

Service Manual



ORDER NO.
RRV2343

STEREO CD RECEIVER XR-MT3

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

Type	Model XR-MT3	Power Requirement	The voltage can be converted by the following method.
KUCXCN	○	AC120V	—
MYXCN	○	AC220-230V	—
NVXCN	○	AC230V	—
DBDXCN	○	AC110-127V/220-230V/240V	With the voltage selector
DLXCN/NC	○	AC110-127V/220-230V/240V	With the voltage selector

● System Component Table

Component	Model				Service manual	Remarks
STEREO CD RECEIVER SYSTEM	X-MT2000				RRV2342	
	KUCXCN	MYXCN,NVXCN	DBDXCN	DLXCN/NC		
STEREO CD RECEIVER	XR-MT3	XR-MT3	XR-MT3	XR-MT3	RRV2343	This manual.
SPEAKER SYSTEM	S-MT3W	S-MT3H	S-MT3	S-MT3-N	RRV2344	

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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

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.

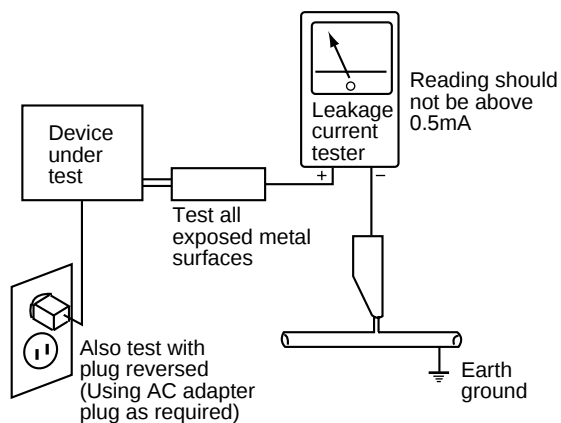
(FOR USA MODEL ONLY)

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 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.

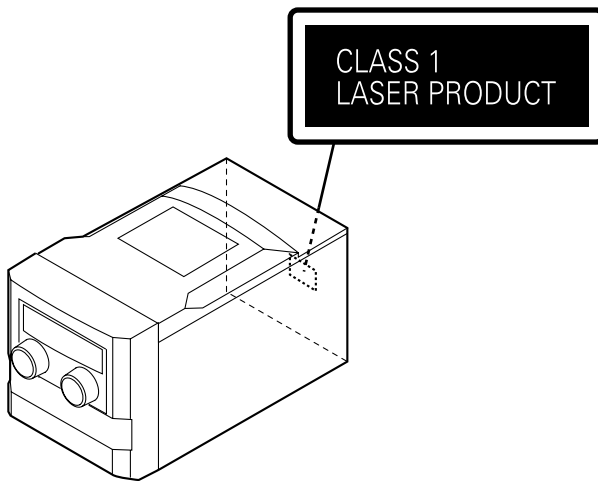
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

— IMPORTANT —

THIS PIONEER APPARATUS CONTAINS
LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS
SHOULD BE DONE BY A SPECIALLY
INSTRUCTED PERSON.

— LASER DIODE CHARACTERISTICS —

MAXIMUM OUTPUT POWER: 5 mW
WAVELENGTH: 760 - 800 nm

LABEL CHECK (For MYXCN and NVXCN Types)

— Additional Laser Caution —

1. Laser Interlock Mechanism

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

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

Laser diode oscillation will continue, if pin 46 of TA2065F (IC2) on the CD SERVO PCB ASSY is connected to GND, or else the terminals of Q1 are shorted to each other (fault condition).

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

2. EXPLODED VIEWS AND PARTS LIST

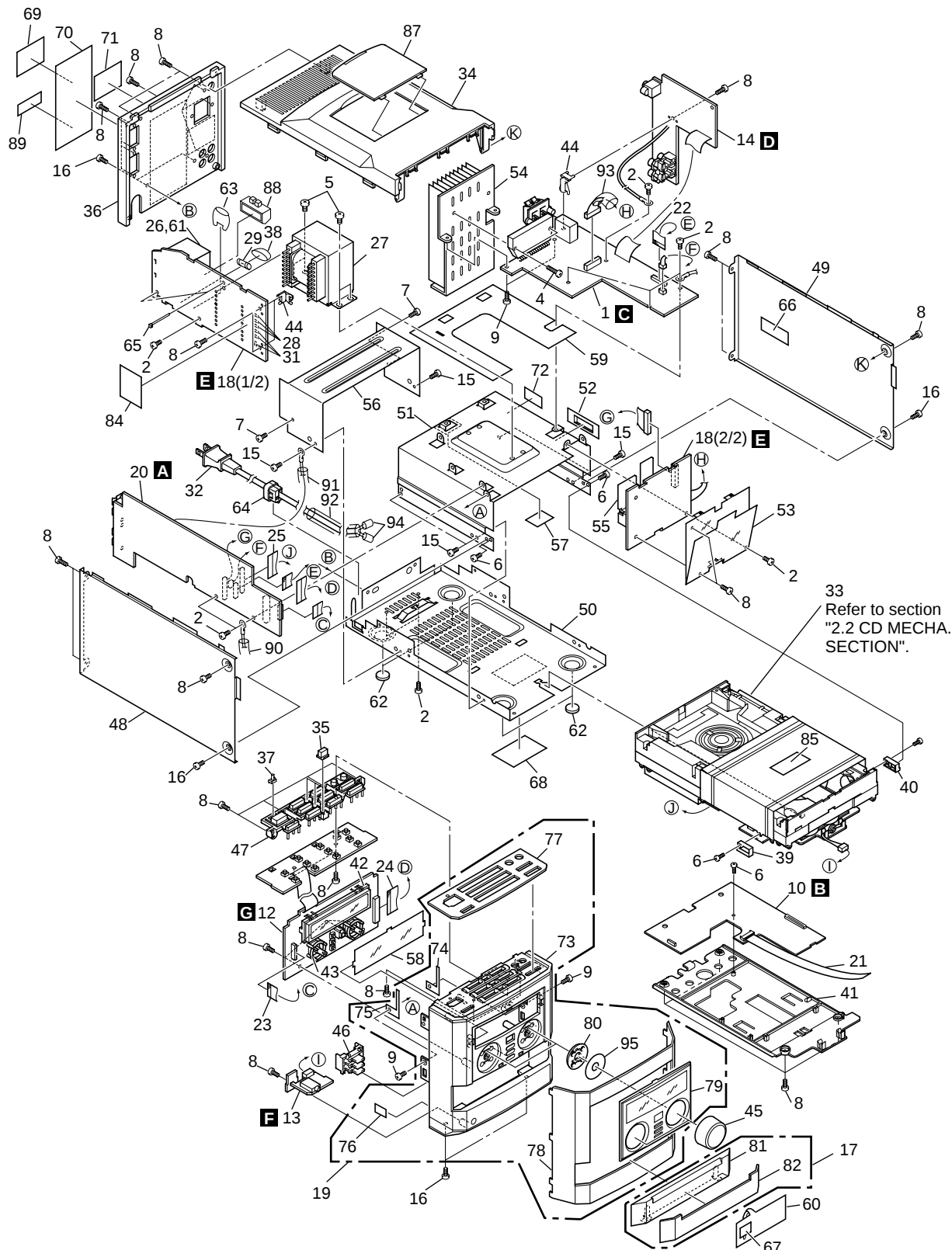
NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

● The Δ mark found on some component parts indicates the importance of the safety factor of the part.

Therefore, when replacing, be sure to use parts of identical designation.

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

2.1 EXTERIOR SECTION



(1) EXTERIOR SECTION PARTS LIST

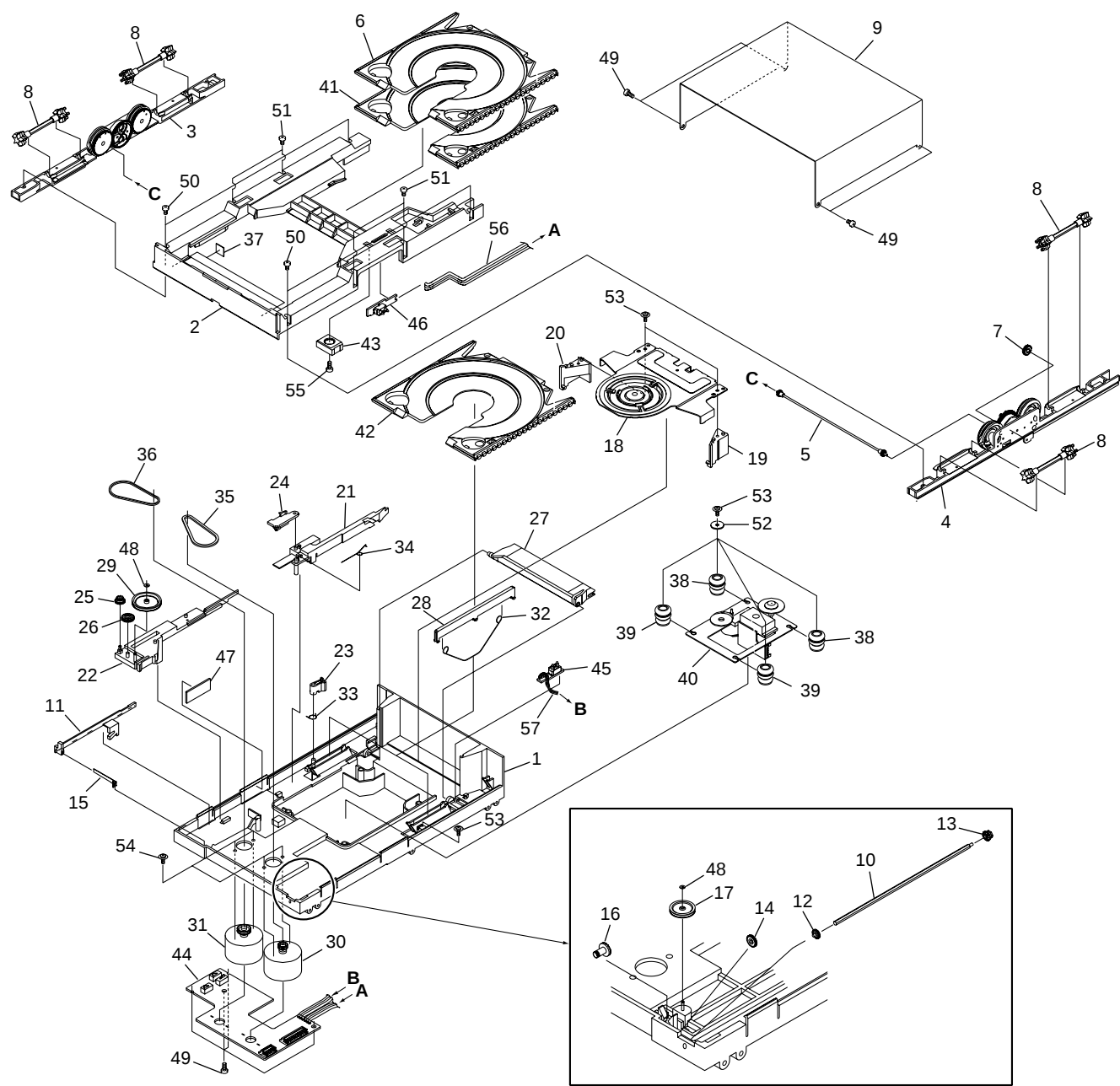
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	AMP PCB Assy	AUD-PMT1E		47	Direct Access Knob Set	510PMT109010
	2	Screw	BBZ30P060FMC		48	Side Panel-L	600PMT117001
	3	Screw	KBZ30P060FNI		49	Side Panel-R	600PMT118001
	4	Screw	BBZ30P140FMC	NSP	50	Bottom Tray	600PMT121000
	5	Screw	BBZ40P060FMC		51	Transformer Bracket	605PMT122000
	6	Screw	BPZ20P050FMC		52	FCC Cable HLD	605PMT142000
	7	Screw	BPZ26P080FMC		53	Cable Holder	605PMT143000
	8	Screw	BPZ30P100FNI		54	Power Heat Sink	613PMT124000
	9	Screw	CBZ30P060FMC		55	Heat Sink	613PMT131000
	10	CD SERVO PCB Assy	CD--PMT1E		56	CD Shield Plate	650PMT139000
	11	••••••			57	CD Insulation Sheet	650PMT144000
NSP	12	DISPLAY PCB Assy	See Contrast table(2)		58	Display Filter Plate	See Contrast table(2)
	13	HP JACK PCB Assy	••••••		59	PC Sheet	650PMT149000
	14	TERMINAL/JACK PCB Assy	JK--PMT1E		60	Transport Stopper PL	650PMT197010
	15	Screw	KBZ30P040FMC		61	Shielding Plate	650277225000
	16	Screw	KBZ30P060FNI		62	Rubber Foot	700PMT130000
	17	CD DOOR Assy MT	SUBPMT1DR01		63	Capacitor Boot	700PMT150000
	18	POWER PCB Assy	See Contrast table(2)		64	Bushing	See Contrast table(2)
	19	S-Assy PMT1 FP01	See Contrast table(2)		65	Cable/Plastic Tie	727000100000
	19	S-Assy PMT1 FP02	See Contrast table(2)		66	65 Label	See Contrast table(2)
	20	TUNER PCB Assy	See Contrast table(2)	NSP	67	Trans. Stopper Label	809PMT194021
	21	FFC Cable 16Pin	040160100101		68	FCC Label	See Contrast table(2)
	22	FFC Cable 16Pin	040160260100	NSP	69	Serial No Barcode Label	See Contrast table(2)
	23	FFC Cable 17Pin	040170100100		70	Warning Label MT3KUC	See Contrast table(2)
	24	FFC Cable 24Pin	040240200130		70	Warning Label MT3E	See Contrast table(2)
	25	FFC Cable 30Pin	040300400100		70	Warning Label MT3D	See Contrast table(2)
△	26	Power TF EI35 120V	See Contrast table(2)		70	Warning Label MT3DL	See Contrast table(2)
△	26	Power TF EI35 230V	See Contrast table(2)		71	Back Label MT3KUC	See Contrast table(2)
△	26	Power TF EI35 11-2	See Contrast table(2)		71	Back Label MT3MY	See Contrast table(2)
△	27	Power TF EI66 120V	See Contrast table(2)		71	Back Label MT3NV	See Contrast table(2)
△	27	Power TF EI66 230V	See Contrast table(2)		71	Back Label MT3DBD	See Contrast table(2)
△	27	Power TF EI66 11-2	See Contrast table(2)		71	Back Label MT3DL	See Contrast table(2)
△	28	Micro Fuse 251001	124010010002		72	Fuse Caution Label	See Contrast table(2)
△	29	Fuse #23901.6 (1.6A)	See Contrast table(2)	NSP	73	Front Panel	500PMT101001
△	29	Fuse #21801.6 (1.6A)	See Contrast table(2)	NSP	74	GND. Copper Plate C	650PMT152000
△	30	Micro Fuse 251002	124020010002	NSP	75	GND. Copper Plate D	650PMT153000
△	31	Micro Fuse #25103.5	124035010000	NSP	76	GND. Copper Plate E	650PMT155000
△	32	PLA-ULP-6'06"-SP2NMG	See Contrast table(2)	NSP	77	Control Panel Plate	650PMT116010
△	32	PLA-VDE-6'06"-VDG	See Contrast table(2)	NSP	78	Front Cover	See Contrast table(2)
△	32	PLA-MOU-6'06"-BS6	See Contrast table(2)	NSP	79	Display Lens	500PMT106010
△	32	PLA-JIS-6'06"-JIS	See Contrast table(2)	NSP	80	Illuminated Ring	509PMT105000
△	33	CD MECHA,CMCJ	153000117000	NSP	81	CD Door	500PMT102001
	34	Top Panel	See Contrast table(2)	NSP	82	CD Door Cover	600PMT120010
	35	Direct Access Knob Lens	500PMT111000		83	••••••	
	36	Back Cover	See Contrast table(2)		84	PCB Insulation Sheet	650PMT157000
	37	Power Standby Lens	500PMT129000		85	CD Caution Label	See Contrast table(2)
	38	Fuse Insulation Cap	500623200000	NSP	86	Fuse Label	See Contrast table(2)
	39	CD Base Adaptor R	503PMT125000		87	Voltage Sel. Cover	See Contrast table(2)
	40	CD Base Adaptor L	503PMT126000		88	Voltage Sel. Knob	See Contrast table(2)
	41	Servo PCB Bracket	505PMT114000	NSP	89	Serial Label	See Contrast table(2)
	42	FL Bracket	505PMT134000		90	Tube AWG5 D4.72 L70	728000047L07
	43	LED Bracket	505PMT135000		91	Tube AWG5 D4.72 L90	728000047L09
	44	PCB Mounting Bracket	505PMT136000		92	Tube AWG1 D7.35 L120	728000073L12
	45	Volume Knob	510PMT103001		93	Tube AWG1 D7.35 L160	728000073L16
	46	Clock Control Knob Set	510PMT108001		94	Tube AWG1 D7.35 L15	728000073L15
					95	Ref Silver Label	See Contrast table(2)

(2) CONTRAST TABLE

XR-MT3/KUCXCEN, MYXCEN, NVXCEN, DBDXCEN and DLXCEN/NC are constructed the same except for the following :

Mark	No.	Symbol and Description	Part No.				
			KUCXCEN	MYXCEN	NVXCEN	DBDXCEN	DLXCEN/NC
	12	DISPLAY PCB Assy	DIP-PMT1E	DIP-PMT1E-E	DIP-PMT1E-E	DIP-PMT1E-DL	DIP-PMT1E-DL
	18	POWER PCB Assy	GEN-PMT1E-UL	GEN-PMT1E-GA	GEN-PMT1E-GA	GEN-PMT1E-DL	GEN-PMT1E-DL
	19	S-Assy PMT1 FP01	SUBPMT1FP01	Not used	Not used	SUBPMT1FP01	SUBPMT1FP01
	19	S-Assy PMT1 FP02	Not used	SUBPMT1FP02	SUBPMT1FP02	Not used	Not used
	20	TUNER PCB Assy	TUN-PMT1E-UL	TUN-PMT1E-EU	TUN-PMT1E-EU	TUN-PMT1E-DL	TUN-PMT1E-DL
△	26	Power TF EI35 120V	123113513020	Not used	Not used	Not used	Not used
△	26	Power TF EI35 230V	Not used	123183513140	123183513140	Not used	Not used
△	26	Power TF EI35 11-2	Not used	Not used	Not used	1231D3513140	1231D3513140
△	27	Power TF EI66 120V	123516636021	Not used	Not used	Not used	Not used
△	27	Power TF EI66 230V	Not used	123586636142	123586636142	Not used	Not used
△	27	Power TF EI66 11-2	Not used	Not used	Not used	1235D6636140	1235D6636140
△	29	Fuse #23901.6 (1.6A)	124016020001	Not used	Not used	Not used	Not used
△	29	Fuse #21801.6 (1.6A)	Not used	124016000002	124016000002	124016000002	124016000002
△	32	PLA-ULP-6'06"-SP2NMG	134117120108	Not used	Not used	Not used	Not used
△	32	PLA-VDE-6'06"-VDG	Not used	134220120001	Not used	Not used	134220120001
△	32	PLA-MOU-6'06"-BS6	Not used	Not used	134240120014	Not used	Not used
△	32	PLA-JIS-6'06"-JIS	Not used	Not used	Not used	134100120001	Not used
	34	Top Panel	500PMT104001	500PMT104001	500PMT104001	500PMT148001	500PMT148001
	36	Back Cover	500PMT113001	500PMT181000	500PMT181000	500PMT113001	500PMT113001
	58	Display Filter Plate	650PMT147001	650PMT147002	650PMT147002	650PMT147002	650PMT147002
	64	Bushing	700PMT156000	700PMT146000	700PMT146000	700PMT146000	700PMT146000
	66	65 Label	809PMT194010	Not used	Not used	Not used	Not used
	68	FCC Label	809PMT194030	Not used	Not used	Not used	Not used
NSP	69	Serial No Barcode Label	809PMT194040	809PMT194120	809PMT194090	Not used	Not used
	70	Warning Label MT3KUC	809PMT194050	Not used	Not used	Not used	Not used
	70	Warning Label MT3E	Not used	809PMT194080	809PMT194080	Not used	Not used
	70	Warning Label MT3D	Not used	Not used	Not used	809PMT194100	Not used
	70	Warning Label MT3DL	Not used	Not used	Not used	Not used	809PMT194110
	71	Back Label MT3KUC	809PMT196010	Not used	Not used	Not used	Not used
	71	Back Label MT3MY	Not used	809PMT196020	Not used	Not used	Not used
	71	Back Label MT3NV	Not used	Not used	809PMT196030	Not used	Not used
	71	Back Label MT3DBD	Not used	Not used	Not used	809PMT196040	Not used
	71	Back Label MT3DL	Not used	Not used	Not used	Not used	809PMT196050
	72	Fuse Caution Label	809036380130	Not used	Not used	Not used	Not used
NSP	78	Front Cover	600PMT119010	600PMT119020	600PMT119020	600PMT119010	600PMT119010
	85	CD Caution Label	Not used	809PMT194070	809PMT194070	809PMT194070	809PMT194070
NSP	86	Fuse Label	Not used	809PMT194130	809PMT194130	809PMT194130	809PMT194130
	87	Voltage Sel. Cover	Not used	Not used	Not used	500PMT110001	500PMT110001
	88	Voltage Sel. Knob	Not used	Not used	Not used	510PMT112001	510PMT112001
NSP	89	Serial Label	Not used	Not used	Not used	809000009000	809000009000
	95	Ref Silver Label	Not used	809PMT151000	809PMT151000	Not used	Not used

