Pioneer

Service Manual

ORDER NO.
RRV4029

MULTI COMPACT DISC PLAYER

PD-M426A
PD-M406A

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

Model	Type	Power Requirement	Remarks
PD-M426A	SYXJ5	AC 220 V to 240 V	
PD-M406A	SYXJ5	AC 220 V to 240 V	

This service manual should be used together with the following manual(s):

Model No.	Order No.	Remarks
PD-M426/WYXJ/2	RRV1868	

For SPECIFICATIONS and PANEL FACILITIES, refer to the operating instructions.

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

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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 trainedto 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.

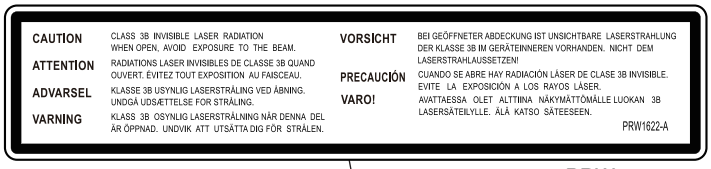
IMPORTANT

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

LASER DIODE CHARACTERISTICS

MAXIMUM OUTPUT POWER : 7 mW
WAVELENGTH : 780 to 785 nm

LABEL CHECK



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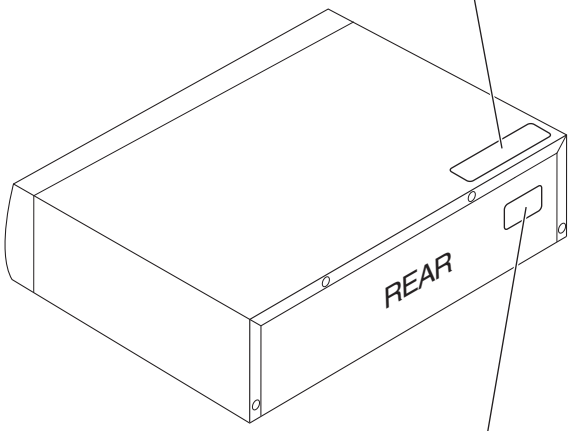


Printed on the Rear Panel

Additional Laser Caution

1. Laser Interlock Mechanism
   The ON/OFF (ON : low level, OFF : high level) status of S601 (LPS1) and S602 (LPS2) switches for detecting the loading state is detected by the system microprocessor, and the design prevents laser diode oscillation except when both switches S601 and S602 are ON (low level or clamped state).
   Thus, interlock will no longer function if switches S601 (LPS1) and S602 (LPS2) are deliberately shorted (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 50 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 with the servo mechanism block removed to be turned over, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* : Refer to page 22 on the service manual RRV1868.

1. 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.*
- *Screws adjacent to ▼ mark on product are used for disassembly.*
- *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions, apply as you think it appropriate.)*
- *Nos. indicate the pages and Nos. in the service manual for the base model.*
- *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 x 10^1 →	561	RD1/4PU 5 6 1 J
47kΩ	→ 47 x 10^3 →	473	RD1/4PU 4 7 3 J
0.5Ω	→ R50		RN2H R 5 0 K
1Ω	→ 1R0		RS1P 1 R 0 K

