OPTIMUS®

Service Manual

42-5064

MODEL CD-8400
FILE-TYPE CD PLAYER

Catalog Number: 42-5064

- **The service manual for this product includes Pioneer's RRV1898 PD-F907/KU service manual. The pages preceding that manual list additional specifications, all service changes between Pioneer's RRV1898 PD-F907/KU and the 42-5064 CD8400, and any RadioShack part numbers that are different from the Pioneer part numbers.**

- **The specifications on Page 51 of the RRV1898 service manual for Pioneer's model PD-F907/KU are like the specifications listed in the owner's manual for the 42-5064 CD-8400. Additional specs are given on the page inside the back cover.**

PART NUMBER DIFFERENCES BETWEEN 42-5064 CD-8400 AND PD-F907/KU

NOTES : ● *Parts marked by "* NSP *" are generally unavailable .*
● ⚠ *indicates safety critical components. Be sure to replace only with specified parts.*
● Ref. No. : *Numbers following P and hyphen(–) indicate the page(s) and location number(s) in the RRV1898 service manual, respectively.*

42-5064 CD-8400 and PD-F907/KU are constructed the same except for the following:

Ref.No.	Mark	Symbol and Description	Parts No.		Remarks
			PD-907/KU	42-5064 CD-8400	
		PACKING			
P3 - 3		Remote Control Unit (CU-PD080)	PWW1132	Not used	
P3 - 3		Remote Control Unit	Not used	PYY1262	
P3 - 4		Battery Cover	AZA7204	PZN1105	
P3 - 5	NSP	Warranty Card	ARY1044	Not used	
P3 - 6		Operating Instructions (English)	PRB1263	PRB1272	
P3 - 11		Packing Case	PHG2285	PHG2325	
P3 - 13	NSP	Battery (R6P, AA)	VEM-013	Not used	
		EXTERIOR SECTION			
P6 - 18		Rear Base	PNA2389	PNA2431	
P6 - 44		Control Button	PAC1822	PAC1899	
P6 - 45		Power Button	PAC1833	PAC1900	
P6 - 46		Name Plate	VAM1073	AAM7001	
P6 - 47		Display Window	PAM1725	PAM1765	
P6 - 52		Hood	PNW2732	PNW2824	
P6 - 50		Operation Panel	PNW2773	PNW2825	

Service Manual

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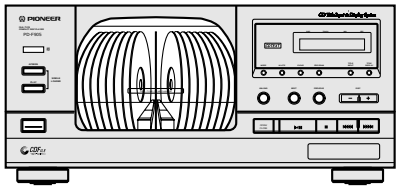
The Art of Entertainment



ORDER NO.
RRV1898

FILE-TYPE CD PLAYER

PD-F957
PD-F907

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

Type	Model		Power Requirement	Remarks
	PD-F957	PD-F907		
KU	–	O	AC120V	
KC	–	O	AC120V	
KU/CA	O	–	AC120V	

CONTENTS

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V . Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

T–ZZY DEC. 1997 Printed in Japan

1. SAFETY INFORMATION

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

WARNING
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.

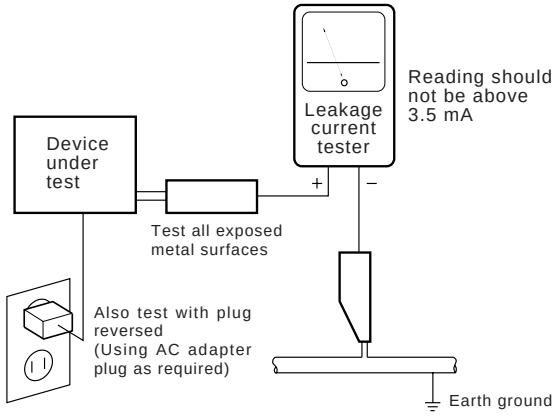
(FOR USA MODEL ONLY)

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 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 3.5 mA.



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

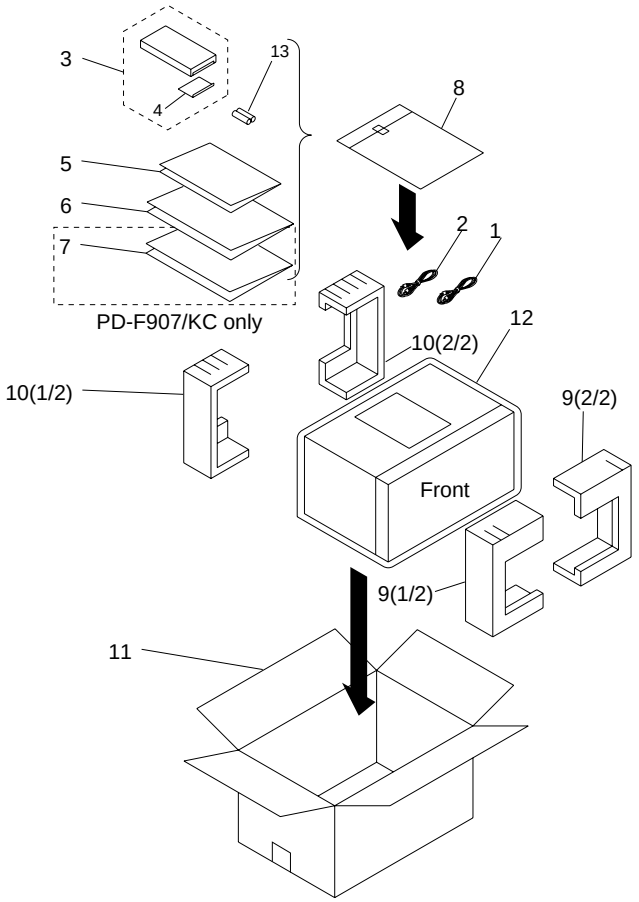
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

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

2. EXPLODED VIEWS AND PARTS LIST

NOTES : ● *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *Screw adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PARTS LIST

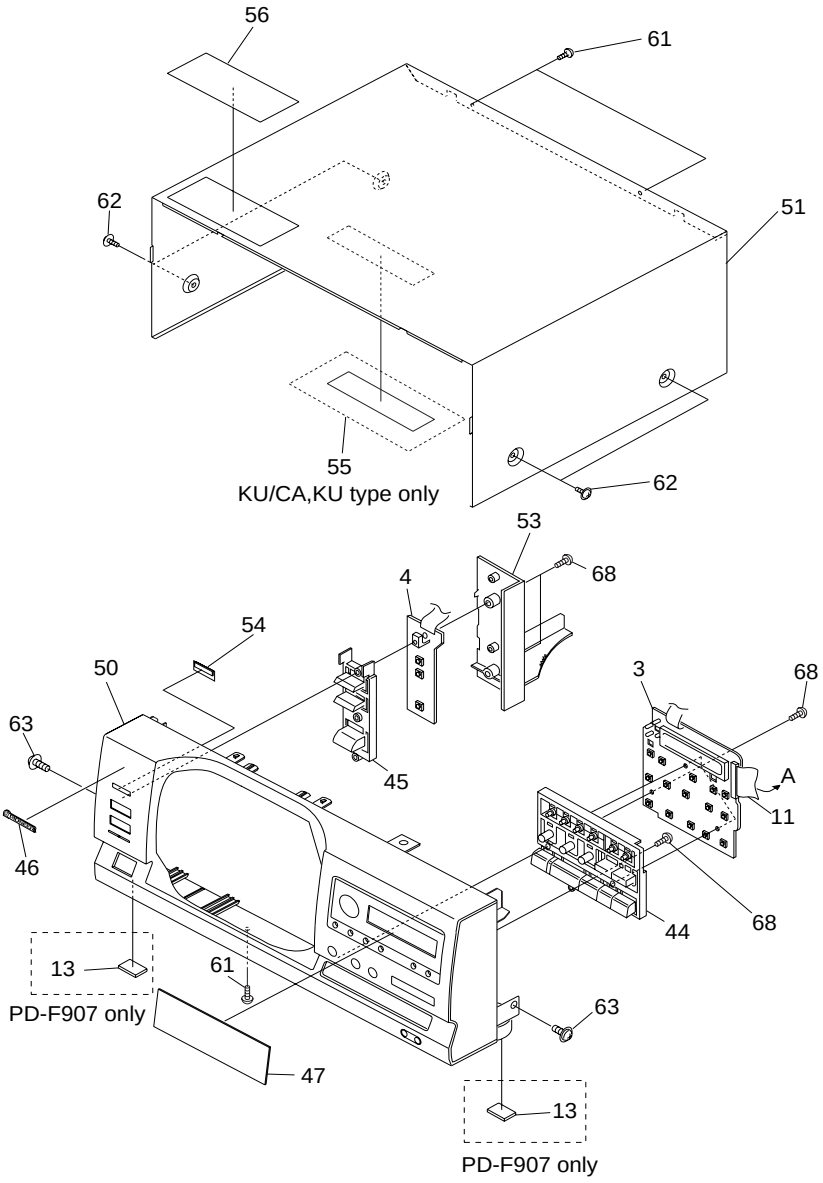
Mark	No.	Description	Parts No.
	1	Control Cable (L=1.0m)	PDE1247
	2	Output Cable (L=1.0m)	PDE1248
	3	Remote Control Unit	See Contrast table (2)
	4	Battery Cover	AZN7204
NSP	5	Warranty Card	See Contrast table (2)
	6	Operating Instructions (English)	See Contrast table (2)
	7	Operating Instructions (French))	See Contrast table (2)
	8	Polyethlene Bag	Z21 - 038
	9	Styrol Protector F	PHA1307
	10	Styrol Protector R	PHA1308
	11	Packing Case	See Contrast table (2)
	12	Mirror Mat	Z23 - 0204
NSP	13	Battery (R6P, AA)	VEM - 013

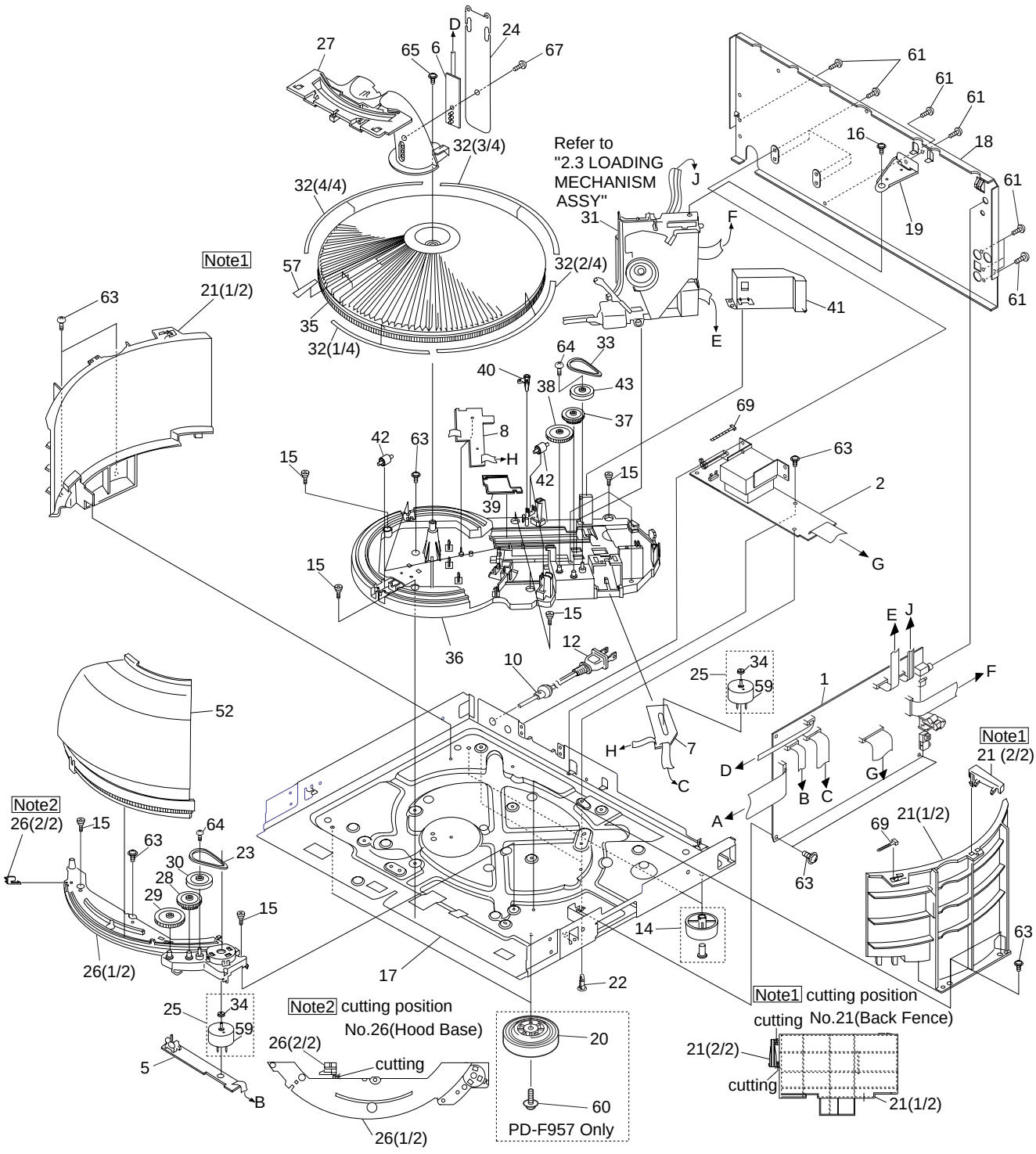
(2) CONTRAST TABLE

PD-F907/KU,KC and PD-F957/KU/CA have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.			Remarks
			PD-F957/ KU/CA	PD-F907/ KU	PD-F907 KC	
	3	Remote Control Unit	PWW1130 (CU-PD088)	PWW1132 (CU-PD080)	PWW1132 (CU-PD080)	
NSP	5	Warranty Card	ARY1044	ARY1044	ARY1039	
	6	Operating Instructions (English)	PRB1264	PRB1263	PRB1263	
	7	Operating Instructions (French)	Not used	Not used	PRD1023	
	11	Packing Case	PHG2304	PHG2285	PHG2286	

2.2 EXTERIOR


56
61
62
51
55
KU/CA,KU type only
62
53
68
4
54
50
3
68
63
45
A
11
46
68
44
13
61
PD-F907 only
63
47
13
PD-F907 only


Refer to "2.3 LOADING MECHANISM ASSY"
Note1
Note2
Note2 cutting position No.26(Hood Base)
Note1 cutting position No.21(Back Fence)
PD-F957 Only

(1) EXTERIOR PARTS LIST

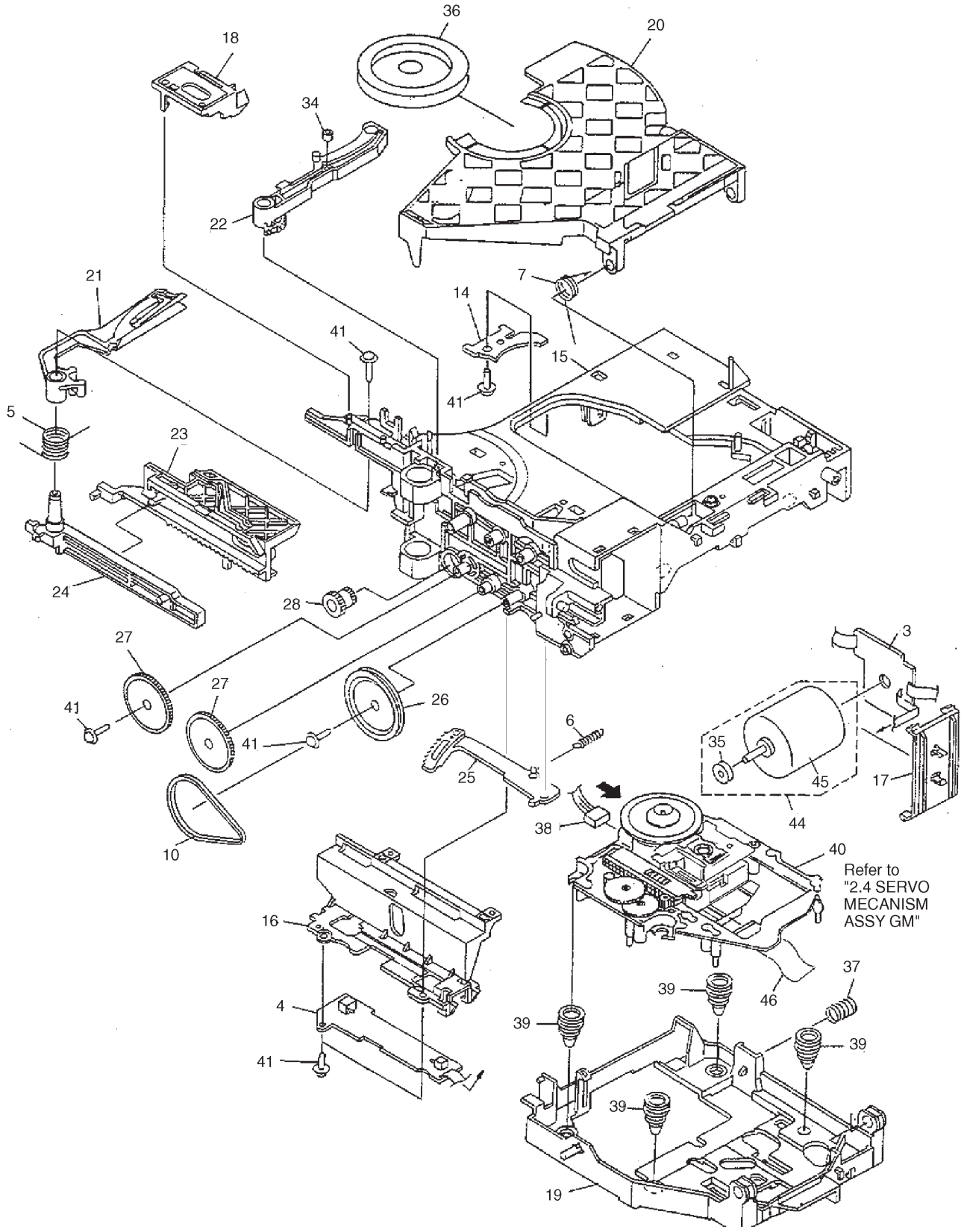
Mark	No.	Description	Parts No.
⚠	1	Main Board Assy	See Contrast table(2)
⚠	2	Power Board Assy	See Contrast table(2)
	3	Display Board Assy	See Contrast table(2)
NSP	4	Switch Board Assy	See Contrast table(2)
NSP	5	Door Board Assy	See Contrast table(2)
NSP	6	Center LED Board Assy	See Contrast table(2)
NSP	7	Select Motor Board Assy	PWZ3324
NSP	8	Sensor Board Assy	PWZ3327
	9	.....	
⚠	10	Cord Stopper	CM - 22C
	11	F.F.C/30V	See Contrast table(2)
⚠	12	AC Power Cord	PDG1015
	13	Rubber Sheet	See Contrast table(2)
	14	Foot Assy	See Contrast table(2)
	15	Screw C	PBA1106
	16	Screw	PBA1108
NSP	17	Under Base	PNA2255
	18	Rear Base	See Contrast table(2)
	19	Stopper Angle	PNB1559
	20	Insulator	See Contrast table(2)
	21	Back Fence	PNW2671
	22	Locking Card Spacer	VEC1596
	23	Belt	PEB1288
	24	Cover	PNM1294
	25	Motor Assy	PEA1333
	26	Hood Base	PNW2633
	27	Center Pole	PNW2634
	28	Gear	PNW2641
	29	Gear	PNW2642
	30	Gear Pulley	VNL1662
	31	Loading Mechanism Assy	PXA1589
	32	Rack Label	PAM1732
	33	Belt	PEB1288
	34	Motor Pulley	PNW1634
	35	Disc Rack	PNW2632
	36	Mecha Base	PNW2639
	37	Gear	PNW2641
	38	Gear	PNW2642
	39	Slider	PNW2643
	40	Lock Lever	PNW2644
	41	Mecha Stopper	PNW2646
	42	Roller	PNW2647
	43	Gear Pulley	VNL1662
	44	Control Button	PAC1822
	45	Power Button	PAC1833
	46	Name Plate	VAM1073
	47	Display Window	See Contrast table(2)
	48	.....	
	49	.....	
	50	Operation Panel	See Contrast table(2)
	51	Bonnet Case	PYY1191
	52	Hood	PNW2732
	53	Side Fence	PNW2674
	54	Sensor Acryl	VNK1566
	55	65 Label	See Contrast table (2)
	56	Label	PRW1428
	57	Label	PRW1429
	58	.....	
	59	Slider Motor	VXM1033
	60	Screw	IBZ30P080FZK
	61	Screw	BBZ30P080FZK
	62	Screw	FBT40P080FZK
	63	Screw	IBZ30P060FMC
	64	Screw	IPZ20P080FMC
	65	Screw	IPZ30P080FCU
	66	.....	
	67	Screw	PPZ30P050FMC
	68	Screw	PPZ30P100FMC
	69	Binder	Z09 - 056

(2) CONTRAST TABLE

PD-F907/KU,KC and PD-F957/KU/CA have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.			Remarks
			PD-F957/ KU/CA	PD-F907/ KU	PD-F907/ KC	
⚠	1	Main Board Assy	PWZ3663	PWZ3400	PWZ3400	
⚠	2	Power Board Assy	PWZ3668	PWZ3414	PWZ3414	
	3	Display Board Assy	PWZ3672	PWZ3426	PWZ3426	
NSP	4	Switch Board Assy	PWZ3675	PWZ3432	PWZ3432	
NSP	5	Door Board Assy	PWZ3681	PWZ3441	PWZ3441	
NSP	6	Center LED Board Assy	PWZ3683	PWZ3443	PWZ3443	
	11	F.F.C/30V	PDD1186 (40P F.F.C)	PDD1167 (32P F.F.C)	PDD1167 (32P F.F.C)	
	13	Rubber Sheet	Not Used	AEB1111	AEB1111	
	14	Foot Assy	REC1263	AEC1531	AEC1531	
	18	Rear Base	PNA2405	PNA2389	PNA2389	
	20	Insulator	PNW2766	Not Used	Not Used	
	47	Display Window	PAM1752	PAM1725	PAM1725	
	50	Operation panel	PNW2786	PNW2773	PNW2773	
	55	65 Label	ORW1069	ORW1069	Not used	

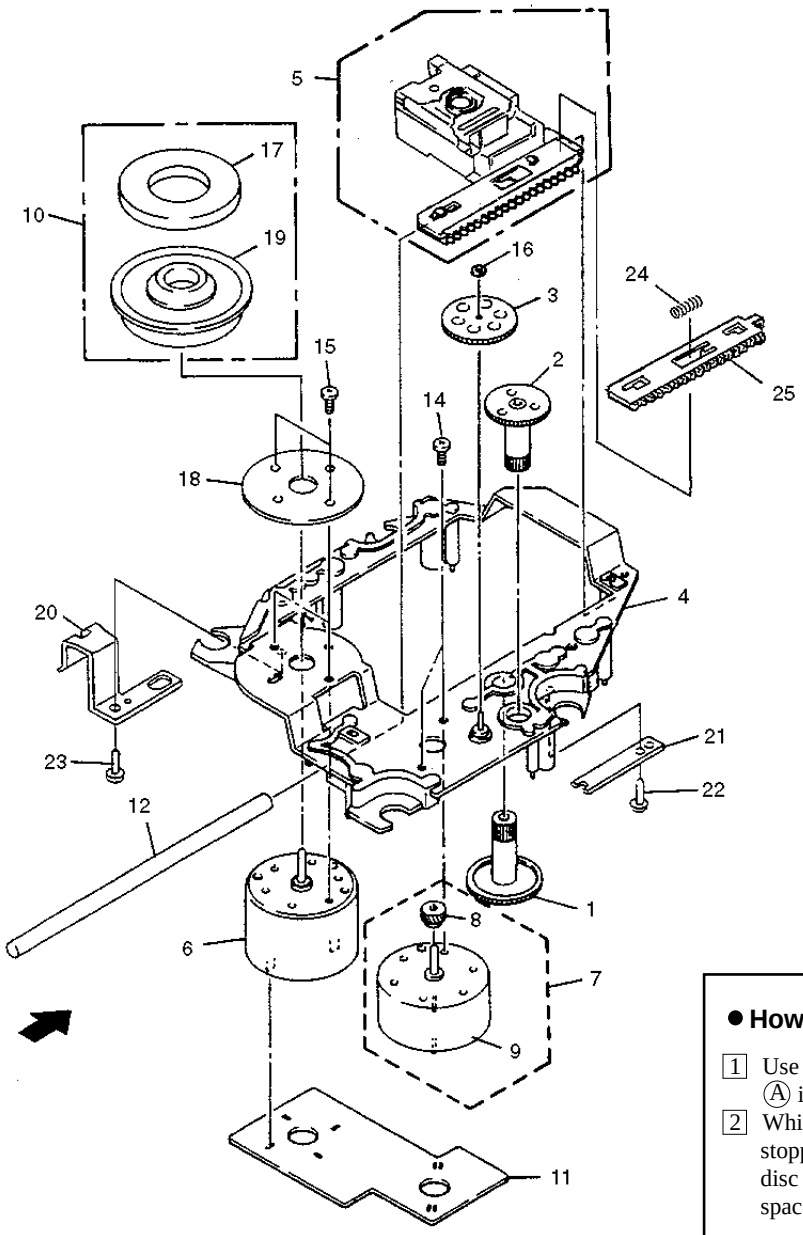
2.3 LOADING MECHANISM ASSY



■ LOADING MECHANISM ASSY PARTS LIST

Mark	No.	Description	Parts No.
	1	……	
	2	……	
NSP	3	Loading Motor Board Assy	PWZ3337
NSP	4	Load SW Board Assy	PWZ3334
	5	Arm A Spring2	ABH7124
	6	Gear Plate Spring	ABH7051
	7	Clamp Spring	ABH7107
	8	……	
	9	……	
	10	Loading Belt	AEB7029
	11	……	
	12	……	
	13	……	
NSP	14	Servo Stopper S	ANB7047
	15	Loading Base	ANW7086
	16	Cam Cover	ANW7052
	17	Motor Holder	ANW7053
	18	Sensor Holder	ANW7119
	19	Float Base 96	PNW2700
	20	Clamper Holder	ANW7117
	21	Arm (A)	ANW7057
	22	Arm (B)	ANW7058
	23	Drive Plate	ANW7059
	24	Arm Plate	ANW7060
	25	Gear Plate	ANW7111
	26	Gear Pulley (B)	ANW7062
	27	Gear A	ANW7063
	28	Drive Gear	ANW7064
	29	……	
	30	……	
	31	……	
	32	……	
	33	……	
	34	Roller B	ANW7075
	35	Motor Pulley	PNW1634
	36	Clamper	PNW2743
	37	Float Spring	ABH7049
	38	Connector Assy (4P)	RDE1043
	39	Float Rubber	AEB7028
NSP	40	Servo Mechanism Assy GM	PXA1591
	41	Screw	IPZ20P080FMC
	42	……	
	43	……	
	44	Motor Assy	AEA7006
	45	Loading Motor	VXM1034
	46	16P FFC/30V	PDD1180
		Froil (for Service)	GYA1001
		Ha Narl (for Service)	GEM1016

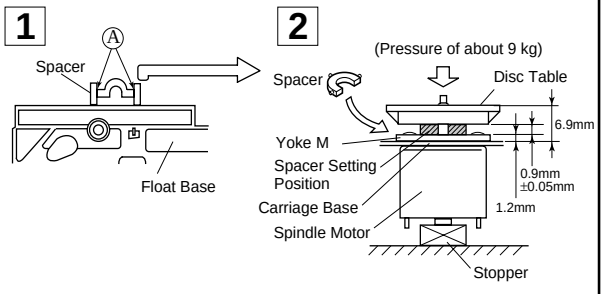
2.4 SERVO MECHANISM ASSY GM



● How to Install the Disc Table

1 Use nipper or other tool to cut the three sections marked Ⓐ in figure 1. Then remove the spacer

2 While supporting the spindle motor shaft with the stopper, put spacer on top of the yoke M, and stick the disc table on top (takes about 9kg pressure). Detach the spacer.



