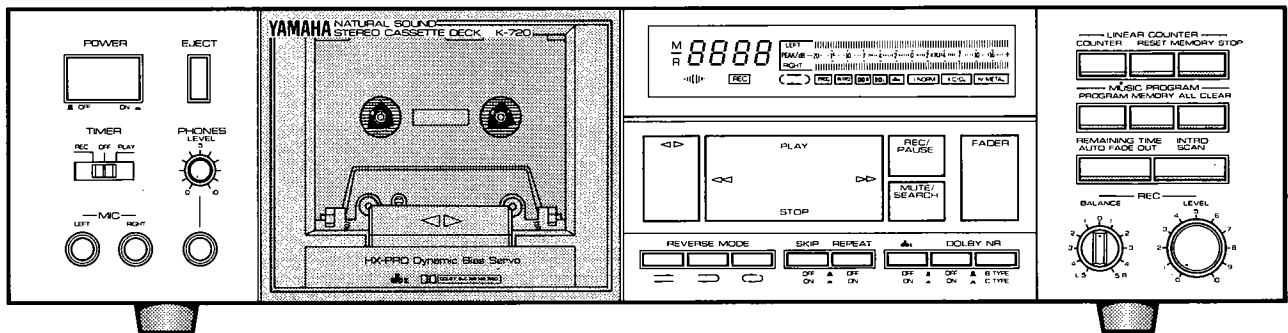


STEREO CASSETTE DECK

K-720

SERVICE MANUAL

FRONT PANEL



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 changes in specification 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.

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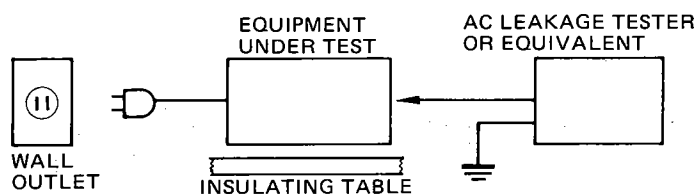
■ TO SERVICE PERSONNEL

1. Critical Components Information.
Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.

2. Leakage Current Measurement (For 120 V Model Only).

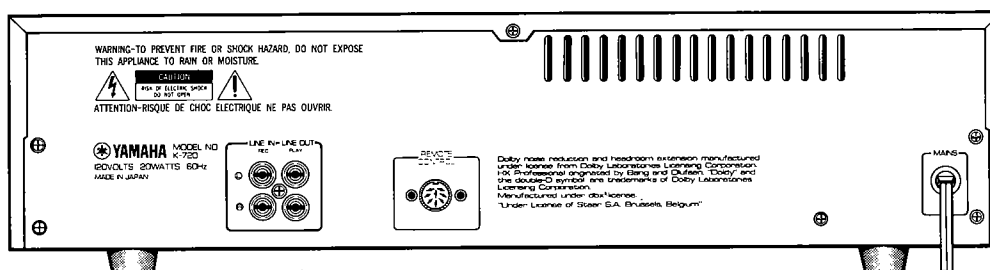
When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.

- 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.

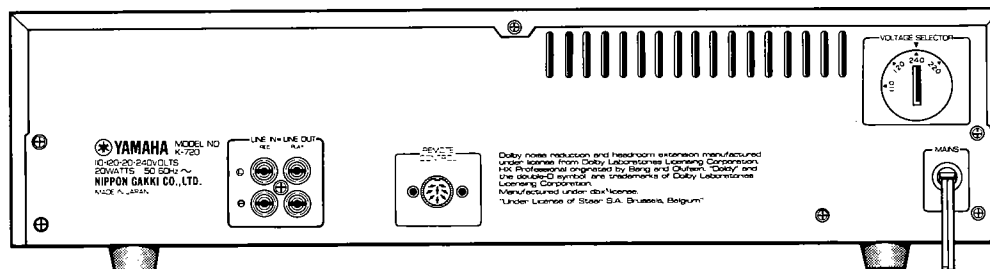


■ REAR PANELS

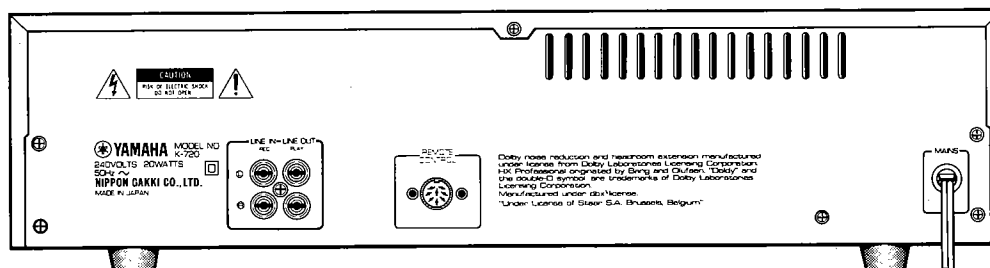
▼ U.S.A. and Canadian models



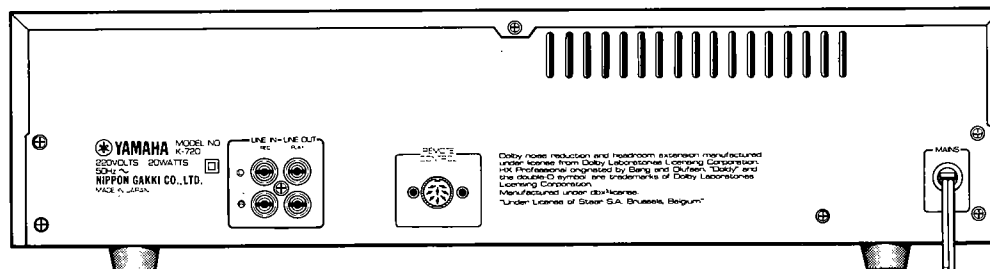
▼ General model



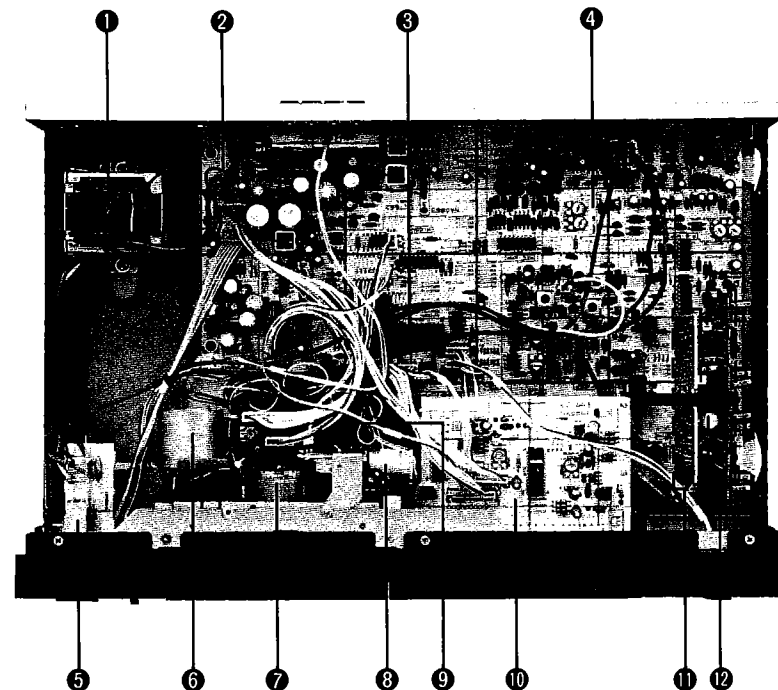
▼ British and Australian model



▼ European model



■ SPECIFICATIONS



Track Configuration	4 track, 2 channel stereo
Motor	DC servo motor (capstan), Flat torque DC motor (reel); DC motor (mech.)
Head System	Sendust rotary rec/playback head system: double gap ferrite erase head
F. Fwd/Rew Time	Approx. 70 sec. (C-60)
Wow & Flutter	
W. RMS/W. PEAK	less than 0.04%/less than $\pm 0.08\%$
Signal-to-Noise Ratio	
(Dolby off, CrO ₂ tape)	better than 59dB
(Dolby B on, CrO ₂ tape)	better than 67dB
(Dolby C on, CrO ₂ tape)	better than 75dB
(dbx on CrO ₂ tape)	better than 90dB
Frequency Response (–20dB)	
Normal Tape	30 ~ 17,000Hz ± 3 dB
CrO ₂ Tape	30 ~ 19,000Hz ± 3 dB
Metal Tape	30 ~ 20,000Hz ± 3 dB
Total Distortion	less than 1.0%

Specifications subject to change without notice.
**TM Dolby laboratories Licensing Corp.*

INTERNAL VIEW

- ① **POWER TRANSFORMER**
 - U.S.A. & Canadian models: GA68640
 - Australian & British models: GA68660
 - European model: GA68650
 - General model: GA68670
- ② **FUSE (F101, 102)**
 - General model: T1A 250V
 - U.S.A. & Canadian models: 1.0A 250V
 - Australian, British and
 - European models: T800mA 250V
- ③ **μ-COM IC : LM6402G-495**
- ④ **MAIN CIRCUIT BOARD**
- ⑤ **POWER SWITCH**
- ⑥ **CAPSTAN MOTOR**
- ⑦ **REEL MOTOR**
- ⑧ **MECHANISM DRIVE MOTOR**
- ⑨ **RELAY CIRCUIT BOARD**
- ⑩ **SUB CIRCUIT BOARD : Drive Display Section**
- ⑪ **dbx CIRCUIT BOARD**
- ⑫ **DOLBY CIRCUIT BOARD**

DISASSEMBLY PROCEDURES (Remove parts in order of disassembly as numbered.)

DISASSEMBLY PROCEDURES OF CABINET PARTS

Removal of Top Cover

Remove 5 screws (①) in Fig. 1.

Removal of Front Panel

Remove 9 screws (②) in Fig. 1.

Removal of Bottom Cover

Remove the lid.

Detach 2 connectors (#1, #2) in Fig. 2.

Remove 6 screws (③) in Fig. 1.

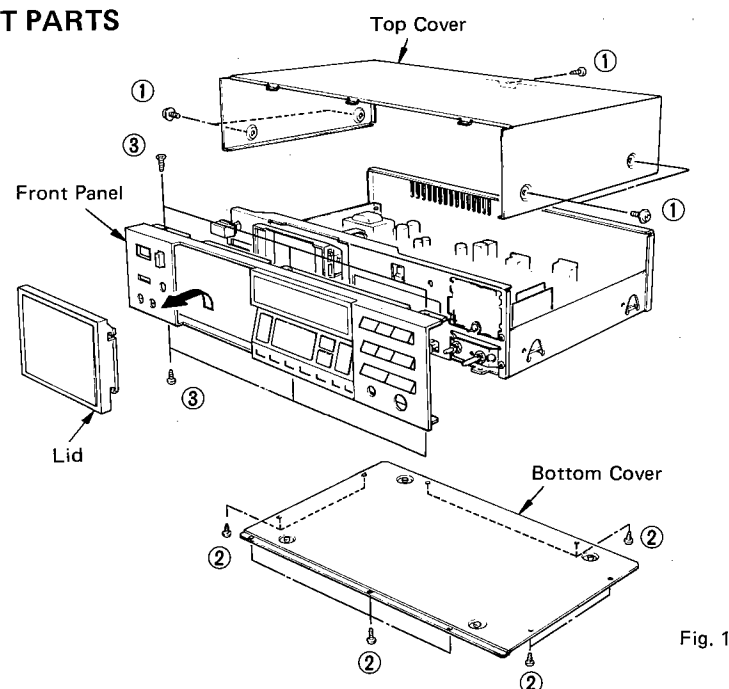
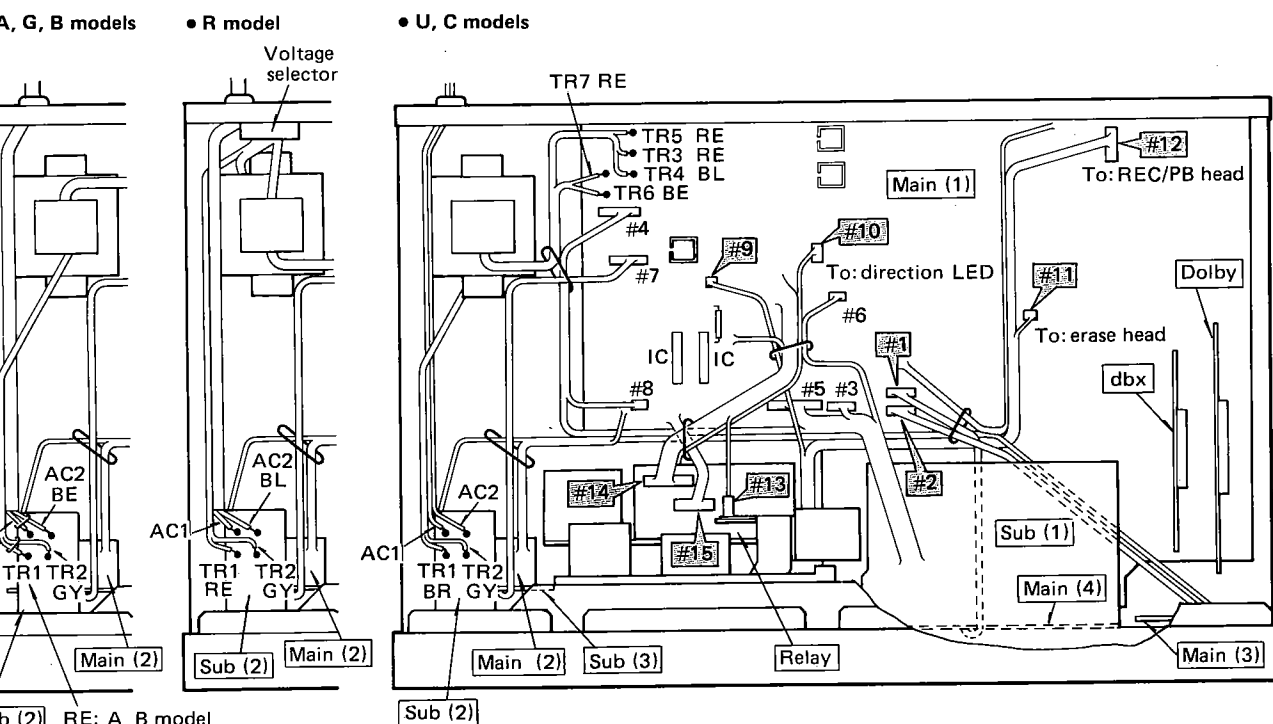


Fig. 1

CONNECTOR WIRING



• WIRE COLOR ABBREVIATIONS

BL ▶ Black	BE ▶ Blue
BR ▶ Brown	VI ▶ Violet
RE ▶ Red	GY ▶ Gray
OR ▶ Orange	WH ▶ White
YE ▶ Yellow	
GR ▶ Green	

Fig. 2

DISASSEMBLY PROCEDURES OF CASSETTE MECHANISM

1. Removal of Cassette Mechanism Unit

a. Remove the top cover.

b. Remove the lid (④) in Fig. 3.

c. Detach 7 connectors (#9 ~ #15) in Fig. 2.

d. Remove 4 screws and plastic rivet (⑤) in Fig. 3 and then pull off the mechanism unit to the back side gently.

