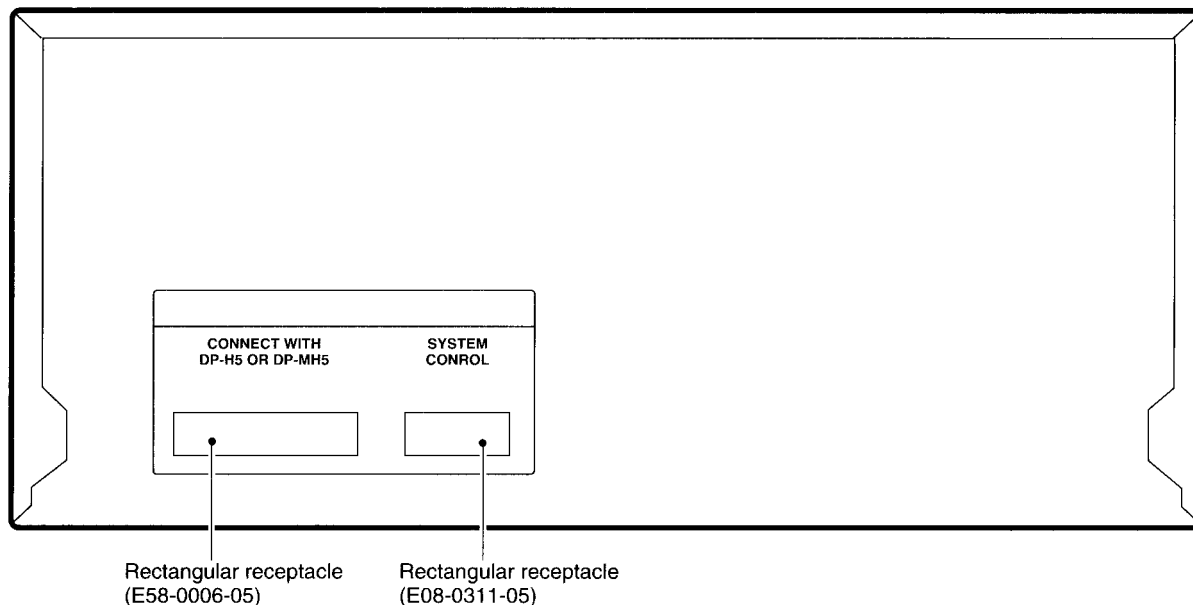
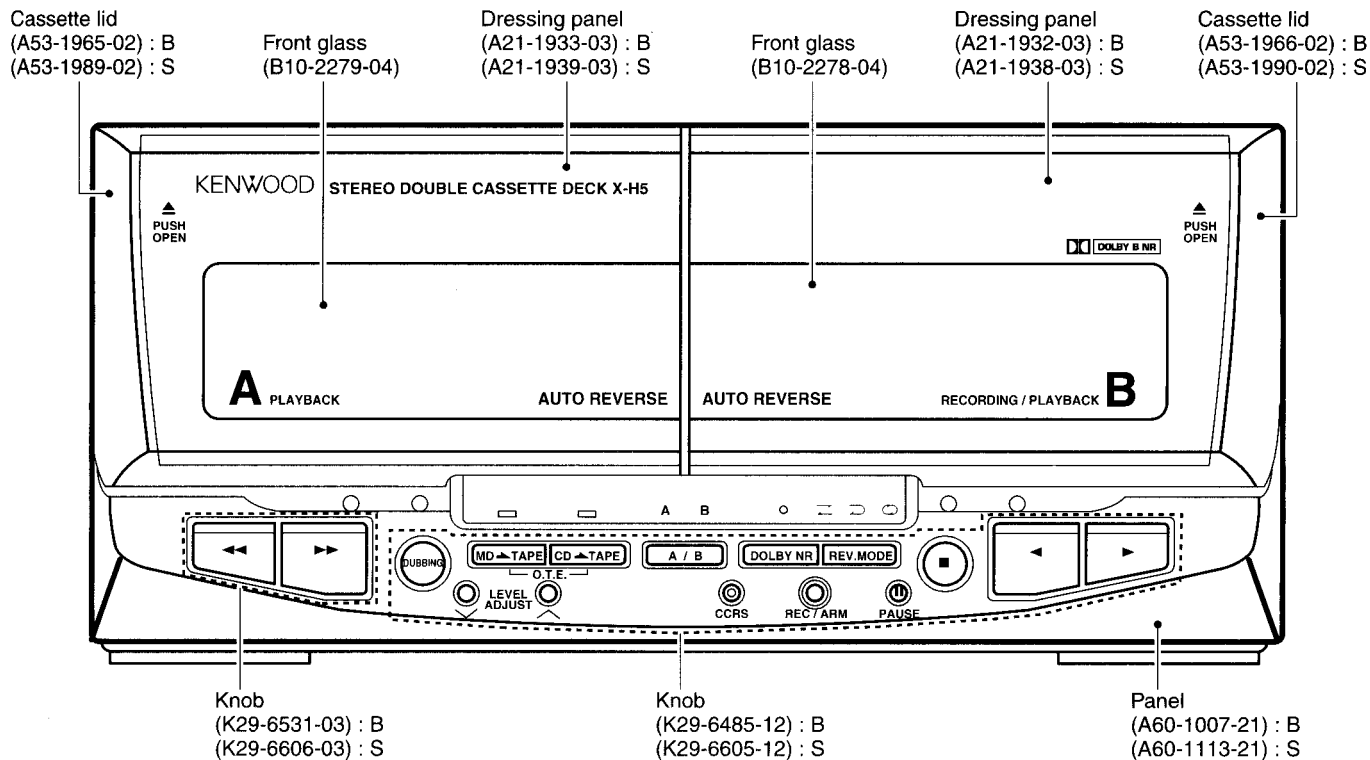


# X-H5

## SERVICE MANUAL

(XD-6000/6500/8000/8500 series)

© 1997-5/B51-5304-00 (K/K) 2588



**B : Black, S : Silver**

### PRECAUTIONS FOR REPAIR

- Since power of this equipment is supplied by A-H5 and C-H series of the stereo system, these equipment and the jig (PS-94UA) are needed when doing the repairs.
- ▲ Refer to X-F7 service manual (B51-5068-00), if require the "synchro test code" in detail.



# X-H5

## CONTENTS / ACCESSORIES

### Contents


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CIRCUIT DESCRIPTION.....	3	EXPLODED VIEW.....	15
ADJUSTMENT.....	7	PARTS LIST.....	17
PC BOARD.....	9	SPECIFICATIONS.....	Back cover

### System configuration

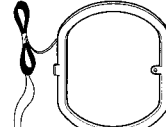
SYSTEM	TUNER / EQUALIZER	AMPLIFIER	CASSETTE DECK	CD PLAYER	SPEAKER	MD RECORDER
XD-6060	C-H51	A-H5	X-H5	DP-H5	LS-H6	-
XD-6500	C-H5	A-H5	X-H5	DP-MH5	LS-H5	-
XD-6560	C-H51	A-H5	X-H5	DP-MH5	LS-H6	-
XD-8000	C-H6	A-H5	X-H5	DP-H5	LS-H6	-
XD-8550	C-H6	A-H5	X-H5	DP-MH5	LS-H6	-
XD-8560	C-H61	A-H5	X-H5	DP-MH5	LS-H6	-
XD-6000/W	C-H5/W	A-H5	X-H5	DP-H5	LS-H5	-
XD-6050/W	C-H5/W	A-H5	X-H5	DP-H5	LS-H5	-
XD-6550/W	C-H5/W	A-H5	X-H5	DP-MH5	LS-H5	-
XD-8050/W	C-H6/W	A-H5	X-H5	DP-H5	LS-H6	-
XD-8500/W	C-H6	A-H5	X-H5	DP-MH5	LS-H6	-

### Accessories

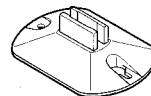
FM indoor antenna .....(1)  
(T90-0801-05) K.M type  
(T90-0809-05) T.E type



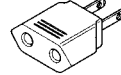
AM loop antenna(1) (T90-0820-05)



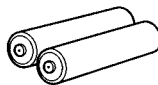
Loop antenna stand (1)  
(J19-3645-05)



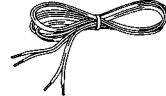
AC plug adaptor.....(2)  
(E03-0115-05)




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



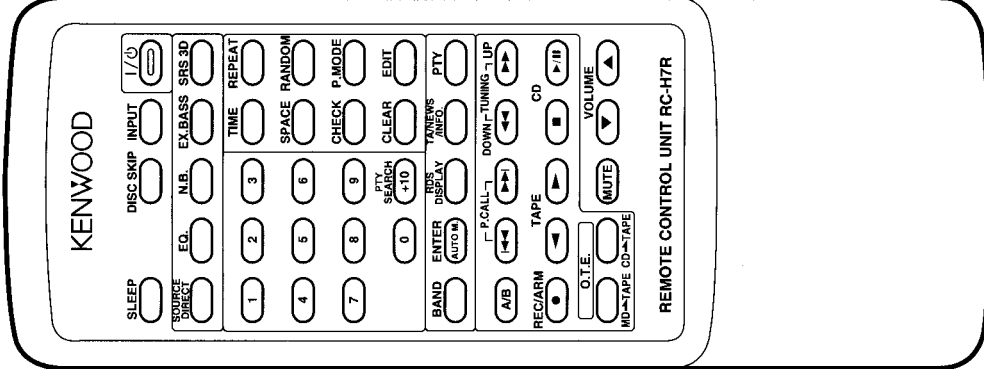
Speaker cords.....(2)  
(E30-5156-08)



Parallel cord.....(1)  
(E30-2738-05)