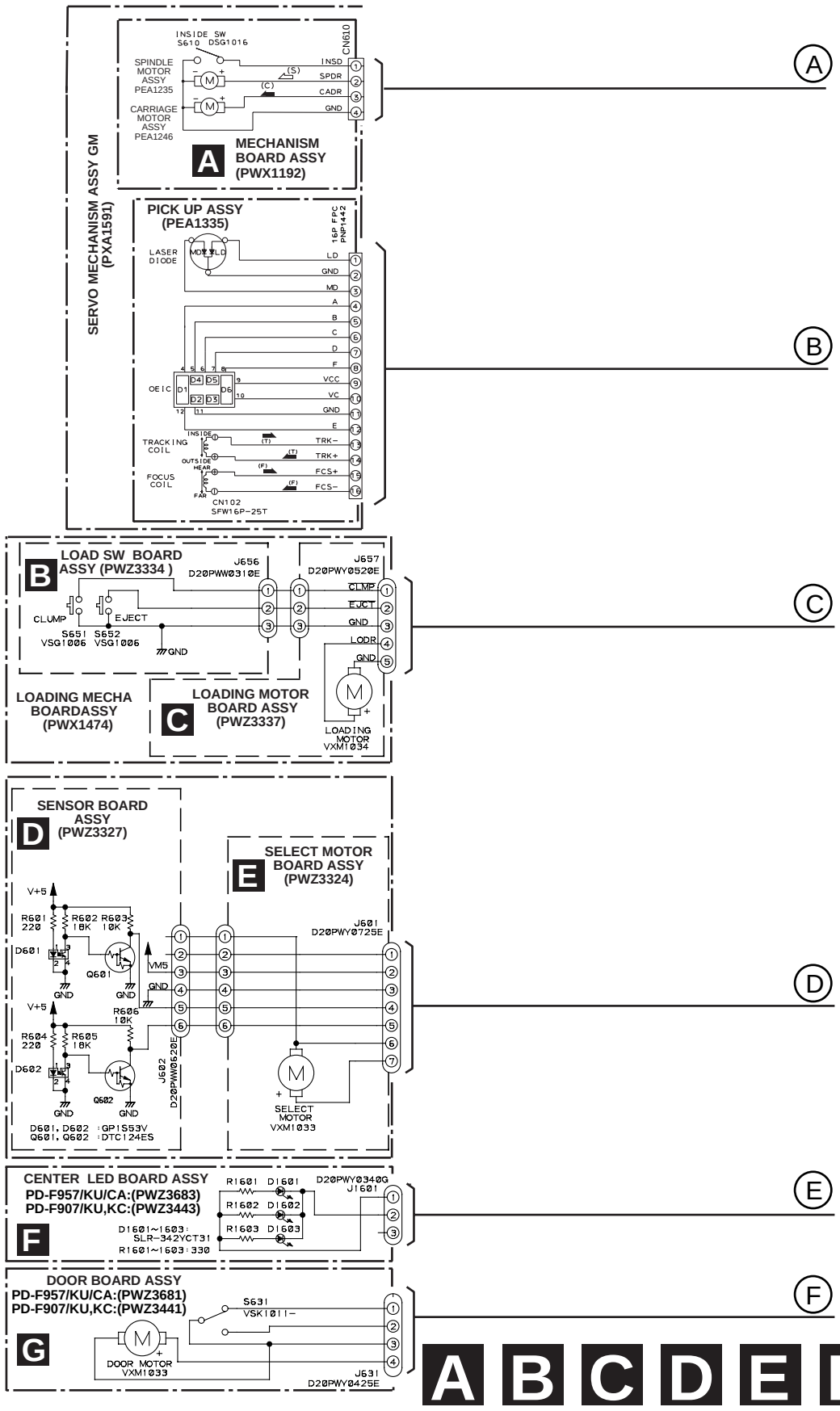
■ SERVO MECHANISM ASSY GM PARTS LIST

Mark	No.	Description	Parts No.
	1	Gear 1	PNW2052
	2	Gear 2	PNW2053
	3	Gear 3	PNW2054
	4	Carriage Base	PNW2699
	5	Pickup Assy - S	PEA1335
	6	D.C. Motor Assy (SPINDLE)	PEA1235
	7	Carriage DC Motor Assy	PEA1246
	8	Pinion Gear	PNW2055
	9	Carriage DC Motor/0.3W	PXM1027
	10	Disc Table Assy	PEA1314
	11	Mechanism Board Assy	PWX1192
	12	Guide Bar	PLA1094
	13	……	
	14	Screw	JFZ17P025FZK
	15	Screw	JFZ20P040FMC
	16	Washer	WT12D032D025
	17	Clamp Magnet	PMF1014
	18	Yoke M	PNB1312
NSP	19	Disc Table	PNW2410
NSP	20	Float Angle	ANB7020
	21	Gear Stopper	PNB1303
	22	Screw	BPZ20P060FMC
	23	Screw	BPZ26P100FMC
	24	PU Rack Spring	ABH7077
	25	Rack Holder	PNW2056

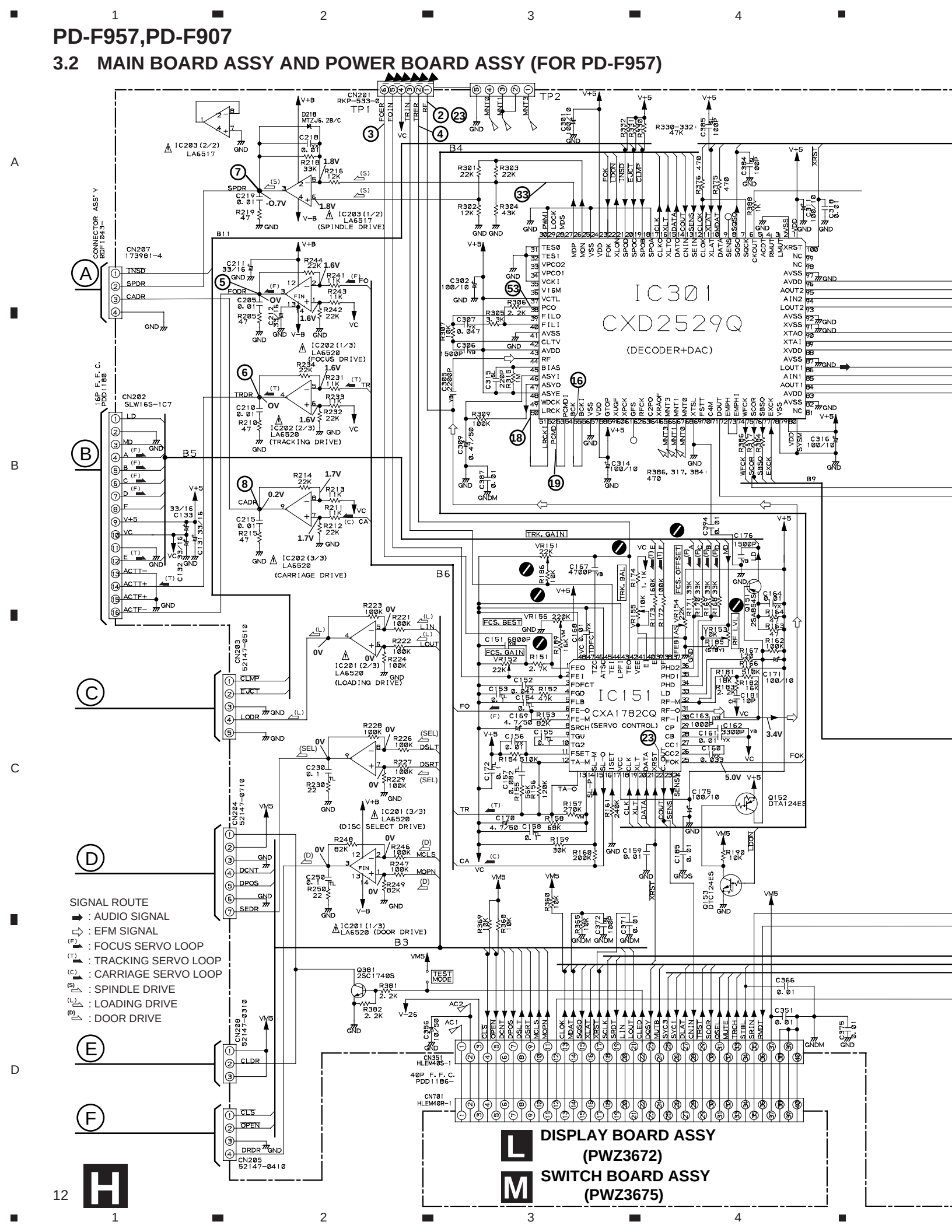
3. SCHEMATIC DIAGRAM

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

3.1 MECHANISM BOARD ASSY,SENSOR BOARD ASSY,LOAD SW BOARD ASSY,SELECT MOTOR BOARD ASSY,LOADING MOTOR BOARD ASSY,CENTER LED BOARD ASSY, DOOR BOARD ASSY AND PICKUP ASSY



3.2 MAIN BOARD ASSY AND POWER BOARD ASSY (FOR PD-F957)



IC301(CXD2529Q) :PLAY MODE

PIN No.	1	2	3 - 4	7	8	9	10	11	12	13	14	16	17	23	24	25
Voltage(V)	5	0	0	4.7	1.2-1.3	1.2-1.4	4.4	5	4.7	4.7	0.05	5	4.7	5	5	0

PIN No.	26	27	38	39	40	41	42	43	44	45	46	47	48	50-55	56	57
Voltage(V)	5	2.6-2.7	2.5	3.1	2.5	0	3.1	5	2.5	0.9	2.5	2.5	5	2.5	0	5

PIN No.	61	71	75	78	79	82	83	84-86	87	88	89-90	91-92	93-95	96	97	100
Voltage(V)	5	2.5	0	0	5	0	5	2.5	0	5	2.5	0	2.5	5	0	5

⚠MAIN BOARD ASSY
(PWZ3663)

⚠ POWER BOARD ASSY
(PWZ3668)

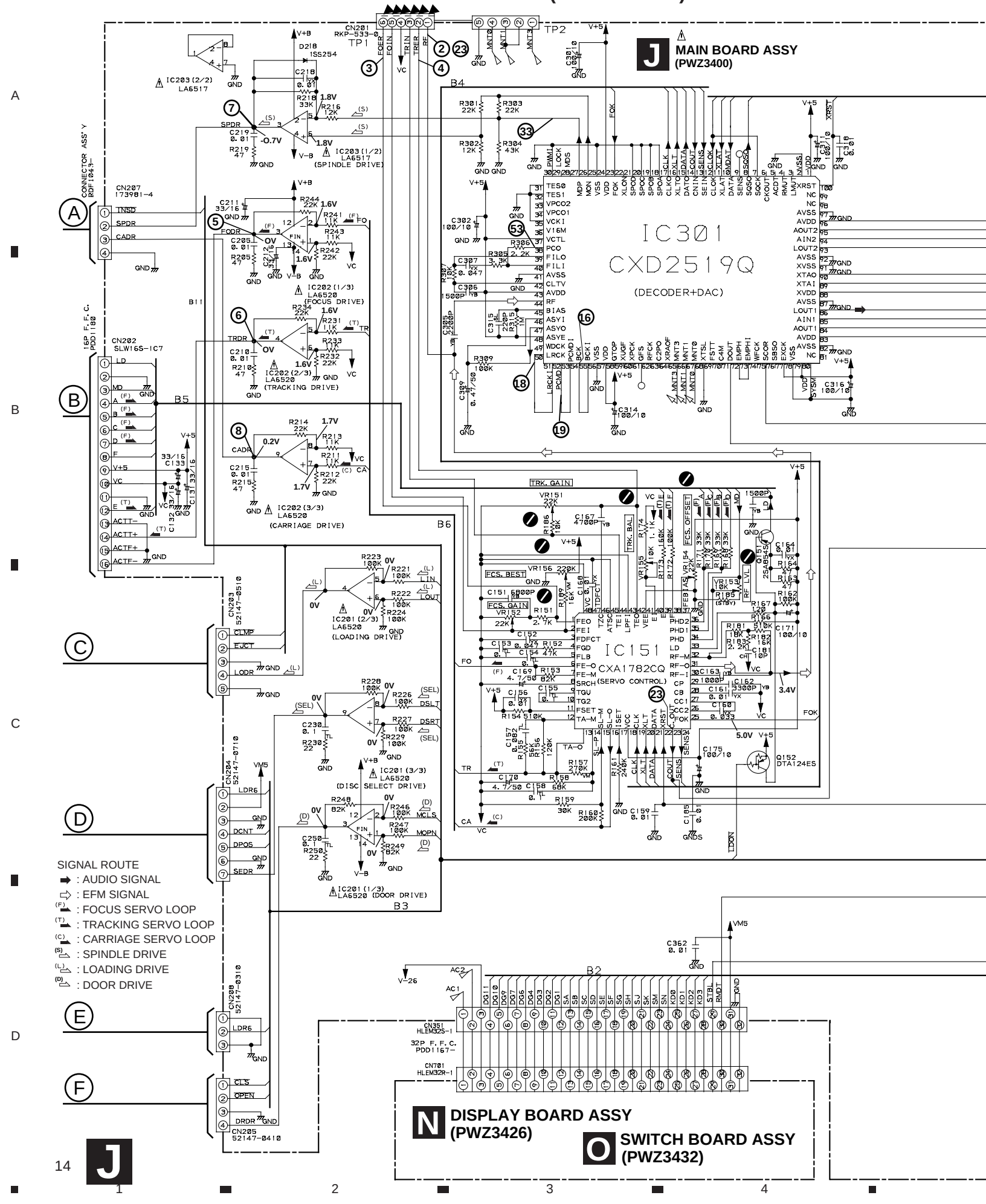
CAUTION:FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE NO.ICP-N10,MFD BY ROHM CO.,LTD,FOR IC31 AND IC32.

AC120V
60Hz
⚠ AC POWER CORD :PDG1015

P0WER TRANSFORMER :⚠PTT1342

NOTE
RESISTORS
1/4W Type
Unmarked RD1/4PU
VM: RD1/4VM
CAPACITORS
(1) TL: Film CFTLA
(2) YB: Ceramic CKCYB
(3) CH: Ceramic CCCCH
(4) YX: Ceramic CGCYX
(5) SL: Ceramic CCCSL
(6) Unmarked type CKCYF
(7) Unmarked CEAT
INDUCTORS
Axial: type LAU
OTHERS
: CHASSIS GROUND
GNDS
ABC: LOW ACTIVE SIGNAL

3.3 MAIN BOARD ASSY AND POWER BOARD ASSY (FOR PD-F907)

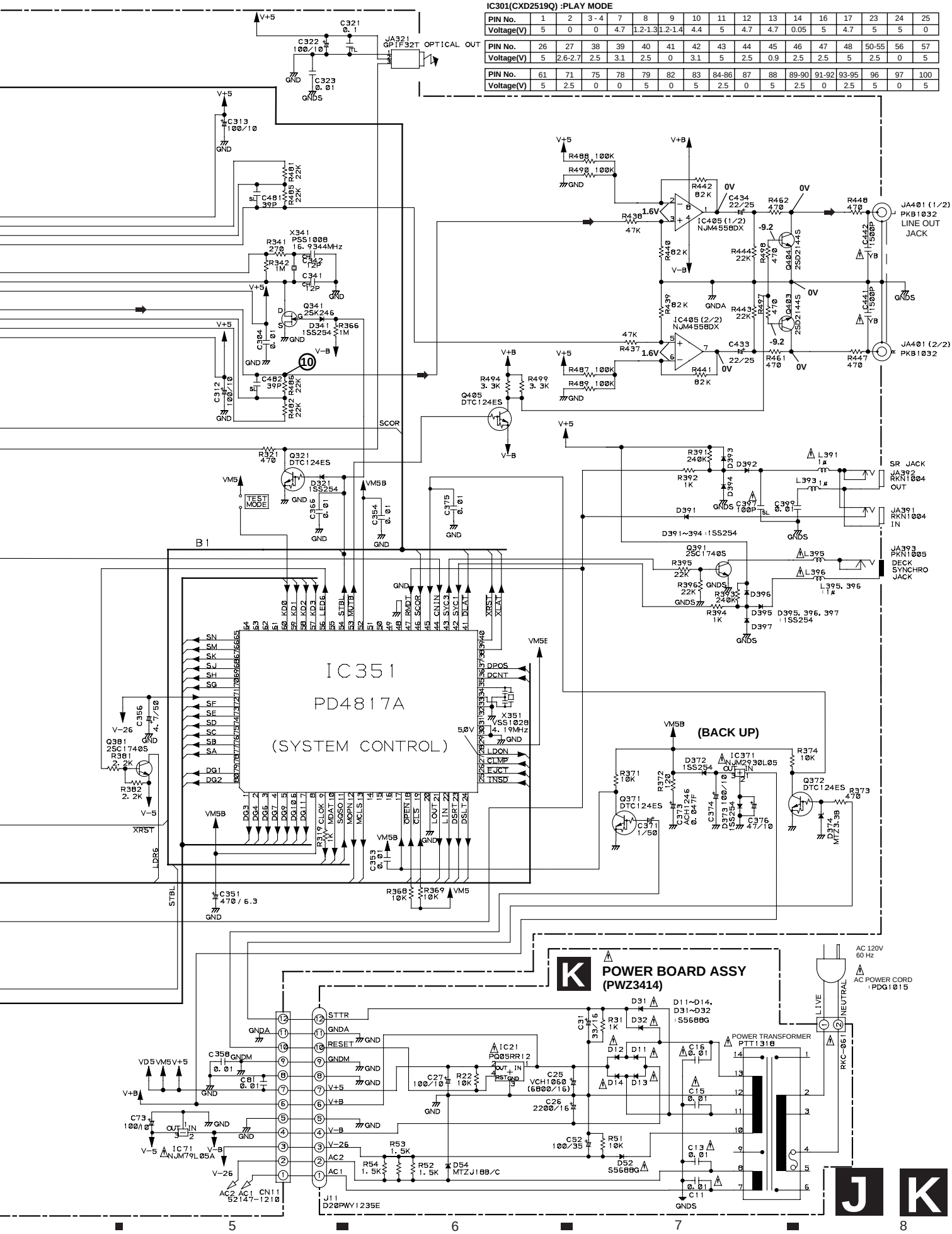


IC301(CXD2519Q) :PLAY MODE

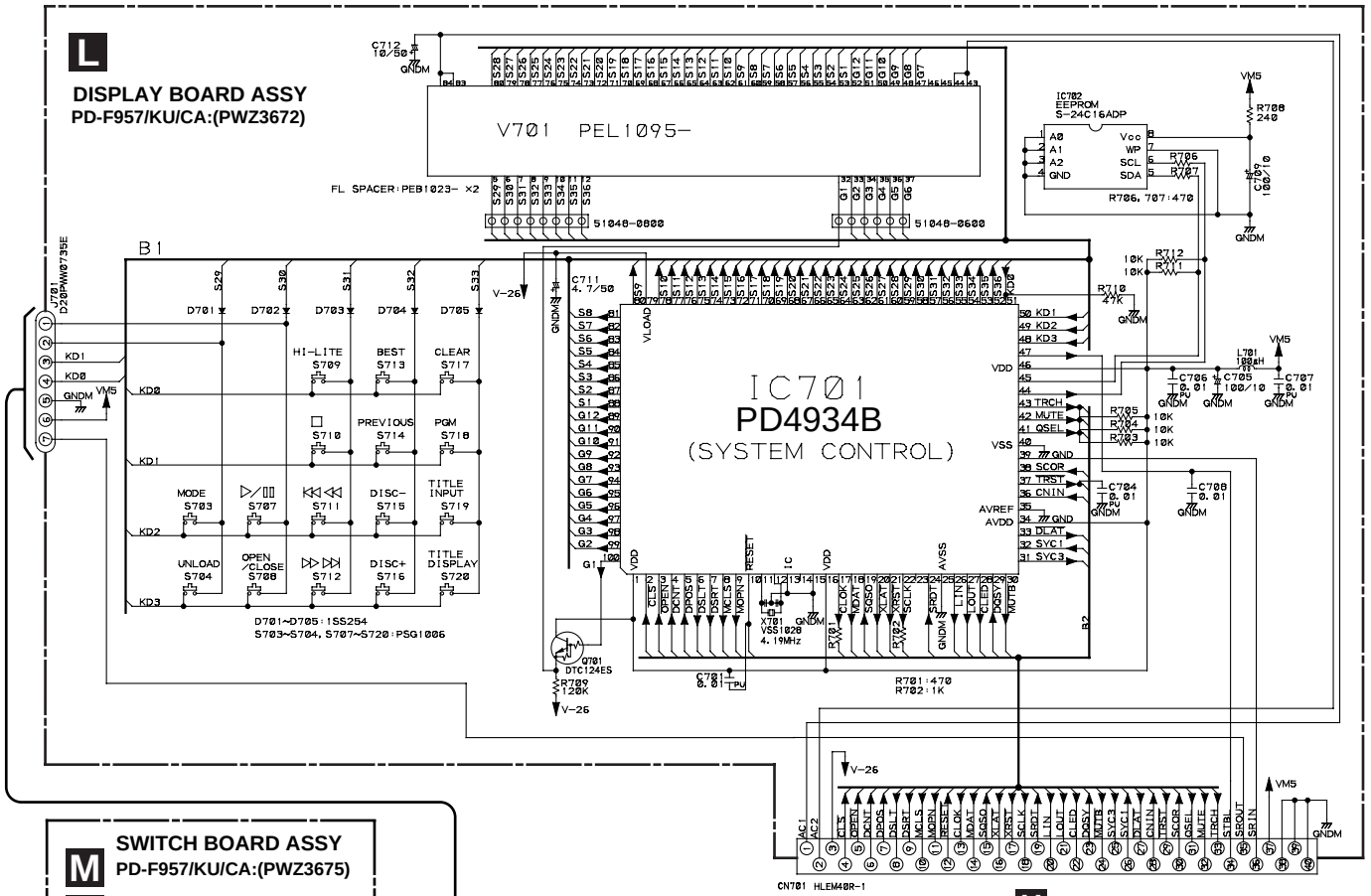
PIN No.	1	2	3 - 4	7	8	9	10	11	12	13	14	16	17	23	24	25
Voltage(V)	5	0	0	4.7	1.2-1.3	1.2-1.4	4.4	5	4.7	4.7	0.05	5	4.7	5	5	0

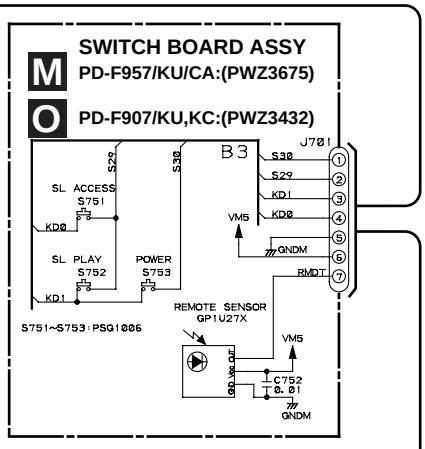
PIN No.	26	27	38	39	40	41	42	43	44	45	46	47	48	50-55	56	57
Voltage(V)	5	2.6-2.7	2.5	3.1	2.5	0	3.1	5	2.5	0.9	2.5	2.5	5	2.5	0	5

PIN No.	61	71	75	78	79	82	83	84-86	87	88	89-90	91-92	93-95	96	97	100
Voltage(V)	5	2.5	0	0	5	0	5	2.5	0	5	2.5	0	2.5	5	0	5



3.4 DISPLAY BOARD ASSY AND SWITCH BOARD ASSY





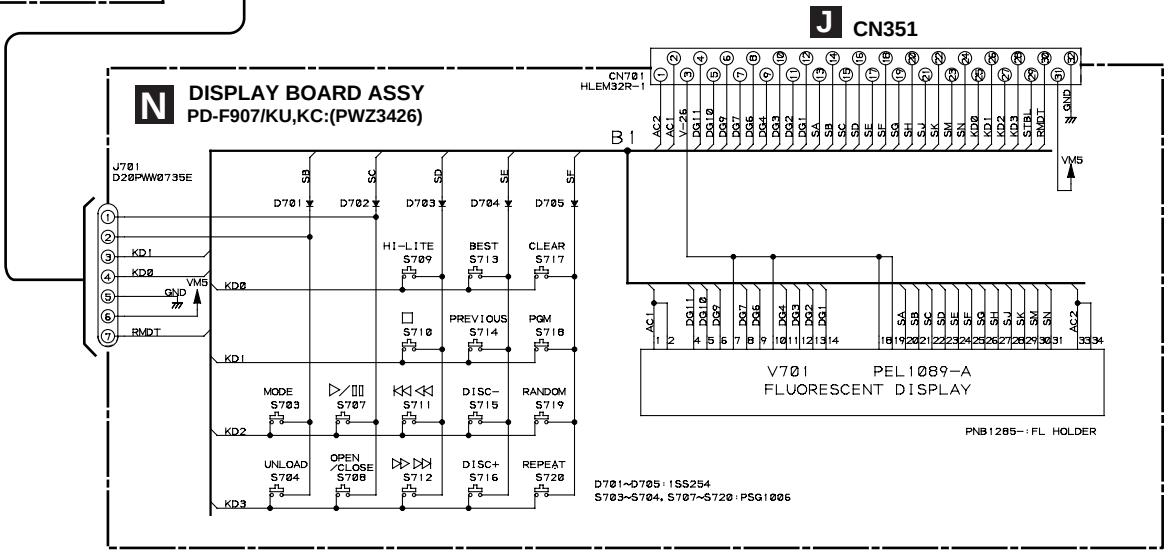
SWITCHES

SWITCH BOARD ASSY

S751 : SL ACCESS
S752 : SL PLAY
S753 : POWER STAND/ON

DISPLAY BOARD ASSY

S703 : MODE
S704 : UNLOAD
S707 : ▶/❚❚
S708 : OPEN/CLOSE
S709 : HI-LITE
S710 : ■
S711 : |◀◀ ◀◀
S712 : ▶▶ ▶▶|
S713 : BEST
S714 : PREVIOUS
S715 : DISC –
S716 : DISC +
S717 : CLEAR
S718 : PGM
S719 : TITLE INPUT (PD-F957)
: RANDOM (PD-F907)
S720 : TITLE DISPLAY (PD-F957)
: REPEAT (PD-F907)

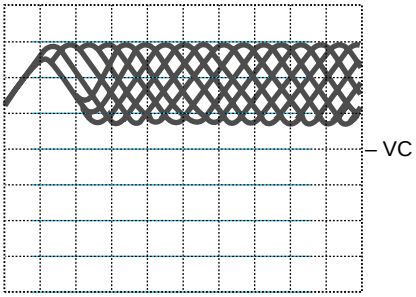


Waveforms

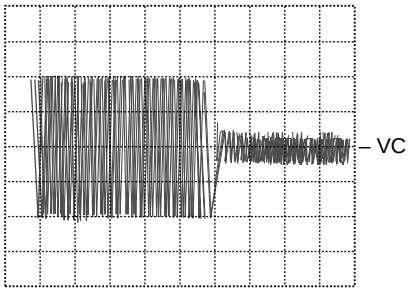
Note: The encircled numbers denote measuring point in the schematic diagram.

