Service Manual

PIONEER®
The Art of Entertainment

ORDER NO.
RRV1951

FILE-TYPE CD PLAYER

PD-F607
PD-F507

● **Refer to the service manual RRV1877 for PD-F607/KUXJ and PD-F507/KUXJ.**

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-F607	PD-F507		
WYXJ	O	–	AC220-240V	———
WVXJ	O	–	AC220-240V	———
WPWXJ	–	O	AC220-240V	———
MAMXJ	–	O	AC220-230V	———
RLXJ	–	O	AC110-120V/220-240V	With the voltage selector
RDXJ	–	O	AC110-127V/220-240V	With the voltage selector

CONTENTS

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1. SAFETY INFORMATION

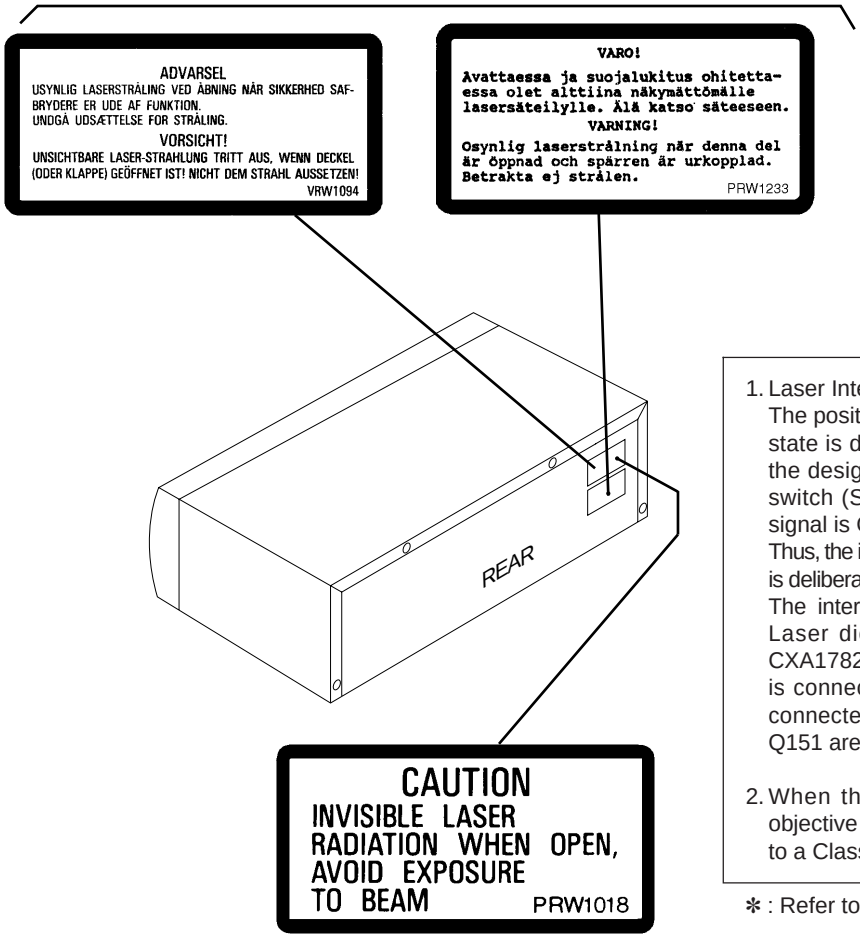
This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly 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.

IMPORTANT
THIS PIONNER 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 : 780-785 nm

LABEL CHECK (For PD-F607/WYXJ,WVXJ and PD-F507/WPWXJ only)

PD-F607/WYXJ only



Additional Laser Caution

1. 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 deliberatery set to CLMP terminal side. (low level)
   The interlock also does not function in the test mode ✻. Laser diode oscillation will continue, if pin 33 of CXA1782CQ (IC151) on the MOTHER BOARD ASSY is connected to GND, or pin 26 of IC351 (LDON) is connected to low level (ON), or else the terminals of Q151 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.

✻ : Refer to page 25. on the service manual RRV1877.