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

5.62kΩ	→ 562 x 10^1 →	5621	RN1/4PC 5 6 2 1 F

1.1 CONTRAST TABLE

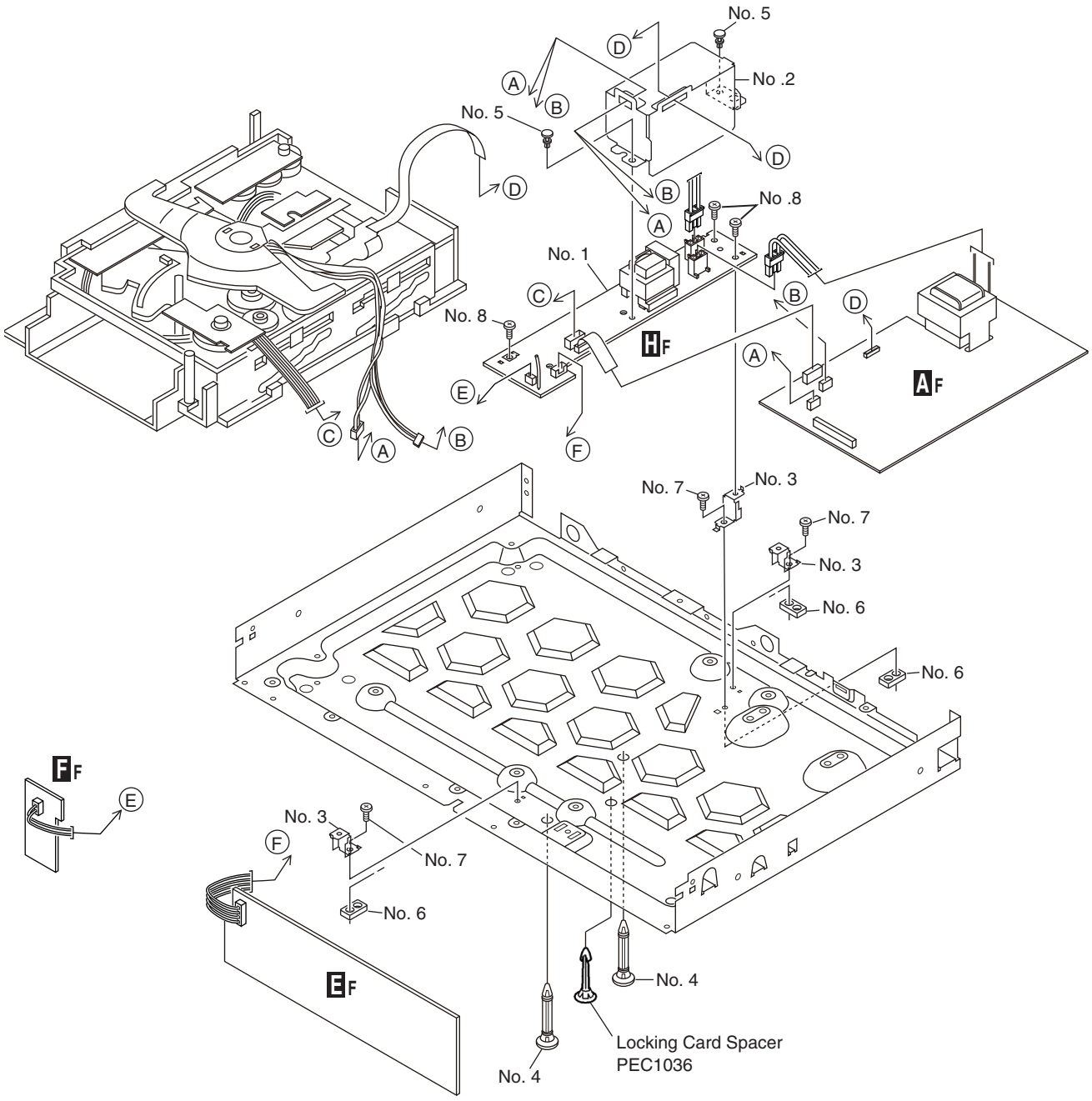
PD-M426/WYXJ/2, PD-M426A/SYXJ5 and PD-M406A/SYXJ5 are constructed the same except for the following:

Mark	No.	Symbol and Description	PD-M426/WYXJ/2	PD-M426A/SYXJ5	PD-M406A/SYXJ5	Remarks
		PCB ASSEMBLIES				
NSP		1..SUB BOARD Assy	PWX1337	Not used	Not used	
	P7-19	2..FUNCTION BOARD Assy	PWZ2769	Not used	Not used	
NSP	P7-34	2..SW BOARD Assy	PWZ2805	Not used	Not used	
		1..SUB BOARD Assy	Not used	PWX1689	PWX1688	
	P7-19	2..FUNCTION BOARD Assy	Not used	PWZ4184	PWZ4183	
	P7-34	2..SW BOARD Assy	Not used	PWZ4185	PWZ4185	
⚠	P7-20	1..MOTHER BOARD Assy	PWM2156	PWM2380	PWM2379	
⚠		1..TRANS Assy	Not used	PWM2378	PWM2378	No. 1
		PACKING SECTION				
	P5-1	Control Cable (for SR)(L=1 m)	Not used	Not used	XDE3063	
	P5-2	Output Cable (for AUDIO)(L=1 m)	PDE1248	XDE3047	XDE3047	
	P5-3	Remote Control Unit	PWW1107	PWW1178	Not used	
	P5-4	Battery Cover	PZN1010	PZN1010	Not used	
	P5-5	6-Compact Disc Magazine	PXA1575	PXA1617	PXA1617	
	P5-6	Operating Instructions (De,It,Nl,Sv,Es,Pt)	PRD1018	Not used	Not used	
	P5-6	Operating Instructions (En,Fr)	PRE1257	Not used	Not used	
	P5-9	CD Packing Case	PHG2309	PHG2471	PHG2472	
NSP	P5-11	Dry Cell Battery (AAA/R03)	VEM-022	VEM1049	Not used	
NSP	P5-12	Warranty Card	ARY7009	ARY7128	ARY7128	
NSP		Label(WEEE)	Not used	ARW7322	Not used	
		IEC65-7 Caution	Not used	PRM1083	PRM1083	
		Eu Battery Caution	Not used	ARM7120	Not used	
		Operating Instructions (En,Fr,De,It,Nl,Es,Ru)	Not used	PRE1301	PRE1301	
		EXTERIOR SECTION				
	P7-2	32P F.F.C/30V	PDD1041	PDD1041	Not used	
	P7-2	30P F.F.C/30V	Not used	Not used	PDD1049	
⚠	P7-3	Power Transformer	PTT1236	PTT1365	PTT1365	