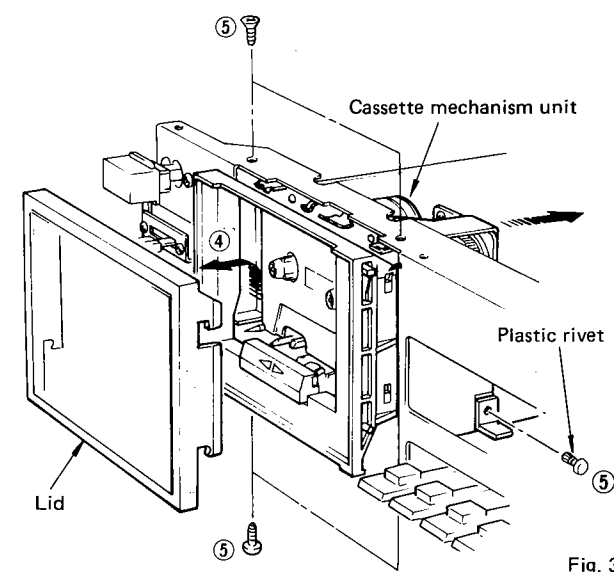


Fig. 3

2. Removal of pinch roller

a. Detach the housing ass'y by removing screw (⑥) in Fig. 4.

b. Remove plastic rivet (⑦) in Fig. 4 and then remove the blind plate.

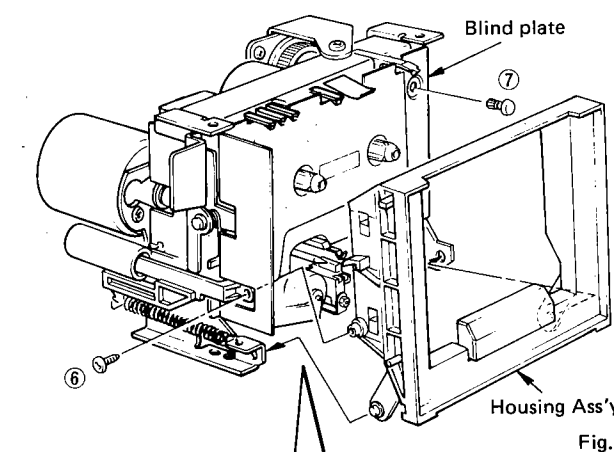
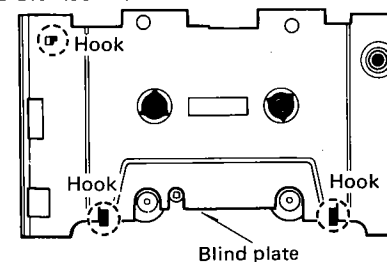


Fig. 4

• NOTE ON ASSEMBLING BLIND PLATE



* For inserting, be sure to set up the three hooks.

c. Remove the E ring (⑧) in Fig. 5.

d. Detach the pinch roller by removing the spring of pinch roller frame.

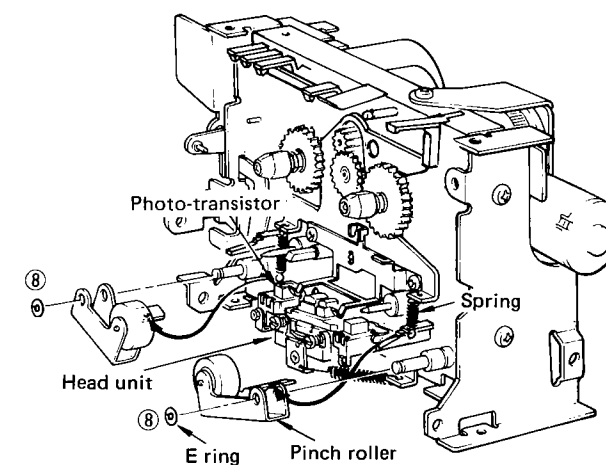


Fig. 5

3. Removal of Head unit

a. Disconnect the lead wires.

* Refer to Fig. 6a for connecting.

b. Remove the spring (A) in Fig. 6a.

c. Remove 2 screws (⑨) in Fig. 6 and then remove the head unit.

* Perform an azimuth adjustment after installing the head unit.

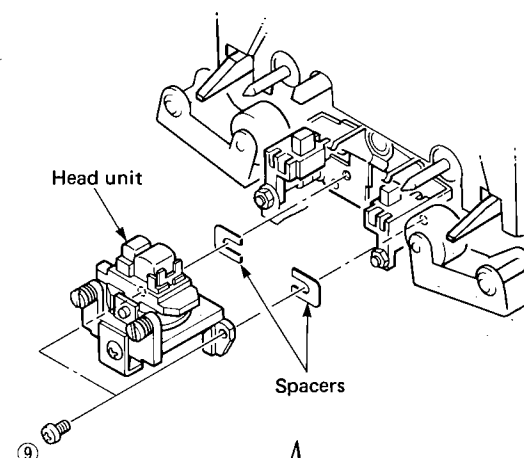


Fig. 6

• Wiring of Head (The figure is shown from under side.)

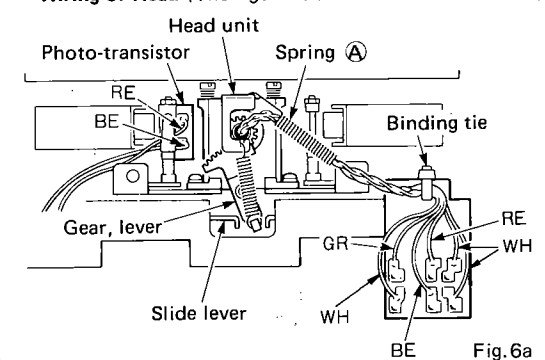
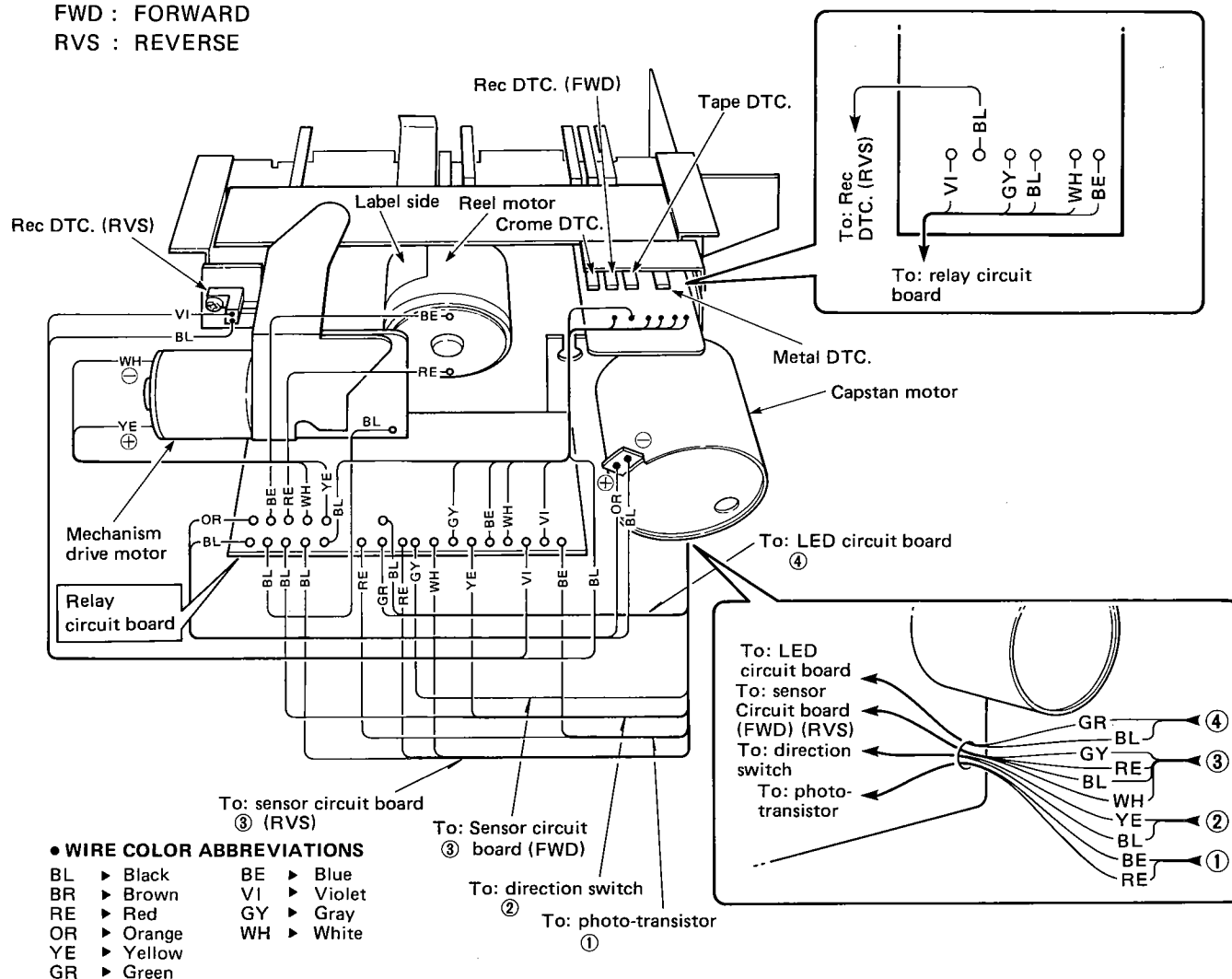


Fig. 6a

● WIRING OF MECHANISM UNIT

FWD : FORWARD

RVS : REVERSE



4. Removal of capstan motor and flywheel belt

- Remove 3 screws (⑩) in Fig.7 and remove the back plate.
- Hang the belt to the direction of revolving rightly. (Fig.7a)

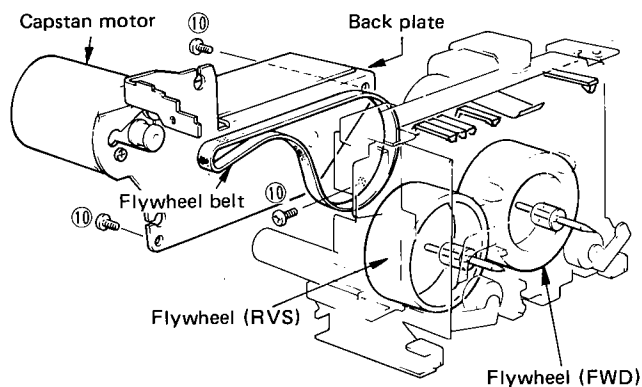
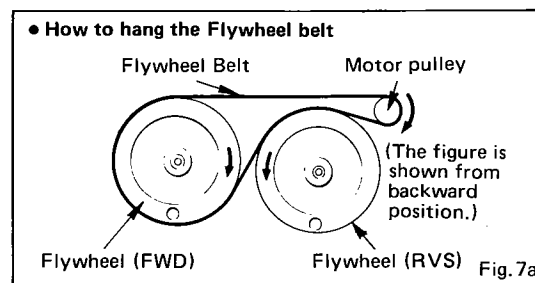


Fig. 7



5. Removal of LED for leader tape detection and photo transistor

Ⓐ Removal of LED

- Detach the back plate by referring to the DISASSEMBLY PROCEDURE 4. (P.6)
- Remove the washers (⑪) in Fig.8 and then remove the flywheel (RVS)..

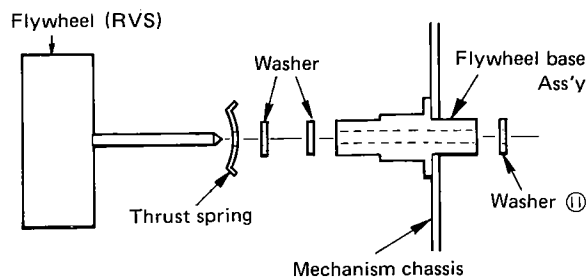


Fig. 8

- Remove 1 screws (⑫) in Fig.9 and then remove the LED circuit board.

