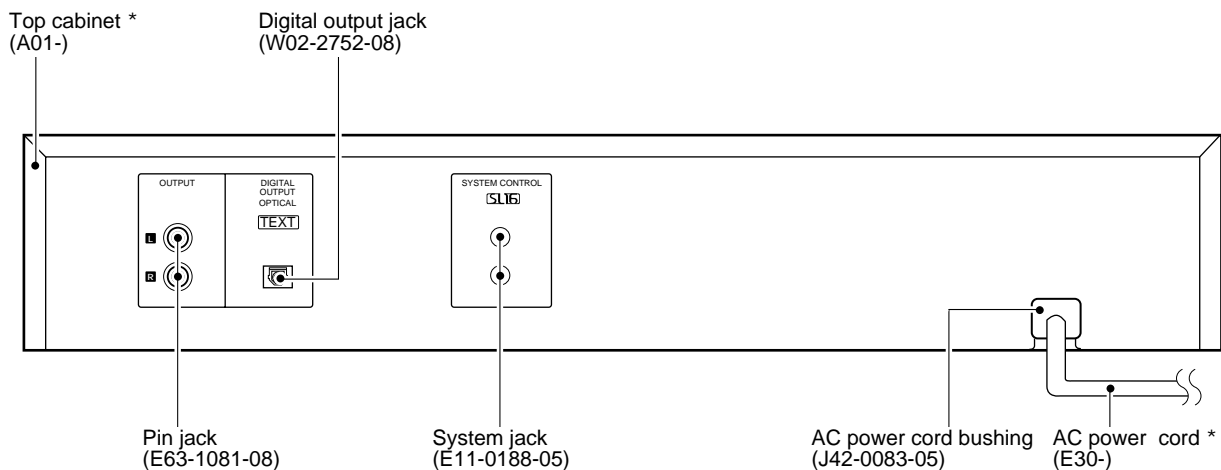
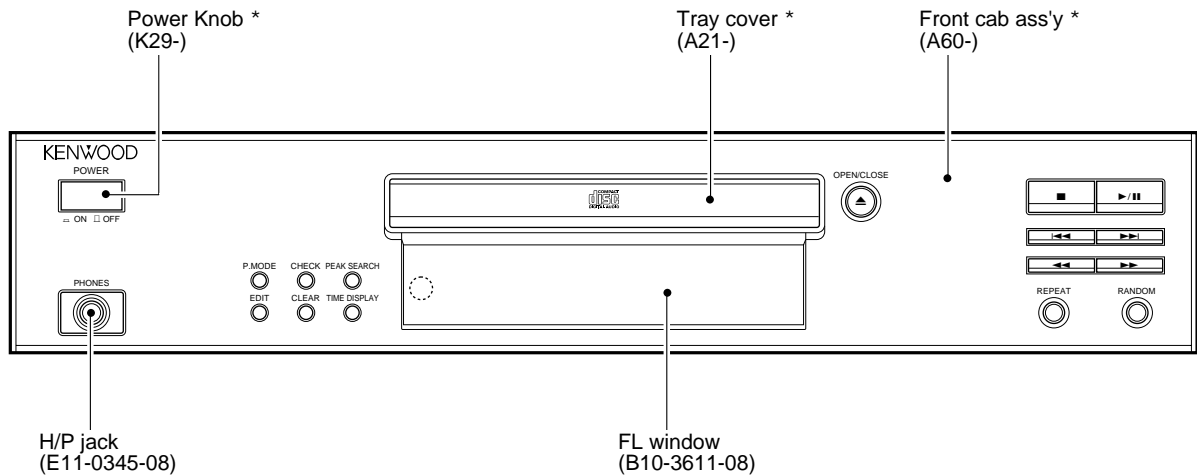


DPF-1030/1030E/1030-S DPF-2030/2030E/2030-S SERVICE MANUAL



*** Refer to parts list on page 14.**

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

Refer to DP-3080MKII/3090 Service manual (B51-5349-00), if you require disassembly for repair.

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.



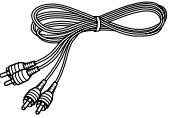
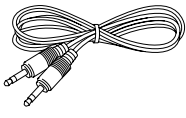
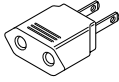

DPF-1030/2030

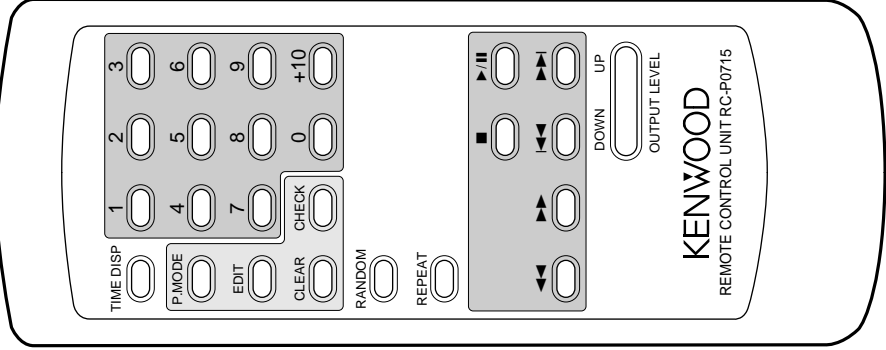
CONTENTS / ACCESSORIES

Contents

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DISASSEMBLY FOR REPAIR	2	EXPLODED VIEW	12
CIRCUIT DESCRIPTION	3	PARTS LIST	14
ADJUSTMENT	4	SPECIFICATIONS	Back cover
PC BOARD	5		

Accessories

Audio cord (1) (E30-2913-08) 	System control cord (1) (E30-2912-08) 	AC plug adaptor (1) (E03-0115-05)  Use to adapt the plug on the power cord to the shape of the wall outlet. (Accessory only for regions where use is necessary.)
Remote control unit (1) (A70-1414-08) : RC-P0715 (DPF-2030 only)	Battery cover : (A09-1190-08)	Batteries (R6/AA) (2) (DPF-2030 only) 

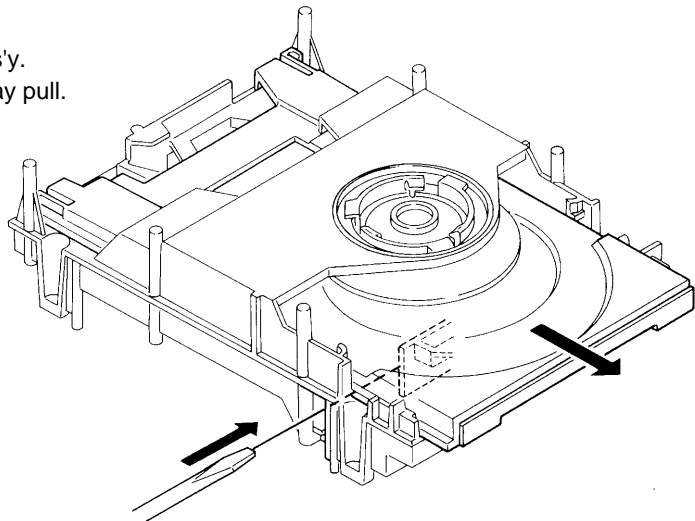


The remote control unit features a numeric keypad (0-9, +10), function keys (TIME DISP, P.MODE, EDIT, CLEAR, CHECK, RANDOM, REPEAT), and volume controls (UP/DOWN, OUTPUT LEVEL). The brand name KENWOOD and model REMOTE CONTROL UNIT RC-P0715 are printed on the device.

