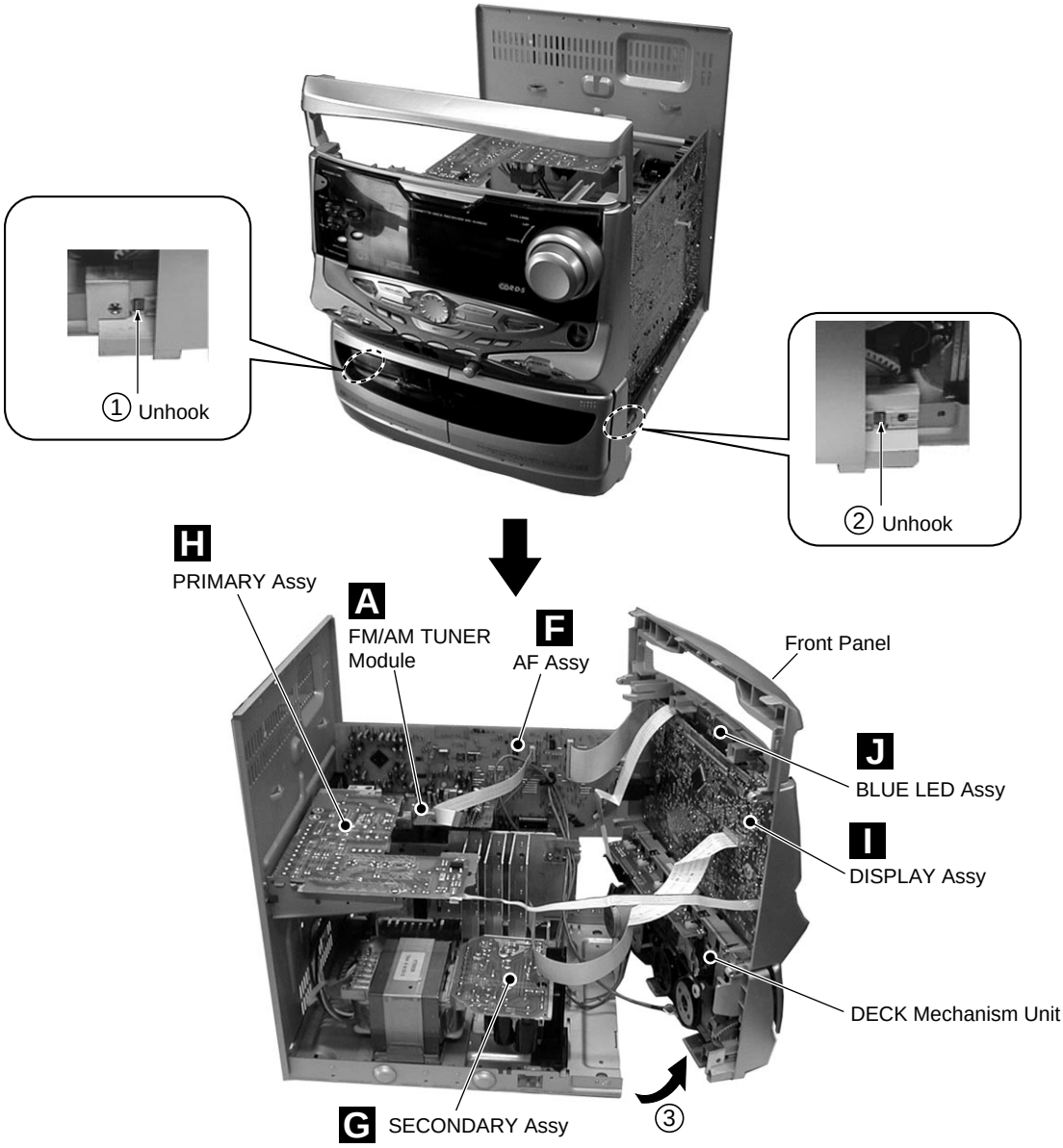
7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

