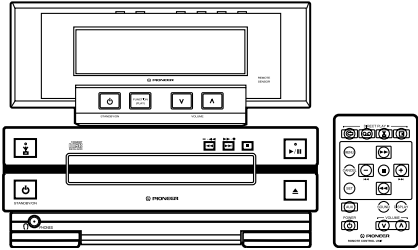


Service Manual



ORDER NO.
RRV1946

STEREO CD RECEIVER XC-L7

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

Type	Model	Power Requirement	Remarks
	XC-L7		
KUXJ/CA	○	AC120V	

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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

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

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.

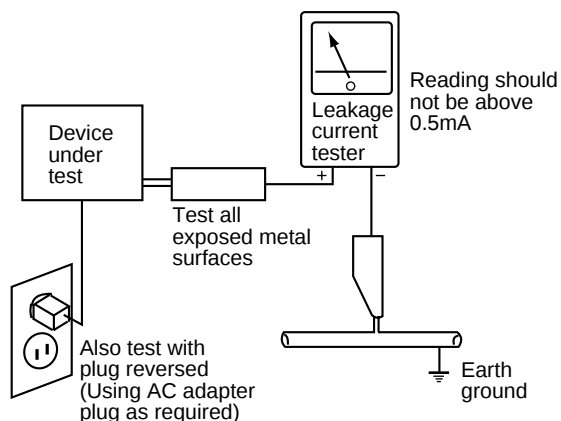
(FOR USA MODEL ONLY)

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 Δ on the schematics and on the parts list in this Service Manual.

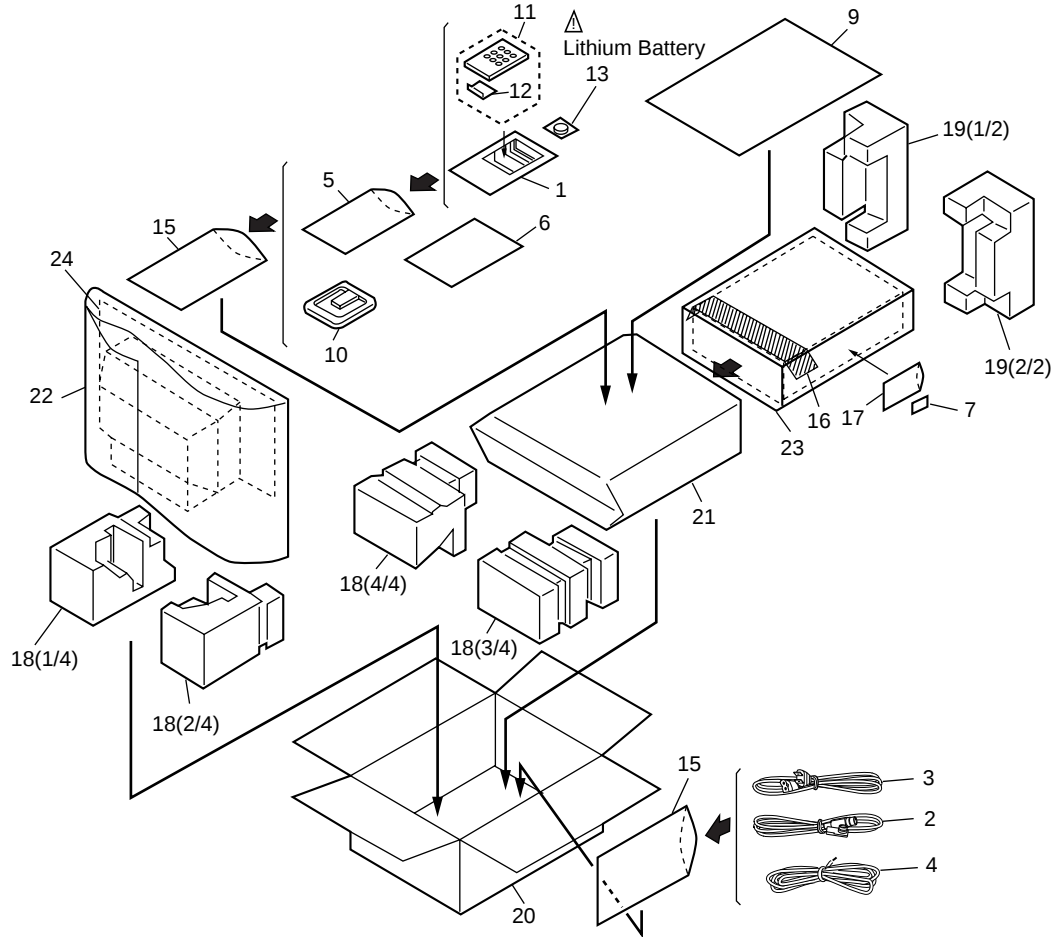
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

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.

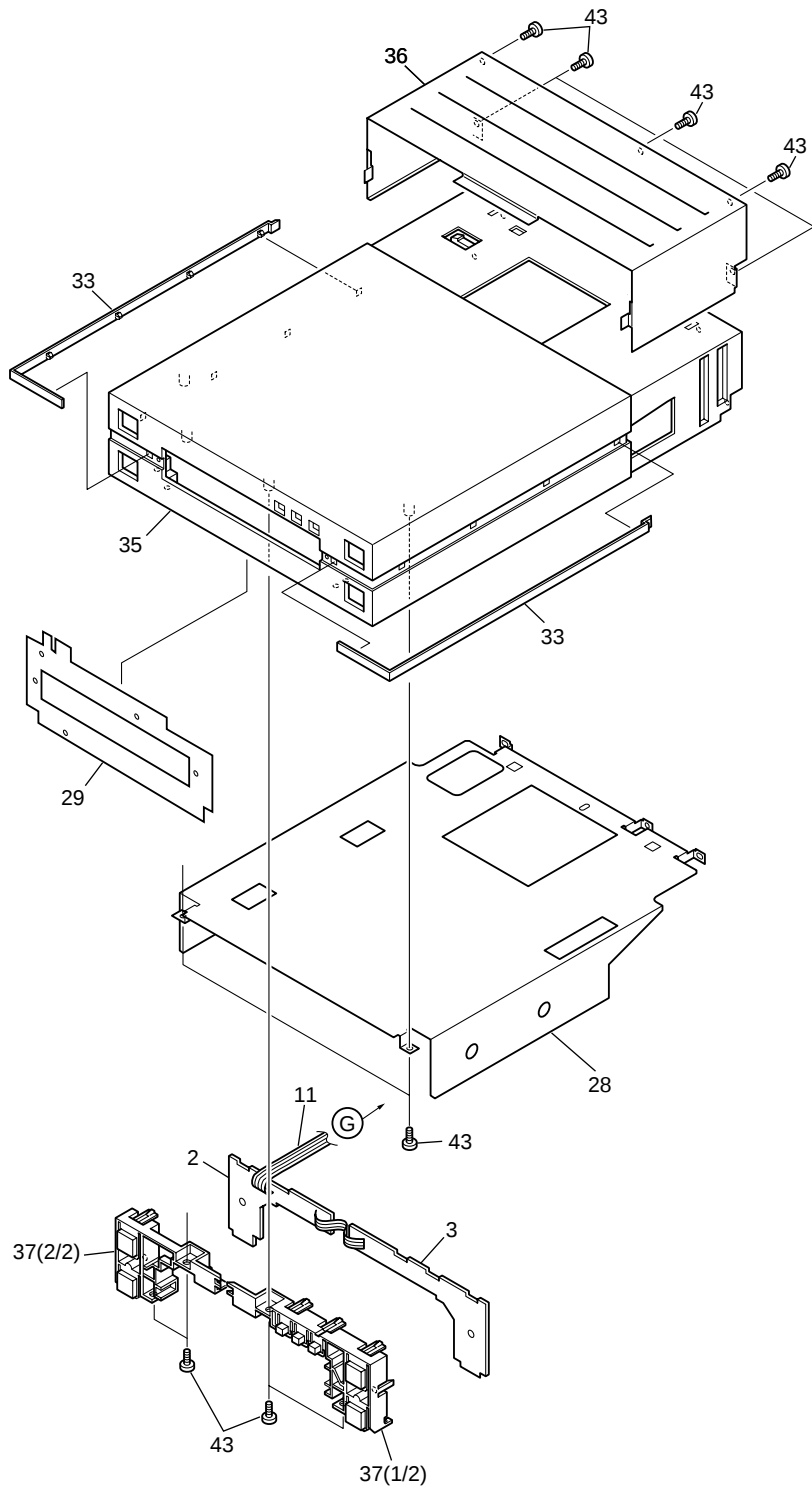
2.1 PACKING

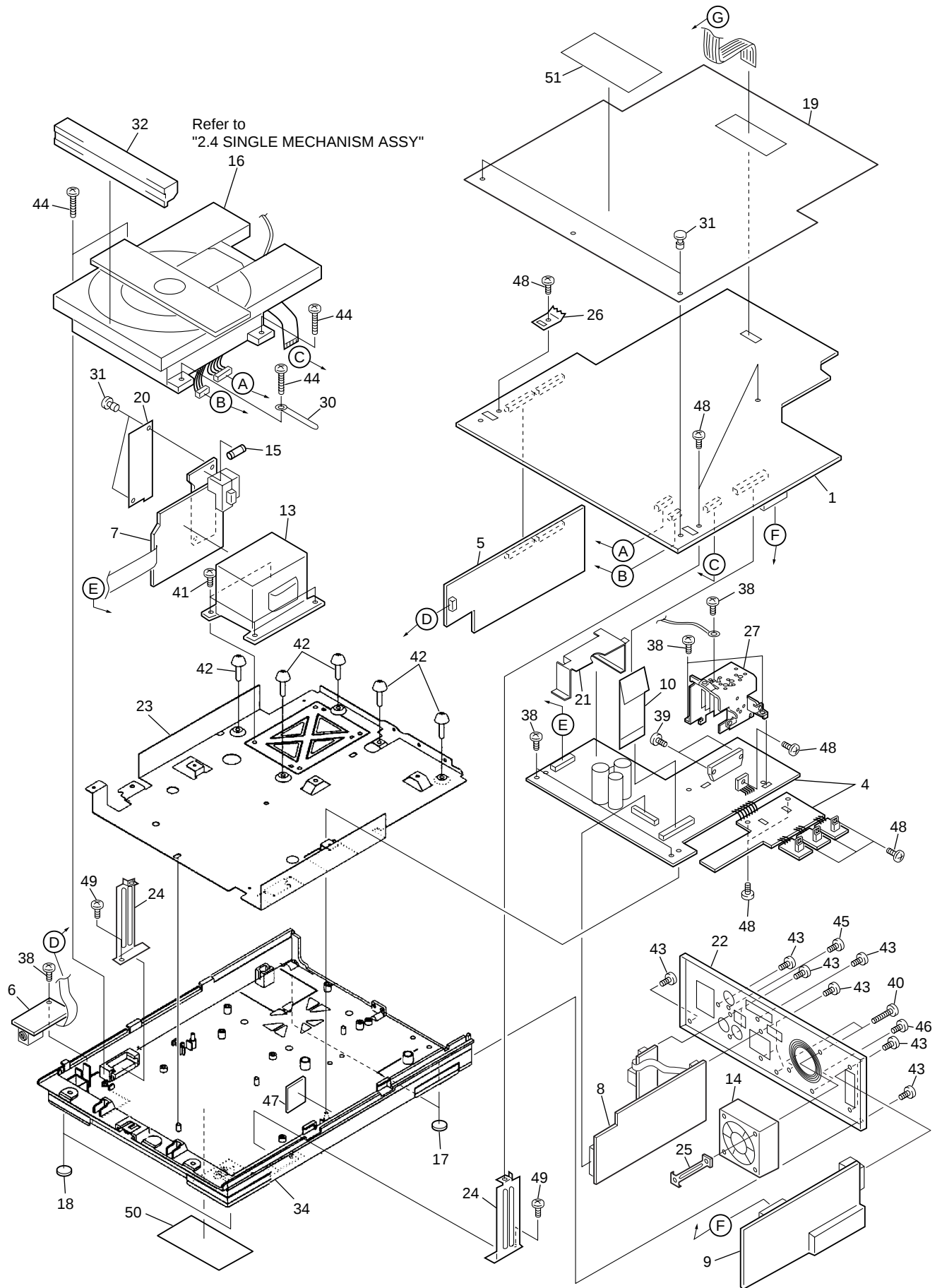


● PACKING PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Remote Control Unit Holder	AAH7008	NSP △	13	Lithium Battery (CR2025)	VEM1009
	2	Display Unit Cord (10P Mini-DIN Cable)	ADE7014		14		
△	3	Power Cord	ADG1152	NSP	15	Polyethylene Bag	Z21-038
	4	FM Antenna	ADH7004	NSP	16	Protect Sheet	AEH7004
NSP	5	Vinyl Bag	AHG7031	NSP	17	Silica Gel	AEN7001
	6	Operating Instructions (English/French)	ARE7169		18	Pad FCD (PS)	AHA7175
NSP	7	Caution SG	ARR7013		19	Pad RCD (PS)	AHA7182
	8				20	Packing Case	AHD7622
NSP	9	Warranty Card	ARY1051	NSP	21	Vinyl Bag	AHG7036
	10	AM Loop Antenna	ATB7007	NSP	22	Polyethylene Bag	CEG1116
	11	Remote Control Unit (CU-XC004)	AXD7145		23	Mirror Mat Sheet	Z23-007
	12	Battery Case	AZE7116	NSP	24	DISPLAY UNIT DU-L7	

2.2 MAIN SECTION (XC-L7)

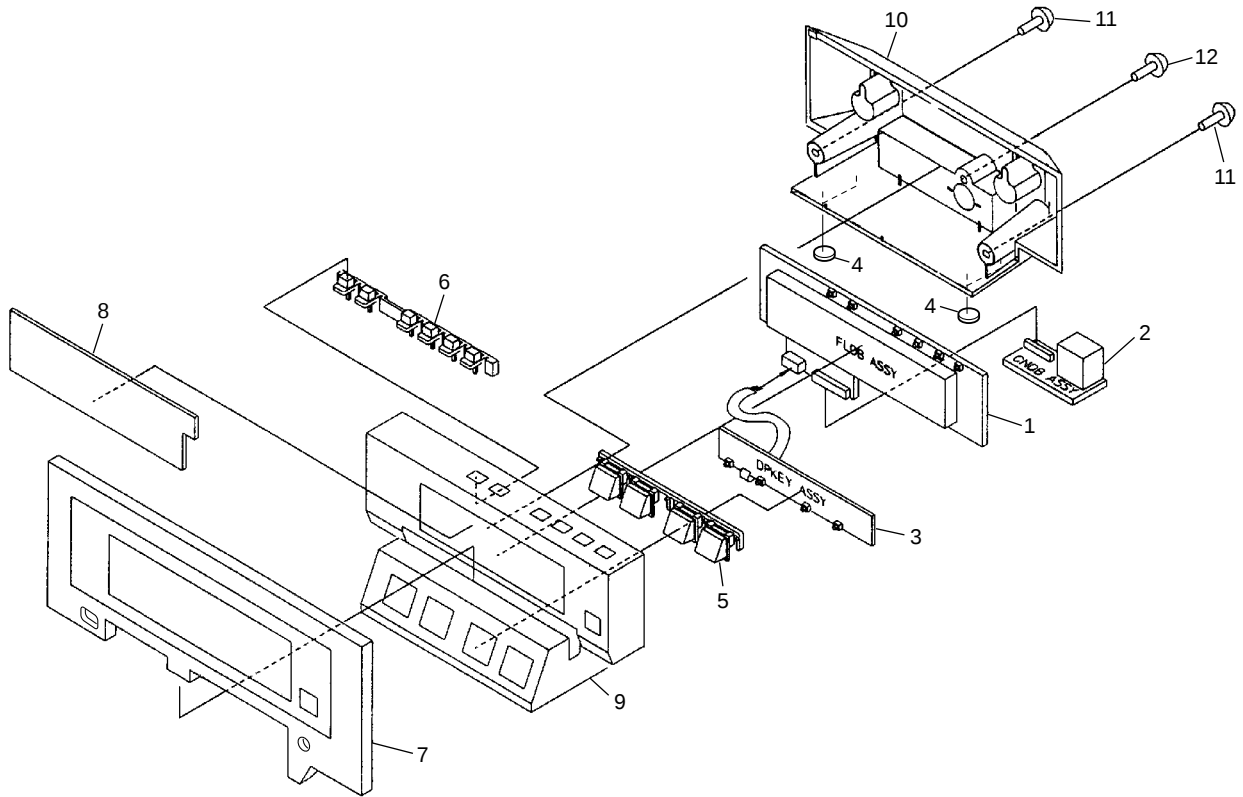




• MAIN SECTION PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	CD MAIN Unit	AWU7147		31	Rivet	VEC1178
	2	CD KEYB1 Unit	AWZ8985		32	Tray Panel CD	AAN7170
	3	CD KEYB2 Unit	AWZ8986		33	Black Line	AAP7033
	4	POWER AMP Unit	AWZ8990		34	Bottom Base CD	AMA7003
	5	POWER AF Unit	AWZ8991		35	Top Panel	AMB7523
	6	POWER HP Unit	AWU7006		36	Bonnet	ANE7168
	7	POWER TRANS Unit	AWU7148		37	Button Assy	AWL7024
	8	POWER SPTB Unit	AWU7149		38	Screw	BBZ30P080FMC
	9	FM/AM Tuner Module	AXQ7065		39	Screw	IBZ30P150FCC
	10	Lead Card(33P)	ADD7065		40	Screw	BBZ30P300FZK
	11	Lead Card(5P)	ADD7066		41	Screw	BBZ40P060FMC
	12	• • • • •			42	Screw	BPZ30P060FZK
△	13	Power Transformer(T1)	ATS7216		43	Screw	BPZ30P080FZK
	14	DC Fan Motor	AXM7003		44	Screw	BPZ30P180FZK
△	15	Fuse(FU1, 2A)	REK1078		45	Screw	PMZ30P060FZK
NSP	16	Single Mechanism Assy	RXA1672		46	Screw	VBZ30P080FZK
	17	Leg	AEB7090	NSP	47	Spacer A	AEB7085
	18	Front Leg	AEB7102		48	Screw	BBZ30P080FCC
	19	Top Barrier	AEC7122		49	Screw	BPZ30P060FCU
	20	Side Barrier	AEC7104	NSP	50	Name Label	ARW7039
	21	M Barrier	AEC7121		51	65 Label	ORW1069
	22	Rear Panel	ANC7694				
NSP	23	Bottom Plate CD	ANF7007				
	24	Angle	ANG7151				
	25	Fan Plate	ANG7153				
	26	Earth Plate	ANG7168				
NSP	27	Heat Sink	ANH7066				
NSP	28	Top Plate	ANK7034				
	29	Tray Sheet	AWL7027				
	30	Cord Clamper	RNH-184				

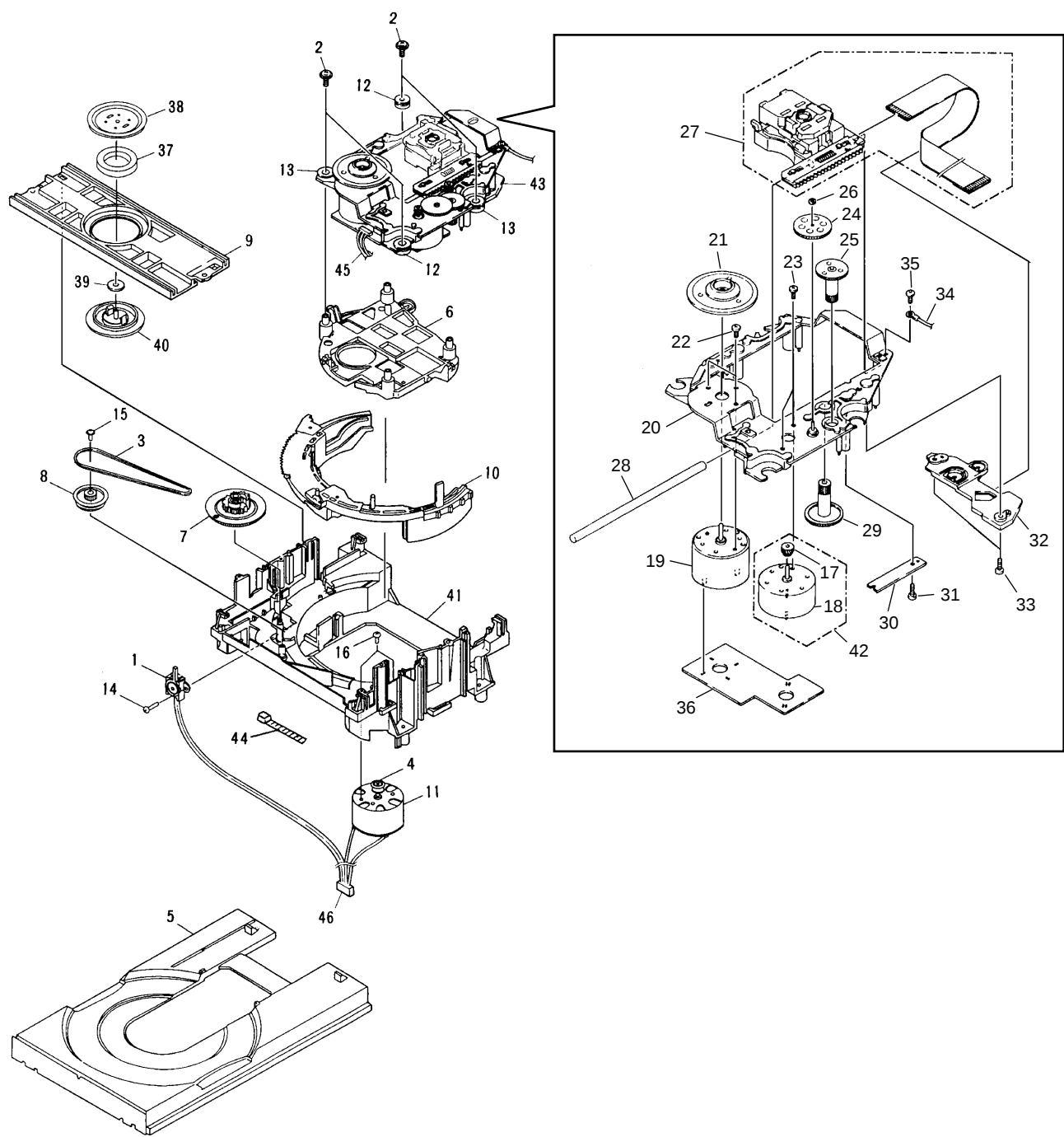
2.3 DISPLAY UNIT DU-L7



• DISPLAY SECTION PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	CD FLDP Unit	AWU7003		11	Screw	BPZ30P100FZK
	2	CD CNB Unit	AWZ8988		12	Screw	PMZ30P060FZK
	3	CD DPKEY Unit	AWZ8989				
	4	Leg	AEB7090				
	5	Display Button	AAD7409				
	6	Top Button	AAD7430				
	7	Window	AAK7461				
	8	FL Filter	AEC7117				
	9	Display Panel	AMB7458				
	10	Rear Cover	AMC7013				

2.4 SINGLE MECHANISM ASSY



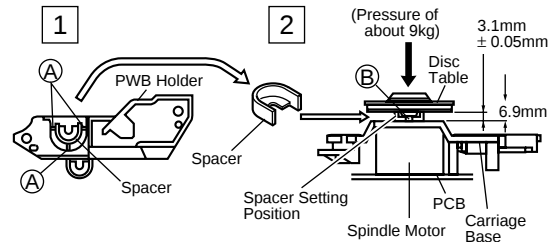
• SINGLE MECHANISM ASSY PARTS LIST

Mark	No.	Description	Part No.
	1	Lever Switch(S601)	DSK1003
	2	Screw	PBA1048
	3	Rubber Belt	PEB1193
	4	Motor Pulley	PNW1634
	5	Tray Black V	PNW2455
	6	Float Base	PNW2032
	7	Drive Gear 2	PNW2369
	8	Gear Pulley	PNW2034
	9	Clamper Base	PNW2375
	10	Clamp Cam	PNW2364
	11	DC Motor/0.75W	PXM1010
	12	Float Rubber B	REB1287
	13	Float Rubber G	REB1288
	14	Screw	BPZ26P080FMC
	15	Screw	Z39 - 019
	16	Screw	PMZ26P040FMC
	17	Pinion Gear	PNW2055
	18	DC Motor (CARRIAGE)	PXM1027
	19	D.C. Motor Assy (SPINDLE)	PEA1235
	20	Carriage Base	PNW2699
	21	Disc Holder	PNW1608
	22	Screw	JFZ20P030FNI
	23	Screw	JFZ17P025FZK
	24	Gear 3	PNW2054
	25	Gear 2	PNW2053
	26	Washer	WT12D032D025
	27	Pick Up Assy-S	PEA1291
	28	Guide Bar	PLA1094
	29	Gear 1	PNW2052
	30	Gear Stopper	PNB1303