DISASSEMBLY FOR REPAIR

1. How to open tray when tray not come out.

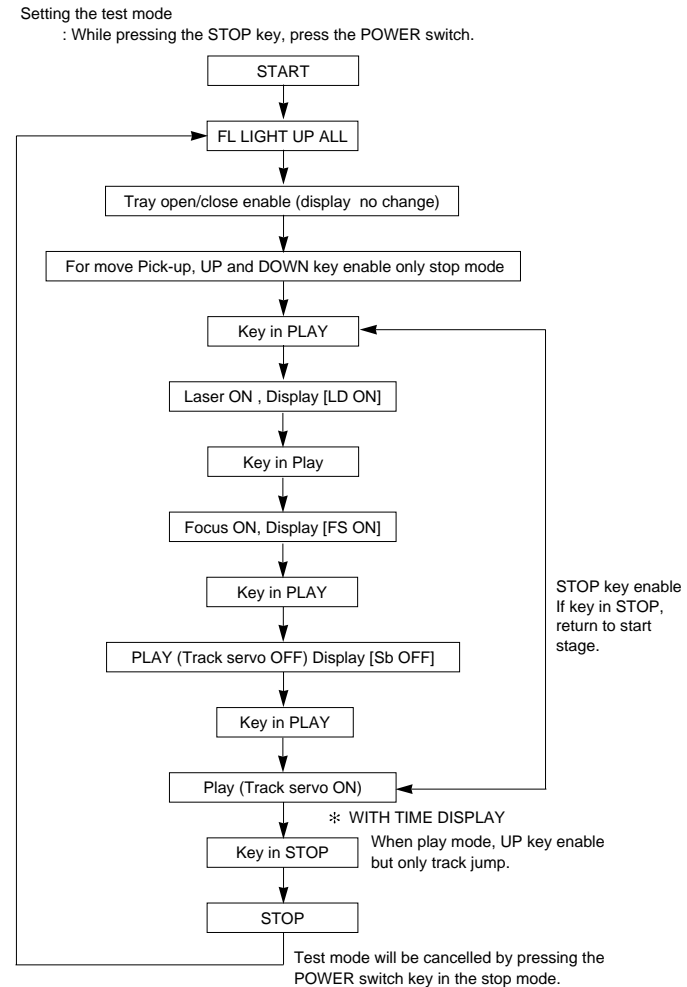
1. Insert the screw driver to left side hole of mechanism ass'y.
2. While pushing the rack gear fully right wards, then the tray pull.



1. Pin description of microprocessor

Pin No.	Pin Name	I/O	Description
1-6	6G-1G	O	FL grid control port.
7	NC	-	Unused.
8	VDD	-	Power supply(+5V).
9-11	-	-	Connected to ground.
12	C-RESET	O	DSP signal output.
13	S-MUTE	O	Muting signal output for system.
14	NC	-	Unused.
15	TEXT	I	Text copy detection.
16	-	-	Connected to ground.
17	RESET	I	Hardware reset signal input.
18	LD CLOSE	O	Tray motor control.
19	LD OPEN	O	Tray motor control.
20	AVSS	-	Connected to ground.
21	-	-	Connected to ground.
22	PU IN SW	I	Pickup location.
23	OPEN SW	I	Tray open switch input.
24	CLOSE SW	I	Tray close switch input.
25-28	KEYO-3	I	Key input port.
29	AVDD	-	Power supply(+5V).
30	AVREF	-	Reference voltage(+5V).
31,32	XT1,2	-	Connected to ground.
33	VSS	-	Connected to ground.
34,35	XO,1	-	X'tal 4.19MHz.
36	WRQ	I	Sub code Q output.
37	COIN	O	Command data to DSP.
38	16BIT	-	Unused.
39	HF	-	Connected to ground.
40	NC	-	Unused.
41	CQCK	O	Clock output to DSP.
42	SQOUT	I	SQ data to dsp.
43	RWC	O	Reading/writing control port.
44	GND	-	Connected to ground.
45	S BUSY	I/O	System control data.
46	S DATA	I/O	System control status.
47	RMC	I	Remote control signal input.
48	GND	-	Connected to ground.
49	TRY L/H	O	Tray motor speed control.
50	SL-	O	Sled motor control port(reverse).
51	SL+	O	Sled motor control port(forward).
52	VDD	-	Power supply(+5V).
53-59	NC	-	Unused.
60	DRF	I	CD focus OK signal input.
61	NC	-	Unused.
62-70	a-j	O	FL segment(a-j) control port.
71	VLOAD	-	Power supply(-30V).
72,73	k,l	O	FL segment(k,l) control port.
74-77	NC	-	Unused.
78-80	9G-7G	O	FL grid(9G-7G) control port.

2. Test mode



3. Key function in test mode

No.	INPUT KEY	FUNCTION	DISPLAY
1	PLAY(1ST)	LASER ON	LD ON
2	PLAY(2ND)	FOCUSING SERVO ON	FS ON
3	PLAY(3RD)	PLAY(TRACKING SERVO OFF)	Sb off
4	PLAY(4TH)	PLAY(TRACKING SERVO ON)	TN0. And Time
5	UP	In the stop mode. Moves the pickup slightly toward the outer position disc. When tracking servo is ON, set the track number up.	-
6	DOWN	In the stop mode. Moves the pickup slightly toward the inner position disc. When tracking servo is ON, set the track number up.	-
7	STOP	Laser off, focusing servo off, tracking servo off.	All segments
8	OPEN/CLOSE	In the stop mode, Tray is opened or closed.	All segments

DPF-1030/2030

ADJUSTMENT

CD section

Since this CD system incorporates the following automatic adjustment function, when the pickup is replaced, it is not necessary to readjust it

Since this CD unit does not need adjustment, the combination of PWB and laser pickup unit is not restricted.

•Automatic adjustment item

1. Focus offset(Fig.1)
2. Tracking offset(Fig.2)
3. E/F balance (Tracking error balance) (Fig.3)
4. RF level AGC function (HF level : constant)
5. RF level automatic follow-up of the tracking gain

This automatic adjustment is performed each time a disc is changed. Therefore, each disc is played back using the optimal settings

