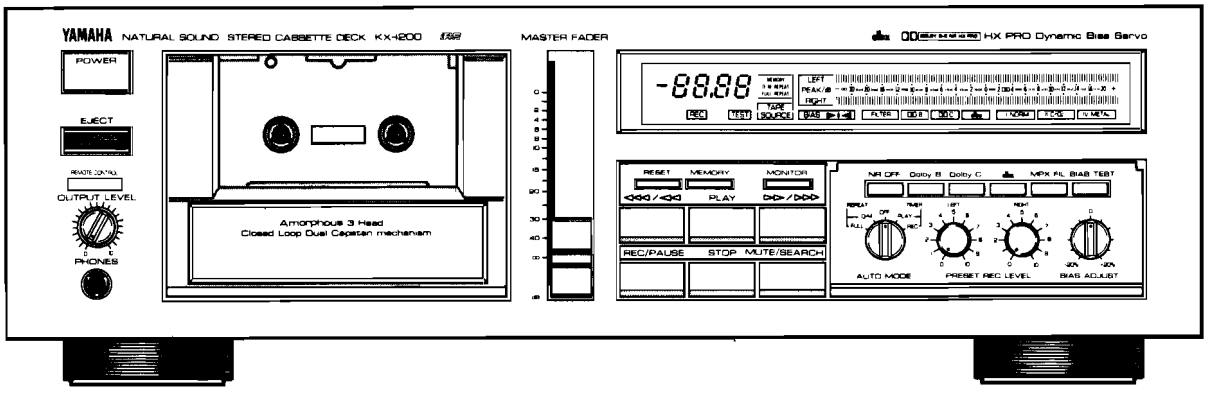
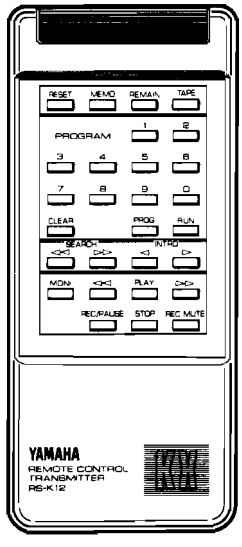
STEREO CASSETTE DECK

KX-1200

SERVICE MANUAL



- **RS-K12**



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 inherant 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 or 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.

KX-1200

■ CONTENTS

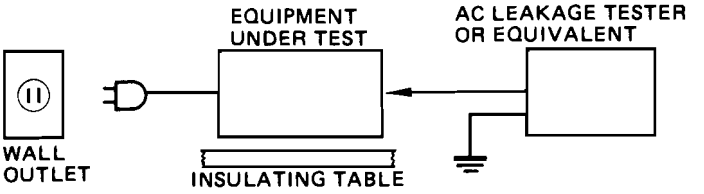
100136

SINCE 1887 YAMAHA
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN
3.3k-172 Printed in Japan. '87.4

■ 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 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 0.15μF.
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

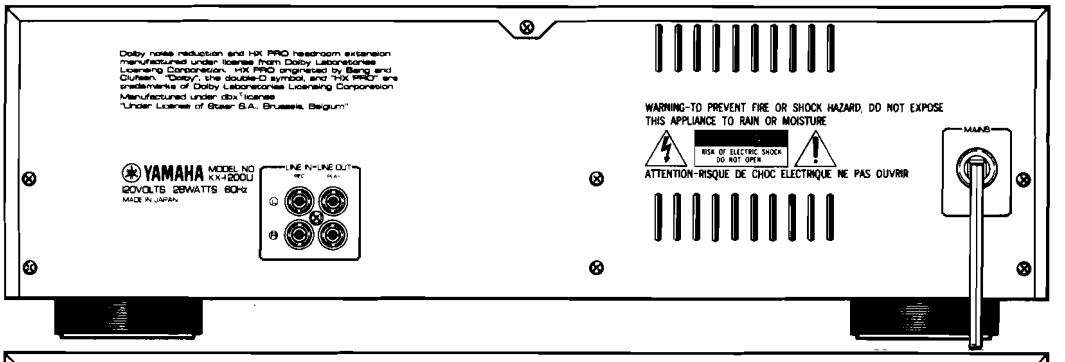


■ POLARIZATION

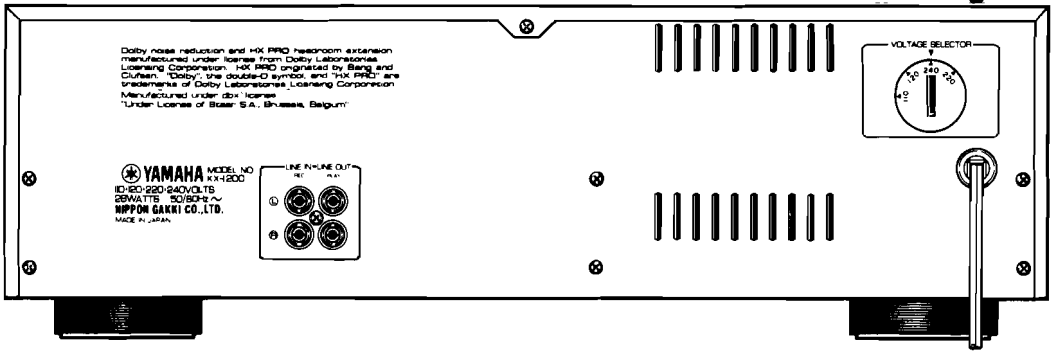
This tuner product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature.

■ REAR PANELS

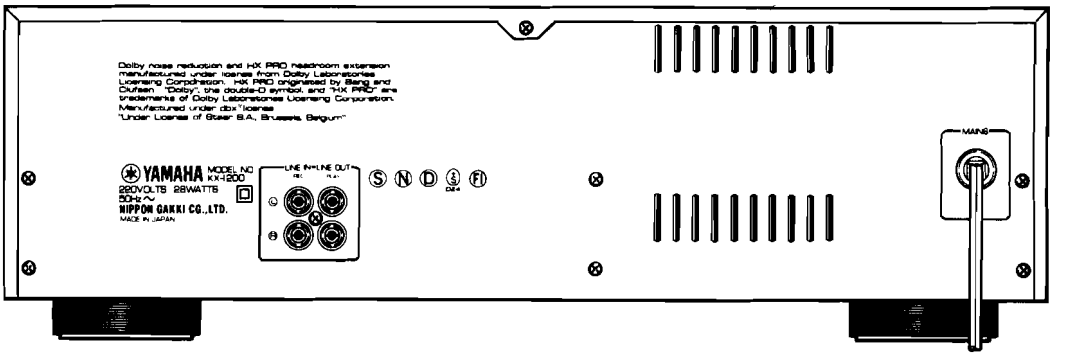
▼ U, C models



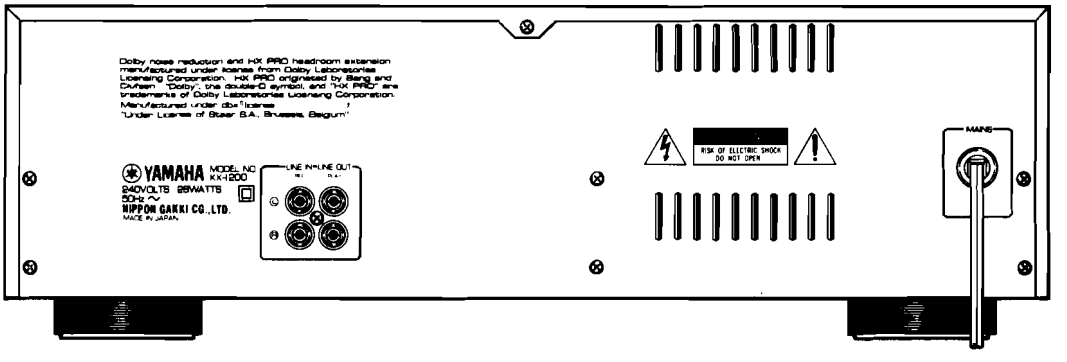
▼ R model



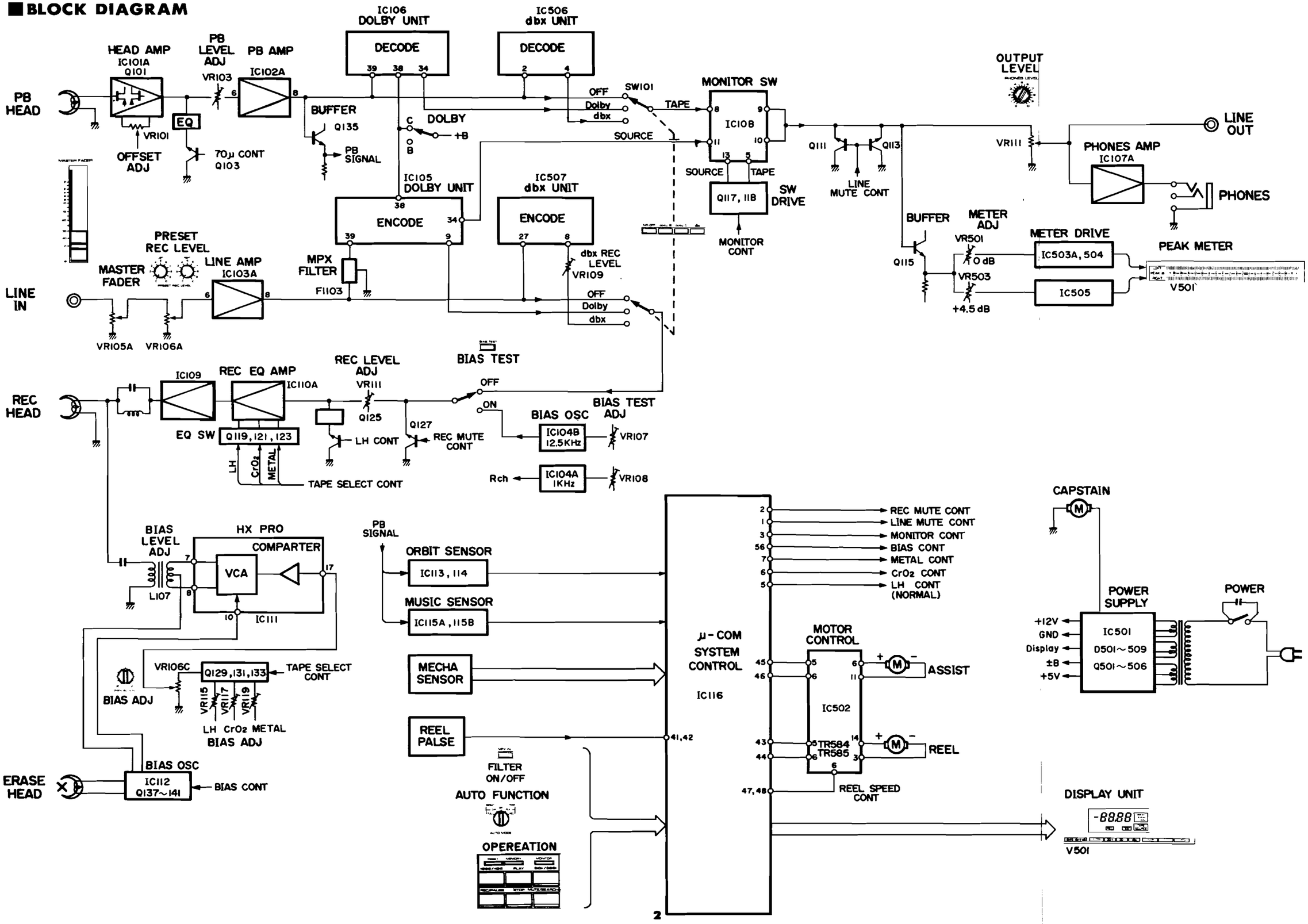
▼ G model



▼ A, B models



■BLOCK DIAGRAM

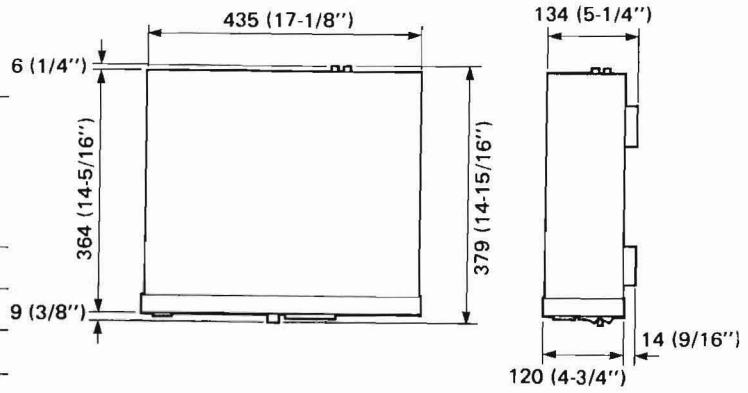


■ SPECIFICATIONS

Type	4-track 2-channel recording and playback stereo cassette tape deck
Heads	
REC/PLAYBACK	Combination, Amorphous with 12-laminated core
ERASE	Double Gap Ferrite
Motors	
Capstan	DC servo motor
Reel	DC flat torque motor
Assist	DC motor
Wow & Flutter	
No more than	±0.06% W. Peak 0.03% W. RMS
Fast Winding Time (C60)	
Normal mode	About 70 seconds
Fast mode	About 45 seconds
Frequency Response	
Normal	20 to 20,000 Hz ± 3dB
Chrome	20 to 22,000 Hz ± 3dB
Metal	20 to 24,000 Hz ± 3dB
S/N Ratio (3rd harmonic distortion: weighted)	
NR OFF	61dB
DOLBY B NR	69dB
DOLBY C NR	77dB
dbx	95dB
Harmonic Distortion	No more than 0.5%
Channel Separation	More than 40dB
Crosstalk	More than 55dB

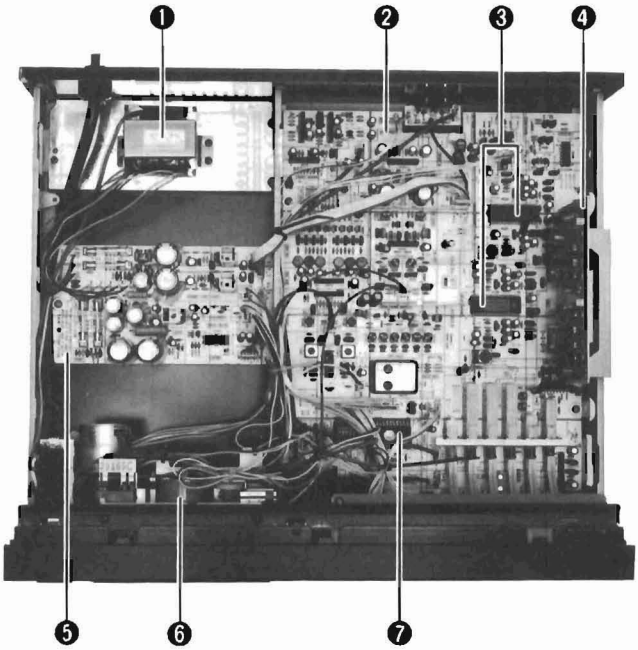
Input Sensitivity/Impedance	
Line	40mV/30kΩ
Output Level/Load Impedance	
Line	360mV/1.2kΩ
Headphones	3.6mW/8Ω
Power Requirement	
U, C	120V AC. 60Hz
R	110, 120, 220, 240V AC. 50/60Hz
G	220V AC. 50Hz
A, B	240V AC. 50Hz
Power Consumption	28W
Dimensions (W x H x D)	435 x 134 x 379 mm (17-1/8" x 5-1/4" x 14-15/16")
Weight	7.9 kg (17 lbs. 6 oz)

• DIMENSIONS



[Unit : mm (inch)]

■ INTERNAL VIEW



❶ POWER TRANSFORMER
❷ MAIN CIRCUIT BOARD (1)
❸ DOLBY IC: CX20188
❹ SUB CIRCUIT BOARD (3)
❺ SUB CIRCUIT BOARD (1)
❻ CASSETTE MECHANISM UNIT
❼ 4 bit μ-COM: LC6554H-3362

■ DISASSEMBLY PROCEDURES

1. **Removal of top Cover**
   Remove 5 screws (①) in fig. 1.

2. **Removal of bottom cover**
   Remove 8 screw (②) in fig. 1.

3. **Removal of front panel**
a. Pull off 5 knobs in fig. 1.
b. Disconnect connectors #12 and #13 in fig. 3.
c. Remove 7 screws (③) then pull off front panel in fig. 1.

4. **Removal of cassette mechanism unit**
a. Remove lid in fig. 2.
b. Disconnect connectors #1 through #6 in fig. 3.
c. Remove 4 screws (④) in fig. 2, then slide off cassette mechanism unit backward gently.

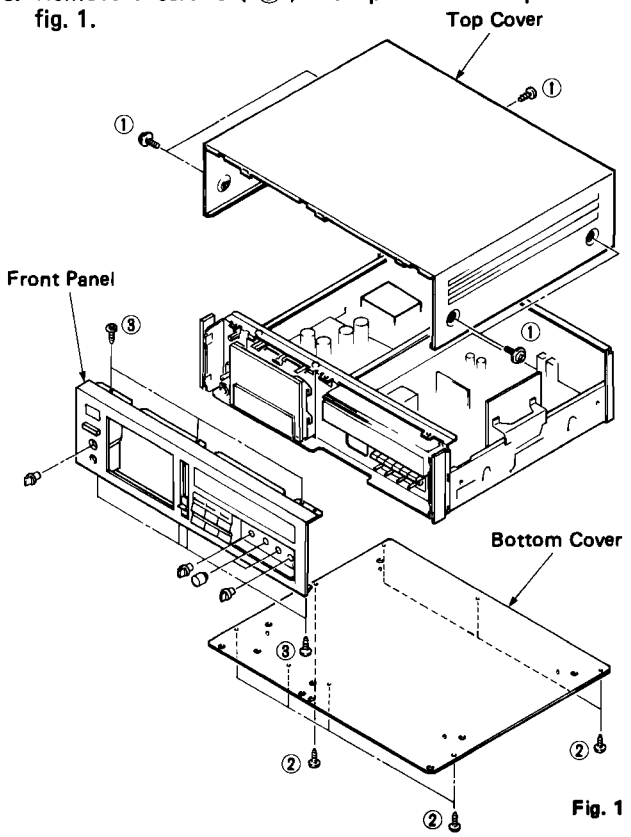


Fig. 1

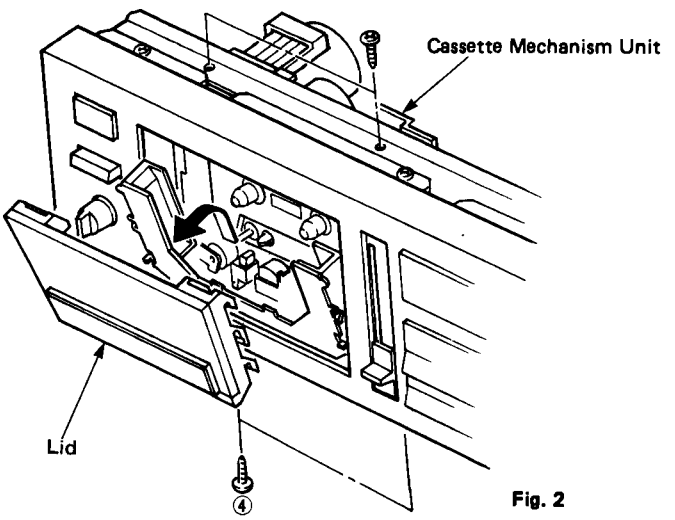


Fig. 2

• CONNECTOR WIRING

Note: Connect the connectors correctly reffering to fig. 3 to prevent malfunction.