PD-F607/WVXJ and PD-F507/WPWXJ only

2. CONTRAST OF MISCELLANEOUS PARTS

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.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *Screw adjacent to ▼ mark on the product are used for disassembly.*
- *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

■ CONTRAST TABLE (FOR PD-F607)

WYXJ, WVXJ and KUXJ types are constructed the same except for the following :

Ref. No.	Mark	Symbol and Description	Part No.			Remarks
			PD-F607			
			KUXJ	WYXJ	WVXJ	
		ASSEMBLES				
P5-1	⚠	Mother Board Assy	PWM2199	PWM2200	PWM2200	
	NSP	Headphone Board Assy	Not used	PWX1549	PWX1549	No.9
	NSP	Sub Board Assy	PWX1540	PWX1541	PWX1541	
P7-16	NSP	└Power SW Board Assy	PWZ3622	PWZ3623	PWZ3623	
		PACKING				
P3-1		Operating Instructions (English)	PRB1262	Not used	PRB1265	
P3-1		Operating Instructions (English/French)	Not used	PRE1265	Not used	
P3-1		Operating Instructions (German/Italian/Dutch/Swedish /Spanish/Portuguese)	Not used	PRD1026	Not used	
P3-5		Control Cable (L=1m)	PDE1247	Not used	Not used	
P3-10		Packing Case	PHG2282	PHG2298	PHG2299	
P3-12	NSP	Warranty Card	ARY1051	ARY7009	ARY7009	
		CD Liner Notes File	Not used	PHN1051	PHN1051	No.1
		Index Label Sheet (25)	Not used	PRW1422	PRW1422	No.2
		Rear Spacer	Not used	Not used	PHC1087	No.3
		Polyetylene Bag (115 x 270 x 0.05)	Not used	Not used	Z21-013	No.4
		EXTERIOR				
P5-2	⚠	Cord Stopper	CM-22C	CM-22B	CM-22B	
P5-4	⚠	AC Power Cord	PDG1015	PDG1003	PDG1055	
P5-5	⚠	Power Transformer (AC120V)	PTT1237	Not used	Not used	
P5-5	⚠	Power Transformer (AC220-240V)	Not used	PTT1236	PTT1236	
P5-8		Rear Base	PNA2386	PNA2398	PNA2399	
P5-42		65 Label	ORW1069	Not used	Not used	
		Insulator (Front Side)	Not used	PNW2766	PNW2766	No.5
		Caution Label	Not used	Not used	PRW1018	No.6
		Caution Label HE	Not used	PRW1233	Not used	N0.7
		Caution Label	Not used	VRW1094	Not used	No.8
		Headphone Angle	Not used	PNB1584	PNB1584	No.10
		Knob	Not used	RAC1903	RAC1903	No.11
		FRONT PANEL SECTION				
P7-10		Display Window	PAM1740	PAM1739	PAM1739	
P7-15		Control Panel	PNW2756	PNW2757	PNW2757	
P7-20		Rubber Sheet	AEB1111	Not used	Not used	
		LED Lens	Not used	PNW2019	PNW2019	No.12

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

• For ASSEMBLIES, Refer to " ■ CONTRAST OF PCB ASSEMBLES" and "3. SCHEMATIC AND PCB DIAGRAMS".

■ CONTRAST TABLE (FOR PD-F507)

WPWXJ, MAMXJ, RLXJ, RDXJ and KUXJ types are constructed the same except for the following :

