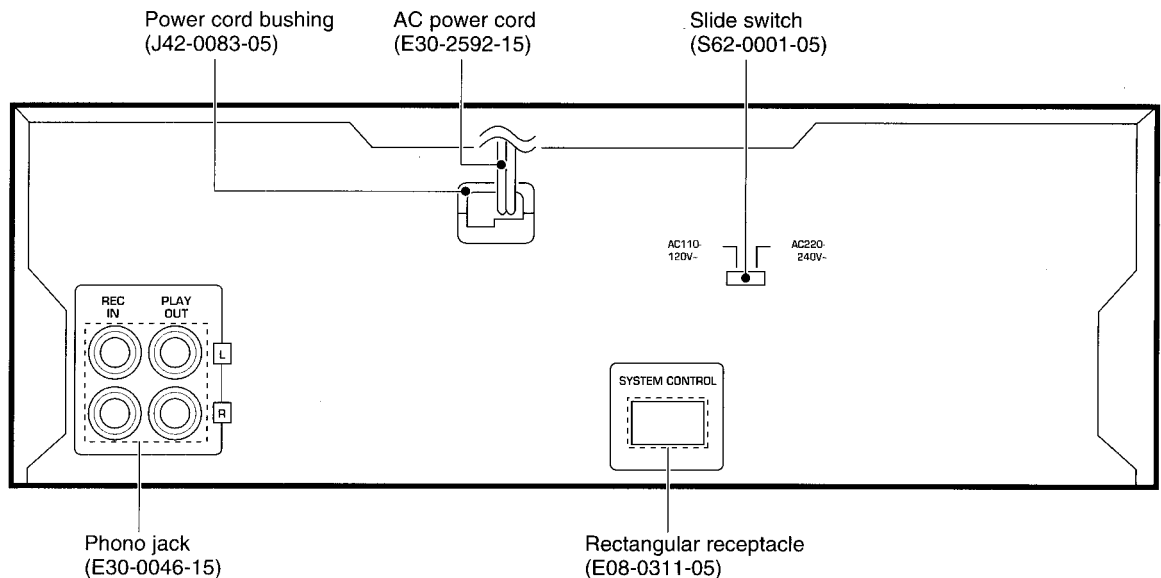
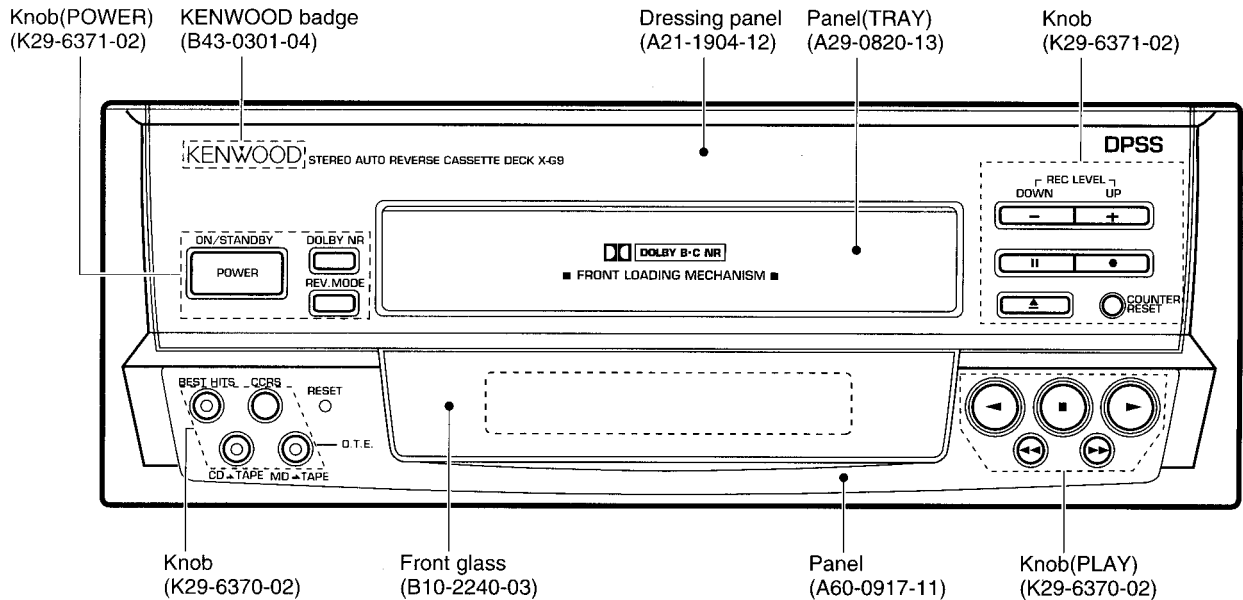


X-G9

SERVICE MANUAL

(UD-955MD)

© 1996-8/B51-5216-00 (K/K) 529



● Refer to KX-W8070S service manual (B51-5022-00), if you require "synchro code" in detail.



X-G9

CONTENTS / DISASSEMBLY FOR REPAIR

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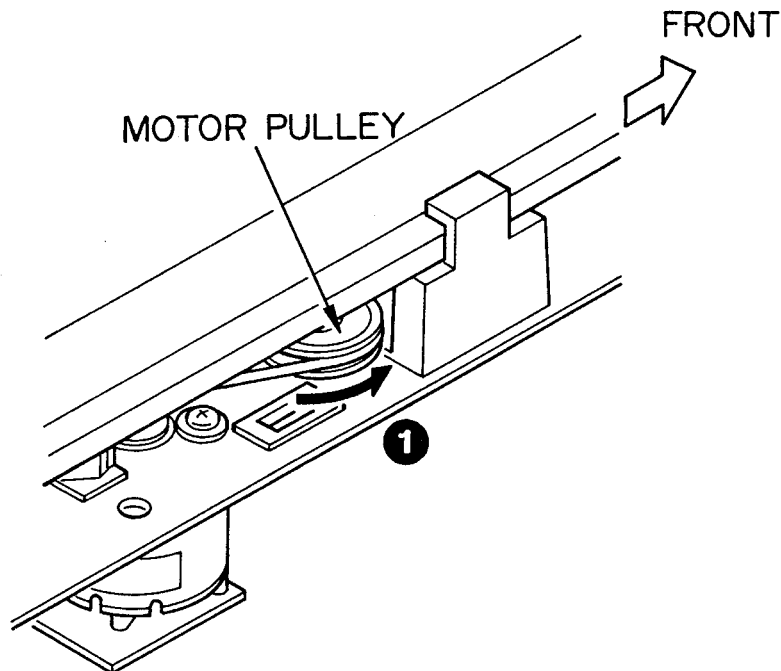
System configurations

SYSTEM	RECEIVER	CASSETTE DECK	CD PLAYER	MD	SPEAKER
UD-955MD	A-G9	X-G9	DP-MG9	MD-G9	LS-G9

DISASSEMBLY FOR REPAIR

※ Power does not turn on and tray does not come out.

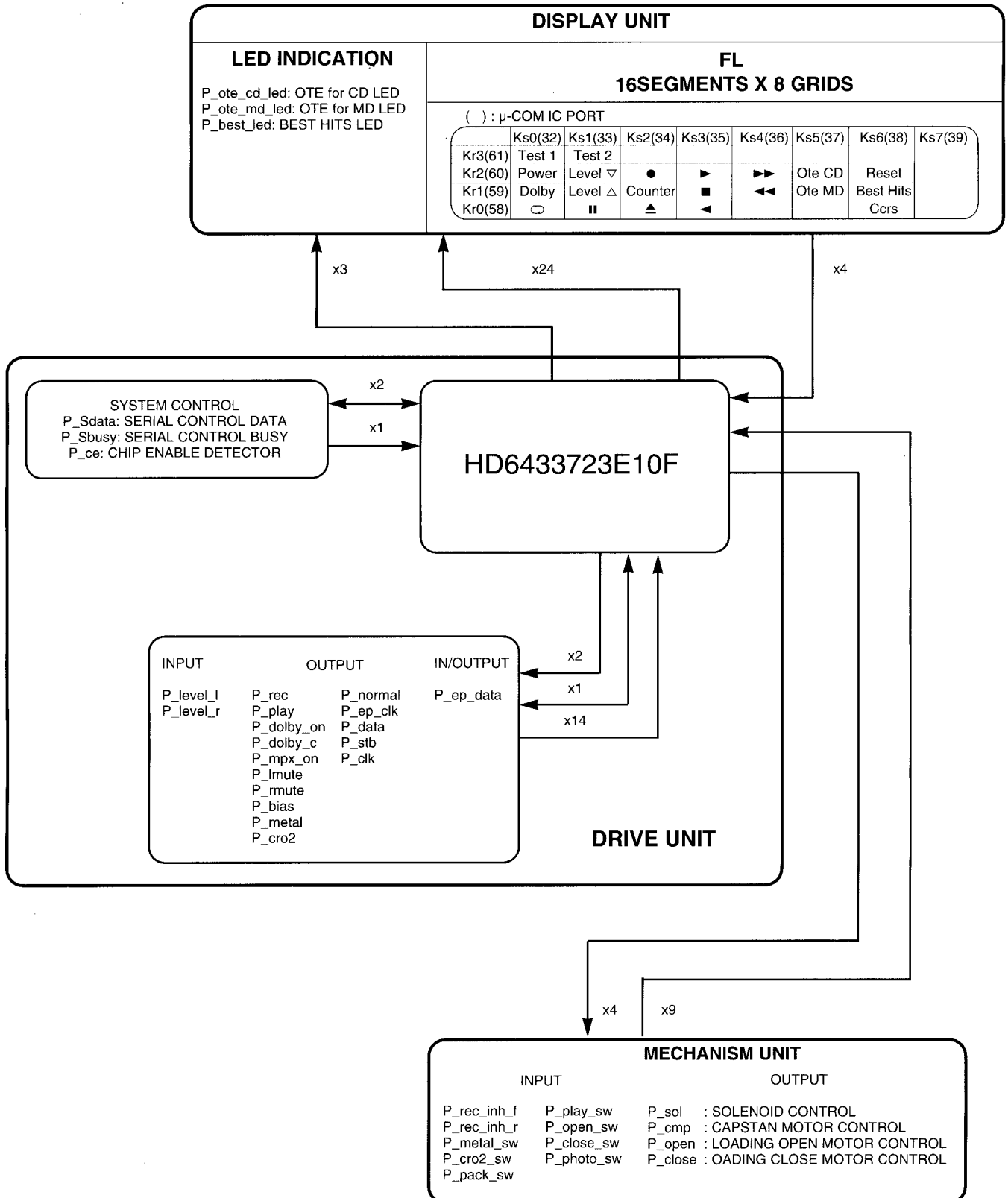
1. Turn the motor pulley in the direction of the arrow (❶) in the drawing with a finger.