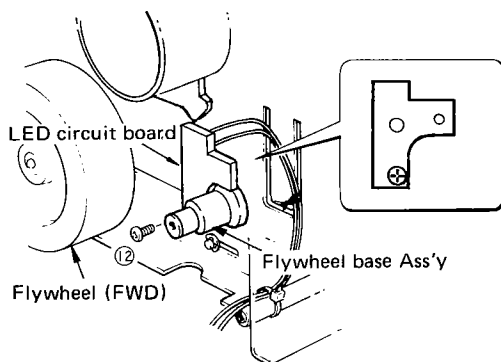


Fig. 9

Ⓑ Removal of photo-transistor

- Remove the hexagonal nut (⑬) in Fig.10 and then remove the photo transistor.

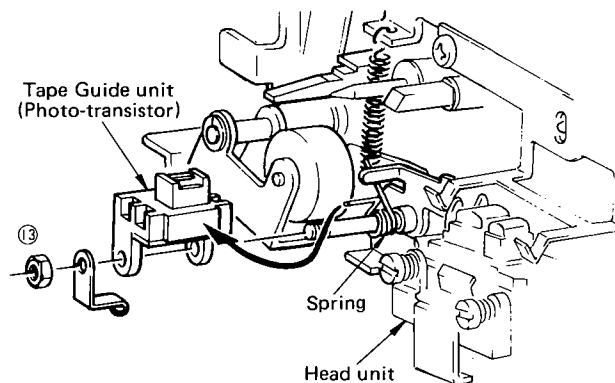


Fig. 10

6. Removal of PAD Unit

- Remove 3 screws (⑭) in Fig.11 and then remove the PAD unit.

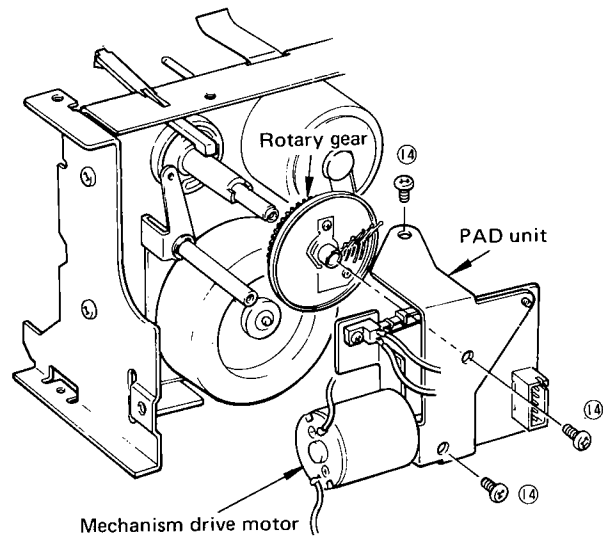


Fig. 11

NOTE ON ASSEMBLING PAD UNIT (Fig. 12)

- Remove extraneous matter such as dust and oil from ① and ② parts (Rotary switch section)
- Insert the PAD unit and rotary gear after assembly.
- For inserting, be sure to align ③, ④, ⑤ and ⑥ correctly. (Fig. 12)

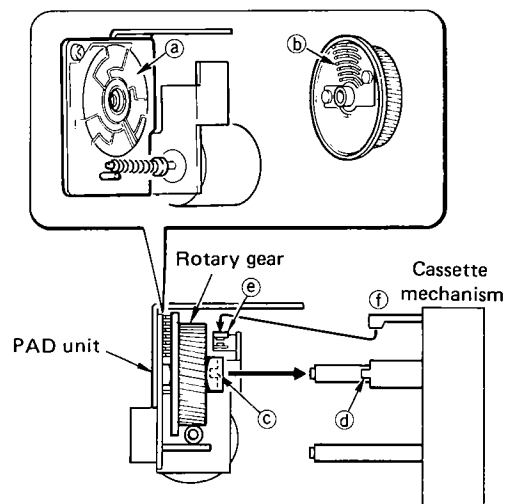


Fig. 12

7. Removal of Sensor Circuit Board

- Remove the back plate, flywheel and PAD unit by referring to the DISASSEMBLY PROCEDURES 4, 5 and 6. (P.6-7)
- In this condition, exchanging the hall IC of the sensor circuit board is possible.

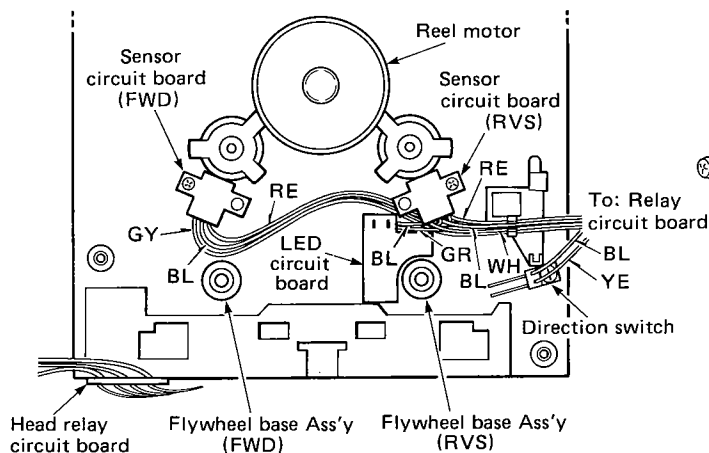


Fig. 13

8. Removal of Reel motor

- Remove the PAD unit by referring to the DISASSEMBLY PROCEDURE 6. (P.7)
- Remove 2 screws (15) in Fig.14 and then remove the reel motor ass'y.

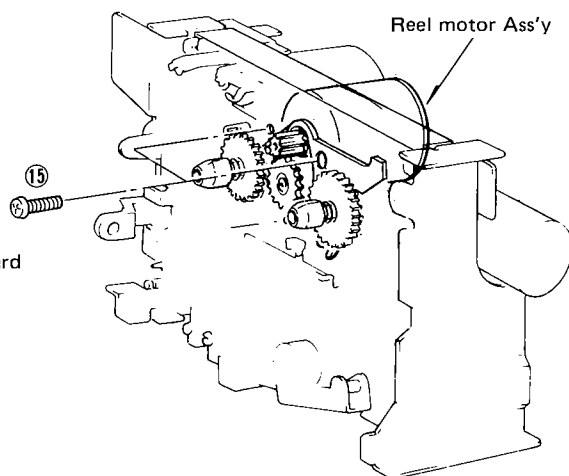


Fig. 14

ADJUSTMENTS

1. Before adjustment:

- 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.
- Proceed with the recording section adjustment after having finished the playback section adjustment.

2. Instruments required

- Audio frequency oscillator
- ACVM or 2 channel ACVM
- Wow/flutter meter
- Oscilloscope
- Torque meter
- DCVM

MECHANICAL ADJUSTMENT

"CONFIRMATION OF TORQUES"

Confirm that torques are within the following ratings.

Item to be Confirmed	Ratings	Measurement conditions
TAKE UP torque	30 ~ 55 g.cm	Couple the Torque Meter (SRK CT-100M) to the deck in play mode, and read the torque of take up reel's. (While in play, read the center of deflection.)
FF torque	More than 70 g.cm	Set the Torque Meter (SRK CT-100M) to the FF mode, and when it was would completely, read the torque of take up reel's.
REW torque	More than 70 g.cm	Set the Torque Meter (SRK CT-100M) to the REW mode, and when winding is over, read the torque of supply reel's.
BACK TENSION torque	2 ~ 4 g.cm	Measure the back tension torque with the Torque Meter (CT-W) in play mode.
Pinch roller pressure	330 ± 30 g	Measure the pinch roller pressure to the capstan in play mode.

"CONFIRMATION OF F. FWD./REW. AND REVERSING TIMES"

Use a C-60 tape and confirm that the time are within the following ratings.

Item to be Confirmed	Time
FF/REW	Less than 80 seconds
REVIEW/CUE	Less than 95 seconds
REVERSE	Less than 0.75 seconds

* Tape reversing time is the open time of the reel motor terminal voltage at the quick reverse.

"MECHANICAL ADJUSTMENT"

Step	Item to be Adjusted	Tape	Instrument required	Mode	Adjustment part	Rating	Remarks
1	Azimuth	MTT-114 10kHz, -10dB	ACVM Oscilloscope	PLAY	Azimuth adjustment screw of rotary head. (Fig. 16)	Set both channel levels to maximum output level.	For the reverse side, turn the tape over. After the adjustment, make sure to apply screw lock paint. (Fig. 17)
2	Height of tape guide	Mirror cassette (MC-09)		PLAY		Adjust the height position so that the tape runs smoothly.	(Fig. 18)
3	Tape speed	MTT-111 3kHz, -10dB	Wow/flutter meter or Frequency counter	PLAY (FWD)	Semi fixed variable resistor at the back of the capstan motor. (Fig. 15)	3000^{+5}_{-15} Hz	*Perform adjustment at the center of the test tape length if possible.
4	Wow/flutter	MTT-111 3kHz, -10dB	Wow/flutter meter	PLAY		Less than 0.07% (JIS WRMS)	After the test tape has run about 30 seconds, check that the meter deflects less than 0.04%.
5	Leader tape DTC.	Maxel: Leader tape	DCVM	REC/PAUSE (RVS)	Semi fixed variable resistor in relay circuit board.	Cathode of D154: more than 6.0V	
		TDK: AD120 Magnetic substance		PLAY (FWD)		Cathode of D154: less than 3.0V	

※ ELECTRICAL ADJUSTMENT

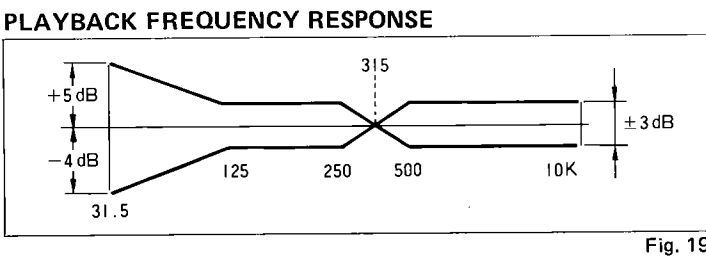
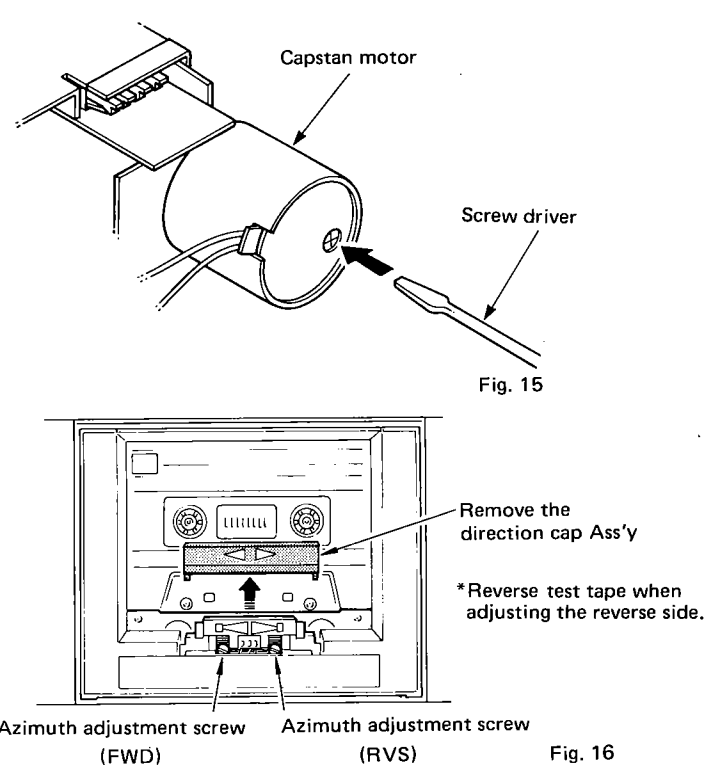
- Proceed with the following adjustment after having finished the mechanical adjustments.