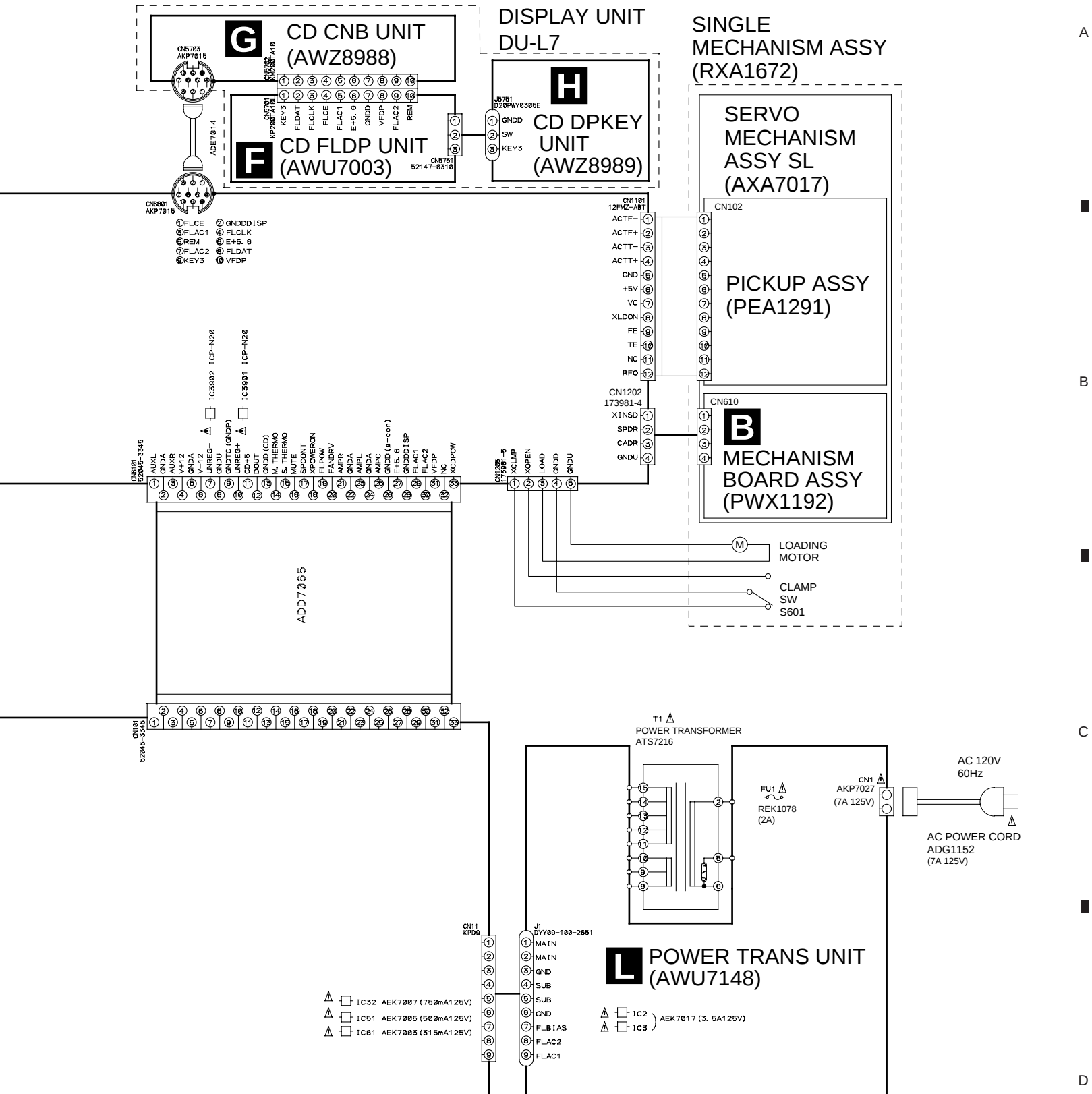
Mark	No.	Description	Part No.
	31	Screw	BPZ20P060FMC
	32	PWB Holder	PNW2057
	33	Screw	BPZ26P100FMC
	34	Earth Lead Unit	PDF1104
	35	Screw	BBZ26P060FMC
NSP	36	Mechanism Board Assy	PWX1192
	37	Clamp Magnet	PMF1014
	38	Yoke	PNB1216
NSP	39	H Rubber	PEB1249
	40	Clamper S	PNW1609
	41	Loading Base	PNW2376
	42	D.C. Motor Assy (CARRIAGE)	PEA1246
NSP	43	Servo Mechanism Assy SL	AXA7017
	44	Binder	Z09 - 056
	45	Connector Assy (4P)	RDE1043
	46	Connector Assy (5P)	PDE1239

• How to install the disc table

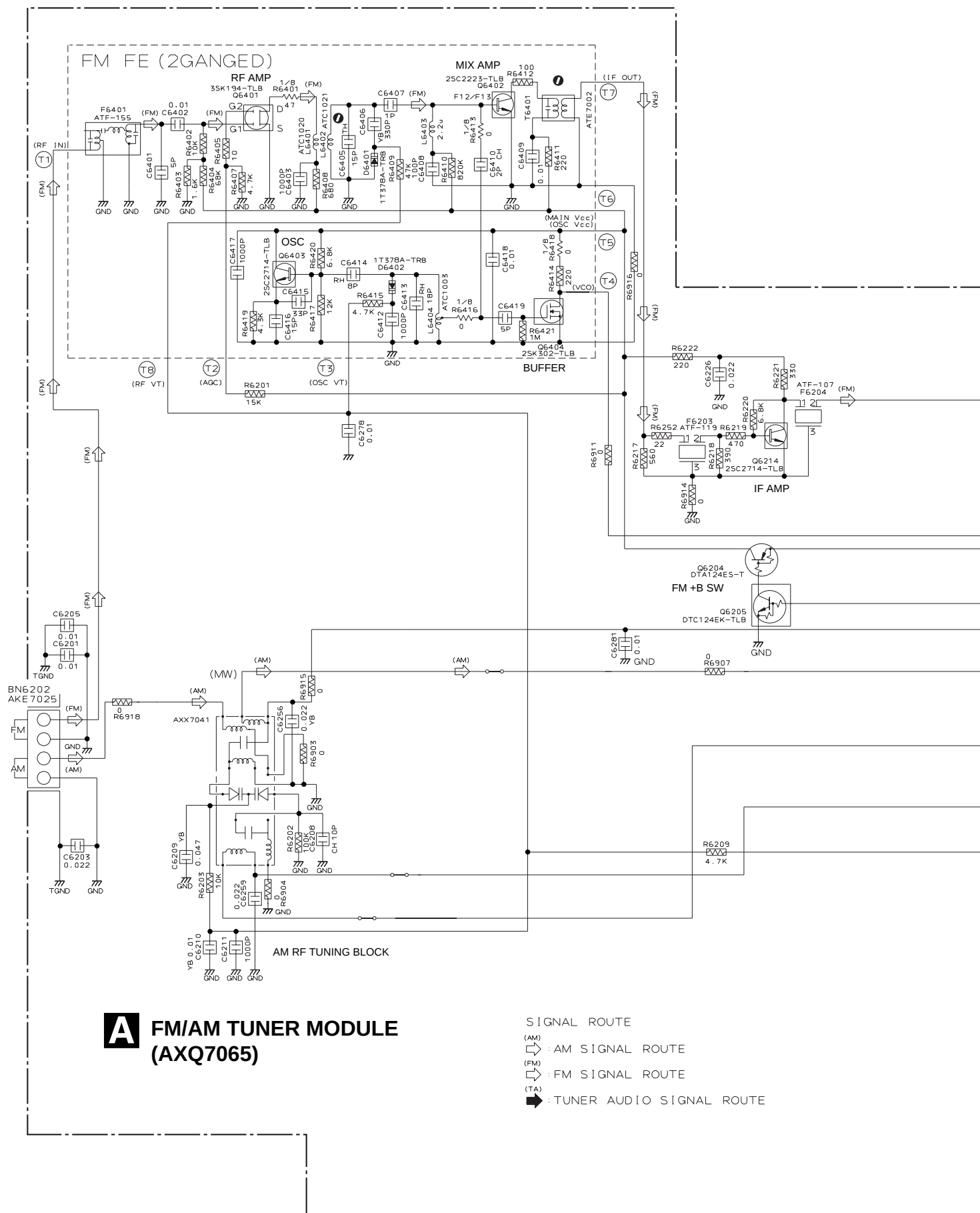
- 1 Use nipper or other tool to cut the three sections marked (A) figure 1. Then remove the spacer.
- 2 While supporting the spindle motor shaft with the stopper, put spacer on top of the motor base (angled so it doesn't touch section (B)), and stick the disc table on top (takes about 9 kg pressure). Take off the spacer.



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



Notes

1. RESISTORS

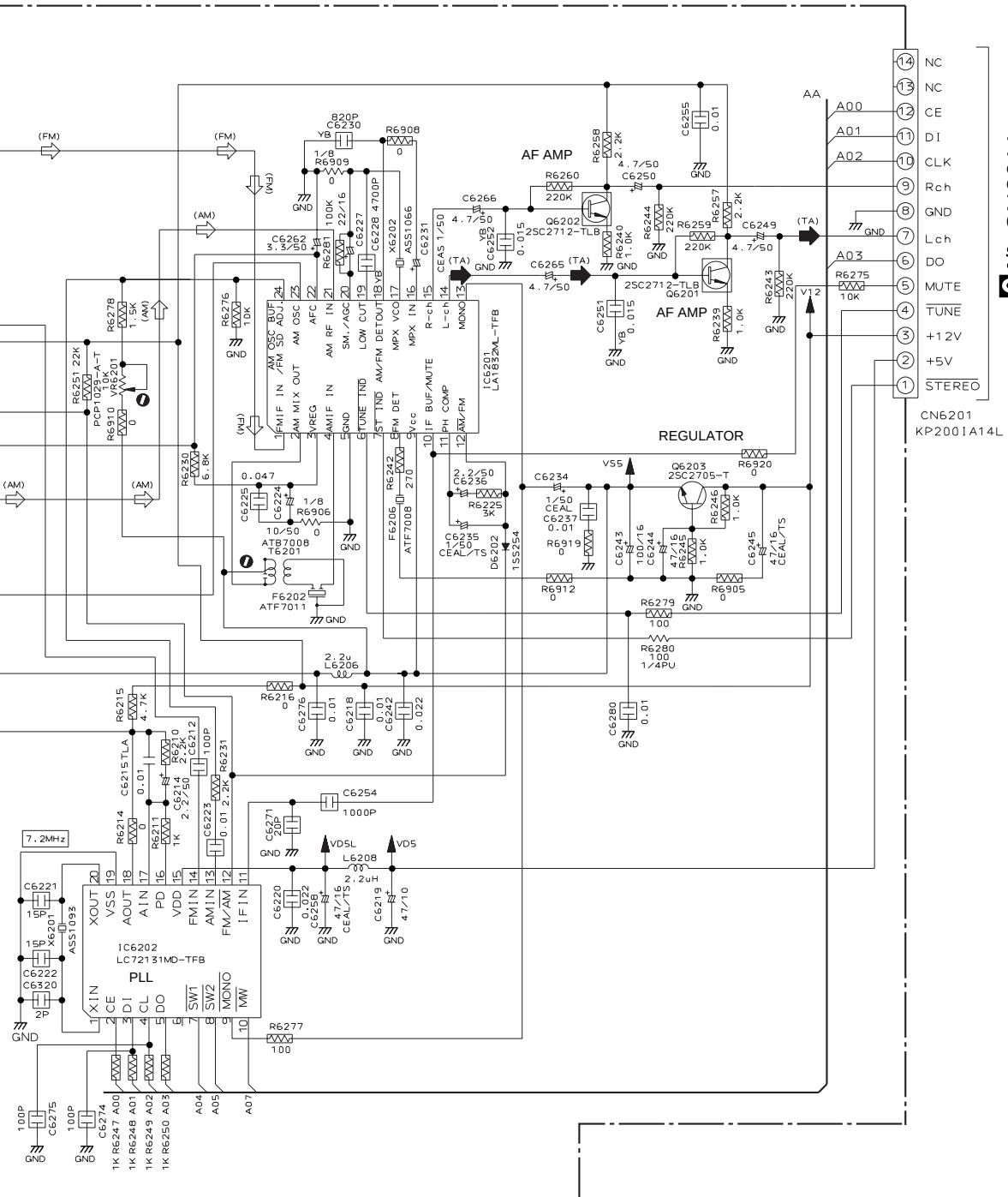
Indicated in Ω , $1/10W \pm 5\%$ Tolerance unless otherwise noted K:K Ω , M:M Ω .

2. CAPACITORS

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

3. DIODES

No mark diode is 1SS254.



CN5201 KP2001A14L

CN5201 KP2001A14L

A



C

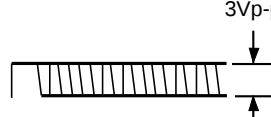
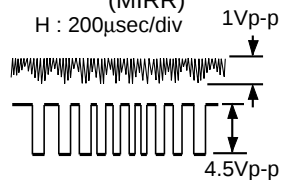
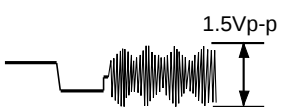
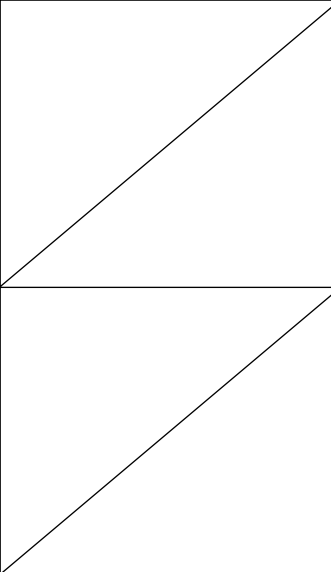
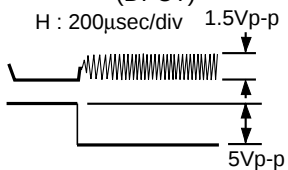
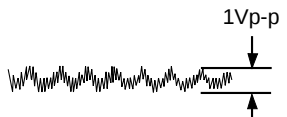
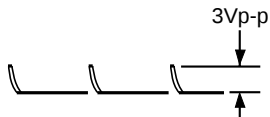
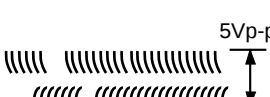
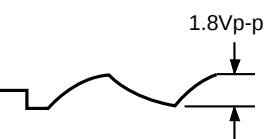
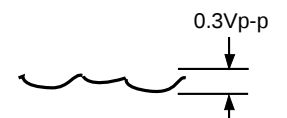
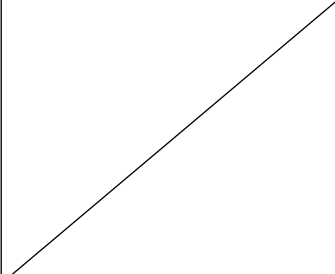
- D

• WAVEFORMS OF CD MAIN UNIT

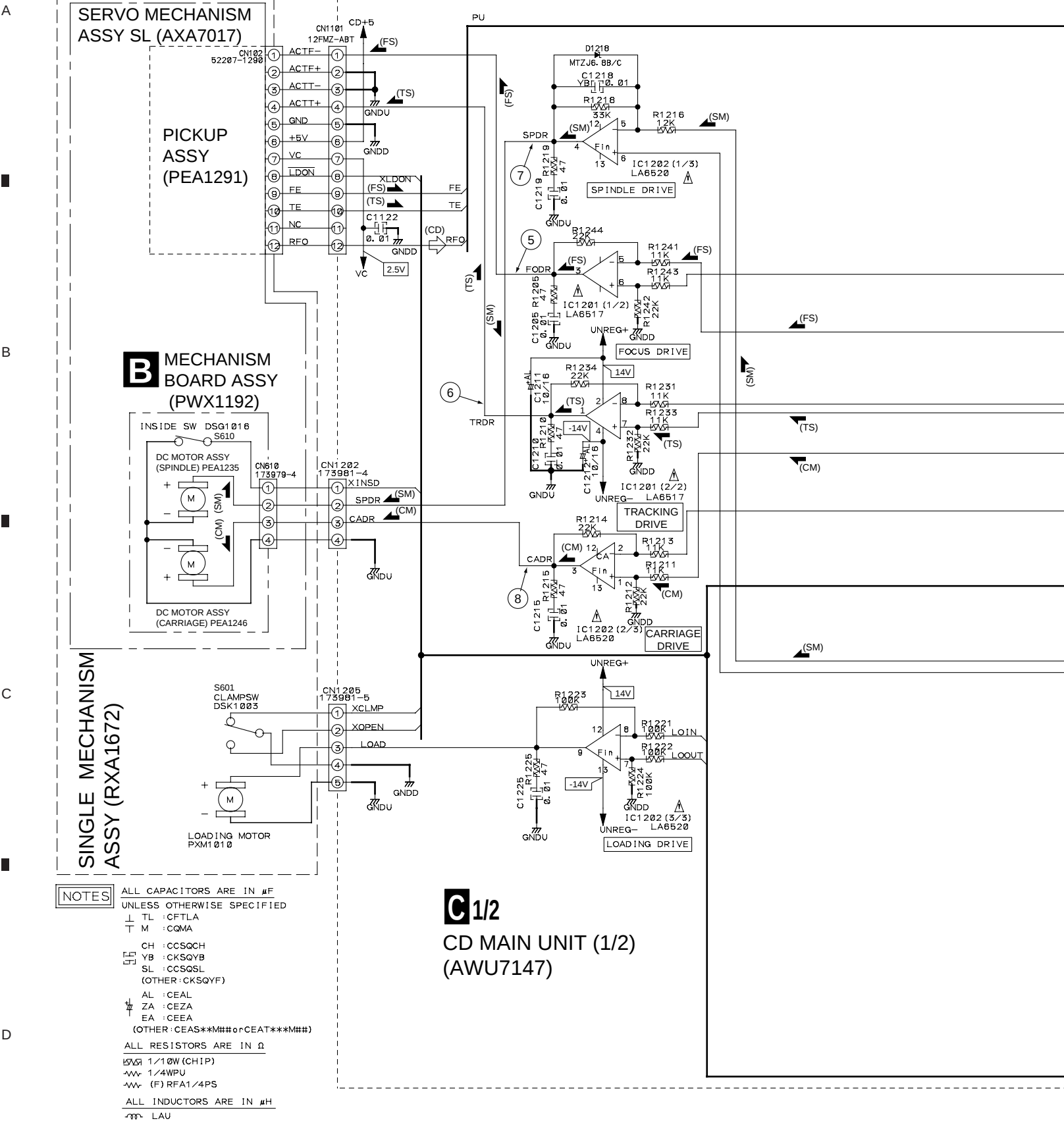
Note: The encircled numbers denote measuring points in the schematic diagram.

*1 50T-JUMP: After switching to the pause mode, press the manual search key.

*2 FOCUS-IN: Press the play key without loading a disc.

② TP1- Pin 1 : PLAY MODE (RF) H : 500nsec/div 	⑤ IC1201- Pin 3 : PLAY MODE (FODR) H : 1msec/div 	⑧ IC1202- Pin 3 : TRACK SEARCH MODE (CADR) H : 200msec/div 	⑲ IC1301- Pin 52 : PLAY MODE (1kHz) (PCMD) H : 500nsec/div 	
② TP1- Pin 1 : TRACK SEARCH MODE (RF) H : 200μsec/div 	⑥ IC1201- Pin 1 : PLAY MODE (TRDR) H : 1msec/div 	⑨ IC1101- Pin 32 : PLAY MODE (EFM) H : 500nsec/div 	⑳ TRACK SEARCH MODE Upper:TP1-Pin1(RF) Lower:IC1101-Pin 29 (MIRR) H : 200μsec/div 	
③ TP1- Pin 6 : PLAY MODE (FOER) H : 10msec/div 	⑥ IC1201- Pin 1 : 50T-JUMP(*1) MODE (TRDR) H : 1msec/div 			㉔ PLAY MODE Upper:TP1-Pin1(RF) Lower:IC1101-Pin 30 (DFCT) H : 200μsec/div 
④ TP1- Pin 2 : PLAY MODE (TRER) H : 10msec/div 	⑦ IC1202- Pin 4 : PLAY MODE (SPDR) H : 50msec/div 			③③ IC1301- Pin 27 : PLAY MODE (MDP) H : 2μsec/div 
④ TP1- Pin 2 : 50T- JUMP(*1)MODE (TRER) H : 1msec/div 	⑦ IC1202- Pin 4 : TRACK SEARCH MODE (SPDR) H : 50msec/div 	①⑥ IC1301- Pin 54 : PLAY MODE (1kHz) (BCLK) H : 500nsec/div 	⑤③ IC1301- Pin 38 : PLAY MODE (PCO) H : 10μsec/div 	
⑤ IC1201- Pin 3 : FOCUS-IN(*2) MODE (FODR) H : 200msec/div 	⑧ IC1202- Pin 3 : PLAY MODE (CADR) H : 2sec/div 	①⑧ IC1301- Pin 50 : PLAY MODE (1kHz) (LRCK) H : 10μsec/div 		

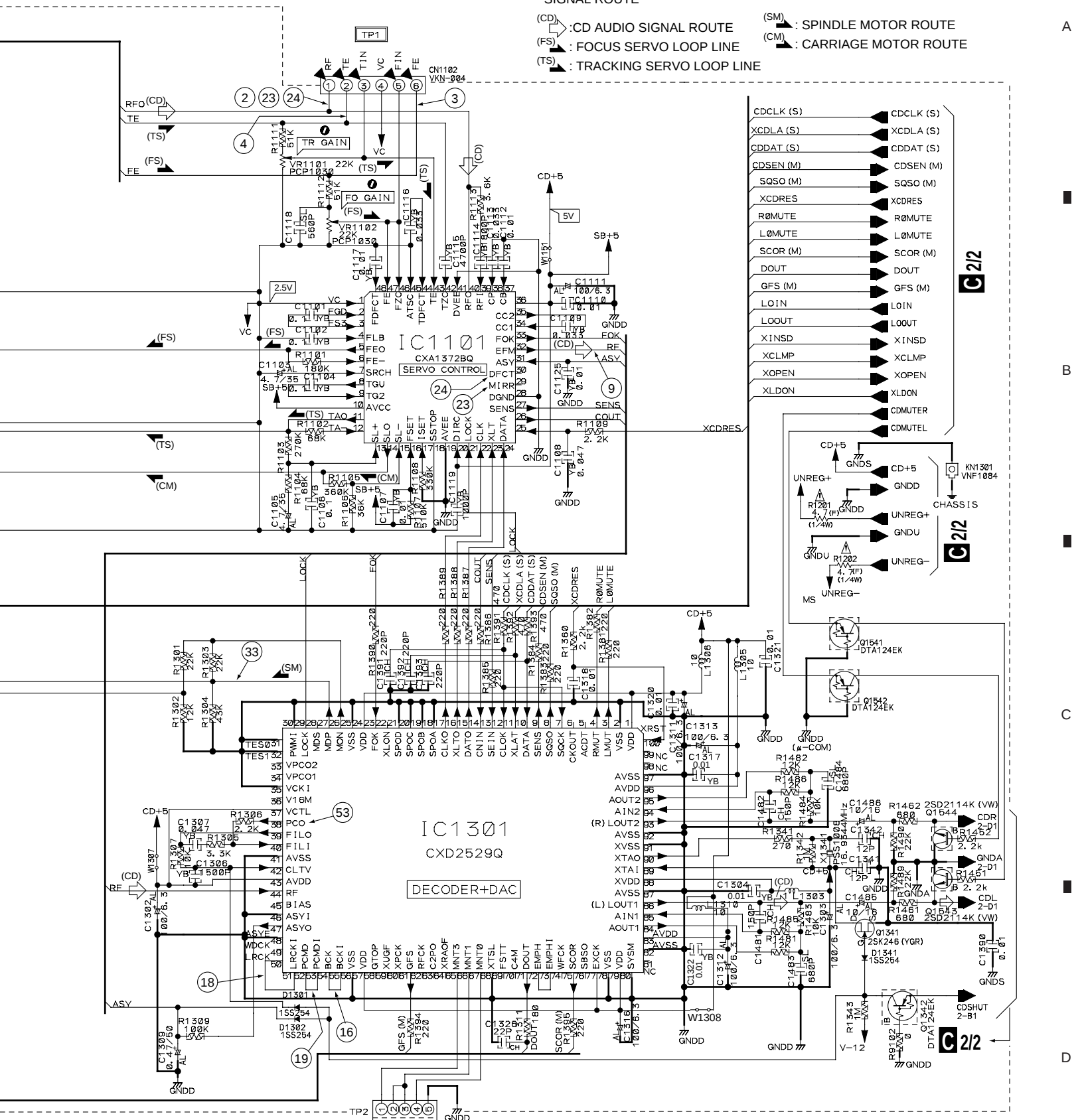
3.4 MECHANISM BOARD ASSY AND CD MAIN UNIT(1/2)