2.2 CD MECHA. SECTION

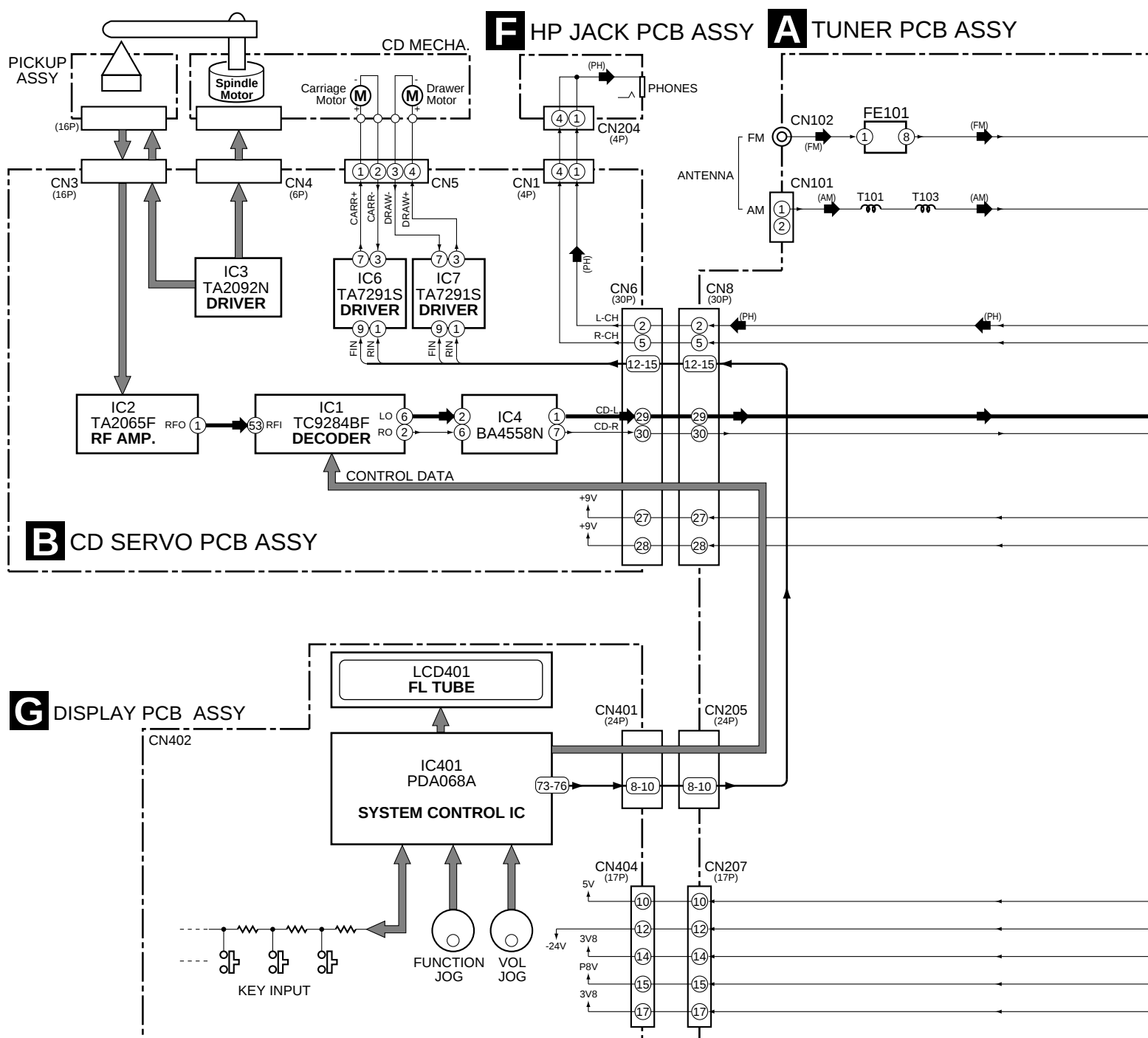


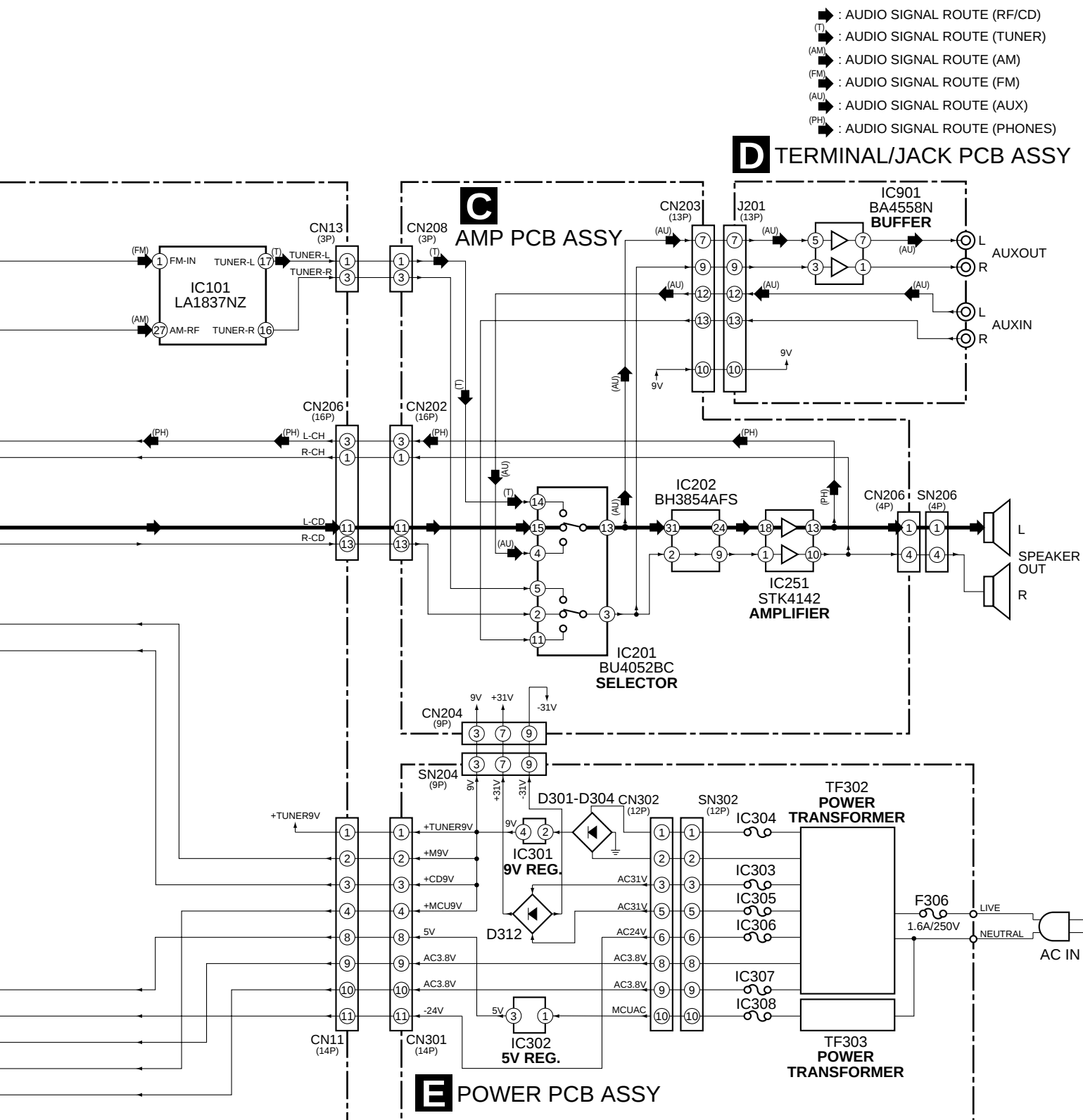
● CD MECHA. SECTION PARTS LIST

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Assy Chassis	45-093-4256		31	Assy Motor DRW S	45-093-4239
	2	Drawer 2	45-264-3278		32	Spring	01-080-4541
	3	Assy Holder L	45-093-3241		33	Spring	01-082-4643
	4	Assy Holder R3B	45-093-3296		34	Spring	01-082-4647
	5	Assy Gear Drive	45-093-4243		35	Belt	02-083-4171
	6	Assy Carriage 101	45-093-4347		36	Belt	02-083-4172
	7	Bevel Gear 4	45-222-4214		37	Cushion	45-063-4136
	8	Assy Gear Star	45-093-4244		38	Insulator	45-063-3201
	9	Cover 2	45-112-3154		39	Insulator	45-063-3202
	10	Shaft	45-300-4173		40	Pickup Unit	KSM213CCM
	11	Slider 4	45-259-3175		41	Assy Carriage 201	45-093-4348
	12	Gear Spline	45-222-4021		42	Assy Carriage 301	45-093-4349
	13	Bevel Gear 1	45-222-4059		43	Spacer SW	45-219-4127
	14	Gear Idler 1	45-222-4176		44	Assy PC Board A	45-093-4263
	15	Plate Spring	45-160-4174		45	Assy PC Board B	45-093-4265
	16	Bevel Gear 3	45-222-4177		46	Assy PC Board C	45-093-4264
	17	Pulley C	45-222-4058		47	Rubber Cushion	45-063-4115
	18	Assy Clamper SO	45-093-4358		48	Washer	GWP15×045025S
	19	Arm Slider R	45-219-3187		49	Screw	GSL20A2606
	20	Arm Slider L	45-219-3188		50	Screw	GSL20B2006
	21	Slider 1	45-259-2185		51	Screw	GSL10B2006
	22	Assy Slider 2	45-093-3240		52	Washer	GWN31×120050
	23	Arm Stopper A2	45-239-4279		53	Screw	GSL15A2608
	24	Arm Stopper B	45-239-4065		54	Screw	GSP14A2604
	25	Gear Idler A	45-222-4128		55	Screw	GST15A2005
	26	Gear Idler C	45-222-4051		56	Lead Wire	45-072-4171
	27	Lever 2	45-259-3289		57	Lead Wire	45-072-4172
	28	Lifter	45-259-3025				
	29	Pulley A	45-229-4052				
	30	Assy Motor CRG S	45-093-4238				

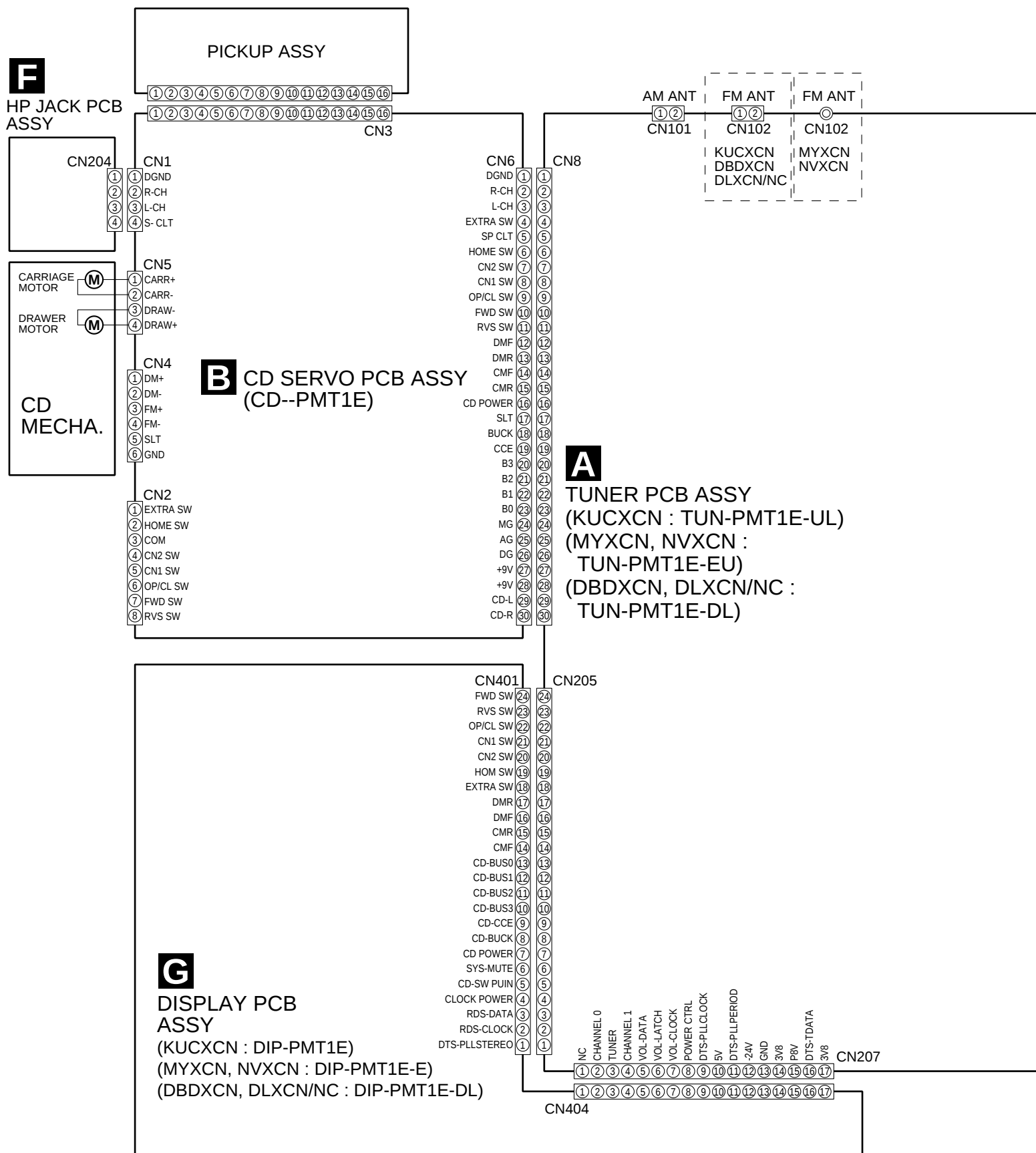
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

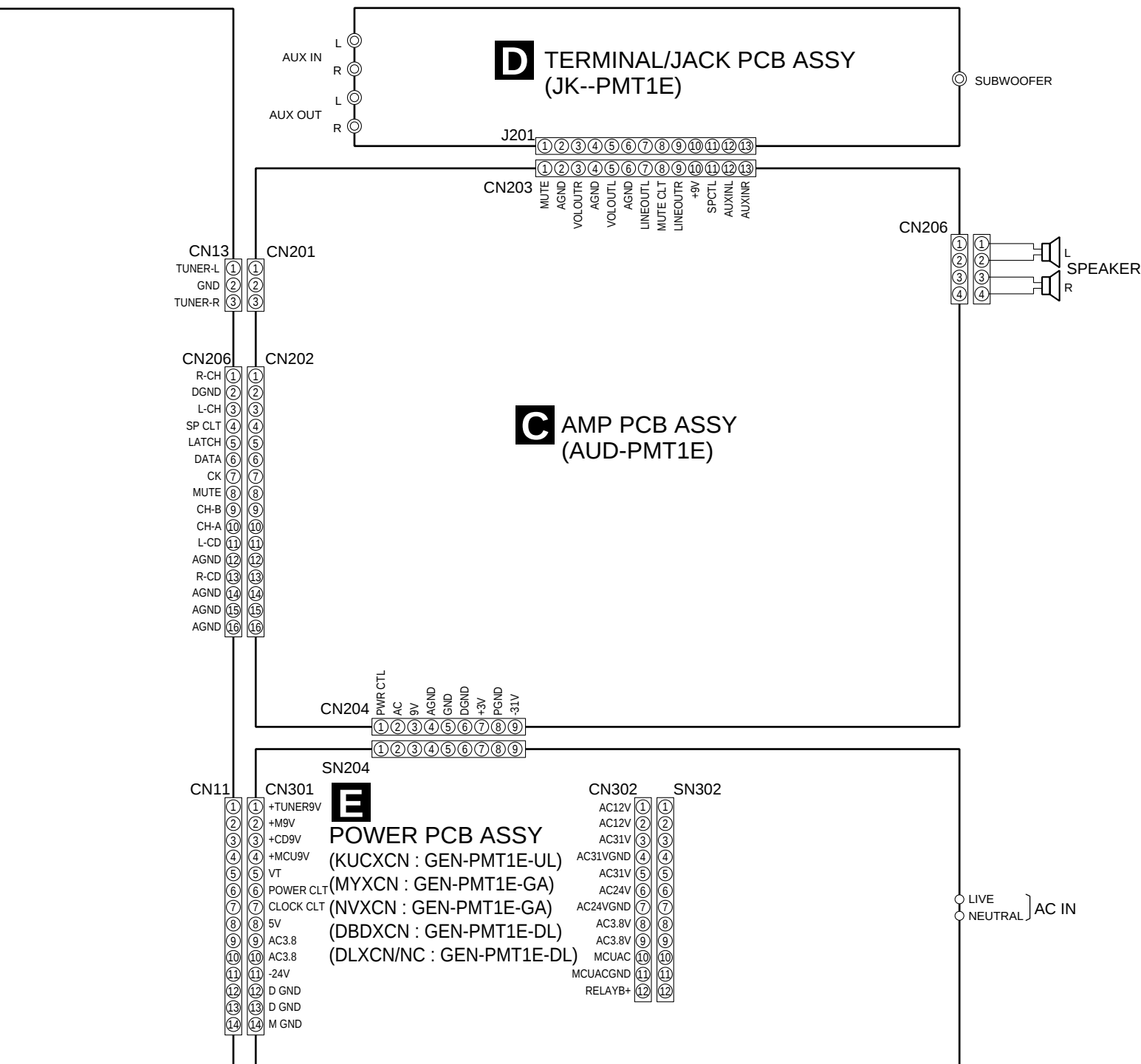


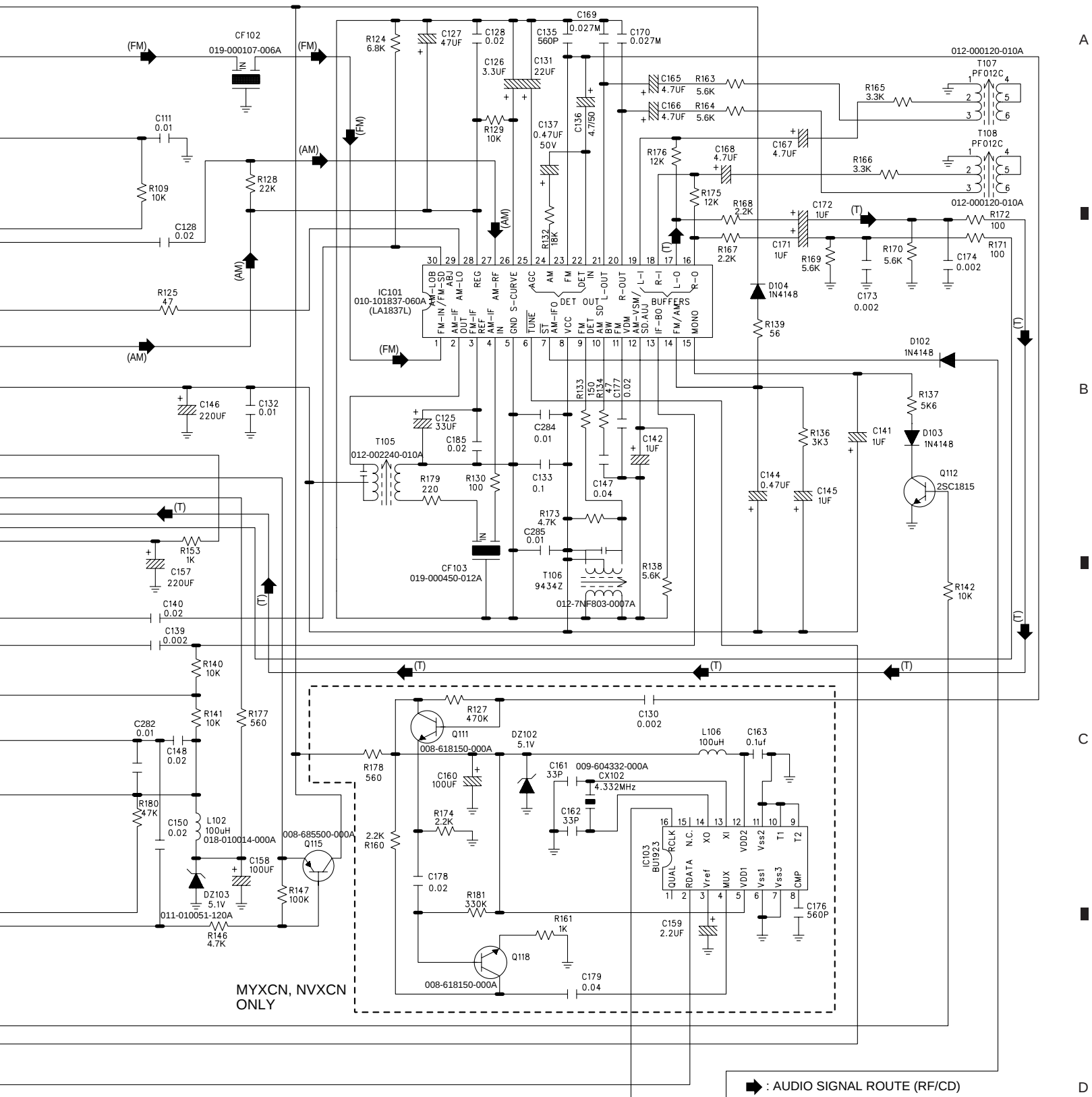


3.2 OVERALL WIRING DIAGRAM



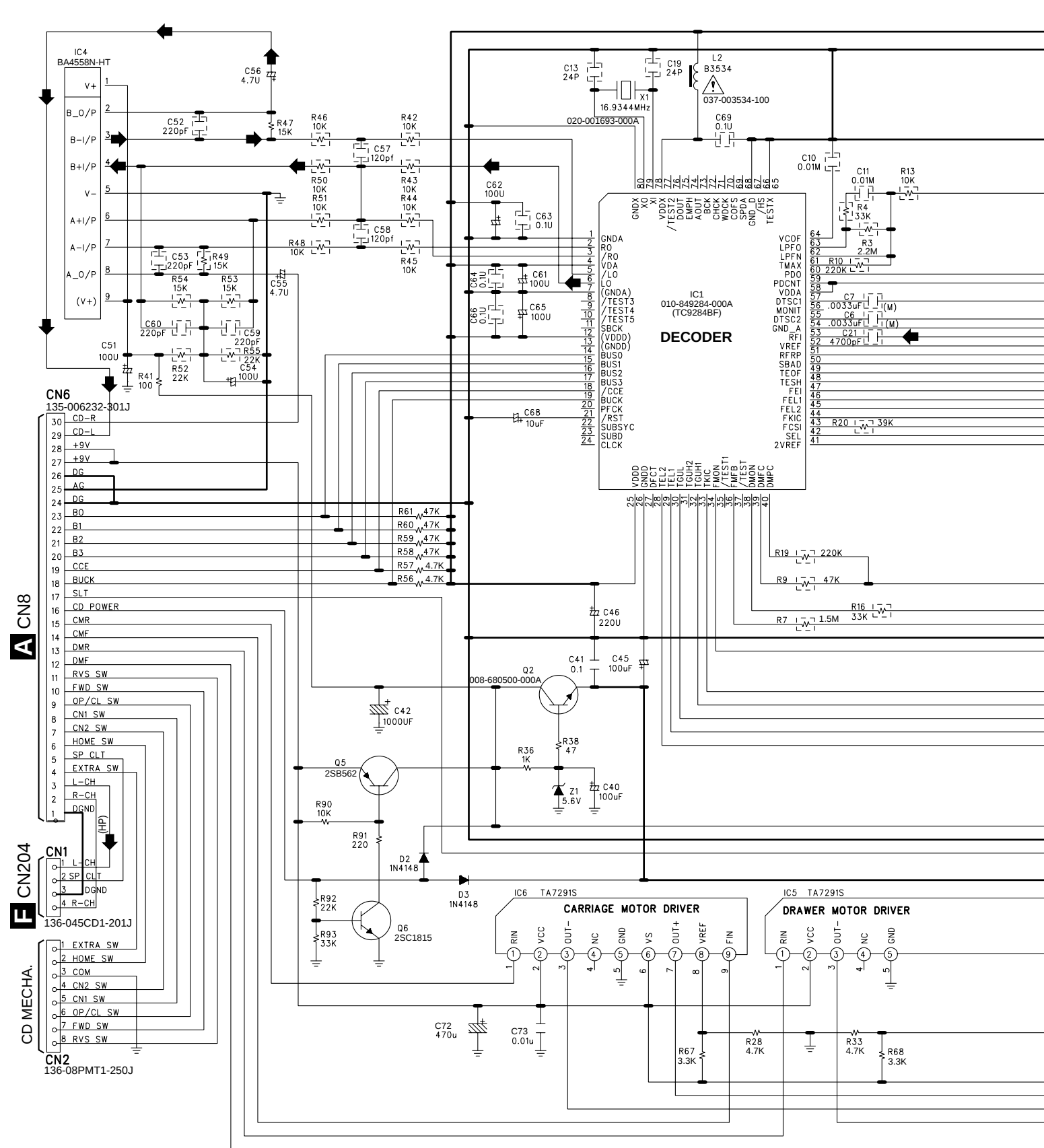
Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".





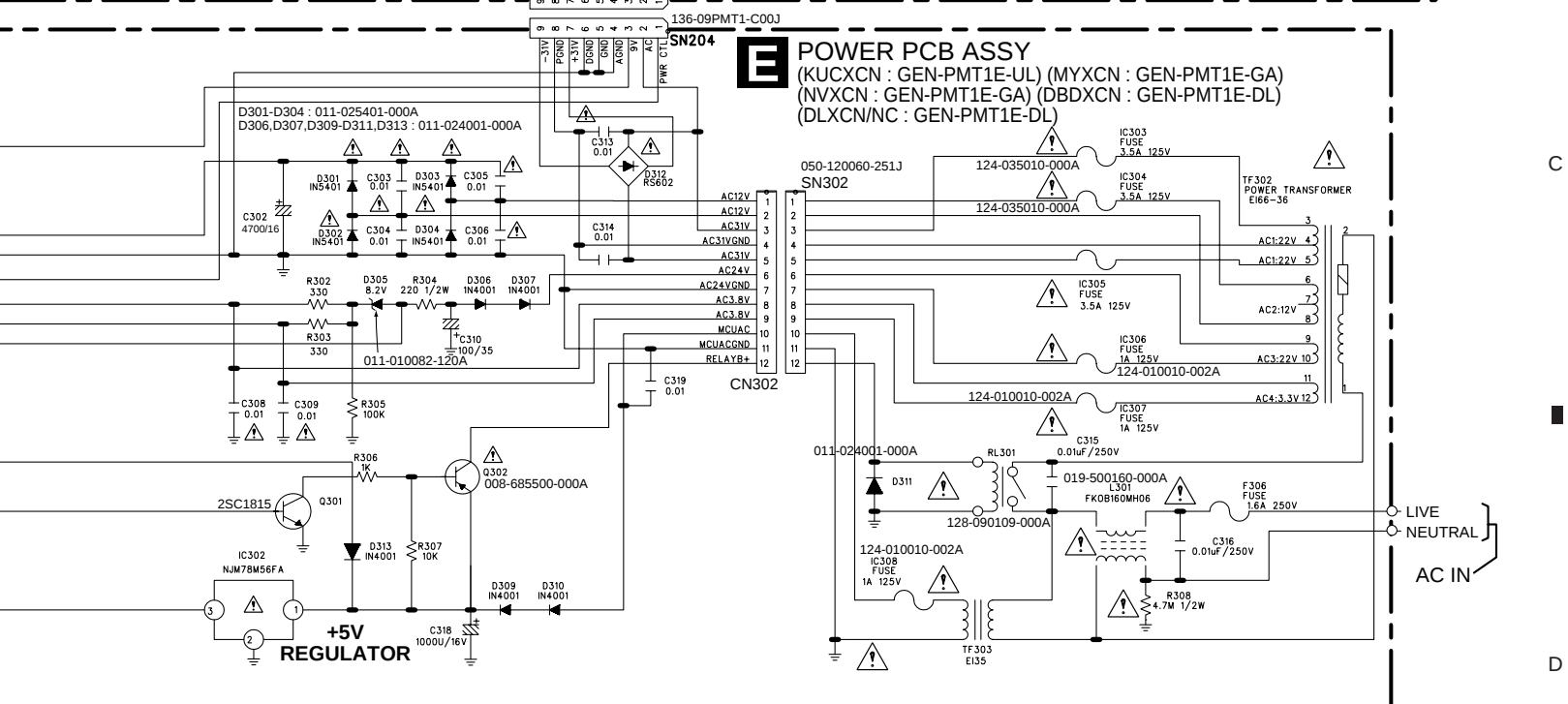
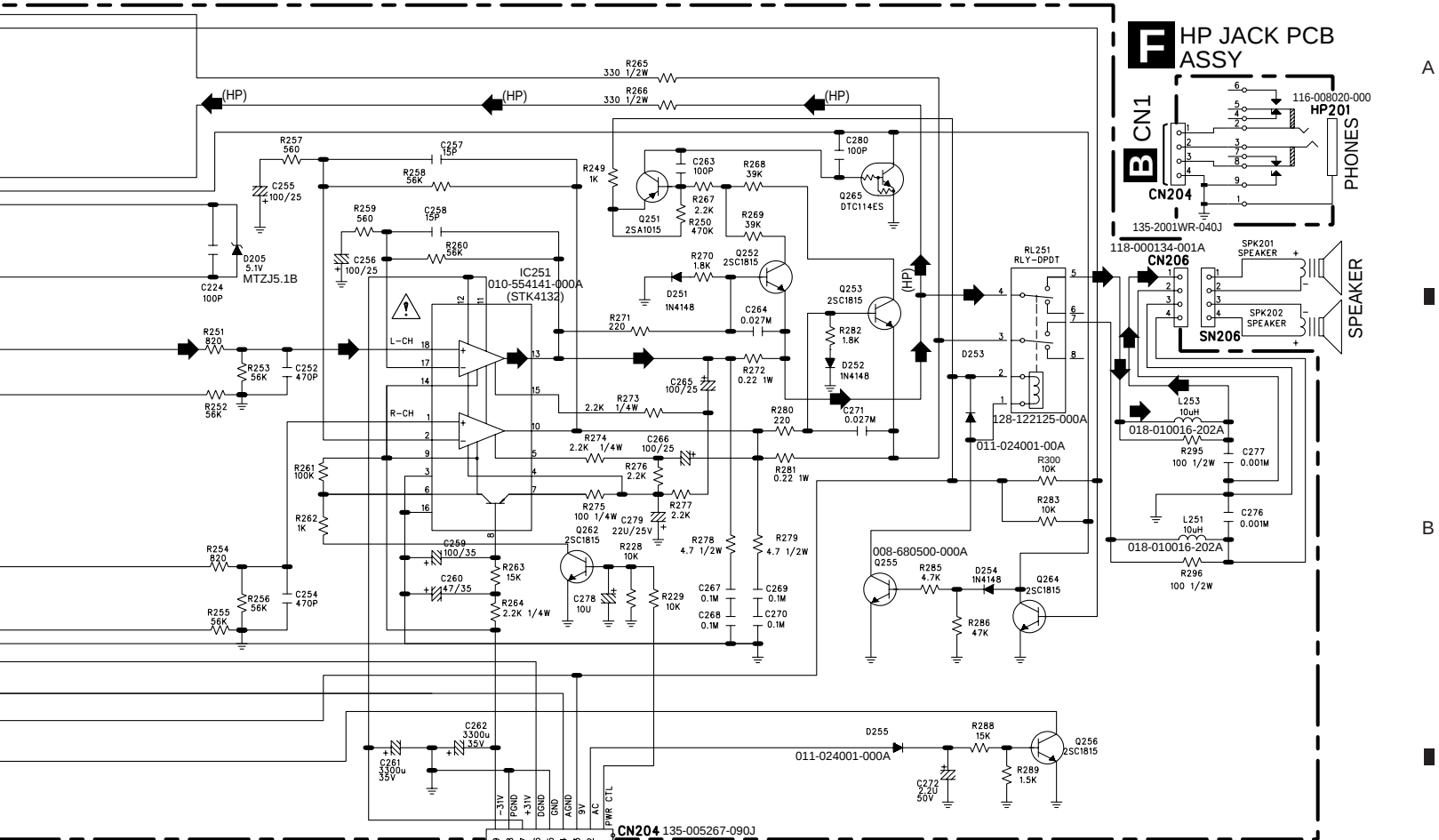
A TUNER PCB ASSY
 (KUCXCN : TUN-PMT1E-UL)
 (MYXCN, NVXCN : TUN-PMT1E-EU)
 (DBDXCN, DLXCNC : TUN-PMT1E-DL)