< Playback section >

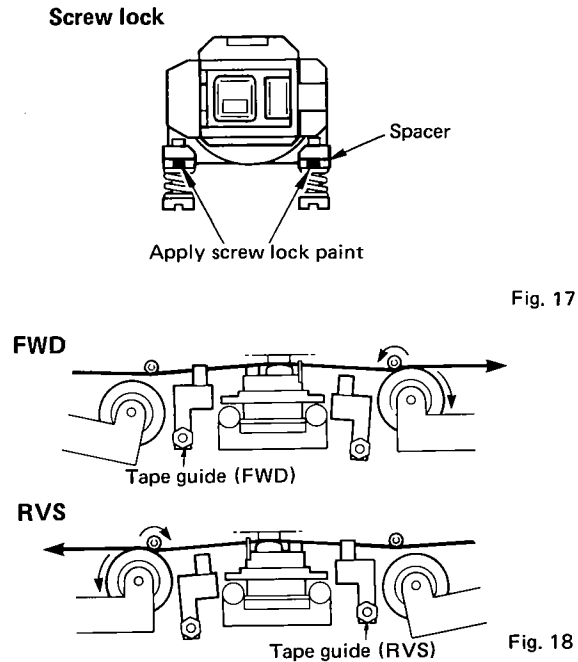
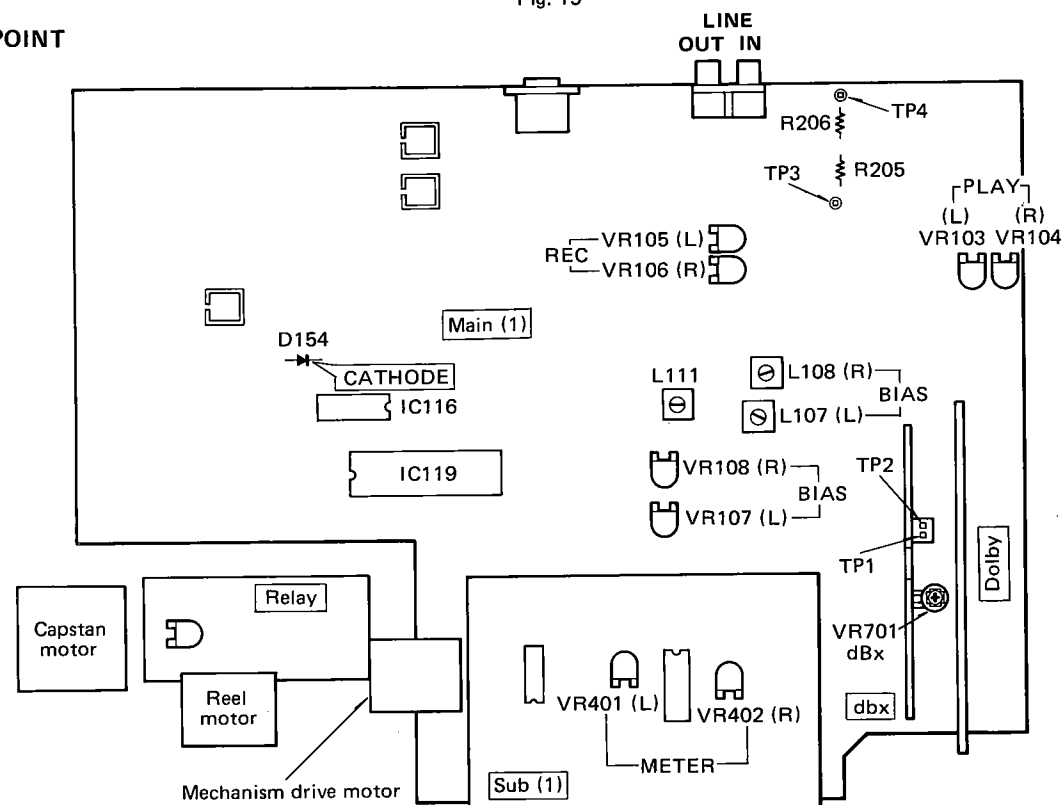
Step	Item to be Adjusted	Tape	Instrument required	Mode	Measurement conditions	Points of measurement	Adjustment parts	Rating
1	Playback level	MTT-212C 315Hz, 160nwb/m or MTT-212 315Hz, 250nwb/m	ACVM	PLAY	PHONES LEVEL volume to be minimum	LINE OUT	VR103 (Lch) VR104 (Rch)	160nwb/m: -9dBV (0.36V) 250nwb/m: -5dBV (0.56V)
2	Confirmation of playback frequency response	Test tape for frequency check. 3180 μ s + 120 μ s (LH) (MTT-256) 3180 μ s + 70 μ s (CrO ₂) (MTT-356)	ACVM Oscilloscope	PLAY		LINE OUT		Check that the 10kHz playback level lies within 0 $\pm$ 3dB of the 315Hz playback level. (Fig. 19)

< Recording section >

Step	Item to be Adjusted	Tape	Instrument required	Mode	Measurement conditions	Points of measurement	Adjustment parts	Rating
1	Bias level	AC-712 (METAL)	ACVM	REC/PAUSE	VR107, 108 $\rightarrow$ MAX	TP3 (Lch) TP4 (Rch)	L107 (Lch) L108 (Rch)	Set the Output levels to maximum
2	Meter		ACVM Audio frequency oscillator	REC/PAUSE	Apply a 333Hz signal to LINE IN terminals. Set the REC LEVEL knob so that LINE OUT voltage is -9dBV (0.35V)	Peak level meter	VR402 (Rch) VR401 (Lch)	Adjust VR401 and VR402 to the lowest level where the 0dB display part of the level meter light up.
3	Record level	AC-512 (CrO ₂)	ACVM Audio frequency oscillator	REC PLAY	Apply a 1kHz signal to LINE IN terminals. Set the REC LEVEL knob so that LINE OUT voltage is -9dBV (0.35V)	LINE OUT	VR105 (Lch) VR106 (Rch)	Set the same level of the record and playback level
4	Record bias (Total frequency response)	AC-512 (CrO ₂)	ACVM Audio frequency oscillator	REC PLAY	Apply a 1kHz signal to LINE IN terminals. Set the REC LEVEL knob so that LINE OUT voltage is -20dBV	LINE OUT	VR107 (Lch) VR108 (Rch)	Set the same level of the record and playback level (Table 1 of P.11)
5	dBV		ACVM	STOP		TP1 $\sim$ TP2	VR701	DC15mV $\pm$ 2mV



• TEST POINT



TOTAL FREQUENCY RESPONSE (-20VU)

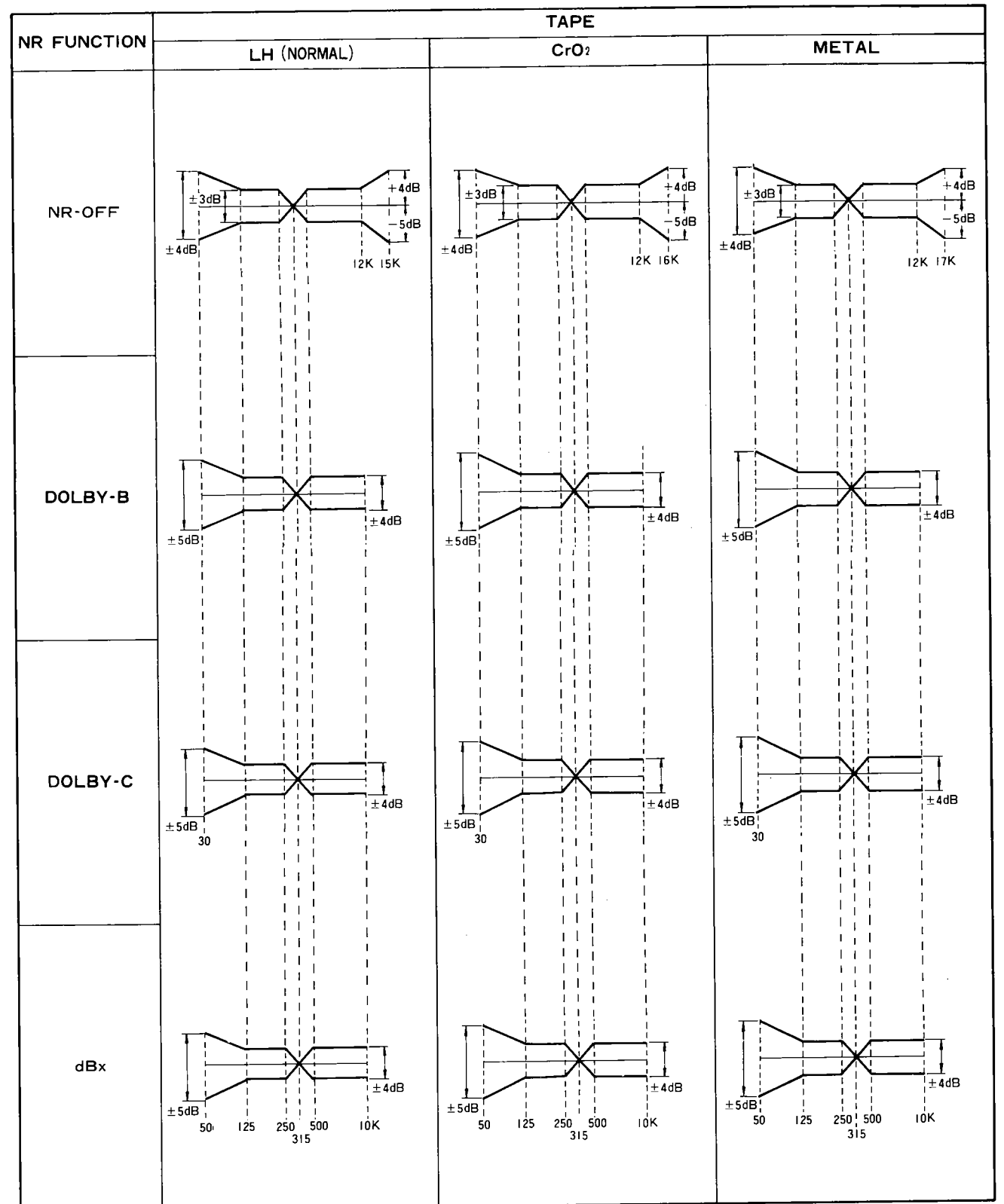
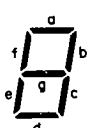


Table 1

LSI DATA TABLES

M6402G-495 (IC119)

NAME	FUNCTION	PIN NO.	NAME	FUNCTION
Xtal	CLOCK, Microcomputer 800kHz	42	EXtal	CLOCK, Microcomputer 800kHz
C ₀	FL DIGIT OUTPUT (1 figure) · KEY SCAN 1	41	VDD	+5V
C ₁	" (2 figure) · " 2	40	B ₃	INPUT PORT (Sensor of each mechanism)
C ₂	" (3 figure) · " 3	39	B ₂	
C ₃	" (4 figure) · " 4	38	B ₁	
INT	Not used (Gnd)	37	B ₀	
RES	RESET, Microcomputer (Reset at "L" Level)	36	A ₃	INPUT PORT Operation key and control switches
D ₀	FL DIGIT OUTPUT (Dot seg.) · KEY SCAN 5	35	A ₂	
D ₁	FADER SIGNAL 2 	34	A ₁	
D ₂	FADER SIGNAL 1 	33	A ₀	
D ₃	CrO ₂ signal	32	I ₂	PULSE INPUT, Reel stand (Left)
E ₀	FL SEGMENT OUTPUT a · M	31	I ₁	PULSE INPUT, Reel stand (Right)
E ₁	" b · —	30	I ₀	PLAY signal
E ₂	" c · R	29	H ₃	REC MUTE (Mute ON at "L" level)
E ₃	" d · 	28	H ₂	LINE MUTE (Mute ON at "L" level)
F ₀	" e · 	27	H ₁	REC BIAS control (Bias ON at "L" level)
F ₁	" f · PROG.	26	H ₀	REC SELECT (Recording at "L" level)
F ₂	" g · INTRO	25	G ₃	Mechanism drive motor control
F ₃	 (C ₀) REC (C ₂) III III III (D ₀)	24	G ₂	
TEST	Gnd.	23	G ₁	Reel motor control
Vss	Gnd.	22	G ₀	

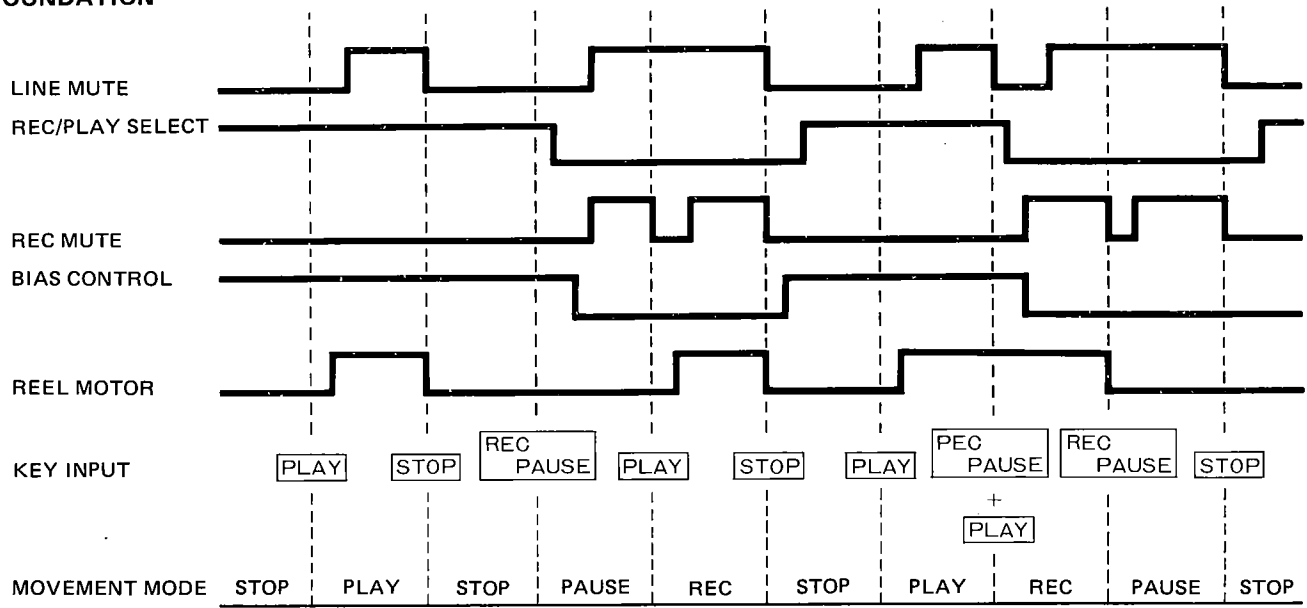
MODE VS OUTPUT

MOVEMENT MODE	OUTPUT (Pin No.)	REEL MOTOR (22.G ₀)	REEL MOTOR (23.G ₁)	LINE MUTE (28.H ₂)	REC SELECT (26.H ₀)	REC MUTE (29.H ₃)	BIAS (27.H ₁)	FADER1 (10.D ₂)	FADER2 (9.D ₁)	PLAY (30.I ₀)
STOP		L	L	L	H	L	H	—	L	—
FF		H	L	L	H	L	H	—	L	H
REW		L	H	L	H	L	H	—	L	H
REC PAUSE	FWD.	L	L	H	L	H	L	H	H	—
	RVS.	L	L	H	L	H	L	H	H	—
REC PLAY	FWD.	H	L	H	L	H	L	H	H	L
	RVS.	L	H	H	L	H	L	H	H	L
PLAY	FWD.	H	L	H	H	L	H	—	H	L
	RVS.	L	H	H	H	L	H	—	H	L
CUE	FWD.	H	L	L	H	L	H	—	H	H
	RVS.	L	H	L	H	L	H	—	H	H
REVIEW	FWD.	L	H	L	H	L	H	—	H	H
	RVS.	H	L	L	H	L	H	—	H	H
AUTO SOURCE CHANGE		L	L	H	L	L	H	L	H	—