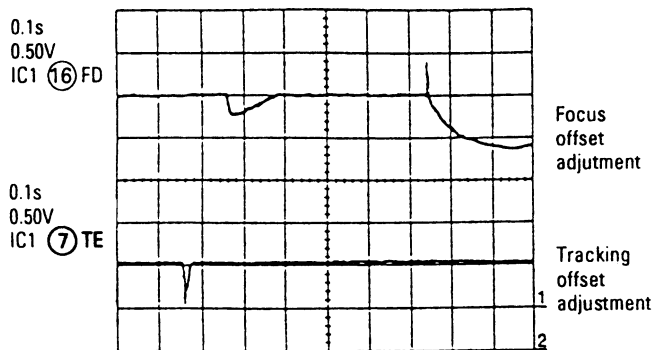


Fig.1

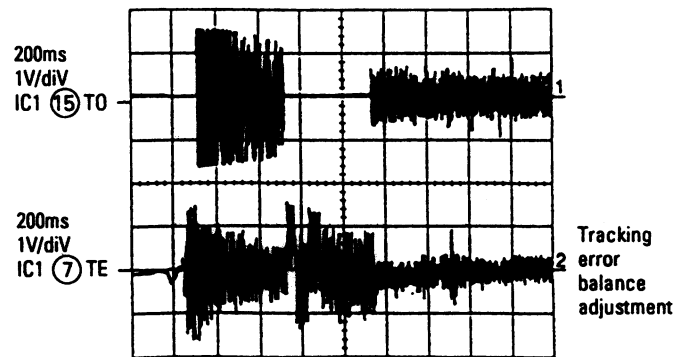


Fig.3

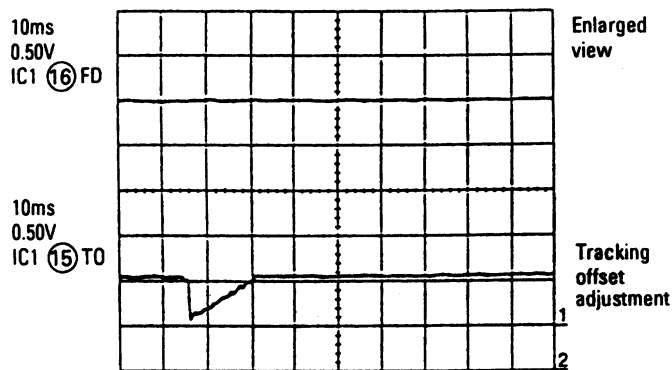


Fig.2

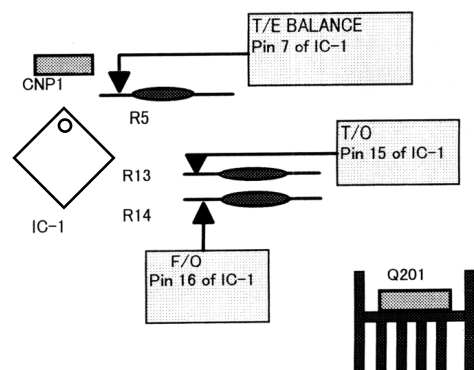
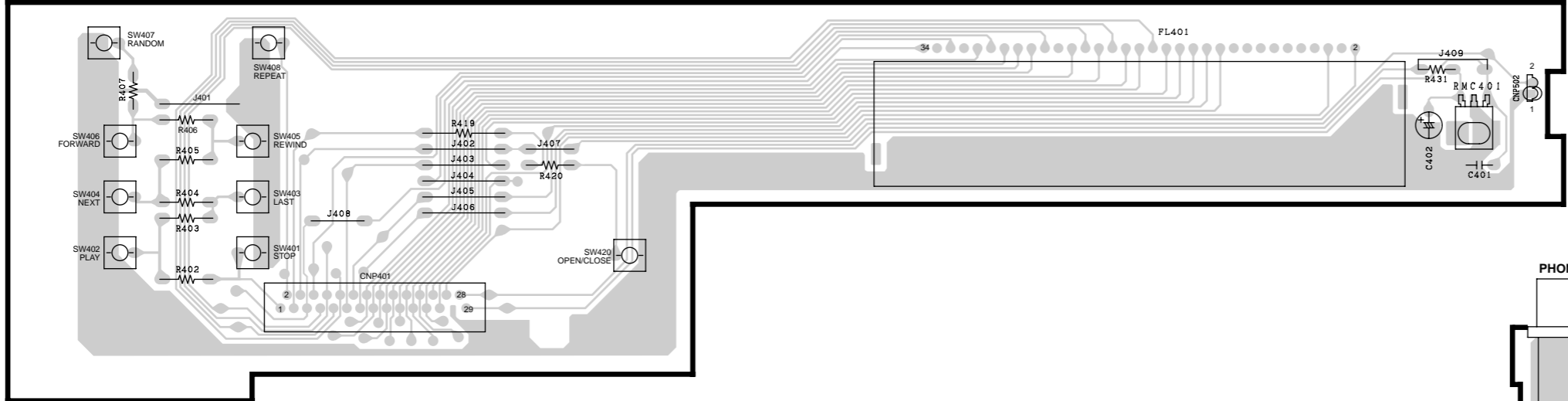


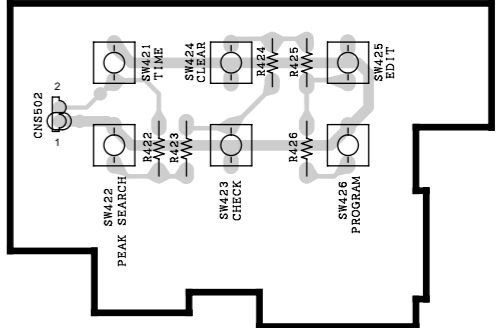
Fig.4 Checking points

PC BOARD(Component side view)

