

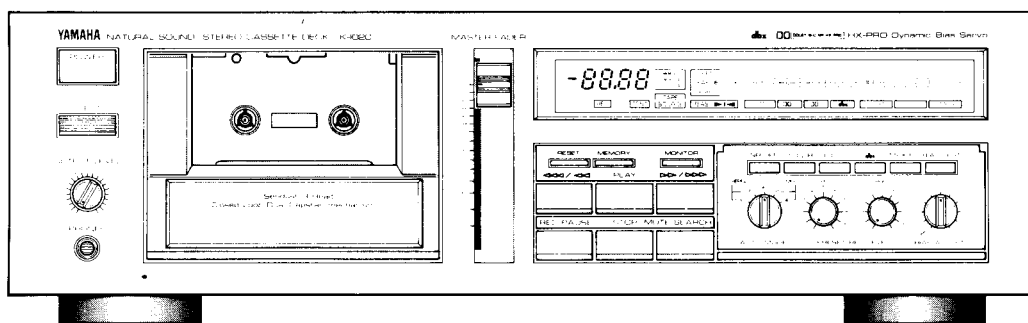


For more Hi-Fi manuals and set-up information
please visit www.hifiengine.com

STEREO CASSETTE DECK K-1020

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.

CONTENTS

TO SERVICE PERSONEL	1
REAR PANELS	1
BLOCK DIAGRAM	2
SPECIFICATIONS	3
INTERNAL VIEW	3
DISASSEMBLY PROCEDURES	4 ~ 6
MECHANICAL ADJUSTMENTS	7 ~ 9
ELECTRICAL ADJUSTMENTS	9 ~ 11

LSI DATA TABLES	12
TIMING CHART	13
PRINTED CIRCUIT BOARD (Pattern Side) ..	14 ~ 17
WIRING	18
IC BLOCK	19 ~ 21
SCHEMATIC DIAGRAM	22, 23
PARTS LIST	24 ~ 36



■ 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.

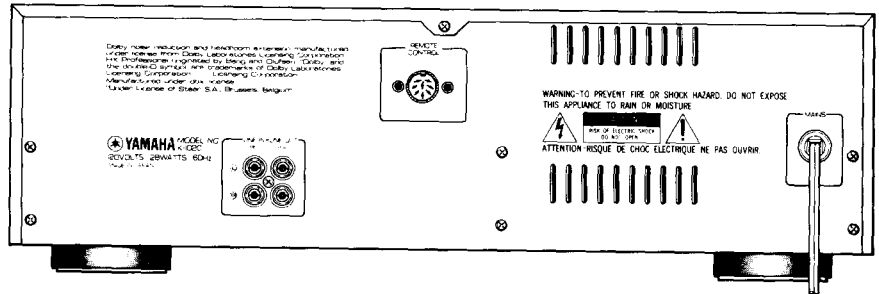
2. Leakage Current Measurement (For 120V Model Only).

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

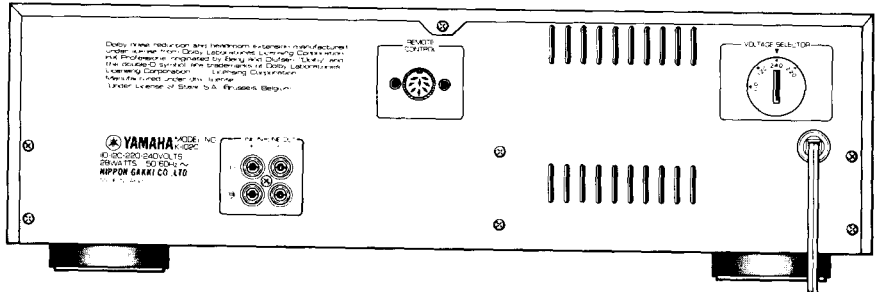
- Meter impedance should be equivalent to 1500 ohm shunted by 0.15 μ F
- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