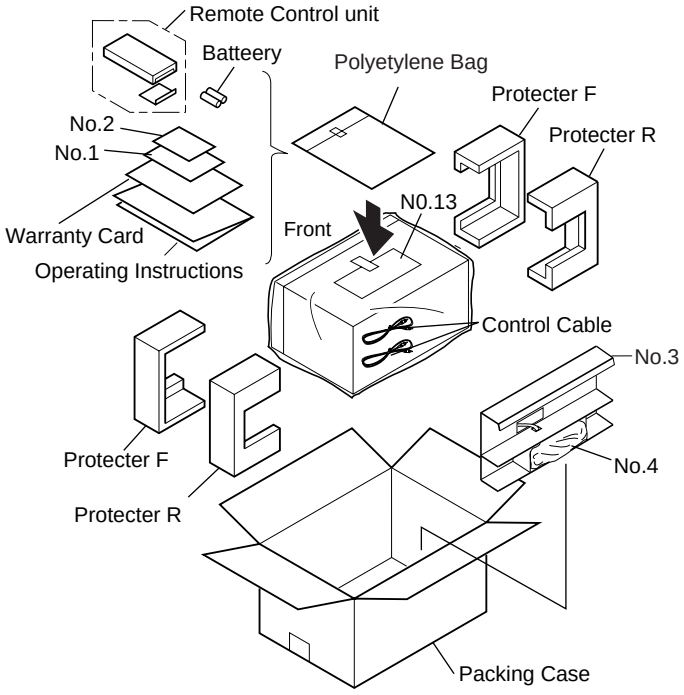
Ref. No.	Mark	Symbol and Description	Part No.					Remarks
			PD-F507					
			KUXJ	WPWXJ	MAMXJ	RLXJ	RDXJ	
		ASSEMBLES						
P5-1	⚠	MOTHER Board Assy	PWM2193	PWM2196	PWM2197	PWM2195	PWM2195	
	NSP	SUB Board Assy	PWX1537	PWX1538	PWX1538	PWX1538	PWX1538	
P7-16	NSP	└ Power SW Board Assy	PWZ3622	PWZ3623	PWZ3623	PWZ3623	PWZ3623	
		PACKING						
P3-1		Operating Instructions (English)	PRB1265	PRB1265	Not used	Not used	Not used	
P3-1		Operating Instructions (English/Spanish/Chinese)	Not used	Not used	PRE1267	PRE1267	PRE1267	
P3-1		Operating Instructions (German/Italian/Dutch/Swedish/Spanish/ Portuguese)	Not used	Not used	PRD1028	Not used	Not used	
P3-5		Control Cable (L=1m)	PDE1247	PDE1247	Not used	Not used	Not used	
P3-10		Packing Case	PHG2301	PHG2303	PHG2313	PHG2303	PHG2303	
P3-12	NSP	Warranty Card	ARY1051	PRY1003	Not used	Not used	Not used	
		CD Liner Notes File	Not used	PHN1051	PHN1051	PHN1051	PHN1051	No.1
		Index Label Sheet (25)	Not used	PRW1422	PRW1422	PRW1422	PRW1422	No.2
		Caution 220V Label	Not used	Not used	Not used	ARR1003	ARR1003	No.13
		EXTERIOR						
P5-2	⚠	Cord Stopper	CM-22C	CM-22B	CM-22B	CM-22B	CM-22B	
P5-4	⚠	AC Power Cord	PDG1015	ADG1123	PDG1062	PDG1003	PDG1056	
P5-5	⚠	Power Transformer (AC120V)	PTT1237	Not used	Not used	Not used	Not used	
P5-5	⚠	Power Transformer (AC220-240V)	Not used	PTT1236	PTT1236	Not used	Not used	
P5-5	⚠	Power Transformer (RLXJ type: AC110-120V/220-240V) (RDXJ type: AC110-127V/220-240V)	Not used	Not used	Not used	PTT1238	PTT1238	
P5-8		Rear Base	PNA2401	PNA2403	PNA2416	PNA2404	PNA2402	
P5-42		65 Label	ORW1069	Not used	Not used	Not used	Not used	
		Insulator (Front Side)	Not used	PNW2766	PNW2766	PNW2766	PNW2766	No.5
		Caution Label	Not used	PRW1018	Not used	PRW1018	Not used	No.6
		FRONT PANEL SECTION						
P7-15		Control Panel	PNW2783	PNW2784	PNW2784	PNW2784	PNW2784	
P7-20		Rubber Sheet	AEB1111	Not used	Not used	Not used	Not used	
		LED Lens	Not used	PNW2019	PNW2019	PNW2019	PNW2019	No.12

Note: • The numbers in the remarks column correspond to the numbers on the exploded diagram, Refer to “EXPLODED VIEWS”.

