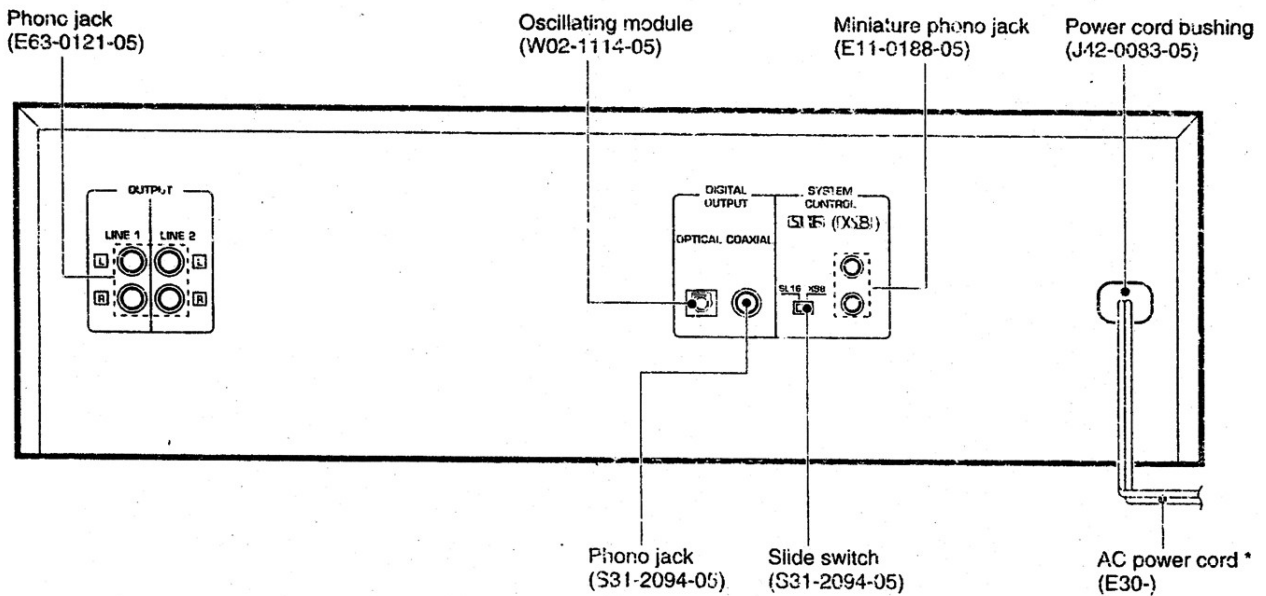
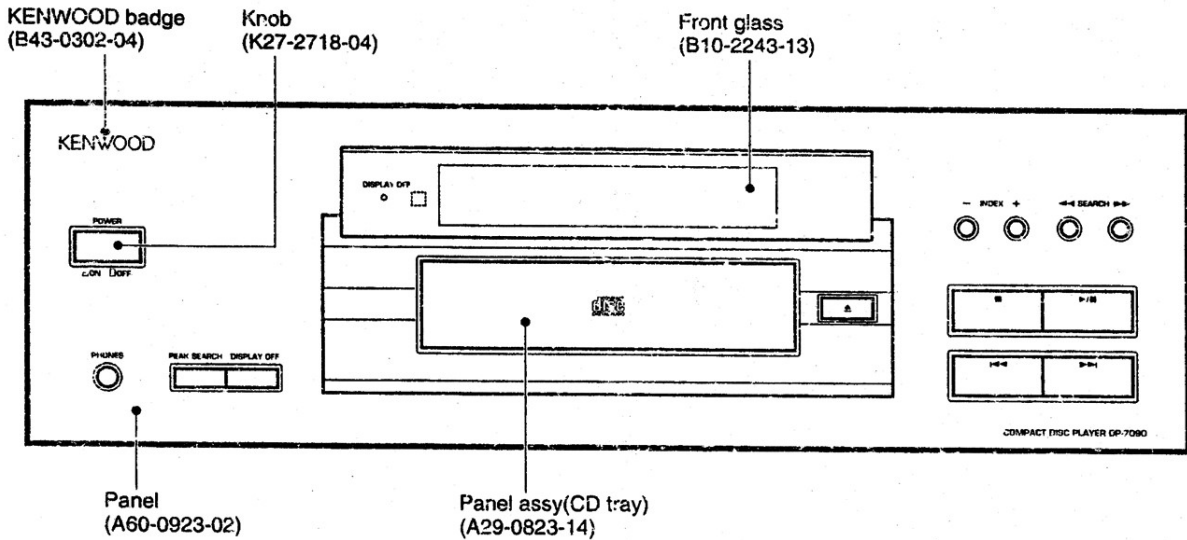


COMPACT DISC PLAYER

DP-7090

SERVICE MANUAL

KENWOOD



* Refer to parts list on page 23.

! 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 CFR1040. 10, Chapter 1, Subchapter J.

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


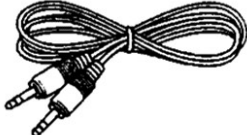


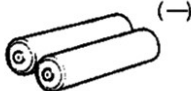
DP-7090

CONTENTS / ACCESSORIES / CAUTIONS

Contents

CONTENTS / ACCESSORIES / CAUTIONS.....	2	SCHEMATIC DIAGRAM	13
BLOCK DIAGRAM	3	EXPLODED VIEW	21
CIRCUIT DESCRIPTION	4	PARTS LIST.....	23
ADJUSTMENT	8	SPECIFICATIONS	Back cover
PC BOARD	9		

Accessories

Audio cord.....(1) (E30-0505-05) 	System control cord.....(1) (E30-2733-05) 	AC plug adaptor.....(1) (E03-0115-05) : M type only  Accessories only for regions where use is necessary.
Remote control unit.....(1) (A70-1071-05 : RC-P0707) 	Batteries (R6/AA).....(2) 	

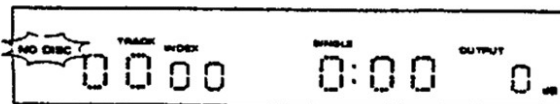
Battery cover (A09-0170-08)

Cautions

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.



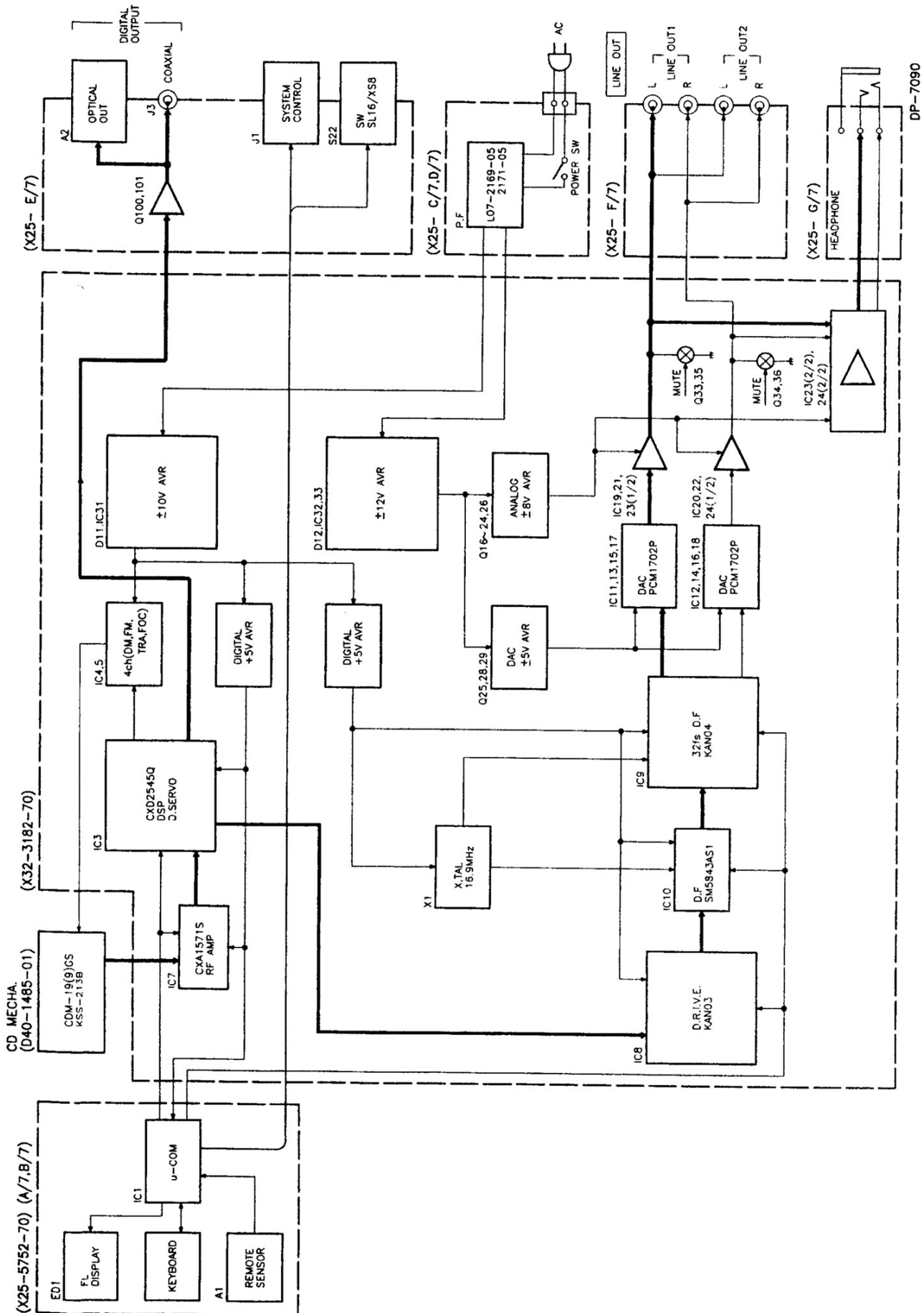
Beware of condensation

When water vapor comes into contact with the surface of cold material, water drops are produced. If condensation occurs, correct operation may not be possible, or the unit may not function correctly. This is not a malfunction, however, and the unit should be dried. (To do this, turn the POWER switch ON and leave the unit for several hours.)