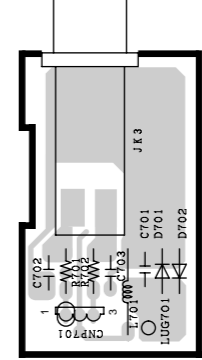
DISPLAY-1 PWB



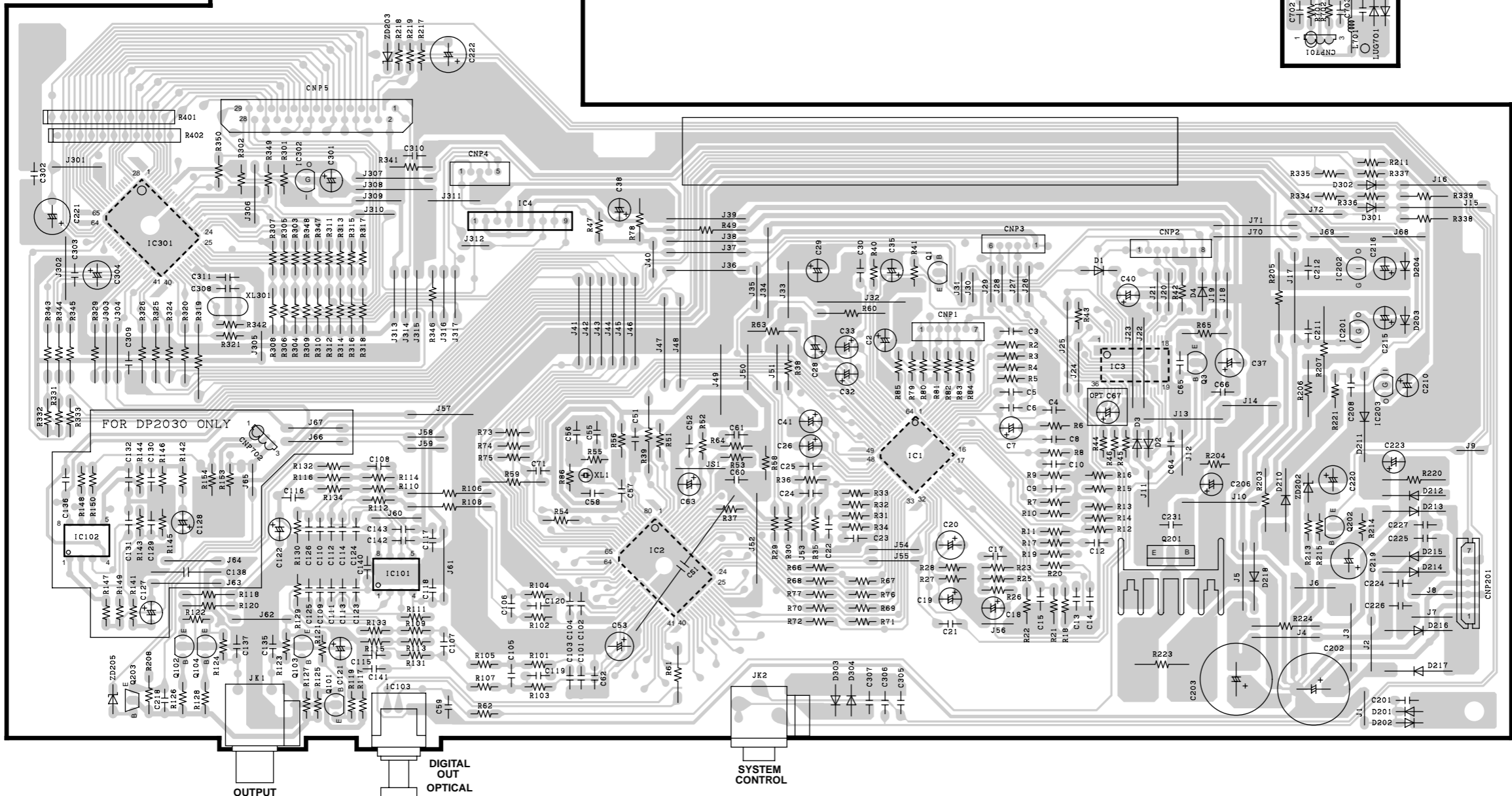
DISPLAY-2 PWB



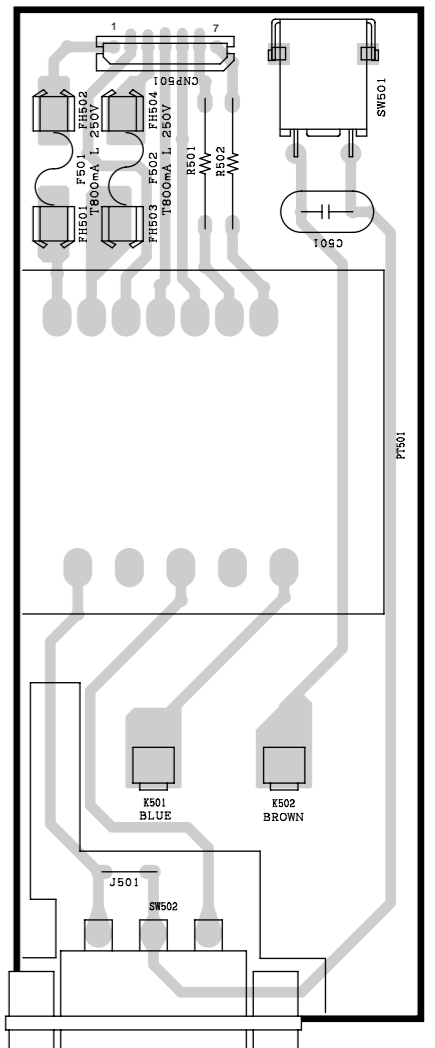
PHONES



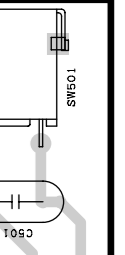
MAIN PWB



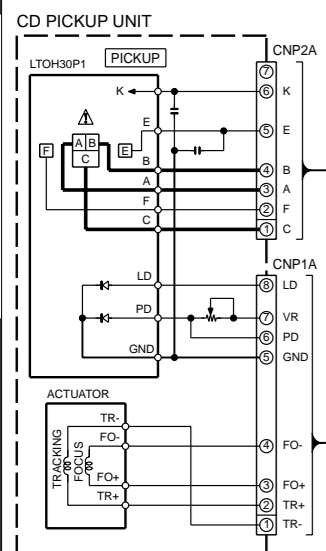
POWER PWB



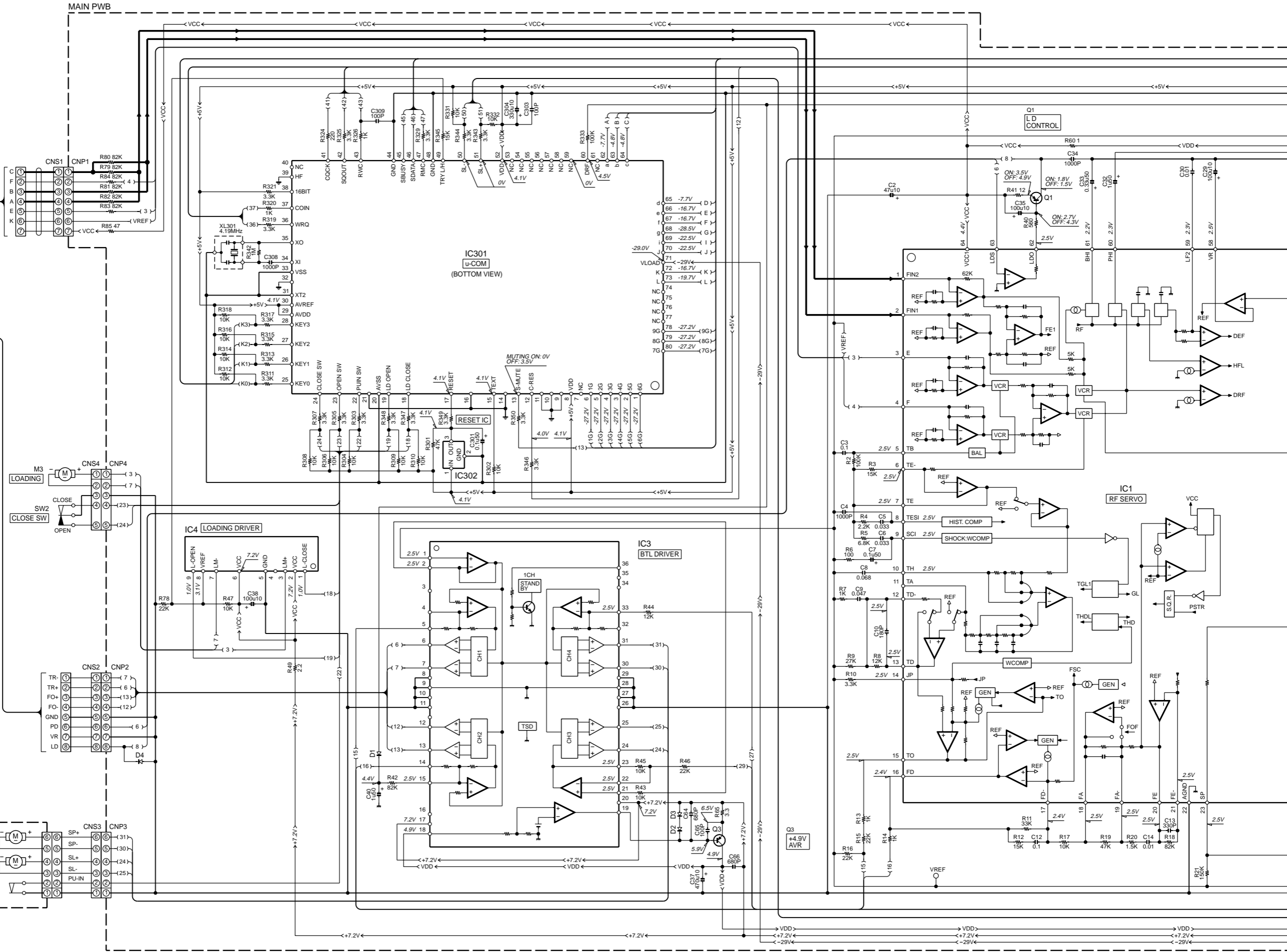
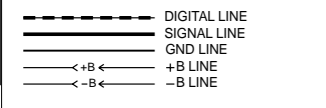
POWER