Remote control unit .....(1)  
(A70-1110-05) K.M  
(A70-1121-05) T.E

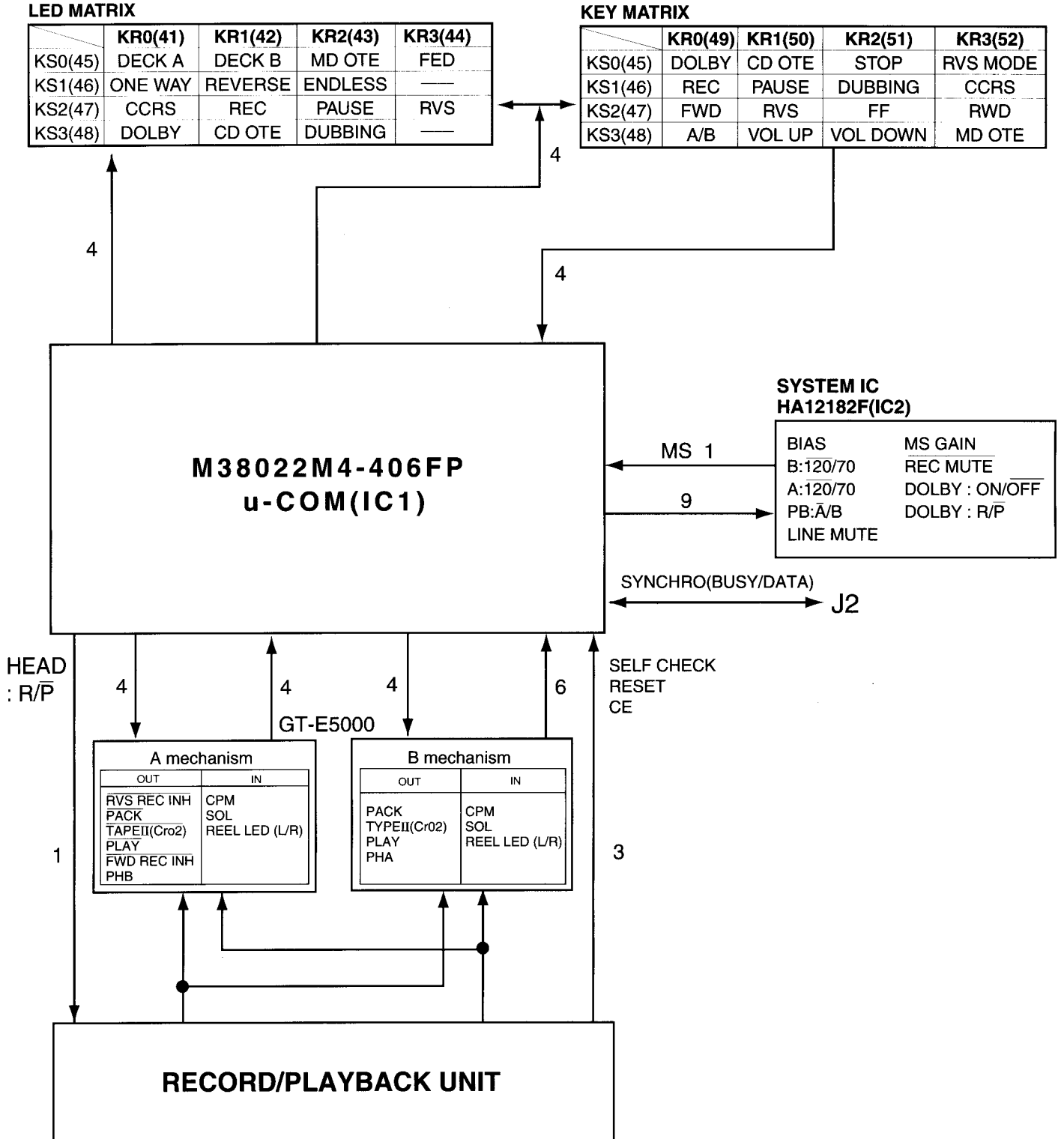


Battery cover (A09-0380-08)

## CIRCUIT DESCRIPTION

### 1. Microprocessor

#### 1-1 Microprocessor periphery block diagram



## CIRCUIT DESCRIPTION

### 1-2 Pin description

Pin No.	Pin name	I/O	Description	Active
1	BIAS	O	Bias ON/OFF control	H : ON
2	B : 120/70	O	B mechanism P/B E.Q control	H : 70us L : 120 us
3	A : 120/70	O	A mechanism P/B E.Q control	H : 70us L : 120 us
4	PB : A/B	O	A/B Play back amp changeover	H : B L : A
5	LINE MUTE	O	Line mute control.	H : ON
6	MS GAIN	O	DPSS(search) sensitivity changeover	
7,8	NC	O	Unused	
9	S DATA	I/O	Serial busy input/output.	
10	S BUSY	I/O	Serial busy input/output	
11~17	NC	O	Unused	
18	CNVss	-	GND	
19	RESET	I	Reset signal INPUT.	L : Reset
20	CE	I	AC off detector signal input	L : AC OFF
21	NC	-	Unused	
22	Xin	I	Clock oscillation element connecting terminals.	
23	Xout	O	Clock oscillation element connecting terminals.	
24	Vss	-	GND	
25	B : RYS REC INH	I	B mechanism RVS recording inhibit detection	L : INHIBITED
26	CSP A B : PACK	I	B mechanism half detection	L : Half detected
27	B : TYPE II (CR02)	I	B mechanism chrome tape detection.	H : TYPE II (CY02)
28	B : PLAY	I	B mechanism head position detection	L : ON
29	B : FWD REC INH	I	B mechanism FWD recording inhibit detection.	L : INHIBITED
30	A : PACK	I	A mechanism half detection	L : Half detected
31	A : TYPE II (CY02)	I	A mechanism chrome tape detection.	H : TYPE II (CY02)
32	A : PLAY	I	A mechanism head position detection.	L : ON
33	A : CPM	O	A capstan motor control.	H : ON
34	B : CPM	O	B capstan motor control.	H : ON
35	A : SOL	O	A solenoid control.	H : ON
36	SOL B	O	B solenoid control.	H : ON
37	A : L REL LED	O	A reel LED control (Left)	H : LIGHT ON.
38	A : R REL LED	O	A reel LED control(Right)	H : LIGHT ON.
39	B : L REL LED	O	B reel LED control(Left)	
40	B : R REL LED	O	B reel LED control(Right)	
41~44	LED 0~33	O	LED control output(LED0~3)	H : LIGHT ON
45~48	KS0~KS3	O	Key scan signal output. KS0~KS3	L : ON
49~52	KS0~KS3	I	Key return signal input. KS0~KS3	
53	HEAD : R/P	O	B mechanism REC/PLAY changeover	H : REC L : PLAY
54	DOLBY : R/P	O	Dolby REC/Dolby playback change over	H : REC L : PLAY
55	DOLBY : ON/OFF	O	Dolby B ON/OFF changeover	H : ON
56	REC MUTE	O	REC mute control.	L : ON
57	Vcc	-	Positive power supply terminals.	
58	VREF	-	Reference voltage input(Vdd)	
59	AVss	-	GND	
60	PHB	I	B mechanism turn detection input.	
61	PHA	I	A mechanism turn detection input.	
62	MS	I	Dolby IC A/D input	H : DETECT BETWEEN TRACKS L : DETECT PRESENCE OF TRACKS
63	SELF CHK	I	Circuit shorted detector signal input	IN CASE OF NG: MORE THAN 3.5V OR LESS THAN 2.5V
64	NC	-	Unused	

## CIRCUIT DESCRIPTION

### 2. Initial status and backup data

#### 2-1 Initial status

ITEM	STATE
DOLBY	OFF
B DECK R/P	PLAY
DECK A/B	B
PLAY EQ A/B	B
120/70	120
REC MUTE	ON
LINE MUTE	ON
BIAS	OFF
SOL	OFF
CPM	ON(1sec) → OFF
DIRECTION	FOWARD(▶)
REVERSE MODE	REVERSE MODE(↶)

#### 2-2. Backup data

- A deck direction
- B deck direction
- Reverse mode
- Dolby ON/OFF

### 3. Test mode

#### 3-1. Setting of the test mode.

- While pressing the FWD PLAY(▶) Key PLUG the AC cord in AC wall outlet.

#### 3-2. Cancelation of the test mode

- Press PAUSE(⏸) Key or turn the AC OFF.

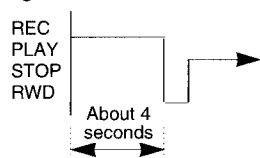
#### 3-3. Contents

##### (1) LED all light on

After turned the power ON the LEDs light on for 1.5 sec.

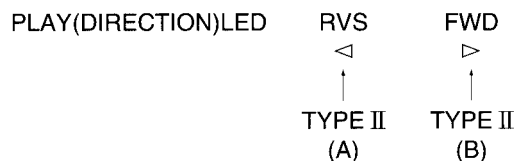
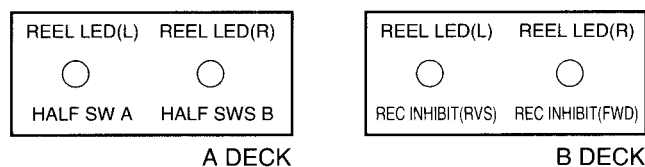
##### (2) 4-second recording

When you press the REC key, the unit records for 4 seconds, then automatically rewinds and plays back those 4 seconds. During, recording if you press the REC key again, 4 seconds are recorded from that time.



##### (3) Mechanism half switch indication

The mechanism switch status is indicated using the following LEDs.



- When a mechanism switch is off after all LEDs were lighted, the above LEDs turn off.
- When a mechanism switch is on after all LEDs were lighted, the above LEDs are lighted.
- If either mechanism works, the LEDs become usual condition.
- If either mechanism stops, the LEDs become as mentioned above.

