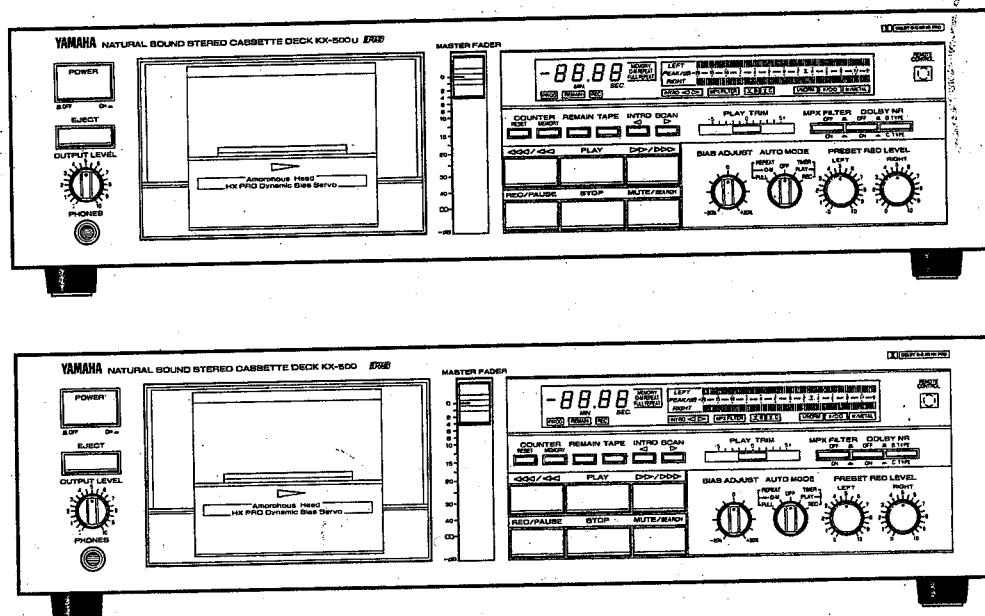
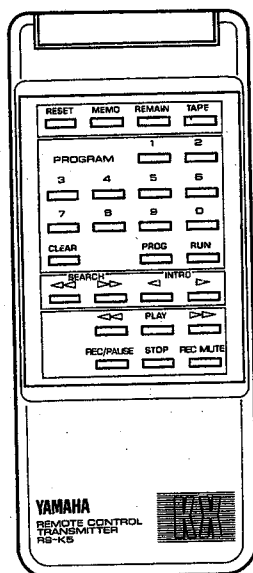


STEREO CASSETTE DECK

KX-500/U

SERVICE MANUAL



IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

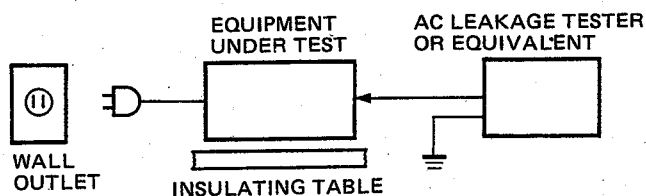
IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

CONTENTS

TO SERVICE PERSONNEL	1	TIMING CHART	9
REAR PANELS	1	IC BLOCK	10, 11
SPECIFICATIONS	2	BLOCK DIAGRAM	12
DIMENSIONS	2	WIRING	13
INTERNAL VIEW	2	PRINTED CIRCUIT BOARD	14 ~ 17
DISASSEMBLY PROCEDURES	3	SCHEMATIC DIAGRAM	18
ADJUSTMENTS	4 ~ 6	PARTS LIST	19 ~ 30
μ-COM DATA	7, 8		

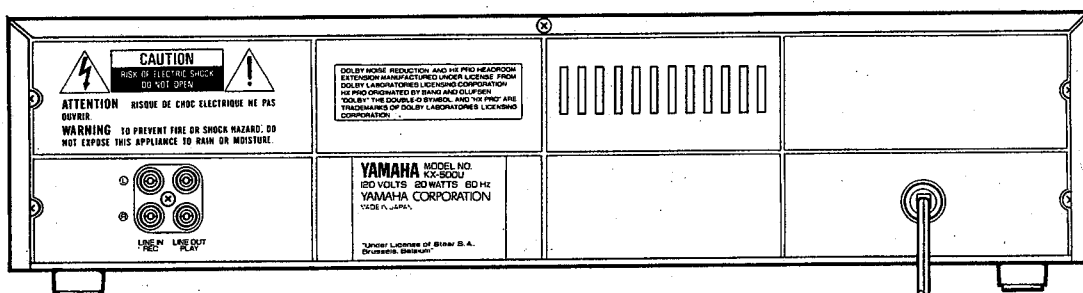
■ TO SERVICE PERSONNEL

- Critical Components Information.**
Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.
- Leakage Current Measurement (For 120V Model Only).**
When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.
 - Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F.
 - Leakage current must not exceed 0.5mA.
 - Be sure to test for leakage with the AC plug in both polarities.

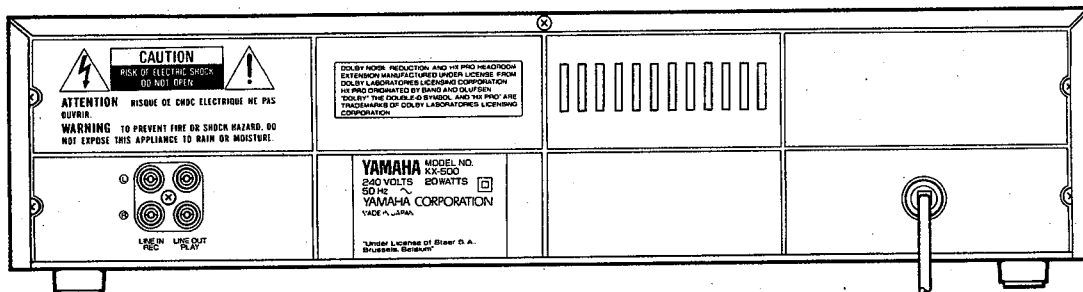


■ REAR PANELS

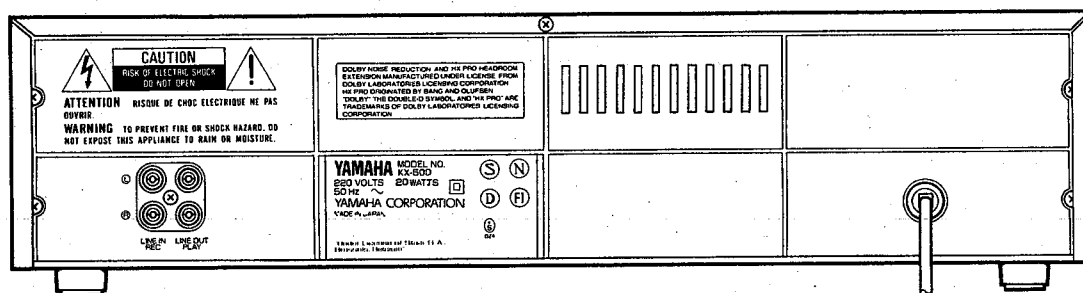
• U, C, models



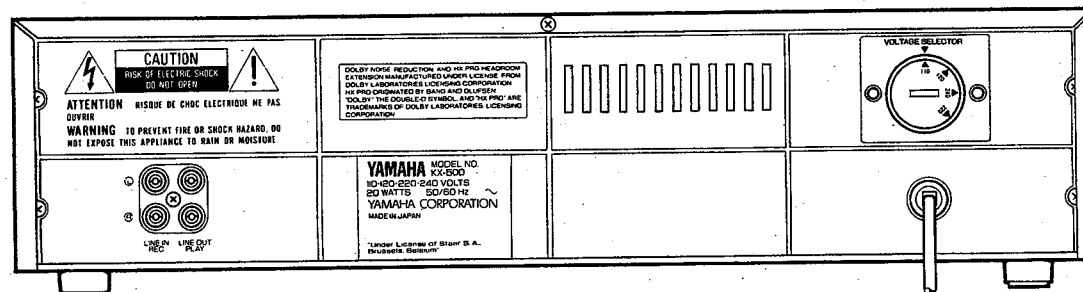
• A, B, models



• G model



• R model



SPECIFICATIONS

Track Configuration	4 track, 2 channel stereo
Motor	DC servo motor (capstan) Flat torque DC motor (reel) DC motor (assist)
Heads	Amorphous with 12-laminated core Rec and Playback heads Double-gap Ferrite erase head
Rapid Transport	
(F. Fwd/Rew)	about 70 sec. (C-60)
(Fast Winding Time)	about 45 sec. (C-60)
Wow and Flutter	
WRMS	less than 0.05%
W. Peak	less than $\pm 0.08\%$
Signal-to-Noise Ratio	
(Dolby off)	better than 60 dB
(Dolby B on)	better than 68 dB
(Dolby C on)	better than 76 dB
Frequency Response	
Normal tape (-20 dB)	20-17,000 Hz ± 3 dB
CrO ₂ tape (-20 dB)	20-19,000 Hz ± 3 dB
Metal tape (-20 dB)	20-20,000 Hz ± 3 dB
Harmonic Distortion	
Normal tape	less than 1%
CrO ₂ tape	less than 1%
Metal tape	less than 1%

Input Sensitivity/Impedance

Line 50 mV/50 k-ohms

Output Level /Impedance

Line 360 mV/1 k-ohms

Phones 1.2 mW/8 ohms

Channel Separation (3150 Hz) 40 dB

Cross Talk (125 Hz) 55 dB

GENERAL

Power Supplies

U.C models 120 V, 60 Hz

A.B models 240 V, 50 Hz

G model 220 V, 50 Hz

R 110/120/220/240 V, 50/60 Hz

Power Consumption 20 W

Dimension (W x H x D) 435 x 117 x 273 mm

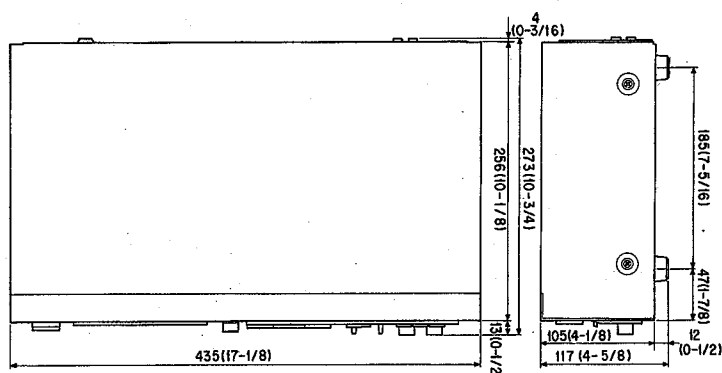
(17-1/8" x 4-5/8" x 10-3/4")

Weight 4.5 kg (9 lbs. 15 oz.)

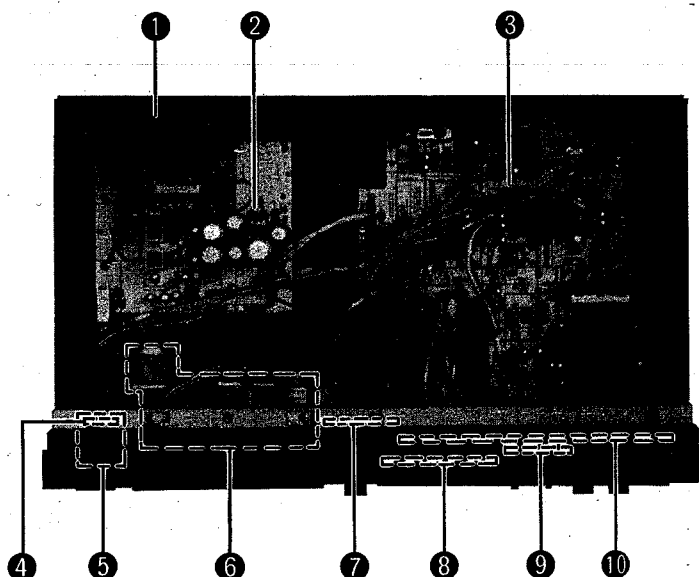
* Specifications subject to change without notice.

(U) U.S.A. model	(B) British model
(C) Canadian model	(G) European model
(A) Australian model	(R) Other model

DIMENSIONS



INTERNAL VIEW



- 1 VOLTAGE SELECTOR (R model only)
- 2 POWER TRANSFORMER UNIT
- 3 MAIN C. BOARD (1)
- 4 MAIN C. BOARD (6) (Output Level)
- 5 MAIN C. BOARD (7) (Phones)
- 6 CASSETTE MECHANISM UNIT
- 7 MAIN C. BOARD (4) (MASTER FADER)
- 8 MAIN C. BOARD (3)
- 9 MAIN C. BOARD (5) (PLAY TRIM)
- 10 MAIN C. BOARD (2)

■ DISASSEMBLY PROCEDURES (Remove parts in disassembly order as numbered)

1. Removal of Top Cover

- a. Remove 5 screws (①) in Fig. 1.

2. Removal of Cassette Mechanism Unit

- a. Remove the Top Cover.
b. Remove the Lid (②) in Fig. 1.
c. Detach 5 connectors (#1 ~ #5) in Fig. 1.
d. Detach 1 connector (2 pin) Power Transformer Unit in Fig. 1.
e. Remove 6 screws (③) in Fig. 1 and then pull off the mechanism unit to the back side gently.