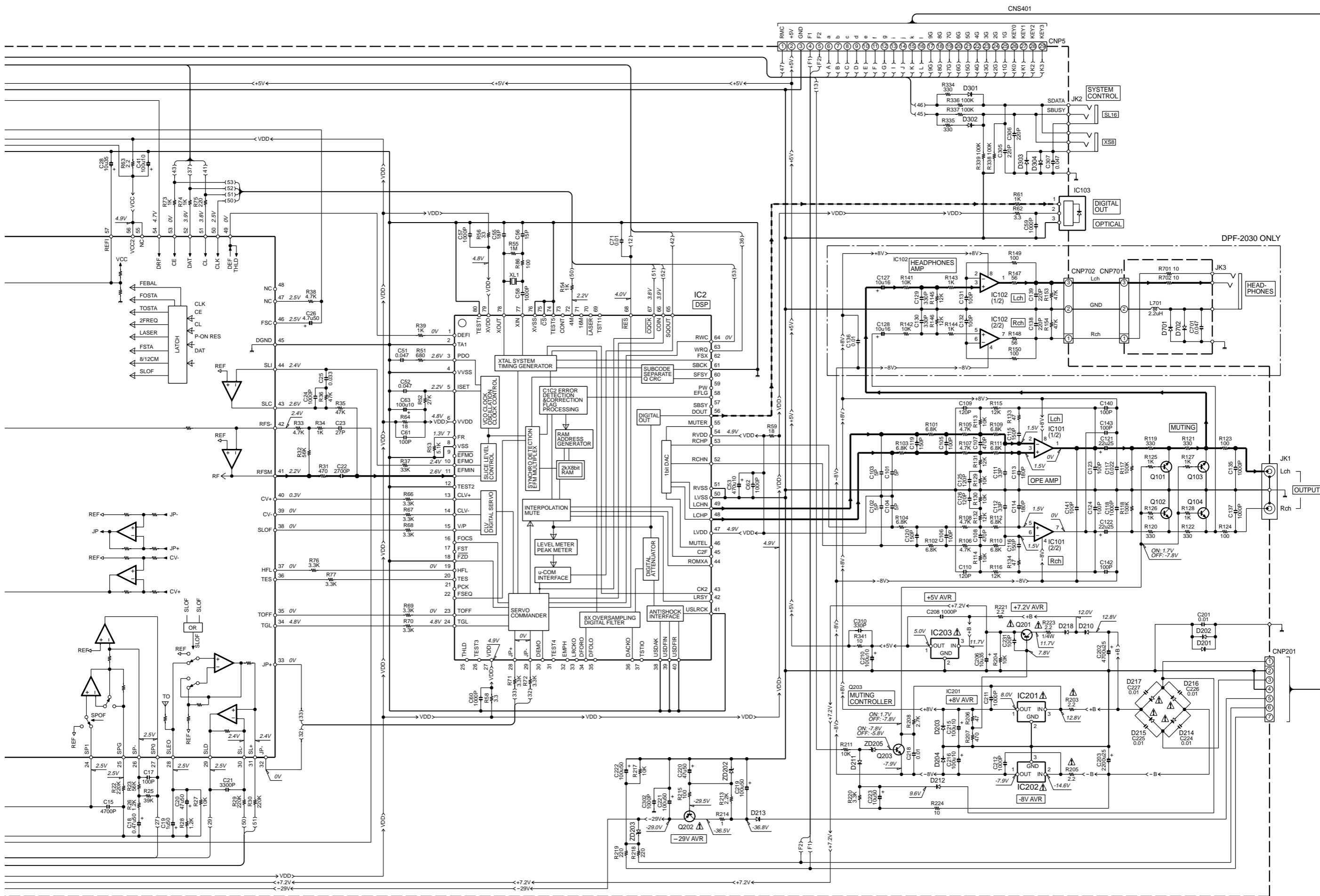


Refer to the schematic diagram for the value of resistors and capacitors.

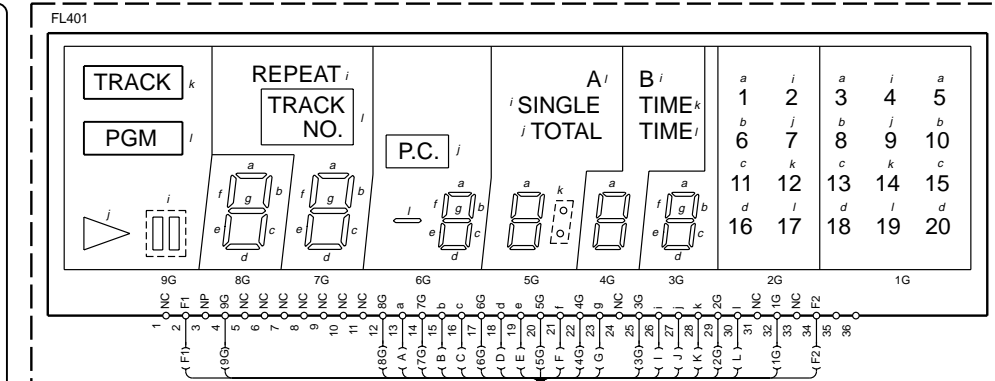


- IC1 : LA9241M
- IC2 : LC78620E
- IC3 : M56748FP
- IC4 : TA7291S
- IC101,102 : NJM4565DD
- IC103 : TOTX178A-1
- IC201 : KIA78S08P
- IC202 : NJM79L08A
- IC203 : KIA78S05P
- IC301 : IX0346(DPF-1030)
- IX0299(DPF-2030)
- IC302 : KIA7036AP
- Q1,202 : KTA1266GR
- Q3 : KTA1271Y
- Q101-104 : 2SC2878B
- Q201 : KTC2026
- Q203 : KRC102M
- D1-4,201-204,211,301-304, 701,702 : 1SS133
- D210,212-218 : 1N4004S
- ZD202 : MTZJ30B
- ZD203 : MTZJ5.6B
- ZD205 : MTZJ8.2B



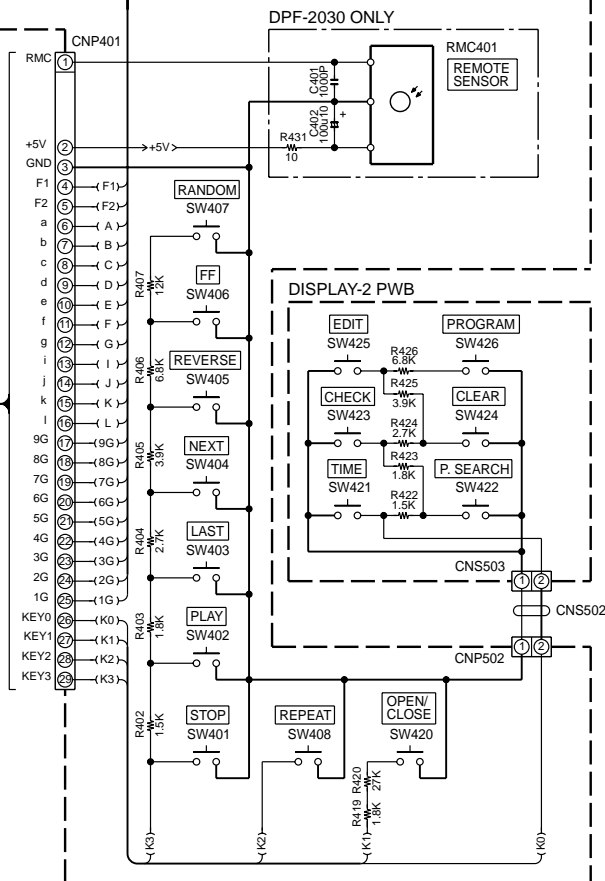


DISPLAY-1 PWB

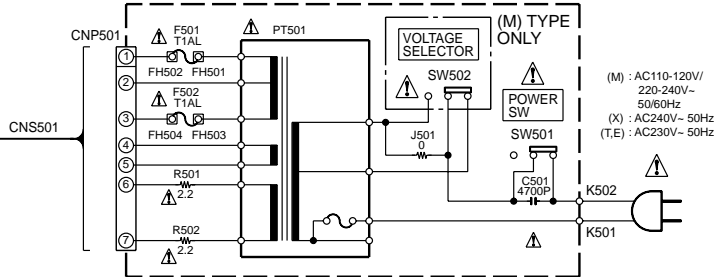


CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

The DC voltage is an actual reading measured with a high impedance type voltmeter. The measurement value may vary depending on the measuring instruments used or on the product. Refer to the voltage during PLAY unless otherwise specified; The value shown in () is the voltage measured at the moment of STOP.



