

Service Manual

ORDER NO.
RRV 1630

FILE-TYPE CD PLAYER

PD-F1005 PD-F905

● Refer to the service manual RRV1582 for PD-F905/KU.

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

Type	Model		Power Requirement	The voltage can be converted by the following method.
	PD-F1005	PD-F905		
KU/CA	O	—	AC120V	—
RD	O	O	AC110 – 127V/220 – 240V	With the voltage selector
WV	—	O	AC220 – 240V	—
WY	—	O	AC220 – 240V	—

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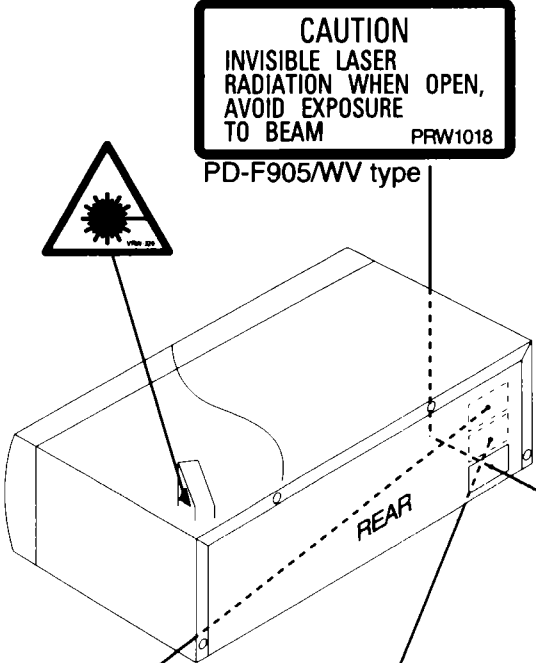
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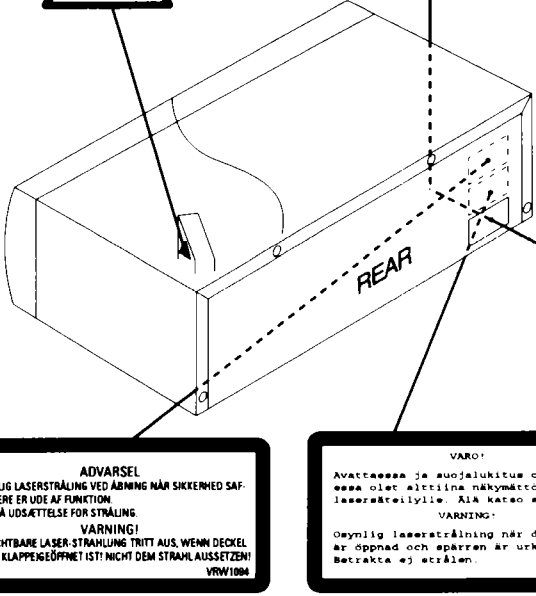
1. SAFETY INFORMATION

VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	 LASER Kuva 1 Lasersäteilyn varoitusmerkki	WARNING! DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.	 LASER Picture 1 Warning sign for laser radiation
ADVERSEL: USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGA UDSÆTTELSE FOR STRÅLING.	IMPORTANT THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1. SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.		
VARNING! OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.	LASER DIODE CHARACTERISTICS MAXIMUM OUTPUT POWER: 5 mw WAVELENGTH: 780-785 nm		

LABEL CHECK (For PD-F905/WY and PD-F905/WV types)



PD-F905/WV type



PD-F905/WY type

CAUTION
INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM
PRW1018

CLASS 1 LASER PRODUCT
VRW-328

Additional Laser Caution

- Laser Interlock Mechanism**
The position of the switch (S651) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S651) is not on CLMP terminal side (CLMP signal is OFF or high level). Thus, the interlock will no longer function if the switch (S651) is deliberately set to CLMP terminal side. (low level)
The interlock also does not function in the test mode*. Laser diode oscillation will continue, if pin 1 of M51593FP (IC101) on the PRE-AMP BOARD ASSY mounted on the Pickup assembly is connected to GND, or pin 19 is connected to low level (ON), or else the terminals of Q101 are shorted to each other (fault condition).
- When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to page 32 on the service manual RRV1582.

2. CONTRAST OF MISCELLANEOUS PARTS

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.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- 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%).