∗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.

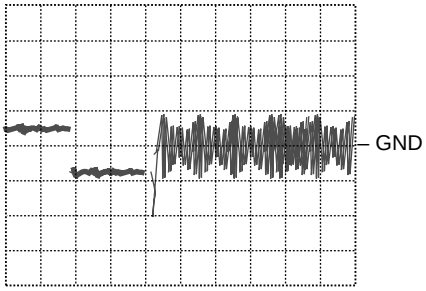
2 TP1-Pin 1: PLAY MODE (RF)
500mV/div 500nsec/div



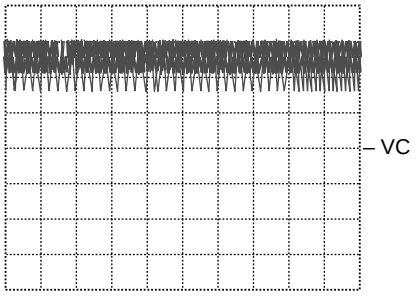
4' TP1-Pin 2: 50T - JUMP (*1) MODE (TRER)
200mV/div 1msec/div



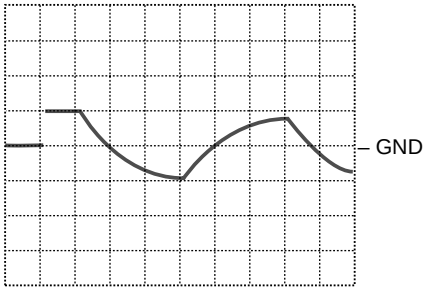
6' IC202-Pin 4: 50T - JUMP (*1) MODE (TRDR)
500mV/div 1msec/div



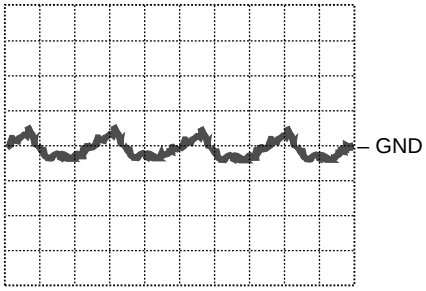
2 TP1-Pin 1: TRACK SEARCH MODE (RF)
500 mV/div 200 µsec/div



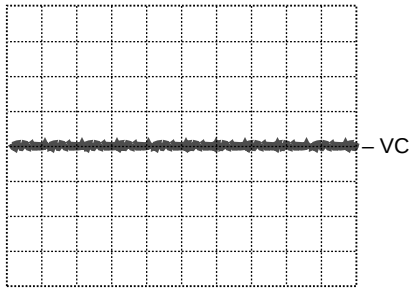
5 IC202-Pin 3: FOCUS-IN (*2) MODE (FODR)
1V/div 200msec/div



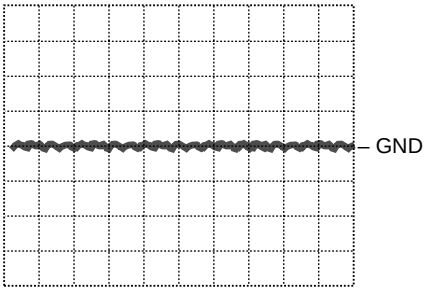
7 IC203-Pin 3: PLAY MODE (SPDR)
1V/div 50msec/div



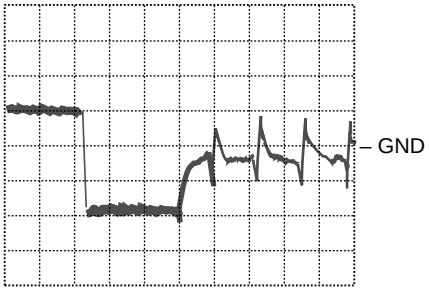
3 TP1-Pin 6: PLAY MODE (FOER)
100mV/div 10msec/div



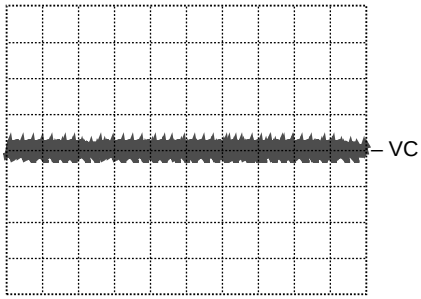
5 IC202-Pin 3: PLAY MODE (FODR)
1V/div 1msec/div



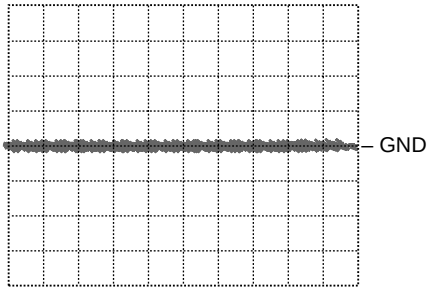
7 IC203-Pin 3: TRACK SEARCH MODE (SPDR)
2V/div 50msec/div



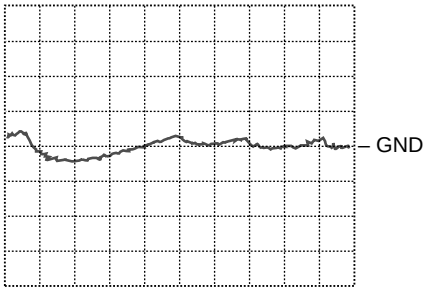
4 TP1-Pin 2: PLAY MODE (TRER)
200mV/div 1msec/div



6 IC202-Pin 4: PLAY MODE (TRDR)
500mV/div 1msec/div

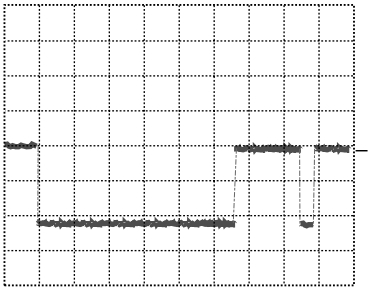


8 IC202-Pin 9: PLAY MODE (CADR)
0.2V/div 2sec/div

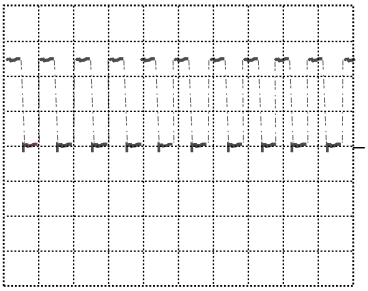


Waveforms

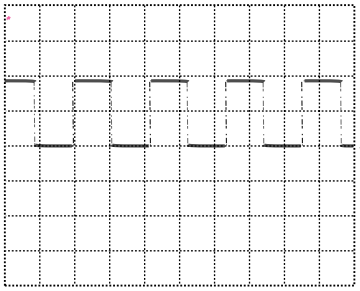
8 IC202-Pin 9: TRACK SEARCH MODE (CADR)
2V/div 200msec/div



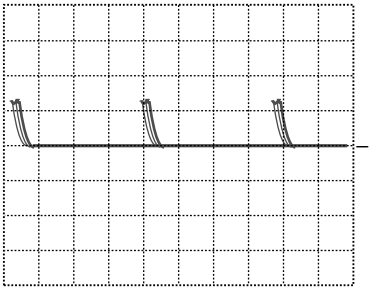
16 IC301-Pin 54 : PLAY MODE (1kHz) (BCK)
2V/div 500nsec/div



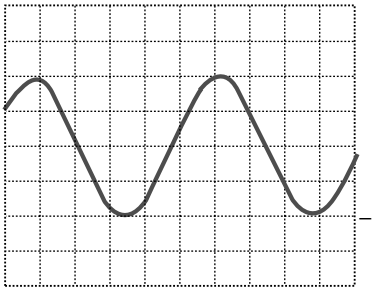
18 IC301-Pin 50 : PLAY MODE (1kHz) (LRCK)
2V/div 10 µsec/div



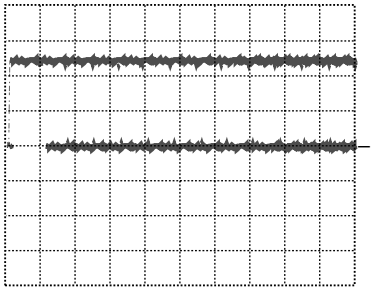
33 IC301-Pin 27 : PLAY MODE (MDP)
2V/div 2 µsec/div



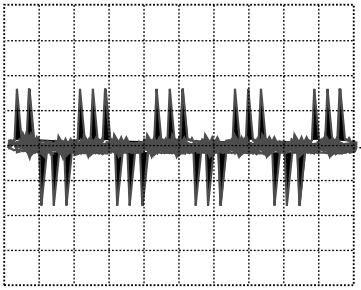
10 IC301-Pin 86 : PLAY MODE (1kHz) (LOUT 1)
1V/div 200msec/div



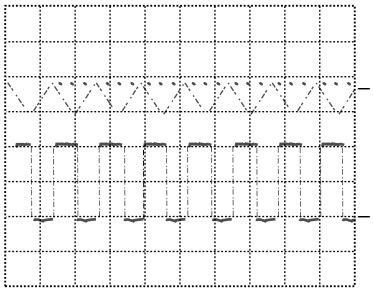
19 IC301-Pin 52 : PLAY MODE (1kHz) (PCMD)
2V/div 500nsec/div



53 IC301-Pin 38 : PLAY MODE (PCO)
2V/div 10 µsec/div

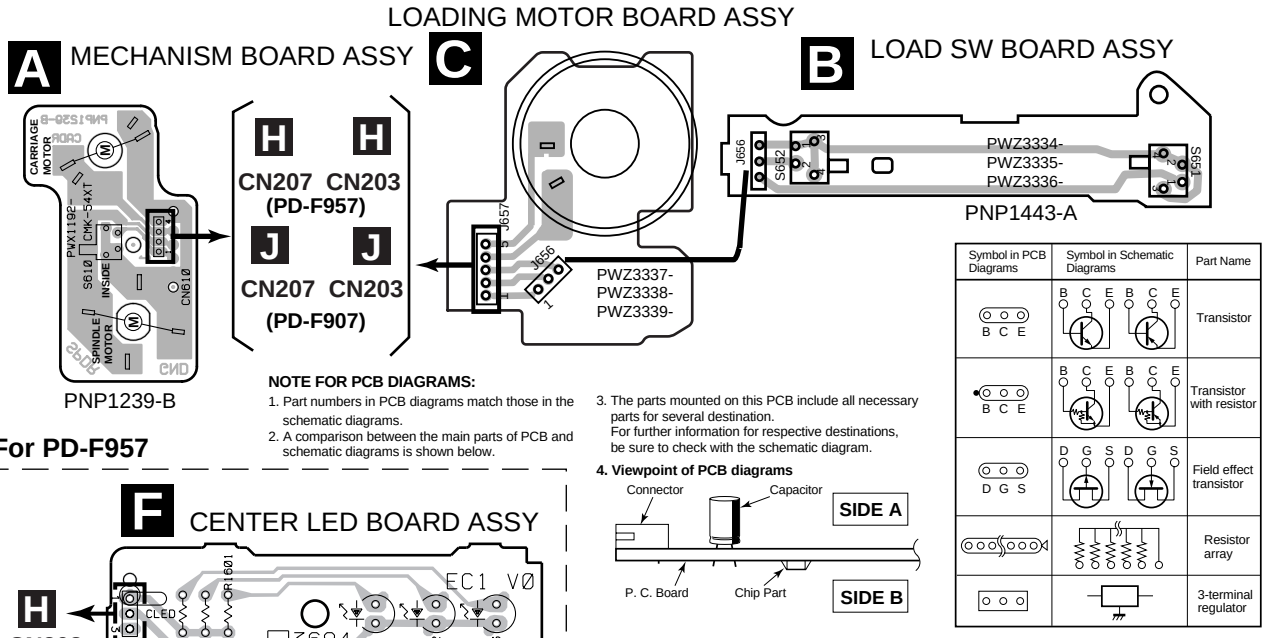


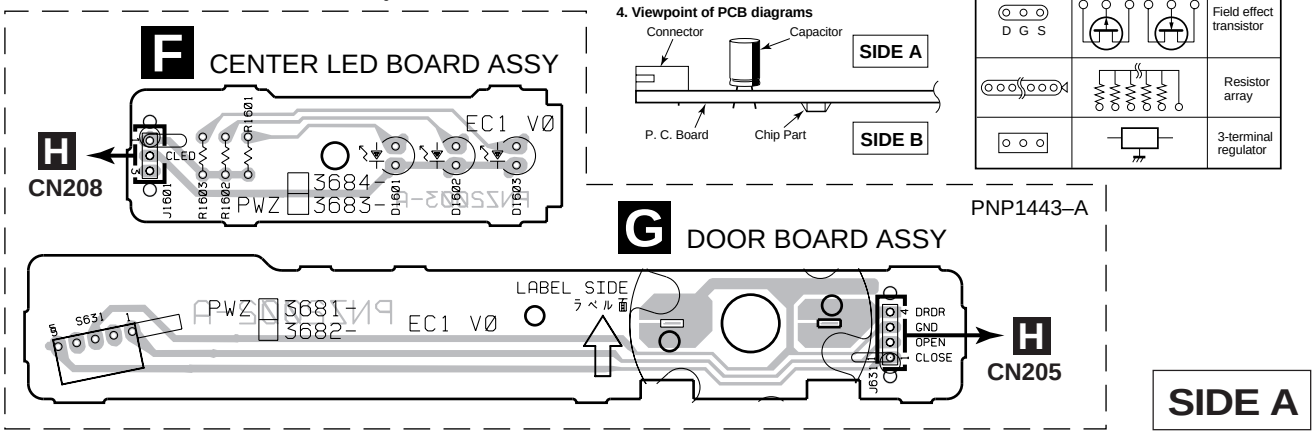
23 TRACK SEARCH MODE
Upper : TP1-Pin 1 (RF) 1V/div
Lower : IC151-Pin 23 (C.OUT)
2V/div 50 µsec/div

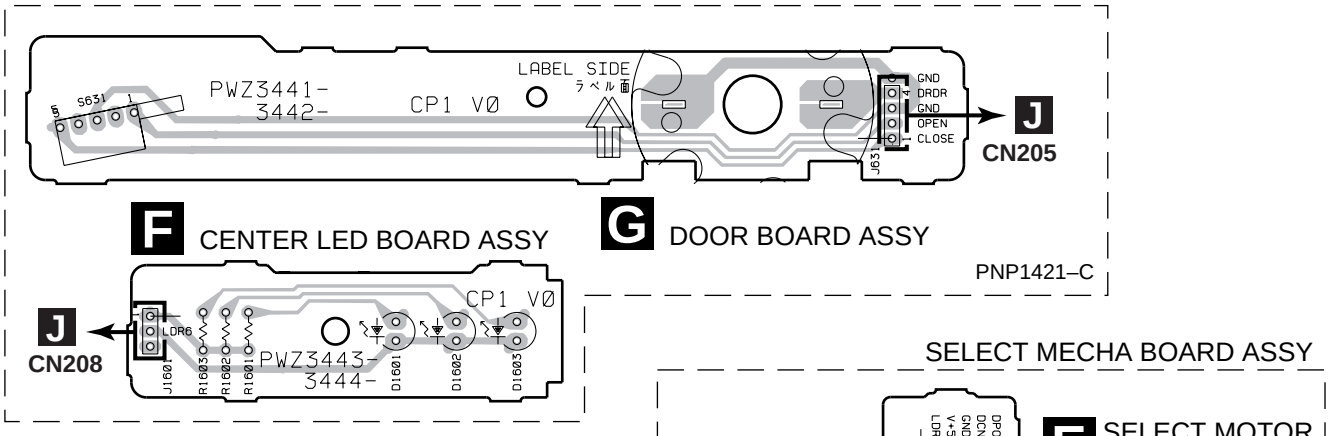


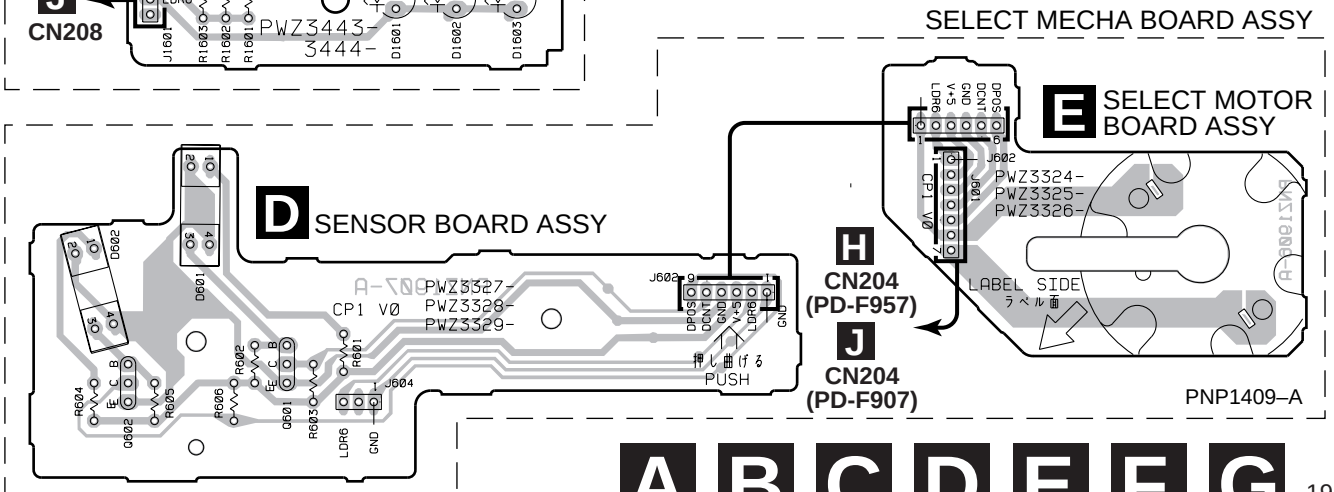
4. PCB CONNECTION DIAGRAM

4.1 MECHANISM BOARD ASSY,SENSOR BOARD ASSY,LOAD SW BOARD ASSY,SELECT MOTOR BOARD ASSY,LOADING MOTOR BOARD ASSY,CENTER LED BOARD ASSY AND DOOR BOARD ASSY