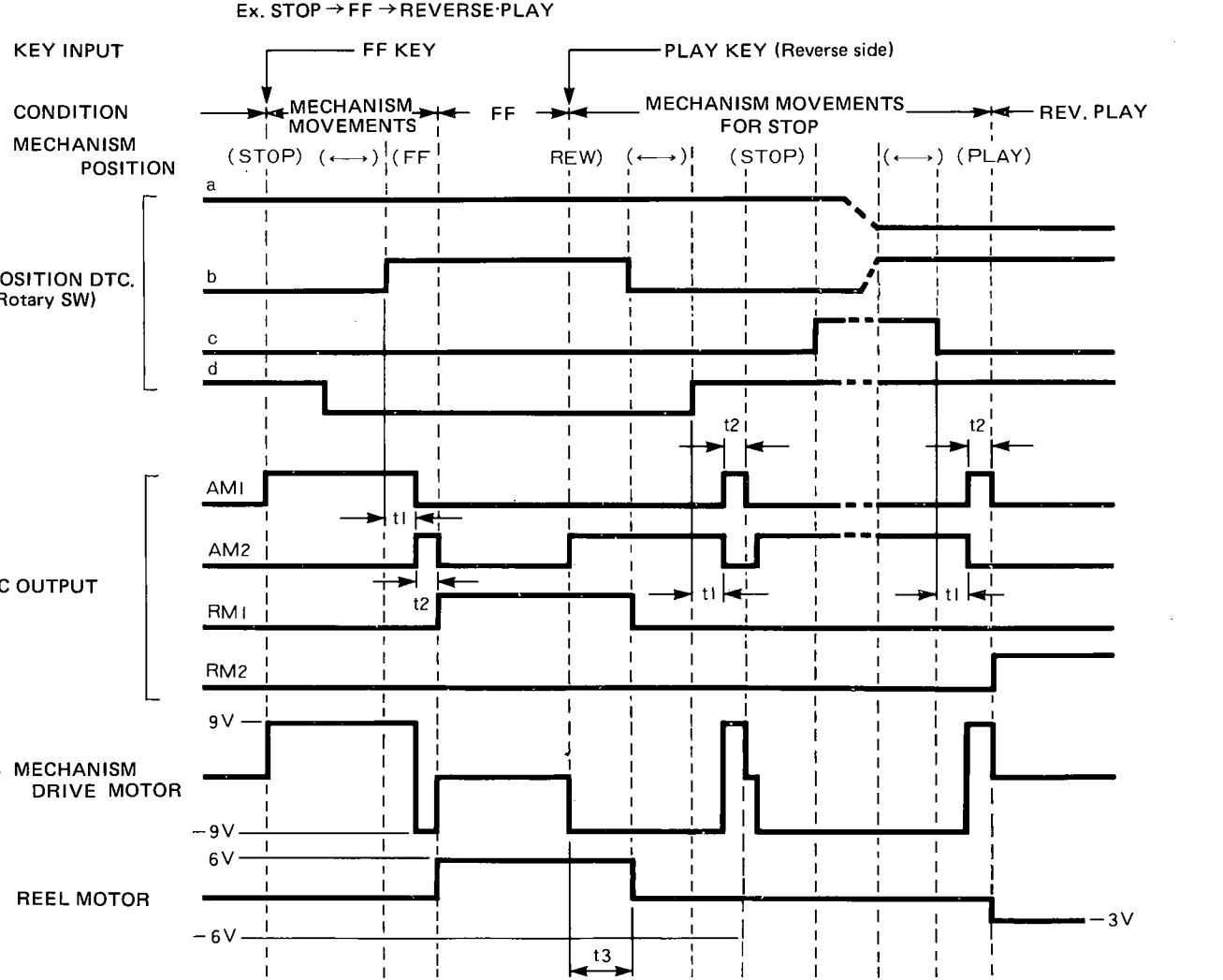
Note: L Low level
H High level
— Holding premode

■TIMING CHART

● FOUNDATION

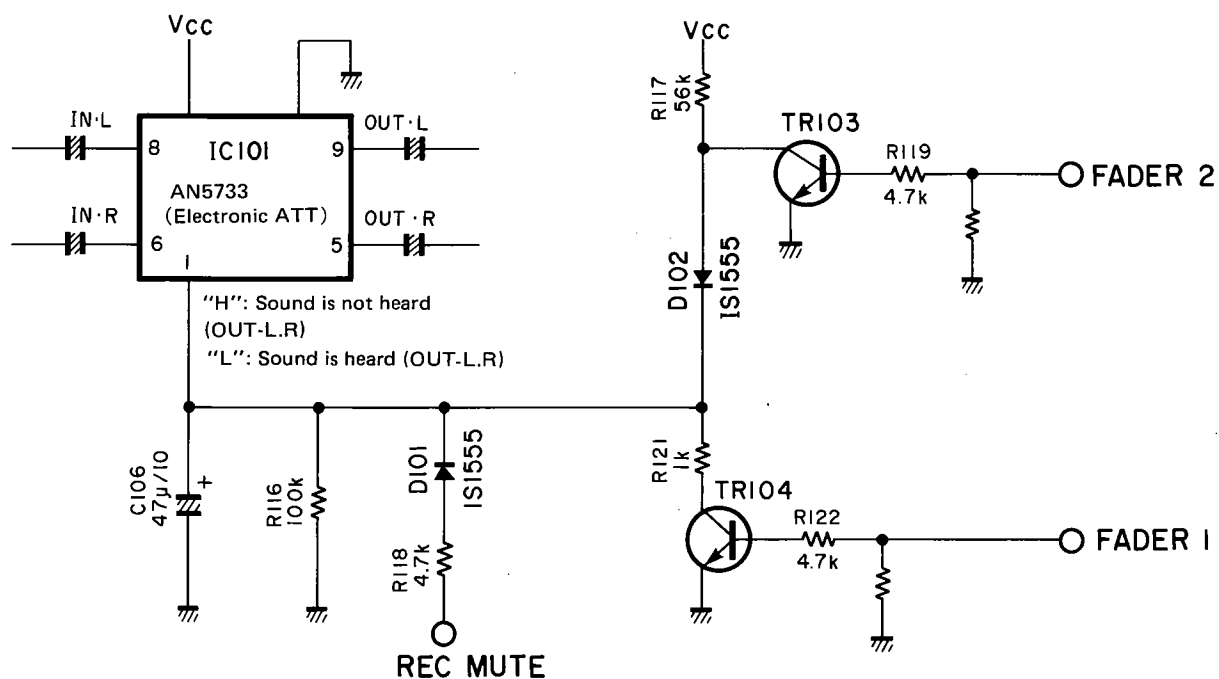
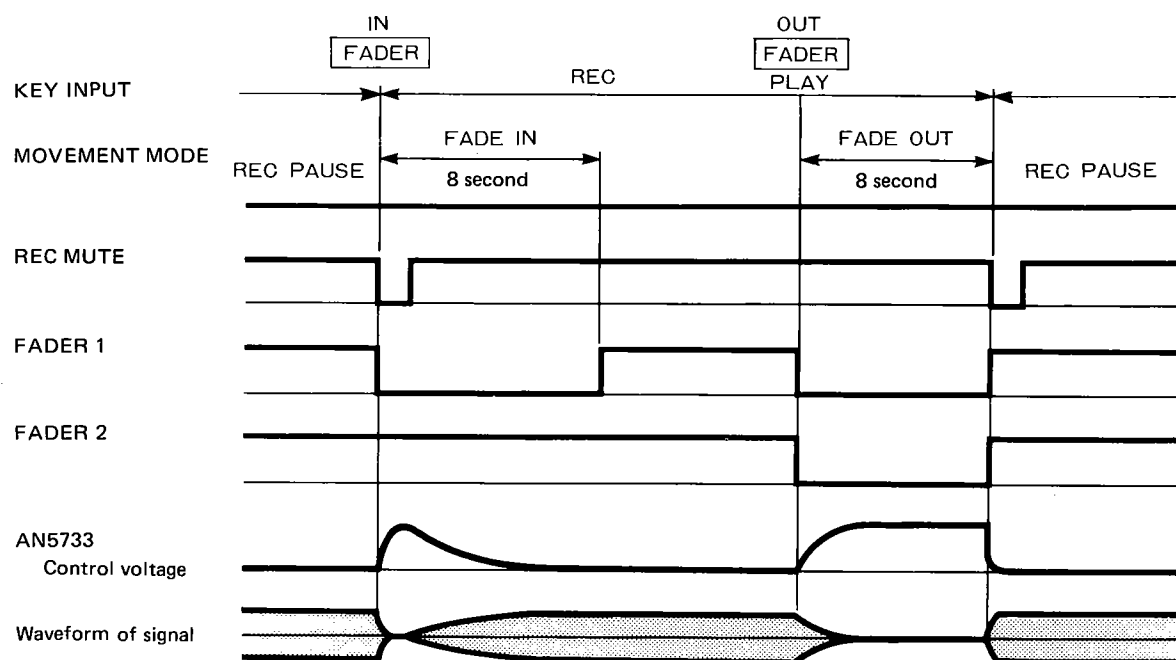


● DRIVE MOTOR MOVEMENTS



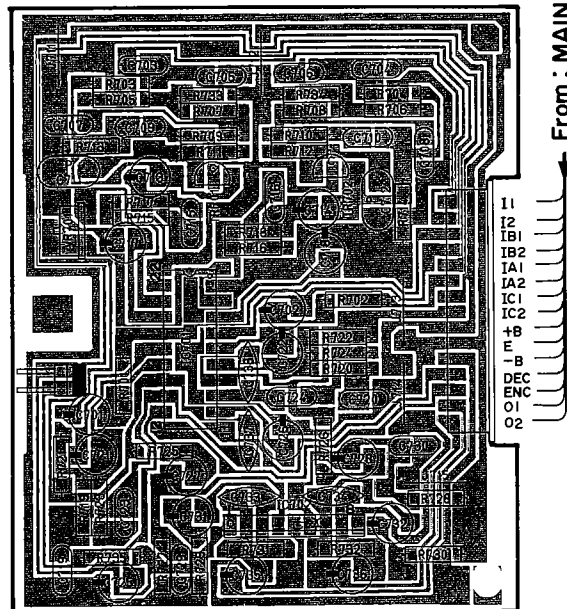
t1 : Mechanism drive motor stops to over-run. t3 : Reel motor revolves until the mechanical position passes through FF/REW.
t2 : Mechanism drive motor is reversed.

● FADER MOVEMENTS

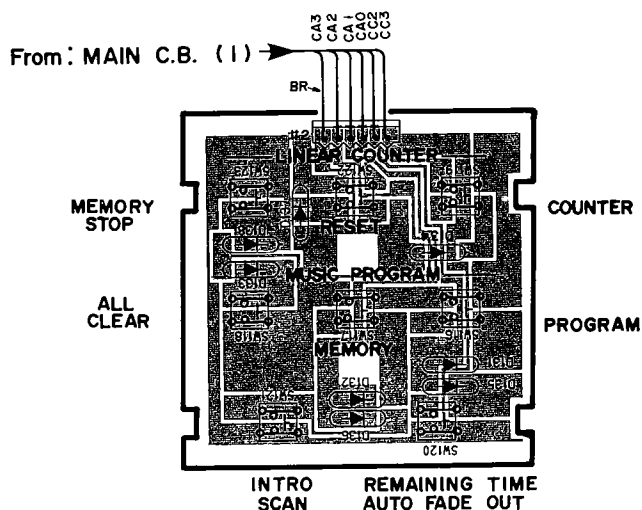


*AN5733 (PIN 1): Gain about 6dB at 0V.
at about two thirds — ∞

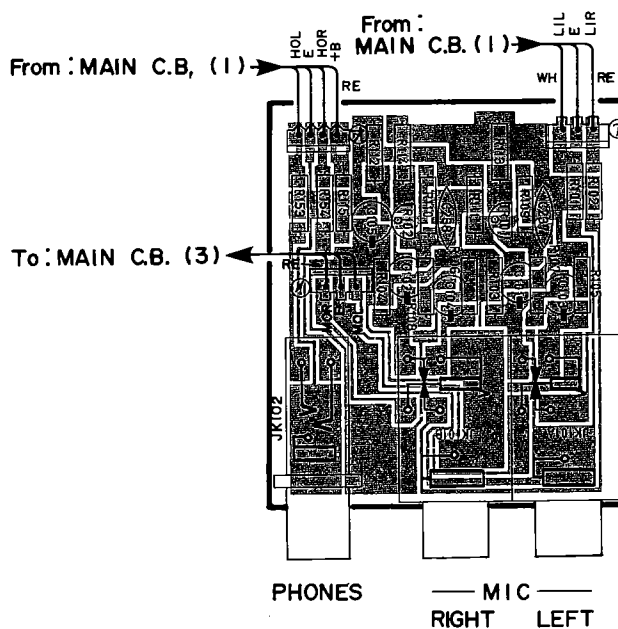
- DOLBY CIRCUIT BOARD



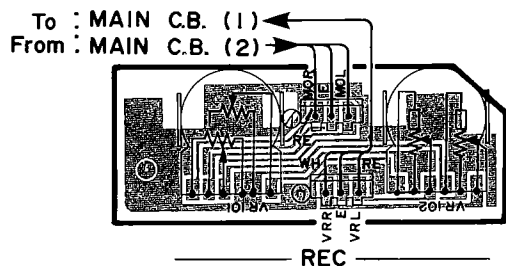
- MAIN CIRCUIT BOARD (5)