3.4 CD SERVO PCB ASSY





➡ : AUDIO SIGNAL ROUTE (RF/CD) (AU) ➡ : AUDIO SIGNAL ROUTE (AUX)
 (T) ➡ : TUNER SIGNAL ROUTE (HP) ➡ : AUDIO SIGNAL ROUTE (PHONES)



• NOTE FOR FUSE REPLACEMENT

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

3.6 DISPLAY PCB ASSY

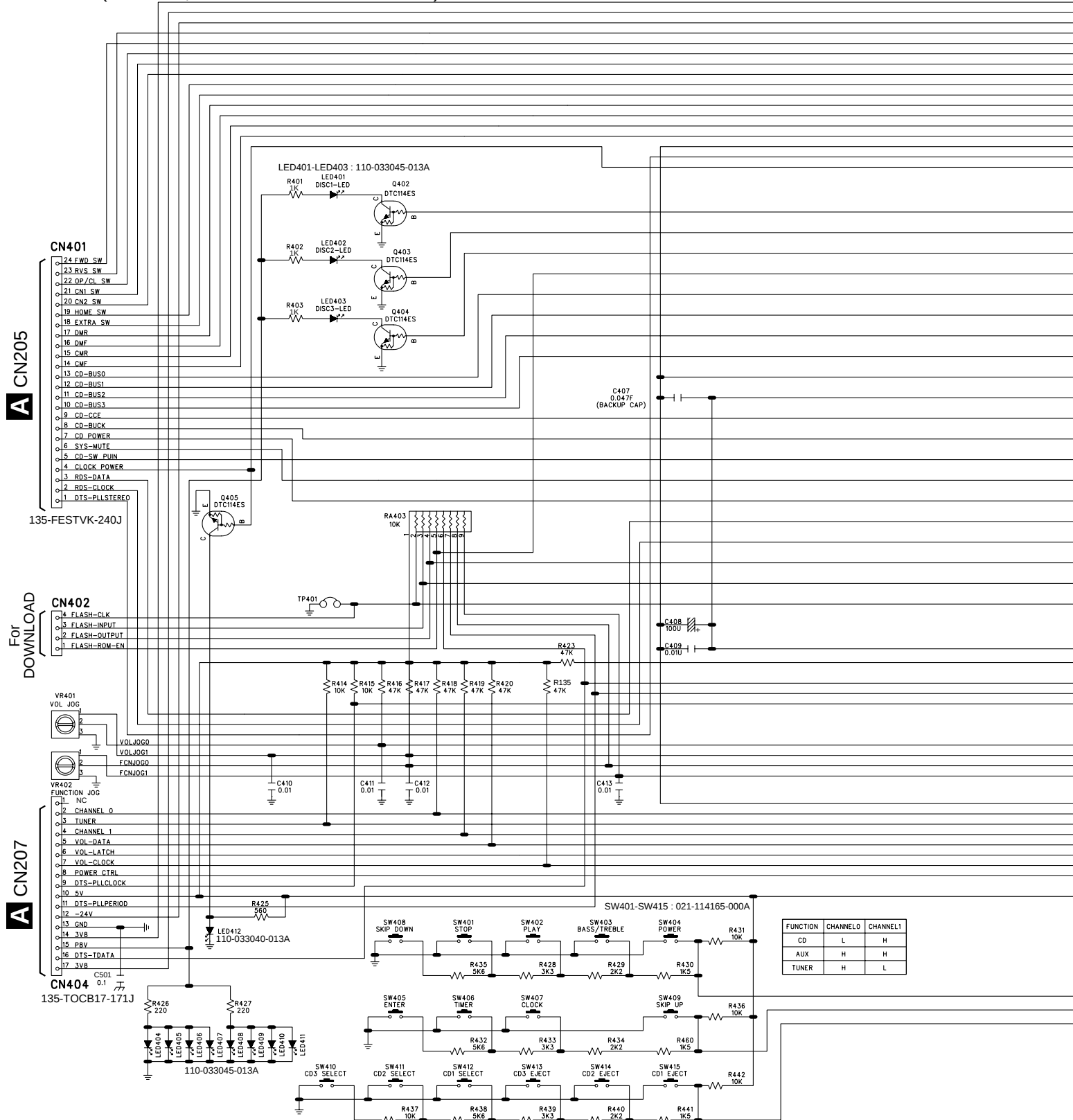


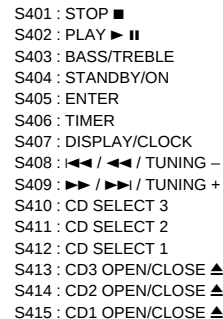
DISPLAY PCB ASSY

(KUCXCN : DIP-PMT1E)

(MYXCN, NVXCN : DIP-PMT1E-E)

(DBDXCN, DLXCN/NC : DIP-PMT1E-DL)



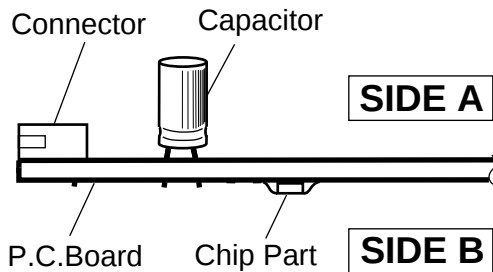


country	R445	R446
KUCXCN	47K	47K
DBDxCN	--	47K
DLXC/N/C		
MYXCN	47K	--
NVXCN		

4. PCB CONNECTION DIAGRAM

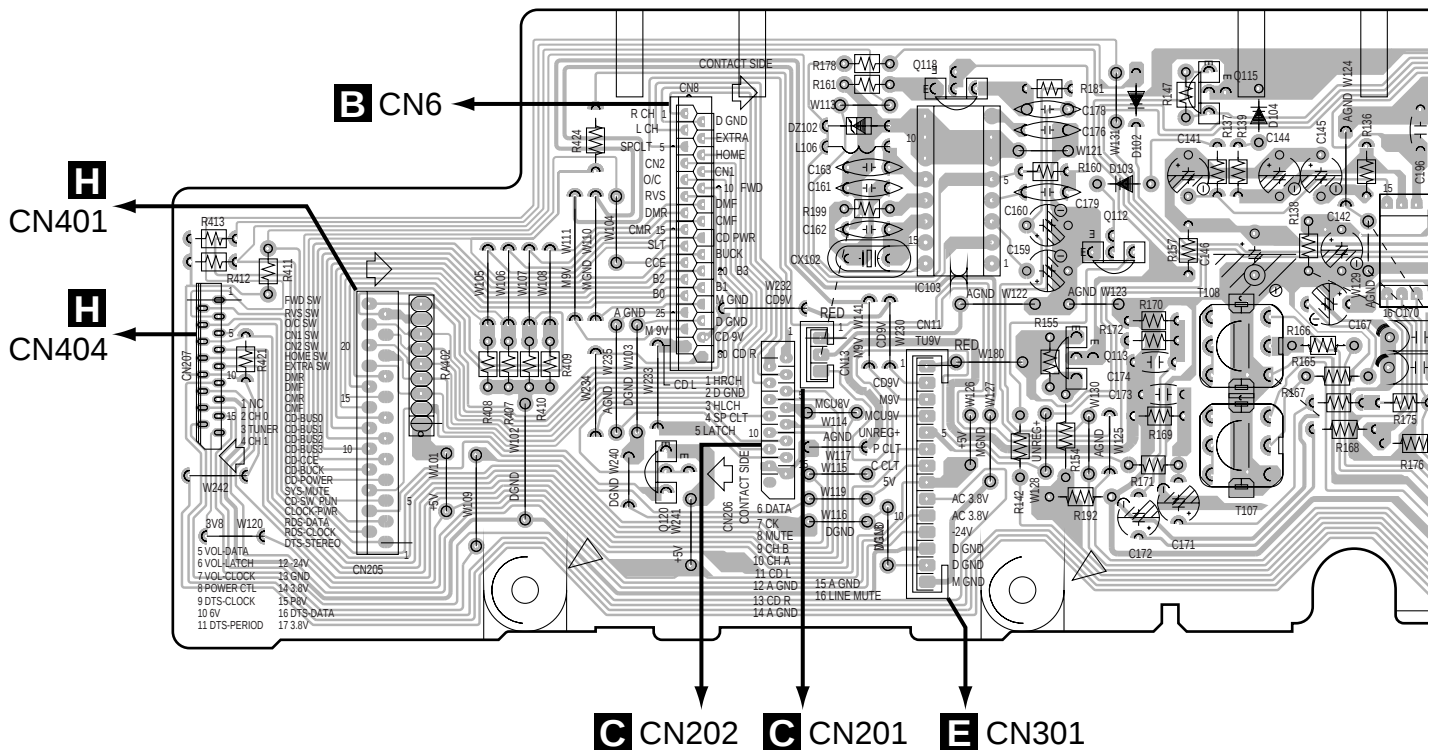
NOTE FOR PCB DIAGRAMS :

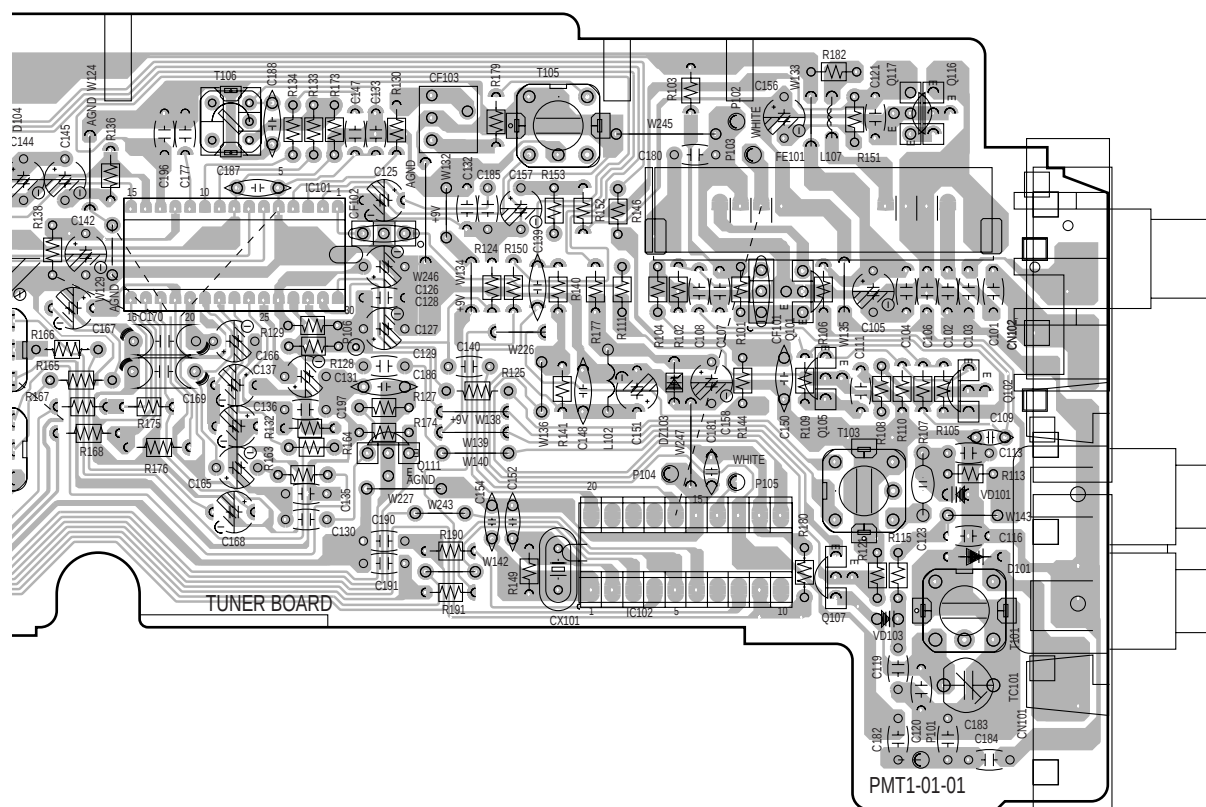
- Part numbers in PCB diagrams match those in the schematic diagrams.
- The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.
- View point of PCB diagrams.



4.1 TUNER PCB ASSY

A TUNER PCB ASSY





Q102

4.2 CD SERVO PCB and HP JACK PCB ASSYS

BCD SERVO PCB ASSY

CD MECHA.

CARRIAGE
MOTOR,
DRAWER
MOTOR

PICKUP
ASSY

SERVO BOARD

PMT-1-01-03

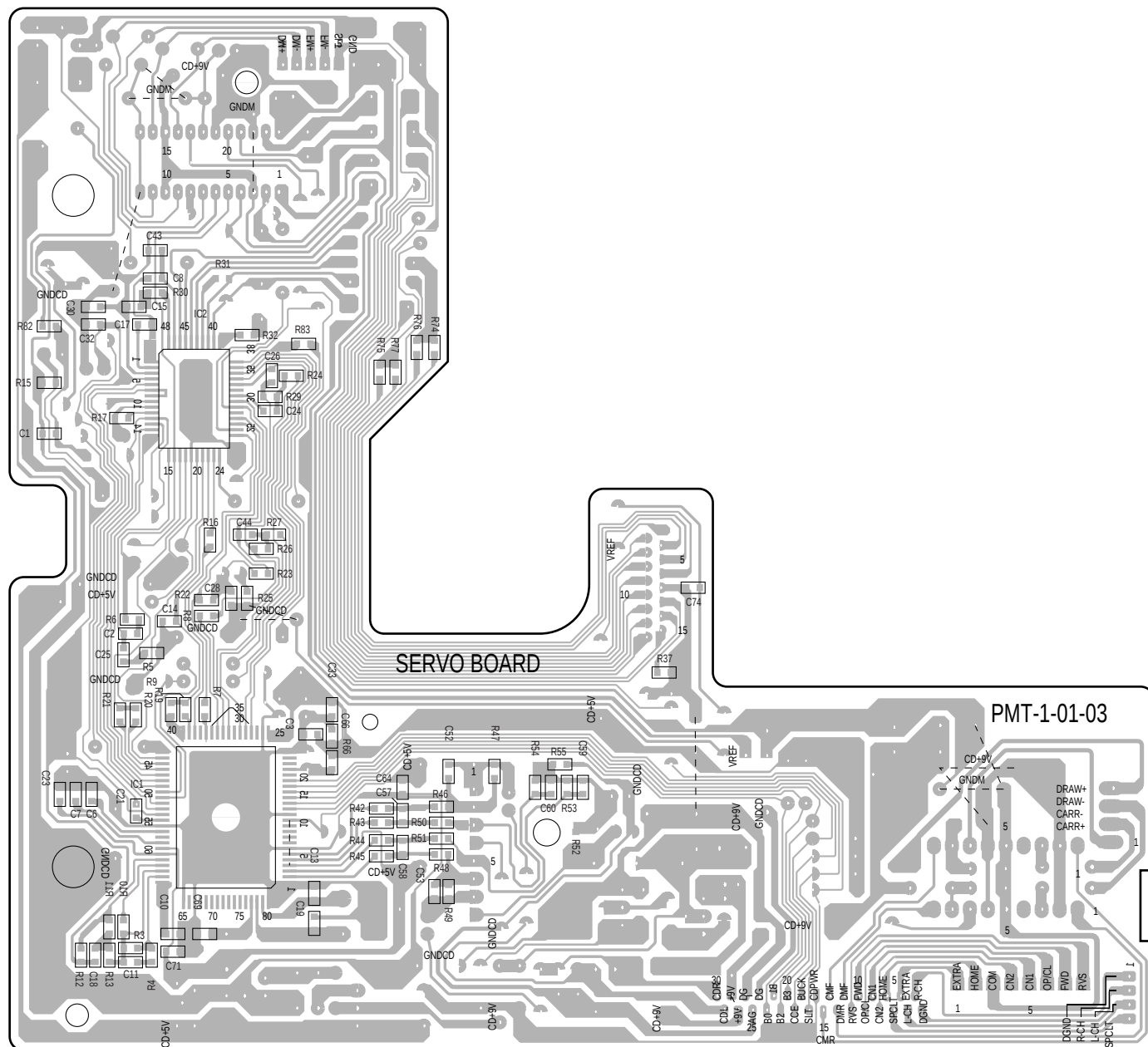
CD MECHA.

A CN8

F
HP JACK PCB ASSY

SIDE A

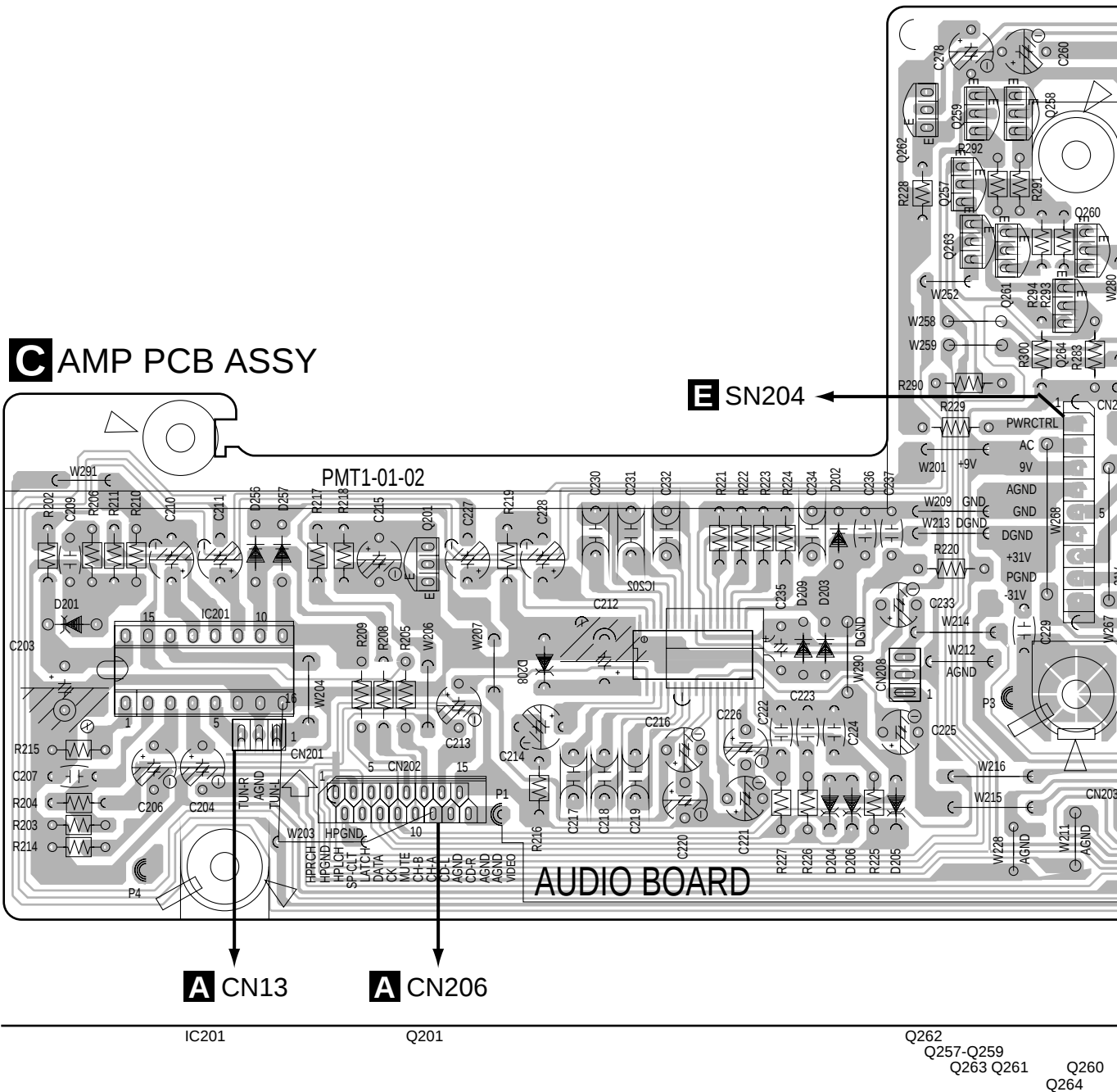
B CD SERVO PCB ASSY



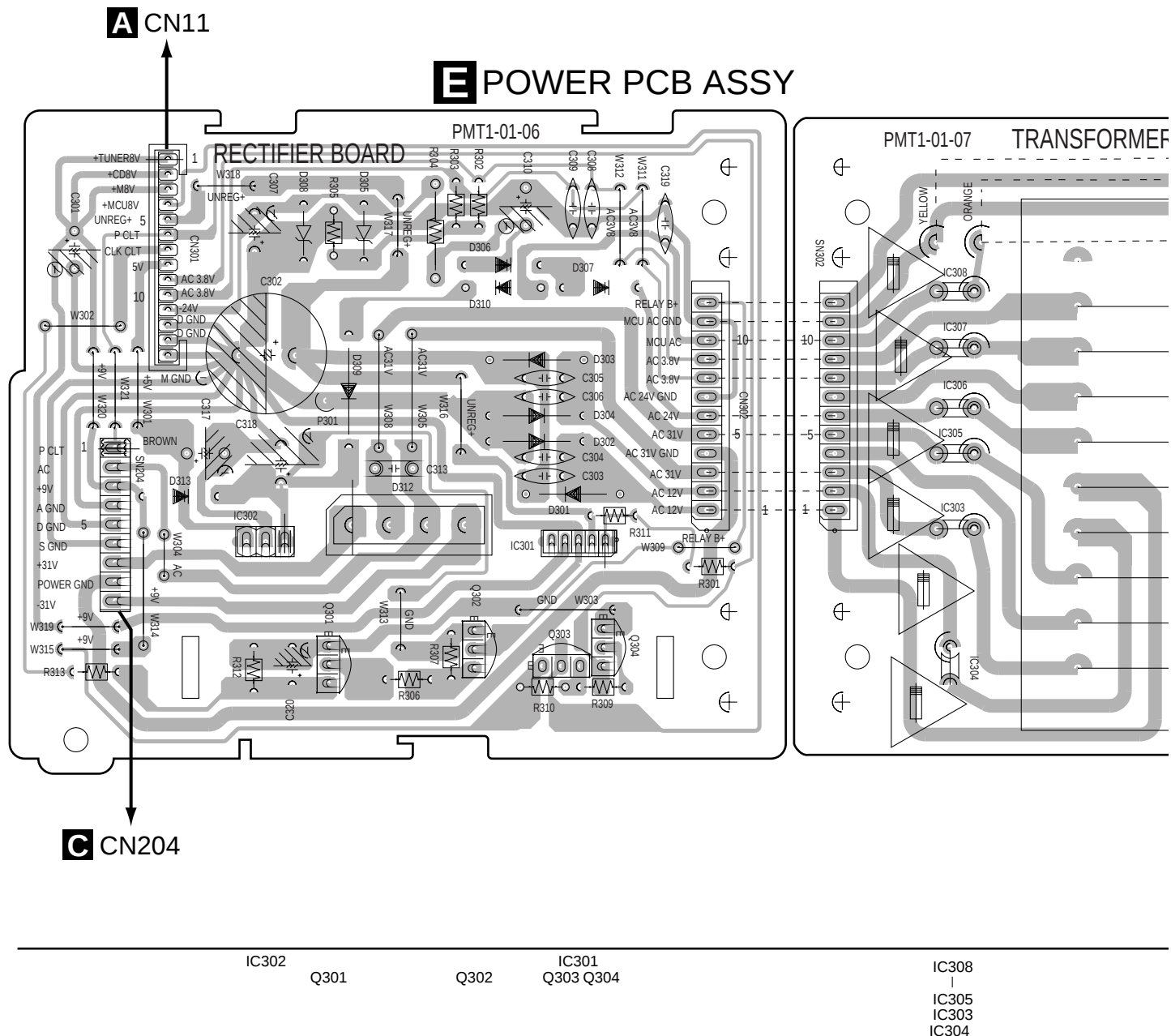
IC2
IC1

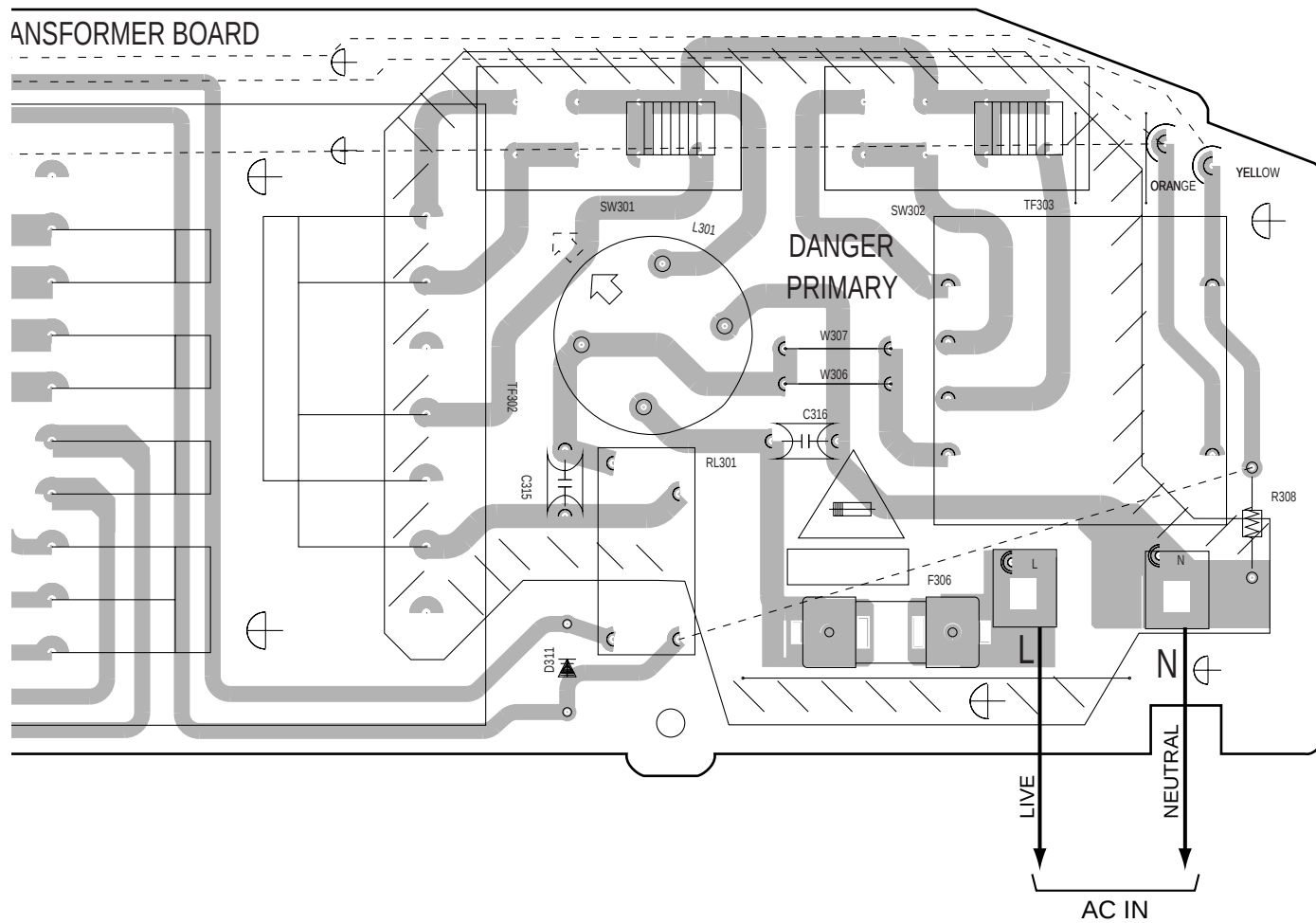
SIDE B

4.3 AMP PCB ASSY



4.4 POWER PCB ASSY





SIDE A

5. PCB PARTS LIST

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

●The Δ mark found on some component parts indicates the importance of the safety factor of the part.