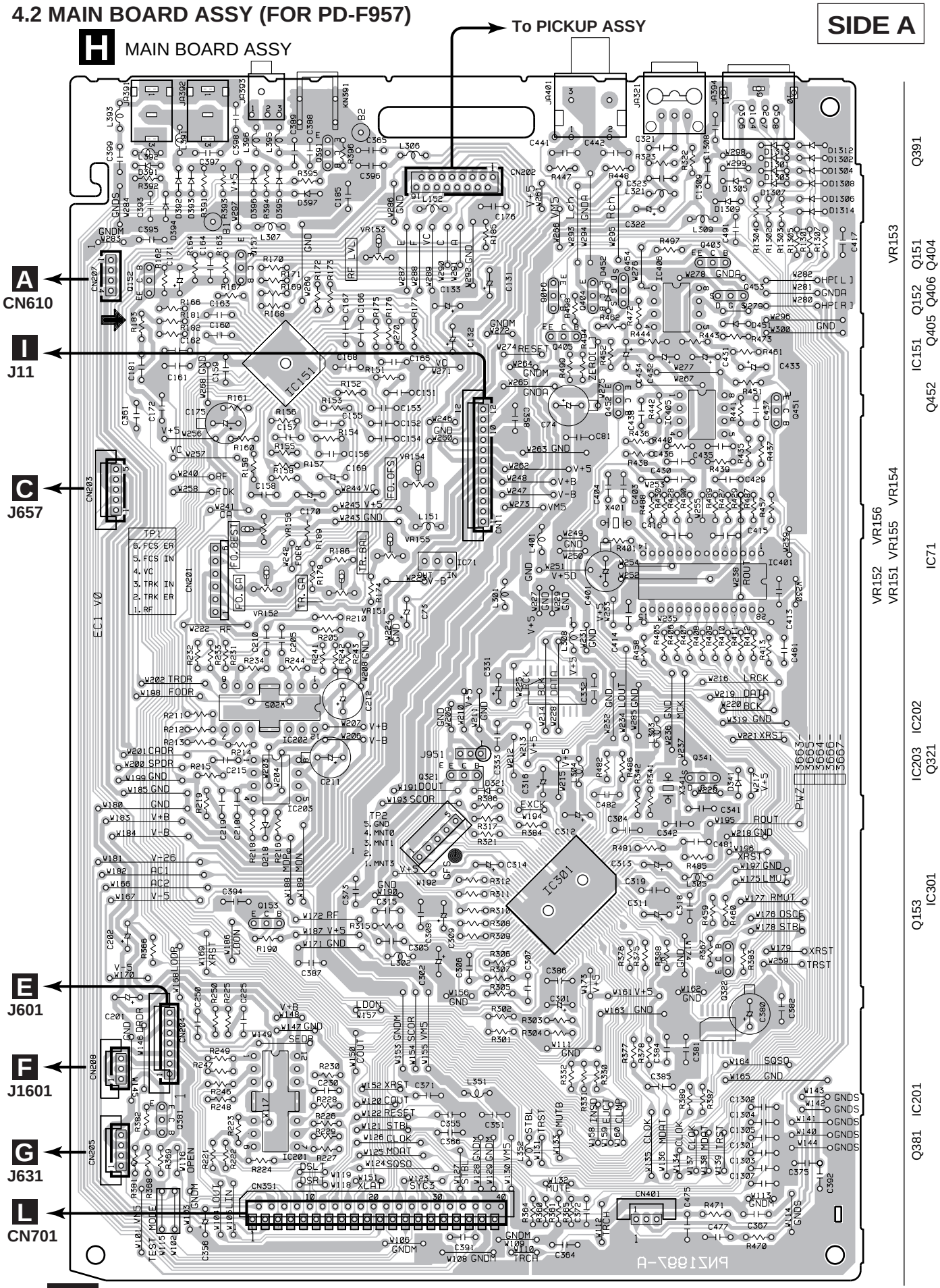




4.2 MAIN BOARD ASSY (FOR PD-F957)

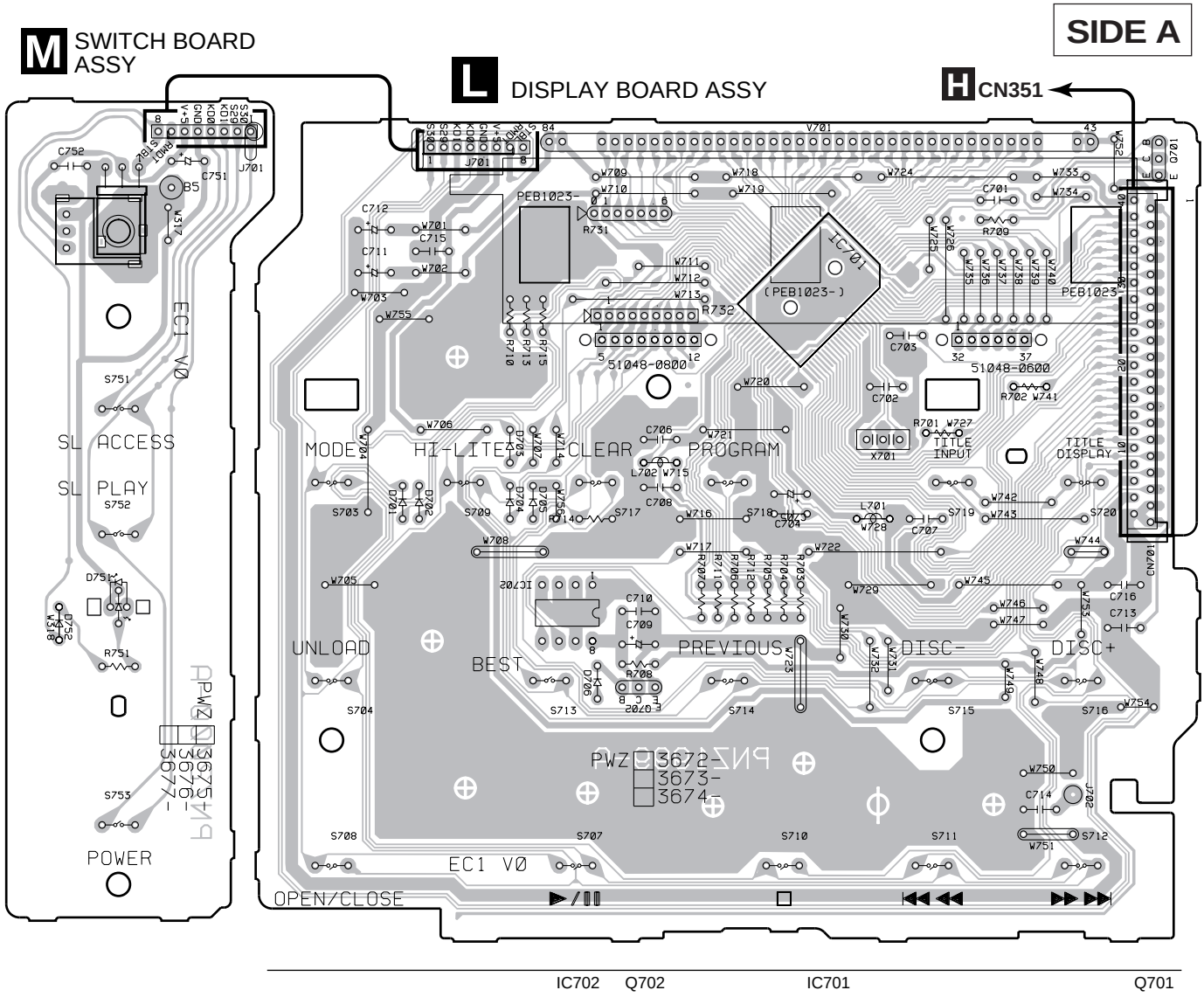
SIDE A

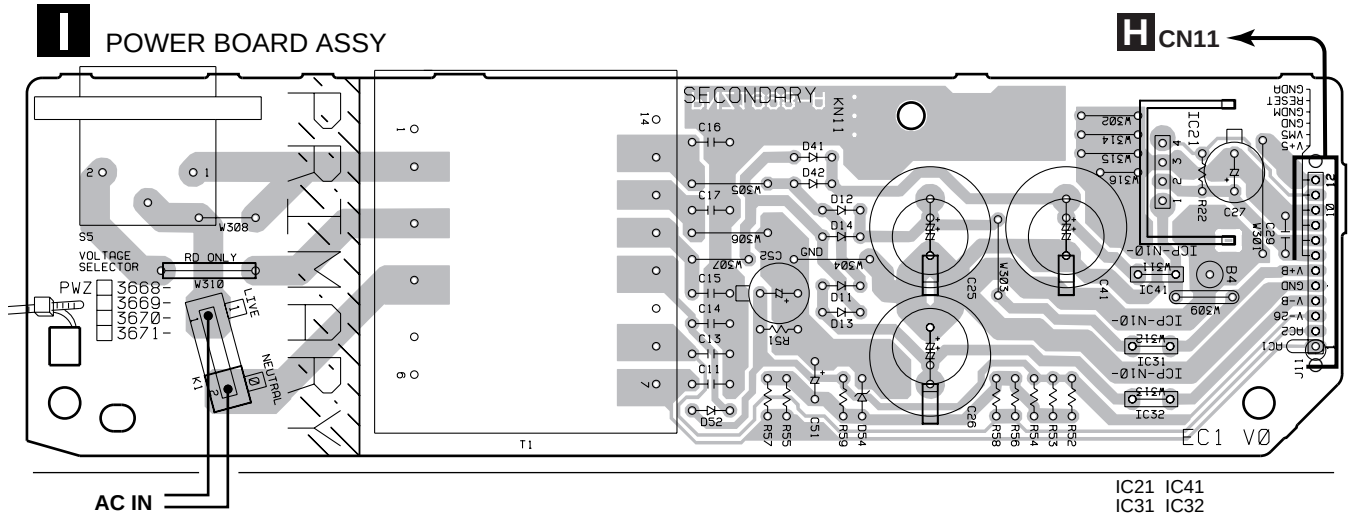
H MAIN BOARD ASSY



PNP1443–A

4.3 DISPLAY BOARD ASSY,SWITCH BOARD ASSY AND POWER BOARD ASSY (FOR PD-F957)

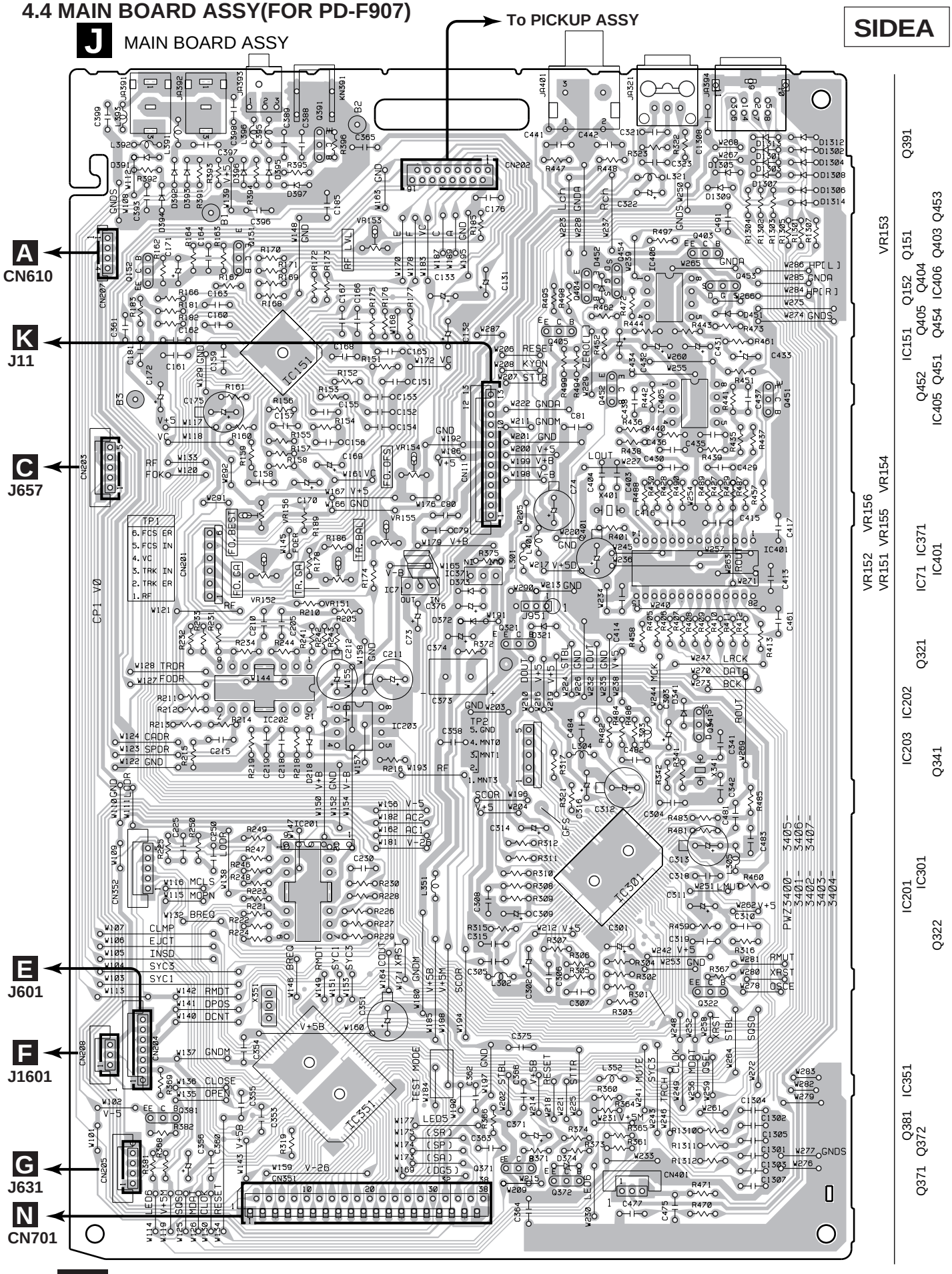




PNP1443–A

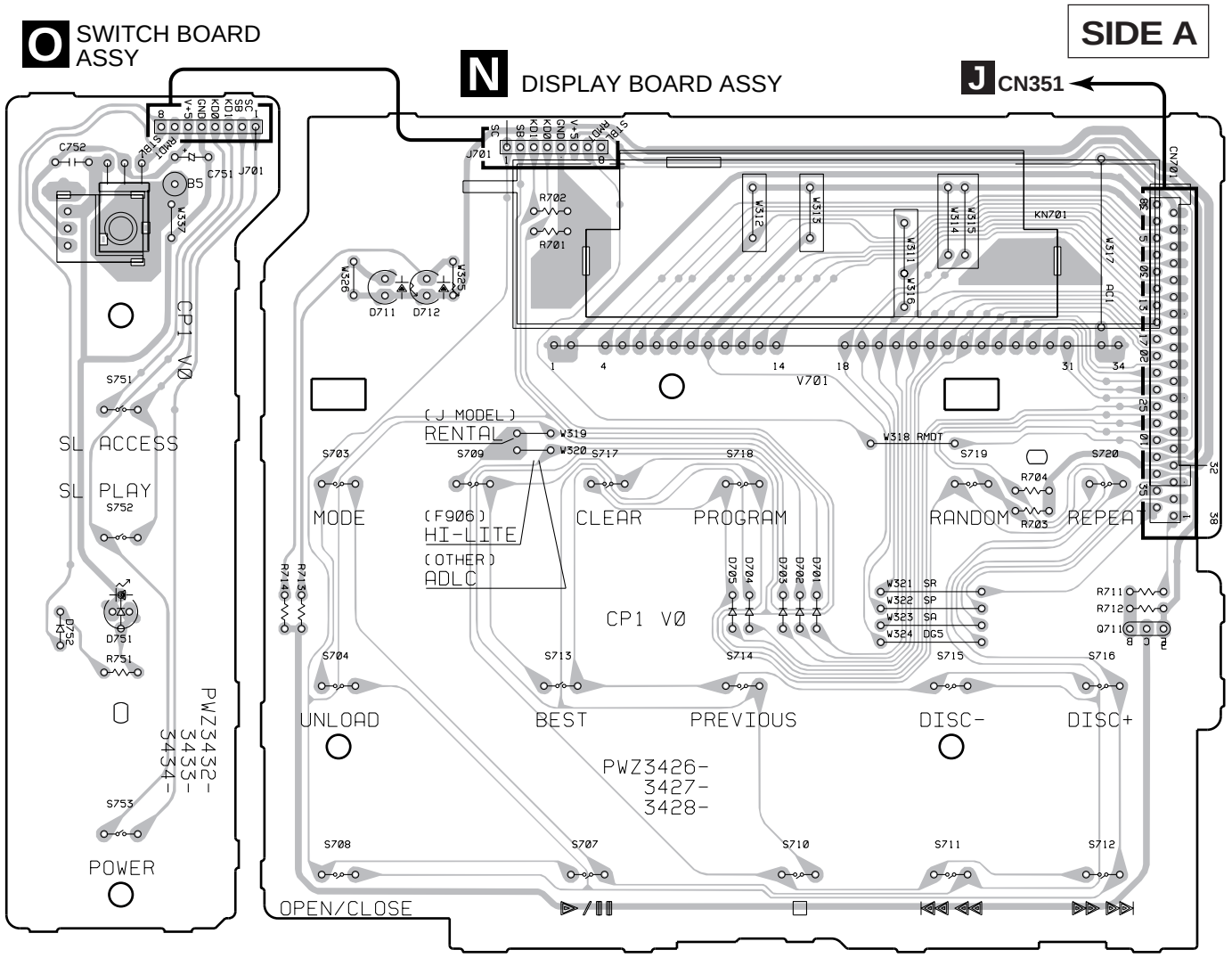
4.4 MAIN BOARD ASSY(FOR PD-F907)

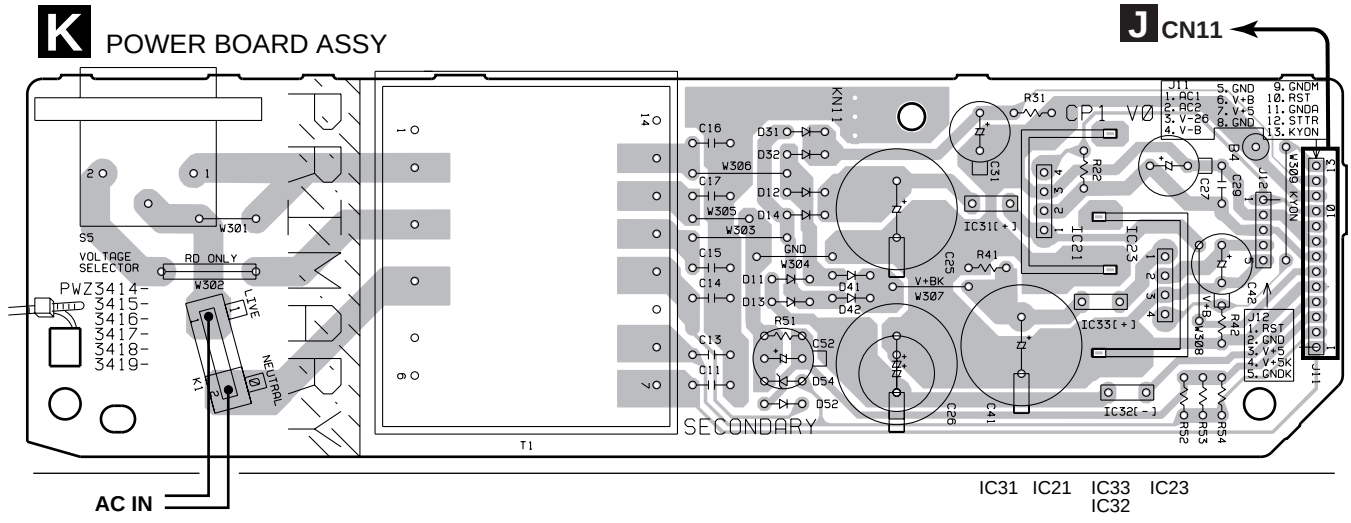
J MAIN BOARD ASSY



PNP1421–C

4.5 DISPLAY BOARD ASSY,SWITCH BOARD ASSY AND POWER BOARD ASSY (FOR PD-F907)





PNP1421–C

5. PCB PARTS LIST

NOTES : ● *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
● *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
● *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

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

560 Ω → 56 × 10 [1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10 [3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

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

5.62k Ω → 562 × 10 [1] → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.			Remarks
		PD-F957/ KU/CA	PD-F907/ KU	PD-F907 KC	
NSP	MOTHER BOARD ASSY	PWM2130	PWM2119	PWM2119	
⚠	├ MAIN BOARD ASSY	PWZ3663	PWZ3400	PWZ3400	
⚠	├ POWER BOARD ASSY	PWZ3668	PWZ3414	PWZ3414	
	├ DISPLAY BOARD ASSY	PWZ3672	PWZ3426	PWZ3426	
NSP	├ SWITCH BOARD ASSY	PWZ3675	PWZ3432	PWZ3432	
NSP	├ DOOR BOARD ASSY	PWZ3681	PWZ3441	PWZ3441	
NSP	└ CENTER LED ASSY	PWZ3683	PWZ3443	PWZ3443	
NSP	SELECT MECHA BOARD ASSY	PWX1465	PWX1465	PWX1465	
NSP	├ SELECT MOTOR BOARD ASSY	PWZ3324	PWZ3324	PWZ3324	
NSP	└ SENSOR BOARD ASSY	PWZ3327	PWZ3327	PWZ3327	
	LOADING MECHANISM ASSY	PXA1589	PXA1589	PXA1589	
NSP	├LOADING MECHA BOARD ASSY	PWX1474	PWX1474	PWX1474	
NSP	├LOAD SW BOARD ASSY	PWZ3334	PWZ3334	PWZ3334	
NSP	└LOADING MOTOR BOARD ASSY	PWZ3337	PWZ3337	PWZ3337	
NSP	SERVO MECHANISM ASSY GM	PXA1591	PXA1591	PXA1591	
	└MECHANISM BOARD ASSY	PWX1192	PWX1192	PWX1192	

■ CONTRAST OF PCB ASSEMBLIES

DOOR BOARD Assy

PWZ3681 and PWZ3441 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		PWZ3681	PWZ3441	
NSP	CONNECTOR J631	51048-0400 D20PDY0425E	Not used D20PWY0425E	

CENTER LED BOARD Assy

PWZ3683 and PWZ3443 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		PWZ3683	PWZ3443	
NSP	CONNECTOR J1601	51048-0300 D20PDY0340G	Not used D20PWY0340G	

SWITCH BOARD Assy

Although PWZ3675 and PWZ3432 are different in part number, they consist of the same components.

■ PARTS LIST FOR PD-F957/KU/CA

Mark	No.	Description	Parts No.
H		**MAIN BOARD ASSY (PWZ3663)**	
		SEMICONDUCTORS	
	IC151		CXA1782CQ
	IC301		CXD2529Q
⚠	IC203		LA6517
⚠	IC201,IC202		LA6520
	IC302		LC89170M
	IC405		NJM4558DX
	Q151		2SA854S
	Q381,Q391		2SC1740S
	Q403,Q404		2SD2144S
	Q341		2SK246
	Q152,Q406		DTA124ES
	Q153,Q321,Q405		DTC124ES
	D1301-D1309,D1312-D1314,D321		1SS254
	D341,D391-D397		1SS254
	D218		MTZJ6.2B
	COILS AND FILTERS		
	L391,L395,L396		LAU1R0J
	CAPACITORS		
	C181		CCCCH100D50
	C341,C342		CCCCH120J50
	C372,C373,C384,C385,C397		CCCSL101J50
	C315		CCCSL221J50
	C481,C482		CCCSL390J50
	C356		CEAT100M50
	C171,C175,C301,C302		CEAT101M10
	C311-C314,C316,C322,C380		CEAT101M10
	C433,C434		CEAT220M25
	C131-C133,C211,C212		CEAT330M16
	C169,C170		CEAT4R7M50
	C309		CEATR47M50
	C153-C155,C158,C172,C230		CFTLA104J50
	C250,C321		CFTLA104J50
	C157		CFTLA823J50
	C156,C161,C164,C168,C218		CGCYX103K25
	C160		CGCYX333K25
	C152,C307		CGCYX473K25
	C163		CKCYB102K50
	C176,C306,C441,C442		CKCYB152K50
	C305		CKCYB222K50
	C162		CKCYB332K50
	C167		CKCYB472K50
	C151		CKCYB682K50
	C159,C185,C205,C210,C215		CKCYF103Z50
	C219,C304,C318,C323,C351		CKCYF103Z50
	C355,C366,C371,C375		CKCYF103Z50
	C381,C382,C387,C394,C398		CKCYF103Z50
	RESISTORS		
	R189		RD1/4VM163J
	R157		RD1/4VM274J
	VR153,VR155	(10k Ω)	RCP1045
	VR151,VR152,VR154	(22k Ω)	RCP1046
	VR156	(220k Ω)	RCP1049
	Other Resistors		RD1/4PU□□□J
	OTHERS		
	CN207	MT 4P CONNECTOR	173981-4
	CN208	3P JUMPER CONNECTOR	52147-0310
	CN205	4P JUMPER CONNECTOR	52147-0410
	CN203	5P JUMPER CONNECTOR	52147-0510
	CN204	7P JUMPER CONNECTOR	52147-0710
	CN11	12P JUMPER CONNECTOR	52147-1210
	JA394	I/O INTERFACE JACK	DKN1035
	JA321	OPTICAL LINK OUT	GP1F32T
	CN351	CONNECTOR	HLEM40S-1
	JA401	JACK	PKB1032
	JA393	JACK	PKN1005
	X341	X TAL.RES.(16.9344MHz)	PSS1008
	JA391,JA392	JACK	RKN1004
	CN201	CONNECTOR 6P	RKP-533
	CN202	CONNECTOR	SLW16S-1C7
		SCREW PLATE	VNE1948
I		**POWER BOARD ASSY (PWZ3668)**	
		SEMICONDUCTORS	
⚠	IC31,IC32		ICP-N10
⚠	IC21		PQ05RR12
	D54		MTZJ24B
⚠	D11-D14,D52		S5688G
	CAPACITORS		
	C27		CEAT101M10
	C52		CEAT101M35
	C26		CEAT222M16
	C11,C13,C15,C16		CKCYF103Z50
	C25	(6800 μF/16V)	VCH1060
	RESISTORS		
	Other Resistors		RD1/4PU□□□J
	OTHERS		
		CONNECTOR	51048-1200
	J11	JUMPER WIRE	D20PDY1235E
⚠		POWER TRANSFORMER	PTT1342
⚠		TERMINAL	RKC-061
L		**DISPLAY BOARD ASSY (PWZ3672)**	
		SEMICONDUCTORS	
	IC701		PD4934B
	IC702		S-24C16ADP
	Q701		DTC124ES
	D701-D705		1SS254
	COILS AND FILTERS		
	L701		LAU101J
	SWITCHES AND RELAYS		
	S703,S704,S707-S720		PSG1006

Mark	No.	Description	Parts No.
CAPACITORS			
	C712		CEAT100M50
	C705,C709		CEAT101M10
	C711		CEAT4R7M50
	C708		CKCYF103Z50
	C701,C704,C706,C707		CKPUYY103M16
RESISTORS			
	Other Resistors		RD1/4PU□□□J
OTHERS			
		CONNECTOR	51048-0600
		CONNECTOR	51048-0800
	CN701	CONNECTOR	HLEM40R-1
	V701	FL INDICATOR TUBE	PEL1095
	X701	CERAMIC RES.(4.19MHz)	VSS1028

M SWITCH BOARD ASSY

SWITCHES AND RELAYS			
	S751-S753		PSG1006
CAPACITORS			
	C752		CKCYF103Z50
OTHERS			
		REMOTE RECEIVER UNIT	GP1U27X

G DOOR BOARD ASSY

OTHERS			
		CONNECTOR	51048-0400
		REAF SWITCH	VSK1011

F CENTER LED BOARD ASSY

SEMICONDUCTORS			
	D1601-D1603		SLR-342YCT31
RESISTORS			
	Other Resistors		RD1/4PU□□□J
OTHERS			
		CONNECTOR	51048-0300
	J1601		D20PDY0340G

E SELECT MOTOR BOARD ASSY

SELECT MOTOR BOARD assembly has no service part.

D SENSOR BOARD ASSY

SEMICONDUCTORS			
	Q601,Q602		DTC124ES
	D601,D602		GP1S53V
RESISTORS			
	Other Resistors		RD1/4PU□□□J

B LOAD SW BOARD ASSY

SWITCHES AND RELAYS			
	S651,S652		VSG1006
OTHERS			
	J656	3P JUMPER WIRE	D20PWW0310E

Mark	No.	Description	Parts No.

C LOADING MOTOR BOARD ASSY

LOADING MOTOR BOARD assembly has no service part.

A MECHANISM BOARD ASSY

SWITCHES AND RELAYS			
	S610		DSG1016
OTHERS			
	CN610	MT 4P CONNECTOR	173979-4

■ PARTS LIST FOR PD-F907/KU/KC

Mark	No.	Description	Parts No.

J MAIN BOARD ASSY(PWZ3400)

SEMICONDUCTORS

	IC151		CXA1782CQ
	IC301		CXD2519Q
⚠	IC203		LA6517
⚠	IC201,IC202		LA6520
⚠	IC371		NJM2930L05
	IC405		NJM4558DX
⚠	IC71		NJM79L05A
	IC351		PD4817A
	Q151		2SA854S
	Q381,Q391		2SC1740S
	Q403,Q404		2SD2144S
	Q341		2SK246
	Q152,		DTA124ES
	Q321,Q371,Q372,Q405		DTC124ES
	D218,D321,D341,D372,D373		1SS254
	D391-D397,		1SS254
	D374		MTZJ3.3B

COILS AND FILTERS

	L391,L395,L396,L393		LAU1R0J

CAPACITORS

	C181		CCCCH100D50
	C341,C342		CCCCH120J50
	C373 (0.047F)		ACH1246
	C315		CCCSL221J50
	C481,C482		CCCSL390J50
	C171,C175,C301,C302		CEAS101M10
	C311-C314,C316,C322,C374		CEAS101M10
	C73		CEAS101M10
	C371		CEAS1R0M50
	C433,C434		CEAS220M25
	C131-C133,C211,C212		CEAS330M16
	C376		CEAS470M10
	C351		CEAS471M6R3
	C169,C170,C356		CEAS4R7M50
	C309		CEASR47M50
	C153-C155,C158,C230		CFTXA104J50
	C250,C321		CFTXA104J50
	C157		CFTXA823J50
	C156,C161,C164,C168,C218		CGCYX103K25
	C160		CGCYX333K25
	C152,C307		CGCYX473K25
	C397		CKCYB101K50
	C163		CKCYB102K50
	C176,C306,C441,C442		CKCYB152K50
	C305		CKCYB222K50
	C162		CKCYB332K50
	C167		CKCYB472K50
	C151		CKCYB682K50
	C159,C185,C205,C210,C215		CKCYF103Z50
	C219,C304,C318,C323,366,C353		CKCYF103Z50
	C354,C358,C362,C366		CKCYF103Z50
	C375,C399,C81		CKCYF103Z50

Mark	No.	Description	Parts No.