- MAIN CIRCUIT BOARD (2)



- MAIN CIRCUIT BOARD (3)



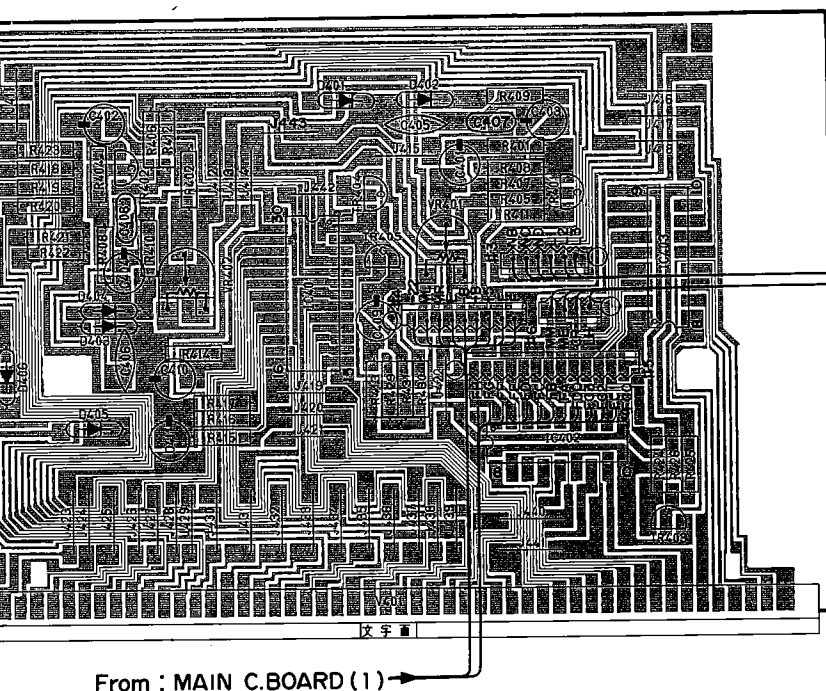
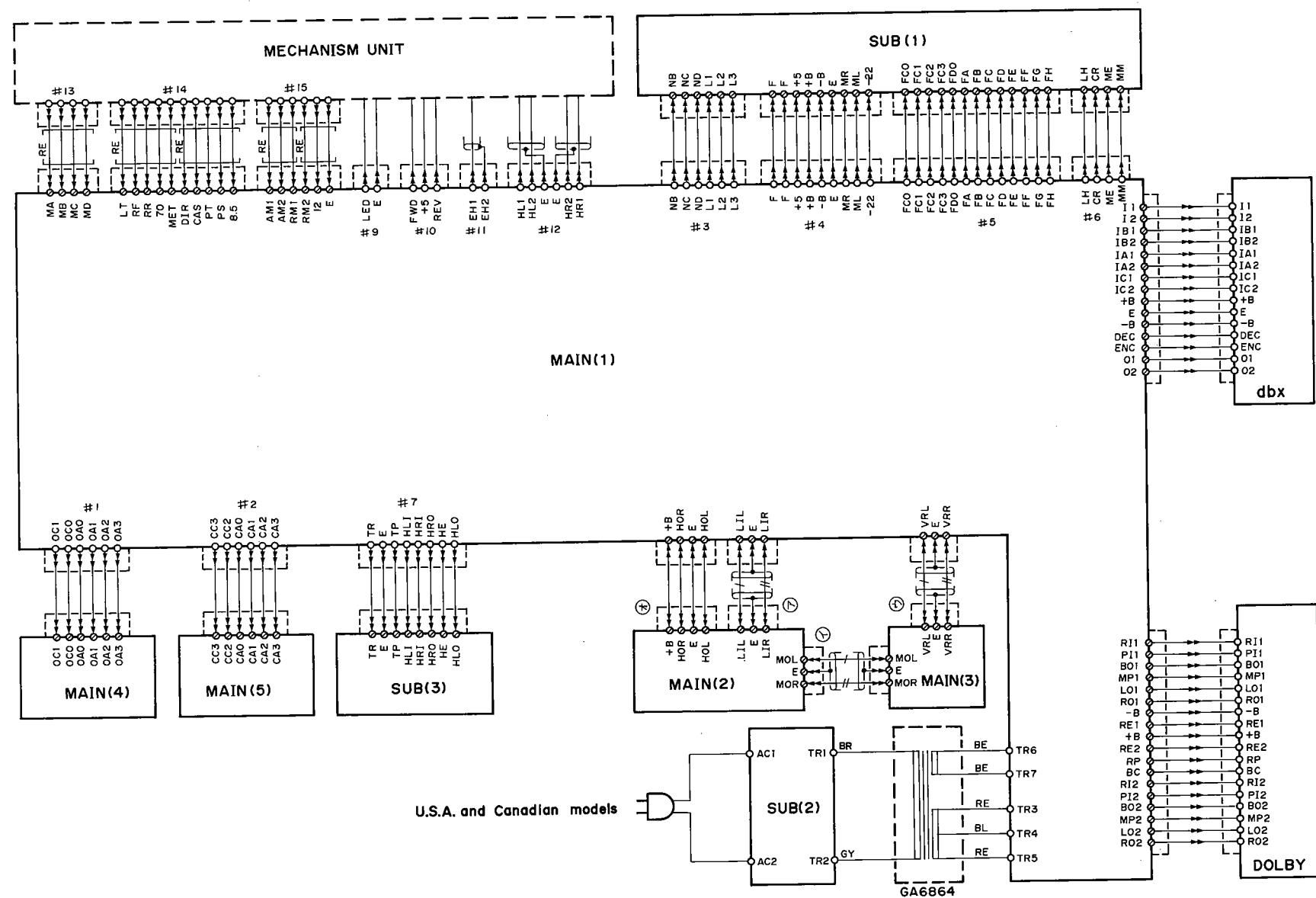
1

2

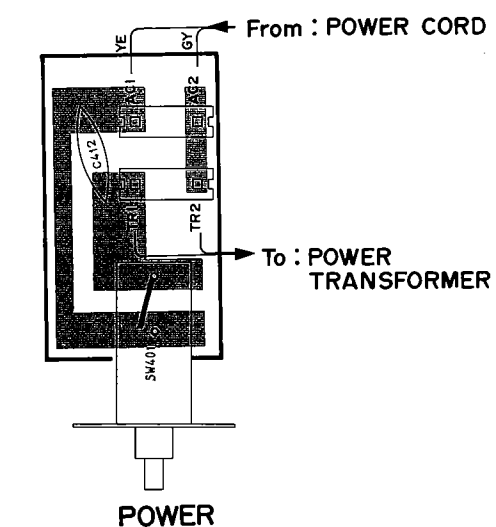
3

4

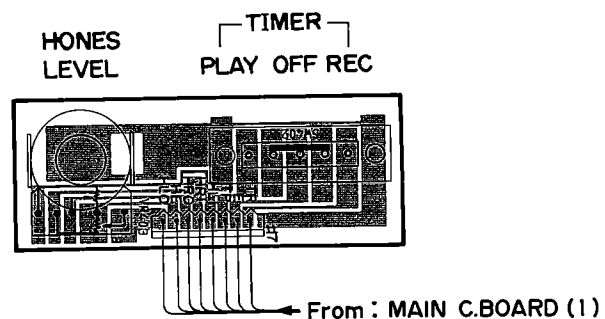
- SUB CIRCUIT BOARD (1)

**■ WIRING**

- SUB CIRCUIT BOARD (2)



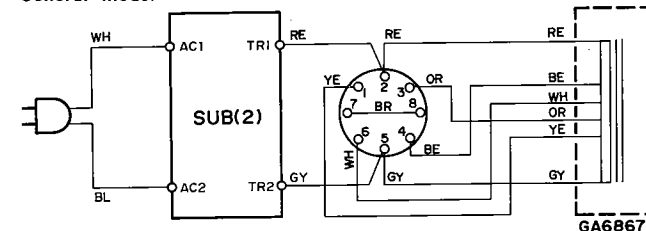
- SUB CIRCUIT BOARD (3)



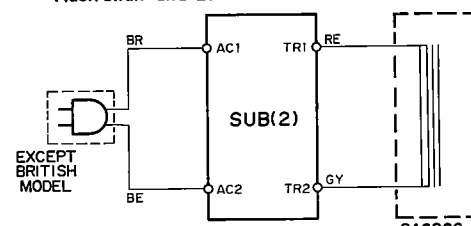
VOLTAGE SELECTOR

Voltage	Terminal No.	
110V	5-4	2-1
120V	6-5	3-2
220V	7-1	8-4
240V	7-6	8-3

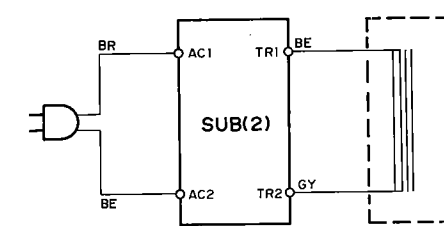
General model



Australian and British models



European model



PARTS LIST

ELECTRICAL PARTS

WARNING

Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.

- Carbon resistors of this amplifier are 1/6W.
There is no discription about them in this parts list.
Use the "Part NO." HF850 000 or equivalent.

K-720

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	
※	NA 08 63 20	Main Circuit Board	メ イ ン シ ー ト	Silver		J	
※	NA 08 63 30	"	"	Black		J	
※	NA 08 63 40	"	"	Silver		R	
※	NA 08 63 50	"	"	Black		R	
※	NA 08 63 60	"	"	Silver		U,C	
※	NA 08 63 70	"	"	Black		U,C	
※	NA 08 63 80	"	"	Silver		A,G,B	
※	NA 08 63 90	"	"	Black		A,G,B	
	FG 21 13 30	Ceramic Cap	セ ラ コ ン	C109,110			
	FG 21 21 00	"	"	C163,164,193,194,237,238			
	FG 21 21 20	"	"	C127,128		J	
	FG 21 22 20	"	"	C205,206,243,244			
	FG 21 26 80	"	"	C145,146			
	FG 44 41 00	"	"	C144,202,204,207-210,228			
	FG 44 41 00	"	"	C249~252		A,G,B	
	FA 15 31 00	Mylar Cap	マ イ ラ ー コ ン	C182			
	FA 15 32 20	"	"	C183			
	FA 15 33 30	"	"	C115,116			
	FA 15 36 80	"	"	C141,142,173,174			
	FA 15 34 70	"	"	C175~178			
	FA 15 41 00	"	"	C119,197,198			
	FA 15 41 20	"	"	C149,150			
	UA 25 46 80	"	"	C155~158			
	FA 15 44 70	"	"	C195,196			
	FA 15 51 00	"	"	C187,188,199,200			
	FA 15 51 50	"	"	C167,168			
	FA 15 42 20	"	"	C231,232			
	UT 45 21 00	Polypropylene Film Cap	ポ リ プ ロ コ ン	C189,190			
	UT 45 26 80	"	"	C185,186			
	UT 45 23 30	"	"	C191,192			
	FT 15 38 20	"	"	C179			
	UK 13 71 00	Electrolytic Cap	B P コ ン	C247			
	FM 11 61 00	"	"	C201,203,250			
	UW 82 73 30	"	ケ ミ コ ン	C123~126		J	
	UW 81 82 20	"	"	C151,152			
	UW 82 74 70	"	"	C106,212			
	UW 82 81 00	"	"	C241,242,105,107,159,160			
	UW 83 81 00	"	"	C219,220			
	UW 84 64 70	"	"	C113,114,165,166			
	UW 84 71 00	"	"	C248		R,U,A,C,G,B	
	UW 84 71 00	"	"	C111,112,131~134,137~140,153,154,171,172,180,181,184,213,217,218,229,230,225,245,246,147,148			
	UW 84 72 20	"	"	C117,143,169,170			
	UW 84 74 70	"	"	C216			
	UW 84 81 00	"	"	C224			
	UJ 16 52 20	"	"	C118			
	UJ 16 61 00	"	"	C101~104,161,162,211,135,136,249			
	UJ 16 62 20	"	"	C108			
	UJ 42 83 30	"	"	C129,130		J	
	UW 52 84 70	"	"	C239,240			
	UW 52 84 70	"	"	C120		J	
	UW 62 91 00	"	"	C121,122		J	
	UW 83 91 00	"	"	C221			
	UJ 15 91 00	"	"	C226,227			