Mark	No.	Symbol and Description	PD-M426/WYXJ/2	PD-M426A/SYXJ5	PD-M406A/SYXJ5	Remarks
⚠	P7-4	AC Power Cord	PDG1003	VDG1061	VDG1061	
	P7-5	Bonnet	PYY1149	PYY1299	PYY1299	
	P7-9	Function Panel	PNW2726	PNW3069	PNW3070	
	P7-11	Name Plate	PAM1608	PAM1776	PAM1776	
	P7-15	Display Window	PAM1846	PAM1846	PAM1845	
	P7-21	Screw	BBZ30P060FMC	BBZ30P060FTC	BBZ30P060FTC	
	P7-22	Screw	BBZ30P080FZK	BBZ30P080FTC	BBZ30P080FTC	
	P7-23	Screw	PPZ30P120FMC	PPZ30P120FTC	PPZ30P120FTC	
	P7-24	Screw	FBT40P080FZK	FBT40P080FTB	FBT40P080FTB	
	P7-28	Screw	PDZ30P050FMC	PDZ30P050FTC	PDZ30P050FTC	
NSP	P7-30	Under Base	PNA1751	PNA2650	PNA2650	
	P7-31	Rear Base	PNA2413	PNA2648	PNA2649	
	P7-33	Flat Cable (6P)	D20PYY0615E	D20PYY0610E	D20PYY0610E	
	P7-35	LED Lens	PNW2019	Not used	Not used	
	P7-38	Caution Label	VRW1094	Not used	Not used	
	P7-39	Caution Label (HE)	PRW1233	Not used	Not used	
NSP	P7-40	Locking Card Spacer	PEC1036	Not used	Not used	
	P7-40	Locking Card Spacer	Not used	AEC7492	AEC7492	
		Barrier	Not used	PEC1053	PEC1053	No. 2
		PCB Angle L Gc(fe)	Not used	PNB1670	PNB1670	No. 3
		PCB Spacer	Not used	PEC1054	PEC1054	No. 4
		Rivet	Not used	AEC7514	AEC7514	No. 5
		Screw Spacer	Not used	PEB1349	PEB1349	No. 6
		Screw	Not used	BBZ30P040FCC	BBZ30P040FCC	No. 7
		Screw	Not used	BBZ30P060FTC	BBZ30P060FTC	No. 8

Notes: The number in the No. colume correspond to the number on “1.2 EXPLODED VIEWS”.
For PCB assemblies, refer to “1.3 CONTRAST OF PCB ASSEMBLIES”, ”4. SCHEMATIC DIAGRAM” and “5. PCB CONNECTION DIAGRAM”.

1.2 EXPLODED VIEWS



1.3 CONTRAST OF PCB ASSEMBLIES

AF MOTHER BOARD Assy

PWM2156, PWM2380 and PWM2379 are constructed the same except for the following:

Mark	Symbol and Description	PWM2156	PWM2380	PWM2379	Remarks
⚠	Rapping Terminal	RKC-061	Not used	Not used	
⚠	J0 2P Connector Assy	Not used	PKP1029	PKP1029	
	D392, D393, D394	Not used	Not used	1SS254	*1
	L391	Not used	Not used	LAU1R0J	*1
	CN351 32P FFC CONNECTOR	HLEM32S-1	HLEM32S-1	Not used	
	CN351 30P FFC CONNECTOR	Not used	Not used	HLEM30S-1	
	JA391, J392 SR JACK	Not used	Not used	RKN1004	*1
	R52, R53, R54	RD1/4PU152J	RD1/4PU182J	RD1/4PU182J	
	R362, R363	RD1/4PU103J	Not used	Not used	
	R391	Not used	Not used	RD1/4PU244J	*1
	R392	Not used	Not used	RD1/4PU102J	*1
	C393	Not used	Not used	CCCSL101J50	*1
	C399	Not used	Not used	CKCYF103Z50	*1

*1 : Refer to “3. SCHEMATIC DIAGRAM” (C-7) on the service manual RRV1868.

EF FUNCTION BOARD Assy

PWZ2769, PWZ4184 and PWZ4183 are constructed the same except for the following:

Mark	Symbol and Description	PWZ2769	PWZ4184	PWZ4183	Remarks
	J0 Connector Assy	Not used	PF04PG-C12	PF04PG-C12	
	CN701 32P FFC CONNECTOR	9607S-32F	9607S-32F	Not used	
	CN701 30P FFC CONNECTOR	Not used	Not used	9607S-30F	
	Remote Sensor	SBX1976-51	SBX1976-51	Not used	

FF SW BOARD Assy

PWZ2805, PWZ4185 and PWZ4185 are constructed the same except for the following:

Mark	Symbol and Description	PWZ2805	PWZ4185	Remarks
	J801	D20PWW0420E	PF02PG-C27	
	D801 LED	PCX1019	Not used	

1.4 PCB PARTS LIST

Mark	No.	Circuit Symbol and No.	Part No.

HF TRANS ASSY

SEMICONDUCTORS

	IC901,906	TC7WH123FU
⚠	IC902	NJM78M05FA
	IC903,907	TC74VHCU04FT
	IC904	TC7W74FU
	IC905	TC74VHC125FTS1
	IC909	TC74VHC08FTS1
	Q901,902,904,906	LTC124EUB
	Q903,905	RN4903
	D901,902,904-906	1SS355
⚠	D907	S1VB60

MISCELLANEOUS

	KN901 WRAPPING TERMINAL	VNF1084
⚠	RY901 JOE LOWPOWER RELAY	ASR7013
⚠	T801 POWER TRANSFORMER	ATT7078
⚠	CN810 AC CODE SOCKET	RKP1751
⚠	CN811 AMP U-P CONNECTOR	RKP1834
	CN902 PLUG(2P)	KM200NA2
	CN904 6P JUMPER CONNECTOR	52147-0610
	CN905 PLUG(4P)	KM200NA4
	JH901 6P CABLE HOLDER	51048-0600
	JH902 PCB BINDER	VEF1040
	JP901 JUMPER WIRE	D20PYY0610E

