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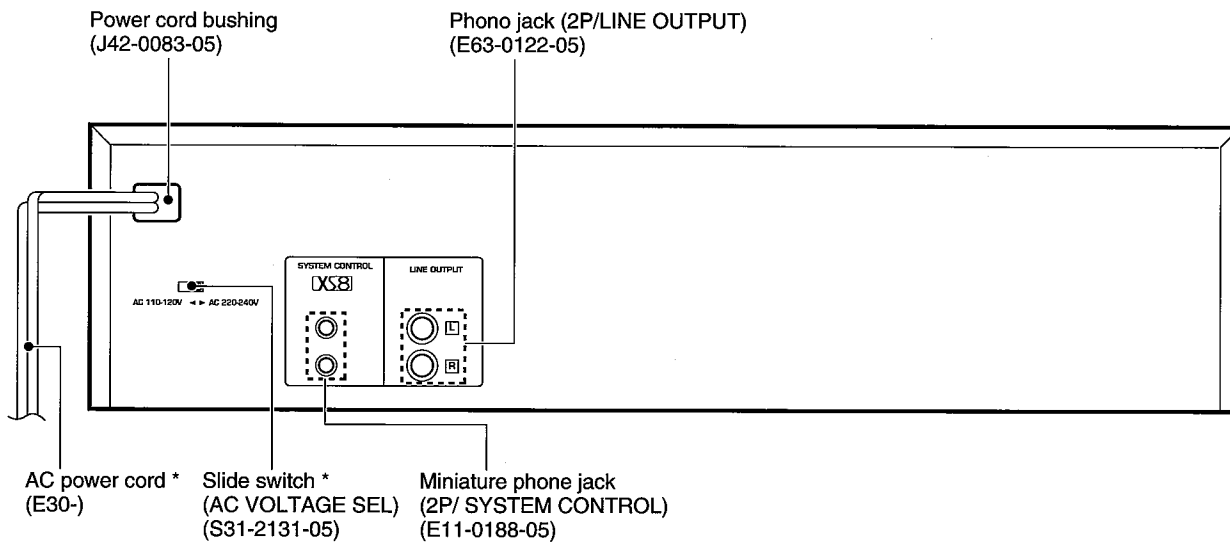
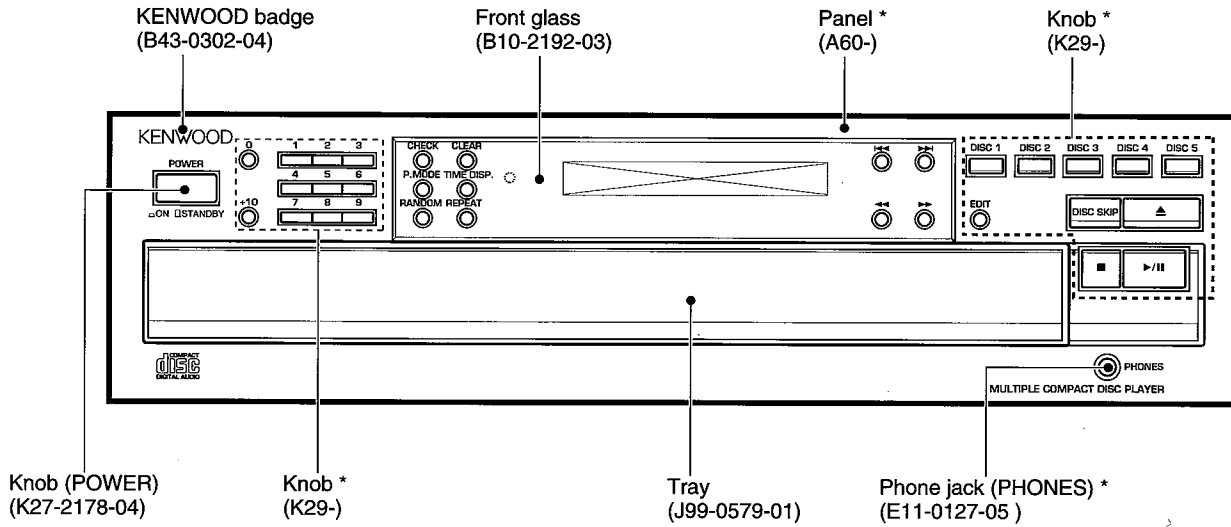
MULTIPLE COMPACT DISC PLAYER

DP-R3080/R4080

SERVICE MANUAL

KENWOOD

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In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

KENWOOD-Corp. certifies this equipment conforms to DHHS Regulations No. 21 CFR 1040. 10, Chapter 1, Subchapter J.

DANGER : Laser radiation when open and interlock defeated.
AVOID DIRECT EXPOSURE TO BEAM.

Illust is DP-R4080.

* Refer to parts list on page 18.