560Ω	→	56 × 10 ¹	→	561		RD1/4PU561J
47kΩ	→	47 × 10 ³	→	473		RD1/4PU473J
0.5Ω	→	0R5				RN2H0R5K
1Ω	→	1R0				RS1P1R0K

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

5.62kΩ	→	562 × 10 ¹	→	5621		RN1/4PC5621F
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■ CONTRAST OF PD-F1005/KU/CA, RD, PD-F905/WY, WV and RD

PD-F1005/KU/CA, RD, PD-F905/WY, WV, RD and PD-F905/KU have the same construction except for the following:

Mark	Symbol & Description	Part No.						Remarks
		PD-F905 /KU	PD-F1005 /KU/CA	PD-F1005 /RD	PD-F905 /WY	PD-F905 /WV	PD-F905 /RD	
NSP	Main Board Assy	PWZ3207	PWZ3211	PWZ3212	PWZ3208	PWZ3209	PWZ3210	*1 No.1 and *2
	Display Board Assy	PWZ3300	PWZ3301	PWZ3301	PWZ3301	PWZ3301	PWZ3301	
	Power Board Assy	PWZ3221	PWZ3224	PWZ3225	PWZ3222	PWZ3222	PWZ3223	
	Switch Board Assy	PWZ3305	PWZ3306	PWZ3306	PWZ3306	PWZ3306	PWZ3306	
NSP	Headphone Board Assy	Not used	PWZ3310	PWZ3310	PWZ3311	PWZ3311	PWZ3310	*1 No.2 and *3
Δ	GUI Board Assy	Not used	PWX1479	PWX1480	Not used	Not used	Not used	
	AC power cord	PDG1015	PDG1015	PDG1056	PDG1003	PDG1055	PDG1056	
	Fuse (T5A) (For AC power cord)	Not used	Not used	Not used	Not used	PEK1003	Not used	
Δ	Strain relief	CM - 22C	CM - 22C	CM - 22B	CM - 22B	CM - 22B	CM - 22B	*1 No.3
	Rear Base	PNA2257	PNA2283	PNA2284	PNA2281	PNA2282	PNA2280	
	Foot Assy	AEC1531	Not used	Not used	Not used	Not used	Not used	
	Insulator	Not used	PNW1912	PNW1912	PNW1912	PNW1912	PNW1912	
	SR Angle	Not used	PNB1192	PNB1192	Not used	Not used	Not used	*1 No.4
	Rubber Sheet	AEB1111	Not used	Not used	Not used	Not used	Not used	
	Operation Panel	PNW2636	PNW2677	PNW2677	PNW2676	PNW2676	PNW2676	
	Display Window	PAM1712	PAM1712	PAM1712	PAM1711	PAM1711	PAM1712	
	Knob	Not used	PAC1707	PAC1707	PAC1707	PAC1707	PAC1707	*1 No.6
	LED Lens	Not used	PNW2019	PNW2019	PNW2019	PNW2019	PNW2019	
	Name Plate	PAM1704	VAM1032	VAM1032	PAM1704	PAM1704	PAM1704	
	Caution Label (HE)	Not used	Not used	Not used	PRW1233	Not used	Not used	
	Caution Label (F)	Not used	Not used	Not used	VRW - 328	VRW - 328	Not used	*1 No.9
	Caution Label (G)	Not used	Not used	Not used	VRW - 329	VRW - 329	Not used	
	Caution Label	Not used	Not used	Not used	Not used	PRW1018	Not used	
	Caution Label	Not used	Not used	Not used	VRW1094	Not used	Not used	
	65 Label	ORW1069	ORW1069	Not used	Not used	Not used	Not used	*1 No.12
	Vinyl Bag	Not used	Not used	Not used	Not used	Z21 - 013	Not used	
	Packing Case	PHG2183	PHG2187	PHG2187	PHG2220	PHG2221	PHG2184	
	Caution 220V Label	Not used	Not used	ARR7003	Not used	Not used	ARR7003	
	Rear Spacer	Not used	Not used	Not used	Not used	PHC1087	Not used	*1 No.15
	Operating instructions (English)	PRB1237	PRB1241	Not used	Not used	PRB1237	Not used	
	Operating instructions (English/Spanish/Chinese)	Not used	Not used	PRE1240	Not used	Not used	PRE1234	
	Operating instructions (English/French/German/Italian/Dutch/Swedish/Spanish/Portuguese)	Not used	Not used	Not used	PRE1239	Not used	Not used	
	Battery (R6P, AA)	VEM - 013	Not used	Not used	VEM - 013	VEM - 013	VEM - 013	*1 No.16
	Battery (LR6, AA)	Not used	AEX1007	AEX1007	Not used	Not used	Not used	
	Remote Control Unit	PWW1108	PWW1110	PWW1110	PWW1108	PWW1108	PWW1108	
	Cord With Plug	VDE1034	VDE1034	VDE1034	Not used	Not used	Not used	
	Cord With mini Plug (SR cord)	PDE1247	PDE1247	PDE1247	Not used	Not used	PDE1247	