RESISTORS

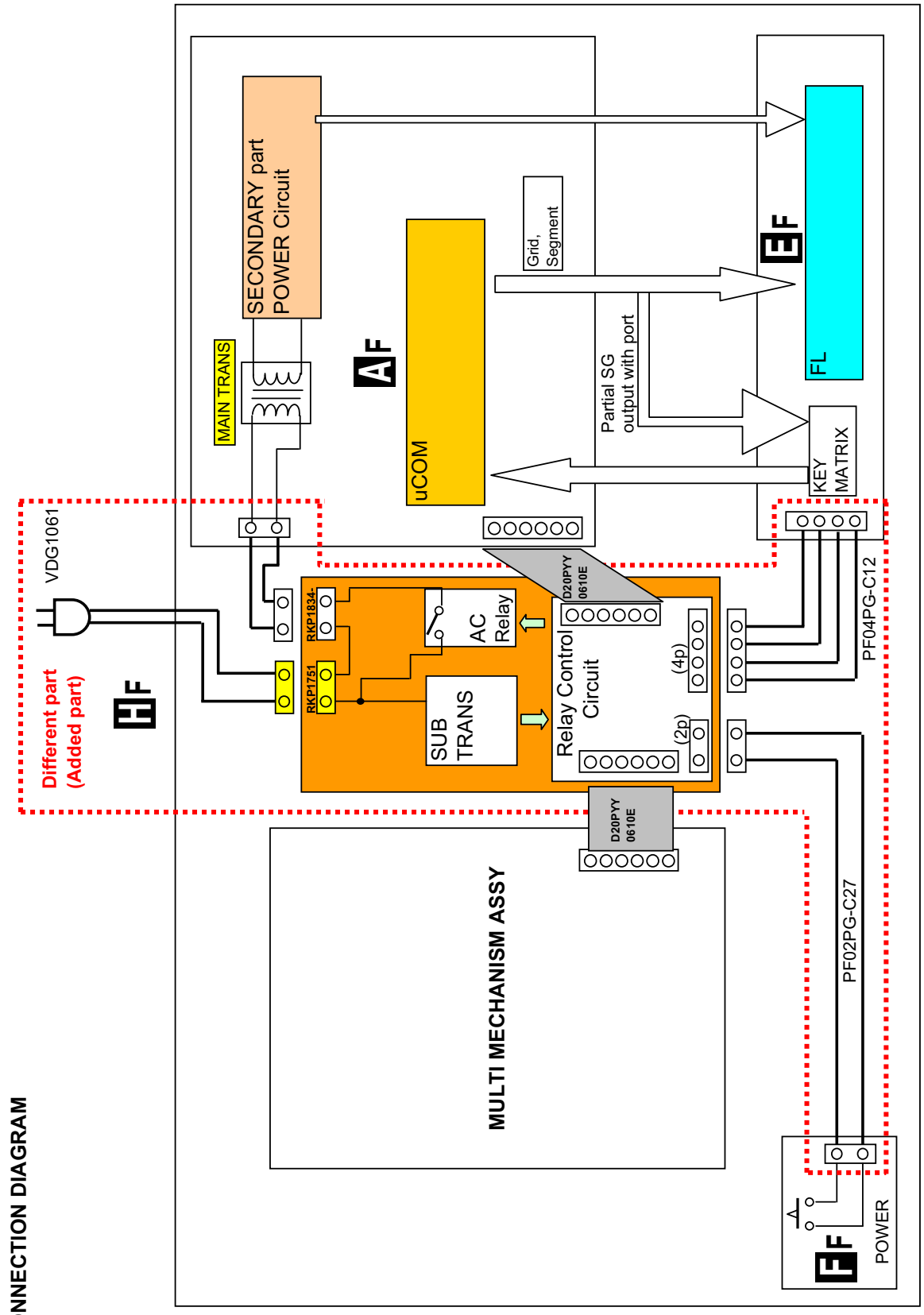
	R903	RD1/4MUF220J
	Other Resistors	RS1/10SR###J

CAPACITORS

⚠	C820	ACE7013
	C902,903,907,908	CKSRYB104K16
	C904	CEAT102M25
	C905	CEAT221M16
	C906,909,920	CKSRYB105K10
	C910,913,917-919	CKSRYB104K16
	C912	CEAT330M16
	C915	CKSRYB103K25
	C921,923,924	CKSRYB104K16
	C922	CEAT470M10