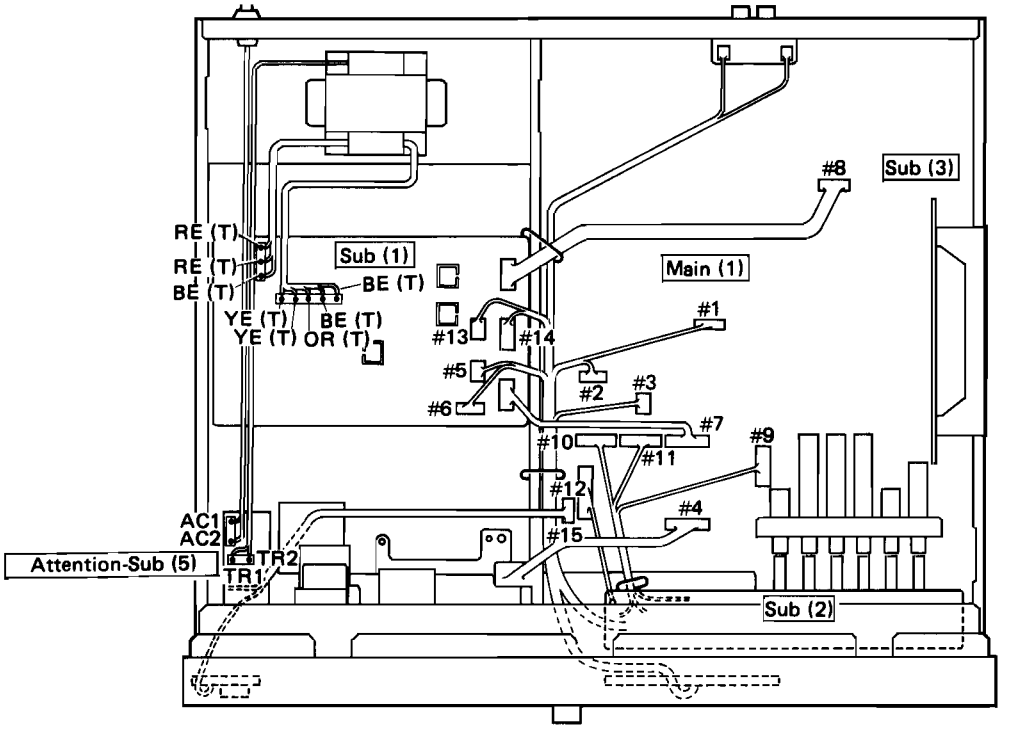


Fig. 3

5. Replacement of cassette mechanism parts

a. Remove 2 screws (⑤) in fig. 4, then remove the front plate.
b. Remove 2 screws (⑥) in fig. 4, then remove the blind plate.

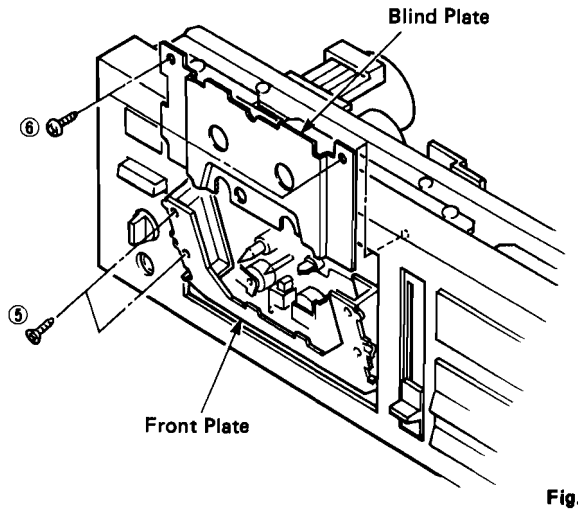


Fig. 4

c. Remove 2 screws (⑦) in fig. 6, then replace the REC/PB head.
d. Remove the screw (⑧) in fig. 6, then replace the ERASE head.
e. Remove the E ring (⑨) in fig. 6, then replace the supply side pinch roller.
f. Remove the E ring (⑩) in fig. 6, then replace the take-up side pinch roller.
g. Remove the washer (⑪) in fig. 6, then replace the idler.

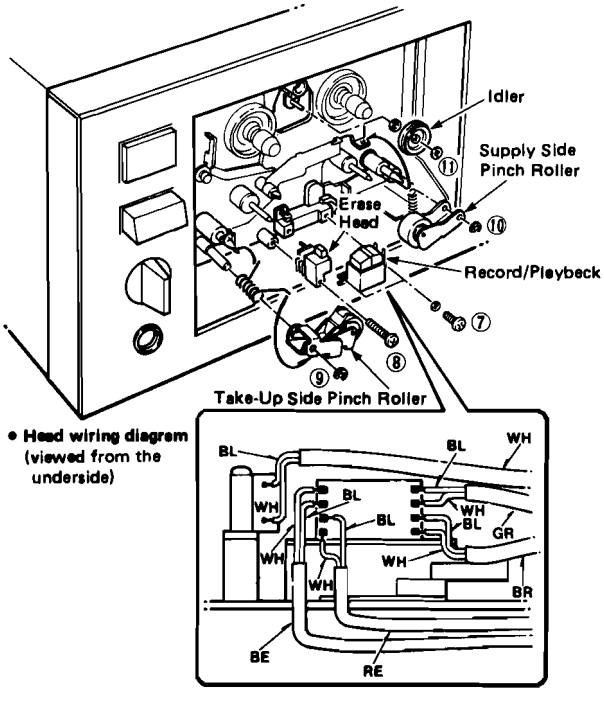


Fig. 6

• WIRING OF MECHANISM UNIT

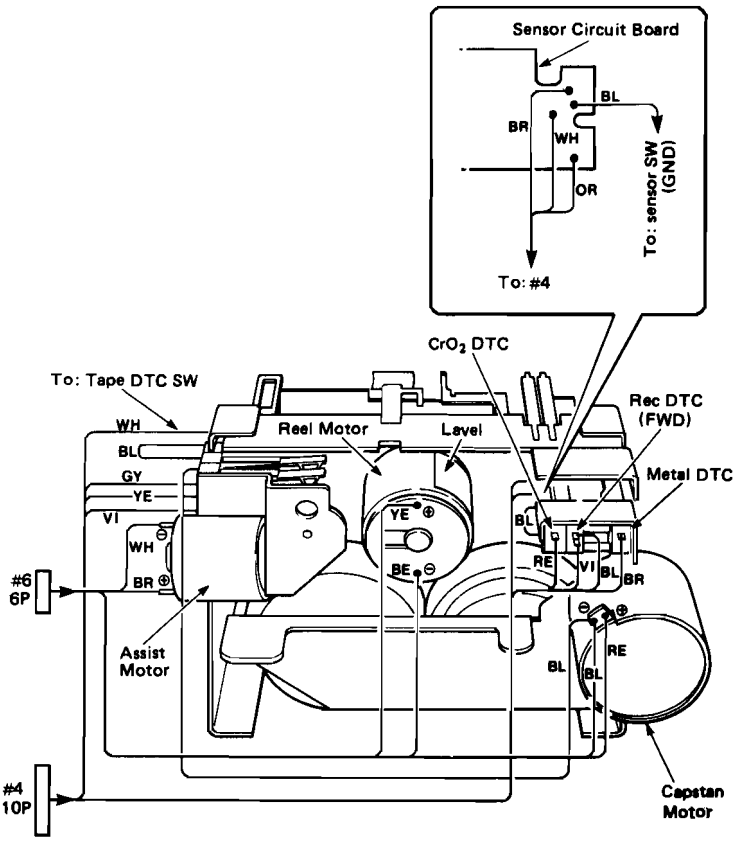


Fig. 5

6. Replacement of capstan motor

a. Remove 4 screws (⑫) in fig. 7, then remove the back plate.

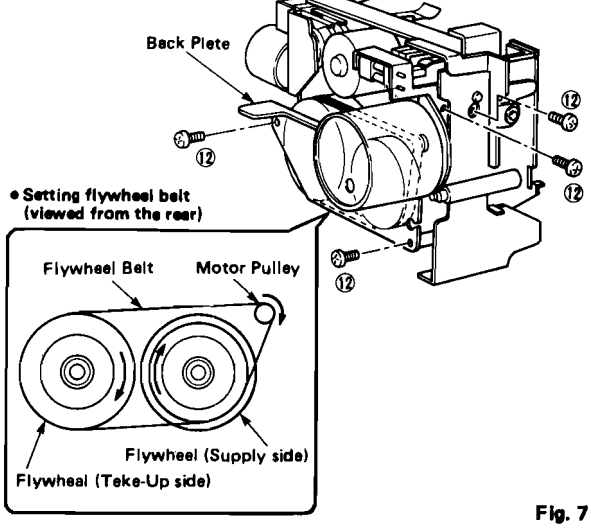


Fig. 7

b. Remove 3 screws (⑬) in fig. 8, then replace the capstan motor.

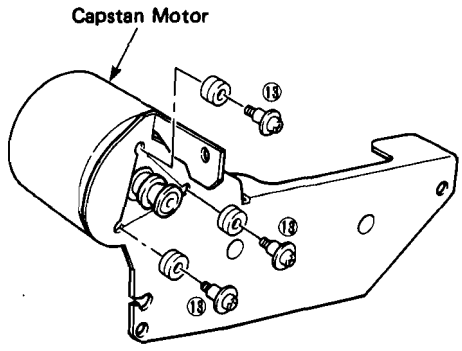


Fig. 8

7. Replacement of reel motor

a. Remove the washer (⑭) , then remove the reel base as shown in fig. 9.
*Note that coil springs of the supply reel and takeup reel are different.
Supply side: Silver
Take-up side: Green

b. Remove the back plate (Refer to Fig. 6.)

c. Remove the washer (⑮) in Fig. 9 and remove the flywheel (take-up side).

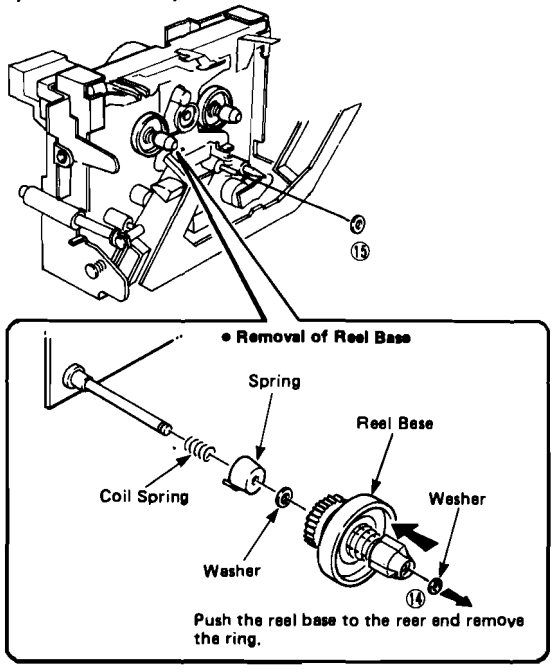


Fig. 9

d. Remove 2 screws and nut (⑯) in Fig. 10 and remove the reel motor installation plate.

e. Remove 2 screws (⑰) in Fig. 10 and replace the reel motor.

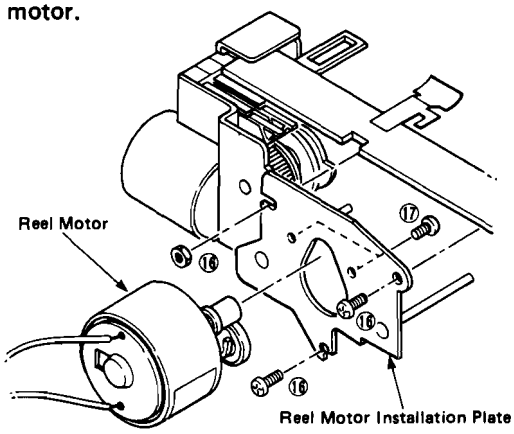


Fig. 10

8. Replacement of assist motor

a. Remove 2 screws (⑱) in Fig. 11 and remove the assist motor installation plate.

b. Remove 2 screws (⑲) in Fig. 11 and replace the assist motor.

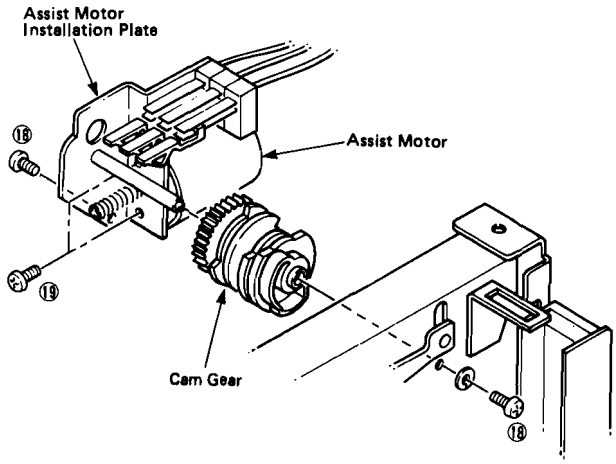


Fig. 11

■ ADJUSTMENTS

1. Before adjustment:

- Make sure that AC line voltage comes within

Models	AC line voltage
U, C	120V ± 10%
G	220V ± 10%
A, B	240V ± 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
- DCVM
- Torque meter
  TW-2111 (TX911580)
  CT160L (TX911120)
  TW-2412 (TX911640)
- Mirror Cassette
  MC-109C (TX911430)
- HEAD GAUGE
  A-BEX THG-801 (TX911420) or M-300.

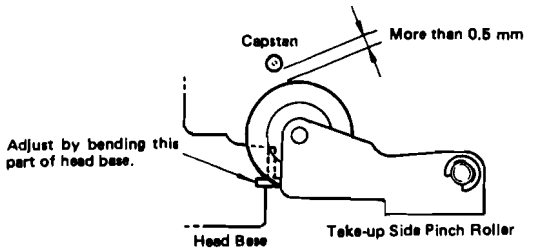
3. Test tape required

- MTT-111N (TX911650)
- MTT-114N (TX911680)
- MTT-212CN (TX911670)
- MTT-212N (TX911660)
- MTT256 (TX911300)
- MTT356 (TX911310)

- Reference tape
  - Normal (LH): YAMAHA MU-R60 or TDK AC223 (TX911600)
  - CrO_2: TDK SA-60 or TDK AC513 (TX911750)
  - METAL: YAMAHA ME-R60 or TDK AC712 (TX911590)

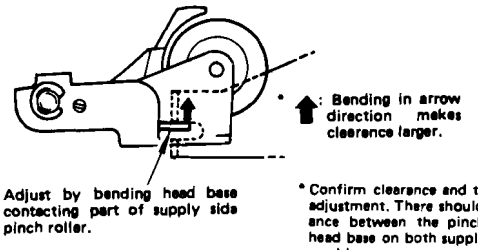
"MECHANICAL ADJUSTMENT"

Step	Adjustment item	Tape	Test Point	Instrument required	Mode	Measurement Conditions	Adjustment Parts	Rating	Remarks
1	Check clearance between take-up side pinch roller and capstan shaft.				PAUSE		Fig. A	More than 0.5mm	
2	Pinch Roller Timing				STOP	With head base pushed up, check timing at which pinch rollers on supply side and take-up side contact capstan.	Fig. B	Take-up side pinch roller should start rotating first.	If timing of both sides is simultaneous or supply side precedes, adjustment is required.
3	Height of record/playback head and tape guide		Fig.D	Headgauge (M-300) (THG-801)			Height adjusting screw of record/playback head tape guide (Fig. C)	Head gauge should pass through smoothly without its block contacting record/playback head guide.	
4	Record/playback head tilt angle			Headgauge (M-300) (THG-801)		With M-300 block placed vertically on record/playback-head, adjust so that M-300 gauge and block becomes parallel (Fig. F)	Tilt angle adjusting screw (Fig. C)	M-300 gauge and block should be parallel.	Place M-300 block vertically on head leaving space between M-300 block and gauge.
5	Supply side pinch roller height		Fig. E	Headgeuge (M-300) (THG-801)			Supply side pinch roller height edjusting screw (Fig. C)	Head gauge should pass through smoothly without its block contacting pinch roller guide. (Fig. E)	
6	Azimuth	10kHz, −10dB (MTT-114)	LINE OUT	A.C.V.M. Oscilloscope	PB		Azimuth adjusting screw (Fig. C)	Playback output of L and R is maximum and phase difference should be minimum. (Phase difference less than 60°)	Repeat adjustments in steps 3 to 6 and apply screw lock paint upon completion of adjustments.
7	Check position of erase head and tape movement.			Mirror cassette (MC-109C)	PB			Tape should move in the center of erase head smoothly. Capstan (supply side) should move smoothly. (Fig. G)	Adjust by using spacer as shown in Fig. H.
8	Check each torque.			Torque meter (Cassette type)		Measure FF, REW torque, take up torque and back tension torque.	Back tension: Adjust leaf spring (5 steps) (Fig. I)	Take-up torque 35 ~ 55g/cm FF, REW torque more than 70g/cm Back tension: 5 ~ 10g/cm	To obtain take-up torque, read the center of deflection.
9	Check FF and REW take up times	AC-513, 712,223 C-60						Normal: Less than 85 seconds High speed: Less than 55 seconds	
10	Tape speed	3kHz, −10dB (MTT-111)	LINE OUT	Wow/flutter meter Frequency counter	PB	Check speed while playing back 3kHz test tape.	Semi fixed variable resistor at the back of the Capstan Motor. (Fig. J)	3000^{+5}_{-15} Hz	
	Wow/Flutter							Less than 0.05% (WRMS)	Check wow/flutter while confirming approximately 3kHz frequency with wow/flutter meter counter.



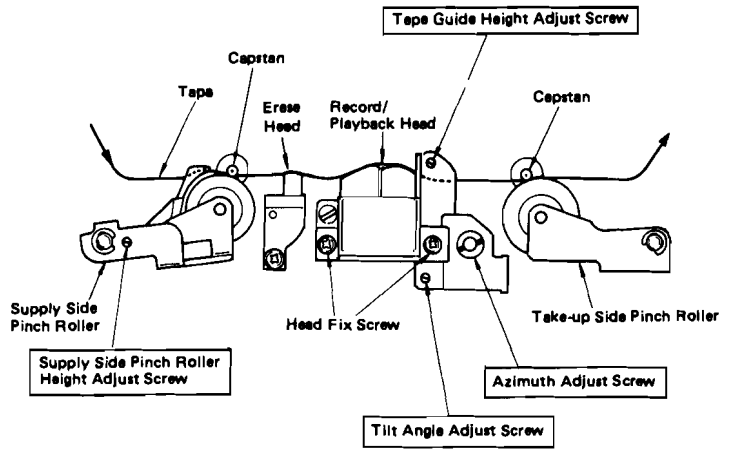
*Make sure to reconfirm after adjustment.

Fig. A



* Confirm clearance and timing after adjustment. There should be a clearance between the pinch arm and head base on both supply and take-up sides.

Fig. B



* Be sure to tighten the head fixing screw securely.
* Be sure to apply screw lock paint to each adjusting screw after adjustment.

Fig. C

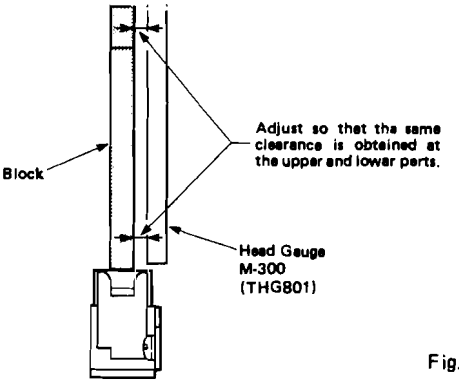


Fig. D

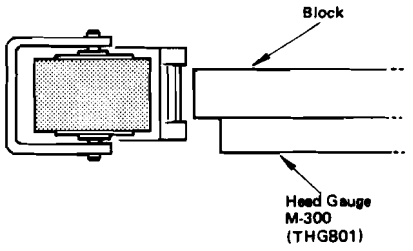


Fig. E

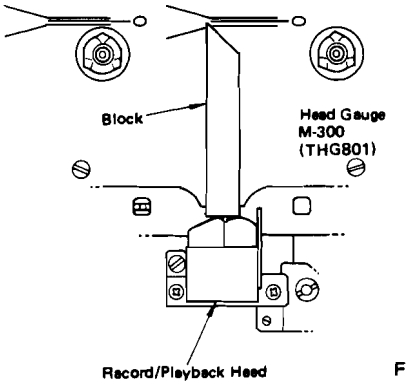


Fig. F

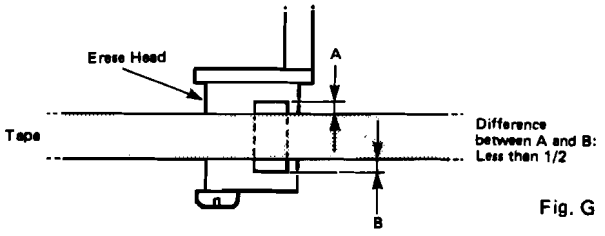
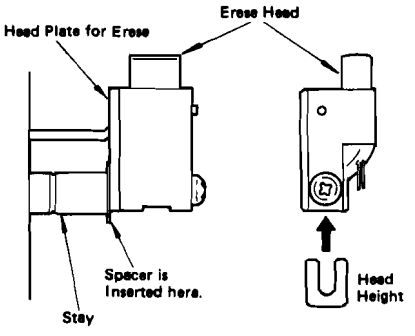


Fig. G



* Use spacer to adjust the head height.