※ New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
	Ui 93:98:20	Electrolytic Cap	8200 μ F 16V	ケ ミ コ ン	C214,215	
	UW 84:91:00	"	1000 μ F 25V	"	C222,223	
	GE 90:04:80	Bias Trap Coil	105kHz	バイアストラップコイル	Fi103,104	
	GE 20:05:10	Dolby Filter		ドルビーフィルター	Fi101,102	
	GE 90:09:60	Coil	820 μ H	コ イ ル	L109,110	
	GE 90:16:20	"	15mH	"	L103,104	
	GE 90:17:90	"		バイアス発振コイル	L111	
	GE 90:17:80	"		ステップアップコイル	L107,108	
	GE 90:16:40	"	12mH	コ イ ル	L105,106,101,102	
	GG 00:07:20	Ceramic Crystal Unit	800kHz	セ ラ ロ ッ ク	XL101	
	HL 82:42:70	Metal Oxide Film Resistor	27 Ω 2P	酸 金 抵 抗	R291	
	HV 45:41:00	Flame Proof Carbon Resistor	10 Ω	不燃化カーボン抵抗	R255	
	HV 45:51:50	"	150 Ω	"	R263,264	
	HZ 00:28:80	Resistor Array	10k Ω ×8	抵 抗 ア レ ー	R301	
	HS 41:19:30	Potentiometer	A50k Ω ×2	可 変 抵 抗 器	VR101	
	HS 41:20:10	"	MN100k Ω	"	VR102	
	HT 37:03:70	Pre-Set Potentiometer	B5k Ω	半 固 定 抵 抗	VR103~106	
	HT 37:03:90	"	B20k Ω	"	VR107,108	
	iA 09:34:00	Transistor	2SA934	ト ラ ン ジ ス タ	TR111,112	} 併用 Inter-changeable
	iB 05:44:20	"	2SB544	"	"	
	iA 11:15:10	"	2SA1115 (E,F)	"	TR117,126,139, 140,145,147	} 併用 Inter-changeable
	iA 11:27:00	"	2SA1127 (R,S,T)	"	"	
	iB 07:50:00	"	2SB750	"	TR149,150	
	iC 19:83:00	"	2SC1983	"	TR148	} 併用 Inter-changeable
	iD 12:73:00	"	2SD1273 (Q,P)	"	"	
	iD 10:52:10	"	2SD1052A	"	"	} 併用 Inter-changeable
	iC 26:03:10	"	2SC2603 (E,F)	"	TR101~110,113~116,118~125, 129~138,141~144,146	
	iC 26:34:00	"	2SC2634 (R,S,T)	"	"	} 併用 Inter-changeable
	iD 13:02:00	"	2SD1302 (R,S)	"	TR127,128,151,152	
	iD 06:55:10	"	2SD655 (E,F)	"	"	
	iF 00:06:70	Diode	1S2473	ダ イ オ ード	D101~119,123~139,141,155	} 併用 Inter-changeable
	iF 00:00:40	"	1S1555	"	"	
	iF 00:65:90	Zener Diode	MA1036H	ツェナーダイオード	D122,153,154	
	iF 00:67:70	"	MA1062H	"	D120	
	iF 00:68:90	"	MA1091H	"	D142	
	iF 00:69:00	"	MA1100L	"	D121,143	
	iF 00:72:00	"	MA1240L	"	D144	
	iH 00:14:30	Diode	1SR35-100A	ダ イ オ ード	D140,145~152	
	iG 03:47:00	IC	AN6551	I C	IC102,110,113,114	} 併用 Inter-changeable
	iG 07:68:00	"	NJM4558S	"	"	
	iG 13:22:00	"	BA715	"	"	
	iG 06:16:00	"	μ PD4066BC	"	IC106~108	} 併用 Inter-changeable
	iG 08:92:00	"	LC4066B	"	"	
	iG 11:05:00	"	M4066BP	"	"	
	iG 07:53:00	"	AN78M05	"	IC120	} 併用 Inter-changeable
	iG 07:56:00	"	NJM78M05A	"	"	

*New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	
	iG 07:74:00	IC	NJM4556S	I C	IC105		R,U,A,C,B,G
	iG 08:99:00	Transistor Array	AN90B20	トランジスタアレー	IC111		
	iG 10:11:00	IC	BA6209	I C	IC117,118		△
	iG 11:02:00	"	AN5733	"	IC101		
	iG 12:15:00	"	NJM2043D	"	IC109		
※	iG 14:59:00	"	AN6873N	"	IC112		
※	iG 14:63:00	"	LC7800	"	IC116		
※	iG 14:66:00	"	AN7116	"	IC103,104	J	
※	iG 14:65:00	"	LM6402G-495	"	IC119		
	iG 12:18:00	"	NJM4560S	"	IC115		
	KA 80:41:10	Push Switch	SUJ2-2	プッシュスイッチ	SW102		
	KA 80:41:20	"	SUJ2-0-2	"	SW103		
※	KA 80:49:60	"		"	SW101		
	KA 90:63:80	Switch		ライトタッチスイッチ	SW108~123		
	KB 00:03:30	Fuse	T1.0A 250V	ヒ ュ ー ズ	F101,102	J,R	△
	KB 00:07:20	"	T800mA 250V	"	"	A,G,B	△
	KB 00:10:60	"	1.0A 250V	"	"	U,C	△
	LB 30:16:80	Phone Jack	WH	ヘッドホーンジャック	JK102 Silver		
	LB 30:16:90	"	BL	"	" Black		
	LB 60:50:30	DIN Jack	8P	D I N ジャック	JK103	R,U,A,C,B,G	
	LB 60:61:10	Mic Jack	WH	マイクジャック	JK101 Silver		
	LB 60:61:20	"	BL	"	" Black		
	LB 40:10:30	Pin Jack	4P	ピンジャック	PJ101		
	LA 00:21:40	Lapping Terminal	P=10 2P i-Type	i 型ラッピング端子板			
	LA 00:21:50	"	P=10 3P i-Type	"			
	LB 20:18:80	Fuse Holder Pin		ヒューズホルダーピン			
	LA 00:41:20	Lapping Terminal	1P i-Type	i 型ラッピング端子板			
	BB 06:62:90	Ground Washer		アースワッシャー			
	BA 08:40:00	Heat Sink		放 熱 板			
	CB 61:22:40	Cushion		シートクッション			
	Ei 03:00:66	Binding Head Tapping Screw	3×6 ZMC2-Y	バインドタッピングネジ	PACK		
※	NA 08:64:20	Sub Circuit Board		サ ブ シ ー ト		J	
※	NA 08:64:30	"		"		R,U,A,C,B,G	
	Fi 40:41:00	Ceramic Cap	0.01μF AC250V	セ ラ コ ン	C412	J	△
	Fi 41:41:00	"	0.01μF	"	"	R,U,A,C,B,G	△
	FG 44:41:00	"	0.01μF 50V	"	C405,406		
	UW 84:64:70	Electrolytic Cap	4.7μF 25V	ケ ミ コ ン	C411		
	UW 84:71:00	"	10μF 25V	"	C409,410		
	UW 56:61:00	"	1μF 50V	"	C401~404		
	HS 41:20:20	Potentiometer	A10kΩ×2	可 変 抵 抗 器	VR403		
	HT 37:04:10	Pre-Set Potentiometer	B50kΩ	半 固 定 抵 抗	VR401,402		
	iA 11:15:10	Transistor	2SA1115 (E,F)	ト ラ ン ジ ス タ	TR403	併用 Inter-changeable	
	iA 11:27:20	"	2SA1127 (R,S,T)	"	"		
	iC 26:03:10	"	2SC2603 (E,F)	"	TR401,102,404,405	併用 Inter-changeable	
	iC 26:34:00	"	2SC2634 (R,S,T)	"	"		

※ New Parts (新規部品)

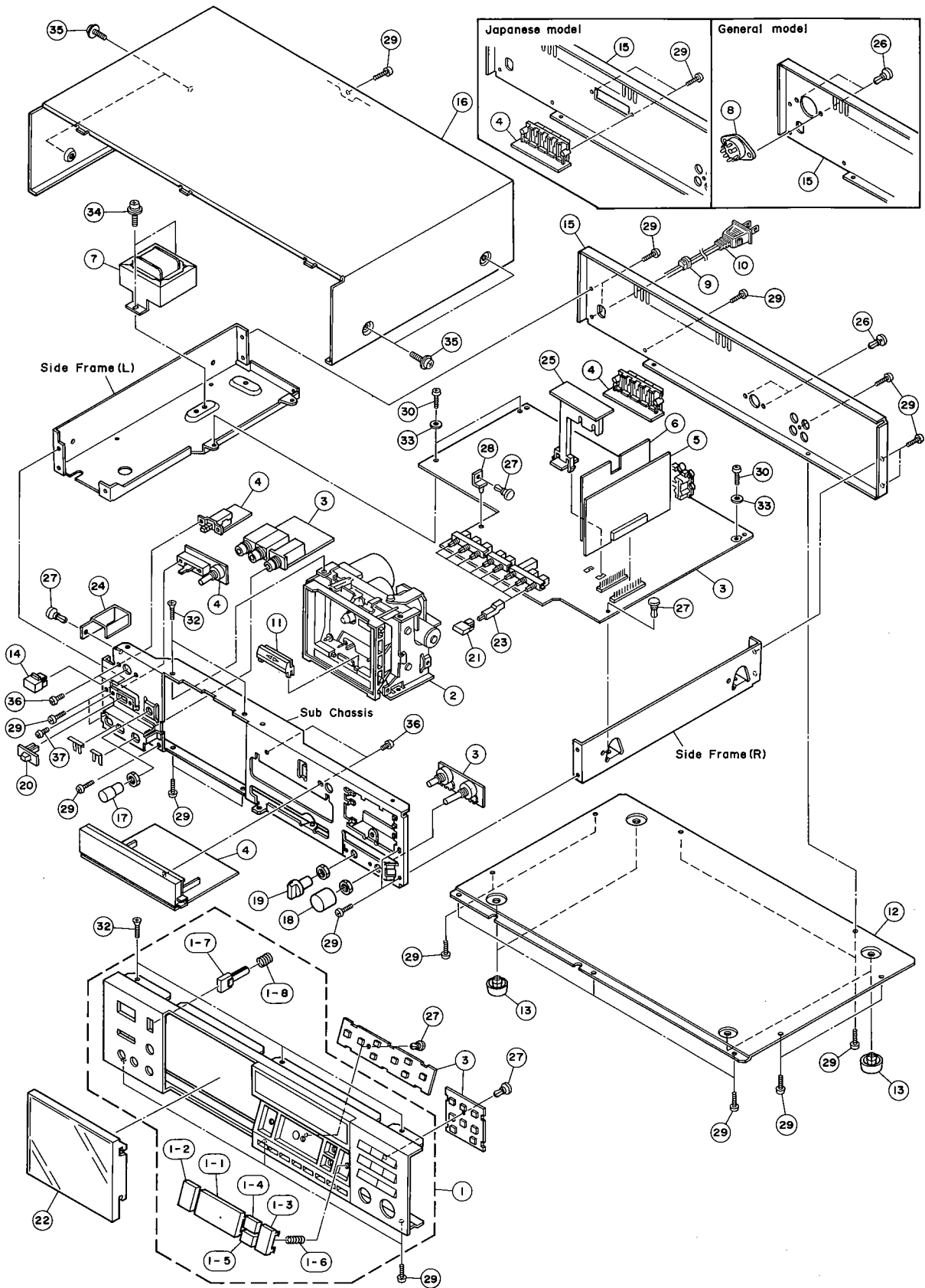
Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	
	iF 00:06:70	Diode	IS2473	ダイオード	D401~406	併用 Inter-changeable	
	iF 00:00:40	"	IS1555	"	"		
※	iG 14:59:00	IC	AN6873N	I C	IC402,403		
※	iG 14:60:00	"	HA12067NT	"	IC401		
	KA 40:12:40	Slide Switch	SSB423	スライドスイッチ	SW402		
	KA 80:32:90	Power Switch	SDLC-P	パワースイッチ	SW401		△
※	iJ 00:00:70	Display Unit	CP1054GR	蛍光表示管	V401		
	LA 00:21:40	Lapping Terminal	P=10 2P i-Type	i 型ラッピング端子板			
	LA 00:42:80	Push Terminal	4P	プッシュターミナル		J	
※	AA 62:41:10	Holder, FL		FLホルダー			
※	CB 63:62:00	Filter, FL		FLフィルター			
	CB 60:56:20	Plastic Rivet		プラスチックリベット			
※	NA 08:74:30	Dolby Circuit Board		ドルビーシート			
	FG 41:21:00	Ceramic Cap	100pF 50V	セラコン	C803,804		
	UA 25:34:70	Mylar Cap	4700pF 50V	マイラーコン	C809,810		
	UA 25:38:20	"	8200pF 50V	"	C807,808		
	UA 25:41:00	"	0.01μF 50V	"	C817,818		
	UA 25:42:70	"	0.027μF 50V	"	C805,806,813,814		
	UA 25:43:30	"	0.033μF 50V	"	C811,812,819,820		
	UW 93:71:00	Electrolytic Cap	10μF 16V	ケミコン	C815,816		
	UW 93:73:30	"	33μF 16V	"	C801,802		
	UW 56:51:00	"	0.1μF 50V	"	C825,826		
	UW 56:51:50	"	0.15μF 50V	"	C821,822		
	UW 56:53:30	"	0.33μF 50V	"	C827,828		
	UW 56:54:70	"	0.47μF 50V	"	C823,824		
	GE 90:06:80	Coil	20kHz	スキューイングコイル	Fi801,802	併用 Inter-changeable	
	GE 90:07:90	"	19kHz	"	"		
	iG 11:65:00	IC	AN7370	I C	IC801,802		
※	LB 02:01:80	Connector	18P	SHVQコネクター			
※	NA 08:63:00	dbx Circuit Board		dbx シート			
	FG 41:13:30	Ceramic Cap	33pF 50V	セラコン	C733,734		
	FG 41:21:00	"	100pF 50V	"	C737,738		
	UA 25:32:70	Mylar Cap	2700pF 50V	マイラーコン	C719,720		
	UA 25:33:30	"	3300pF 50V	"	C707~710		
	UA 25:36:80	"	6800pF 50V	"	C723,724		
	UA 25:41:00	"	0.01μF 50V	"	C729,730		
	UA 25:43:30	"	0.033μF 50V	"	C715,716		
	UA 25:51:00	"	0.1μF 50V	"	C703~706		
	UT 45:23:30	Polypropylen Film Cap	330pF 100V	ポリプロコン	C711,712		
	UW 93:71:00	Electrolytic Cap	10μF 16V	ケミコン	C717,718,725,727,728 735,736		
	UW 93:72:20	"	22μF 16V	"	C721,722,731,732		
	UW 56:51:00	"	0.1μF 50V	"	C701,702		
	UW 56:54:70	"	0.47μF 50V	"	C713,714		
	UW 56:61:00	"	1μF 50V	"	C726		