POWER PWB

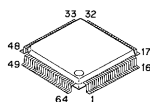
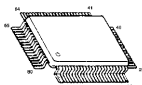
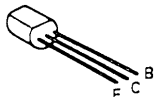


DPF-1030/1030E/1030-S
DPF-2030/2030E/2030-S

2SC2878B

LC78620E

LA9241M



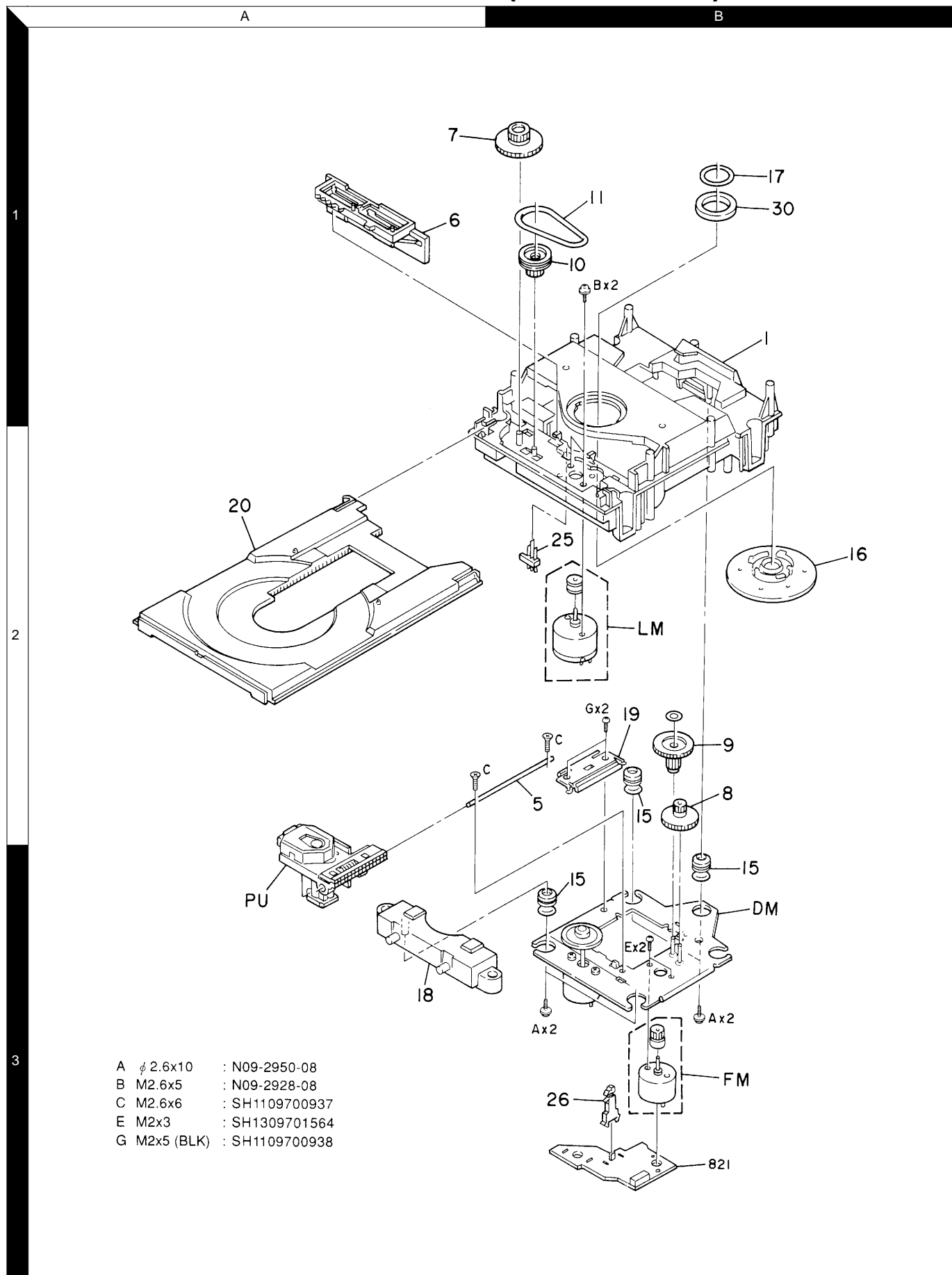
DPF-1030/2030

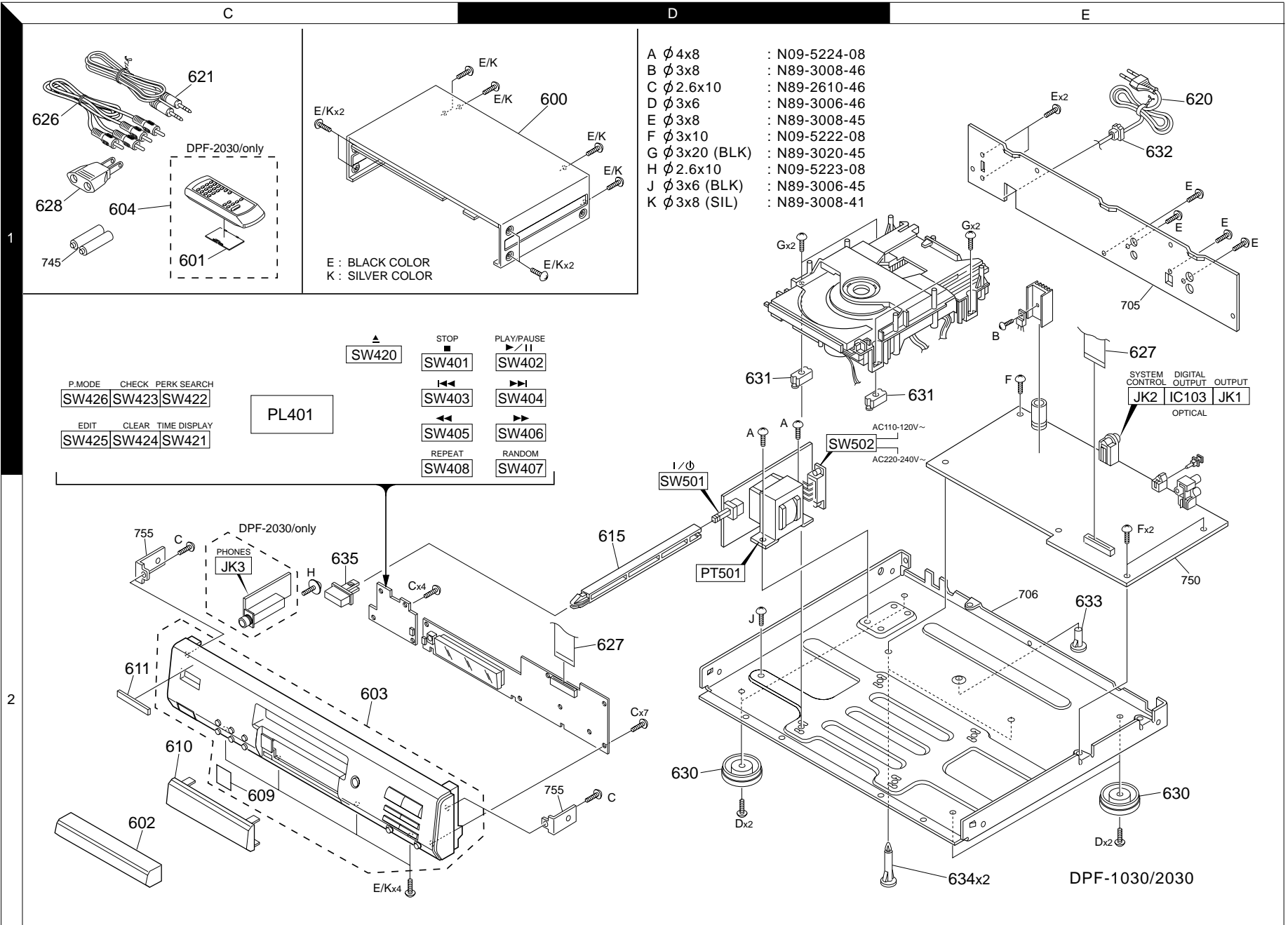
Y22-8290-50

KENWOOD

DPF-1030/2030

EXPLODED VIEW (MECHANISM)





- A Ø 4x8 : N09-5224-08
- B Ø 3x8 : N89-3008-46
- C Ø 2.6x10 : N89-2610-46
- D Ø 3x6 : N89-3006-46
- E Ø 3x8 : N89-3008-45
- F Ø 3x10 : N09-5222-08
- G Ø 3x20 (BLK) : N89-3020-45
- H Ø 2.6x10 : N09-5223-08
- J Ø 3x6 (BLK) : N89-3006-45
- K Ø 3x8 (SIL) : N89-3008-41

EXPLODED VIEW (UNIT)

DPF-1030/2030

* 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.

①

Table with columns: Ref. No, Add-ress, New Parts, Parts No., Description, Desti-nation, Re-marks. Includes sub-header DPF-1030/1030E/1030-S/2030/2030E/2030-S and various part entries like 600, 601, 602, etc.

L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia
Y : PX(Far East,Hawaii) T : England E : Europe G : Germany V : China(Shanghai)
Y : AAFES(Europe) X : Australia Q : Russia H : Korea M : Other Areas Δ indicates safety critical components .

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②

Table with columns: Ref. No, Add-ress, New Parts, Parts No., Description, Desti-nation, Re-marks. Includes sub-header ELECTRICAL PARTS and various part entries like H, FL401, C2, C3, etc.

L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia
Y : PX(Far East,Hawaii) T : England E : Europe G : Germany V : China(Shanghai)
Y : AAFES(Europe) X : Australia Q : Russia H : Korea M : Other Areas Δ indicates safety critical components .

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Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
C111,112			CC45FSL1H330J	CERAMIC 33PF	J	
C113,114			CC45FSL1H181J	CERAMIC 180PF	J	
C115,116			CC45FSL1H151J	CERAMIC 150PF	J	
C117			CK45FB1H223Z	CERAMIC 0.022UF	Z	
C118			CC45FSL1H102J	CERAMIC 1000PF	J	
C119,120			CC45FSL1H151J	CERAMIC 150PF	J	