##### (4)The function of DPSS

- Press PLAY key twice. At the time, it begins to detect the first music. Then, if continuing for 20 seconds (the replay speed change) from the position where music was detected, the X-H5 begins to detect the interval of the music. If the music interval
- When the search is working, the LINE MUTE function doesn't work.
- If the first music is less than 20 seconds, the X-H5 cancels the function of the detection in the existence or non-existence of the music. Then, the X-H5 continues the function of the search (CUE/RVW).

## CIRCUIT DESCRIPTION

### 4. The table which showed the contents which control a mechanism switch

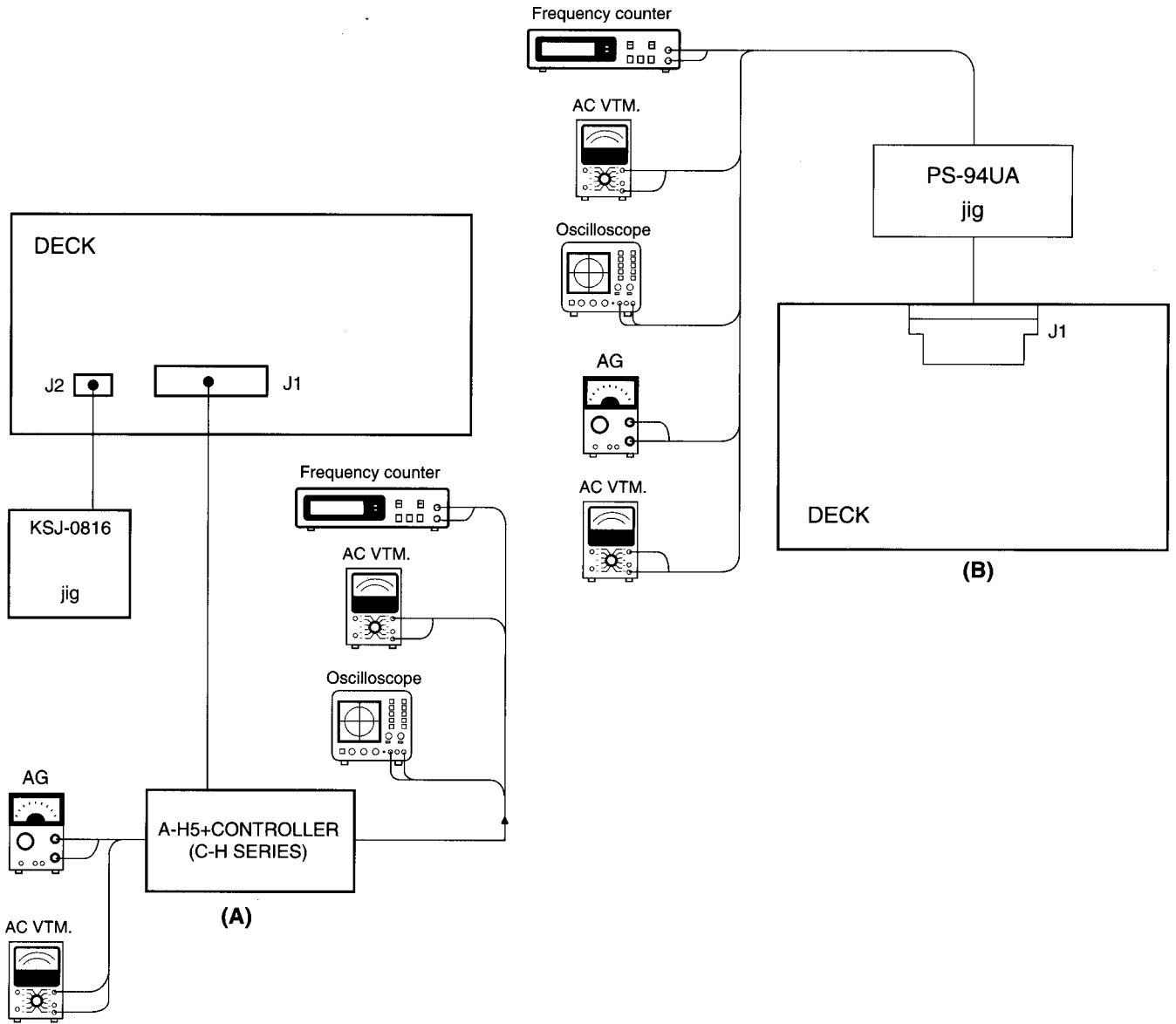
The switch which was shown below is the mechanism switch to detect each condition.

Mechanism switch	Function
Half detection ( A , B deck)	<ul style="list-style-type: none"> <li>• When there is a safety tab on the cassette tape, this function works.</li> <li>• When there is not a safety tab on the cassette tape, the function of the key at the deck and the function of dubbing key doesn't work.</li> <li>• As for deck B, the function of the CCRS key and the function of one touch edit key doesn't work</li> </ul>
FWD wrong recording prevention detection (Only B deck)	<ul style="list-style-type: none"> <li>• When the safety tab is on the FWD direction of cassette tape, this function works.</li> <li>• When the safety tab is not on the FWD direction of cassette tape, X-H5 doesn't record to the direction of FWD.</li> </ul>
RVS wrong recording prevention detection (Only B deck)	<ul style="list-style-type: none"> <li>• When the safety tab is on the RVS direction of cassette tape, this function works.</li> <li>• When the safety tab is not on the FWD direction of cassette tape, X-H5 doesn't record to the direction of RVS.</li> </ul>
TYPE2 (CrO2) tape detection( A , B deck)	<ul style="list-style-type: none"> <li>• If the cassette tape of TYPE2 (CrO2) is inserted in X-H5, the mechanism switch becomes OFF condition. At this time, the recording / replay equalizer becomes 70us.</li> </ul>
Head position detection( A , B deck)	<ul style="list-style-type: none"> <li>• When a head is rising this function works.</li> </ul>

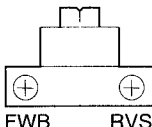
A switch turns on in LOW condition in the port of a microprocessor, because it is reversing logic in a circuit.

## ADJUSTMENT

### Connection diagram



## ADJUSTMENT

No.	Item	Input setting	Output setting	Deck setting	Adjustment points	Adjustment method	Fig.
<p>Unless otherwise specified, set the respective switches as follows :  <b>TAPE : NORMAL    DOLBY : OFF</b></p> <p><b>I. Cassette mechanism section (Recording/play head adjustment)</b></p>							
(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 damped with alcohol.	
(2)	Azimuth of the REC/PLAY head	SCC-1727 TCC-153 MTT-144 10 kHz, -10 dB	-	PLAY		Adjust the output to maximum and adjust the azimuth adjustment screw for the Lissajous waveform pattern of the oscilloscope to become close to a 45° straight line.	
<p><b>II. Printed circuit board adjustment</b></p>							
(1)	Tape speed (normal)	SCC-1727 TCC-110 MTT-111 3 kHz	(A)	PLAY	A DECK : VR 7 B DECK : VR 8	Adjust so that the frequency is 3 kHz at the tape center.	
(2)	Playback level	MTT-150 400 Hz	(A)	PLAY	A DECK : VR1 (L) VR2 (R) B DECK : VR3 (L) VR4 (R)	Output level : -1 dBs	
		MTT-256, SCC1727 315 Hz (160 mWb/m)				Output level : -4 dBs	
		MTT-256U, TCC-160 315 Hz (250 mWb/m)				Output level : 0 dBs	
(3)	Bias current	1 kHz -20 dBs 10 kHz -20 dBs	(A)	REC and PLAY	B DECK : (L) VR 5 (R) VR 6	[SYSTEM] ... A-H5+X-H5+C-H series Record 1 kHz and 10 kHz in alternation and adjust the variable resistors which control the bias current so that the same playback level is obtained.	
			(B)			[UNIT] ... X-H5 with PS-94UA Record 1 kHz and 10 kHz in alternation and adjust the variable resistors as follows. 1 kHz ... -20 dBs 10 kHz ... -18 dBs	