2. DIFFERENCE FROM PD-M426

2.1 CONNECTION DIAGRAM



CONNECTION DIAGRAM

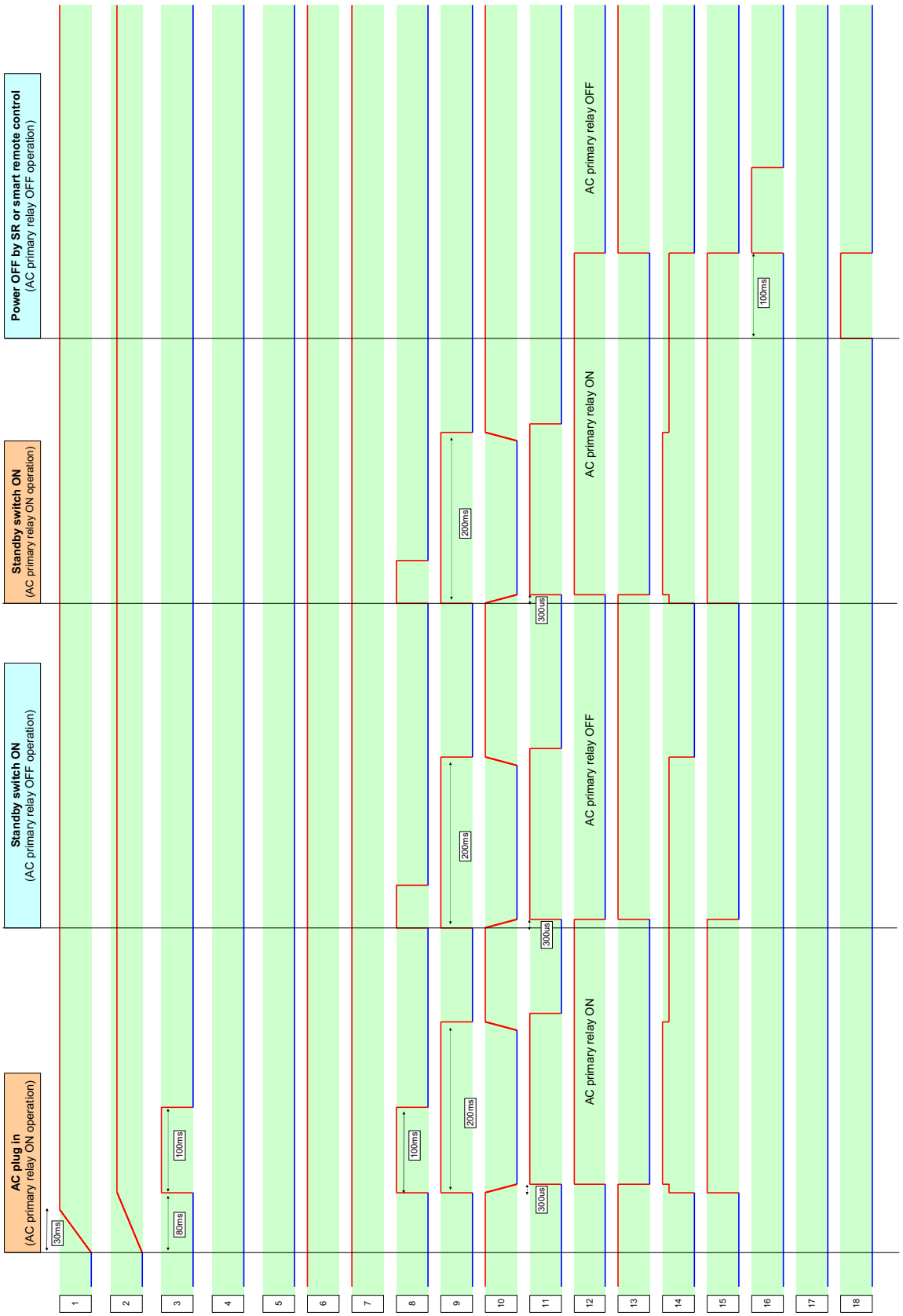
OPERATION MODE DIFFERENCE

		PD-M426	PD-M426A/PD-M406A	
		6 magazine/Single magazine	6 magazine	Single magazine
Standby power consumption		about 5 W	0.3 W	
Remote control power key		Used	Not used	
Standby LED		Used	Not used	
from OFF→	AC plug in(without magazine)	Standby mode	Standby mode	
	AC plug in(with magazine)	ON (PLAY if DISC on)	ON (Play if DISC on)	
from standby mode→	EJECT operation	Standby mode after EJECT	No operation	
	Main unit power key (without magazine)	ON	ON	
	Main unit power key (with magazine)	ON	ON (Play if DISC on)	
	Remote control power key (without magazine	ON	No operation	
	Remote control power key (with magazine)	ON	No operation	
	Power ON by SR control (without magazine)	ON	No operation	
	Power ON by SR control (with magazine)	ON	No operation	
	Loading the magazine	ON	No operation	
from ON→	Main unit power key	Standby mode	Standby mode	
	Remote control power key	Standby mode	No operation by accessory remote control unit Standby mode by using preset remote control unit	
	Power OFF by SR control	Standby mode	Standby mode	
Memory Function (State recovery when rebooting the unit)	Resume function	used→from TR1 of the last played DISC	Not used→from TR1 of DISC1 after power on	
	REPEAT	Not used	Not used	
	RANDAM	Not used	Not used	
	PROGRAM	Used	Not used	