Therefore, when replacing, be sure to use parts of identical designation.

●When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω $\rightarrow$ 56×10^1 $\rightarrow$ 561 RD1/4PU 5 6 1 J

47k Ω $\rightarrow$ 47×10^3 $\rightarrow$ 473 RD1/4PU 4 7 3 J

0.5 Ω $\rightarrow$ R50 RN2H R 5 0 K

1 Ω $\rightarrow$ 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 $\rightarrow$ 562×10^1 $\rightarrow$ 5621 RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.					Remarks
		KUCXCN	MYXCN	NVXCN	DBDXCN	DLXCN/NC	
NSP	TUNER PCB ASSY	TUN-PMT1E-UL	TUN-PMT1E-EU	TUN-PMT1E-EU	TUN-PMT1E-DL	TUN-PMT1E-DL	
	CD SERVO PCB ASSY	CD--PMT1E	CD--PMT1E	CD--PMT1E	CD--PMT1E	CD--PMT1E	
	AMP PCB ASSY	AUD-PMT1E	AUD-PMT1E	AUD-PMT1E	AUD-PMT1E	AUD-PMT1E	
	TERMINAL/JACK PCB ASSY	JK--PMT1E	JK--PMT1E	JK--PMT1E	JK--PMT1E	JK--PMT1E	
	POWER PCB ASSY	GEN-PMT1E-UL	GEN-PMT1E-GA	GEN-PMT1E-GA	GEN-PMT1E-DL	GEN-PMT1E-DL	
	HP JACK PCB ASSY						
	DISPLAY PCB ASSY	DIP-PMT1E	DIP-PMT1E-E	DIP-PMT1E-E	DIP-PMT1E-DL	DIP-PMT1E-DL	



TUNER PCB ASSY

TUN-PMT1E-UL, TUN-PMT1E-EU and TUN-PMT1E-DL are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		TUN-PMT1E-UL, TUN-PMT1E-DL	TUN-PMT1E-EU	
	IC103	Not used	BU1923	
	Q111, Q118	Not used	008-618150-000A	
	DZ102	Not used	MTZJ5.1B	
	L106	Not used	018-010014-00A	
	C130	Not used	003-20280-050	
	C159	Not used	CEAT2R2M50	
	C160	Not used	CEAT101M10	
	C161, C162	Not used	CCCCH330J50	
	C163	Not used	CGCYX104K25	
	C176	Not used	CKCYB561K50	
	C178	Not used	003-20380-050	
	C179	Not used	CKCYF473Z50	
	R127	Not used	RD1/4PU474J	
	R160, R174	Not used	RD1/4PU222J	
	R161	Not used	RD1/4PU102J	
	R181	Not used	RD1/4PU334J	
	CX102 (4.332MHz)	Not used	009-604332-000A	
	CN102	118-040102-002A	118-030401-000A	
	JP	Not used	054-010A50-090J	

POWER PCB ASSY

GEN-PMT1E-UL, GEN-PMT1E-GA and GEN-PMT1E-DL are constructed the same except for the following :

Mark	Symbol and Description	Part No.		Remarks
		GEN-PMT1E-UL GEN-PMT1E-GA	GEN-PMT1E-DL	
	SLIDE SW	Not used	025-230041-000A	

DISPLAY PCB ASSY

DIP-PMT1E, DIP-PMT1E-E and DIP-PMT1E-DL are constructed the same except for the following :

Mark	Symbol and Description	Part No.			Remarks
		DIP-PMT1E	DIP-PMT1E-E	DIP-PMT1E-DL	
	LED WLEDS03304 GRN R445 R446	Not used RD1/4PU473J RD1/4PU473J	110-033041-003A RD1/4PU473J Not used	Not used Not used RD1/4PU473J	

PCB PARTS LIST FOR XR-MT3/KUCXCN UNLESS OTHERWISE NOTED

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

A TUNER PCB ASSY

SEMICONDUCTORS

IC101(ICREVA-AFM-IF-MPX LA1837L)	010-101837-000A
IC102 (ICPLL TC9257P)	010-849257-001A
Q102,Q105 (TRANSISTOR 2SC1417)	008-314170-008A
Q113,Q115 (TRLPNPPWR 3CA8550)	008-685500-000A
Q120 (TR DTA114YS)	008-801144-000A
Q112,Q116,Q117	2SC1815
Q101,Q107	2SK161
D101-D104	1N4148
VD101,VD103	KV1561A-2
DZ103 (ZENER IN-5231B,HZ5C1)	011-010051-120A

COILS AND FILTERS

L102 (INDUCTOR 100μH)	018-010014-000A
L108 (BAD COIL #BA3534)	037-003534-100
CF102,CF101	019-000107-006A
CERAMIC FILTER SFE10	
CF103 (CERAMIC FILTER LTU450G2)	019-000450-012A

CAPACITORS

C173,C174,C139,C103 (0.002μF)	003-020280-050
C177,C128,C129,C140,C185,C116	003-020380-050
C148,C150 (CERAMIC CAP 0.02μF)	003-020380-050
C154,C152 (CERAMIC CAP 24pF)	003-024010-050
C147 (CERAMIC CAP 0.04μF)	003-040380-050
C288,C183,C184 (CERAMIC 50pF)	003-050010-050
C135 (CERAMIC CAP 820pF/50V)	003-082110-050
C123 (POLY CAP 350pF/50V)	005-035100-000A
C113	CCCCH100D50
C190	CCCCH101J50

C101	CCCCH330J50
C156	CEAT100M50
C158	CEAT101M10
C171,C136,C141,C142,C145,C172	CEAT1R0M50
C131	CEAT220M25
C146	CEAT221M10
C125	CEAT330M16
C126	CEAT3R3M50
C127	CEAT470M16
C167,C168,C165,C166	CEAT4R7M50
C144,C137	CEATR47M50
C133,C121	CGCYX104K25
C119	CKCYB682K50
C132,C111,C106-C109,C104,C180	CKCYF103Z50
C186-C188,C101	CKCYF103Z50
C169,C170	CQMBA273J50

RESISTORS

RA402 (RESISTOR NETWORK 10kΩ)	001-229103-000A
Other Resistors	RD1/4PU□□□J

OTHERS

TC101	TRIMMER CAP CVN610-3	007-200610-000A
T107,T108	IFT PF120C 10mm	012-000120-010A
T105	IFT 4A-224R,10mm	012-002240-010A
T103	IFT 1A612R,10mm	012-006120-010A
T101	IFT 1A784R MW RF,10mm	012-007840-010A
T106	IFT FM DET 600TEAS	012-7NF803-007A
FE101	TUNER-FN&&&00STATION	042-104511-000A
P101	JP WIRE AWG26 110mm	051-675110-009J
	SHIELD WIRE SINGLE	053-103077-015J
CN101,CN102	EXT SP JACK	118-040102-002A

Mark	No.	Description	Part No.
	CN206	FFC CONN SOCKET 16P	135-006116-160J
	CN8	FFC CONN 6232 30PINS	135-006232-300J
	CN205	FFC CONN SOCKET 24P	135-FEBTVK-240J
	CN207	FFC CONN SOCKET 17P	135-TOCB17-171J
	CN13	HSG PMT1-3A PEC 2001H	136-03PMT1-B00J
	CN11	HSG PMT1-14A PEC 2001H	136-14PMT1-B00J
	CX101	CRYSTAL RESONATOR (7.2MHz)	009-607200-000A

B CD SERVO PCB ASSY

SEMICONDUCTORS

IC2 (TA2065F)	010-832065-000A
IC3 (IC MOTOR DRIVER TA2092)	010-832092-000A
IC1 (TC9284BF)	010-849284-000A
IC4	BA4558N-HT
IC5,IC6	TA7291S

Q2 (TRLNPNPWR 3DA8050)	008-680500-000A
Q1 (TRLNPNPWR 3CA8550)	008-685500-000A
Q5	2SB562
Q6	2SC1815
D1-D3	1N4148

COILS

△ L1 (INDUCTOR 100μH)	018-010014-000A
L2 (BAD COIL #BA3534)	037-003534-100

CAPACITORS

C13,C19,C43 (CHIP CAP 24pF/50V)	003-624052-050A
C18	CCSRCH101J50
C57,C58	CCSRCH121J50
C52,C52,C59,C60	CCSRCH221J50
C15	CCSRCH270J50

C8	CCSRCH4R0C50
C37,C68,C12,C20	CEAT100M50
C34,C38,C40,C45,C61,C62,C54	CEAT101M10
C65	CEAT101M10
C42	CEAT102M10

C9	CEAT1R0M50
C27	CEAT220M25
C46,C48	CEAT221M10
C16,C31,C29	CEAT470M16
C72	CEAT471M10

C56,C55	CEAT4R7M50
C51	CEJQ101M10
C75	CEJQ470M16
C41,C4,C35,C22,C36	CGCYX104M16
C73,C47	CKCYF103Z50

C10,C11,C33,C74	CKSRYB103K50
C23,C24,C28,C64,C66,C69	CKSRYB104K16
C44	CKSRYB153K50
C26	CKSRYB223K50
C7,C6	CKSRYB332K50

C1	CKSRYB471K50
C21	CKSRYB472K50
C17,C30,C32,C3	CKSRYB473K16
C2	CKSRYB563K16
C14	CKSRYB682K50

C25	CKSRYF333Z50
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Mark	No.	Description	Part No.
RESISTORS			
	R34		RD1/4PM100J
	R41		RD1/4PU101J
	FEO,TEB,TEO (100kW)		002-104085-102A
	Other Resistors		RS1/16S□□□J

OTHERS

21	ZENER IN-5232B 5.6V	011-010056-120A
FEB	SEMI-FIXED	002-472065-000A
CN6	FFC CONN 6232 30P	135-006232-301J
CN3	FFC CONN SOCKET 16P	135-TOCA16-160A
CN1	HSG 5CD1-4B JST	136-045CD1-201J

CN5	HSG PMT1-4A JST	136-04PMT1-250J
CN4	HSG 2CD9-6C (REV)	136-067238-205J
CN2	HSG PMT1-8A JST	136-08PMT1-250J
	SOLDERING PIN	137-300000-002J
X1	CERAMIC RESONATOR (16.93MHz)	020-001693-000A

C AMP PCB ASSY

SEMICONDUCTORS

△ IC251 (STK4142MKIIA)	010-554142-000A
IC202	BH3854FS
IC201	BU4052BC
Q255	008-680500-000A
Q257	008-801144-000A

Q251	2SA1015
Q201,Q252,Q253,Q256,Q262,Q264	2SC1815
Q258-Q261	2SD1468S
Q263,Q265	DTC114ES
D253,D255	011-024001-000A

D202,D203,D252,D252,D254,D256	1N4148
D257	1N4148
D201	MTZJ4.7B
D204-D206	MTZJ5.1B
△ D209	MTZJ9.1B

COILS

L251,L253 (INDUCTOR 10μH)	018-010016-202A
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RELAY

RL291 RELAY 12V	128-122125-000A
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CAPACITORS

C276,C277 (0.001μF)	004-010210-100
C271,C264 (MYLAR CAP 0.027μF)	004-027350-100
C257,C258	CCCSL150J50
C215	CEAT100M50
C226	CEAT101M10

C255,C256,C265,C266	CEAT101M25
C259	CEAT101M35
C213,C227	CEAT1R0M50
C214,C221,C228,C279	CEAT220M25
C203	CEAT221M16

C251,C253,C272	CEAT2R2M50
C261,C262	CEAT332M35
C216	CEAT3R3M50
C260	CEAT470M35
C212,C235	CEAT471M16

Mark	No.	Description	Part No.
	C204,C210,C211,C216,C225,C233 C206,R204,R205 C220 C236,C237,C229 C207,C209,C222-C224,C263,C280	CEAT4R7M50 CEAT4R7M50 CEATR22M50 CGCYX104K25 CKCYB101K50	
	C252,C254 C219,C232 C267-C270 C234 C217,C218,C230,C231	CKCYB471K50 CQMBA103J50 CQMBA104J50 CQMBA223J50 CQMBA683J50	

RESISTORS

R295,R296 R265,R266 R278,R279 R212 R272,R281	RD1/2LMF101J RD1/2LMF331J RD1/2LMF4R7J RD1/4PU1R0J RS1LMFR22J
Other Resistors	RD1/4PM□□□J

OTHERS

CN206 CN204 CN202 CN201 CN208	PUSH TERMINAL HEADER 4 PINS FFC CONN SOCKET 16P HEADER CTL 3 PINS HSG CD189D-3A	118-000134-001A 135-005267-090J 135-006116-160J 135-PHS030-030J 136-03189D-200J
P3,P4	ROUND PIN	137-500001-000J

D TERMINAL/JACK PCB ASSY**SEMICONDUCTORS**

IC901,IC902 Q901,Q910,Q912,Q913 (TR DTA114YS) Q904,Q906,Q907 Q902,Q903,Q905,Q908,Q909,Q911	BA4558N-HT 008-801144-000A 2SC1815 2SD1468S
D901,D902	1N4148

CAPACITORS

C907 (CERAMIC CAP 0.02μF) C903,C910,C924,C925,C928,C929 C908,C905 C902,C909 C935	003-020380-050 CCCCH101J50 CEAT101M10 CEAT1R0M50 CEAT220M25
C912 C927 C906,C904,C911,C913,C915-C918 C934 C914	CEAT221M10 CEAT2R2M50 CEAT4R7M50 CEAT4R7M50 CEATR22M50
C919 C921-C923	CGCYX104K25 CKCYF102Z50

RESISTORS

All Resistors	RD1/4PU□□□J
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OTHERS

J201 GND J904 J901	CONN PIN 14 PINS JP WIRE AWG22 140MM RCA JACK HSP-244V-01 RCA JACK HTJ-032-09B	050-140060-200J 051-275140-009J 118-000244-000A 118-020032-003A
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Mark	No.	Description	Part No.
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E POWER PCB ASSY**SEMICONDUCTORS**

△	IC306-IC308 (MICRO FUSE 251001 1A)	124-010010-002A
△	IC303,IC304 (MICRO FUSE #25103.5-TS2 3.5A) D311	124-035010-000A 011-024001-000A
△	IC301 (IC REGULA BA09ST)	010-400009-001A
△	IC302	NJM78M56FA
△	Q302,Q303 (TRLPNPPWR 3CA8550) Q301 Q304	008-685500-000A 2SC1815 DTC114ES
△	D305 (ZENER IN-5237B,8.2V) D308 (ZENER BZX55C24 24V) D312 (BRIDGE RECTIFIER RS602) D306,D307,D309-D311,D313 (RECTIFIER IN-4001B)	011-010082-120A 011-010240-120A 011-020602-001A 011-024001-000A
△	D301-D304 (RECTIFIER IN-5401BL)	011-025401-000A

RELAY

△	RL301	RELAY 9 OSA-SS-212DM	128-090109-000A
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COIL

△	L301	AC LINE FILTER	019-500160-000A
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CAPACITORS

△	C316,C319 (CERAMIC CAP 0.01μF)	003-010320-250A
△	C313 (MYLAR CAP 0.01μF/100V) C310,C307 C318 C317,C301	004-010310-100 CEAT101M35 CEAT102M16 CEAT221M16
	C302 C320	CEAT472M16 CEAT4R7M50
△	C303-C306,C308,C309,C319	CKCYF103Z50

RESISTORS

△	R308 R304 Other Resistors	RD1/2PM475J RD1/2PMF221J RD1/4PU□□□J
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OTHERS

SN302	CONN PIN 12 PINS JP WIRE AWG22#UL1672 JP WIRE AWG22 YELLOW AC CONTACT TERMINAL FUSE HOLDER 7900	050-120060-251J 051-265160-003J 051-275180-010J 137-400001-000J 550-790000-000J
F306		
P301	JP WIRE AWB22#1007 HEAT SINK	051-275120-009J 613PMT131000
△	SCREW	BBZ30P060FMC
△	SCREW	BBZ30P140FMC
CN301	HEADER 14 PINS	135-2001WS-140J
SN204	HSG PMT1-9A	136-09PMT1-C00J

XR-MT3

Mark	No.	Description	Part No.
F HP JACK PCB ASSY			
SEMICONDUCTOR			
	D105		1SS133
COIL			
	L107		LAU100J
CAPACITORS			
	C287		CGCYX104M16
	C280,C281		CKCYF103Z50
OTHERS			
	P201	JP WIRE AWG26 80MM	051-675080-009J
	HP201	HEADPHONE JACK	116-008020-000
	CN204	HEADER MOLEX 9 PINS	135-2001WR-040J

G DISPLAY PCB ASSY			
SEMICONDUCTORS			
	IC401		LC87F65C8A-QIP
	Q406		2SC1815
	Q402-Q405		DTC114ES
	D401		1N4148
	LED404-LED411	LED-Y-3MM	110-033045-013A
	LED412	LED-R-3MM	110-033040-013A
	LED401-LED403	LED-Y-3MM	110-033045-013A

SWITCHES			
	SW401-SW404,SW408-SW415		021-114165-000A
	(F021-KHH902-001) TACT SW		
	SW405-SW407		021-114165-000A
	(F021-KHH902-001)TACT SW		

CAPACITORS			
	C416,C417		CCCCH220J50
	C420,C428		CEAT100M50
	C419,C418(CERAMIC CAP 30pF/50V)		003-430050-050
	C407 (ELECT CAP 47000MFD/5.5V)		006-747300-05CA
	C402,C404		CEAT1R0M50
	C414		CEAT220M25
	C405,C495		CGCYX104K25
	C401,C403,C497-C499,C409-C413		CKCYF103Z50
	C421,C415,C500		CKCYF103Z50

RESISTORS			
	RA404-RA406		001-220104-000A
	RESISTOR NETWORK100K		
	RA403 RESISTOR NETWORK EXB		001-229103-000A
	VR401,VR402		030-H12203-204A
	Other Resistors		RD1/4PU□□□J

OTHERS			
	CN15		050-100050-201J
		JP WIRE AWB22#1007	051-275120-009J
	REM401	REMOTE/CONTROL PHOTO	111-000638-000A
	LCD401	VACUUM FLUORESCENT	115-000920-000A
	CN401	FFC CONN SOCKET 24P	135-FESTVK-240J
	CN404	FFC CONN SOCKET 17P	135-TOCB17-171J
	X401	CRYSTAL RESONATOR	009-332768-100A
		(32.768kHz)	
	X402	CERAMIC RESONATOR	020-000800-000A
		(8MHz)	

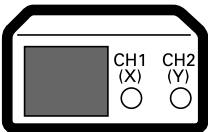
6. ADJUSTMENT

6.1 CD SECTION

CD ASSY is taken out according to the procedure of DISASSEMBLY. And, please adjust the part CD after connecting connectors.