Fig. H

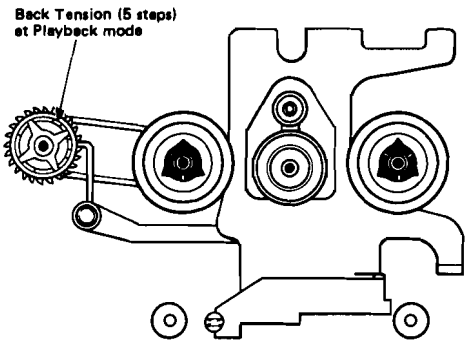


Fig. I

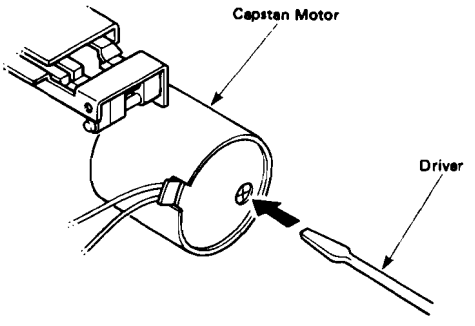


Fig. J

"ELECTRICAL ADJUSTMENTS"

<PLAYBACK ADJUSTMENTS>

* Use 360mV (−9dBV) for 0dB as the standard level of this unit.

- **Proceed with the playback adjustments after having finished the mechanical adjustments.**

Step	Adjustment item	Tape	Point of Measurement	Instrument required	Mode	Adjustment Part	Rating
1	EQ Amp. DC. Offset		TP1 (L) ~ E TP2 (R) ~ E	D.C.V.M.	STOP	VR101 (L) VR102 (R)	0 ± 2V D.C.
2	Playback level	MTT-212C (315Hz 160nwb/m)	LINE OUT	A.C.V.M. (AC Volt/dB Meter)	PB	VR103 (L) VR104 (R)	360 ± 25mV (−9.0 ± 1 dBV)
3	Playback frequency response confirmation	MTT-356U (3180 + 70μs) MTT-256U (3180 + 120μs)	LINE OUT	A.C.V.M.	PB		Frequency response should be within specification in Fig. K.
4	dbx Timing		TP501 ~ TP502 TP503 ~ TP504	D.C.V.M.	STOP	VR505 VR506	16.4 ± 0.5mV D.C.

• PLAYBACK FREQUENCY RESPONSE

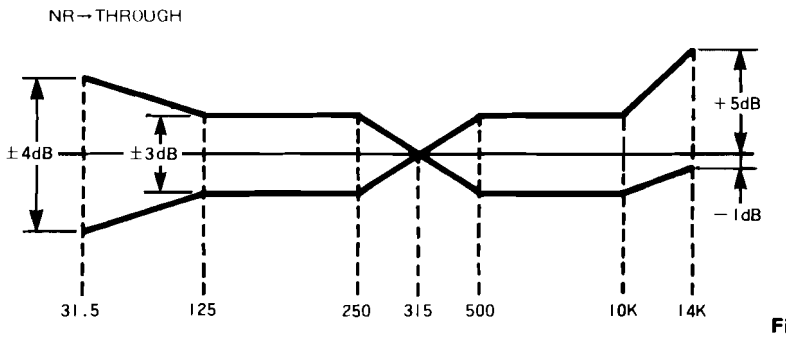


Fig. K

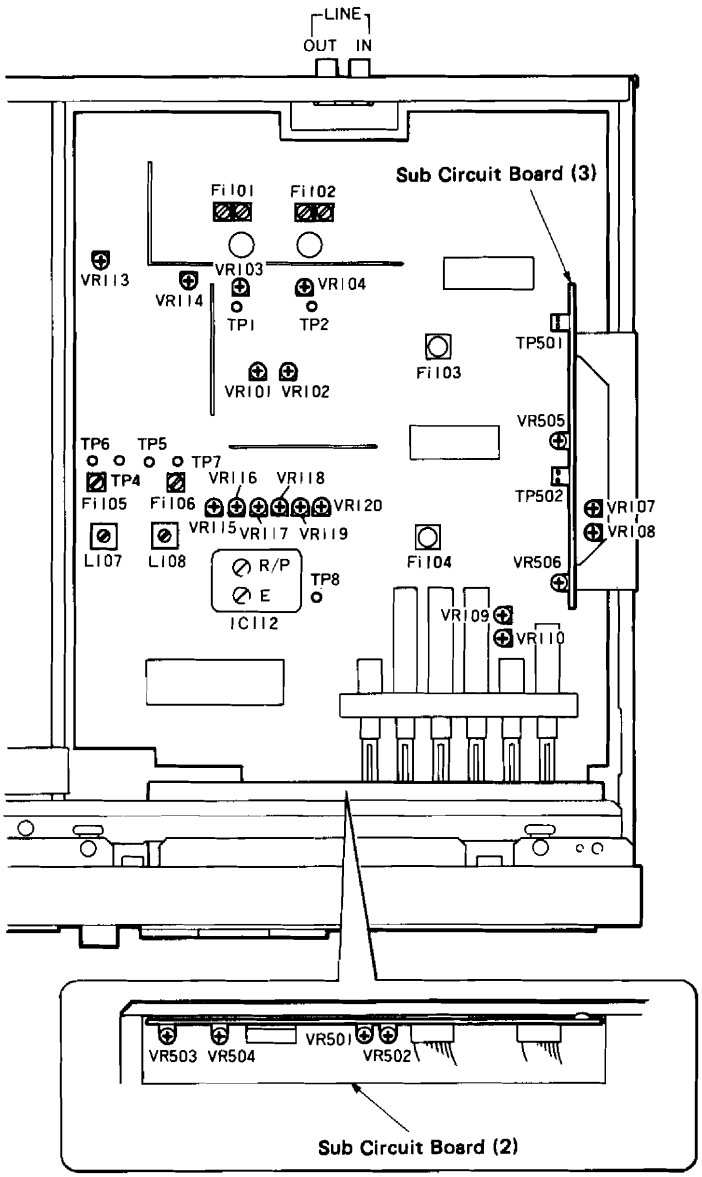
• RECORDING ADJUSTMENT

- **Proceed with the recording adjustments after having finished the playback adjustments.**

Step	Adjustment item	Tape	Test Point	Instrument required	Mode	Measurement Conditions	Adjustment Parts	Rating	Remarks
1	Peak Level Meter (+4.5dB)		LINE OUT LINE IN	A.C.V.M. Audio frequency oscillator	SOURCE	Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 600mV (−4.5dBV).	VR503 (L) VR504 (R)	+4dB segment (red) should light.	
	Peak Level Meter (0dB)					Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 360mV (−9dBV).	VR501 (L) VR502 (R)	0dB segment (red) should light.	When MASTER FADER is decreased L and R segments around 0dB should fade out almost simultaneously.
2	BIAS Oscillation level	METAL	TP5 TP6	A.C.V.M.	REC	BIAS ADJUST → Maximum (VR106) Set VR119 and 120 all the way to the left.	L107 L108 IC112 R/P	Adjust so that oscillation output is maximum.	
3	BIAS Leak	METAL	LINE OUT	A.C.V.M.	REC TAPE	With no signal applied (REC at minimum), set BIAS ADJUST to maximum and measure bias leak at LINE OUT when recording and monitoring simultaneously (TAPE mode) by using a metal tape.	Fi101 (L) Fi102 (R)	Less than 13mV	Adjust so as to minimize bias leak.
4	BIAS Trap	METAL	TP6(L) TP7(R)	A.C.V.M.	REC		Fi105 (L) Fi106 (R)		Adjust so as to minimize level.

Step	Adjustment Item	Tape	Test Point	Instrument Required	Mode	Measurement Conditions	Adjustment Parts	Rating	Remarks
5	Recording Level (Through)	AC-513 INPUT SIGNAL (1kHz, −20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency osillator	REC TAPE NR → OFF	①Set VR115 to 120 as the midpoint. ②Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 36mV (−29dBV). ③Record the signal and adjust so that there is no level difference when SOURCE/TAPE is switched.	VR113 (L) VR114 (R)	±0.5dB	The reference tape of this unit is AC-513 (equivalent to TDK-SA). If other tape is used, slight difference in level results.
6	Recording Level (dbx)	AC-513 INPUT SIGNAL (1kHz, −20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency osillator	REC TAPE NR → dbx	①Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 36mV (−29dBV). ②Record the signal and adjust so that there is no level difference when SOURCE/TAPE is switched.	VR109 (L) VR110 (R)	±0.5dB	Each adjustment in step 5 should be completed.
7	Recording BIAS (CrO_2)	AC-513 INPUT SIGNAL (1kHz, 12kHz, −20dB)	LINE OUT	A.C.V.M.	REC TAPE NR → OFF	①Confirm the 1kHz record/playback level (Step 5). ②Record and playback a 12 kHz (−20dB) signal and adjust so that the same level as the above ① level is obtained.	VR117 (L) VR118 (R)	Frequency response should satisfy Fig. L.	As ORBiT signal is 1kHz and 12kHz, use a 1kHz signal and a 12kHz one when adjusting recording/playback frequency response and confirm that each reting is satisfied. If other frequency is used for adjustment. Bias indicator may indicate an error.
8	Recording BIAS (Normal)	AC-223 INPUT SIGNAL (1kHz, 12kHz, −20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency osillator	REC TAPE	①Record and playback a 1kHz (−20dB) signal and read the level. (A slight difference results as record/playback level of this unit is set to AC-513.) ②Apply a 12kHz signal from LINE IN so that LINE OUT voltage is 36mV (−29dBV: voltage 20dB lower than the standard level) ③Record the signal and adjust so that the same level as the above ① level is obtained.	VR115 (L) VR116 (R)	Frequency response should satisfy Fig. M.	As ORBiT signal is 1kHz and 12kHz, use a 1kHz signal and a 12kHz one when adjusting recording/playback frequency response and confirm that each rating is satisfied. If other frequency is used for adjustment. Bias indicator may indicate an error.
9	Recording BIAS (METAL)	AC-712 INPUT SIGNAL (1kHz, 10kHz, −20dB)	LINE OUT	A.C.V.M.	REC TAPE	①Record and playback a 1kHz (−20dB) signal and read the level. ②Record and playback a 10kHz (−20dB) signal and adjust so that the same level as the above ① level is obtained.	VR119 (L) VR120 (R)	Frequency response should satisfy Fig. N.	
10	BIAS Test (LOW) BIAS Test (High)	AC-712	TP3 BIAS Indicator	A.C.V.M.	BIAS TEST REC BIAS ADJ Center.	Set METAL (AC-712) and perform BIAS TEST.	VR107 VR108	20 ± 5mV ▶◀ should light.	Each adjustment in Steps 5 end 7 should be complited. Confirm adjustment is made within ±2 graduation when BIAS TEST is performed with other tape (AC-513, 223).

• TEST POINT



• RECORDING FREQUENCY RESPONSE

NR OFF		
NORMAL	CrO_2	METAL

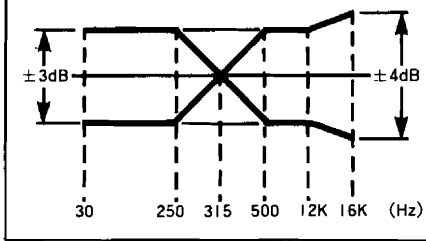
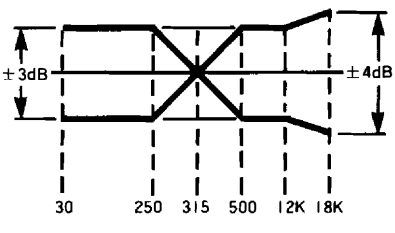
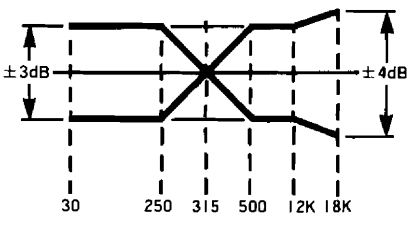

		

Fig. N	Fig. M	Fig. L

Dolby B NR ON	Dolby C NR ON	dbx ON

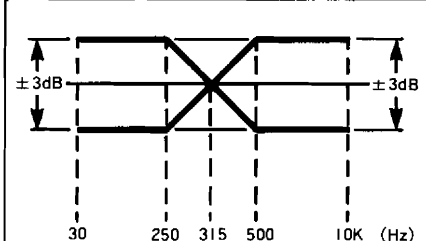
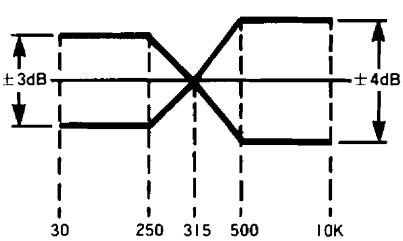
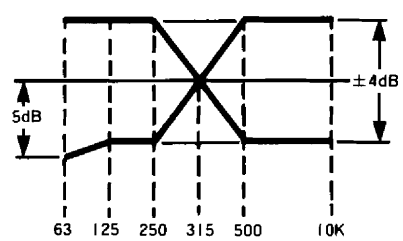
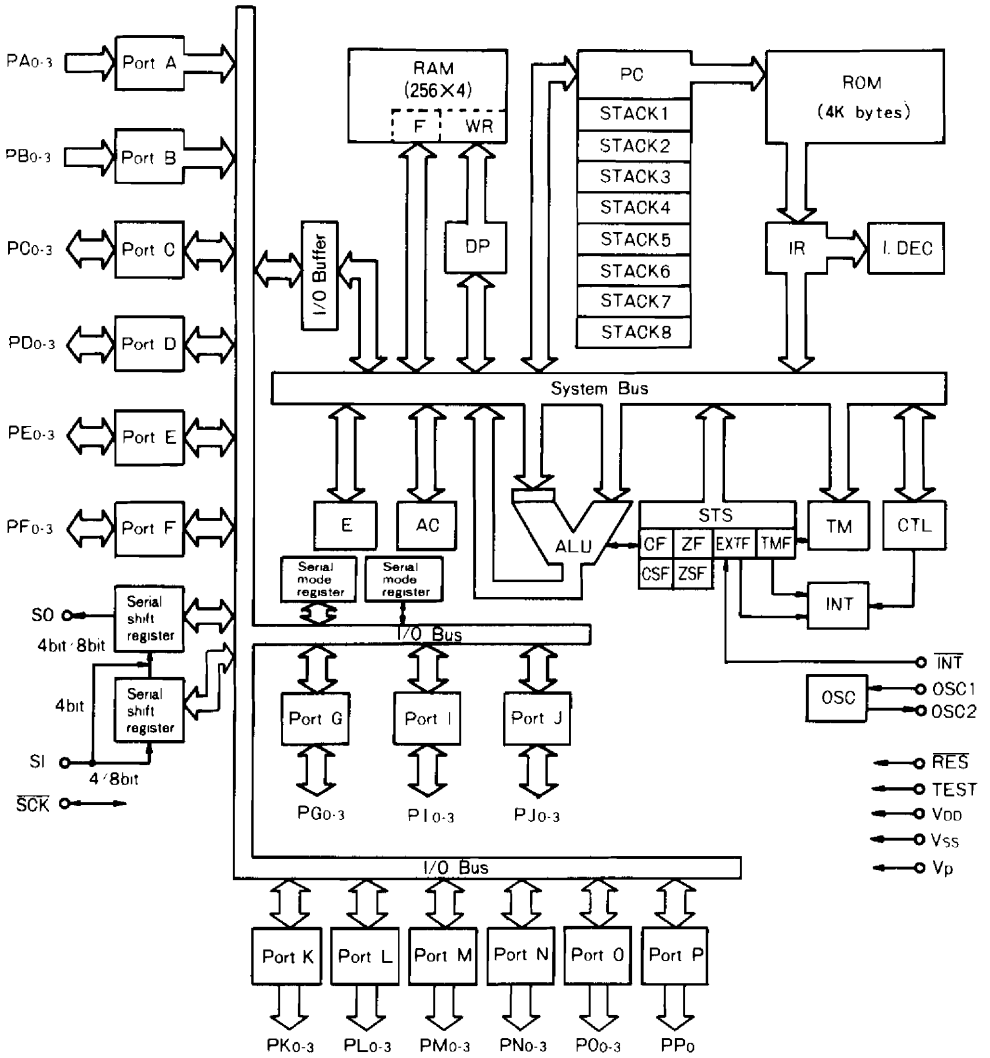
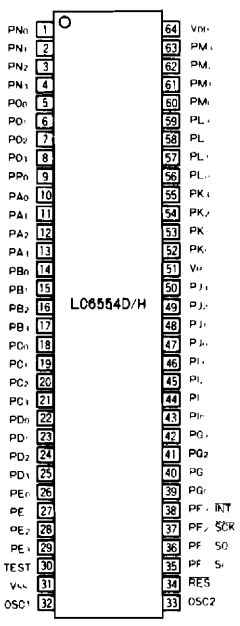

		

Fig. O		

■ LSI DATA

IC116: LC6554H-3362





STS	:	Status register	RAM	:	Data memory
ROM	:	Program memory	F	:	Flag
PC	:	Program counter	WR	:	Working register
INT	:	Interrupt control	AC	:	Accumulator
IR	:	Instruction register	ALU	:	Arithmetic and logic unit
I. DEC	:	Instruction decoder	DP	:	Data pointer
CF, CSF	:	Carry flag, carry save flag	E	:	E register
ZF, ZSF	:	Zero flag, zero save flag	CTL	:	Control register
EXTF	:	External interrupt request	OSC	:	Oscillator
TMF	:	Internal interrupt request	TM	:	Timer

Note) Pins SI, SO, $\overline{SCK}$, $\overline{INT}$ are commonly used with PF_0, PF_1, PF_2 and PF_3 respectively.