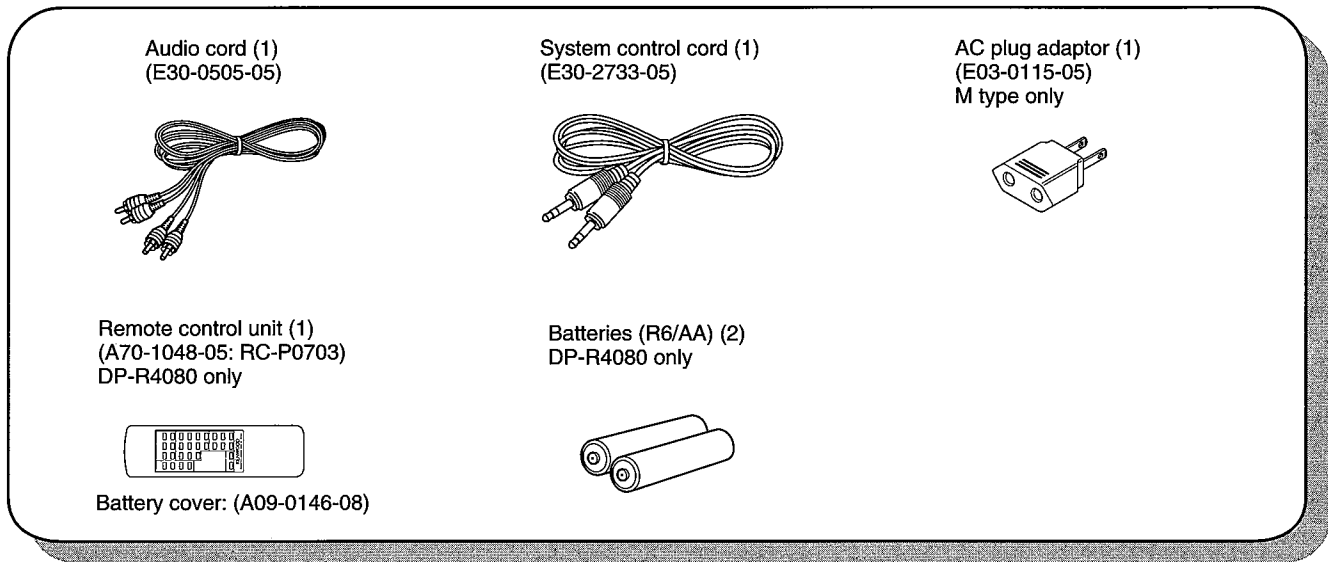
DP-R3080/R4080

CONTENTS / ACCESSORIES / CAUTION

Contents

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Accessories

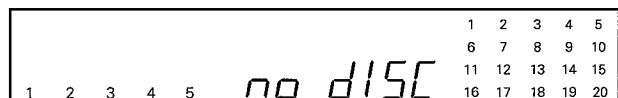


Caution

Note related to transportation and movement

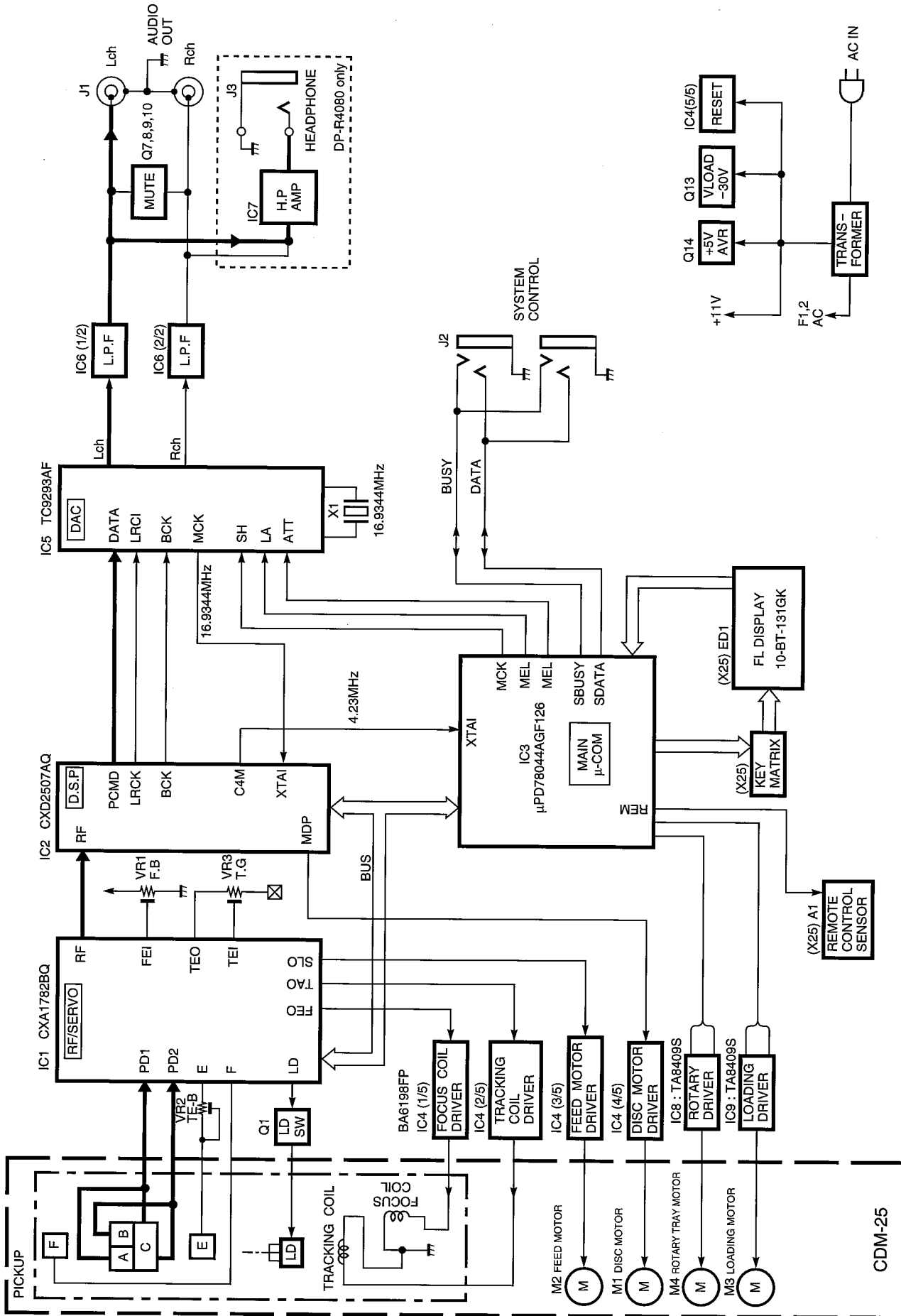
Before transporting or moving this unit, carry out the following operations.

1. Turn the power ON but do not load a disc.
2. Wait a few seconds and verify that the display shown appears.
Wait further a few seconds.
3. Turn the power OFF.