SIGNAL ROUTE

- (CD) : CD AUDIO SIGNAL ROUTE
 (FS) : FOCUS SERVO LOOP LINE
 (TS) : TRACKING SERVO LOOP LINE

- (SM) : SPINDLE MOTOR ROUTE
 (CM) : CARRIAGE MOTOR ROUTE



3.5 CD MAIN (2/2), CD KEYB1 AND CD KEYB2 UNITS

A

B

C

D

C1/2

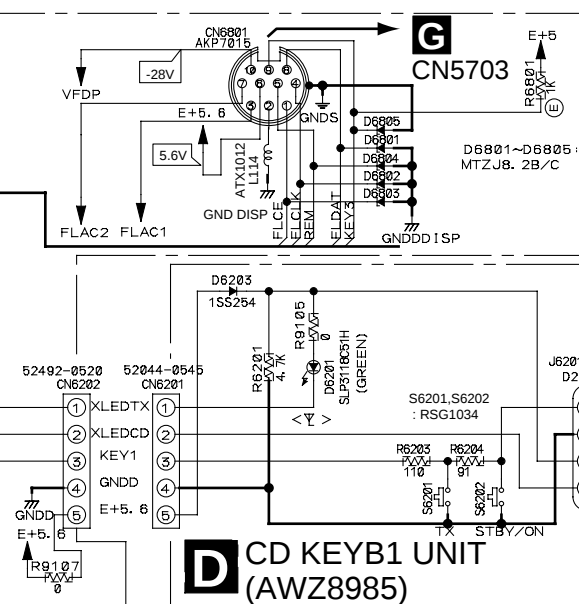
NO CONNECTION

A CN6201

C1/2

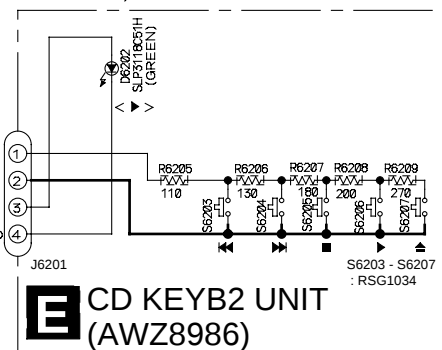
CN3002

CN3001



SIGNAL ROUTE

- ➡ : LCH AUDIO SIGNAL ROUTE
- (AUX) ➡ : AUX AUDIO SIGNAL ROUTE
- (PB) ➡ : DECK PB SIGNAL ROUTE
- (REC OUT) ➡ : DECK REC SIGNAL ROUTE
- (TX) ➡ : TUNER AUDIO SIGNAL ROUTE
- (CD) ➡ : CD AUDIO SIGNAL ROUTE



C 2/2 CD MAIN UNIT (2/2) (AWU7147)

CD KEYB1 UNIT
S6201 : Y
S6202 : STANDBY/ON

CD KEYB2 UNIT
S6203 :
S6204 :
S6205 :
S6206 :
S6207 :

NOTES

ALL CAPACITORS ARE IN μF
UNLESS OTHERWISE SPECIFIED
TL : CFTLA
M : CQMA

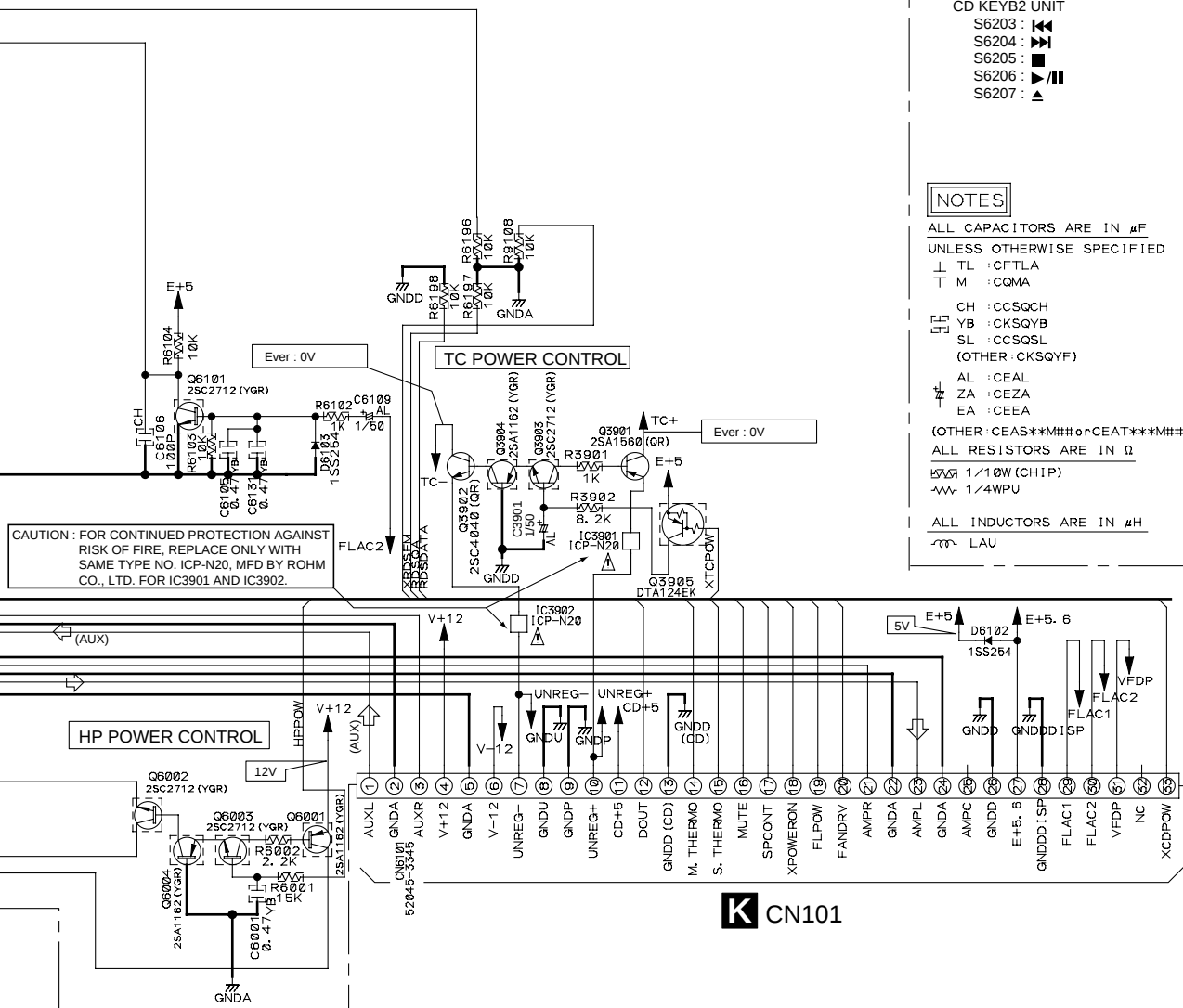
CH : CCSQCH
YB : CKSQYB
SL : CCSQSL
(OTHER : CKSQYF)

AL : CEAL
ZA : CEZA
EA : CEEA

(OTHER : CEAS**M#**orCEAT**M#**)

ALL RESISTORS ARE IN Ω
1/10W (CHIP)
1/4WPU

ALL INDUCTORS ARE IN μH
LAU



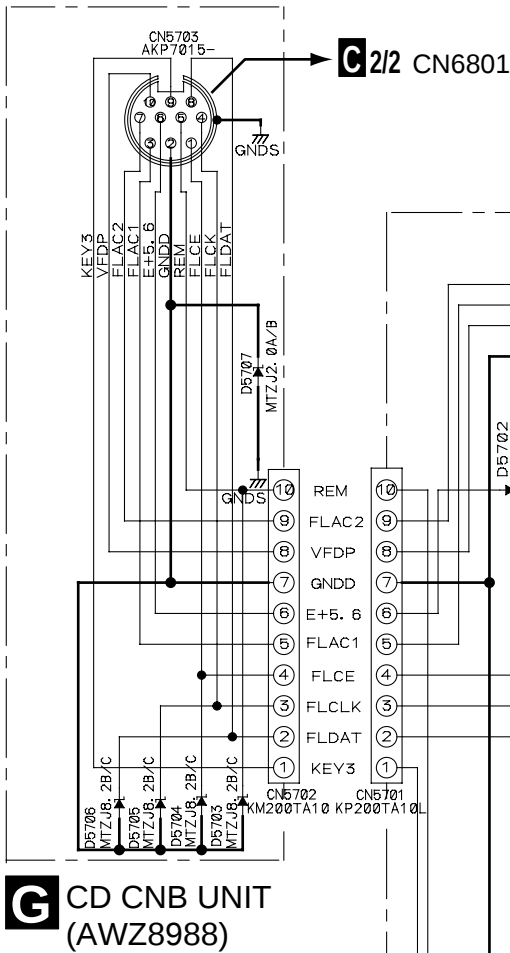
3.6 CD FLDP, CD CNB AND CD DPKEY UNITS

A

B

C

D



F CD FLDP UNIT (AWU7003)

NOTES

ALL CAPACITORS ARE IN μ F
UNLESS OTHERWISE SPECIFIED

TL : CFTLA
M : CQMA

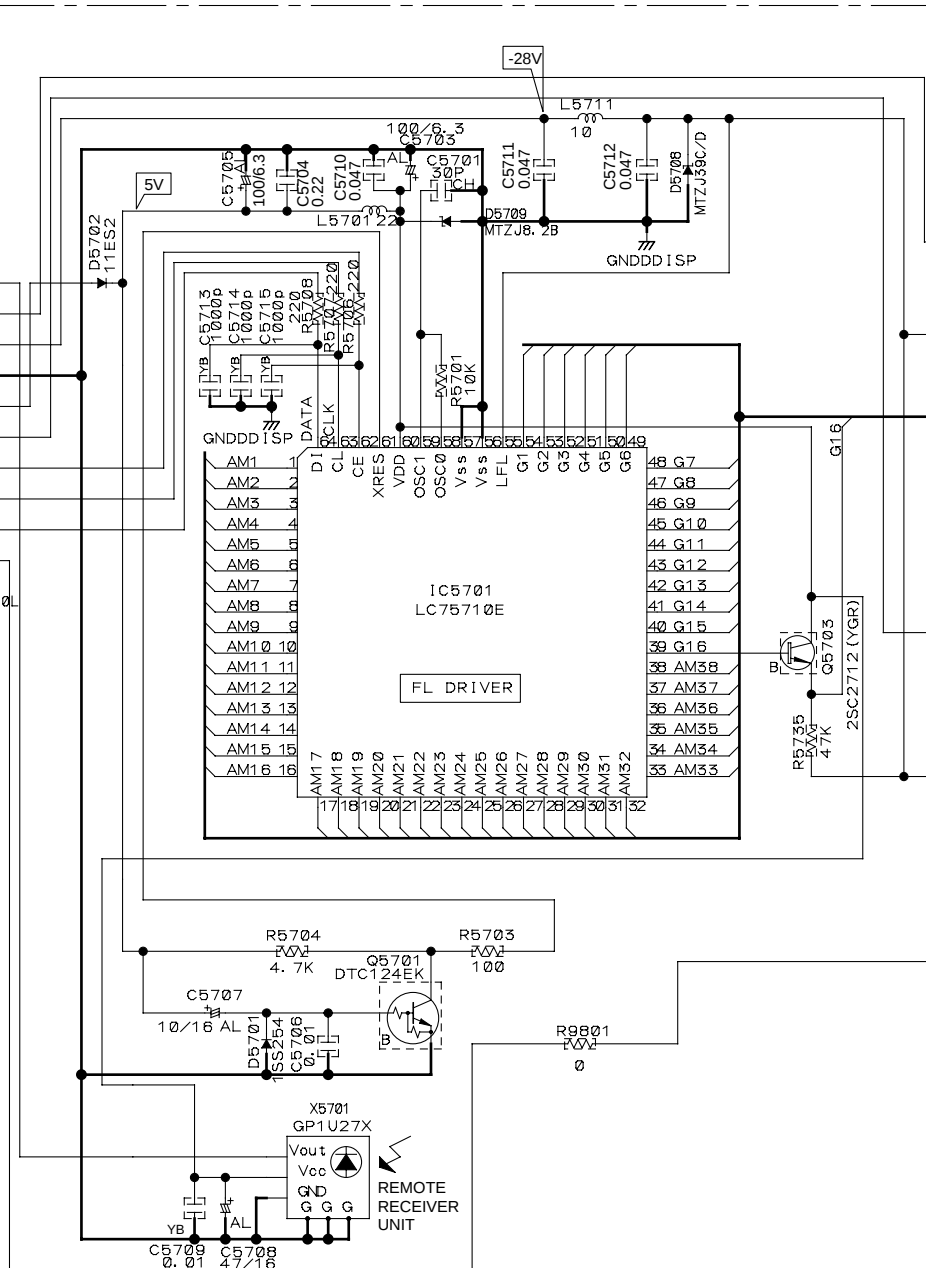
CH : CCSQCH
YB : CKSQYB
SL : CCSQSL
(OTHER : CKSQYF)

AL : CEAL
ZA : CEZA
EA : CEEA
(OTHER : CEAS**M## or CEAT**M##)

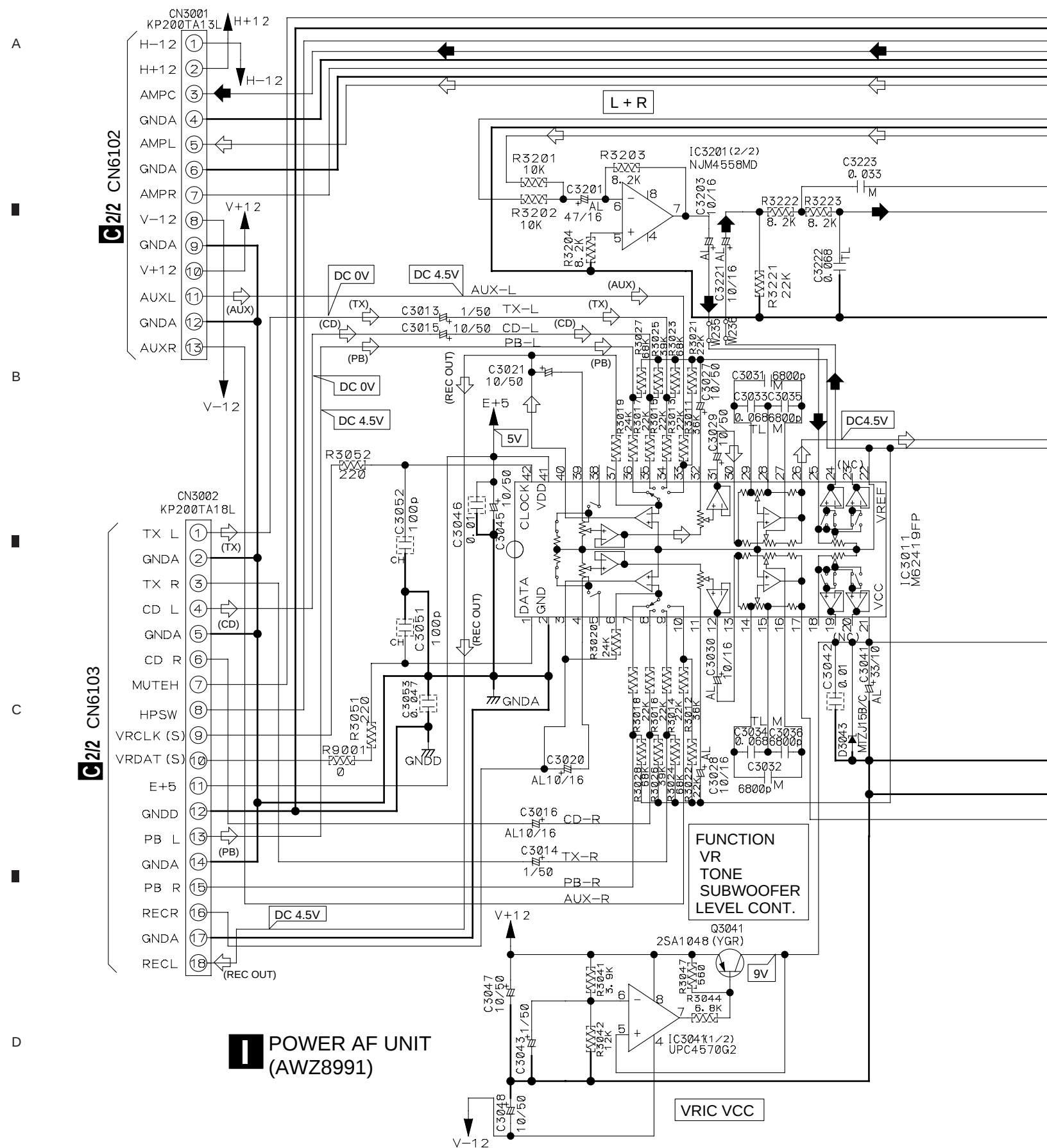
ALL RESISTORS ARE IN Ω

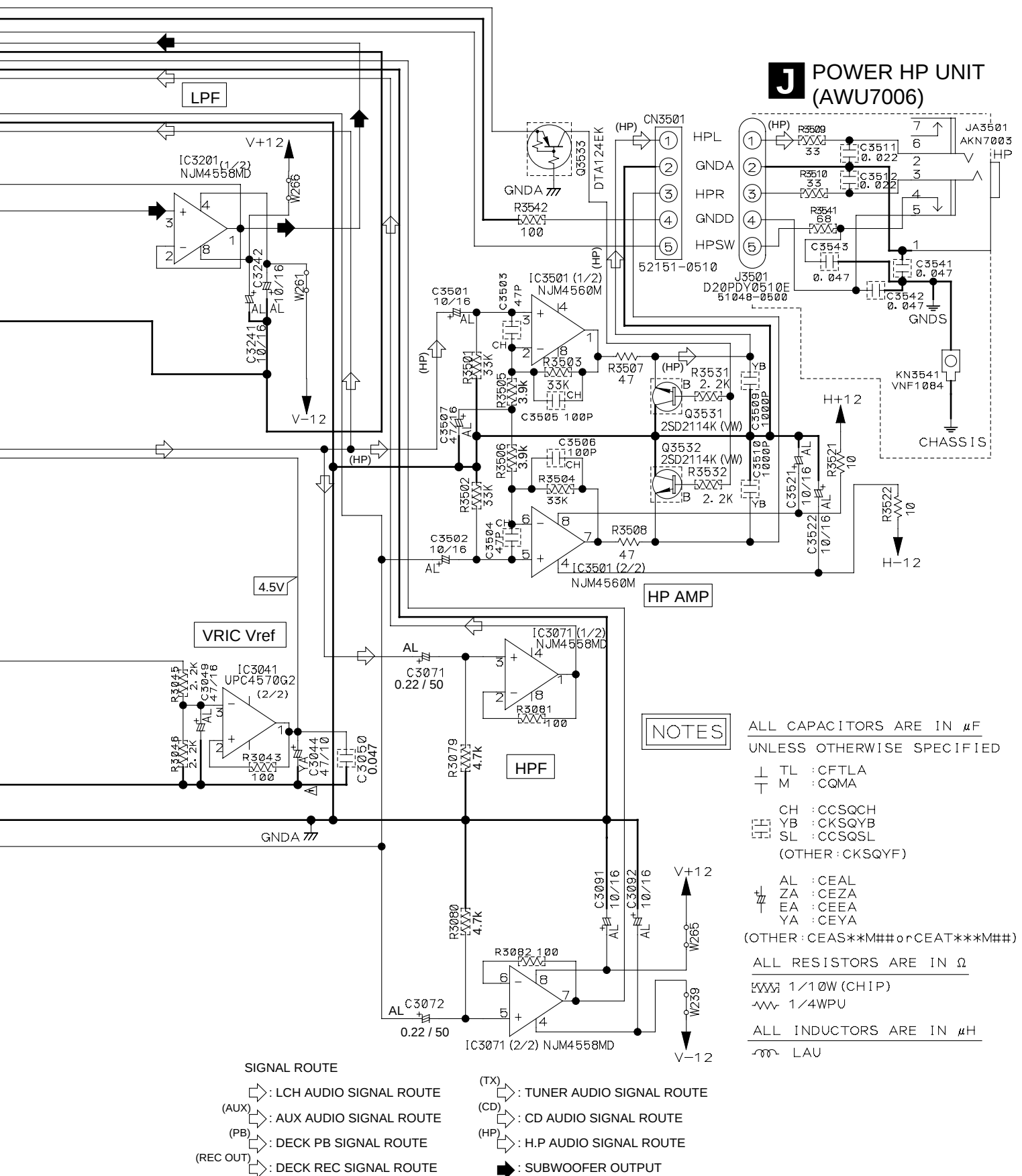
1/10W (CHIP)
1/4WPU

ALL INDUCTORS ARE IN μ H
LAU



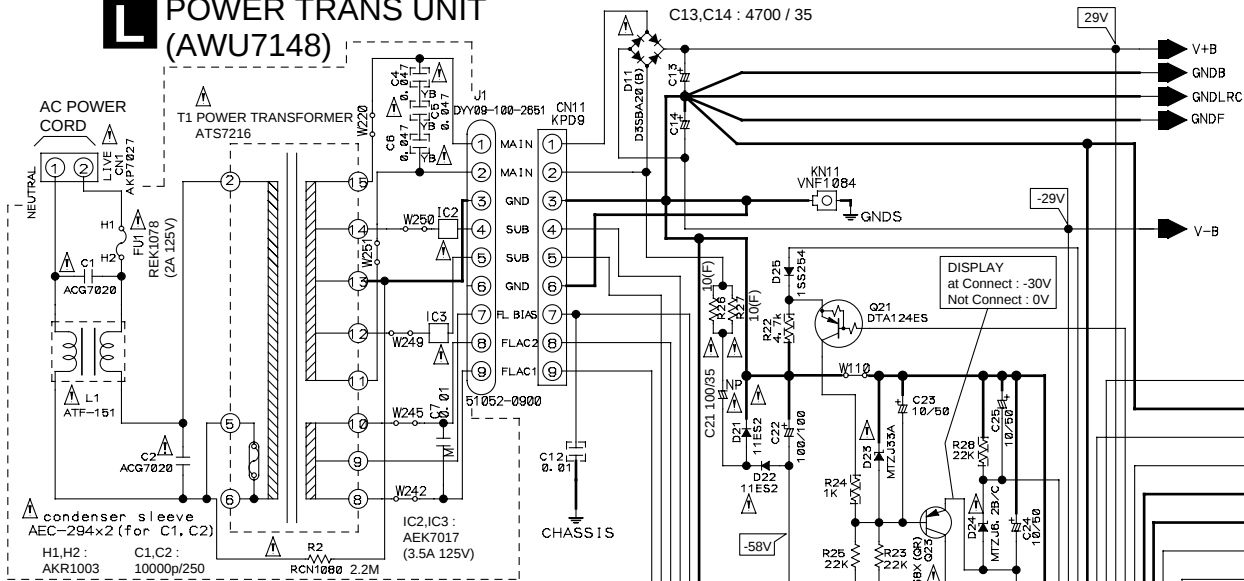
3.7 POWER AF AND POWER HP UNITS





3.8 POWER AMP, POWER TRANS AND POWER SPTB UNITS

POWER TRANS UNIT (AWU7148)



NOTE FOR FUSE REPLACEMENT

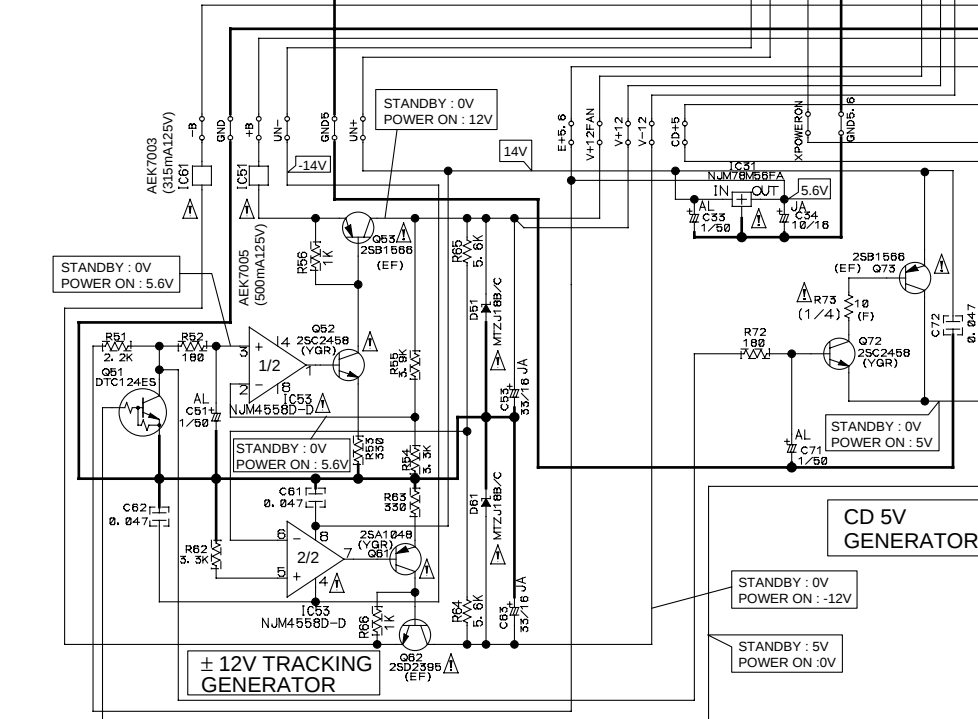
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE AND RATINGS ONLY.