■ REAR PANELS

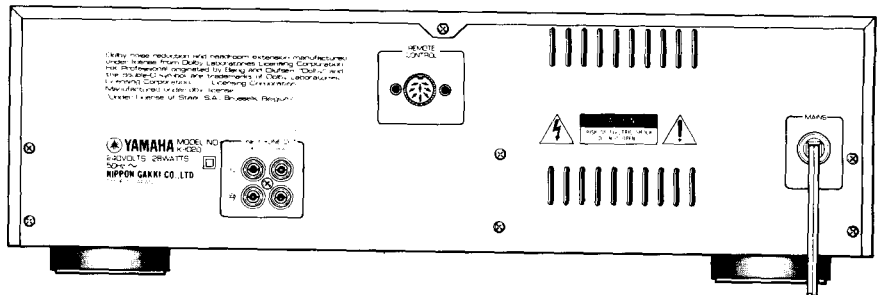
U.S.A. & Canadian models



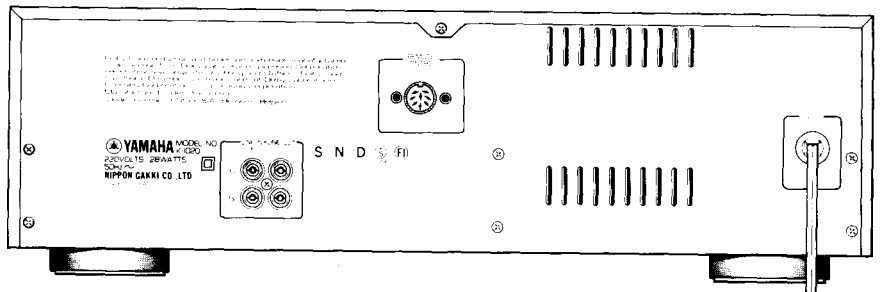
General model



British & Australian models



European model





SPECIFICATIONS

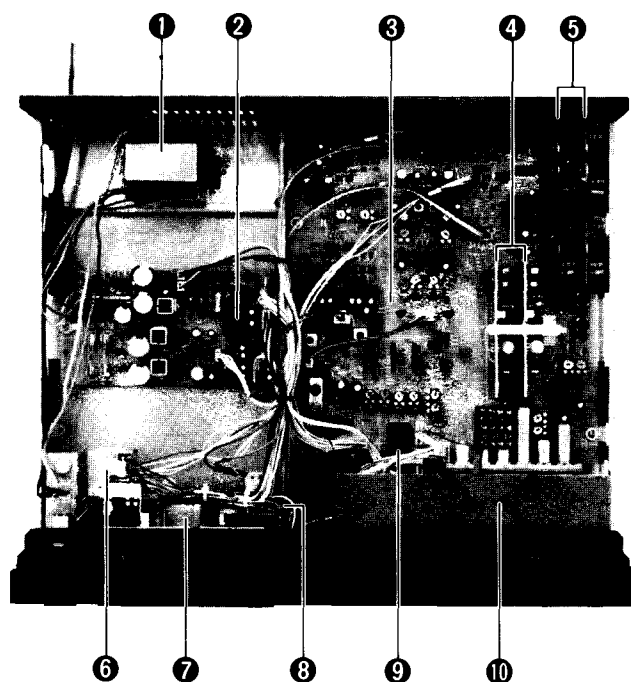
Type	4-track, 2-channel stereo	
Head	R & P Heads: Combination, Pure Sendust with triple-laminated core Erase Heads: Ion-plating Ferrite, Double-gap	
Motors	Capstan: DC Servo Motor Reel: Flat torque DC Motor Assist: DC Motor	
Wow & Flutter	No more than $\pm 0.06\%$ (W. Peak); No more than 0.03% (W. RMS)	
Fast Wind Time	About 70 seconds/45 seconds (High Speed winding) (C-60)	
Frequency Response	Normal tape (-20dB) 20 to 18,000Hz ± 3 dB Chrome tape (-20dB) 20 to 20,000Hz ± 3 dB Metal tape (-20dB) 20 to 23,000Hz ± 3 dB	
Signal to Noise Ratio	Dolby off More than 59 dB Dolby B on More than 67 dB Dolby C on More than 75 dB dbx on More than 95 dB	
Harmonic Distortion	Normal tape Less than 0.5% Chrome tape Less than 0.5% Metal tape Less than 0.8%	

Input Sensitivity Impedance	Line 40 mV/30 k-ohms	
Output Level/Load Impedance	Line 360 mV/47 k-ohms Headphones 3.6 mW/8 ohms Channel Separation (3150 Hz) 40 dB Cross Talk (125 Hz) 60 dB	
Power Supplies	U.S. & Canadian Models 120V AC, 60Hz European Model 220V AC, 50Hz British & Australian Models 240V AC, 50Hz General Model 110/120/220/240V AC, 50/60Hz	
Power Consumption	28 watts	
Dimensions (W x H x D)	435 x 134 x 380 mm 17-1/8" x 5-1/4" x 15"	
Weight	7.6 kg (16 lbs. 12 oz.)	

Specifications are subject to change without notice.

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

INTERNAL VIEW



- ① POWER TRANSFORMER
U.S.A. & Canadian models: GA68590
European model: GA68600
Australian & British models: GA68610
General model: GA68620
- ② POWER CIRCUIT BOARD (1)
- ③ MAIN CIRCUIT BOARD (1)
- ④ dbx Circuit Board
- ⑤ Dolby Circuit Board
- ⑥ CAPSTAN MOTOR
- ⑦ REEL MOTOR
- ⑧ ASSIST MOTOR
- ⑨ μ -COM IC: LM6402G-494
- ⑩ POWER CIRCUIT BOARD

DISASSEMBLY PROCEDURES

1. Adjustment of mechanism unit and replacement of head parts.

- Remove the cassette lid.
- Remove 2 screws ① in Fig. 1 and remove the blind plate.
- Remove 4 screws ② in Fig. 1 and remove the front plate.

* In this state, the head can be adjusted and its parts can be replaced.