■ $M MECHANISM CD-2

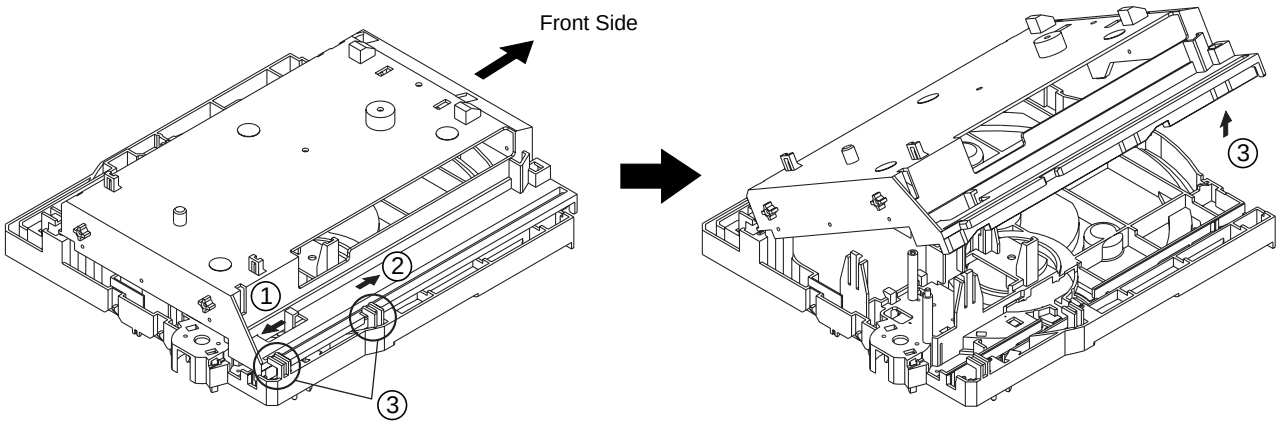


■ FRONT PANEL

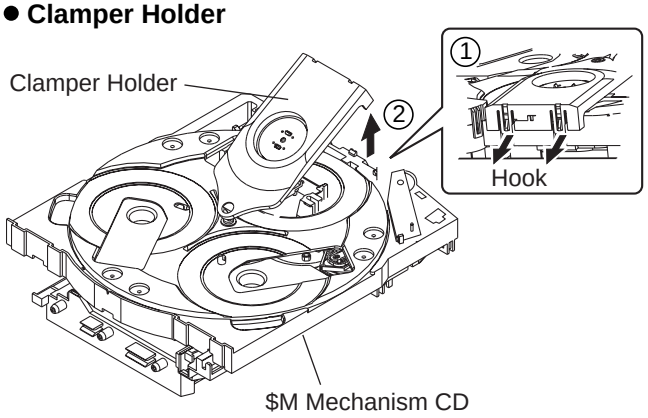


■$M MECHANISM CD-2 ADDITIONAL TO JOB

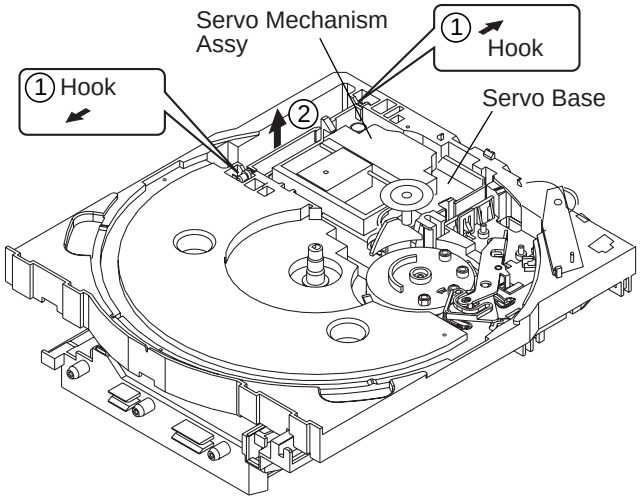
● **Mechanism Base (Bottom View)**



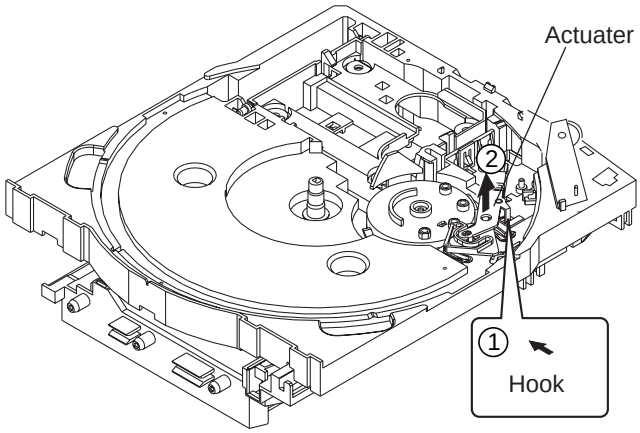
● **Clamper Holder**



● **Servo Base**

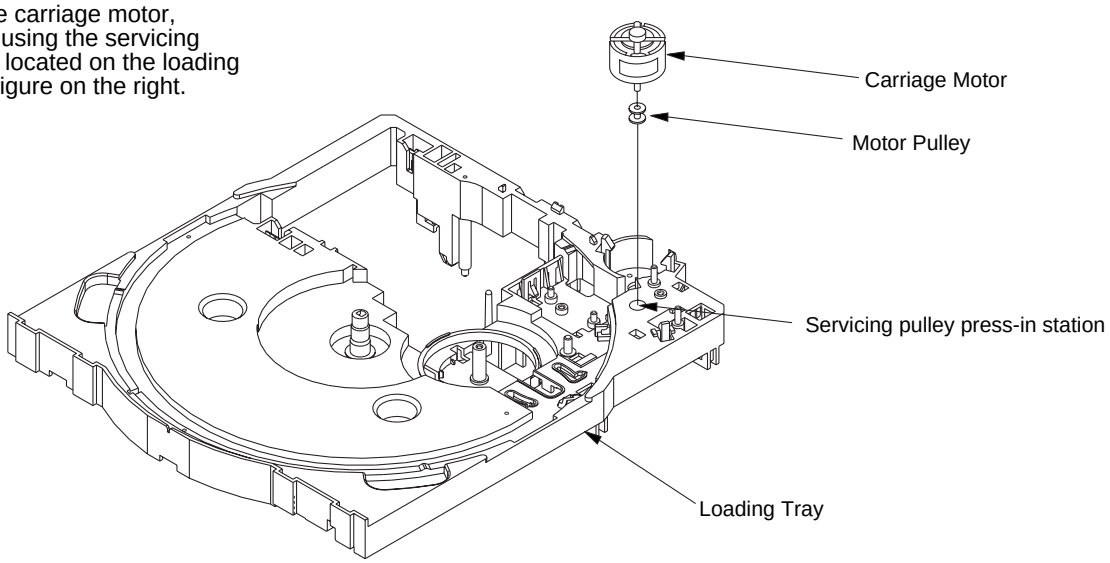


● **Actuater**



■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 PARTS

7.2.1 IC

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

■ PDC063A (DISPLAY ASSY : IC5501)

• System Control Microcomputer IC

● Pin Function

No.	Pin Name	I/O	Function
1	CD RESET	O	Reset output for CD decoder
2	CD SE CLK	O	Clock output for CD decoder SENS data
3	CD SENS	I	CD SENS input
4	CD LAT	O	Latch output for CD decoder data
5	CD DCLK	O	Clock output for CD decoder data
6	CD DATA	O	CD decoder data output
7	A/V mode LED	O	Audio/Visual mode LED output
8	TIMER LED	O	TIMER LED output