CIRCUIT DESCRIPTION

1. DECK Microprocessor HD6433723E10F(X28-286 : IC1)

1-1. Microprocessor periphery block diagram



CIRCUIT DESCRIPTION

1-2. Pin Description

Pin No.	Name	I/O	Description	
1	P REC INH F	I	Mechanism FWD recording inhibit detection.	H : INHIBITED
2	P REC INH R	I	Mechanism RVS recording inhibit detection	H : INHIBITED
3	P LEVEL L	I	A/D level input. L channel.	
4	P LEVEL R	I	A/D level input. R channel.	
5	AVSS		A/D input reference GND.	
6	TEST		Terminal for detection of TEST MODE. TO VSS.	
7	X OUT	O	Oscillator connection terminal for sub clock oscillation.	
8	X IN	I	Oscillator connection terminal for sub clock oscillation.	
9	VSS		GND	
10	M CLK IN	I	Main clock input terminal.	
11	M CLK OUT	O	Main clock output terminal.	
12	RESET	O	Reset terminal of microprocessor.	L : RESET
13	P REC	O	Mechanism head changeover terminal.	H : REC
14	P PLAY	O	Mechanism head changeover terminal.	H : PLAY
15	P DOLBY ON	O	ON/OFF changeover of Dolby.	H : DOLBY OFF
16	P DOLBY C	O	Changeover of B/C noise reduction of Dolby.	H : DOLBY C
17	P BIAS	O	Control of oscillation of recording bias.	H : ON
18	NC		No connection.	
19	P CE	I	AC off detection signal input	L : AC OFF
20	P L MUTE	O	Line mute control.	L : ON
21	P R MUTE	O	REC mute control.	L : ON
22	P MPX ON	O	ON/OFF of multiplex filter.	H : MPX ON
23~25	NC	O	No Connection.	
26	P METAL	O	Tape bias changeover terminal.	H : METAL
27	P CRO2	O	Tape bias changeover terminal.	H : CRO2
28	P NORMAL	O	Tape bias changeover terminal.	H : NORMAL
29	P OTE CD LED	O	CD LED	
30	P OTE MD LED	O	MD LED	
31	P BEST LED	O	BEST HITS LED	
32	KS0 / SEG N	O	Key scan 0 / segment N	
33	KS1 / SEG M	O	Key scan 1 / segment M	
34	KS2 / SEG G	O	Key scan 2 / segment G	
35	KS3 / SEG F	O	Key scan 3 / segment F	
36	KS4 / SEG H	O	Key scan 4 / segment H	
37	KS5 / SEG C	O	Key scan 5 / segment C	
38	KS6 / SEG P	O	Key scan 6 / segment P	
39	KS7 / SEG R	O	Key scan 7 / segment R	
40	FDP power supply		FDP driving power supply terminal (-30[V])	
41	SEG E	O	Segment output for FDP : E	
42	SEG D	O	Segment output for FDP : D	
43	SEG J	O	Segment output for FDP : J	
44	SEG K	O	Segment output for FDP : K	
45	SEG B	O	Segment output for FDP : B	
46	SEG A	O	Segment output for FDP : A	
47	SEG S	O	Segment output for FDP : S	
48	SEG T	O	Segment output for FDP : T	
49~56	G1~G8	O	Grid output for FDP : G1~G8	
57	VCC		Microprocessor power supply (+5[V])	
58~60	KR0~KR2	I	Key return signal input : KR0~KR2	
61	N/C	I	No connection.	
62	P EP CLK	O	Clock for communication with E ² PROM	
63	P EP DATA	I/O	Data for communication with E ² PROM	
64	P PHOTO	I	Input of revolution speed detected from mechanism	
65	P CLOSE sw	I	Tray close detection switch.	H : CLOSE

CIRCUIT DESCRIPTION

Pin No.	Name	I/O	Description
66	P OPEN sw	I	Tray open detection switch. H : OPEN
67	P CLK	O	Clock to send data to the volume IC.
68	P STB	O	Strobe to send data to the volume IC.
69	P DATA	O	Data to sent the volume IC.
70	P CLOSE	O	Control terminal of loading mechanism. H : CLOSED
71	P OPEN	O	Control terminal of loading mechanism. H : OPEN
72	P CMP	O	Capstan motor of mechanism.
73	P SOL	O	Solenoid of mechanism.
74	P SBUSY	I/O	Serial communication between equipment (Busy).
75	P SDATA	I/O	Serial communication between equipment (Data).
76	A VCC		A/D reference voltage.
77	P PLAY SW	I	Head rise detector SW. L : PLAY
78	P PACK SW	I	Cassette HALF detector SW. (Active LOW) H : NO HALF
79	P CRO2 SW	I	Normal tape detector SW. L : NORMAL
80	P METAL SW	I	Metal tape detector SW. L : NORMAL / CRO 2

2. DEFAULT STATUS

ITEM	STATE
POWER	OFF
DOLBY	OFF
REVERSE MODE	▷
R / P	PLAY
P / R	REC
REC MUTE	ON
LINE MUTE	ON
BIAS	OFF
SELECTOR	TUNER
ELECTRIC VOLUME	-15dB
MPX	ON
BIAS TYPE	NORMAL
SOL	OFF
CPM	ON(1sec) → OFF
OPEN	OFF
CLOSE	OFF

- 4 - seconds recording
When pressed REC KEY, the unit records for 4 seconds, then automatically rewinds and play back those 4 seconds.
During recording, if pressed the REC Key again, 4 seconds are recorded from that time.
- Electric volume (UP / DOWN)
The UP(+) Key is pressed, the electric volume is changed ($-\infty \rightarrow 15 \rightarrow 0$).
The DOWN(-) Key is pressed, the electric volume is changed ($0 \rightarrow 15 \rightarrow -\infty$).
- CCRS
The CCRS LED blinks during the CCRS operation.
If the CCRS Key is pressed, recording is paused. If an excessive input is received, the recording level is lowered.
- Mechanism half SW detection and indication.
(The segments light off when the leaf SW is ON.)

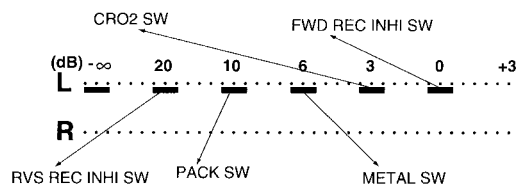
2-1. INITIALIZATION

AC plug out during TEST mode (1, SYNCHRO) and AC plug IN.

3. TEST MODE

3-1. TEST 1 MODE

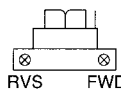
- (1) Setting method
 - While pressing the play Key [▶] or shorting the TEST pin (② → ①) with the diode plug the power cord to the AC wall output.
- (2) Cancellation
 - Press the pause Key [⏸] or reset Key.
 - Turn off the AC power.
- (3) Specifications
 - After the power is turned on, all the LEDs are light on for 1.5 sec.
 - Set the recording level to -15dB.



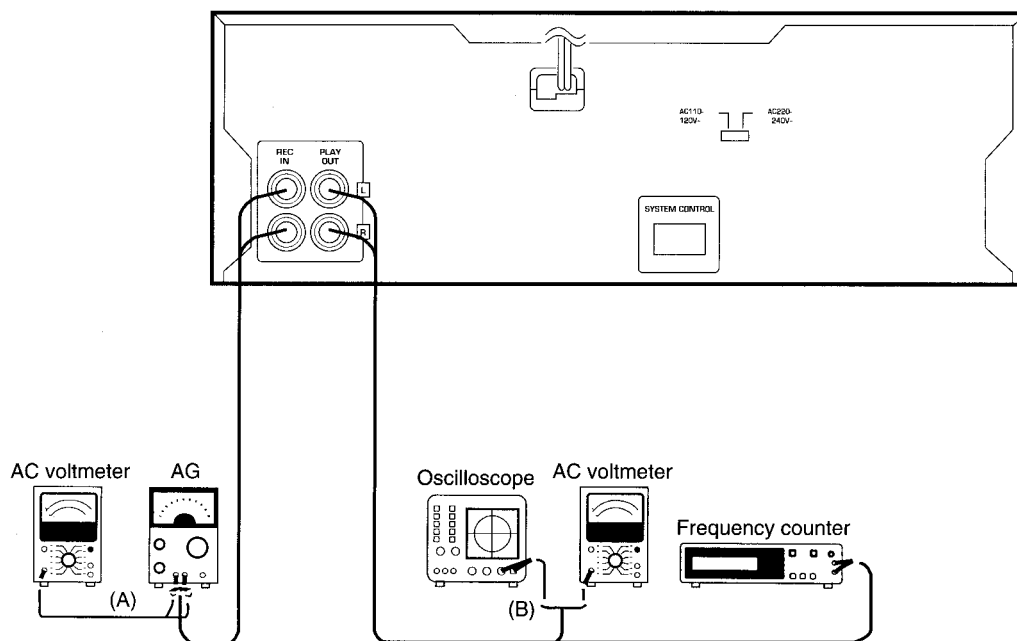
3-2. Synchronization test mode (KSJ-0816)

- (1) Synchro test on
If the deck power is on, in any mode, the synchro test on code (E040H) turned on the synchro test.
- (2) Synchro test off
The synchro test off code (E041H) turned off the synchro test and returns the unit to the state it was in before the synchro test. Also, since the backing up is ended, the next time the power is turned on, the default values are set in the backup area.