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BLOCK DIAGRAM

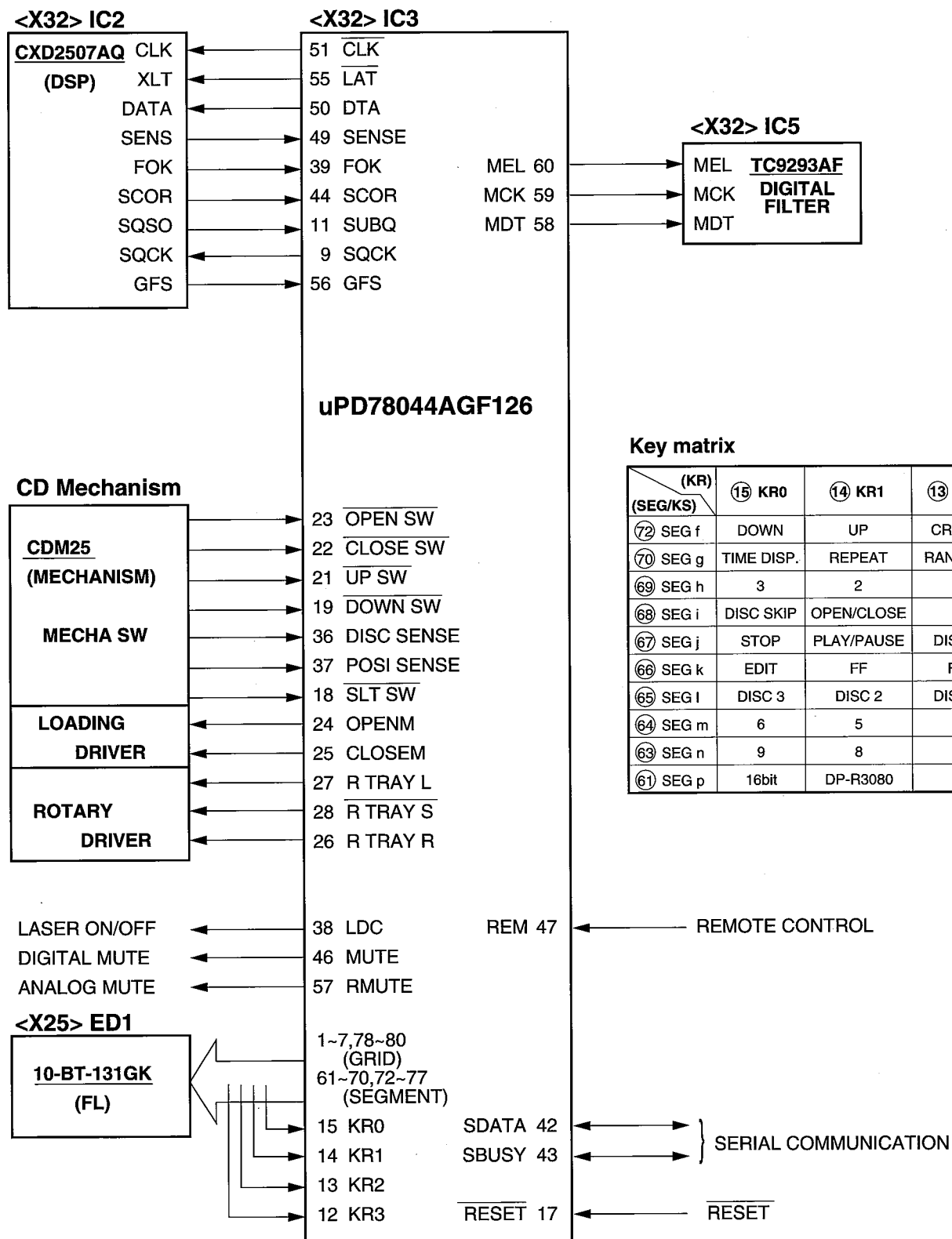


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CIRCUIT DESCRIPTION

1. Main Microprocessor : UPD78044AGF126(X32 : IC3)

1-1. Microprocessor periphery block diagram



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CIRCUIT DESCRIPTION

1-2. Pin description

Pin No.	Name	I/O	Function	
1~7	7G~1G	O	Display digit control (Grid7~Grid1)	
8	VDD		Power supply (+5V)	
9	SQCK	O	Q data reading clock output	
10		O	Unused	
11	SUBQ	I	Q data input	
12~15	KR3~KR0	I	Key return 3~0	
16		I	Unused	
17	RESET	I	Reset input	L : RESET
18	SLT SW	I	CDM25 start limit switch input	L : SW ON
19	DOWN SW	I	CDM25 mechanism down switch input	L : SW ON
20	AVSS	I	Unused (connected to VSS)	
21	UP SW	I	CDM25 mechanism up switch input	L : SW ON
22	CLOSE SW	I	CDM25 close switch input	L : SW ON
23	OPEN SW	I	CDM25 open switch input	L : SW ON
24	OPEN M	O	Open motor control	H : ACTIVE
25	CLOSE M	O	Close motor control	H : ACTIVE
26	RTRAY R	O	Rotary tray motor control (CW)	H : ACTIVE
27	RTRAY L	O	Rotary tray motor control (CCW)	H : ACTIVE
28	RTRAY S	O	Rotary tray motor control (deceleration)	L : ACTIVE
29	AVDD		Unused (connected to VDD)	
30	AVREF		Unused (connected to VSS)	
31		I	Unused	
32			Unused (OPEN)	
33	VSS		GND	
34	X1	I	System clock input	
35	X2		Unused	
36	DSENSE	I	CDM25 disc sensor detection	
37	PSENSE	I	CDM25 position sensor detection	
38	LDC	O	Laser signal output	L : LASER ON
39	FOK	I	FOK signal input	H : FOCUS ON
40,41		I	Unused	
42	SDATA	I/O	System serial data signal input output	
43	BUSY	I/O	System serial busy signal input output	
44	SCOR	I	Sub code frame sync detection	
45	MON	O	Focus drug countermeasure circuit control	
46	MUTG	O	Digital mute control	H : MUTE ON
47	REM	I	Remote control signal input	
48			Unused	
49	SENSE	I	Sense input from CXD2507AQ	
50	DTA	O	Data output for CXD2507AQ	
51	CLK	O	Clock output for CXD2507AQ	
52	VDD		Power supply (+5V)	
53,54		I	Unused	
55	LAT	O	Latch output for CXD2507AQ	
56	GFS	I	Frame signal input	
57	RMUTE	O	Analog mute control	L : MUTE ON
58	MDT	O	Attenuater data output	
59	MCK	O	Attenuater clock output	
60	MEL	O	Attenuater latch output	
61~70	Sa~Sj/KS	O	Display segment control (Seg a~Seg j) / Key scan	
71	VLOAD		Display drive negative power supply (-35V)	
72~77	Sk~Sp/KS	O	Display segment control (Seg k~Seg p) / Key scan	
78~80	10G~8G	O	Display digit control (Grid10~Grid8)	

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CIRCUIT DESCRIPTION

2. Test mode

2-1. Setting the test mode

- The microprocessor built in the unit can be put to TEST MODE by just pressing the TIME DISP. key when set to power on.
- DP-R series is available to set to each test mode by each key.

2-2. Key vs Function in test mode

Step	Key name	Display	Description	
1	PLAY/PAUSE (Cyclic)	03	(1) Focus servoON (2) Tracking servoOFF (3) Feed servoOFF	TE-B adjustment
		05	(1) Focus servoON (2) Tracking servoON (3) Feed servoON	F-GAIN/T-GAIN FE-B adjustment
2	UP		Display goes on	
3	DOWN		Display goes off	
4	DISC1		Search the position of No. 1	
5	STOP	00	(1) Focus servoOFF (2) Tracking servoOFF (3) Feed servoOFF	Waiting key input
6	DISC2	-	Canceled Test mode	Normal mode
7	DISC3	01	Canceled Test mode, then 01 PLAY	Normal mode

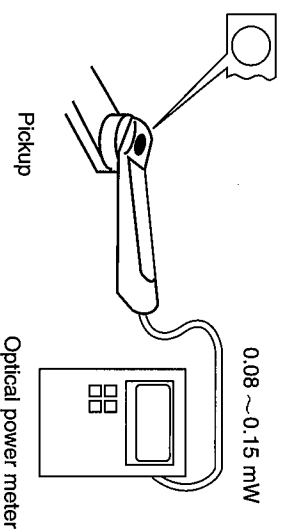
ADJUSTMENT

ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	PLAYER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Open the tray (Normal mode), then turn the power off.							
1	LASER POWER	-	Apply the sensor section of optical power meter on the pickup lens.	While pressing the TIME DISP. key, turn the AC ON. (Test mode) Press the PLAY/PAUSE key, then confirm that the display is "03".	-	On the power from 0.08 to 0.15 mW, when the diffraction grating is correctly aligned with the RF level of 1.0 Vp-p or more.	(a)
<ol style="list-style-type: none"> 1. Press the STOP key. 2. Press the OPEN key. 3. Load a disc, then press the CLOSE key. 4. Press the PLAY key. 5. Press the OPEN key to open the tray. 6. Turn the power off. (Player stops as the tray is opened while the disc clumped.) 7. While pressing the TIME DISP. key, turn the power ON to enter the Test mode. 							
2	TRACKING ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1 : RF (CN2 pin 1) CH2 : TE (CN2 pin 6)	Press the PLAY/PAUSE key, then confirm that the display is "03".	TE BALANCE VR2	Symmetry between upper and lower patterns	(c)
3	FOCUS ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1 : RF (CN2 pin 1) CH2 : TE (CN2 pin 6)	Press the PLAY/PAUSE key, then confirm that the display is "05".	FE BALANCE VR1	Optimum eye pattern	(b) or (d)
4	TRACKING GAIN	Test disc Type 4 Apply signal of 50mVrms to CN2 pin 5-6.	Connect a LPF to CN2 pin 5-6 to which you connect an oscilloscope or AC voltmeters.	Press the PLAY/PAUSE key, then confirm that the display is "05".	TRACKING GAIN VR3	Two VTVMs should read the same value.	(e)

Note:
Type 4 disc : SONY VEDS-18 Test Disc or equivalent.
LPF : Around 47 kΩ+ 390 pF or so.
Step 1~4 are in Test Mode.

