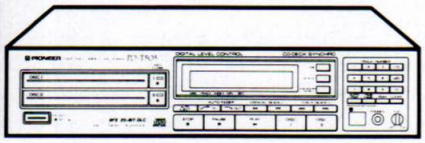
PIONEER®
The future of sound and vision.

Service Manual



ORDER NO.
ARP1952

TWIN–TRAY COMPACT DISC PLAYER

PD-T505
PD-T505-S
PD-T305

PD–T505, PD–T505–S AND PD–T305 HAVE FOLLOWING VERSIONS :

Type	Applicable model			Power requirement	Export destination
	PD–T505	PD–T505–S	PD–T305		
KC	○	–	○	AC120V only	Canada
HEM	○	–	○	AC220V, 240V (switchable) *	European continent
HEWM	–	○	–	AC220V, 240V (switchable) *	European continent
HB	○	–	○	AC220V, 240V (switchable) *	United Kingdom
HPW	○	–	○	AC220V, 240V (switchable) *	Australia
SD	○	–	○	AC110V, 120V–127V, 220V, 240V (switchable)	Kindgom of Saudi Arabia and general market

*Change the position of jumper of the transformer board assembly.

- This manual is applicable to the PD–T505/KC, HEM, HB, HPW, SD, PD–T505–S/HEWM, PD–T305/KC, HEM, HB, HPW and SD types.
- As to the PD–T505/HEM, HB, HPW, SD, PD–T505–S/HEWM, PD–T305/HEM, HB, HPW and SD types, refer to pages 30–48.
- The PD–T505–S is the same as the PD–T505 except for color.
- As for adjusting method, refer to two–CD model (PD–T505) in ADJUSTMENT FOR CD PLAYER VOL. 1 (ORDER NO. ARP2000).

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CONTENTS

1. SAFETY INFORMATION

(FOR EUROPEAN MODEL ONLY)

VARO!
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

ADVERSEL:
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLING.

VARNING!
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

LASER
Kuva 1
Lasersateilyn varoitusmerkki

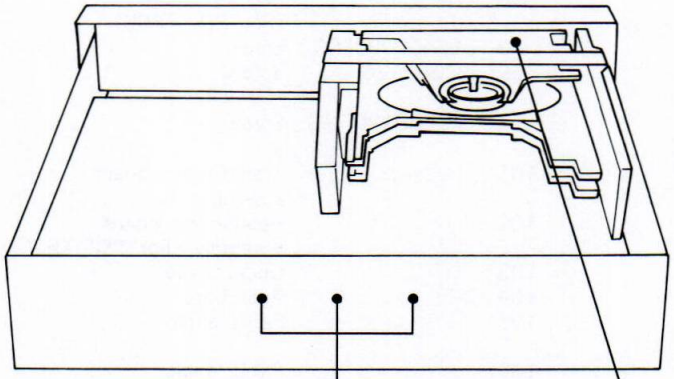
WARNING!
DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.

IMPORTANT
THIS PIONEER APPARATUS CONTAINS LASER OF HIGHER CLASS THAN 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

LASER
Picture 1
Warning sign for laser radiation

LABEL CHECK (TWIN type)



Additional Laser Caution

1. Laser Interlock Mechanism
   The ON/OFF status of the U (S601) and L (S603) switches for detecting the disc clamp state is detected by the system microprocessor, and the design prevents laser diode oscillation when both switches U and L are OFF (high level).
   Thus, the interlock will no longer function if switches U (S601) and L (S603) are deliberately shorted.
   Laser diode oscillation will continue if pins 2 and 3 of CXA1471S (IC101) are connected to ground or pin 20 is connected to high level (ON) or the terminals of Q101 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 or higher laser beam.

HEM and HB types

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

HB type

ADVARSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHED SAFBRYDERE ER UDE AF FUNKTION.
UNDGÅ UDSÆTTELSE FOR STRÅLING.
VORSICHT!
UNSICHTBARE LASER-STRAHLUNG TRITT AUS, WENN DECKEL (ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!
VRW1094

HEM type

CLASS 1
LASER PRODUCT
VRW-328

HEM and HB types

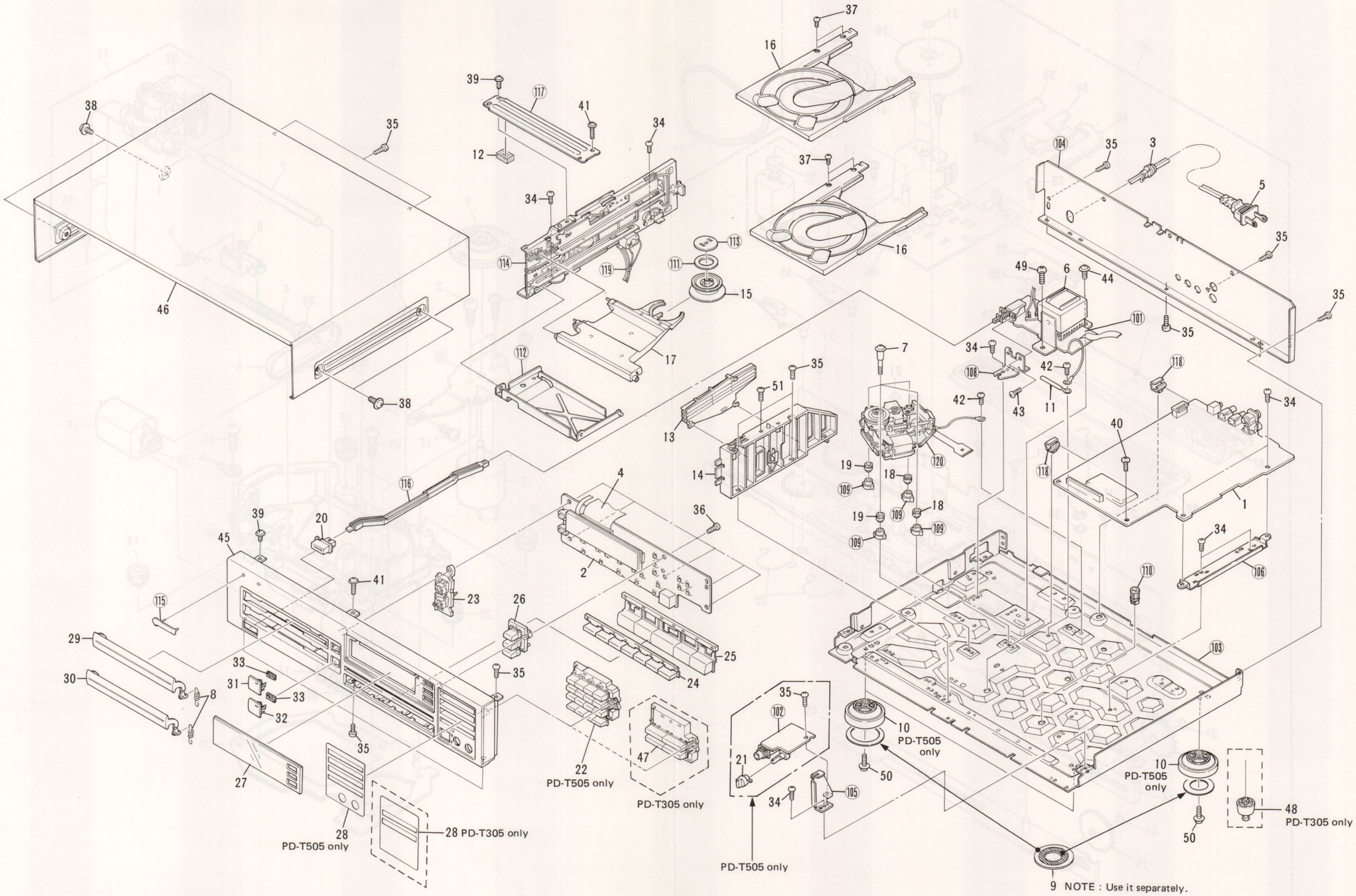
2. EXPLODED VIEWS AND PARTS LIST

NOTES :
- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the impotance 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.

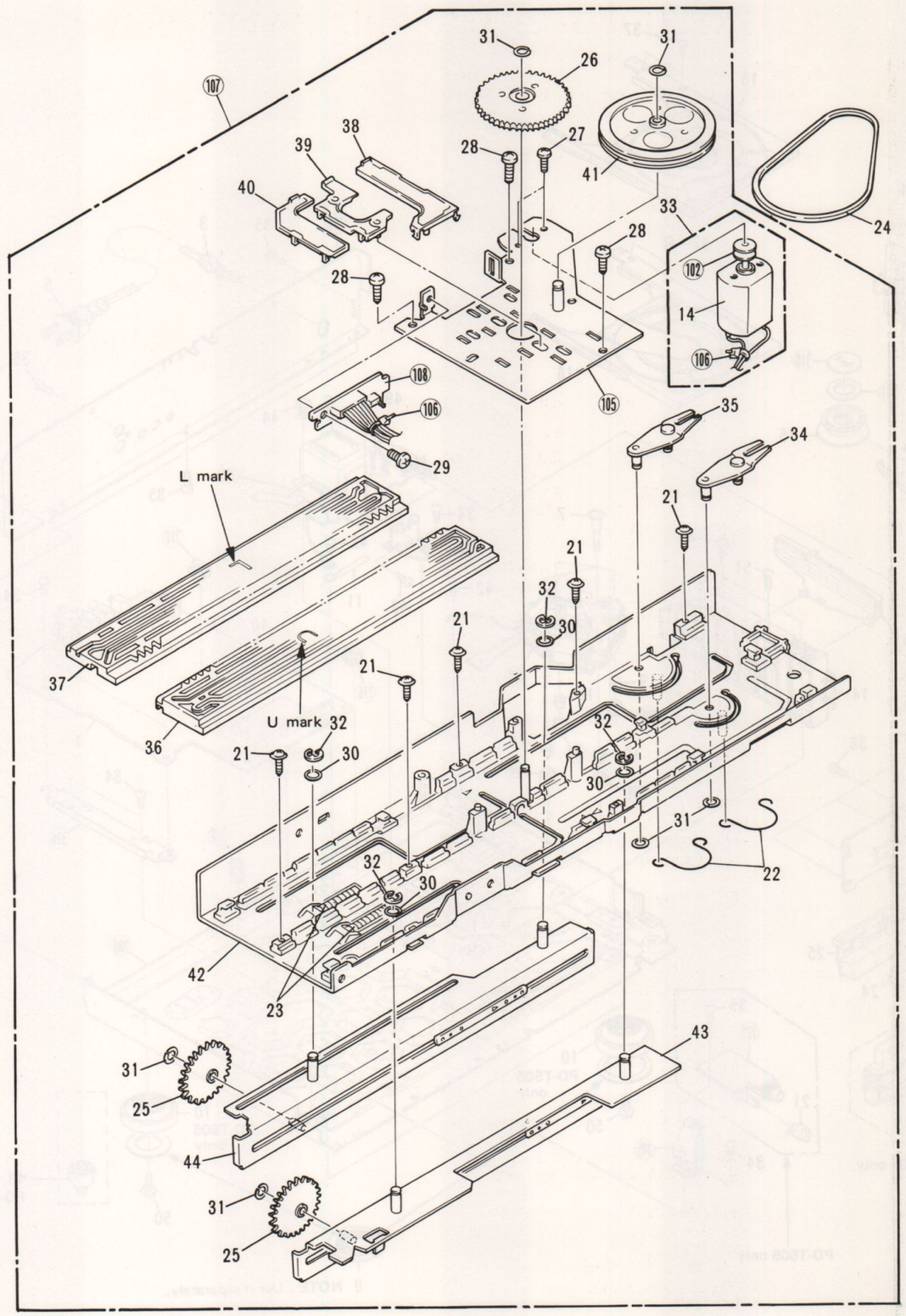
Parts List of Exterior (PD−T505/KC, PD−T305/KC)