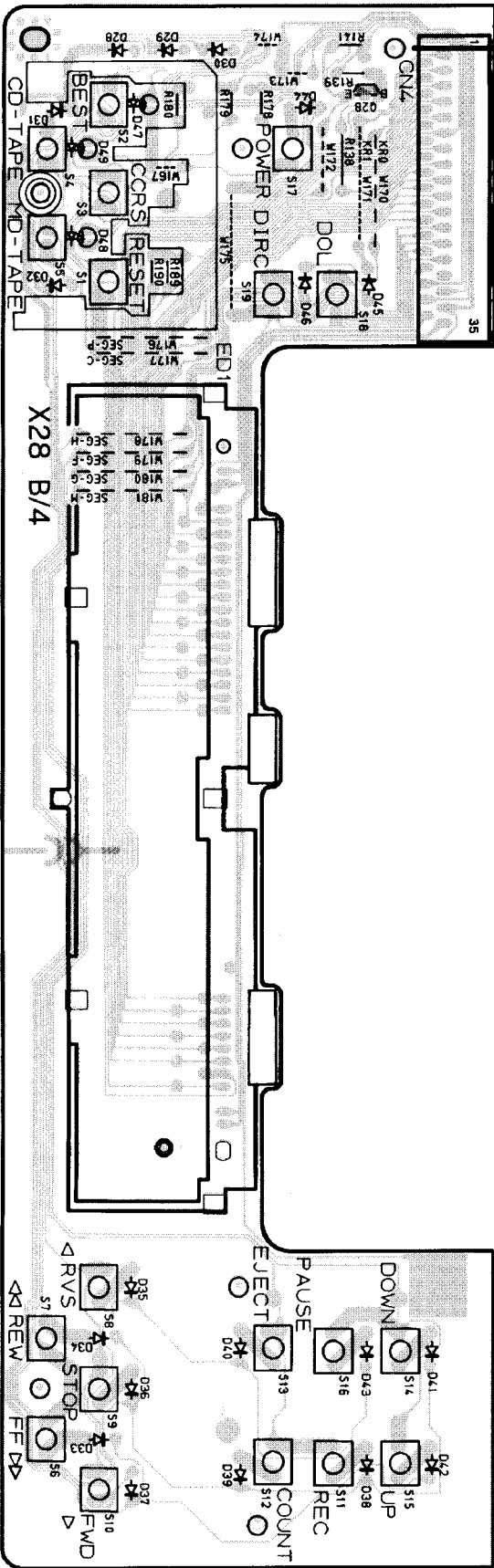
ADJUSTMENT

NO.	ITEM	INPUT SETTING	OUTPUT SETTING	CASSETTE TAPE DECK SETTING	ALIGNMENT POINTS	ALIGN FOR	FIG.
Unless otherwise specified, set the respective switches as follows: TAPE : NORMAL DOLBY : OFF I Cassette mechanism unit (Adjustment of the REC / PLAY head)						0dBs = 0.775V	
(1)	Demagnetization and cleaning	—	—	Power : OFF Demagnetization, cleaning, PLAY	Recording head, erase head, capstan pinch roller	Demagnetize the REC / PLAY head with the head eraser. Clean the REC / PLAY head, erase head, capstan and pinch roller using a cotton swab slightly dampened with alcohol.	
(2)	Azimuth of the REC / PLAY head	SCC-1727 TCC-153 MTT-114 10kHz, -10dB	(B)	PLAY		Adjust the output to maximum and adjust the azimuth adjustment screw for the Lissajours waveform pattern of the oscilloscope to become close to a 45° straight line.	
II PC BOARD ADJUSTMENT							
(1)	TAPE SPEED (NORMAL)	TCC-110 MTT-111 SCC-1727 3kHz	(B)	PLAY	VR7	Adjust the tape speed so that 3kHz is obtained at the center of the tape.	
III PC board adjustment.							
(1)	PLAYBACK LEVEL	MTT-150 400Hz	(B)	PLAY	VR 1 (L) VR 2 (R)	Adjust the playback output to -1dBs.	
		MTT-256, SCC-1727 315Hz				Adjust the playback output to -4dBs.	
		MTT-256U, TCC-120 315Hz				Adjust the playback output to 0 dBs.	
(2)	BIAS CURRENT	(A) Adjust the AG for the output of the DECK to become 12.5kHz -20dBs. 400Hz/12.5kHz (AC-224)	(B)	REC PLAY	VR 3 (L) VR 4 (R)	Record 400Hz and 12.5kHz alternately, and adjust the bias current adjustment potentiometer for the playback levels to become the same.	
(3)	RECORDING LEVEL	(A) Adjust the AG for the output of the DECK to become 1kHz -20dBs.	(B)	REC PLAY	VR 5 (L) VR 6 (R)	-20 dBs	

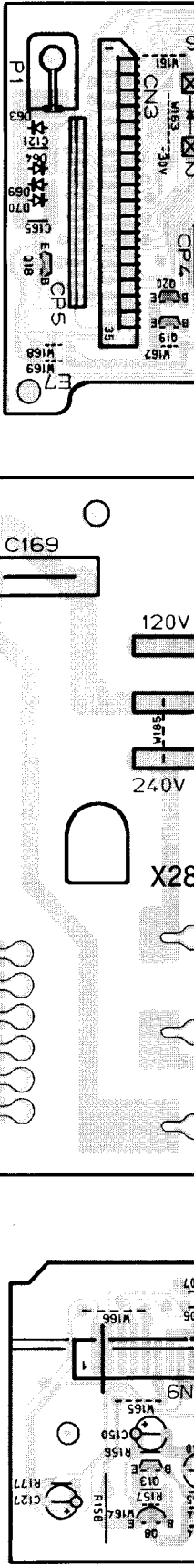
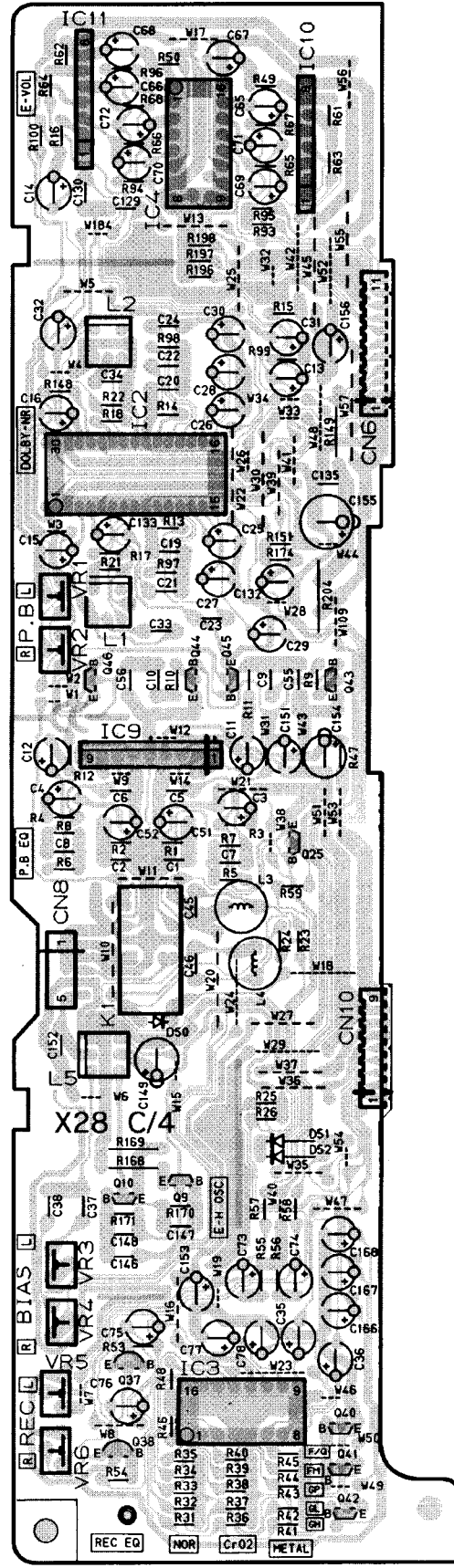
Measurement Equipment Connections

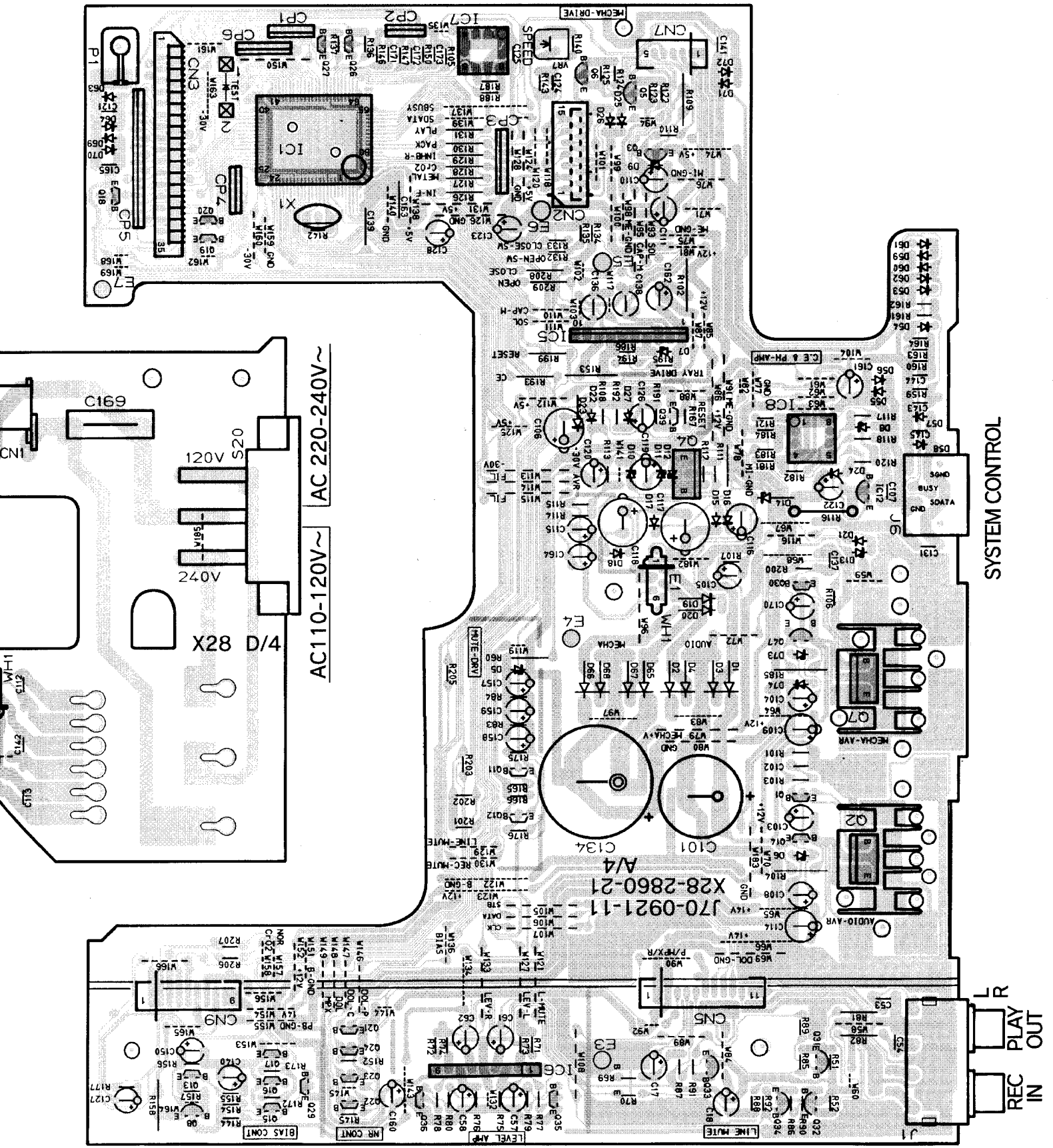


PC BOARD(Component side view)