(a) Laser power



(e) Tracking gain

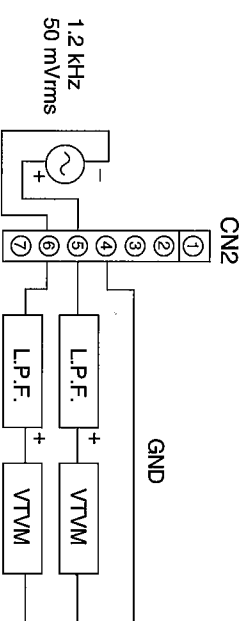
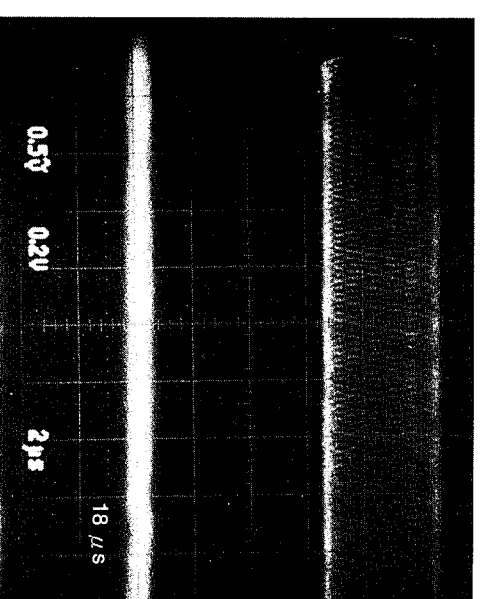
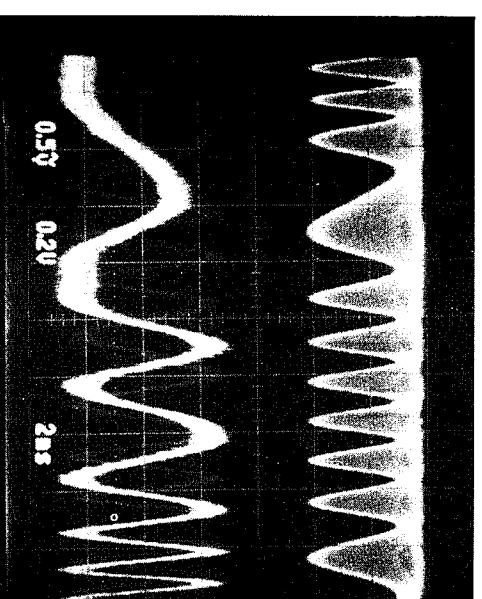


FIG. (b)



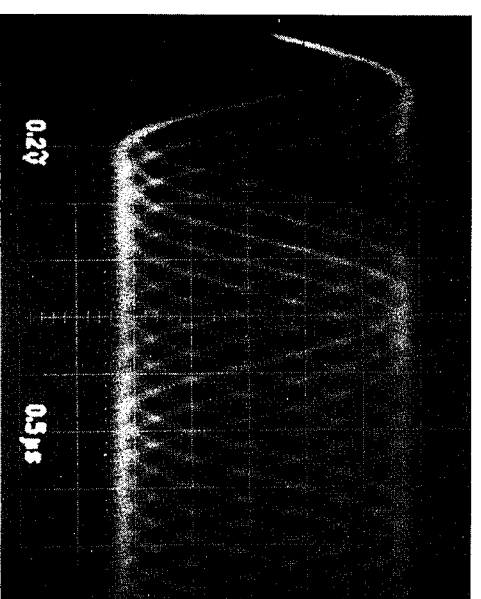
- RF signal and TE signal in test mode (PLAY).
- If the diffraction grating has been adjusted correctly, the influence of triggering is observed on the TE waveform of approx. 18 μs from RF signal trigger point, in the form of a projection.

FIG. (c)



- RF signal and TE signal in test mode (Focusing servo ON / Tracking servo OFF). (Disc Type 4)
- Adjust TE signal so that the waveform is symmetrical in relation to VC. (TE BALANCE)

FIG. (d)

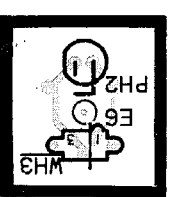
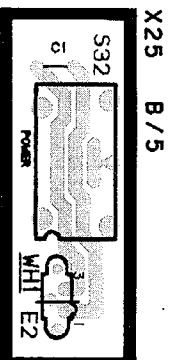
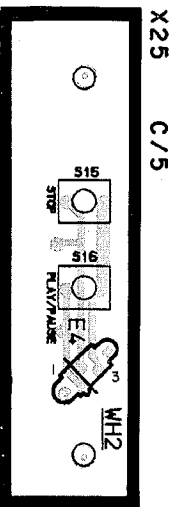
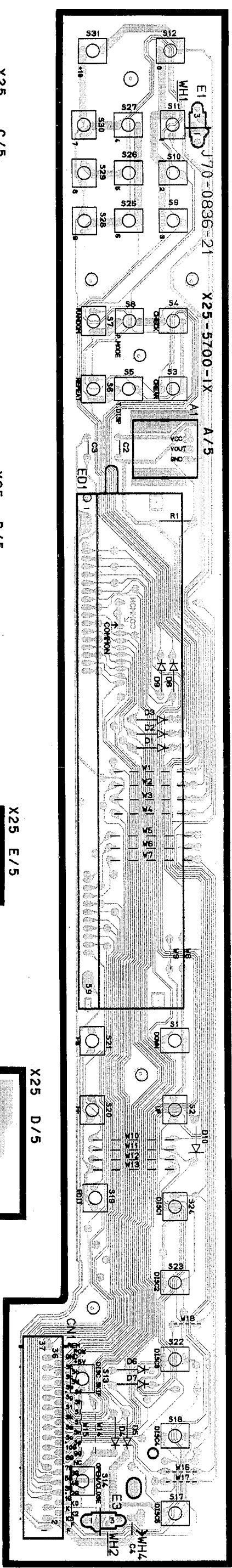


- RF signal in test mode (PLAY).
- Perform the tangential and focusing offset are focused into one point on the display. The crossing points above and below the center shall also be looked clearly. (FE BALANCE)

PC BOARD (Component side view)