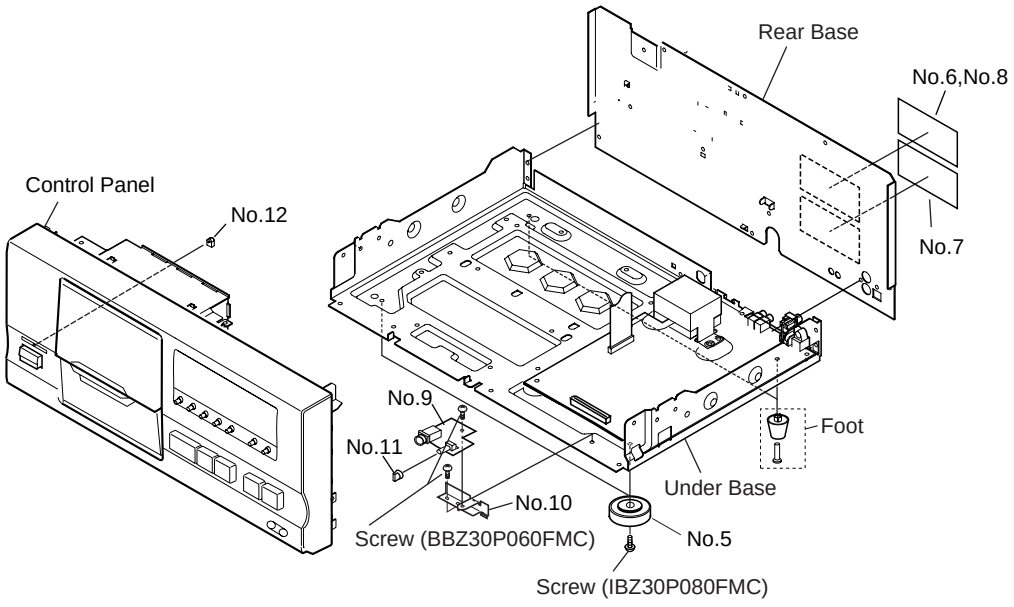
• For ASSEMBLIES, Refer to “ ■ CONTRAST OF PCB ASSEMBLES” and “3. SCHEMATIC AND PCB DIAGRAMS”.

■ EXPLODED VIEWS

● PACKING SECTION



● EXTERIOR and FRONT PANEL SECTION



■ CONTRAST OF PCB ASSEMBLIES

JF MOTHER BOARD ASSY ASSY (For PD-F507)

PWM2197, PWM2195 and PWM2196 are constructed the same except for the following :

Mark	Symbol and Description	Part No.			Remarks
		PWM2196	PWM2197	PWM2195	
	D391-D394	1SS254	Not used	Not used	
	L391	LAU1R0J	Not used	Not used	
	C319,C324,C431,C432	Not used	Not used	CKCYF103Z50	
	C399	CKCYF103Z50	Not used	Not used	
	R391	RD1/4PU244J	Not used	Not used	
	R392	RD1/4PU102J	Not used	Not used	
	JA391,JA392	RKN1004	Not used	Not used	
⚠	S5 (Voltage selector)	Not used	Not used	PSB1006	

■ PCB PARTS LIST

Mark	No.	Description	Part No.

JF MOTHER BOARD ASSY (PWM2196: For PDF-507/WPWXJ)

SEMICONDUCTORS

	IC151		CXA1782CQ
	IC301		CXD2529Q
⚠	IC31,IC34		ICP-N10
⚠	IC201,IC202		LA6520
	IC405		NJM4558D-D
	IC351		PD4900B
⚠	IC21		PQ05RR12
	Q151		2SA854S
	Q403,Q404		2SD2144S
	Q341		2SK246
	Q152		DTA124ES
	Q321,Q405		DTC124ES
	D321,D341,D352,D391-D394		1SS254
	D54		MTZJ18B
	D218		MTZJ6.2B
⚠	D11-D14,D52		S5688G

COILS

	L351		LAU100J
	L322,L391		LAU1R0J

CAPACITORS

	C181		CCCCH100D50
	C341,C342		CCCCH120J50
	C318		CCCSL181J50
	C315		CCCSL221J50
	C481,C482		CCCSL390J50
	C171,C175,C301,C302		CEAT101M10
	C311-C314,C316,C322,C352		CEAT101M10
	C52		CEAT101M35
	C26		CEAT102M16
	C433,C434		CEAT220M25
	C131-C133,C27		CEAT330M16
	C25		CEAT332M16
	C351		CEAT471M6R3
	C169,C170,C356		CEAT4R7M50
	C309		CEATR47M50
	C156,C161,C164,C168,C218		CGCYX103K25
	C321		CGCYX104K25
	C160		CGCYX333K25
	C167		CGCYX472K25
	C152,C307		CGCYX473K25
	C163		CKCYB102K50
	C176,C306,C441,C442		CKCYB152K50
	C305		CKCYB222K50
	C162		CKCYB332K50
	C151		CKCYB682K50
⚠	C11-C13,C15,C16,C17		CKCYF103Z50
	C159,C172,C173,C205		CKCYF103Z50
	C210,C215,C219,C2231,C29		CKCYF103Z50
	C304,C310,C317,C323,C325		CKCYF103Z50
	C353,C354,C357,C399		CKCYF103Z50
	C153-C155,C158		CQMA104J50
	C157		CQMA823J50