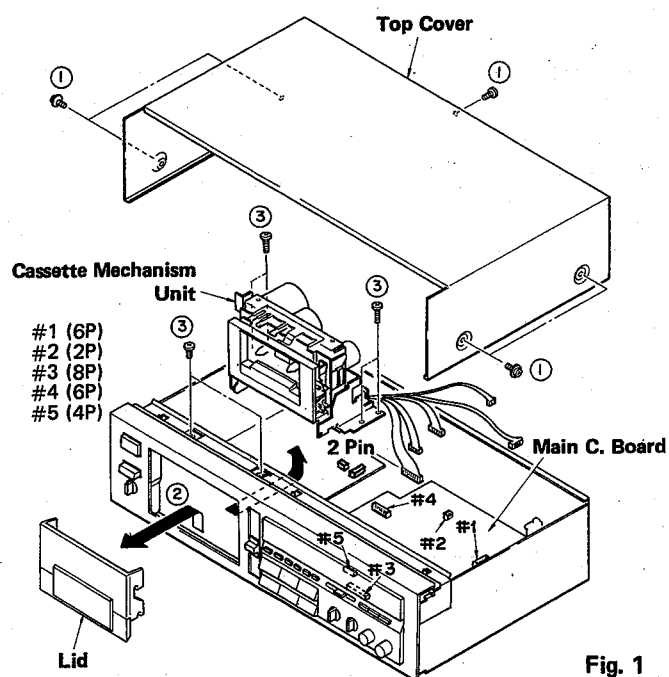


Fig. 1

3. Removal of Front Panel

- a. Remove the Top Cover.
b. Remove 5 knobs in Fig. 2.
c. Detach 9 connectors (#6 ~ #12, ⑦, ⑧).
d. Detach 1 connector (5 pin) Power Transformer Unit.
e. Remove 8 screws (④) in Fig. 2 and pull the front panel forward.

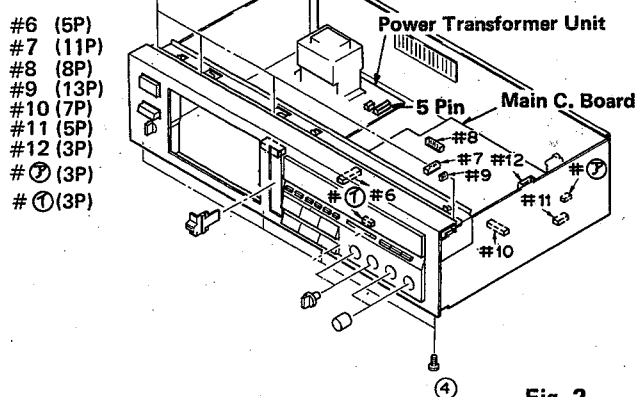


Fig. 2

4. Removal of Heads and Pinch Roller

- a. Remove 2 screws (⑤) in Fig. 3 and then remove the Recording/Playback Head.
b. Remove 2 screws (⑥) in Fig. 3 and then remove the Erase Head.
c. Remove Washer (⑦) in Fig. 3 and then remove the Pinch Roller.

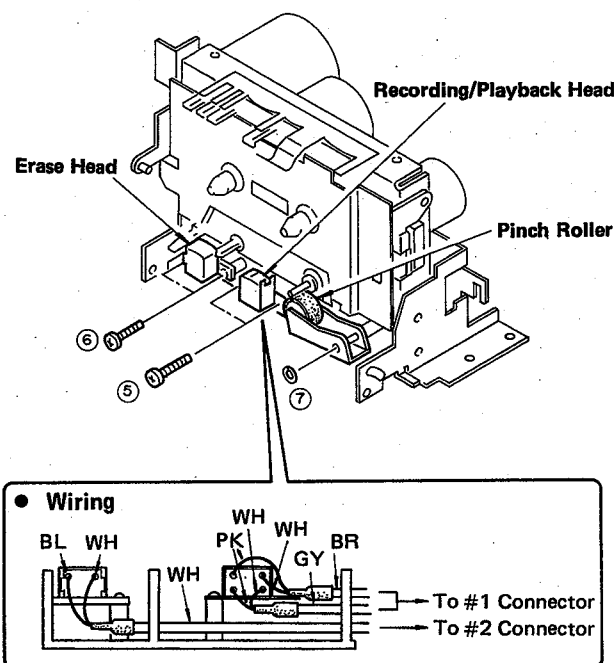


Fig. 3

5. Removal of Capstan Motor and Flywheel Belt

- a. Remove 2 screws (⑧) in Fig. 4 and then remove the back plate.
b. Remove 2 screws (⑨) in Fig. 4 and then remove the Capstan Motor.

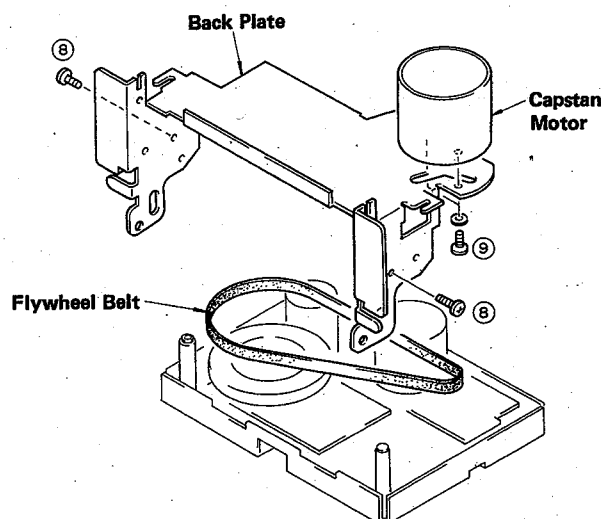


Fig. 4

■ ADJUSTMENTS

1. Before adjustment:

- Make sure that AC line voltage comes within

Models	AC line voltage
U, C	120V $\pm$ 10%
G	220V $\pm$ 10%
A, B	240V $\pm$ 10%

- Since head magnetization, dust accumulations, etc. are likely to introduce error in the various characteristics, it is very important that the heads are properly demagnetized and cleaned.

2. Instruments required

- Audio frequency oscillator (AF OSC)
- ACVM or dual channel ACVM
- Wow/flutter meter
- Oscilloscope
- Torque meter
TW-2111 (TX911580) TW-2412 (TX911640)
TW-2121 (TX911570) TW-2422 (TX911630)
CT160L (TX911120)

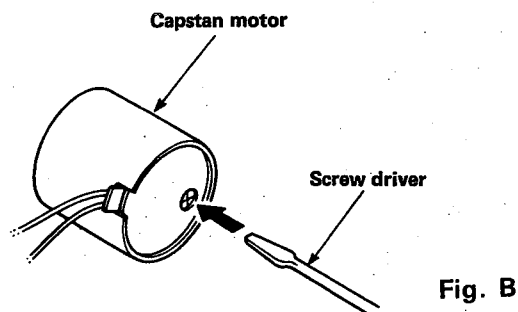
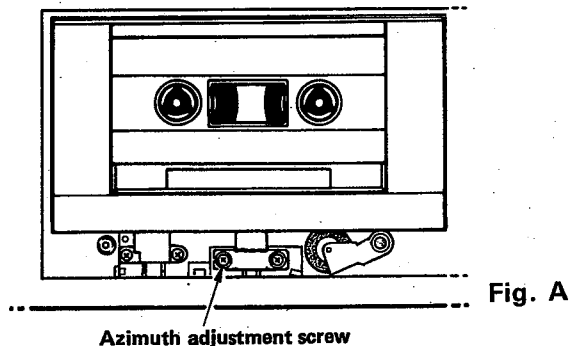
- DCVM
- Mirror Cassette
MC-109C (TX911430)

3. Test tape required

- MTT-111N (TX911650): Tape Speed (Normal)
- MTT-114N (TX911680): Azimuth
- MTT-212CN (TX911670): Playback Level
- MTT-256 (TX911300): Playback Frequency Response (LH)
- MTT-356 (TX911310): Playback Frequency Response (CrO₂)
- Reference tape
Normal (LH) : TDK AC223 (TX911600)
CrO₂ : TDK SA-60 or TDK AC513 (TX911610)
METAL : TDK AC712 (TX911590)

● "MECHANICAL ADJUSTMENT"

Step	Item to be Adjusted	Tape	Instrument required	Mode	Adjustment part	Rating	Remarks
1	Check each torque		Torque meter	PLAY FF REW		Take-up torque: 25g·cm ~ 70g·cm FF, REW torque: more than 70g·cm Back tension: 2g· ~ 6g·cm	
2	Check FF REW take up times	AC-223 C-60				Less than 85 sec. (Normal) Less than 55 sec. (Hi-speed)	
3	Check tape movement		Mirror cassette (MC-109C)	PLAY		Tape should move in the center of head smoothly.	
4	Azimuth	MTT-114N 10kHz, -10dB	ACVM Oscilloscope	PLAY	Azimuth adjustment screw. (Fig. A)	Playback output of L and R is maximum and phase difference should be minimum.	After the adjustment, make sure to apply screw lock paint.
5	Tape speed	MTT-111N 3kHz, -10dB	Wow/flutter meter or Frequency counter	PLAY	Semi fixed variable resistor at the back of the capstan motor. (Fig. B)	3000Hz $\pm$ $\frac{5}{15}$ Hz	● Perform adjustment at the center of the test tape length if possible
6	Wow/flutter	MTT-111N 3kHz, -10dB	Wow/flutter meter	PLAY		Less than 0.07% (JIS WTD)	

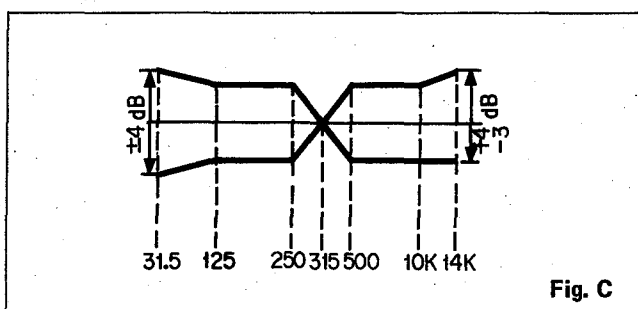


● ELECTRICAL ADJUSTMENT

- Proceed with the following adjustment after having finished the mechanical adjustment.
- Playback section (160nwb/m=0 dB, 0 VU)

Step	Item to be adjusted	Tape	Instrument required	Mode	Measurement conditions	Points of measurement	Adjustment part	Rating
1	Playback level	MTT-212CN (160nwb/m)	ACVM	PLAY		LINE OUT	VR105 (Lch) VR106 (Rch)	360mV $\pm$ 25mV
2	Confirmation of playback frequency response	Test tape for frequency check. MTT-256 (LH: 3180 μ s+120 μ s) MTT-356 (CrO ₂ : 3180 μ s+70 μ s)	ACVM Oscilloscope	PLAY		LINE OUT		Check that the 14kHz playback level lies within 0dB $\pm$ 3dB of the 315Hz playback level. (Fig. C)

● PLAYBACK FREQUENCY RESPONSE



● Recording section

Step	Item to be adjusted	Tape	Instrument required	Mode	Measurement conditions	Points of measurement	Adjustment part	Rating
1	Meter		ACVM AF OSC	REC/ PAUSE	1 REC LEVEL $\rightarrow$ MAX. 2 Apply a 1kHz signal to LINE IN terminals. Set the AF OSC output level so that LINE OUT voltage is 360mV.	Peak level meter	Pre-set Potentiometer of Meter Circuit Board VR109 (Lch) VR110 (Rch)	Adjust adjustment parts to the lowest level where the 0dB display part of the level meter light up.
2	Bias Oscillation level (HX-PRO)	METAL	ACVM	REC PLAY	1 BIAS ADJ VR $\rightarrow$ MAX. (Clockwise)	TP1-GND (Lch) T P 2-GND (Rch)	L105 (Lch) L106 (Rch)	Adjust so that oscillation output is maximum.
3	Recording level		ACVM AF OSC	REC PLAY	1 BIAS ADJ VR $\rightarrow$ CENTER (Front Panel) 2 Apply a 1kHz signal to LINE IN terminals. Set the REC LEVEL knob so that LINE OUT voltage is 360mV.	LINE OUT	VR111 (Lch) VR112 (Rch)	Set the same level of the record and playback level. 360mV $\pm$ 20mV
4	Record Bias (Total frequency response)	CrO ₂	ACVM AF OSC	REC PLAY	Apply a 15kHz signal to LINE IN terminals. Set the REC LEVEL knob so that LINE OUT voltage is 36mV ($\sim$ 20dB)	LINE OUT	VR113 (Lch) VR114 (Rch)	Set the same level of the record and playback level. (Fig. D)