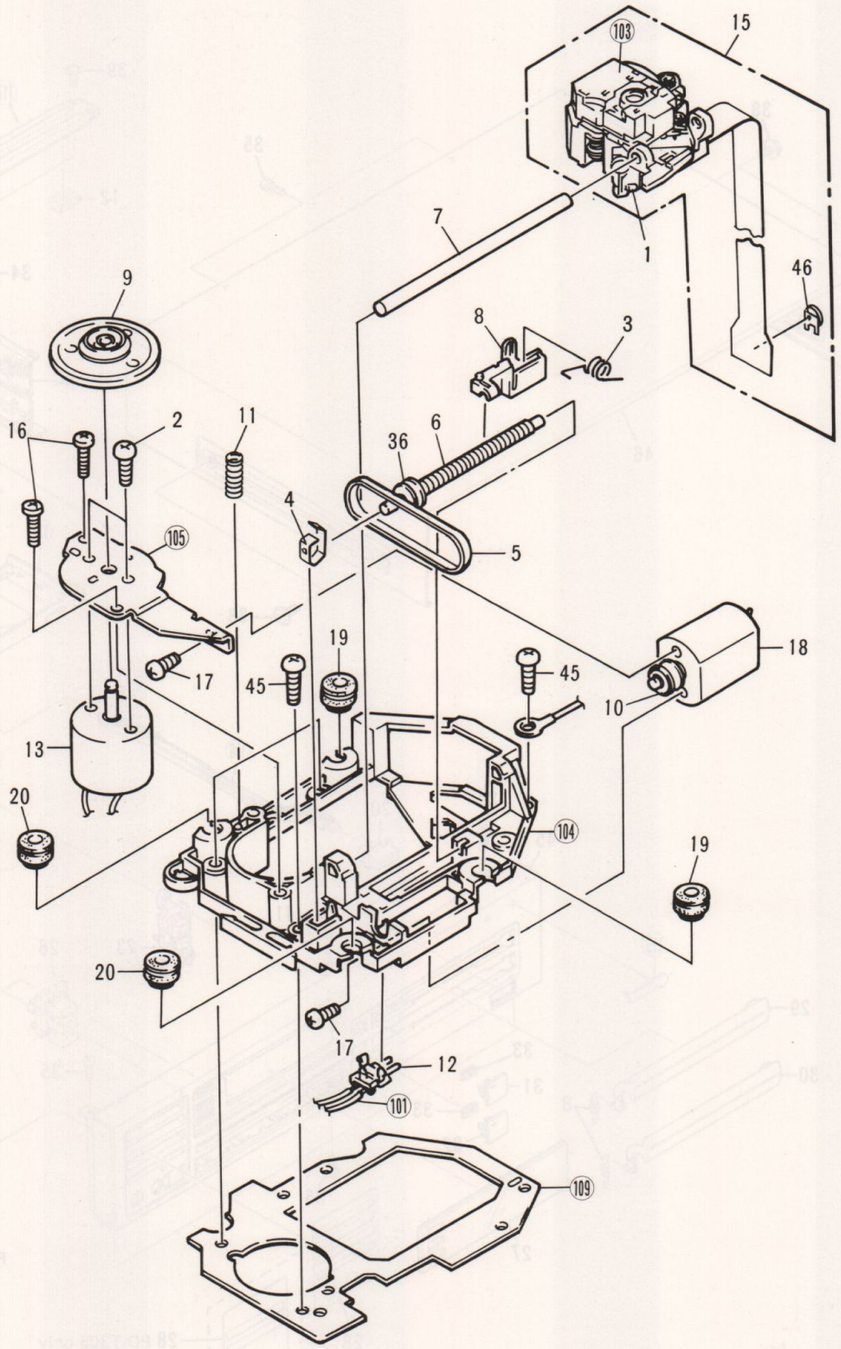
Mark	No.	Part No.	Description
⊙	1	PWZ1897	Main board assembly (For PD−T505)
⊙		PWZ1891	Main board assembly (For PD−T305)
⊙	2	PWZ1908	Control board assembly (For PD−T505)
⊙		PWZ1906	Control board assembly (For PD−T305)
⚠	3	CM−22C	Strain relief
⚠	4	PDD1050	36P F.F.C/30V (For PD−T505)
		PDD1051	34P F.F.C/30V (For PD−T305)
⚠	5	PDG1002	AC power cord
⚠	6	PTT1147	Power transformer
	7	PBA1011	Screw
	8	PBH1090	Door spring
	9	PNM1070	Stopper (For PD−T505)
	10	PNW1263	Insulator (For PD−T505)
	11	RNH−184	Cord clamper
	12	PNM1011	Cushion rubber
	13	PNW1476	Guide
⊙	14	PNW1477	Guide base
	15	PNW1612	Clamper
	16	PNW1722	Tray
	17	PNW1723	Clamper holder
	18	PEB1014	Floating rubber
	19	PEB1132	Floating rubber
	20	PAC1058	Power button
	21	PAC1370	Headphone knob (For PD−T505)
	22	PAC1440	Select button (For PD−T505)
	23	PAC1448	O/C button
	24	PAC1449	Track button
	25	PAC1450	Play button
	26	PAC1451	Time button
	27	PAM1369	Display window (A)
	28	PAM1383	Headphone name plate (For PD−T505)
		PAM1368	Headphone name plate (For PD−T305)
	29	PNW1683	Door 1
	30	PNW1684	Door 2
	31	PNW1685	O/C cap 1
	32	PNW1686	O/C cap 2
	33	PNW1688	Lens
	34	BBZ30P060FMC	Screw
	35	BBZ30P080FCC	Screw
	36	BBZ30P120FMC	Screw
	37	BMZ20P040FZK	Screw
	38	FBT40P080FZK	Screw
	39	IBZ30P050FZK	Screw
	40	IBZ30P150FCU	Screw
	41	IPZ30P080FMC	Screw
	42	PDZ30P050FMC	Screw
	43	PMZ30P060FCU	Screw
	44	PSA40P080FZB	Screw
	45	PEA1049	Control panel assembly (For PD−T505)
		PEA1047	Control panel assembly (For PD−T305)
	46	PYY1131	Bonnet
	47	PAC1452	Program button (For PD−T305)
	48	PXA1201	Leg assembly (For PD−T305)
	49	BBZ40P080FCC	Screw
	50	IBZ30P120FCC	Screw
	51	BPZ30P120FMC	Screw
	101		Transformer board assembly
	102		Headphone board assembly (For PD−T505)
	103		Under base
	104		Rear base
	105		Panel angle
	106		P.C.B. angle
	107		Panel angle
	108		Switch angle
	109		Mechanism support
	110		P.C.B. spacer
	111		Magnet
	112		Synchronous lever
	113		Yoke
	114		Loading base assembly
	115		Name plate
	116		Power switch joint
	117		Joint plate
	118		Holder
	119		Binder
	120		Servo mechanism assembly

2.1 EXTERIOR



2.2 MECHANISM SECTION





Parts List of Mechanism Section

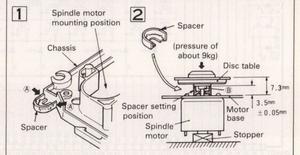
Mark	No.	Part No.	Description
	1	CKSYF105Z16	Chip capacitor
	2	JFZ20P025FMC	Screw
	3	PBH1084	Drive spring
	4	PBK1057	Plate spring
	5	PEB1072	Belt
	6	PLA1003	Drive screw
	7	PLA1071	Guide bar
	8	PNW1605	Half nut
	9	PNW1608	Disc table
	10	PNW1634	Pulley
	11	PBH1009	Earth spring
	12	PSH1003	S Slide switch
	13	PEA1028	Spindle motor assembly (with oil)
	14	PXM1002	Motor (LOADING)
	15	PEA1030	Pick-up assembly
	16	BPZ20P080FZK	Screw
	17	PMZ20P030FMC	Screw
	18	PXM1012	Motor (CARRIAGE)
	19	PEB1014	Floating rubber
	20	PEB1132	Floating rubber
	21	PBA1035	Screw
	22	PBH1074	Spring
	23	PBH1076	Spring
	24	PEB1106	Belt
	25	PNW1478	Sync gear
	26	PNW1486	Gear
	27	PMZ20P030FMC	Screw
	28	PPZ26P080FMC	Screw
	29	PSZ26P050FMC	Screw
	30	WA32L060C035	Washer
	31	WT26D047D025	Washer
	32	Z39-010	E ring
	33	PYY1089	Motor assembly (LOADING)
	34	PNB1180	Auxiliary arm (U)
	35	PNB1181	Auxiliary arm (L)
	36	PNW1481	Rack (U)
	37	PNW1482	Rack (L)
	38	PNW1483	Switch lever (U)
	39	PNW1484	Switch lever (S)
	40	PNW1485	Switch lever (L)
	41	PNW1487	Gear pulley
	42	PNW1488	Loading base
⊙	43	PXT1025	Slide angle (U) unit
⊙	44	PXT1026	Slide angle (L) unit
	45	PBZ30P080FMC	Screw
	46	PCP1008	Semi-fixed resistor

Mark	No.	Part No.	Description
	101		Connector assembly (6P)
	102		Motor pulley
	103		Actuater cover
	104		Mechanism chassis
	105		Motor base
	106		Binder
	107		Loading base assembly
	108		SW board assembly
	109		Mechanism base

• How to install the disc table

1 Use nippers or other tool to cut the two 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 motor base (angled so it doesn't touch section Ⓑ), and stick the disc table on top (takes about 9kg pressure). Take off the spacer.

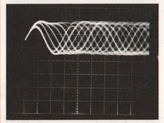


Wave Forms

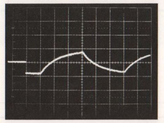
Note: The encircled numbers denote measuring points in the schematic diagram.

*1 50T-JUMP: After switching to the pause mode, press the manual search key.
*2 FOCUS-IN: Press the key without loading a disc.

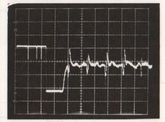
② TP1-Pin 1: PLAY MODE (RF) 500mV/div 500nsec/div



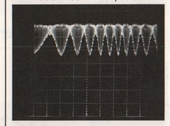
⑤ Q201 Emitter: FOCUS-IN (*2) MODE (FODR) 1V/div 200msec/div



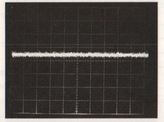
⑦ IC201-Pin 9: TRACK SEARCH MODE (SPDR) 2V/div 50msec/div



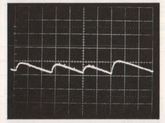
② TP1-Pin 1: TRACK SEARCH MODE (RF) 500mV/div 200μsec/div



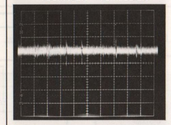
⑤ Q201 Emitter: PLAY MODE (FODR) 1V/div 1msec/div



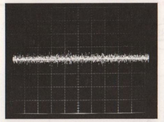
⑧ IC201-Pin 3: PLAY MODE (CADR) 1V/div 2S/div



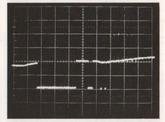
③ TP1-Pin 6: PLAY MODE (FOER) 100mV/div 10msec/div



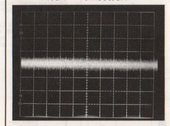
⑥ Q203 Emitter: PLAY MODE (TRDR) 500mV/div 1msec/div



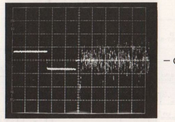
⑧ IC201-Pin 3: TRACK SEARCH MODE (CADR) 2V/div 200msec/div



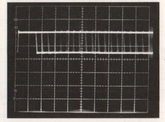
④ TP1-Pin 2: PLAY MODE (TRER) 1V/div 10msec/div



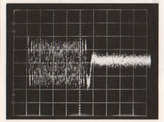
⑥ Q203 Emitter: 50T-JUMP (*1) MODE (TRDR) 500mV/div 1msec/div



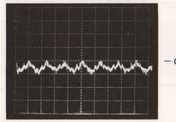
⑨ IC151-Pin 38: PLAY MODE (EFM) 2V/div 500nsec/div



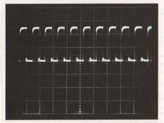
④ TP1-Pin 2: 50T-JUMP (*1) MODE (TRER) 1V/div 1msec/div



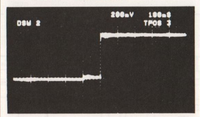
⑦ IC201-Pin 9: PLAY MODE (SPDR) 1V/div 50msec/div



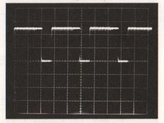
⑯ IC301-Pin 35: PLAY MODE (1kHz) (BCLK) 2V/div 500nsec/div



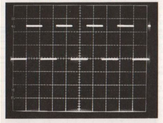
㉒ IC21-Pin 5: POWER SWITCH-ON (RST) 2V/div 100msec/div



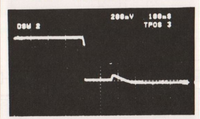
㉖ IC401-Pin 13: PLAY MODE (1kHz) (DIG.FIL.WDCK) 2V/div 1μsec/div



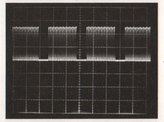
⑱ IC301-Pin 32: PLAY MODE (1kHz) (LRCK) 2V/div 10μsec/div



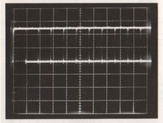
㉒ IC21-Pin 5: POWER SWITCH-OFF (RST) 2V/div 100msec/div