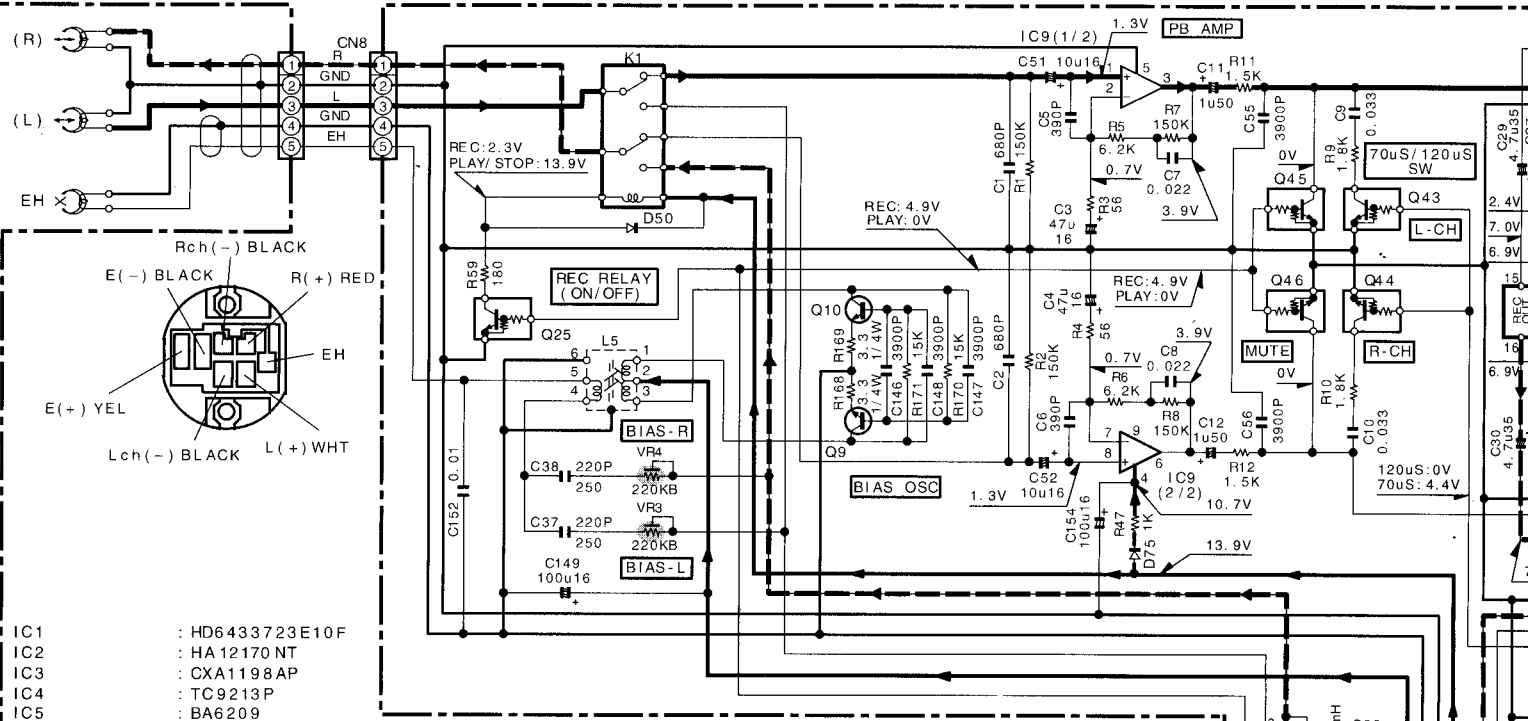
FRONT





MECHANISM ASS'Y
D40-1476-05

X28-C/4

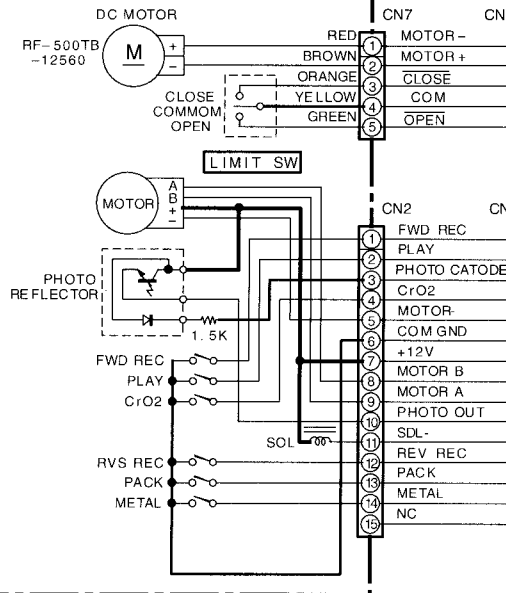
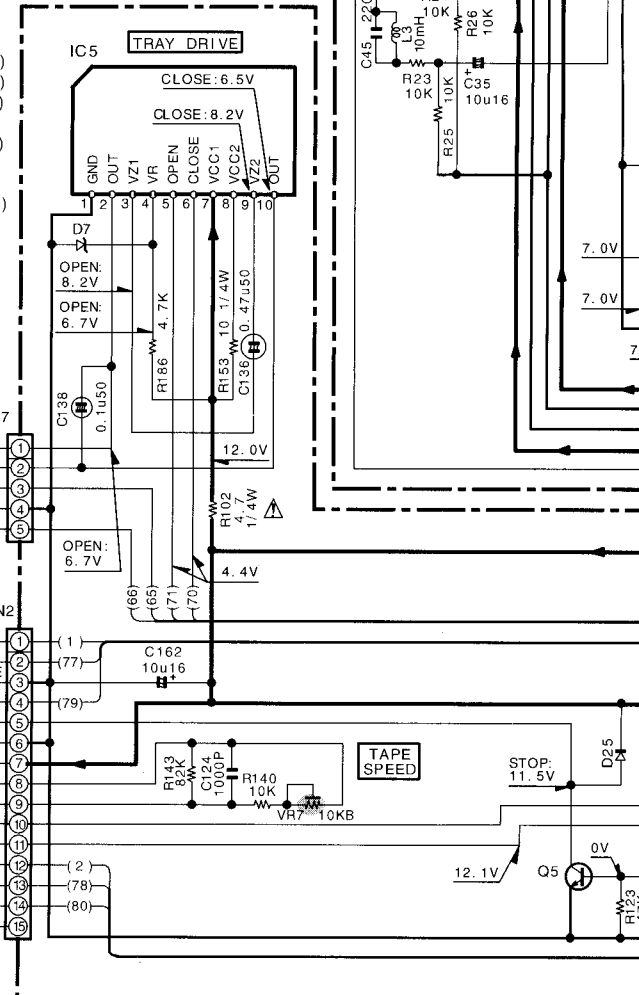


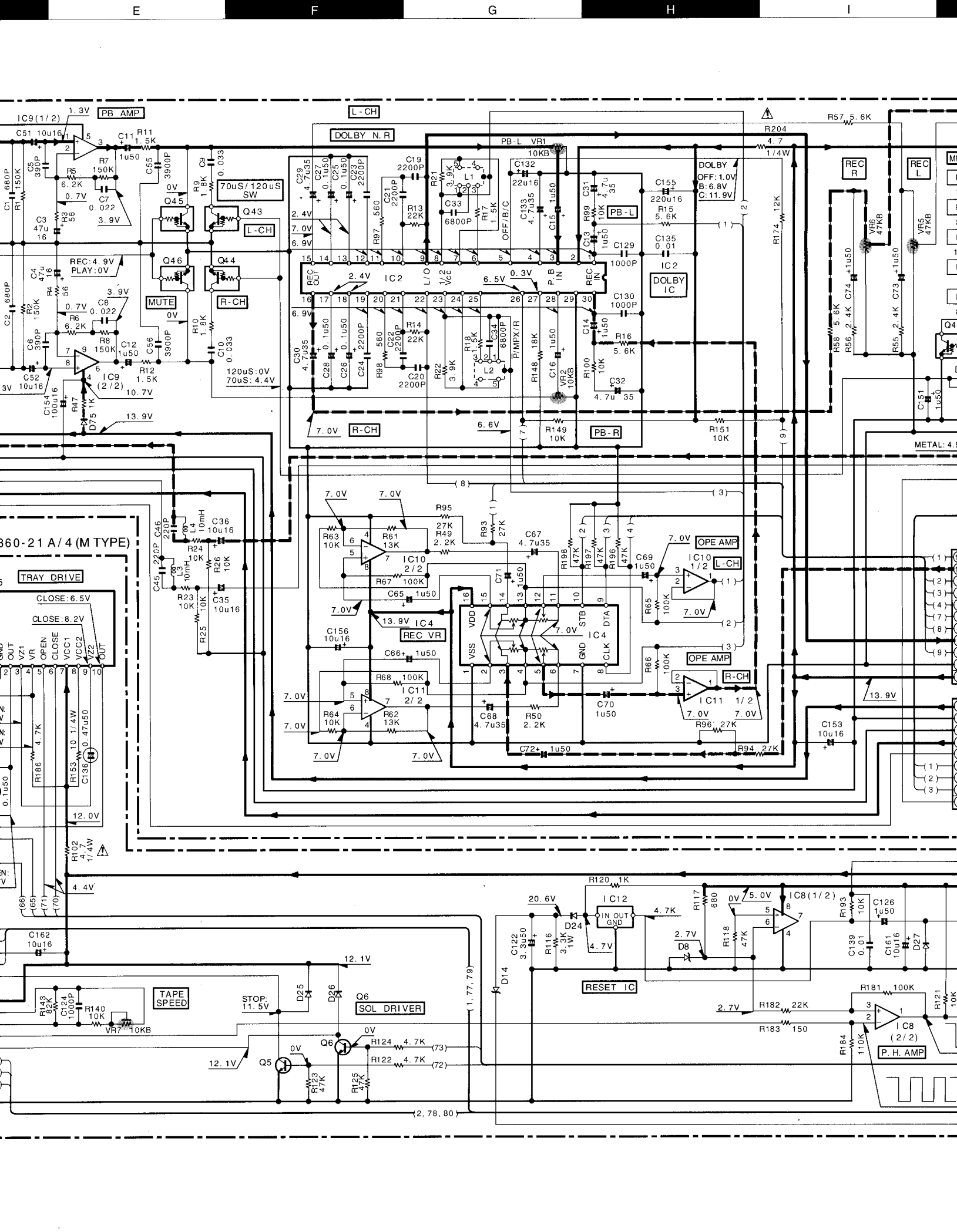
- IC1 : HD6433723E10F
- IC2 : HA12170 NT
- IC3 : CXA1198AP
- IC4 : TC9213P
- IC5 : BA6209
- IC6 : BA6138
- IC7 : XL24C01AP
- IC8 : BA10393
- IC9 : TA8125S
- IC10, 11 : NJM4565L-D
- IC12 : PST993D-T

