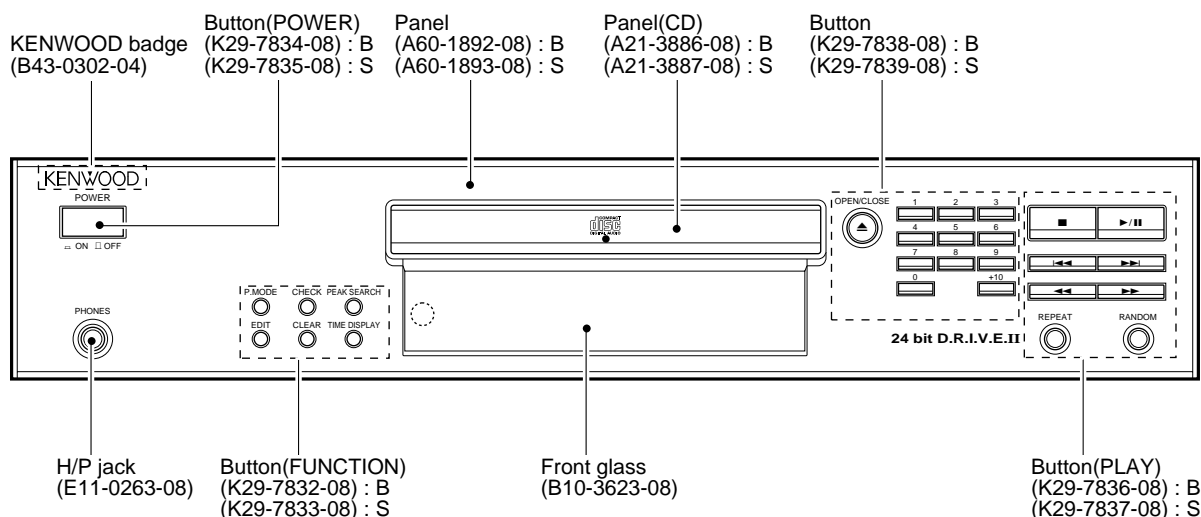


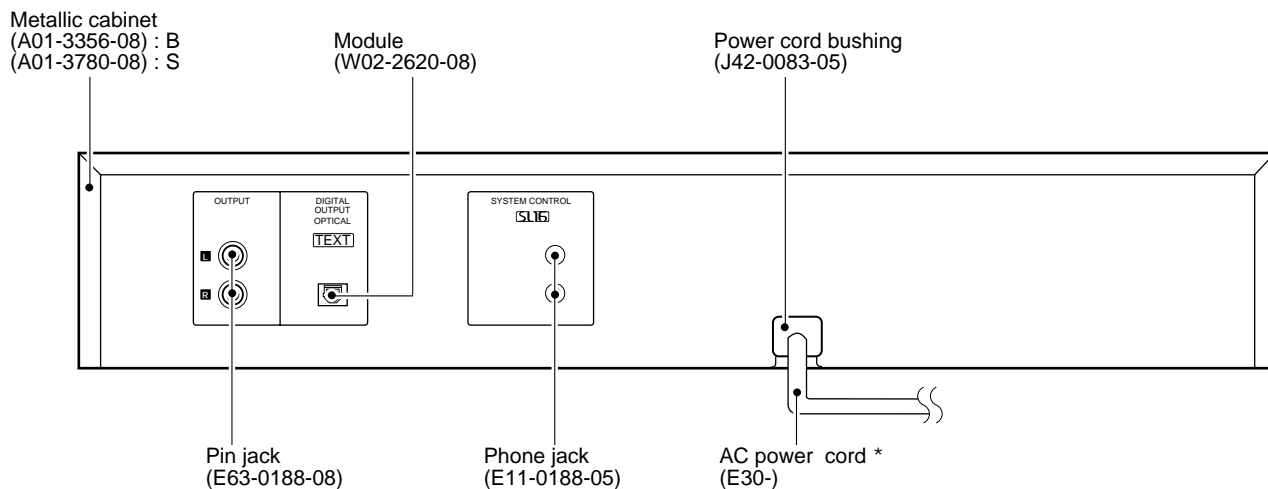
COMPACT DISC PLAYER
DPF-3030/3030E/3030-S
SERVICE MANUAL

KENWOOD

© 2000-3/B51-5608-00 (K/K) 1704



B : black
S : silver



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.

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

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-3030/3030E/3030-S

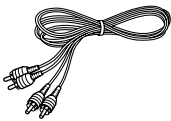
CONTENTS / ACCESSORIES

Contents

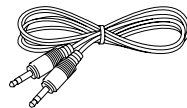
CONTENTS / ACCESSORIES	2	EXPLODED VIEW	12
CIRCUIT DESCRIPTION	3	PARTS LIST	14
ADJUSTMENT	4	PARTS DESCRIPTIONS	17
PC BOARD	5	SPECIFICATIONS	Back cover
SCHEMATIC DIAGRAM	7		

Accessories

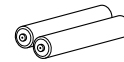
Audio cord (1)
(E30-0505-05)



System control cord (1)
(E30-2733-05)

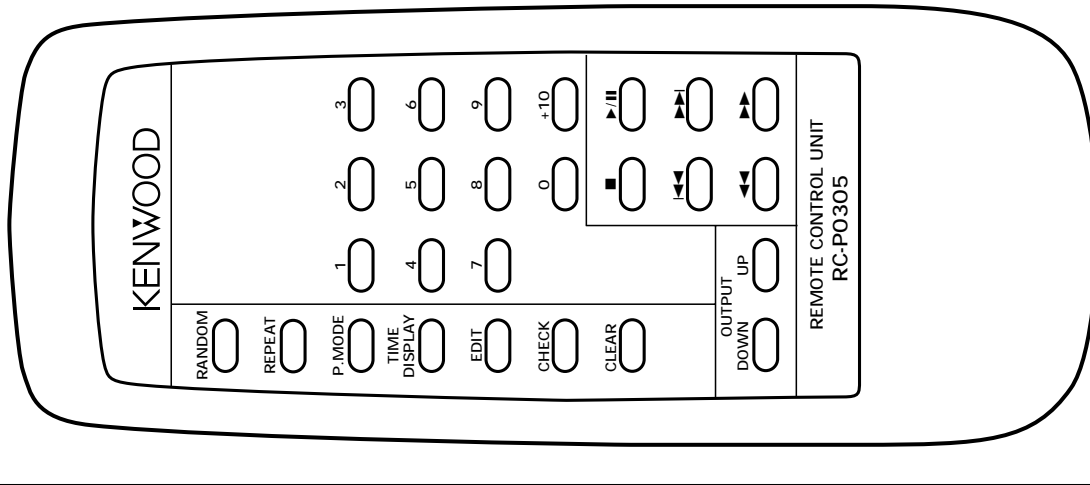


Batteries (R6/AA)..... (2)