C121,122			CE04KW1E220M	ELECTRO 22UF	25WV	
C123,124			CC45FSL1H101J	CERAMIC 100PF	J	
C125,126			CC45FSL1H121J	CERAMIC 120PF	J	
C127,128			CE04KW1C100M	ELECTRO 10UF	16WV	2
C129,130			CC45FSL1H331J	CERAMIC 330PF	J	2
C131,132			CC45FSL1H101J	CERAMIC 100PF	J	2
C135			CC45FSL1H102J	CERAMIC 1000PF	J	
C136			CQ92FM1H103K	MYLAR 0.010UF	K	2
C137			CC45FSL1H102J	CERAMIC 1000PF	J	
C138,139			CC45FSL1H221J	CERAMIC 220PF	J	2
C140-143			CC45FSL1H101J	CERAMIC 100PF	J	
C201			CK45FB1H103Z	CERAMIC 0.010UF	Z	
C202			CE04KW1E472M	ELECTRO 4700UF	25WV	
C203			CE04KW1E222M	ELECTRO 2200UF	25WV	
C206			CE04KW1V100M	ELECTRO 10UF	35WV	
C208			CQ92FM1H102K	MYLAR 1000PF	K	
C210			CE04KW1A101M	ELECTRO 100UF	10WV	
C211,212			CC45FSL1H102J	CERAMIC 1000PF	J	
C215,216			CE04KW1A101M	ELECTRO 100UF	10WV	
C218			CQ92FM1H103K	MYLAR 0.010UF	K	
C219			CE04KW1H101M	ELECTRO 100UF	50WV	
C220			CE04KW1H470M	ELECTRO 47UF	50WV	
C221,222			CE04KW1H101M	ELECTRO 100UF	50WV	
C223			CE04KW1H100M	ELECTRO 10UF	50WV	
C224-227			CK45FB1H103Z	CERAMIC 0.010UF	Z	
C231			CC45FSL1H101J	CERAMIC 100PF	J	
C301			CE04KW1H0R1M	ELECTRO 0.1UF	50WV	
C302			CC45FSL1H102J	CERAMIC 1000PF	J	
C303			CC45FSL1H101J	CERAMIC 100PF	J	
C304			CE04KW1A331M	ELECTRO 330UF	10WV	
C305,306			CC45FSL1H221J	CERAMIC 220PF	J	
C307			CK45FB1H473Z	CERAMIC 0.047UF	Z	
C308			CQ92FM1H102K	MYLAR 1000PF	K	
C309			CC45FSL1H101J	CERAMIC 100PF	J	
C401			CQ92FM1H102K	MYLAR 1000PF	K	2
C402			CE04KW1A101M	ELECTRO 100UF	10WV	2
C501	*		C90-3936-08	CERAMIC 0.0047UF	J	
C701	*		CK45FB1H473Z	CERAMIC 0.047UF	Z	2
CNP1		*	E35-2628-08	CONNECTOR	CONE7P53253	
CNP2		*	E35-2316-08	CONNECTOR	QCNCM705HAFZZ	
CNP3		*	E40-8381-08	CONNECTOR	CONE6P53253	
CNP4		*	E40-8382-08	CONNECTOR	CONE5P53253	
CNP5		*	E40-8378-08	FFC CONE TOP	QCNCWZG29AWZZ	
CNP201			E40-8379-08	CONNECTOR WIRE	CONE-7P5267X	
CNP401			E40-8377-08	FFC CONE SIDE	QCNCWZF29AWZZ	
CNP501			E35-2314-08	CONNECTOR	CNCWN0757AWZZ	
CNP502,503			J19-5973-08	2P CABLE HLDR	QCNCW015BAWZZ	
FH501-504			J19-5865-08	FUSE HOLDER	QFSDH0001AWZZ	