9	RY ON/OFF	O	RELAY ON/OFF
10	BLUE LED	O	BLUE LED output
11	XRESET	I	CPU reset input
12	VOL JOG	I	Volume JOG input
13	MORF JOG	I	Sound morphing JOG input
14	VSS	–	Ground
15	CF1	I	
16	CF2	O	
17	VDD	–	Power supply
18	KEY1	I	Key input 1 (A/D)
19	KEY2		Key input 2 (A/D)
20	KEY3		Key input 3 (A/D)
21	MS	I	Deck MS input
22	ST/TUNE	I	Tuner STEREO/TUNE input
23	SPE-IN	I	Spectrum analayzer signal input
24	–	–	
25	CD MUTE	O	CD mute output (pull-up)
26	AC	I	AC pulse interrupt input
27	SCOR	I	CD SCOR interrupt input
28	RDS CLK	I	Tuner RDS clock interrupt input
29	REMOCON	I	Remote control interrupt input
30	G1	O	Grid output
31	G2		
32	G3		
33	G4		
34	G5		
35	G6		
36	G7		
37	G8		
38	G9		
39	G10		
40	G11		
41	G12		
42	G13		
43	G14		
44	G15		
45	S1	O	Segment 1 output
46	VDD	–	Power supply
47	S2/D5597	I/O	Segment 2 output/SW7 input
48	S3/D5598		Segment 3 output/SW6 input
49	S4/D5595		Segment 4 output/SW5 input
50	S5/D5594		Segment 5 output/SW4 input