RESISTORS

	R189		RD1/4VM163J
	R157		RD1/4VM274J
	VR153,VR155	(10k Ω)	RCP1045
	VR151,VR152,VR154	(22k Ω)	RCP1046
	VR156	(220k Ω)	RCP1049
	Other Resistors		RD1/4PU□□□J

OTHERS

	CN207	MT 4P CONNECTOR	173981-4
	CN208	3P JUMPER CONNECTOR	52147-0310
	CN205	4P JUMPER CONNECTOR	52147-0410
	CN203	5P JUMPER CONNECTOR	52147-0510
	CN204	7P JUMPER CONNECTOR	52147-0710
	CN11	12P JUMPER CONNECTOR	52147-1210
	JA321	OPTICAL LINK OUT	GP1F32T
	CN351	CONNECTOR	HLEM32S-1
	JA401	JACK	PKB1032
	JA393	JACK	PKN1005
	X341	X TAL.RES.(16.9344MHz)	PSS1008
	JA391,JA392	JACK	RKN1004
	CN201	CONNECTOR 6P	RKP-533
	CN202	CONNECTOR	SLW16S-1C7
		SCREW PLATE	VNE1948
	X351	CERAMIC RES.(4.19MHz)	VSS1028

K POWER BOARD ASSY (PWZ3414)

SEMICONDUCTORS

⚠	IC21		PQ05RR12
	D54		MTZJ18B/C
⚠	D11-D14,D31,D32,D52		S5688G

CAPACITORS

	C27		CEAS101M10
	C52		CEAS101M35
	C26		CEAS222M16
	C31		CEAS330M16
	C11,C13,C15,C16		CKCYF103Z50
	C25	(6800 μF/16V)	VCH1060

RESISTORS

	Other Resistors		RD1/4PU□□□J

OTHERS

	J11		D20PWY1235E
⚠		POWER TRANSFORMER	PTT1318
⚠		TERMINAL	RKC-061

N DISPLAY BOARD ASSY (PWZ3426)

SEMICONDUCTORS

	D701-D705		1SS254

SWITCHES AND RELAYS

	S703,S704,S707-S720		PSG1006

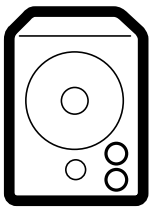
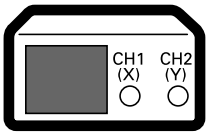
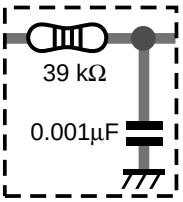
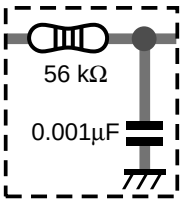
OTHERS

	CN701	CONNECTOR	HLEM32R-1
	V701	FL INDICATOR TUBE	PEL1089

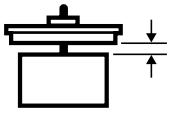
6. ADJUSTMENT

6.1 PREPARATIONS

6.1.1 Jigs and Measuring Instruments

 8 Cm DISC (With at last about 20 minutes recording)	 CD TEST DISC (YEDS-7)	 ⊖ screwdriver (small)	 ⊕ screwdriver (medium)	 ⊕ screwdriver (large)
 ⊖ Precise screwdriver	 Ball point hexagon wrench (size: 1.5mm) GGK1002	 Low-frequency oscillator	 Dual-trace oscilloscope (10 : 1 probe)	 Low pass filter ① (39 kΩ + 0.001µF)
				 Low pass filter ② (56 kΩ + 0.001µF)

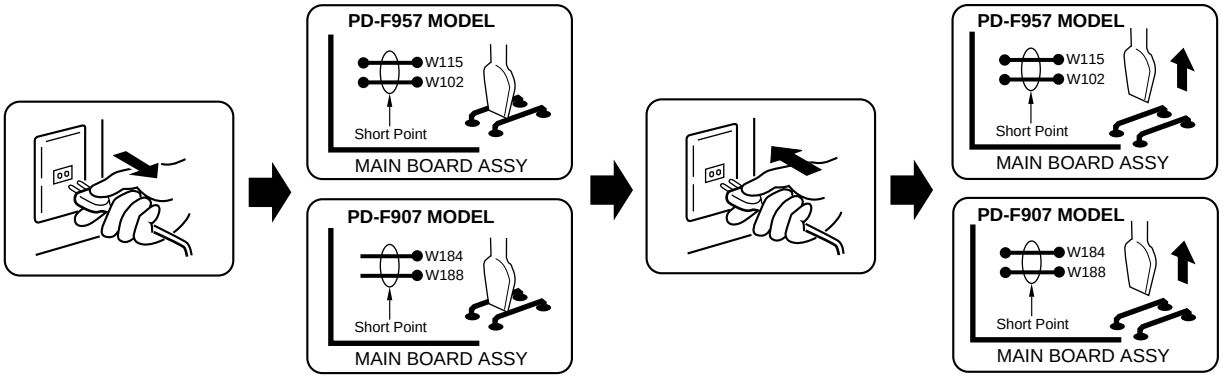
6.1.2 Necessary Adjustment Points

When	Adjustment points
Exchange PICKUP	1.2.3.4.5.6.7. 8.9.10.11.12 → Page 30 - 35
Exchange MAIN BOARD ASSY	1.3.5.6.7.8. 9.10.11.12 → Page 30 - 35
Exchange SERVO MECH ASSY	1.2.3.4.5.6.7. 8.9.10.11.12 → Page 30 - 35
Exchange SPINDLE MOTOR	 ADJ → Page 9

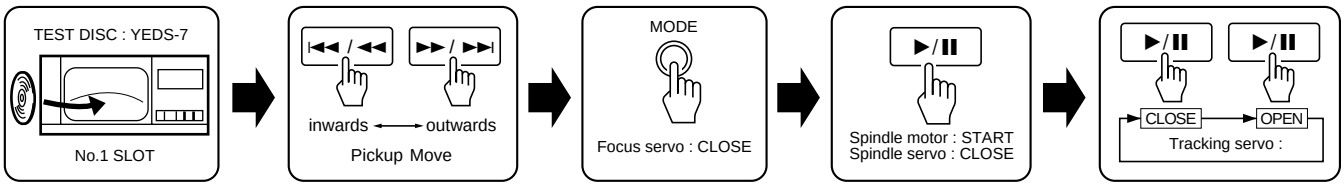
6.2 ADJUSTMENT

6.2.1 How to Start/Cancel Test Mode

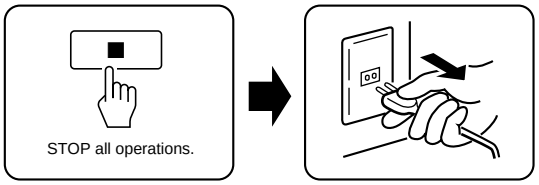
TEST MODE : ON



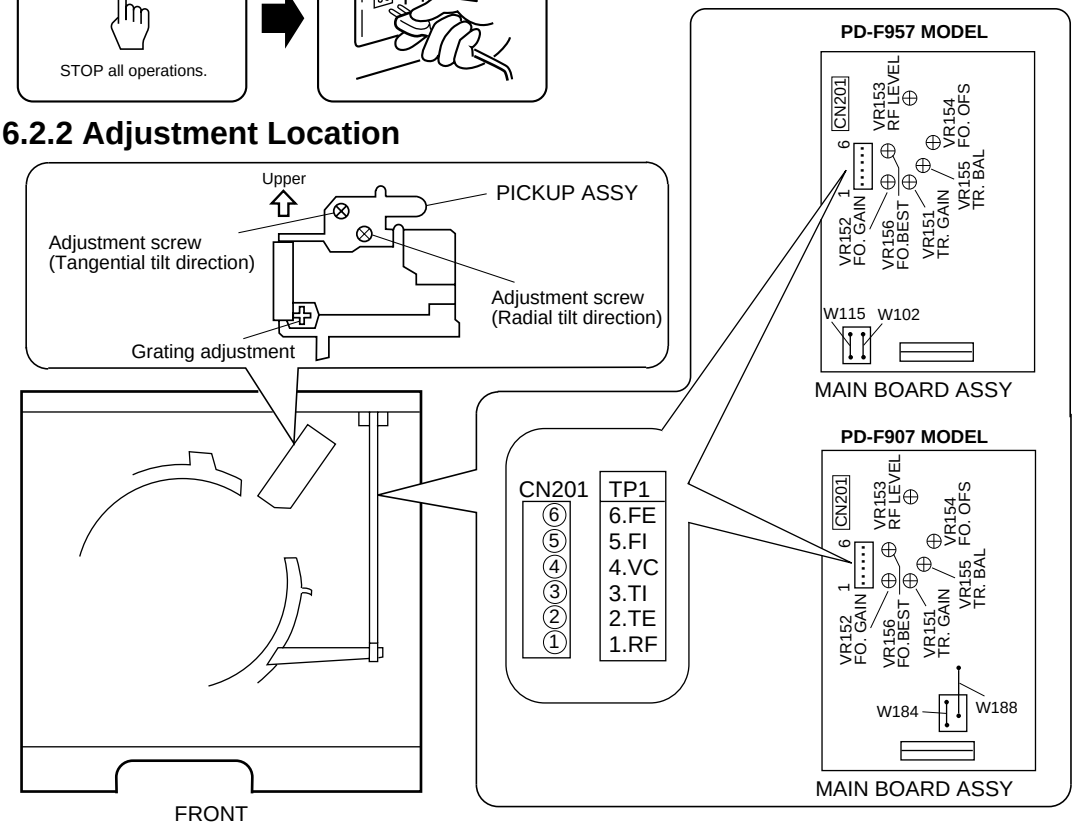
TEST MODE : PLAY



TEST MODE : STOP → CANCEL

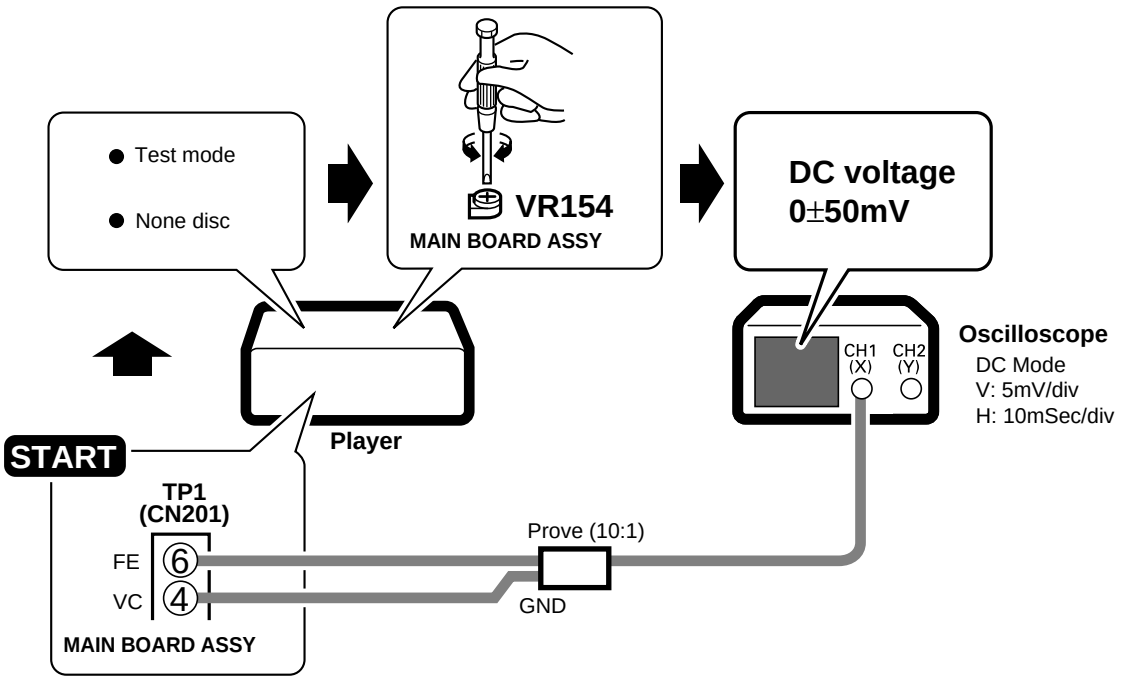


6.2.2 Adjustment Location

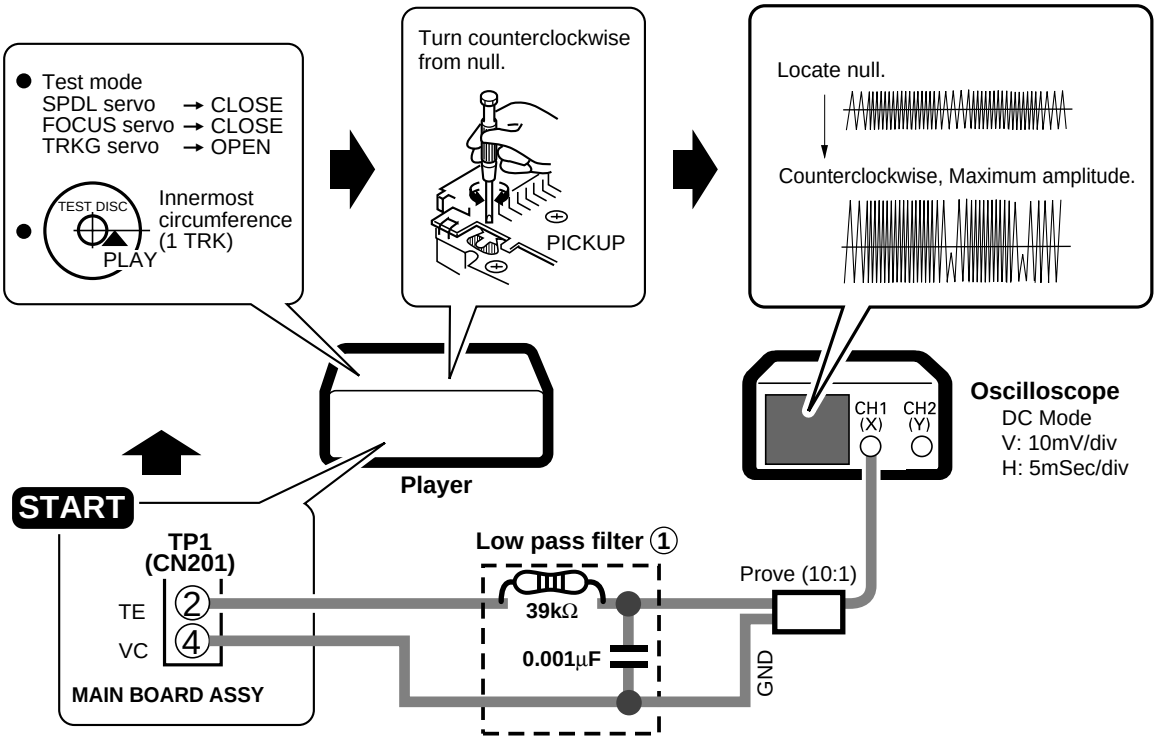


6.2.3 Check and Adjustment

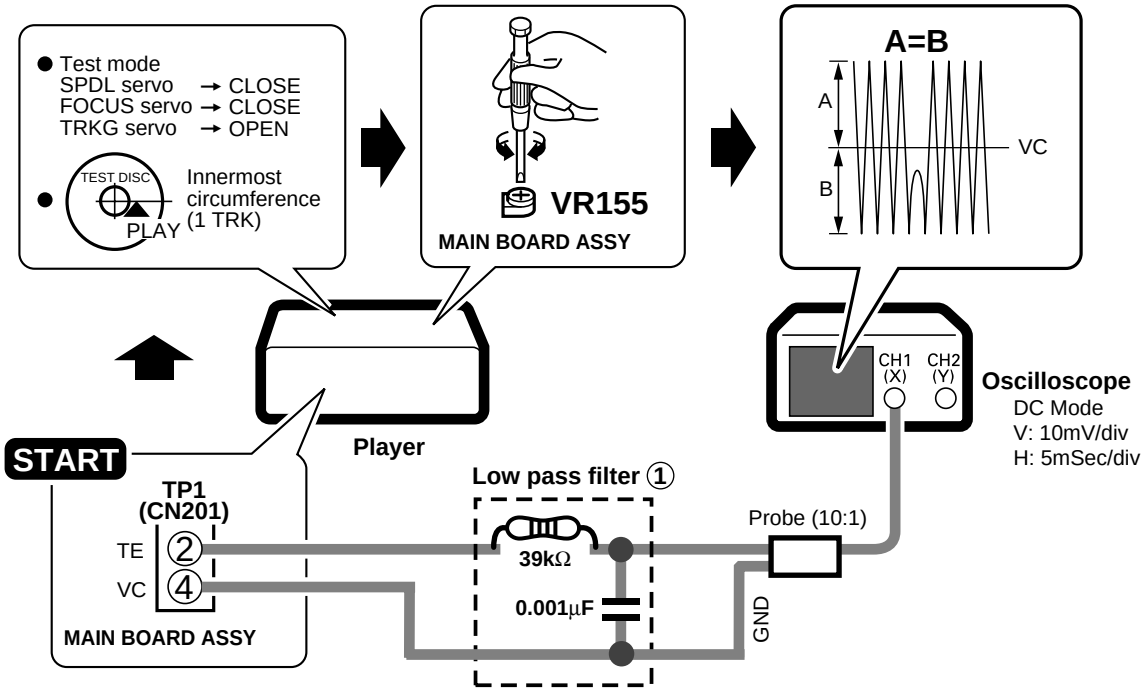
1. Focus Offset Adjustment



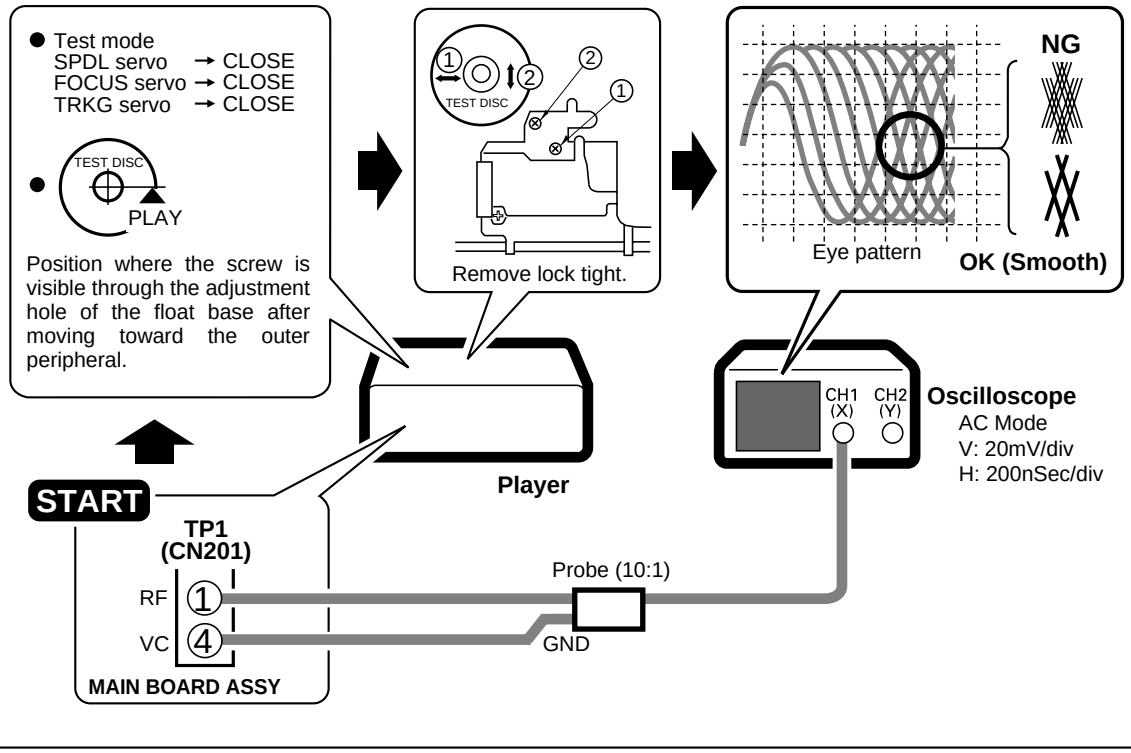
2. Grating Adjustment



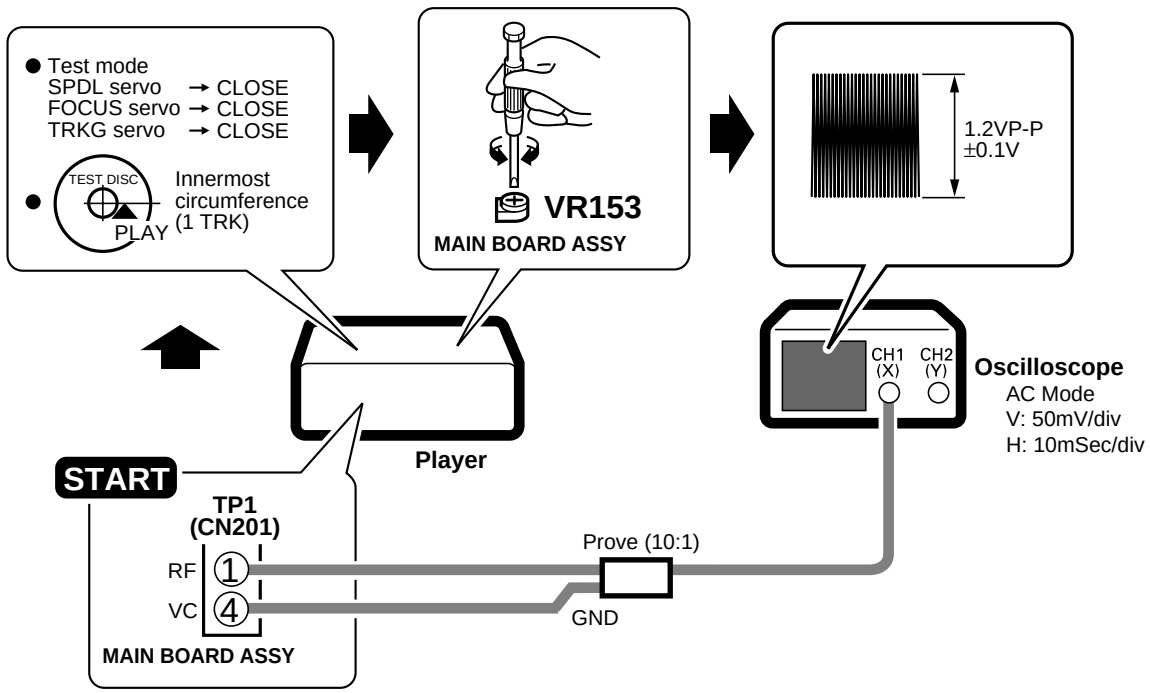
3. Tracking Error Barance Adjustment



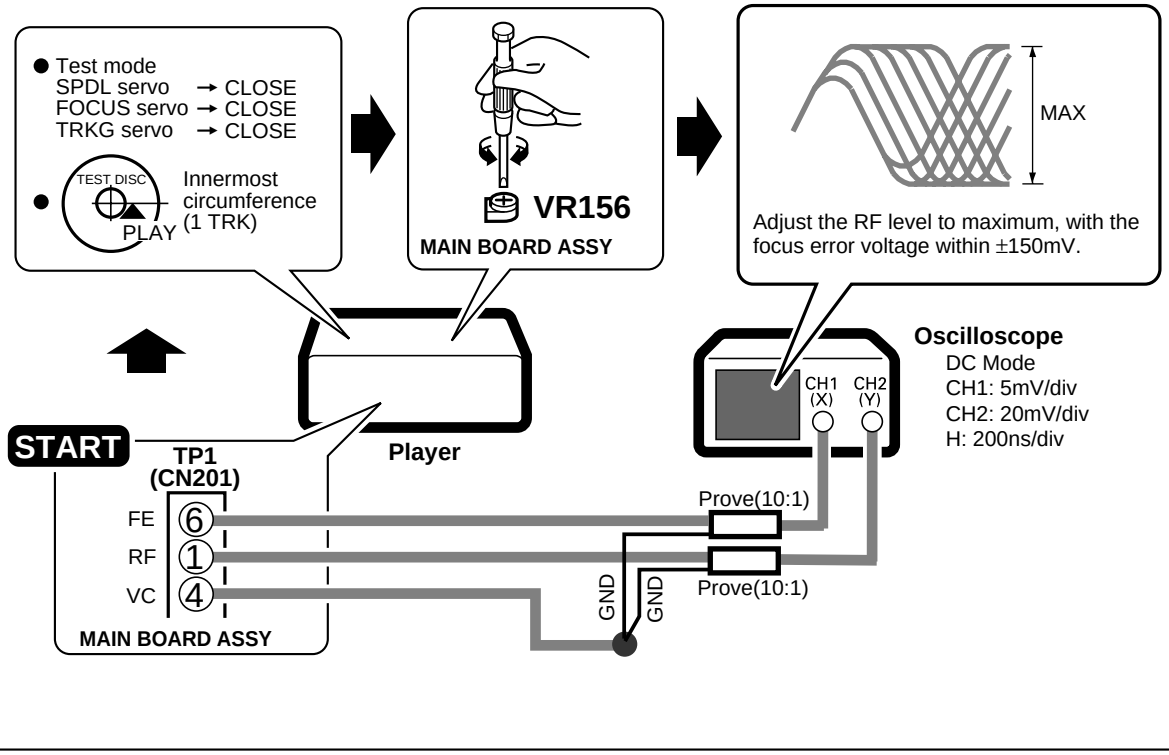
4. Pickup ①Radial/ ②Tangential Direction Tilt Adjustment