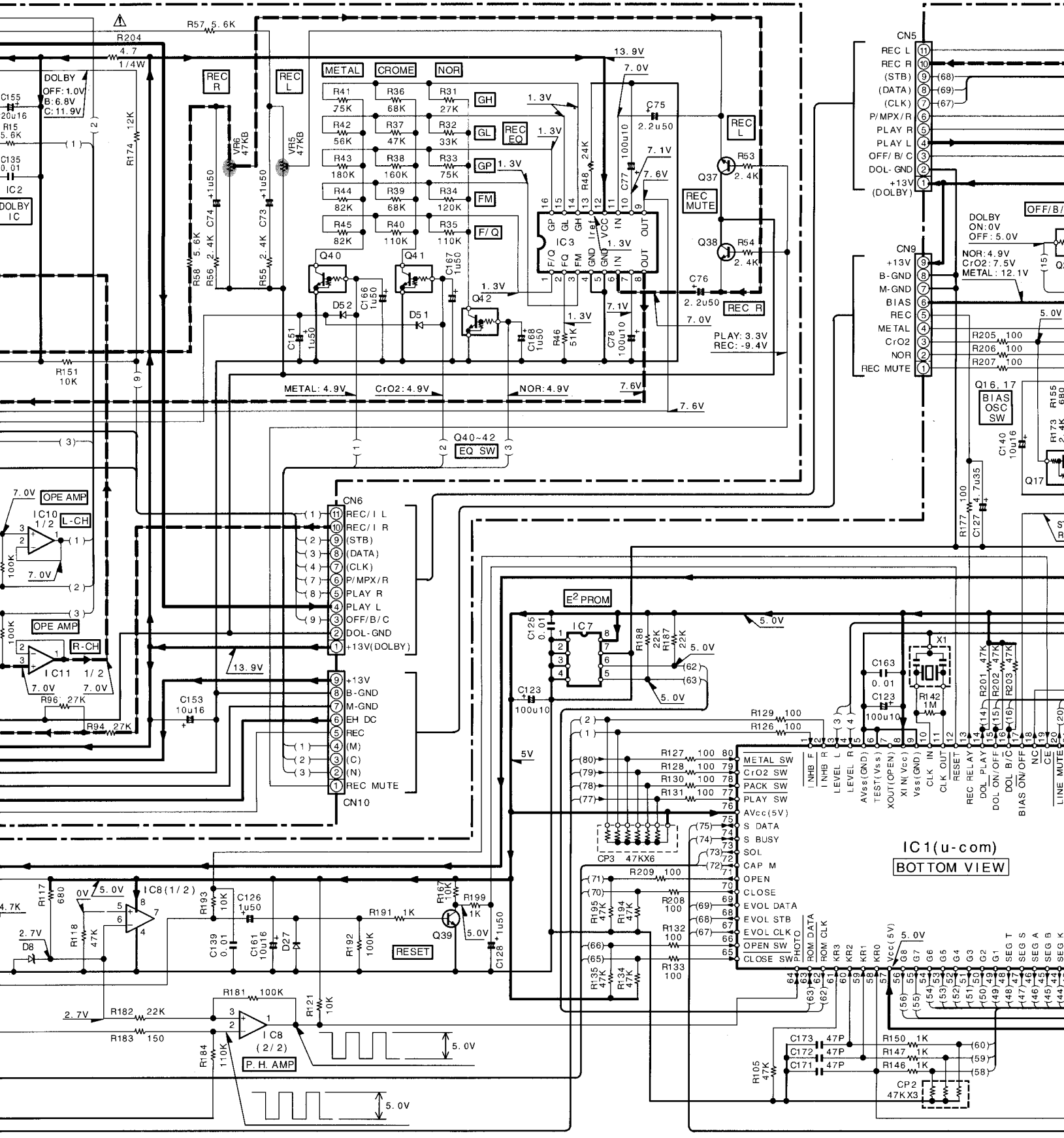
- Q1, 9, 10, 13, 26, 27, 30, 35, 36, 39 : 2SC3311A(Q, R) or 2SC2458(Y, GR)
- Q2, 7 : 2SD2061(E, F) or 2SD2012
- Q3, 8 : 2SC3940A(R, S) or 2SD863(E, F)
- Q4 : 2SA1535A
- Q5, 6, 47 : 2SC3246
- Q11, 12 : UN4112 or DTA124ESA
- Q14 : 2SC2003(L, K)
- Q15-25, 29, 40-46 : UN4212 or DTC124ESA
- Q31-34, 37, 38 : 2SC2878(B)

- D1~4, 65~68 : S5688B or 1SR139-100
- D21~27, 50~64, 69~72, 75 : HSS104 or 1SS133
- D5 : RD10ES(B) or HZS10N(B)
- D7, 10 : RD6.8ES(B2) or HZS6.8N(B2)
- D8 : RD2.7ES(B2) or HZS2.7N(B2)
- D9 : RD5.6ES(B2) or HZS5.6N(B2)
- D11 : RD16ES(B2) or HZS16N(B2)
- D13 : RD3.9ES(B2) or HZS3.9N(B2)
- D15~20, 74 : HSS104A or 1SS131
- D12, 73 : RD11ES(B2) or HZS11N(B2)
- D14 : RD8.2ES(B2) or HZS8.2N(B2)
- D6 : RD13ES(B2) or HZS13N(B2)

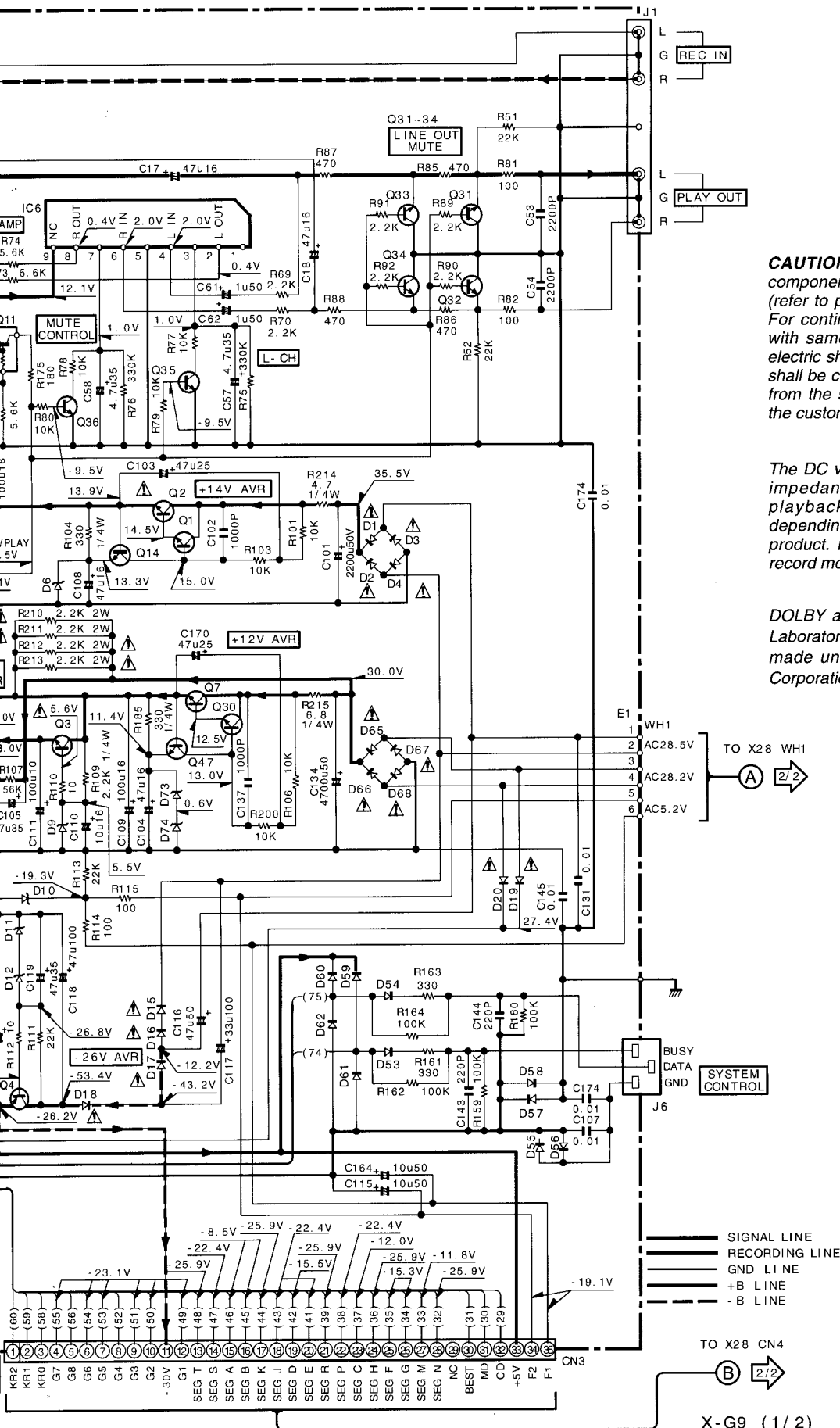
X28-2860-21 A/4 (M TYPE)







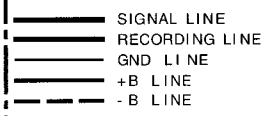
IC1(u-com)
BOTTOM VIEW



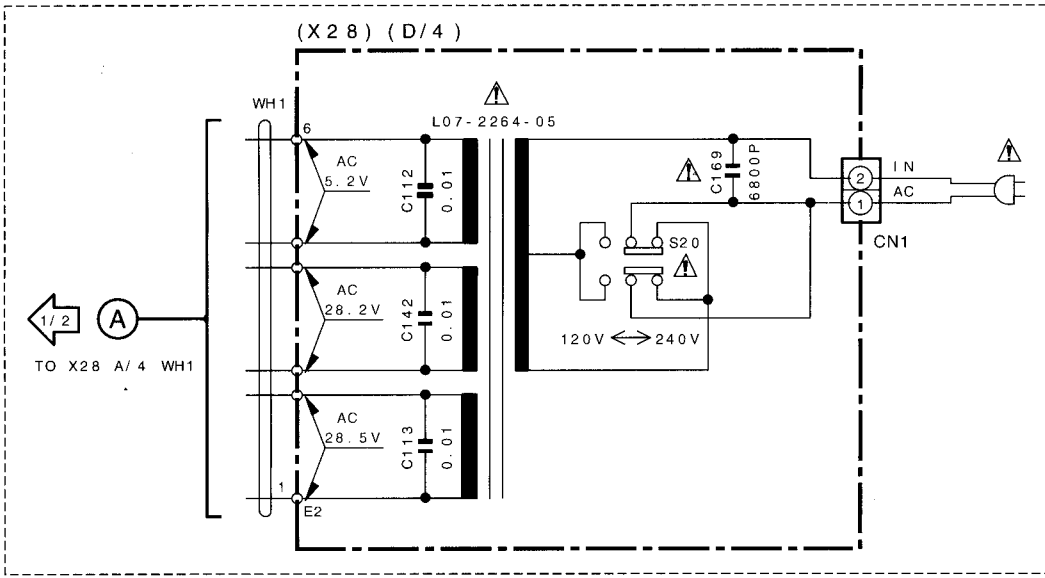
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, 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 with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

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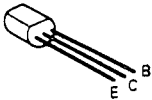


(M TYPE)