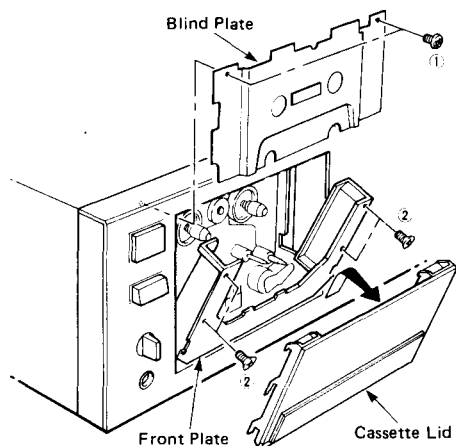


Fig. 1

- Remove 2 screws ③ in Fig. 2 and replace the record/playback head.
- Remove the screw ④ in Fig. 2 and replace the erase head.
- Remove the E ring ⑤ in Fig. 2 and replace the supply side pinch roller.
- Remove the E ring ⑥ in Fig. 2 and replace the take-up side pinch roller.
- Remove the washer ⑦ in Fig. 2 and replace the idler.

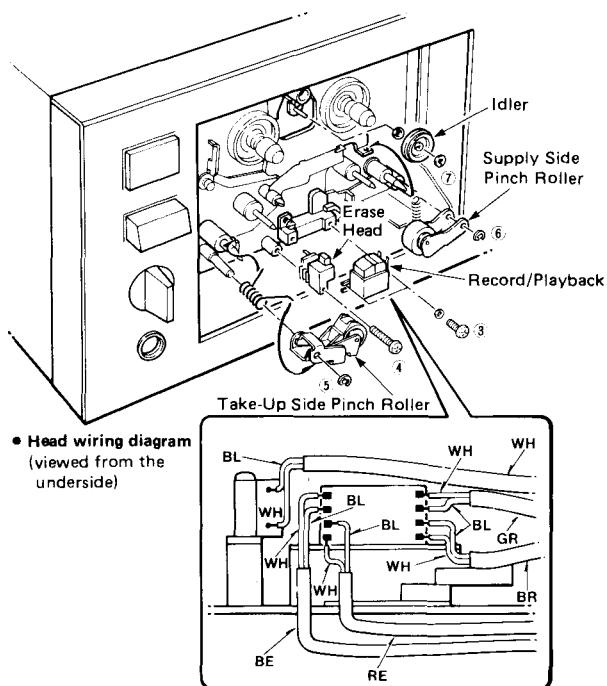


Fig. 2

2. Removal of mechanism unit

- Remove 5 screws ⑧ in Fig. 3 and remove the top cover.
- Remove the cassette lid.

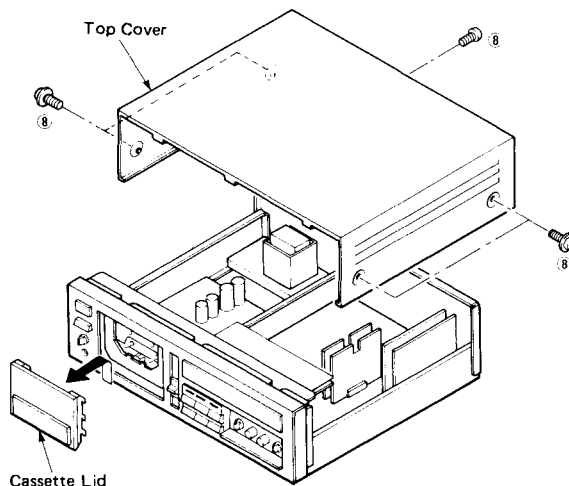
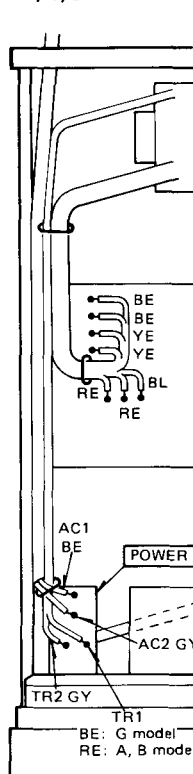


Fig. 3

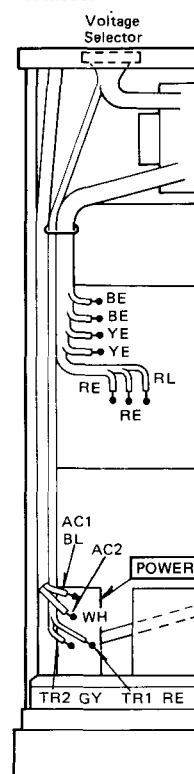
- Disconnect connectors #1 through #5, #7 and #8 in Fig. 4.

CONNECTOR WIRING

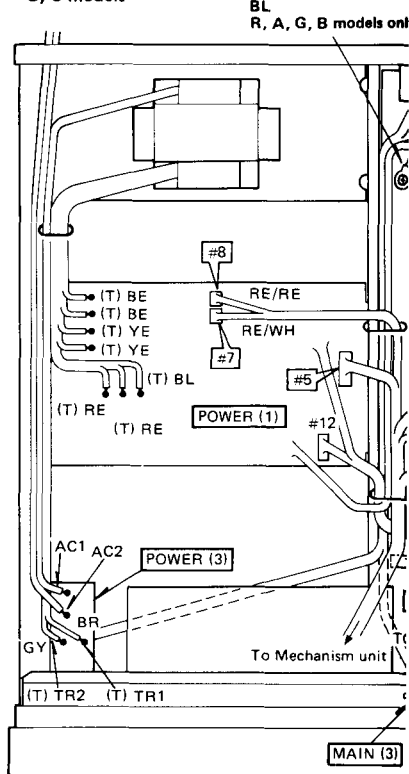
• A, G, B models



• R model



• U, C models



- d. Remove 4 screws ⑨ in Fig. 5 and pull out the mechanism unit gradually to the rear.