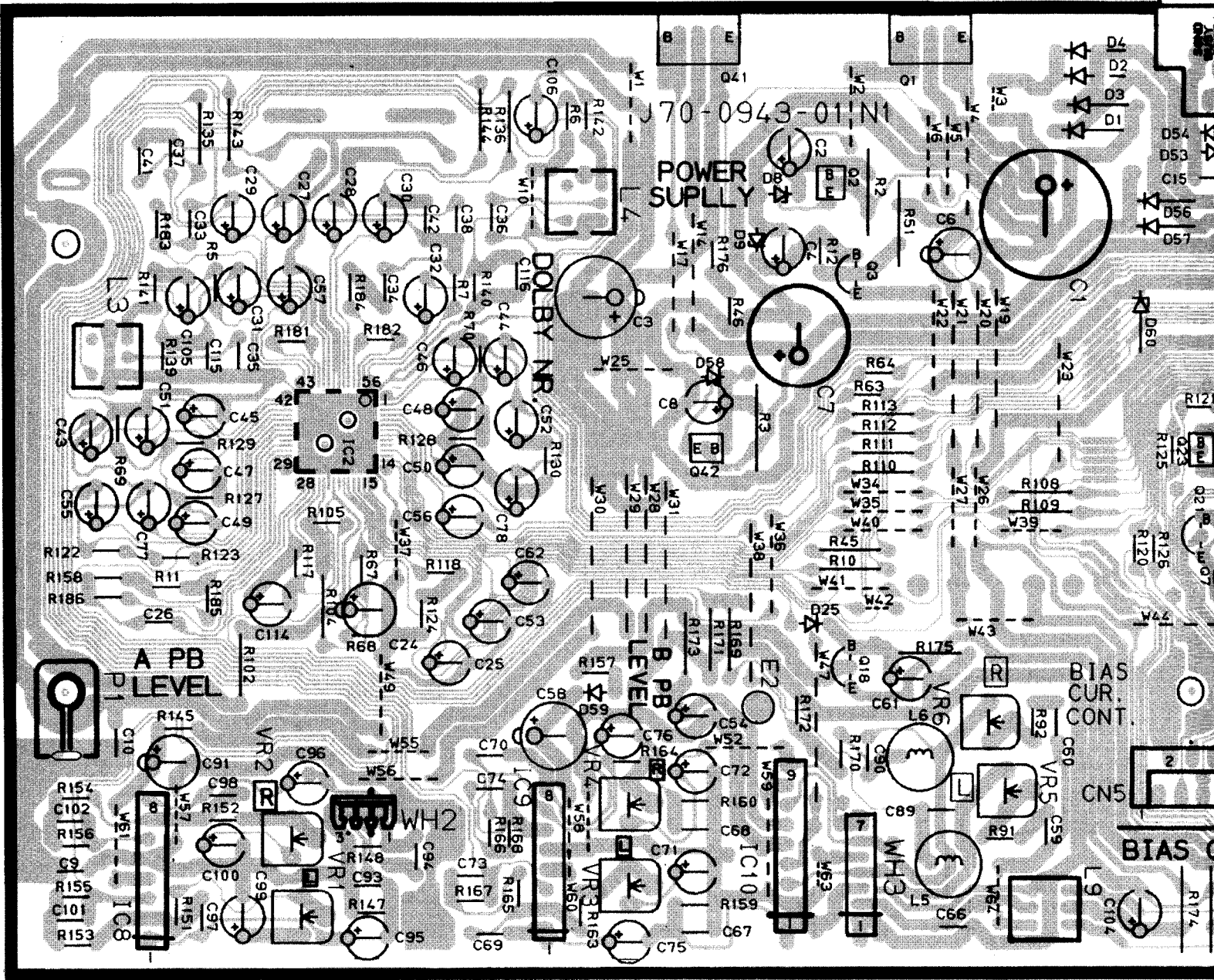


# BOARD(Component side view)

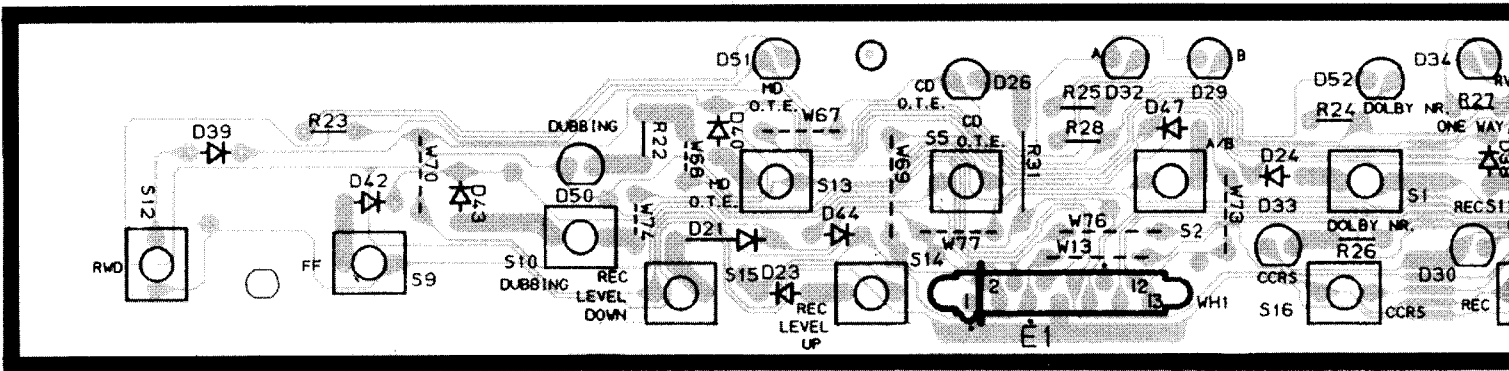
RECORD PLAYBACK UNIT (X28-2870-21): MIY  
(X28-2872-70): TEQ

SYS  
CONT

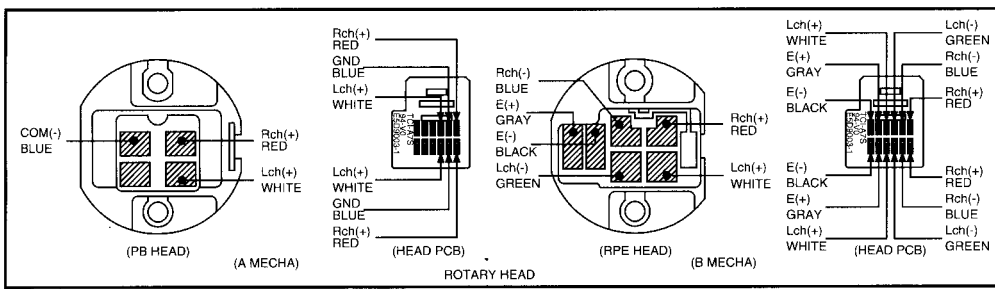
X28-287X-XX A/2



X28 B/2

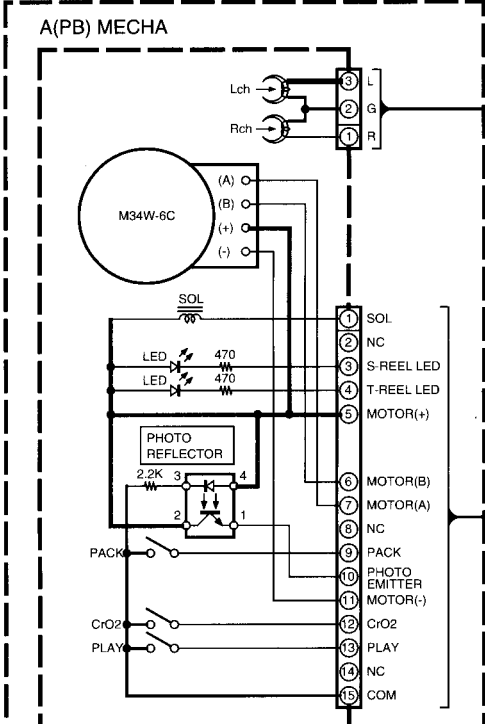




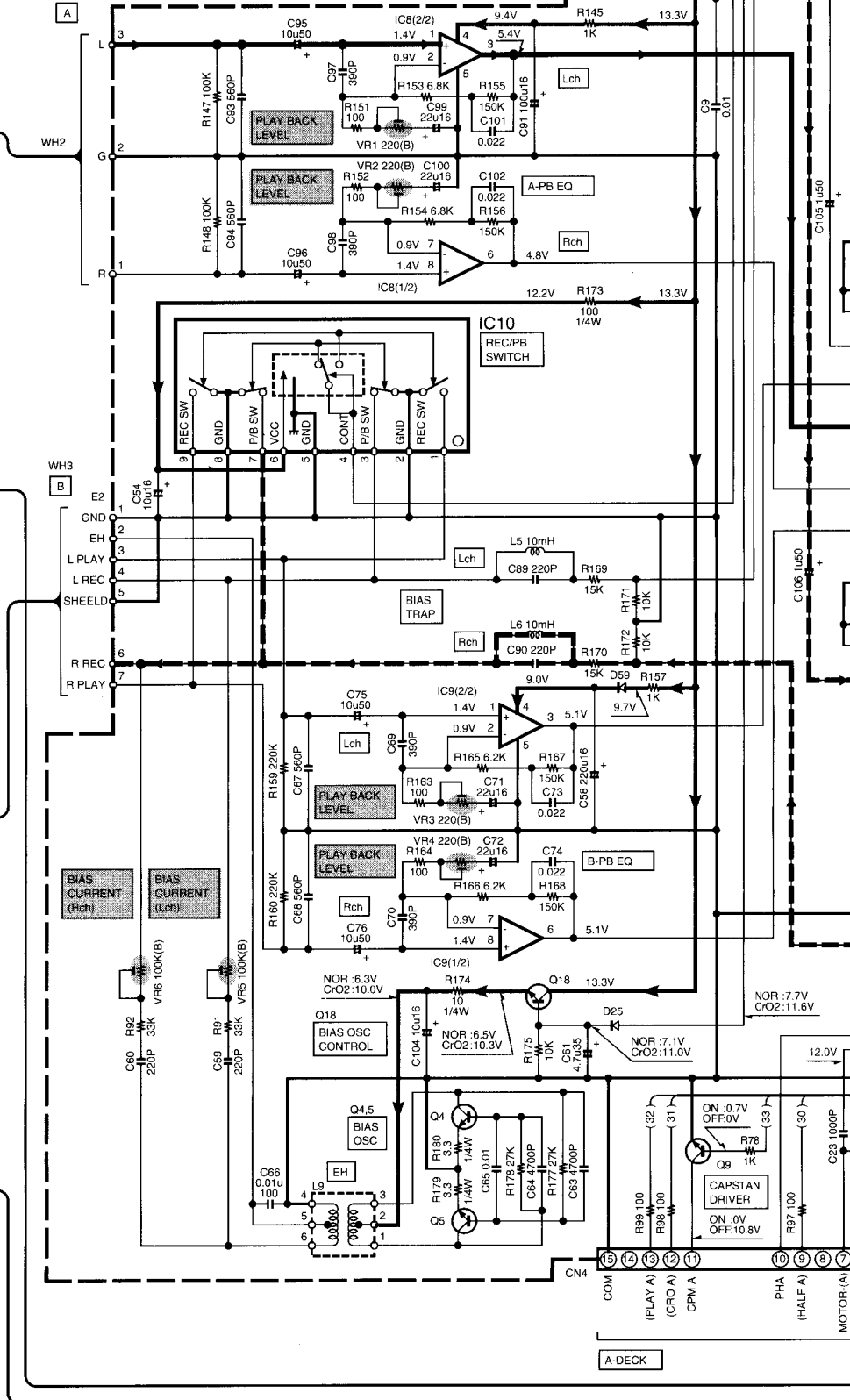
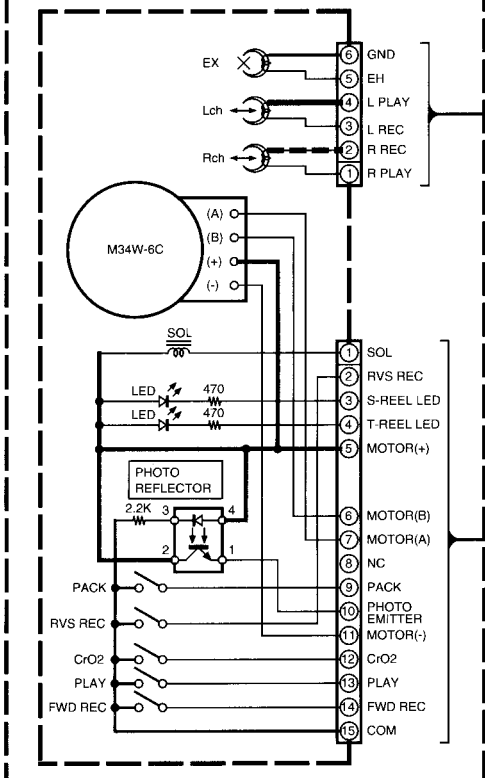