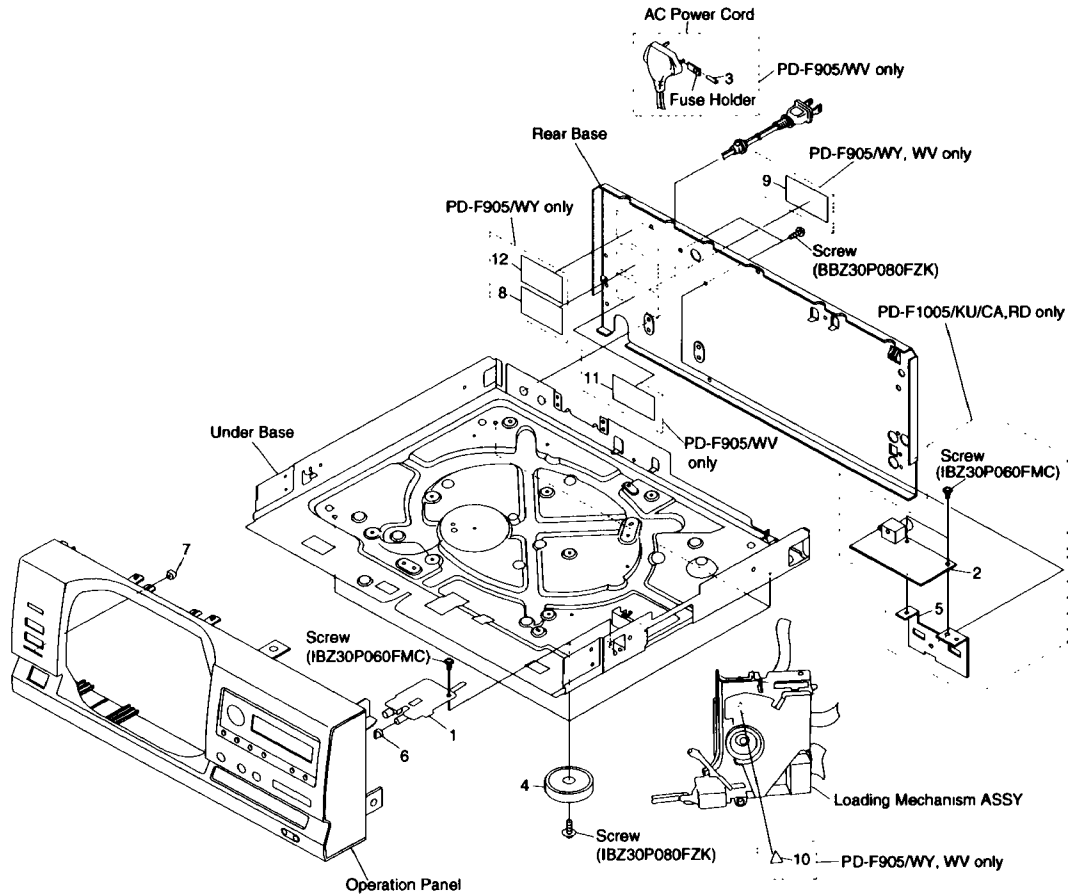
Note *1 : The numbers in the remarks column correspond to the numbers on the exploded diagram. Refer to "EXPLODED VIEWS".

*2 : Although PWZ3311 and PWZ3310 are different in part number, they consist of the same components.

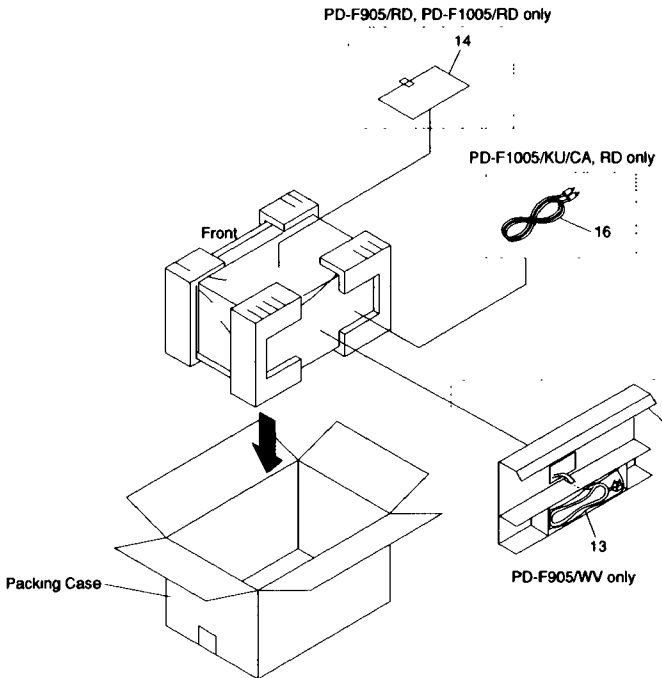
*3 : Refer to "3. SCHEMATIC AND PCB DIAGRAMS".