RESISTORS

	VR153,VR155 (10kΩ)		RCP1045
	VR151,VR152,VR154 (22kΩ)		RCP1046
	VR156 (220kΩ)		RCP1049
	Other Resistors		RD1/4PU□□□J

OTHERS

	CN351	CONNECTOR	HLEM34S-1
	CN201	CONNECTOR 6P	RKP-533
	CN202	CONNECTOR 25P	VKN1201
	JA401	2P PIN JACK	PKB1023
	JA391,JA392	REMOCON JACK	RKN1004
	JA321	OPTICAL OUTPUT JACK	TOTX178
⚠		TERMINAL 2P	RKC-061
	X341	CRYSTAL RESONATOR (16.9344MHz)	PSS1008
	X351	CERAMIC RESONATOR (4.194MHz)	VSS1014

JF MOTHER BOARD ASSY (PWM2200: For PDF-607/WYXJ)

SEMICONDUCTORS

	IC406		BA15218
	IC151		CXA1782CQ
	IC301		CXD2529Q
⚠	IC31,IC34		ICP-N10
⚠	IC201,IC202		LA6520
	IC302		LC89170M
	IC405		NJM4558D-D
	IC401		PD2026B(L)
	IC351		PD4900B
⚠	IC21		PQ05RR12

Mark	No.	Description	Part No.
	Q151		2SA854S
	Q403,Q404		2SD2144S
	Q152		DTA124ES
	Q321,Q405		DTC124ES
	D54		MTZJ18B
	D218		MTZJ6.2B
⚠	D11-D14,D52		S5688G
COILS			
	L351		LAU100J
	L322		LAU1R0J
	L3410		LAUR47J
CAPACITORS			
	C181		CCCCH100D50
	C403		CCCCH120J50
	C404		CCCCH220J50
	C318		CCCSL181J50
	C315		CCCSL221J50
	C429,C430,C43-C438		CCCSL390J50
	C171,C175,C301,C302,C311		CEAT101M10
	C314,C316,C322,C352		CEAT101M10
	C52		CEAT101M35
	C26		CEAT102M16
	C433,C434		CEAT220M25
	C131-C133,C27,C432		CEAT330M16
	C25		CEAT332M16
	C351		CEAT471M6R3
	C169,C170,C356		CEAT4R7M50
	C309		CEATR47M50
	C413-C416		CFTXA104J50
	C156,C161,C164,C168,C218		CGCYX103K25
	C321		CGCYX104K25
	C160		CGCYX333K25
	C167		CGCYX472K25
	C152,C307		CGCYX473K25
	C163		CKCYB102K50
	C176,C306		CKCYB152K50
⚠	C441,C442		CKCYB152K50
	C305		CKCYB222K50
	C162		CKCYB332K50
	C151		CKCYB682K50
⚠	C11-C13,C15		CKCYF103Z50
	C159		CKCYF103Z50
⚠	C16,C17		CKCYF103Z50
	C172,C173,C205,C210,C215		CKCYF103Z50
	C219,C29,C304,C310		CKCYF103Z50
	C312,C313,C317,C319		CKCYF103Z50
	C323-C325,C353,C354,C357		CKCYF103Z50
	C387,C405,C417,C461,C471		CKCYF103Z50
	C153-C155,C158,C382		CQMA104J50
	C157		CQMA823J50
RESISTORS			
	VR153,VR155 (10kΩ)		RCP1045
	VR151,VR152,VR154 (22kΩ)		RCP1046
	VR156 (220kΩ)		RCP1049
	Other Resistors		RD1/4PU □□□J
OTHERS			
	CN401	CONNECTOR	52147-0310
	CN351	CONNECTOR	HLEM38S-1
	CN201	CONNECTOR 6P	RKP-533
	CN202	CONNECTOR 25P	VKN1201
	JA401	2P PIN JACK	PKB1023
	JA321	OPTICAL OUTPUT JACK	TOTX178
⚠		TERMINAL 2P	RKC-061
	X401	CRYSTAL RESONATOR (16.9344MHz)	PSS1008
	X351	CRYSTAL RESONATOR (4.194MHz)	VSS1014