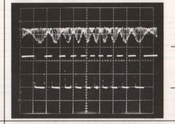
㉗ IC401-Pin 15: PLAY MODE (1kHz) (DIG.FIL.BCLK) 2V/div 1μsec/div



⑲ IC301-Pin 34: PLAY MODE (1kHz) (DATA) 2V/div 500nsec/div

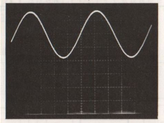


㉓ : TRACK SEARCH MODE
Upper: TP1-Pin 1 (RF) 1V/div
Lower: IC151-Pin 35 (MIRR) 2V/div 200μsec/div

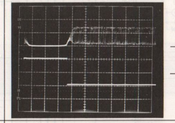


㉘

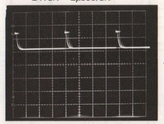
⑳ IC402-Pin 1: PLAY MODE (1kHz) (D/A OUT) 1V/div 200μsec/div



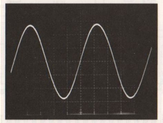
㉔ : PLAY MODE
Upper: TP1-Pin 1 (RF) 1V/div
Lower: IC151-Pin 36 (DFCT) 5V/div 200μsec/div



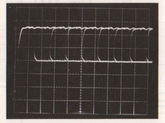
㉝ IC301-Pin 4: PLAY MODE (MDP) 2V/div 2μsec/div



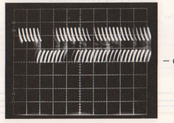
㉑ PIN-OUTPUT: PLAY MODE (1kHz) 1V/div 200μsec/div



㉕ IC401-Pin 12: PLAY MODE (1kHz) (DIG.FIL.DATA) 2V/div 100nsec/div

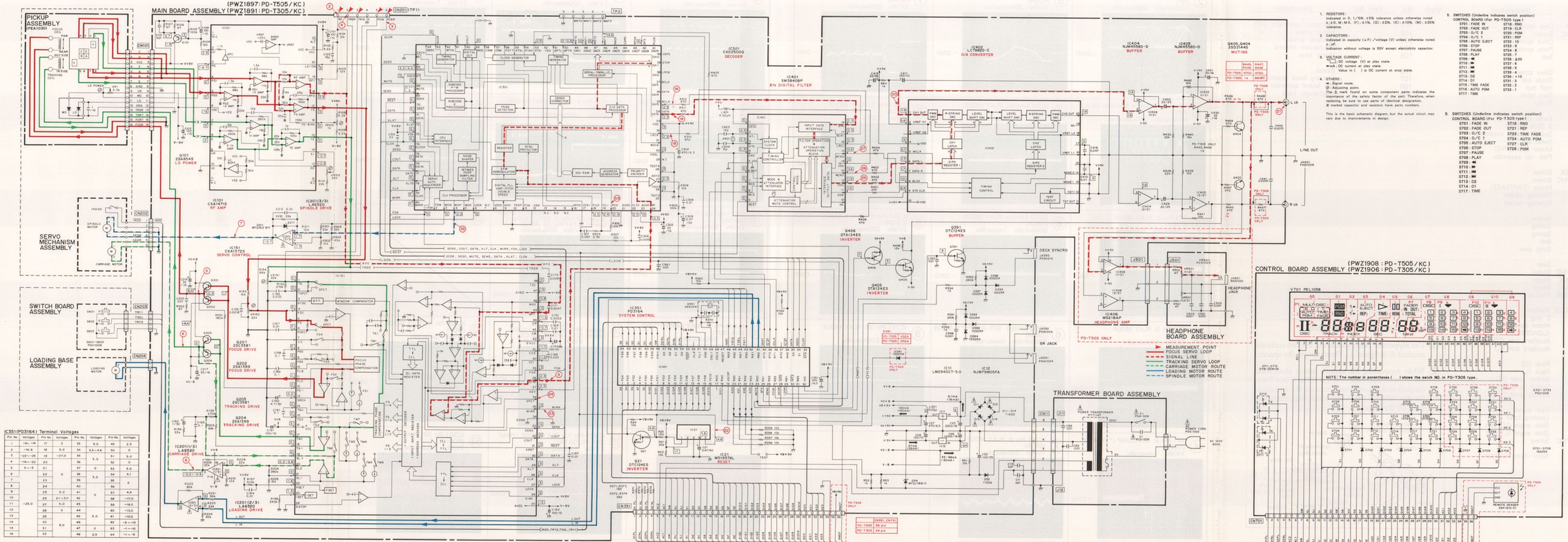


㊸ IC301-Pin 20: PLAY MODE (PCO) 2V/div 10μsec/div



3. SCHEMATIC DIAGRAM

(FOR PD-T505/KC AND PD-T305/KC TYPES)



IC351(PD3164) Terminal Voltages

Pin No.	Voltages	Pin No.	Voltages	Pin No.	Voltages	Pin No.	Voltages
1	-9~-14	17	0	33	5.0	49	2.5
2	-16.6	18	5.0	34	3.3~4.4	50	0
3	-22~-26	19	-27.0	35	5.0	51	5.0
4	-14~-22	20		36		52	0
5	0~-5	21	0	37	0	53	5.0
6	22	22		38	5.0	54	4.1
7	23	23		39		55	0
8	24	24		40		56	
9	25	5.0	41	0	57	4.4
10	26	27~5.0	42		58	-17.0
11	-25.0	27	5.0	43		59	-16.0
12		28	0	44		60	-13.0
13		29	5.0	45	5.0	61	-10.0
14		30		46		62	-5~-13
15		31		47	0	63	-1~-10
16		32		48	2.5	64	-1~-9

1. RESISTORS :
Indicated in Ω, J/ERK ±5% tolerance unless otherwise noted
k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10%, (M) : ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (F) / •voltage (V) unless otherwise noted
p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT :
└ DC voltage (V) at play state.
•mA : DC current at play state.
Value in ( ) is DC current at stop state.

4. OTHERS :
→ Signal route.
Ⓐ : Adjusting point.
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.
■ marked capacitor and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES (Underline indicates switch position)
CONTROL BOARD (For PD-T505 type)

S701 : FADE IN	S718 : RND
S702 : FADE OUT	S719 : CLR
S703 : O/C 2	S720 : PGM
S704 : O/C 1	S721 : REP
S705 : AUTO EJECT	S722 : TIME
S706 : STOP	S723 : 5
S707 : PAUSE	S724 : 6
S708 : PLAY	S725 : 7
S709 : ⏮	S726 : ≥20
S710 : ⏭	S727 : 8
S711 : ⏮	S728 : 9
S712 : ⏭	S729 : 4
S713 : O2	S730 : ≤10
S714 : O1	S731 : 3
S715 : TIME FADE	S732 : 2
S716 : AUTO PGM	S733 : 1
S717 : TIME	

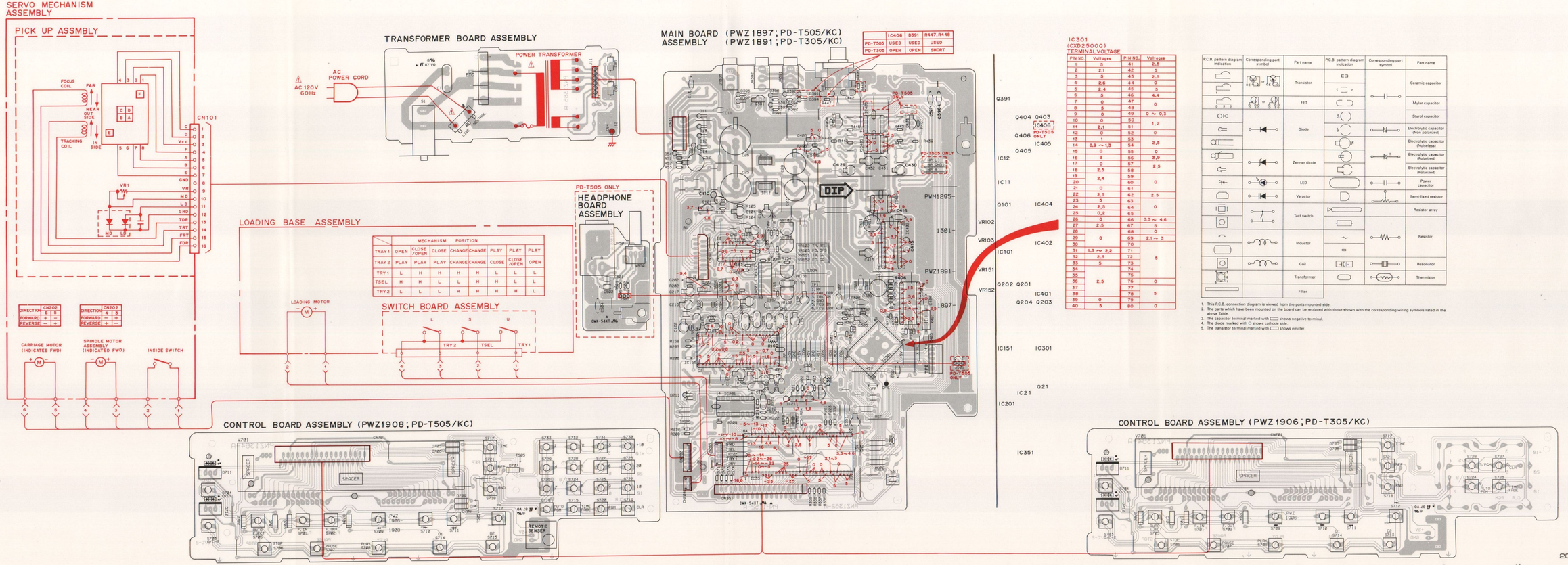
5. SWITCHES (Underline indicates switch position)
CONTROL BOARD (For PD-T305 type)

S701 : FADE IN	S718 : RND
S702 : FADE OUT	S721 : REP
S703 : O/C 2	S723 : TIME FADE
S704 : O/C 1	S724 : AUTO PGM
S705 : AUTO EJECT	S727 : CLR
S706 : STOP	S728 : PGM
S707 : PAUSE	
S708 : PLAY	
S709 : ⏮	
S710 : ⏭	
S711 : ⏮	
S712 : ⏭	
S713 : O2	
S714 : O1	
S717 : TIME	

4. P.C. BOARDS CONNECTION DIAGRAM

(FOR PD–T505/KC AND PD–T305/KC TYPES)

- View from component side



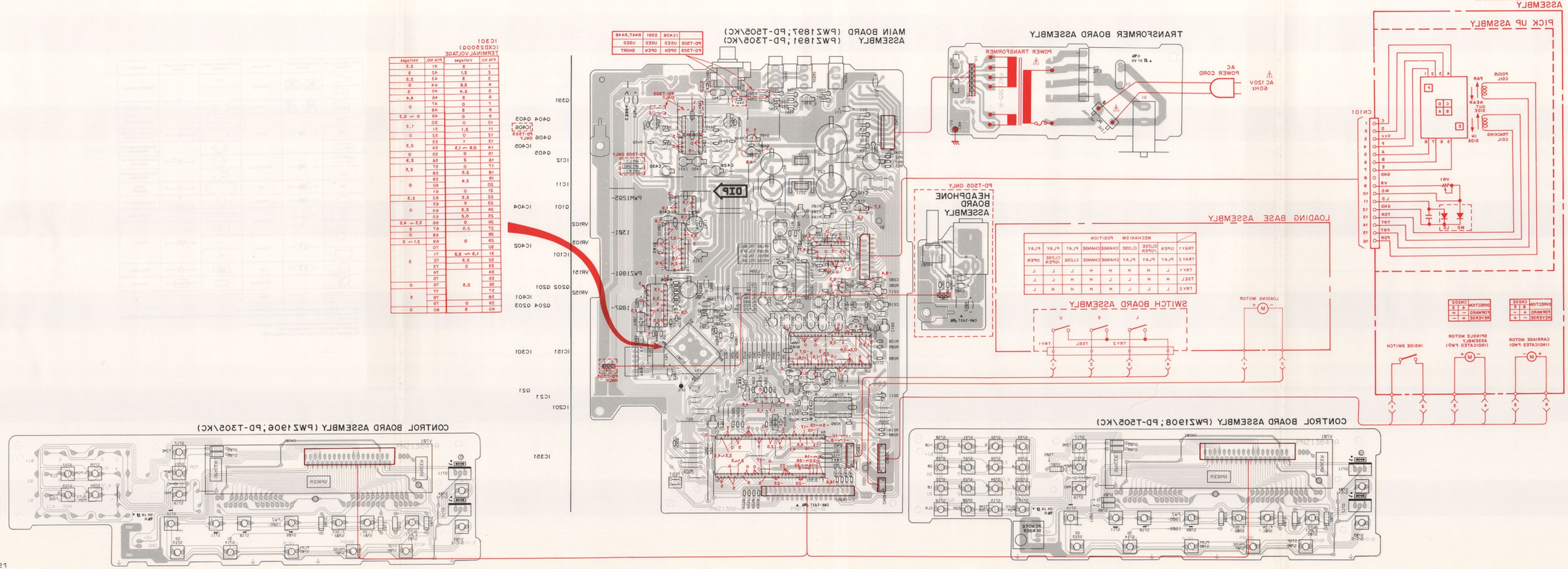
P.C.B. pattern diagram indication	Corresponding part symbol	Part name	P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor			Ceramic capacitor
		FET			Mylar capacitor
		Diode			Styrol capacitor
					Electrolytic capacitor (Non polarized)
					Electrolytic capacitor (Noiseless)
		Zenner diode			Electrolytic capacitor (Polarized)
					Electrolytic capacitor (Polarized)
		LED			Power capacitor
		Varactor			Semi-fixed resistor
		Tact switch			Resistor array
		Inductor			Resistor
		Coil			Resonator
		Transformer			Thermistor
		Filter			

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with ○ shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.