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 49103.5 MFD, BY LITTELFUSE INK. FOR IC2 AND IC3 (AEK7017).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.750 MFD, BY LITTELFUSE INK. FOR IC32 (AEK7007).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.500 MFD, BY LITTELFUSE INK. FOR IC51 (AEK7005).

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491.315 MFD, BY LITTELFUSE INK. FOR IC61 (AEK7003).



NOTES

ALL CAPACITORS ARE IN μ F UNLESS OTHERWISE SPECIFIED

- TL : CFTLA
- T M : CQMA
- CH : CCSQCH
- YB : CKSQYB
- SL : CCSQSL
- (OTHER : CKSQYF)
- AL : CEAL
- ZA : CEZA
- EA : CEEA
- YA : CEYA
- (OTHER : CEAS**M##orCEAT**M##)

ALL RESISTORS ARE IN Ω
1/10W (CHIP)
1/4WPU
(F) RFA1/4PS
FL RD1/4LMF
ALL INDUCTORS ARE IN μ H
LAU

SIGNAL ROUTE

➡ : LCH AUDIO SIGNAL ROUTE

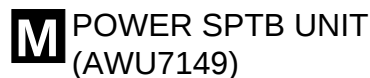
(AUX) : AUX AUDIO SIGNAL ROUTE

➡ : SUBWOOFER OUTPUT

F

C

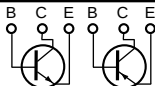
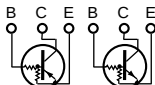
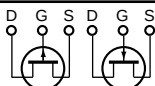
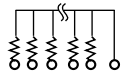
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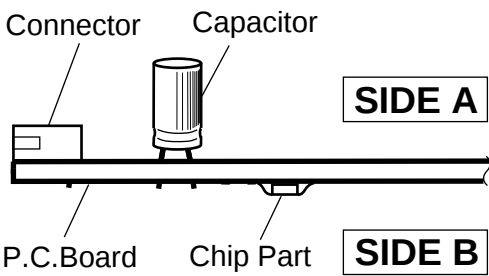
4. PCB CONNECTION DIAGRAM

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.



SIDE A





A

B

C

D

IC3601

Q3601

Q3905

Q6102

Q3903

Q6101

Q3904

IC6101

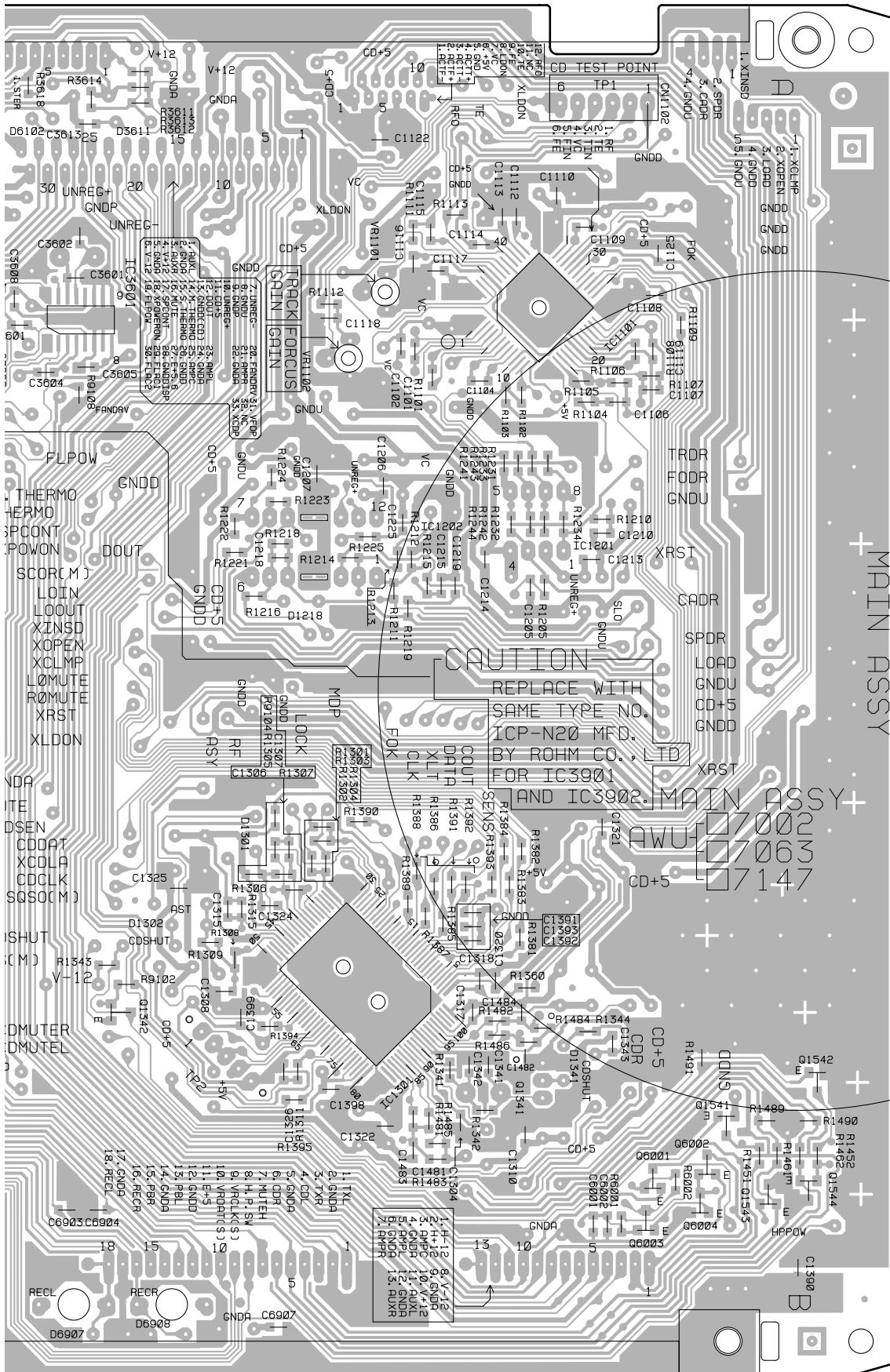
Q6103

CD MAIN UNIT

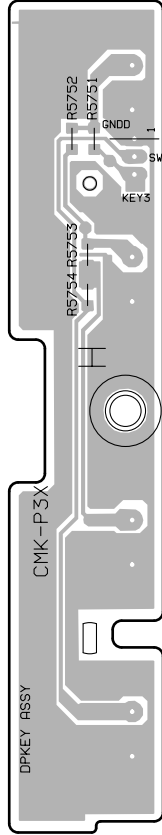
(ANP7209-C)

SIDE B

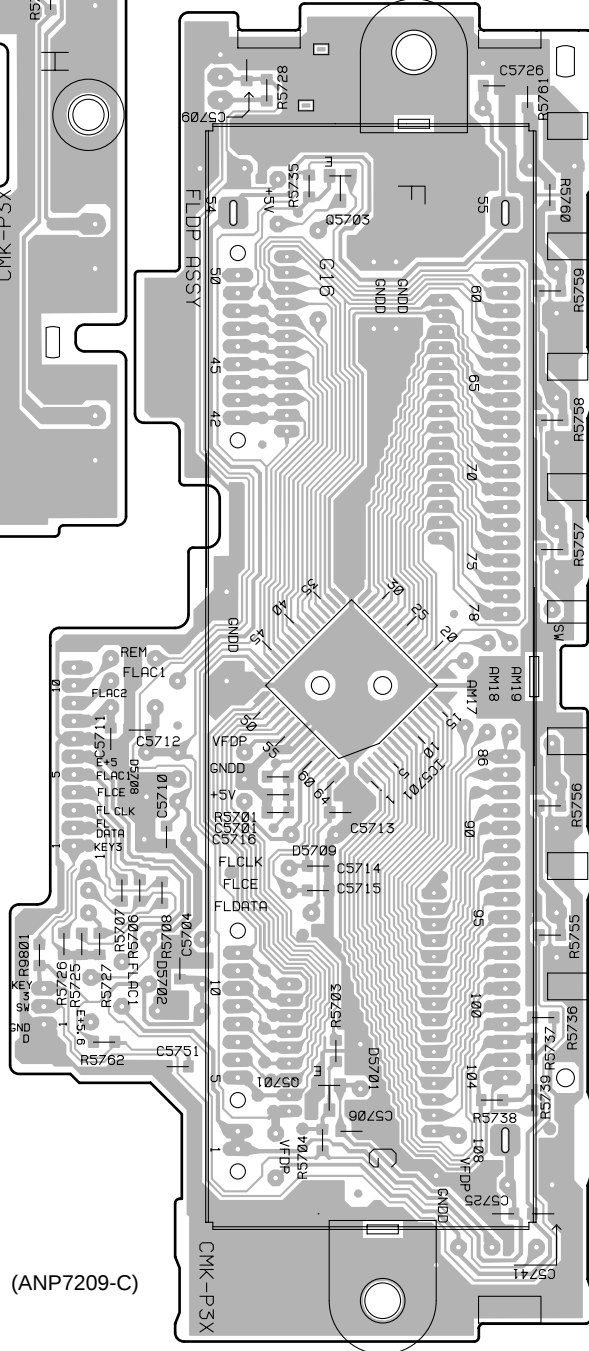




H CD DPKEY UNIT

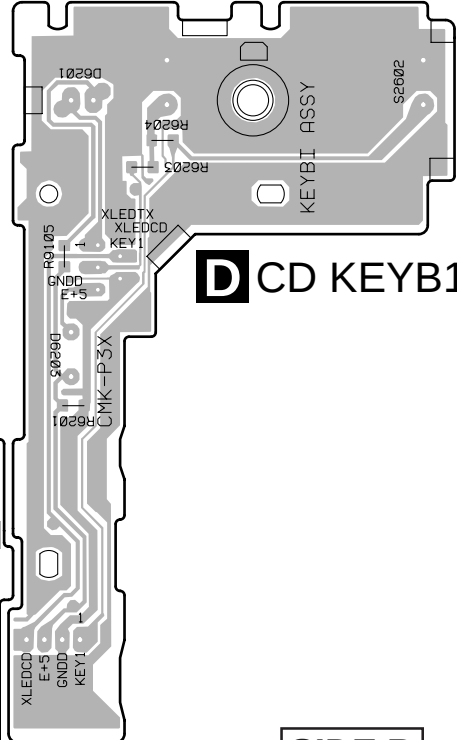


F CD FLDP UNIT



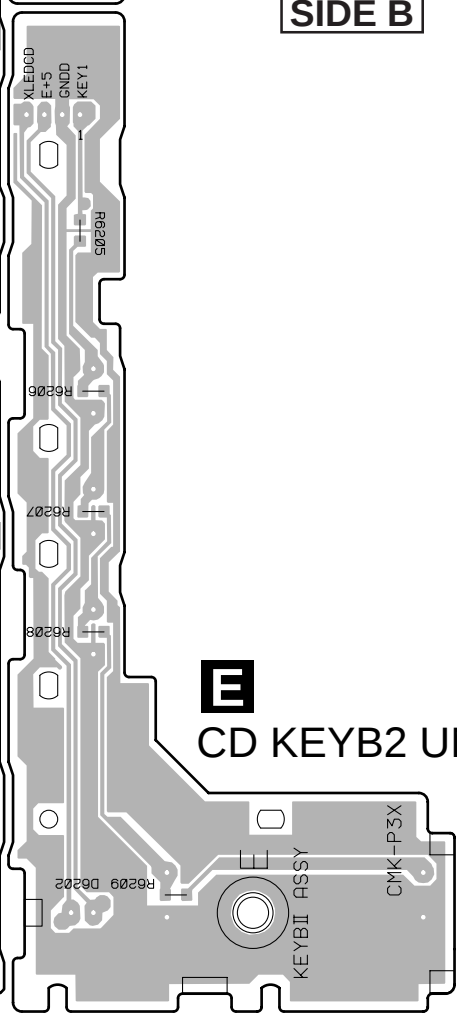
(ANP7209-C)

D CD KEYB1 UNIT



SIDE B

E CD KEYB2 UNIT



4.4 POWER AF, POWER HP, POWER AMP,
POWER TRANS AND POWER SPTB UNITS

L POWER TRANS UNIT

J POWER HP UNIT

AC
POWER
CORD

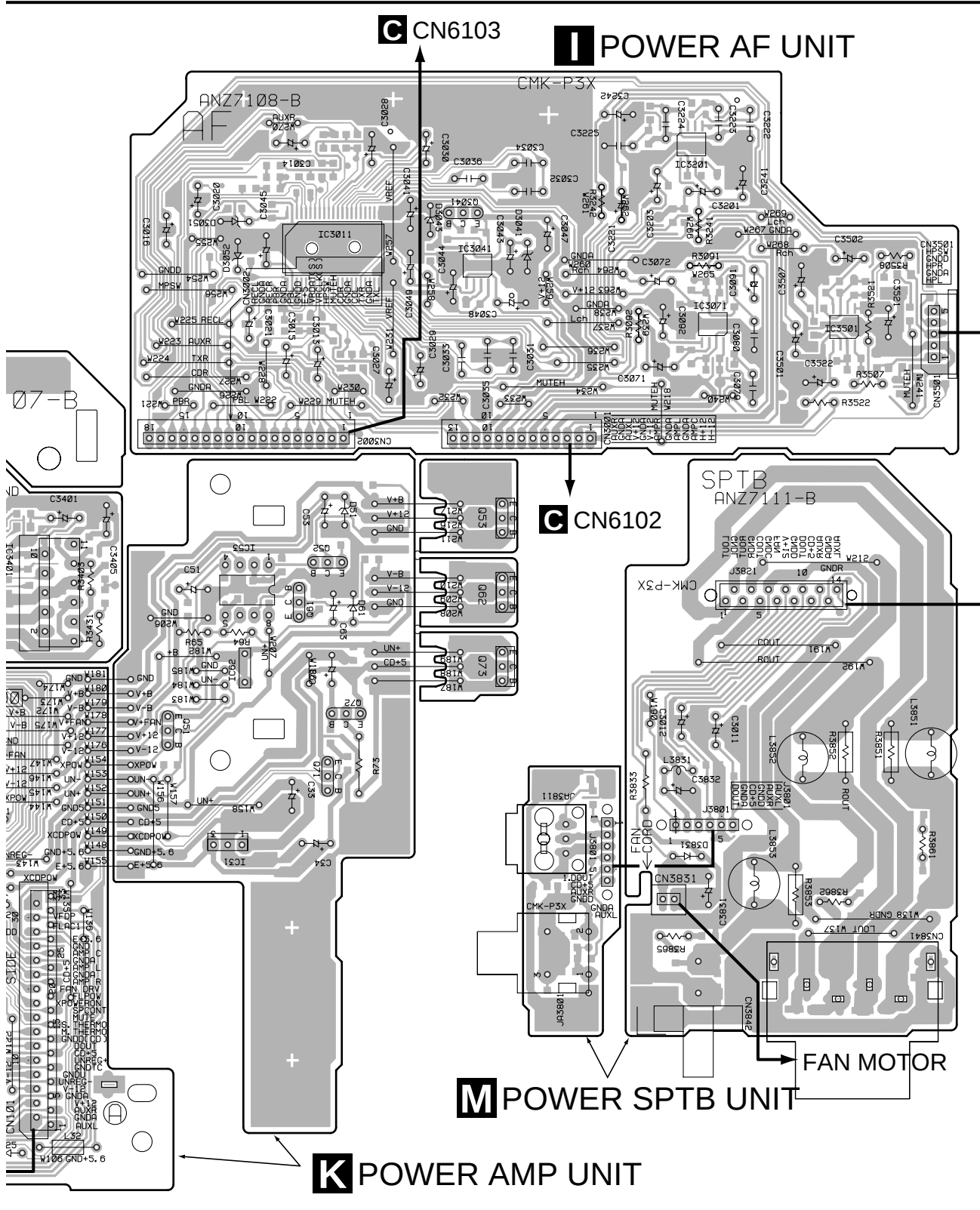
SIDE A

Q23

IC3301

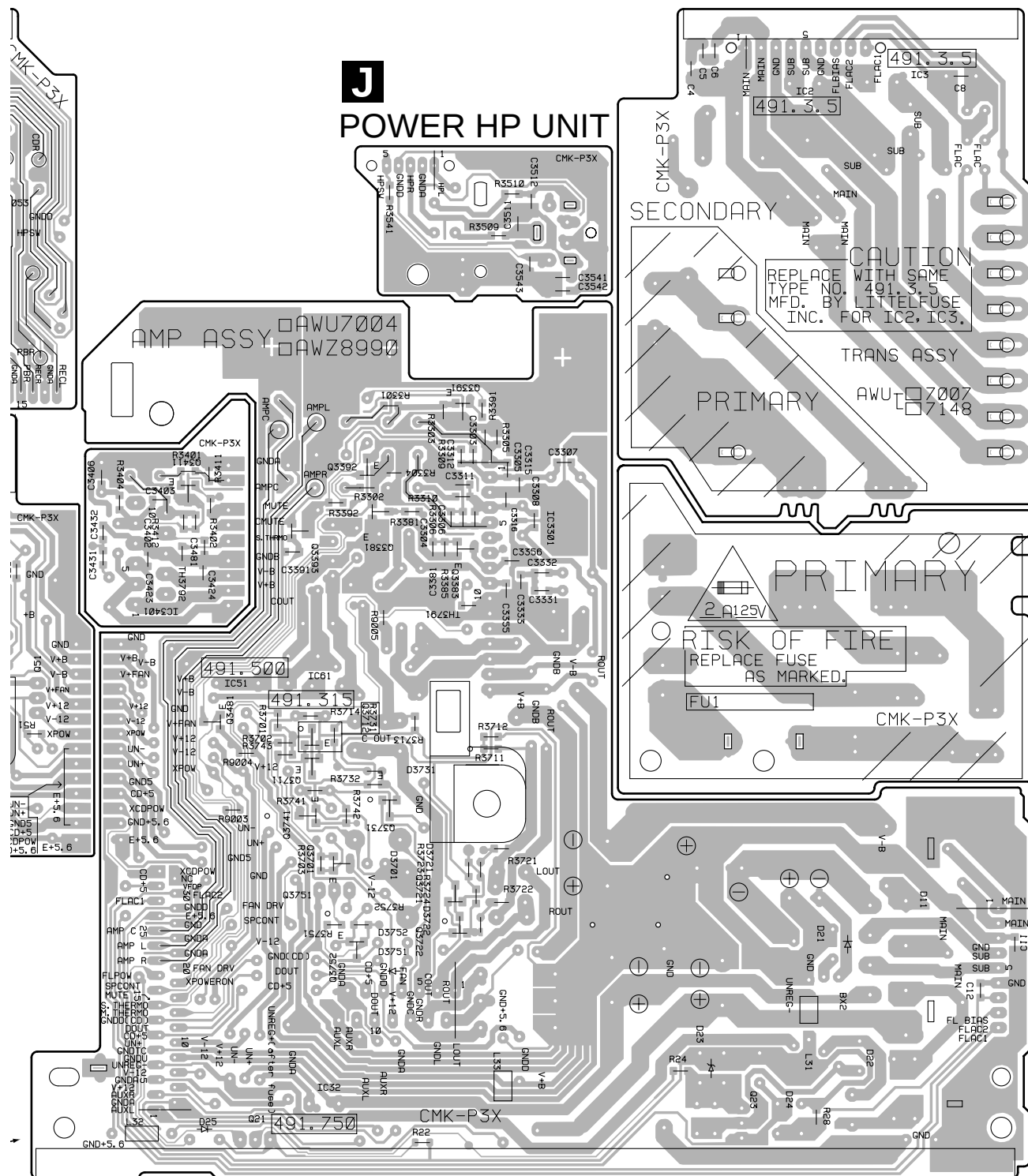
Q3751 IC61 IC51
IC32 Q21

C CN6101



L01

L POWER TRANS UNIT



	Q3393	Q3392	Q3391
Q3481	Q3712	Q3381	Q3383
	Q3711	Q3701	Q3731
	Q3741	Q3752	Q3722

SIDE B

J K L

5. PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

●The $\triangle$ 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 $\rightarrow$ 56×10^1 $\rightarrow$ 561 RD1/4PU $\begin{matrix} 5 & 6 & 1 \\ \hline \end{matrix}$ J

47k Ω $\rightarrow$ 47×10^3 $\rightarrow$ 473 RD1/4PU $\begin{matrix} 4 & 7 & 3 \\ \hline \end{matrix}$ J

0.5 Ω $\rightarrow$ R50 RN2H $\begin{matrix} R & 5 & 0 \\ \hline \end{matrix}$ K

1 Ω $\rightarrow$ 1R0 RS1P $\begin{matrix} 1 & R & 0 \\ \hline \end{matrix}$ K

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

5.62k Ω $\rightarrow$ 562×10^1 $\rightarrow$ 5621 RN1/4PC $\begin{matrix} 5 & 6 & 2 & 1 \\ \hline \end{matrix}$ F

Mark	No.	Description	Part No.
------	-----	-------------	----------

LIST OF ASSEMBLIES

		FM/AM TUNER MODULE	AXQ7065
--	--	--------------------	---------

NSP		MECHANISM BOARD ASSY	PWX1192
-----	--	----------------------	---------

NSP		MOTH ASSY	AWM7386
	└	CD MAIN UNIT	AWU7147
	└	CD KEYB1 UNIT	AWZ8985
	└	CD KEYB2 UNIT	AWZ8986
	└	CD FLDP UNIT	AWU7003
	└	CD CNB UNIT	AWZ8988
	└	CD DPKEY UNIT	AWZ8989

NSP		POWER ASSY	AWM7387
	└	POWER AF UNIT	AWZ8991
	└	POWER HP UNIT	AWU7006
	└	POWER AMP UNIT	AWZ8990
	└	POWER TRANS UNIT	AWU7148
	└	POWER SPTB UNIT	AWU7149

Mark	No.	Description	Part No.
------	-----	-------------	----------

	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

	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, C6412, 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

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	ATC1003
L6401	ATC1020
L6402	ATC1021
F6204	ATF-107
F6203	ATF-119

Mark	No.	Description	Part No.
	C6220, C6226, C6242, C6256 C6225		CKSQYF223Z50 CKSQYF473Z50

RESISTORS

R6280	RD1/4PU101J
R6413, R6416, R6418, R6906, R6909	RS1/8S0R0J
R6401	RS1/8S470J
VR6201(10kΩ)	PCP1029
Other Resistors	RS1/10S□□□J