● RECORDING FREQUENCY RESPONSE

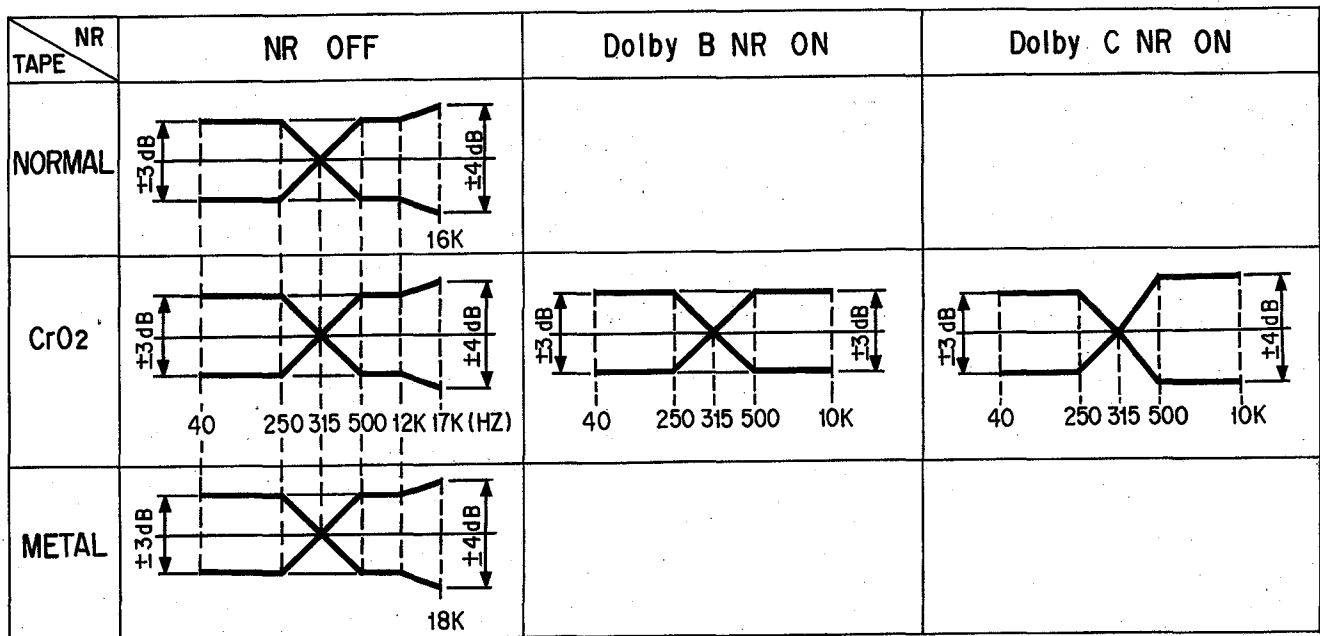
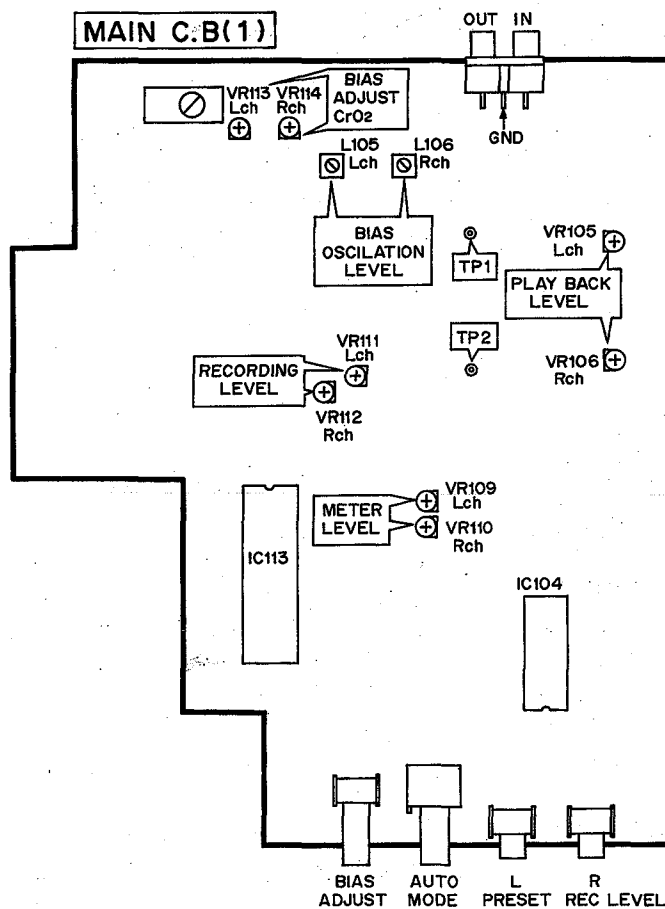


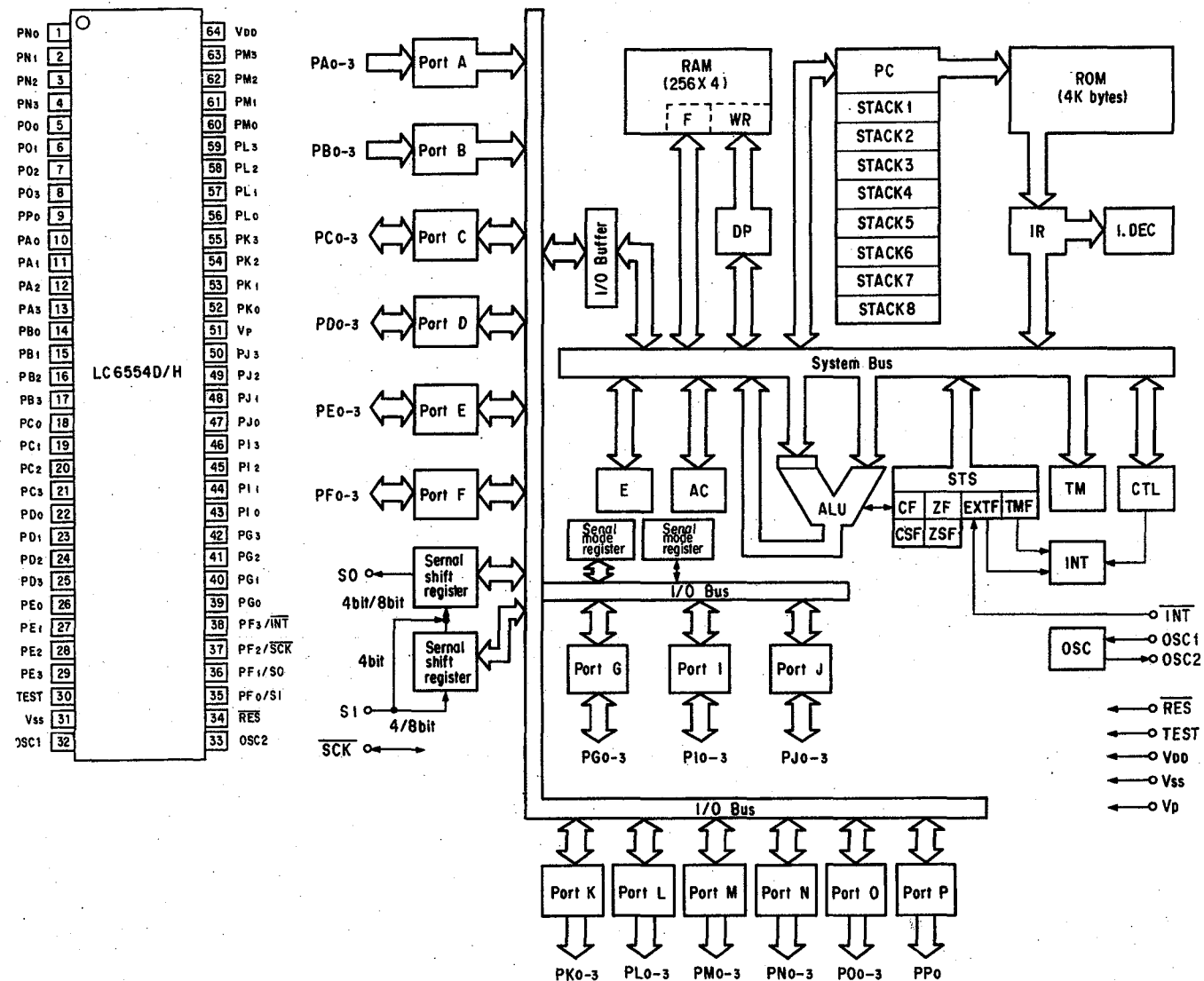
Fig. D

● TEST POINT

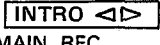


■ μ -COM DATA

IC113: LC6554H-3603
(4-bit μ -COM)



● TERMINAL DESCRIPTION

NO.	NAME	FUNCTION	NO.	NAME	FUNCTION
1	N ₀	LINE MUTE	64	V _{DD}	+5
2	N ₁	REC MUTE	63	M ₃	DISPLAY DIGIT OUTPUT G₁ G₂ G₃ G₄
3	N ₂	REC	62	M ₂	
4	N ₃	REC	61	M ₁	
5	O ₀	NORMAL	60	M ₀	
6	O ₁	CrO ₂	59	L ₃	 a, CrO₂ b, FULL REPEAT c, O-M REPEAT d, MEMORY e,  f,  g, 
7	O ₂	METAL	58	L ₂	
8	O ₃	SEGMENT OUTPUT	57	L ₁	
9	P ₀	DIGIT OUTPUT G _s	56	L ₀	
10	A ₀	INPUT KEY • PLAY • REC/PAUSE • FF • REW • MUTE/SEARCH • STOP • RESET • MEMORY	55	K ₃	
11	A ₁		54	K ₂	
12	A ₂		53	K ₁	
13	A ₃		52	K ₀	
14	B ₀		51	VP	-22V
15	B ₁		50	J ₃	BIAS
16	B ₂		49	J ₂	70μ
17	B ₃		48	J ₁	REEL MOTOR SPEED CONTROL
18	C ₀	MECHANISM POSITION SW	47	J ₀	
19	C ₁		46	I ₃	ASSIST MOTOR CONTROL (-)
20	C ₂		45	I ₂	
21	C ₃	INTRO (F)	44	I ₁	REEL MOTOR CONTROL (REW)
22	D ₀	METAL DTC	43	I ₀	
23	D ₁	CASSETTE HALE	42	G ₃	ROTATION DTC. (S)
24	D ₂	CrO ₂ DTC	41	G ₂	
25	D ₃	ERASURE PROTECTION	40	G ₁	ROTATION DTC. (T)
26	E ₀	AUTO MODE • FULL REPEAT • O-M REPEAT • TIMER PLAY • TIMER REC	39	G ₀	MUSIC PULSE
27	E ₁		38	F ₃	REMOTE INPUT
28	E ₂		37	F ₂	• INTRO (R) • REMAIN • TAPE SELECT
29	E ₃		36	F ₁	
30	TEST	GND	35	F ₀	
31	V _{SS}	GND	34	RES	RESET
32	OSC1	CLOCK	33	OSC2	CLOCK (4MHz)

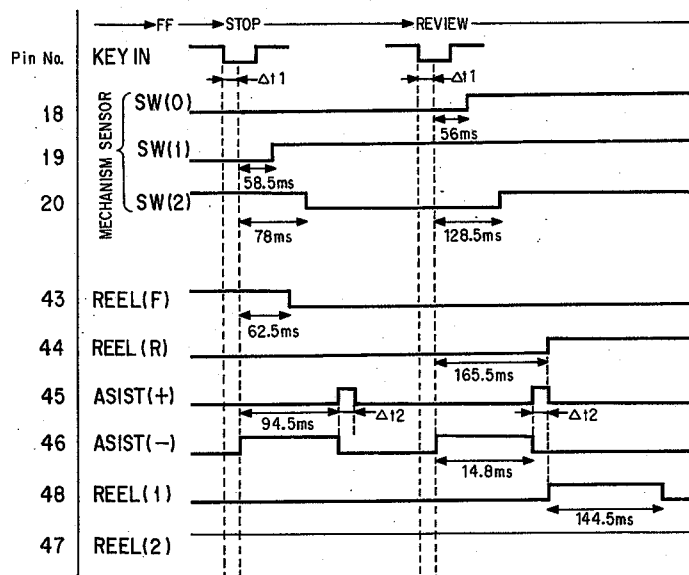
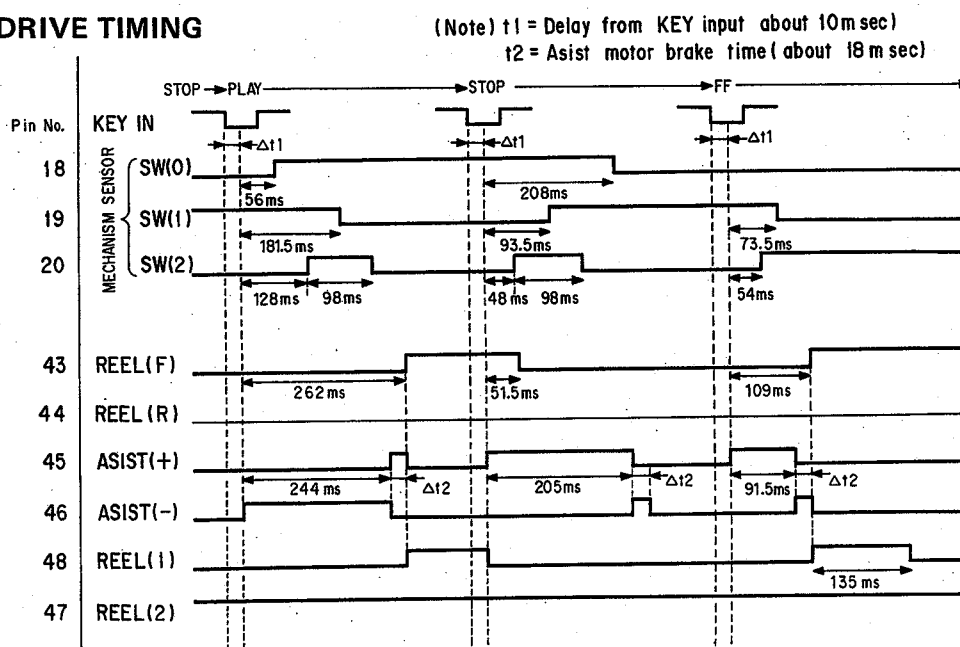
● MODE VS OUTPUT

TERMINAL	NAME	STOP	FF	FF (HIGH SPEED)	REW	REW (HIGH SPEED)	PLAY	REC/ PAUSE	REC/ PLAY	CUE	REVIEW
J ₃ , 50	BIAS	L	L	L	L	L	L	L	H	L	L
N ₁ , 2	REC MUTE	H	H	H	H	H	H	H	L	H	H
No, 1	LINE MUTE	H	H	H	H	H	L	L	L	H	H
I ₁ , 8	REEL · R	L	L	L	H	H	L	L	L	L	H
I ₀ , 5	REEL · F	L	H	H	L	L	H	L	H	H	L
J ₁ , 48	REEL1	L	L	L	L	L	H	H	H	L	L
J ₀ , 47	REEL2	H	H	L	H	L	H	H	H	H	H