Be especially careful in the following conditions:

- When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
- When a heater starts operating.
- When the unit is brought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

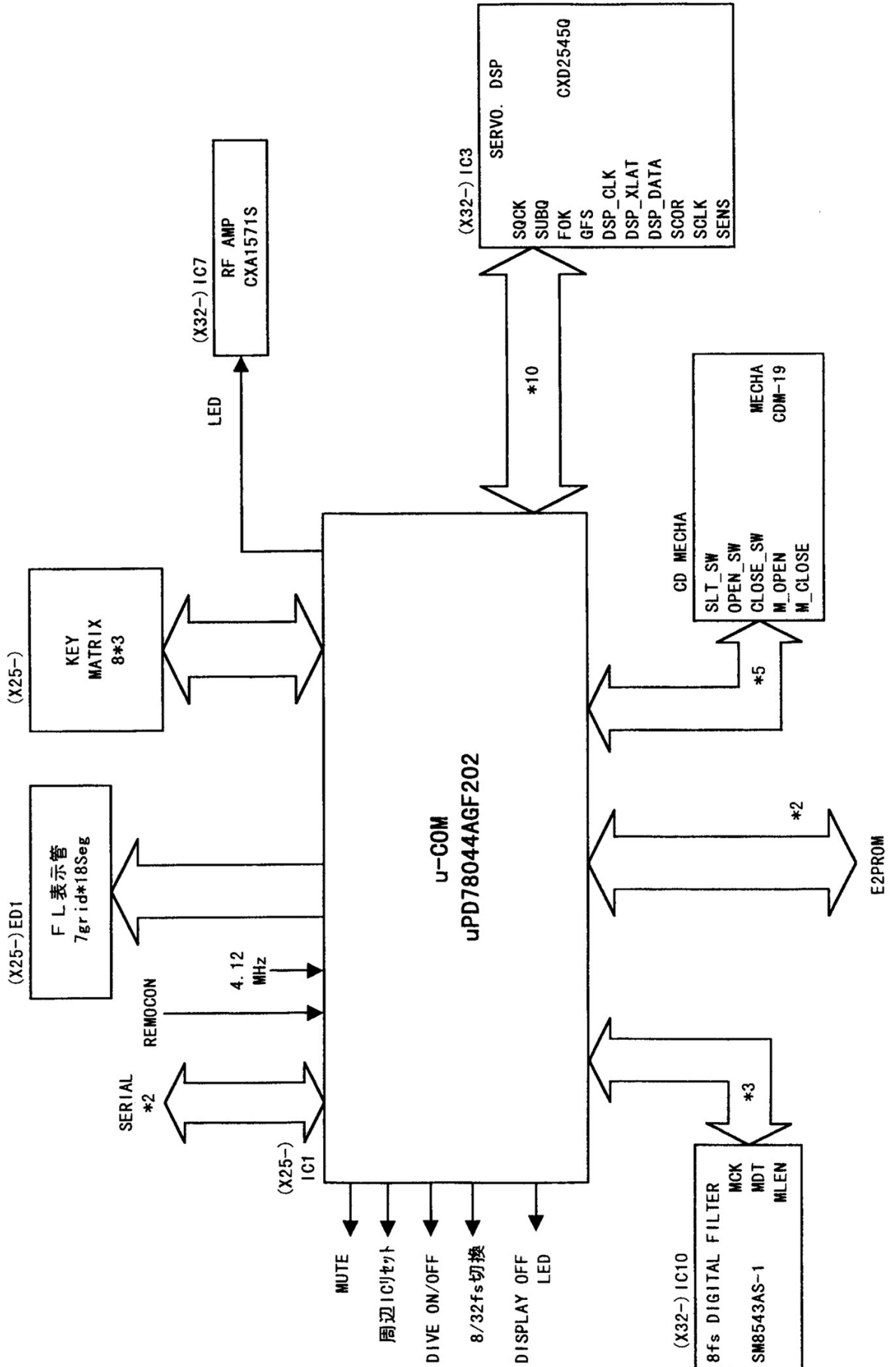
BLOCK DIAGRAM



DP-7090

CIRCUIT DESCRIPTION

1. Microprocessor uPD78044AGF202(X25- IC1)



CIRCUIT DESCRIPTION

2. Pin description

No.	Name	I/O	Description															
1	GRID_1	O	FL grid signal output. Grid 1															
2	GRID_3	O	FL grid signal output. Grid 3															
3	GRID_4	O	FL grid signal output. Grid 4															
4	GRID_7	O	FL grid signal output. Grid 7															
5	GRID_6	O	FL grid signal output. Grid 6															
6	GRID_5	O	FL grid signal output. Grid 5															
7	GRID_2	O	FL grid signal output. Grid 2															
8	Vdd		Power supply.															
9	SQCK	O	Q data reading clock output to CXD2545Q.															
10		O	No used.															
11	SUBQ	I	Q data / RF jitter value of CXD 2545Q is read.															
12	DIG_SEL 1	O	Digital input selector control of TC9245.															
13	DIG_SEL 2	O	Digital input selector control of TC9245.															
			<table border="1"> <tr> <td>DIG-SEL 1</td> <td>H</td> <td>L</td> <td>L</td> <td>H</td> </tr> <tr> <td>DIG-SEL 2</td> <td>H</td> <td>L</td> <td>H</td> <td>L</td> </tr> <tr> <td>Outside input</td> <td>OFF</td> <td>1</td> <td>2</td> <td>3</td> </tr> </table>	DIG-SEL 1	H	L	L	H	DIG-SEL 2	H	L	H	L	Outside input	OFF	1	2	3
DIG-SEL 1	H	L	L	H														
DIG-SEL 2	H	L	H	L														
Outside input	OFF	1	2	3														
14	EMPHASYS	I	Emphasys on / off detection of TC9245 . H : EMPHASYS ON															
15	FS_DET 2	I	Sampling frequency detection of TC9245.															
16	FS_DET 1	I	Sampling frequency detection of TC9245.															
			<table border="1"> <tr> <td>FS-DET 1</td> <td>L</td> <td>L</td> <td>H</td> </tr> <tr> <td>FS-DET 2</td> <td>L</td> <td>H</td> <td>H</td> </tr> <tr> <td>Sampling Fs</td> <td>44.1</td> <td>48</td> <td>32</td> </tr> </table>	FS-DET 1	L	L	H	FS-DET 2	L	H	H	Sampling Fs	44.1	48	32			
FS-DET 1	L	L	H															
FS-DET 2	L	H	H															
Sampling Fs	44.1	48	32															
17	RESET		Reset for u - COM															
18	OPEN_SW	I	Tray open switch signal input. L : TRAY OPEN															
19	CLOSE_SW	I	Tray close switch signal input. L : TRAY CLOSE															
20	AVss		No used (GND)															
21	M_OPEN	O	Tray open motor drive signal output. H : MOTOR ON L : MOTOR OFF															
22	M_CLOSE	O	Tray close motor drive signal output. H : MOTOR ON L : MOTOR OFF															
23	SLT_SW	I	Start limit switch signal input from pick up L : START LIMIT detection															
24	LDC	O	Laser output L : LASER ON															
25	CD_DI	O	CD / outside digital input switched.															
26	MCK	O	Drive clock output.															
27	MDT	O	Drive data output.															
28	MLEN	O	Drive latch															
29	Add		No uses (Vdd)															
30	AVref		No used (GND)															
31	ERROR	I	Error signal input from TC9245. L : ERROR detection.															
32			No used (OPEN)															
33	Vss		GND															
34	X1		4.19MHz system clock input.															
35	X2		4.19MHz system clock input.															
36	SDATA	I / O	Serial data signal input / output.															
37	SBUSY	I / O	Serial busy signal input / output.															
38	MUTE	O	Digital / Analog mute control output.															
39	PROM_SDA	O	E2PROM data control.															
40	PROM_SCL	O	E2PROM clock control.															

CIRCUIT DESCRIPTION

No.	Name	I/O	Description
41	DSP_CLK	O	Clock output to CXD2545
42	DSP_XLAT	O	Data latch output to CXD2545
43	DSP_DATA	O	Data output to CXD2545
44	SCOR	I	Sub-code synchro detection signal input from CXD2545
45	SCLK	O	Clock output for SENS signal to CXD2545
46	XRST	O	Reset output to periphery IC. L : RESET
47	REM_IN	I	Remote control signal input
48	IC		Connects to Vss
49	SER8_16	I	Serial 8 / 16 bit switching detection. L : 8bit
50	SENS	I	SENS signal input from CXD2545
51	T_8_32	O	Field test 1. 8 / 32fs switching H : 32fs L : 8fs
52	Vdd		Power supply
53	T_DR_OFF	O	Field test2. Drive circuit on / off switching H : DRIVE ON
54	KR2	I	Key return 2
55	KR1	O	Key return 1
56	KR0	I	Key return 0
57	LOCK	I	LOCK signal input from CXD2545
58	FOK	I	FOK signal input from CXD 2545
59	S_D	O	FL segment d
60	S_Q	O	FL segment q
61	S_R/KS7	O	FL segment r and key scan 7 combined uses.
62	S_N/KS6	O	FL segment n and key scan 6 combined uses.
63	S_P/KS5	O	FL segment p and key scan 5 combined uses.
64	S_O/KS4	O	FL segment o and key scan 4 combined uses.
65	S_E/KS3	O	FL segment e and key scan 3 combined uses.
66	S_C/KS2	O	FL segment c and key scan 2 combined uses.
67	S_G/KS1	O	FL segment g and key scan 1 combined uses.
68	S_F/KS0	O	FL segment f and key scan0 combined uses.
69	S_B	O	FL segment b
70	S_A	O	FL segment a
71	Vload		Negative voltage supply for FL.
72	S_M	O	FL segment : m
73	S_H	O	FL segment : h
74	S_L	O	FL segment : l
75	S_K	O	FL segment : k
76	S_J	O	FL segment : j
77	S_I	O	FL segment : i
78	DIG_LED 1		Digital in 1 / Display off LED display. H : ON L : OFF
79	DIG_LED 2		Digital in 2 LED display H : ON L : OFF
80	DIG_LED 3		Digital in 3 LED display H : ON L : OFF

CIRCUIT DESCRIPTION

3. KEY MATRIX

	5 6 KR0	5 5 KR1	5 4 KR2
6 8 K. SCAN 0	DIG. INSEL	PEAK SEARCH	DISPLAY (7090) REPEAT (7002/5002)
6 7 K. SCAN 1	STOP	PLAY/PAUSE	INDEX +
6 6 K. SCAN 2	SKIP DOWN	SKIP UP	INDEX -
6 5 K. SCAN 3	FB	FF	OPEN/CLOSE
6 4 K. SCAN 4	DIODE 1	DIODE 2	
6 3 K. SCAN 5			
6 2 K. SCAN 6			

4. DIODE MATRIX (Model distinction)

		5 6 KR0 (DIODE 1) (D33)	5 5 KR1 (DIODE 2) (D6)
6 4 SO	DP-7090	0	1
	DPF-7002	0	0
	DPF-5002	1	0

0 : non diode / 1 : diode

5. Test mode

MODE : Adjustment/Inspection (Self adjustment confirmation)				
	INPUT key	DIS-PLAY	Action	Note
1	The power supply is turned on while pressing PEAK SEARCH key.	0 1	Test mode	TIME display turn-off
2	PLAY/PAUSE key	0 5 ↓ 0 3	0 5 → 0 3 cyclic action with 05 mode	03 mode: Focus servo only on condition. 05 mode: PLay condition without reading TOC.
3	UP key	—	All illumination All turn-offs ↑ (FL, LED)	When other key are pressed this mode is canceled.
4	DOWN key		Canceling a test mode it become usual play condition.	Only STOP condition is effective TIME display turn-off.
5	FF key	0 1	Feed	Only STOP condition is effective TIME display turn-off.
6	FB key	0 1	Feed	Only STOP condition is effective TIME display turn-off.
7	STOP key	0 7 ↓ 0 8 ↓ 0 9 ↓ 1 0	Doing STOP it becomes 07 mode conditions. (self adjustment completion condition) A display content changes a limit cyclically when STOP key is pressed consecutively. 07 → [07 FF : FB] 08 → [08 FG : TG] 09 → [09 FE : RF] 10 → [10 TE : VC] (07 → 08 → 09 → 10 → 07 cyclic)	* "PGM.PGM CHECK" self adjustment is lighted at the time of NG determination and even NG item flickers. * EF,FB,FE excludes from OK/NG determination * A numerical value of each item is indicated with hexadecimal number. (EF : EF balance FB : focus bias) (EF:EFbalance FB:focus bias) 07 mode → — : — 08 mode → 0D ~ 7E : 09 ~ 7E 09 mode → — : 08 ~ CD 10 mode → 3F ~ C0 : 19 ~ E6
8	O / C		Open/close of a tray	A test mode does not cancel. A clear is done only as a result of self adjustment.