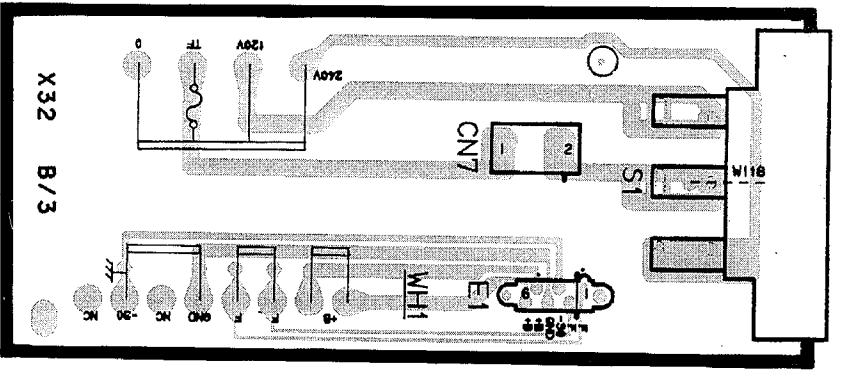
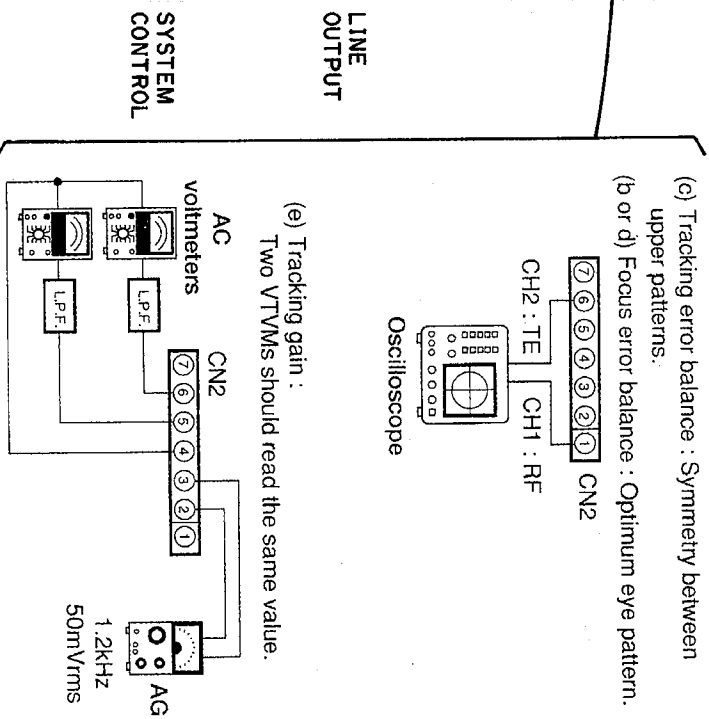
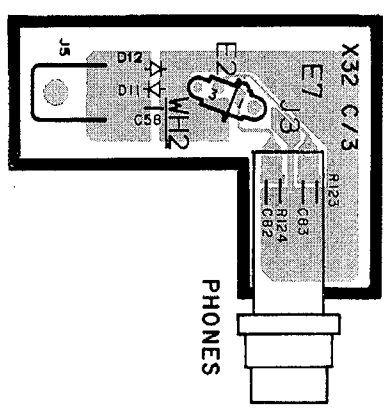
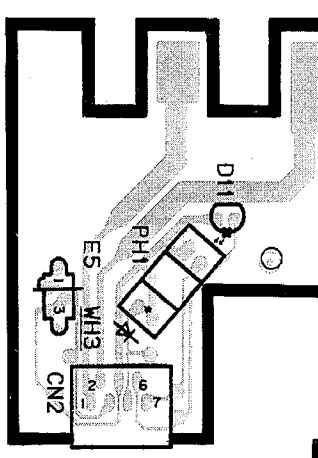
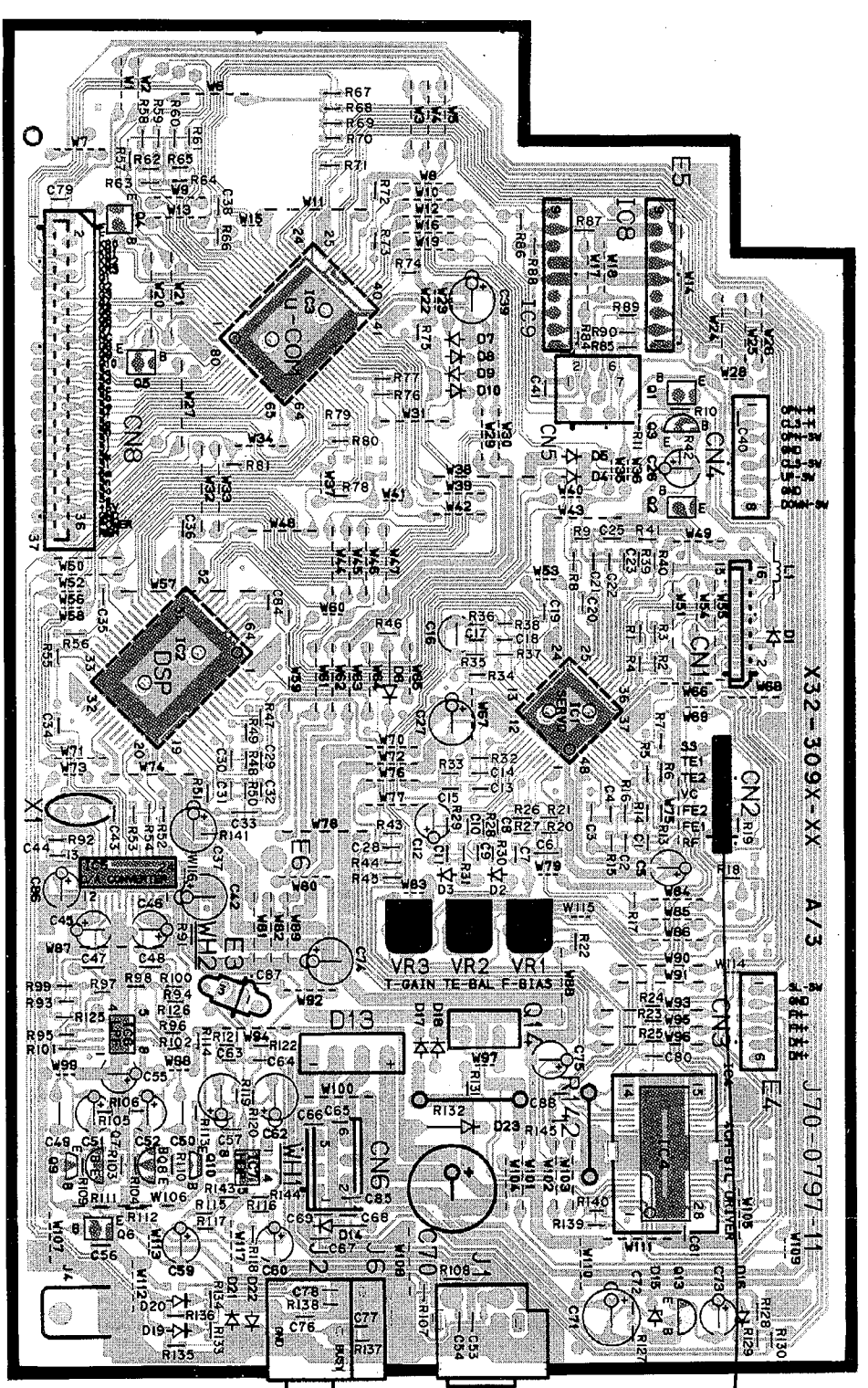
DISPLAY UNIT (X25-5700-XX)

10 : DP-R3080
11 : DP-R4080



CD PLAYER UNIT (X32-3090-XX)

10 : DP-R3080 K,P,X,E
11 : DP-R4080 K,P,X,T,E
21 : DP-R3080 M,Y
22 : DP-R4080 M,Y



DP-R3080/R4080

PARTS LIST

* New Parts
Parts without **Parts No.** are not supplied.
Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.
Teile ohne **Parts No.** werden nicht geliefert.