6.1.1 PREPARATIONS

(1) Jigs and Measuring Instruments

 CD TEST DISC (YEDS-7)	 ⊖ Precise screwdriver	 ⊖ screwdriver (small)	 ⊕ screwdriver (medium)
 ⊕ screwdriver (large)	 Dual-trace oscilloscope (10 : 1 probe)		

(2) Necessary Adjustment Points

When	Adjustment Points
Exchange PICKUP	1, 2, 3, 4 → Pages 39 and 40
Exchange CD ASSY	1, 2, 3, 4 → Pages 39 and 40
Exchange SERVO MECH ASSY	1, 2, 3, 4 → Pages 39 and 40

6.1.2 Adjustment

(1) Adjustment Locations

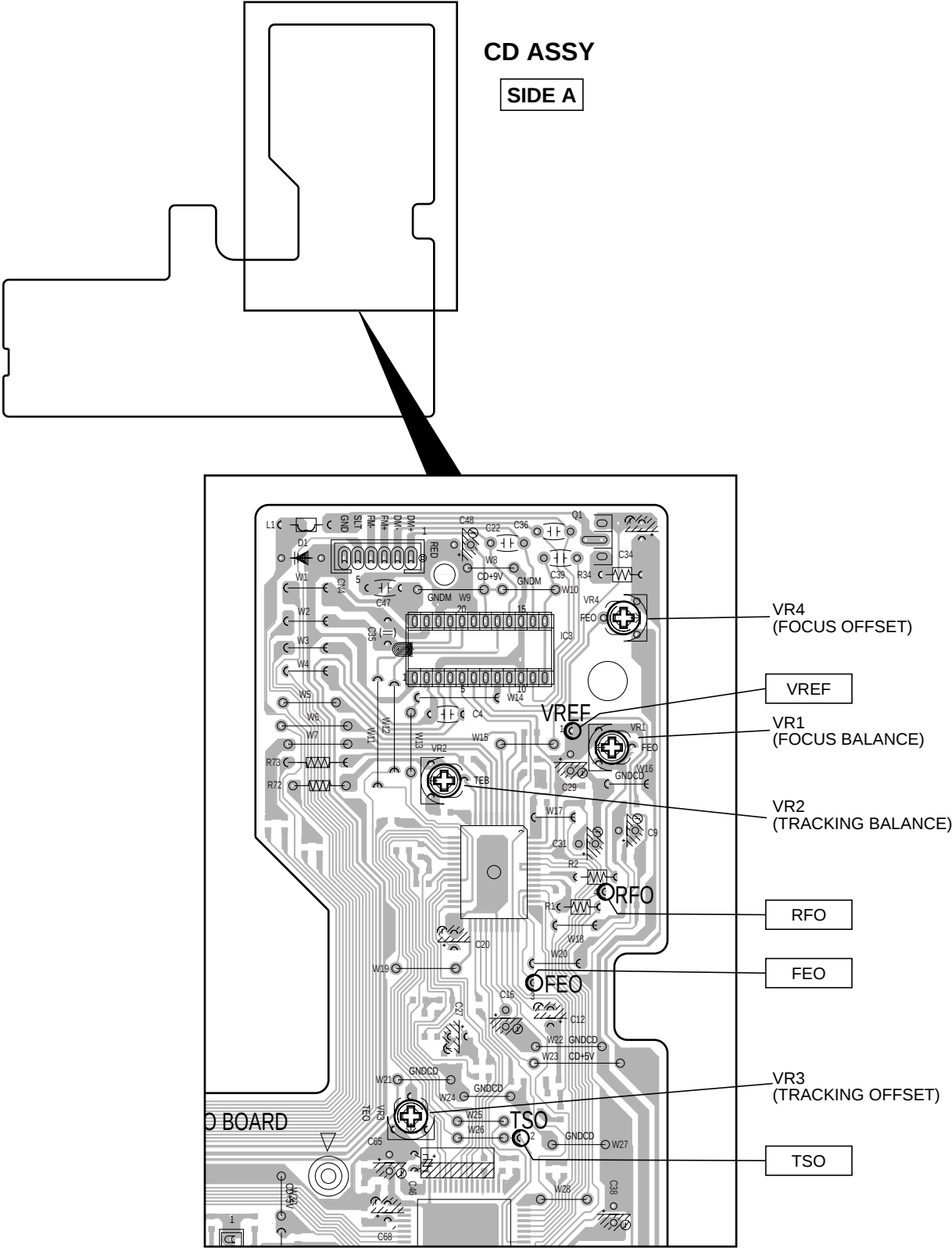
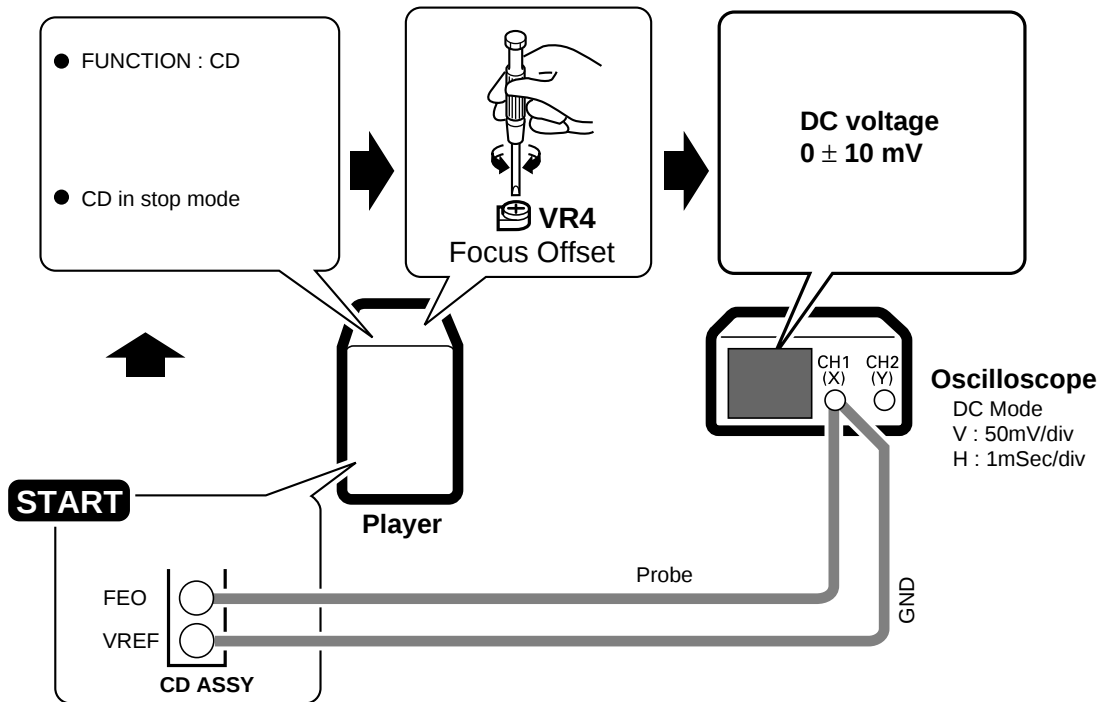


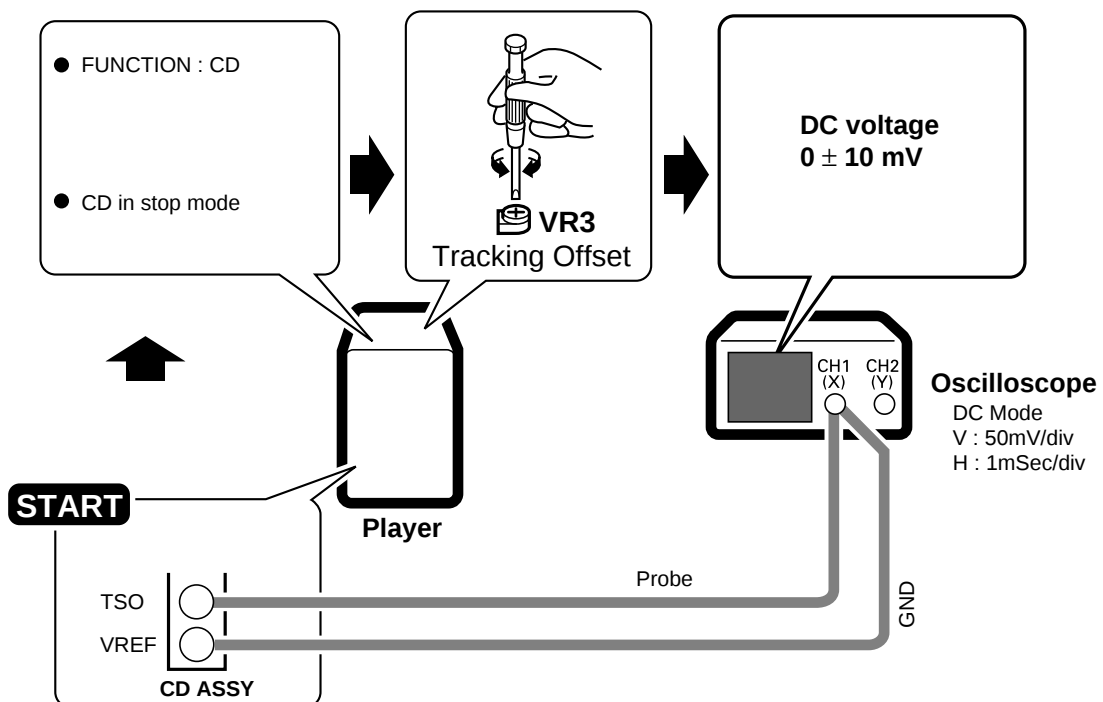
Fig. 1 Adjustment Locations

(2) Check and Adjustment

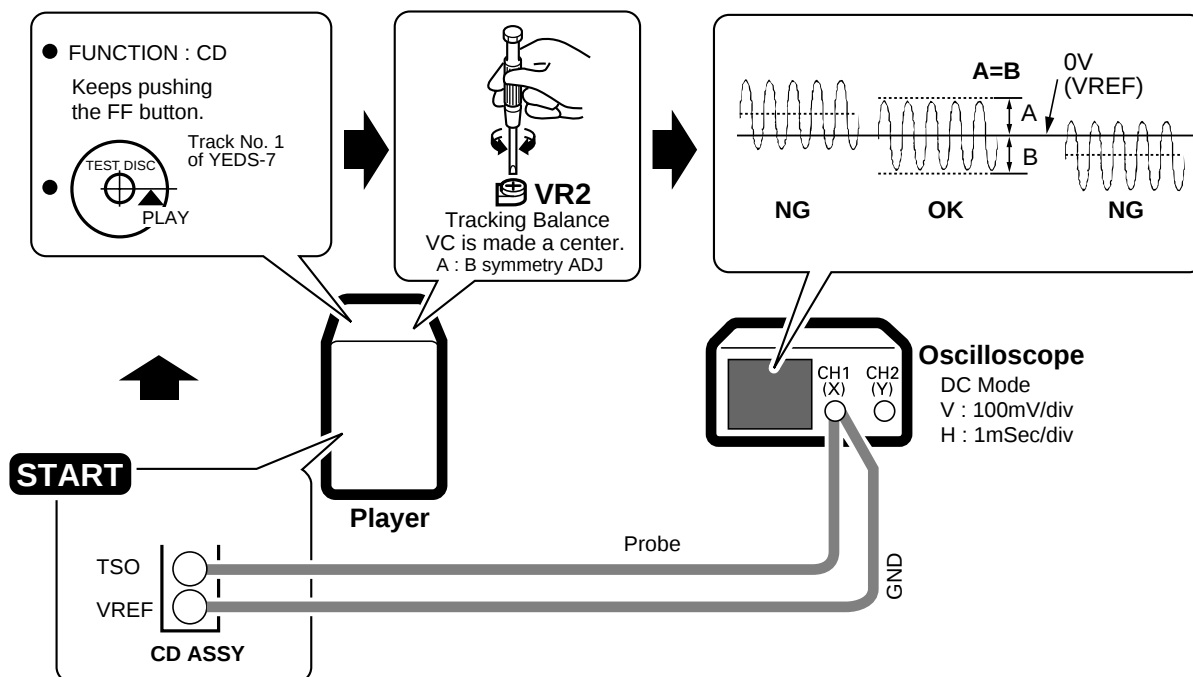
1. Focus Offset (FEO) Adjustment



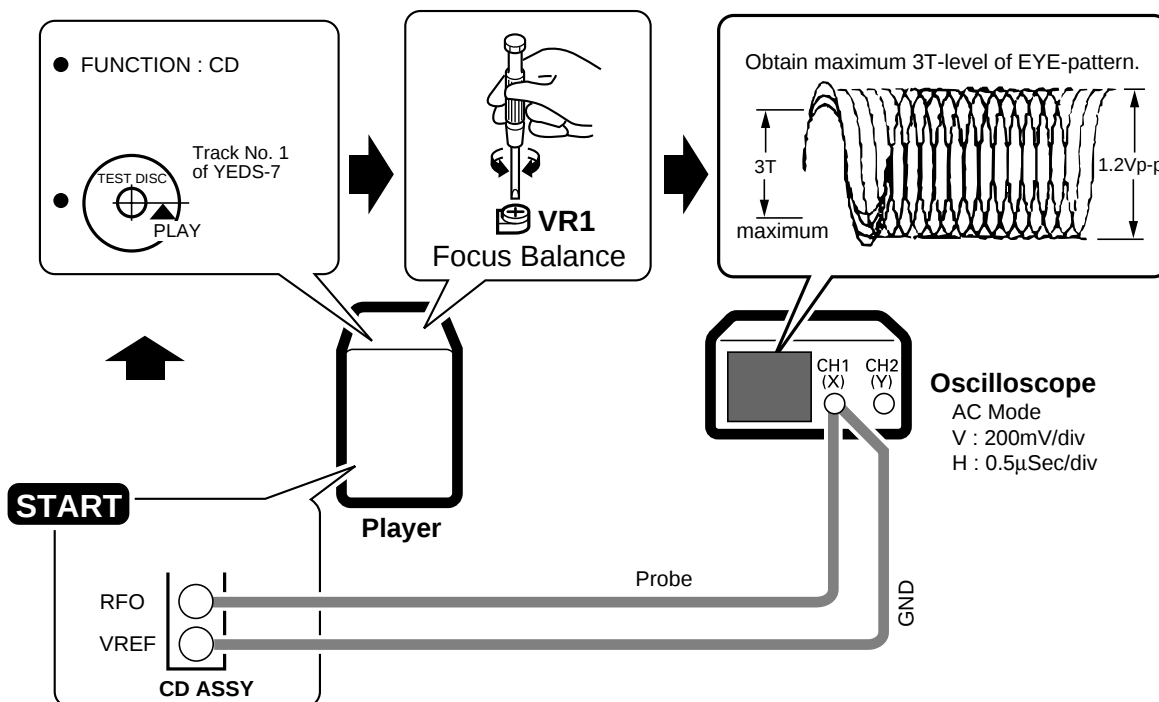
2. Tracking Offset (TEO) Adjustment



3. Tracking Balance (TEB) Adjustment



4. Focus Balance (FEB) / eye pattern (RF level) Adjustment

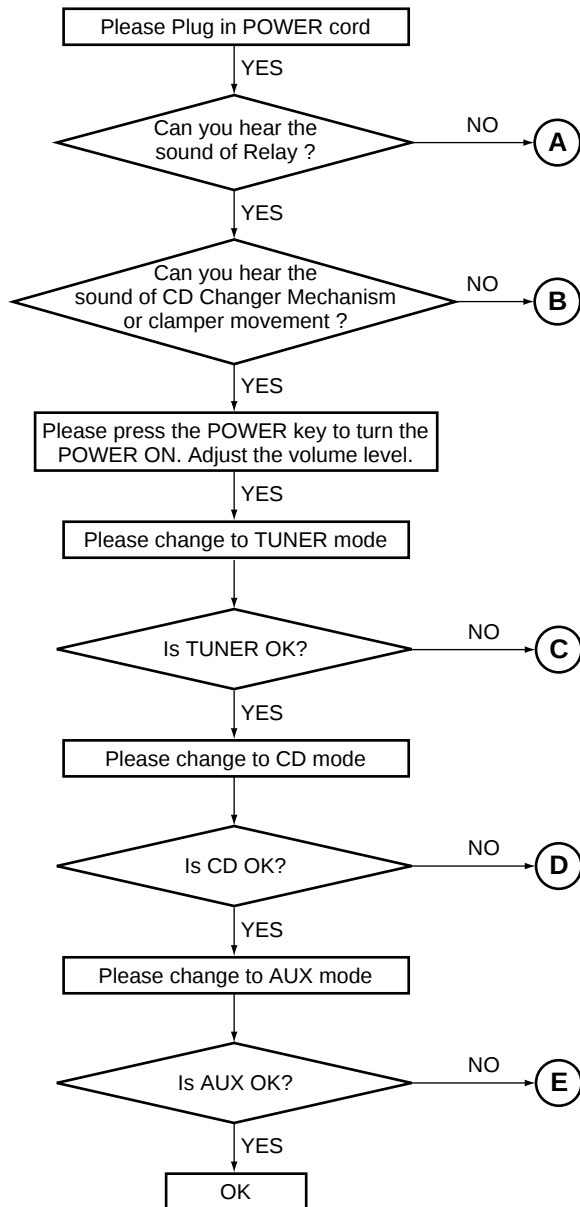


7.1 GENERAL INFORMATION

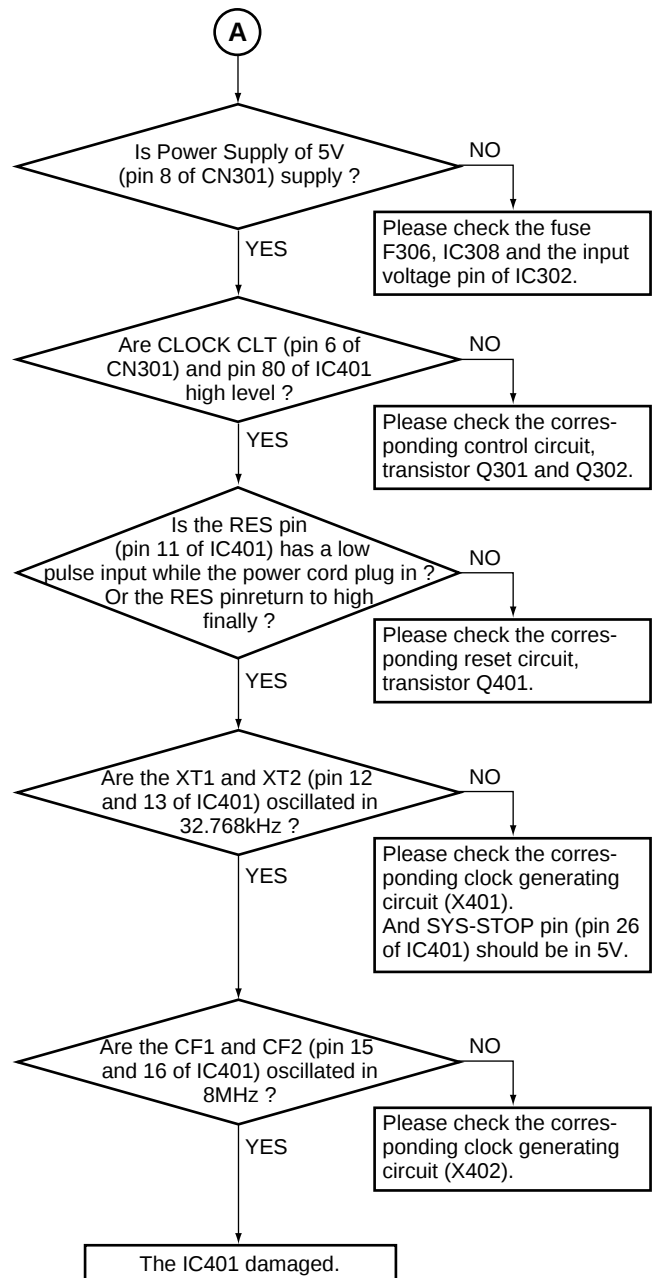
7.1 DIAGNOSIS

7.1.1 TROUBLE SHOOTING

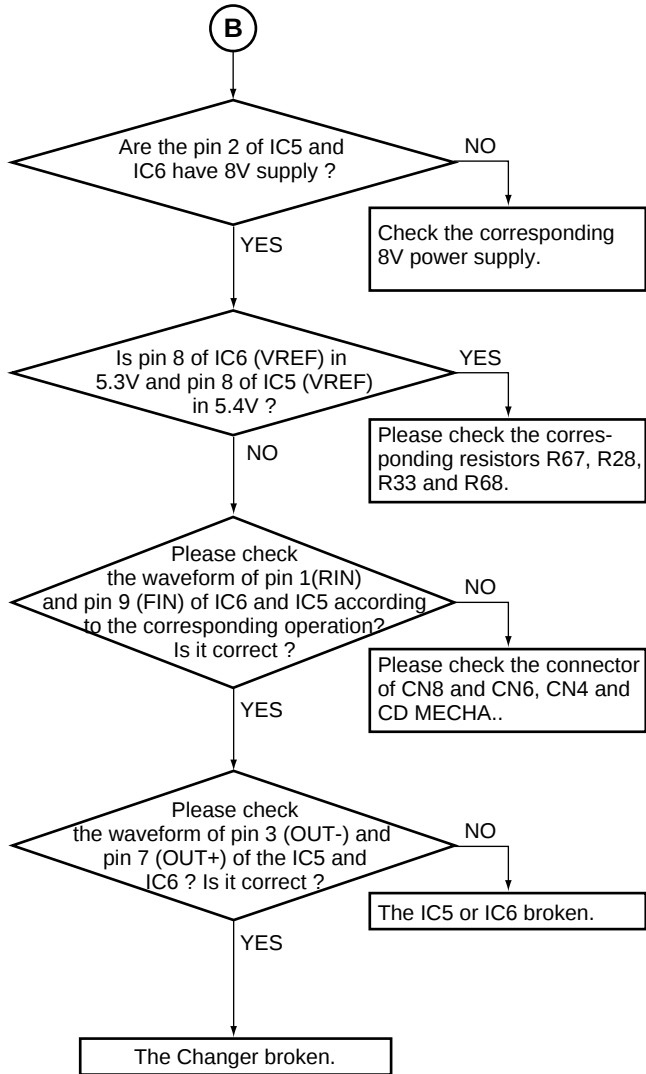
1. Troubleshooting



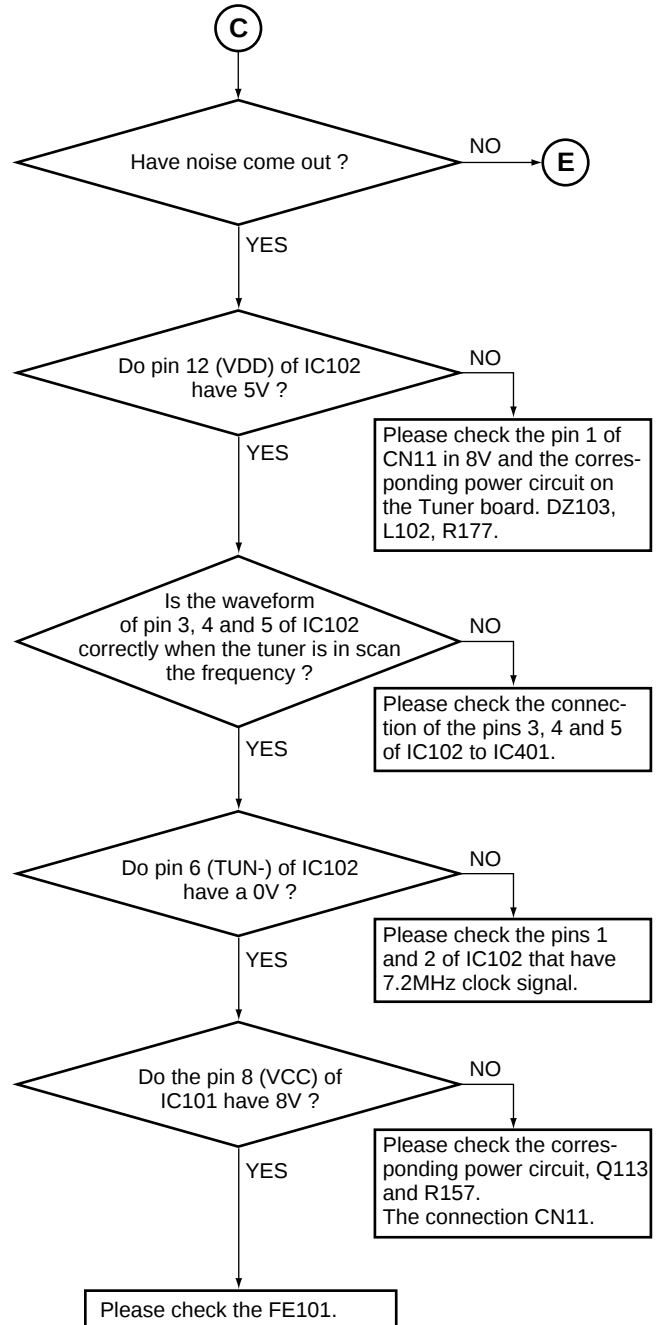
2. Cannot hear the sound of relay when power cord plug in



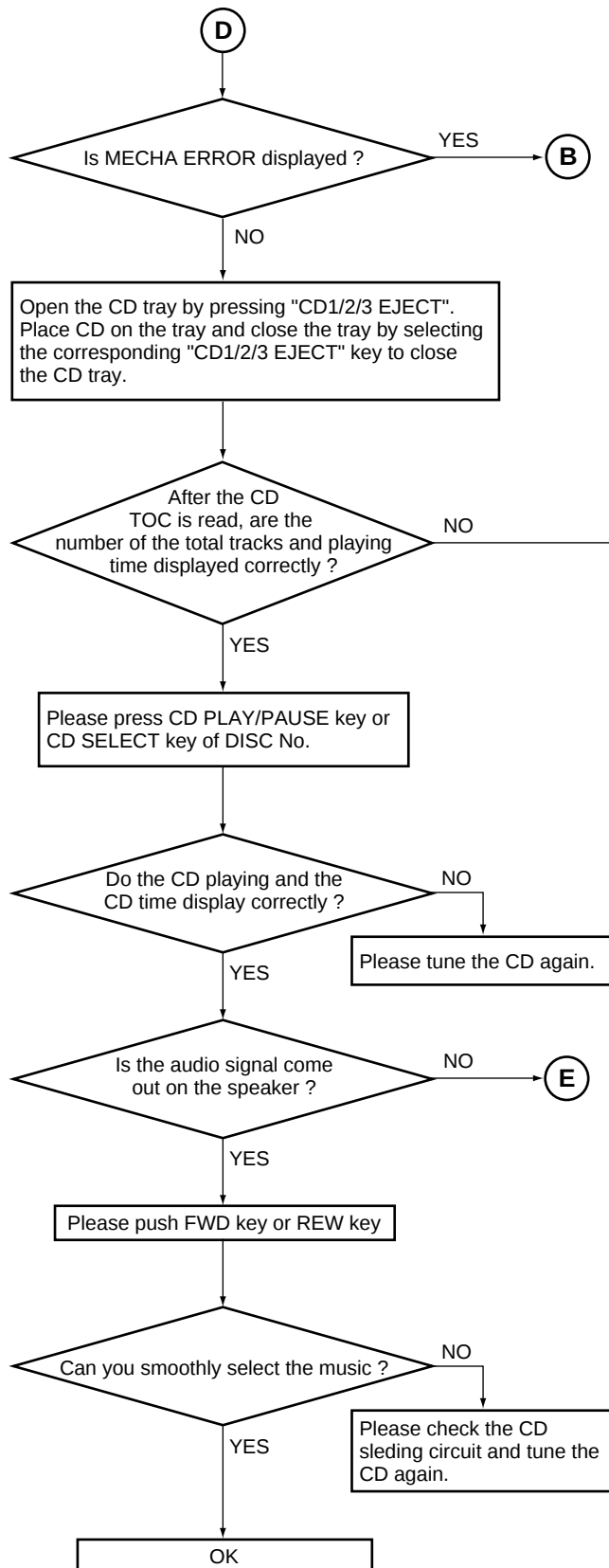
3. Can you hear the sound of CD Changer Mechanism or clamper movement when power cord plug in