Remote control unit (1)
(A70-1181-08) : RC-P0305

Battery cover : (A09-0356-08)



DPF-3030/3030E/3030-S

CIRCUIT DESCRIPTION

1. Microprocessor : CXP82320-535Q(IC500)

Pin description

Pin No.	Pin Name	I/O	Description
1	GFS	-	Unused.
2	RMC	I	Input port of remote control signal.
3	PE5	-	GND.
4,5	PE6,7	-	Unused.
6	MUTE	O	Digital muting control. (ON : L)
7	MLEN	O	Latch control to AD1855(IC600).
8	MCK	O	Clock control to AD1855(IC600).
9	SENS	I	Sense input from CXD2587Q(IC300).
10	MDT	O	Data control to AD1855(IC600).
11	SQCK	O	Clock to read Q data.
12	SUBQ	I	Q data input port.
13	PB7	-	Unused.
14-17	KR0-KR3	I	Key input port(KR0-KR3).
18	CLOSE	O	Control port of loading motor. (ACTIVE : L)
19	OPEN	O	Control port of loading motor. (ACTIVE : L)
20	MON	O	Control port of spindle motor. (ON : H)
21	XRST	O	CXD2587Q(IC300) reset port.
22	DATA	O	Data output to CXD2587Q(IC300).
23	XLT	O	Latch output to CXD2587Q(IC300).
24	CLK	O	Clock output to CXD2587Q(IC300).
25	FOK	I	Focus OK input port.
26	LDON	O	Laser output port. (ON : H)
27	A MUTE	O	Analogue muting output. (ON : H)
28	ZERO(R)	I	Zero(R) flug from AD1855(IC600).
29	ZERO(L)	I	Zero(L) flug from AD1855(IC600).
30	RESET	I	Reset signal input.
31	EXTAL	-	Xtal 4.19MHz.
32	XTAL	-	Xtal 4.19MHz.
33	VSS	-	GND.
34-46	S0-S12	-	Unused.
47	SEG11	O	FL segment port(l)
48	SEG10	O	FL segment port(k), key scan(KS10)
49	SEG9	O	FL segment port(j), key scan(KS9)
50	SEG8	O	FL segment port(i), key scan(KS8)
51-54	SEG7-SEG4	O	FL segment port(g-d), key scan(KS7-KS4)
55-57	SEG3-SEG1	O	FL segment port(c-a)
58-61	T12-T09	-	Unused.
62-70	G9-G1	O	Output port. To FL grid.
71	VFDP	-	Power supply(-26V).
72	VDD	-	Power supply(+5.0V).
73	NC	-	Connected to VDD.
74	STOP	I	Detection port of limit switch. (ON : L)
75	16BIT	O	Unused.
76	SYSTEM DATA	I/O	System serial data.
77	SYSTEM BUSY	I/O	System serial busy.
78	SCOR	I	SCOR from 2587Q(IC300).
79	OP/SW	I	Input port of open switch. (ON : L)
80	CL/SW	I	Input port of close switch. (ON : L)

2. TEST MODE

KEY	DISPLAY	OPERATION
PEAK SEARCH + AC ON	01 FFFF	Entering the the test mode.
PLAY/PAUSE	03	T-SERVO OFF
	05	T-SERVO ON
▶▶	-	The pickup travels outwards in the stop mode.
◀◀	-	The pickup travels inwards in the stop mode.

To cancel the test mode, turn the power off.

DPF-3030/3030E/3030-S

ADJUSTMENT

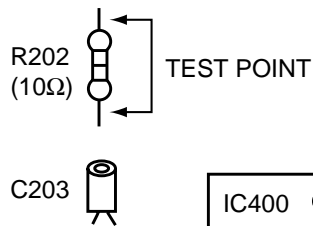
No.	ITEM	INPUT SETTING	OUTPUT SETTING	PLAYER SETTING	ALIGNMENT POINT	ALIGN FOR	FIG.
<p>1. With pressing the "PEAK SEARCH" key, turn the power on to enter the test mode.</p> <p>2. Press the "OPEN/CLOSE" key and then load the test disc on the tray.</p> <p>3. To close the tray, press the "OPEN/CLOSE" key.</p>							
1	FOCUS OFFSET	TEST DISC TYPE 4	Connect an oscilloscope to TP200 RF (PIN 2) VC (PIN 1)	Press the "PLAY/PAUSE" key. Confirm that the display is "05".	VR200	Optimum eye pattern	
2	LASER CURRENT CHECK	TEST DISC TYPE 4	Connect the DC voltmeter to R202(both ends).	Press the "PLAY/PAUSE" key. Confirm that the display is 03 or 05.	-	0.5V ± 0.2V	(a)

Note:

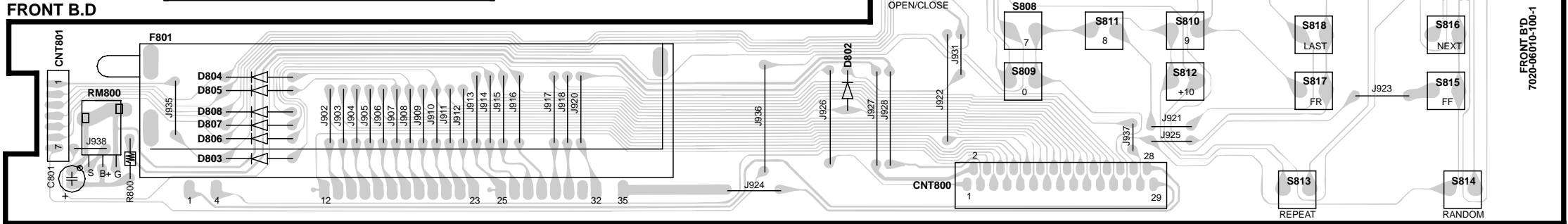
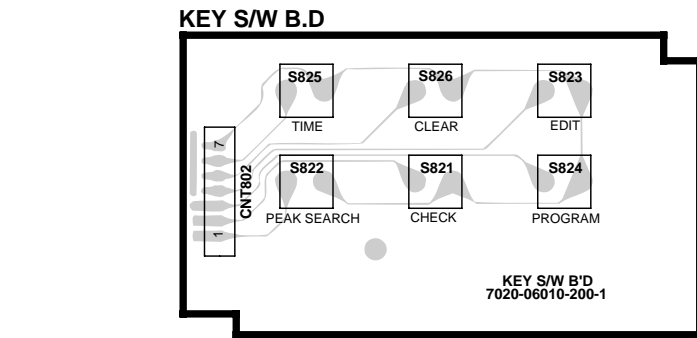
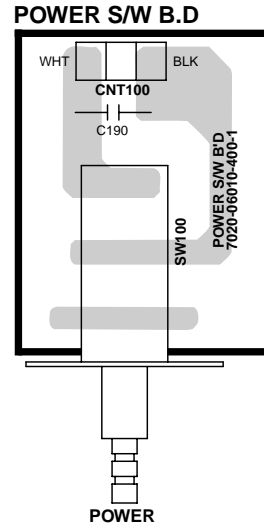
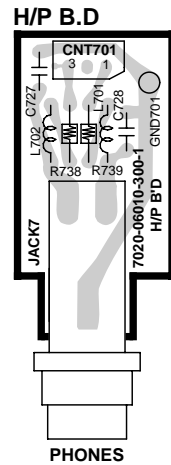
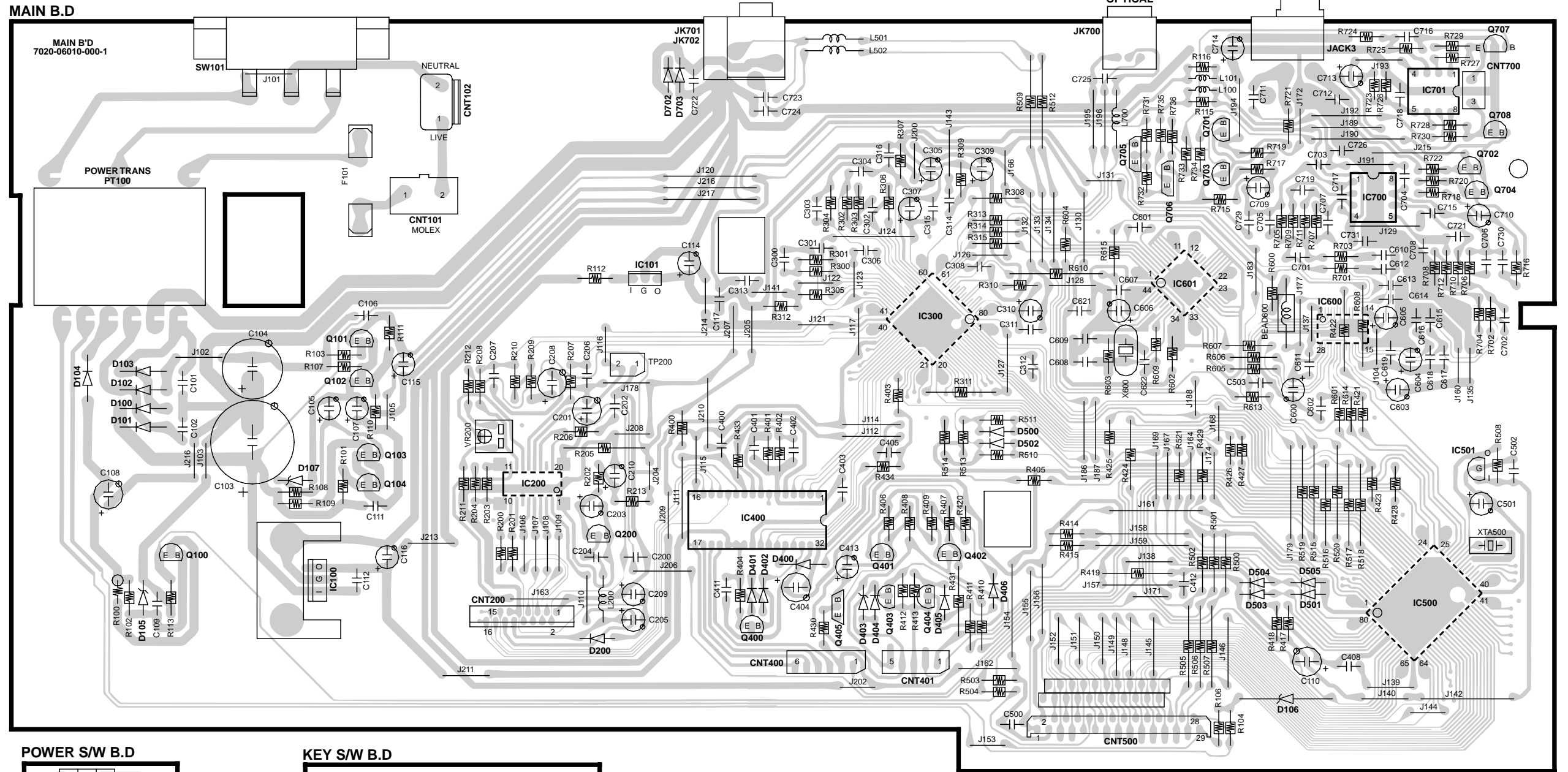
Type 4 disc : SONY YEDS-18 Test Disc or equivalent.

LPF: Around 47 kΩ+ 390 pF or so.