OTHERS

BN6202	4P ANTENNA TERMINAL	AKE7025
X6202	CRYSTAL RESONATOR (456kHz)	ASS1066
X6201	CRYSTAL RESONATOR (7.2MHz)	ASS1093
CN6201	14P SOCKET AM RF TUNING BLOCK	KP200IA14L AXX7041

B MECHANISM BOARD ASSY**SWITCHES**

S610	DSG1016
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OTHERS

CN610	MT CONNECTOR(4P)	173979-4
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C CD MAIN UNIT**SEMICONDUCTORS**

IC1101	CXA1372BQ
IC1301	CXD2529Q
△ IC3901, IC3902	ICP-N20
△ IC1201	LA6517
△ IC1202	LA6520

IC6101	PD4843B
Q3904, Q6001, Q6004, Q6103	2SA1162
Q3901	2SA1560
Q3903, Q6002, Q6003, Q6101	2SC2712
Q3902	2SC4040

Q1543, Q1544	2SD2114K
Q1341	2SK246
Q1342, Q1541, Q1542, Q3905	DTA124EK
Q6102	DTC143EK
D1301, D1302, D1341, D3611	1SS254

D6101-D6104	1SS254
D6907, D6908	MTZJ15B
D1218	MTZJ6.8B
D6801-D6805, D6904-D6906	MTZJ8.2B
D6901-D6903	UDZS8.2B

COILS AND FILTERS

L114 Beads Filter	ATX1012
L1305, L1306, L1310	LAU100J
L1303	LAU1R0J
L6101	LAU220J

CAPACITORS

C6104	ACH7013
C6106	CCSQCH101J50
C1341, C1342	CCSQCH120J50

Mark	No.	Description	Part No.
	C1481, C1482 C1326		CCSQCH151J50 CCSQCH220J50

C1391-C1393, C6114, C6120, C6124 C6126 C1118 C1483, C1484 C1211, C1212, C1485, C1486, C6107	CCSQCH221J50 CCSQCH221J50 CCSQSL561J50 CCSQSL681J50 CEAL100M16
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C6130 C1111, C1302, C1303, C1311-C1313 C1316, C6101 C3901, C6109 C1103, C1105	CEAL100M16 CEAL101M6R3 CEAL101M6R3 CEAL1R0M50 CEAL4R7M35
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C1309 C1119, C6121, C6122, C6125 C1107, C1112, C1117, C1125, C1218 C1101, C1102, C1104, C1106 C1306, C6118, C6119	CEALR47M50 CKSQYB102K50 CKSQYB103K50 CKSQYB104K25 CKSQYB152K50
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C1114 C6903, C6904 C1109, C1113, C1116 C1115 C1108, C1307	CKSQYB182K50 CKSQYB332K50 CKSQYB333K50 CKSQYB472K50 CKSQYB473K50
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C6001, C6105, C6131 C1110, C1122, C1205, C1210, C1215 C1219, C1225, C1304, C1317, C1318 C1320-C1322, C1390, C3611 C6102, C6103, C6108, C6111, C6113	CKSQYB474K16 CKSQYF103Z50 CKSQYF103Z50 CKSQYF103Z50 CKSQYF103Z50
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C6199, C6901, C6902, C6907	CKSQYF103Z50
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RESISTORS

R6200	RD1/4PU223J
△ R1201, R1202	RFA1/4PS4R7J
R6801	RN1/10SE1001D
△ R6148	RS1/10S102J
VR1101, VR1102(22kΩ)	PCP1030

Other Resistors	RS1/10S□□□J
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OTHERS

CN1101 FPC CONNECTOR(12P)	12FMZ-ABT
CN1202 MT CONNECTOR(4P)	173981-4
CN1205 MT CONNECTOR(5P)	173981-5
CN6101 FFC CONNECTOR(33P)	52045-3345
CN6202 FFC BOTTOM CONNECTOR(5P)	52492-0520

CN6901 SOCKET(19P)	AKP7001
CN6801 10P MINI DIN SOCKET	AKP7015
CN3611 14P PLUG	KM200IA14
CN6102 13P PLUG	KM200TA13
CN6103 18P PLUG	KM200TA18

X1341 CRYSTAL RESONATOR (16.9344MHz)	PSS1008
CN1102 6P SIDE POST KN1301, KN6101 EARTH METAL FITTING	VKN-004 VNF1084

X6101 CERAMIC RESONATOR (4.19MHz)	VSS1014
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XC-L7

Mark	No.	Description	Part No.
D	CD KEYB1 UNIT		
	SEMICONDUCTORS		
	D6203		1SS254
	D6201		SLP3118C51H
SWITCHES			
	S6201, S6202		RSG1034
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	CN6201	5P FFC CONNECTOR	52044-0545
	J6201	4P JUMPER WIRE	D20PWW0405E
E	CD KEYB2 UNIT		
	SEMICONDUCTORS		
	D6202		SLP3118C51H
SWITCHES			
	S6203–S6207		RSG1034
RESISTORS			
	All Resistors		RS1/10S□□□J
F	CD FLDP UNIT		
	SEMICONDUCTORS		
	IC5701		LC75710E
	Q5703		2SC2712
	Q5701		DTC124EK
	D5702		11ES2
	D5701		1SS254
	D5708		MTZJ39C
	D5709		MTZJ8.2B
COILS AND FILTERS			
	L5711		LAU100J
	L5701		LAU220J
SWITCHES			
	S5755–S5760		RSG1030
CAPACITORS			
	C5701		CCSQCH300J50
	C5707		CEAL100M16
	C5703, C5705		CEAL101M6R3
	C5721, C5722		CEAL1R0M50
	C5708		CEAL470M16
	C5713–C5715		CKSQYB102K50
	C5709		CKSQYB103K50
	C5711, C5712, C5725, C5726		CKSQYB473K50
	C5706		CKSQYF103Z50
	C5704		CKSQYF224Z25
	C5710		CKSQYF473Z50

Mark	No.	Description	Part No.
RESISTORS			
	R5724		RA11T473J
	R5721, R5722		RA15T473J
	R5723		RA8T473J
	Other Resistors		RS1/10S□□□J
OTHERS			
	9P CABLE HOLDER		51048-0900
	12P CABLE HOLDER		51048-1200
	CN5751		52147-0310
	3P JUMPER CONNECTOR		
	V5701	FL TUBE	AAV7051
	FL SPACER		AEB7091
	X5701	REMOTE RECEIVER UNIT	GP1U27X
	CN5701	10P SOCKET	KP200TA10L
G	CD CNB UNIT		
	SEMICONDUCTORS		
	D5707		MTZJ2.0A
	D5703–D5706		MTZJ8.2B
OTHERS			
	CN5703	10P MINI DIN SOCKET	AKP7015
	CN5702	10P PLUG	KM200TA10
H	CD DPKEY UNIT		
	SWITCHES		
	S5751–S5754		RSG1030
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	J5751	3P JUMPER WIRE	D20PWY0305E
I	POWER AF UNIT		
	SEMICONDUCTORS		
	IC3011		M62419FP
	IC3071, IC3201		NJM4558MD
	IC3501		NJM4560M
	IC3041		UPC4570G2
	Q3041		2SA1048
	Q3531, Q3532		2SD2114K
	Q3533		DTA124EK
	D3043		MTZJ15B
CAPACITORS			
	C3051, C3052, C3505, C3506		CCSQCH101J50
	C3503, C3504		CCSQCH470J50
	C3016, C3020, C3028, C3030		CEAL100M16
	C3091, C3092, C3203, C3221		CEAL100M16
	C3241, C3242, C3501, C3502		CEAL100M16
	C3521, C3522		CEAL100M16
	C3041		CEAL330M10
	C3049, C3201, C3507		CEAL470M16
	C3071, C3072		CEALR22M50
	C3015, C3021, C3027, C3029, C3045		CEAT100M50

Mark	No.	Description	Part No.
△	C3047, C3048		CEAT100M50
	C3013, C3014, C3043		CEAT1R0M50
	C3044		CEYA470M10
	C3033, C3034, C3222		CFTLA683J50
	C3509, C3510		CKSQYB102K50
	C3042, C3046		CKSQYF103Z50
	C3050, C3053		CKSQYF473Z50
	C3223		CQMA333J50
	C3031, C3032, C3035, C3036		CQMA682J50

RESISTORS

R3521, R3522	RD1/4PU100J
R3507, R3508	RD1/4PU470J
Other Resistors	RS1/10S□□□J

OTHERS

CN3001 13P SOCKET	KP200TA13L
CN3002 18P SOCKET	KP200TA18L

J POWER HP UNIT

CAPACITORS

C3511, C3512	CKSQYF223Z50
C3541-C3543	CKSQYF473Z50

RESISTORS

All Resistors	RS1/10S□□□J
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OTHERS

5P CABLE HOLDER	51048-0500
JA3501 MINI JACK	AKN7003
J3501 2mm PITCH JUMPER(5P)	D20PDY0510E
KN3541 EARTH METAL FITTING	VNF1084

K POWER AMP UNIT

SEMICONDUCTORS

△ IC61 (315mA 125V)	AEK7003
△ IC51 (500mA 125V)	AEK7005
△ IC32 (750mA 125V)	AEK7007
△ IC3401	LM3886TF
△ IC53	NJM4558D-D
△ IC31	NJM78M56FA
△ IC3301	STK401-030
△ Q61	2SA1048
Q3721, Q3722, Q3731	2SA1162
△ Q23	2SB1238X
△ Q53, Q73	2SB1566
△ Q52, Q72	2SC2458
Q3383, Q3711, Q3712, Q3741	2SC2712
Q3391, Q3392, Q3411, Q3701, Q3752	2SD2114K
△ Q62	2SD2395
Q3393, Q3481	DTA124EK
Q21, Q3751	DTA124ES
Q3381	DTA144EK
Q51	DTC124ES
△ D21, D22, D3751	11ES2

Mark	No.	Description	Part No.
	D25, D3381, D3701		1SS254
	D3721, D3722, D3731		1SS355
△	D31		D2SBA20(B)
△	D11		D3SBA20(B)
△	D23		MTZJ33A
△	D24		MTZJ6.2B
△	D51, D61		MTZJ18B
	TH3791, TH3792		AEX7002

RELAYS

RY3331, RY3431	ASR7007
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CAPACITORS

C3307, C3308	CCSQCH100D50
C3403	CCSQCH121J50
C3303, C3304	CCSQCH330J50
C3305, C3306	CCSQCH470J50
C33, C51, C71	CEAL1R0M50

C21	CEANP101M35
C23-C25, C3313, C3314, C3401	CEAT100M50
C3741	CEAT100M50
C22	CEAT101M2A
C3323, C3354	CEAT101M50

C3321, C3322, C3421, C3422	CEAT220M50
C3711	CEAT221M6R3
C3309, C3310	CEAT330M16
C3405, C3411	CEAT470M10
C32	CEAT472M16

C13, C14	CEAT472M35
C31	CEAT682M16
C34	CEJA100M16
C53, C63	CEJA330M16
C3301, C3302	CEZA100M50

C3402	CKSQYB104K25
C3331-C3333, C3431, C3432	CKSQYB473K50
C12, C3355, C3356, C3406	CKSQYF103Z50
C3381, C3423, C3424, C61, C62	CKSQYF473Z50
C72	CKSQYF473Z50

RESISTORS

△ R3725, R3726, R3733(0.1Ω/1W)	ACN7032
R3331, R3332, R3431	RD1/4PU100J
R3481	RD1/4PU123J
R23, R25	RD1/4PU223J
R64, R65	RD1/4PU562J
R3307, R3308, R3403	RD1/4PU563J
△ R26, R27, R73	RFA1/4PS100J
△ R3321, R3322	RFA1/4PS101J
△ R3724	RS1/10S102J
Other Resistors	RS1/10S□□□J

OTHERS

CN101 FFC CONNECTOR(33P)	52045-3345
CN11 9P JUMPER WIRE	KPD9
CN3301	KPE14
14P JUMPER CONNECTOR	VEF1040
PCB BINDER	

XC-L7

Mark	No.	Description	Part No.
L POWER TRANS UNIT			
SEMICONDUCTORS			
△		IC2, IC3	AEK7017
COILS AND FILTERS			
△		L1	ATF-151
CAPACITORS			
△		C1, C2(10000pF/AC250V)	ACG7020
△		C4-C6	CKSQYB473K50
		C7	CQMA103J50
RESISTORS			
△		R2 (2.2MΩ/ 1/2W)	RCN1080
OTHERS			
	1	CABLE HOLDER(9P)	51052-0900
△		CONDENSER COVER	AEC-294
△	AN1	1P AC INLET	AKP7027
	H1, H2	FUSE CLIP	AKR1003

M POWER SPTB UNIT

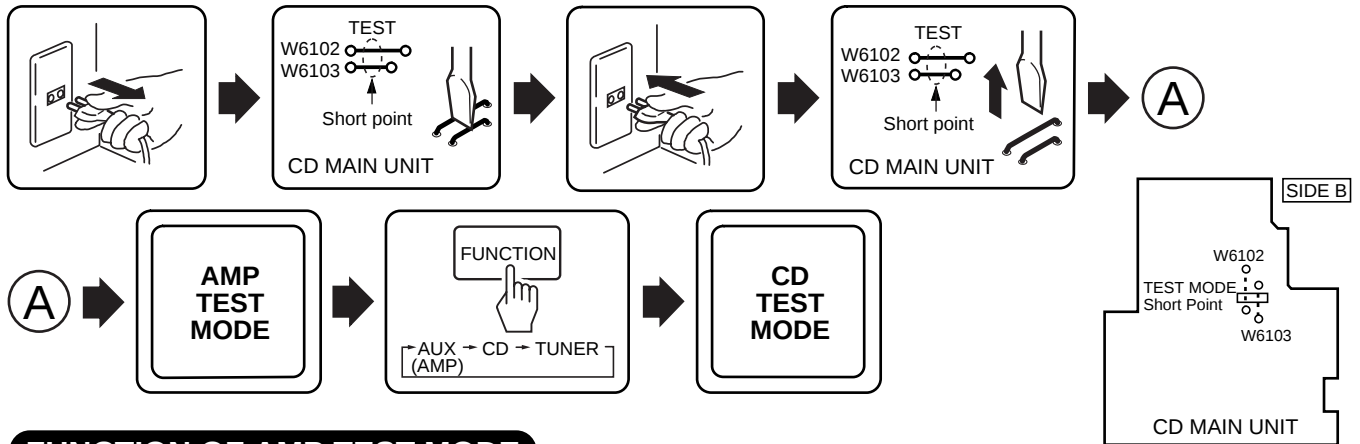
SEMICONDUCTORS			
		D3831	1SS254
COILS AND FILTERS			
△		L3851-L3853	ATH-059
		L3831	LAU100J
CAPACITORS			
		C3801, C3802	CCSQCH101J50
		C3803, C3804	CCSQSL471J50
		C3831	CEAT220M50
		C3011, C3012	CEAT2R2M50
		C3832	CEAT470M10
		C3843-C3845	CKSQYB102K50
		C3805, C3811, C3812, C3833	CKSQYF103Z50
		C3841, C3842, C3846	CKSQYF103Z50
		C3861-C3866	CKSQYF473Z50
RESISTORS			
		R3851-R3853	RD1/4LMF101J
		R3861-R3863	RD1/4PU6R8J
△		R3833	RFA1/4PS330J
		Other Resistors	RS1/10S□□□J
OTHERS			
		6P CABLE HOLDER	51048-0600
		14P CABLE HOLDER	51063-1405
	CN3842	2P CONNECTOR	5569-02A1
	CN3841	SPEAKER TERMINAL(4P)	AKE7001
	J3801	6P JUMPER WIRE	D20PDD0610E
	J3821	14P JUMPER WIRE	D15A14-100-2651
	JA3801	AUDIO 2P PIN JACK	RKB1041
	JA3811	OPTICAL OUTPUT JACK	TOTX178

6. ADJUSTMENT

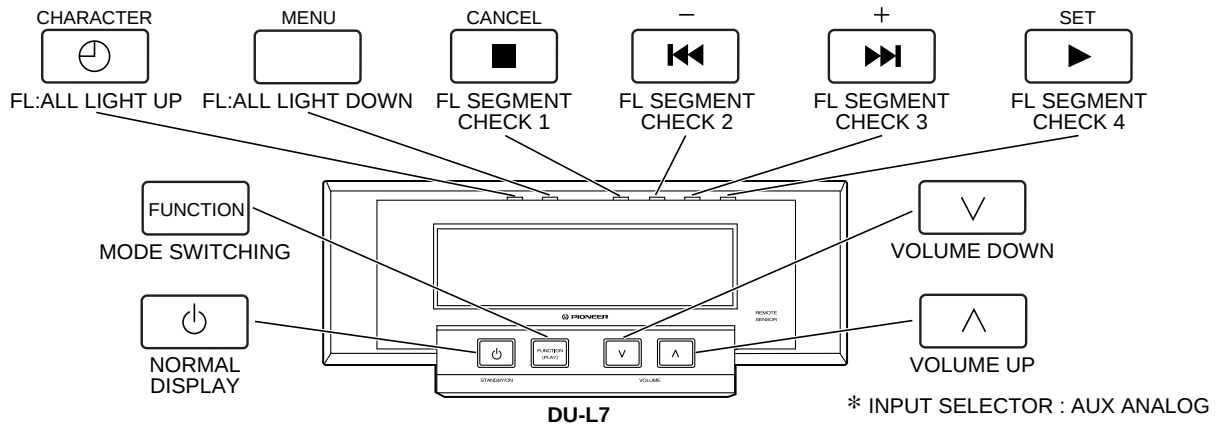
6.1 TEST MODE

6.1.1 HOW TO START/CANCEL TEST MODE

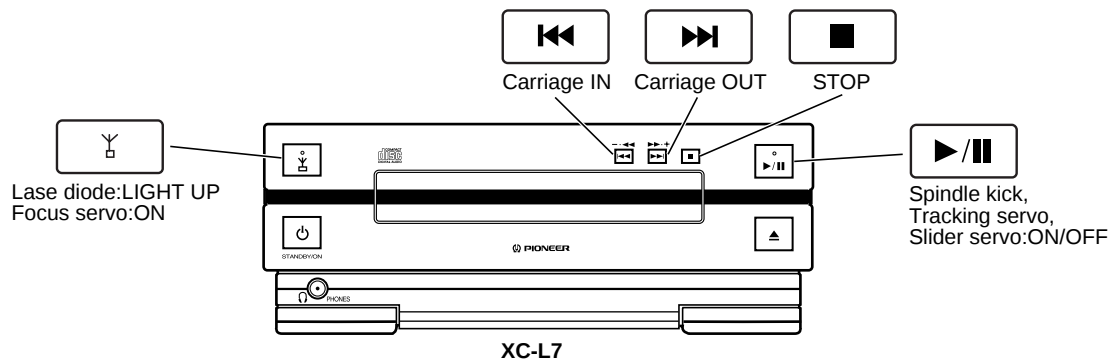
TEST MODE : ON



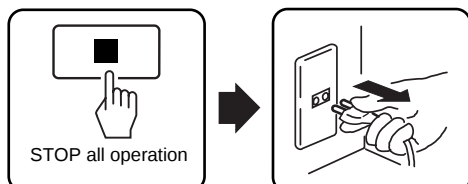
FUNCTION OF AMP TEST MODE



FUNCTION OF CD TEST MODE



TEST MODE : STOP → CANCEL



6.2 TUNER SECTION

6.2.1 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.

6.2.2 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.

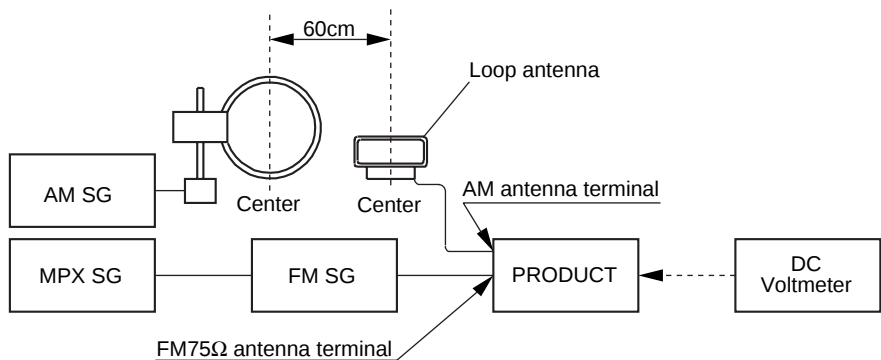


Fig. 1 AM and FM Adjustment Wiring Diagram

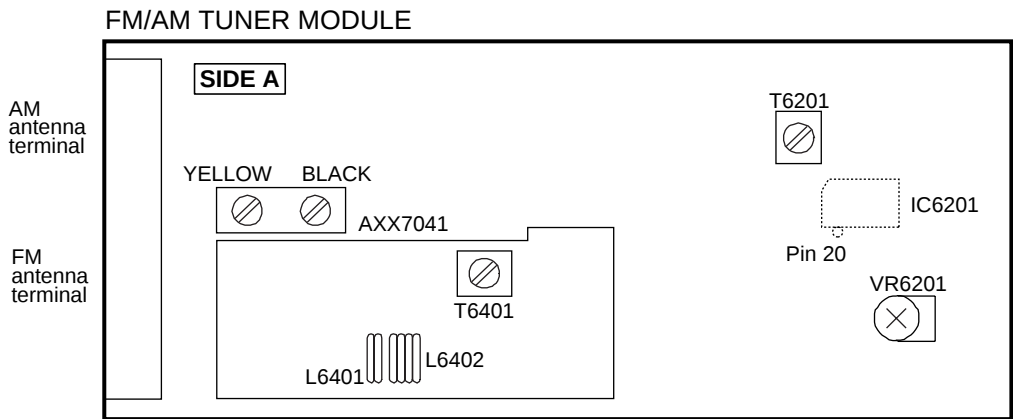
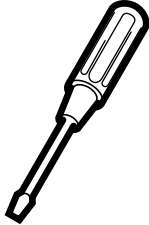
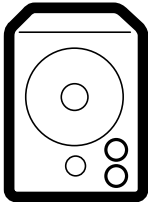
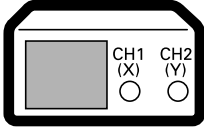
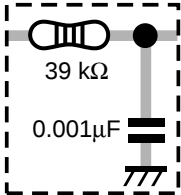


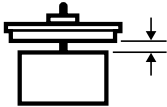
Fig. 2 Adjustment Point

6.3 CD SECTION
6.3.1 PREPARATIONS

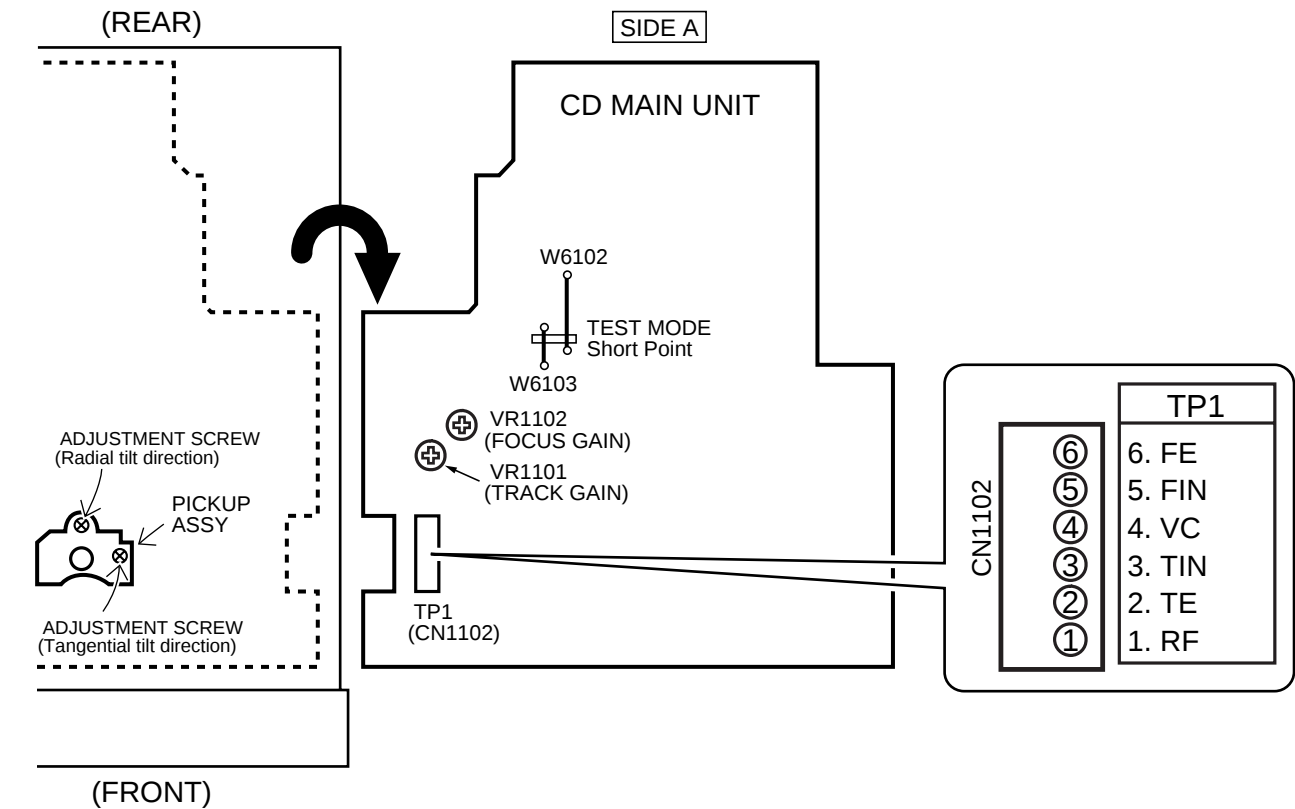
■ Jigs and Measuring Instruments

 8-cm DISC (With at least about 20 minutes recording)	 CD TEST DISC (YEDS-7)	 ⊖ Precise screwdriver	 ⊖ screwdriver (small)	 ⊕ screwdriver (medium)
 Ball point hexagon wrench (size: 1.5mm) GGK1002	 ⊕ screwdriver (large)	 Low-frequency oscillator	 Dual-trace oscilloscope (10 : 1 probe)	 Low pass filter (39 kΩ + 0.001μF)