※New Parts (新規部品)

[illegible]

※New Parts (新規部品)

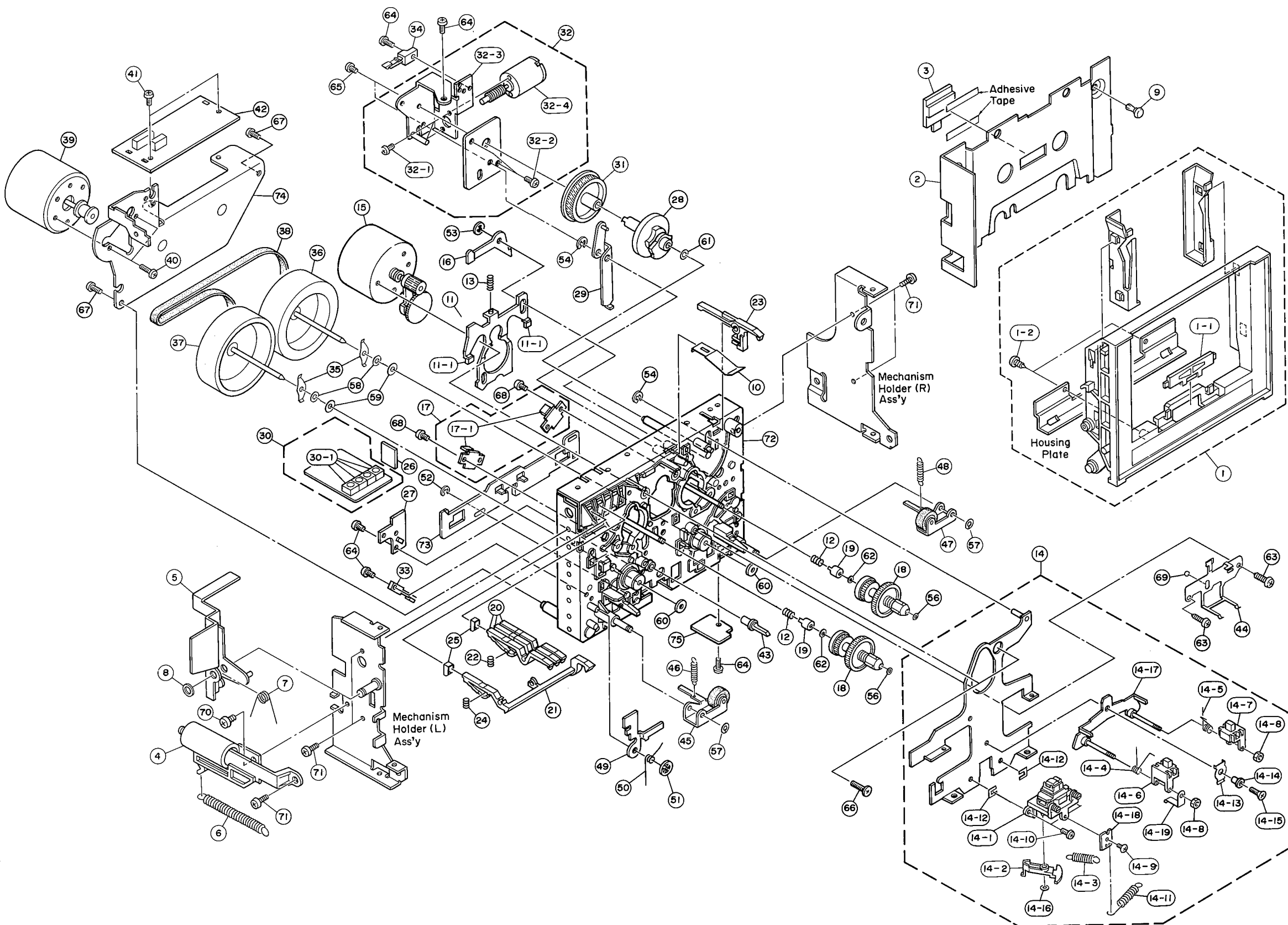
EXPLODED VIEW



※ New Parts (新規部品)

※New Parts (新規部品)

EXPLODED VIEW(CASSETTE MECHANISM)



MECHANISM PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
※	NB 62 49 30	Mechanism Unit	メ カ ユ ニ ッ ト	Silver		
	NB 62 49 40	"	"	Black		
※	1 NB 62 49 60	Housing Ass'y	ハ ウ ジ ン グ Ass'y			
	1-1 iF 00 50 60	Direction LED	LS002Y	ディレクションLED	K-700	
	1-2 Ei 03 00 66	Binding Head Tapping Screw	3×6 ZMC2-Y	バインドタッピングネジ	PACK	
※	2 BA 09 12 90	Blind Plate	ブラインドプレート			
	3 iF 00 35 70	LED	SLD-301C	L E D		
	4 NB 61 37 20	Damper Ass'y	ダ ン パ ー Ass'y		K-700	
	5 NB 61 37 50	Eject Lever Ass'y	イジェクトレバーAss'y		"	
	6 AA 61 81 80	Spring	イジェクトスプリング		"	
	7 AA 61 82 30	"	レバースプリング		"	
	8 CB 62 24 00	Washer	ポリスライダーワッシャー			
	9 CB 09 96 00	Plastic Rivet	プラスチックリベット			
※	10 XX 63 99 20	Spring Plate	カセット押えバネ			
※	11 XX 63 99 30	Lever, Brake	ブ レ ー キ レ バ ー			
※	11-1 XX 63 99 40	Rubber, Brake	ブ レ ー キ ゴ ム			
※	12 XX 63 99 50	Coil Spring	圧 縮 コ イ ル バ ネ			
※	13 XX 63 99 60	"	"			
※	14 XX 64 03 80	Head Base Unit	ヘッドベースユニット			
※	14-1 XX 64 03 70	Head Unit	ヘッドユニット			
	14-2 XX 62 32 50	Gear Lever	反 転 歯 車		K-700	
	14-3 XX 62 32 20	Coil Spring	引 張 コ イ ル バ ネ		"	
	14-4 XX 62 32 10	"	圧 縮 コ イ ル バ ネ		"	
	14-5 XX 62 32 00	"	"		"	
	14-6 XX 62 31 60	Tape Guide	テ ー プ ガ イ ド	RVS	"	
	14-7 XX 62 31 90	"	"	FWD	"	
	14-8 EV 10 10 26	Hex Nut	M2	六 角 ナ ッ ト	PACK	
	14-9 XX 63 37 80	Truss Head Screw	2.0×3.2	ト ラ ス 小 ネ ジ		
	14-10 EA 02 00 46	Pan Head Screw	M2×4 ZMC2-Y	ナ ベ 小 ネ ジ	PACK	
	14-11 XX 62 37 60	Coil Spring	引 張 コ イ ル バ ネ		K-700	
	14-12 XX 62 31 20	Spacer	ス ペ ー サ ー		"	
※	14-13 XX 64 00 20	Spring Plate	押 え バ ネ			
※	14-14 XX 64 00 30	Collar	カ ラ ー			
	14-15 EB 02 00 56	Flat Head Screw	M2×5 ZMC2-Y	サ ラ 小 ネ ジ	PACK	
※	14-16 XX 64 03 30	Washer	φ1.8×φ3.8×t0.5	ワ ッ シ ャ ー		
※	14-17 XX 63 99 90	Select Plate Ass'y	切 換 カ シ メ Ass'y			
※	14-18 XX 64 00 00	Holder, Spring	バ ネ 掛 け			
※	14-19 XX 64 00 10	Binding Plate	線 押 え			
※	15 XX 64 00 40	Reel Motor Ass'y	リールモーターAss'y			
※	16 XX 64 00 50	Lever, Brake	ブ レ ー キ レ バ ー			
※	17 XX 64 00 60	Sensor Circuit Board	セ ン サ ー シ ー ト			
※	17-1 iG 03 04 50	Hall Generator	ホ ー ル IC			
※	18 XX 64 00 70	Reel Base Ass'y	リール台 Ass'y			
※	19 XX 64 00 80	Spring Stand	バ ネ 受 け			
※	20 XX 64 00 90	Switch Lever	ス イ ッ チ レ バ ー			
※	21 XX 64 01 00	"	"	METAL		
※	22 XX 64 01 10	Coil Spring	圧 縮 コ イ ル バ ネ			
※	23 XX 62 33 50	Lever, Sensor	セ ン サ ー レ バ ー	REC	K-700	
※	24 XX 64 01 20	Coil Spring	圧 縮 コ イ ル バ ネ			
※	25 XX 64 01 30	Frame, Switch Lever	ス イ ッ チ レ バ ー 枠			
※	26 XX 64 01 40	Plate	当 板			
※	27 XX 64 01 60	LED Circuit Board	LED シ ー ト			
※	28 XX 62 32 90	Cam	カ ム		K-700	

※New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets
29	XX 62 32 80	Change Lever Unit	切換レバーユニット		K-700	
※ 30	XX 64 01 70	Sensor Switch Circuit Board	センサーSWシート			
※ 30-1	XX 64 01 80	Key Switch	キ ー ス イ ッ チ			
31	XX 62 34 30	Rotary Gear	ロ ー タ リ ー ギ ャ		K-700	
※ 32	XX 64 01 90	PAD Unit	PAD ユ ニ ッ ト			
32-1	EA 02 00 30	Pan Head Screw	M2×3 ZMC2-Y	ナ ベ 小 ネ ジ		
32-2	XX 62 36 60	"	M2.5×5	ナ ベ 小 ネ ジ		
※ 32-3	XX 64 02 00	PAD Holder	PAD 取 付 板			
※ 32-4	XX 64 02 10	Assist Motor Ass'y	アシストモーターAss'y			
※ 33	XX 64 02 20	Leaf Switch	リ ー フ ス イ ッ チ	DIRECTION		
34	XX 62 34 10	"	"	CASSETTE	K-700	
35	XX 62 34 00	Thrust Spring	ス ラ ス ト バ ネ			
※ 36	XX 62 33 90	Flywheel	フ ラ イ ホ イ ール	FWD		
※ 37	XX 64 02 30	"	"	RVS		
38	XX 62 33 80	Belt Flywheel	平 ベ ル ト		K-700	
※ 39	XX 64 02 50	Capstan Motor	キャプスタンモーター			
40	ED 02 60 36	Binding Head Screw	M2.6×3 ZMC2-Y	バ イ ン ド 小 ネ ジ	PACK	
41	XX 62 36 60	Pan Head Screw	2.5×5	ナ ベ 小 ネ ジ		
※ 42	XX 64 02 60	Relay Circuit Board	中 継 シ ー ト			
43	XX 62 34 60	Half Guide	ハ ー フ ガ イ ド		K-700	
※ 44	XX 64 02 70	Head Holder Plate	ヘ ッ ド 押 え 板			
45	XX 62 36 20	Pinch Roller Ass'y	ピンチローラーAss'y	RVS	K-700	
※ 46	XX 64 02 80	Coil Spring	コ イ ル バ ネ			
47	XX 62 36 00	Pinch Roller Ass'y	ピンチローラーAss'y	FWD	K-700	
※ 48	XX 64 02 90	Coil Spring	コ イ ル バ ネ			
※ 49	XX 64 03 10	Lever,Lock	ロ ッ ク レ バ ー			
※ 50	XX 64 03 20	Coil Spring	ネジリコイルバネ			
51	EV 50 13 06	E Ring	φ3 FNM3-3g	E リ ン グ	PACK	
52	EV 50 12 06	"	φ2 FNM3-3g	"	PACK	
53	EV 50 12 56	"	φ2.5 FNM3-3g	"	PACK	
54	EV 50 13 06	"	φ3 FNM3-3g	"	PACK	
55	XX 62 34 90	Spacer	ス ペ ー サ ー		K-700	
56	XX 62 37 50	Washer	φ1.8×φ3.2×t0.5	ワ ッ シ ャ ー		
※ 57	XX 64 03 40	"	φ2.7×φ6×t0.5	"		
58	XX 62 37 40	"	φ2.6×φ4.7×t0.25	"		
※ 59	XX 64 03 50	"	φ2.6×φ7×t0.13	"		
60	XX 62 34 80	"	φ2.5×φ7×t0.8	座 金		
61	XX 62 37 30	"	φ4.1×φ5.8×t0.1	ワ ッ シ ャ ー		
※ 62	XX 64 03 60	"	φ2.1×φ4.5×t0.1	"		
63	XX 62 36 40	Pan Head Screw	M2.5×8	ナ ベ 小 ネ ジ		
※ 64	XX 62 36 50	"	M2.5×6	"		
65	EA 02 00 46	"	M2×4 ZMC2-Y	"	PACK	
66	EA 02 61 46	"	M2.6×14 ZMC2-Y	"	PACK	
67	Ei 02 61 06	Binding Head Tapping Screw	2.6×10 ZMC2-Y	バ イ ン ド タ ッ ピ ングネジ	PACK	
68	Ei 02 60 56	"	2.6×5 ZMC2-Y	"	PACK	
69	EZ 00 15 10	Steel Ball	φ3	ス チ ール ボ ール		
70	Ei 03 00 66	Binding Head Tapping Screw	3×6 ZMC2-Y	バ イ ン ド タ ッ ピ ングネジ	PACK	
71	Ei 32 60 66	"	2.5×6 ZMC2-BI	"	PACK	
※ 72	XX 63 99 10	Mechanism Chassis Ass'y	メカシャシー Ass'y			
※ 73	XX 64 01 50	Slide Lever	ス ラ イ ド レ バ ー			
74	XX 64 02 40	Back Plate	バ ッ ク プ レ ート			
75	XX 64 03 00	Connector Ass'y	コ ネ ク タ ー Ass'y			

※ New Parts (新規部品)