4. P.C. BOARDS CONNECTION DIAGRAM

(FOR PD-T505/KC AND PD-T305/KC TYPES)

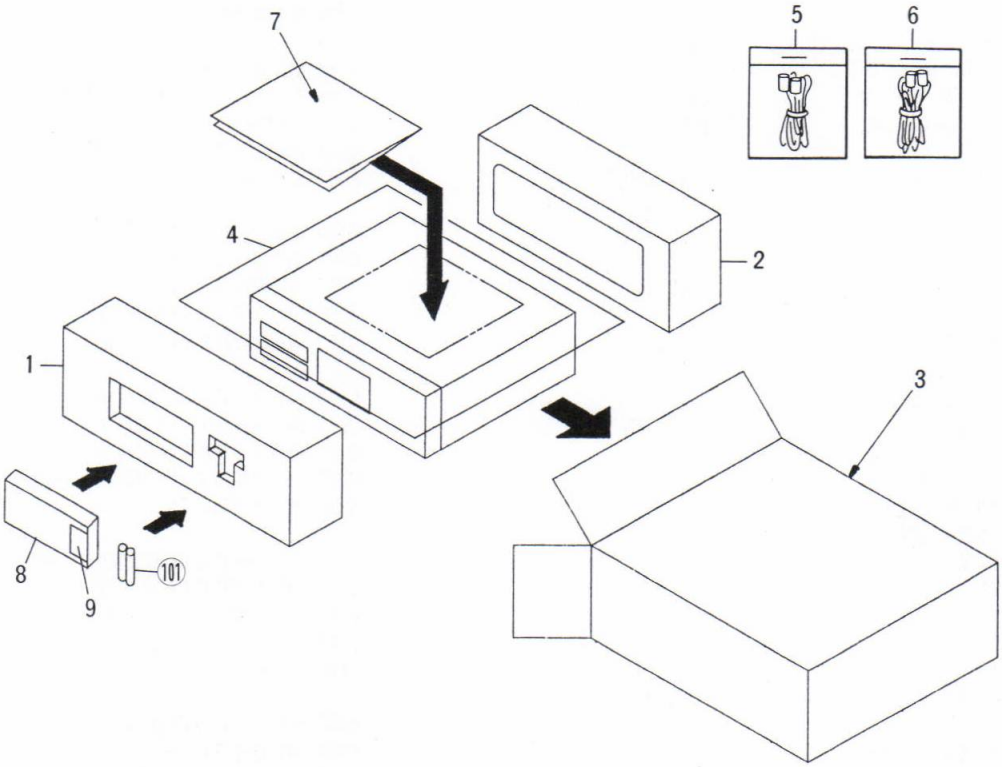
• View from soldering side



5. PACKING

Parts List (PD−T505/KC, PD−T305/KC)

Mark	No.	Part No.	Description
	1	PHA1124	Protector (F)
	2	PHA1125	Protector (R)
	3	PHG1439	Packing case (For PD−T505)
		PHG1425	Packing case (For PD−T305)
	4	Z23−007	Sheet
	5	PDE−319	Connection cord (Mini)
	6	PDE1001	Connection cord
	7	PRB1120	Operating instructions (English)
	8	PWW1048	Remote control unit (For PD−T505)
	9	VNL−634	Case (C) (For PD−T505)
	101		Battery (For PD−T505)



6. P.C.B's PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the impotance 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 ····· RD1/4PS [5][6][1] J
47k Ω → 47 × 10^3 → 473 ····· RD1/4PS [4][7][3] J
0.5 Ω → 0R5 ····· RN2H [0][R][5] K
1 Ω → 010 ····· RS1P [0][1][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 ····· RN1/4SR [5][6][2][1] F

⊙ MAIN BOARD ASSEMBLY(PWZ1897) (For PD-T505/KC)

SEMICONDUCTORS

Mark	No.	Symbol & Description	Part No.
⚠		IC11 IC	LM2940CT-5.0
⚠		IC12 REGULATOR IC	NJM79M05FA
		IC21 SYSTEM RESET IC	M51957AL
		IC101 PRE AMP IC	CXA1471S
		IC151 SERVO IC	CXA1372S
⚠		IC201 POWER OP-AMP	LA6520
		IC301 EFM DEMODULATION IC	CXD2500Q
		IC351 MICROCOMPUTER, IC	PD3164
		IC401 DIGITAL FILTER, IC	SM5840BP
		IC402 D/A CONVERTER, IC	LC78820-C
		IC404, 405 OP-AMP IC	NJM4558D-D
		IC406	M5218AP
		Q21 TRANSISTOR	DTC124ES
		Q101 TRANSISTOR	2SA854S
		Q201 TRANSISTOR	2SC3581
		Q202 TRANSISTOR	2SA1399
		Q203 TRANSISTOR	2SC3581
		Q204 TRANSISTOR	2SA1399
		Q391 TRANSISTOR	DTC124ES
		Q403, 404 TRANSISTOR	2SD2144S
		Q405 TRANSISTOR	DTC124ES
		Q406 TRANSISTOR	DTA124ES
⚠		D11-14 DIODE	11ES2
⚠		D52 DIODE	11ES2
		D54 ZENNER DIODE	MTZJ16B
		D211 ZENNER DIODE	MTZJ6.2B
		D391-397 DIODE	1SS254

COILS/TRANSFORMERS

Mark	No.	Symbol & Description	Part No.
		L351, 401	LAUR22K

CAPACITORS

Mark	No.	Symbol & Description	Part No.
		C11 CERAMIC CAPACITOR	CKCYF103Z50
		C13 CERAMIC CAPACITOR	CKCYF103Z50
		C21 ELECTR. CAPACITOR	CEASR47M50
		C25 ELECTR. CAPACITOR	CEAS222M16
		C26 ELECTR. CAPACITOR	CEAS102M16
		C27 ELECTROLYTIC CAPACIT	CEAS471M6R3
		C28 ELECTR. CAPACITOR	CEAS101M10
		C52 ELECTR. CAPACITOR	CEAS101M35
		C101, 102 ELECTR. CAPACITOR	CEAS101M10
		C103 CERAMIC CAPACITOR	CCCCH180J50
		C104 ELECTR. CAPACITOR	CEAS101M10
		C110 CERAMIC CAPACITOR	CKDYF103Z50
		C151-153 ELECTR. CAPACITOR	CEAS101M10
		C155 MYLOR FILM CAPACITOR	CQMA182J50
		C156 MYLOR FILM CAPACITOR	CQMA333K50
		C157 MYLOR FILM CAPACITOR	CQMA103K50
		C158, 159 MYLOR FILM CAPACITOR	CQMA104K50
		C160 ELECTR. CAPACITOR	CEAS4R7M50
		C161 MYLOR FILM CAPACITOR	CQMA104K50
		C162 ELECTR. CAPACITOR	CEAS010M50
		C163 MYLOR FILM CAPACITOR	CQMA104K50
		C164 MYLOR FILM CAPACITOR	CQMA103K50
		C167 CERAMIC CAPACITOR	CKCYF103Z50
		C168 MYLOR FILM CAPACITOR	CQMA333K50
		C169 MYLOR FILM CAPACITOR	CQMA103K50
		C170 MYLOR FILM CAPACITOR	CQMA332J50
		C171 MYLOR FILM CAPACITOR	CQMA472J50
		C172 MYLOR FILM CAPACITOR	CQMA472K50
		C202 CERAMIC CAPACITOR	CKCYF103Z50
		C212 MYLOR FILM CAPACITOR	CQMA103K50
		C216, 217 ELECTR. CAPACITOR	CEAS330M16
		C301 MYLOR FILM CAPACITOR	CQMA104K50
		C302 ELECTROLYTIC CAPACIT	CEAS471M6R3
		C303 ELECTR. CAPACITOR	CEAS330M16
		C306 CERAMIC CAPACITOR	CKCYB152K50
		C307 MYLOR FILM CAPACITOR	CQMA473J50
		C308 MYLOR FILM CAPACITOR	CQMA103K50
		C309 ELECTR. CAPACITOR	CEASR47M50
		C351 ELECTROLYTIC CAPACIT	CEAS471M6R3
		C361 CERAMIC CAPACITOR	CKCYF103Z50
		C397 CERAMIC CAPACITOR	CKCYF103Z50
		C396 CERAMIC CAPACITOR	CKCYB102K50
		C403, 404 CERAMIC CAPACITOR	CCCCH150J50
		C411 ELECTR. CAPACITOR	CEAS101M10

Mark	No.	Symbol & Description	Part No.
		C413 ELECTR. CAPACITOR	CEAS330M16
		C415 CERAMIC CAPACITOR	CKCYF103Z50
		C416 CERAMIC CAPACITOR	CKCYF473Z50
		C429, 430 ELECTR. CAPACITOR	CEAS220M25
		C431, 432 ELECTR. CAPACITOR	CEAS330M16
		C441, 442 MYLOR FILM CAPACITOR	CQMA152J50
		RESISTORS	
		R21-24 CARBONFILM RESISTOR	RD1/6PM□□□J
		R51-53 CARBONFILM RESISTOR	RD1/6PM□□□J
		R101-110 CARBONFILM RESISTOR	RD1/6PM□□□J
		R153-158 CARBONFILM RESISTOR	RD1/6PM□□□J
		R160 CARBONFILM RESISTER	RD1/6PM□□□J
		R201-203 CARBONFILM RESISTOR	RD1/6PM□□□J
		R205, 206 CARBONFILM RESISTER	RD1/6PM□□□J
		R208-212 CARBONFILM RESISTOR	RD1/6PM□□□J
		R221-224 CARBONFILM RESISTOR	RD1/6PM□□□J
		R301-312 CARBONFILM RESISTOR	RD1/6PM□□□J
		R352 CARBONFILM RESISTOR	RD1/6PM□□□J
		R356-360 CARBONFILM RESISTOR	RD1/6PM□□□J
		R370-374 CARBONFILM RESISTOR	RD1/6PM□□□J
		R391-394 CARBONFILM RESISTOR	RD1/6PM□□□J
		R401-406 CARBONFILM RESISTOR	RD1/6PM□□□J
		R411 CARBONFILM RESISTOR	RD1/6PM□□□J
		R429, 430 CARBONFILM RESISTOR	RD1/6PM□□□J
		R439-442 CARBONFILM RESISTOR	RD1/6PM□□□J
		R445-448 CARBONFILM RESISTOR	RD1/6PM□□□J
		R496-498 CARBONFILM RESISTOR	RD1/6PM□□□J
		VR102 VR	VRTB6VS223
		VR103 VR	VRTB6VS102
		VR151, 152 VR	VRTB6VS223
		OTHERS	
		CN11 JUMPER CONNECTOR	KPC6
		CN101 CONNECTOR	52045-1610
		CN351 CONNECTOR	HLEM36S-1
		JA391, 392 REMOTE CONTROL JACK/12V	PKN1004
		JA393 MINI-JACK	RKN1014
		JA401 2P PIN JACK	PKB1009
		X351 CERAMIC RESONATOR	VSS1014
		X401 XTAL RES (OSC)	PSS1006

⊙ MAIN BOARD ASSEMBLY(PWZ1891) (For PD-T305/KC)