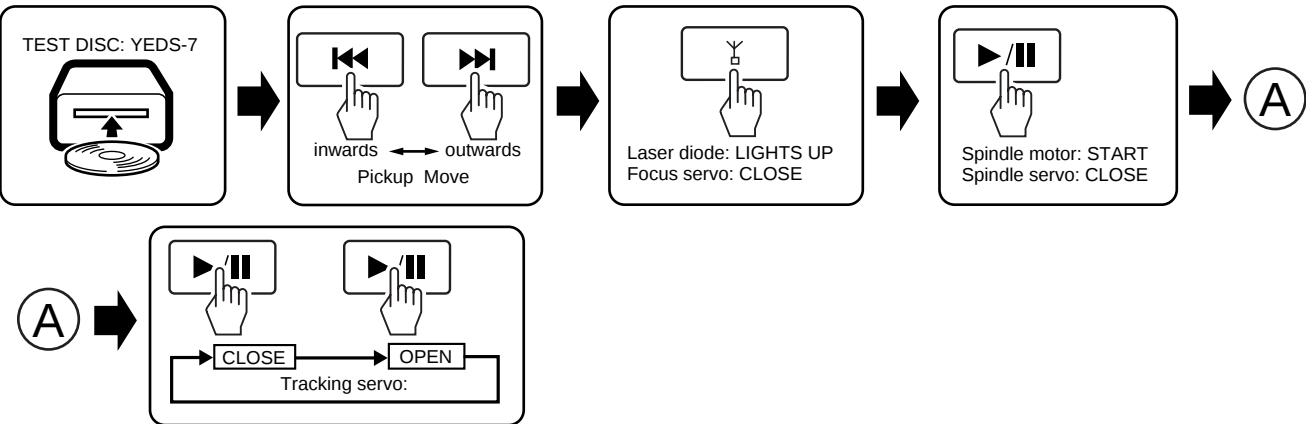
■ Necessary Adjustment Points

When	Adjustment Points
Exchange PICKUP	1, 2, 3, 4, 5, 6 → Page 47 to 49
Exchange CD MAIN UNIT	1, 2, 3, 4, 5, 6 → Page 47 to 49
Exchange SERVO MECH ASSY	1, 2, 3, 4, 5, 6 → Page 47 to 49
Exchange SPINDLE MOTOR	 ADJ → Page 9

■ Adjustment Locations

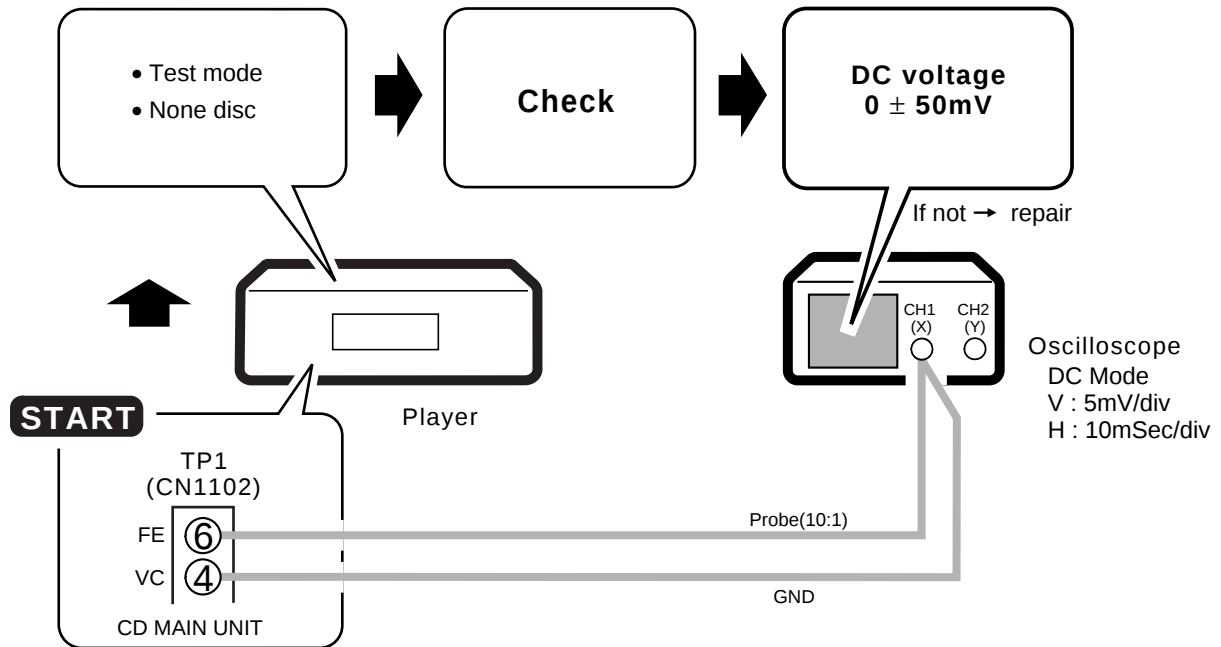


TEST MODE : PLAY

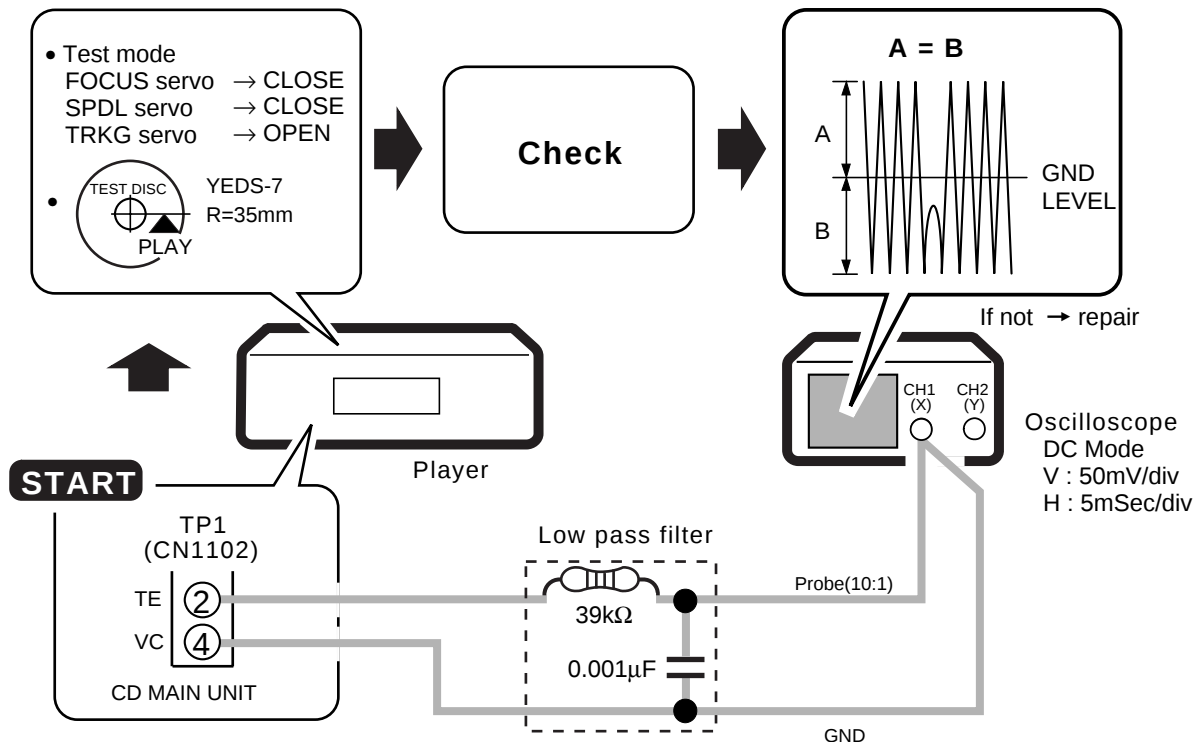


■ Check and Adjustment

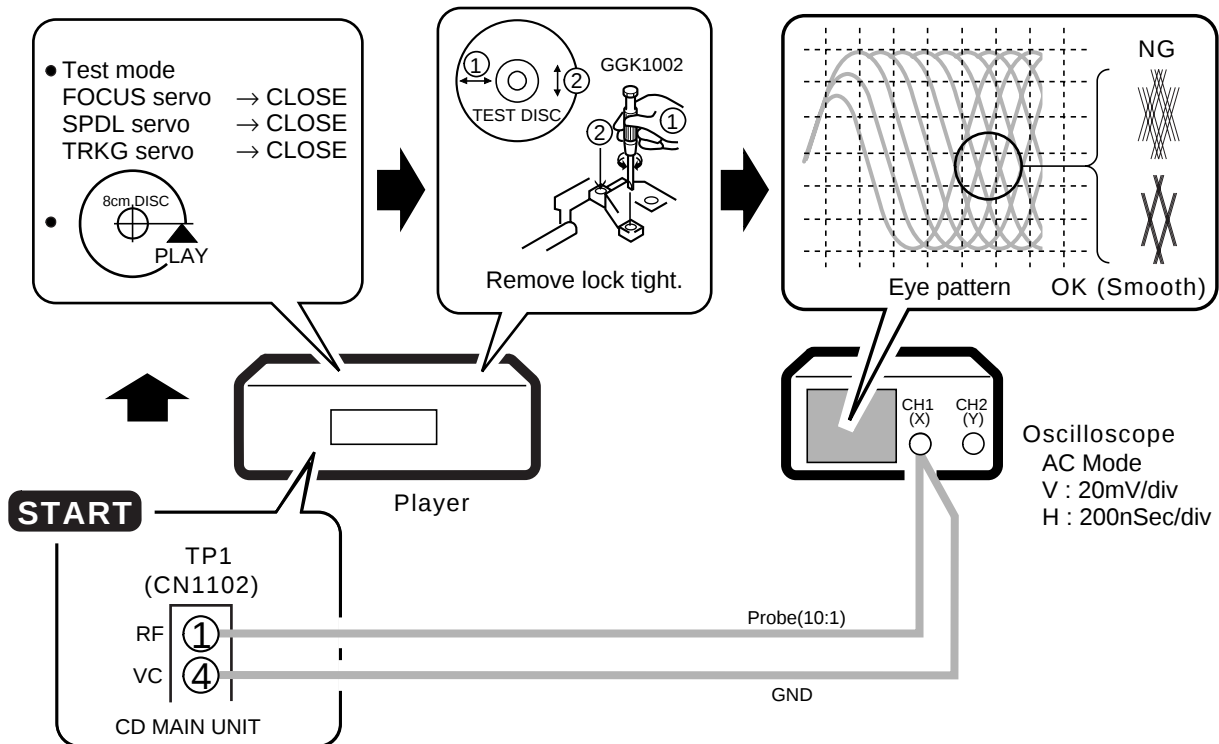
1. Focus Offset Check



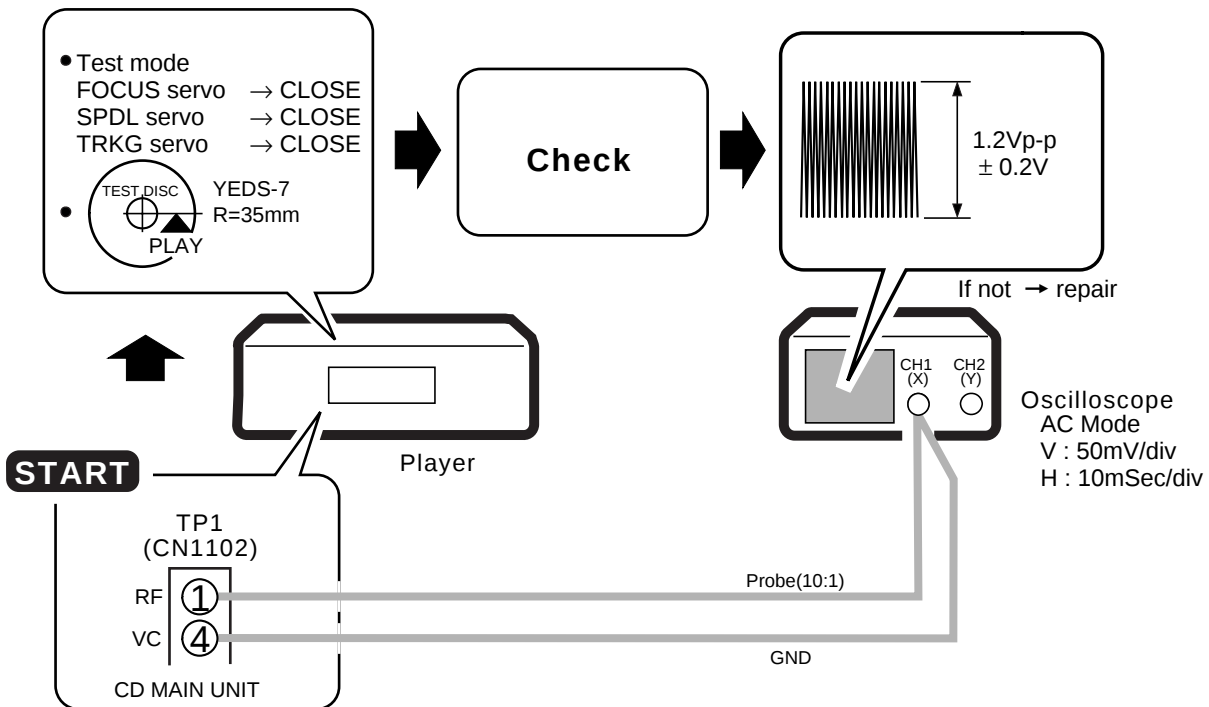
2. Tracking Error Balance Check



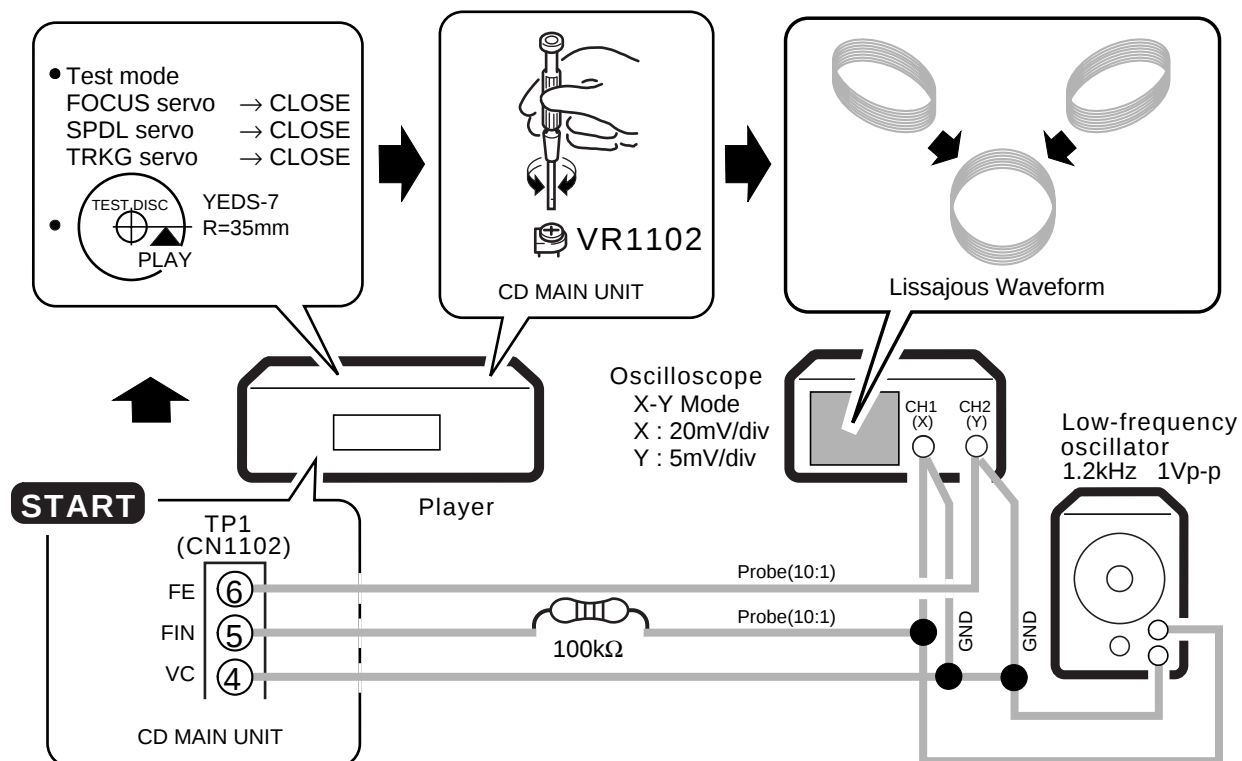
3. Pickup ① Radial/ ② Tangential Direction Tilt Adjustment



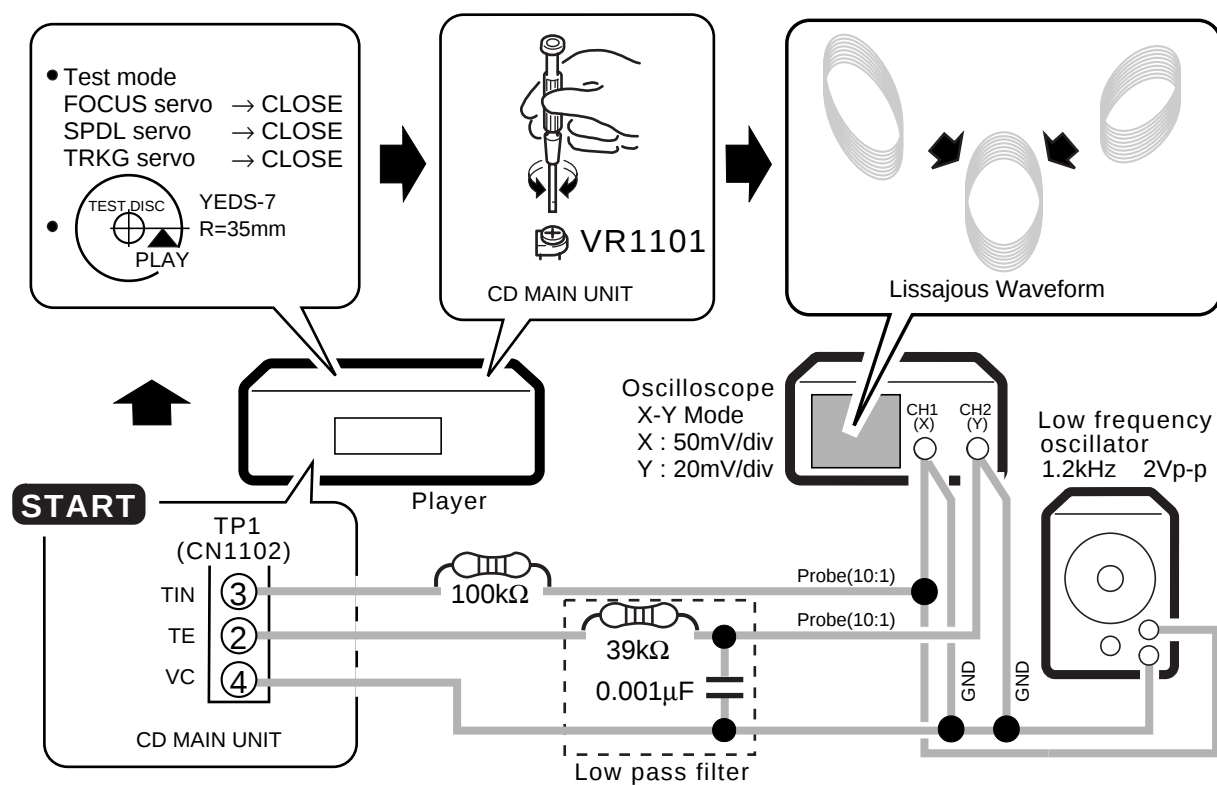
4. RF Level Check



5. Focus Servo Loop Gain Adjustment



6. Tracking Servo Loop Gain Adjustment



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.