■ EXPLODED VIEWS

● Exterior



● Packing



■ CONTRAST OF PCB ASSEMBLIES

MAIN BOARD ASSY

PWZ3211, PZW3212, PWZ3208, PWZ3209, PWZ3210 and PWZ3207 have the same construction except for the following:

Mark	Symbol & Description	Part No.						Remarks
		PWZ3207	PWZ3211	PWZ3212	PWZ3208	PWZ3209	PWZ3210	
△	C392	Not used	Not used	Not used	CGCYX104K25	CGCYX104K25	Not used	*
	C305	Not used	Not used	Not used	CKCYF473Z50	CKCYF473Z50	Not used	*
	C371	CEAS010M50	Not used	Not used	CEAS010M50	CEAS010M50	CEAS010M50	
	C373 (0.047μF)	ACH1246	Not used	Not used	ACH1246	ACH1246	ACH1246	
	C374	CEAS330M16	Not used	Not used	CEAS330M16	CEAS330M16	CEAS330M16	
	C375	CKCYF103Z50	Not used	Not used	CKCYF103Z50	CKCYF103Z50	CKCYF103Z50	
	C376	CEAS470M10	Not used	Not used	CEAS470M10	CEAS470M10	CEAS470M10	
	C393	CCCSL101J50	CCCSL101J50	CCCSL101J50	Not used	Not used	CCCSL101J50	
	C401	CEAS330M16	CEAS471M6R3	CEAS471M6R3	CEAS330M16	CEAS330M16	CEAS330M16	
	C405	Not used	CKCYB101K50	CKCYB101K50	Not used	Not used	Not used	*
△	C475 – C477	Not used	CKCYF103Z50	CKCYF103Z50	CKCYF103Z50	CKCYF103Z50	Not used	*
	C1301 – C1304	CKCYB101K50	CKCYB101K50	Not used	Not used	Not used	Not used	
	C1305	CKCYB101K50	CKCYB101K50	Not used	CKCYB101K50	Not used	Not used	
	C1307	CKCYF103Z50	CKCYF103Z50	Not used	Not used	Not used	Not used	
	C1308	CKCYF103Z50	CKCYF103Z50	Not used	CKCYF103Z50	Not used	Not used	
	CN11	52147 – 1310	52147 – 1210	52147 – 1210	52147 – 1310	52147 – 1310	52147 – 1310	
	CN206	Not used	52147 – 0810	52147 – 0810	Not used	Not used	Not used	*
	CN401	Not used	52147 – 0310	52147 – 0310	52147 – 0310	52147 – 0310	52147 – 0310	*
	D372, D373, D375	1SS254	Not used	Not used	1SS254	1SS254	1SS254	
	D374	MTZJ3.3B	Not used	Not used	MTZJ3.3B	MTZJ3.3B	MTZJ3 3B	
△	D391 – D394	1SS254	1SS254	1SS254	1SS254	Not used	1SS254	
	D1301 – D1309, D1312 – D1314	1SS254	1SS254	Not used	1SS254	Not used	Not used	
	IC351	PD4718A	PD4733A	PD4733A	PD4718A	PD4718A	PD4718A	
	IC371	NJM2930L05	Not used	Not used	NJM2930L05	NJM2930L05	NJM2930L05	
	IC406	Not used	BA15218	BA15218	BA15218	BA15218	BA15218	*
	JA391	RKN1004	RKN1004	RKN1004	RKN1004	Not used	RKN1004	
	JA392	RKN1004	RKN1004	RKN1004	Not used	Not used	RKN1004	
	JA394	DKN1035	DKN1035	Not used	DKN1035	Not used	Not used	
	L351, L375	Not used	LAU100J	LAU100J	Not used	Not used	Not used	*
	L392	Not used	Not used	Not used	LAU010J	LAU010J	Not used	*
	L396	LAU010J	LAU010J	LAU010J	LAU2R2J	LAU2R2J	LAU010J	
△	Q371, Q372	DTC124ES	Not used	Not used	DTC124ES	DTC124ES	DTC124ES	
	R371, R374	RD1/4PU103J	Not used	Not used	RD1/4PU103J	RD1/4PU103J	RD1/4PU103J	
	R372	RD1/4PU101J	Not used	Not used	RD1/4PU101J	RD1/4PU101J	RD1/4PU101J	
	R373	RD1/4PU471J	Not used	Not used	RD1/4PU471J	RD1/4PU471J	RD1/4PU471J	
	R375	RD1/4PU102J	Not used	Not used	RD1/4PU102J	RD1/4PU102J	RD1/4PU102J	
	R391	RD1/4PU244J	RD1/4PU244J	RD1/4PU244J	RD1/4PU244J	Not used	RD1/4PU244J	
	R392	RD1/4PU102J	RD1/4PU102J	RD1/4PU102J	RD1/4PU102J	Not used	RD1/4PU102J	
	R470, R471	Not used	RD1/4PU470J	RD1/4PU470J	RD1/4PU470J	RD1/4PU470J	RD1/4PU470J	*
	R472, R473	Not used	RD1/4PU102J	RD1/4PU102J	RD1/4PU102J	RD1/4PU102J	RD1/4PU102J	*
	R1301 – R1305, R1307	RD1/4PU471J	RD1/4PU471J	Not used	RD1/4PU471J	Not used	Not used	
	R1310	RD1/4PU103J	RD1/4PU103J	Not used	RD1/4PU103J	Not used	Not used	