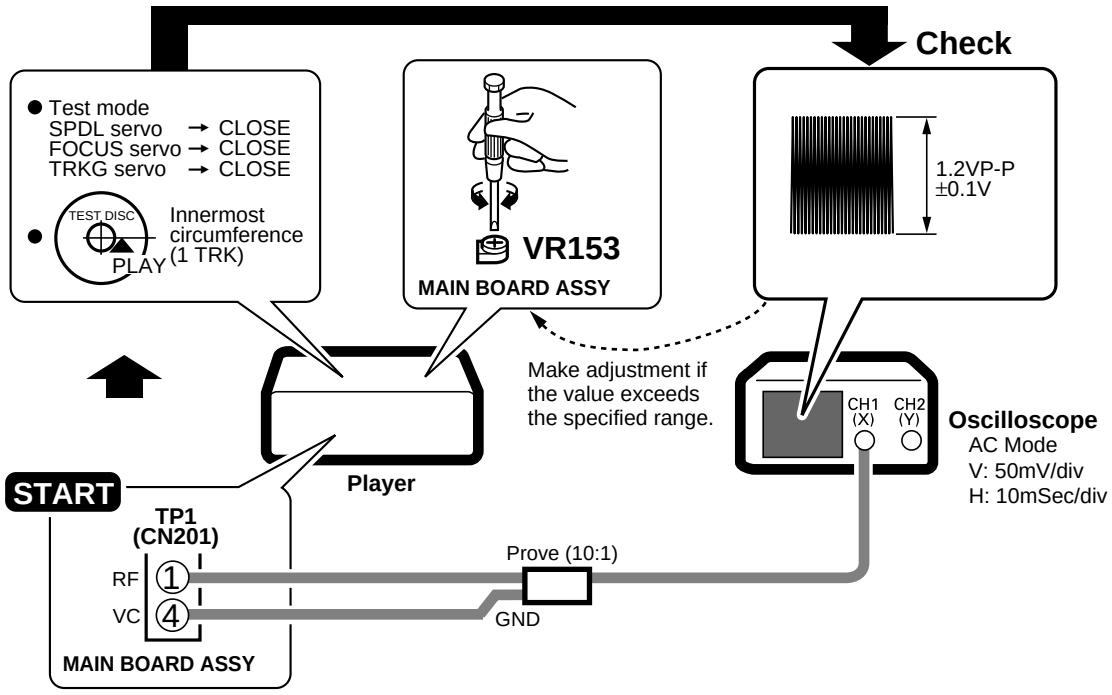
5. RF Level Adjustment Ⅰ



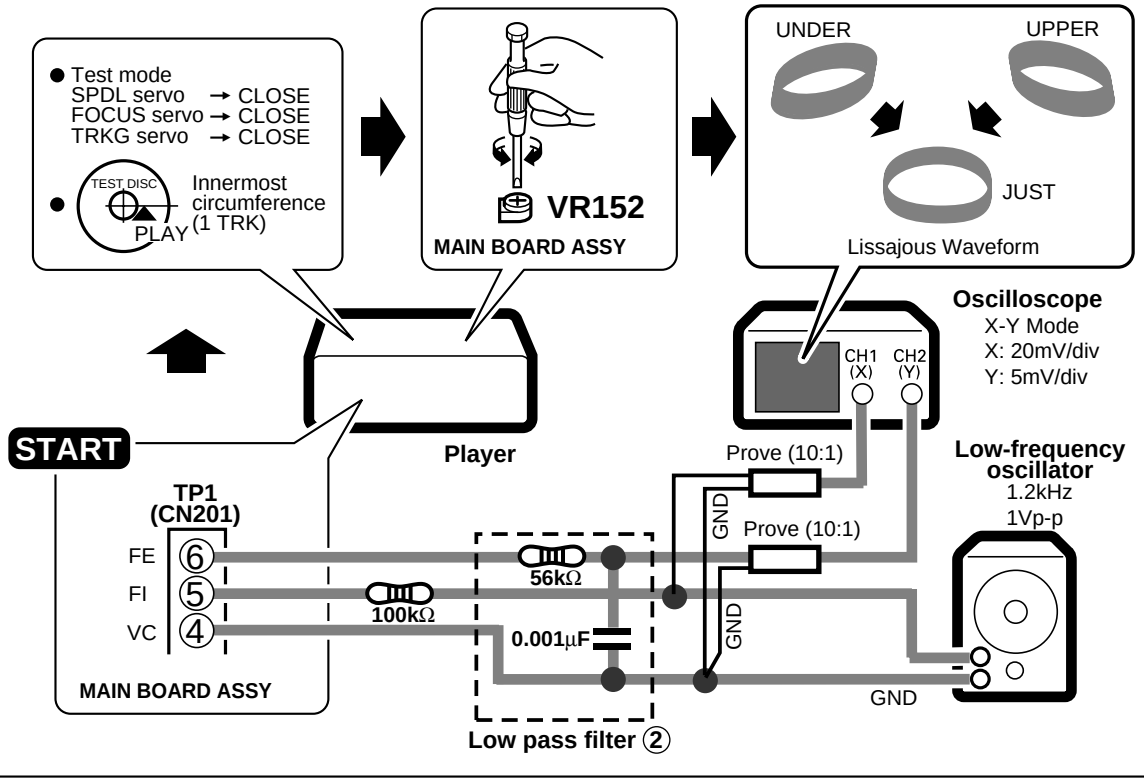
6. Focus Best Adjustment Ⅰ



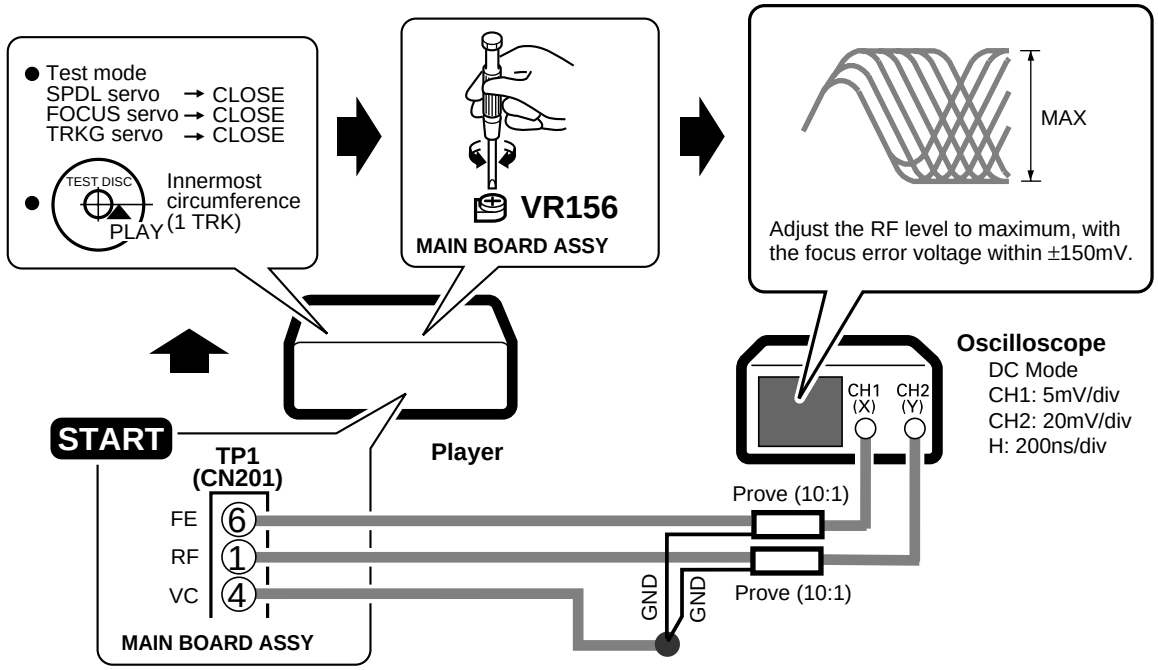
7. RF Level Adjustment Ⅱ



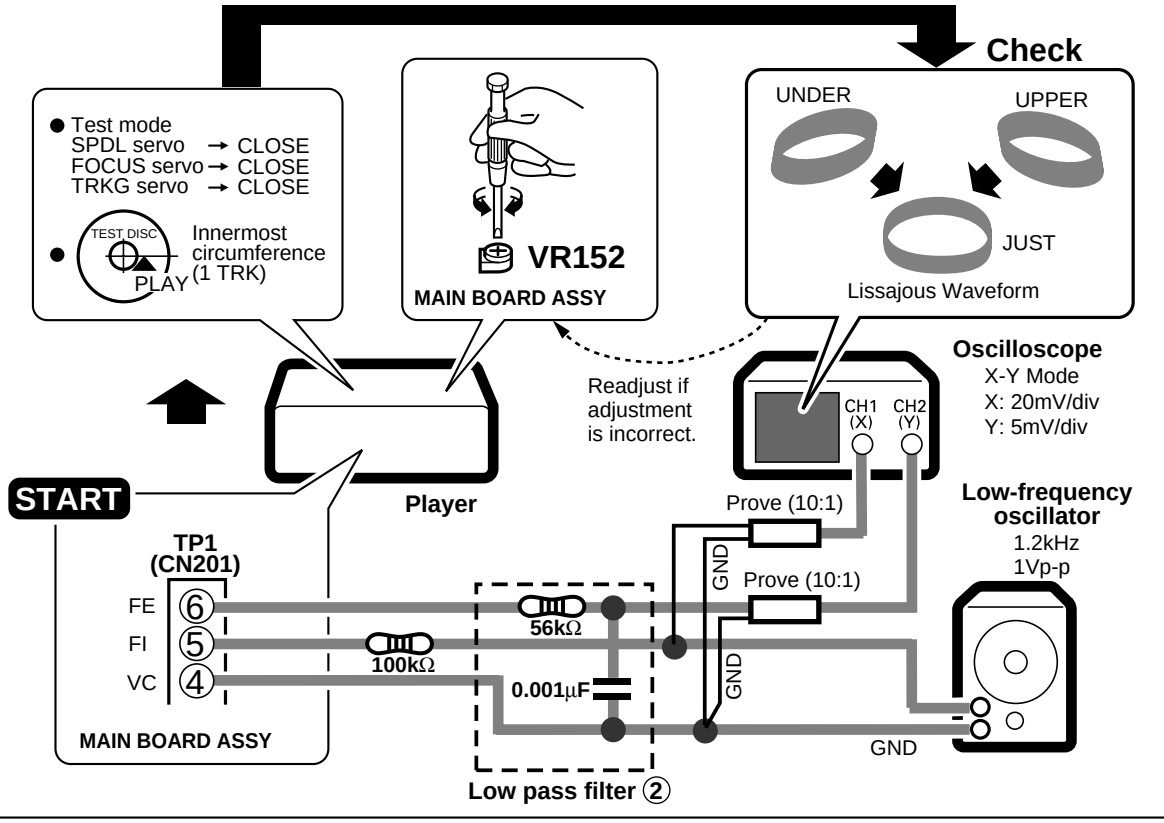
8. Focus Servo Loop Gain Adjustment Ⅰ



9. Focus Best Adjustment Ⅱ

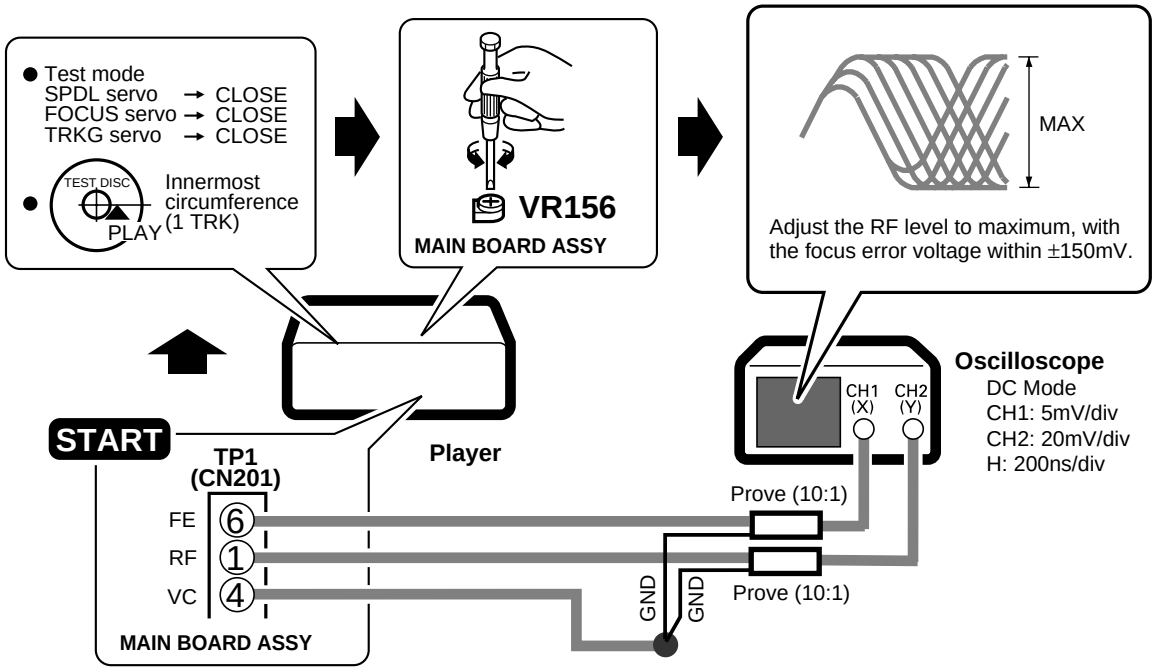


10. Focus Servo Loop Gain Adjustment Ⅱ

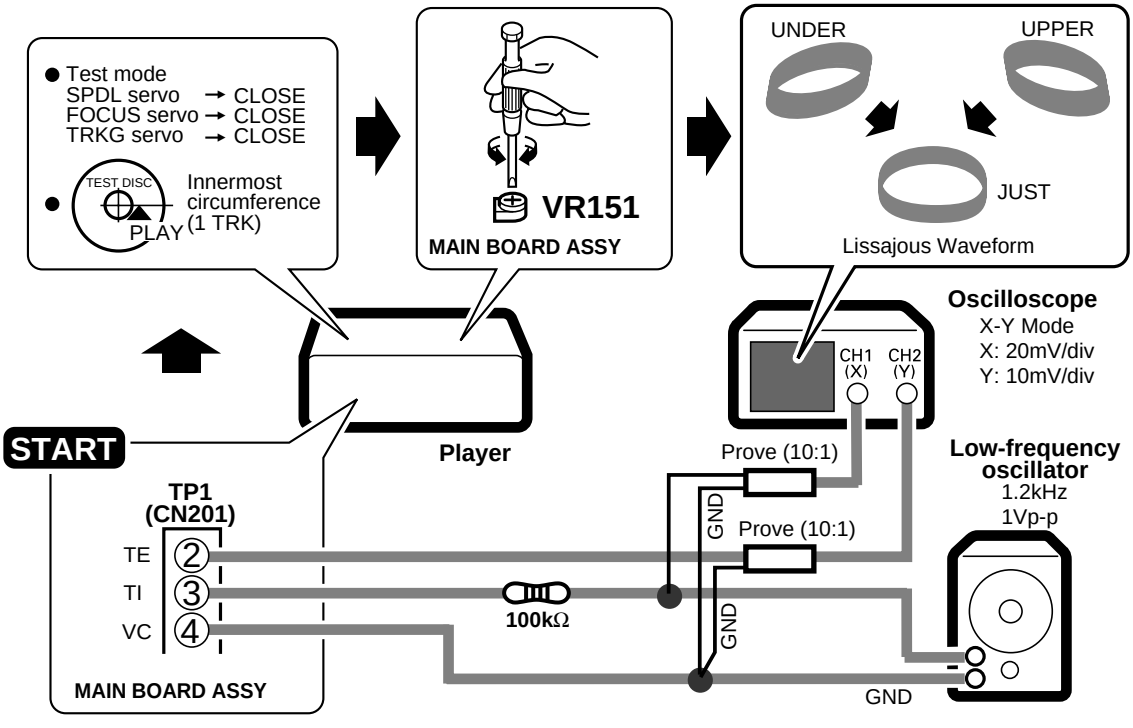


11. Focus Best Adjustment Ⅲ

Adjust this point only if adjustment was made in item 10.



12. Tracking Servo Loop Gain Adjustment



7. GENERAL INFORMATION

7.1 PARTS

7.1.1 IC

■ PD4934B (IC701:DISPLAY BOARD ASSY)

● SYSTEM CONTROL MICRO COMPUTER

● Pin Function

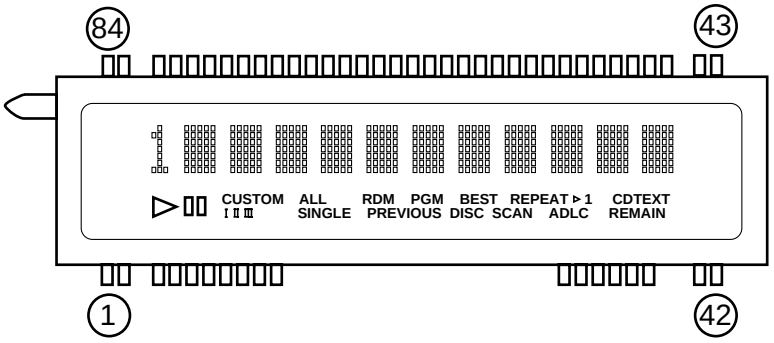
- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

No.	Pin Name	I/O	Function
1	VDD	+5V	+5V
2	$\overline{\text{CLS}}$	I	Hood open/close SW input.
3	$\overline{\text{OPEN}}$	I	Open ($\overline{\text{CLS}}$:H ,$\overline{\text{OPEN}}$:L),Close (CLS :L,OPEN:H)
4	DCNT	I	Disc count pulse input.
5	DPOS	I	Disc position detection pulse input.
6	DSLT	O	Selecter output. Count up(DSRT:L,DSLT:H) Count down(DSRT:H,DSLT:L)
7	DSRT	O	Stop(DSRT:L,DSLT:L)
8	MCLS	O	Hood motor output. Open(MOPN:H,MCLS:L) Close(MOPN:L,MCLS:H)
9	MOPN	O	Stop(MOPN:L,MCLS:L)
10	RESET	I	CPU Reset.(L: RESET)
11	X2	–	Crystal connection for system clock oscillation
12	X1	–	:4.19MHz.
13	IC	GND	GND
14	XT2	–	NC (OPEN)
15	GND	I	GND
16	VDD	+5V	+5V
17	CLOK	O	Serial clock.
18	MDAT	O	LSI control data.
19	SQSO	I	Serial input.(Q data/fcok/gfs/sens/$\overline{\text{clmp}}$/$\overline{\text{eject}}$/$\overline{\text{insd}}$)
20	$\overline{\text{XLAT}}$	O	LSI control data latch pulse output.
21	$\overline{\text{XRST}}$	O	Reset input fof each LSI.
22	SCLK	O	CD TEXT timing data clock output.
23	-	O	L: output.
24	SRDT	I	CD TEXT data input.
25	AVSS	–	GND
26	LIN	O	Lauding motor output. IN(LIN:H,LOUT:L) OUT(LIN:L,LOUT:H)
27	LOUT	O	Stop(LIN:L,LOUT:L)
28	CLED/TEST	I/O	Center LED control (ON:H , OFF:input)
29	DQSY	I	CD TEXT data input.
30	MUTB	O	Muting output (L:MUTE)
31	SYC3	O	Synchronous output.
32	SYC1	I	Synchronous input.
33	$\overline{\text{DLAT}}$	O	DAC control data latch pulse output.
34	AVDD	+5V	+5V
35	AVREF	GND	GND
36	CNIN	I	C.OUT input.
37	$\overline{\text{TRST}}$	O	CD TEXT decooder reset output. (L: reset)
38	SCOR	I	Subcode sync SO+S1 input.
39	RMDT	I	Remote control data input.
40	VSS	GND	GND
41	QSEL	O	Signal output for Q DATA expansion
42	MUTE	O	Muting output for expansion. (MUTE:H)
43	TRCH	O	Data serial output for expansion.
44	SCL	O	EEPROM clock output
45	SDA	I/O	EEPROM data IN/OUTPUT
46	VDD	+5V	+5V
47	STBL	O	Standby - led /osce.
48	KD3	I	Key data input.
49	KD2	I	
50	KD1	I	
51	KD0	I	
52	S36	O	FL driving segment output.
53	S35	O	
54	S34	O	
55	S33	O	
56	S32	O	
57	S31	O	
58	S30	O	
59	S29	O	
60	S28	O	
61	S27	O	
62	S26	O	
63	S25	O	
64	S24	O	
65	S23	O	
66	S22	O	
67	S21	O	
68	S20	O	
69	S19	O	
70	S18	O	
71	S17	O	
72	S16	O	
73	S15	O	
74	S14	O	
75	S13	O	
76	S12	O	
77	S11	O	
78	S10	O	
79	VLOAD	-26V	-26V
80	S9	O	FL driving segment output.
81	S8	O	
82	S7	O	
83	S6	O	
84	S5	O	
85	S4	O	
86	S3	O	
87	S2	O	
88	S1	O	
89	G12	O	
90	G11	O	
91	G10	O	
92	G9	O	
93	G8	O	
94	G7	O	
95	G6	O	
96	G5	O	
97	G4	O	
98	G3	O	
99	G2	O	
100	G1	O	

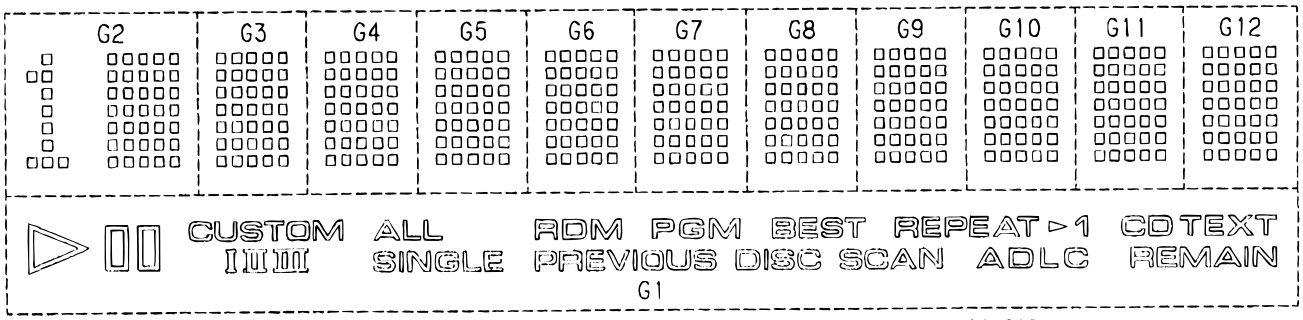
7.1.2 DISPLAY

■ PEL1095(V701: DISPLAY BOARD ASSY) :FOR PD-F957

● Pin Assignment



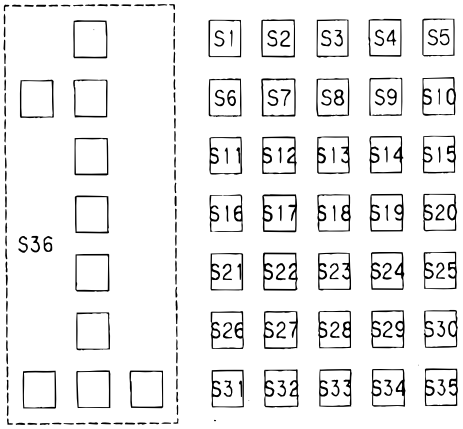
● Anode Grid Assignment



	G1
S17	▷
S18	□□
S19	I
S20	II
S21	III
S22	CDTEXT
S23	ADLC
S24	SCAN
S25	DISC
S26	PREVIOUS

	G1
S27	SINGLE
S28	BEST
S29	REMAIN
S30	▷ I
S31	REPEAT
S32	PGM
S33	RDM
S34	ALL
S35	CUSTOM

G2~G12



● Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Assignment	NL	NL	NP	NP	S29	S30	S31	S32	S33	S34	S35	S36	NP	NP	NP	NP	NP	NP	NP	NP	NP

Pin No.	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
Assignment	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	G1	G2	G3	G4	G5	G6	NP	NP	NP	NL	NL

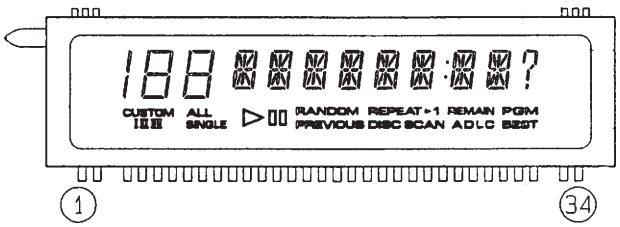
Pin No.	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Assignment	F2	F2	NP	NP	G7	G8	G9	G10	G11	G12	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11

Pin No.	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84
Assignment	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25	S26	S27	S28	NP	NP	F1	F1

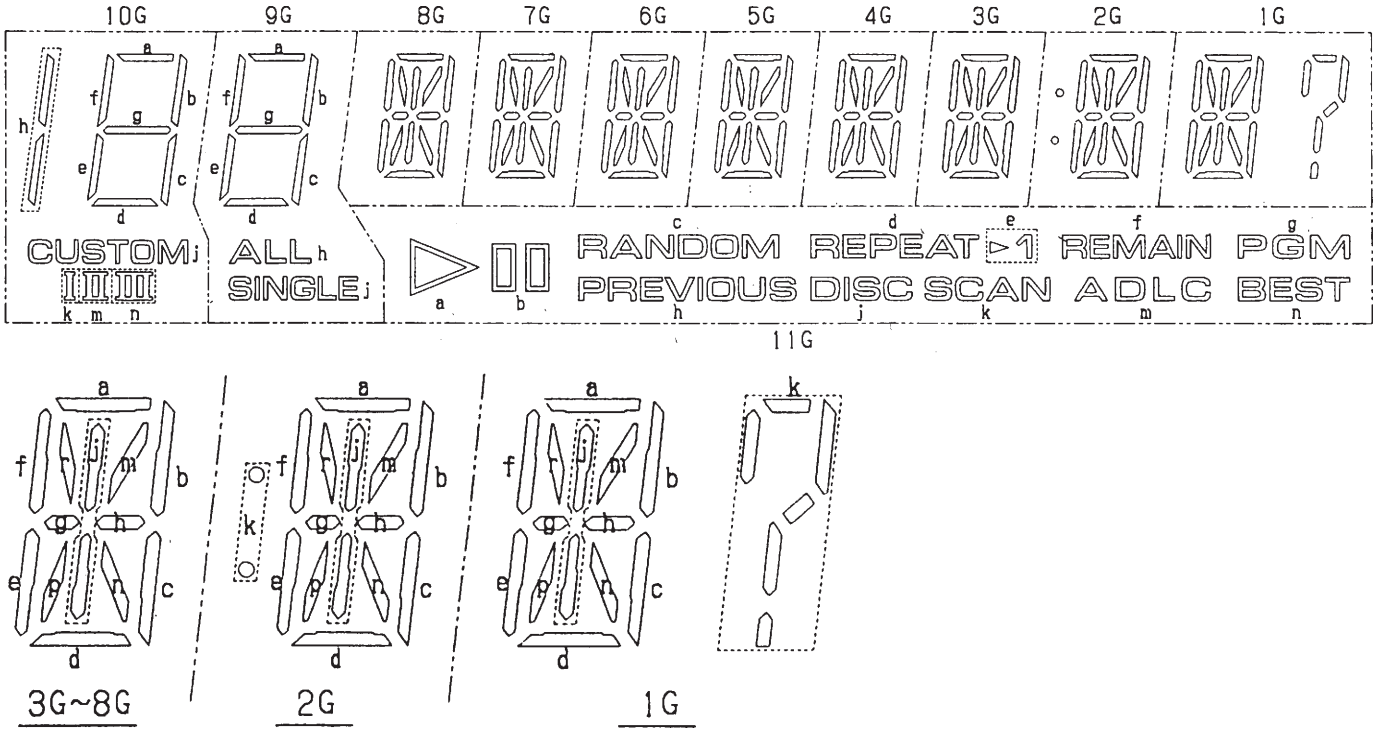
F1,F2:Filament G1~G12:Grid S1~S36:Anode NP:No Pin NL:No Lead

■ PEL1089(V701: DISPLAY BOARD ASSY) :FOR PD-F907

● Pin Assignment



● Anode Grid Assignment



● Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Connection	F	F	NP	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NL	NL	NL	p	r	a

Pin No.	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Connection	b	c	d	e	f	g	h	j	k	m	n	NP	F	F

F:Filament 1G~11G:Grid a~h, j, k, m, n, p, r:Anode NP:No Pin NL:No Lead

7.2 DIAGNOSIS

7.2.1 ERROR CODE DISPLAY

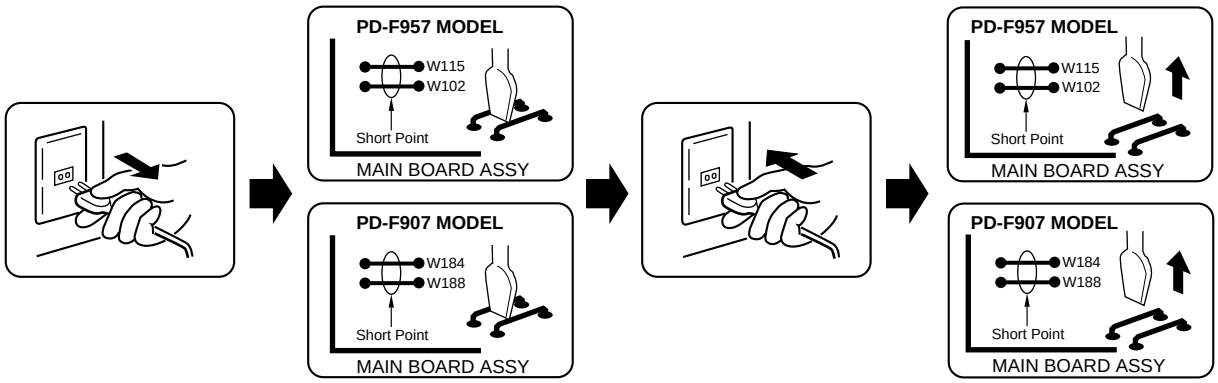
If a failure occurs in the Loading mechanism, the error symbol is automatically displayed on the fluorescent display screen of the front panel.