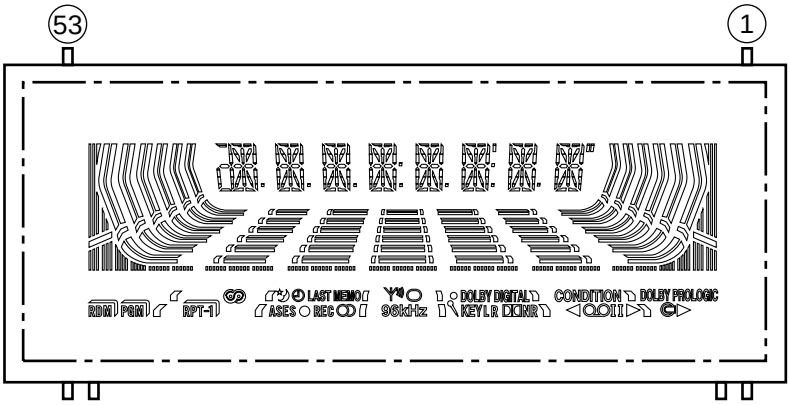
No.	Pin Name	I/O	Function
51	VFDP	–	
52	S6/D5593	I/O	Segment 6 output/SW3 input
53	S7/D5592		Segment 7 output/SW2 input
54	S8/D5591		Segment 8 output/SW1 input
55	S9	O	Segment 9 output
56	S10/CLAMP	I/O	Segment 10 output/CD CLAMP SW input
57	S11/OPEN		Segment 11 output/CD OPEN SW input
58	S12/INSIDE		Segment 12 output/CD INSIDE SW input
59	S13/CDISC123		Segment 13 output/CD DISC 123 SW input
60	S14/ARF		Segment 14 output/DECK ARF SW input
61	S15/ARR		Segment 15 output/DECK ARR SW input
62	S16/MODE1		Segment 16 output/DECK MODE SW1 input
63	S17/MODE2		Segment 17 output/DECK MODE SW2 input
64	S18/HALF1		Segment 18 output/DECK HALF SW1 input
65	S19/HALF2		Segment 19 output/DECK HALF SW2 input
66	S20/CrO2_1		Segment 20 output/DECK CrO2 SW1 input
67	S21/CrO2_2		Segment 21 output/DECK CrO2 SW2 input
68	S22	O	Segment 22 output
69	S23		Segment 23 output
70	S24		Segment 24 output
71	RDSDATA	I	Tuner RDS data input
72	VDD	–	Power supply
73	SOL2	O	DECK solenoid output 2
74	SOL1		DECK solenoid output 1
75	MOTOR	O	DECK motor output
76	CD LOAD IN	I	CD loading motor input (pull-down)
77	CD LOAD OUT	O	CD loading motor output (pull-down)
78	LED DISC3	O	DISC 3 LED output
79	LED DISC2		DISC 2 LED output
80	LED DISC1		DISC 1 LED output
81	REEL1	I	DECK reel pulse input 1
82	REEL2		DECK reel pulse input 2
83	–	–	
84	RDS MUTE	O	Mute output of Tuner RDS (pull-down)
85	PLL CE	O	Chip enable output of Tuner PLL
86	EVOL CE	O	Chip enable output of electronic volume IC
87	POWER	O	Power output
88	LINE MUTE	O	Line mute output
89	VSS	–	Ground
90	VDD	–	Power supply
91	EXP CLK	O	Clock output for EXP IC
92	EXP DATA	O	Data output for EXP IC
93	EXP CE	O	Chip enable output of EXP IC (BU4094BCF)
94	SCAN ON	O	Outputs for SW reading
95	CD SHUT	O	Crystal ON/OFF of the CD decoder
96	SQSO	I	CD subcode data input
97	CD SQCK	O	Clock output for CD subcode data
98	SYSDATA	O	Data output of the Tuner PLL data/electronic volume IC
99	TXDATA	I	Tuner data input
100	SYSCLK	O	Clock output of the Tuner PLL data/electronic volume IC

7.2.2 DISPLAY

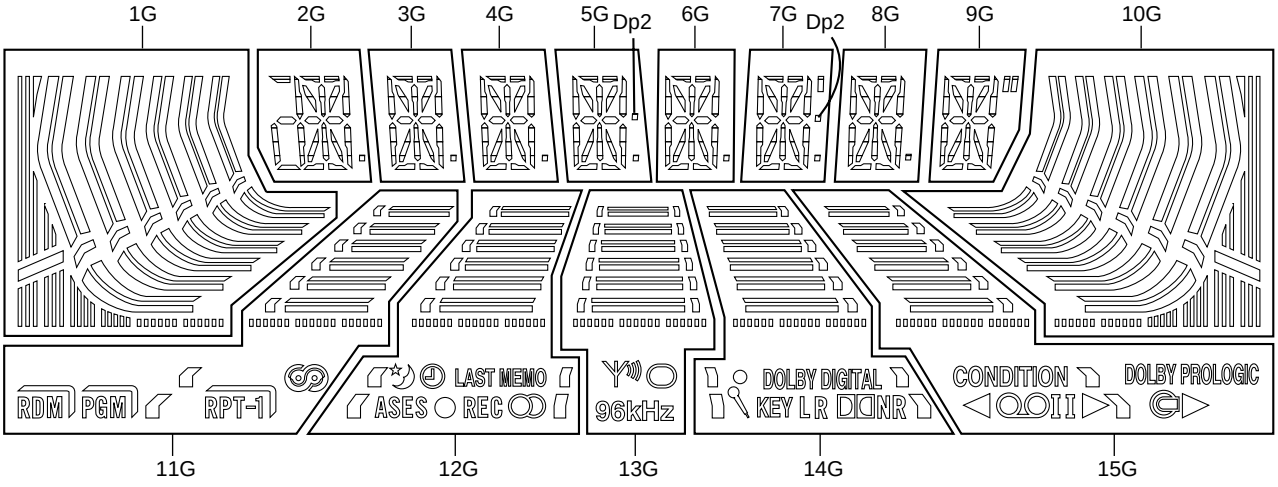
■ XAV3009 (DISPLAY ASSY :V5621)