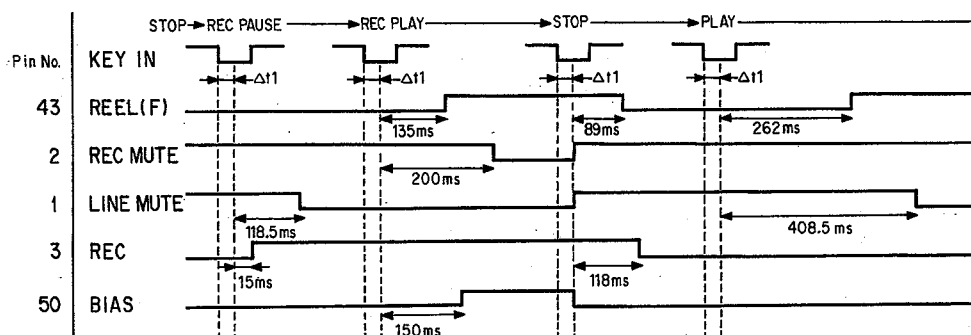
Note: L Low level
H High level

■ TIMING CHART

● MECHANISM DRIVE TIMING

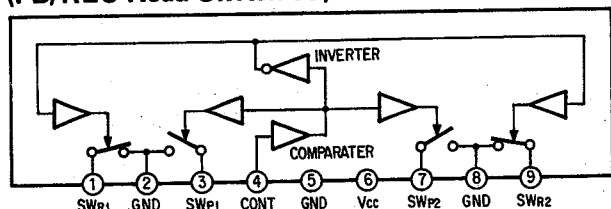


● AMP SELECTOR TIMING

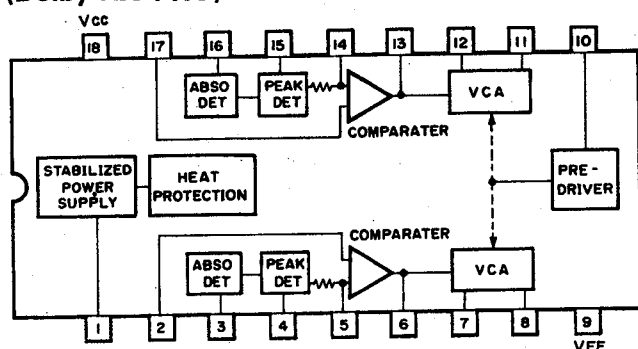


■ IC BLOCK

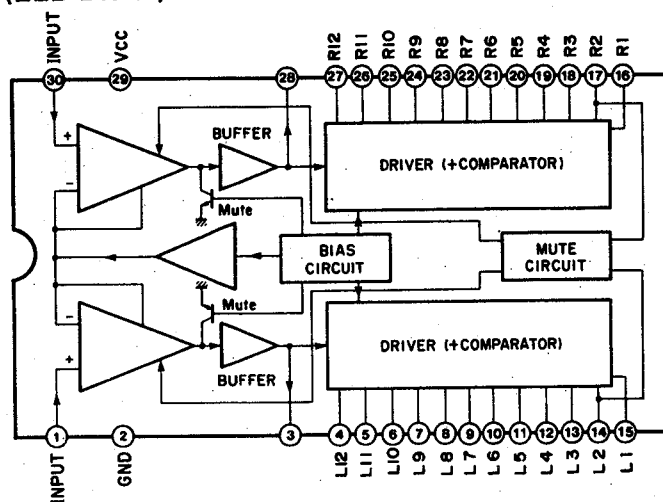
IC101: μ PC1330HA
(PB/REC Head Switch IC)



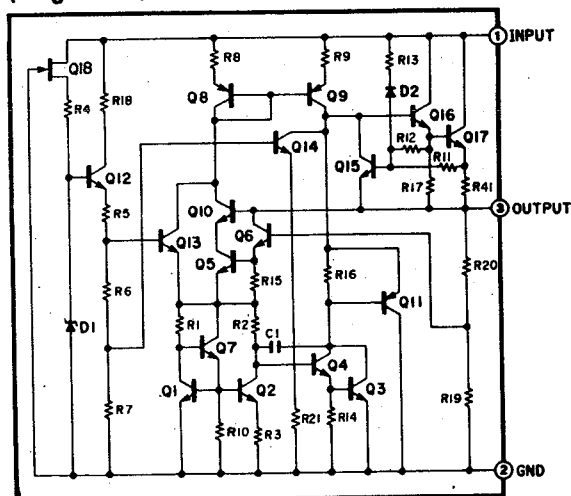
IC110: μ PC1297CA
(Dolby HX PRO)



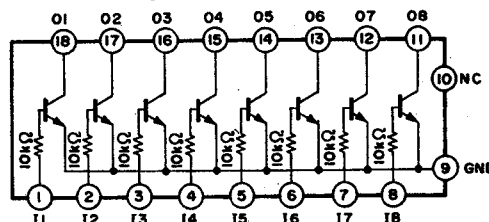
IC114: HA12067NT
(LED Driver)



IC501: NJM78M05A
(Regulator)

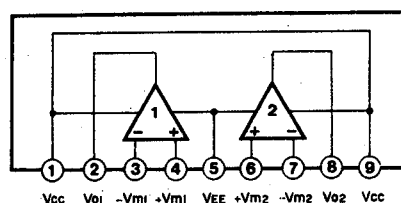


IC109: AN90B20
(Transistor Array)

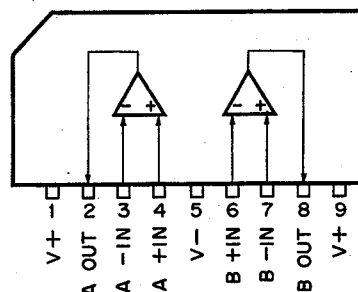


IC103, 106: AN6551, NJM4558S, BA715

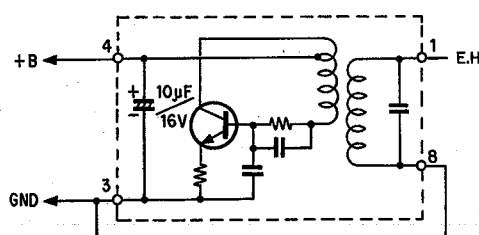
IC105, 107, 108: NJM4556S-A
(Dual Ope-amp.)



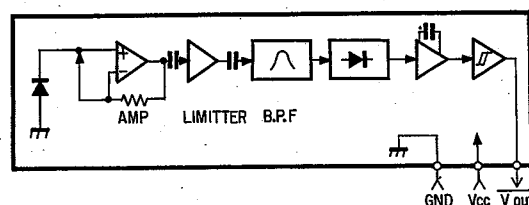
IC102: NJM2043S-D
(Pre-amp.)



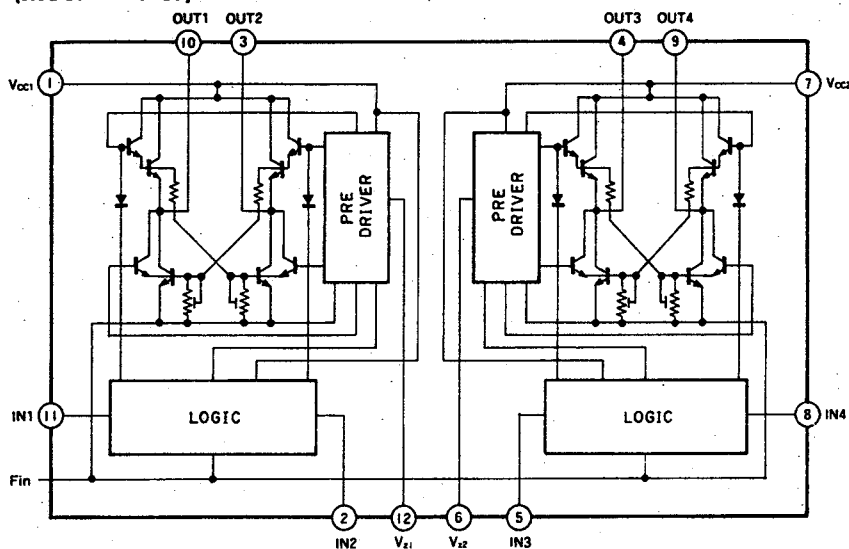
IC111: VE040700
(Bias OSC Block)



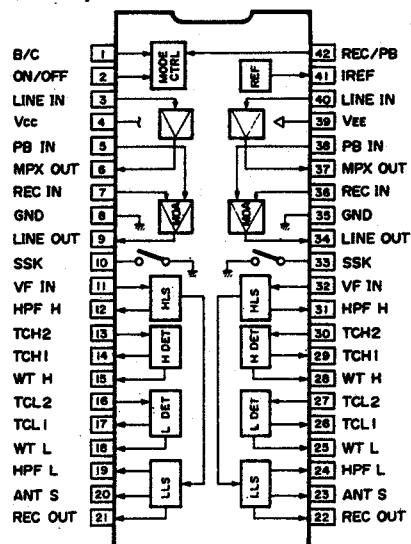
U101: GP1U501
(Remote Control Receptor)



IC112: LB1649 (Motor Driver)

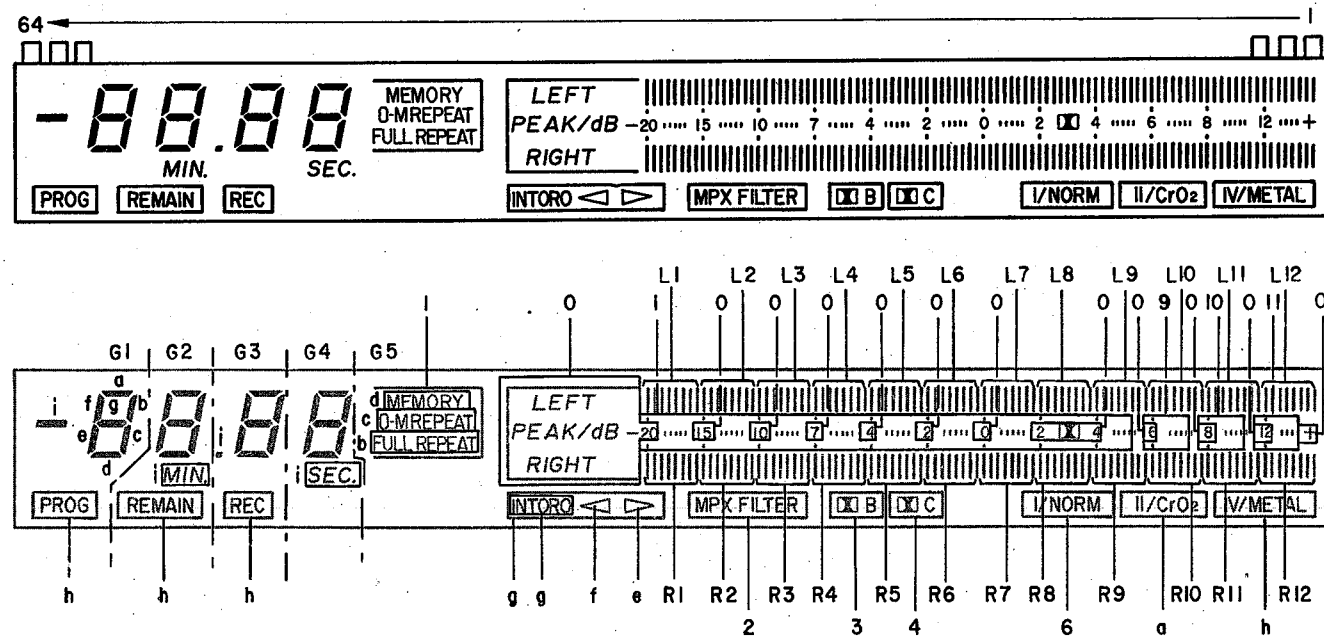


IC104: CX20187
(Dolby NR)