DP-7090

ADJUSTMENT

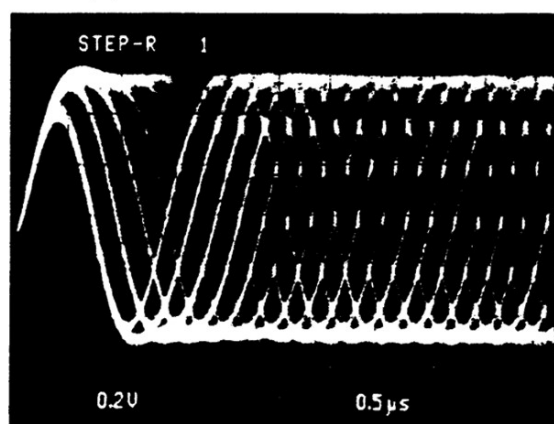
No.	ITEM	INPUT SETTING	OUTPUT SETTING	PLAYER SETTING	ALIGNMENT POINT	ALIGN FOR	FIG.
1	FOCUS ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1 : RF(CN3 pin1)	Set the unit to test mode. Press the PLAY key, then display is "05".	FE BALANCE VR 1	Optimum eye pattern.	(a)

Note :

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

Step 1 is In Test Mode. (Tesc Mode : Turn power on with pressing PEAK SEARCH key.)

FIG. (a)

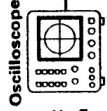


RF signal

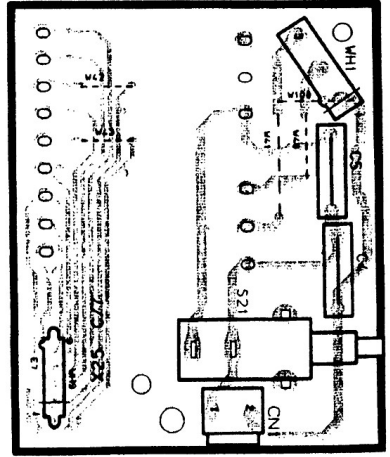
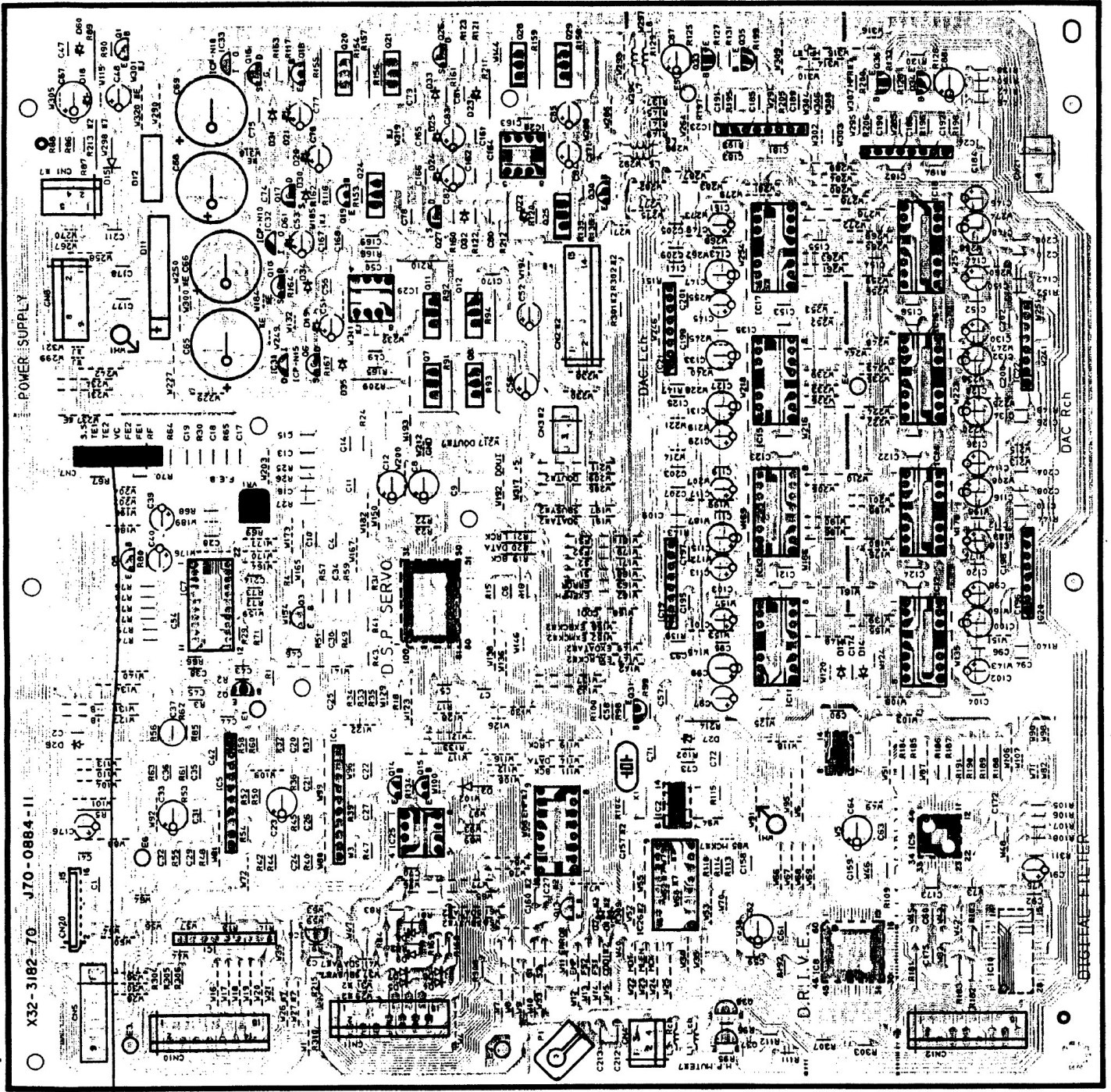
- RF signal in test mode (PLAY).
- Perform the tangential and focusing offset are focused into one point on the display. The crossing points above and below the center shall also be locked clearly. (FE BALANCE)

PC BOARD (COMPONENT SIDE VIEW)

CD PLAYER UNIT (X32-3182-70)

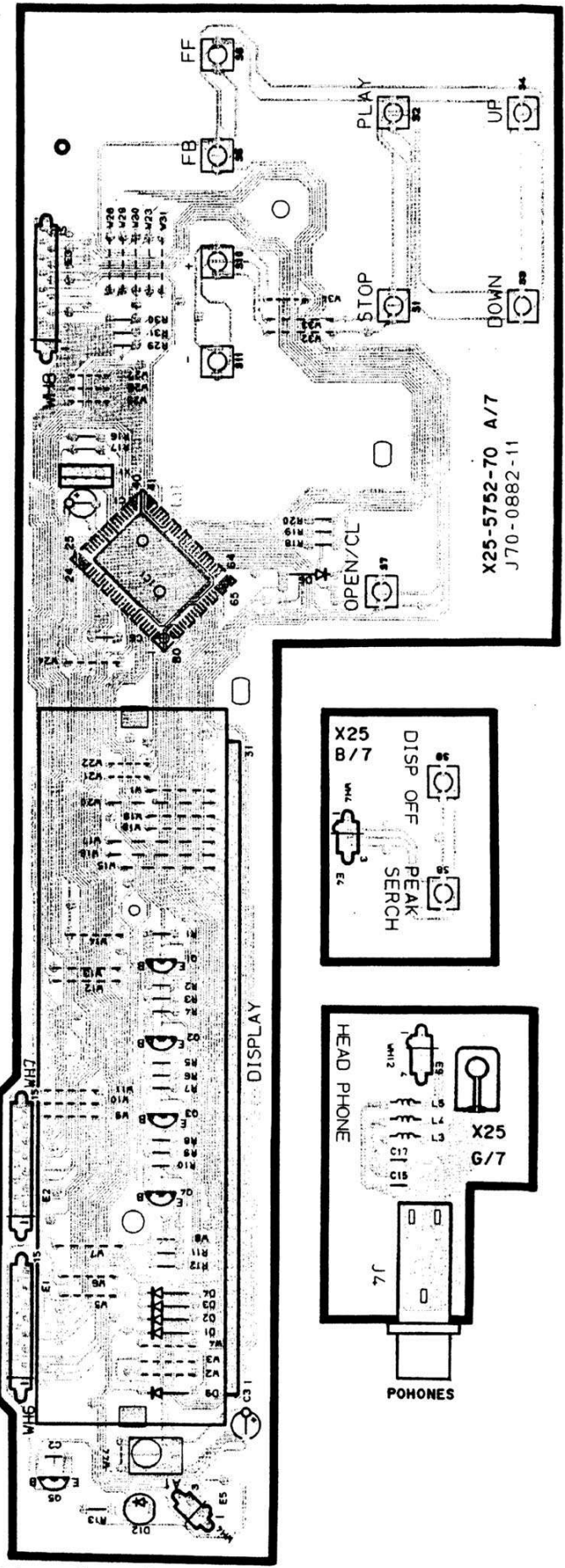
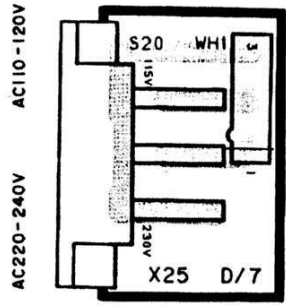
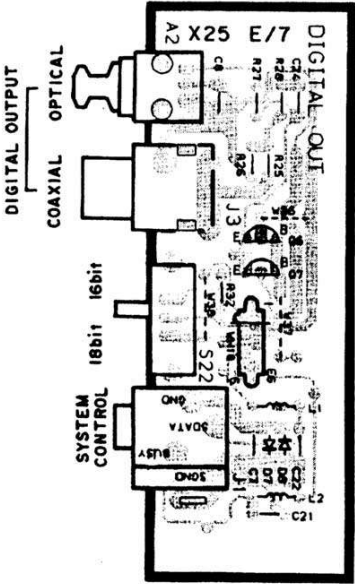
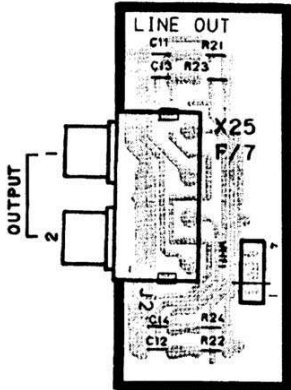