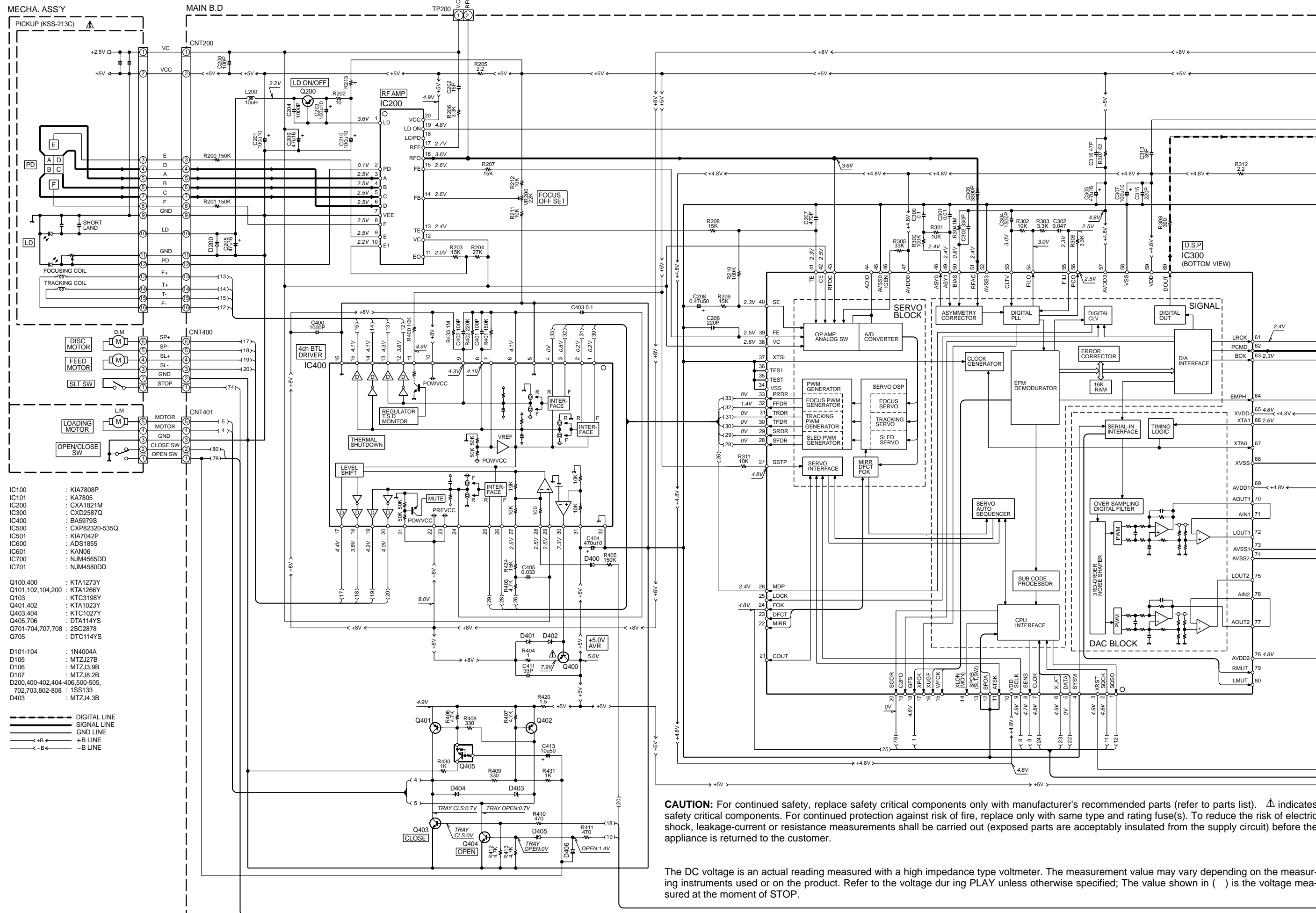
(a) TEST POINT OF LASER CURRENT



PC BOARD(Component side view)



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



- IC100 : KIA7808P
- IC101 : KA7805
- IC200 : CXA1821M
- IC300 : CXD2587Q
- IC400 : BA5979S
- IC500 : CXP82320-535Q
- IC501 : KIA7042P
- IC600 : ADS1855
- IC601 : KAN06
- IC700 : NJM4565DD
- IC701 : NJM4580DD

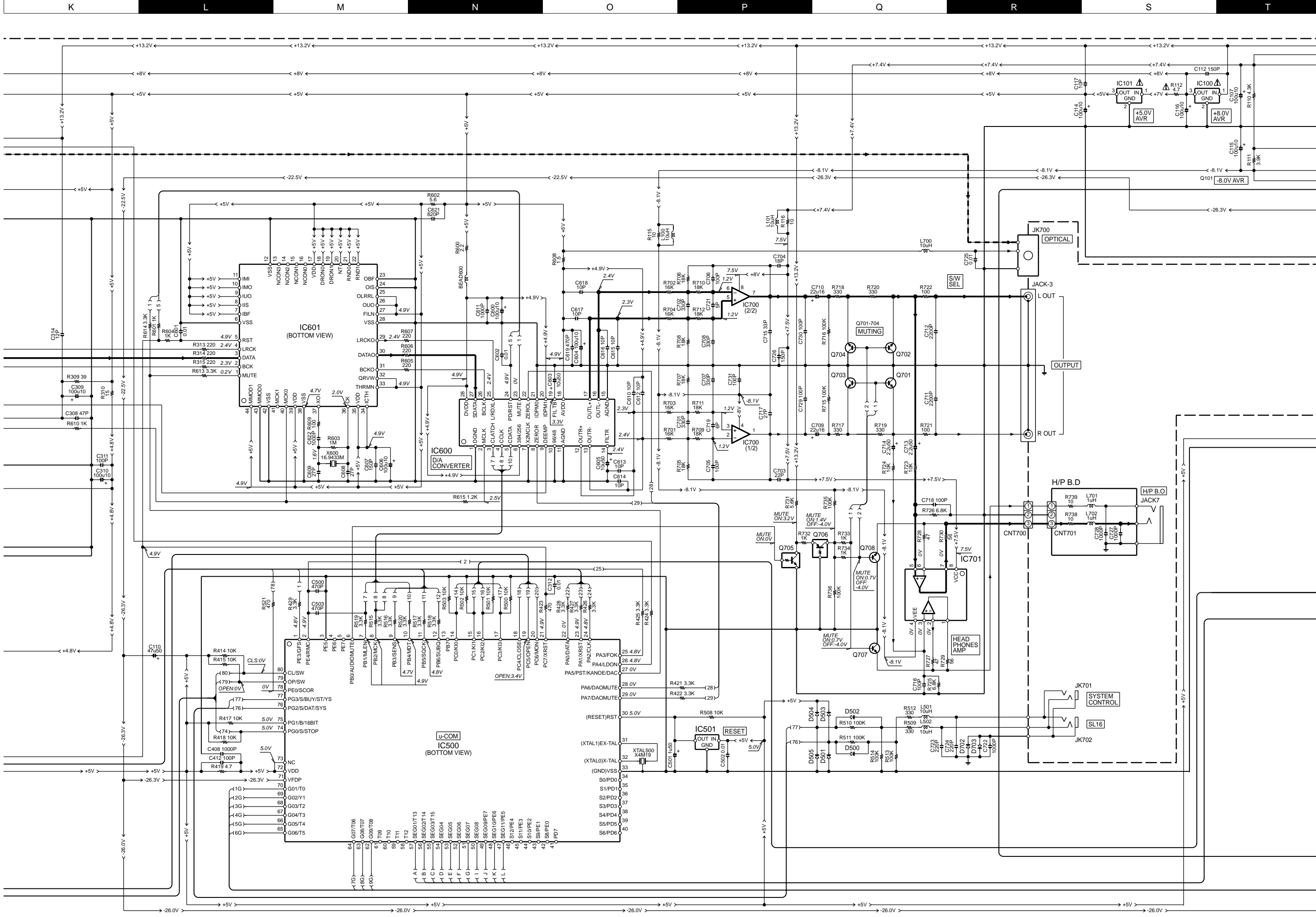
- Q100,400 : KTA1273Y
- Q101,102,104,200 : KTA1266Y
- Q103 : KTC3198Y
- Q401,402 : KTA1023Y
- Q403,404 : KTC1027Y
- Q405,706 : DTA114YS
- Q701-704,707,708 : 2SC2878
- Q705 : DTC114YS