- **V1 (FL Display)**

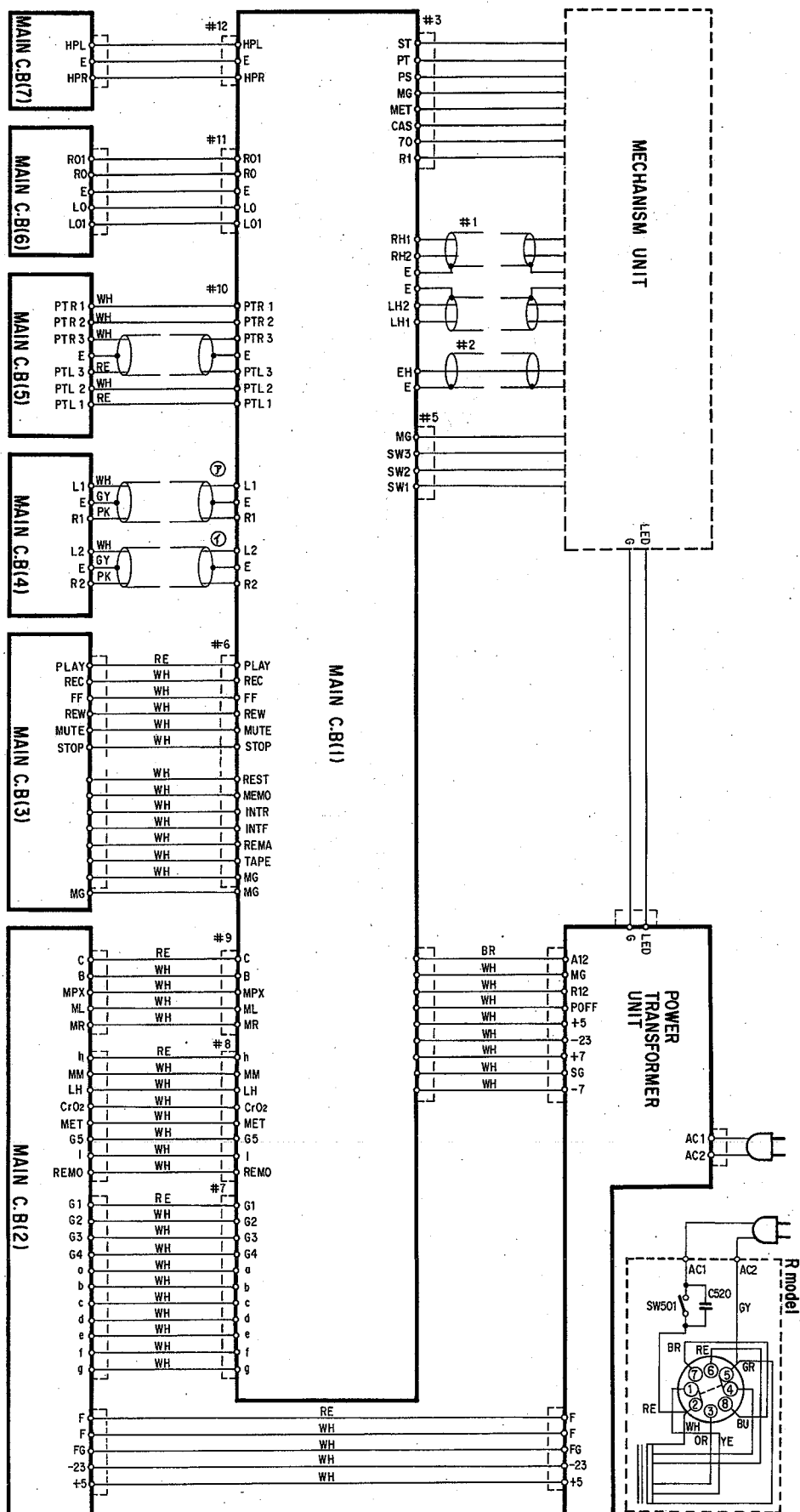
CPF1078GR



● PIN ASSIGNMENT

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	F	F	F	L 12	R 12	G5	10	L 11	R 11	9	L 10	R 10	L 9	G5	R 9	L 8	R 8	L 7	R 7	L 6	R 6	G5
Pin No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
	L 5	R 5	L 4	R 4	L 3	R 3	L 2	G5	R 2	L 1	R 1	0	i	11	8	G5	NP	NP	7	6	5	G5
Pin No.	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64		
	l	d	e	G4	c	g	G3	b	f	G2	a	h	G1	4	3	G1	2	F	F	F		

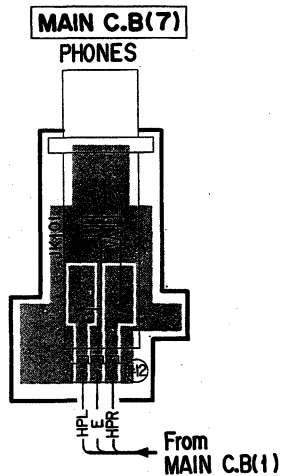
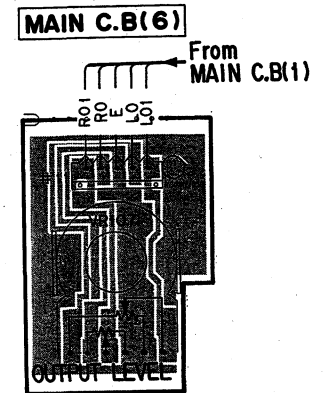
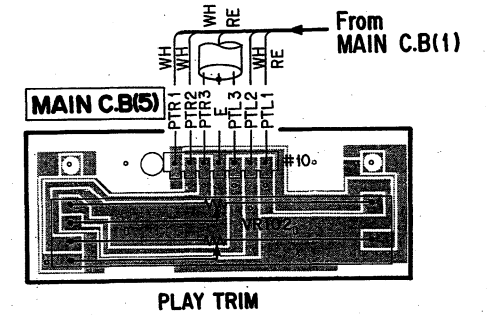
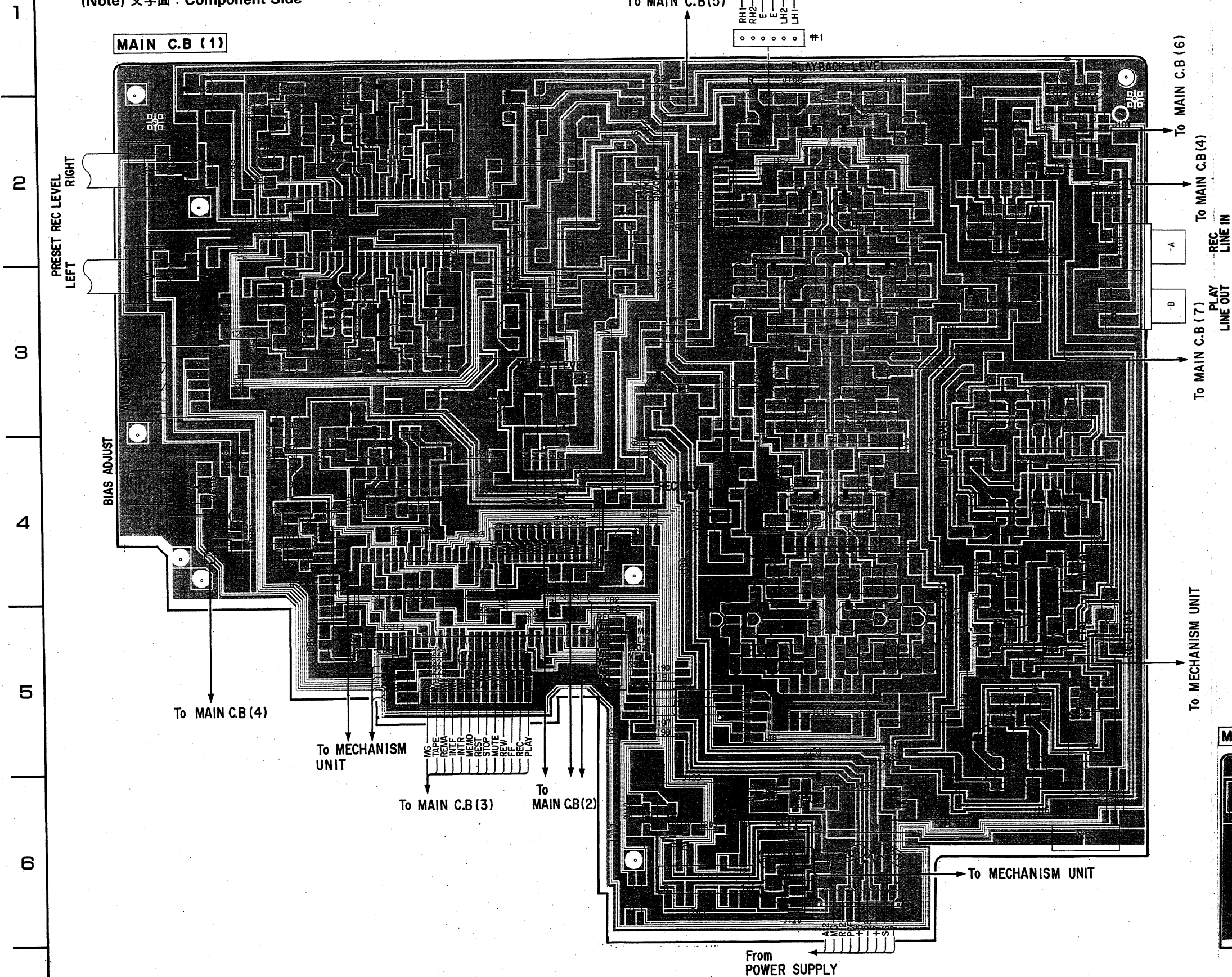
KX-500/U
■ WIRING



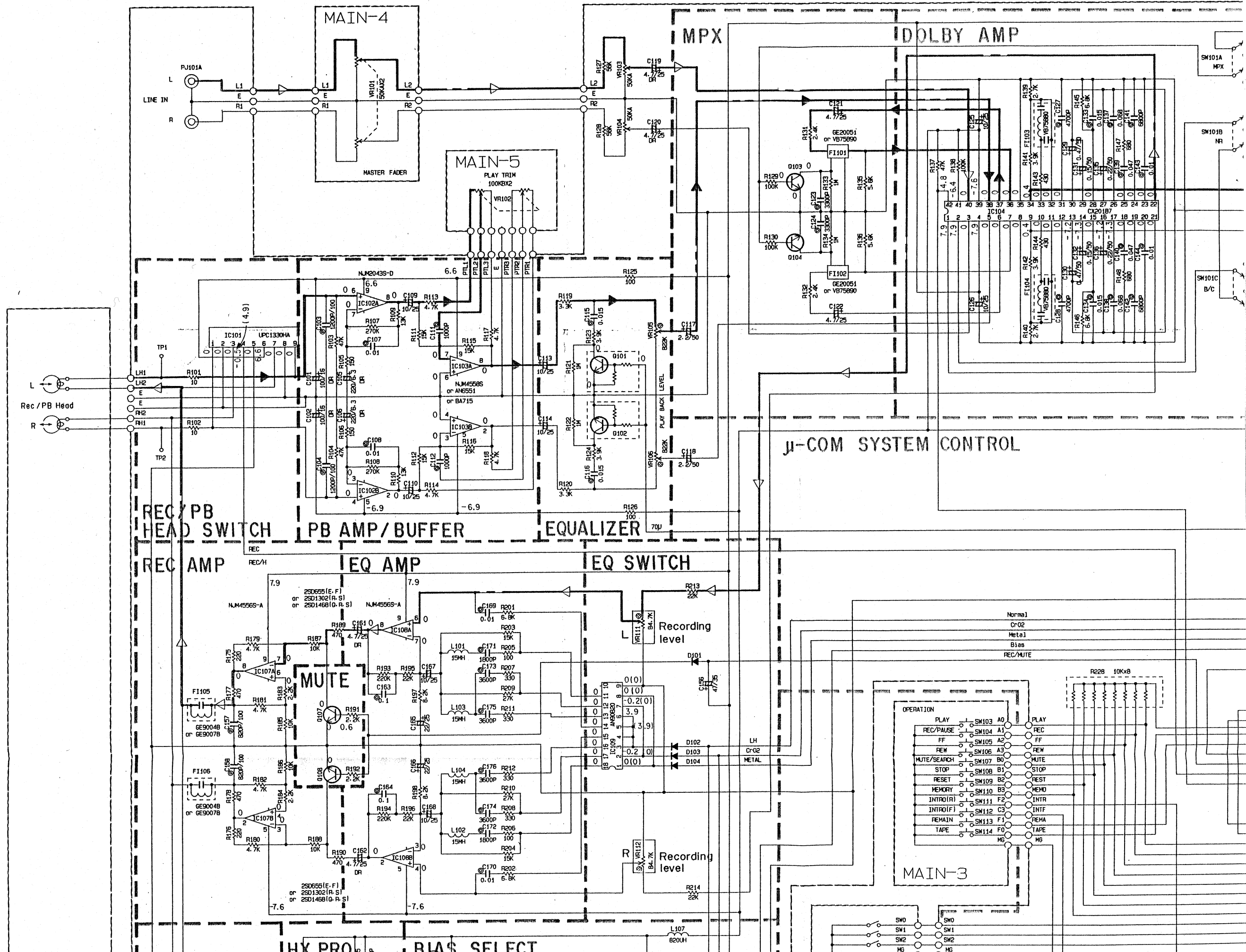
KX-500/U

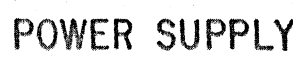
PRINTED CIRCUIT BOARD (Pattern Side)