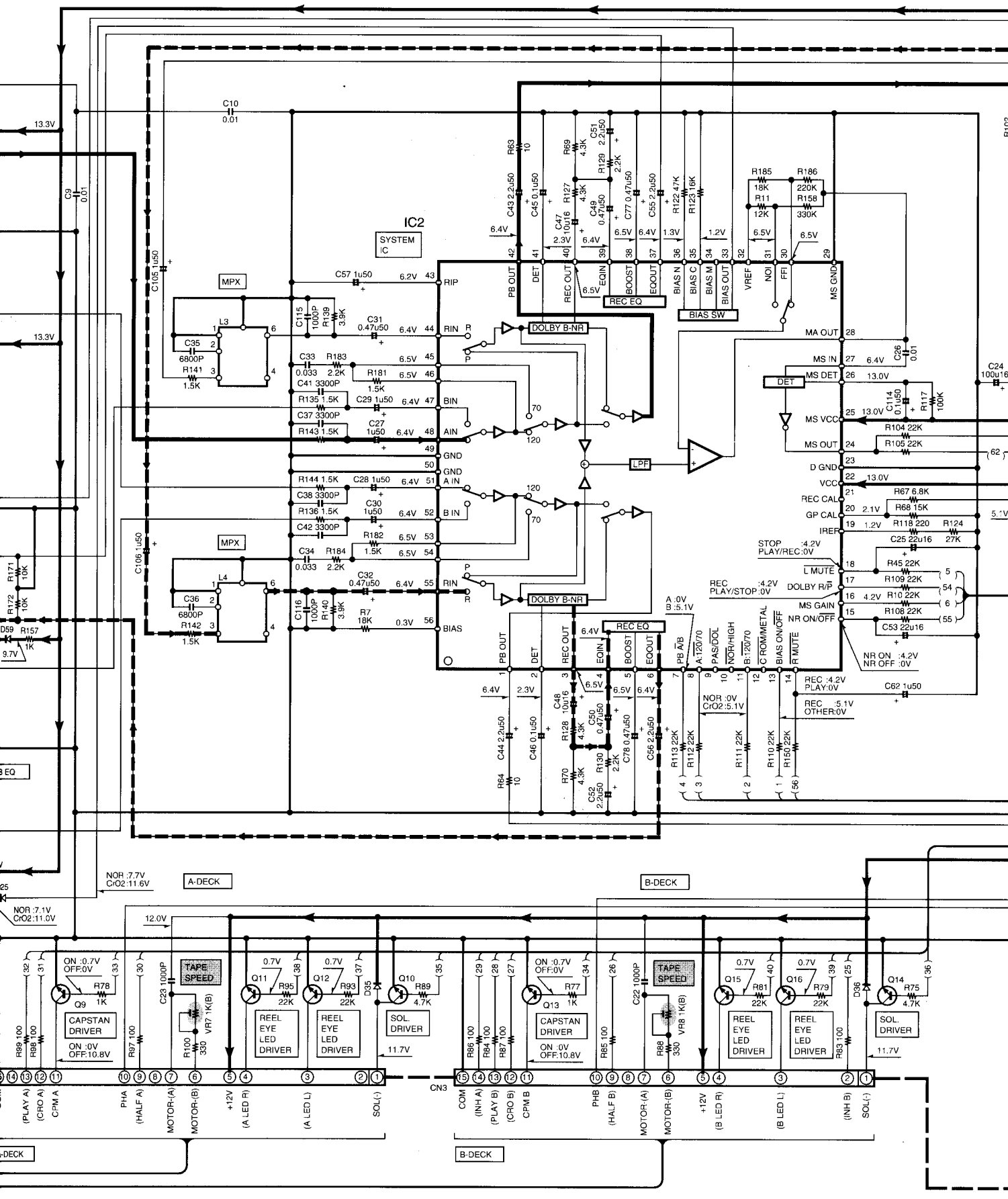
(X28-2872-70) (A/2)