3. LOGIC WAVEFORM OF TRANS ASSY

Logic waveform with loading the magazine

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

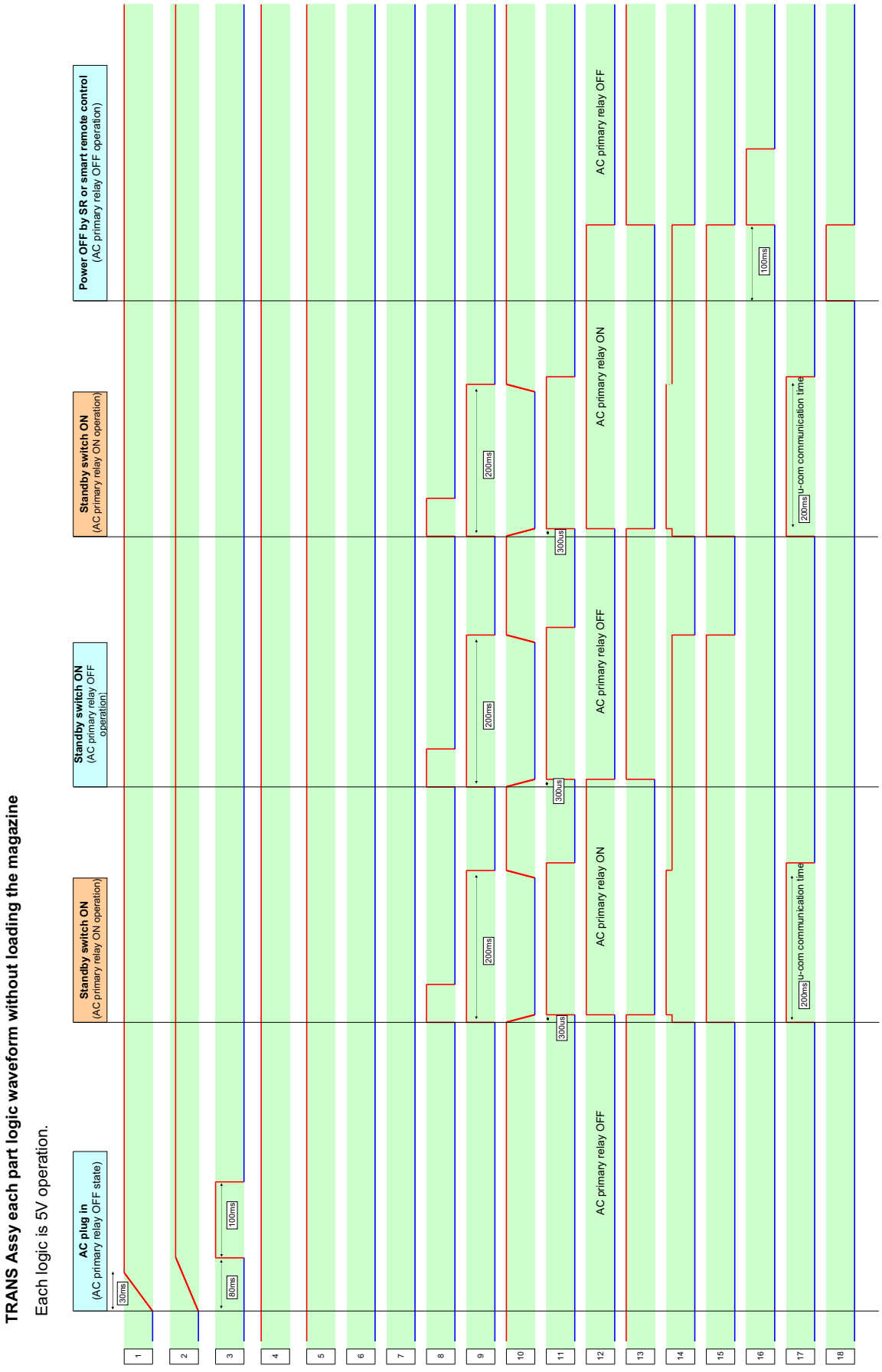


TRANS Assy each part logic waveform with loading the magazine

Each logic is 5V operation.