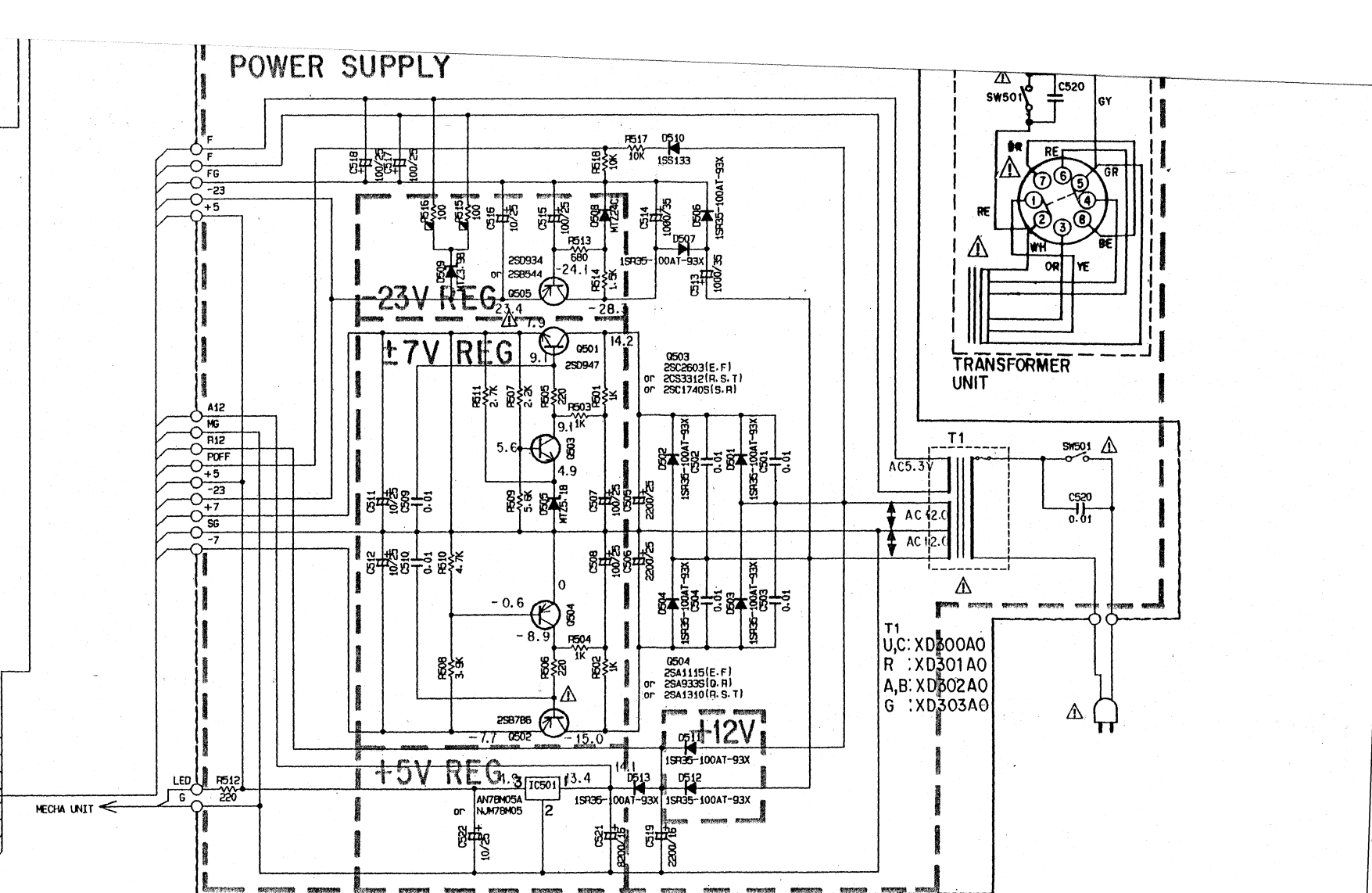
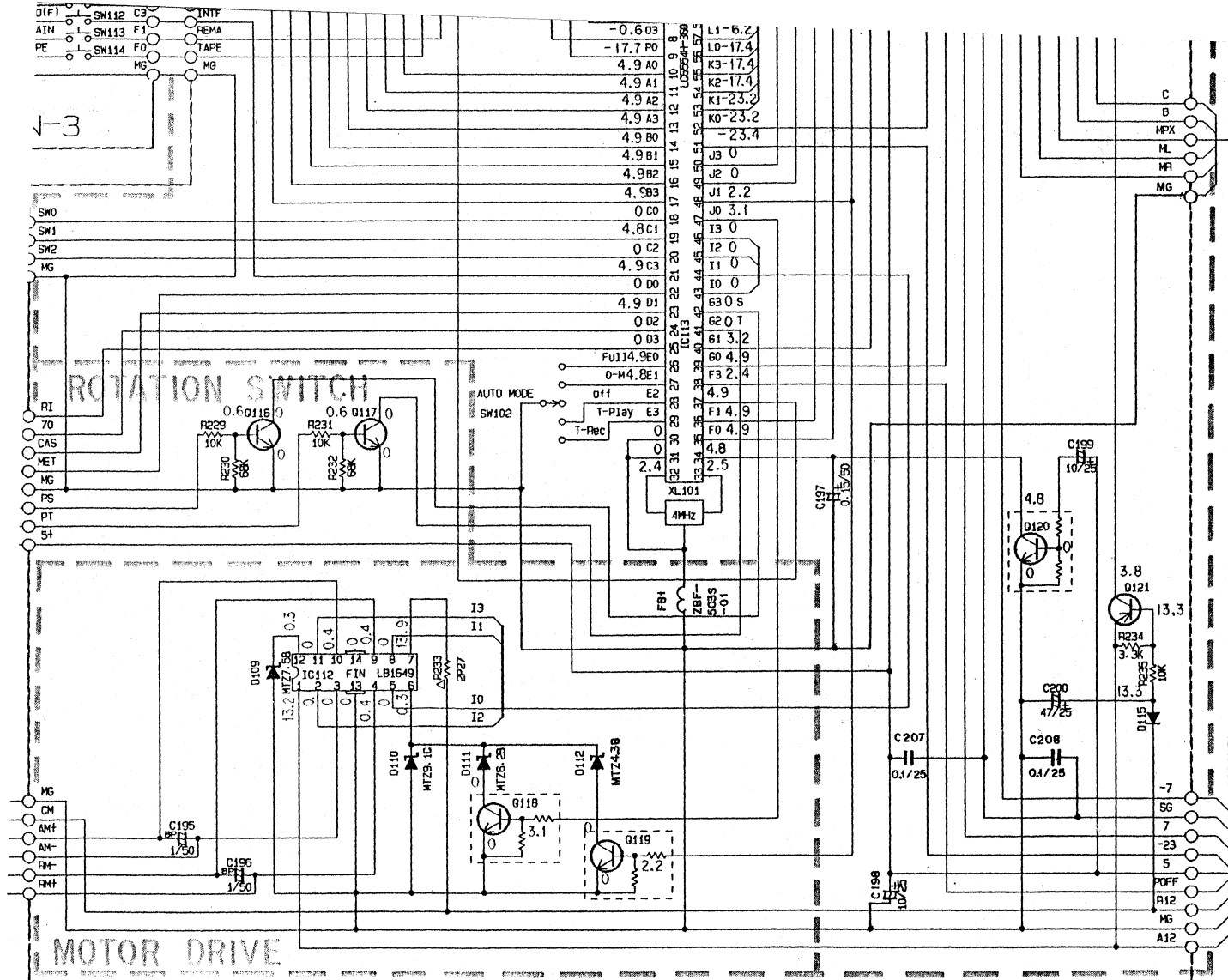
(Note) 文字面 : Component Side



■ SCHEMATIC DIAGRAM







thermally specified

RESISTOR 25A1115(E.F) or 25A933S(G.R) or 25A1310(R.S.T)

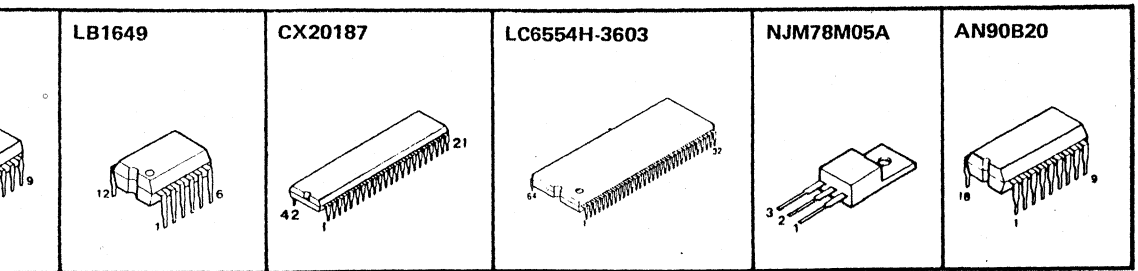
RESISTOR 25C2603(E.F) or 25C1740S(S.R) or 25C3312(R.S.T)

15S133

ICM DTC114ES

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
□	CARBON FILM RESISTOR 1/16W
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
■	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊙	SEMI VARIABLE RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
①	MICA CAPACITOR
⊖	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR



CAUTION

- Components having special characteristics are marked △ and must be replaced with parts having specifications equal to those originally installed.
- All voltages are measured with a 10MΩ/V DC electric volt meter.
- Schematic diagram is subject to change without notice.

■ WARNING

PARTS LIST

■ ELECTRICAL PARTS

Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.
Carbon resistors 1/6 W are not included in the ELECTRICAL PARTS list.
For the parts No. of the carbon resistor, refer to P. 31.

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	リンク
※	NA:09:72:90	Main Circuit Board	メ イ ン シ ー ト				
	FG:11:25:60	Ceramic Cap.	セ ラ コ ン	C185,186			
	FG:21:31:50	//	//	C201,202			
	FG:24:41:00	//	//	C149,150,181,182,187,188			
	FG:24:42:20	//	//	C183,184			
	FH:61:11:00	//	//	C190			
	FA:15:31:00	Mylar Cap.	マ イ ラ ー コ ン	C111,112			
	FA:15:31:80	//	//	C171,172			
	FA:15:33:30	//	//	C123,124			
	FA:15:33:60	//	//	C173~176			
	FA:15:34:70	//	//	C127,128			
	FA:15:36:80	//	//	C141,142			
	FA:15:41:00	//	//	C107,108,143,144,153,169,170			
	FA:15:41:50	//	//	C115,116,133,134			
	FA:15:44:70	//	//	C139,140			
	FA:15:46:80	//	//	C137,138			
	FA:15:51:00	//	//	C151,152,163,164			
	VE:01:66:00	Electrolytic Cap.	ケ ミ コ ン (DUOREX)	C105,106			
	VE:01:79:00	//	//	C101,102			
	VE:01:82:00	//	//	C119,120,161,162			
	VE:01:83:00	//	//	C145,146			
	UH:14:64:70	//	ケ ミ コ ン	C121,122,147,148			
	UH:14:71:00	//	//	C109,110,113,114,125,126,154,167,168,191,199			
	UH:14:72:20	//	//	C165,166,198			
	UH:14:74:70	//	//	C193,194,200			
	UH:14:81:00	//	//	C189,192			
	UH:15:74:70	//	//	C156			
	UW:56:51:50	//	//	C131,132			
	UJ:16:52:20	//	//	C135,136			
	UH:16:54:70	//	//	C129,130			
	UH:16:61:00	//	//	C155			
	UH:16:62:20	//	//	C117,118			
	FM:11:61:00	//	B P コ ン	C195,196			
	UM:40:64:70	//	ケ ミ コ ン	C203~205			
	FZ:00:41:30	Ceramic Cap.	セ ラ コ ン	C207,208			
	UT:45:21:00	Polypropylene Film Cap.	ポ リ プ ロ コ ン	C177,178			
	UT:45:24:70	//	//	C179,180			
	UT:45:28:20	//	//	C157,158			
	UT:45:31:20	//	//	C103,104			
	GE:20:05:10	Dolby Filter	ドルビーフィルター	FI101,102 } Inter-			
	VB:75:89:00	Coil MPX	M P X コ イ ル	// } changeable			
	VE:79:74:00	Bead Filter	ZBF-503S-01	ビーズフィルター	FBI		
	GE:90:04:80	Bias Trap Coil	105kHz	バイアストラップコイル	FI105,106 } Inter-		
	GE:90:07:80	//	105kHz	//	// } changeable		
	VB:75:88:00	Skewing Coil		スキューイングコイル	FI103,104		
	GE:90:09:60	Coil	820μH	固 定 コ イ ル	L107,108		
	GE:90:16:50	//	15mH	//	L101,102,103,104		
	VA:70:99:00	Step-up Coil	105kHz	ステップアップコイル	L105,106		
	VD:82:76:00	Ceramic Resonator	4MHz	セラミック共振子	XL101		
	HL:32:42:70	Metal Oxide Film Resistor	27Ω 2W	酸 金 抵 抗	R233		

※New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	VB 86 14 00	//	B4.7kΩ	//	VR111,112		
	VB 86 16 00	//	B 22kΩ	//	VR105,106,110,113,114		
	VE 11 14 00	Resistor, Array	10kΩ×8	抵 抗 ア レ ー	R228		
※	VE 61 32 00	Potentiometer Slide	B100kΩ×2	ス ラ イ ド V R	VR102		
	VA 87 80 00	//	A50kΩ×2	//	VR101		
	VA 87 79 00	// Rotary	A 5kΩ×2	ロ ー タ リ ー V R	VR107		
	VD 91 37 00	//	A50kΩ	//	VR103,104		
※	VE 85 74 00	//	A 2kΩ	//	VR115		
	iA 11 15 10	Transistor	2SA1115(E,F)	ト ラ ン ジ ス タ ー	Q121	Inter-changeable	
	iA 09 33 70	//	2SA933S(Q,R)	//	//		
	iA 13 10 00	//	2SA1310(R,S,T)	//	//		
	iA 09 34 00	//	2SA934	//	Q114	Inter-changeable	
	iB 05 44 10	//	2SB544	//	//		
	iC 26 03 10	//	2SC2603(E,F)	//	Q103,104, 115~117,123~125	Inter-changeable	
	iC 17 40 00	//	2SC1740S(S,R)	//	//		
	iC 33 12 00	//	2SC3312(R,S,T)	//	//		
	iD 06 55 10	//	2SD655(E,F)	//	Q105~108	Inter-changeable	
	iD 13 02 00	//	2SD1302(R,S)	//	//		
	VA 71 00 00	//	2SD1468(Q,R,S)	//	//		
	VD 67 87 00	Digital Transistor	DTC114ES	デジタルトランジスター	Q101,102,111~113 118~120,122		
	iF 00 34 50	Diode	1SS133	ダ イ オ ー ド	D101~104,107,108, 113~120		
	iF 01 06 30	Zener Diode	MTZ4.3B	ツェナーダイオード	D112		
	iF 01 07 40	//	MTZ6.2B	//	D111		
	iF 00 64 70	//	MTZ7.5B	//	D109		
	iF 01 08 70	//	MTZ9.1C	//	D110		
	VD 85 31 00	Remote Control Receptor Unit	GPIU501	リモコン受光ユニット	U101	KX-W900	
	iG 03 47 00	IC	AN6551	I C	IC103,106	Inter-changeable	
	iG 07 68 00	//	NJM4558S	//	//		
	iG 13 22 00	//	BA715	//	//		
	iG 07 74 10	//	NJM4556S-A	//	IC105,107,108		
	iG 08 29 00	//	NJM2043S-D	//	IC102		
	iG 14 60 00	//	HA12067NT	//	IC114		
	XA 30 00 01	//	μPC1297CA	//	IC110		
	XD 86 40 01	//	μPC1330HA	//	IC101		
	XB 29 80 01	//	CX20187	//	IC104		
	XA 29 90 01	//	LB1649	//	IC112		
※	XD 84 50 01	//	LC6554H-3603	//	IC113		
	VE 04 07 00	Bias OSC Block		バイアスOSCブロック	IC111		
	iG 08 99 00	Transistor Array	AN90B20	トランジスターアレー	IC109		
※	VE 62 08 00	Display Tube	CPF1078GR	蛍 光 表 示 管	VI01		
※	VE 61 31 00	Switch, Push		プッシュスイッチ	SW101		