- D101-104 : 1N4004A
- D105 : MTZJ27B
- D106 : MTZJ3.9B
- D107 : MTZJ8.2B
- D200,400-402,404-406,500-505,702,703,802-808 : 1SS133
- D403 : MTZJ4.3B

- - - - - DIGITAL LINE
 _____ SIGNAL LINE
 _____ GND LINE
 ← +B ← +B LINE
 ← -B ← -B LINE

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.



IC601
(BOTTOM VIEW)

IC600
D/A CONVERTER

IC500
(BOTTOM VIEW)

IC501
RESET

IC700
(2/2)

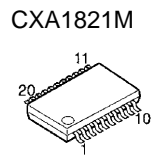
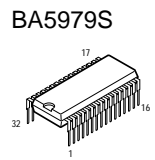
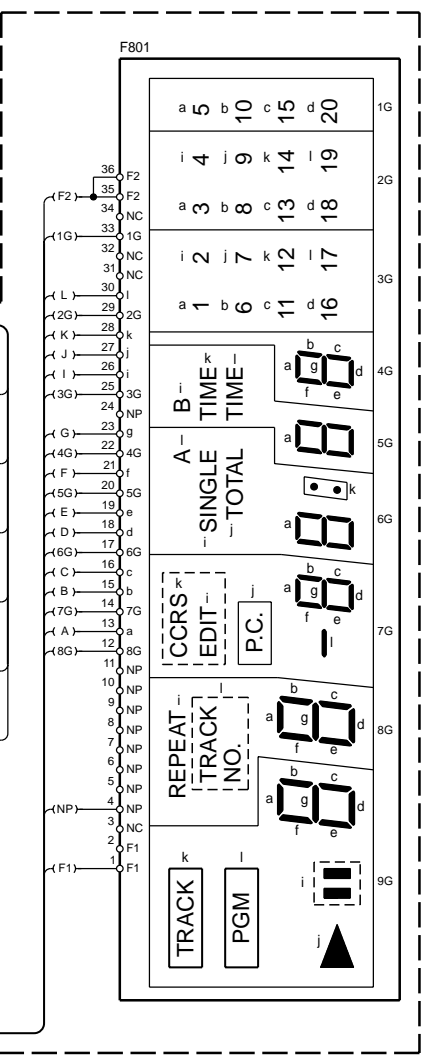
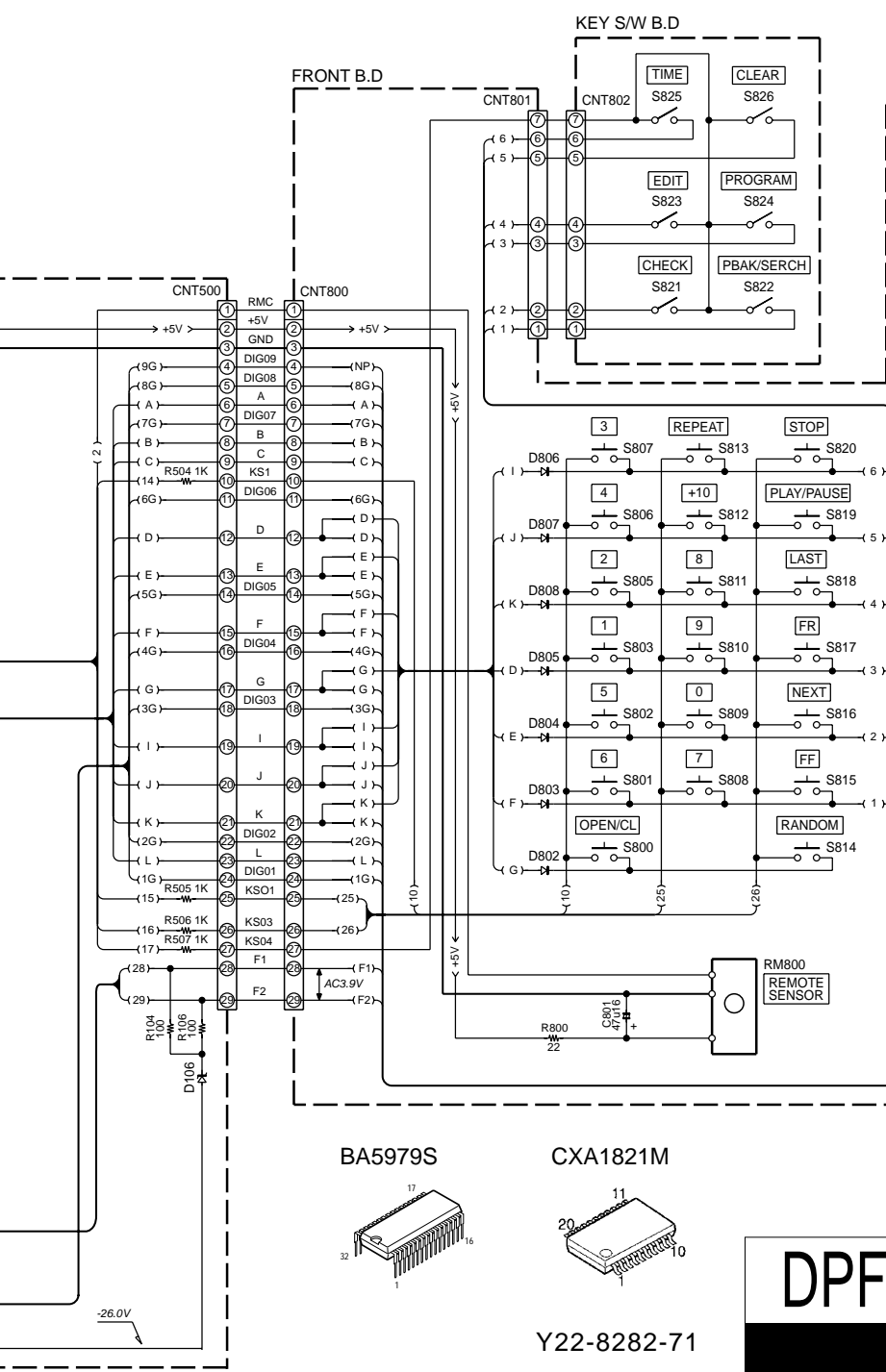
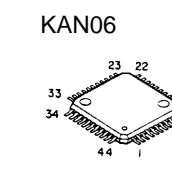
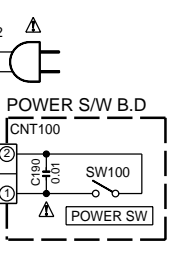
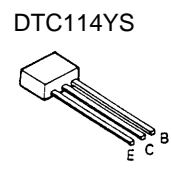
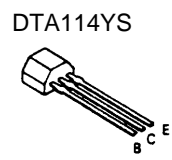
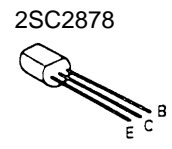
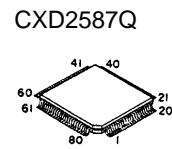
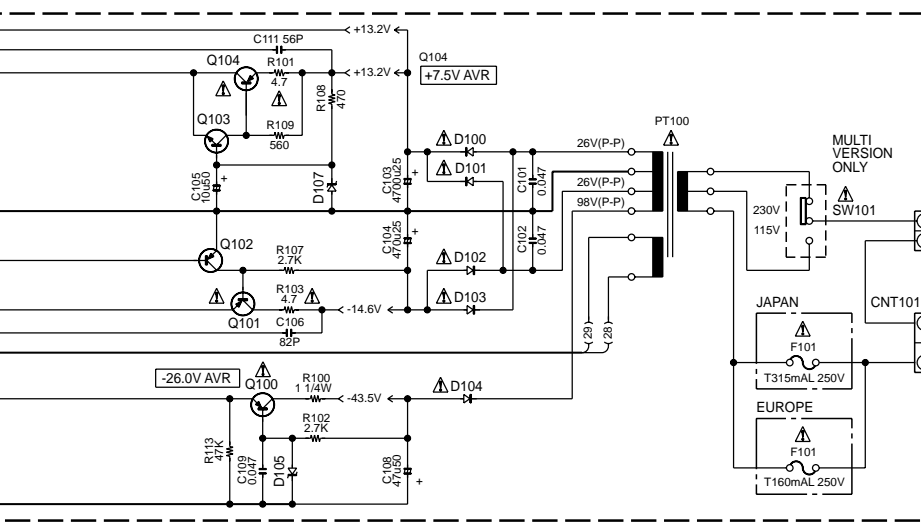
IC700
(1/2)