Note * : Refer to "SCHEMATIC DIAGRAM".

DISPLAY BOARD ASSY

PWZ3301 and PWZ3300 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		PWZ3300	PWZ3301	
	J701	D20PWW0735E	D20PWW0835E	

POWER BOARD ASSY

PWZ3224, PWZ3225, PWZ3222, PWZ3223 and PWZ3221 have the same construction except for the following:

Mark	Symbol & Description	Part No.					Remarks
		PWZ3221	PWZ3224	PWZ3225	PWZ3222	PWZ3223	
△	C31	CEAS330M16	Not used	Not used	CEAS330M16	CEAS330M16	*
	D31, D32	S5688G	Not used	Not used	S5688G	S5688G	
△	IC31	Not used	Not used	ICP – N10	ICP – N10	ICP – N10	*
	J11	D20PWY1335E	D20PWY1235E	D20PWY1235E	D20PWY1335E	D20PWY1335E	
△	R31	RD1/4PU102J	Not used	Not used	RD1/4PU102J	RD1/4PU102J	*
	S5 Voltage Selector (AC110 – 127V/220 – 240V)	Not used	Not used	PSB1006	Not used	PSB1006	
△	Power Transformer (AC120V)	PTT1318	PTT1318	Not used	Not used	Not used	
△	Power Transformer (AC110 – 127V/220 – 240V)	Not used	Not used	PTT1320	Not used	PTT1320	
△	Power Transformer (AC220 – 240V)	Not used	Not used	Not used	PTT1317	Not used	

Note * : Refer to "SCHEMATIC DIAGRAM".

SWITCH BOARD ASSY

PWZ3306 and PWZ3305 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		PWZ3305	PWZ3306	
	D751	Not used	PCX1019	*
	R751	Not used	RD1/4PU471J	*

Note * : Refer to "SCHEMATIC DIAGRAM".

GUI BOARD ASSY

PWX1480 and PWX1479 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		PWX1479	PWX1480	
	S901	Not used	RSH1039	*

Note * : Refer to "SCHEMATIC DIAGRAM".

■ PCB PARTS LIST

Mark	No.	Description	Parts No.
------	-----	-------------	-----------

GUI BOARD ASSY (PWX1479)**SEMICONDUCTORS**

IC902	LH5168N – 10L
IC904	MM1031XS
IC901	PD4734A
IC903	PD6162A
Q901	2SC1740S
D901	1SS133X

COILS AND FILTERS

L901	LFA100K
L911	LFA220J

CAPACITORS

C913	CCSQCH080D50
C914	CCSQCH150J50
C916	CCSQCH330J50
C915	CCSQCH470J50
C911, C912, C921	CEAS101M16
C901	CEAS331M6R3
C923	CEAS471M6R3
C903 – C905	CKSQYF103Z50
C922	CKSQYF104Z50
C902 (0.1μF/5.5V)	PCH1106
VC911	PCM1001

RESISTORS

All Resistors	RS1/10S□□□□
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OTHERS

X911	CRYSTAL RESONATOR	ASS1056
CN901	PLUG 3 – P	KM250MA3
JA901	JACK 1P	VKB1063
X901	CERAMIC RESONATOR	VSS1028

HEADPHONE BOARD ASSY (PWZ3310)**COILS AND FILTERS**

L501, L504, L505	LAU010J
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CAPACITORS

C501, C502	CKCYF223Z50
C503, C504	CKCYF473Z50

RESISTORS

VR501 (0.5kΩ)	PCS1003
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OTHERS

JA501	JACK	RKN1002
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3. SCHEMATIC AND PCB DIAGRAMS

NOTE FOR SCHEMATIC DIAGRAMS

(Type 4A)

1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. RESISTORS:

Unit: k: k Ω , M: M Ω , or Ω unless otherwise noted.

Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.

Tolerance: (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ or $\pm 5\%$ unless otherwise noted.

4. CAPACITORS:

Unit: p: pF or μ F unless otherwise noted.

Ratings: capacitor (μ F)/voltage(V) unless otherwise noted.