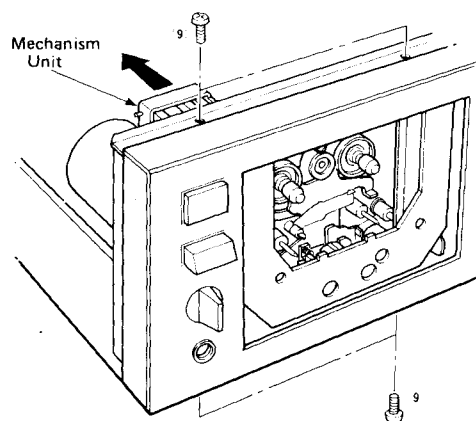


Fig. 5

3. Replacement of capstan motor

- Remove the mechanism unit.
- Remove 4 screws ⑩ in Fig. 6 and remove the back-plate.

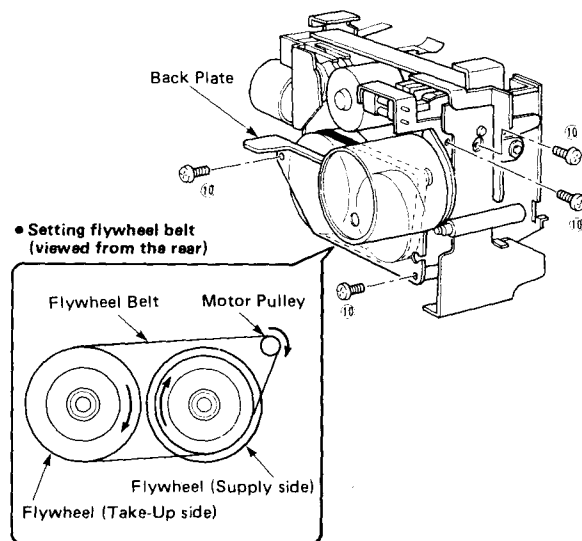
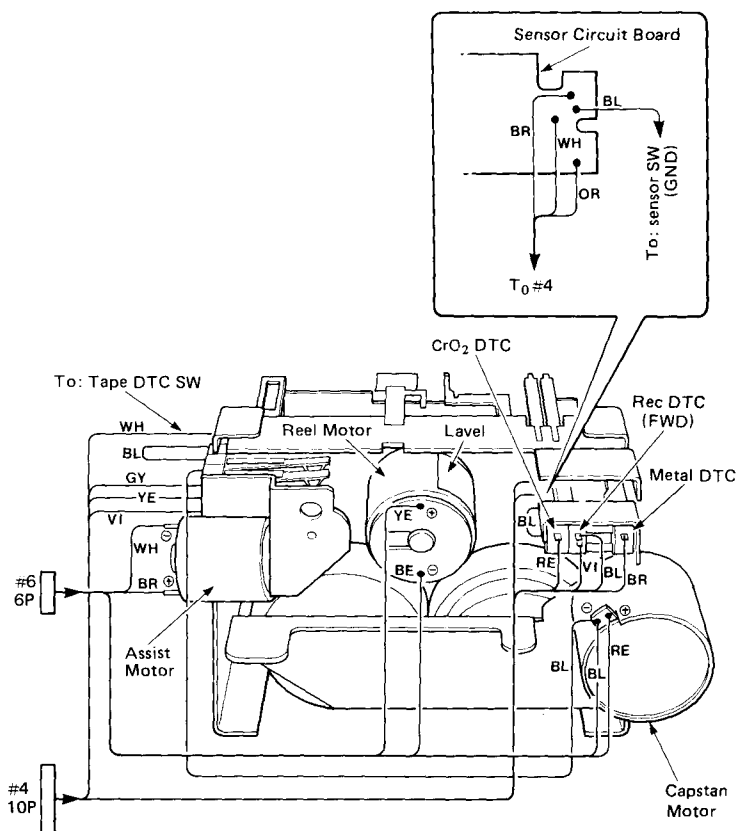
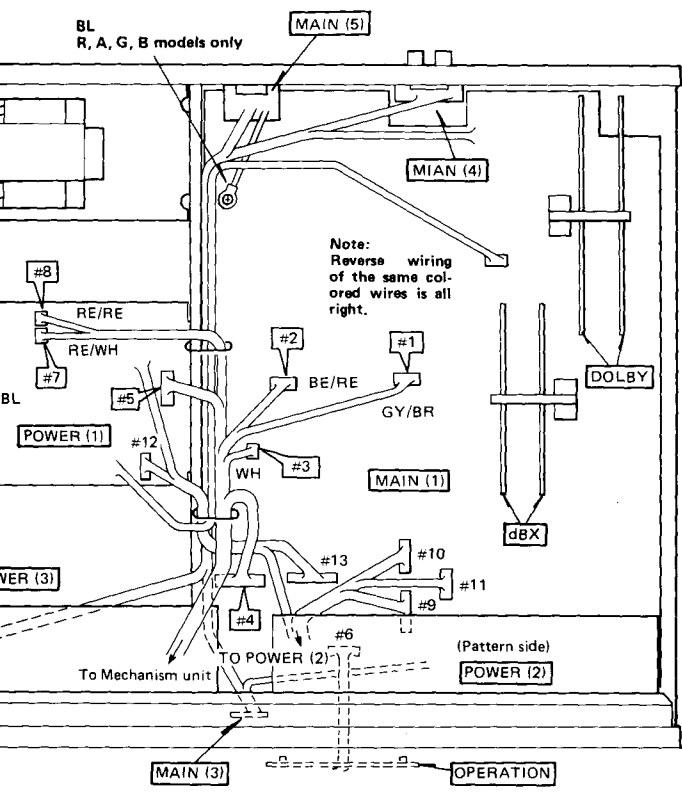