IC701

H/P B.D

SYSTEM CONTROL

SL16

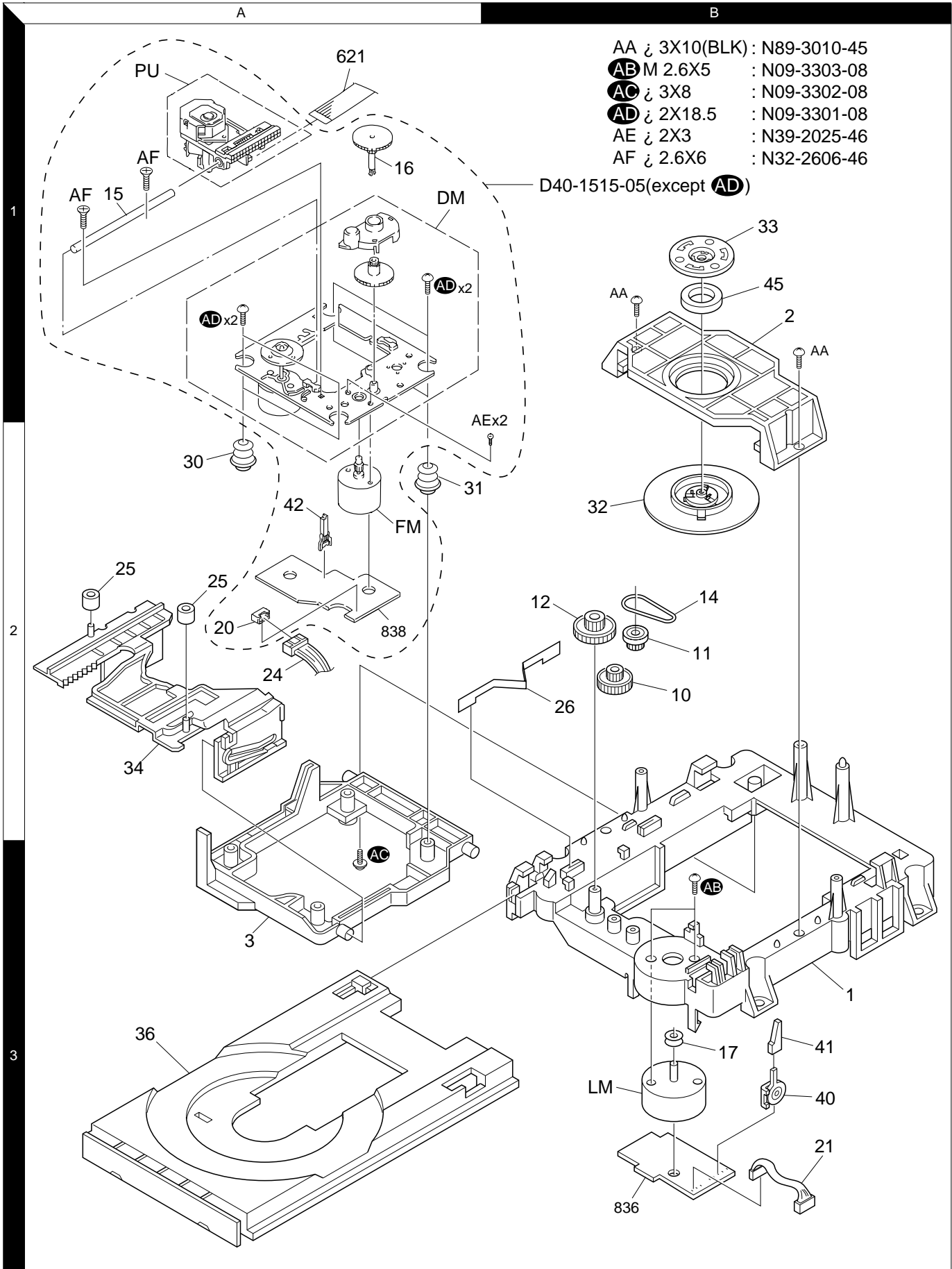


DPF-3030

DPF-3030/3030E/3030-S
 Y22-8282-71
 KENWOOD

DPF-3030/3030E/3030-S

EXPLODED VIEW (MECHANISM)