• TERMINAL DESCRIPTION

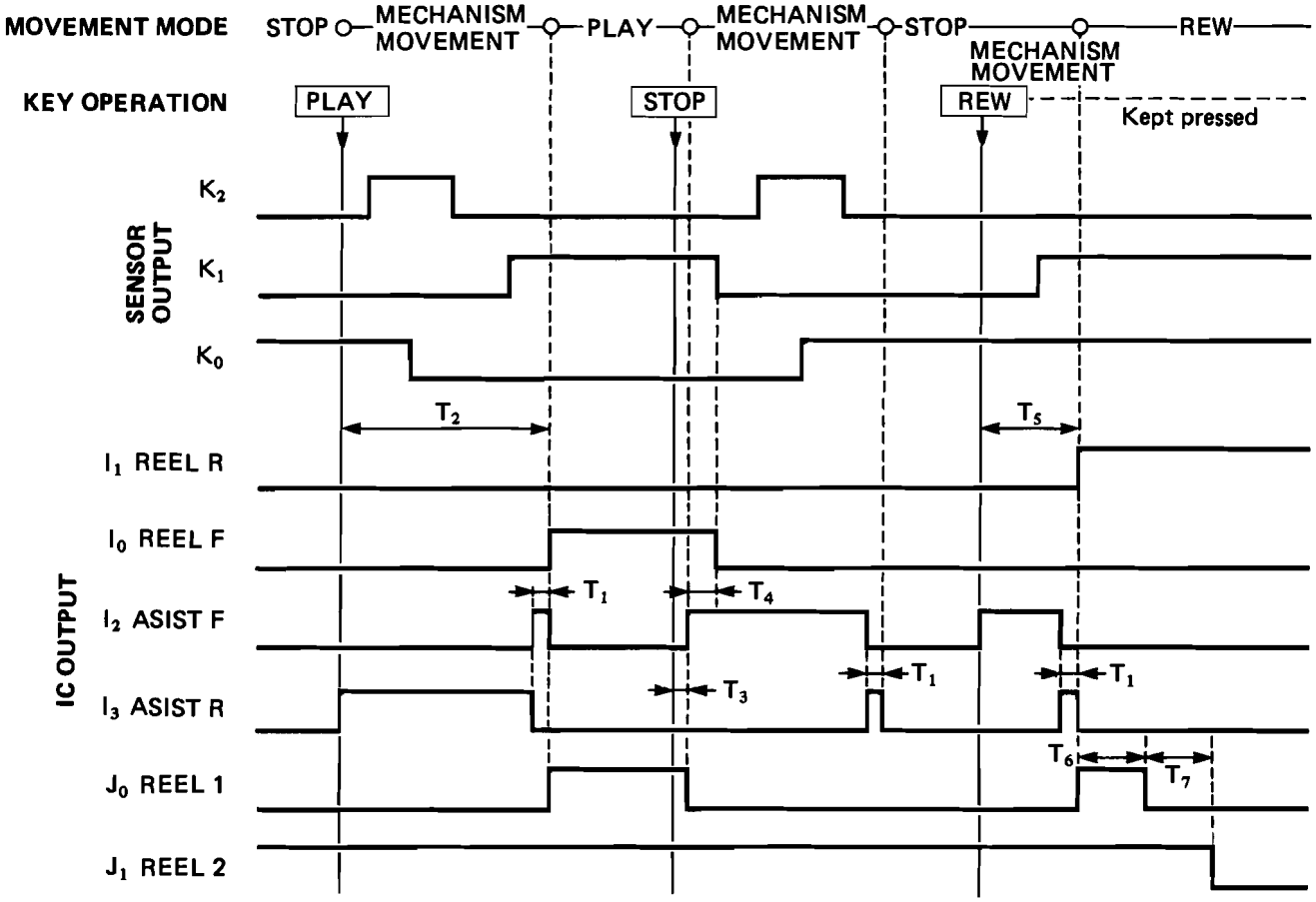
NO	NAME	FUNCTION	NO	NAME	FUNCTION
1	N_0	LINE MUTE	64	VDD	+5
2	N_1	REC MUTE	63	M_3	DISPLAY DIGIT OUTPUT (1 figure) G_5
3	N_2	MONITOR SW	62	M_2	(2 figure) G_4
4	N_3	Remote Control Transmitter REC DISPLAY	61	M_1	(3 figure) G_3
5	O_0	NORMAL } TAPE	60	M_0	(4 figure) G_2
6	O_1	CrO_2 } TAPE	59	L_3	LED SEGMENT OUTPUT a, MEMORY
7	O_2	METAL } TAPE	58	L_2	b, ▷‖◁ , BIAS
8	O_3	70μ (PB AMP.)	57	L_1	c, ▷
9	P_0	DISPLAY (DOT) G_1	56	L_0	d, ◁
10	A_0	INPUT KEY • PLAY	55	K_3	e, TAPE
11	A_1	• REC/PAUSE	54	K_2	f, O-M REPEAT
12	A_2	• FF	53	K_1	g, FULL REPEAT
13	A_3	• REW	52	K_0	h, –, REC, ● , TEST, SOURCE
14	B_0	• MUTE/SEARCH	51	Vp	–22
15	B_1	• STOP	50	J_3	BIAS
16	B_2	• RESET	49	J_2	DISPLAY (REMOTE)
17	B_3	• MEMORY	48	J_1	REEL MOTOR CONTROL
18	C_0	MECHANISM POSITION SW (0) Cassette Mechanism	47	J_0	
19	C_1	(1)	46	I_3	ASSIST MOTOR CONTROL
20	C_2	(2)	45	I_2	
21	C_3	MONITOR	44	I_1	REEL MOTOR CONTROL (REW)
22	D_0	CrO_2 DTC.	43	I_0	(FF)
23	D_1	METAL DTC.	42	G_3	ROTATION DTC. (S) CASSETTE MECHANISM
24	D_2	ERASURE PROTECTION	41	G_2	ROTATION DTC. (T)
25	D_3	CASSETTE HALF	40	G_1	MUSIC PULES
26	E_0	AUTO MODE • FULL REPEAT	39	G_0	REMOTE (WIRELESS)
27	E_1	• 0-M REPEAT	38	$F_3/\overline{INT}$	POWER OFF
28	E_2	• TIMER PLAY	37	$F_2/\overline{SCK}$	ORBIT • TEST
29	E_3	• TIMER REC	36	F_1/SO	• TEST LOW
30	TEST	GND	35	F_0/SI	• TEST HIGH
31	Vss	GND	34	$\overline{RES}$	RESET
32	OSC1	CLOCK	33	OSC2	CLOCK

• MODE VS OUTPUT

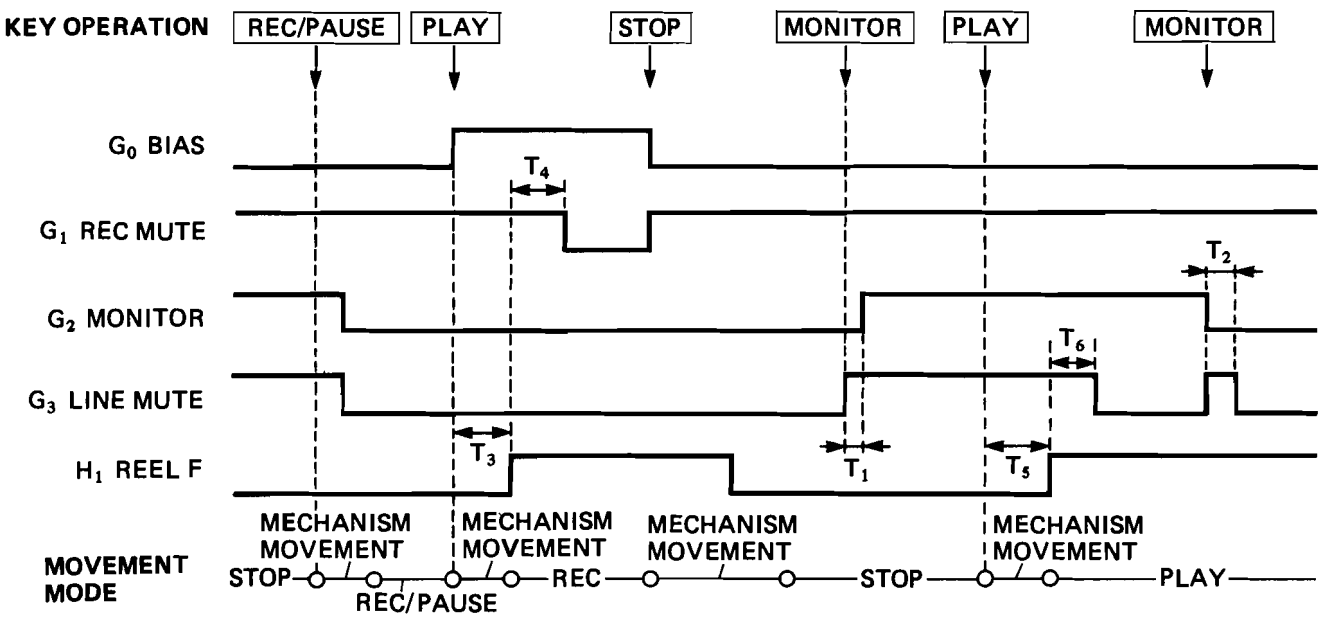
Terminal	NAME	STOP	FF	FF (High Speed)	REW	REW (High Speed)	PLAY	REC/ PAUSE	REC/ PLAY	CUE	REVIEW
$J_3 \cdot 50$	BIAS	L	L	L	L	L	L	L	H	L	L
$N_1 \cdot 2$	REC MUTE	H	H	H	H	H	H	H	L	H	H
$N_2 \cdot 3$	MONITOR	H–	H–	H–	H–	H–	**H	***L	***L	H–	H–
$N_0 \cdot 1$	LINE MUTE	(H) *	(H) *	(H) *	(H) *	(H) *	L	(L) *	(L) *	(H) *	(H) *
$I_1 \cdot 44$	REEL · R	L	L	L	H	H	L	L	L	L	H
$I_0 \cdot 43$	REEL · F	L	H	H	L	L	H	L	H	H	L
$J_0 \cdot 47$	REEL 1	H	L	L	L	L	H	L	H	L	L
$J_1 \cdot 48$	REEL 2	H	H	L	H	L	H	H	H	H	H

Note: L ..... Low level
H ..... High level
– ..... Holding premode
** ..... L changes when operation is ON.
*** ..... H changes at initial REC.
* ..... L changes when TAPE is selected.
H changes when SOURCE is selected.

■TIMING CHART



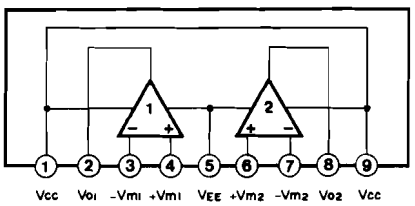
T_1 : Reversing due to assist motor stop . . . About 17.5 msec
T_2 : Play operation time . . . About 310 msec
T_3 : Delay of play → STOP . . . About 15.5 msec
T_4 : Reel motor running time before shifting out of the previous mode . . . About 48 msec
T_5 : Operation time of STOP → REW . . . About 85 msec
T_6 : Delay before fast forward voltage . . . About 122 msec
T_7 : Delay before high speed fast forward voltage . . . About 135.5 msec



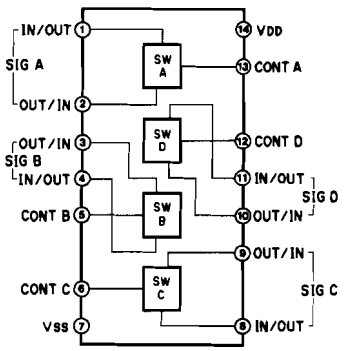
T_1 : Monitor mute delay . . . About 25μsec
T_2 : Monitor switching mute . . . About 23.5 msec
T_3 : Operation of PAUSE → PLAY . . . About 157 msec
T_4 : REC mute delay . . . About 132 msec (to wait til running is stabilized)
T_5 : PLAY operation . . . About 310 msec
T_6 : Line mute delay . . . About 127.5 msec

■ IC BLOCK

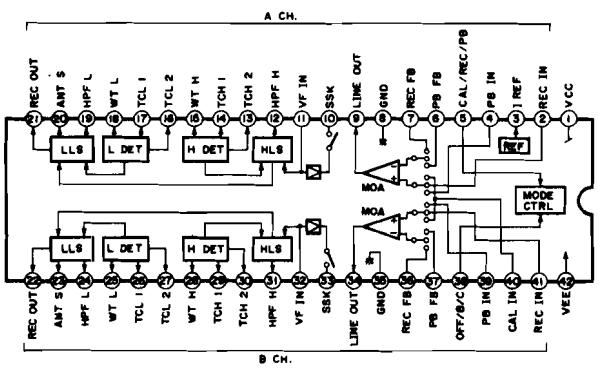
IC101, 102, 104, 113 ~ 115, 503: AN6551, NJM4558S, BA715
IC103: NJM2043S-D
IC107: NJM4556S-A
IC109, 110: NJM4556S
(Dual Ope-amp)



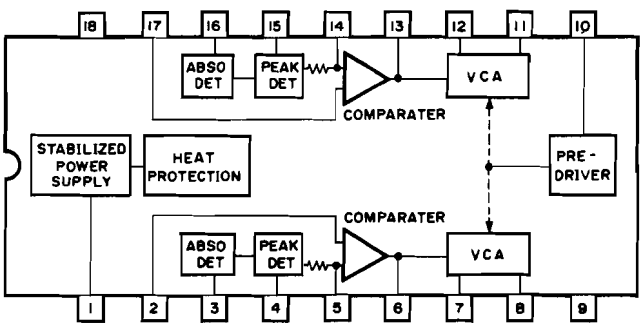
IC108: μPD4066BC, LC4066B (Quad Bilateral Switch)



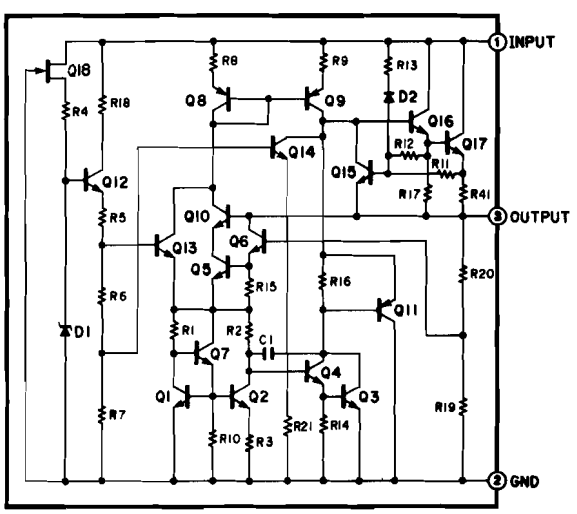
IC105, 106: CX20188
(Dolby B/C NR)



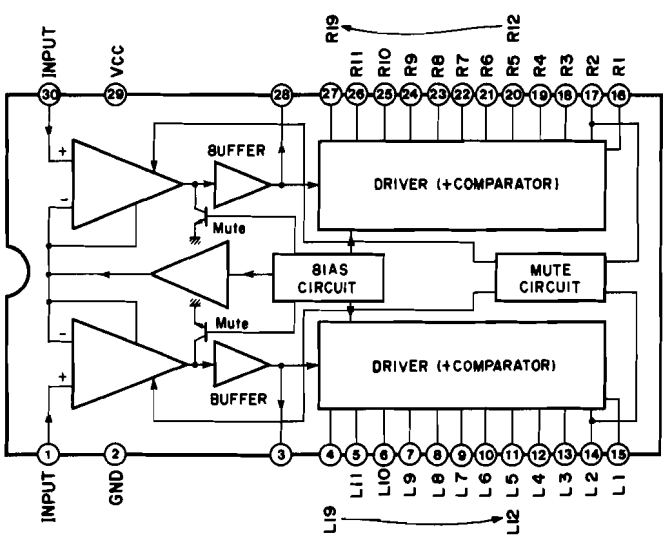
IC111: μPC1297CA (Dolby HX PRO)



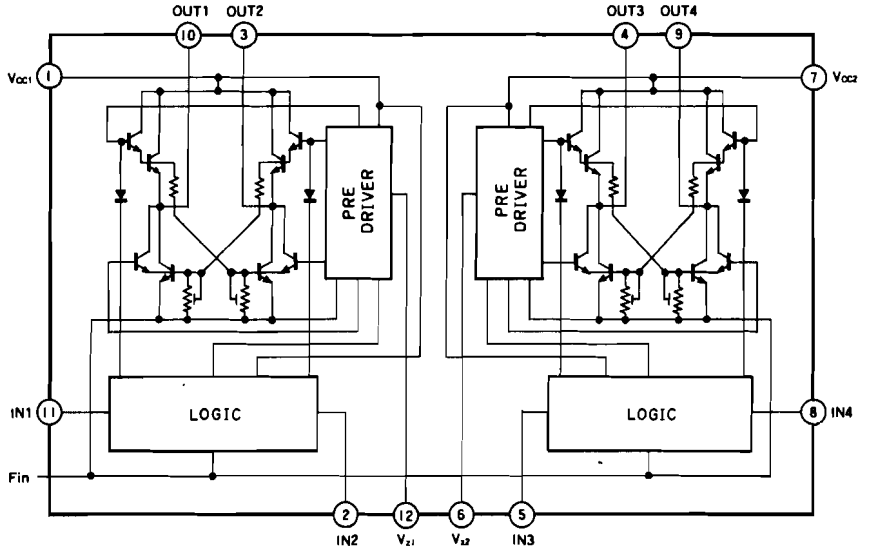
IC501: AN78M05, NJM78M05A (Regulator)



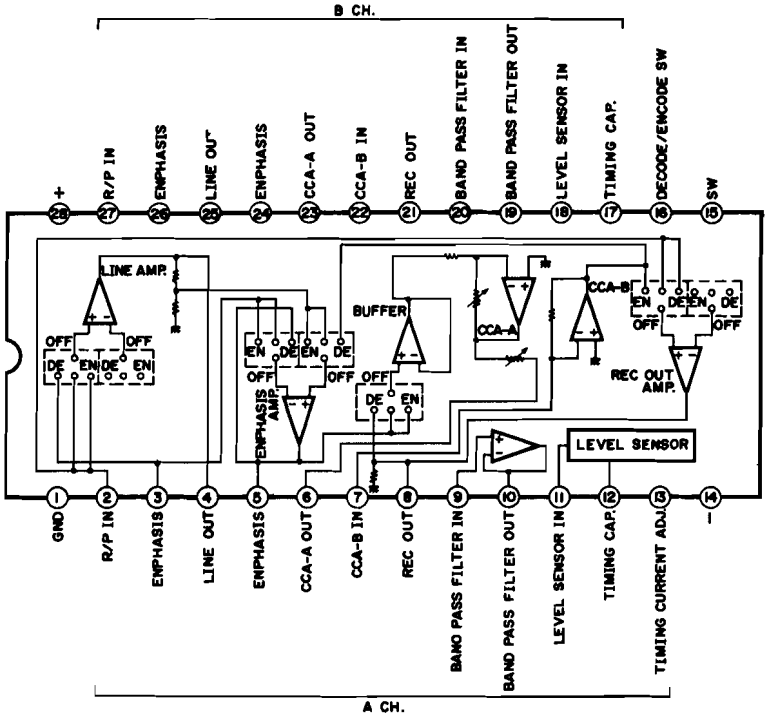
IC504, 505: HA12067NT (LED Driver)



IC502: LB1649 (Motor Driver)



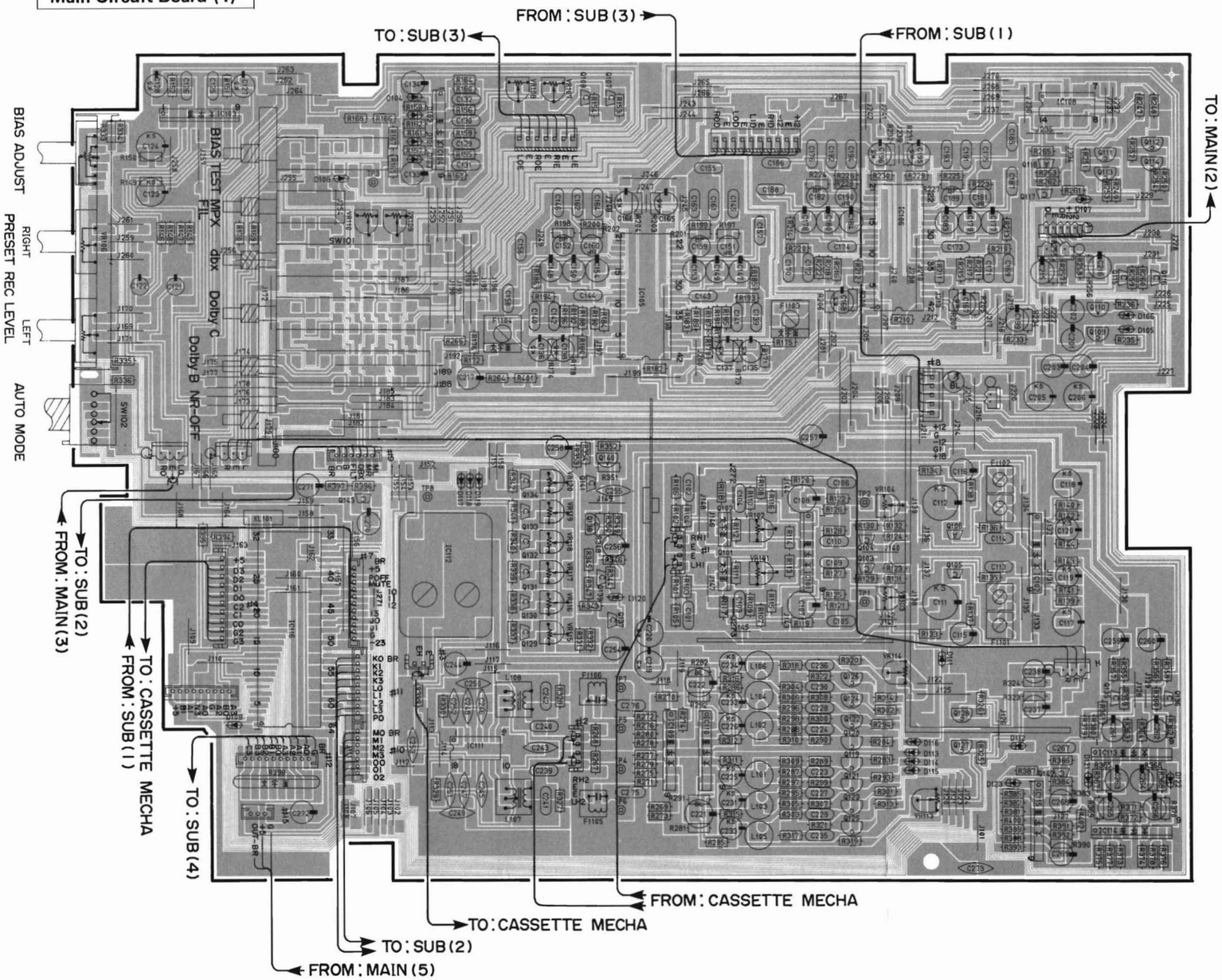
IC506, 507: AN6294NK (Dual dbx NR)