Fig. 6

• WIRING OF MECHANISM UNIT



- c. Remove 3 screws ⑪ in Fig. 7 and replace the capstan motor.

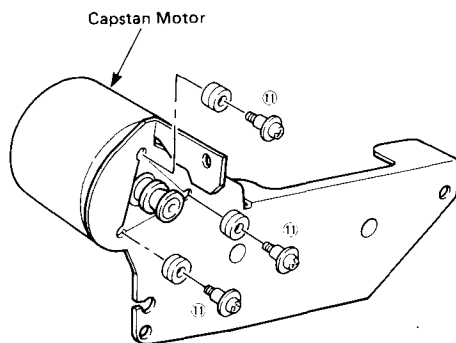


Fig. 7

4. Replacement of reel motor

- Remove the mechanism unit.
- Remove 2 screws ⑫ in Fig. 8 and remove the blind plate.
- Remove the reel base as shown in Fig. 8.
* Note that coil springs of the supply reel and takeup reel are different.
Supply side: Silver
Take-up side: Green
- Remove the back plate (Refer to Fig. 6.)
- Remove the washer ⑬ in Fig. 8 and remove the flywheel (take-up side).

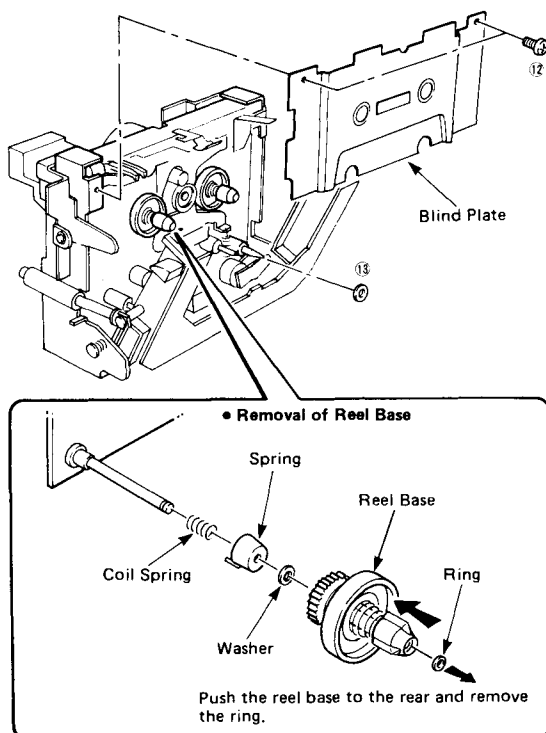


Fig. 8

- Remove 2 screws ⑭ and nuts ⑮ in Fig. 9 and remove the reel motor installation plate.
- Remove 2 screws ⑯ in Fig. 9 and replace the reel motor.

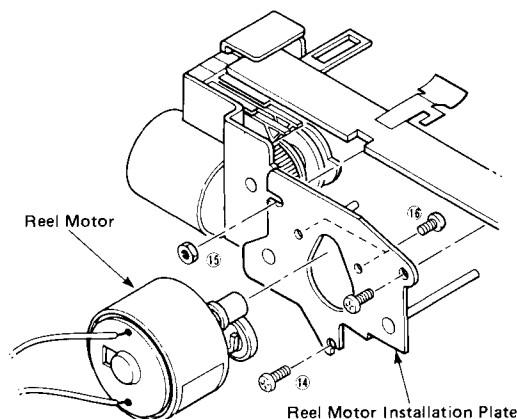


Fig. 9

5. Replacement of assist motor

- Remove the top cover.
- Remove the blind plate.
- Remove 2 screws ⑰ in Fig. 10 and remove the assist motor installation plate.
- Remove 2 screws ⑱ in Fig. 10 and replace the assist motor.

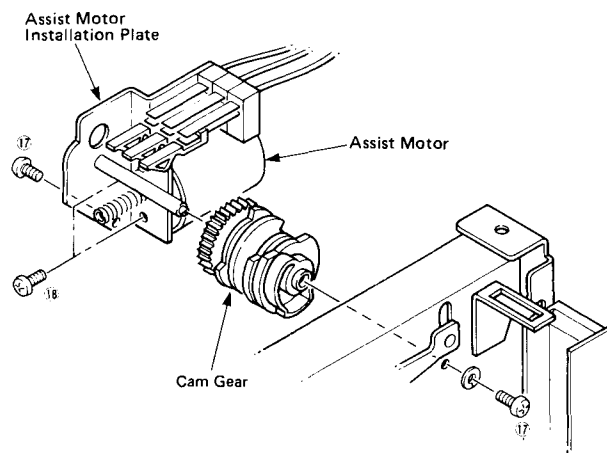


Fig. 10

MECHANICAL 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.