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
⚠		IC11 IC	LM2940CT-5.0
⚠		IC12 REGULATOR IC	NJM79M05FA
		IC21 SYSTEM RESET IC	M51957AL
		IC101 PRE AMP IC	CXA1471S
		IC151 SERVO IC	CXA1372S
⚠		IC201 POWER OP-AMP	LA6520
		IC301 EFM DEMODULATION IC	CXD2500Q
		IC351 MICROCOMPUTER, IC	PD3164
		IC401 DIGITAL FILTER, IC	SM5840BP
		IC402 D/A CONVERTER, IC	LC78820-C
		IC404, 405 OP-AMP IC	NJM4558D-D
		Q21 TRANSISTOR	DTC124ES
		Q101 TRANSISTOR	2SA854S
		Q201 TRANSISTOR	2SC3581
		Q202 TRANSISTOR	2SA1399
		Q203 TRANSISTOR	2SC3581
		Q204 TRANSISTOR	2SA1399
		Q391 TRANSISTOR	DTC124ES
		Q403, 404 TRANSISTOR	2SD2144S
		Q405 TRANSISTOR	DTC124ES
		Q406 TRANSISTOR	DTA124ES
⚠		D11-14 DIODE	11ES2
⚠		D52 DIODE	11ES2
⚠		D54 ZENNER DIODE	MTZJ16B
⚠		D211 ZENNER DIODE	MTZJ6.2B
		D392-397 DIODE	1SS254
		COILS/TRANSFORMERS	
		L351, 401	LAUR22K
		CAPACITORS	
		C11 CERAMIC CAPACITOR	CKCYF103Z50
		C13 CERAMIC CAPACITOR	CKCYF103Z50
		C21 ELECTR. CAPACITOR	CEASR47M50
		C25 ELECTR. CAPACITOR	CEAS222M16
		C26 ELECTR. CAPACITOR	CEAS102M16
		C27 ELECTROLYTIC CAPACIT	CEAS471M6R3
		C28 ELECTR. CAPACITOR	CEAS101M10
		C52 ELECTR. CAPACITOR	CEAS101M35
		C101, 102 ELECTR. CAPACITOR	CEAS101M10
		C103 CERAMIC CAPACITOR	CCCCH180J50
		C104 ELECTR. CAPACITOR	CEAS101M10
		C110 CERAMIC CAPACITOR	CKDYF103Z50
		C151-153 ELECTR. CAPACITOR	CEAS101M10
		C155 MYLOR FILM CAPACITOR	CQMA182J50
		C156 MYLOR FILM CAPACITOR	CQMA333K50
		C157 MYLOR FILM CAPACITOR	CQMA103K50
		C158, 159 MYLOR FILM CAPACITOR	CQMA104K50
		C160 ELECTR. CAPACITOR	CEAS4R7M50
		C161 MYLOR FILM CAPACITOR	CQMA104K50
		C162 ELECTR. CAPACITOR	CEAS010M50
		C163 MYLOR FILM CAPACITOR	CQMA104K50
		C164 MYLOR FILM CAPACITOR	CQMA103K50
		C167 CERAMIC CAPACITOR	CKCYF103Z50
		C168 MYLOR FILM CAPACITOR	CQMA333K50
		C169 MYLOR FILM CAPACITOR	CQMA103K50
		C170 MYLOR FILM CAPACITOR	CQMA332J50
		C171 MYLOR FILM CAPACITOR	CQMA472J50
		C172 MYLOR FILM CAPACITOR	CQMA472K50
		C202 CERAMIC CAPACITOR	CKCYF103Z50
		C212 MYLOR FILM CAPACITOR	CQMA103K50
		C216, 217 ELECTR. CAPACITOR	CEAS330M16
		C301 MYLOR FILM CAPACITOR	CQMA104K50
		C302 ELECTROLYTIC CAPACIT	CEAS471M6R3
		C303 ELECTR. CAPACITOR	CEAS330M16
		C306 CERAMIC CAPACITOR	CKCYB152K50

Mark	No.	Symbol & Description	Part No.
	C307	MYLOR FILM CAPACITOR	CQMA473J50
	C308	MYLOR FILM CAPACITOR	CQMA103K50
	C309	ELECTR. CAPACITOR	CEASR47M50
	C351	ELECTROLYTIC CAPACIT	CEAS471M6R3
	C361	CERAMIC CAPACITOR	CKCYF103Z50
	C396	CERAMIC CAPACITOR	CKCYB102K50
	C397	CERAMIC CAPACITOR	CKCYF103Z50
	C403, 404	CERAMIC CAPACITOR	CCCCH150J50
	C411	ELECTR. CAPACITOR	CEAS101M10
	C413	ELECTR. CAPACITOR	CEAS330M16
	C415	CERAMIC CAPACITOR	CKCYF103Z50
	C416	CERAMIC CAPACITOR	CKCYF473Z50
	C429, 430	ELECTR. CAPACITOR	CEAS220M25
	C431, 432	ELECTR. CAPACITOR	CEAS330M16
	C441, 442	MYLOR FILM CAPACITOR	CQMA152J50
RESISTORS			
	R21-24	CARBONFILM RESISTOR	RD1/6PM□□□J
	R51-53	CARBONFILM RESISTOR	RD1/6PM□□□J
	R101-110	CARBONFILM RESISTOR	RD1/6PM□□□J
	R153-158	CARBONFILM RESISTOR	RD1/6PM□□□J
	R160	CARBONFILM RESISTER	RD1/6PM□□□J
	R201-203	CARBONFILM RESISTOR	RD1/6PM□□□J
	R205, 206	CARBONFILM RESISTER	RD1/6PM□□□J
	R208-212	CARBONFILM RESISTOR	RD1/6PM□□□J
	R221-224	CARBONFILM RESISTOR	RD1/6PM□□□J
	R301-312	CARBONFILM RESISTOR	RD1/6PM□□□J
	R352	CARBONFILM RESISTOR	RD1/6PM□□□J
	R356-360	CARBONFILM RESISTOR	RD1/6PM□□□J
	R370-374	CARBONFILM RESISTOR	RD1/6PM□□□J
	R391-394	CARBONFILM RESISTOR	RD1/6PM□□□J
	R401-406	CARBONFILM RESISTOR	RD1/6PM□□□J
	R411	CARBONFILM RESISTOR	RD1/6PM□□□J
	R429, 430	CARBONFILM RESISTOR	RD1/6PM□□□J
	R439-442	CARBONFILM RESISTOR	RD1/6PM□□□J
	R445, 446	CARBONFILM RESISTOR	RD1/6PM□□□J
	R496-498	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR102	VR	VRTB6VS223
	VR103	VR	VRTB6VS102
	VR151, 152	VR	VRTB6VS223
OTHERS			
	CN11	JUMPER CONNECTOR	KPC6
	CN101	CONNECTOR	52045-1610
	CN351	CONNECTOR	HLEM34S-1
	JA391, 392	JACK/12V	PKN1004
	JA393		RKN1014
	JA401	JACK	PKB1009
	X351	CERAMIC RESONATOR	VSS1014
	X401	XTAL RES (OSC)	PSS1006

Mark	No.	Symbol & Description	Part No.
HEADPHONE BOARD ASSEMBLY (For PD-T505/KC)			
CAPACITORS			
	C501, 502	CERAMIC CAPACITOR	CKCYB102K50
	C504	CERAMIC CAPACITOR	CKCYF473Z50
RESISTORS			
	R501, 502	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR501	VARIABLE RESISTOR	PCS1003
⊙ CONTROL BOARD ASSEMBLY (PWZ1908)(For PD-T505/KC)			
SEMICONDUCTORS			
	D701-709	DIODE	1S2473
	D721, 722		SPB-25MVW
SWITCHES			
	S701-733	SWITCH	PSG1006
	REMOTE SENSOR		SBX1610-51
OTHERS			
	CN701	CONNECTOR	HLEM36R-1
	V701	FL INDICATOR TUBE	PEL1038
⊙ CONTROL BOARD ASSEMBLY (PWZ1906)(For PD-T305/KC)			
SEMICONDUCTORS			
	D701-706	DIODE	1S2473
	D721, 722		SPB-25MVW
SWITCHES			
	S701-714, 723, 724, 727, 728	SWITCH	PSG1006
OTHERS			
	CN701	CONNECTOR	HLEM34R-1
	V701	FL INDICATOR TUBE	PEL1038
TRANSFORMER BOARD ASSEMBLY			
SWITCH			
⚠	S1	POWER SWITCH	PSA-009
CAPACITORS			
⚠	C1	CAPACITOR(CERAMIC)	RCG-009
	C85, 86	CERAMIC CAPACITOR	CKCYF103Z50

7 IC DESCRIPTIONS

● LC78820 (D/A CONVERTER)

PIN FUNCTIONS

Pin No.	Pin Name	Pin Function
1	CH1OUT	CH1 output terminal (L ch).
2	VrefH1	Reference voltage "H" (Input terminal1).
3	VrefH2	Reference voltage "H" (Input terminal2).
4	VDD	Power supply voltage terminal +5V.
5	WCLK	Word clock input terminal. Generates the internal signal to latch digital audio data (DATAL, DATAR).
6	DATAL	Digital audio data input terminal (L ch). Input by bit serial from MSB. 2's complement format data.
7	DATAR	Digital audio data input terminal (R ch). Input by bit serial from MSB. 2's complement format data.
8	BCLK	Bit clock input terminal. Clock pulse to read-in digital audio data into LSI by bit serial.
9	SYSCLK	System clock input terminal. Main clock pulse to drive LSI. Functions as the interface select terminal in accordance with a mode (MODE1, 2).
10	VDD	Power supply voltage terminal +5V.
11	TSTOUT	Test output terminal. Normally open state.
12	TST1	Test output terminal. Normally connect to GND.
13 14	MODE1 MODE2	Interface select terminal. Refer to the timing chart.
15	GND	GND terminal.
16	VrefL1	Reference voltage "L" Input terminal1.
17	GND	GND terminal.
18	VrefL2	Reference voltage "L" Input terminal2.
19	NC	No connection.
20	CH2OUT	CH2 output terminal (R ch).

8. FOR PD−T505/HEM, HB, HPW, SD, PD−T505−S/HEWM, PD−T305/HEM, HB, HPW AND SD TYPES

8.1 LINE VOLTAGE SELECTION FOR HEM, HB AND HPW TYPES

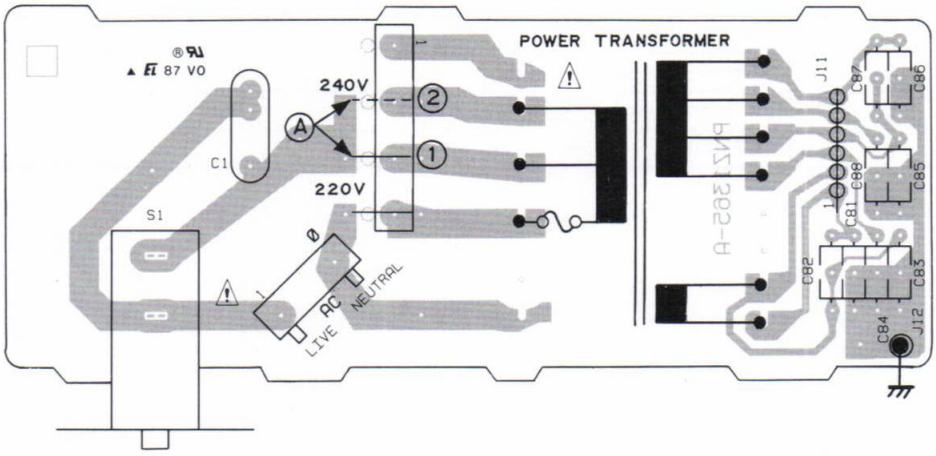
1. Disconnect the AC power cord.
2. Remove the bonnet.
3. Change the position of the jumper Ⓐ as follows.

Voltage	Jumper Ⓐ position
220V	①
240V	②

4. Stick the line voltage label on the rear panel.

Description	Part No.
220V label	AAX−193
240V label	AAX−192

TRANSFORMER BOARD ASSEMBLY



8.2 CONTRAST OF MISCELLANEOUS PARTS FOR PD−T505 AND PD−T505−S TYPES

NOTES :
- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the impotance 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.

The PD−T505／HEM, HB, HPW, SD and PD−T505−S／HEWM types are the same as the PD−T505／KC type with the exception of the following sections.