(a) Focus error balance :
Optimum eye pattern



PC BOARD (COMPONENT SIDE VIEW)

DISPLAY UNIT (X25-5752-70)



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

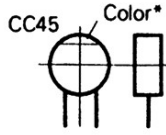
DP-7090

PARTS DESCRIPTIONS

CAPACITORS

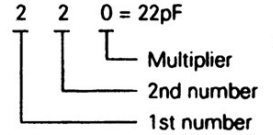
CC 45 TH 1H 220 J
 1 2 3 4 5 6

- 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 \ 1st word	A	B	C	D	E	F	G	H	J	K	V
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

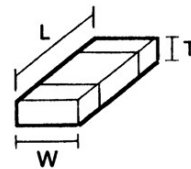
(Chip) (B,F)

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



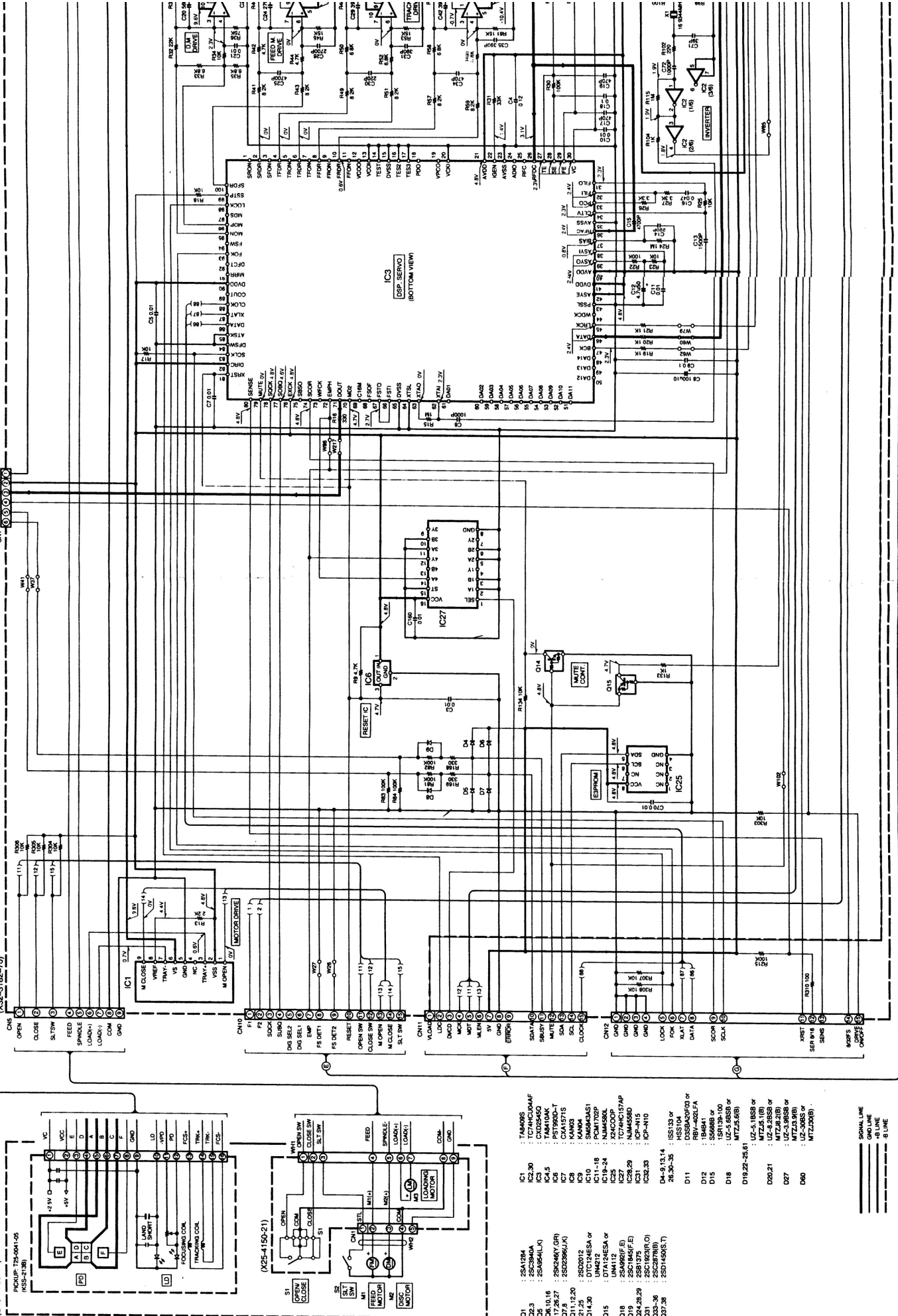
Dimension (Chip resistor)

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		

MECHA. ASSY [CDM-19 (9) GS]
 PICKUP: 725-0041-05
 (MS-2542)