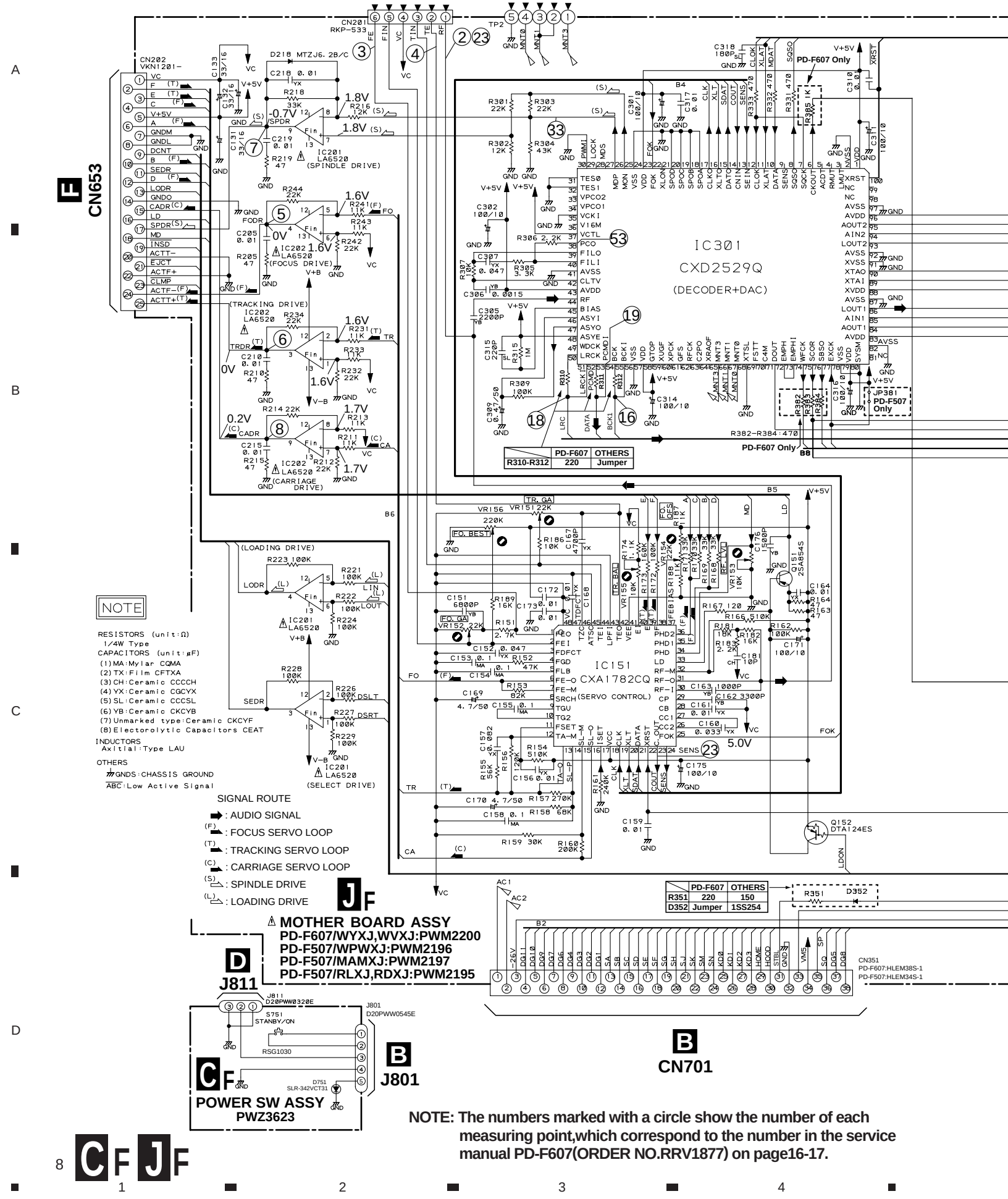
K HEADPHONE BOARD ASSY (PD-F607 only)