※ New Parts (新規部品)

[illegible]

※New Parts (新規部品)

[illegible]

※New Parts (新規部品)

EXPLODED VIEW PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※ 1	VE 72 74 00	Tape Mechanism Unit	テープメカユニット	Black			
※ //	VE 72 75 00	//	//	Silver			
※ 1-1	VE 61 11 00	Cassette Mechanism Unit	カセットデッキメカ				
1-2	VD 94 13 00	Sub Panel	サ ブ パ ネ ル	Silver	KX-800		
//	VD 94 14 00	//	//	Black	KX-800		
1-3	CB 60 98 80	Cassette Guide (R)	カセットガイド(R)		K-5100		
//	CB 62 85 70	// (L)	// (L)		K-520		
※ 2	VE 72 76 00	Panel Unit	パ ネ ル ユ ニ ッ ト	Black		R,A,B,G	
※ //	VE 72 77 00	//	//	Black		U,C	
※ //	VE 72 78 00	//	//	Silver		R,A,B,G	
※ //	VE 72 79 00	//	//	Silver		U,C	
2-1	CB 63 63 70	Button	ボ タ ン	Silver EJECT	K-1020		
//	CB 63 63 80	//	//	Black //	K-1020		
2-2	AA 62 89 60	Spring	ス プ リ ン グ		K-540		
2-3	VA 85 24 00	Knob	ノ ブ	Silver	K-540		
//	VA 85 25 00	//	//	Black	K-540		
2-4	CB 63 64 30	Slider	ス ラ イ ダ ー		K-1020		
2-5	AA 62 89 50	Shaft	シ ャ フ ト				
2-6	CB 06 88 80	Plastic Rivet	プラスチックリベット				
2-7	Ei 03 01 06	Binding Head Tapping Screw	3×10 ZMC2-Y バインドタッピングネジ	PACK			
※ 3	NA 09 72 90	Main Circuit Board	メ イン シ ー ト				
4	NA 09 57 00	Power Transformer Ass'y	パ ワ ー ト ラ ンス Ass'y		KX-800	U,C	
//	NA 09 57 10	//	//		KX-800	R	
//	NA 09 57 20	//	//		KX-800	A,B	
//	NA 09 57 30	//	//		KX-800	G	
5	CB 61 68 10	Cord Stopper	CM-22A コ ー ド ス ト ッ パ ー			U,C	
//	CB 62 01 90	//	CM-22B //			R,A,B,G	
6	VE 64 00 00	Power Cord Ass'y	パ ワ ー コ ー ド Ass'y		KX-800	U,C	
//	VE 22 29 00	//	//			R	
//	VE 04 29 00	//	//		KX-800	A	
//	VE 04 31 00	//	//		KX-800	B	
//	VE 04 34 00	//	//		KX-800	G	
7	NB 63 05 30	Chassis	シ ャ ー シ		K-340	U,C,A,B,G	
//	NB 63 05 50	//	//		K-340	R	
8	CB 63 42 80	Rod	ロ ッ ド	Power	K-220		
9	CB 63 67 50	Button	ボ タ ン	Silver POWER	CD-X2		
//	CB 65 20 60	//	//	Black //	LV-X1		
10	CB 66 21 50	Knob	ノ ブ	Silver AUTO MODE OUTPUT LEVEL BIAS ADJUST	KX-200		
//	CB 63 42 70	//	//	Black //	K-720		
11	CB 62 60 30	//	//	Silver REC LEVEL	K-520		
//	CB 62 60 40	//	//	Black //	SR-50		
※ 12	VE 61 06 00	//	//				
※ //	VE 61 07 00	//	//				
13	VD 63 65 00	Rod	ロ ッ ド		KX-800		
14	VE 01 25 00	Button	3×14 ボ タ ン	Silver MPX FILTER DOLBY NR.	KX-800		
//	CB 66 07 90	//	3×14 //	Black //	AX-900		
15	CB 62 52 50	Lid Cover	リ ッ ド カ バ ー		K-17		
16	VE 60 85 00	Sub Panel Lid	リ ッ ド サ ブ パ ネ ル	Silver	KX-300		
//	VE 60 86 00	//	//	Black	KX-300		
17	VD 63 62 00	Top Cover	ト ッ プ カ バ ー	Silver	KX-800		
//	VD 63 63 00	//	//	Black	KX-800		
18	CB 06 88 80	Plastic Rivet	プラスチックリベット			R	

※New Parts (新規部品)

※New Parts (新規部品)

A

B

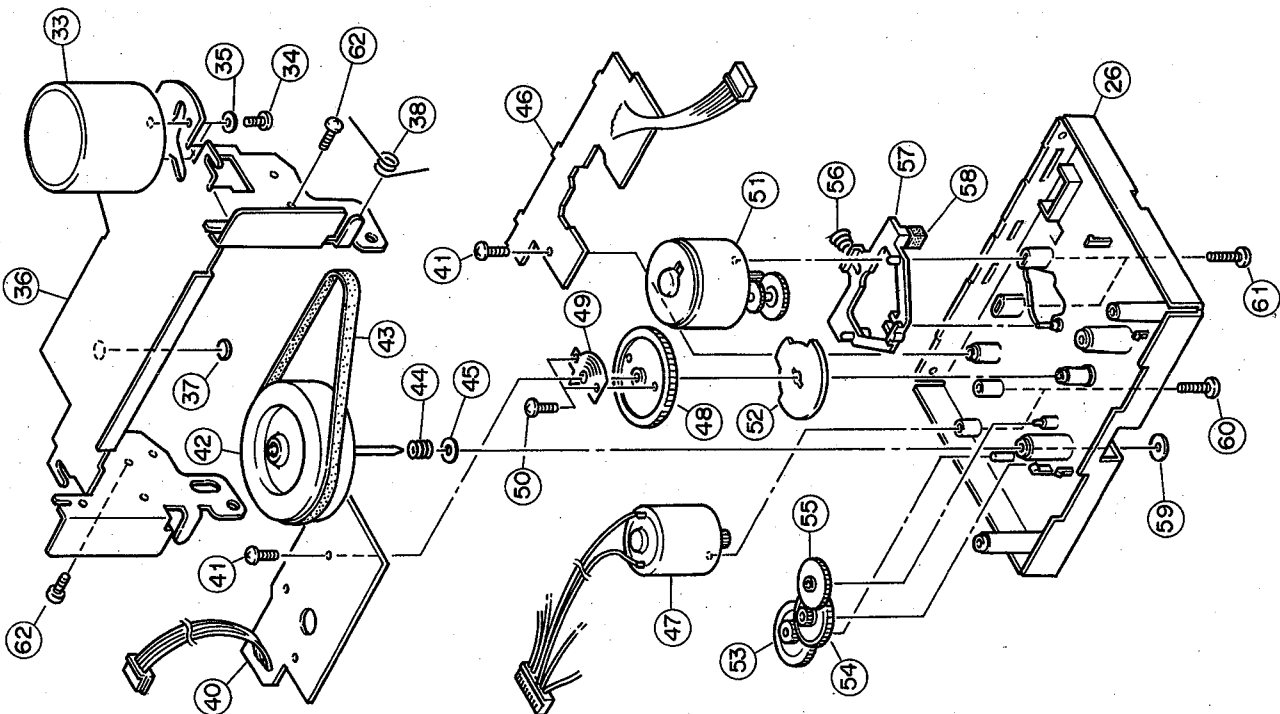
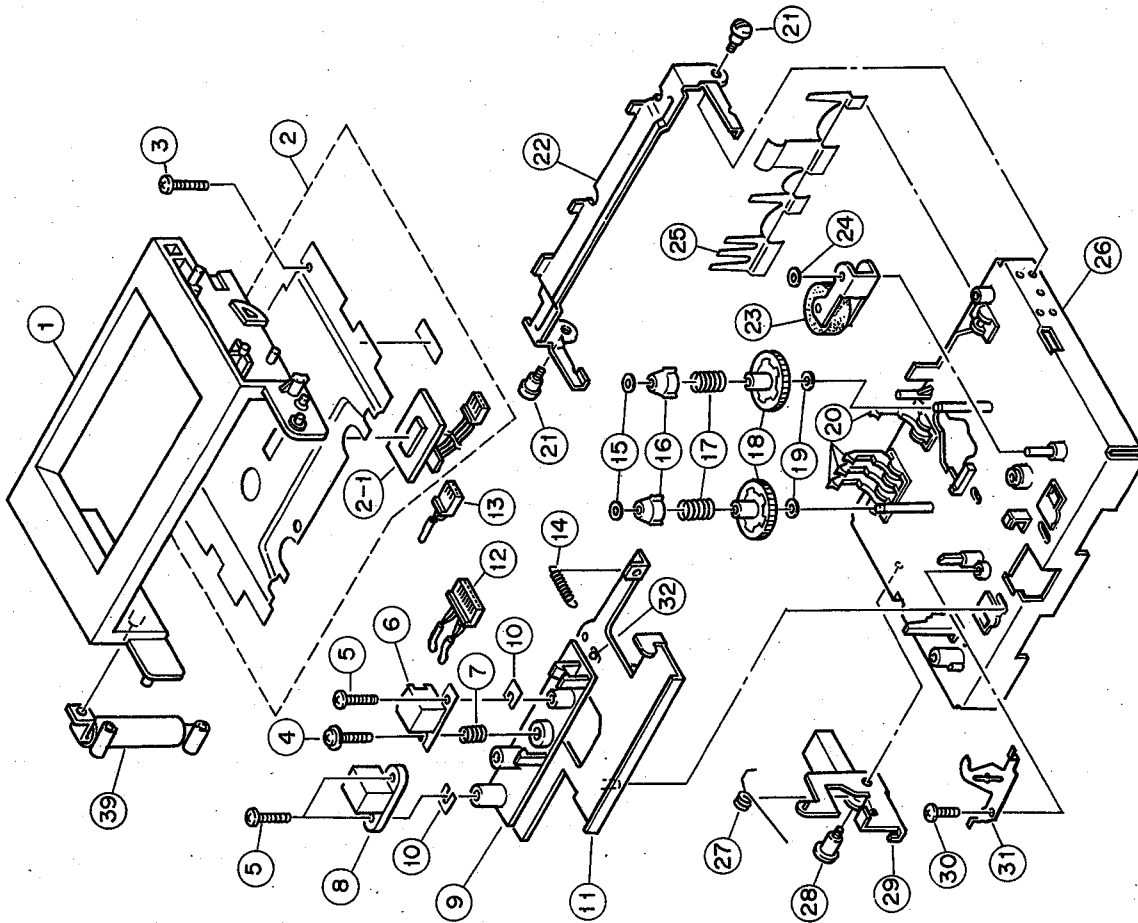
C

D

E

KX-500/U

MECHANISM EXPLODED VIEW



MECHANISM PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks/Markets	Common Model	リンク
※	VE 61 11 00	Cassette Mechanism Unit	カセットメカユニット			
1	XX 67 42 00	Cassette Holder	カセットホルダー		K-540	KGC103823
※	2 NX 60 16 90	Blind Plate Ass'y	ブラインドプレートAss'y			KGE015954
2-1	XX 67 42 20	LED	L E D		K-540	KGD103860
3	XX 67 46 90	Pan Head Tapping Screw	ナベSタイト			KGE103865
4	XX 67 47 00	Special Screw	ギザフランジナベ小ネジ			SEE3053601
5	XX 67 47 30	Binding Head Screw	2×12 ZMC2-Y バインド小ネジ	PACK		SEE3053806
6	GX 60 17 50	REC/PLAYBACK Head	録再ヘッド		KX-300	SGE6500101
7	XX 67 42 50	Coil Spring	圧縮コイルバネ			SIE2401101
8	XX 67 42 60	Erase Head	消去ヘッド		K-540	308860103
※	9 AX 60 26 00	Head Base	ヘッド台座			SID1100903
10	XX 64 06 50	Spacer	スペーサー		K-1020	SIE3401102
11	XX 67 42 80	Head Base Plate	ヘッドベース		K-540	KGD015444
※	12 MX 60 06 90	Connector	コネクタ			SEE2717931
※	13 MX 60 07 00	//	//			SEE2717921
14	XX 67 43 10	Coil Spring	引張コイルバネ			SIE2403701
15	XX 64 12 10	Washer	φ1.8×φ3.2×t0.5 平座金		K-1020	SEE1022802
16	XX 67 43 20	Reel	リール爪		K-540	KGD103625
17	XX 67 43 30	Spring	圧縮バネ		K-540	KGE103842
18	XX 67 43 40	Reel Base Ass'y	リール台Ass'y		K-540	KGE015441
19	XX 64 03 60	Washer	φ2.1×φ4.5×t0.1 平座金		K-720	PBE16032
20	XX 67 43 50	Switch Lever Ass'y	スイッチレバーAss'y		K-540	KGE015299
21	XX 67 43 60	Screw Shaft	軸		K-540	KGE103508
22	XX 67 43 70	Release Arm	解除アーム		K-540	KGD103511
23	XX 67 43 80	Pinch Roller Ass'y	ピンチローラーAss'y		K-540	KGE015430
24	XX 64 03 40	Washer	φ2.7×φ6.0×t0.5 平座金		K-720	SEE1022826
25	XX 67 43 90	Spring	戻しバネ		K-540	KGD103512
26	XX 67 44 00	Chassis	シャーシ		K-540	KGD015468
27	XX 67 44 10	Coil Spring	コイルバネ		K-540	KGE103816
28	XX 67 44 20	Shaft	軸		K-540	KGE103509
29	XX 67 44 30	Lock Lever Ass'y	ロックレバーAss'y		K-540	KGD015443
30	EA 02 60 86	Pan Head Screw	M2.5×8 ZMC2-Y ナベ小ネジ	PACK		SEE3053502
31	XX 67 44 40	Head Base Holder Plate	ヘッドベース押え板		K-540	KGE103749
32	EZ 00 15 30	Steel Ball	φ2 スチールボール		KX-800	SIE3600201
※	33 JX 60 02 00	Motor, Capstan	キャプスタンモーター			KGE015764
34	XX 62 36 30	Pan Head Screw	2.5×3.5 ナベ小ネジ			KGE103614
35	EV 30 02 66	Spring Washer	φ2.6 スプリングワッシャー	PACK		
36	XX 67 44 60	Motor Bracket	モーターブラケット		K-540	KGC103752
37	XX 67 44 70	Thrust Bearing	スラスト受		K-540	SIE3300701
38	XX 67 44 80	Coil Spring	コイルバネ		K-540	KGE103881
39	XX 67 44 90	Damper Unit	ダンパーユニット		K-540	SIE9903001
※	40 NX 60 17 00	Control PCB Ass'y	コントロール板Ass'y			KGD015950
41	XX 67 47 10	Screw	タッピンネジ			KGE103483
42	XX 67 45 10	Flywheel	フライホイール		K-540	KGD103811
43	XX 67 45 20	Belt	平ベルト		K-540	KGE103762
44	XX 67 45 30	Coil Spring	圧縮コイルバネ		K-540	KGE103845
45	XX 69 63 70	Washer	φ2.6×φ9.5×t0.5 平座金			KGE103912
※	46 NX 60 17 10	Sensor Switch PCB Ass'y	検知SW基板Ass'y			KGD015951
47	XX 67 45 70	Assist Motor Ass'y	アシストモーターAss'y		K-540	KGE015408
48	XX 67 45 80	Gear	接片歯車		K-540	KGD103485
49	XX 67 45 90	Contact Rotary	ロータリー接片		K-540	SIE3402401
50	XX 67 47 20	Pan Head Screw	ナベ小ネジ		K-540	SEE3052201