Rated voltage: 50V except for electrolytic capacitors.

5. COILS:

Unit: m: mH or μ H unless otherwise noted.

6. VOLTAGE AND CURRENT:

 or $\leftarrow$ V:

DC voltage (V) in PLAY mode unless otherwise noted.

 mA or $\leftarrow$ mA:

DC current in PLAY mode unless otherwise noted.

Value in () is DC current in STOP mode.

7. OTHERS:

•  or  : Adjusting point.

•  : Measurement point.

• The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. SCH- ON THE SCHEMATIC DIAGRAM:

• SCH- indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

9. SWITCHES (Underline indicates switch position):

DISPLAY BOARD ASSY

S703 : MODE	S711 : 	S717 : CLEAR
S704 : UNLOAD	S712 : 	S718 : PROGRAM
S707 : 	S713 : BEST	S719 : RANDOM
S708 : OPEN/CLOSE	S714 : PREVIOUS	S720 : REPEAT
S709 : ADLC	S715 : DISC -	
S710 : 	S716 : DISC +	

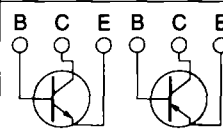
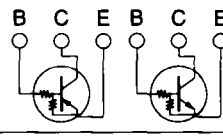
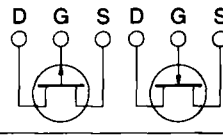
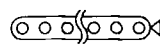
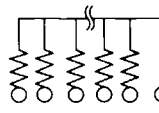
SWITCH BOARD ASSY

S751 : SINGLE LOADER ACCESS
S752 : SINGLE LOADER PLAY
S753 : POWER STANDBY/ON

NOTE FOR PCB DIAGRAMS

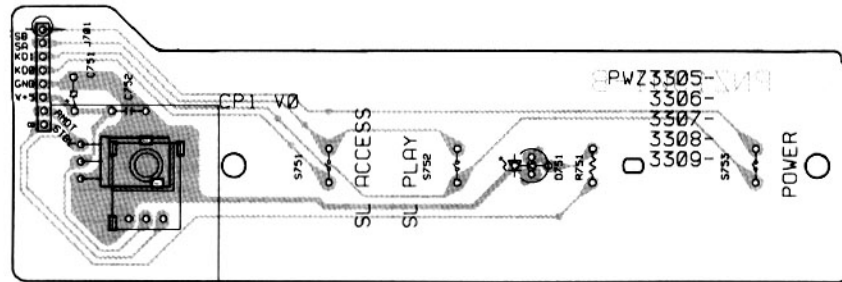
1. Part numbers in PCB diagrams match those in the schematic diagrams.

2. A comparison between the main parts of PCB and schematic diagrams is shown below.

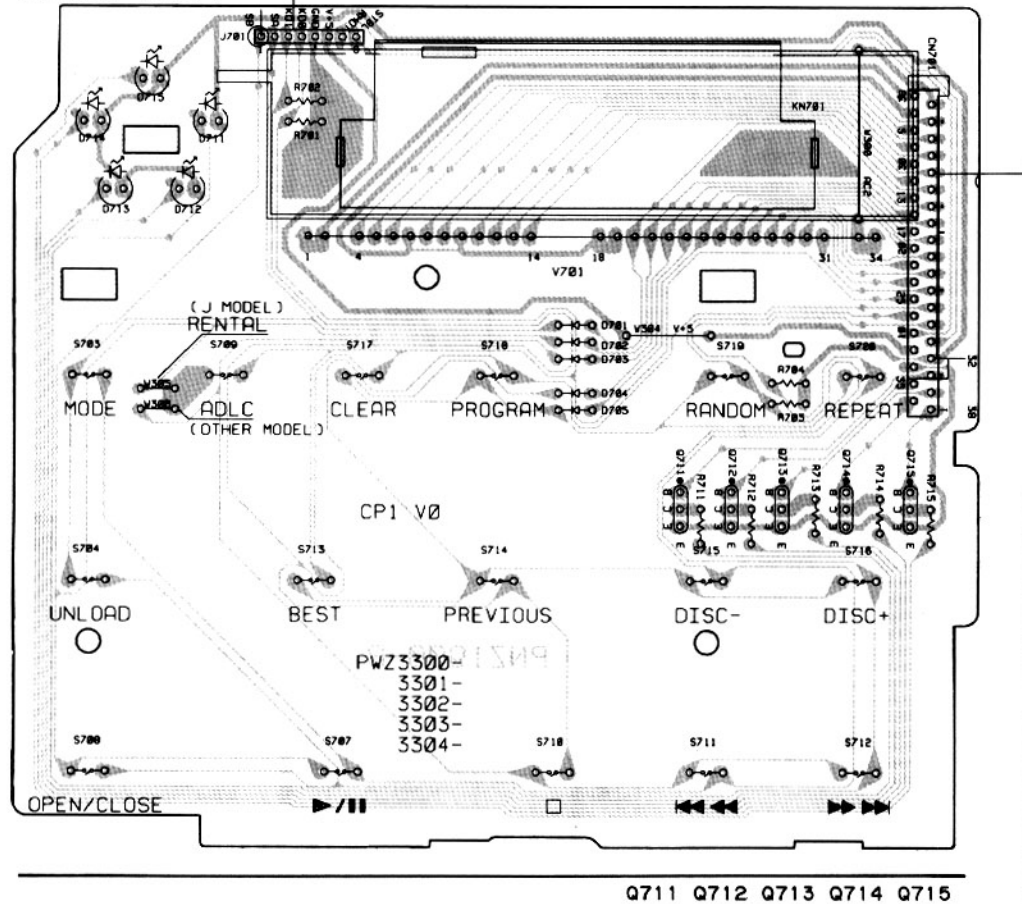
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