L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia
Y : PX(Far East,Hawaii) T : England E : Europe G : Germany V : China(Shanghai)
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Ref. No	Address	New Parts	Parts No.	Description	Destination	Remarks
JK1			E63-1081-08	PIN JACK	QJAKZ0012AWZZ	
JK2			E11-0188-05	SYSTEM JACK	QJAKZ0013AWZZ	
JK3			E11-0345-08	H/P JACK	QJAKH0002AWZZ	2
K501,502			E35-1953-08	LUG1746A	POWER SUPPLY	
Δ F501,502		*	F50-0168-08	FUSE	FUSET801E	
-		*	J19-6090-08	FL HOLDER	LHLDZ1207AWFW	
L701			L90-0312-08	COIL	VP-DH2R2K0000	2
Δ PT501		*	L07-2879-08	POWER TRANS	RTRNP0292AWZZ	EE2E3
Δ PT501		*	L07-2879-08	POWER TRANS	RTRNP0292AWZZ	TX
Δ PT501		*	L07-2880-08	POWER TRANS	RTRNP0293AWZZ	M
XL1		*	L77-2231-08	CRYSTAL	RCRSP0005AWZZ	
XL301			L78-0677-08	CRYSTAL	4.19MHZ,CRSTL1595AT	
Δ R203			RD14BB2C2R2J	RD	2.2 J 1/6W	
Δ R205			RD14BB2C2R2J	RD	2.2 J 1/6W	
R208		*	R92-1965-08	RC	2.7K J 1/2W	
R220			RD14BB2H332J	RD	3.3K J 1/2W	
Δ R223			RD14BB2E2R2J	RD	2.2 J 1/4W	
Δ R501,502			RD14BB2E2R2J	RD	2.2 J 1/4W	
SW401-408			S70-0071-08	SWITCH	QSW-K0005AWZZ	
SW420-426			S70-0071-08	SWITCH	QSW-K0005AWZZ	
Δ SW501		*	S68-0128-08	SWITCH	QSW-P0014AWZZ	
Δ SW502			S62-0087-08	SLIDE SWITCH	QSOCE0004AWZZ	
SW701			S70-0071-08	SWITCH	QSW-K0005AWZZ	
D1 -4			1SS133	DIODE		
D201-204			1SS133	DIODE		
D210		*	1N4004S	DIODE		
D211			1SS133	DIODE		
Δ D212-218		*	1N4004S	DIODE		
D301-304			1SS133	DIODE		2
D701,702			1SS133	DIODE		
IC1			LA9241M	IC(AFAMP.SERVO)		
IC2			LC78620E	IC(CD SERVO DSP)		
IC3			M56748FP	IC		
IC4			TA7291S	IC(BRIDGE DRIVER)		
IC101			NJM4565DD	IC OP AMP		
IC102			NJM4565DD	IC OP AMP		2
Δ IC201			KIA78S08P	IC		
Δ IC202			NJM79L08A	IC(VOLTAGE REGULATOR/ -8V)		
Δ IC203			KIA78S05P	IC		
IC301		*	IX0299	IC SYSTEM U-CON		2
IC301		*	IX0346	IC SYSTEM U-CON		1
IC302			KIA7036AP	IC		
Q1			KTA1266GR	TRANSISTOR		
Q3			KTA1271Y	TRANSISTOR		
Q101-104			2SC2878B	TRANSISTOR		
Δ Q201		*	KTC2026	TRANSISTOR		
Δ Q202		*	KTA1266GR	TRANSISTOR		2
Q203			KRC102M	TRANSISTOR		
ZD202			MTZJ30B	ZENER DIODE		
ZD203			MTZJ5.6B	ZENER DIODE		
ZD205			MTZJ8.2B	ZENER DIODE		

L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia
Y : PX(Far East,Hawaii) T : England E : Europe G : Germany V : China(Shanghai)
Y : AAFES(Europe) X : Australia Q : Russia H : Korea M : Other Areas Δ indicates safety critical components.

PARTS LIST

DPF-1030/2030

DPF-1030/2030

PARTS LIST

5

Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
RMC401 IC103			W02-2689-08 W02-2752-08	REM CNTRL MDL OPTICAL OUT	VHLN63H380A-1	2
MECHANISM PARTS						
1	1B		A10-3468-08	LOADING CHS	LCHSM0072AWZZ	
5	2B		J90-0862-08	GUIDE SFT	NSFTM0002AWFW	
6	1A		D13-1726-08	RACK GEAR	NGERR0001AWZZ	
7	1A		D13-1727-08	TRAY GEAR	GEAR1728B	
8	2B		D13-1869-08	MIDDLE GEAR	NGERH0011AWZZ	
9	2B		D13-1870-08	DRIVING GEAR	NGERH0012AWZZ	
10	1B		D15-0388-08	DRIVE PULLEY	PULLY1728A	
11	1B		D16-0396-08	DRIVE BELT	BELT1728A	
15	2B, 3B		J02-1146-08	CUSHION	MCUSN1524A	
16	2B		J11-0811-08	STABILIZER	LHLDM1001AWZZ	
17	1B		J11-0812-08	CD MAGNET RING	LANGZ0002AWFW	
18	3A		J19-5661-08	MEC HOLDER	LHLDZ1001AWZZ	
19	2B		J19-5662-08	GUIDE RAIL	MLEVP0080AWZZ	
20	2A		J99-0809-08	DISC HOLDER	GCOVA1201AWSA	
25	2B		S74-0080-08	LEAF SWITCH	SWICHL1749A	
26	3B		S74-0054-08	LEAF SWITCH		
30	1B		T99-0609-08	MAGNET	PMAGF0001AWZZ	
CNS1			E35-2615-08	CD PICKUP A WIRE	QCWNW1535AWZZ	
CNS2			E35-2320-08	CD PICKUP B WIRE	QCWNW1182AWZZ	
CNS3			E35-2321-08	MOTOR WIRE(6P)	QCWNW1339AWZZ	
CNS4			E35-2322-08	TRAY WIRE	QCWNW1379AWZZ	
DM	3B		T42-0825-08	MOTOR ASSY	DISC	
FM	3B		T42-0824-08	MOTOR ASSY	FEED	
LM	2B		T42-0823-08	MOTOR ASSY	TRAY	
PU	2A	*	T25-0101-08	PICKUP ASSY	HPC1LXASY	

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HOW TO READ THE PARTS LIST ABBREVIATION OF MODEL AND MASS PRODUCTION'S DESTINATIONS

MODEL	ABB.	Australia	Canada	China	England	Europe	Germany	Korea	Malaysia
DPF-1030	1	-	-	-	-	E	-	-	-
DPF-1030E	1	-	-	-	-	E2	-	-	-
DPF-1030-S	1	-	-	-	-	E3	-	-	-
DPF-2030	2	-	-	-	T	E	-	-	-
DPF-2030E	2	-	-	-	-	E2	-	-	-
DPF-2030-S	2	X	-	-	-	-	-	-	-
MODEL	ABB.	Mexico	PX/AAFES	Russia	Scandinavia	Shanghai	USA	Other area	
DPF-1030	1	-	-	-	-	-	-	-	-
DPF-1030E	1	-	-	-	-	-	-	-	-
DPF-1030-S	1	-	-	-	-	-	-	M	-
DPF-2030	2	-	-	-	-	-	-	-	-
DPF-2030E	2	-	-	-	-	-	-	-	-
DPF-2030-S	2	-	-	-	-	-	-	M	-

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 6 Hz ~ 20 KHz, ± 0.5 dB
Signal to noise ratio More than 94 dB
Dynamic range More than 92 dB
Total harmonic distortion + noise Less than 0.007% (at 1 KHz)
Channel separation More than 90 dB (at 1 KHz)
Wow & flutter Unmeasurable Limit

[General]

Power consumption 12 W
Dimensions W : 440 mm (17-5/16")
H : 95 mm (3-3/4")
D : 370 mm (14-9/16")
Weight (Net) 4.3 kg (9.5 lb)

Output level/impedance

Variable (only DPF-2030) (Max.) 2.0 V/0.8 K Ω
Fixed (only DPF-1030) 2.0 V/0.8 K Ω

Digital output

Optical -15 dBm ~ -21 dBm
(Wave length 660 nm)
Headphone output (Max.) 20 mW (32 Ω)



1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

Note:

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

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