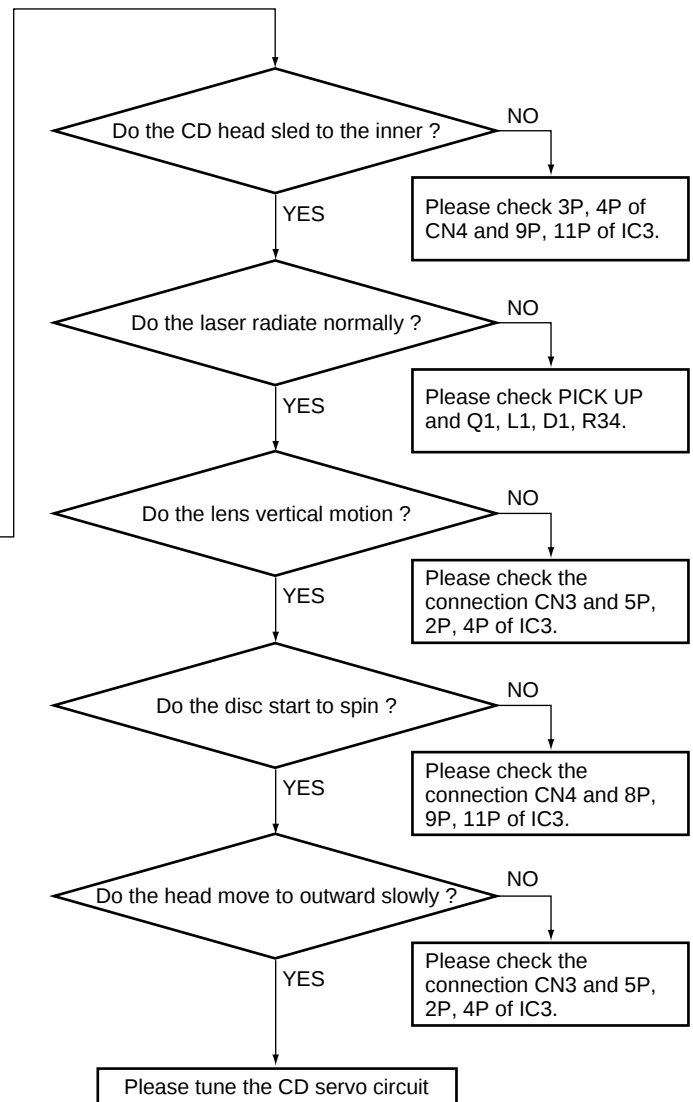
4. Tuner troubleshooting



5. CD troubleshooting



• The total track number is incorrectly displayed



6. No audio signal come out on speaker

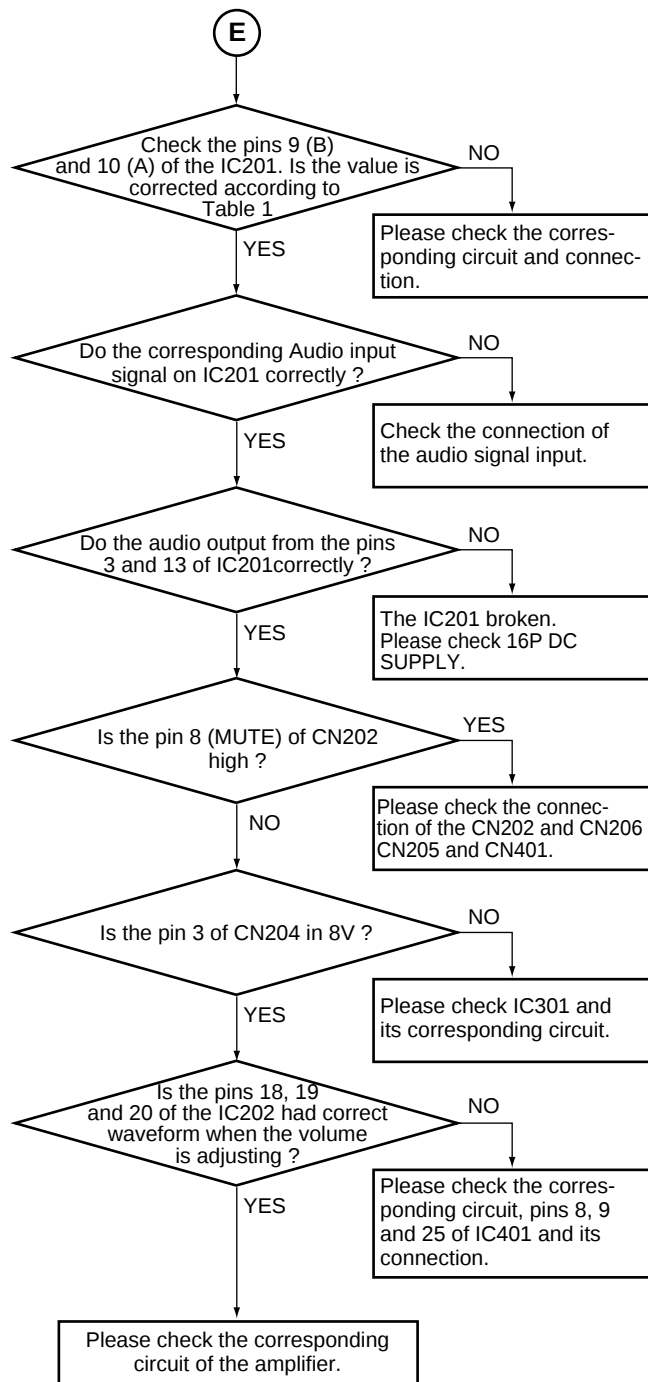
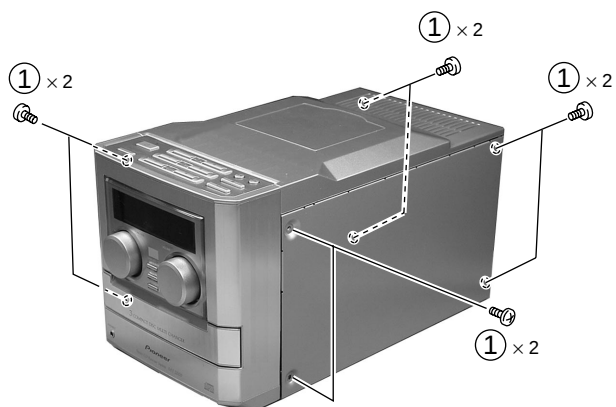


Table 1

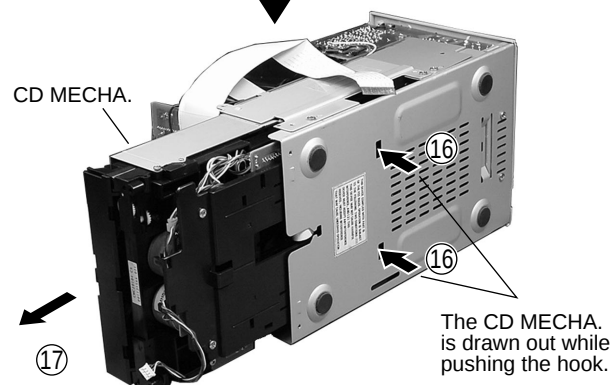
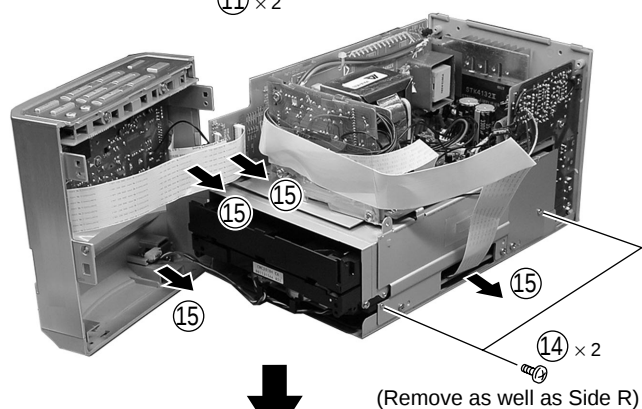
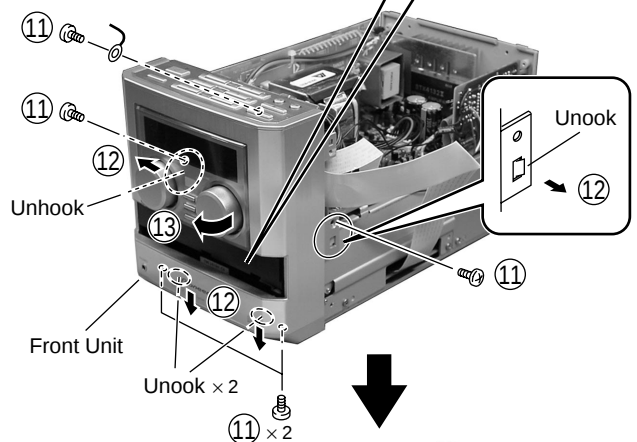
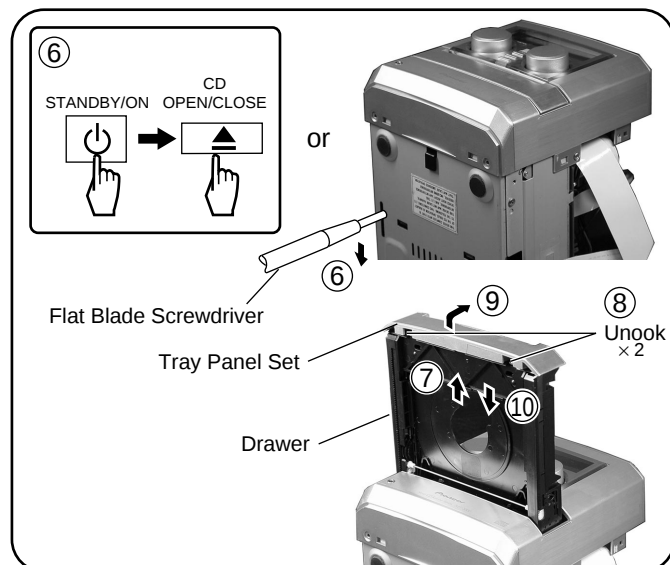
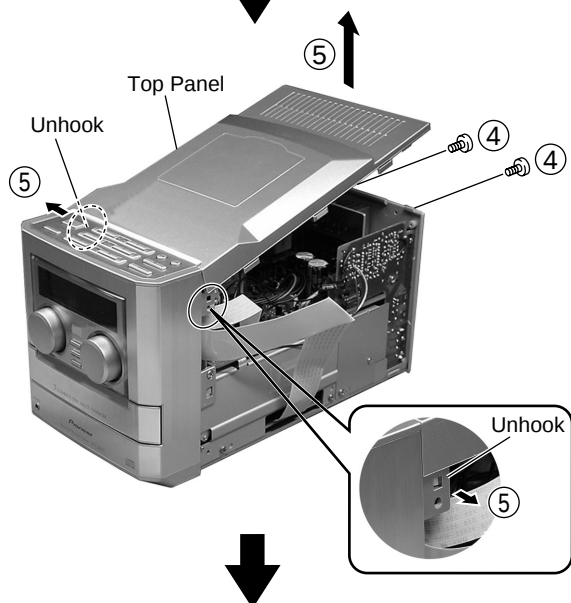
Channel	(B) Pin 9 of IC201	(A) Pin 10 of IC201
Power OFF	0	0
Tuner	0	1
CD	1	0
AUX	1	1

7.1.2 DISASSEMBLY/ASSEMBLY

(1) Main Body Section



Side Panel L
(Remove as well as Side Panel R)

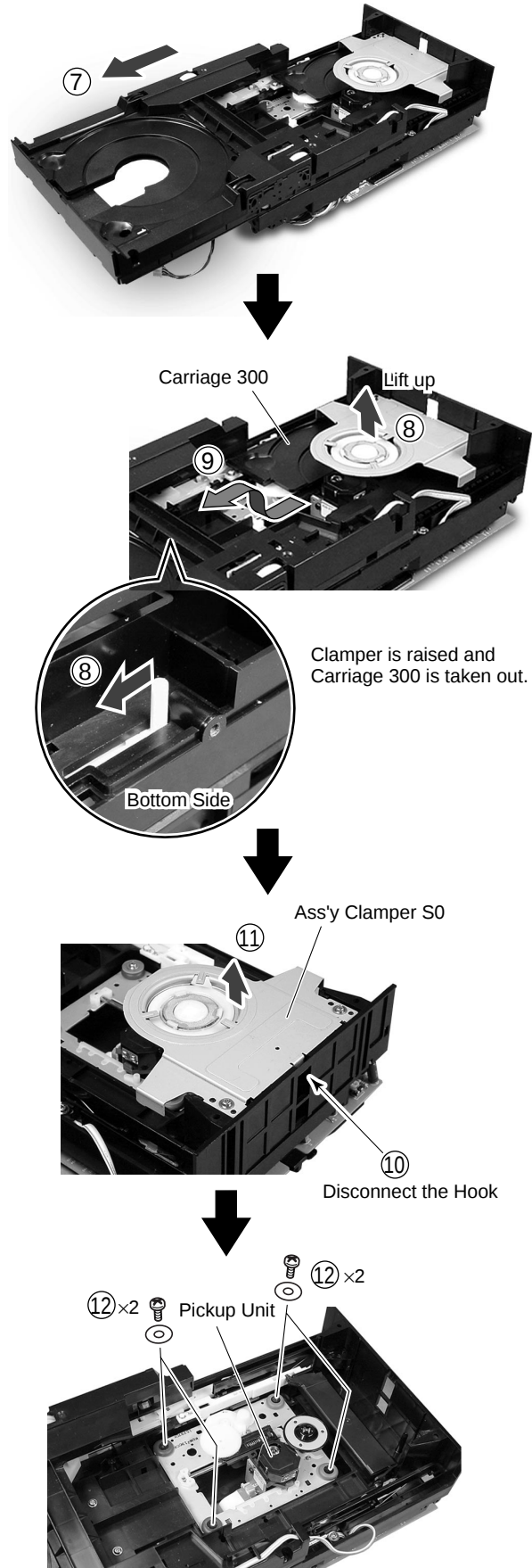
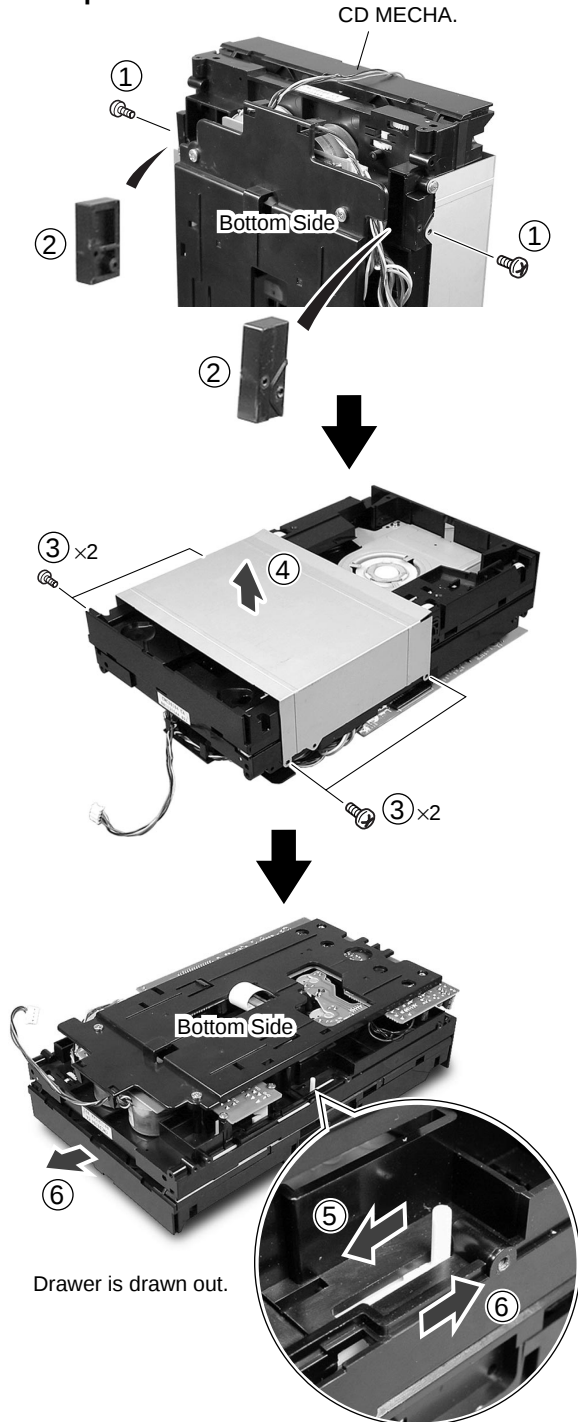


(2) CD MECHA.

CAUTION

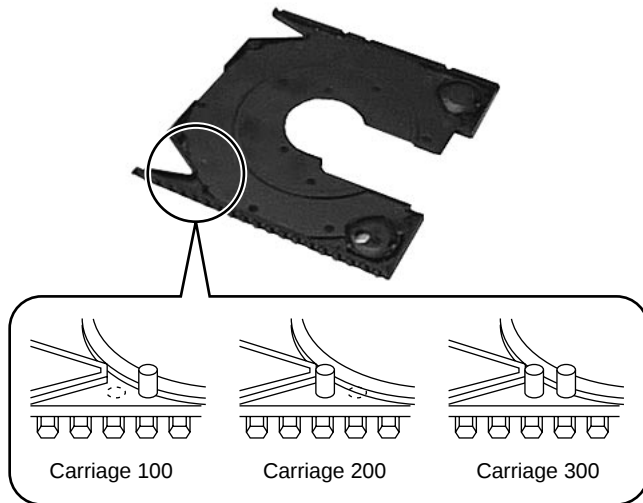
- If Tray Panel Set is not detached when the CD MECHA. is repaired, the CD MECHA. cannot be removed from the main body of the product.
When Drawer was not able not to open and shut by some something wrong's (The power supply does not enter, etc.) occurring, and remove Tray Panel Set, Slider 2 of the CD MECHA. is moved from the ditch of the chassis on the bottom side of the product with a minus driver and Drawer is drawn out. Afterwards, please remove Front Unit after removing Tray Panel Set .

■ Pickup Unit

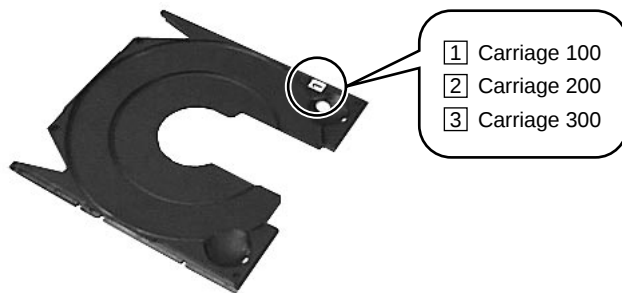


■ Caution for Disassembly/Assembly of CD MECHA.

1. As for the distinction method of Carriage 100, 200, and 300, Switch distinguishes the shape of the projection part on its back. Please confirm the number seal pasted to the surface of Carriage and the projection shape of the figure below when you exchange it.

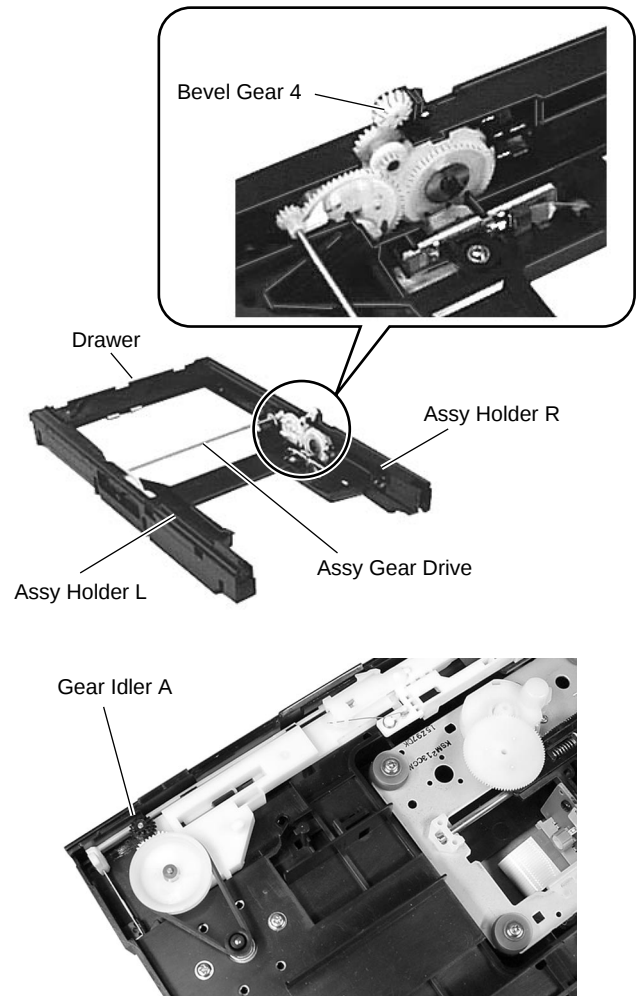


Method of distinguishing the back of Carriage.

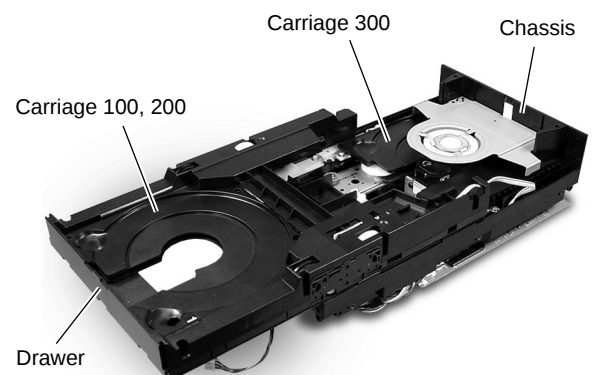


Method of distinguishing surface of Carriage.

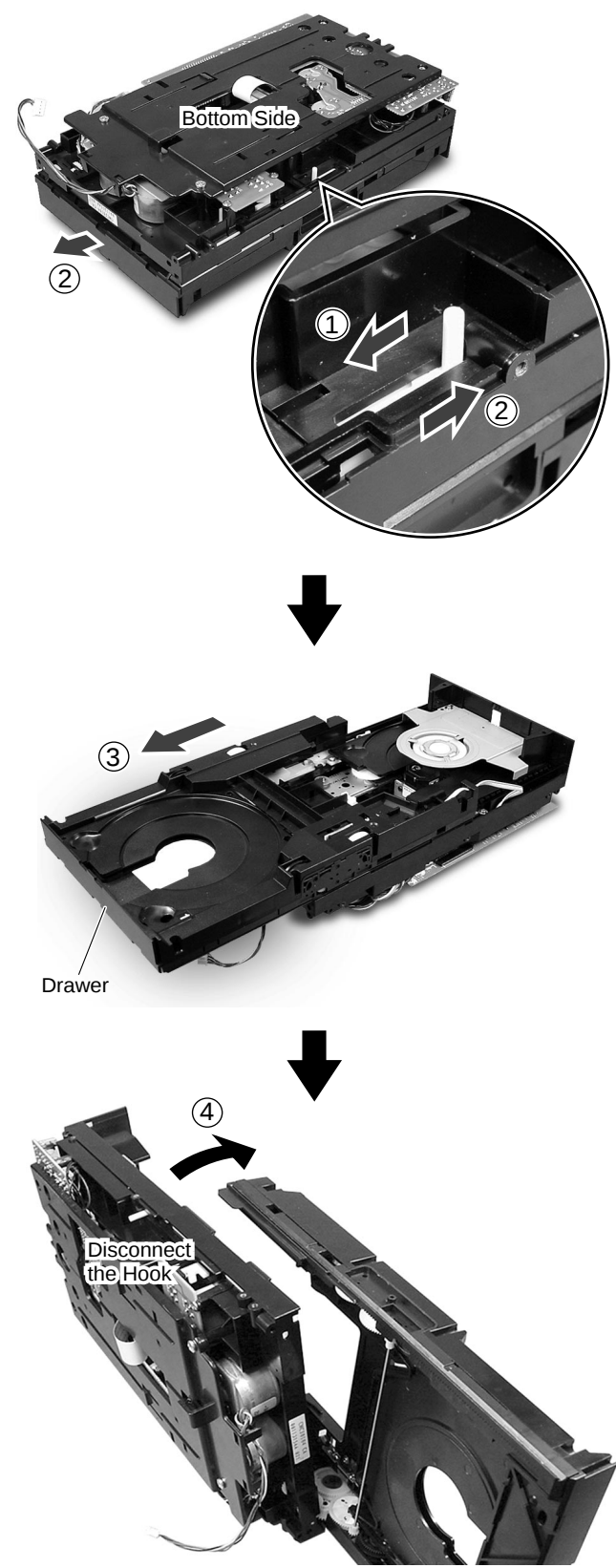
2. Please do not disassemble Assy Holder L, R and the inside of and Drawer, and do not disassemble Assy Gear Drive which connects Assy Holder L with R. (The position match of each gear is necessary)
3. Please do not lose the gear (Bevel Gear 4 and Gear Idler A) not fixed while put in the axis.



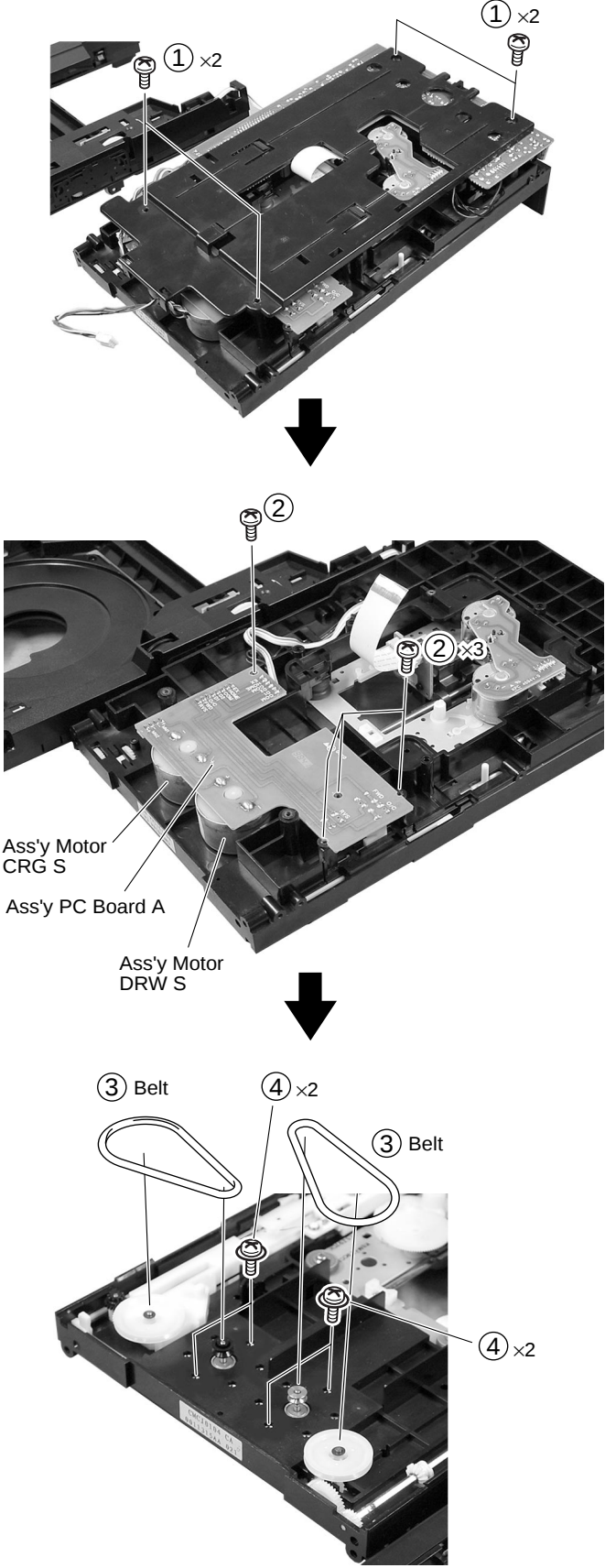
4. Carriage 300 is put in the Chassis side, and please put in the Drawer side without fail in order of Carriage 100 and 200.