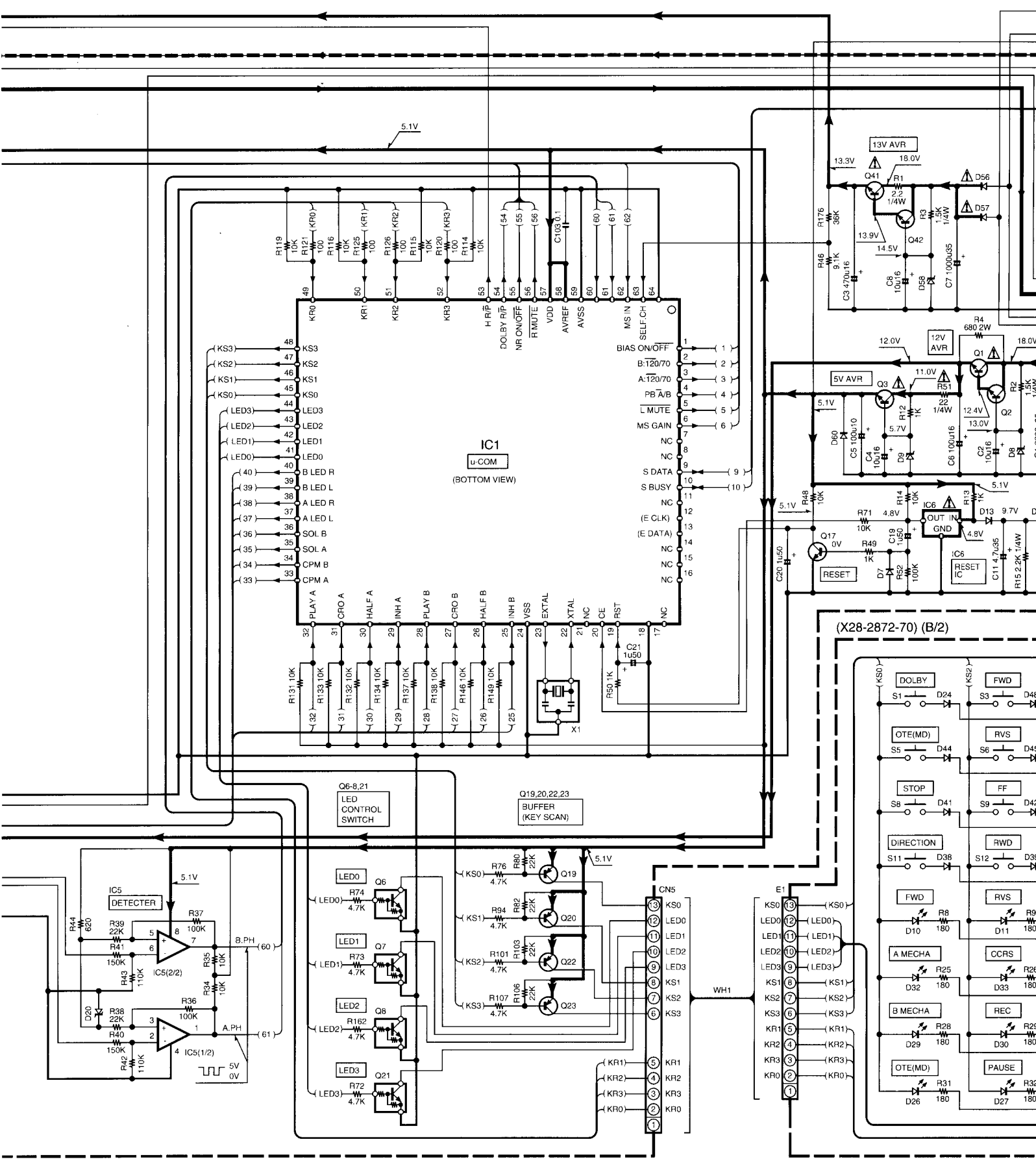
DECK MECHA (RVStype) D40-1508-05

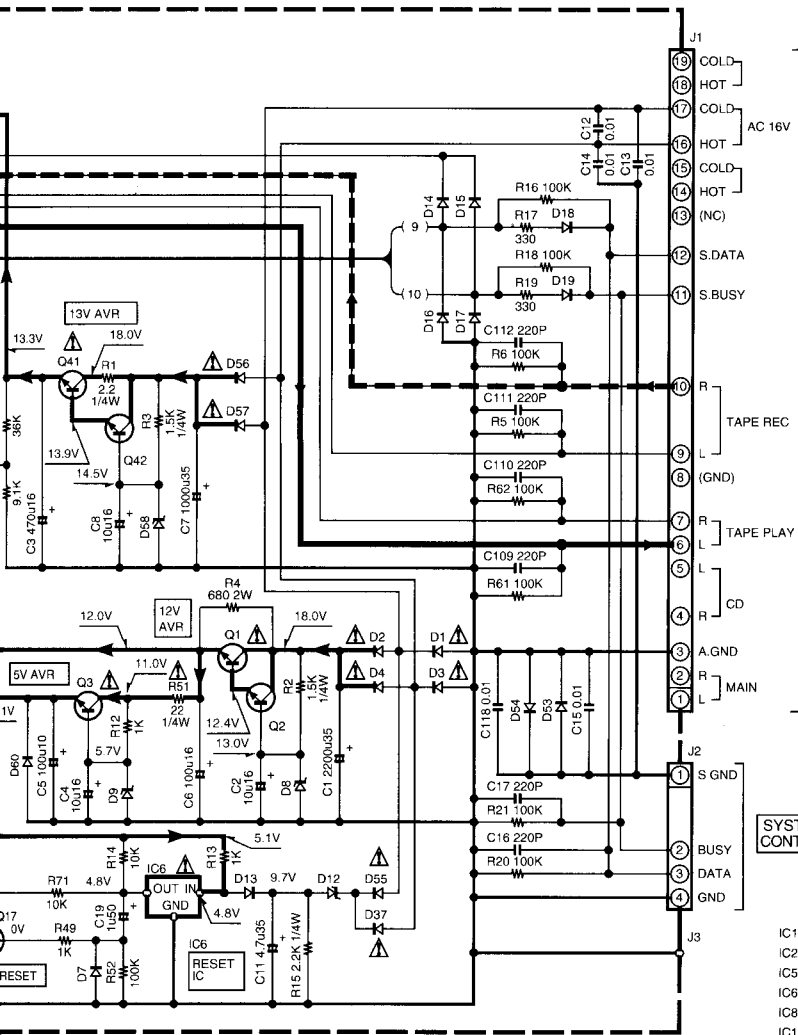


B(RPE) MECHA (RVStype) D40-1509-05







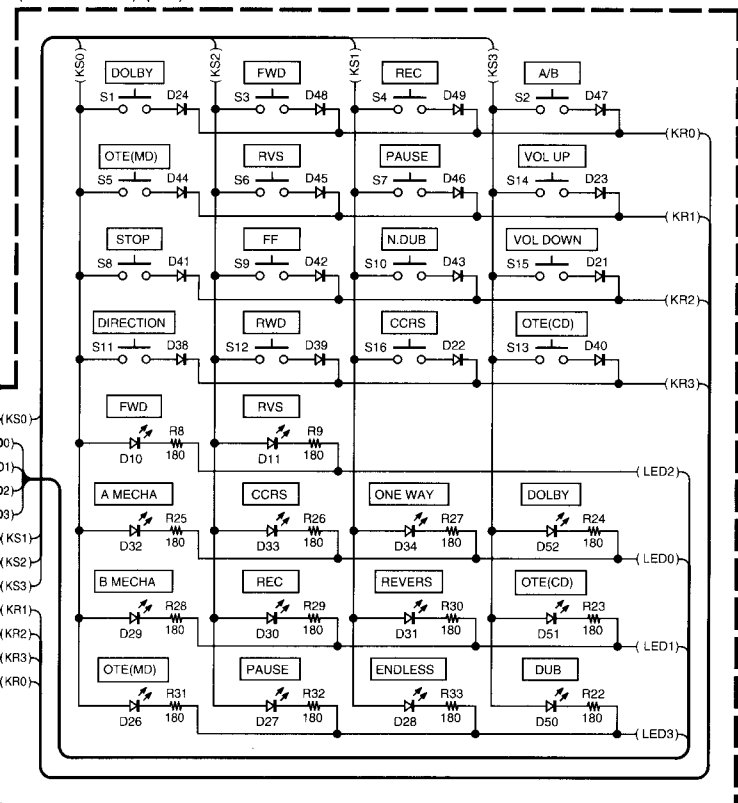


**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of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

DOLBY and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation. Noise reduction circuit made under license from Dolby Laboratories Licensing Corporation.

(X28-2872-70) (B/2)



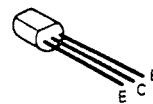
SYSTEM CONTROL

- IC1 : N38022M4-406FP
- IC2 : HA12182F
- IC5 : BA10393
- IC6 : PST993D-T
- IC8,9 : BA328
- IC10 : BA3126N

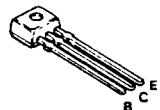
- Q1,41 : 2SD2525 or 2SD2137(P)
- Q2,4,5,11,12,15-17,21,42 : 2SC2785(F,E) or 2SC1740S(Q,R)
- Q3,9,10,13,14 : 2SC3246
- Q6,7,8,21 : DTC113ZSA or UN4219
- Q18 : 2SC3940A(R,S)
- Q19,20,22,23 : 2SA1175(F,E) or 2SA933AS(Q,R)
- D1-4,56,57 : S5688B or 1SR139-400
- D7,13-19,21-25,35-49,53-55,59 : 1SS193 or HSS104
- D8 : UZ-13BSB or MTZJ13(B)
- D9 : UZ-5.6BSB or MTZJ5.6(B)
- D10,11,28,29,31,32,34,52 : B30-2468-05
- D12 : UZ-6.8BSB or MTZJ6.8(B)
- D20 : UZ-2.7BSB or MTZJ2.7(B)
- D26,27,30,33,50,51 : B30-2430-05
- D58 : UZ-15BSB or MTZJ15(B)
- D60 : UZ-6.2BSB or MTZJ6.2(B)