- **FL Display**

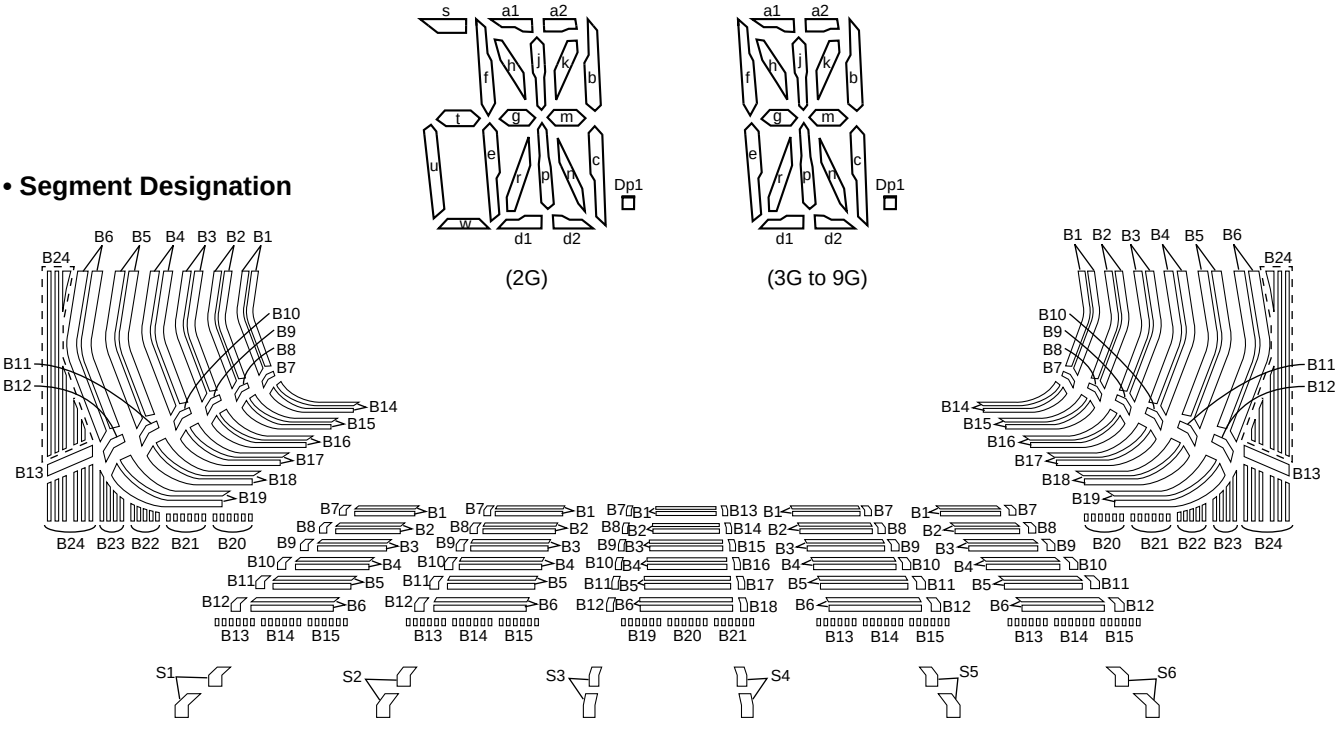
• Pin Assignment



• Grid Assignment



• Segment Designation



(1G, 10G to 15G)

• Pin Connection

Pin No.	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
Connection	F2	F2	F2	NP	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G	P1	P2	P3	P4	P5	P6	P7
Pin No.	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
Connection	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	NX	NX	NX	NX	NP	NP	F1	F1	F1	

NOTE 1) F1, F2..... Filament
2) NP..... No pin
3) NX..... No extend pin
4) DL..... Datum Line
5) 1G to 15G..... Grid
6) Field of vision is a minimum of 29° from the lower side.