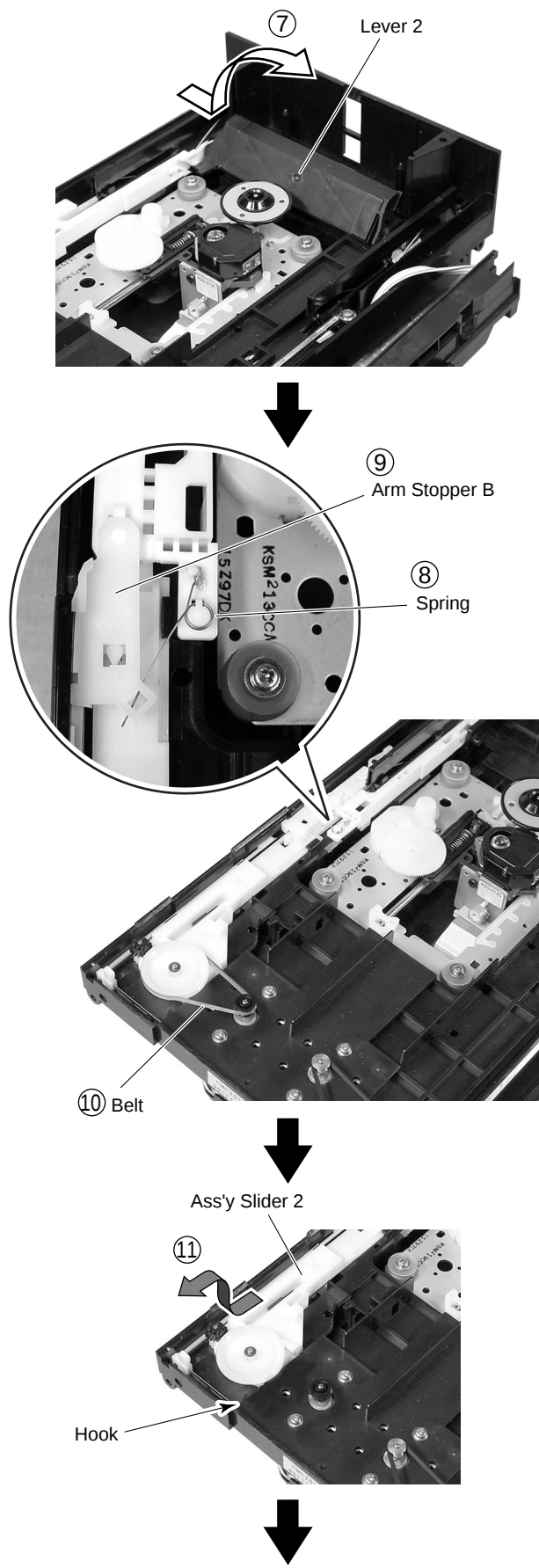
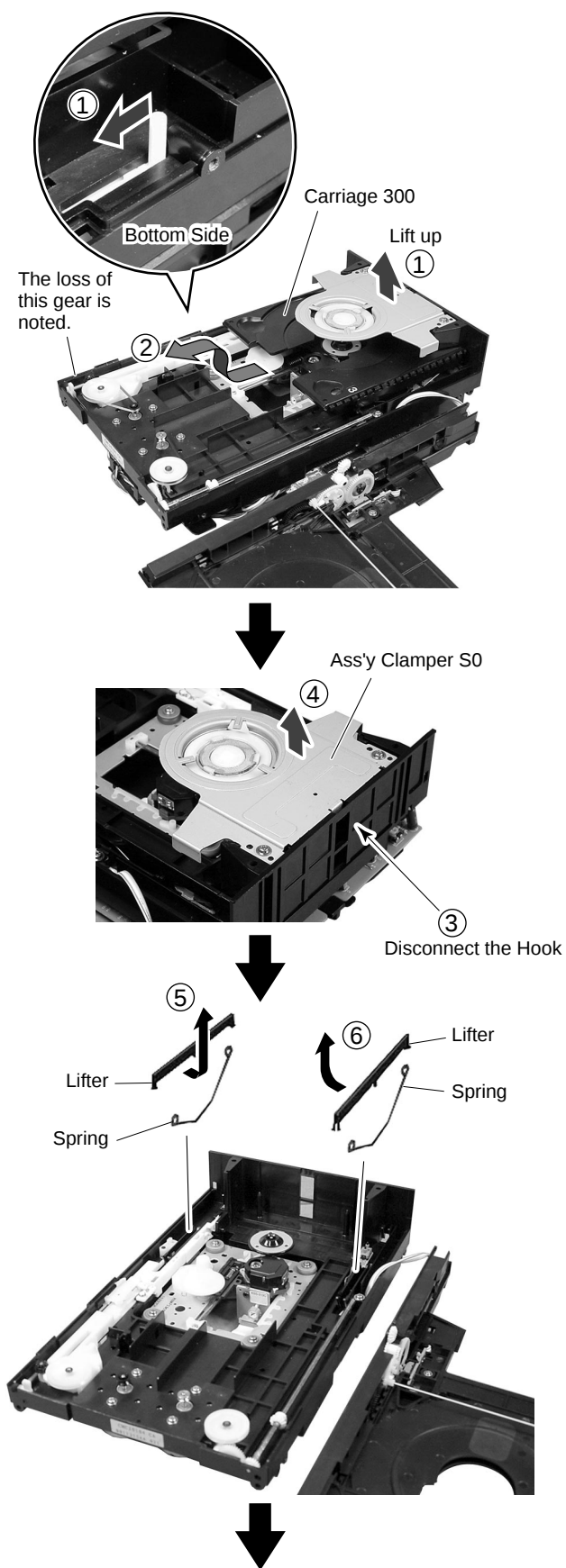
■ Drawer

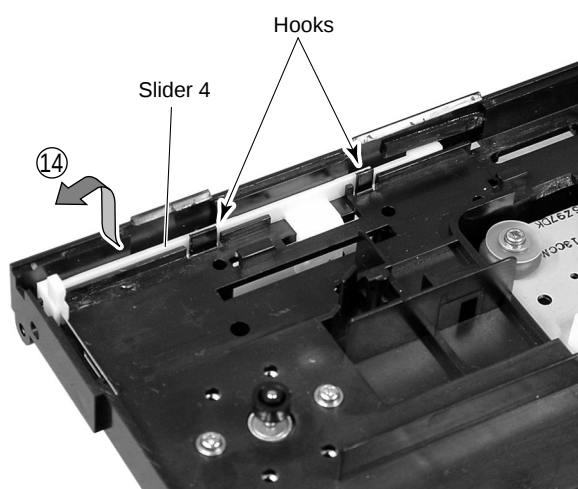
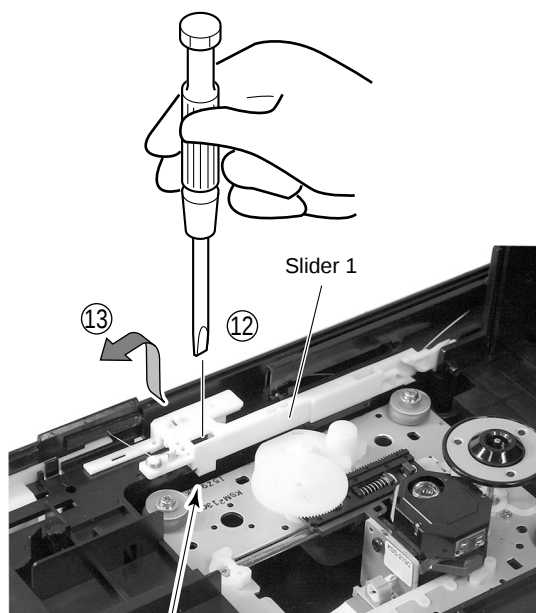


■ Disassembly of Ass'y Motor CRG S and Ass'y Motor DRW S

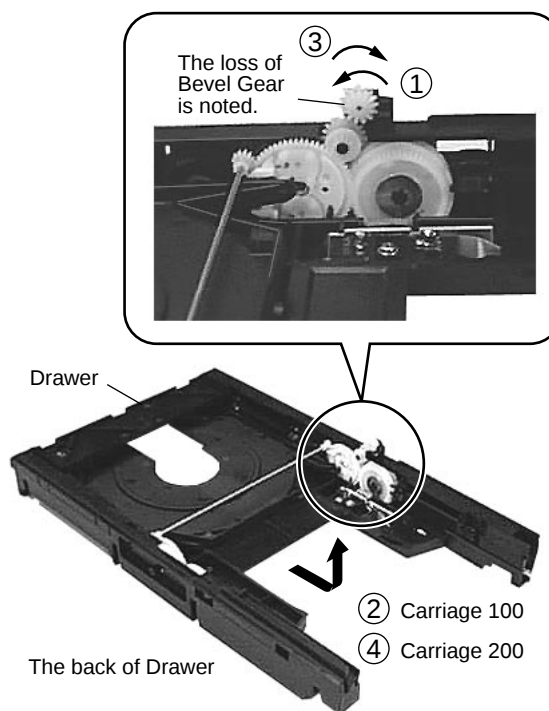


■ Chassis





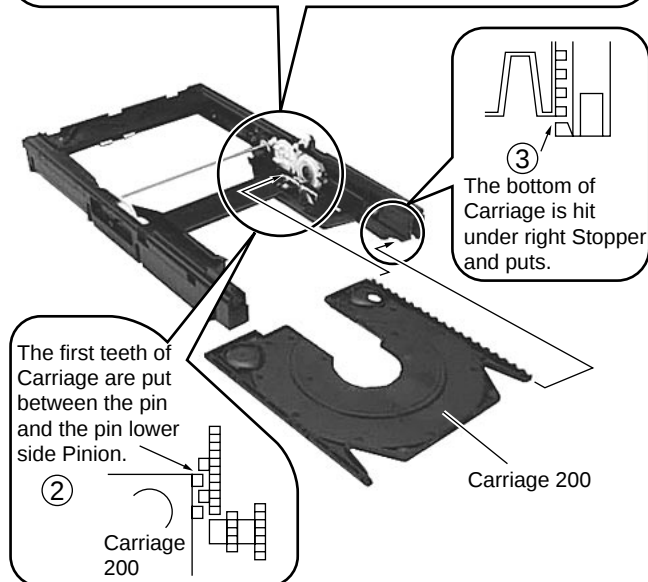
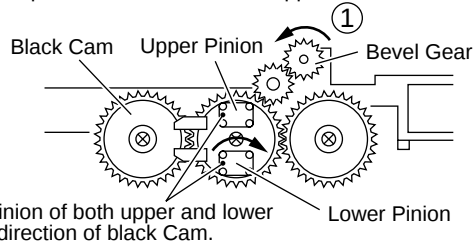
■ Disassembly of Carriage 100, 200



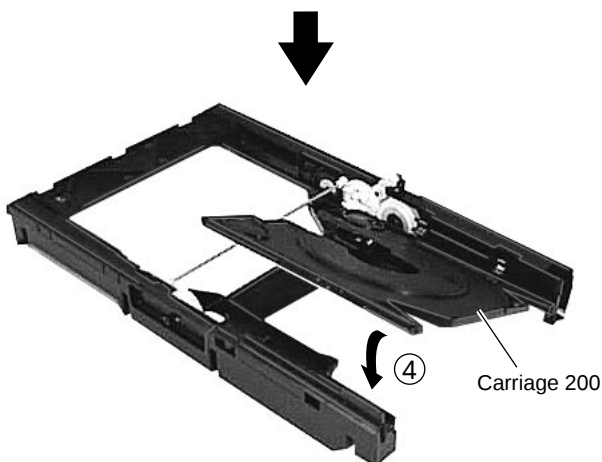
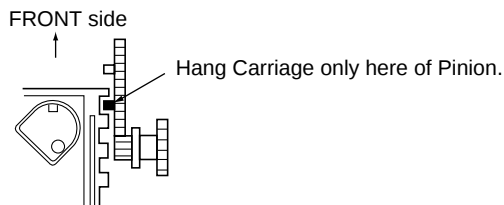
■ Assembly of Carriage 100, 200

(Carriage 100 is No.1 carriage. Carriage 200 is No.2 carriage.)

- ① After Bevel Gear is turned counterclockwise, and five rotations are made after lower side Pinion begins to turn, stops in the place where its rotation stopped.



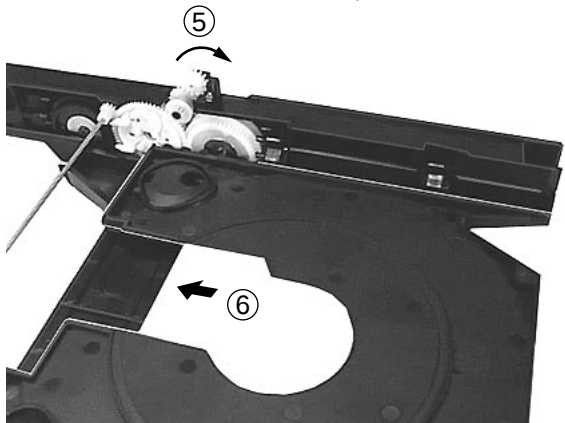
- Notes of procedure ③.



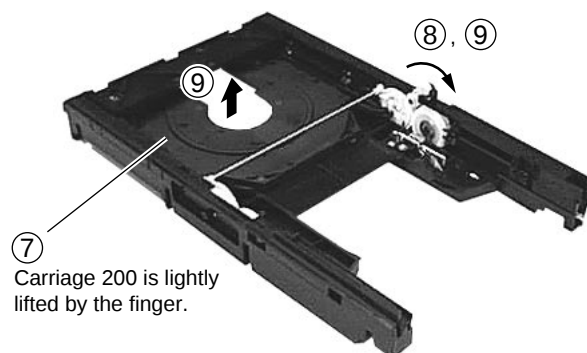
- ④-1 The other side of the side applied by ③ of Carriage is lightly pushed.

- ④-2 Puts Carriage 100 on Carriage 200 which applies by ④-1. Be careful about notes by ③ at this time.

- ⑤ Bevel Gear is turned clockwise. (direction of a rear side from a front side)



- ⑥-1 Carriage 200 moves to a front side.
⑥-2 Bevel Gear is turned as it is clockwise. (direction of a rear side from a front side)
⑥-3 Carriage 100 drops below.



- ⑦ When Carriage 100 drops below, Carriage 200 is lightly lifted by the finger.

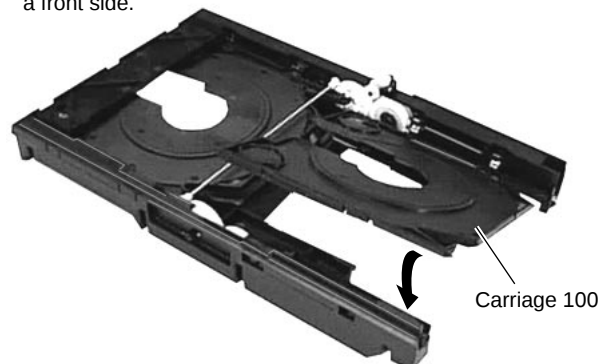
Note : Lift it horizontally when you lift Carriage.

Carriage inclines when it is not the horizontal, and mechanism locks.

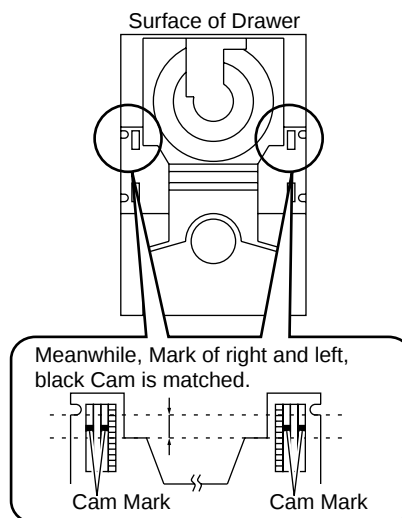
- ⑧ Bevel Gear is turned clockwise (direction of a rear side from a front side) like the state of ⑦.

- ⑨ Carriage 200 lifts up. And, when the movement is started Carriage 100 to the direction of a front side, separates the hand which lifted Carriage 200.

- ⑩ Keeps turning Bevel Gear clockwise (direction of a rear side from a front side) until Carriage 100 bumps to the wall on a front side.



- ⑪ The position of a right and left, black cam is matched while confirming it from the table side of Drawer.



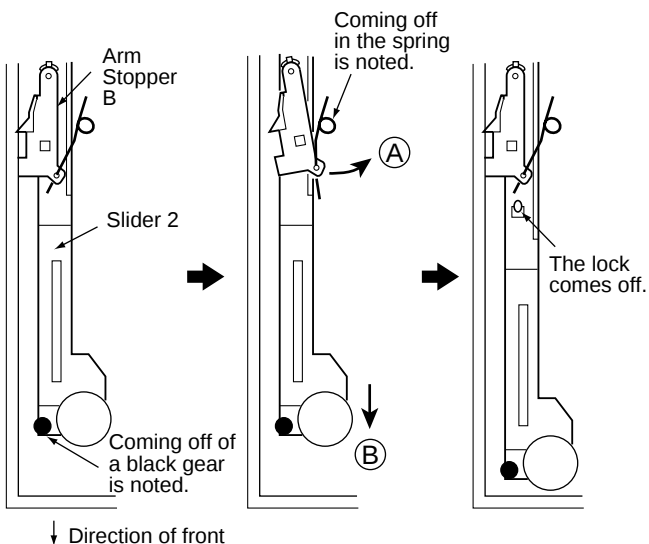
■ Assembly of Drawer and Chassis

The following work is done before Drawer is put on Chassis.

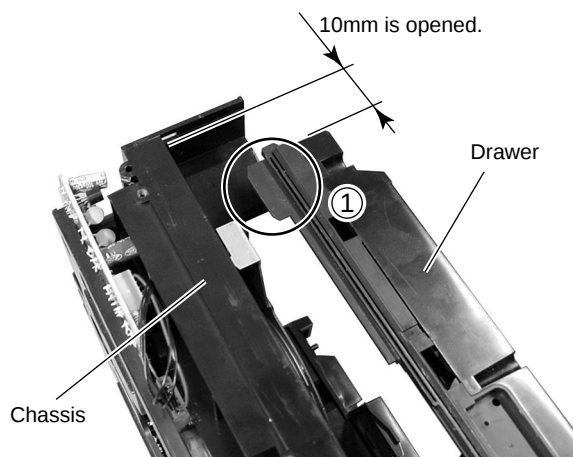
- (1) It is confirmed that Carriage 300 is clamped, and Clamper has fallen.
- (2) It is confirmed to Drawer to be built in neatly in order of Carriage 200 and 100.
- (3) Arm Stopper B is moved horizontally (inside) as shown in the figure below. (A)
- (4) Pulls Slider 2 until the lock comes off to the direction of ta front side. (B)

Note : Do not lift Arm Stopper B for above when you move Arm Stopper B.

There is a possibility to bend the spring when Arm Stopper B is lifted, and the spring bends. And, when Arm Stopper B becomes floatage feeling, Drawer is caught.

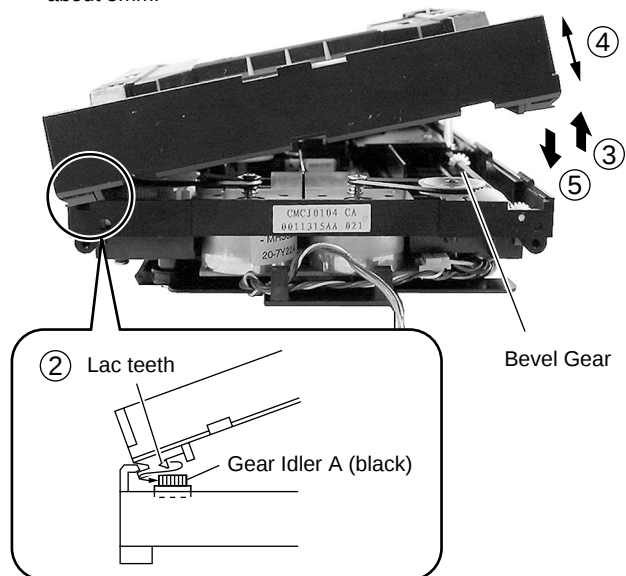


- (1) This ○ part of Drawer is put on Chassis like the arrow.

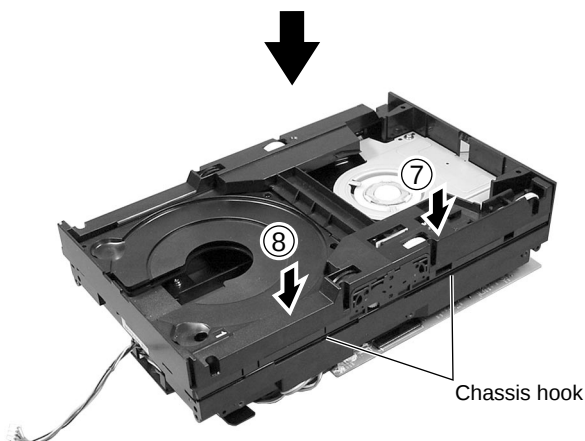
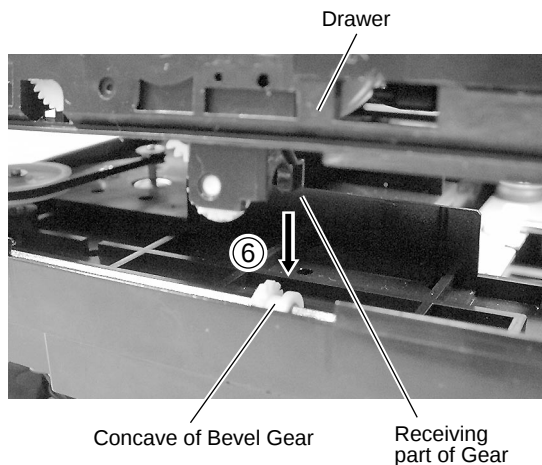


- (2) The lac teeth and Gear Idler A are matched, and it is pressed under the diagonal lightly.
- (3) Right this side of Drawer is lifted.
- (4) Drawer is moved back and forth, and stops Drawer with the point which it enters left.

- (5) Its right side is slowly lowered up to the angle by which Bevel Gear can do in the slide while doing Drawer back and forth by about 5mm.



- (6) When peeps from the inside of Drawer when the receiving part of Gear is fixed into the concave part of Bevel Gear, the place where it is fixed is comprehensible.



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.