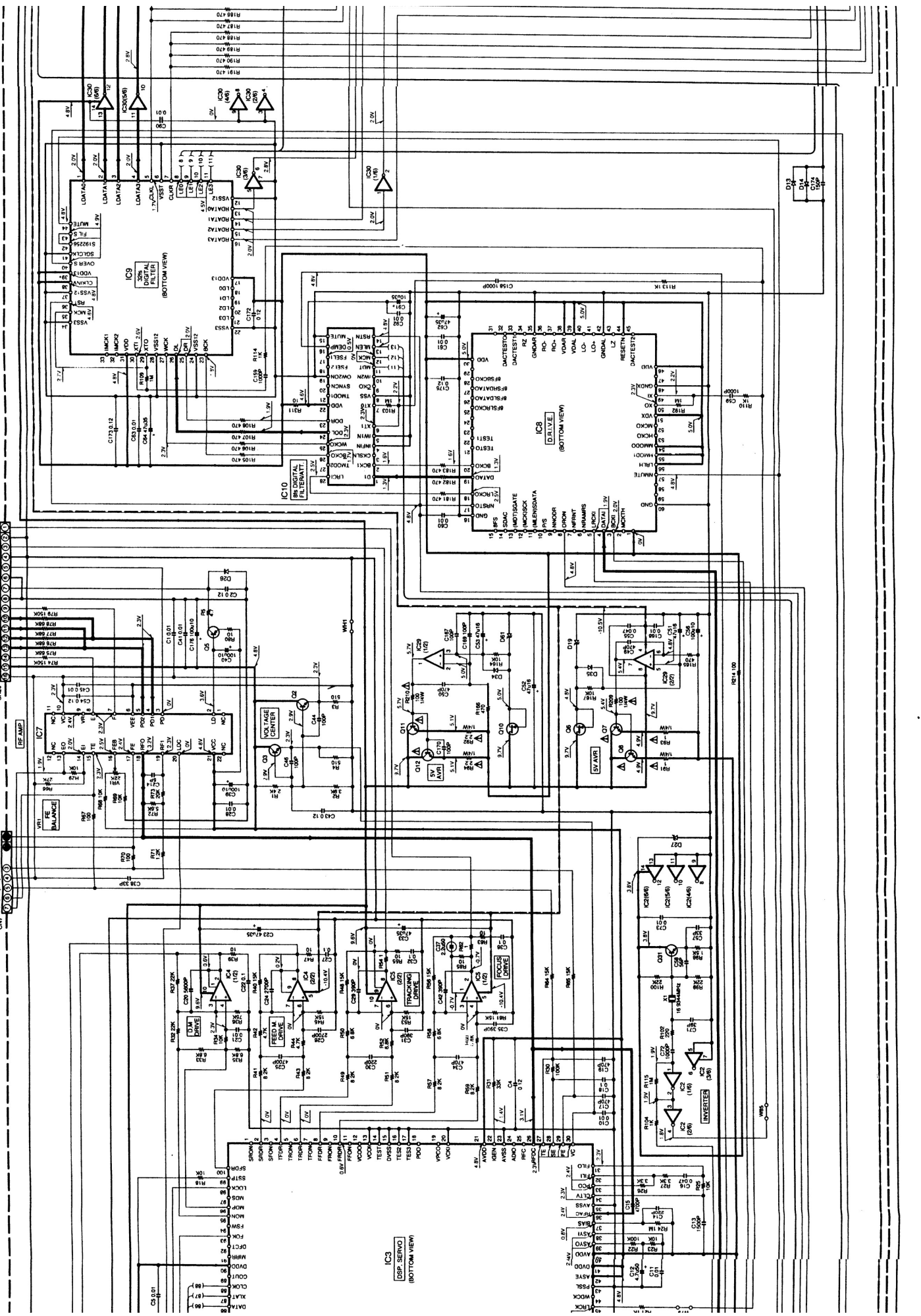


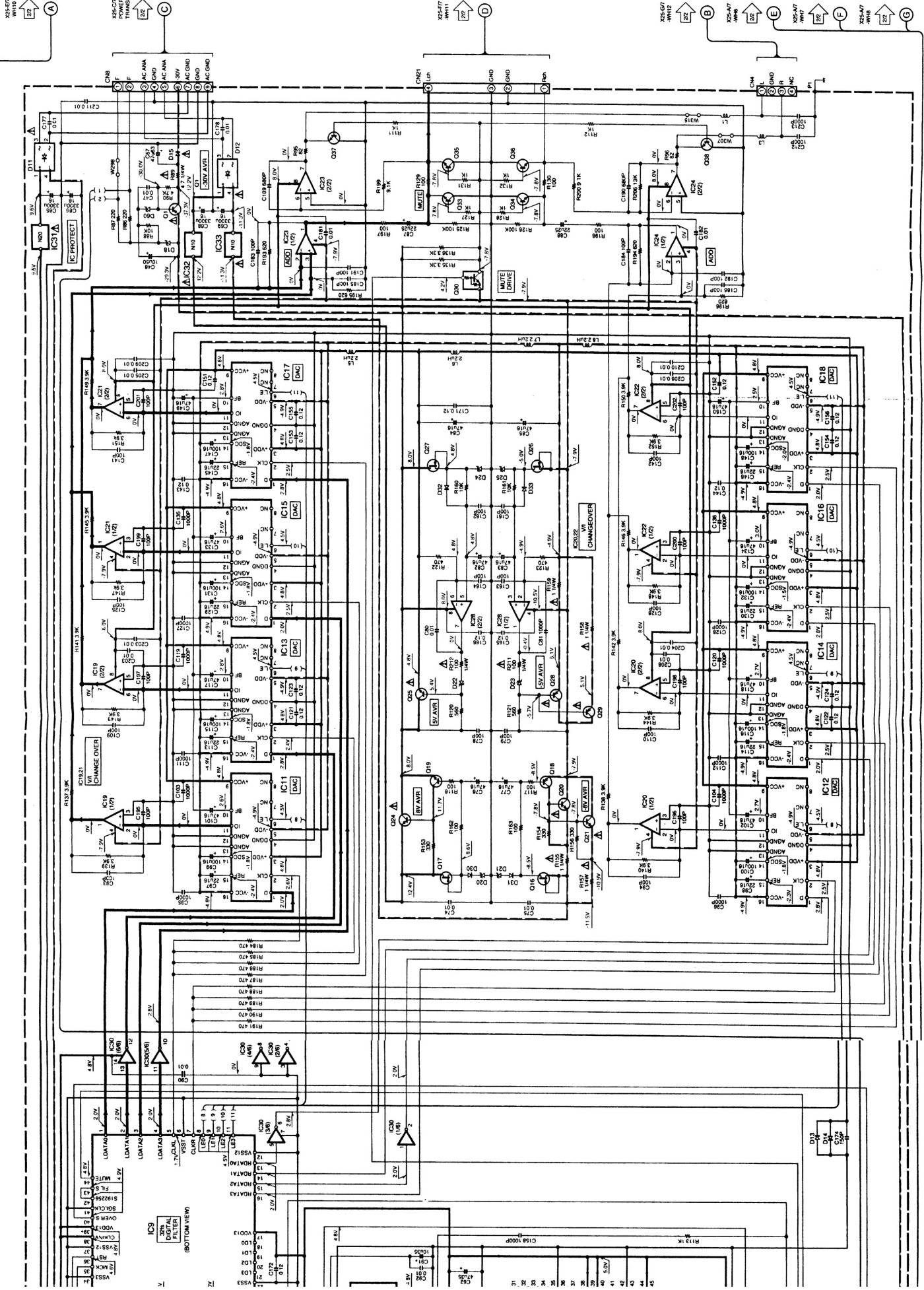
- O1 : 2SA1284
- O2 : 2SC3904
- O3 : 2SC3904
- O4 : 2SC3904
- O5 : 2SC3904
- O6 : 10.16
- O7 : 17.26.27
- O8 : 17.26.27
- O9 : 17.26.27
- O10 : 17.26.27
- O11 : 17.26.27
- O12 : 17.26.27
- O13 : 17.26.27
- O14 : 17.26.27
- O15 : 17.26.27
- O16 : 17.26.27
- O17 : 17.26.27
- O18 : 17.26.27
- O19 : 17.26.27
- O20 : 17.26.27
- O21 : 17.26.27
- O22 : 17.26.27
- O23 : 17.26.27
- O24 : 17.26.27
- O25 : 17.26.27
- O26 : 17.26.27
- O27 : 17.26.27
- O28 : 17.26.27
- O29 : 17.26.27
- O30 : 17.26.27
- O31 : 17.26.27
- O32 : 17.26.27
- O33 : 17.26.27
- O34 : 17.26.27
- O35 : 17.26.27
- O36 : 17.26.27
- O37 : 17.26.27
- O38 : 17.26.27
- O39 : 17.26.27
- O40 : 17.26.27
- O41 : 17.26.27
- O42 : 17.26.27
- O43 : 17.26.27
- O44 : 17.26.27
- O45 : 17.26.27
- O46 : 17.26.27
- O47 : 17.26.27
- O48 : 17.26.27
- O49 : 17.26.27
- O50 : 17.26.27
- O51 : 17.26.27
- O52 : 17.26.27
- O53 : 17.26.27
- O54 : 17.26.27
- O55 : 17.26.27
- O56 : 17.26.27
- O57 : 17.26.27
- O58 : 17.26.27
- O59 : 17.26.27
- O60 : 17.26.27
- O61 : 17.26.27
- O62 : 17.26.27
- O63 : 17.26.27
- O64 : 17.26.27
- O65 : 17.26.27
- O66 : 17.26.27

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.

ADJUSTMENT
CUT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100





XPS-67 WH10 2Z (A)

XPS-67 WH10 2Z (C)

XPS-67 WH10 2Z (D)

XPS-67 WH12 2Z (B)

XPS-67 WH-6 2Z (E)

XPS-67 WH-6 2Z (E)

XPS-67 WH-6 2Z (E)

XPS-67 WH-6 2Z (E)

XPS-67 WH-6 2Z (E)

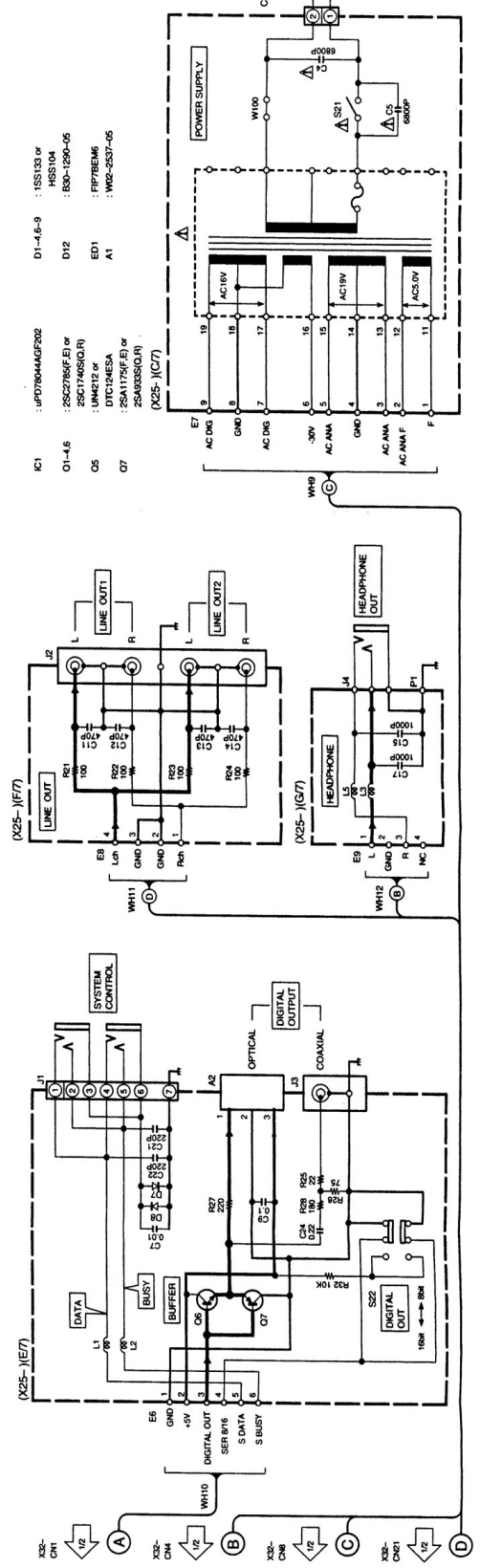
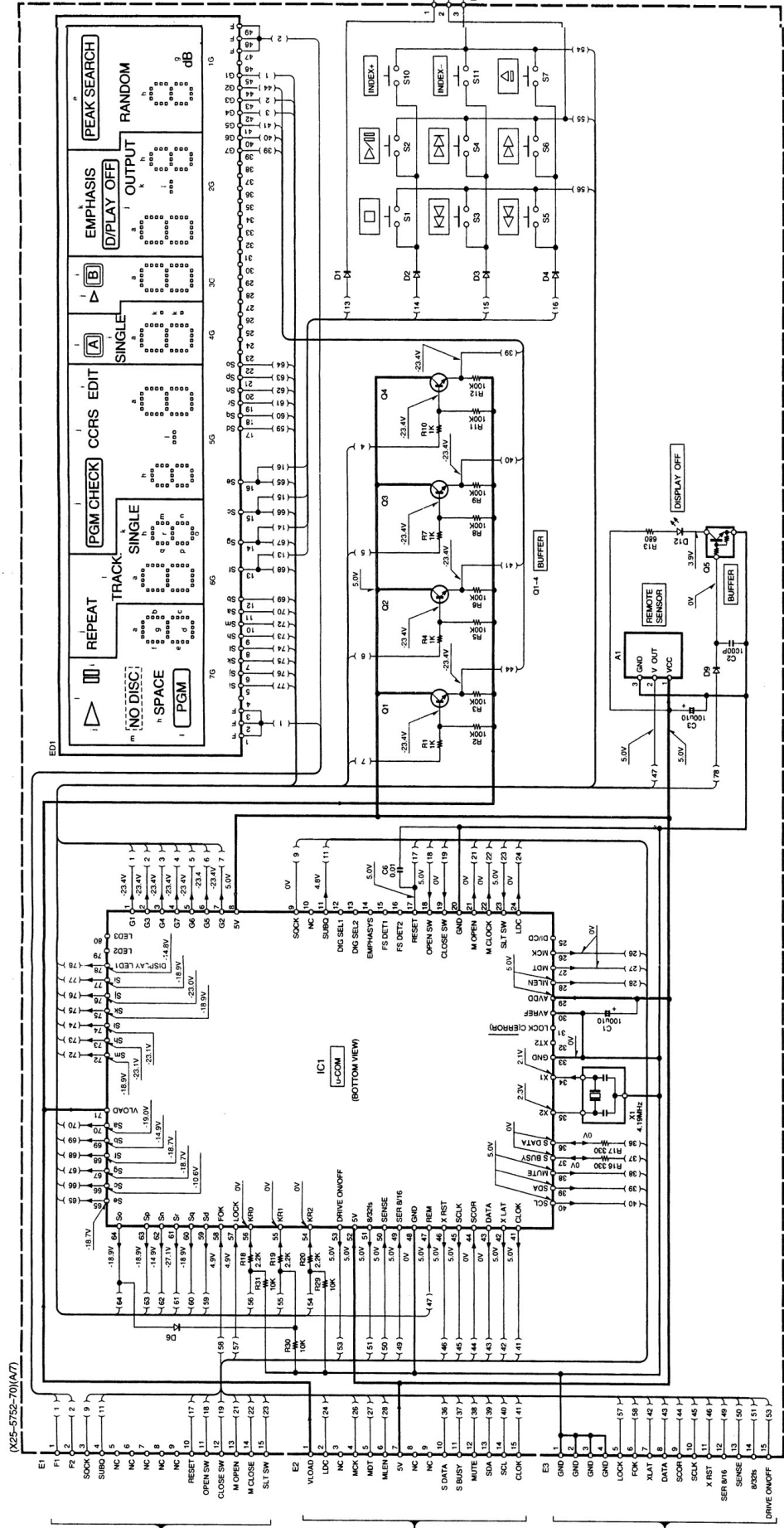
XPS-67 WH-6 2Z (E)

XPS-67 WH-6 2Z (E)

XPS-67 WH-6 2Z (E)

XPS-67 WH-6 2Z (E)

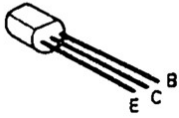
XPS-67 WH-6 2Z (E)



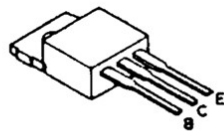
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, 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.