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C81			CK73FB1H103K	CHIP C		
C82, 83			CK73FSL1H821J	0.010UF		
C84, 85			CK73FB1H103K	820PF	K	4
C86			CE04LW1A101M	0.010UF	J	
C87			CK73FB1H103K	100UF	K	
				0.010UF	10W	
C88			CK73FB1E104K	CHIP C		
C89			CK73FB1H103K	CHIP C		
CN1			E40-4856-05	FLAT CABLE CONNECTOR (16P)		
CN2			E40-4876-05	PIN ASSY (7P)		
CN3			E40-3250-05	PIN ASSY (6P)		
CN4			E40-3252-05	PIN ASSY (8P)		
CN5			E40-4187-05	FLAT CABLE CONNECTOR (7P)		
CN6			E40-4296-05	FLAT CABLE CONNECTOR (6P)		
CN7			E40-4345-05	PIN ASSY (2P)		
CN8			E40-4924-05	FLAT CABLE CONNECTOR (37P)		
J1		*	E63-0122-05	PHONE JACK (2P/LINE OUTPUT)		
J2			E11-0188-05	MINIATURE PHONE JACK (2P/S.CON)		
J3			E11-0127-05	PHONE JACK (PHONES)		
E4-6			J11-0808-05	WIRE CLAMPER		
E7			J11-0808-05	WIRE CLAMPER		
L1			L40-1001-17	SMALL FIXED INDUCTOR (10UH,K)		
X1			L78-0289-05	RESONATOR		
R1-5			CK73FB2A473J	47K	J	1/10W
R6			CK73FB2A104J	100K	J	1/10W
R7			CK73FB2A912J	9.1K	J	1/10W
R8			CK73FB2A623J	62K	J	1/10W
R9			CK73FB2A472J	4.7K	J	1/10W
R10			CK73FB2A105J	1.0M	J	1/10W
R11			CK73FB2A224J	220K	J	1/10W
R12			CK73FB2A102J	1.0K	J	1/10W
R13			CK73FB2A101J	100	J	1/10W
R14, 15			CK73FB2A334J	330K	J	1/10W
R16			CK73FB2A473J	47K	J	1/10W
R17, 18			CK73FB2A512J	5.1K	J	1/10W
R19			CK73FB2A101J	100	J	1/10W
R20			CK73FB2A333J	33K	J	1/10W
R21			CK73FB2A104J	100K	J	1/10W
R22			CK73FB2A562J	5.6K	J	1/10W
R23			CK73FB2A752J	7.5K	J	1/10W
R24, 25			CK73FB2A104J	100K	J	1/10W
R26			CK73FB2A103J	10K	J	1/10W
R27			CK73FB2A684J	680K	J	1/10W
R28			CK73FB2A114J	110K	J	1/10W
R29			CK73FB2A105J	1.0M	J	1/10W
R30			CK73FB2A114J	110K	J	1/10W
R31			CK73FB2A105J	1.0M	J	1/10W
R32			CK73FB2A514J	510K	J	1/10W
R33			CK73FB2A563J	56K	J	1/10W
R34			CK73FB2A104J	100K	J	1/10W
R35			CK73FB2A223J	22K	J	1/10W
R36			CK73FB2A912J	9.1K	J	1/10W
R37			CK73FB2A104J	100K	J	1/10W

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 Y : PX(Far East, Hawaii) T : Europe E : Europe 4 : DP-R4080
 V : AAFES(Europe) X : Australia M : Other Areas
 Δ indicates safety critical components.

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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
C6			CK73EB1C474K	0.47UF	K	
C7, 8			CK73FB1E104K	0.10UF	K	
C9			CK73FB1H473K	0.047UF	K	
C10			CK73FSL1H221J	220PF	J	
C11			CK73FB1H102K	1000PF	K	
C12			CE04LW1C100M	10UF	16W	
C13			CK73FB1H333K	0.033UF	K	
C14			CK73FB1H103K	0.010UF	K	
C15			CK73FSL1H151J	150PF	J	
C16			CE04HW1E100M	10UF	25W	
C17 - 19			CK73FB1H103K	0.010UF	K	
C20			CK73FB1H333K	0.033UF	K	
C21			CK73FB1H103K	0.010UF	K	
C22			CK73FB1H222K	2200PF	K	
C23			CK73FB1H103K	0.010UF	K	
C25			CK73FSL1H680J	68PF	J	
C26			CE04LW1A101M	100UF	10W	
C27			CE04LW0J331M	330UF	6.3W	
C28			CK73FB1H333K	0.033UF	K	
C29			CK73FB1H473K	0.047UF	K	
C30			CK73FB1H152K	1500PF	K	
C31			CK73FB1H103K	0.010UF	K	
C32			CK73FB1H332K	3300PF	K	
C33			CK73EB1C474K	0.47UF	K	
C34, 35			CK73FB1H102K	1000PF	K	
C36			CK73FB1H103K	0.010UF	K	
C37			CE04LW0J331M	330UF	6.3W	
C38			CK73FB1H103K	0.010UF	K	
C39			CE04LW0J331M	330UF	6.3W	
C40, 41			CK73FB1E104K	0.10UF	K	
C42			CE04LW0J221M	220UF	6.3W	
C43			CK73FB1H223K	0.022UF	K	
C44			CK73FSL1H220J	22PF	J	
C45, 46			CE04LW1A101M	100UF	10W	
C47, 48			CQ93FMG1H102J	1000PF	J	
C49, 50			CQ93FMG1H821J	820PF	J	
C51, 52			CE04LW1C100M	100UF	16W	
C53, 54			CK73FSL1H821J	820PF	J	
C55			CE04LW1C470M	47UF	16W	
C56			CK73FB1H103K	0.010UF	K	4
C57, 58			CK73FB1H103K	0.010UF	K	4
C59, 60			CE04LW1H2R2M	2.2UF	50W	4
C61, 62			CE04LW0J221M	220UF	6.3W	4
C63, 64			CK73FB1H103K	0.010UF	K	4
C65-69			CK73FB1H103K	0.010UF	K	
C70			CE04LW1C222M	2200UF	16W	
C71			CE04LW1H101M	100UF	50W	
C72			CK73FB1H103K	0.010UF	K	
C73			CE04LW1H100M	10UF	50W	
C74			CE04LW0J221M	220UF	6.3W	
C75			CE04LW1H4R7M	4.7UF	50W	
C76			CK73FB1H473K	0.047UF	K	
C77, 78			CK73FSL1H221J	220PF	J	
C79			CK73FB1H103K	0.010UF	K	
C80			CK73FSL1H470J	47PF	J	