■ LC876564 (DISPLAY CONTROL ASSY : IC401)

• System Control IC

• Pin Function

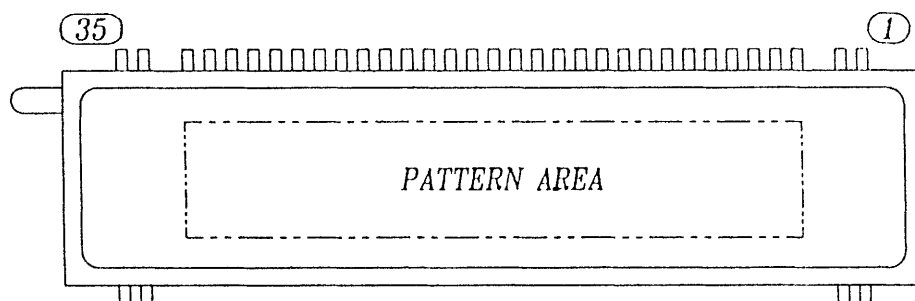
NO.	Pin Name	I/O	Function
1	FCNJOG0	I	Function Jogger Input
2	FCNJOG1	I	Function Jogger Input
3	DTS-TDATA	I/O	Tuner communication DATA pin
4	DTS-PLLPERIOD	O	Tuner communication PERIOD pin
5	DTS-PLLCLOCK	O	Tuner communication CLOCK pin
6	VOLJOG0	I	Volume Jogger Input
7	VOLJOG1	I	Volume Jogger Input
8	VOL-CLOCK	O	Volume IC communication CLOCK pin
9	VOL-DATA	O	Volume IC communication DATA pin
10	(NC)	–	Not used
11	RESET	I	MCU low reset pin
12	XT1 (LOW CLK)	–	Sub-Clock 32.768KHz (Input)
13	XT2 (LOW CLK)	–	Sub-Clock 32.768KHz (Output)
14	VSS1	–	Ground
15	CF1 (MAIN CLK)	–	Main clock 8MHz (Input)
16	CF2 (MAIN CLK)	–	Main clock 8MHz (Output)
17	VDD1	–	5V power supply
18	KEY0	I	Keyboard Input (Analog)
19	KEY1	I	Keyboard Input (Analog)
20	KEY2	I	Keyboard Input (Analog)
21	DTS-COUNTRY	I	Tuner Country setting option pin
22	DTS-STRENGTH	I	Tuner Signal Strength
23	CHANNEL0	O	Control Audio Channel Output
24	CHANNEL1	O	Control Audio Channel Output
25	VOL-LATCH	O	Volume IC communication LATCH pin
26	SYS-STOP	I	No Power detection pin
27	(NC)	–	Not used
28	SYS-POWER	O	Control the audio power supply
29	REMOTE	I	Infra-red remote receiver input pin
30	VFD (GD1)	O	Output for VFD display controller digit
31	VFD (GD2)	O	Output for VFD display controller digit
32	VFD (GD3)	O	Output for VFD display controller digit
33	VFD (GD4)	O	Output for VFD display controller digit
34	VFD (GD5)	O	Output for VFD display controller digit
35	VFD (GD6)	O	Output for VFD display controller digit
36	VFD (GD7)	O	Output for VFD display controller digit
37	VFD (G08)	O	Output for VFD display controller digit
38	VFD (G09)	O	Output for VFD display controller digit
39	VFD (S18)	O	Output for VFD display controller segment
40	VFD (S17)	O	Output for VFD display controller segment
41	VFD (S16)	O	Output for VFD display controller segment
42	VFD (S15)	O	Output for VFD display controller segment
43	VFD (S14)	O	Output for VFD display controller segment
44	VFD (S13)	O	Output for VFD display controller segment
45	VFD (S12)	O	Output for VFD display controller segment
46	VDD3	–	Power Supply (+5V)
47	VFD (S11)	O	Output for VFD display controller segment

NO.	Pin Name	I/O	Function
48	VFD (S10)	O	Output for VFD display controller segment
49	VFD (S09)	O	Output for VFD display controller segment
50	VFD (S08)	O	Output for VFD display controller segment
51	VP	–	VFD Power Supply (-24V)
52	VFD (S07)	O	Output for VFD display controller segment
53	VFD (S06)	O	Output for VFD display controller segment
54	VFD (S05)	O	Output for VFD display controller segment
55	VFD (S04)	O	Output for VFD display controller segment
56	VFD (S03)	O	Output for VFD display controller segment
57	VFD (S02)	O	Output for VFD display controller segment
58	VFD (S01)	O	Output for VFD display controller segment
59	(NC)	–	Not used
60	(NC)	–	Not used
61	(NC)	–	Not used
62	(NC)	–	Not used
63	(NC)	–	Not used
64	DTS-PLLSTEREO	I	Tuner in stereo pin
65	RVS-SW	I	Changer - Slider Reverse position switch
66	FWD-SW	I	Changer - Slider Forward position switch
67	OP/CL-SW	I	Changer - Drawer open/close detect switch
68	CN1-SW	I	Changer - Carriage number 1 switch
69	CN2-SW	I	Changer - Carriage number 2 switch
70	HOME-SW	I	Changer - Carriage Home Position switch
71	EXTRA-SW	I	Changer - Carriage Extra Position switch
72	VDD4	–	Power Supply (+5V)
73	DMR	O	Drawer Motor Reverse control
74	DMF	O	Drawer Motor Forward control
75	CMR	O	Carriage Motor Reverse control
76	CMF	O	Carriage Motor Forward control
77	(NC)	–	Not used
78	(NC)	–	Not used
79	(NC)	–	Not used
80	CLK-POWER	O	Main Power Control
81	D1-LED	O	Top panel CD1 LED control
82	D2-LED	O	Top panel CD2 LED control
83	D3-LED	O	Top panel CD3 LED control
84	(NC)	–	Not used
85	CD-BUS0	I/O	CD Servo IC DATA BUS 0
86	CD-BUS1	I/O	CD Servo IC DATA BUS 1
87	CD-BUS2	I/O	CD Servo IC DATA BUS 2
88	CD-BUS3	I/O	CD Servo IC DATA BUS 3
89	VSS2	–	Ground
90	VDD2	–	Power Supply (+5V)
91	CD-CCE	O	CD Servo IC Chip-enable pin
92	CD-BUCK	O	CD Servo IC Bus Clock pin
93	CD-SW_PUIN	I	CD Servo Pickup Inner Switch
94	SYS-MUTE	O	System Muting
95	CD-POWER	O	CD Power Control pin
96	RDS-DATA	I	RDS IC communication DATA pin
97	RDS-CLOCK	I	RDS IC communication CLOCK pin
98	FLASH-OUTPUT	–	For Download program to FLASH type MCU
99	FLASH-INPUT	–	For Download program to FLASH type MCU
100	FLASH-CLK	–	For Download program to FLASH type MCU

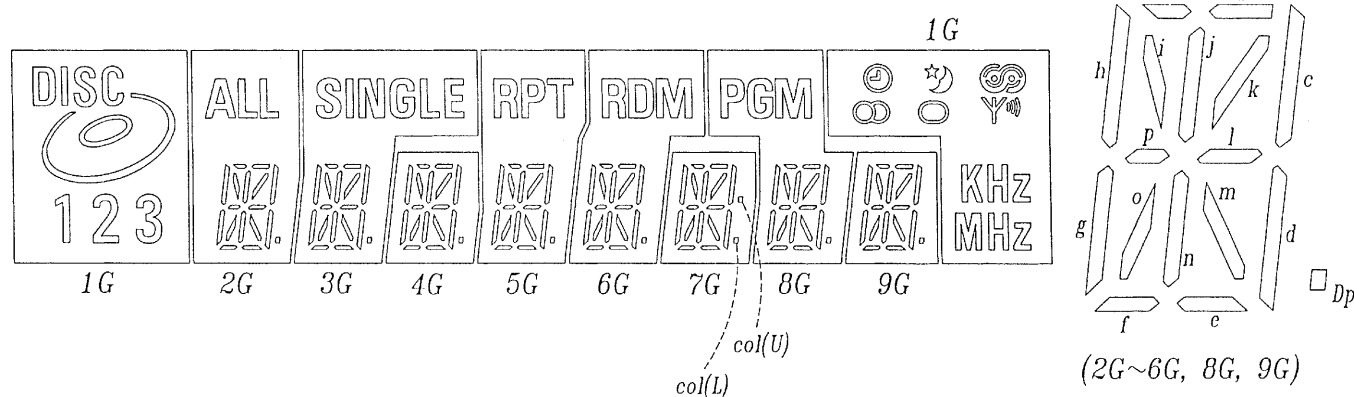
7.2.2 DISPLAY

■ 115-000920-000A (HNA-09SS20) (DISPLAY CONTROL ASSY : LCD401)

• FL DISPLAY



● Anode Connection



	1G	2G	3G	4G	5G	6G	7G	8G	9G
P1	DISC	a	a	a	a	a	a	a	a
P2	1	b	b	b	b	b	b	b	b
P3	2	c	c	c	c	c	c	c	c
P4	3	d	d	d	d	d	d	d	d
P5	4	e	e	e	e	e	e	e	e
P6	5	f	f	f	f	f	f	f	f
P7	6	g	g	g	g	g	g	g	g
P8	7	h	h	h	h	h	h	h	h
P9	8	i	i	i	i	i	i	i	i
P10	9	j	j	j	j	j	j	j	j
P11	10	k	k	k	k	k	k	k	k
P12	11	l	l	l	l	l	l	l	l
P13	12	m	m	m	m	m	m	m	m
P14	13	n	n	n	n	n	n	n	n
P15	14	o	o	o	o	o	o	o	o
P16	15	p	p	p	p	p	p	p	p
P17	16	Dp	Dp	Dp	Dp	Dp	col(U)	Dp	Dp
P18	17	ALL	SINGLE	---	RPT	RDM	col(L)	PGM	---

● Pin Connection

PIN NO.	35	34	33	32	31	30	29	28	27	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	F2	F2	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	NC	NC	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	F1	F1

*** NOTE ***

1) Fh : Filament Pin

2) NP : No Pin

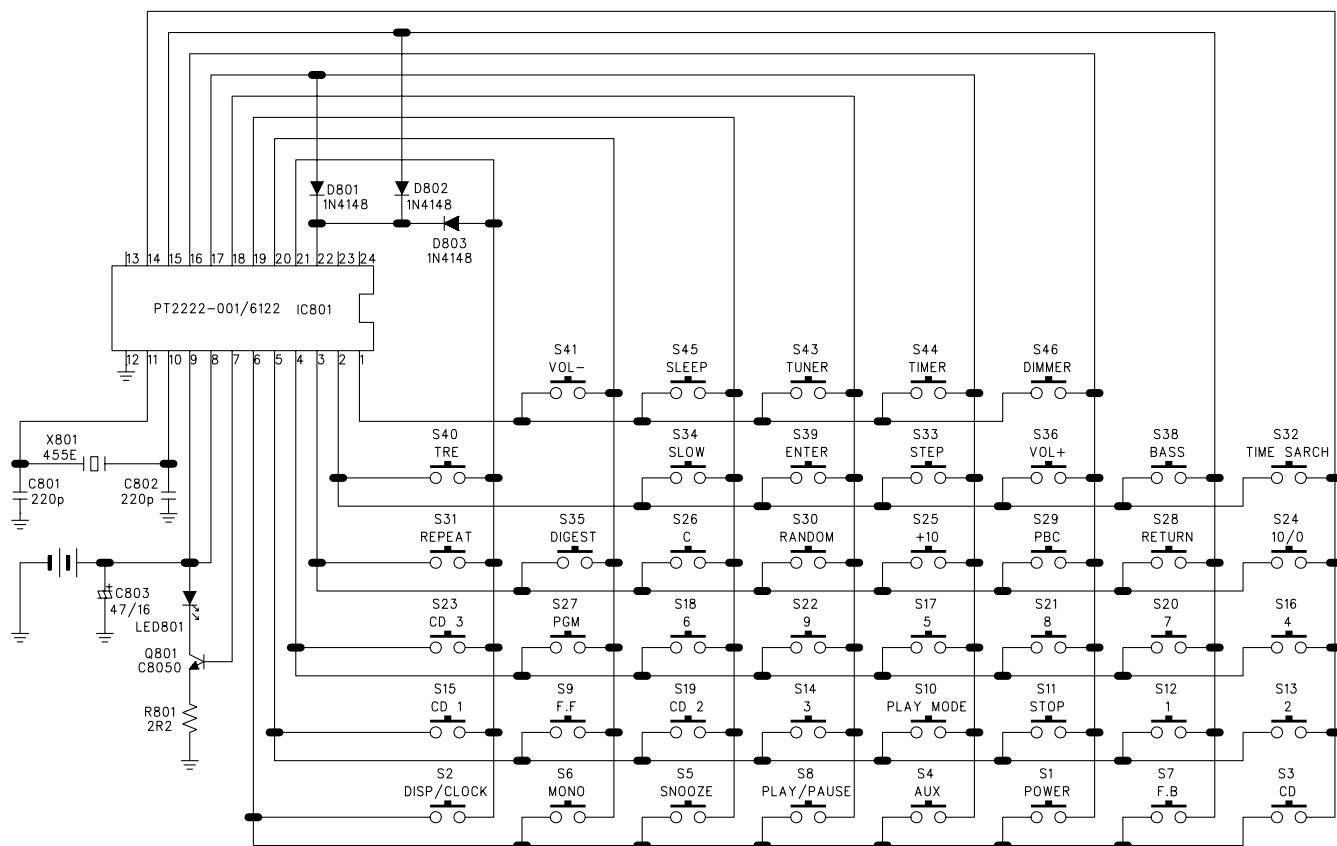
3) NC : No Connection Pin

4) nG : Grid Pin

5) Pn : Anode Pin

7.3 REMOTE CONTROL UNIT

7.3.1 SCHEMATIC DIAGRAM



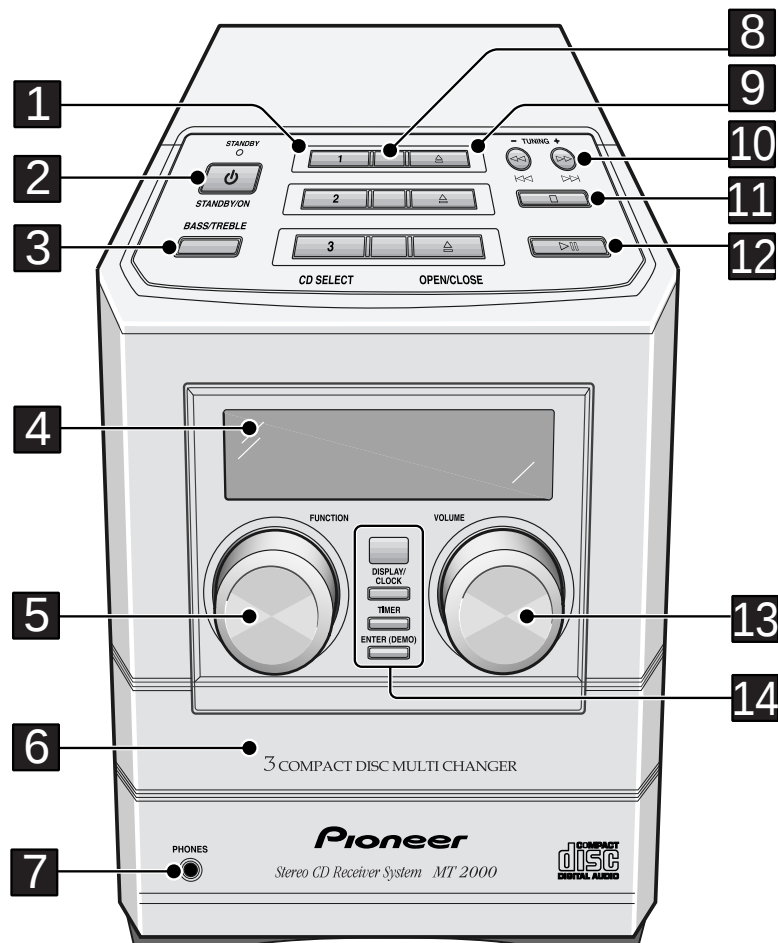
A



8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

■ Front Panel



- 1 CD SELECT 1 / 2 / 3** – Use to select CDs, and start playback if there's a disc loaded. Also switches the system on if it was in standby.
- 2 STANDBY / ON** – Press to switch on or into standby.
- 3 BASS / TREBLE** – Use to adjust the tone of the sound.
- 4 Fluorescent display**
- 5 FUNCTION** – Turn to select the source to listen to: CD, radio or an external component.
- 6 Disc tray**
- 7 PHONES socket** – Plug in a pair of headphones for private listening.
- 8 Disc indicators** – Indicate whether a disc is loaded in that disc tray (blinks while loading; lights when loaded)
- 9 OPEN / CLOSE ▲** – Use to open or close individual disc trays. Also switches the system on if it was in standby.

- 10 ◀◀ / ◀◀ / TUNING -** – When using the CD player, use to scan backwards, or skip back tracks. When using the radio, use for tuning and to select preset stations.

▶▶ / ▶▶ / TUNING + – When using the CD player, use to scan forwards, or skip forward tracks. When using the radio, use for tuning and to select preset stations.

- 11 ■** – Press to stop a CD playing. Also cancels auto scan tuning.

- 12 ▶||** – Press to start or restart a CD playing, or pause a disc that's already playing. Also switches the system on if it was in standby.

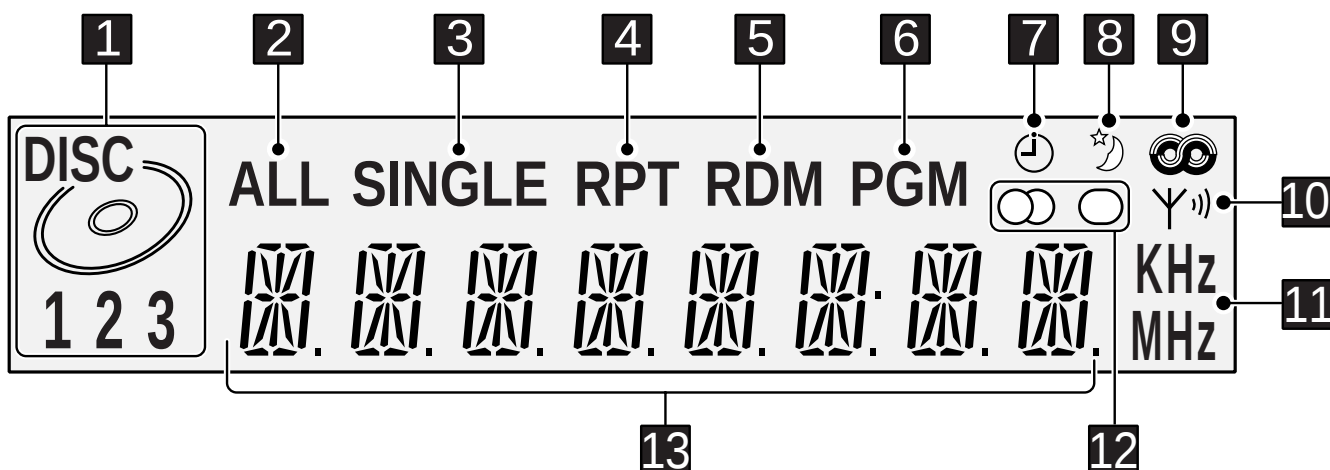
- 13 VOLUME** – Turn to adjust the volume.

- 14 DISPLAY / CLOCK** – Press to change the CD or station information shown in the display. Also use to set/display the clock.

TIMER – Use to set the wake up.

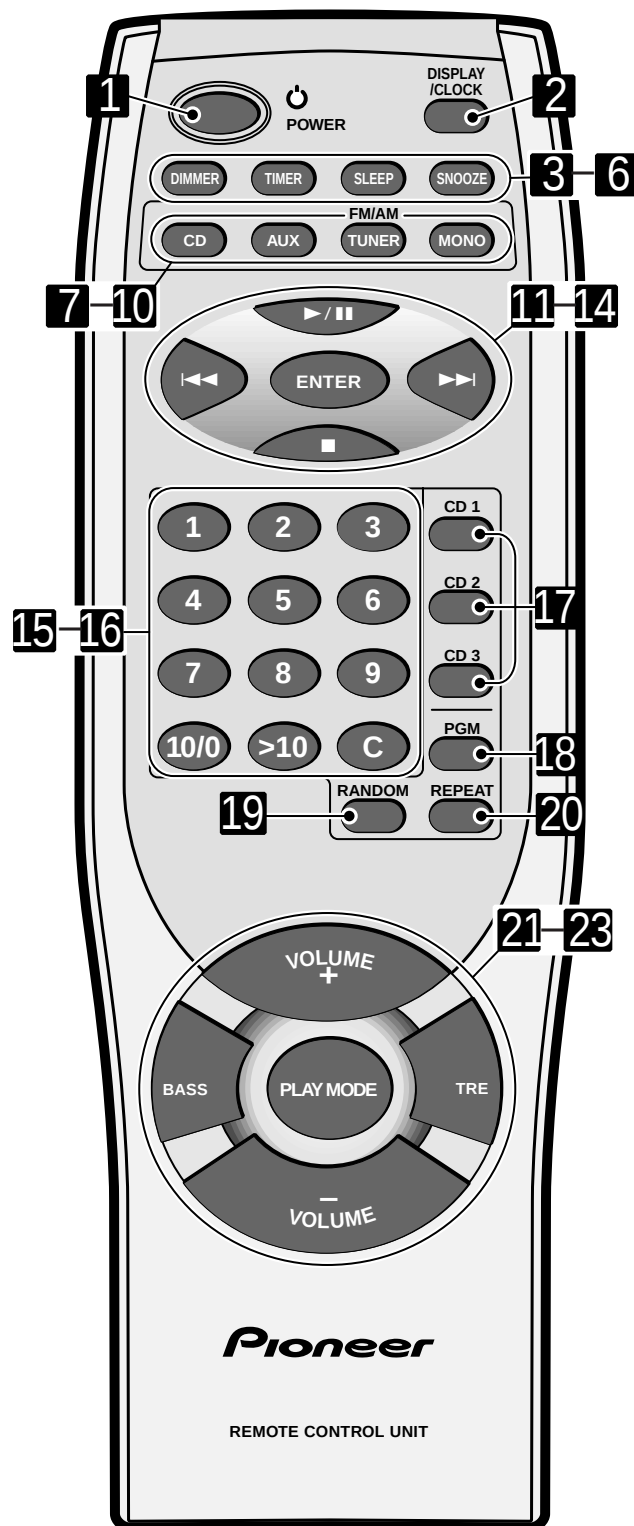
ENTER (DEMO) – Use to save a radio station preset; set the clock or timer. Also switches the demo on/off.

■ Display



- 1 Current disc indicator** – Shows the current disc (blinks when paused).
- 2 ALL** – Lights in All disc play mode (all CDs loaded will play).
- 3 SINGLE** – Lights in Single disc play mode (only the currently selected disc will play).
- 4 RPT** – Lights in repeat play mode.
- 5 RDM** – Lights in random play mode.
- 6 PGM** – Lights when the track order has been programmed.
- 7** – Lights when the wake up timer has been set.
- 8** – Lights when the sleep timer has been set.
- 9** – Lights when an RDS broadcast is received. (MYXCN and NVXCN types only)
- 10** – Indicates the strength of the broadcast signal.
- 11 kHz / MHz** – Indicates an FM frequency (MHz) or an AM frequency (kHz).
- 12** – Indicates whether you're listening to the radio in stereo or mono.
- 13 Character display**

Remote Control Unit



- 1 **POWER (STANDBY/ON)** – Press to switch the unit on or into standby.
- 2 **DISPLAY/CLOCK** – Press to change the information shown in the display.
- 3 **DIMMER** – Use to change the brightness of the display.
- 4 **TIMER** – Press to set the wake up timer.
- 5 **SLEEP** – Press to set the sleep timer.
- 6 **SNOOZE** – Press for snooze function when using the wake up timer.
- 7 **CD** – Press for CD mode. Also switches the system on if it was in standby.
- 8 **AUX** – Press for auxiliary mode. Also switches the system on if it was in standby.
- 9 **FM/AM TUNER** – Press for tuner mode, and to switch between AM and FM. Also switches the system on if it was in standby.
- 10 **MONO** – Press to hear a stereo FM broadcast in mono (improves the sound quality).
- 11 **▶/⏸** – Press to start or restart playback, or pause a disc that's already playing.
- 12 **⏮ and ▶** – When listening to CDs, press to skip back/forward tracks; press and hold for fast reverse/forward play. When listening to the radio, use for turning and use to tune into stations and select preset stations.
- 13 **ENTER** – Use to save a radio station preset; set the clock or timer.
- 14 **■** – Press to stop playback. Also cancels auto scan tuning.
- 15 **Number buttons** – When playing CDs, use to select track numbers. When listening to the radio, use to select preset stations.
- 16 **C** – Press to clear a CD playlist.
- 17 **CD buttons** – Press to select discs. Also switches the system on if it was in standby.
- 18 **PGM** – Press to start programming a CD playlist.
- 19 **RANDOM** – Press to start random CD playback.
- 20 **REPEAT** – Use to select the repeat mode (1-track, current disc or all-disc).
- 21 **VOLUME +/-** – Use to adjust the volume.
- 22 **BASS / TRE** – Use to adjust the tone (bass and treble) of the sound.
- 23 **PLAY MODE** – Use to select single disc play, or all-disc play.

8.2 SPECIFICATIONS

Stereo CD Receiver:

Amplifier Section

X-MT2000 (U.S. and Canadian models)

Continuous Average Power Output is 12.5 Watts* per channel, min., at 8 ohms from 60 Hertz to 15,000 Hertz, with no more than 1.0% total harmonic distortion.**

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

** Measured by audio spectrum analyzer.

Continuous Power (RMS) 20 W + 20 W
(1 kHz, THD 10%, 8 Ω)
Continuous Power (DIN) 15 W + 15 W
(1 kHz, THD 1%, 8 Ω)

FM Tuner Section

Frequency Range 87.5 – 108 MHz
Antenna 75 Ω , unbalanced

AM Tuner Section

Frequency Range 530 kHz – 1,700 kHz (10 kHz step)
Antenna Loop antenna

Compact Disc Player Section

Type Compact disc digital audio system
Usable discs Compact discs
Channels 2 (stereo)
Frequency Response 20Hz–20 kHz

Power Section & Miscellaneous

Power Requirements AC 120 V, 50/60 Hz
Power Consumption (ON mode) 48 W
Power Consumption (Standby mode) 1 W
Dimensions 160 (W) $\times$ 170 (H) $\times$ 323.5 (D) mm
(6 $\frac{3}{10}$ (W) $\times$ 6 $\frac{7}{10}$ (H) $\times$ 12 $\frac{12}{16}$ (D) in.)
Weight 4.8 kg
(10 lb. 9 oz.)

Accessories

Operating instructions 1
Warranty card 1
FM wire antenna 1
AM loop antenna 1
'AAA' size R03 batteries 2
Remote control unit 1
Speaker cords 2

Speaker System:

Enclosure Bass-reflex bookshelf type
Loudspeaker wide band (full range) 87 mm
(3 $\frac{2}{5}$ in.)
Nominal impedance 8 Ω
Frequency response 70 Hz–20,000 Hz
Maximum input 20 W
External dimensions 130 (W) $\times$ 170 (H) $\times$ 194 (D) mm
(5 $\frac{1}{10}$ (W) $\times$ 6 $\frac{7}{10}$ (H) $\times$ 7 $\frac{3}{5}$ (D) in.)
Weight 1.35 kg
(3 lb. 1 oz.)

Stereo CD Receiver:

Amplifier Section

Continuous Power (RMS) 20 W + 20 W
(1 kHz, THD 10%, 8 Ω)
Continuous Power (DIN) 15 W + 15 W
(1 kHz, THD 1%, 8 Ω)
Music Power (DIN) 36 W + 36 W
(1 kHz, THD 1%, 8 Ω)

• Above specifications are for when the power supply is 230 V.

FM Tuner Section

Frequency Range 87.5 – 108 MHz
Antenna 75 Ω , unbalanced

AM Tuner Section

Frequency Range 531 kHz – 1,602 kHz (9 kHz step)
530 kHz – 1,700 kHz (10 kHz step)
Antenna Loop antenna

Compact Disc Player Section

Type Compact disc digital audio system
Usable discs Compact discs
Channels 2 (stereo)
Frequency Response 20Hz–20 kHz

Power Section & Miscellaneous

Power Requirements AC 230V, 50/60Hz (UK model)
AC 220- 230 V, 50/60 Hz
Power Consumption (ON mode) 52 W
Power Consumption (Standby mode) 1 W
Dimensions 160 (W) $\times$ 170 (H) $\times$ 323.5 (D) mm
Weight 4.8 kg

Accessories

Operating instructions 1
Warranty card 1
FM wire antenna 1
AM loop antenna 1
'AAA' size R03 batteries 2
Remote control unit 1
Speaker cords 2

Speaker System:

Enclosure Bass-reflex bookshelf type
Loudspeaker wide band (full range) 87 mm
Nominal impedance 8 Ω
Frequency response 70 Hz–20,000 Hz
Maximum input 20 W
External dimensions 130 (W) $\times$ 170 (H) $\times$ 194 (D) mm
Weight 1.4kg

Note :

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