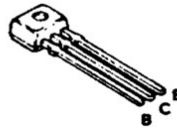
2SA1284
2SA954
2SA992
2SC1845
2SC1923
2SC2878
2SC3940A



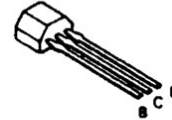
2SD2396



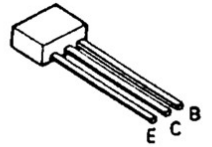
2SA1175
2SC2785



DTA124ESA
DTC124ESA
UN4112
2SC1740S



UN4212



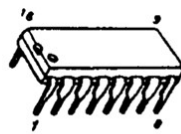
2SB1375
2SD2012



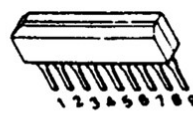
NJM4558D
X24C00P



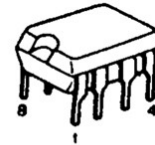
PCM1702P



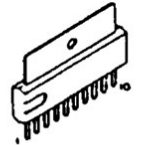
TA8409S



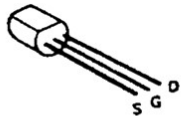
NJM4580L



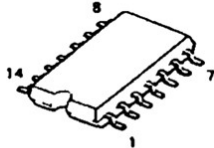
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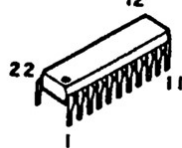
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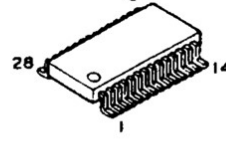
TC74HCU04AF



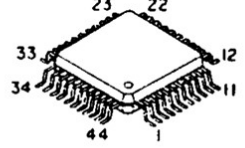
CXA1571S



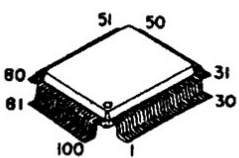
SM5843AS1



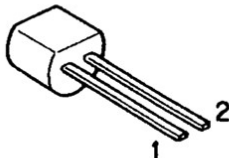
KAN04



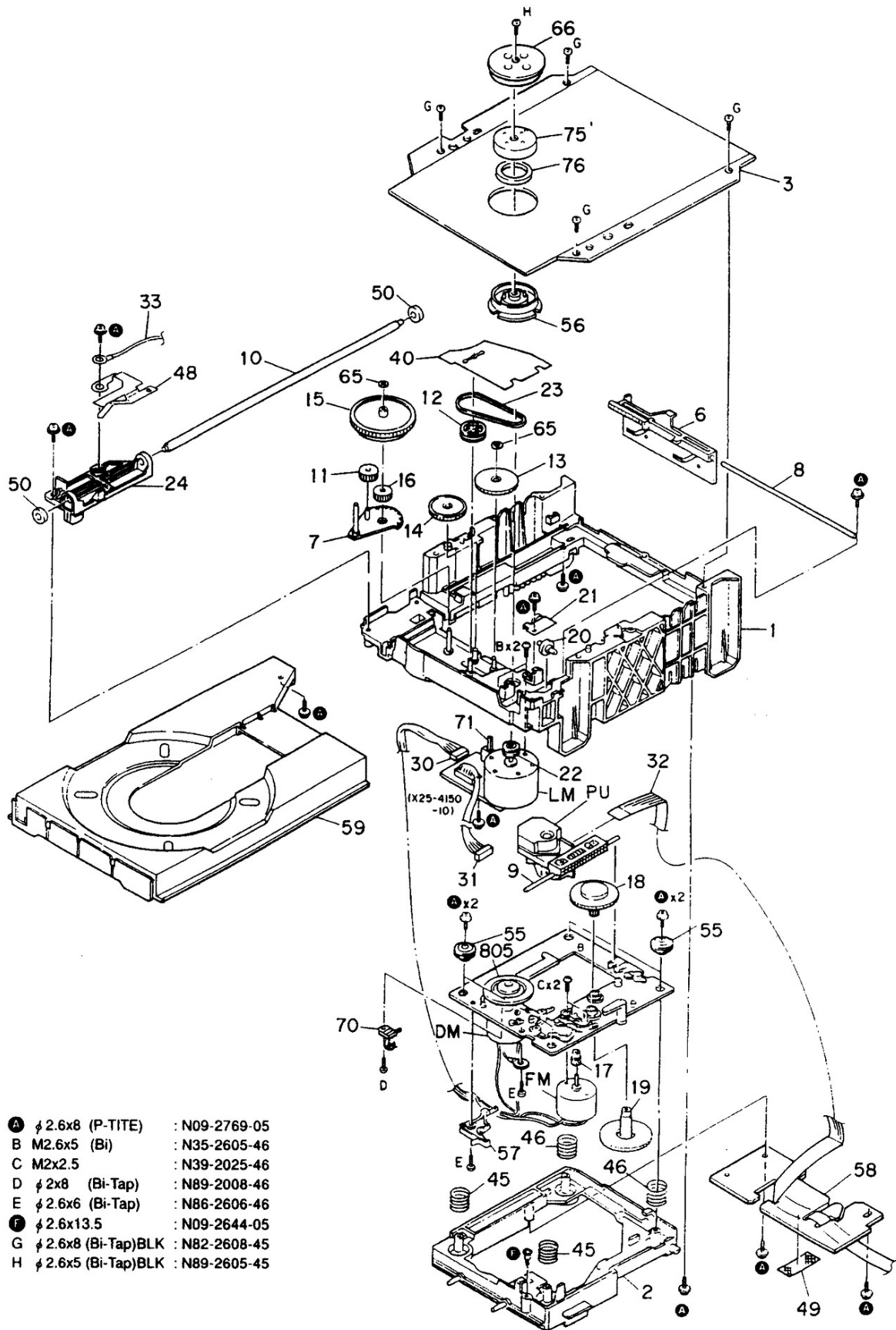
CXD2545Q



ICP-N10



EXPLODED VIEW (MECHANISM)

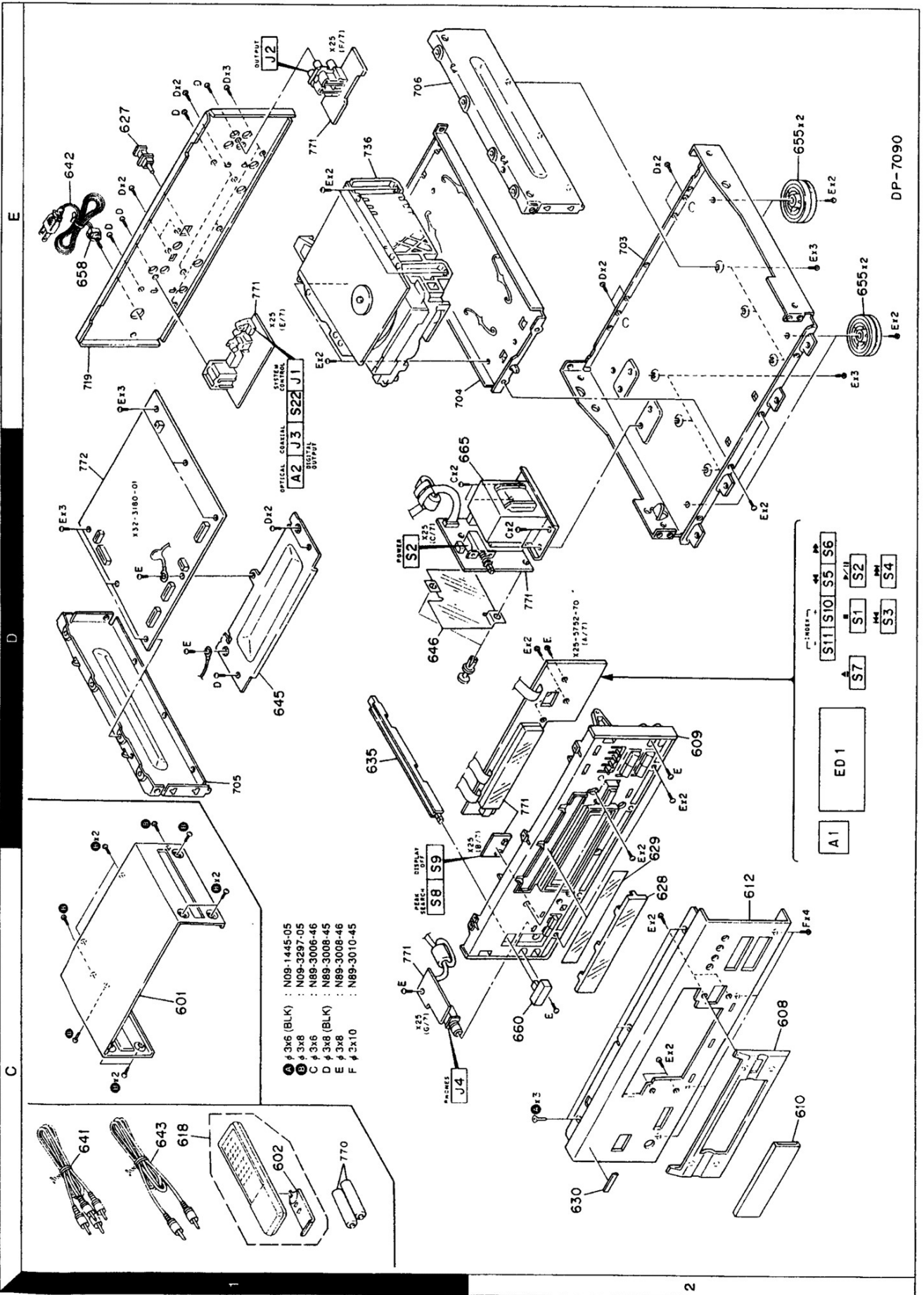


- A ϕ 2.6x8 (P-TITE) : N09-2769-05
- B M2.6x5 (Bi) : N35-2605-46
- C M2x2.5 : N39-2025-46
- D ϕ 2x8 (Bi-Tap) : N89-2008-46
- E ϕ 2.6x6 (Bi-Tap) : N86-2606-46
- F ϕ 2.6x13.5 : N09-2644-05
- G ϕ 2.6x8 (Bi-Tap)BLK : N82-2608-45
- H ϕ 2.6x5 (Bi-Tap)BLK : N89-2605-45