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7

Ref. No	Add- ress	New Parts	Parts No.	Description	Desig- nation	Re- marks
5	2B		E09-0250-04	CAP		
7	2A		D10-3439-13	ARM		
8	2B		D10-3438-12	SLIDER		
9	1A		D13-1577-14	GEAR		
10	2A		D13-1578-04	GEAR		
11	2A		D13-1579-04	GEAR		
12	3D		D13-1682-04	WORM		
13	2C		D13-1881-04	GEAR		
14	2C,2F		D14-0357-04	ROLLER		
16	3A		D15-0359-04	PULLEY		
17	1A		D16-0355-03	BELT		
18	2A		D21-1763-14	SHAFT		
19	2B		D10-3619-08	GUIDE SHAFT		
20	1B		D13-1728-08	GEAR		(DRIVE)
21	1B		D13-1728-08	GEAR		(MIDDLE)
25	3D		E36-0747-25	FLAT CABLE (7P)		
26	1B		E36-1317-05	FLAT CABLE (16P)		
29	2B		E36-1318-05	WIRING HARNESS (6P)		
35	2C		G01-3630-14	COMPRESSION SPRING		
36	2B		G01-3753-04	COMPRESSION SPRING		
37	2B		G01-3754-04	COMPRESSION SPRING		
38	3A		G02-1049-04	FLAT SPRING		
39	3D		G09-0634-04	WIRE SPRING		
40	2A		G01-3697-24	EXTENSION SPRING		
41	2C		G02-1065-04	FLAT SPRING		
43	2B		J02-1121-04	INSULATOR		
44	1A		J11-0198-03	CLAMPER		
45	3D		J19-3634-04	HOLDER		
46	2A		J90-0811-04	GUIDE		
47	2F		J90-0810-22	GUIDE		
48	3C		J99-0579-01	TRAY		
49	2C		J99-0547-01	TRAY		
AK			N19-1417-08	FLAT WASHER		
55	2A,3A		S93-2061-05	LEVER SWITCH		
56	2B		S74-0054-08	LEAF SWITCH		
63	1A		T50-1055-04	YOKE		
64	1A		T99-0544-15	MAGNET		
FM	2B		T42-0840-08	FEED MOTOR ASSY		
LM	3A		T42-0524-05	DC MOTOR		
PU	1B		T25-0048-05	PICKUP		
RM	3D		T42-0828-05	DC MOTOR		

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DP-R3080/R4080

SPECIFICATIONS

[Format]

System Compact disc digital audio system
Laser Semiconductor laser

[D/A convertors]

D/A conversion 1 Bit
Oversampling 8 fs (352.8 kHz)

[Audio]

Frequency response 4 Hz ~ 20 kHz, ± 1.0 dB
Signal to noise ratio More than 96 dB
Dynamic range More than 94 dB
Total harmonic distortion + noise
..... Less than 0.007 % (at 1kHz)

Channel separation More than 90 dB (at 1 kHz)
Wow flutter Unmeasurable limit
Output level / impedance
Fixed 2.0 V / 1.0 k Ω
Headphone output (max.) 20 mW / 32 Ω
(DP-R4080 only)

[General]

Power consumption 10 W
Dimensions W : 440 mm (17-5/16")
H : 123 mm (4-13/16")
D : 396 mm (15-9/16")
Weight (Net) 4.9 kg (10.8 lb)

Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the General market(M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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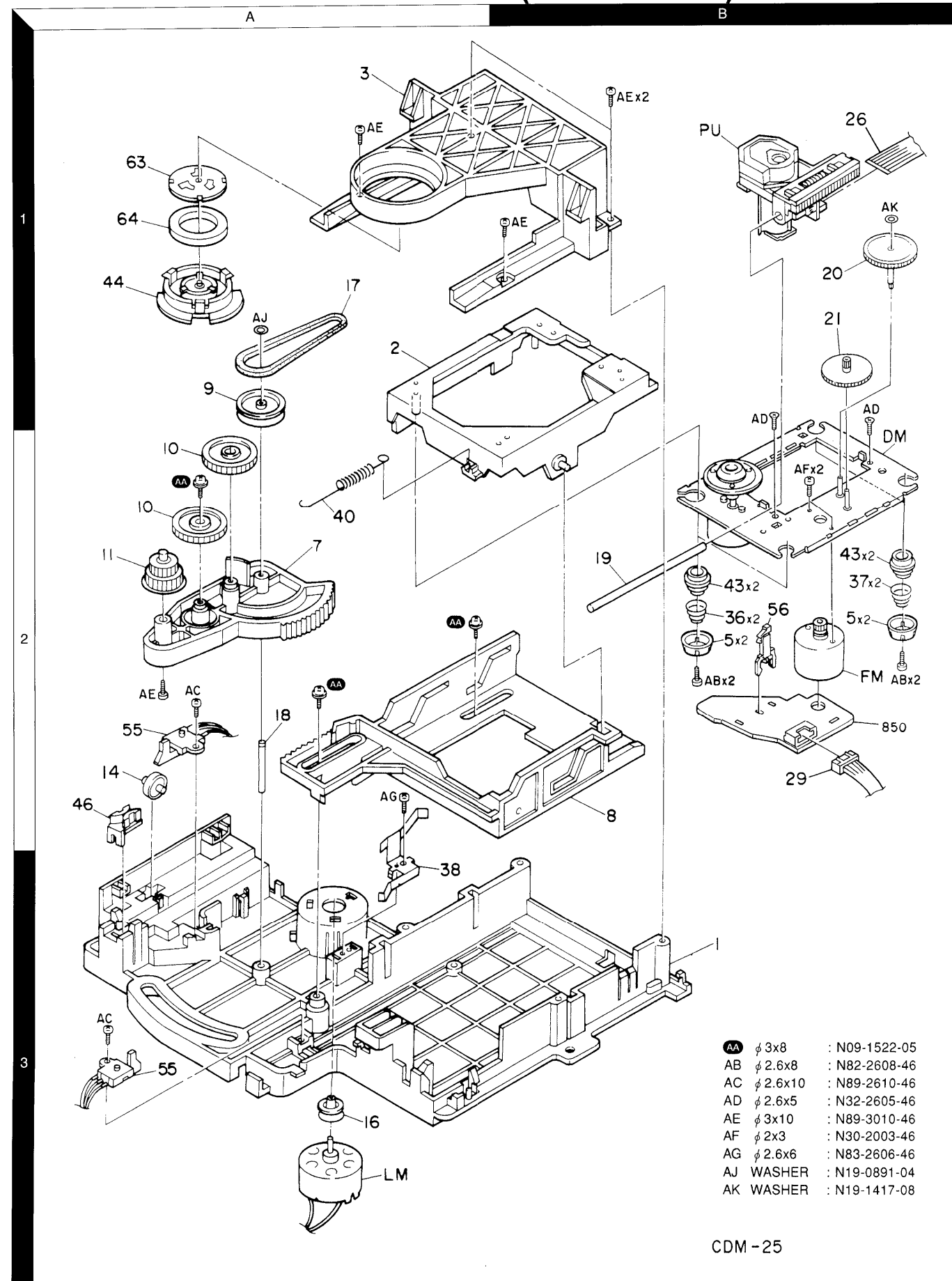
KENWOOD ELECTRONICS (MALAYSIA) SDN BHD

10th Floor, Block B, Wisma Semantan, No. 12 Janlan Gelenggang, Bukit Damansara, 50490 Kuala Lumpur, Malaysia

EXPLODED VIEW (MECHANISM)