Logic waveform without loading the magazine

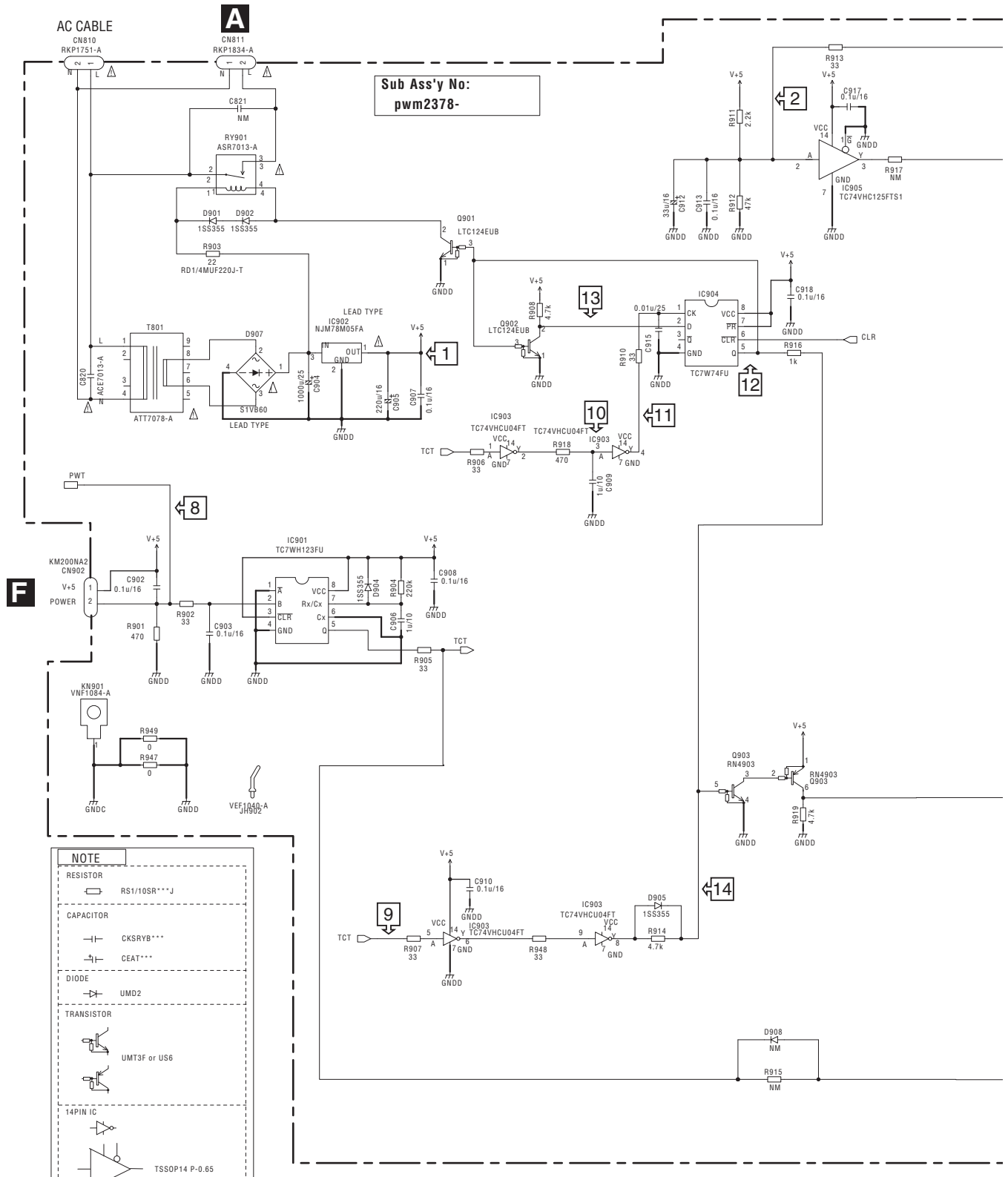
Note : The numbers in framed rectangle denote measuring point in the schematic diagram.



TRANS Assy each part logic waveform without loading the magazine

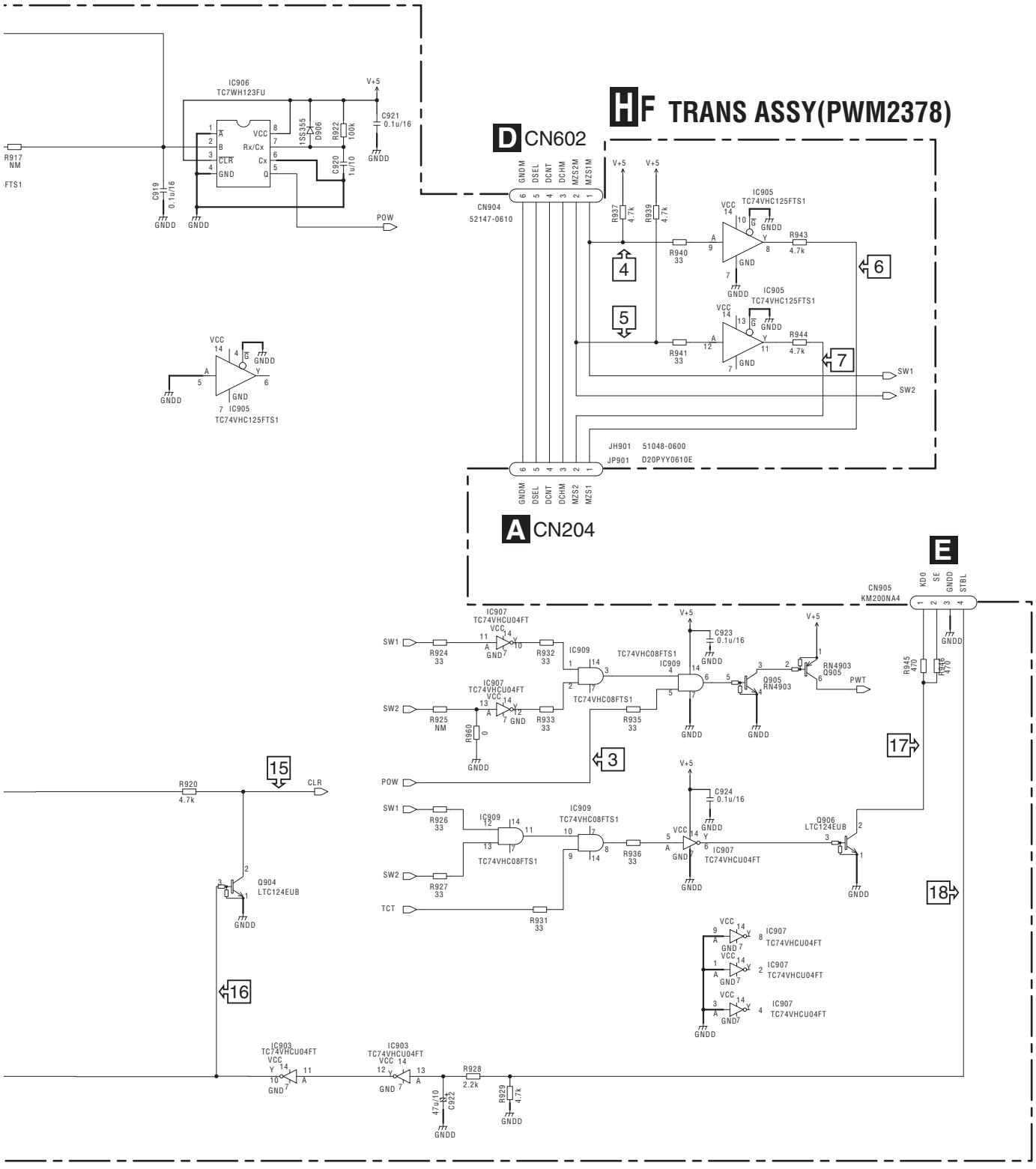
Each logic is 5V operation.