Mark	No.	Description	Part No.
COILS			
⚠	L501,L506,L507		LAU1R0J
CAPACITORS			
⚠	C501,C502		CKCYF103Z50
⚠	C507		CKCYF473Z50
RESISTORS			
	VR501	(5kΩ)	PCS1003
OTHERS			
	JA501	HEADPHONE JACK	RKN1002
	J501	JUMPER WIRE 3P	D20PWY0310E

C F POWER SW BOARD ASSY

Mark	No.	Description	Part No.
SEMICONDUCTOR			
	D751		SLR-342VCT31
SWITCHE			
	S751		RSG1030
OTHERS			
	J801	JUMPER WIRE 5P	D20PWW0545E

3.SCHEMATIC AND PCB DIAGRAMS



NOTE: When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCBPARTS LIST".

PD-F607, PD-F507

IC301 (CXD2529Q)

PIN No.	1	2to4	7	8	9	10	11	12	13	14	16	17	23	24	25	26	27	38	39	40	41	42	43
Voltage(V)	5	0	4.7	1.2-1.4	1.2-1.4	4.4	5	4.7	4.7	0.05	5	4.7	5	5	0	5	2.6-2.7	2.5	3.1	2.5	0	3.1	5

PIN No.	44	45	46	47	48	50to55	56	57	61	71	75	78	79	82	83	84to86	87	88	89,90	91,92	93to95	96	97	100
Voltage(V)	2.5	0.9	2.5	2.5	5	2.5	0	5	5	2.5	0	0	5	0	5	2.5	0	5	2.5	0	2.5	5	0	5

	PD-F607	OTHERS
R427-R430	22K	—
R435,R436	16K	Jumper
R437,R438	16K	47K
R439-R442	43K	82K
R487-R490	—	100K
C429,C430	39P	—
C435-C436	39P	—

	PD-F607	OTHERS
C312,C313	0.01	100/10

	PD-F607	OTHERS
R447	470	Jumper
R448	470	Jumper
R461	470	1K
R462	470	1K

	PD-F607	OTHERS
D321	Jumper	1SS254

	R360	R361
PD-F607	○	×
OTHER	×	○

	RDXJ,RLXJ	OTHER
JP1	×	○
JP2	○	×
S5	○	×

PD-F607 Only

EXCEPT PD-F607

PD-F507/RDXJ Only

WYXJ,WVXJ :33/16
RDXJ :0.01

HEADPHONE ASSY
PWX1549

PD-F607 Only (R386–R388:470)

EXCEPT PD-F507/WPWXJ

PD-F507/WPWXJ Only

IC351
PD4900B
(SYSTEM CONTROL)

CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE WITH SAME TYPE NO. ICP-N10, MFD BY ROHM CO., LTD. FOR IC31 AND IC34.

AC Power Cord
PD-F607/WYXJ,PD-F507,RLXJ:PDG1003
PD-F607/WVXJ:PDG1055
PD-F507/WPWXJ:ADG1123
PD-F507/MAMXJ:PDG1062
PD-F507/RDXJ:PDG1056

RKC-061
LIVE
NEUTRAL

Power Requirement
WYXJ,WVXJ,WPWXJ:AC220-240 50/60Hz
RLXJ:AC110-120V/220-240V 50/60Hz
RDXJ:AC110-127V/220-240V 50/60Hz
MAMXJ:AC220-230V 50/60Hz

WYXJ,WVXJ:PTT1236
WPWXJ,MAMXJ:PTT1236
RLXJ,RDXJ:PTT1238

■ PCB DIAGRAMS

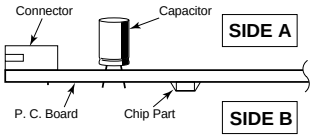
NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

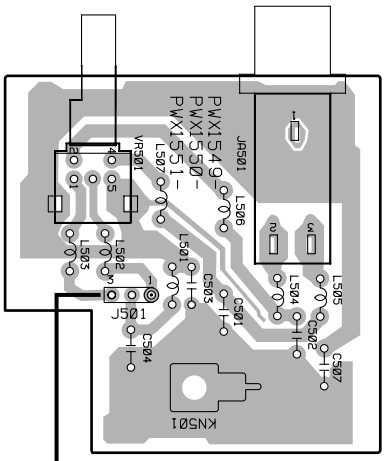
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.

4. Viewpoint of PCB diagrams



K HEADPHONE BOARD ASSY



SIDE A

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