Mark	Symbol & Description	Part No.					
		PD−T505／KC type	PD−T505／HEM type	PD−T505／HB type	PD−T505／HPW type	PD−T505／SD type	PD−T505−S／HEWM type
⊙	Main board assembly	PWZ1897	PWZ1895	PWZ1895	PWZ1896	PWZ1896	PWZ1895
	Transformer board assembly	Non supply	Non supply	Non supply	Non supply	Non supply	Non supply
⚠	Strain relief	CM−22C	CM−22B	CM−22B	CM−22B	CM−22B	CM−22B
⚠	AC power cord	PDG1002	PDG1008	PDG1009	PDG1011	RDG1003	PDG1008
⚠	Power transformer (120V)	PTT1147	·····	·····	·····	·····	·····
⚠	Power transformer (220／240V)	·····	PTT1148	PTT1148	PTT1148	·····	PTT1148
⚠	Power transformer (110／120−127／220／240V)	·····	·····	·····	·····	PTT1149	·····
⚠	Line voltage selector	·····	·····	·····	·····	PSB1002	·····
	Display window (A)	PAM1369	·····	·····	PAM1369	PAM1369	·····
	Display window (B)	·····	PAM1386	PAM1386	·····	·····	PAM1386
	Power button	PAC1058	PAC1058	PAC1058	PAC1058	PAC1058	PAC1482
	Headphone knob	PAC1370	PAC1370	PAC1370	PAC1370	PAC1370	PAC1402
	Select button	PAC1440	PAC1440	PAC1440	PAC1440	PAC1440	PAC1473
	Track button	PAC1449	PAC1449	PAC1449	PAC1449	PAC1449	PAC1496
	Play button	PAC1450	PAC1450	PAC1450	PAC1450	PAC1450	PAC1499
	Headphone name plate	PAM1383	PAM1383	PAM1383	PAM1383	PAM1383	PAM1415
	Door 1	PNW1683	PNW1683	PNW1683	PNW1683	PNW1683	PNW1754
	Door 2	PNW1684	PNW1684	PNW1684	PNW1684	PNW1684	PNW1755
	O／C cap 1	PNW1685	PNW1685	PNW1685	PNW1685	PNW1685	PNW1756
	O／C cap 2	PNW1686	PNW1686	PNW1686	PNW1686	PNW1686	PNW1757
	Control panel	PNW1701	PNW1701	PNW1701	PNW1701	PNW1701	PNW1730
	Control panel assembly	PEA1049	PEA1049	PEA1049	PEA1049	PEA1049	PEA1077
	Bonnet	PYY1131	PYY1131	PYY1131	PYY1131	PYY1131	PYY1138
	Stopper	PNM1070	PNM1070	PNM1070	·····	·····	PNM1070
	Insulator	PNW1263	PNW1263	PNW1263	·····	·····	PNW1263
	Leg assembly	·····	·····	·····	PXA1201	PXA1201	·····
	Connection cord (Mini)	PDE−319	·····	·····	·····	·····	·····
	Packing case	PHG1439	PHG1439	PHG1439	PHG1439	PHG1439	PHG1467
	Operating instructions (English)	·····	·····	PRB1120	PRB1120	PRB1120	·····
	Operating instructions (English／French)	PRE1116	PRE1116	·····	·····	·····	·····
	Operating instructions (German／Italian／Dutch／Spanish／Swedish／Portuguese)	·····	PRF1033	·····	·····	·····	PRF1033
	Operating instructions (Spanish)	·····	·····	·····	·····	PRC1021	·····

⊙MAIN BOARD ASSEMBLY (PWZ1895 and PWZ1896)

The main board assemblies (PWZ1895 and PWZ1896) are the same as the main board assembly (PWZ1897) with the exception of the following sections.

Mark	Symbol & Description	Part No.			Remarks
		PWZ1897	PWZ1895	PWZ1896	
	D11−D14	11ES2	·····	11ES2	
	D25	·····	2W02−5008−L	·····	
	D391−D394	1SS254	·····	·····	
	IC30−IC32	·····	ICP−N10	·····	
	R391	RD ¼PM244J	·····	·····	
	R392	RD ¼PM102J	·····	·····	
	JA391, JA392 Remote control jack	PKN1004	·····	·····	

TRANSFORMER BOARD ASSEMBLY

The transformer board assemblies (for PD−T505／SD and PD−T505−S／HEWM types) are the same as the transformer board assembly (for PD−T505／KC type) for the service supply parts.

8.3 CONTRAST OF MISCELLANEOUS PARTS FOR PD−T305 TYPE

NOTES :
- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the impotance 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.

The PD−T305／HEM, HB, HPW and SD types are the same as the PD−T305／KC type with the exception of the following sections.

Mark	Symbol & Description	Part No.					Remarks
		PD−T305／KC type	PD−T305／HEM type	PD−T305／HB type	PD−T305／HPW type	PD−T305／SD type	
⊙	Main board assembly	PWZ1891	PWZ1892	PWZ1892	PWZ1891	PWZ1891	
	Headphone board assembly	·····	Non supply	Non supply	Non supply	·····	
	Transformer board assembly	Non supply	Non supply	Non supply	Non supply	Non supply	
⚠	Strain relief	CM−22C	CM−22B	CM−22B	CM−22B	CM−22B	
⚠	AC power cord	PDG1002	PDG1008	PDG1009	PDG1011	RDG1003	
⚠	Power transformer (120V)	PTT1147	·····	·····	·····	·····	
⚠	Power transformer (220／240V)	·····	PTT1148	PTT1148	PTT1148	·····	
⚠	Power transformer (110／120−127／220／240V)	·····	·····	·····	·····	PTT1149	
⚠	Line voltage selector	·····	·····	·····	·····	PSB1002	
	Headphone name plate (C)	PAM1368	·····	·····	PAM1368	PAM1368	
	Headphone name plate (D)	·····	PAM1385	PAM1385	·····	·····	
	Display window (A)	PAM1369	·····	·····	PAM1369	PAM1369	
	Display window (B)	·····	PAM1386	PAM1386	·····	·····	
	Stopper	·····	PNM1070	PNM1070	·····	·····	
	Insulator	·····	PNW1263	PNW1263	·····	·····	
	Leg assembly	PXA1201	·····	·····	PXA1201	PXA1201	
	Headphone knob	·····	PAC1370	PAC1370	·····	·····	
	Operating instructions (English)	·····	·····	PRB1120	PRB1120	·····	
	Operating instructions (English／French)	PRE1116	PRE1116	·····	·····	·····	
	Operating instructions (German／Italian／Dutch／Swedish／Spanish／Portuguese)	·····	PRF1033	·····	·····	·····	
	Operating instructions (Spanish)	·····	·····	·····	·····	PRC1021	

⊙MAIN BOARD ASSEMBLY (PWZ1892)

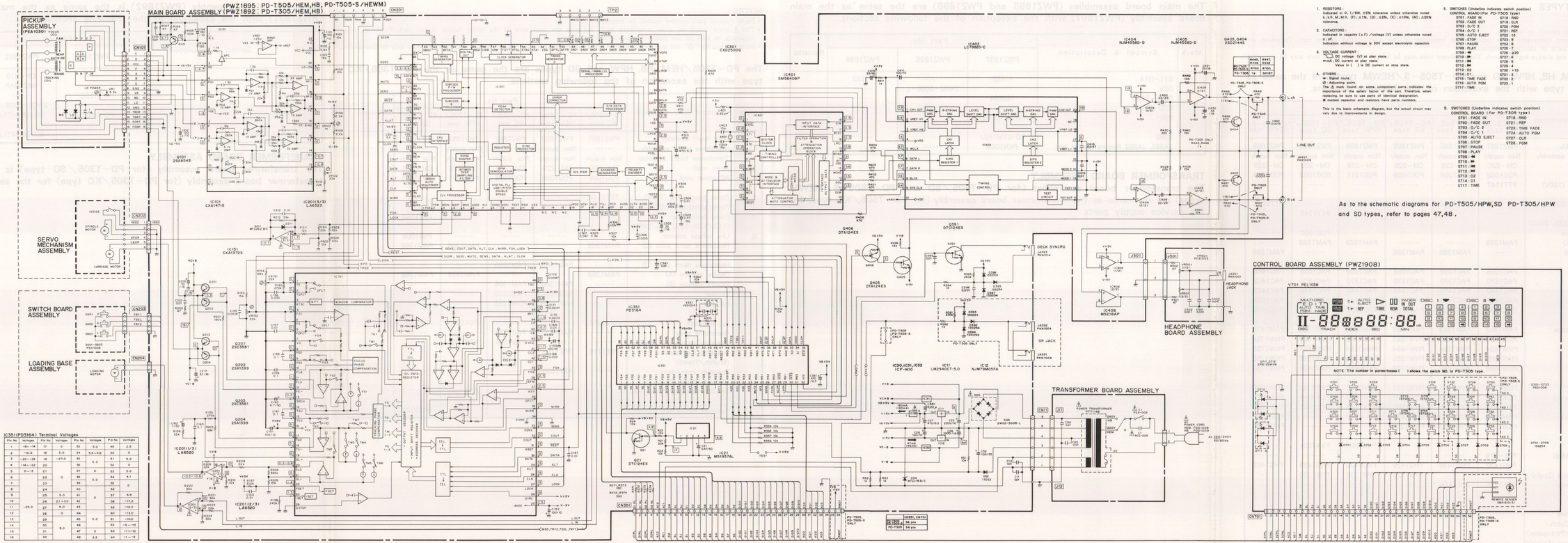
The main board assembly (PWZ1892) is the same as the main board assembly (PWZ1891) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		PWZ1891	PWZ1892	
	IC30−IC32	·····	ICP−N10	
	IC406	·····	M5218AP	
	D11−D14	11ES2	·····	
	D25	·····	2W02−5008−L	
	R445, R446	RD ¼PM102J	RD ¼PM471J	
	R447, R448	·····	RD ¼PM471J	

TRANSFORMER BOARD ASSEMBLY

The transformer board assembly (for PD−T305／SD type) is the same as the transformer board assembly (for PD−T305／KC type) for the service supply parts.

8.4 SCHEMATIC DIAGRAM (FOR PD-T505/HEM, HB, PD-T505-S/HEWM, PD-T305/HEM AND HB TYPES)



1. RESISTORS :
Indicated in: 0, 1/8W, ±5% tolerance unless otherwise noted
k : kΩ, M : MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10%, (M) : ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF) / voltage (V) unless otherwise noted
p : pF.
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT :
DC voltage (V) at play state.
mA : DC current at play state.
Value in ( ) is DC current at stop state.

4. OTHERS :
Signal route.
Adjusting point.
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.
marked capacitor and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES (Underline indicates switch position)
CONTROL BOARD (For PD-T505 type)

ST01 : FADE IN	ST18 : END
ST02 : FADE OUT	ST19 : CLR
ST03 : O/C 2	ST20 : PGM
ST04 : O/C 1	ST21 : REP
ST05 : AUTO EJECT	ST22 : TIME
ST06 : STOP	ST23 : 9
ST07 : PAUSE	ST24 : 8
ST08 : PLAY	ST25 : 7
ST09 : ◀◀	ST26 : ≥20
ST10 : ▶▶	ST27 : 6
ST11 : ⏮	ST28 : 5
ST12 : ⏭	ST29 : 4
ST13 : D1	ST30 : ≤10
ST14 : D2	ST31 : 3
ST15 : TIME FADE	ST32 : 2
ST16 : AUTO PGM	ST33 : 1
ST17 : TIME	

5. SWITCHES (Underline indicates switch position)
CONTROL BOARD (For PD-T305 type)

ST01 : FADE IN	ST18 : END
ST02 : FADE OUT	ST21 : REP
ST03 : O/C 2	ST23 : TIME FADE
ST04 : O/C 1	ST24 : AUTO PGM
ST05 : AUTO EJECT	ST27 : CLR
ST06 : STOP	ST28 : PGM
ST07 : PAUSE	
ST08 : PLAY	
ST09 : ◀◀	
ST10 : ▶▶	
ST11 : ⏮	
ST12 : ⏭	
ST13 : D2	
ST14 : D1	
ST17 : TIME	

As to the schematic diagrams for PD-T505/HPW,SD PD-T305/HPW and SD types, refer to pages 47,48 .