4. SCHEMATIC DIAGRAM
4.1 TRANS ASSY



The ⚠ mark found on some component parts should be replaced with same parts (safety regulation authorized) of identical designation.

HF TRANS ASSY(PWM2378)



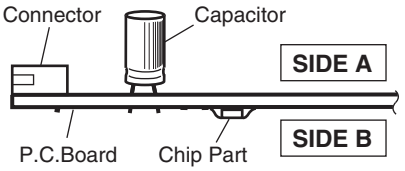
5. PCB CONNECTION DIAGRAM
5.1 TRANS ASSY

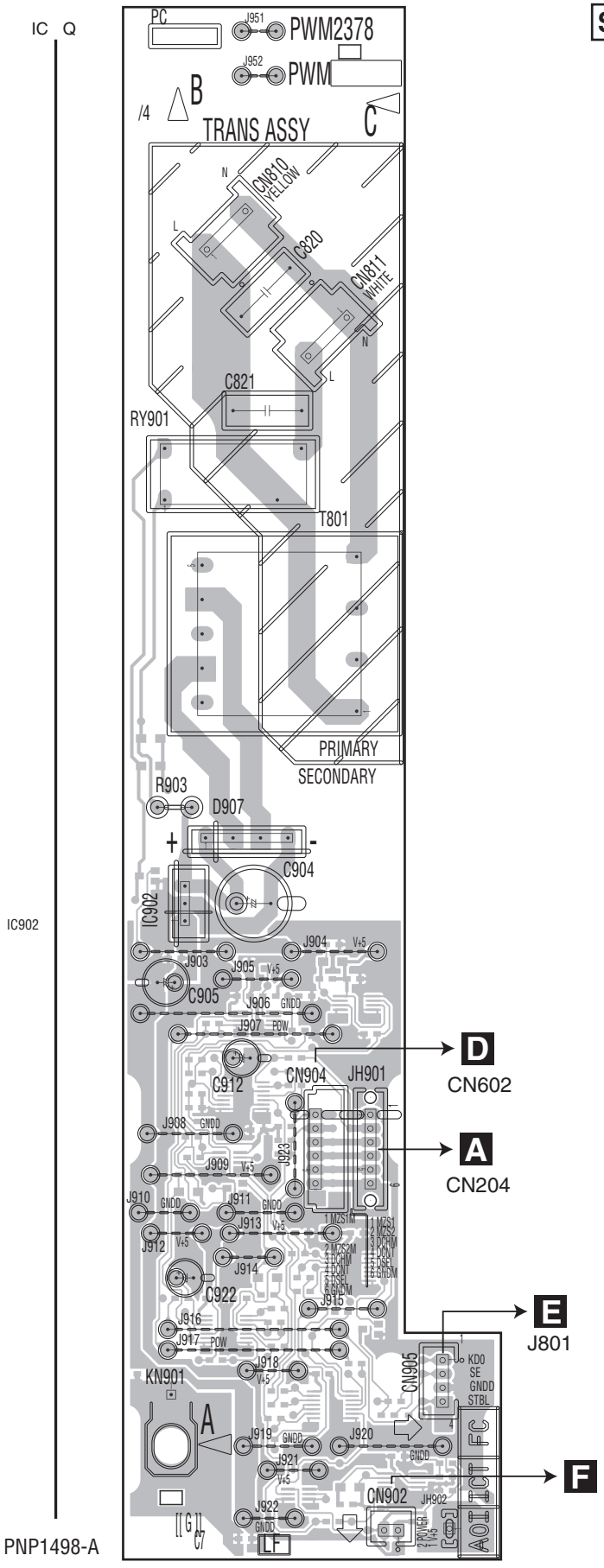
HF TRANS ASSY

NOTE FOR PCB DIAGRAMS :

1. 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.

2. View point of PCB diagrams.





HF

HF TRANS ASSY

SIDE B