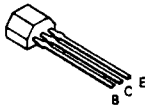


1/2 (B)
TO X28 A/4 CN3

2SC2003
2SC2878
2SC3246
2SC3940A
2SD863



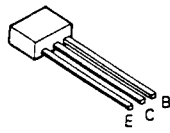
DTA124ESA
DTC124ESA
UN4112
2SC2458



2SA1535A
2SD2061



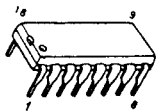
UN4212
2SC3311A



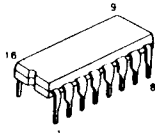
2SD2012



CXA1198AP



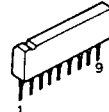
TC9213P



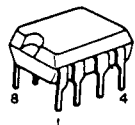
TA8125S



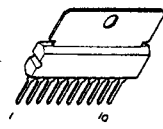
BA6138



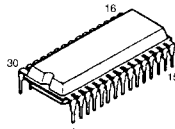
BA10393
XL24C01AP



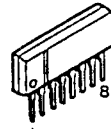
BA6209



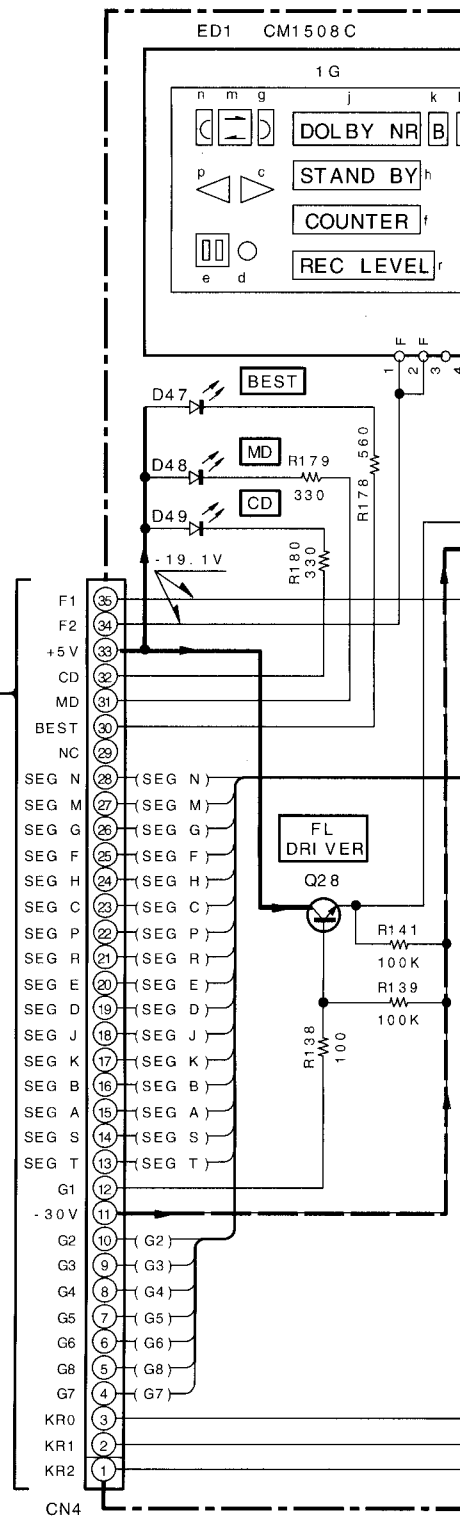
HA12170NT



NJM4565L-D



X28-2860-21(B/4)



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 with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

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(X28 B/4)

Q28 : 2SC3311A (Q, R) or 2SC2458 (Y, GR)

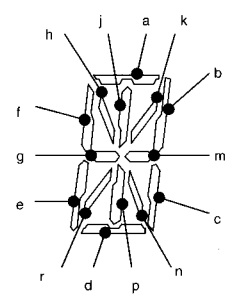
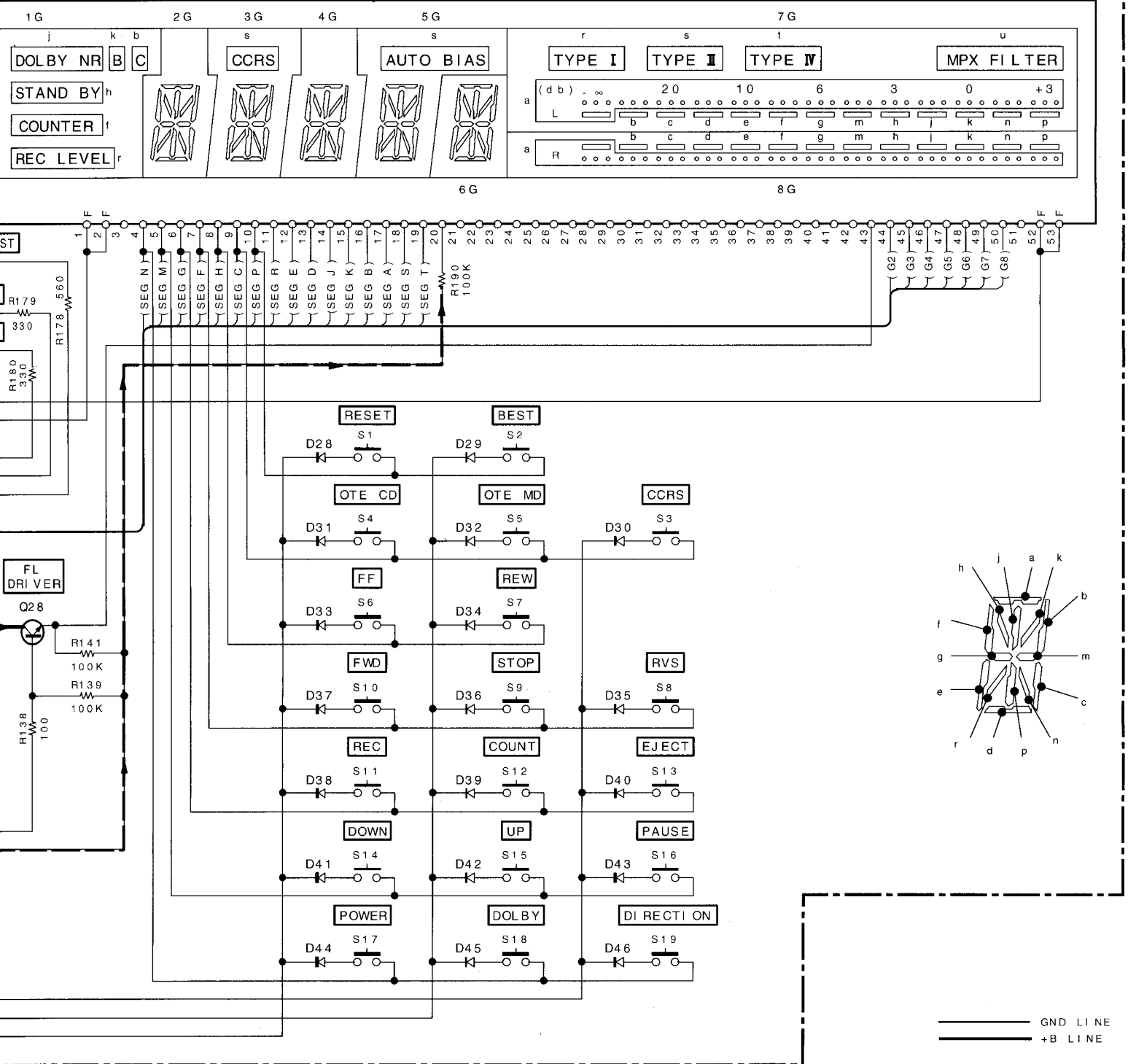
D28~46 : UN4112 or DTC124ESA

D47~49 : B30-2430-05

ED1 : CM1508C

21 (B / 4)

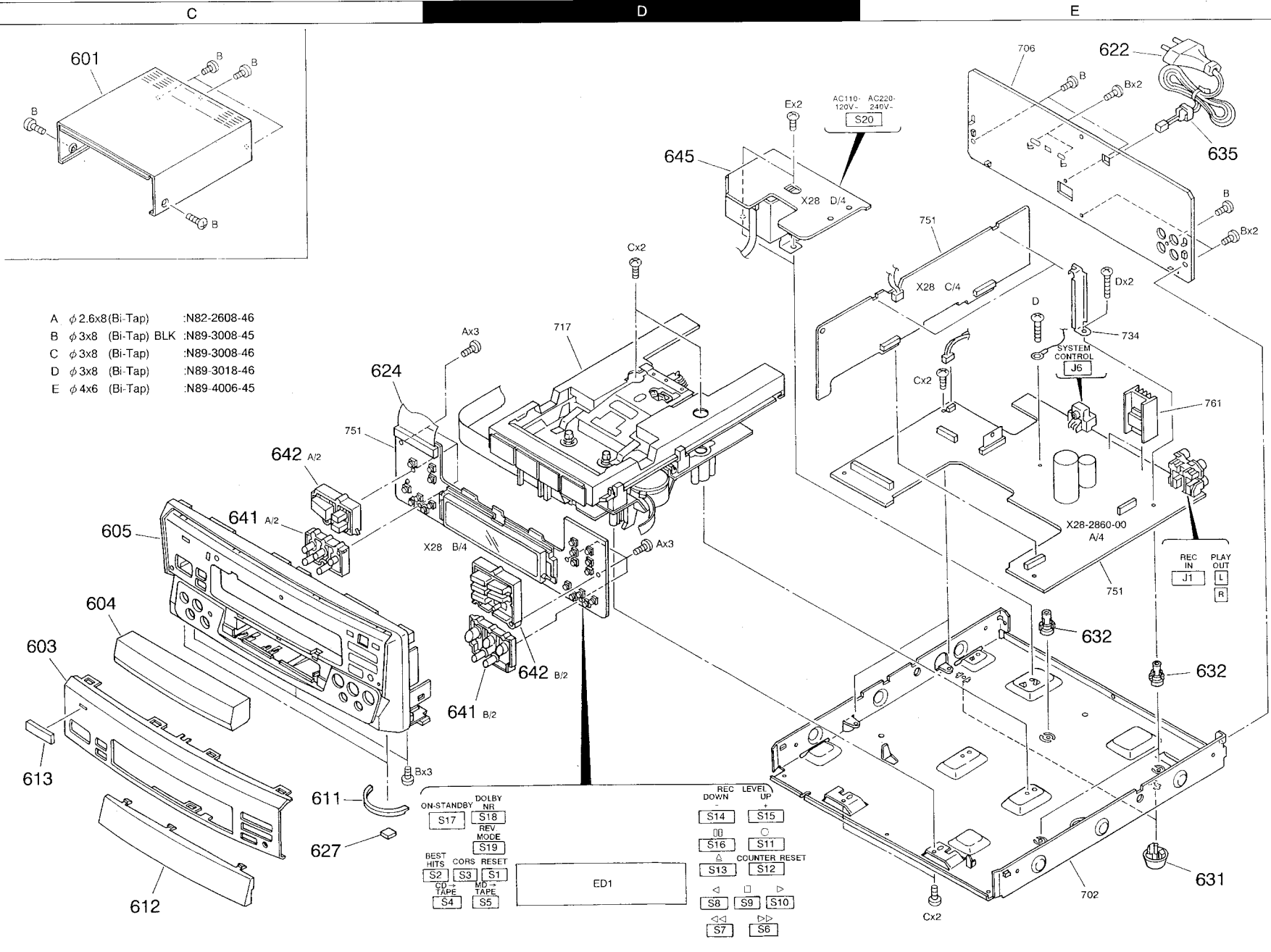
M1508C



X-G9 (2 / 2)

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Parts with the exploded numbers larger than 700 are not supplied.