IC351(PD3164) Terminal Voltages

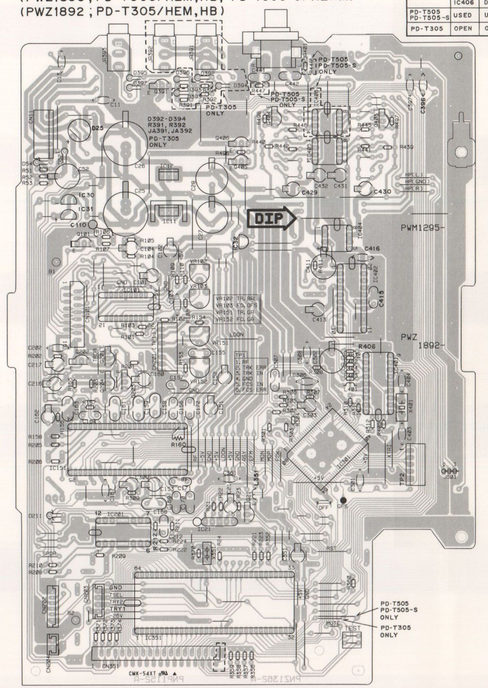
Pin No	Voltages	Pin No	Voltages	Pin No	Voltages	Pin No	Voltages
1	-6~-14	17	0	33	5.0	49	2.5
2	-16.6	18	5.0	34	3.3~4.6	50	0
3	-12~-16	19	-27.0	35	0	51	5.0
4	-14~-22	20		36	5.0	52	0
5	0~-5	21	0	37	0	53	5.0
6		22		38		54	4.1
7		23		39	5.0	55	0
8		24		40		56	
9		25	5.0	41	0	57	4.4
10	-25.0	26	2.1~3.0	42		58	-17.0
11		27	5.0	43	5.0	59	-16.0
12		28	0	44		60	-13.0
13		29		45	5.0	61	-10.0
14		30	5.0	46		62	-5.~-10
15		31		47	0	63	-1.~-10
16		32		48	2.5	64	-1.~-9

8.5 P.C. BOARD PATTERNS (FOR PD-T505/HEM, HB, SD, PD-T505-S/HEWM, PD-T305/HEM, HB AND HPW TYPES)

- View from component side

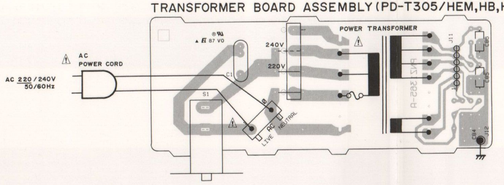
MAIN BOARD ASSEMBLY
(PWZ1895 ; PD-T505/HEM,HB, PD-T505-S/HEWM)
(PWZ1892 ; PD-T305/HEM,HB)

	IC406	D391	R447,R448
PD-T505 PD-T505-S	USED	USED	USED
PD-T305	OPEN	OPEN	SHORT

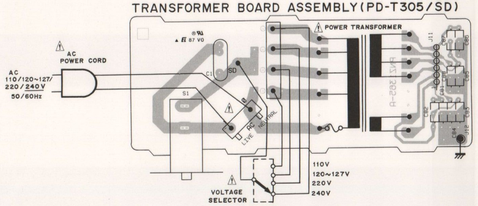


	CN351
PD-T505 PD-T505-S	36 PIN
PD-T305	34 PIN

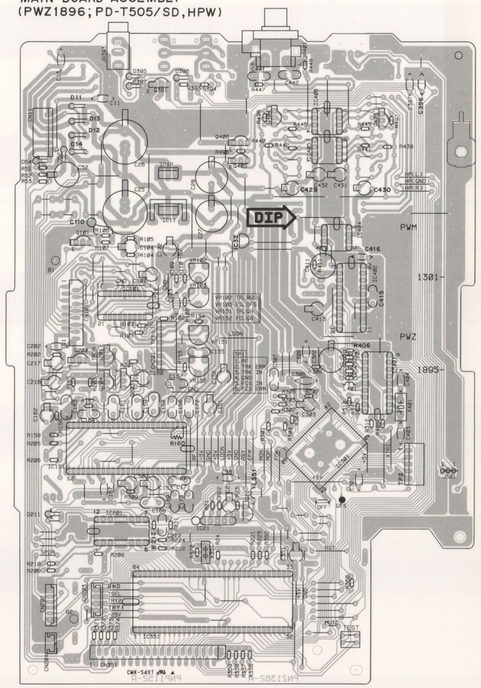
(PD-T505/HEM,HB,HPW)
(PD-T505-S/HEWM)
TRANSFORMER BOARD ASSEMBLY(PD-T305/HEM,HB,HPW)



(PD-T505/SD)
TRANSFORMER BOARD ASSEMBLY(PD-T305/SD)



MAIN BOARD ASSEMBLY
(PWZ1896 ; PD-T505/SD,HPW)



P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		FET
		Diode
		Zenner diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
		Styrol capacitor
		Electrolytic capacitor (Non polarized)
		Electrolytic capacitor (Noseless)
		Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with ▯ shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.

8.5 P.C. BOARD PATTERNS (FOR PD-T505\HEM, HB, SD, PD-T505-S\HEWM, PD-T305\HEM, HB AND HPW TYPES)

● View from soldering side

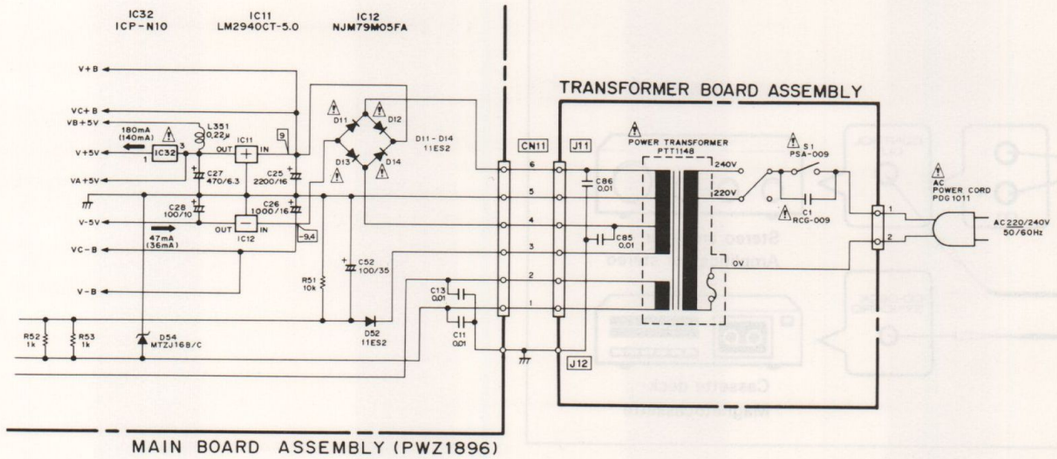
PD-T505	36 PIN	CN351	
PD-T505-S			
PD-T305	34 PIN		

PD-T505	USED	USED	USED
PD-T505-S			
PD-T305	OPEN	OPEN	SHORT

8.6 SCHEMATIC DIAGRAM FOR PD–T505/HPW AND SD TYPES

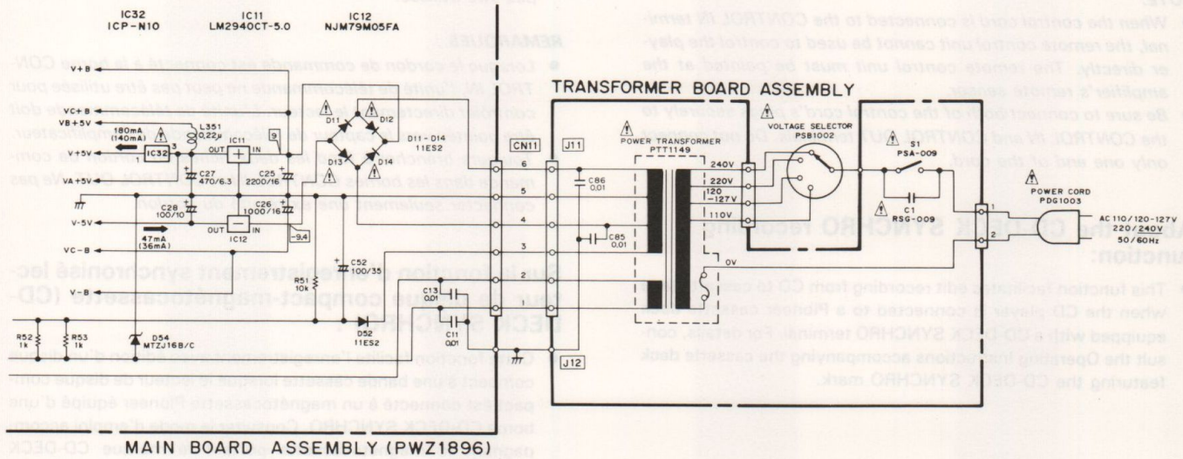
FOR PD–T505/HPW TYPE

Note : The schematic diagram of the PD–T505/HPW type is shown in the PD–T505/KC type with the exception of the following sections.



FOR PD–T505/SD TYPE

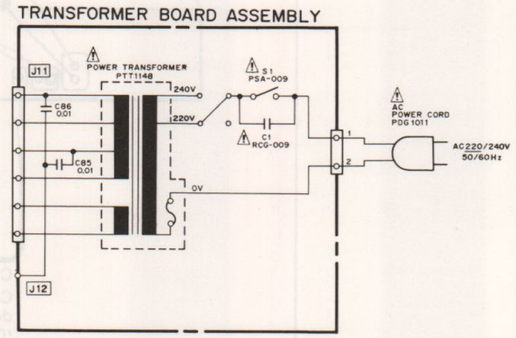
Note : The schematic diagram of the PD–T505/SD type is shown in the PD–T505/KC type with the exception of the following sections.



8.7 SCHEMATIC DIAGRAM FOR PD–T305/HPW AND SD TYPES

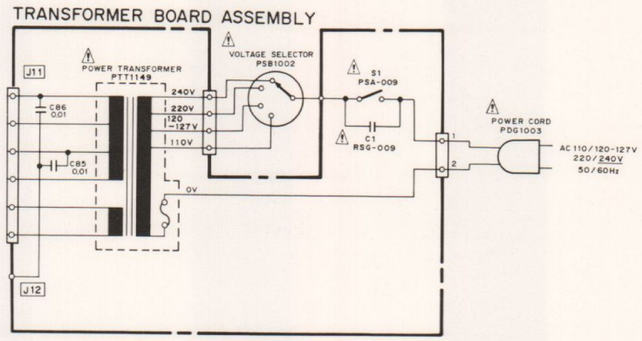
FOR PD–T305/HPW TYPE

Note : The schematic diagram of the PD–T305/HPW type is shown in the PD–T305/KC type with the exception of the following section.

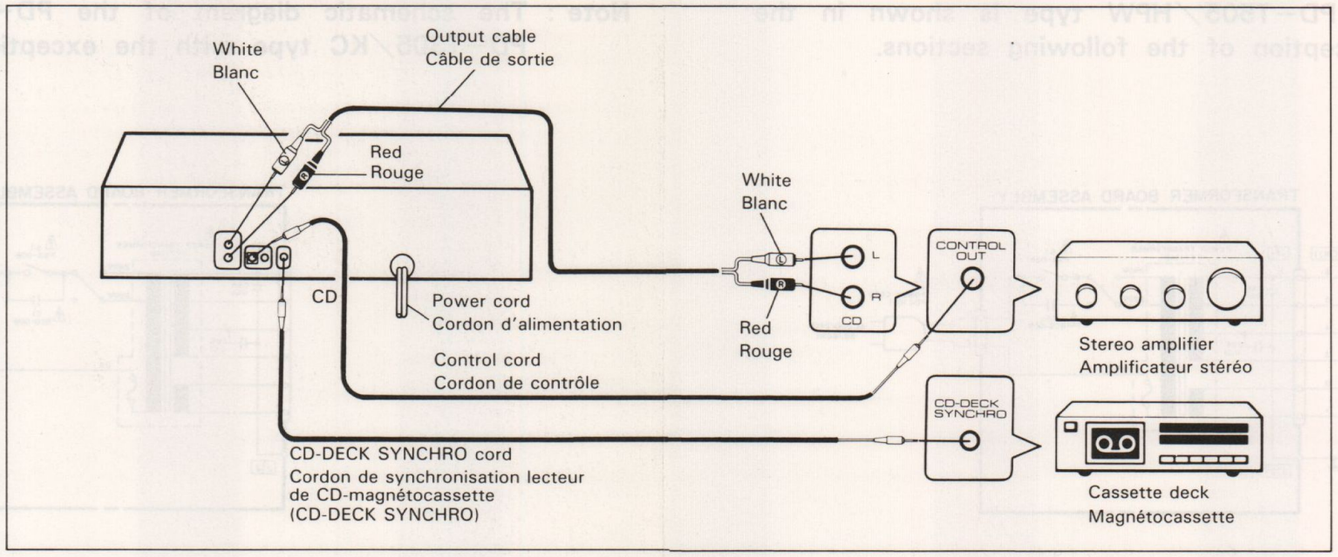


FOR PD–T305/SD TYPE

Note : The schematic diagram of the PD–T305/SD type is shown in the PD–T305/KC type with the exception of the following section.



9. CONNECTIONS／CONNEXIONS



CONNECTING THE OUTPUT CABLE:

Connect the plugs on one end of the cable to your amplifier's input terminals (CD or AUX), and those on the other end to the output terminals on this CD player.

- When connecting the cord, insert the white plugs into the left (L) channel, and the red plugs to the right (R) channel.
- Be sure to connect all plugs fully into their terminals.
- Never connect the CD player to your amplifier's turntable (PHONO) terminals, since sound will be distorted and proper playback will not be possible.