7.2.2 ERROR HISTORY AND DISPLAY

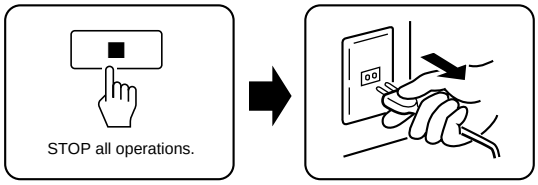
Error history display in test mode

The previously generated errors (NG processing) can be confirmed in the test mode. Since the has a backup function, the error history is memorized even if the power is turned off. (Memory holding time : About two days)

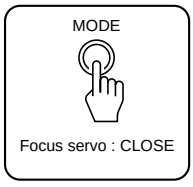
TEST MODE: ON



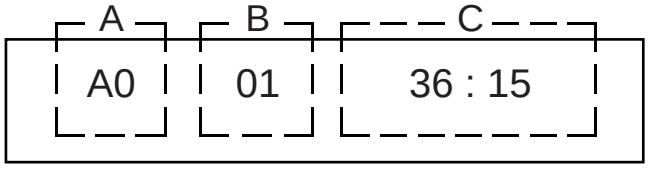
TEST MODE: STOP CANCEL



■ Press the "BEST" button of the keys on the main body.



An error appears on the fluorescent indicator display by the above operation.



A: Disc No. : Error code
B: Track No. : Error sequence
C: Minute:second No. : Error generation mode
(Only 10's digit is valid.)

The previously generated 16 error codes (maximum) can be memorized. These error codes are displayed one at a time in the ascending order by pressing the "BEST" button again.

Note : A product performs fail safe operation when an error occurs. At that time, an error code is memorized by the fail safe operation after the error is eliminated.

7.2.3 ERROR HISTORY DISPLAY

(1) Disc No. A : Detail of error code at portion

<Note> The user display appears only when the normal operation cannot be returned even if the fail safe operation is executed after each error occurs.

User	display	Description
None	A0	• A disc couldn't be detected for playback after loading because; No disc existed. A disc was turned upside down. A disc was dirty. A disc was loaded incompletely. • The focus got out of place during playback due to the crack and stain on the disc.
None	A1	• The servo mechanism couldn't move to the desired tune position within a fixed time during selection of a tune from playback or during playback.
U1	A3	• A disc couldn't be loaded within a fixed time. (A disc couldn't be carried from the rack block.)
	A4	• A disc couldn't be unloaded within a fixed time. (A disc couldn't be returned to the rack block.)
U2	A2	• The LOADING mechanism couldn't move to the desired disc position within a fixed time during selection of a disc from playback or during playback start from stop.
	A5	• The LOADING mechanism couldn't be forcibly returned to the home position (left position when viewed from the front) within a fixed time after it is initialized or becomes NG.
None	A6	• A disc couldn't be normally rotated for playback after loading because; A disc was turned upside down. A disc was dirty A disc was loaded incompletely. • A disc couldn't be normally rotated during playback due to the crack and stain on the disc.

User	display	Description
None	A7	• Mechanism position just before the LOADING mechanism shifts to the disc selection operation when the DCNT pin is low. (The DCNT pin is usually high when the LOADING mechanism is in the stop state. The mechanism position is thus judged to have been shifted for some reason. The shifted mechanism position may cause a failure.)
None	A8	• Discrepancy has occurred between the detected disc position and the current disc position during movement of the loading mechanism. (The system may incorrectly counted the waveforms of the DCNT and DPOS terminals. If counting is incorrect, the position of the disc No. displayed does not match the disc position counted.)
None	A9	• Mechanism position during disc loading when the DCNT pin is low. (The DCNT pin is usually high when the LOADING mechanism is in the stop state. The mechanism position is thus judged to have been shifted for some reason. The shifted mechanism position may cause a failure.)
None	AA	• The pickup block cannot return to the innermost circumference when the playback is Completed or another disc is shifted.

Hood section

User	display	Description
U3	P0	The hood did not open within the specified time. The switch of the hood was malfunctioning.
	P1	The hood did not close within the specified time. The switch of the hood was malfunctioning.
	P2	The hood was attempted to be opened with force when it was completely closed. The switch of the hood was malfunctioning.

(2) Track No. B : Error sequence in portion

The display of 1 to 16 appears. The low number indicates the recently generated error. The error whose number is "1" was generated most recently.

(3) Minute : Second No. C : Detail of error generation mode in portion

Indicates the internal mode in which the displayed error is generated. The upper digit in "minute : second" has the meaning.

Digit of minute		Digit of second	
Display	Contents	Display	Contents
0 *	Spindle stop operation	0 *	During closing of the hood and when the hood is completely close
1 *	Disc return operation		
2 *	Disc selection operation		
3 *	Setup operation	1 *	During opening of the hood and when the hood is completely open
4 *	CD-R setup operation		
5 *	TOC read		
6 *	Track search operation		
7 *	Play		
8 *	Pause		
9 *	Manual search		

7.2.4 DISASSEMBLY

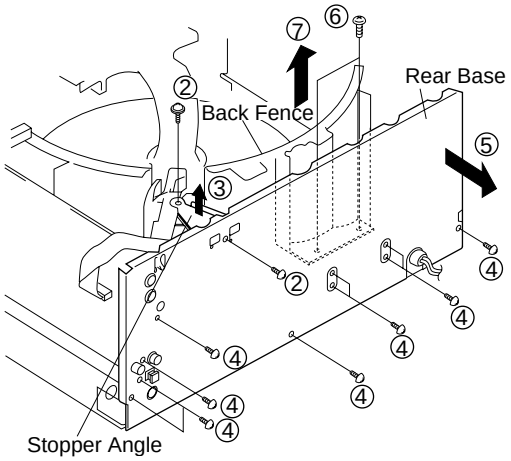
■ REMOVING THE LOADING MECHANISM ASSY

① Remove the Bonnet.

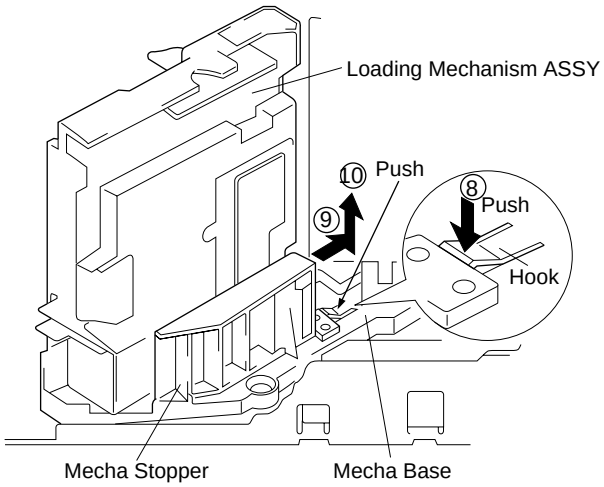
②–③ Remove the Screws and Stopper Angle.

④–⑤ Remove the Screws and Rear Base.

⑥–⑦ Remove the Screws and Back Fence.

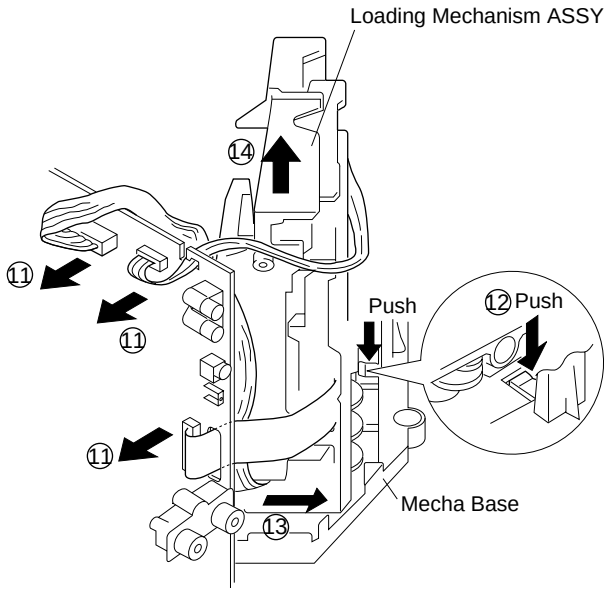


⑧–⑩ While holding down the hook of the Mecha Base, slide the Mechanism Stopper toward the right to pull up and remove the Mecha Stopper.



⑪ Remove the each wire.

⑫–⑭ While holding down the hook of the Mecha Base, slide the Loading Mechanism Assy to pull up and remove the Loading Mechanism Assy.



■ REMOVING THE OPERATION PANEL

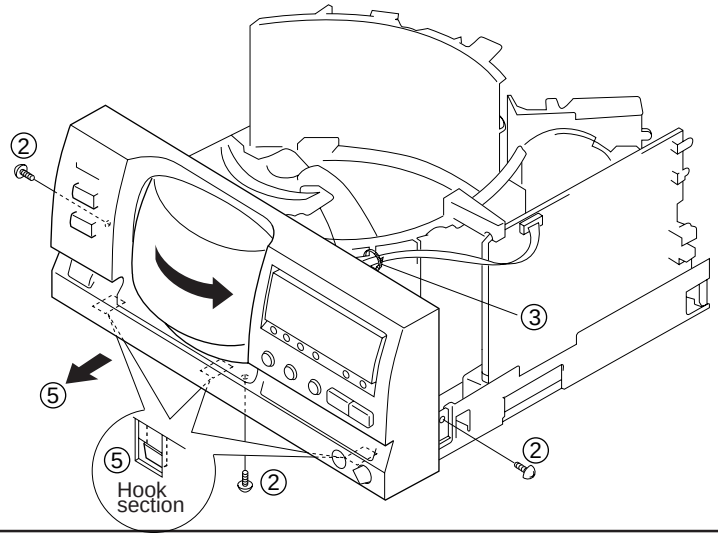
① Remove the Bonnet.

② Remove the Screws.

③ Cut the Binder securing the wire material.

④ Remove the Center Pole. (Refer to the “REMOVING THE DISC RACK”)

⑤ Shift the Front Panel slightly toward you while paying attention to the back side hooks on the Chassis.

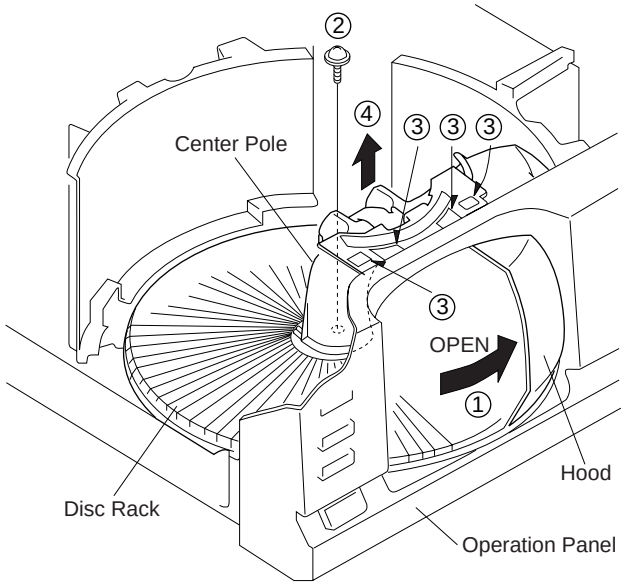


■ REMOVING THE DISC RACK

① Open the Hood.

② Remove the Screws.

③-④ Press the 4 hooks to remove the Center Pole from the Operation Panel.



■ REMOVE THE HOOD AND HOOD BASE

① Remove the Bonnet.

② Remove the Operation Panel. (Refer to the “REMOVING THE OPERATION PANEL”)

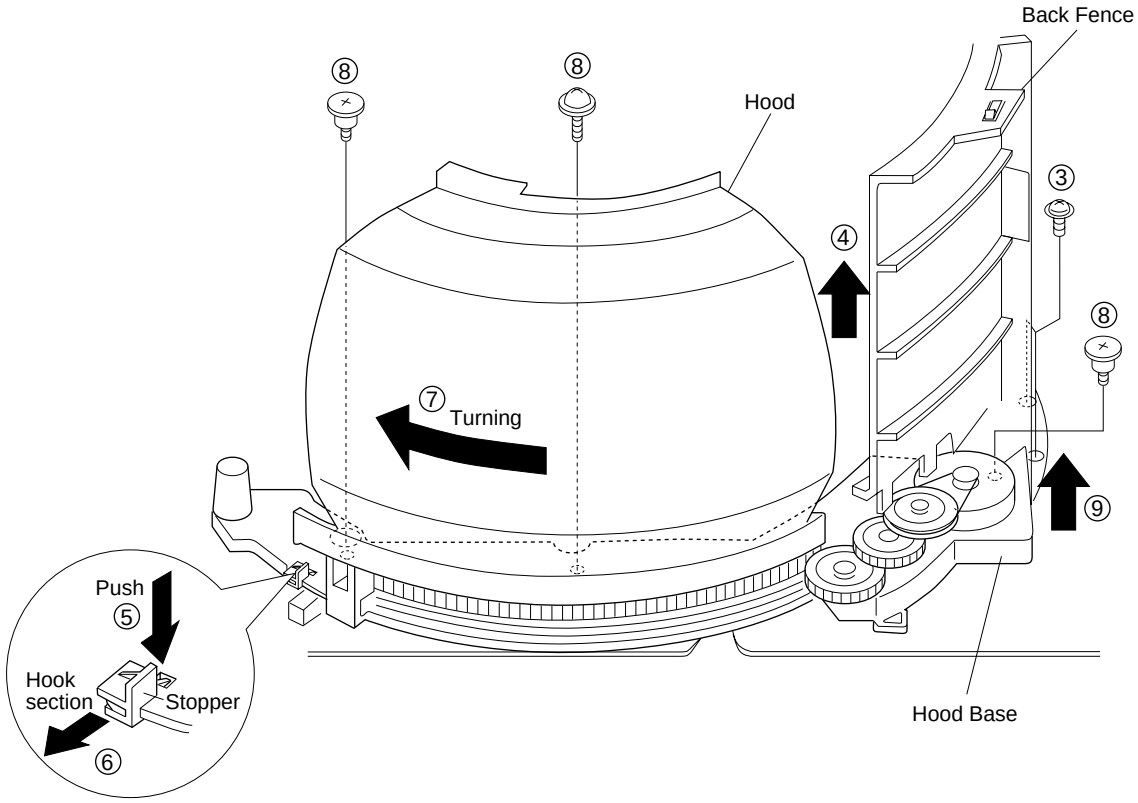
③ Remove the Screws.

④ Remove the Back Fence.

⑤ - ⑦ Press the hook of the Stopper of the Hood Base to remove the Stopper. Slide the Hood toward the left to remove the Hood.

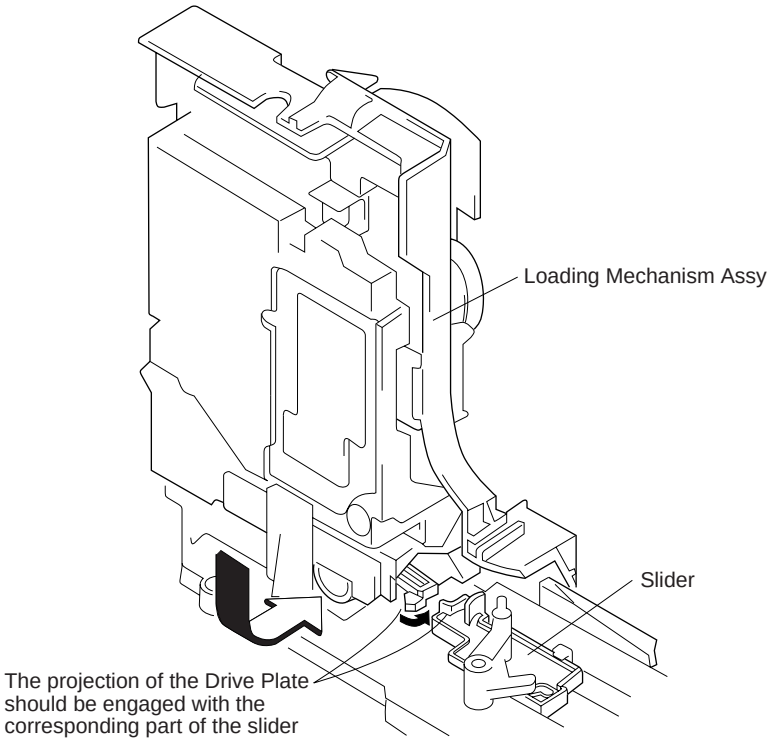
⑧ Remove the Screws.

⑨ Remove the Hood Base.



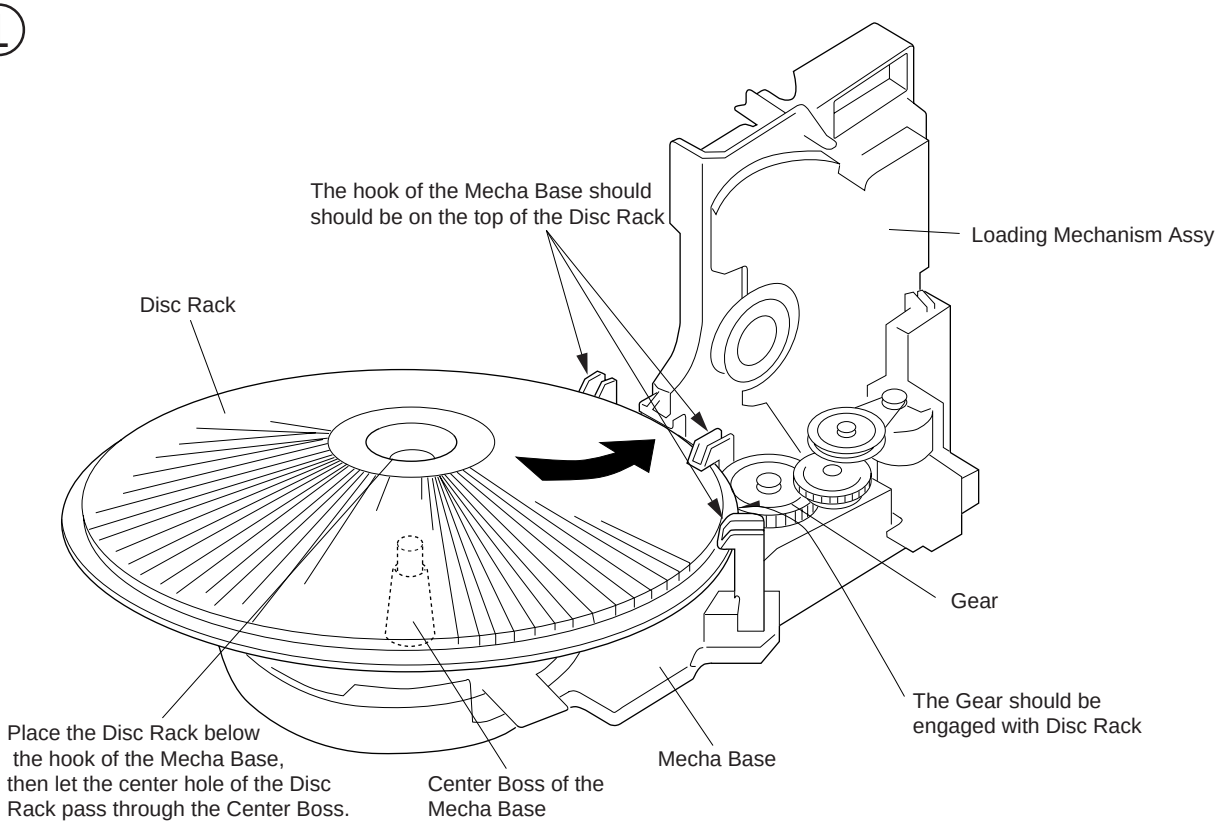
■ INSTALLING THE LOADING MECHANISM ASSY

①



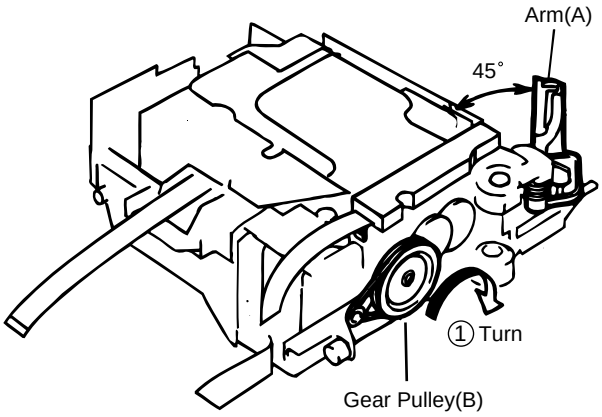
■ INSTALLING THE DISC RACK

①

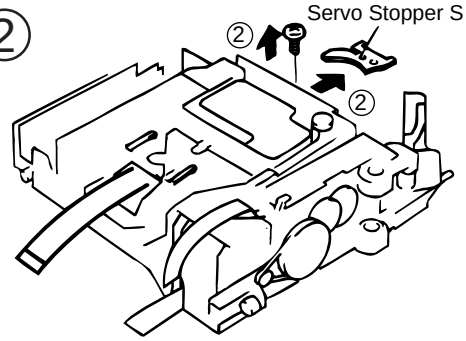


■ REMOVING THE SERVO MECHANISM ASSY GM

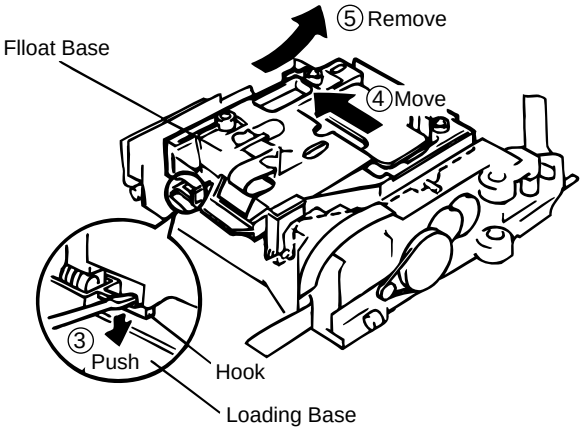
① Turn gear pulley (B) and position Arm (A) as shown below.



②

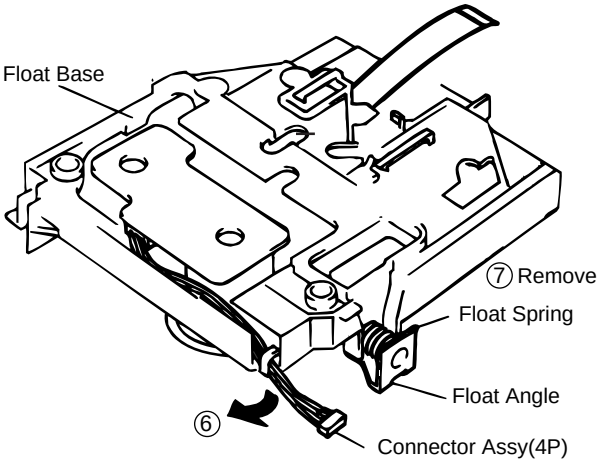


③ – ⑤ Slide the float base in the direction of the arrow ④ while pressing down on the loading base hook, and, lifting it gently, pull it out in the direction of the arrow ⑤.