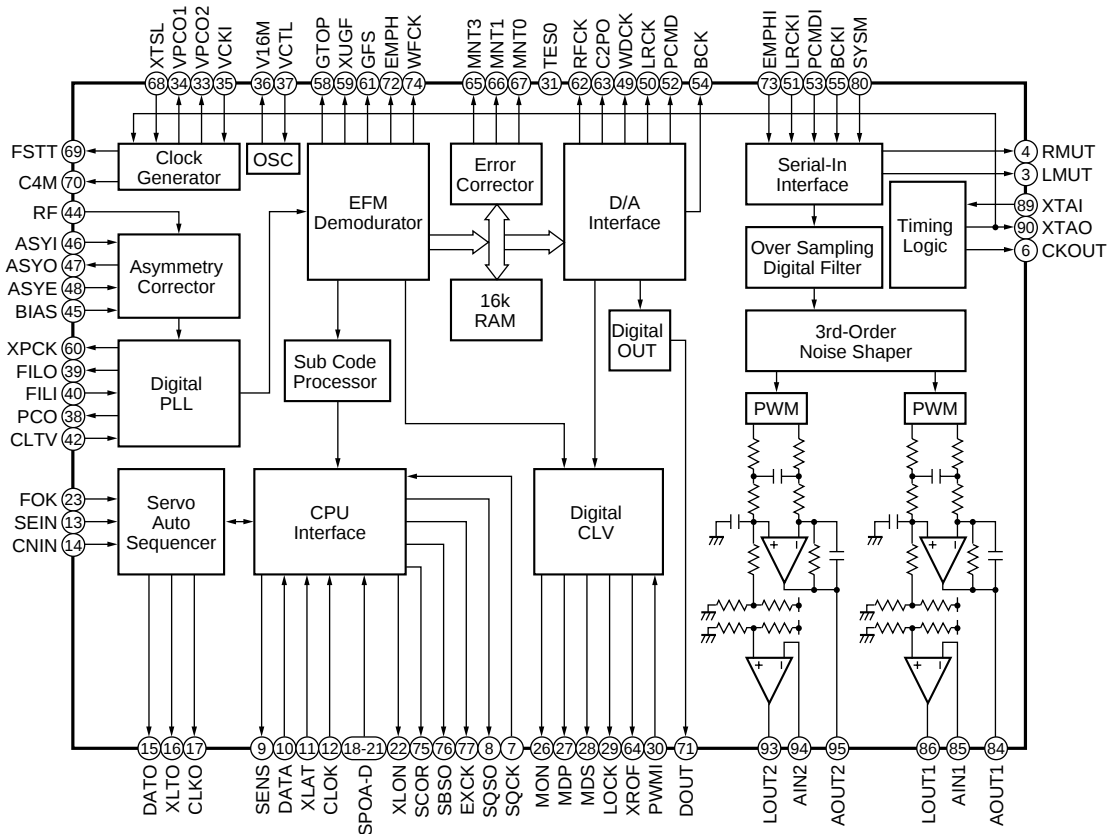
■ CXD2529Q (CD MAIN UNIT : IC1301)

- **DIGITAL SIGNAL PROCESSING for CD**

● Pin Arrangement (Top view)



- **Block Diagram**



● Pin Function

No.	Pin Name	I/O	Function
1	VDD	–	Power supply (+5V)
2	VSS	–	GND
3	LMUT	O	Left-channel zero detection flag
4	RMUT	O	Right-channel zero detection flag
5	TES2	O	TEST output pin; normally open
6	CKOUT	O	Master clock frequency-divider output Selects and outputs $XTAI \times 1$, $\times 1/2$, $\times 1/4$ or low only
7	SQCK	I	SQSO readout clock input
8	SQSO	O	Sub Q 80-bit serial output
9	SENS	O	SENS output to CPU
10	DATA	I	Serial data input from CPU
11	XLAT	I	Latch input from CPU Serial data is latched at the falling edge
12	CLOK	I	Serial data transfer clock input from CPU
13	SEIN	I	SENS input from SSP
14	CNIN	I	Track jump count signal input
15	DATO	O	Serial data output to SSP
16	XLTO	O	Serial data latch output to SSP Latched at the falling edge
17	CKO	O	Serial data transfer clock output to SSP
18	SPOA	I	Microcomputer extended interface (input A)
19	SPOB	I	Microcomputer extended interface (input B)
20	SPOC	I	Microcomputer extended interface (input C)
21	SPOD	I	Microcomputer extended interface (input D)
22	XLON	O	Microcomputer extended interface (output)
23	FOK	I	Focus OK input Used for SENS output and the servo auto sequencer
24	VDD	–	Power supply (+5V)
25	VSS	–	GND
26	MON	O	Spindle motor on/off control output
27	MDP	O	Spindle motor servo control
28	MDS	O	
29	LOCK	O	GFS is sampled at 460Hz; when GFS is high, this pin outputs a high signal If GFS is low eight consecutive samples, this pin outputs low
30	PWMI	I	Spindle motor external control input
31	TES0	I	TEST pin; normally GND
32	TES1		
33	VPCO2	O	Wide-band EFM PLL charge pump output Turned on/off by FCSW of address E
34	VPCO1	O	Charge pump output for wide-band EFM PLL
35	VCKI	I	VCO2 oscillation input for the wide-band EFM PLL
36	V16M	O	VCO2 oscillation output for the wide-band EFM PLL
37	VCTL	I	VCO2 control voltage input for the wide-band EFM PLL
38	PCO	O	Master PLL charge pump output
39	FILO	O	Master PLL (slave=digital PLL) filter output
40	FILI	I	Master PLL filter input
41	AVSS	–	Analog GND
42	CLTV	I	Master VCO control voltage input
43	AVDD	–	Analog power supply (+5V)
44	RF	I	EFM signal input
45	BIAS	I	Constant current input of the asymmetry circuit
46	ASYI	I	Asymmetry comparator voltage input
47	ASYO	O	EFM full-swing output (low=VSS, high=VDD)
48	ASYE	I	Low: asymmetry circuit off; high: asymmetry circuit on
49	WDCK	O	D/A interface Word clock $f=2f_s$
50	LRCK	O	D/A interface LR clock output $f=f_s$
51	LRCKI	I	LR clock input
52	PCMD	O	D/A interface Serial data output (two's complement, MSB first)
53	PCMDI	I	D/A interface Serial data input (two's complement, MSB first)

No.	Pin Name	I/O	Function
54	BCK	O	D/A interface Bit clock output
55	BCKI	I	D/A interface Bit clock input
56	VSS	–	GND
57	VDD	–	Power supply (+5V)
58	GTOP	O	GTOP output
59	XUGF	O	XUGF output
60	XPCK	O	XPLCK output
61	GFS	O	GFS output
62	RFCK	O	RFCK output
63	C2PO	O	C2PO output
64	XROF	O	XRAOF output
65	MINT3	O	MNT3 output
66	MINT1	O	MNT1 output
67	MINT0	O	MNT0 output
68	XTSL	I	Crystal selector input Low:16.9344MHz;high:33.8688MHz
69	FSTT	O	2/3 frequency-divider output for pins 89 and 90
70	C4M	O	4.2336MHz output 1/4 frequency-divided VCKI output in CAV-W mode
71	DOUT	O	Digital out output
72	EMPH	O	Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis
73	EMPHI	I	Inputs a high signal when de-emphasis is on, and a low signal when de-emphasis is off
74	WFCK	O	WFCK output
75	SCOR	O	Outputs a high signal when either subcode sync S0 or S1 is detected
76	SBSO	O	Sub P to W serial output
77	EXCK	I	SBSO readout clock input
78	VSS	–	GND
79	VDD	–	Power supply (+5V)
80	YSM	I	Mute input Active when high
81	NC	–	Not used
82	AVSS	–	Analog GND
83	AVDD	–	Analog power supply (+5V)
84	AOUT1	O	Left-channel analog output
85	AIN1	I	Left-channel operational amplifier input
86	LOUT1	O	Left-channel LINE output
87	AVSS	–	Analog GND
88	XVDD	–	Power supply for master clock
89	XTAI	I	Crystal oscillation circuit input Input the external master clock via this pin
90	XTAO	O	Crystal oscillation circuit output
91	XVSS	–	GND for master clock
92	AVSS	–	Analog GND
93	LOUT2	O	Right-channel LINE output
94	AIN2	I	Right-channel operational amplifier input
95	AOUT2	O	Right-channel analog output
96	AVDD	–	Analog power supply (+5V)
97	AVSS	–	Analog GND
98	NC	–	Not used
99	NC	–	Not used
100	XRST	I	System reset Reset when low

Notes)

- PCMD is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High:sync protection window released)
- XUGF is the negative pulse for the frame sync derived from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge of XPLCK and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived with the crystal accuracy. This signal has a cycle of 136μs (during normal-speed).
- C2PO represents the data error status.
- XRAOF is generated when the 16K RAM exceeds the ±4F jitter margin.

■ PD4843B (CD MAIN UNIT : IC6101)

• SYSTEM CONTROL UCOM

● Pin Function

No.	Mark	Pin Name	I/O	Function	No.	Mark	Pin Name	I/O	Function
1	P15/ANI5	S.THERMO	I	A/D input for Sub-thermistor	41	P65/WR	ROMUTE	I	MUTE request of CD R ch O
2	P16/ANI6	J/EX	I	Destination switch input H:J, L:EX	42	P66/WAIT	LOMUTE	I	MUTE request of CD L ch O
3	P17/ANI7	S.CLK	I	System bus CLOCK	43	P67/ASTB	XCLMP	I	CD clamp switch input
4	AVss	——	—	Ground of A/D converter	44	P30/TO0	XOPEN	I	CD open switch input
5	P130	S.DAT1	I	System bus DATA IN	45	P31/TO1	XINSD	I	CD slider inside switch
6	P131	S.DAT0	O	System bus DATA OUT	46	P32/TO2	LOIN	O	CD tray IN
7	AVREF1	——	—	Reference voltage input of D/A	47	P33/TI1	LOOUT	O	CD tray OUT
8	P70/SI2	FLCE	O	FL driver CE	48	P34/TI2	XCDPOW	O	Not used
9	P71/SO2	FLDATA	O	FL driver DATA	49	P35/PCL	SPCONT	O	Speaker relay control
10	P72/SCK2	FLCLK	O	FL driver CLOCK	50	P36/BUZ	XPOWON	O	POWER ON/OFF
11	P20/SI1	SQSO	I	CD SQSO (CXD2529Q)	51	P37	FLPOW	O	FL POWER ON/OFF
12	P21/SO1	CDDAT	O	CD DATA (CXD2529Q)	52	P120/RTP0	FANDRV	O	Fan control HI/LOW
13	P22/SCK1	CDCLK	O	CD CLOCK (CXD2529Q)	53	P121/RTP1	——	O	Not used
14	P23/STB	H.P.SW	I	Headphone switch	54	P122/RTP2	TESTU	I	Unit checker TEST MODE
15	P24/BUSY	D.REQ	O	Display data CS	55	P123/RTP3	TXMUTE	O	TUNER MUTE / IF COUNT
16	P25/SI0	D.DAT	I	Display data DATA	56	P124/RTP4	TXD.O.	I	TUNER DATA OUT (LC72131MD) (PLL frequency synthesizer for elect - ronic tuning)
17	P26/SO0	——	O	Not used	57	P125/RTP5	PLLCLK	O	TUNER CLOCK (LC72131MD) (PLL frequency synthesizer for elect - ronic tuning)
18	P27/SCK0	D.CLK	I	Display data CLOCK	58	P126/RTP6	TXDI	O	TUNER DATA IN (LC72131MD) (PLL frequency synthesizer for elect - ronic tuning)
19	P40/AD0	——	O	Not used	59	P127/RTP7	PLLCE	O	TUNER CE
20	P41/AD1	——	O	Not used	60	RESET	XRESET	I	RESET input of microprocessor
21	P42/AD2	——	O	Not used	61	P00/INTP0	REM	I	Remote control input
22	P43/AD3	——	O	Not used	62	P01/INTP1	ACPULSE	I	AC pulse input
23	P44/AD4	——	O	Not used	63	P02/INTP2	SCOR	I	CD SCOR
24	P45/AD5	HPPOW	O	Power supply for headphone H:ON, L:OFF	64	P03/INTP3	RDSCLK	I	RDS IC CLOCK
25	P46/AD6	VRDATA	O	Volume IC (M62419FP) DATA	65	P04/INTP4	RDSDATA	I	RDS IC DATA
26	P47/AD7	VRCLK	O	Volume IC (M62419FP) CLOCK	66	P05/INTP5	RDSQA	I	RDS DATA QUALITY
27	P50/A8	XLEDTX	O	TUNER LED control H:lights-out, L:light	67	P06/INTP6	S.REQ	I/O	System bus REQ
28	P51/A9	XLEDCD	O	CD LED control H:lights-out, L:light	68	VDD	VDD	—	Positive power supply
29	P52/A10	CDMUTEL	O	Mute control of CD analog output (Lch)	69	X2	X2	—	Crystal connection for main-system clock oscillation
30	P53/A11	CDMUTER	O	Mute control of CD analog output (Rch)	70	X1	X1	I	
31	P54/A12	XCDLA	O	CD LATCH (CXD2529Q)	71	IC	IC	—	
32	P55/A13	GFS	I	CD GFS input (CXD2529Q)	72	XT2	XT2	—	
33	VSS	——	—	Ground	73	XT1/P07	XTESTMODE	I	Test mode
34	P56/A14	CDSSEN	I	CD SENSE input (CXD2529Q)	74	AVDD	AVDD	—	Power supply
35	P57/A15	CDSHUT	O	CD XTAL ON/OFF H:XTAL OFF, L:XTAL ON	75	AVREFO	AVREFO	I	Reference voltage input of D/A
36	P60	XMUTE	O	System MUTE H:MUTE OFF, L:MUTE ON	76	P10/ANI0	KEY1	I	KEY input (main unit)
37	P61	XLDON	O	CD laser diode ON/OFF H:OFF, L:ON	77	P11/ANI1	——	O	Not used
38	P62	XTCPow	O	TAPE power supply ON/OFF H:OFF, L:ON	78	P12/ANI2	KEY3	I	KEY input (display)
39	P63	XRDSFM	O	RDS IC power supply ON/OFF	79	P13/ANI3	ST/TUNE	I	STEREO/TUNED
40	P64/RD	CDRES	O	CD RESET (CXD2529Q)	80	P14/ANI4	MTHERMO	I	Thermistor input (M)

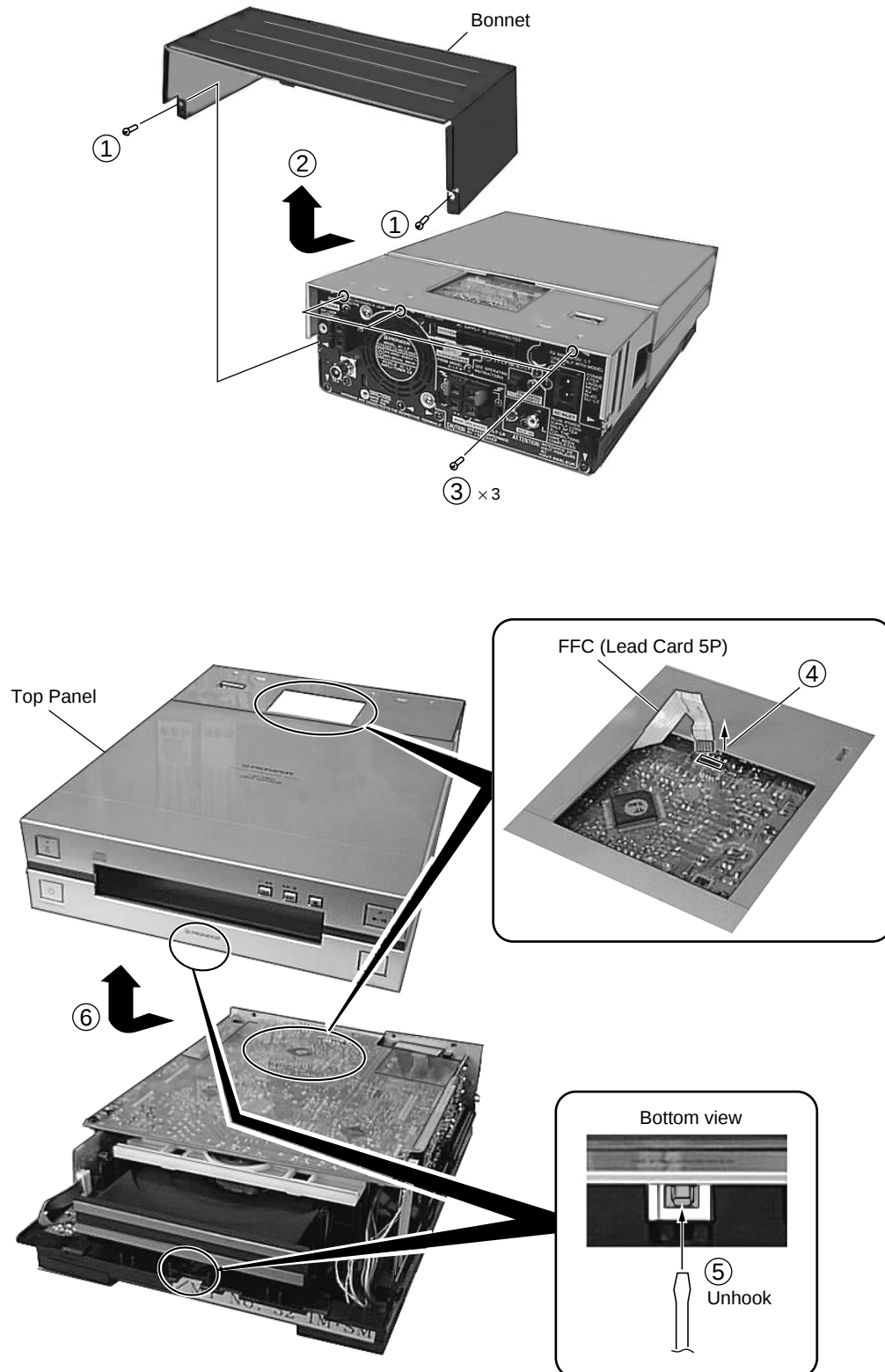
7.2 DIAGNOSIS

7.2.1 DISASSEMBLY

(1) BONNET AND TOP PANEL

Disassembly : ① → ② → ③ → ④ → ⑤ → ⑥

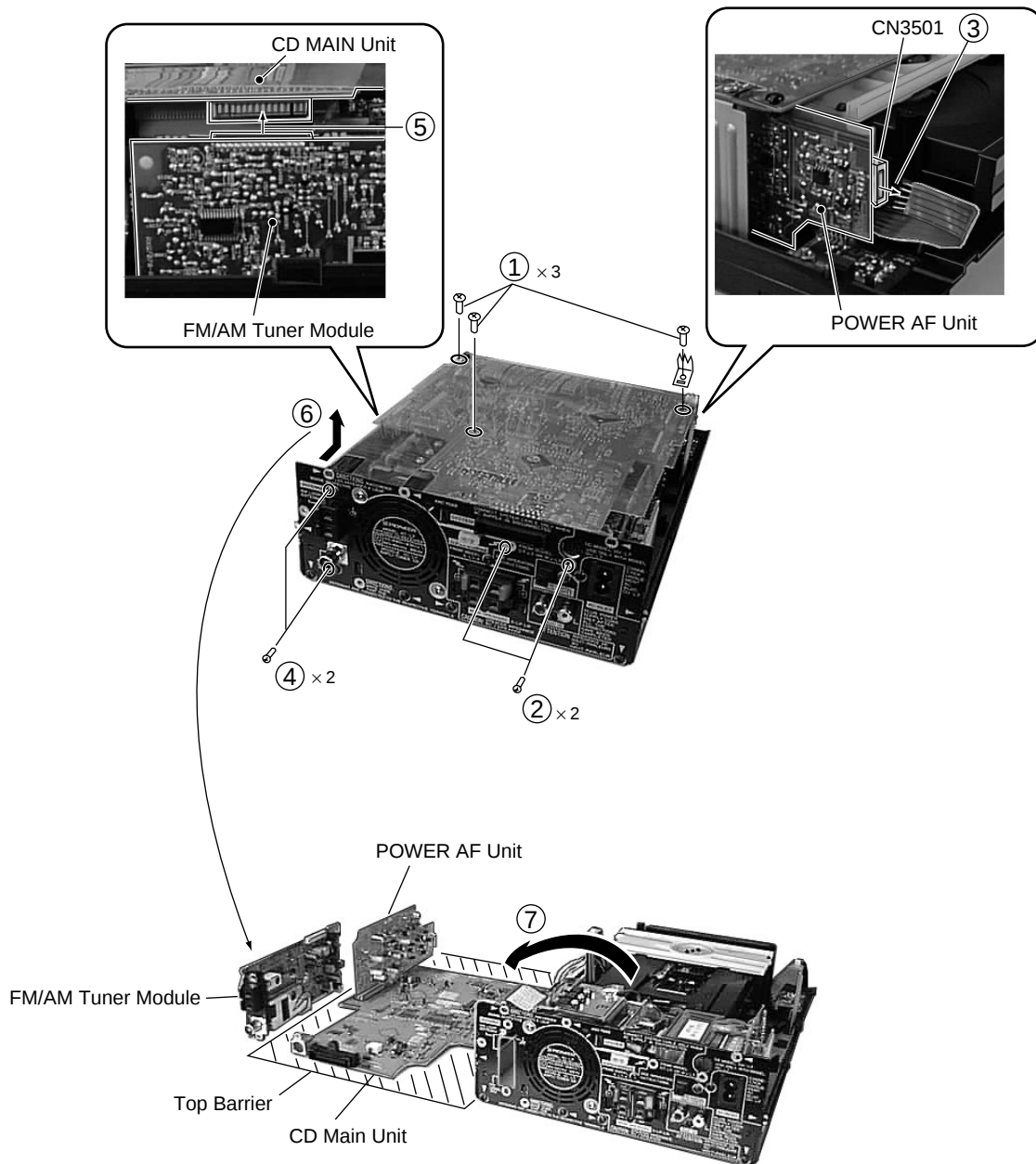
Assembly : ⑥ → ⑤ → ④ → ③ → ② → ①



(2) CD MAIN UNIT, POWER AF UNIT AND FM/AM TUNER MODULE

Disassembly : ①→②→③→④→⑤→⑥→⑦

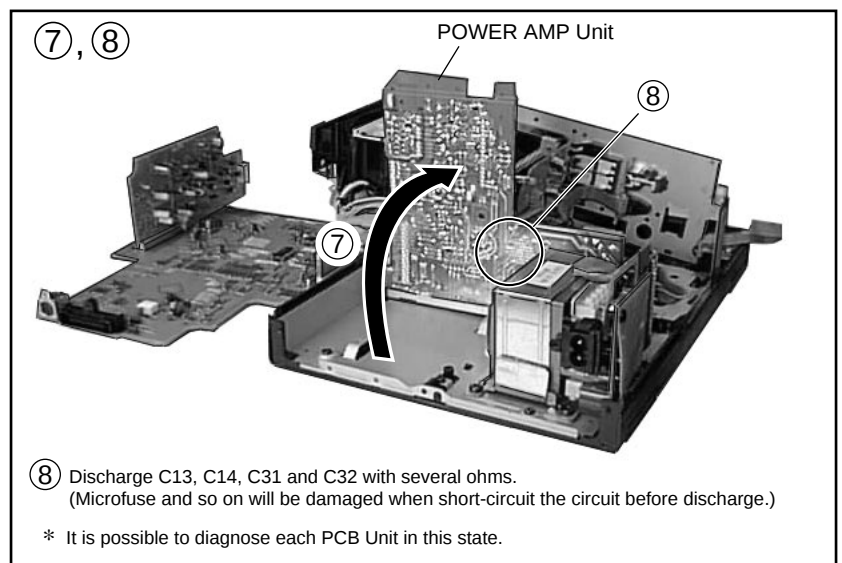
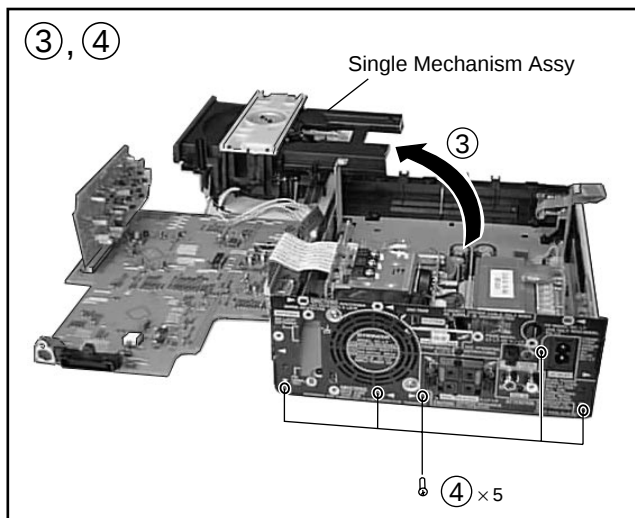
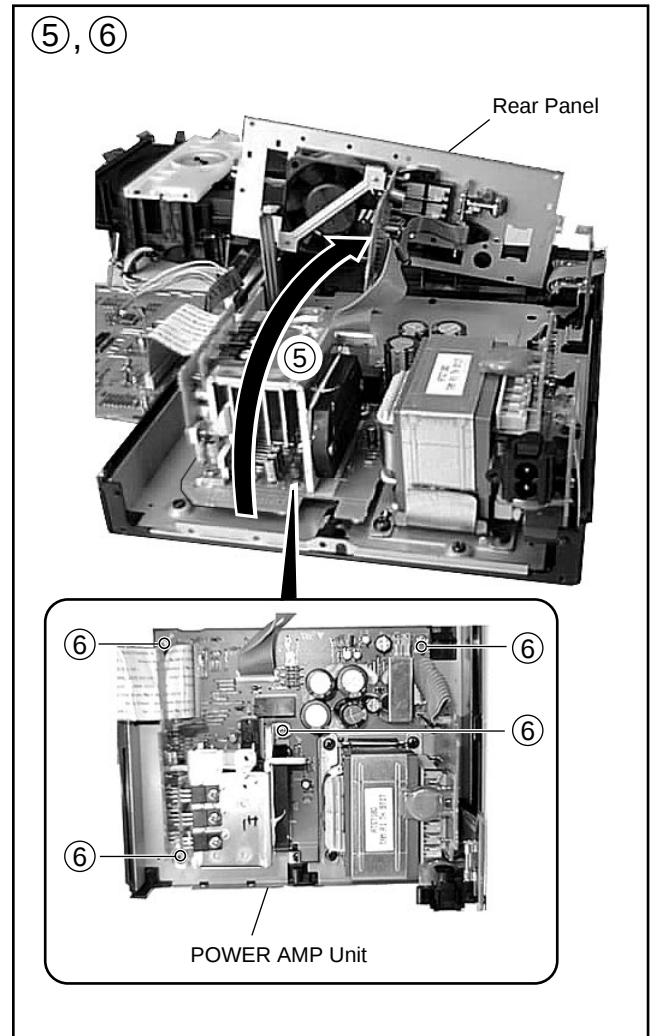
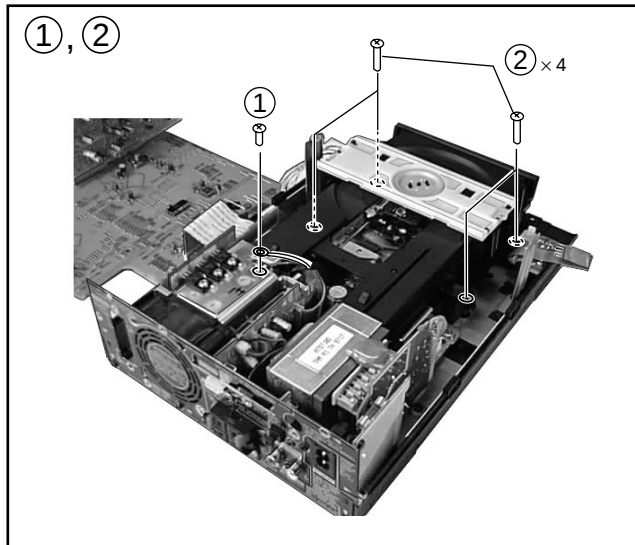
Assembly : ⑦→⑥→⑤→④→③→②→①