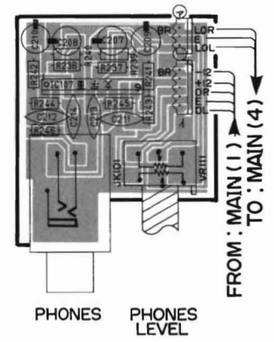
■ PRINTED CIRCUIT BOARD (Pattern side)

Note) 文字面 : Component side

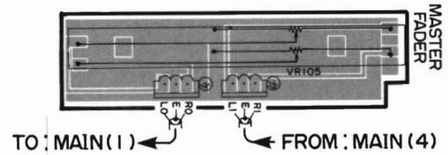
Main Circuit Board (1)



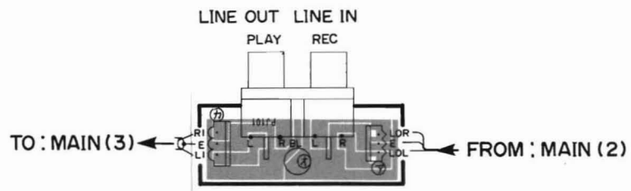
Main Circuit Board (2)



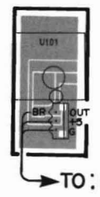
Main Circuit Board (3)



Main Circuit Board (4)



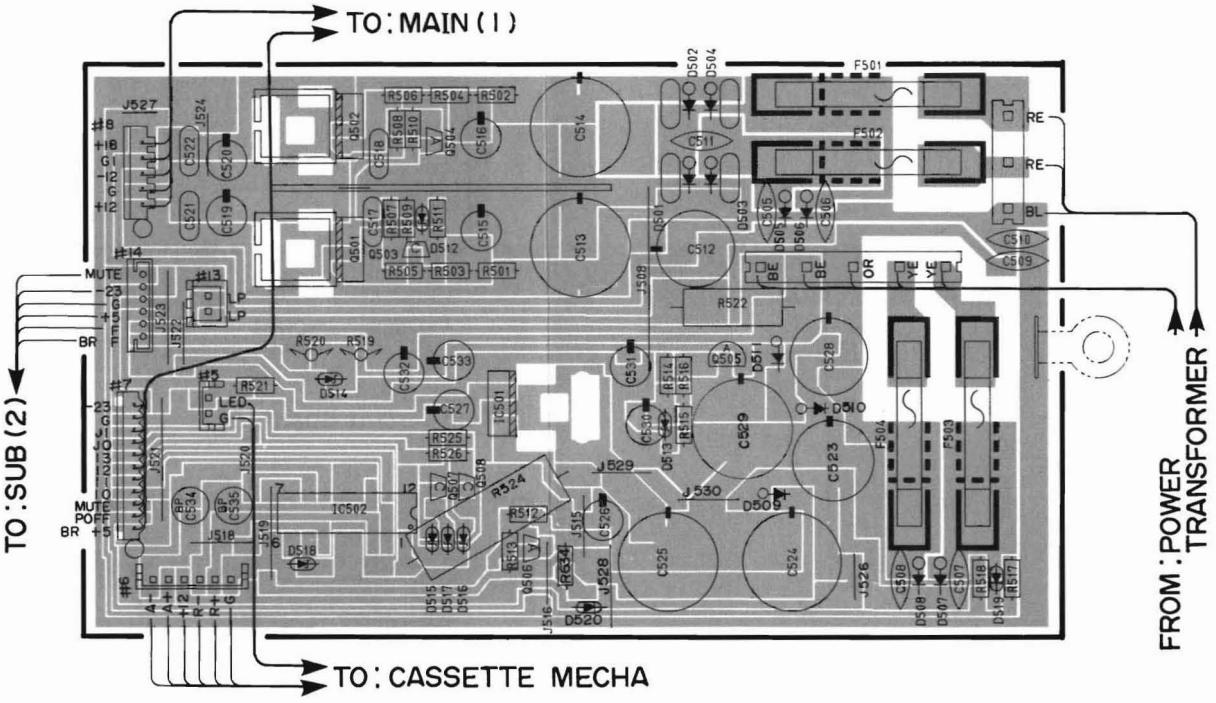
Main Circuit Board (5)



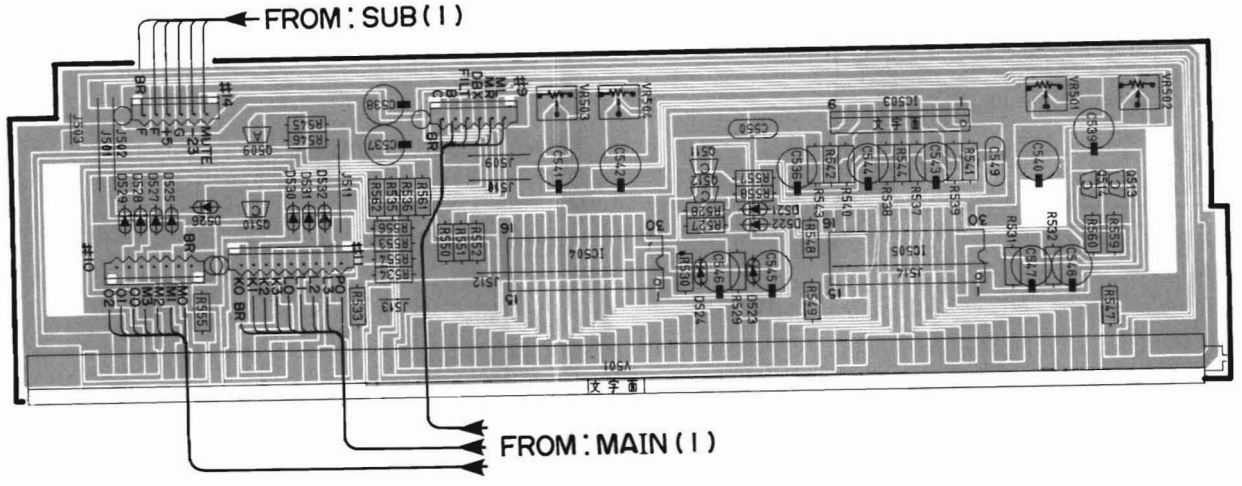
■PRINTED CIRCUIT BOARD(Pattern side)

Note) 文字面 : Component side

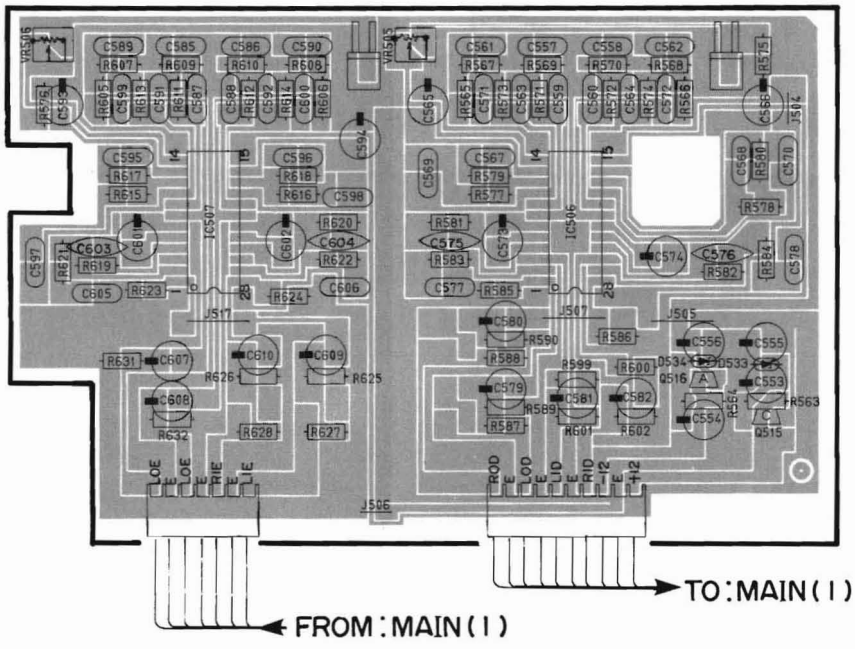
Sub Circuit Board (1)



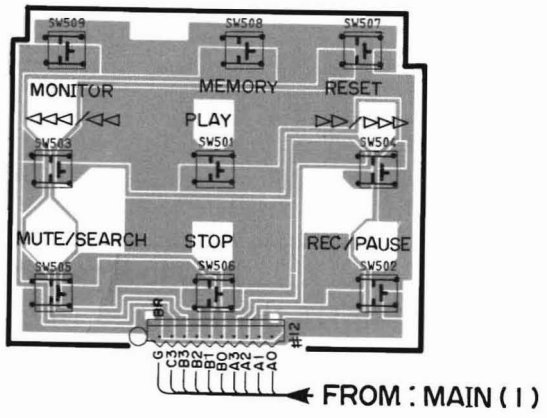
Sub Circuit Board (2)



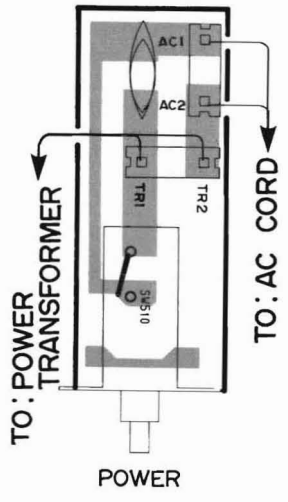
Sub Circuit Board (3)



Sub Circuit Board (4)



Sub Circuit Board (5)



■SCHEMATIC DIAGRAM(1/2)

2SA1115 (E, F) 2SA933S (Q, R) 2SA1310 (R, S, T) 2SA1310 (R, S, T) 2SA934 2SB544 2SC2603 (E, F) 2SC3312 (R, S, T) 2SD655 2SC1740 (S, R) 2SD1302 (R, S)	2SB786 2SD947	ISS133 MTZ3.6A MTZ4.7B MTZ6.8B MTZ6.2B MTZ9.1C MTZ22C	MTZ11B 1SR35-100A MTZ7.5B	NJM78M05A AN78H05	2SK389 (GR, BL)	NJM2043S-D	NJM4558S NJM4556S AN6551 BA715	LB1649	µPD4066BC LC4066B	µPC1297CA	AN6294NK	HA12067NT

: PLAY
: REC
: Dolby Encode
: Dolby Decode
: dbx Encode
: dbx Decode

C LEVEL ADJ(dbx,R)

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
◪	CARBON FILM RESISTOR (1/6W)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	SEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR

CAPACITOR

REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	#
NO MARK	CERAMIC CAPACITOR	⊣⊢
◎	POLYESTEL FILM CAPACITOR (Mylar)	
○	POLYSTYRENE FILM CAPACITOR	
Ⓘ	MICA CAPACITOR	
Ⓟ	POLYPROPYLENE FILM CAPACITOR	
●	SEMICONDUCTIVE CERAMIC CAPACITOR	

Unless otheewise specified

PNP TRANSISTOR	2SA933(Q.R)or2SA1115(E.F)or2SA1310(R.S.T)
NPN TRANSISTOR	2SC1740S(S.R)or2SC2603(E.F)or2SC3312(R.S.T)
DIODE	1SS133

DOLBY (ENCODE)

DOLBY (DECODE)

SYSTEM CONTROLLER

MAIN(4-B)

PHONES AMP.

LINE OUT

NOT CONNECTED

FROM SUB(3)

IC106 CX20188

IC108 μPD4066BC or M4066BP or LC4066B

MOTOR SW

Q109 2SC2060 or 2SD400

Q110 2SA934 or 2SB544

Q111,Q112,Q113,Q114 2SD655(E.F) or 2SD1302(R.S) or 2SD1468(Q.R.S)

IC107 A NJM4556S-A

IC107 B

IC114 A

IC115 B

IC116 LC6554H-3362

Q142

Q143

D107

D108

D109

D121

D122

D123

XL101 4MHz

U101 GP1U011

JK101

REPEAT FILL O-M SW102

TIMER PLAY REC

R398 10KX8

CASSETTE MECHA.

CASSETTE REC METAL CrO2 K2 K1 K0 TAKE UP SUPPLY

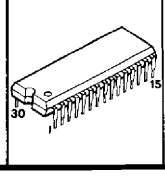
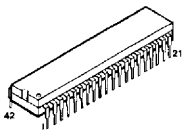
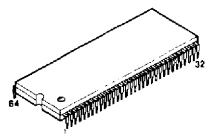
FROM SUB(1)

FROM SUB(2)

FROM SUB(4)

MAIN(2)

MAIN(5)

	HA12067NT	CX20188	LC6554H-3362
			

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

■SCHEMATIC DIAGRAM(2/2)

RESISTOR

REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
☒	CARBON FILM RESISTOR (1/6W)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
◪	FIRE PROOF CARBON FILM RESISTOR
□	SEMENT MOLDED RESISTOR
⊘	SEMI VARIABLE RESISTOR

CAPACITOR

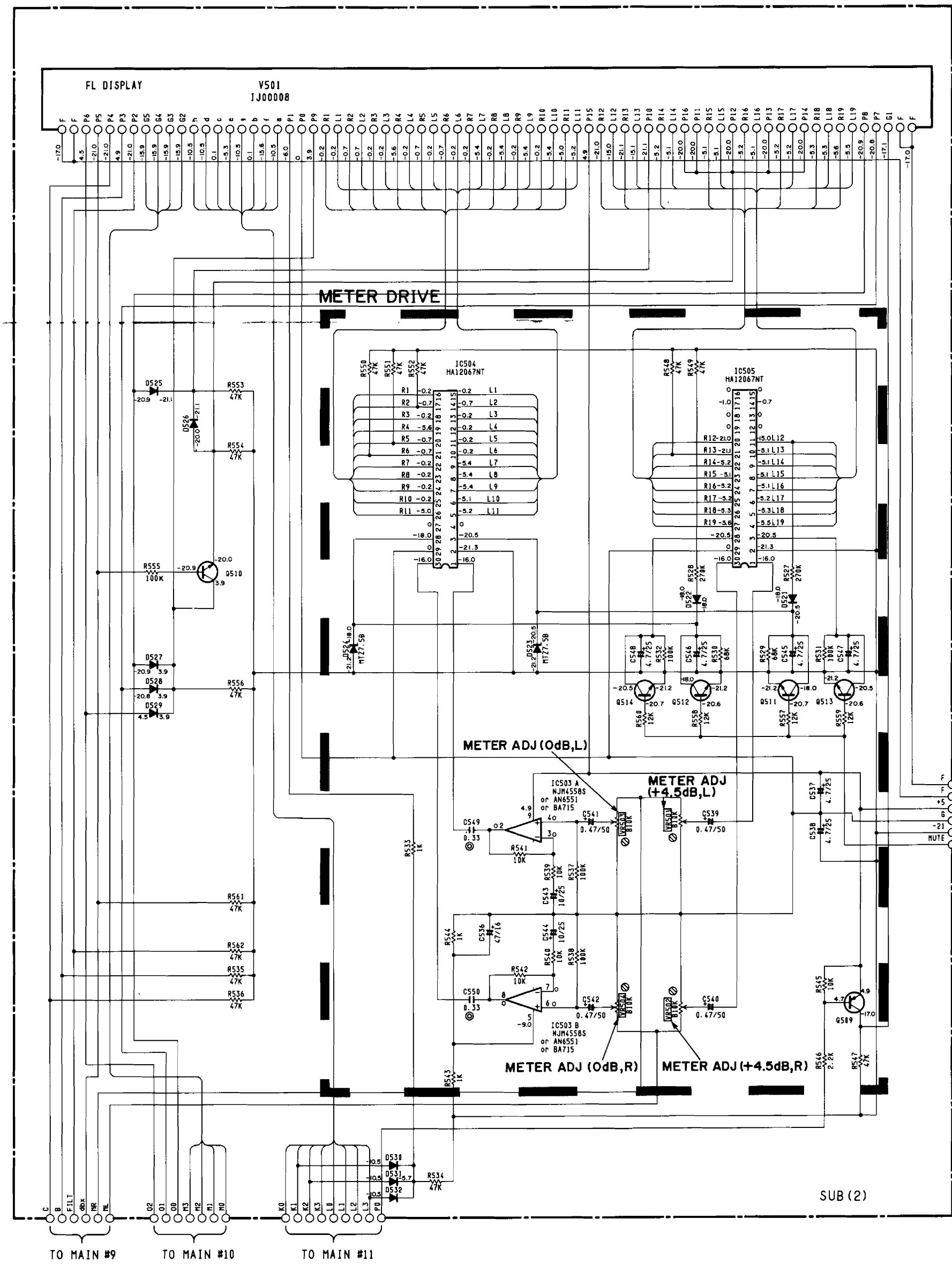
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
NO MARK	CERAMIC CAPACITOR
◎	POLYESTEL FILM CAPACITOR (Mylar)
○	POLYSTYRENE FILM CAPACITOR
Ⓜ	MICA CAPACITOR
Ⓟ	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

Uniess otheerwise specitied

PNP TRANSISTOR	2SA933S(Q.R) or 2SA1115(E.F) or 2SA1310(R.S.T)
NPN TRANSISTOR	2SC1740(S.R) or 2SC2603(E.F) or 2SC3312(R.S.T)
DIODE	1SS133

◆ : dbx Encode

◢ : dbx Decode



dbx (ENCODE)

dbx (DECODE)

SUB (4)

TO MAIN #12

C3 SW509 MONITOR
B3 SW508 MEMORY
B2 SW507 RESET
B1 SW506 STOP
B0 SW505 MUTE/SEARCH
A3 SW504 REW
A2 SW503 FF
A1 SW502 REC/PAUSE
A0 SW501 PLAY
G

IC507 AN6294NK

IC506 AN6294NK

dbx Timing (Encode)

dbx Timing (Decode)

SUB (3)

LOE E ROE E RIE E LIE

RID E LID E LOD E ROD -12 E +12

TO MAIN

TO MAIN

MOTOR CONTROL

SUB (1)

IC502 LB1649

CASSETTE MECHA.

ASSIST

REEL

CAPSTAN

TO MAIN #7

-23
G
J0
I3
I2
I1
I0
MUTE
P-OFF
+5

POWER SUPPLY

IC501 AN78M05 or NJM78M05A

Q501 2SD947

Q502 2SB786

Q503

Q504

Q505 2SB544 or 2SA934

Q506

Q507

Q508

Q509

Q515

Q516

F501~F504
T1.0A 250V····J.R
1.0A 250V····U.C
T800mA 250V···A.G.B

F501

F502

F503

F504

TO MAIN #8

+13
G
-13
G1
+18

#14 F F +5 G -21 MUTE

#6 A- A+ +12 R- R+ G

#13 LP LP

#5 G LED

RE BE YE GR YE RE BL RE

Australian & British models

SUB (5)

TR1 AC1 TR2 AC2

Exqept British model

XC801

U.S.A & Canadian model

SW510

C551 0.01/250···J 0.01·····EX

XC800---U.C
XC798---J

European model

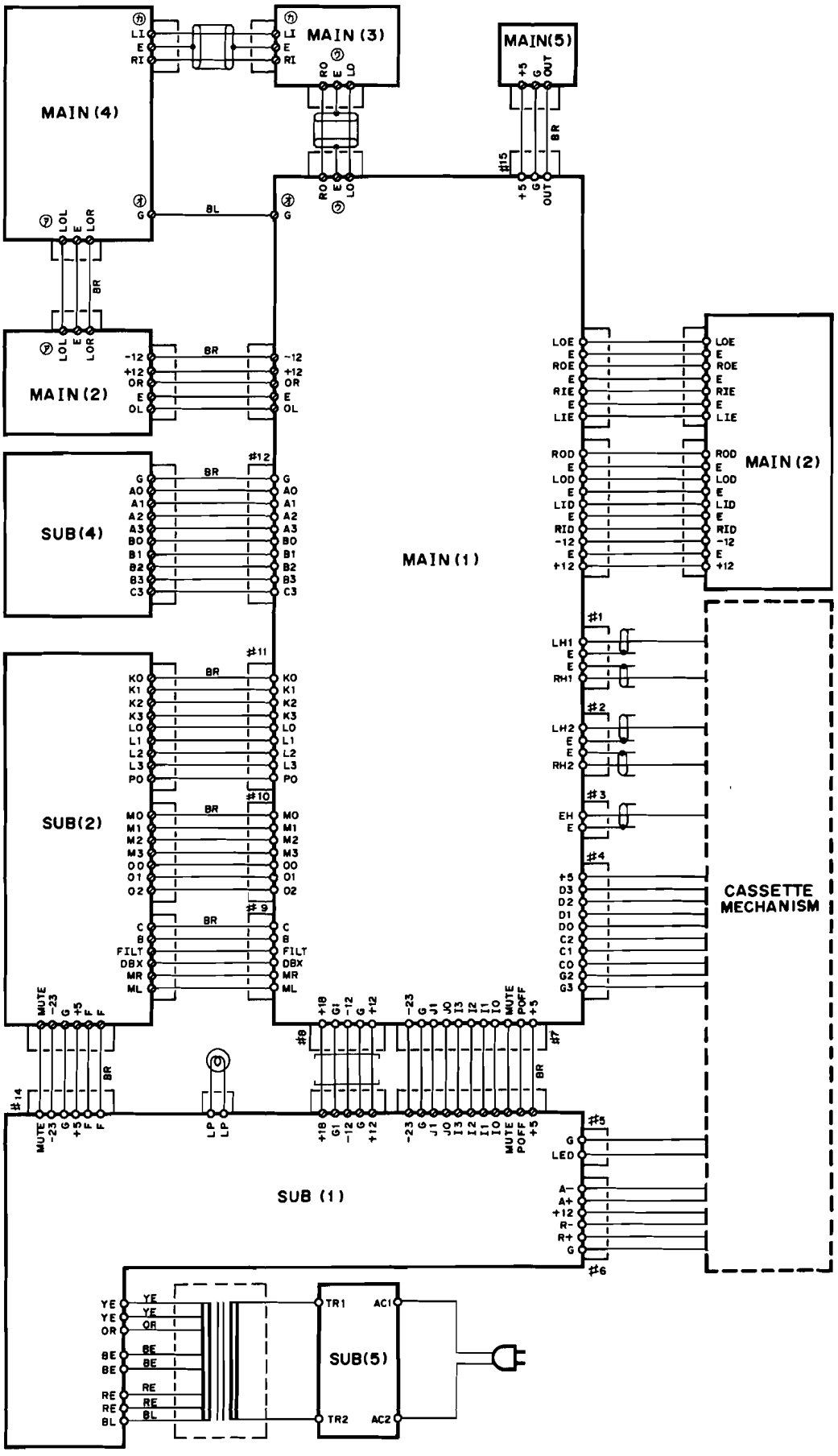
XC802

General model

XC799

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

■ WIRING


MAIN (4)
MAIN (3)
MAIN(5)
MAIN (2)
SUB(4)
MAIN (1)
MAIN (2)
SUB(2)
CASSETTE MECHANISM
SUB (1)
SUB(5)

PARTS LIST

■ELECTRICAL PARTS

■WARNING

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

- Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS list. For the parts No. of the carbon resistor, refer to p. 39.