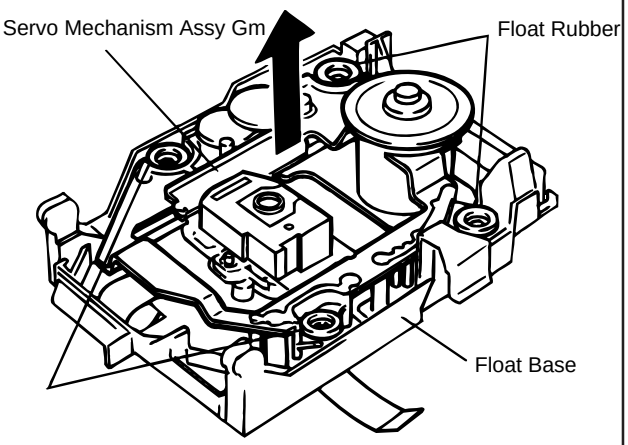


⑥ Remove the connector ASSY (4P) from the float base.

⑦ Remove the float spring. (To install this part, line up the float angle side of the Servo Mechanism ASSY GM first, and press down on the float base side.)



⑧ Remove the float rubber from the Servo Mechanism ASSY GM. At this time the float rubber should remain on the float base side. (To install it on the float base when it has been removed, push it into place with a thin cylindrical object.

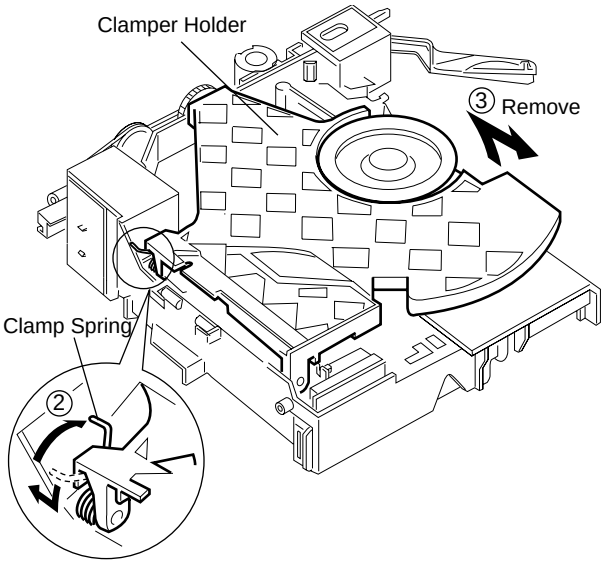


■ REMOVING THE ARM (A)

① Remove the float base together with the Servo Mechanism ASSY GM. (Refer to Steps①-⑤for "■Removing the Servo Mechanism ASSY GM".)

②–③

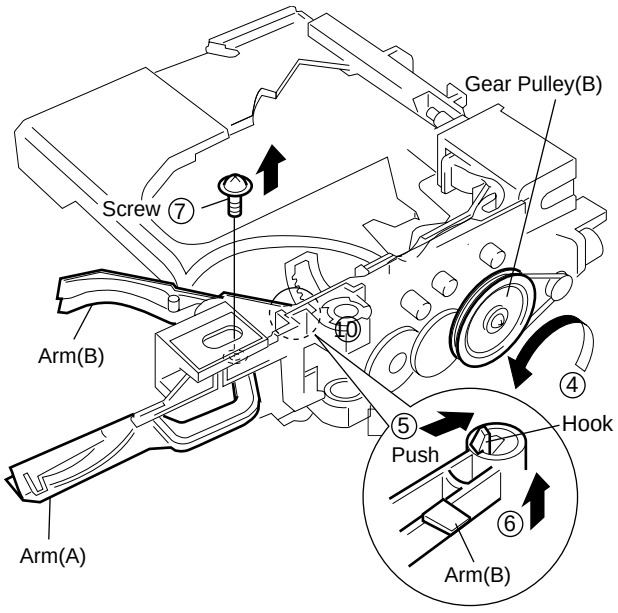
Remove the clamp spring and remove the clamper holder.



④ Turn gear pulley (B) and position Arm (A) as shown below.

⑤ ⑥ Remove Arm (B) while pressing the hook in the direction of the arrow.

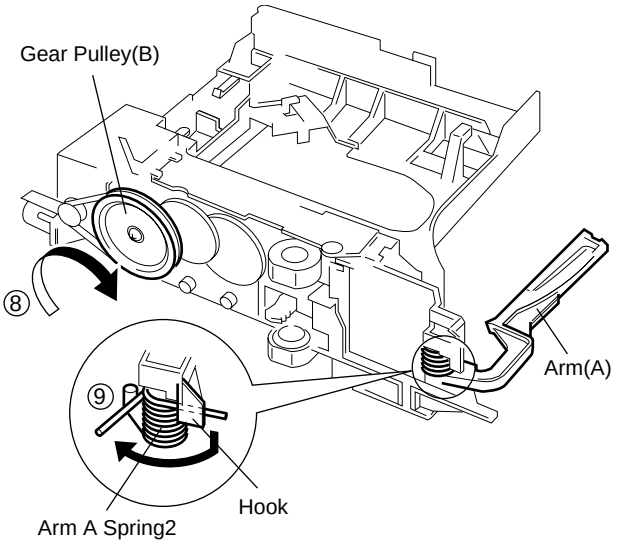
⑦ Remove screw 7.



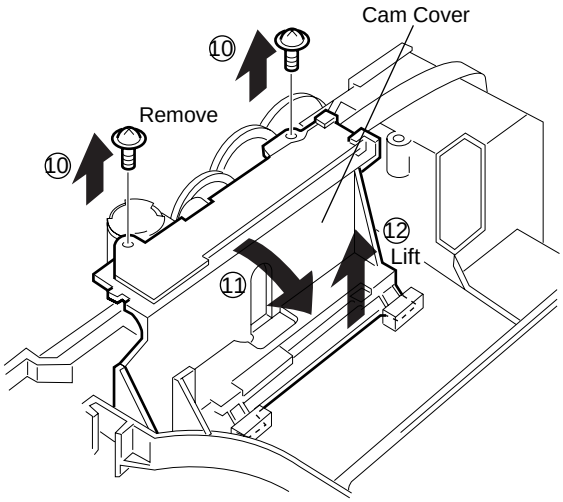
⑧ Turn gear pulley (B) and position Arm (A) as shown below.

⑨ Remove the Arm A spring2 from its hook.

Note: Do not hold the tip (blade) of arm (A) during operation.



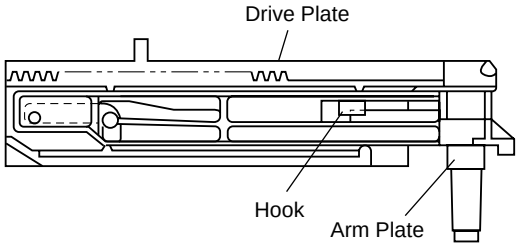
⑩ – ⑫



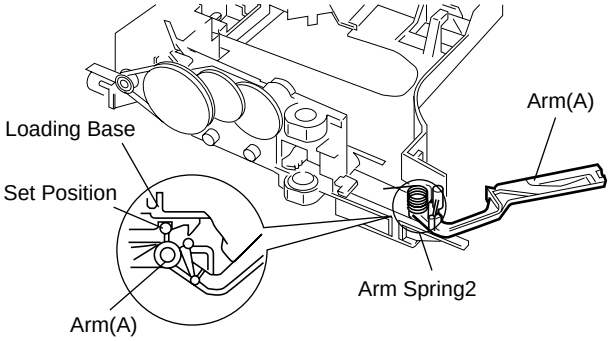
⑬ Remove drive plate, Arm plate, Arm A spring2 and Arm (A). (Refer to Steps 3-4 on page 47.)

■ FOR REASSEMBLY, REVERSE THE DISASSEMBLY PROCEDURE, AND IN ADDITION CARRY OUT THE FOLLOWING ITEMS.

① Assemble the arm plate as shown below, watching out for the drive plate hook.

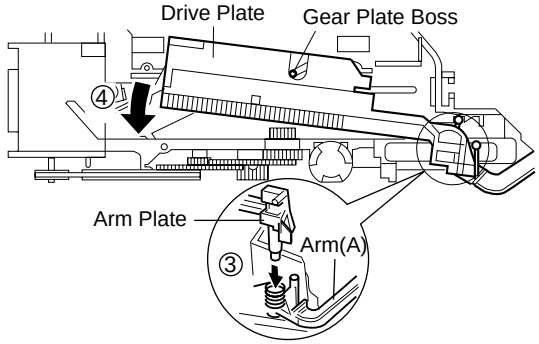


② Place Arm (A) and the Arm A spring2 on the loading base, being careful to keep them in the position shown below.

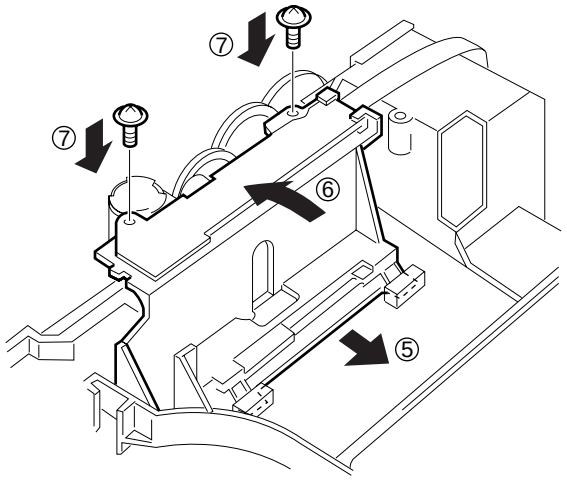


③ Set the drive plate and arm plate, which were assembled in Step ①, on the Arm (A) side as shown below. At this time be careful to keep Arm (A) in the position described in Step ②.

④ Insert the gear plate boss into the drive plate groove and pull it toward you.



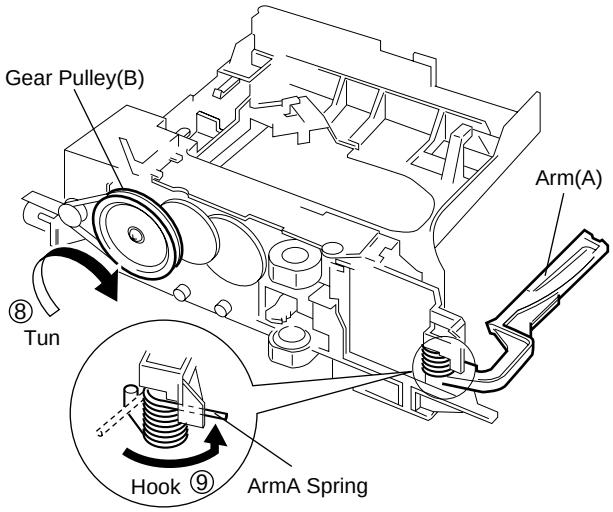
⑤ – ⑦



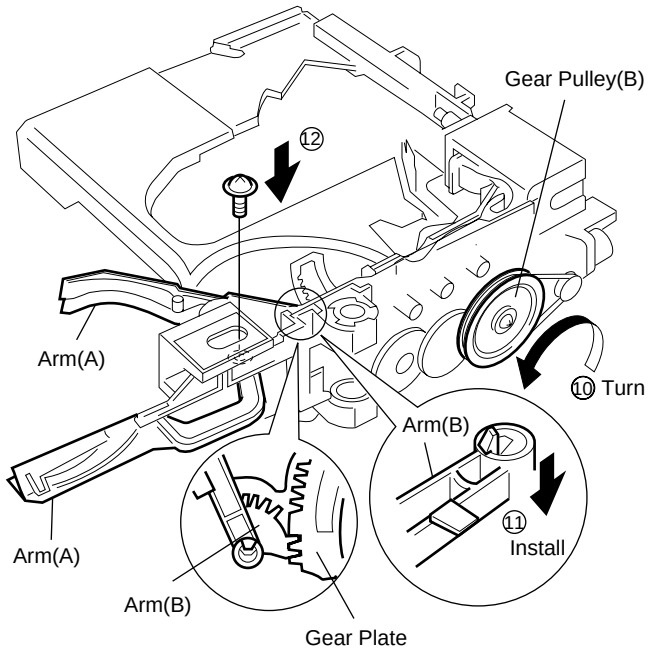
⑧ Turn gear pulley (B) and position Arm (A) as shown below.

⑨

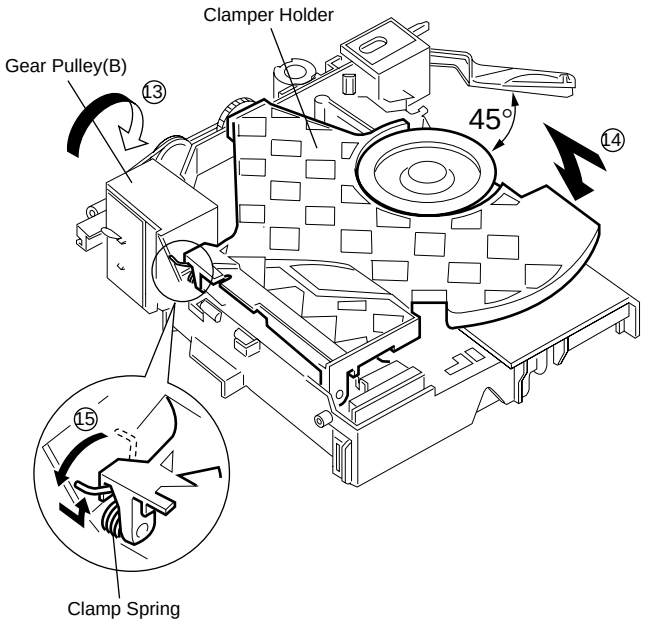
Note : Do not hold the tip (blade) of arm (A) during operation.



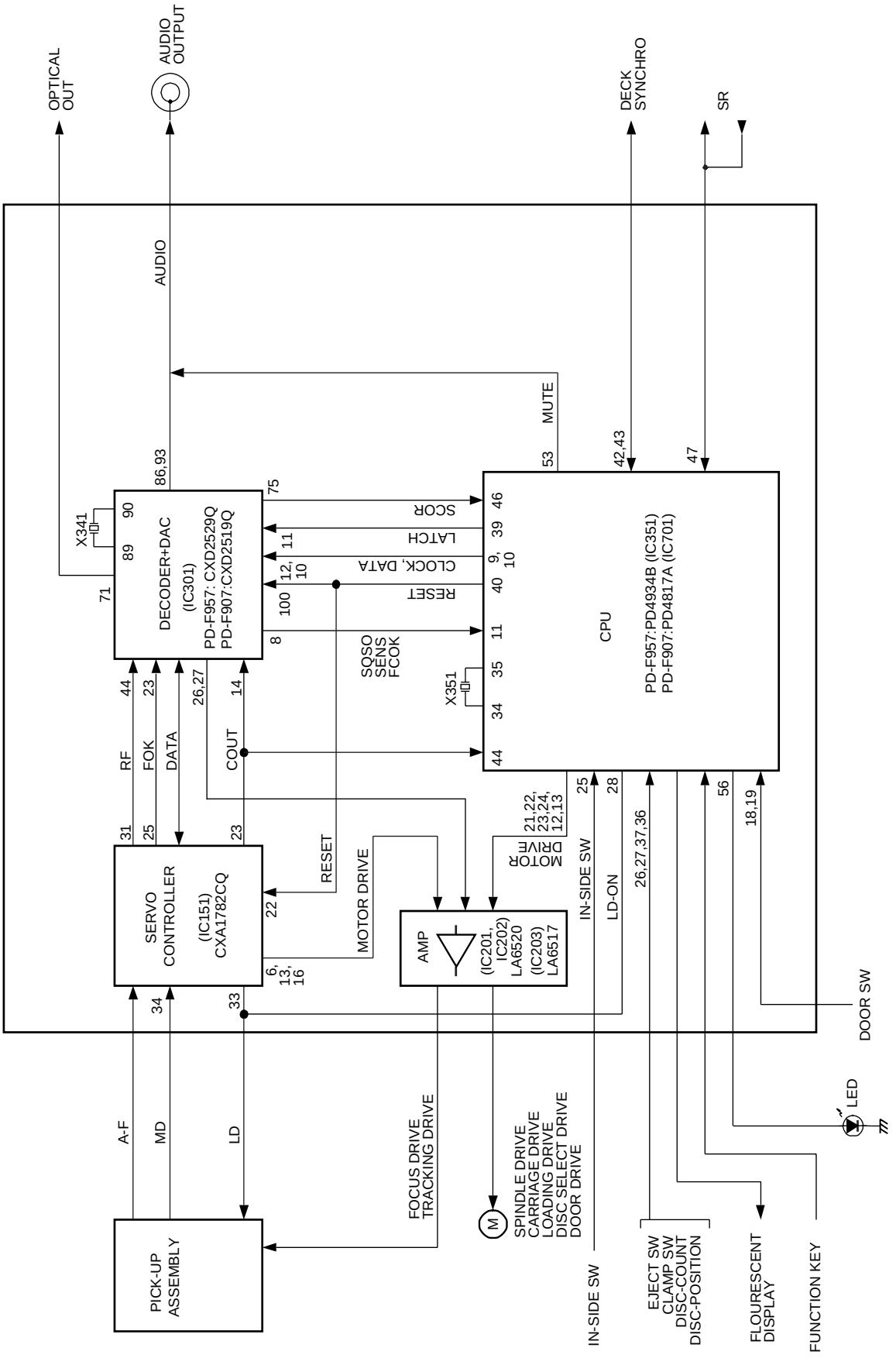
⑩ – ⑫


Gear Pulley(B)
⑫
Arm(A)
⑩ Turn
Arm(B)
⑪
Install
Arm(A)
Arm(B)
Gear Plate

⑬ – ⑮

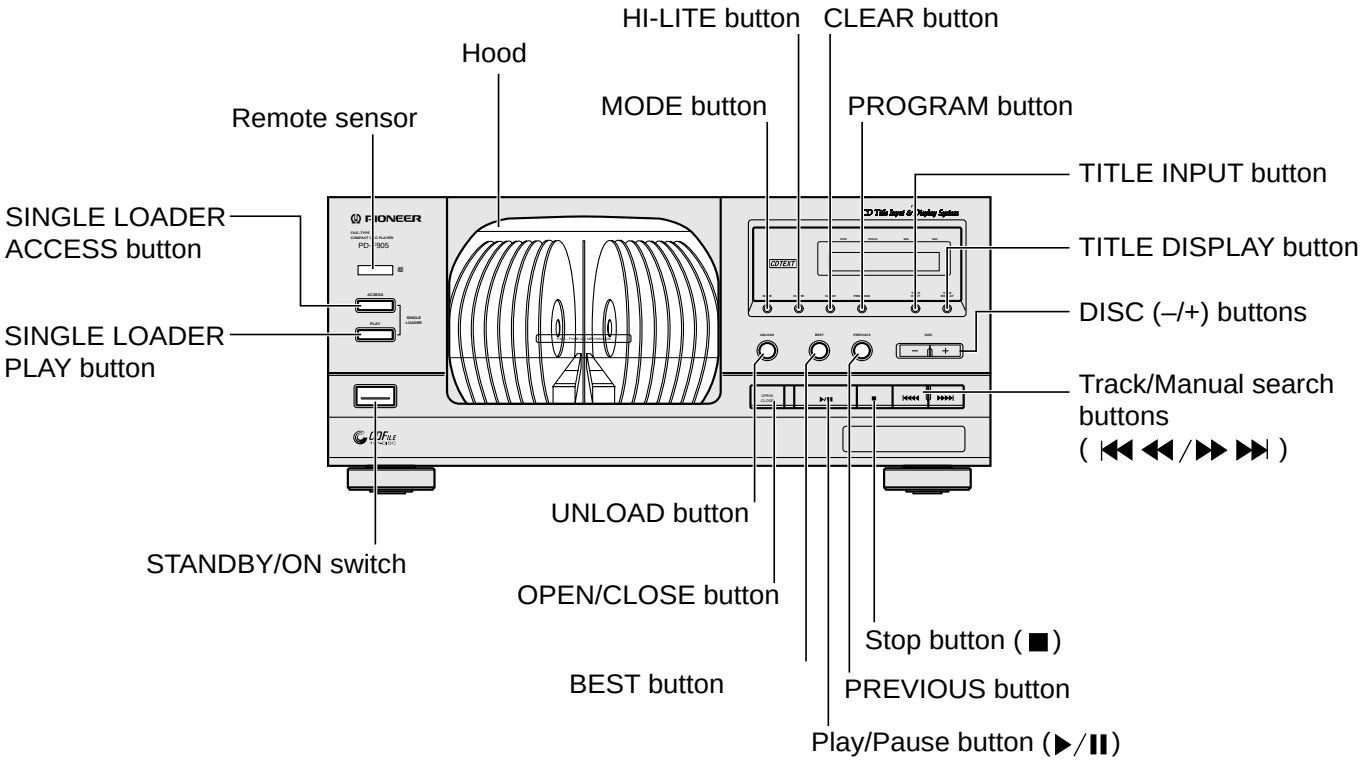

Clamper Holder
Gear Pulley(B)
⑬
45°
⑭
⑮
Clamp Spring

7.3 BLOCK DIAGRAM

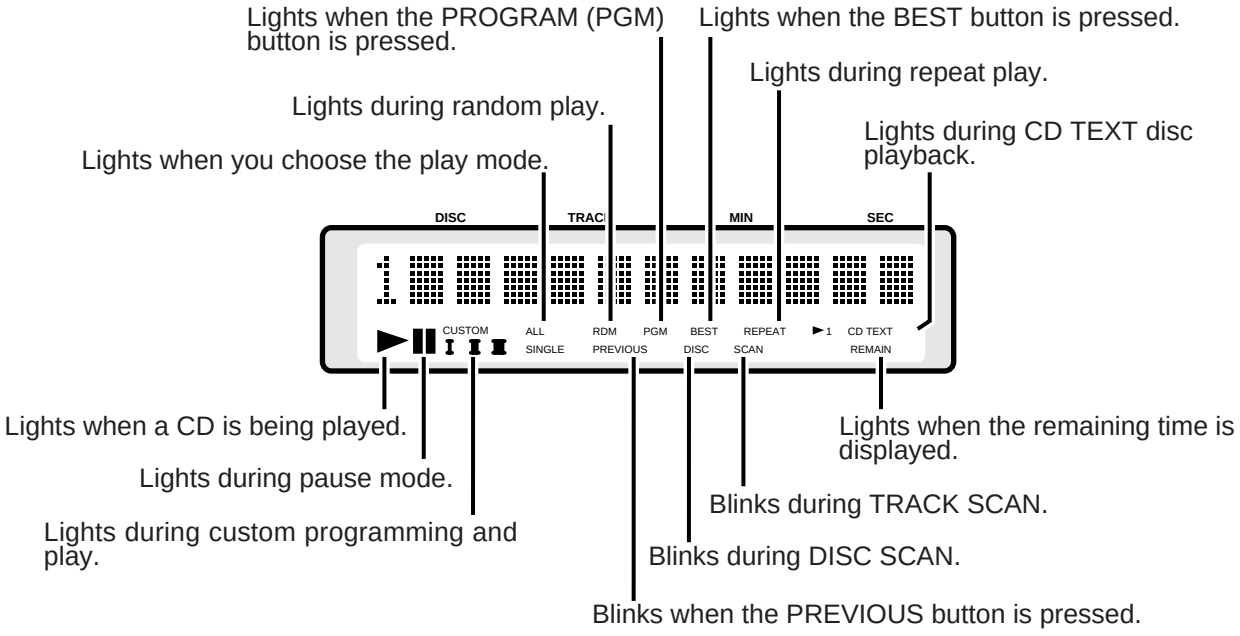


8. PANEL FACILITIES AND SPECIFICATIONS

FRONT PANEL



DISPLAY



SPECIFICATION

1. General

Type ..... Compact disc digital audio system
Power requirements
U.S. and Canadian models ..... AC 120V, 60 Hz
U.K. model ..... AC 220-240V, 50/60 Hz
European model ..... AC 220-240V, 50/60 Hz
Multi-voltage model ..... AC 110-127/220-240V (switchable) 50/60Hz
Power consumption
U.S. and Canadian models 12W
U.K. model 14W
European model 14W
Multi-voltage model 14W
Operating temperature ..... +5°C - +35°C (+41°F - +95°F)
Weight (without package) ..... 6.5 kg (14 lb 3 oz.)
External dimensions ..... 420(W) X 402(D) X 193(H) mm 16-9/16(W) X 15-13/16(D) X 7-10/16(H) in.

2. Audio section

Frequency response ..... 2 Hz - 20 kHz
S/N ratio ..... 98 dB or more (EIAJ)
Dynamic range ..... 96 dB or more (EIAJ)
Channel separation ..... 96 dB or more (EIAJ)
Harmonic distortion ..... 0.003 % or less (EIAJ)
Level difference between channels ..... 1.0 dB or less (EIAJ)
Output voltage ..... 2 Vrms (EIAJ)
Wow and flutter ..... less than ±0.001 % (W.PEAK) (below measurable level) (EIAJ)
Channels ..... 2-channel (stereo)

3. Output terminal

Audio line output
Control input jack (Except for U.K. model)
Control output jack (Except for European and U.K. models)
CD-DECK SYNCHRO jack
Optical digital output jack
I/O interface (Except for U.K. and Multi-voltage models)
Head phone jack with volume control
(Except for U.S. and Canadian models)

4. Accessories

- Remote control unit 1
- Size AA/R6P dry cell batteries 2
- Output cable 1
- Control cable (Except for European and U.K. models) 1
- CD liner notes file (Except for U.S. and Canadian models) 1
- Index label sheet (Except for U.S. and Canadian models) 1
- Operating instructions 1

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

AUDIO SPECIFICATIONS

Frequency response	2Hz to 20 kHz
Signal to noise ratio	More than 98 dB
Dynamic range	More than 96 dB
THD	1kHz: 0.003% maximum
Output voltage	2 Vrms
Channel balance	1.0 dB maximum

RadioShack
A Division of Tandy Corporation
Fort Worth, Texas 76102

RRV1971M ZZY

6A8

Printed in Japan