CDM-19 (9) GS
DPF-7002 MECHA

DP-7090

EXPLODED VIEW (UNIT)



PARTS LIST

* New Parts
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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	Depth-notation	Re-marks
C1			CE04KW1A101M	ELECTRO		
C2			CO93FMG1H102J	MYLAR		
C3			CE04KW1A101M	ELECTRO		
C4	.5		C91-1488-05	MF	100UF	
C6			CO93FMG1H103J	MYLAR	1000PF	
C7			CK45FF1H103Z	CERAMIC	0.010UF	
C8			CO93FMG1H104J	MYLAR	0.10UF	
C11-14			CO93FMG1H471J	MYLAR	470PF	
C15			CK45FB1H102K	CERAMIC	1000PF	
C17			CK45FB1H102K	CERAMIC	1000PF	
C21,22			CC45FSL1H221J	CERAMIC	220PF	
C24			CF92FV1H224J	MF-C	0.22UF	
CN1			E40-4245-05	PIN ASSY		
J1			E11-0188-05	MINIATURE PHONE JACK(2P LENGTH)		
J2			E63-0121-05	PHONO JACK		
J3			E63-0185-05	PHONO JACK		
J4			E11-0190-05	PHONE JACK (3P)		
685			J19-3672-03	HOLDER		
L1-3		*	L92-0064-05	FERRITE CORE		
L5			L92-0067-05	FERRITE CORE		
L6			L92-0017-05	FERRITE CORE		
L7			L92-0017-05	FERRITE CORE		
L8			L78-0267-05	RESONATOR (4.194MHZ)		
S1-11			S70-0031-05	TACT SWITCH		
S21			S40-1153-05	PUSH SWITCH		
S22			S31-2084-05	SLIDE SWITCH		
D1-4			HSS104	DIODE		
D1-4			ISS133	DIODE		
D6-9			HSS104	DIODE		
D6-9			ISS133	DIODE		
ED1		*	FIP7BEM6	INDICATOR TUBE		
IC1			UPD78044AGF20	2 MI-COM IC		
O1-4			2SC1740S(Q,R)	TRANSISTOR		
O1-4			2SC2785(F,E)	TRANSISTOR		
O5			DTC124ESA	DIGITAL TRANSISTOR		
O5			UN4212	DIGITAL TRANSISTOR		
O6			2SC1740S(Q,R)	TRANSISTOR		
O6			2SC2785(F,E)	TRANSISTOR		
O7		*	2SA1175(F,E)	TRANSISTOR		
O7			2SA933AS(Q,R)	TRANSISTOR		
A1			W02-2537-05	ELECTRIC CIRCUIT MODULE		
A2			W02-1114-05	OSCILLATING MODULE		
CD PLAYER UNIT (X32-3182-70)						
C1			CO93FMG1H103J	MYLAR	0.010UF	
C2			CF92FV1H124J	MF-C	0.12UF	
C3			CO93FMG1H103J	MYLAR	0.010UF	
C4			CF92FV1H124J	MF-C	0.12UF	
C5			CO93FMG1H103J	MYLAR	0.010UF	
C6			CO93FMG1H102J	MYLAR	1000PF	
C7			CO93FMG1H103J	MYLAR	0.010UF	
C8			CE04KW1A101M	ELECTRO	100UF	

L : Scandinavia
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Ref. No	Add-ress	New Parts	Parts No.	Description	Depth-notation	Re-marks
DP-7090						
601	1C	*	A01-3325-01	METALLIC CABINET		
602	1C	*	A09-0170-08	BATTERY COVER		
608	2C	*	A21-1906-03	DRESSING PANEL		
609	2D	*	A21-1911-03	DRESSING PANEL ASSY		
610	2C	*	A22-1723-21	SUB PANEL		
612	2C	*	A29-0823-14	PANEL ASSY		
618	1C	*	A60-0823-02	REMOTE CONTROLLER ASSY		
618	1C	*	A70-1071-05	PANEL		
627	1E	*	B07-2305-04	ESCUTCHEON		
628	2C	*	B07-2306-04	ESCUTCHEON		
629	2C	*	B09-0097-05	OPTICAL OUTPUT TERMINAL CAP		
630	2C	*	B10-2243-13	FRONT GLASS		
630	2C	*	B11-0322-03	COLOR FILTER		
635	1D	*	B43-0302-04	KENWOOD BADGE		
641	1C	*	B46-0310-03	WARRANTY CARD		
642	1E	*	B58-0965-13	CAUTION CARD (PL SENTENCE)		
642	1E	*	B58-0966-13	CAUTION CARD (PL SENTENCE)		
643	1C	*	B60-2752-00	INSTRUCTION MANUAL(ENGLISH)		
645	1D	*	B60-2753-00	INSTRUCTION MANUAL(F,G,D,I)		
646	1D	*	D21-1447-03	EXTENSION SHAFT		
641	1C	*	E29-1618-04	LEAD PLATE		
642	1E	*	E30-0505-05	AUDIO CORD		
642	1E	*	E30-2592-15	AC POWER CORD		
643	1C	*	E30-2721-05	AC POWER CORD		
643	1C	*	E30-2733-05	CORD WITH PLUG		
645	1D	*	F18-1065-03	BLIND PLATE		
646	1D	*	F20-1483-04	INSULATING BOARD		
655	2E	*	G10-0146-04	NON-WOVEN FABRIC		
656	1E	*	G11-0155-14	SOFT TAPE (40X9X2)		
660	1C	*	G11-2269-04	CUSHION		
665	1D	*	G11-2272-04	SOFT TAPE		
665	2E	*	H10-7197-02	POLYSTYRENE FOAMED FIXTURE		
665	2E	*	H10-7198-02	POLYSTYRENE FOAMED FIXTURE		
665	2E	*	H12-2288-04	PACKING FIXTURE		
665	2E	*	H25-0232-04	PROTECTION BAG (235X350X0.03)		
665	2E	*	H25-0319-04	PROTECTION BAG		
665	2E	*	H25-0651-04	PROTECTION BAG		
665	2E	*	H25-0657-04	PROTECTION BAG		
665	2E	*	H50-2003-04	ITEM CARTON CASE		
665	2E	*	H50-2005-04	ITEM CARTON CASE		
665	2E	*	J02-1169-03	FOOT		
665	2E	*	J42-0083-05	POWER CORD BUSHING		
665	2E	*	J61-0307-05	WIRE BAND		
660	1C	*	K27-2178-04	KNOB (BUTTON)		
665	1D	*	L07-2171-05	POWER TRANSFORMER		
DISPLAY UNIT (X25-5752-70)						
D12			B30-1290-05	LED		

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PARTS LIST

4
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Ref. No	Add. ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
C72			CO93FMG1H103J	1000PF		
C73			CO93FMG1H103J	0.010UF		
C76			CE04KW1C470M	47UF		
C78			CC45FSL1H101J	1000PF		
C80			CK45FF1H103Z	0.010UF		
C81			CK45FB1H102K	1000PF		
C82			CE04KW1C470M	47UF		
C87			C90-1814-05	22UF		
C89			CO93FMG1H103J	0.010UF		
C91			CE04KW1V100M	10UF		
C92			CO93FMG1H103J	0.010UF		
C93			CF92FV1H101K	1000PF		
C95			CK45FB1H102K	1000PF		
C96			CE04KW1C220M	22UF		
C99			CE04KW1C101M	1000PF		
C101			CE04KW1C470M	47UF		
C103			CK45FB1H102K	1000PF		
C109			CF92FV1H101K	1000PF		
C111			CK45FB1H102K	1000PF		
C113			CE04KW1C220M	22UF		
C115			CE04KW1C101M	100UF		
C117			CE04KW1C470M	47UF		
C119			CK45FB1H102K	1000PF		
C121			CF92FV1H124J	0.12UF		
C125			CF92FV1H101K	100PF		
C127			CK45FB1H102K	1000PF		
C129			CE04KW1C220M	22UF		
C131			CE04KW1C101M	100UF		
C133			CE04KW1C470M	47UF		
C135			CK45FB1H102K	1000PF		
C141			CF92FV1H101K	100PF		
C143			CF92FV1H124J	0.12UF		
C145			CE04KW1C220M	22UF		
C147			CE04KW1C101M	100UF		
C149			CE04KW1C470M	47UF		
C151			CF92FV1H124J	0.12UF		
C158			CO93FMG1H102J	1000PF		
C161			CC45FSL1H101J	100PF		
C165			CF92FV1H124J	0.12UF		
C167			CC45FSL1H101J	100PF		
C168			CK45FF1H103Z	0.010UF		
C169			CE04KW1C101J	100PF		
C171			CF92FV1H124J	0.12UF		
C174			C91-1476-05	150PF		
C175			CF92FV1H124J	0.12UF		
C176			CE04KW1A101M	100UF		
C177			CO93FMG1H103J	0.010UF		
C181			CO93FMG1H103J	0.010UF		
C183			C91-1474-05	100PF		
C189			CO93FMG1H681J	680PF		
C191			C91-1474-05	100PF		
C195			CC45FSL1H101J	100PF		
C203			CK45FF1H103Z	0.010UF		
C212			CK45FB1H102K	1000PF		
C214			CC45FSL1H050C	5.0PF		