2. Instruments required

- Head Gauge (M-300)
- Audio frequency oscillator
- Oscilloscope
- Mirror Cassette (MC-109C)
- Torque meter
- Wow/flutter meter
- D.C.V.M. (DC Voltmeter)
- A.C.V.M. (AC Voltmeter)

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)			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)		With M-300 block placed vertically on record/playback head, adjust so that M-300 gauge and block becomes parallel (Fig. E)	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. F	Headgauge (M-300)			Supply side pinch roller height adjusting screw (Fig. C)	Head gauge should pass through smoothly without its block contacting pinch roller guide. (Fig. F)	
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-512, 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 + $\frac{5}{-15}$ Hz	
	Wow/Flutter							Less than 0.05% (WRMS)	Check wow/flutter while confirming approximately 3kHz frequency with wow/flutter meter counter.

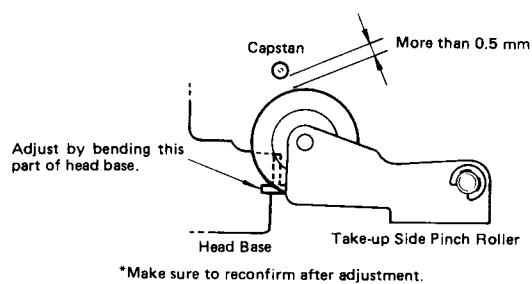


Fig. A

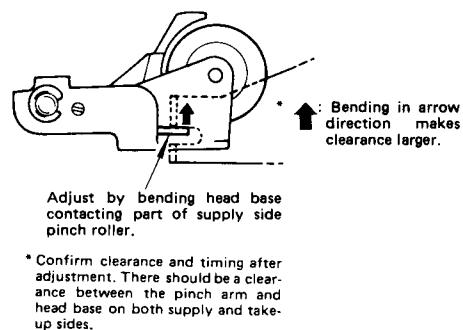


Fig. B

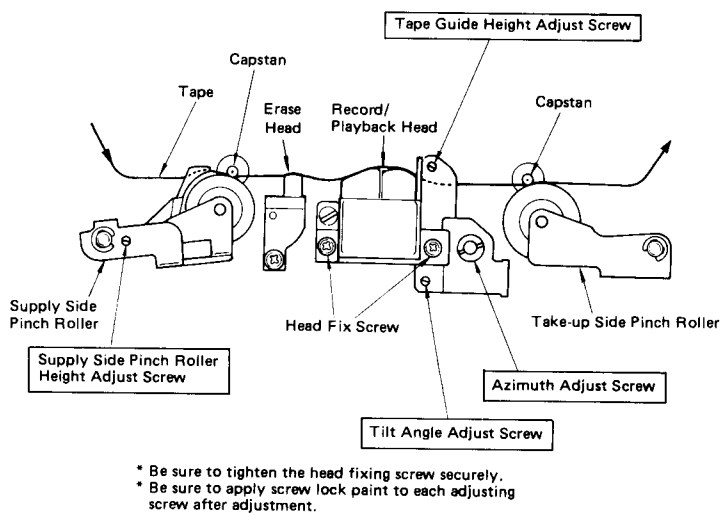


Fig. C

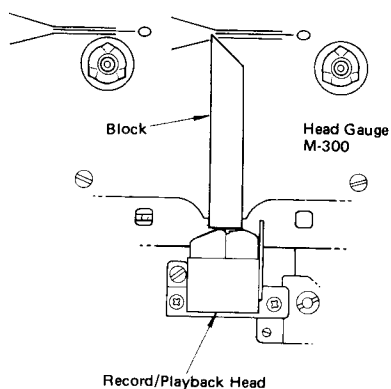


Fig. D

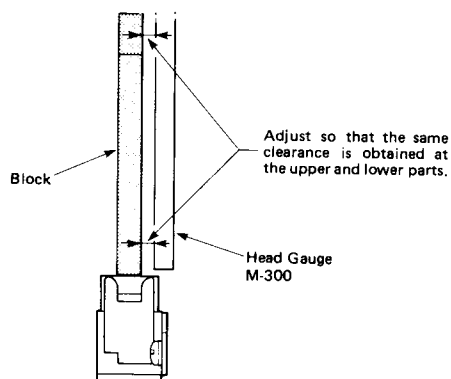


Fig. E

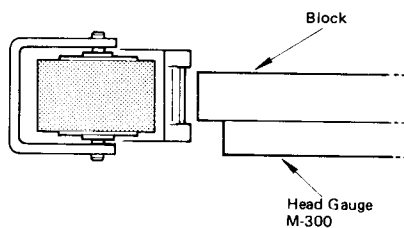


Fig. F

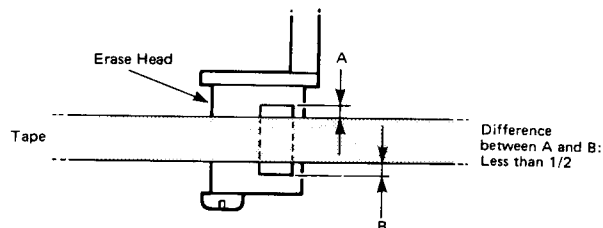
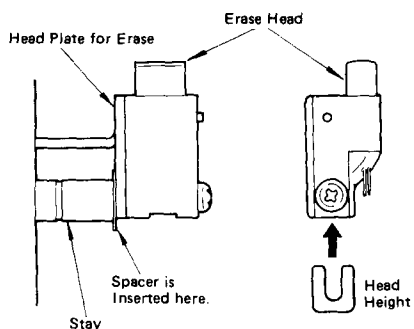