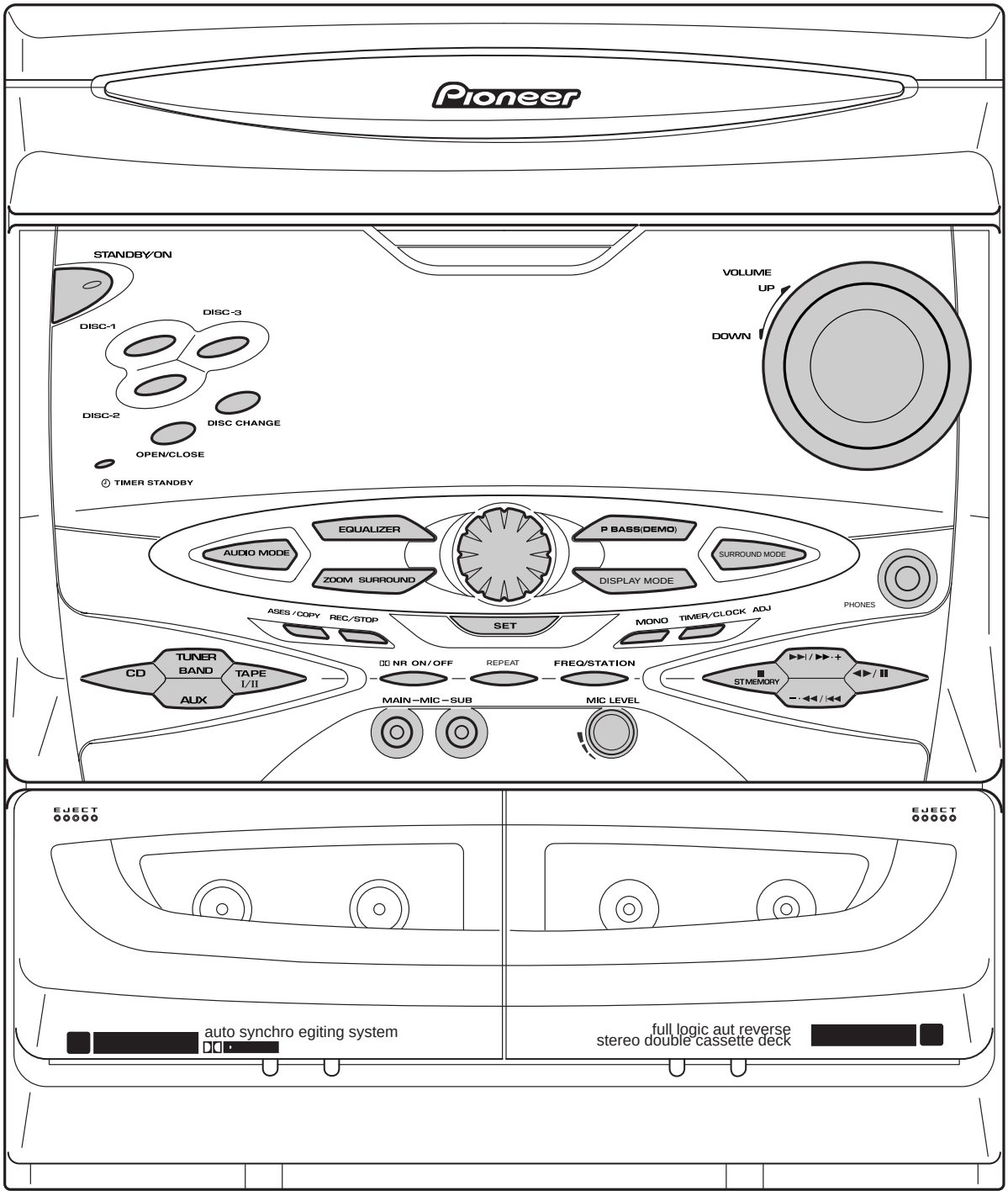
• Anode Connection

	1G	2G	3G,4G	5G	6G	7G	8G	9G	10G	11G	12G	13G	14G	15G
P1	B24	—	—	—	—	—	—	—	B24	RDM	S2	96kHz	S4	▷(RIGHT)
P2	B23	a1	a1	a1	a1	a1	a1	a1	B23		ASES			
P3	B22	a2	a2	a2	a2	a2	a2	a2	B22	PGM	○		KEY	S6
P4	B21	h	h	h	h	h	h	h	B21		REC	B21	L	▷ (LEFT)
P5	B19	j	j	j	j	j	j	j	B19	RPT	S3	B19	R	
P6	B17	k	k	k	k	k	k	k	B17			B17	DCNR	DOLBY PROLOGIC
P7	B15	b	b	b	b	b	b	b	B15	B15	B15	B15	B15	B15
P8	B14	f	f	f	f	f	f	f	B14	B14	B14	B14	B14	B14
P9	B13	g	g	g	g	g	g	g	B13	B13	B13	B13	B13	B13
P10	B6	m	m	m	m	m	m	m	B6	B6	B6	B6	B6	B6
P11	B11	c	c	c	c	c	c	c	B11	B11	B11	B11	B11	B11
P12	B10	e	e	e	e	e	e	e	B10	B10	B10	B10	B10	B10
P13	B4	r	r	r	r	r	r	r	B4	B4	B4	B4	B4	B4
P14	B9	p	p	p	p	p	p	p	B9	B9	B9	B9	B9	B9
P15	B8	n	n	n	n	n	n	n	B8	B8	B8	B8	B8	B8
P16	B2	d1	d1	d1	d1	d1	d1	d1	B2	B2	B2	B2	B2	B2
P17	B3	d2	d2	d2	d2	d2	d2	d2	B3	B3	B3	B3	B3	B3
P18	B12	dp1	dp1	dp1	dp1	dp1	dp1	—	B12	B12	B12	B12	B12	B12
P19	B18	—	—	dp2	—	dp2	—	—	B18	-1		B18	DOLBY DIGITAL	◁
P20	B20	—	—	—	—		—		B20	S1		B20	○	
P21	B16	s	—	—	—	—	—	—	B16		LAST MEMO	B16	S5	CONDITION
P22	B5	t	—	—	—	—	—	—	B5	B5	B5	B5	B5	B5
P23	B1	u	—	—	—	—	—	—	B1	B1	B1	B1	B1	B1
P24	B7	w	—	—	—	—	—	—	B7	B7	B7	B7	B7	B7