3
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Ref. No	Add. ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
C9			CO93FMG1H104J	0.10UF		
C10			CO93FMG1H103J	0.010UF		
C12			CE04KW1H470M	47UF		
C13			CO93FMG1H152J	1500PF		
C14			CC45FSL1H221J	220PF		
C15			CO93FMG1H472J	4700PF		
C16			CO93FMG1H473J	0.047UF		
C17			CO93FMG1H471J	470PF		
C18			CO93FMG1H104J	0.10UF		
C19			CO93FMG1H471J	470PF		
C20			CO93FMG1H562J	5600PF		
C21			CO93FMG1H103J	0.010UF		
C22			CO93FMG1H104J	0.10UF		
C23			CE04KW1V470M	47UF		
C24			CO93FMG1H272J	2700PF		
C25			CO93FMG1H472J	4700PF		
C26			CO93FMG1H272J	2700PF		
C27			CO93FMG1H104J	0.10UF		
C28			CO93FMG1H103J	0.010UF		
C29			CO93FMG1H391K	390PF		
C30			CC45FSL1H221J	220PF		
C31			CO93FMG1H391K	390PF		
C32			CO93FMG1H104J	0.10UF		
C33			CE04KW1V470M	47UF		
C34			CO93FMG1H471J	470PF		
C35			CO93FMG1H391K	390PF		
C36			CO93FMG1H104J	0.10UF		
C37			CE04HW1H2R2M	2.2UF		
C38			CC45FSL1H630J	33PF		
C39			CE04KW1A101M	100UF		
C41			CO93FMG1H103J	0.010UF		
C42			CO93FMG1H391K	390PF		
C43			CF92FV1H124J	0.12UF		
C44			CC45FSL1H101J	100PF		
C45			CO93FMG1H103J	0.010UF		
C46			CC45FSL1H101J	100PF		
C47			CO93FMG1H103J	0.010UF		
C48			CE04KW1H100M	10UF		
C49			CK45FB1H471K	470PF		
C51			CE04KW1C470M	47UF		
C54			CF92FV1H124J	0.12UF		
C55			CK45FF1H473Z	0.047UF		
C56			CE04KW1A101M	100UF		
C57			C91-1468-05	33PF		
C58			C91-1471-05	56PF		
C59			CO93FMG1H102J	1000PF		
C60			CO93FMG1H103J	0.010UF		
C62			CE04KW1V470M	47UF		
C63			CO93FMG1H103J	0.010UF		
C64			CE04KW1V470M	47UF		
C65			CE04KW1C32M	3300UF		
C67			CE04KW1H470M	47UF		
C68			CE04KW1C32M	3300UF		
C69			CO93FMG1H103J	0.010UF		
C70			CO93FMG1H103J	0.010UF		
C71			C91-1469-05	39PF		

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Ref. No	Add-ress	New Parts	Parts No.	Description	Designation	Re-marks
IC7			CXA1571S	ANALOGUE IC		
IC8			KAN03	CUSTOM IC		
IC9			KAN04	CUSTOM IC		
IC10			SM5843AS1	MOS-IC		
IC11-1B			PCMI1702P	MOS-IC		
IC19-24			NJM4580L	IC(OP AMP X2)		
IC25			X24C00P	MEMORY IC		
IC28,29			NJM4558D	ANALOGUE IC		
IC30			TC74HCJ04AF	IC(HEX INVERTER SMD)		
IC31		*	ICP-N20	ANALOGUE IC		
IC32,33		*	ICP-N10	ANALOGUE IC		
O1			2SA1284	TRANSISTOR		
O2 ,3			2SC3940A	TRANSISTOR		
O5			2SA954(L,K)	TRANSISTOR		
O6			2SK246(Y,GR)	FET		
O7 ,8			2SD2396(J,K)	TRANSISTOR		
O10			2SK246(Y,GR)	FET		
O11 ,12			2SD2396(L,K)	TRANSISTOR		
O14			DTC124ESA	DIGITAL TRANSISTOR		
O14			UN4212	DIGITAL TRANSISTOR		
O15			DTA124ESA	DIGITAL TRANSISTOR		
O16 ,17			UN4112	DIGITAL TRANSISTOR		
O18			2SK246(Y,GR)	FET		
O19			2SA992(F,E)	TRANSISTOR		
O20 ,21			2SC1845(F,E)	TRANSISTOR		
O24			2SD2012	TRANSISTOR		
O25			2SB1375	TRANSISTOR		
O26 ,27			2SD2012	TRANSISTOR		
O28 ,29			2SK246(Y,GR)	FET		
O28 ,29			2SB1375	TRANSISTOR		
Q30			DTC124ESA	DIGITAL TRANSISTOR		
Q30			UN4212	DIGITAL TRANSISTOR		
Q31			2SC1923(R,O)	TRANSISTOR		
Q33 ,36			2SC2878(B)	TRANSISTOR		
Q37 ,38			2SD1450(S,T)	TRANSISTOR		
CD MECHANISM ASSY (D40-1485-11)						
1	2B		A10-2788-32	CHASSIS ASSY		
2	3B		A11-0695-25	SUB CHASSIS (FRAME)		
3	1B		A11-0723-03	SUB CHASSIS (CLAMP)		
6	1B		D10-2479-03	SLIDER		
7	2A		D10-2481-04	ARM ASSY		
10	1A		D10-2491-04	ROD (RETAINER)		
11	2A		D13-0744-04	ROD (PULLEY)		
12	1A		D13-0779-04	GEAR		
13	2B		D13-0780-04	GEAR (INTERMEDIATE)		
14	2A		D13-0890-04	GEAR (IDLER)		
15	1A		D13-0891-03	GEAR (MAIN)		
16	2B		D13-0892-04	GEAR		
17	3B	*	D13-0894-04	GEAR (FEED MOTOR)		
18	2B		D13-0895-05	GEAR (INTERMEDIATE)		
19	3B		D13-0896-05	GEAR (FEED)		
20	2B		D14-0324-04	ROLLER		
21	2B		D14-0325-04	ROLLER ASSY		
22	2B		D15-0295-04	MOTOR PULLEY (LOADING MOTOR)		

* 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	Designation	Re-marks
CN1			E40-4296-05	FLAT CABLE CONNECTOR		
CN4			E40-4294-05	FLAT CABLE CONNECTOR		
CN5			E40-3255-05	PIN ASSY		
CN7			E40-4876-05	PIN ASSY		
CN8			E40-4807-05	PIN ASSY		
CN10-12			E40-4609-05	PIN ASSY		
CN20			E40-4856-05	FLAT CABLE CONNECTOR		
CN21			E40-3248-05	PIN ASSY		
E1 -3			J11-0098-05	WIRE CLAMPER		
L1			L92-0017-05	FERRITE CORE		
L3			L92-0017-05	FERRITE CORE		
L5 -8			L40-2291-17	SMALL FIXED INDUCTOR		
X1			L77-2133-05	CRYSTAL RESONATOR(16.9344MHZ-1)		
R89			RD14NB2E4R7J	RD 4.7 J 1/4W		
R91 ,94			RD14NB2E1R0J	RD 1.0 J 1/4W		
R137-152			RN14BK2C3901F	RD 3.90K F 1/6W		
R155			RD14NB2E1R0J	RD 1.0 J 1/4W		
R157-159			RD14NB2E1R0J	RD 1.0 J 1/4W		
R209-212			RD14NB2E101J	RD 100 J 1/4W		
VR11			RD14NB2E100J	RD 10 J 1/4W		
VR1			R12-3686-05	TRIMMING POT.(22K)		
D4 -9			HSS104	DIODE		
D4 -9			1SS133	DIODE		
D11			D3SBA20F03	DIODE		
D11			RBV-402LFA	DIODE		
D12			1B4B41	DIODE		
D13 ,14			HSS104	DIODE		
D13 ,14			1SS133	DIODE		
D15			S56868	DIODE		
D15			1SR139-400	DIODE		
D18			MTZJ5.6(B)	ZENER DIODE		
D18			UZ-5.6BSB	ZENER DIODE		
D19			MTZJ5.1(B)	ZENER DIODE		
D19			UZ-5.1BSB	ZENER DIODE		
D20 ,21			MTZJ8.2(B)	ZENER DIODE		
D20 ,21			UZ-8.2BSB	ZENER DIODE		
D22-25			MTZJ5.1(B)	ZENER DIODE		
D22-25			UZ-5.1BSB	ZENER DIODE		
D26			HSS104	DIODE		
D26			1SS133	DIODE		
D27			MTZJ3.9(B)	ZENER DIODE		
D27			UZ-3.9BSB	ZENER DIODE		
D30-35			HSS104	DIODE		
D30-35			1SS133	DIODE		
D60			MTZJ30(B)	ZENER DIODE		
D60			UZ-30BS	ZENER DIODE		
D61			MTZJ5.1(B)	ZENER DIODE		
D61			UZ-5.1BSB	ZENER DIODE		
IC1			TAB409S	MOS-IC		
IC2			TC74HCJ04AF	IC(HEX INVERTER SMD)		
IC3			CX2D2545Q	MOS-IC		
IC4 ,5			TAB410AK	ANALOGUE IC		
IC6			PST993D-T	ANALOGUE IC		

L : Scandinavia
Y : PX(Far East, Hawaii)
Y : AAFES(Europe)

K : USA
T : Europe
X : Australia

P : Canada
E : Europe
M : Other Areas

R : Mexico
G : Germany

Δ indicates safety critical components.

DP-7090

PARTS LIST

Ref. No	Add. Parts	Parts No.	Description	Desti- nation	Re- marks
23	1B	D16-0309-03	BELT		
24	2A	D23-0267-03	RETAINER		
30	2A	E31-7868-25	WIRING HARNESS		
31	2B	E35-1542-05	WIRING HARNESS		
32	2B	E35-1543-05	FLAT CABLE		
33	1B	E35-1583-15	WIRING HARNESS		
34		E40-3263-05	PIN ASSY		
40	1A	F19-1027-04	BLIND PLATE		
45	3B	G01-3326-14	COMPRESSION SPRING (FRONT)		
46	3B	G01-3327-14	COMPRESSION SPRING (REAR)		
48	1A	G02-1020-04	FLAT SPRING		
49	3B	G10-0146-04	NON-WOVEN FABRIC		
50	1A,2A	G11-2038-04	CUSHION		
55	3B	J02-1058-15	INSULATOR		
56	1B	J11-0173-33	CLAMPER		
57	3B	J19-3335-05	BRACKET		
58	3B	J19-5708-14	BRACKET		
59	2A	J99-0088-23	THAY ASSY		
65	1B	N19-0366-04	FLAT WASHER		
66	1B	N19-1292-04	FLAT WASHER		
70	3A	S33-1022-05	LEVER SWITCH		
DM	3B	A11-0733-05	SUB CHASSIS ASSY (DISC MOTOR)		
FM	3B	T42-0532-05	DC MOTOR (FEED MOTOR)		
LM	2B	T42-0530-05	DC MOTOR (LOADING MOTOR)		
PU	2B	T25-0041-05	OPTICAL PICKUP HEAD (KSS-2T3B)		

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SPECIFICATIONS

[Format]

System Compact disc digital audio system
Laser Semiconductor laser

[D/A Convertors]

D/A Conversion 20 Bit
Oversampling 32 fs (1411.2 kHz)

[Audio]

Frequency response 4Hz ~ 20 kHz, ± 0.3 dB
Signal to noise ratio More than 120 dB
Dynamic range More than 99 dB
Total harmonic distortion + noise
..... Less than 0.002 % (at 1 kHz)
Channel separation More than 100 dB (at 1 kHz)

Wow & flutter Unmeasurable Limit
Output level / impedance
Variable 0 ~ 2 V / 0.3 kΩ
Digital output
Coaxial 0.5 V p-p / 75 W
Optical -15 dBm ~ -21 dBm
(Wave length 660 nm)
Headphone output (Max.) 20 mW (32 Ω)

[General]

Power consumption 20 W
Dimensions W: 440 mm (17-5/16")
H: 147 mm (5-13/16")
D: 366 mm (14-7/16")
Weight (Net) 7.6 kg (16.7 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 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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