--- RECORDING LINE  
 \_\_\_\_\_ SIGNAL LINE  
 \_\_\_\_\_ GND LINE  
 \_\_\_\_\_ +B LINE

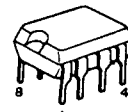
2SC3246  
2SC3940A



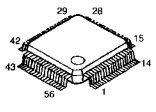
2SA1175  
2SC2785



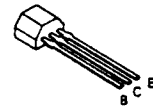
BA10393



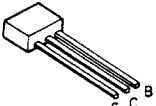
HA12182F



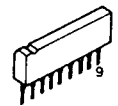
2SC1740S



UN4219



BA3126N

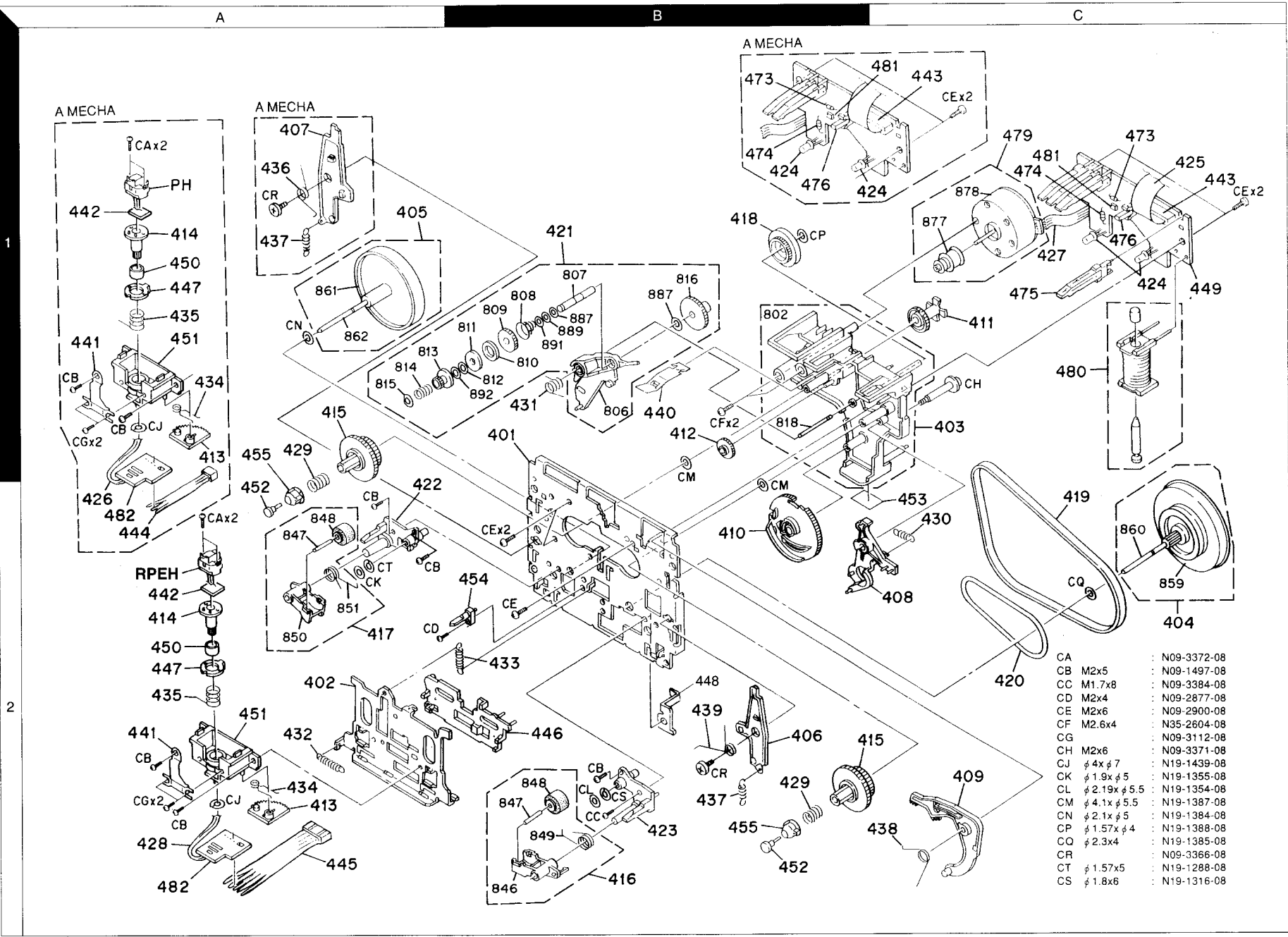


X-H5

Y26-4232-70

KENWOOD





CA	M2x6	N09-3372-08
CB	M2x5	N09-1497-08
CC	M1.7x8	N09-3384-08
CD	M2x4	N09-2877-08
CE	M2x6	N09-2900-08
CF	M2.6x4	N35-2604-08
CG		N09-3112-08
CH	M2x6	N09-3371-08
CJ	φ 4x φ 7	N19-1439-08
CK	φ 1.9x φ 5	N19-1355-08
CL	φ 2.19x φ 5.5	N19-1354-08
CM	φ 4.1x φ 5.5	N19-1387-08
CN	φ 2.1x φ 5	N19-1384-08
CP	φ 1.57x φ 4	N19-1388-08
CQ	φ 2.3x4	N19-1385-08
CR		N09-3366-08
CT	φ 1.57x5	N19-1288-08
CS	φ 1.8x6	N19-1316-08

EXPLODED VIEW (CASSETTE DECK MECHANISM)

X-H5





\* 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
<b>X-H5</b>						
601	1D	*	A01-3418-01	METALLIC CABINET (BLACK)	TEQ	
601	1D	*	A01-3420-01	METALLIC CABINET (SILVER)		
604	2D	*	A21-1932-03	DRESSING PANEL (R)(BLACK)	TEQ	
604	2D	*	A21-1938-03	DRESSING PANEL (R)(SILVER)		
605	2D	*	A21-1933-03	DRESSING PANEL (L)(BLACK)	TEQ	
605	2D	*	A21-1939-03	DRESSING PANEL (L)(SILVER)		
606	2D	*	A53-1963-02	CASSETTE HOLDER(L)		
607	2D	*	A53-1964-02	CASSETTE HOLDER(R)		
608	2D	*	A53-1965-02	CASSETTE LID (L)(BLACK)	TEQ	
608	2D	*	A53-1989-02	CASSETTE LID (L)(SILVER)		
609	2D	*	A53-1966-02	CASSETTE LID (R)(BLACK)	TEQ	
609	2D	*	A53-1990-02	CASSETTE LID (R)(SILVER)		
610	2E	*	A60-1007-21	PANEL (BLACK)	TEQ	
610	2E	*	A60-1113-21	PANEL (SILVER)		
615	2E	*	B07-2335-14	ESCUTCHEON		
616	2D	*	B10-2278-04	FRONT GLASS (R)		
617	2D	*	B10-2279-04	FRONT GLASS (L)		
618	2E	*	B10-2310-14	FRONT GLASS		
619	2D	*	B43-0301-04	KENWOOD BADGE		
622	1E	*	D39-0326-05	DAMPER		
628	1E	*	G01-3950-04	TORSION COIL SPRING		
629	2F	*	G01-3951-04	TORSION COIL SPRING		
-		*	H10-7240-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-7241-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H20-0581-04	PROTECTION COVER	MI	
-		*	H25-0681-04	PROTECTION BAG	EQ	
-		*	H25-0681-04	PROTECTION BAG	T	
-		*	H25-0681-04	PROTECTION BAG	YTO	
-		*	H50-2138-04	ITEM CARTON CASE (BLACK)	TEQ	
-		*	H50-2139-04	ITEM CARTON CASE	Y	
-		*	H50-2140-04	ITEM CARTON CASE	MI	
-		*	H50-2304-04	ITEM CARTON CASE	TEQ	
633	2F	*	J02-0366-15	FOOT		
634	2F	*	J19-3751-04	UNIT HOLDER		
637	2D	*	J52-0039-05	PUSH LATCH		
641	2E	*	K29-6485-12	KNOB (BLACK)	TEQ	
641	2E	*	K29-6605-12	KNOB (SILVER)		
642	1E	*	K29-6531-03	KNOB (BLACK)	TEQ	
642	1E	*	K29-6606-03	KNOB (SILVER)		
<b>RECORD/PLAYBACK UNIT(X28-287X-XX)</b>						
D10 ,11			B30-2468-05	LED		
D26			B30-2430-05	LED(RED)		
D27 -29			B30-2468-05	LED		
D30			B30-2430-05	LED(RED)		
D31			B30-2468-05	LED		
D32			B30-2468-05	LED		
D33			B30-2430-05	LED(RED)		
D34			B30-2468-05	LED		
D50 ,51			B30-2430-05	LED(RED)		
D52			B30-2468-05	LED		
C1			CE04LW1V222M	ELECTRO 2200UF 35WV		

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②

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C2			CE04LW1C100M	ELECTRO 10UF 16WV		
C3			CE04EW1C471M	ELECTRO 470UF 16WV		
C4			CE04LW1C100M	ELECTRO 10UF 16WV		
C5			CE04LW1A101M	ELECTRO 100UF 10WV		
C6			CE04LW1C101M	ELECTRO 100UF 16WV		
C7			CE04LW1V102M	ELECTRO 1000UF 35WV		
C8			CE04LW1C100M	ELECTRO 10UF 16WV		
C9 ,10			CQ92FM1H103J	MYLAR 0.010UF J		
C11			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C12 -15			CK45FF1H103Z	CERAMIC 0.010UF Z		
C16 ,17			CC45FSL1H221J	CERAMIC 220PF J		
C19 -21			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C22 ,23			CK45FB1H102K	CERAMIC 1000PF K		
C24			CE04LW1C101M	ELECTRO 100UF 16WV		
C25			CE04LW1C220M	ELECTRO 22UF 16WV		
C26			CK45FF1H103Z	CERAMIC 0.010UF Z		
C27 -30			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C31 ,32			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C33 ,34			CQ92FM1H333J	MYLAR 0.033UF J		
C35 ,36			CQ92FM1H682J	MYLAR 6800PF J		
C37 ,38			CK45FB1H332K	CERAMIC 3300PF K		
C41 ,42			CK45FB1H332K	CERAMIC 3300PF K		
C43 ,44			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C45 ,46			CE04LW1H0R1M	ELECTRO 0.1UF 50WV		
C47 ,48			CE04LW1C100M	ELECTRO 10UF 16WV		
C49 ,50			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C51 ,52			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C53			CE04LW1C220M	ELECTRO 22UF 16WV		
C54			CE04LW1C100M	ELECTRO 10UF 16WV		
C55 ,56			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C57			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C58			CE04LW1C221M	ELECTRO 220UF 16WV		
C59 ,60			CC45FSL1H221J	CERAMIC 220PF J		
C61			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C62			CE04LW1H100M	ELECTRO 10UF 50WV		
C63 ,64			CQ92FM1H472J	MYLAR 4700PF J		
C65			CQ92FM1H103J	MYLAR 0.010UF J		
C66			CQ93HP2A103J	MYLAR 0.010UF J		
C67 ,68			CK45FB1H561K	CERAMIC 560PF K		
C69 ,70			CK45FB1H391K	CERAMIC 390PF K		
C71 ,72			CE04LW1C220M	ELECTRO 22UF 16WV		
C73 ,74			CQ92FM1H223J	MYLAR 0.022UF J		
C75 ,76			CE04LW1H100M	ELECTRO 10UF 50WV		
C77 ,78			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C89 ,90			CC45FSL1H221J	CERAMIC 220PF J		
C91			CE04LW1C101M	ELECTRO 100UF 16WV		
C93 ,94			CK45FB1H561K	CERAMIC 560PF K		
C95 ,96			CE04LW1H100M	ELECTRO 10UF 50WV		
C97 ,98			CK45FB1H391K	CERAMIC 390PF K		
C99 ,100			CE04LW1C220M	ELECTRO 22UF 16WV		
C101,102			CQ92FM1H223J	MYLAR 0.022UF J		
C103			CQ92FM1H104J	MYLAR 0.10UF J		
C104			CE04LW1C100M	ELECTRO 10UF 16WV		
C105,106			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C109-112			CC45FSL1H221J	CERAMIC 220PF J		