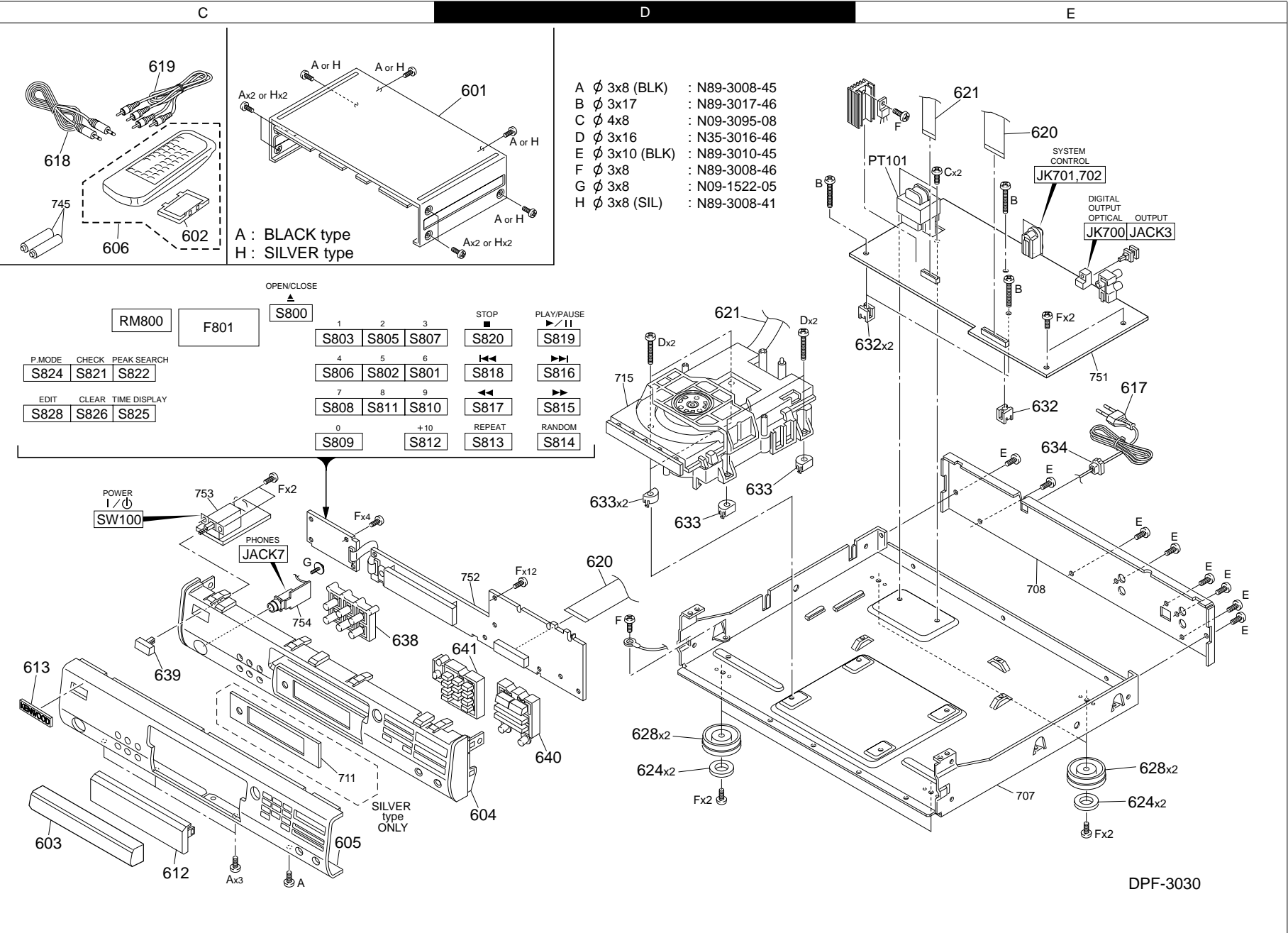


- AA ∷ 3X10(BLK) : N89-3010-45
- AB M 2.6X5 : N09-3303-08
- AC ∷ 3X8 : N09-3302-08
- AD ∷ 2X18.5 : N09-3301-08
- AE ∷ 2X3 : N39-2025-46
- AF ∷ 2.6X6 : N32-2606-46

D40-1515-05(except AD)

DPF-3030/3030E/3030-S EXPLODED VIEW (UNIT)

Parts with exploded numbers larger than 700 are not supplied.



DPF-3030

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



Table with 6 columns: Ref. No, Add-ress, New Parts, Parts No., Description, Desti-nation, Re-marks. Contains multiple rows of electronic components and their specifications.

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

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

PARTS LIST
DPF-3030/3030E/3030-S

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

5

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
MECHANISM ASSY						
1	3B		A10-3405-08	MECHA BASE		
2	1B		A15-0090-08	FLAPPER		
3	3A		A13-3114-08	FRAME FEED		
10	2B		D13-1754-08	GEAR CENTER		
11	2B		D13-1753-08	GEAR PULLEY		
12	2B		D13-1755-08	GEAR LOAD		
14	2B		D16-0703-08	BELT		
15	1A		D10-3606-08	ROD (GUIDE)		
16	1A		D13-1720-08	GEAR (DRIVING)		
20	2A		E40-3264-05	CONNECTOR S6B-PH		
21	3B		E35-2224-08	WIRE HARNES 5P		
24	3B		E35-2223-08	WIRE HARNES 6P		
25	2A		F07-0783-08	RUBBER STOPPER		
26	2B		G09-0657-08	SPRING RACK		
30	2A		G11-2367-08	INULATOR(4B, GREEN)		
31	2A		G11-2368-08	INULATOR(30, RED)		
32	2B		J11-0829-08	CLAMPER		
33	1B		J21-6409-08	PLATE CLAMPER		
34	2A		J90-0853-08	GUIDE FRAME		
36	3A		J99-0600-08	TRAY		
41	3B		J31-0874-08	HOLDER SW		
AB			N09-3303-08	SCREW		
AC			N09-3302-08	SCREW WPH 3X8		
AD			N09-3301-08	SCREW		
40	3B		S74-0068-08	SWITCH LEAF		
42	2A		S74-0038-08	LEAF SWITCH		
17	3B		D15-0395-08	PULLEY MOTOR		
45	1B		T99-0579-08	MAGNET CORE		
DM	1A		A11-1082-18	DISC MOTOR ASSY		
FM	2A		T42-0817-08	FEED MOTOR ASSY		
LM	3B		T42-0855-08	MOTOR, DC		
PU	1A		T25-0061-08	PICK UP (KSS-213C)		