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

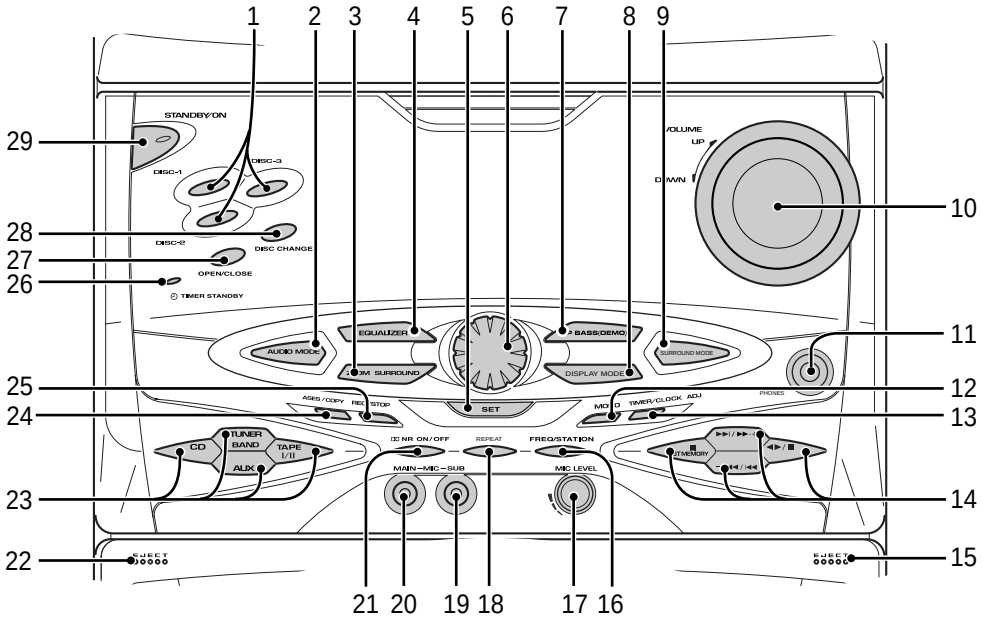
Front Panel



Front panel

The illustration on this page shows the XR-A780.
Not all features are available on the XR-A3800.

model: XR-A780

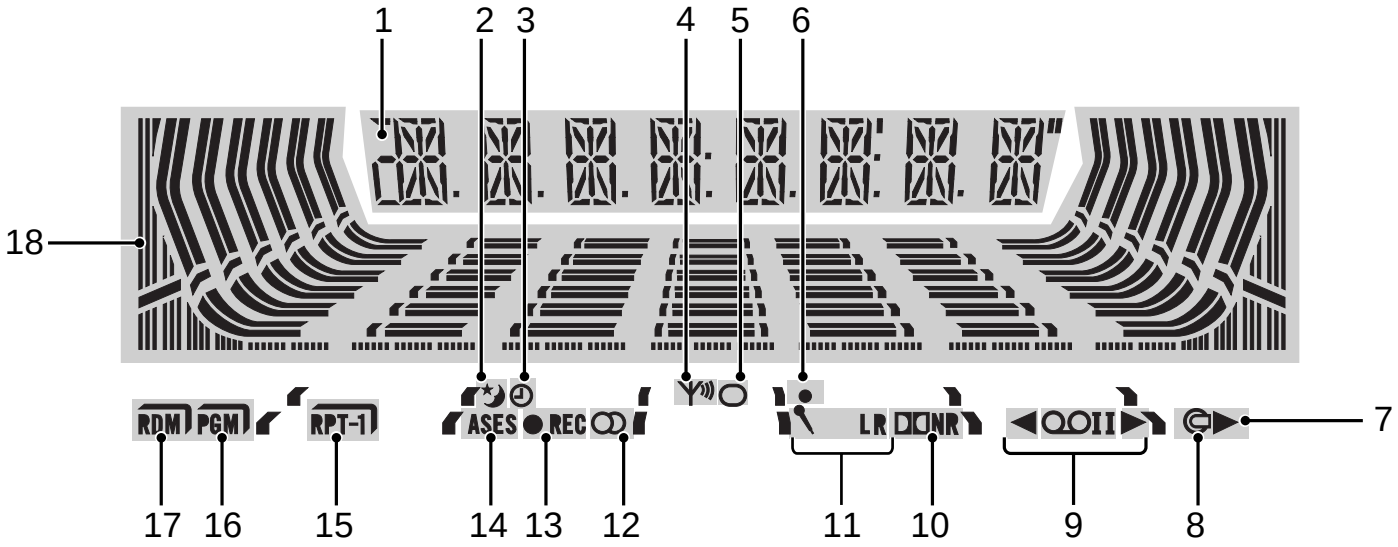


1 DISC-1/2/3
2 AUDIO MODE
3 ZOOM SURROUND
4 EQUALIZER
5 SET
Use to enter timer/clock settings, or user sound settings.
6 JOG dial
Use to morph between sound settings, and when setting the clock or timer.
7 P.BASS (DEMO)
8 DISPLAY MODE
9 SURROUND MODE
10 VOLUME UP/DOWN
Use to adjust the overall volume.
11 PHONES jack (Headphones)
Plug in a pair of headphones to this jack.
12 MONO
13 TIMER / CLOCK ADJ
14 Playback/tuning controls
■ ST. MEMORY
►►I/►►· +
–·◄◄/I◄◄
◄►/II
15 EJECT (tape II)
Press to open the cassette door of deck II.
16 FREQ / STATION
17 MIC LEVEL
18 REPEAT
19 MIC SUB
20 MIC MAIN
21 XR-A780: NR* ON/OFF
XR-A3800: RANDOM
22 EJECT (tape I)
Press to open the cassette door of deck I.
23 Function select buttons
CD
TUNER BAND
AUX
TAPE I/II
24 ASES / COPY
25 REC / STOP
26 TIMER STANDBY indicator
27 OPEN/CLOSE
28 DISC CHANGE
29 STANDBY/ON and standby indicator
Press to switch the unit between standby and on. Indicator lights in standby.