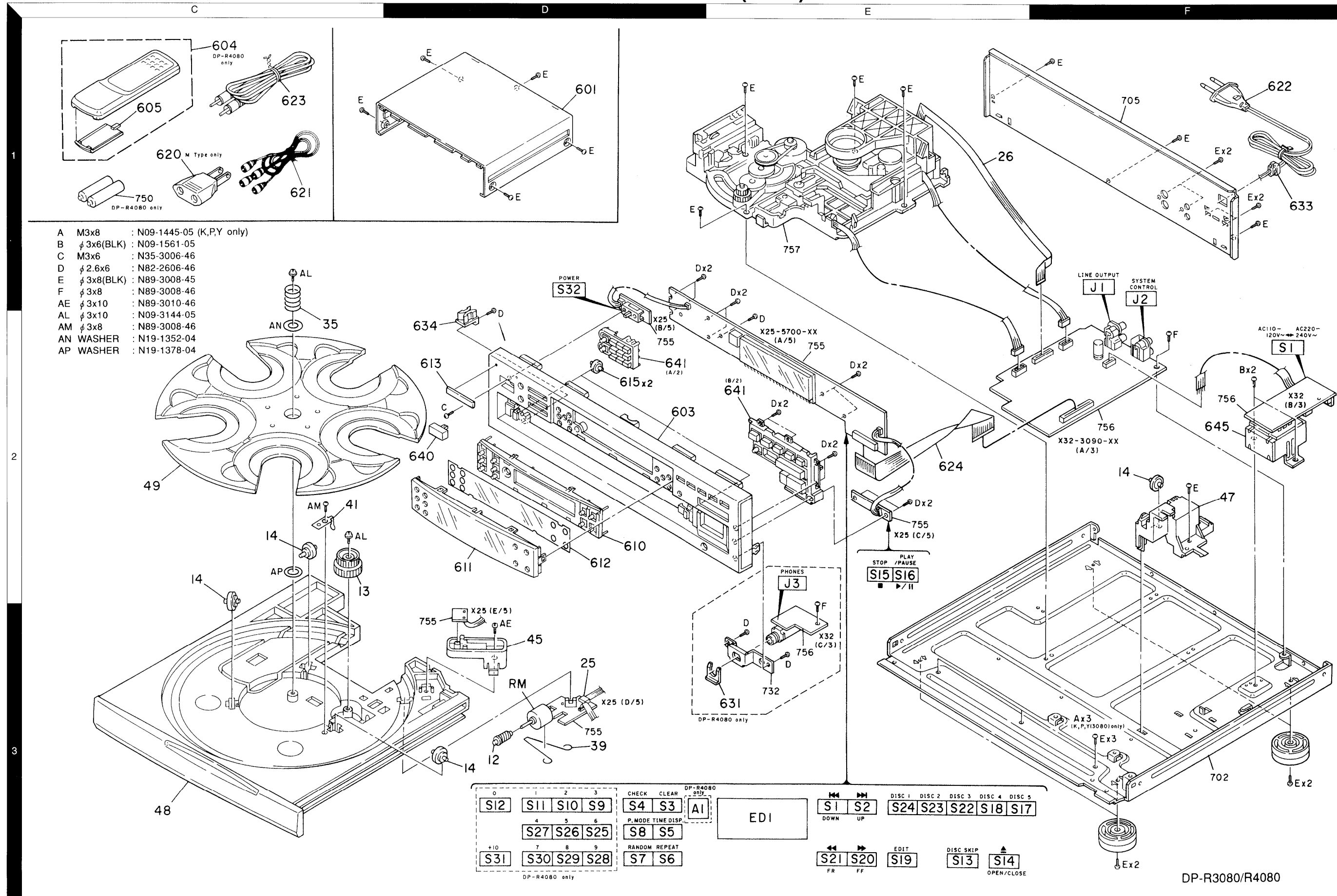
EXPLODED VIEW (UNIT)

PARTS LIST

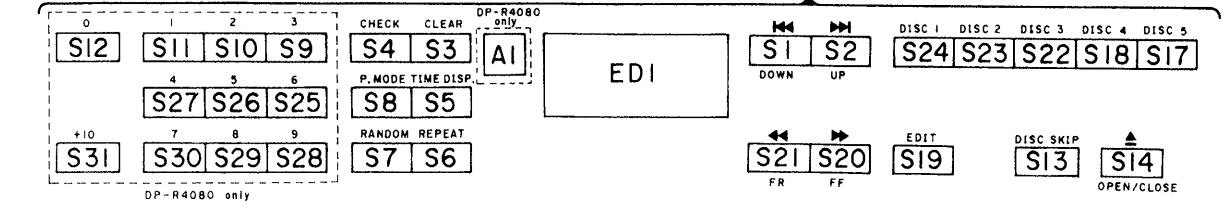


- AA ϕ 3x8 : N09-1522-05
- AB ϕ 2.6x8 : N82-2608-46
- AC ϕ 2.6x10 : N89-2610-46
- AD ϕ 2.6x5 : N32-2605-46
- AE ϕ 3x10 : N89-3010-46
- AF ϕ 2x3 : N30-2003-46
- AG ϕ 2.6x6 : N83-2606-46
- AJ WASHER : N19-0891-04
- AK WASHER : N19-1417-08

CDM - 25



- A M3x8 : N09-1445-05 (K,P,Y only)
- B ϕ 3x6(BLK) : N09-1561-05
- C M3x6 : N35-3006-46
- D ϕ 2.6x6 : N82-2606-46
- E ϕ 3x8(BLK) : N89-3008-45
- F ϕ 3x8 : N89-3008-46
- AE ϕ 3x10 : N89-3010-46
- AL ϕ 3x10 : N09-3144-05
- AM ϕ 3x8 : N89-3008-46
- AN WASHER : N19-1352-04
- AP WASHER : N19-1378-04



DP-R3080/R4080

Ref. No.	Part No.	Description	QTY	Re-mark
601	601	CARTON BOARD	4	X
602	602	PROTECTION BAG (235X360X0.03)	4	M
603	603	PROTECTION BAG (235X360X0.03)	4	KPYXK
604	604	PROTECTION BAG (235X360X0.03)	4	KPYXK
605	605	PROTECTION BAG (235X360X0.03)	4	YXWTE
606	606	FOOT JACK MOUNTING HARDWARE	3	KP
607	607	POWER CORD BUSHING	3	XX
608	608	GUIDE	3	XX
609	609	WIPE BAND	3	XX
610	610	KNOB	3	XX
611	611	KNOB	3	XX
612	612	KNOB	3	XX
613	613	POWER TRANSFORMER (POWER)	3	XX
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798	798	POWER TRANSFORMER (POWER)	3	XX
799	799	POWER TRANSFORMER (POWER)	3	XX
800	800	POWER TRANSFORMER (POWER)	3	XX

Ref. No.	Part No.	Description	QTY	Re-mark
601	601	METALLIC CABINET	3	M
602	602	PANEL	4	ME
603	603	PANEL	4	Y
604	604	PANEL	4	XP
605	605	PANEL	4	XT
606	606	REMO. CON. ASSY (FC-P0703)	3	KPYXK
607	607	BATTERY COVER	3	KPYXK
608	608	ESCLUTCHEON	3	KPYXK
609	609	FRONT GLASS	3	KPYXK
610	610	FRONT GLASS	3	KPYXK
611	611	FRONT GLASS	3	KPYXK
612	612	FRONT GLASS	3	KPYXK
613	613	FRONT GLASS		