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-3030	B	-	-	-	T	E	-	-	-
DPF-3030E	B	-	-	-	-	E2	-	-	-
DPF-3030-S	S	-	-	-	T	E	-	-	-
MODEL	ABB.	Mexico	PX/AAFES	Russia	Scandinavia	Shanghai	USA	Other area	
DPF-3030	B	-	-	-	-	-	-	-	-
DPF-3030E	B	-	-	-	-	-	-	-	-
DPF-3030-S	S	-	-	-	-	-	-	-	-

L : Scandinavia K : USA P : Canada R : Mexico C : China I : Malaysia B : BLACK
 Y : PX(Far East,Hawaii) T : England E : Europe G : Germany V : China(Shanghai) S : SILVER
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DPF-3030/3030E/3030-S
PARTS LIST

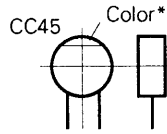
DPF-3030/3030E/3030-S

PARTS DESCRIPTIONS

CAPACITORS

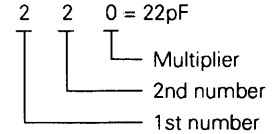
CC 45 TH 1H 220 J
 1 2 3 4 5 6

- 1 = Type ... ceramic, electrolytic, etc.
- 2 = Shape ... round, square, ect.
- 3 = Temp. coefficient
- 4 = Voltage rating
- 5 = Value
- 6 = Tolerance



• Capacitor value

- 010 = 1pF
- 100 = 10pF
- 101 = 100pF
- 102 = 1000pF = 0.001μF
- 103 = 0.01μF



• Temperature coefficient

1st Word	C	L	P	R	S	T	U
Color*	Black	Red	Orange	Yellow	Green	Blue	Violet
ppm/°C	0	-80	-150	-220	-330	-470	-750

2nd Word	G	H	J	K	L
ppm/°C	±30	±60	±120	±250	±500

Example : CC45TH = -470 ± 60ppm/°C

• Tolerance (More than 10pF)

Code	C	D	G	J	K	M	X	Z	P	No code
(%)	±0.25	±0.5	±2	±5	±10	±20	+40	+80	+100	More than 10μF -10 ~ +50
							-20	-20	-0	Less than 4.7μF -10 ~ +75

(Less than 10pF)

Code	B	C	D	F	G
(pF)	±0.1	±0.25	±0.5	±1	±2

• Voltage rating

2nd word	A	B	C	D	E	F	G	H	J	K	V
1st word											
0	1.0	1.25	1.6	2.0	2.5	3.15	4.0	5.0	6.3	8.0	-
1	10	12.5	16	20	25	31.5	40	50	63	80	35
2	100	125	160	200	250	315	400	500	630	800	-
3	1000	1250	1600	2000	2500	3150	4000	5000	6300	8000	-

• Chip capacitors

(EX) C C 7 3 F S L 1 H 0 0 0 J
 1 2 3 4 5 6 7

(Chip) (CH, RH, UJ, SL)

(EX) C K 7 3 F F 1 H 0 0 0 Z
 1 2 3 4 5 6 7

(Chip) (B, F)

Refer to the table above.

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Voltage rating
- 6 = Value
- 7 = Tolerance

Dimension (Chip capacitors)

Dimension code	L	W	T
Empty	5.6 ± 0.5	5.0 ± 0.5	Less than 2.0
A	4.5 ± 0.5	3.2 ± 0.4	Less than 2.0
B	4.5 ± 0.5	2.0 ± 0.3	Less than 2.0
C	4.5 ± 0.5	1.25 ± 0.2	Less than 1.25
D	3.2 ± 0.4	2.5 ± 0.3	Less than 1.5
E	3.2 ± 0.2	1.6 ± 0.2	Less than 1.25
F	2.0 ± 0.3	1.25 ± 0.2	Less than 1.25
G	1.6 ± 0.2	0.8 ± 0.2	Less than 1.0

RESISTORS

• Chip resistor (Carbon)

(EX) R K 7 3 E B 2 B 0 0 0 J
 1 2 3 4 5 6 7

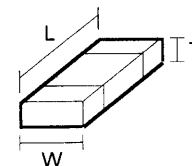
(Chip) (B, F)

• Carbon resistor (Normal type)

(EX) R D 1 4 B B 2 C 0 0 0 J
 1 2 3 4 5 6 7

- 1 = Type
- 2 = Shape
- 3 = Dimension
- 4 = Temp. coefficient
- 5 = Rating wattage
- 6 = Value
- 7 = Tolerance

Dimension



Dimension (Chip resistor)

Dimension code	L	W	T
E	3.2 ± 0.2	1.6 ± 0.2	1.0
F	2.0 ± 0.3	1.25 ± 0.2	1.0
G	1.6 ± 0.2	0.8 ± 0.2	0.5 ± 0.1

Rating wattage

Code	Wattage	Code	Wattage	Code	Wattage
1J	1/16W	2C	1/6W	3A	1W
2A	1/10W	2E	1/4W	3D	2W
2B	1/8W	2H	1/2W		

DPF-3030/3030E/3030-S

SPECIFICATIONS

[Format]

System Compact disc digital audio system
Laser Semiconductor laser

[D/A Convertors]

D/A Conversion 1-Bit D/A converter achieving a 24-bit resolution
Oversampling 8 fs (352.8 kHz)

[Audio]

Frequency response 4 Hz ~ 20 kHz, ± 0.5 dB
Signal to noise ratio More than 120 dB
Dynamic range More than 98 dB
Total harmonic distortion + noise Less than 0.003% (at 1 kHz)
Channel separation More than 100dB (at 1 kHz)
Wow & flutter Unmeasurable Limit
Output level/impedance
Variable (Max.) 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)

[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)



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 alternate schematic diagrams, and information on regional component variations through use of parts list.

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