■ PCB DIAGRAMS

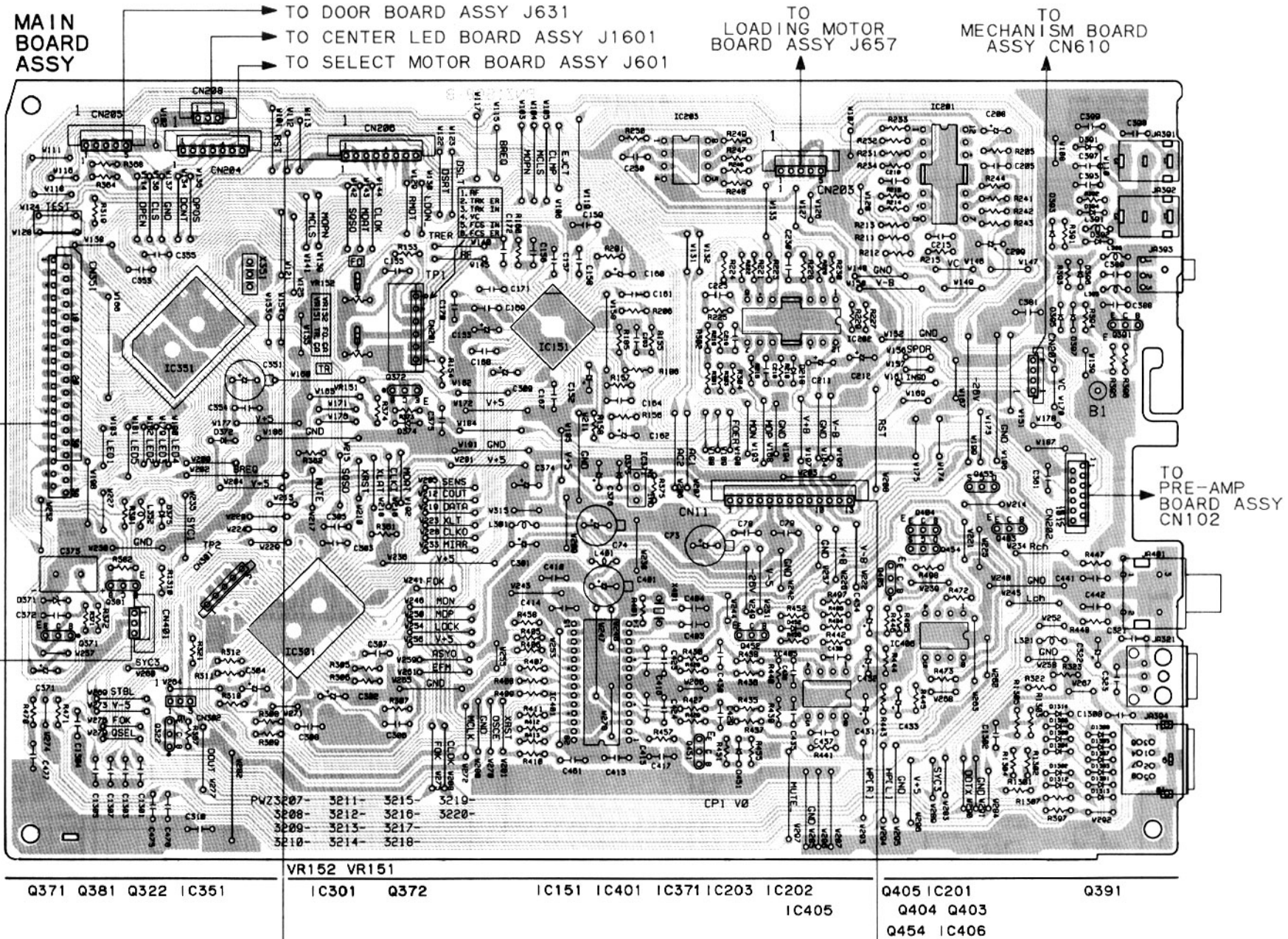
SWITCH BOARD ASSY



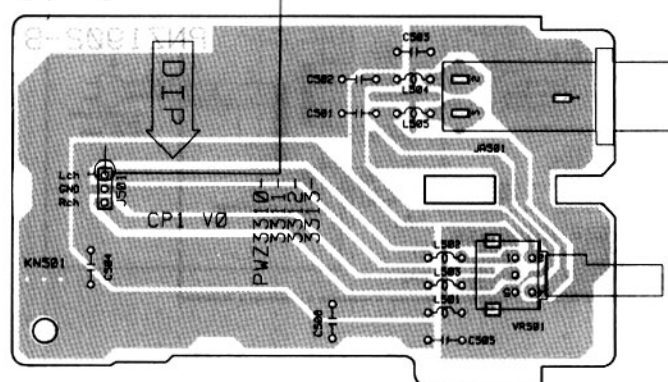
DISPLAY BOARD ASSY



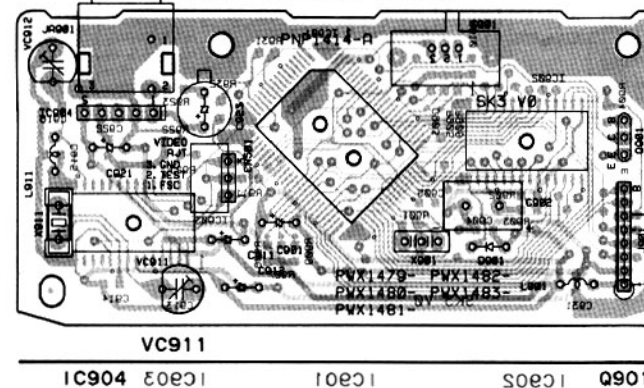
MAIN BOARD ASSY



HEADPHONE BOARD ASSY

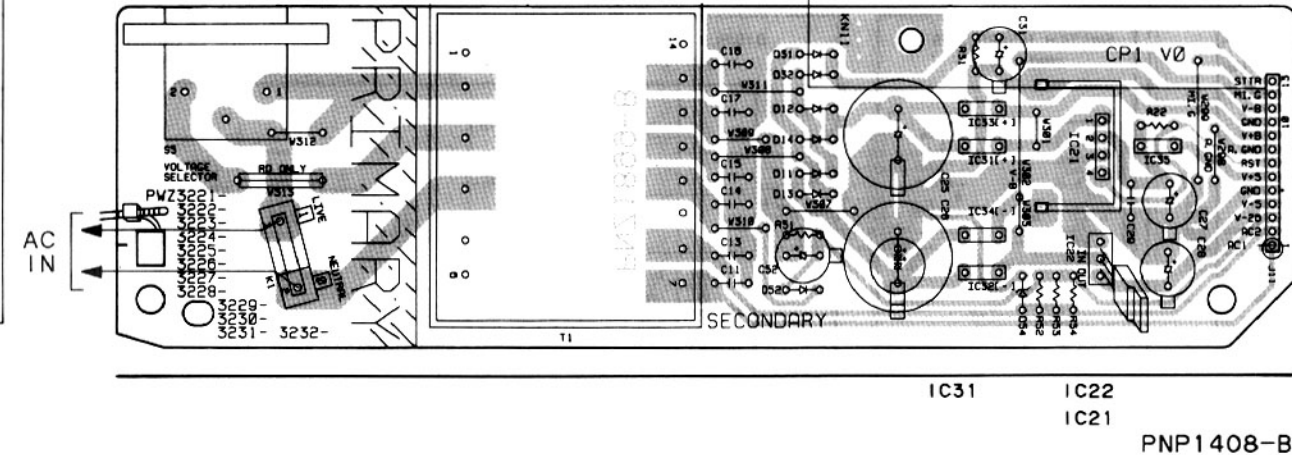


GUI BOARD ASSY



- This diagram is viewed from the mounted parts side.
- 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.

POWER BOARD ASSY



4. ADJUSTMENTS

Note : Adjustment of PF-F1005 is the same as that of PD-F905 except for the following.

■ CHROMA FREQUENCY ADJUSTMENT

Symptom when out of adjustment:

The TV picture is not in color (Black-and-white picture).

Procedure

1. Short-circuit pin 2 and pin 3 of connector CN501 of the GUI BOARD ASSY.
2. Connect a frequency counter to pin 1 of CN501.
Adjust VC911 so that the frequency is within 3.579545 MHz $\pm$ 5 Hz.