	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		NA 09 53 50	Main Circuit Board		メインシート			J	
※		NA 09 48 70	〃		〃			R,U,A,G,C,B	
		FG 21 21 00	Ceramic Cap.	100pF 50V	セラコン	C211,212			
		FG 11 25 60	〃	560pF 50V	〃	C249,250			
		FG 44 41 00	〃	0.01μF 50V	〃	C213,214,251,252,255			
		FG 44 42 20	〃	0.022μF 50V	〃	C247,248			
		FG 74 43 30	〃	0.033μF 50V	〃	C245,246			
		FG 44 44 70	〃	0.047μF 50V	〃	C243,273			
		FH 61 11 00	〃	10pF 500V	〃	C253			
		FA 15 31 00	Mylar Cap.	1000pF 50V	マイラーコン	C129,131			
		FA 15 32 20	〃	2200pF 50V	〃	C103,104,139～142,169～172			
		FA 15 32 70	〃	2700pF 50V	〃	C229,230			
		FA 15 33 30	〃	3300pF 50V	〃	C227～230			
		FA 15 33 90	〃	3900pF 50V	〃	C143,144,173,174			
		FA 15 35 60	〃	5600pF 50V	〃	C161,162,191,192			
		FA 15 38 20	〃	8200pF 50V	〃	C109,110			
		FA 15 41 00	〃	0.01μF 50V	〃	C130,132,163,164,193,194,267			
		FA 15 42 20	〃	0.022μF 50V	〃	C235,236			
		FA 15 41 50	〃	0.015μF 50V	〃	C145,146,175,176			
		FA 15 45 60	〃	0.056μF 50V	〃	C155,156,185,186			
		FA 15 46 80	〃	0.068μF 50V	〃	C157,158,187,188			
		UJ 14 64 70	Electrolytic Cap.	4.7μF 25V	ケミコン	C256,257			
		UJ 14 71 00	〃	10μF 25V	〃	C115,116,119,201,202,217,244,256,263,264,271,272			
		UJ 14 72 20	〃	22μF 25V	〃	C209,210,258			
		UJ 14 74 70	〃	47μF 25V	〃	C203,204,254,257			
		UJ 16 54 70	〃	0.47μF 50V	〃	C147,148,177,178			
		UJ 16 61 00	〃	1μF 50V	〃	C133,134,207,208,215,216,237,238,259～262,268,269			
		UM 02 82 20	〃	220μF 6.3V	〃	C117,118,123,124			
		UM 05 64 70	〃	4.7μF 25V	オーディオケミコン	C135～138,167,168			
		UM 05 71 00	〃	10μF 25V	〃	C119～122,165,166,195,196			
		UM 05 72 20	〃	22μF 25V	〃	C225,226			
		UM 05 74 70	〃	47μF 25V	〃	C127,128			
		UM 05 81 00	〃	100μF 25V	〃	C205,206,219,220			
		UM 07 56 80	〃	0.68μF 50V	〃	C231～234			
※		VD 80 76 00	〃	1000μF 16V	ケミコン	C111,112			
※		VD 80 79 00	〃	10μF 25V	〃	C107,108			
		UW 56 51 50	〃	0.15μF 50V	〃	C149,150,179,180,270			
		UJ 16 52 20	〃	0.22μF 50V	〃	C183,184			
		FZ 00 54 20	〃	10μF 25V	ブラックゲートコン	C221,222			
		FM 11 61 00	〃	1μF 50V	BPコン	C151,152,159,160,181,182,189,190			
		FZ 00 65 40	Mylar Cap.	0.01μF 50V	鋼リードマイラーコン	C105,106			
		UT 45 21 00	Polypropylene Film Cap.	100pF 100V	ポリプロコン	C101,102,125,126			
		UT 45 21 50	〃	150pF 100V	〃	C241,242			
		UT 45 23 30	〃	330pF 100V	〃	C113,114,239,240			
		UT 45 24 70	〃	470pF 100V	〃	C275,276			
		GE 20 05 10	Dolby Filter		ドルビーフィルター	Fil03,104			
※		VD 42 20 00	Bias Trap Coil	105+210kHz	バイアストラップコイル	Fil01,102			
※		VD 42 21 00	〃	210kHz	〃	Fil05,106			
		GE 90 16 10	Coil	6.8mH	コイル	L105,106			
		GE 90 16 30	〃	10mH	〃	L103,104			
		GE 90 16 50	〃	15mH	〃	L101,102			

※New Parts (新規部品) NR

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
※		VD 42 22 00	Coil	ステップアップコイル	L107,108			
※		VD 82 76 00	Ceramic Resonetor 4MHz	セラミック振動子	XL101			
		VB 86 07 00	Pre-Set Potentiometer B100Ω	半固定抵抗	VR101,102			
		VB 86 14 00	// B4.7kΩ	//	VR107,108,113,114,117,118			
		VB 86 15 00	// B10kΩ	//	VR103,104,109,110			
		VB 86 16 00	// B22kΩ	//	VR119,120			
		VB 86 13 00	// B3.3kΩ	//	VR115,116			
		HQ 40 02 70	Potentiometer A50kΩ×2	可変抵抗器	VR105			
		HS 41 27 40	// A5kΩ×2	//	VR111			
※		VD 42 24 00	VR Unit A50kΩ,B10kΩ	VRユニット	VR106			
		HZ 00 28 80	Resistor Array 10kΩ×8	抵抗アレー	R398			
		iA 09 34 00	Transistor 2SA934	トランジスタ	Q110,140 (Inter-changeable)			
		iB 05 44 10	// 2SB544	//	// (Inter-changeable)			
		iA 11 15 10	// 2SA1115(E,F)	//	Q116			
		iA 09 33 00	// 2SA933S(Q,R)	//	// (Inter-changeable)			
		iX 60 31 70	// 2SA1310(R,S,T)	//	// (Inter-changeable)			
		iD 06 55 10	// 2SD655(E,F)	//	111～114,119～128 (Inter-changeable)			
		iD 13 02 00	// 2SD1302(R,S)	//	// (Inter-changeable)			
		iE 10 45 00	Dual FET 2SK389(GR,BL)	デュアルFET	Q101,102			
		iF 00 61 30	Diode 1SS133	ダイオード	D101～104,107～109,111～119,121～123			
		iF 00 89 10	Zener Diode MTZ6.8B	ツェナーダイオード	D120			
		iF 00 88 30	// MTZ11B	//	D105,106			
※		VB 96 96 00	Receive Unit GP1U011	受光ユニット				
		iG 03 47 00	IC AN6551	IC	IC101,102,104,113～115			
		iG 07 68 00	// NJM4558S	//	// (Inter-changeable)			
		iG 13 22 00	// BA715	//	// (Inter-changeable)			
		iG 07 74 00	// NJM4556S	//	IC109,110			
		iG 07 74 10	// NJM4556S-A	//	IC107			
		iG 08 29 00	// NJM2043S-D	//	IC103			
		iG 06 16 00	// μPD4066BC	//	IC108 (Inter-changeable)			
		iG 08 92 00	// LC4066B	//	// (Inter-changeable)			
		XA 30 00 01	// μPC1297CA	//	IC111			
※		XC 77 10 01	// CX20188	//	IC105,106			
※		XC 84 50 02	// LC6554H-3362	//	IC116			
※		VD 20 66 00	Bias OSC Black	バイアス発振ブロック	IC112			
		KA 50 19 60	Rotary Switch SBU 2-5	ロータリースイッチ	SW102			
※		VD 70 40 00	Push Switch SPUL 6連	プッシュスイッチ	SW101			
		LB 30 21 40	Phone Jack	ヘッドホンジャック	JK101			
		LB 40 12 90	Pin Jack 4P	ピンジャック	PK101			
		LA 00 41 20	Test Point Pin	テストポイントピン				
※		LB 60 24 60	Base Pin	ベースピン				
		LB 60 78 70	//	//				

※New Parts（新規部品）NR

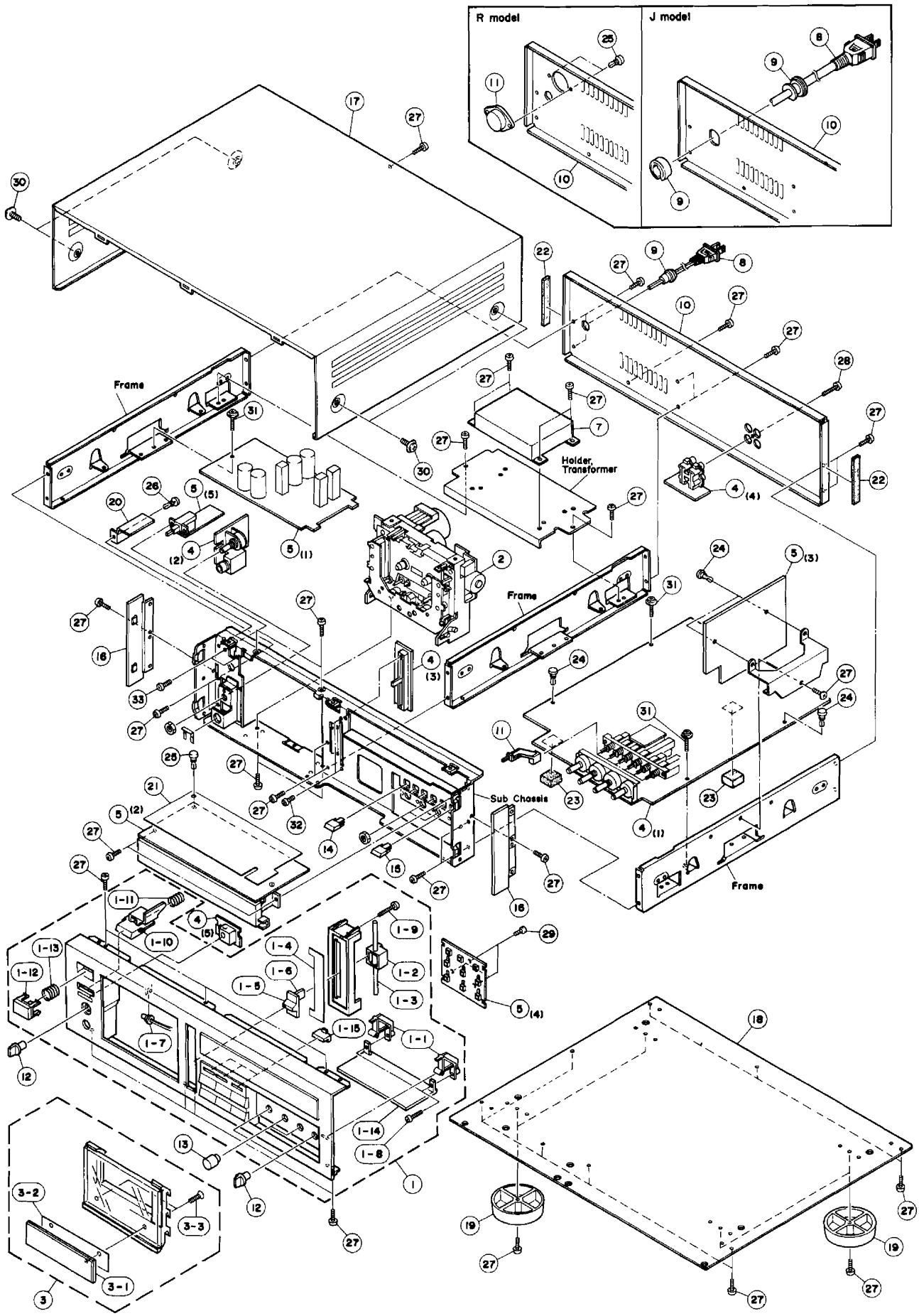
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		VD 65 04 00	Base Pin	2P i-Type	E Hベースピン				
※		VD 65 05 00	〃	4P i-Type	〃				
		LB 91 80 50	〃	5P i-Type	〃				
※		VD 65 07 00	〃	10P i-Type	〃				
※		VD 28 63 00	Ground Plate		アース板				
		VB 68 02 00	〃		〃				
		AA 61 69 90	Shielding Plate		シールド板				
※		***NA 09 48 80***	***Sub Circuit Board***		サブシート			J	
※		***NA 09 48 90***	〃		〃			R	
※		***NA 09 49 00***	〃		〃			U,C	
※		***NA 09 49 10***	〃		〃			A,G,B	
		FG 44 41 00	Ceramic Cap.	0.01μF 50V	セラコン	C505～511			
		FG 21 13 30	〃	33pF 50V	〃	C575,576,603,604			
		VA 89 13 00	〃	0.01μF 250V	〃	C551		J	
		Fi 41 41 00	〃	0.01μF VA-1	〃	C551 } Inter-changeable		R,U,C,A,G,B	
		Fi 51 41 00	〃	0.01μF DNS	〃	〃 } Inter-changeable		R,U,C,A,G,B	
		FZ 00 65 40	Mylar Cap.	0.01μF 50V	銅リードマイラーコン	C501～504			
		FA 15 33 30	〃	3300pF 50V	マイラーコン	C557,558,563,564,585,586,591,592			
		FA 15 41 00	〃	0.01μF 50V	〃	C517,518			
		FA 15 41 50	〃	0.015μF 50V	〃	C577,578,605,606			
		FA 15 41 80	〃	0.018μF 50V	〃	C567,568,595,596			
		FA 15 51 00	〃	0.1μF 50V	〃	C561,562,571,572,589,590,599,600			
		FA 15 51 20	〃	0.12μF 50V	〃	C569,570,597,598			
		FA 15 53 30	〃	0.33μF 50V	〃	C521,522,549,550			
		UT 45 23 30	Polypropylene Film Cap.	330pF 100V	ポリプロコン	C559,560,587,588			
		UJ 13 74 70	Electrolytic Cap.	47μF 16V	ケミコン	C526,536			
		UJ 14 64 70	〃	4.7μF 25V	〃	C537,538,545,548			
		UJ 24 71 00	〃	10μF 25V	〃	C519,520,527,531～533,543,544,553～556,581,582,607,608			
		UJ 14 72 20	〃	22μF 25V	〃	C565,566,573,574,579,580,593,594,601,602,609,610			
		UJ 14 81 00	〃	100μF 25V	〃	C515,516,530			
		UJ 16 54 70	〃	0.47μF 50V	〃	C539～542			
		UH 14 91 00	〃	1000μF 25V	〃	C512,523			
		UH 15 91 00	〃	1000μF 35V	〃	C528			
※		UH 15 92 20	〃	2200μF 35V	〃	C529			
		Ui 93 98 20	〃	8200μF 16V	〃	C524,525			
		VC 78 09 00	〃	3300μF 25V	〃	C513,514			
		FM 17 61 00	〃	1μF 50V	BPコン	C534,535			
		HV 45 51 00	Frame Proof Carbon Resistor	100Ω 1/4W	不燃化カーボン抵抗	R519,520			
		HL 32 42 20	Metal Oxide Filme Resistor	22Ω 2W	酸金抵抗	R522			
		HL 33 42 70	〃	27Ω 3W	〃	R524			
		VB 85 97 00	Pre-Set Potentiometer	B4.7kΩ	半固定抵抗	VR505,506			
		HT 37 03 80	〃	B10kΩ	〃	VR501～504			
		iA 09 34 00	Transistor	2SA934	トランジスタ	Q505 } Inter-changeable			
		iB 05 44 10	〃	2SB544	〃	〃 } Inter-changeable			
		iA 11 15 10	〃	2SA1115(E,F)	〃	Q504,506,509,516 } Inter-changeable			
		iA 09 33 00	〃	2SA933S(Q,R)	〃	〃 } Inter-changeable			
		iX 60 31 70	〃	2SA1310(R,S,T)	〃	〃 } Inter-changeable			
		iB 07 86 00	〃	2SB786	〃	Q502			

※New Parts（新規部品）NR

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
	iC 26 03 10	Transistor	2SC2603(E,F)	トランジスタ	Q503,507,508,510~515 (Inter-changeable)		
	iC 17 40 00	//	2SC1740(S,R)	//	// (Inter-changeable)		.
	iX 60 31 80	//	2SC3312(R,S,T)	//	// (Inter-changeable)		
	iD 09 47 00	//	2SD947	//	Q501		
	iF 00 61 30	Diode	1SS133	ダイオード	D519~522,525~532		
	iH 00 14 30	//	1SR35-100A	//	D501~511		⚠
	iF 00 88 00	Zener Diode	MTZ3.6A	ツェナーダイオード	D514		
	iF 01 06 60	//	MTZ4.7B	//	D516		
	iF 00 89 10	//	MTZ6.8B	//	D512		
	iF 00 64 70	//	MTZ7.5B	//	D523,524,533,534		
	iF 01 07 40	//	MTZ6.2B	//	D515		
	iF 01 08 70	//	MTZ9.1C	//	D517,518		
※	iF 00 90 50	//	MTZ22C	//	D513		
	iG 03 47 00	IC	AN6551	IC	IC503 (Inter-changeable)		
	iG 07 68 00	//	NJM4558S	//	// (Inter-changeable)		
	iG 13 22 00	//	BA715	//	// (Inter-changeable)		
	iG 07 56 00	//	NJM78M05A	//	IC501		
	XA 29 90 01	//	LB1649	//	IC502		
	iG 14 60 00	//	HA12067NT	//	IC504,505		
※	XC 84 40 01	//	AN6294NK	//	IC506,507		
	iJ 00 00 80	Display Unit		蛍光表示管	V501		
	VC 13 31 00	Switch	SDDLD1	スイッチ	SW510		⚠
	KA 90 63 80	//	5M EVQ-QRB-04M	//	SW501~509		
	KB 00 03 30	Fuse	T1.0A 250V	ヒューズ	F501~504	J,R	⚠
	KB 00 10 60	//	1.0A 250V	//	//	U,C	⚠
	KB 00 07 20	//	T800mA 250V	//	//	A,G,B	⚠
	LA 00 21 40	Lapping Terminal	P=10 2P i-type	i型ラッピング端子板			
	LA 00 23 20	//	P=7.5 3P i-type	//			
	LA 00 23 40	//	P=7.5 5P i-type	//			
	LB 91 80 20	Base Pin	2P i-type	XHベースピン			
	LB 20 14 10	//	SEBS2P-SHF	//			
	LB 20 18 80	Fuse Holder Pin		ヒューズホルダーピン			
	VD 65 04 00	Base Pin	2P i-type	EHベースピン			
	VD 65 06 00	//	6P i-type	//			
	AA 62 43 00	Holder		ホルダー			
	BB 06 62 90	Washer, Ground		アースワッシャー			
	BA 08 40 00	Heat Sink		放熱板			
	CB 60 56 20	Plastic Rivet		プラスチックリベット			
	CB 63 91 70	FL Filter		FLフィルター			
	VB 68 02 00	Bus Bar		アースプレートバスバー			
	Ei 03 00 66	Binding Head Tapping Screw	3×6 ZMC2-Y	バインドタッピングネジ	PACK		