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PARTS LIST

X-H5

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3

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C114 C115,116 C118			CE04LW1H0R1M CK45FB1H102K CQ92FM1H103J	ELECTRO 0.1UF 50WV CERAMIC 1000PF K MYLAR 0.010UF J		
CN3 ,4 CN5 J1 J2			E40-4609-05 E40-4607-05 E58-0006-05 E08-0311-05	PIN ASSY PIN ASSY RECTANGULAR RECEPTACLE RECTANGULAR RECEPTACLE		
E2			J11-0808-05	WIRE CLAMPER		
L3 ,4 L5 ,6 L9 X1		*	L79-1242-05 L40-1035-20 L32-0592-05 L78-0290-05	LC FILTER SMALL FIXED INDUCTOR(10MH,J) BIAS OSCILLATING COIL RESONATOR (8MHZ)		
R1 R2 ,3 R4 R15 R51			RD14GB2E2R2J RD14NB2E152J RS14KB3D681J RD14NB2E222J RD14NB2E220J	FL-PROOF RD 2.2 J 1/4W RD 1.5K J 1/4W FL-PROOF RS 680 J 2W RD 2.2K J 1/4W RD 22 J 1/4W		
R102 R174 R179,180 VR1 -4 VR5 ,6 VR7 ,8 S1 -16			RD14GB2E100J RD14NB2E100J RD14NB2E3R3J R12-0605-05 R12-5651-05 R12-1616-05 S70-0031-05	FL-PROOF RD 10 J 1/4W RD 10 J 1/4W RD 3.3 J 1/4W TRIMMING POT.(220) TRIMMING POT.(100K) TRIMMING POT.(1K) TACT SWITCH		
D1 -4 D1 -4 D7 D7 D8			S5688B 1SR139-400 HSS104 1SS133 MTZJ13(B)	DIODE DIODE DIODE DIODE ZENER DIODE		
D8 D9 D9 D12 D12			UZ-13BSB MTZJ5,6(B) UZ-5,6BSB MTZJ6,8(B) UZ-6,8BSB	ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D13 -19 D13 -19 D20 D20 D21 -25 D21 -25 D35 -49 D35 -49 D53 -55 D53 -55			HSS104 1SS133 MTZJ2,7(B) UZ-2,7BSB HSS104 1SS133 HSS104 1SS133 HSS104 1SS133	DIODE DIODE ZENER DIODE ZENER DIODE DIODE DIODE DIODE DIODE		
D56 ,57 D56 ,57 D58 D58 D59			S5688B 1SR139-400 MTZJ15(B) UZ-15BSB HSS104	DIODE DIODE ZENER DIODE ZENER DIODE DIODE		
D59 D60 D60			1SS133 MTZJ6,2(B) UZ-6,2BSB	DIODE ZENER DIODE ZENER DIODE		

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IC1 IC2 IC5 IC6 IC8 ,9		*	M38022M4-406FP HA12182F BA10393 PST993D-T BA328	MI-COM IC ANALOGUE IC ANALOGUE IC ANALOGUE IC IC		
IC10 Q1 Q1 Q2 Q2			BA3126N 2SD2137(P) 2SD2525 2SC1740S(Q,R) 2SC2785(F,E)	ANALOGUE IC TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q3 Q4 ,5 Q4 ,5 Q6 -8 Q6 -8			2SC3246 2SC1740S(Q,R) 2SC2785(F,E) DTC113ZSA UN4219	TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR		
Q9 ,10 Q11 ,12 Q11 ,12 Q13 ,14 Q15 -17			2SC3246 2SC1740S(Q,R) 2SC2785(F,E) 2SC3246 2SC1740S(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q15 -17 Q18 Q19 ,20 Q19 ,20 Q21			2SC2785(F,E) 2SC3940A(R,S) 2SA1175(F,E) 2SA933AS(Q,R) DTC113ZSA	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR		
Q21 Q22 ,23 Q22 ,23 Q41 Q41			UN4219 2SA1175(F,E) 2SA933AS(Q,R) 2SD2137(P) 2SD2525	DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q42 Q42			2SC1740S(Q,R) 2SC2785(F,E)	TRANSISTOR TRANSISTOR		
<b>CASSETTE DECK MECHANISM (D40-1508-05 : A) (D40-1509-05 : B)</b>						
401 402 403 404 405	1B 2A 1C 2C 1A		A10-3340-08 A10-3350-08 A11-1119-08 D01-0201-08 D01-0202-08	CHASSIS HEAD CHASSIS MECHA BASE ASSY FLYWHEEL ASSY (R) FLYWHEEL ASSY (L)		
406 407 408 409 410	2B 1A 2C 2C 2B		D10-3711-08 D10-3712-08 D10-3717-08 D10-3718-18 D13-1809-08	INTER LOCK ARM (BR)B INTER LOCK ARM (BL)A TRIGGER ARM BRAKE ARM CAM GEAR		
411 412 413 414 415	1C 1B 1A,2A 1A,2A 1A,2C		D13-1810-08 D13-1811-08 D13-1813-08 D13-1814-08 D13-1812-08	IDLER GEAR (REM) IDLER GEAR RETURN GEAR ROTATOR REEL GEAR		
416 417 418 419 420	2B 2A 1B 2C 2C		D14-0387-08 D14-0388-08 D15-0400-08 D16-0716-08 D16-0717-08	PINCH ASSY (R) PINCH ASSY (L) PULLEY GEAR DRIVE BELT CLUTCH BELT (W)		
421	1B		D19-0306-08	CLUTCH ASSY		

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422	2A		D23-0329-08	HOUSING ASSY (L)		
423	2B		D23-0330-08	HOUSING ASSY (R)		
424	1B,1C		B30-2409-08	LED		
425	1C		E35-0986-08	15P FLAT RIBBON WIRE		
426	2C		E35-1817-08	HEAD WIRE (PB)		
427	1C		E35-1818-08	MOTOR WIRE		
428	2A		E35-1820-08	HEAD WIRE (RP)		
429	1A,2B		G01-3709-08	B.T SPRING		
430	2C		G01-3990-08	TRIGGER ARM SP		
431	1B		G01-3991-08	CLUTCH ARM SP		
432	2A		G01-3992-08	HERD RETURN SP		
433	2B		G01-3993-08	HERD CHASSIS SP		
434	1A,2A		G01-3994-08	RETURN GEAR SP		
435	1A,2A		G01-3995-08	EARTH SP		
436	1A		G01-3996-08	INTER LOCK SP (BL)		
437	1A,2B		G01-3997-08	INTER LOCK SP (C)		
438	2C		G01-3998-08	BRAKE ARM SP		
439	2B		G01-3999-08	INTER LOCK SP (BR)		
440	1B		G02-0913-08	PACK SP		
441	1A,2A		G02-1623-08	AZIMUTH PLATE		
442	1A,2A		G11-2117-08	HEAD WIRE CLAMP		
443	1C		J19-3652-08	CABLE HOLDER		
444	2A		J19-5827-08	CONNECTOR (3P) S3B-PH		
445	2A		J19-5828-08	CONNECTOR S6B-PH		
446	2B		J21-6473-08	H/D RETURN PLATE		
447	1A,2A		J21-6474-08	HEAD PLATE		
448	2B		J21-6500-08	BKT (B)		
449	1C		J26-0063-08	MECHA PCB (CHL)		
450	1A,2A		J31-0877-08	ROTATOR COLLAR		
451	1A,2A		J39-0200-08	HEAD BASE		
452	1A,2B		J42-0183-08	REEL BUSH		
453	2C		J69-0086-08	FILAMENT TAPE		
454	2B		J90-0849-08	CASSETTE GUIDE		
455	1A,2B		D19-0270-18	REEL CAP (A)		
473	1B,1C		RD14BB2C222J	RESISTOR 2.2ohm		
474	1C		RD14BB2C471J	RESISTOR 470ohm		
475	1C		S74-0033-08	REC SWITCH		
476	1C		S74-0042-08	PLAY SWITCH		
479	1C		T42-0884-08	MOTOR ASSY		
480	1C		T94-0239-08	SOLENOID ASSY		
481	1C		T95-0154-08	PHOTO INTERRUPTER		
482	2A		W02-2599-08	HEAD PCB		
CA			N09-3372-08	HEAD SCREW		
CB			N09-1497-08	TAP TITE SCREW 2X5		
CC			N09-3384-08	TAPPING SCREW 1.7X8		
CD			N09-2877-08	TAPTITE SCREW 2X4		
CE			N09-2900-08	BIND TAPPING SCREW 2X6		
CF			N35-2604-08	BINDING SCREW 2.6X4		
CG			N09-3112-08	AZIMUTH SCREW		
CH			N09-3371-08	SCREW (CAM)		
CJ			N19-1439-08	POLY MASHER 4X7X.04CUT		
CK			N19-1355-08	NYLON WASHER 1.9X5X0.5		
CL			N19-1354-08	NYLON WASHER 2.19X5.5X0.5		
CM			N19-1387-08	TEFLON WASHER 4.1X5.5X0.25		
CN			N19-1384-08	POLY WASHER 2.1X5X0.25		

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CP			N19-1388-08	POLY WASHER 1.57X4X0.5CUT		
CQ			N19-1385-08	POLY WASHER 2.3X4X0.25		
CR			N09-3366-08	SCREW (INTER LOCK)		
CS			N19-1316-08	POLY WASHER 1.8X6X0.5CUT		
CT			N19-1288-08	POLY WASHER 1.57X5X0.5CUT		
PH	1A		T31-0074-08	POTATION HEAD		
RPEH	2A		T31-0075-08	ROTATION HEAD (RP) KC9142		

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PARTS LIST

X-H5

## SPECIFICATIONS

### Cassette deck unit

Track .....	4-track,2-channel stereo
Recording system.....	AC bias system (Frequency : 105 kHz)
Heads	
A deck Playback head .....	1
B deck Playback/recording head .....	1
Erasing head.....	1
Motors	
A deck.....	1
B deck.....	1
Fast winding time.....	Approx.115 seconds (C-60 tape)
Frequency response	
Type I tape.....	50 Hz to 15,000 Hz, $\pm 3$ dB
Type II tape.....	50 Hz to 16,000 Hz, $\pm 3$ dB
Signal to noise ratio	
Dolby B NR ON .....	64 dB(3rd H.D. 3 %, Type II tape)
Dolby NR OFF.....	56 dB(3rd H.D. 3 %, Type II tape)
Wow and flutter.....	0.15 % (W.R.M.S.)

### General

Dimensions .....	W : 270 mm (10-5/8")
	H : 124 mm (4-7/8")
	D : 322 mm (12-11/16")
Weight (net).....	2.7 kg (6 lb)



1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. Sufficient performance may not be exhibited at extremely cold locations (where water freezes).

### 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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