* Manufactured under licence from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.

Display

The illustration on this page shows the XR-A780.
Not all features are available on the XR-A3800.



1 Character display
2 Lights when the sleep timer has been set.
3 Lights when either the record timer or the wake up timer has been set.
4 Lights when the tuner is receiving a broadcast.
5 Lights when the tuner is set to mono FM mode.
6 Lights when in beat cut 2 mode. (XR-A780 model only)
7 Lights when a CD is playing.
8 Lights when the system is in CD mode.
9 ◄ and ► – Indicates the current tape play/record direction.
I or II – Indicates the current tape deck, I or II.
10 Lights when Dolby Noise Reduction is switched on. (XR-A780 model only)
11 – Lights when in the karaoke mode.
L R – Indicates which channels of the karaoke track you're hearing.
12 Lights when the tuner is receiving a stereo FM broadcast in auto stereo mode.
13 Lights when recording to tape.
14 Lights during automatic recording of a CD.
15 Highlights during repeat play mode.
16 Highlights during program playback mode.
17 Highlights during random playback mode.
18 Sound morphing / sound level display

Remote control

To learn about the function of a particular button, look up the name of the button in the following alphabetical list (buttons marked with symbols appear first).

⏻
Press to switch the system on or into standby.

■ (Stop)

◄►/II (Play/pause/reverse)

◄◄ (Reverse scan/fast rewind/radio tuning)

►► (Forward scan/fast forward/radio tuning)

– I◄◄ (Reverse track skip/music search/preset station select)

►►I + (Forward track skip/music search/preset station select)

>10
Use to select numbers over 10 (press this button, then input the number using the other number buttons).

10/0
Use as zero or 10 when entering numbers (for track numbers and station presets).

1–9
Number buttons (for track numbers and station presets).

A AUDIO/SURROUND

AUX

C CD

CLEAR
Press to delete the most recently programmed track.

D DISC-1/2/3

DISC CHANGE

DISPLAY

J JOG
Use to morph between sound settings, and when setting the clock or timer.

K KARAOKE

M MONO (SHIFT & 7)

MORPHING

MUTE

O OPEN/CLOSE

P PROGRAM

R RANDOM (SHIFT & 9)

REPEAT (SHIFT & 8)

S SHIFT
Use to access secondary functions on the remote control.

SLEEP

T TAPE I/II

TUNER/BAND

V VOLUME +/–
Use to adjust the overall volume level.

8.2 SPECIFICATIONS

Amplifier section

Continuous Power Output – Stereo

Continuous average power output of 70 watts* per channel, min., at 6 ohms, from 60 Hz to 15,000 Hz with no more than 5%** total harmonic distortion (front L/R).

* Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claim's for Amplifiers.

** Measured by Audio Spectrum Analyzer.

RMS (1 kHz, 10 % T.H.D., 6 Ω)
XR-A3800 ..... 100 W + 100 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
Erase head x 1
Motor ..... DC servo motor x 1
Tape types
XR-A3800 ..... TYPE I (Normal) tape

FM tuner section

FrequencyRange ..... 87.5 MHz to 108 MHz
Antenna input ..... 75 Ω unbalanced

AM tuner section

FrequencyRange
With 9 kHz step ..... 531 kHz to 1,602 kHz
With 10 kHz step ..... 530 kHz to 1,700 kHz
Antenna input ..... Loop antenna

Miscellaneous

Power Requirements
US and Canadian models ..... AC 120 V, 60 Hz
Power Consumption
XR-A3800 ..... 130 W
Power Consumption in Standby mode ..... 1 W
Dimensions ..... 270 (W) x 320 (H) x 339 (D) mm
10 5/8 (W) x 12 5/8 (H) x 13 3/8 (D) in.
Weight (without package)
XR-A3800 ..... 8.3 kg (18 lbs. 5 oz.)

Accessories

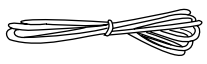
Operating instructions 1
Remote control unit 1
Power Cord 1
FM antenna 1
AM loop antenna 1
AA/R6P dry cell batteries 2
Warranty card 1

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

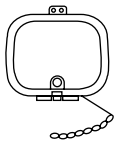
■ Accessories

① Remote Control Unit × 1
(XZN3106)

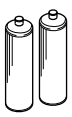
② FM Antenna × 1
(ADH7004)



③ AM Loop Antenna × 1
(XTB3001)



④ AA/R6P Dry Cell Batteries × 2
(VEM-013)



⑤ Power Cord × 1
(ADG7022)