* 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

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
X-G9						
601	1C		A01-3319-11	METALLIC CABINET		
603	2C		A21-1904-12	DRESSING PANEL		
604	2C		A29-0820-13	PANEL (TRAY)		
605	2C		A60-0917-11	PANEL		
611	2C		B07-2268-24	ESCUTCHEON		
612	2C		B10-2240-03	FRONT GLASS		
613	2C		B43-0301-04	KENWOOD BADGE		
△ 622	1E		E30-2592-15	AC POWER CORD		
624	1C		E35-1200-05	FLAT CABLE		
627	2C		G11-2243-04	CUSHION		
-			H10-7191-12	POLYSTYRENE FOAMED FIXTURE		
-			H10-7192-12	POLYSTYRENE FOAMED FIXTURE		
-			H20-0576-04	PROTECTION COVER		
-		*	H50-2059-04	ITEM CARTON CASE		
631	2E		J02-0366-15	FOOT		
632	2E		J19-3721-14	UNIT HOLDER		
△ 635	1E		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
641	2C,2D		K29-6370-02	KNOB (PLAY)		
642	1C,2D		K29-6371-02	KNOB (POWER)		
△ 645	1D	*	L07-2264-05	POWER TRANSFORMER		
RECORD / PLAYBACK UNIT (X28-2860-21)						
D47 -49			B30-2430-05	LED(RE D)		
C1 ,2			CK45FB1H681K	CERAMIC	680PF	K
C3 ,4			CE04KW1C470M	ELECTRO	47UF	16WV
C5 ,6			CK45FB1H391K	CERAMIC	390PF	K
C7 ,8			CQ93FMG1H223J	MYLAR	0.022UF	J
C9 ,10			CQ93FMG1H333J	MYLAR	0.033UF	J
C11 -16			CE04KW1H010M	ELECTRO	1.0UF	50WV
C17 ,18			CE04KW1C470M	ELECTRO	47UF	16WV
C19 -24			CQ93FMG1H222J	MYLAR	2200PF	J
C25 -28			CE04KW1H0R1M	ELECTRO	0.1UF	50WV
C29 -32			CE04KW1V4R7M	ELECTRO	4.7UF	35WV
C33 ,34			CQ93FMG1H682J	MYLAR	6800PF	J
C35 ,36			CE04KW1C100M	ELECTRO	10UF	16WV
C37 ,38			C91-1436-05	FILM	220PF	J
C45 ,46			CC45FSL1H221J	CERAMIC	220PF	J
C51 ,52			CE04KW1C100M	ELECTRO	10UF	16WV
C53 ,54			CK45FB1H222K	CERAMIC	2200PF	K
C55 ,56			CQ93FMG1H392J	MYLAR	3900PF	J
C57 ,58			CE04KW1V4R7M	ELECTRO	4.7UF	35WV
C61 ,62			CE04KW1H010M	ELECTRO	1.0UF	50WV
C65 ,66			CE04KW1H010M	ELECTRO	1.0UF	50WV
C67 ,68			CE04KW1V4R7M	ELECTRO	4.7UF	35WV
C69 -74			CE04KW1H010M	ELECTRO	1.0UF	50WV
C75 ,76			CE04KW1H2R2M	ELECTRO	2.2UF	50WV
C77 ,78			CE04KW1A101M	ELECTRO	100UF	10WV
C101			CE04KW1H222M	ELECTRO	2200UF	50WV
C102			CK45FB1H102K	CERAMIC	1000PF	K

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C103			CE04KW1E470M	ELECTRO	47UF	25WV
C104			CE04KW1C470M	ELECTRO	47UF	16WV
C105			CE04KW1V470M	ELECTRO	47UF	35WV
C106			CE04KW0J471M	ELECTRO	470UF	6.3WV
C107			CK45FF1H103Z	CERAMIC	0.010UF	Z
C108			CE04KW1C470M	ELECTRO	47UF	16WV
C109			CE04KW1C101M	ELECTRO	100UF	16WV
C110			CE04KW1C100M	ELECTRO	10UF	16WV
C111			CE04KW1A101M	ELECTRO	100UF	10WV
C112,113			CK45FF1H103Z	CERAMIC	0.010UF	Z
C114			CE04KW1C101M	ELECTRO	100UF	16WV
C115			CE04KW1H100M	ELECTRO	10UF	50WV
C116			CE04KW1H470M	ELECTRO	47UF	50WV
C117			CE04DW2A330M	ELECTRO	33UF	100WV
C118			CE04KW2A470M	ELECTRO	47UF	100WV
C119,120			CE04KW1V470M	ELECTRO	47UF	35WV
C121			CK45FF1H103Z	CERAMIC	0.010UF	Z
C122			CE04KW1H3R3M	ELECTRO	3.3UF	50WV
C123			CE04KW1A101M	ELECTRO	100UF	10WV
C124			CK45FB1H102K	CERAMIC	1000PF	K
C125			CK45FF1H103Z	CERAMIC	0.010UF	Z
C126			CE04KW1H010M	ELECTRO	1.0UF	50WV
C127			CE04KW1V4R7M	ELECTRO	4.7UF	35WV
C128			CE04KW1H010M	ELECTRO	1.0UF	50WV
C129,130			CK45FB1H102K	CERAMIC	1000PF	K
C131			CK45FF1H103Z	CERAMIC	0.010UF	Z
C132			CE04KW1C220M	ELECTRO	22UF	16WV
C133			CE04KW1V4R7M	ELECTRO	4.7UF	35WV
C134			C90-1588-05	ELECTRO	4700UF	50WV
C135			CK45FF1H103Z	CERAMIC	0.010UF	Z
C136			CE04HW1HR47M	NP-ELEC	0.47UF	50WV
C137			CK45FB1H102K	CERAMIC	1000PF	K
C138			CE04HW1H0R1M	NP-ELEC	0.1UF	50WV
C139			C91-0769-05	CERAMIC	0.010UF	K
C140			CE04KW1C100M	ELECTRO	10UF	16WV
C141			C91-0769-05	CERAMIC	0.010UF	K
C142			CK45FF1H103Z	CERAMIC	0.010UF	Z
C143,144			CC45FSL1H221J	CERAMIC	220PF	J
C145			CK45FF1H103Z	CERAMIC	0.010UF	Z
C146-148			CQ93FMG1H392J	MYLAR	3900PF	J
C149			CE04KW1C101M	ELECTRO	100UF	16WV
C150			CE04KW1H2R2M	ELECTRO	2.2UF	50WV
C151			CE04KW1H010M	ELECTRO	1.0UF	50WV
C152			CQ93HP2A103J	MYLAR	0.010UF	J
C153			CE04KW1C100M	ELECTRO	10UF	16WV
C154			CE04KW1C101M	ELECTRO	100UF	16WV
C155			CE04KW1C221M	ELECTRO	220UF	16WV
C156-162			CE04KW1C100M	ELECTRO	10UF	16WV
C163			C91-0769-05	CERAMIC	0.010UF	K
C164			CE04KW1H100M	ELECTRO	10UF	50WV
C165			CK45FF1H103Z	CERAMIC	0.010UF	Z
△ C166-168			CE04KW1H010M	ELECTRO	1.0UF	50WV
C169			C91-1488-05	MF	6800PF	250VAC
C170			CE04KW1E470M	ELECTRO	47UF	25WV
C171-173			C91-0737-05	CERAMIC	47PF	J

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PARTS LIST

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C174			C91-0769-05	CERAMIC 0.010UF K		
CN1			E40-4632-05	PIN ASSY		
CN2			E40-4902-05	FLAT CABLE CONNECTOR		
CN3			E40-4922-05	FLAT CABLE CONNECTOR		
CN4			E40-4960-05	FLAT CABLE CONNECTOR		
CN5			E40-9844-05	PIN ASSY		
CN6			E40-9827-05	SOCKET FOR PIN ASSY		
CN7			E40-3249-05	PIN ASSY		
CN8			E40-3263-05	PIN ASSY		
CN9			E40-9842-05	PIN ASSY		
CN10			E40-9825-05	SOCKET FOR PIN ASSY		
J1			E63-0046-15	PHONO JACK		
J6			E08-0311-05	RECTANGULAR RECEPTACLE		
-			J19-3604-03	HOLDER		
E3 -6			J11-0098-05	WIRE CLAMPER		
L1 ,2			L79-1210-05	LC FILTER		
L3 ,4			L40-1035-29	SMALL FIXED INDUCTOR(10MH, J)		
L5			L32-0591-05	BIAS OSCILLATING COIL		
X1			L78-0290-05	RESONATOR (8MHZ)		
CP1			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
CP2			R90-0854-05	MULTI-COMP 47KX3 J 1/6W		
CP3			R90-0819-05	MULTI-COMP 47KX6 J 1/6W		
CP4			R90-0487-05	MULTI-COMP 47KX4 J 1/6W		
△ R102			RD14NB2E4R7J	RD 4.7 J 1/4W		
R104			RD14NB2E101J	RD 100 J 1/4W		
R109			RD14NB2E222J	RD 2.2K J 1/4W		
R116			RS14KB3A332J	FL-PROOF RS 3.3K J 1W		
R153			RD14NB2E100J	RD 10 J 1/4W		
△ R158			RD14NB2E2R2J	RD 2.2 J 1/4W		
R185			RD14NB2E101J	RD 100 J 1/4W		
△ R204			RD14NB2E4R7J	RD 4.7 J 1/4W		
△ R210-213			RS14KB3D222J	FL-PROOF RS 2.2K J 2W		
VR1 ,2			R12-3127-05	TRIMMING POT.(10K)		
VR3 ,4			R12-5066-05	TRIMMING POT.		
VR5 ,6			R12-3133-05	TRIMMING POT.(47K)		
VR7			R12-3685-05	TRIMMING POT.(10K)		
K1			S76-0018-05	MAGNETIC RELAY		
S1 ,2			S70-0031-05	TACT SWITCH		
S3			S70-0802-05	TACT SWITCH		
S4 -19			S70-0031-05	TACT SWITCH		
△ S20			S62-0001-05	SLIDE SWITCH		
△ D1 -4			S5688B	DIODE		
△ D1 -4			1SR139-100	DIODE		
D5			HZS10N(B)	ZENER DIODE		
D5			RD10ES(B)	ZENER DIODE		
D6			HZS13N(B2)	ZENER DIODE		
D6			RD13ES(B2)	ZENER DIODE		
D7			HZS6.8N(B2)	ZENER DIODE		
D7			RD6.8ES(B2)	ZENER DIODE		
D8			HZS2.7N(B2)	ZENER DIODE		
D8			RD2.7ES(B2)	ZENER DIODE		
D9			HZS5.6N(B2)	ZENER DIODE		