(3) SINGLE MECHANISM ASSY AND POWER AMP UNIT

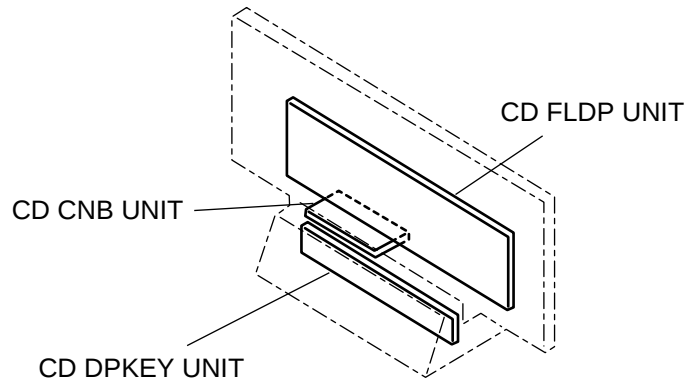
Disassembly : ①→②→③→④→⑤→⑥→⑦→⑧

Assembly : ⑧→⑦→⑥→⑤→④→③→②→①

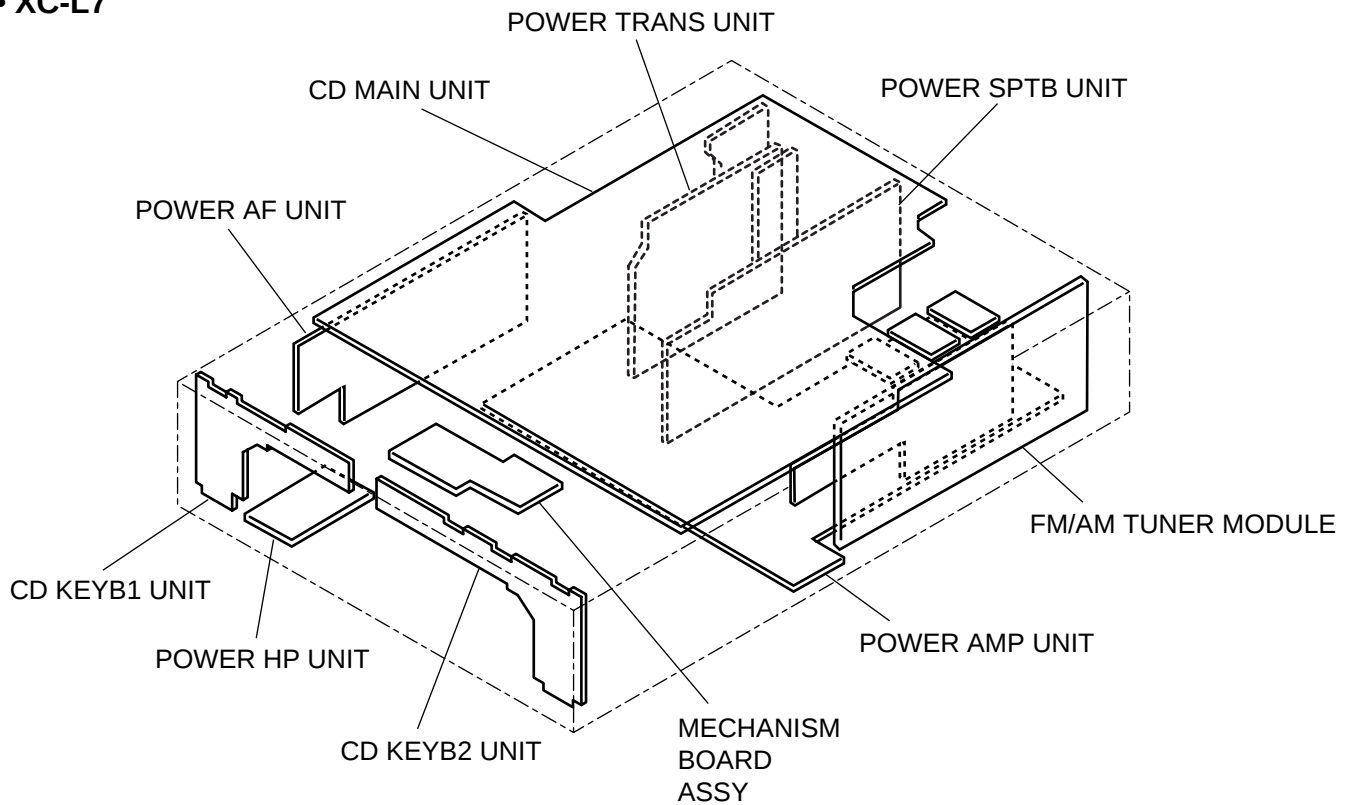


7.2.2 PCB LOCATIONS

• DU-L7

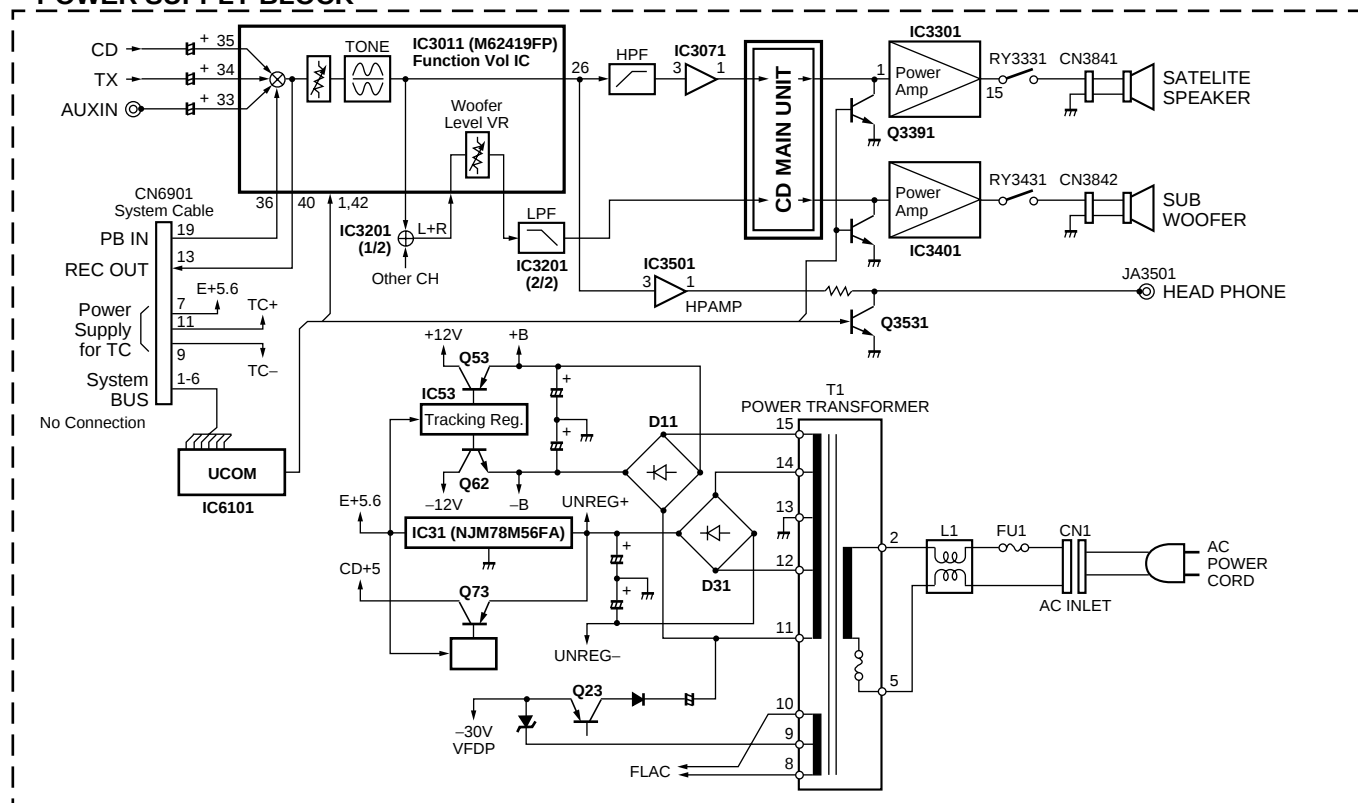


• XC-L7

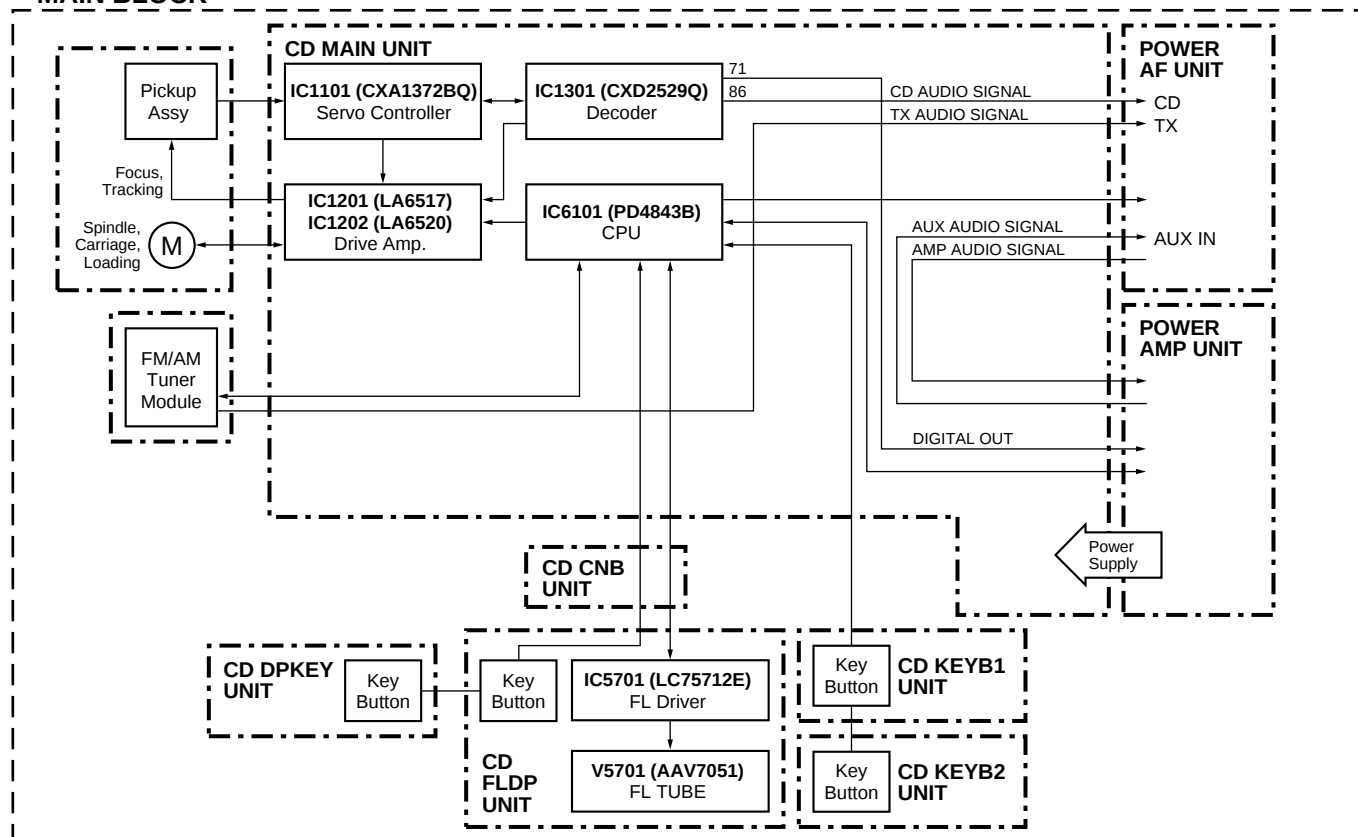


7.3 BLOCK DIAGRAM

- POWER SUPPLY BLOCK

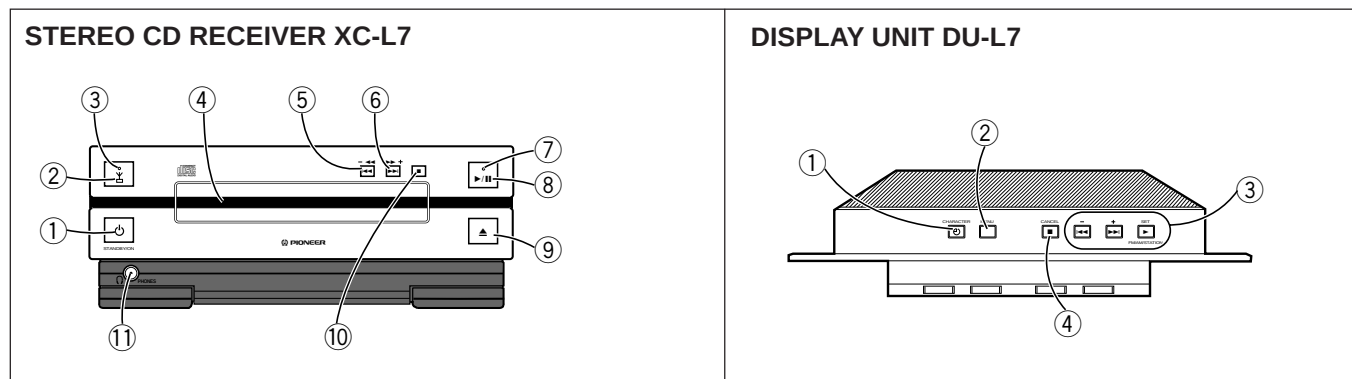


- **MAIN BLOCK**



8. PANEL FACILITIES AND SPECIFICATIONS

• PANEL FACILITIES



STEREO CD RECEIVER XC-L7

- ① **POWER, STANDBY/ON switch**
- ② **FM/AM/station button**
- ③ **Tuner indicator**
- ④ **CD tray**
- ⑤ **button**
- ⑥ **button**
- Roles of common operation buttons vary depending on the input function currently selected, as follows:

During Tuner Operation

: Frequency and station – (down) button.

: Frequency and station + (up) button.

During CD Operation

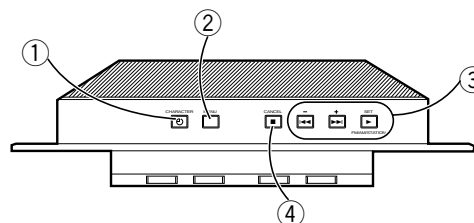
: Fast reverse/track search button.

: Fast forward/track search button.

- ⑦ **Playback indicator**
- ⑧ **CD Play/Pause button**
- ⑨ **CD tray Open/Close button (▲)**
- ⑩ **CD stop button (■).**
- ⑪ **PHONES jack**

For use with headphones equipped with a stereo miniplug. When headphones are connected, sound to the speakers is disabled.

DISPLAY UNIT DU-L7



DISPLAY UNIT DU-L7

- ① **CHARACTER/Timer button**
- ② **MENU button**
- ③ **buttons**

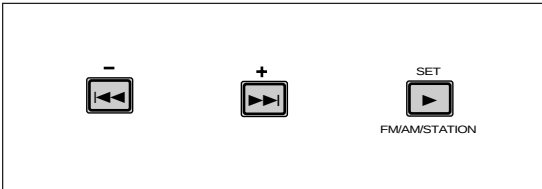
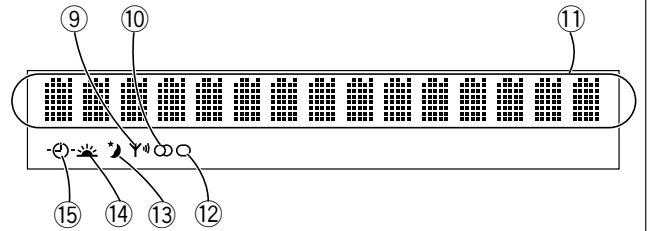
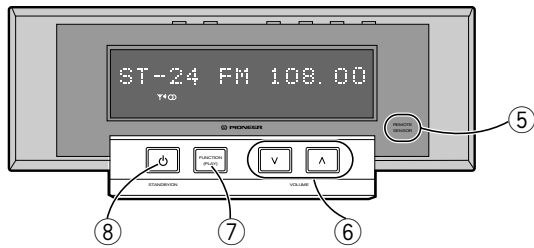
- Roles of common operation buttons vary depending on the input function currently selected.

- ④ **CANCEL/Stop button**
- ⑤ **REMOTE SENSOR**
- ⑥ **VOLUME ^ (UP), v (DOWN) buttons**
- ⑦ **FUNCTION button**
- ⑧ **POWER STANDBY/ON switch**

[DISPLAY SECTION]

- ⑨ **Lights when station is tuned.**
- ⑩ **Lights when receiving a stereo broadcast.**
- ⑪ **Shows station frequencies and main operating conditions.**
- ⑫ **Lights during monaural mode.**
- ⑬ **Lights during setting and operation of the sleep timer.**
- ⑭ **Lights during wake-up timer setting mode; flashes during operation.**
- ⑮ **Lights during setting and operation of the wake-up timer.**

DISPLAY UNIT DU-L7



DISPLAY UNIT DU-L7: Roles of common operation buttons vary depending on the input function currently selected, as follows:

During Tuner Operation



: Frequency and station – (down) button.



: Frequency and station + (up) button.



FM/AM/STATION

: FM/AM/STATION button.

During CD Operation



: Reverse track search button.

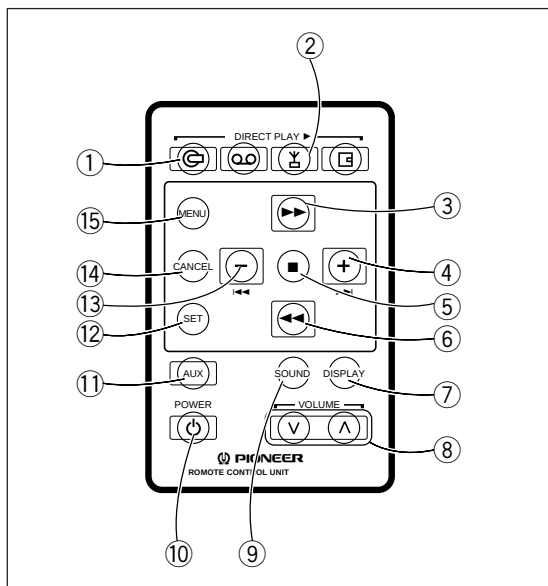


: Forward track search button.



FM/AM/STATION

: Play/Pause button.



REMOTE CONTROL UNIT

① **CD Play/Pause button**

② **FM/AM/Station button**

③ **▶▶ button**

④ **⊕ button**

⑤ **■ button**

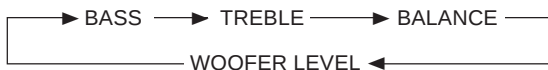
⑥ **◀◀ button**

⑦ **DISPLAY button**

⑧ **VOLUME ▲ (UP), ▼ (DOWN) buttons**

⑨ **SOUND button**

Each time this button is pressed, the sound mode changes in the following sequence:



⑩ **POWER button (POWER STANDBY/ON)**

⑪ **AUX function button**

⑫ **SET button**

NOTE :

The and buttons do not operate on this component.

⑬ **⊖ button**

⑭ **CANCEL button**

⑮ **MENU button**

● Roles of buttons ③, ④, ⑤, ⑥, and ⑬ vary depending on the input function currently selected, as follows:

During Tuner Operation

: Station + (up) button

: Station - (down) button

: Frequency up button

: Frequency down button

During CD Operation

: Forward track search button

: Reverse track search button

: Stop button

: Fast forward (manual search) button

: Fast reverse (manual search) button

• SPECIFICATIONS

Stereo CD Receiver: XC-L7

Amplifier Section

Output for Satellite Speakers

Continuous average power output of 20 watts* per channel, min., at 8 ohms, from 200 Hz to 20,000 Hz with no more than 0.9 % total harmonic distortion (front).**

Output for Subwoofer Speaker

Continuous average power output of 30 watts* per channel, min., at 4 ohms, from 40 Hz to 200 Hz with no more than 0.9 % total harmonic distortion (front).**

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

** Measured by Audio Spectrum Analyzer.

FM Tuner Section

Frequency Range 87.5 - 108MHz

Antenna 75 Ω, unbalanced

AM Tuner Section

Frequency Range 530 kHz - 1,700 kHz
(10 kHz step);

531 kHz - 1,602 kHz (9 kHz step)

Antenna Loop antenna

Compact Disc Section

Type Compact disc digital audio system

Usable discs Compact discs

Channels 2 (stereo)

Frequency Response 4 Hz–20 kHz

Signal-to-Noise Ratio 110 dB (EIAJ)

Wow and Flutter Limit of measurement
(0.001%) or less (EIAJ)

Power Requirements AC 120 V, 60 Hz

Power Consumption 75 W

Dimensions 220 (W) x 85 (H) x 310 (D) mm

8-11/16 (W) x 3-3/8 (H) x 12-3/16 (D) in

Weight 4.0 kg (8 lb 13 oz)

Accessories

Operating Instructions 1

Warranty Card 1

FM antenna 1

AM loop antenna 1

Remote control unit 1

Lithium battery (CR2025) 1

Remote control unit holder 1

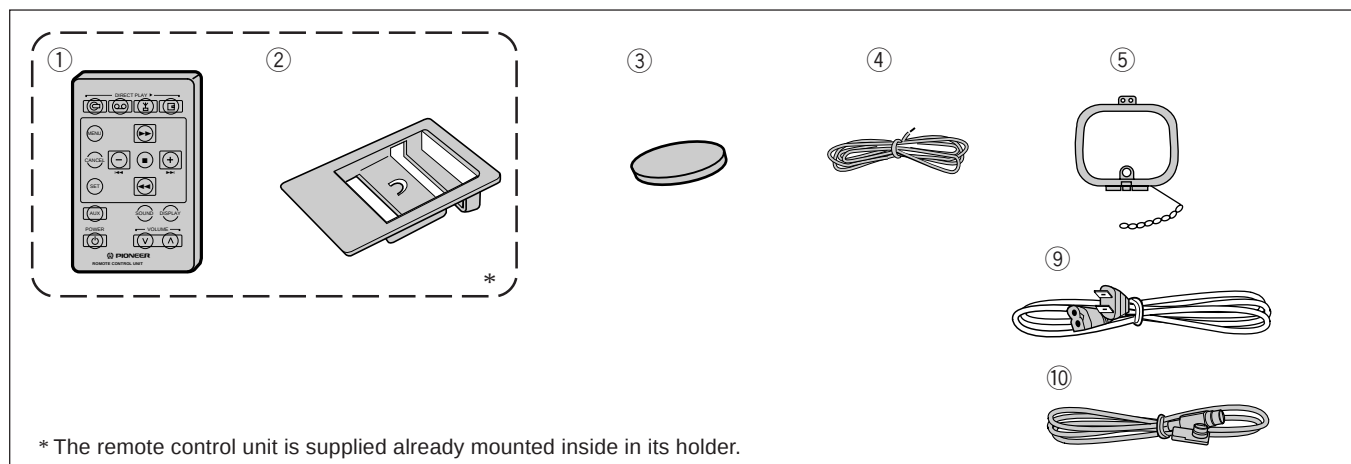
Power cord 1

Display unit cord 1

NOTE:

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

• Accessories



① Remote control unit x 1 : AXD7145
(CU-XC004)

② Remote control unit holder x 1 : AAH7008

③ Lithium battery (CR2025) x 1 : VEM1009

④ FM antenna x 1 : ADH7004

⑤ AM loop antenna (shown assembled) x 1 : ATB7007

⑨ Power cord x 1 : ADG1152

⑩ Display unit cord (10p mini-DIN cable) x 1 : ADE7014

● Operating instructions x 1

● Warranty card x 1