Fig. G



* Use spacer to adjust the head height.

Fig. H

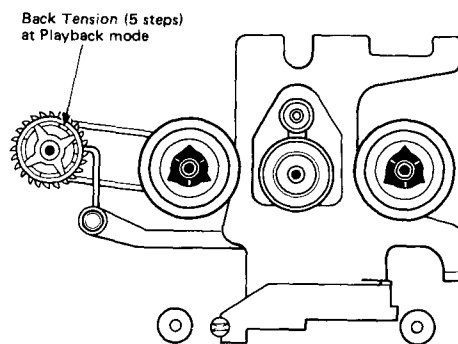


Fig. I

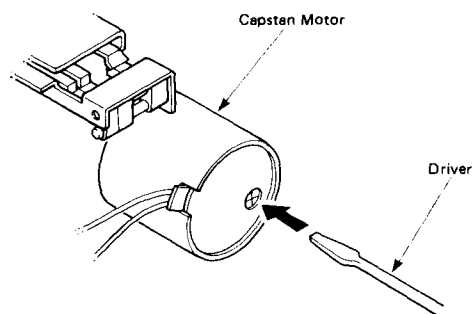


Fig. J

ELECTRICAL ADJUSTMENTS

PLAYBACK ADJUSTMENTS

* Make sure to use a new tape of IEC standards for a test tape.

Alignment tape

Normal TDK AC223 or YAMAHA NR 60

CrO₂ TDK AC512 or YAMAHA CR 60

METAL TDK AC712 or YAMAHA MR 60

* 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 speci- fication in Fig. K.
4	dbx IC		TP1 ~ TP2 (dbx circuit board)	D.C.V.M.	STOP	VR701 (dbx circuit board)	15 ± 2mV D.C.

RECORDING ADJUSTMENT

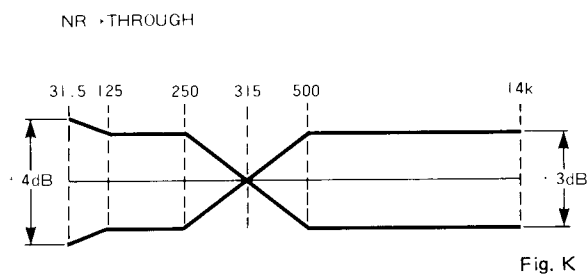
• Proceed with the recording adjustments after having finished the playback adjustments.

Step	Adjustment item	Tape	Test Point	Instrument required	Mode	Measurement Conditions	Adjustment Parts	Rating	Remarks
1	Peak Level Meter (+4.5dB)		LINE OUT	A.C.V.M.	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)		LINE IN	Audio frequency oscillator		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 simul- taneously.