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D9			RD5.6ES(B2)	ZENER DIODE		
D10			HZS6.8N(B2)	ZENER DIODE		
D10			RD6.8ES(B2)	ZENER DIODE		
D11			HZS16N(B2)	ZENER DIODE		
D11			RD16ES(B2)	ZENER DIODE		
D12			HZS11N(B2)	ZENER DIODE		
D12			RD11ES(B2)	ZENER DIODE		
D13			HZS3.9N(B2)	ZENER DIODE		
D13			RD3.9ES(B2)	ZENER DIODE		
D14			HZS8.2N(B2)	ZENER DIODE		
△ D14			RD8.2ES(B2)	ZENER DIODE		
△ D15 -20			HSS104A	DIODE		
△ D15 -20			1SS131	DIODE		
D21 -46			HSS104	DIODE		
D21 -46			1SS133	DIODE		
D50 -64			HSS104	DIODE		
D50 -64			1SS133	DIODE		
△ D65 -68			S5688B	DIODE		
△ D65 -68			1SR139-100	DIODE		
D69 -72			HSS104	DIODE		
D69 -72			1SS133	DIODE		
D73			HZS11N(B2)	ZENER DIODE		
D73			RD11ES(B2)	ZENER DIODE		
D74 ,75			HSS104A	DIODE		
D74 ,75			1SS131	DIODE		
ED1			CM1508C	INDICATOR TUBE		
IC1			HD6433723E10F	MI-COM IC		
IC2			HA12170NT	ANALOGUE IC		
IC3			CXA1198AP	ANALOGUE IC		
IC4			TC9213P	MOS-IC		
IC5			BA6209	ANALOGUE IC		
IC6			BA6138	ANALOGUE IC		
IC7			XL24C01AP	MEMORY IC		
IC8			BA10393	ANALOGUE IC		
IC9			TA8125S	IC(2CH PRE AMP)		
IC10,11			NJM4565L-D	ANALOGUE IC		
IC12			PST993D-T	ANALOGUE IC		
Q1			2SC2458(Y,GR)	TRANSISTOR		
Q1			2SC3311A(Q,R)	TRANSISTOR		
Q2			2SD2012	TRANSISTOR		
△ Q2			2SD2061(E,F)	TRANSISTOR		
△ Q3			2SC3940A(R,S)	TRANSISTOR		
△ Q3			2SD863(E,F)	TRANSISTOR		
△ Q4			2SA1535A	TRANSISTOR		
△ Q5 ,6			2SC3246	TRANSISTOR		
Q7			2SD2012	TRANSISTOR		
Q7			2SD2061(E,F)	TRANSISTOR		
Q8			2SC3940A(R,S)	TRANSISTOR		
Q8			2SD863(E,F)	TRANSISTOR		
Q9 ,10			2SC2458(Y,GR)	TRANSISTOR		
Q9 ,10			2SC3311A(Q,R)	TRANSISTOR		
Q11 ,12			DTA124ESA	DIGITAL TRANSISTOR		
Q11 ,12			UN4112	DIGITAL TRANSISTOR		
Q13 ,14			2SC2458(Y,GR)	TRANSISTOR		
Q13 ,14			2SC3311A(Q,R)	TRANSISTOR		

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Q15 -25			DTC124ESA	DIGITAL TRANSISTOR		
Q15 -25			UN4212	DIGITAL TRANSISTOR		
Q26 -28			2SC2458(Y,GR)	TRANSISTOR		
Q26 -28			2SC3311A(Q,R)	TRANSISTOR		
Q29			DTC124ESA	DIGITAL TRANSISTOR		
Q29			UN4212	DIGITAL TRANSISTOR		
Q30			2SC2458(Y,GR)	TRANSISTOR		
Q30			2SC3311A(Q,R)	TRANSISTOR		
Q31 -34			2SC2878(B)	TRANSISTOR		
Q35 ,36			2SC2458(Y,GR)	TRANSISTOR		
Q35 ,36			2SC3311A(Q,R)	TRANSISTOR		
Q37 ,38			2SC2878(B)	TRANSISTOR		
Q39			2SC2458(Y,GR)	TRANSISTOR		
Q39			2SC3311A(Q,R)	TRANSISTOR		
Q40 -46			DTC124ESA	DIGITAL TRANSISTOR		
Q40 -46			UN4212	DIGITAL TRANSISTOR		
Q47			2SC2003(L,K)	TRANSISTOR		
MECHANISM ASSY (D40-1476-05)						
401	2B		A10-3174-08	HEAD CHASSIS		
402	2B		A10-3307-08	CHASSIS OS ASSY (H)		
405	3B		D01-0175-08	FLYWHEEL ASSY (R)		
406	3B		D01-0176-08	FLYWHEEL ASSY (L)		
407	3A		D10-3470-08	TRIGGER ARM		
408	2A		D10-3471-18	HEAD CHANGE ARM		
409	2A		D10-3478-08	SELECT LEVER		
410	3A		D10-3479-08	SHIFT LEVER		
411	2A		D10-3480-08	C/R LEVER		
415	1B		D10-3674-08	CLAMPER GUIDE		
416	2B		D13-0981-08	ROTATION GEAR		
417	3B		D13-1616-08	REW GEAR		
418	2A		D13-1617-08	REEL GEAR		
419	3B		D13-1618-08	IDLER GEAR		
420	1A		D13-1621-08	RETURN GEAR		
421	3B		D13-1622-18	CAM GEAR		
422	2A		D13-1776-08	GEAR (A)		
423	2A		D13-1777-08	GEAR (B)		
424	2B		D13-1778-08	PULLEY GEAR		
425	2A		D14-0383-08	PINCH ARM ASSY (R)		
426	3B		D14-0384-08	PINCH ARM ASSY (L)		
427	3B		D15-0369-08	IDLER PULLEY		
428	3B		D16-0708-08	DRIVE BELT (H)		
429	3B		D16-0709-08	CLUTCH BELT (H)		
431	2A		D19-0270-18	REEL CAP (A)		
432	3A		D19-0287-08	CLUTCH ARM ASSY		
433	1B		D21-1848-08	CLAMPER SHAFT		
434	1B		D32-0351-08	TRAY GUIDE		
BL	2B		D16-0710-08	BELT (LD)		
438	2B		E31-1636-08	EARTH WIRE (H)		
439	1B		E35-1189-08	5P HEAD WIRE ASSY (C)		
440	3B		E35-1632-08	MOTOR WIRE (H)		
441	2B		E35-1633-08	5P WIRE ASSY		
442	2B		E35-1634-08	3P FLAT WIRE		
443	3A		E35-1656-08	FFC (15P)		

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444	2B		E40-3263-05	CONNECTOR (5P)		
445	3A		E40-4195-05	CONNECTOR (15P)		
448	2A		G01-3709-08	B.T SPRING		
449	3B		G01-3710-08	SHIFT LEVER SP		
450	3A		G01-3711-08	TRIGGER ARM SP		
451	2A		G01-3712-08	HEAD CHANGE ARM SP		
452	2B		G01-3714-08	C/R LEVER SP		
453	2A		G01-3715-08	SELECT LEVER SP		
454	2A		G01-3716-08	SHIFT SP		
455	1A		G01-3718-08	RETURN SPR		
456	1A		G01-3719-08	FWD SPR		
457	2B		G01-3720-08	HEAD RETURN PLATE SP		
458	2A		G01-3721-08	BRAKE SP (R)		
459	3B		G01-3722-08	BRAKE SP (L)		
460	3B		G01-3724-08	CLUTCH ARM SPRING (B)		
461	3B		G01-3725-08	CLUTCH SP		
462	2B		G01-3739-08	HEAD CHASSIS SP		
463	1A		G01-3790-08	EARTH SPRING (B)		
464	1B		G01-3947-08	CLAMPER SP		
465	1B		G01-3948-08	CLAMPER GUIDE SP		
467	1B		G02-1068-08	AZIMUTH SPR (B)		
468	2A		G02-1607-08	PACK SPRING (N)		
469	1B		G02-1608-08	CASSETTE SPRING		
470	2A		G11-2100-08	HEAD WIRE CLAMP		
471	3B		G11-2205-08	TUBE		
472	2A		G16-0791-08	REFLECT SEAL		
475	1B		J11-0819-08	CLAMPER (A)		
476	1B		J11-0820-08	CLAMPER (B)		
477	2B		J21-6135-08	HEAD RETURN PLATE		
478	2A		J21-6184-08	HEAD PLATE ASSY		
479	3A		J26-0046-08	MECHA PCB (C)		
480	2B		J26-0047-08	LD PCB		
481	3A		J31-0875-08	COLLAR (H)		
482	1A		J39-0188-08	HEAD BASE		
483	2B		J39-0199-08	SEAL (B)		
484	2A		J42-0183-08	REEL BUSH		
485	3B		J61-0307-05	SK BINDER SKB-80		
486	2A		J90-0832-08	SHIFT SP GUIDE		
489	1B		J99-0589-08	TRAY ASSY		
494	1B		N09-1497-08	TAP TITE SCREW 2X5		
496	1B		N09-2769-05	SELF TAPPING SCREW 2.6X8		
497	3A		N09-2871-08	TAPPING SCREW 2X6		
498	2A		N09-2890-08	HEAD SCREW (RVS)		
499	2B		N09-2901-08	BIND TAP TITE SCREW 2X4		
501	1B		N09-3112-08	AZIMUTH SCREW		
502	1B		N09-3325-08	TRUSS TAPPING SC 2.6X8		
503	2B,3B		N19-1288-08	POLY WS 1.65X5X0.5CUT		
504	2A		N19-1316-08	POLY WS 1.8X6X0.5CUT		
505	2A		N19-1354-08	NYLON WS 2.19X5.5X0.5		
506	2B		N19-1355-08	NYLON WS 1.9X5X0.5		
507	3B		N19-1384-08	POLY WS 2.1X5X0.25T		
508	3B		N19-1385-08	POLY WS 2.3X5X0.25T		
509	3A		N19-1386-08	POLY WS 1.65X5X0.13T		
510	2A		N19-1387-08	TEFLON WS 4.1X5.5X0.25T		

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PARTS LIST

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511	2A		N19-1388-08	POLY WS 1.57X4X0.5SCUT		
512	1B		N19-1396-08	LUMILER WS 3.5X8X0.5SCUT		
513	1B		N19-1430-08	LUMILER WS 4.5X7X0.188		
514	3B		N35-2604-46	BINDING SCREW 2.6X4		
515	1B		N86-2003-46	BIND TAP TITE SCREW 2X3		
516	2B		N89-2625-45	TAPPING SCREW B TITE 2.6X25		
R1	3A		RD14BB2C152J	RD 1.5K J 1/6W		
519	1B		S33-2061-05	SWITCH (SCCF21)		
520	3A		S74-0042-08	PLAY SWITCH		
521	3A		S74-0074-08	REC SWITCH		
527	3A		T94-0239-08	SOLENOID ASSY (H)		
528	3A		T95-0125-08	PHOTO INTERRUPTER SG107LF		
MM	2B		T42-0861-08	MOTOR ASSY (LD)		
MM	3B		T42-0860-08	MOTOR ASSY (H)		
RPEH	2A		T39-0027-08	ROTATION HEAD (RP)		

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SPECIFICATIONS

Track4-track, 2-channel stereo

Recording systemAC bias system
 (Frequency : 105 kHz)

Heads

Playback/recording head1

Erasing head1

Motors1

Wow and flutter0.09% (W.RMS)

Fast winding timeApprox. 110 seconds(C-60 tape)

Frequency response

TYPE I tape50 Hz to 19,000 Hz, ±3 dB

TYPE II tape50 Hz to 19,000 Hz, ±3 dB

TYPE IV tape50 Hz to 20,000 Hz, ±3 dB

Signal to noise ratio

Dolby NR OFF57 dB (ICE, 250 nWb/m, Metal tape)

Dolby NR ON58 dB

Dolby B NR ON67 dB

Dolby C NR ON74 dB

[General]

Power consumption20 W

DimensionsW : 270 mm (10-1/4")
 H : 104 mm (4-1/8")
 D : 320 mm (12-5/8")

Weight (net)3.1 kg (6.8 lb)

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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