※New Parts (新規部品)

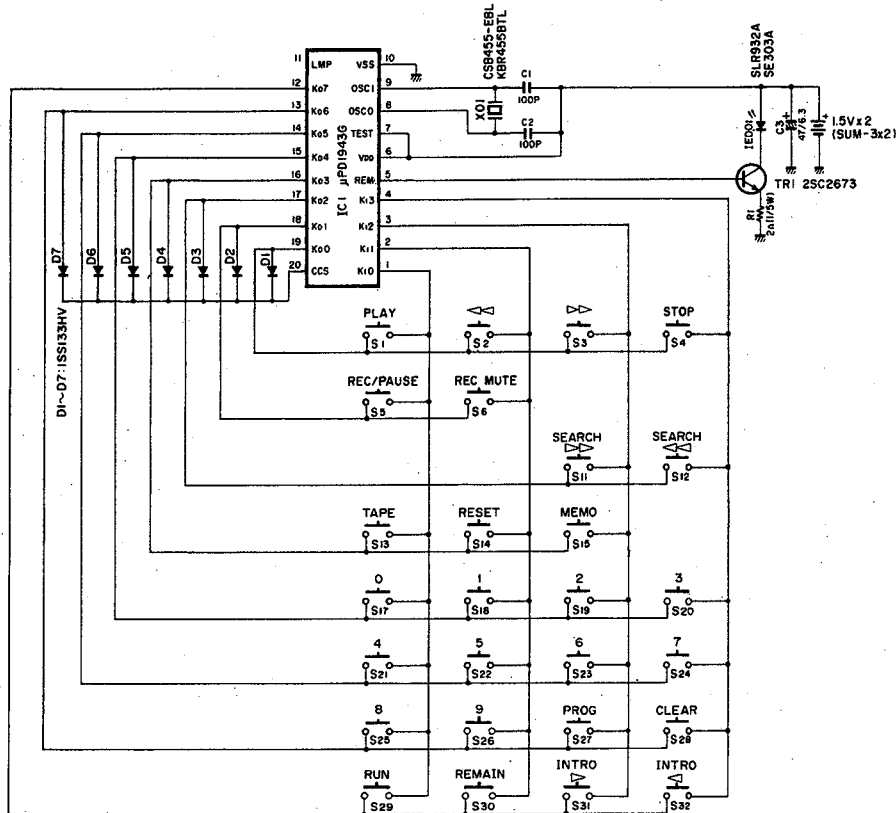
[illegible]

※New Parts (新規部品)

KX-500/U

REMOTE CONTROL TRANSMITTER

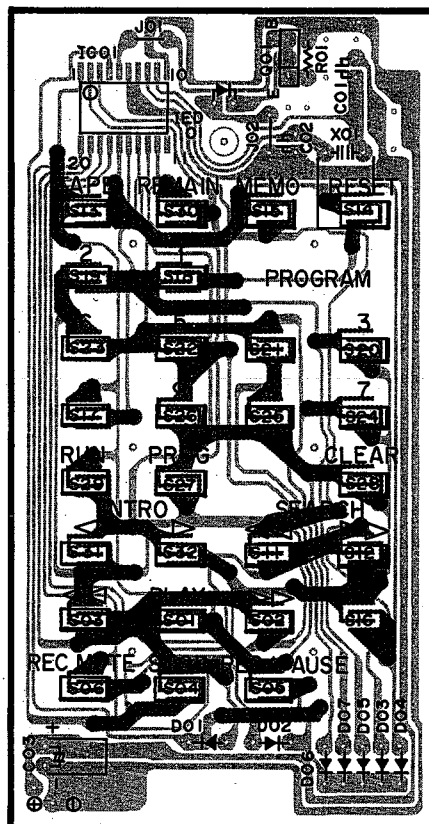
SCHEMATIC DIAGRAM



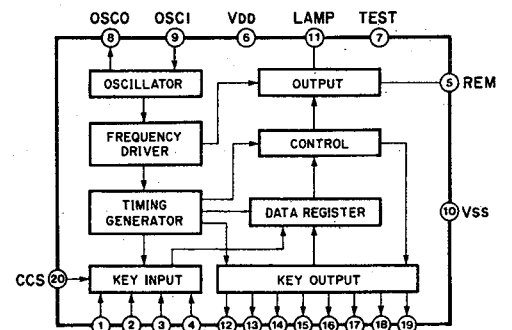
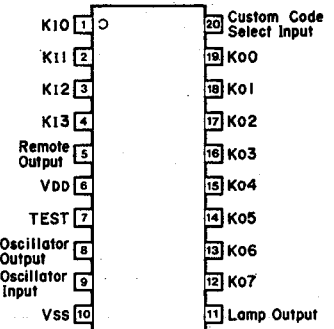
FUNCTION	DATA CODE
PLAY	00
◀◀	01
▶▶	02
STOP	03
REC/PAUSE	04
REC/MUTE	05
SEARCH▶▶	0A
SEARCH◀◀	0B
TAPE	0C
RESET	0D
MEMO	0E
0	10
1	11
2	12
3	13
4	14
5	15
6	16
7	17
8	18
9	19
PROG	1A
CLEAR	1B
RUN	1C
REMAIN	1D
INTRO▶	1E
INTRO◀	1F

CUSTOM CODE
7F

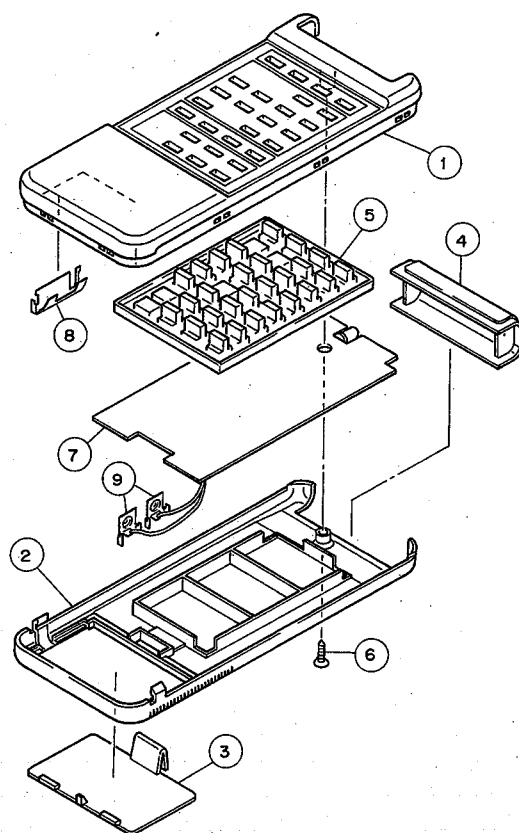
PRINTED CIRCUIT BOARD



IC1: μPD1943G



EXPLODED VIEW



Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※	VE 71 89 00	Remote Control Transmitter	リモートコントロールトランスミッター	Black			
※	VE 71 90 00	//	//	Silver			
※	I CX 60 35 00	Case (A)	ケース (A)	Black			
※	// CX 60 35 10	//	//	Silver			
	2 XX 67 16 20	Case (B)	ケース (B)	Black			
	// XX 67 17 10	//	//	Silver			
	3 XX 67 16 30	Case (C)	ケース (C)	Black			
	// XX 67 17 20	//	//	Silver			
	4 XX 67 16 40	Filter	フ ィ ル タ ー				
※	5 CX 60 35 20	Rubber Contact	ゴ ム 接 点	Black			
※	// CX 60 35 30	//	//	Silver			
	6 XX 67 16 60	Flat Head Screw	皿 小 ネ ジ	Black			
	// XX 67 17 50	//	//	Silver			
※	7 NX 60 05 60	P.C. Board Ass'y	プリント基盤 Ass'y				
	8 XX 67 16 80	Dry Cell Terminal (A)	電池電極板 (A)				
※	NX 60 05 60	P.C. Board Ass'y	プリント基盤 Ass'y				
	iX 60 16 00	IC	μPD1943G	I C	ICI		
	QX 60 00 40	Ceramic Resonator	KBR455BTL	セラミック振動子	XI		
	FG 21 21 00	Ceramic Cap.	100pF 50V	セラコン	C1, 2		
	UJ 11 74 70	Electrolytic Cap.	47μ 6.3V	ケミコン	C3		
	iC 26 73 00	Transistor	2SC2673	トランジスタ	Q1		
	HX 60 14 00	Carbon Resistor	2Ω 1/4W	カーボン抵抗	R1		
	iX 60 36 00	IED	SLR-932A	I E D	IED1		
	iF 00 34 50	Diode	ISS133	ダイオード	D1~7		
9	XX 67 16 90	Dry Cell Terminal (B)	電池電極板 (B)				

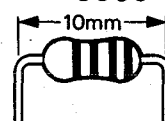
※New Parts (新規部品)

Parts List for Carbon Resistor

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ353100	HF853100	12K Ω	HJ357120	HF857120
1.8 "	HJ353180	*	15 "	HJ357150	HF857150
2.2 "	HJ353220	HF853220	18 "	HJ357180	HF857180
3.3 "	HJ353330	HF853330	22 "	HJ357220	HF857220
4.7 "	HJ353470	HF853470	27 "	HJ357270	HF857270
5.6 "	HJ353560	HF853560	33 "	HJ357330	HF857330
10 "	HJ354100	HF854100	39 "	HJ357390	HF857390
15 "	HJ354150	HF854150	47 "	HJ357470	HF857470
22 "	HJ354220	HF854220	56 "	HJ357560	HF857560
27 "	HJ354270	HF854270	68 "	HJ357680	HF857680
33 "	HJ354330	HF854330	82 "	HJ357820	HF857820
39 "	HJ354390	HF854390	91 "	HJ357910	HF857910
47 "	HJ354470	HF854470	100 "	HJ358100	HF858100
56 "	HJ354560	HF854560	120 "	HJ358120	HF858120
68 "	HJ354680	HF854680	150 "	HJ358150	HF858150
82 "	HJ354820	HF854820	180 "	HJ358180	HF858180
100 "	HJ355100	HF855100	220 "	HJ358220	HF858220
110 "	HJ355110	HF855110	270 "	HJ358270	HF858270
120 "	HJ355120	HF855120	330 "	HJ358330	HF858330
150 "	HJ355150	HF855150	390 "	HJ358390	HF858390
160 "	HJ355160	*	470 "	HJ358470	HF858470
180 "	HJ355180	HF855180	560 "	HJ358560	HF858560
220 "	HJ355220	HF855220	680 "	HJ358680	HF858680
270 "	HJ355270	HF855270	820 "	HJ358820	HF858820
330 "	HJ355330	HF855330	1.0M Ω	HJ359100	HF859100
390 "	HJ355390	HF855390	1.2 "	HJ359120	*
470 "	HJ355470	HF855470	1.5 "	HJ359150	HF859150
510 "	*	HF855510	1.8 "	HJ359180	HF859180
560 "	HJ355560	HF855560	2.2 "	HJ359220	HF859220
680 "	HJ355680	HF855680	3.3 "	HJ359330	HF859330
820 "	HJ355820	HF855820	3.9 "	HJ359390	*
910 "	HJ355910	HF855910	4.7 "	HJ359470	HF859470
1.0K Ω	HJ356100	HF856100			
1.2 "	HJ356120	HF856120			
1.5 "	HJ356150	HF856150			
1.8 "	HJ356180	HF856180			
2.0 "	HJ356200	HF856200			
2.2 "	HJ356220	HF856220			
2.4 "	HJ356240	HF856240			
2.7 "	HJ356270	HF856270			
3.0 "	HJ356300	HF856300			
3.3 "	HJ356330	HF856330			
3.6 "	HJ356360	HF856360			
3.9 "	HJ356390	HF856390			
4.7 "	HJ356470	HF856470			
5.1 "	HJ356510	HF856510			
5.6 "	HJ356560	HF856560			
6.8 "	HJ356680	HF856680			
8.2 "	HJ356820	HF856820			
9.1 "	HJ356910	HF856910			
10 "	HJ357100	HF857100			

1/4W Type

HJ35○○○○



1/6W Type

HF85○○○○