CONNECTING THE POWER CORD:

Insert the power cord's plug into an accessory AC outlet on your amplifier, or into a normal household outlet.

CONNEXION DU CABLE DE SORTIE :

Brancher les fiches à une extrémité du câble aux bornes d'entrée (CD ou AUX) de l'amplificateur et celles à l'autre extrémité aux bornes de sortie de ce lecteur de disque compact.

- Lors de la connexion du cordon, insérer les fiches blanches dans le canal gauche (L) et les fiches rouges dans le canal droit (R).
- Toujours brancher à fond les fiches dans les bornes.
- Ne jamais connecter le lecteur de disque compact aux bornes de table de lecture (PHONO) de l'amplificateur, car le son sera déformé et une reproduction correcte n'est pas possible.

CONNEXION DU CORDON D'ALIMENTATION :

Insérer la fiche du cordon d'alimentation dans une sortie CA accessoire de l'amplificateur ou dans une prise électrique normale.

REMOTE CONTROL AMPLIFIER OPERATION:

Applicable models: PD-T305 and
PD-T505 (U.S. and Canadian models).

If your amplifier features the SR mark, connect the accessory control cord between the Amplifier's CONTROL OUT terminal and the CD player's CONTROL IN terminal.

- You can then use the remote control unit furnished with your amplifier to perform PLAY, PAUSE, STOP and TRACK operations on the CD player.
- For details regarding connection and operation, consult the Operating Instructions accompanying your stereo amplifier.
- These terminals do not need to be connected if you do not intend to use this function.

NOTE:

- *When the control cord is connected to the CONTROL IN terminal, the remote control unit cannot be used to control the player directly. The remote control unit must be pointed at the amplifier's remote sensor.*
- *Be sure to connect both of the control cord's plugs securely to the CONTROL IN and CONTROL OUT terminals. Do not connect only one end of the cord.*

About the CD-DECK SYNCHRO recording function:

- This function facilitates edit recording from CD to cassette tape when the CD player is connected to a Pioneer cassette deck equipped with a CD-DECK SYNCHRO terminal. For details, consult the Operating Instructions accompanying the cassette deck featuring the CD-DECK SYNCHRO mark.

UTILISATION PAR TELECOMMANDE VIA L'AMPLIFICATEUR :

Modèles applicables : PD-T305 et
PD-T505 (Modèles Etats-Unis et Canada).

Si l'amplificateur porte la marque SR, connecter le cordon de contrôle accessoire entre la borne CONTROL OUT de l'amplificateur et la borne CONTROL IN du lecteur de disque compact.

- L'unité de télécommande fournie avec l'amplificateur peut alors être utilisée pour activer les fonctions de lecture (PLAY), de PAUSE, d'arrêt (STOP) et de piste (TRACK) du lecteur de disque compact.
- Consulter le mode d'emploi accompagnant l'amplificateur stéréo pour plus de détails concernant les connexions et l'utilisation.
- Il est inutile de connecter ces bornes si cette fonction ne doit pas être utilisée.

REMARQUES :

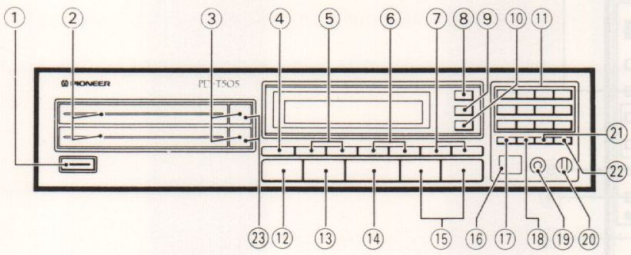
- *Lorsque le cordon de commande est connecté à la borne CONTROL IN, l'unité de télécommande ne peut pas être utilisée pour contrôler directement le lecteur. L'unité de télécommande doit être pointée vers le capteur de télécommande de l'amplificateur.*
- *Toujours brancher à fond les deux fiches du cordon de commande dans les bornes CONTROL IN et CONTROL OUT. Ne pas connecter seulement une extrémité du cordon.*

Sur la fonction d'enregistrement synchronisé lecteur de disque compact-magnétocassette (CD-DECK SYNCHRO) :

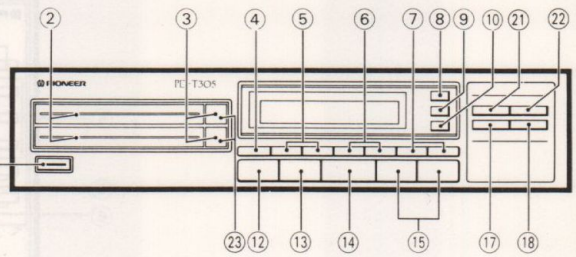
- Cette fonction facilite l'enregistrement avec édition d'un disque compact à une bande cassette lorsque le lecteur de disque compact est connecté à un magnétocassette Pioneer équipé d'une borne CD-DECK SYNCHRO. Consulter le mode d'emploi accompagnant le magnétocassette portant la marque CD-DECK SYNCHRO pour plus de détails.

10. PANEL FACILITIES／COMMANDES DU PANNEAU

PD-T505



PD-T305



FRONT PANEL

① **POWER switch**

Press to turn power ON and OFF. If the power is turned ON when a disc is already loaded, the player will automatically enter the play mode (timer start function).

② **Disc tray (DISC I, DISC II)**
③ **OPEN/CLOSE buttons**
④ **AUTO EJECT button**
⑤ **AUTO FADER buttons**
⑥ **MANUAL SEARCH buttons**
⑦ **TRACK SEARCH buttons**
⑧ **TIME button**
⑨ **REPEAT button**
⑩ **RANDOM PLAY button**
⑪ **TRACK NUMBER buttons (1−10, +10, ≧20)**
⑫ **STOP button (■)**
⑬ **PAUSE button (❚❚)**
⑭ **PLAY button (▶)**
⑮ **Disc select buttons (DISC I, DISC II)**
⑯ **Remote sensor**
⑰ **Auto program edit button (AUTO PGM)**
⑱ **Time fade edit button (TIME FADE)**
⑲ **Headphones jack (PHONES)**
⑳ **Headphones volume control (PHONES LEVEL)**
㉑ **Program button (PGM)**
㉒ **CLEAR button**
㉓ **Indicators (I, II)**

Green : During playback.
Red : Without disc.
Yellow : At other times.

NOTE:
Items ⑲ and ⑳ are included on the U.K. and European models of the PD-T305.

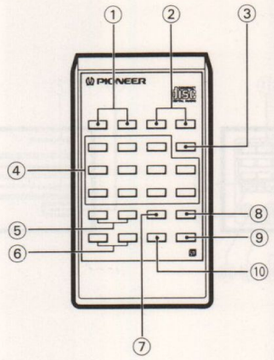
PANNEAU AVANT

① **Interrupteur d'alimentation (POWER)**

Appuyer sur cet interrupteur pour mettre l'appareil sous tension (ON) et en attente (OFF). Si l'alimentation est activée (ON) lorsqu'un disque est déjà chargé, le lecteur passe automatiquement dans le mode de lecture (fonction de démarrage par minuterie).

② **Plateau de disque (DISC I, DISC II)**
③ **Touche d'ouverture/fermeture (OPEN/CLOSE)**
④ **Touche d'éjection automatique (AUTO EJECT)**
⑤ **Touches de commande progressive automatique (AUTO FADER)**
⑥ **Touche de recherche manuelle (MANUAL SEARCH)**
⑦ **Touche de recherche de piste (TRACK SEARCH)**
⑧ **Touche de temps (TIME)**
⑨ **Touche de répétition (REPEAT)**
⑩ **Touche de lecture aléatoire (RANDOM PLAY)**
⑪ **Touches de numéros de pistes (TRACK NUMBER) (1−10, +10, ≧20)**
⑫ **Touche d'arrêt (STOP) (■)**
⑬ **Touche de PAUSE (❚❚)**
⑭ **Touche de lecture (PLAY) (▶)**
⑮ **Touches de sélection de disque (DISC I, DISC II)**
⑯ **Capteur de télécommande**
⑰ **Touche d'édition programmée automatique (AUTO PGM)**
⑱ **Touche d'atténuation temporisée (TIME FADE)**
⑲ **Prise de casque (PHONES)**
⑳ **Commande de volume de casque (PHONES LEVEL)**
㉑ **Touche de programmation (PGM)**
㉒ **Touche d'effacement (CLEAR)**

PD-T505 only/PD-T505 seulement



REMOTE CONTROL UNIT

Buttons listed here but not accompanied with explanations have the same functions as the corresponding front-panel buttons.

① **DISC SELECT buttons (DISC I, DISC II)**
② **OUTPUT LEVEL button**
③ **Program button (PGM)**
④ **Track number buttons (1–10, >10)**
⑤ **Track search buttons (TRACK ⏮, ⏭)**
⑥ **Manual search buttons (MANUAL ◀◀, ▶▶)**
⑦ **RANDOM PLAY button**
⑧ **PLAY button (▶)**
⑨ **STOP/CLEAR button (■)**
⑩ **PAUSE button (❚❚)**

㉓ **Indicateurs (I, II)**

Vert : Pendant la reproduction.
Rouge : Pas de disque.
Jaune : Aux autres moments.

REMARQUE :
Les éléments ⑲ et ⑳ sont inclus sur les modèles Royaume-Uni et Europe du PD-T305.

UNITE DE TELECOMMANDE

Les touches indiquées ici mais n'étant pas accompagnées d'explications ont les mêmes fonctions que les touches correspondantes du panneau avant.

① **Touches de sélection de disque (DISC SELECT) (DISC I, DISC II)**
② **Touche de niveau de sortie (OUTPUT LEVEL)**
③ **Touche de programmation (PGM)**
④ **Touches de numéros de pistes (1–10, >10)**
⑤ **Touches de recherche de piste (TRACK) (⏮, ⏭)**
⑥ **Touches de recherche manuelle (MANUAL) (◀◀, ▶▶)**
⑦ **Touche de lecture aléatoire (RANDOM PLAY)**
⑧ **Touche de lecture (PLAY) (▶)**
⑨ **Touche d'arrêt/effacement (STOP/CLEAR) (■)**
⑩ **Touche de PAUSE (❚❚)**

11. SPECIFICATIONS

1. General

Type ..... Compact disc digital audio system
Power requirements
European models ..... AC 220V, 50/60Hz
U.K., Australian models ..... AC 240V, 50/60Hz
U.S., Canadian models ..... AC 120V, 60Hz
Other models ..... AC 110/120–127/220/240V (switchable), 50/60Hz
Power consumption 13W
Operating temperature ..... +5°C–+35°C (+41°F–+95°F)
Weight 4.2kg (9lb, 4oz)
External dimensions:
PD-T505: U.S. Canadian, U.K. and European models,
PD-T305: U.K. and European models, ... 420(W) × 326(D) × 102(H)mm
16-9/16(W) × 12-27/32(D) × 4-1/32(H) in.
Other models ..... 420(W) × 326(D) × 94(H)mm
16-9/16(W) × 12-27/32(D) × 3-23/32(H) in.

2. Audio section

Frequency response 2Hz–20kHz
S/N ..... 106dB or more (EIAJ)
Dynamic range ..... 92dB or more (EIAJ)
Channel separation ..... 98dB or more (EIAJ)
Total harmonic distortion ..... 0.04% or less (EIAJ)
Output voltage 2.0V
Wow and flutter ..... Limit of measurement (±0.001% W.PEAK) or less (EIAJ)
Number of channels ..... 2 channels (stereo)

3. Output terminal

- Audio line output terminals
- CD-DECK SYNCHRO terminal
- Control input/output terminals (PD-T305: All models, PD-T505: U.S. and Canadian models only)
- Headphone jack (with volume control) (PD-T305: U.K. and European models only, PD-T505: All models)

4. Functions

- Play
- Pause
- Track search
- Manual search
- Direct selection (PD-T505)
- Programmed playback
- Programmed repeat
- Pause program
- Multi-disc auto program edit
- Multi-disc time fade edit
- Single track repeat
- Sequential disc all track repeat
- Relay playback
- Random relay play
- Program relay play
- Single track auto eject play
- Auto eject play
- Auto eject random play
- Auto eject program play
- Random play
- Random repeat
- Digital level control (remote control: PD-T505)
- Auto fader in/out
- Display of a particular track
- Timer start

5. Accessories

- Remote control unit (PD-T505 only) 1
- Size AAA/R03 dry cell batteries (PD-T505 only) 2
- Remote control cord (PD-T505: U.S. and Canadian models) (PD-T305: All models) 1
- Output cable 1
- Operating instructions 1

NOTE:
The specifications and design of this product are subject to change without notice, due to improvements.