※New Parts（新規部品）NR

EXPLODED VIEW



■MECHANISM PARTS

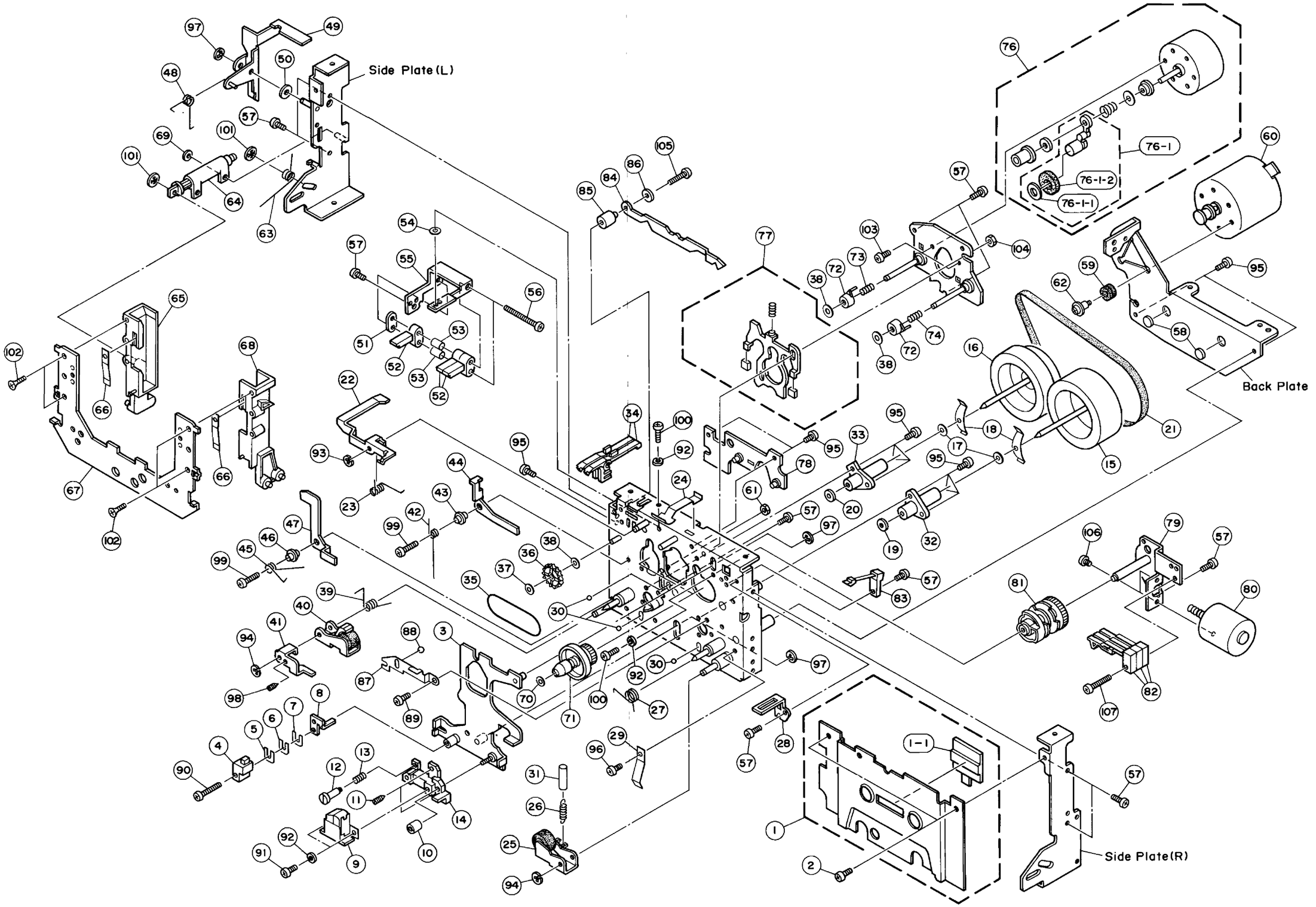
	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク	
※	1	VD 40 93 00	Panel Unit		パネルユニット	Black		J,R,A,G,B		
※	//	VD 40 95 00	//		//	Silver		//		
※	//	VD 40 94 00	//		//	Black		U,C		
※	//	VD 40 96 00	//		//	Silver		//		
	1-1	CB 63 64 20	Arm		アーム		K-1x			
	1-2	CB 63 64 30	Slider		スライダー		//			
	1-3	AA 61 93 20	Shaft (L)		シャフト(L)		//			
	1-4	BA 09 13 70	VR Plate		VRプレート	Silver	K-1x(S)			
	//	BA 09 13 80	//		//	Black				
	1-5	BA 09 18 60	Slide Knob		スライドツマミ	Silver				
	//	BA 09 18 70	//		//	Black				
	1-6	AA 62 41 50	Slide Lever		スライドレバー	Silver				
	//	AA 62 41 60	//		//	Black				
	1-7	JB 00 12 50	Lamp	8V 150mA	パイロットランプ					
	1-8	Ei 12 60 86	Binding Head Tapping Screw	2.6×8 FNM3-3G	バインドタッピングネジ	PACK				
	//	Ei 32 60 86	//	2.6×8 FCRM3-BI	//	PACK				
	1-9	Ei 03 01 26	//	3×12 ZMC2-Y	//	PACK				
	1-10	CB 63 63 70	Button, EJ		ボタンEJ	Silver				
	//	CB 63 63 80	//		//	Black				
	1-11	AA 62 43 20	Spring		スプリング					
	1-12	NB 61 41 30	Button (P) Ass'y		ボタン(P) Ass'y	Silver				
	//	NB 61 41 40	//		//	Black				
	1-13	AA 61 78 80	Spring		スプリング					
	1-14	BA 09 13 50	Pocket Panel		ポケットパネル	Silver				
	//	BA 09 13 60	//		//	Black				
	1-15	CB 63 64 10	Push Button		プッシュボタン	Silver				
	//	CB 64 33 80	//		//	Black				
※	2	VD 40 98 00	Cassette Mechanism Unit		カセットメカユニット					
※	3	VD 70 57 00	Lid Ass'y		リッド Ass'y	Black				
※	//	VD 70 56 00	//		//	Silver				
※	3-1	VD 70 27 00	Lid Panel		リッドパネル	Silver				
※	//	VD 70 29 00	//		//	Black				
	3-2	CA 07 73 50	Lid Sheet		リッドシート		K-1xw			
	3-3	EB 33 01 06	Flat Head Screw	3×10 FCRM3-BI	皿小ネジ	PACK				
※	4	NA 09 53 50	Main Circuit Board		メインシート			J		
※	//	NA 09 48 70	//		//			R,U,A,G,C,B		
※	5	NA 09 48 80	Suh Circuit Board		サブシート			J		
※	//	NA 09 48 90	//		//			R		
※	//	NA 09 49 00	//		//			U,C		
※	//	NA 09 49 10	//		//			A,G,B		
※	6	LB 20 14 80	Voltage Selector		電圧切換器			R		⚠
※	7	XC 79 80 01	Power Transformer		電源トランス			J		⚠
※	//	XC 79 90 01	//		//			R		⚠
※	//	XC 80 00 01	//		//			U,C		⚠
※	//	XC 80 10 01	//		//			A,B		⚠
※	//	XC 80 20 01	//		//			G		⚠
	8	MG 00 21 90	Power Cord	7A 125V	電源コード			J		⚠
	//	MG 00 16 30	//	6A 250V 2m	//			R		⚠
	//	MG 00 22 70	//	10A 125V 2.1m	//			U		⚠
	//	MG 00 09 20	//	7.5A 250V 2.5m	//	Inter-changeable		A		⚠
	//	MG 00 14 90	//	7.5A 250V 2.5m	//	Inter-changeable		A		⚠
	//	MG 00 09 60	//	2.5A 250V 2m	//	Inter-changeable		G		⚠
	//	MG 00 16 20	//	2.5A 250V 2m	//	Inter-changeable		G		⚠

※New Parts (新規部品) NR

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク	
	8	MG 00 14 50	Power Cord	10A 125V 2m	電源コード		C		⚠
	//	MG 00 18 60	//	2.5A 250V 2m	//		B		⚠
	9	CB 62 01 90	Cord Stopper	CM-22B	コードストッパー		R,A,G,B		
	//	CB 62 02 00	//	CM-22C	//		U,C		
※	10	VD 07 33 00	Rear Panel		リアパネル		J		
※	//	VD 07 34 00	//		//		R		
※	//	VD 07 35 00	//		//		U,C		
※	//	VD 07 36 00	//		//		A,B		
※	//	VD 07 37 00	//		//		G		
	11	CB 63 63 90	Rod, Switch		ロッド,スイッチ	K-Ixw			
	12	CB 63 42 60	Knob		ツマミ	Silver	//		
	//	CB 63 42 70	//		//	Black	//		
	13	CB 63 79 40	//		//	Silver	//		
	//	CB 62 08 20	//		//	Black			
	14	CB 63 42 20	Push Button		プッシュボタン	Silver	K-Ixw		
	//	CB 63 42 30	//		//	Black			
	15	CB 64 08 00	// (Red)		// (赤)		K-Ixw		
	16	CB 62 07 10	Side Cover		サイドカバー	Silver			
	//	CB 62 07 20	//		//	Black			
	17	AA 62 43 30	Top Cover		トップカバー	Silver			
	//	AA 62 43 40	//		//	Black			
	18	AA 62 42 80	Buttom Cover		ボトムカバー				
	19	VD 17 61 00	Leg Ass'y		脚 Ass'y		J		
	//	NB 62 01 40	//		//		R,U,C,A,G,B		
	20	CB 64 11 80	Isolation Cover		絶縁カバー	K-Ixw			
	21	VD 39 93 00	Isolation Fiber		絶縁ファイバー				
	22	CB 62 38 70	Isolation Rubber		防振ゴム				
	23	CB 63 07 60	Damper (M)		ダンパー(M)				
	24	CB 60 56 20	Plastic Rivet		プラスチックリベット				
	25	CB 06 88 80	//		//				
	26	CB 09 96 00	//		//				
	27	Ei 33 00 66	Binding Head Tapping Screw	3×6 FCRM3-BI	バインドタッピングネジ	PACK			
	28	Ei 33 01 06	//	3×10 ZMC2-BI	//	PACK			
	29	Ei 32 60 86	//	2.6×8 FCRM3-BI	//	PACK			
	30	ED 14 00 86	Binding Head Screw	4×8 FNM3-3g	バインド小ネジ	PACK			
	31	EK 93 00 10	BW Head Tapping Screw	3×8 ZMC2-BI	BWヘッドタッピングネジ	PACK			
	32	ED 02 00 36	Binding Head Screw	2×3 ZMC2-Y	バインド小ネジ	PACK			
	33	ED 33 00 66	//	3×6 FCRM3-BI	//	PACK			
		CB 06 92 50	Binding Tie		インシュロックタイ				
			Accessories		付属品				
		Mi 06 62 10	Pin Cord	1.2m	ピンコード				
※		VD 35 52 00	Remote Control Transmitter	RS-KI2	リモートコントロールトランスミッター	Black			
※		VD 35 51 00	//	RS-KI2	//	Silver			
			Dry Cell	SUM-3	単3乾電池				

※New Parts (新規部品) NR

■EXPLODED VIEW (Cassette Mechanism Unit)



■MECHANISM PARTS(Cassette Mechanism Unit)

	Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
※		VD 40 98 00	Mechanism Unit	メカユニット				
	1	NB 62 46 40	Blind Plate Ass'y	ブラインドプレートAss'y				
	1-1	iF 00 35 70	LED (Yellow)	LED(キ)				
	2	Ei 32 60 46	Binding Head Tapping Screw	2.6X4 FCRM3-BI	バインドタッピングネジ	PACK		
	3	XX 64 06 10	Head Base		ヘッドベースカシメ組			
※	4	XX 64 14 40	Erase Head		消去ヘッド			
	5	XX 64 06 30	Spacer	t0.06	スペーサー			
	6	XX 64 06 40	〃	t0.03	〃			
	7	XX 64 06 50	〃	t0.1	〃			
	8	XX 64 06 60	Head Plate for Erase		Eヘッド板(B)			
※	9	XX 64 14 30	R/P Combination Head		R/Pコンビヘッド			
	10	XX 64 06 80	Nut		調整ナット			
	11	XX 64 06 90	Screw	M2X4	止メネジ			
	12	XX 64 07 00	〃		軸			
	13	XX 64 07 10	Coil Spring		圧縮コイルバネ			
	14	XX 64 07 20	Head Block		ヘッドブロック			
	15	XX 64 07 30	Flywheel	φ2.5	フライホイール			
	16	XX 64 07 40	〃	φ2.2	〃			
	17	XX 64 07 50	Washer	φ2.6Xφ4.7Xt0.5	ワッシャー			
	18	XX 64 07 60	Spring Plate		板バネ			
	19	XX 64 07 70	Plain Washer	φ2.5	座金			
	20	XX 64 07 80	〃	φ2.2	〃			
	21	XX 64 07 90	Belt, Flywheel		平ベルト			
	22	XX 64 08 00	Sensor Lever		検知レバー			
	23	XX 64 08 10	Coil Spring		コイルバネ			
	24	XX 64 08 20	Spring Plate		カセット押えバネ			
	25	XX 64 08 30	Pinch Arm Ass'y		ピンチアームAss'y			
	26	XX 64 08 40	Coil Spring		引張コイルバネ			
	27	XX 64 08 50	〃		ネジリコイルバネ			
	28	XX 64 08 60	Plate		保護板			
	29	XX 64 08 70	Spring Plate		カセットバネ			
	30	EZ 00 15 30	Steel Ball	φ2	スチールボール			
	31	XX 64 14 20	Tube	l=19	チューブ			
	32	XX 64 08 80	Stand	φ2.5	キャプスタンスタンド			
	33	XX 64 08 90	〃	φ2.2	〃			
	34	XX 64 09 00	Lever, REC		RECレバー			
	35	XX 64 09 10	Belt		角ベルト			
	36	XX 64 09 20	Pully Unit		プーリーユニット			
	37	XX 64 03 30	Washer	φ1.8Xφ3.8Xt0.5	ポリスライダーワッシャー	K-720		
	38	XX 64 03 60	〃	φ2.1Xφ4.5Xt0.1	ワッシャー	〃		
	39	XX 64 09 30	Coil Spring		コイルバネ			
	40	XX 64 09 40	Pinch Roller Ass'y		Sピンチローラー Ass'y			
	41	XX 64 09 50	Plate, ADJ		調整板			
	42	XX 64 09 60	Coil Spring		コイルバネ			
	43	XX 64 09 70	Coller		カラー			
	44	XX 64 09 80	Change Lever		切換レバー			
	45	XX 64 09 90	Coil Spring		コイルバネ			
	46	XX 64 10 00	Coller		カラー			
	47	XX 64 10 10	Locked Plate		ロック板			
	48	XX 64 10 20	Coil Spring		コイルバネ			
	49	XX 64 10 30	Lever, Eject		解除レバー圧入組			
	50	XX 64 10 40	Plain Washer	φ4.4Xφ10Xt0.5	平座金			
	51	XX 64 10 50	Washer	4.4X10.4X1.0	ワッシャー			

※New Parts (新規部品)

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
52	XX 64 10 60	Leaf Switch		リーフスイッチ				
53	XX 64 10 70	Coller		カラー				
54	XX 64 10 80	Washer	φ2.7×φ5×t0.5	ワッシャー				
55	XX 64 10 90	Plate		SW取付板				
56	XX 64 11 00	Screw		ビス				
57	XX 62 36 50	Pan Head Screw	M2.5×6 ZMC2-Y	ナベ小ネジ				
58	XX 64 11 10	Thrust Stand		スラスト受				
59	XX 64 11 20	Cushion Rubber		ゴム座				
60	XX 64 14 10	Capstan Motor Ass'y		キャプスタンモーター組				
61	EV 10 02 66	Hexagonal Nut	M2.6	六角ナット	PACK			
62	XX 64 11 30	Screw		モーター止メネジ				
63	XX 64 11 40	Coil Spring		コイルバネ				
64	XX 64 11 50	Damper Unit		ダンパーユニット				
65	XX 64 11 60	Holder (L)		ホルダー(左)				
66	XX 64 11 70	Spring		カセットバネ				
67	XX 64 11 80	Front Plate		フロントプレート				
68	XX 64 11 90	Holder (R)		ホルダー(右)				
69	XX 64 12 00	Washer	φ2.2×φ5×t0.2	座金				
70	XX 64 12 10	〃	φ1.8×φ3.2×t0.5	ポリスライダーワッシャー				
71	XX 64 12 20	Reel Base Ass'y		リール台総組				
72	XX 64 12 30	Spring Stand		バネ受				
73	XX 64 12 40	Coil Spring		圧縮コイルバネ				
74	XX 64 12 50	〃		〃				
75	XX 64 12 60	Holder, Motor		モーター取付板				
※ 76	XX 64 14 80	Reel Motor Ass'y		リールモーターAss'y				
76-1	XX 64 12 80	Idler Lever Ass'y		アイドラレバー組				
※ 76-1-1	XX 64 14 50	Washer		ポリスライダーワッシャー				
※ 76-1-2	XX 64 14 60	Idler		アイドラー				
77	XX 64 12 90	Lever Ass'y, Brake		ブレーキ板組				
※ 78	XX 64 14 70	Sensor Circuit Board		センサー基板組				
79	XX 64 13 10	PAD Holder		PADホルダー				
80	XX 64 13 20	PAD Motor		PADモーター				
81	XX 64 13 30	Gear, Cum		カムギヤ				
82	XX 64 13 40	Leaf Switch		リーフスイッチ				
83	XX 64 13 50	〃		〃				
84	XX 64 13 60	Plate, Joint		連結板				
85	XX 64 13 70	Coller		カラー				
86	XX 64 13 80	Plain Washer	φ8×φ2.6×t1.0	平座金				
87	XX 64 13 90	Head Holder Plate		ヘッド押え板				
88	EX 60 01 30	Steel Ball	3φ	スチールボール				
89	EA 03 00 46	Pan Head Screw	M3×4 ZMC2-Y	ナベ小ネジ	PACK			
90	ED 02 01 26	Binding Head Screw	M2×12 ZMC2-Y	バインド小ネジ	PACK			
91	EA 02 00 46	Pan Head Screw	M2×4 ZMC2-Y	ナベ小ネジ	PACK			
92	EV 30 02 06	Spring Washer	φ2 ZMC2-Y	スプリングワッシャー	PACK			
93	EV 50 12 56	E-Ring	φ2.5 FNM3-3g	Eリング	PACK			
94	EV 50 12 06	〃	φ2 FNM3-3g	〃	PACK			
95	XX 62 36 60	Pan Head Screw	M2.5×5 ZMC2-Y	ナベ小ネジ				
96	XX 62 36 70	Truss Head Tapping Screw	2×3.2 ZMC2-Y	トラスタッピングネジ				
97	EV 50 13 06	E-Ring	φ3 ZMC2-Y	Eリング	PACK			
98	XX 64 14 00	Screw	M2×3	止メネジ				
99	EA 02 51 00	Pan Head Screw	M2.5×10 ZMC2-Y	ナベ小ネジ				
100	EA 02 00 56	〃	M2×5 ZMC2-Y	〃	PACK			
101	EX 60 01 20	CS-Ring	CS2.4mm	CSリング				
102	EN 39 00 20	Flat Head Tapping Screw	2.6×8 ZMC2-Y	サラタッピングネジ				
103	EA 02 60 36	Pan Head Screw	M2.6×3 ZMC2-Y	ナベ小ネジ	PACK			

※New Parts (新規部品)

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets	ランク
104	EV 10 00 26	Hexagonal Nut	M2 ZMC2-Y 六角ナット	PACK			
105	EA 02 61 26	Pan Head Screw	M2.6×12 ZMC2-Y ナベ小ネジ	PACK			
106	EA 02 00 30	〃	M2×3 ZMC2-Y 〃				
107	EA 02 62 06	〃	M2.6×20 ZMC2-Y 〃	PACK			

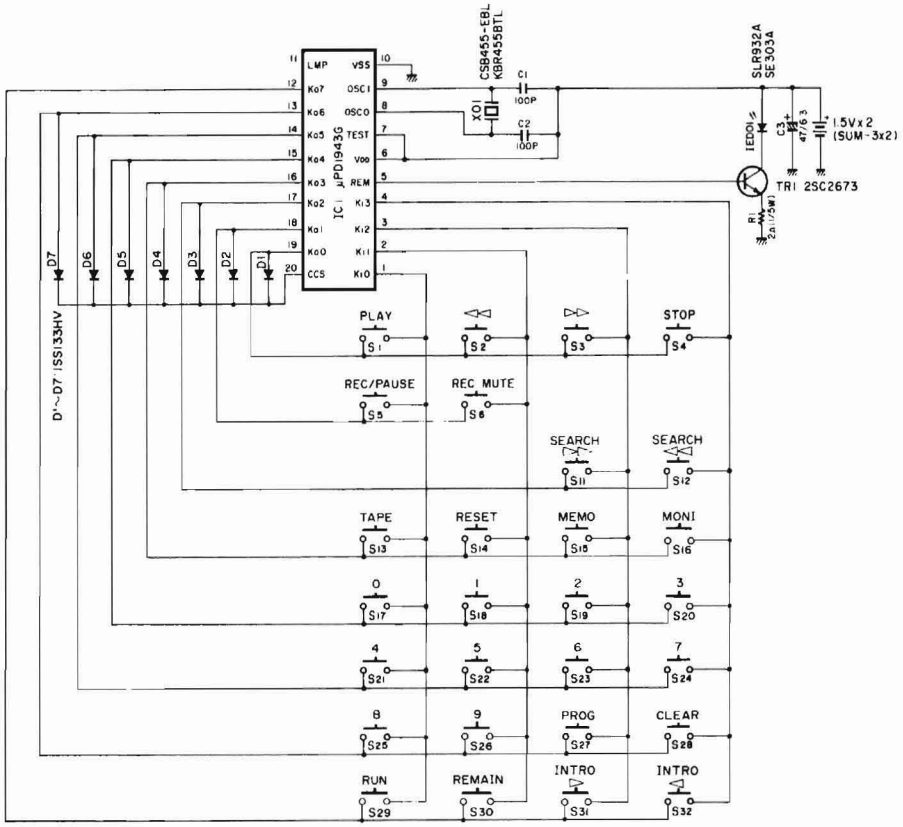
※New Parts（新規部品）

KX-1200

RS-K12

REMOTE CONTROL TRANSMITTER

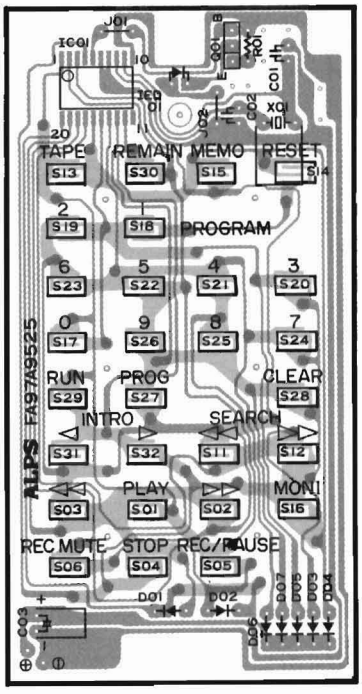
■ SCHEMATIC DIAGRAM



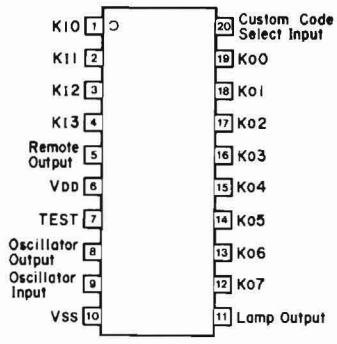
FUNCTION	DATA CODE
PLAY	00
◁◁	01
▷▷	02
STOP	03
REC/PAUSE	04
REC/MUTE	05
SEARCH▷▷	0A
SEARCH◁◁	0B
TAPE	0C
RESET	0D
MEMO	0E
MONI	0F
0	10
1	11
2	12
3	13
4	14
5	15
6	16
7	17
8	18
9	19
PROG	1A
CLEAR	1B
RUN	1C
REMAIN	1D
INTRO▷	1E
INTRO◁	1F

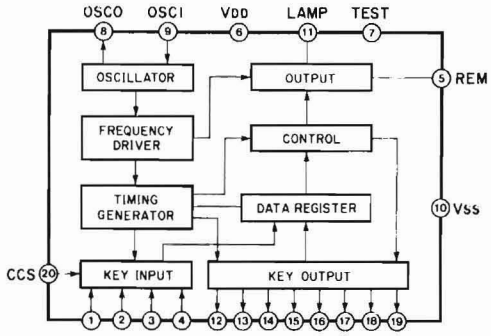
CUSTOM CODE
7F

■ PRINTED CIRCUIT BOARD(Pattern side)

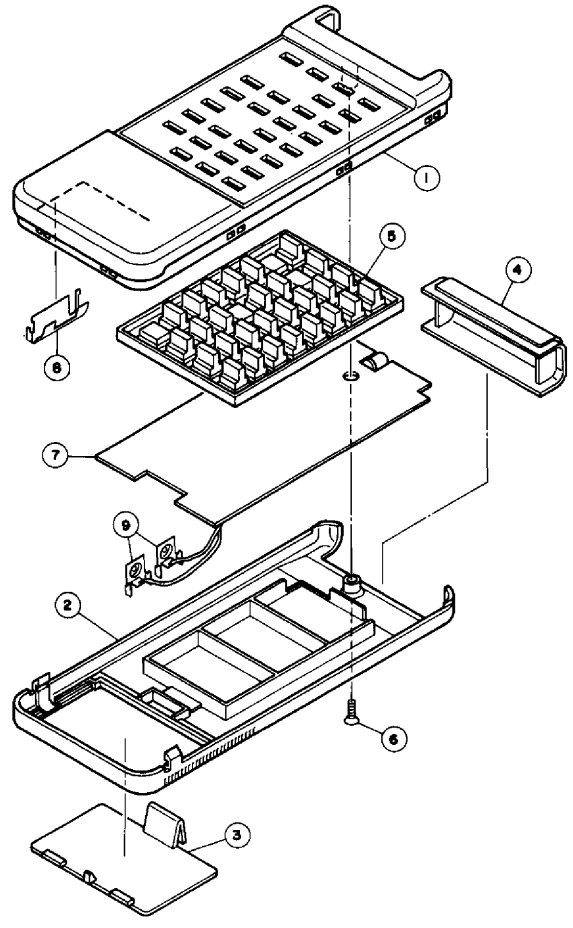


- IC1: μPD1943G





■EXPLODED VIEW



	Ref. No.	Part No.	Description		部品名	Remarks	Common Model	Markets	ランク
※		VD 35 52 00	Remote Control Transmitter	RS-K12	リモートコントロールトランスミッター	Black			
※		VD 35 51 00	〃	〃	〃	Silver			
※	1	CX 60 11 60	Case (A)		ケース(A)	Black			
※	〃	CX 60 11 50	〃		〃	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 11 80	Rubber Contact		ゴム接点	Black			
※	〃	CX 60 11 70	〃		〃	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	IC	IC1			
		QX 60 00 40	Ceramic Resonator	KBR455BTL	セラミック振動子	X1			
		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	IED	IED1			
		iF 00 34 50	Diode	1SS133	ダイオード	D1~7			
	9	XX 67 16 90	Dry Cell Terminal (B)		電池電極板(B)				

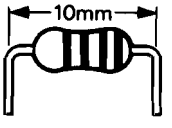
※New Parts (新規部品)

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	12KΩ	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	1.0MΩ	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
1.0KΩ	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			

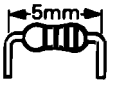
1/4W Type

HJ35○○○○



1/6W Type

HF85○○○○



STEREO CASSETTE DECK

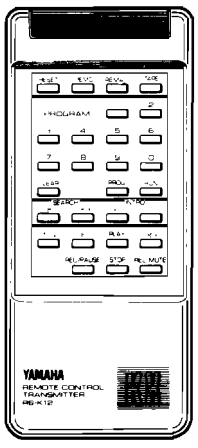
KX-1200 Titan Color

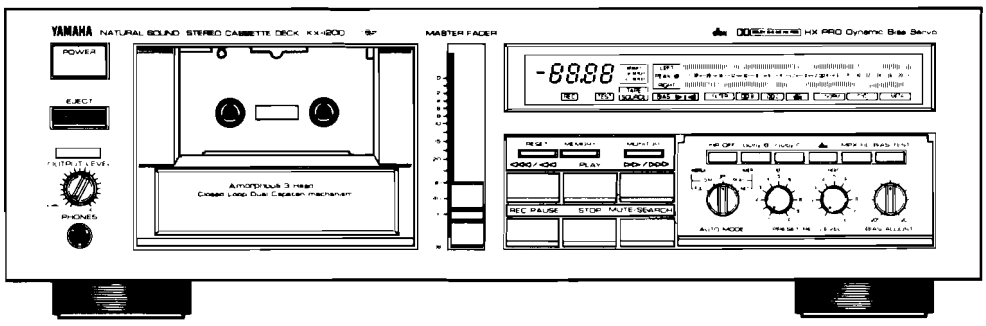
PARTS LIST

ADDITIONAL PARTS LIST FOR TITAN COLOR MODEL

This additional parts list should be used in conjunction with the service manual 100136
File this parts list with the service manual.

● **RS-K12**





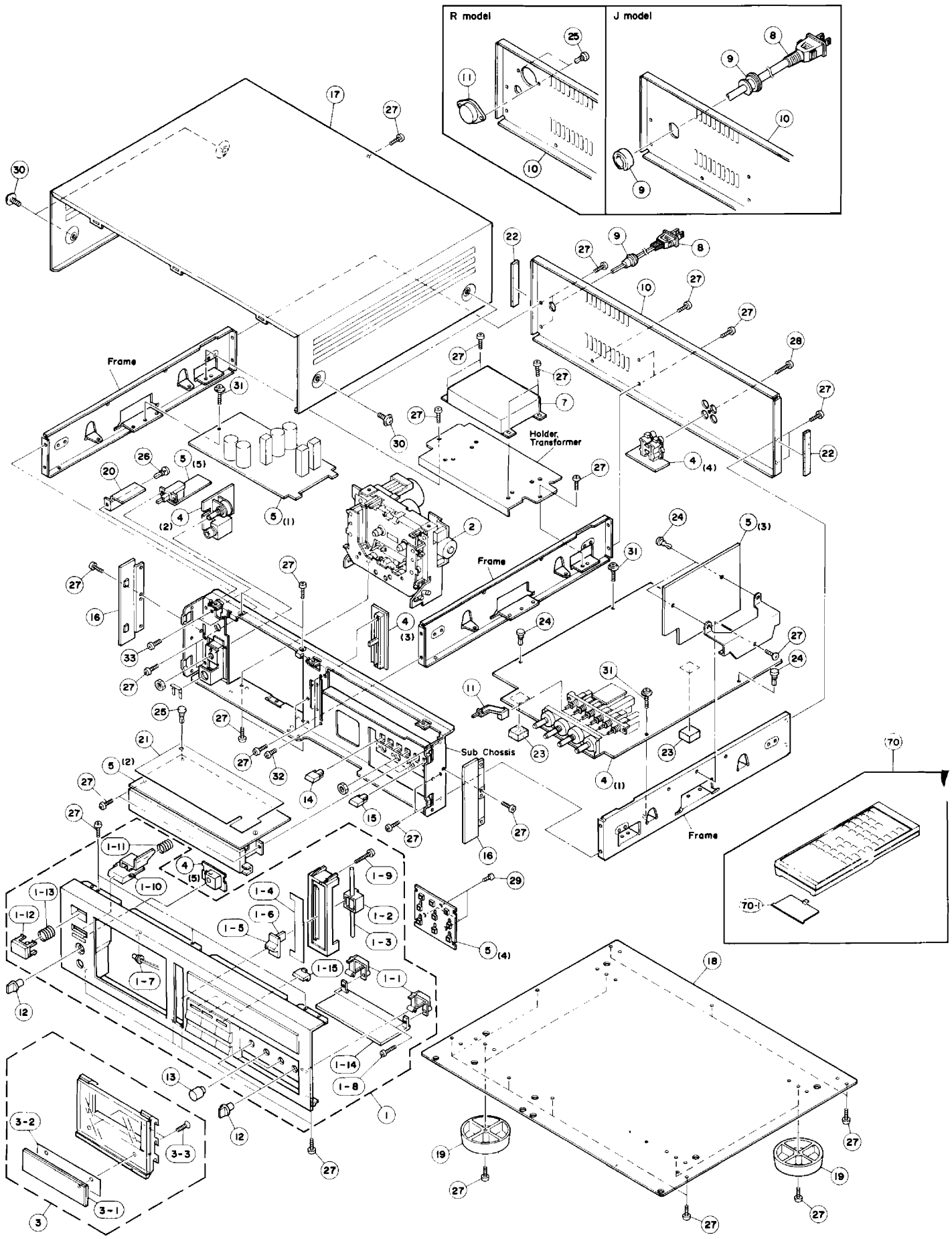
■ CONTENTS

KX-1200

100339

YAMAHA
YAMAHA CORPORATION
P.O.Box 1, Hamamatsu, Japan
3.25K-21 Printed in Japan '90.2

■ EXPLODED VIEW



■ MECHANISM PARTS

	Ref. NO.	PART NO.	Description		部品名	Remarks	Markets	ランク
*	1	VH462000	PANEL UNIT		パネルユニット	Titan	U,C	
*	1	VH462100	PANEL UNIT		パネルユニット	Titan	R,A,B,G	
	1- 1	CB636420	ARM		アーム	Titan		
	1- 2	CB636430	SLIDER		スライダー			
	1- 3	AA619320	SHAFT/L		シャフト L			
	1- 4	VF233700	PLATE/VR		VRプレート	Titan		
	1- 5	VF233800	SLIDE KNOB		スライドノブ	Titan		
	1- 6	AA624160	SLIDE LEVER		スライドレバー	Titan,Black		
	1- 7	VF511500	LAMP	150mA 8V	ランプ	Titan		
	1- 8	Ei326086	BIND HEAD TAPPING SCREW	2.6x8 FCRM3-BL	バインドBタイトネジ	PACK		
	1- 9	Ei030126	BIND HEAD TAPPING SCREW	3x12 FCRM3-BL	バインドBタイトネジ	PACK		
	1-10	VF232400	BUTTON,EJ		ボタンEJ	Titan		
	1-11	AA624320	SPRING		スプリング			
	1-12	VF232500	BUTTON (P) ASS'Y		ボタン(P)ASSY	Titan		
	1-13	AA617880	SPRING		スプリング			
	1-14	VF233400	POCKET PANEL		ポケットパネル	Titan		
	1-15	VF232900	BUTTON,PUSH		プッシュボタン			
	2	VF220700	CASSETTE MECHANISM UNIT		カセットメカユニット	Titan		
	2-1	VD651100	BLIND PLATE ASS'Y		ブラインドプレートASSY	Titan		
	2-1-1	VF248800	LED	SLF-401C (AMBER)	LED	Titan		
	3	VF201900	LID ASS'Y		リッドASSY	Titan		
	3-1	VF234300	LID PANEL		リッドパネル	Titan		
	3-3	EB330106	FLAT HEAD SCREW	3x10 FCRM3-BL	皿小ネジ	PACK		
*	4	VH384100	MAIN CIRCUIT BOARD		メインシート	Titan		
*	5	VH384200	SUB CIRCUIT BOARD		サブシート	Titan	R	
*	5	VH384300	SUB CIRCUIT BOARD		サブシート	Titan	U,C	
*	5	VH384400	SUB CIRCUIT BOARD		サブシート	Titan	A,B,G	
	6	LB201480	VOLTAGE SELECTOR		電圧切替器		R	
	7	XC799001	POWER TRANSFORMER		電源トランス		R	
	7	XC800001	POWER TRANSFORMER		電源トランス		U,C	
	7	XC801001	POWER TRANSFORMER		電源トランス		A,B	
	7	XC802001	POWER TRANSFORMER		電源トランス		G	
	8	MG001630	POWER CORD	6A 250V 2.0m	電源コード		R	
	8	MG002270	POWER CORD	10A 125V 2.1m	電源コード		U	
	8	MG000920	POWER CORD	7.5A 250V 2.5m	電源コード		A	
	8	MG001620	POWER CORD	2.5A 250V 2.0m	電源コード		G	
	8	MG001450	POWER CORD	10A 125V 2.0m	電源コード		C	
	8	MG001860	POWER CORD	6A 250V 2.0m	電源コード		B	
	9	CB620200	CORD STOPPER	CM-22C	コードストッパー		U,C	
	9	CB620190	CORD STOPPER	CM-22B	コードストッパー		R,A,B,G	
	10	VD073400	REAR PANEL		リヤパネル		R	
	10	VD073500	REAR PANEL		リヤパネル		U,C	
	10	VD073600	REAR PANEL		リヤパネル		A,B	
	10	VD073700	REAR PANEL		リヤパネル		G	
	11	CB636390	ROD,SWITCH		ロッド			
	12	VF231400	KNOB		ノブ	Titan		
	13	VF231600	KNOB		ツマミ	Titan		
	14	CB634250	PUSH BUTTON		プッシュボタン	Titan		
	15	VF231700	PUSH BUTTON		プッシュボタン	Titan		
	16	VF231800	SIDE COVER		サイドカバー	Titan		

*New Parts (新規部品)

ランク : Japan only

Ref. NO.	PART NO.	Description		部品名	Remarks	Markets	ランク
17	VF231900	TOP COVER		トップカバー	Titan		
18	AA624280	BOTTOM COVER		ボトムカバー			
19	VE185300	LEG		レッグ	Titan		
20	CB641180	ISOLATION COVER		絶縁カバー			
21	VD399300	ISOLATION FIBER		絶縁ファイバー			
22	CB623870	ISOLATION RUBBER		防振ゴム			
23	CB630760	DAMPER(M)		ダンパ（M）			
24	CB605620	PLASTIC RIVET		プラリベット			
25	CB068880	PLASTIC RIVET		プラリベット			
26	CB099600	PLASTIC RIVET		プラリベット			
27	Ei330066	BIND HEAD TYTE SCREW	3x6 FCRM3-BL	バインドBタイトネジ	PACK		
28	Ei330106	BIND HEAD P-TYTE SCREW	3x10 FCRM3-BL	バインドPタイトネジ	PACK		
29	Ei326086	BIND HEAD P-TYTE SCREW	2.6x8 FCRM3-BL	バインドPタイトネジ	PACK		
30	EX601150	BW HEAD S-TYTE SCREW	4x8-10 FNM3-BL	BWヘッドSタイトネジ	Titan		
31	EK930010	BW HEAD TAPPING SCREW	3x8 FCRM3-BL	BWヘッドタップネジ			
32	ED020036	BIND HEAD SCREW	2x3 ZMC2-Y	バインド小ネジ	PACK		
33	ED330066	BIND HEAD SCREW	3x6 FCRM3-BL	バインド小ネジ	PACK		
※ 34	VD074100	STAY/PCB		ステイ			
※ 35	CB620500	ISOLATION RUBBER		防振ゴム			
	CB069250	BINDING TIE	BK-1	束線止め			
		ACCESSORIES		付属品			
	VG718700	PIN PLUG CORD	1.0m	ピンピンコード			
※ 70	VF219300	REMOTE CONTROL TRANSMITTER	RS-K10T	トランスミッター	Titan		
70-1	CX603950	CASE(C)		電池蓋	Titan		
		DRY CELL	SUM-3,R06	乾電池			
※	**VH384100**	**MAIN CIRCUIT BOARD**		**メインシート**	**Titan**		
	VF219800	PHONES JACK	HLJ2317	ホーンコネクタ	Titan		
※	**VH384200**	**SUB CIRCUIT BOARD**		**サブシート**	**Titan**	**R**	
※	**VH384300**	**SUB CIRCUIT BOARD**		**サブシート**	**Titan**	**U,C**	
※	**VH384400**	**SUB CIRCUIT BOARD**		**サブシート**	**Titan**	**A,B,G**	
	VF219700	FLUORESCENT DISPLAY	CP1084GR	螢光表示管	V501 Titan		
※	VE797500	FILTER FL		フィルター	Titan		

※New Parts（新規部品）

ランク：Japan only