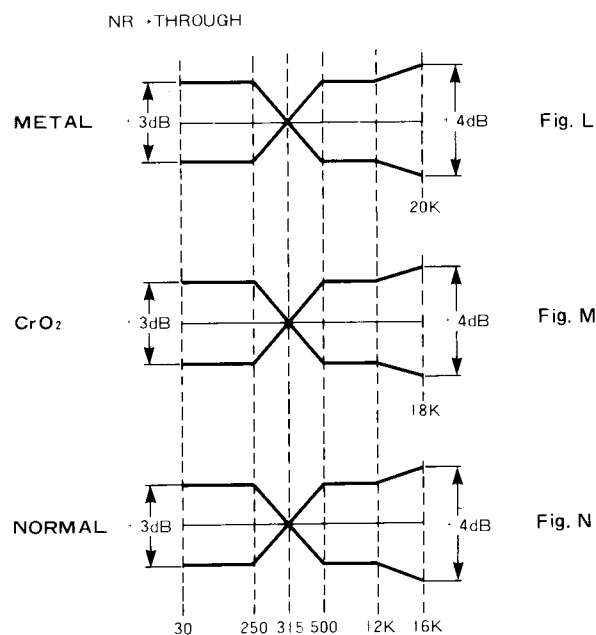
Step	Adjustment Item	Tape	Test Point	Instrument Required	Mode	Measurement Conditions	Adjustment Parts	Rating	Remarks
2	BIAS Oscillation level	METAL	TP5 TP6	A.C.V.M.	REC	BIAS ADJUST → Maximum (VR107) Set VR119 and 120 all the way to the left.	L109 L110	Adjust so that oscillation output is maximum.	
3	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	Recording Level (Through)	AC-712 INPUT SIGNAL (1kHz, -20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency oscillator	REC TAPE NR → OFF	① Set VR119 and 120 as the midpoint. ② Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 36mV (-29dBV). ③ Record the signal and adjust so that there is no level difference when SOURCE/TAPE is switched.	VR111 (L) VR112 (R)	±0.5dB	The reference tape of this unit is AC-720 (equivalent to TDK-MA). If other tape is used, slight difference in level results.
5	Recording Level (dbx)	AC-712 INPUT SIGNAL (1kHz, -20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency oscillator	REC TAPE NR → dbx	① Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 36mV (-29dBV). ② Record the signal and adjust so that there is no level difference when SOURCE/TAPE is switched.	VR121 (L) VR122 (R)	±0.5dB	Each adjustment in step 4 should be completed.
6	Recording BIAS (METAL)	AC-712 INPUT SIGNAL (1kHz, 10kHz, -20dB)	LINE OUT	A.C.V.M.	REC TAPE NR → OFF	① Confirm the 1kHz record/playback level (Step 4). ② Record and playback a 10 kHz (-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. L.	As ORBiT signal is 1kHz and 10kHz, use a 1kHz signal and a 10kHz 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.
7	Recording BIAS (CrO ₂)	AC-512 INPUT SIGNAL (1kHz, 10kHz, -20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency oscillator	REC TAPE	① Record 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-712.) ② Apply a 10kHz signal from LINE IN so that LINE OUT voltage is 36mV (-29dBV: voltage 20dB lower than the standard level) ③ Record 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 10kHz, use a 1kHz signal and a 10kHz 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.
8	Recording BIAS (Normal)	AC-223 INPUT SIGNAL (1kHz, 10kHz, -20dB)	LINE OUT	A.C.V.M.	REC TAPE	① Record and playback a 1kHz (-20dB) signal and read the level. ② Record and playback a 10kHz (-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. N.	
9	BIAS Test (LOW)	AC-712	TP3	A.C.V.M.	BIAS TEST REC BIAS ADJ Center.	Set METAL (AC-712) and perform BIAS TEST.	VR110	30 ± 5mV	Each adjustment in Steps 4 and 6 should be completed. Confirm adjustment is made within ±2 graduation when BIAS TEST is performed with other tape (AC-512, 223).
	BIAS Test (High)		BIAS Indicator				VR109	▶◀ should light.	

Step	Adjustment Item	Tape	Test Point	Instrument Required	Mode	Measurement Conditions	Adjustment Parts	Rating	Remarks
2	BIAS Oscillation level	METAL	TP5 TP6	A.C.V.M.	REC	BIAS ADJUST → Maximum (VR107) Set VR119 and 120 all the way to the left.	L109 L110	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	Recording Level (Through)	AC-712 INPUT SIGNAL (1kHz, -20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency oscillator	REC TAPE NR → OFF	① Set VR119 and 120 as the midpoint. ② Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 36mV (-29dBV). ③ Record the signal and adjust so that there is no level difference when SOURCE/TAPE is switched.	VR111 (L) VR112 (R)	±0.5dB	The reference tape of this unit is AC-720 (equivalent to TDK-MA). If other tape is used, slight difference in level results.
5	Recording Level (dbx)	AC-712 INPUT SIGNAL (1kHz, -20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency oscillator	REC TAPE NR → dbx	① Apply a 1kHz sine wave signal from LINE IN so that LINE OUT voltage is 36mV (-29dBV). ② Record the signal and adjust so that there is no level difference when SOURCE/TAPE is switched.	VR121 (L) VR122 (R)	±0.5dB	Each adjustment in step 4 should be completed.
6	Recording BIAS (METAL)	AC-712 INPUT SIGNAL (1kHz, 10kHz, -20dB)	LINE OUT	A.C.V.M.	REC TAPE NR → OFF	① Confirm the 1kHz record/playback level (Step 4). ② Record and playback a 10 kHz (-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. L.	As ORBiT signal is 1kHz and 10kHz, use a 1kHz signal and a 10kHz 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.
7	Recording BIAS (CrO ₂)	AC-512 INPUT SIGNAL (1kHz, 10kHz, -20dB)	LINE OUT LINE IN	A.C.V.M. Audio frequency oscillator	REC TAPE	① Record 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-712.) ② Apply a 10kHz signal from LINE IN so that LINE OUT voltage is 36mV (-29dBV: voltage 20dB lower than the standard level) ③ Record 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 10kHz, use a 1kHz signal and a 10kHz 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.
8	Recording BIAS (Normal)	AC-223 INPUT SIGNAL (1kHz, 10kHz, -20dB)	LINE OUT	A.C.V.M.	REC TAPE	① Record and playback a 1kHz (-20dB) signal and read the level. ② Record and playback a 10kHz (-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. N.	
9	BIAS Test (LOW)	AC-712	TP3	A.C.V.M.	BIAS TEST REC BIAS ADJ Center.	Set METAL (AC-712) and perform BIAS TEST.	VR110	30 ± 5mV	Each adjustment in Steps 4 and 6 should be completed. Confirm adjustment is made within ±2 graduation when BIAS TEST is performed with other tape (AC-512, 223).
	BIAS Test (High)		BIAS Indicator				VR109	▶◀ should light.	

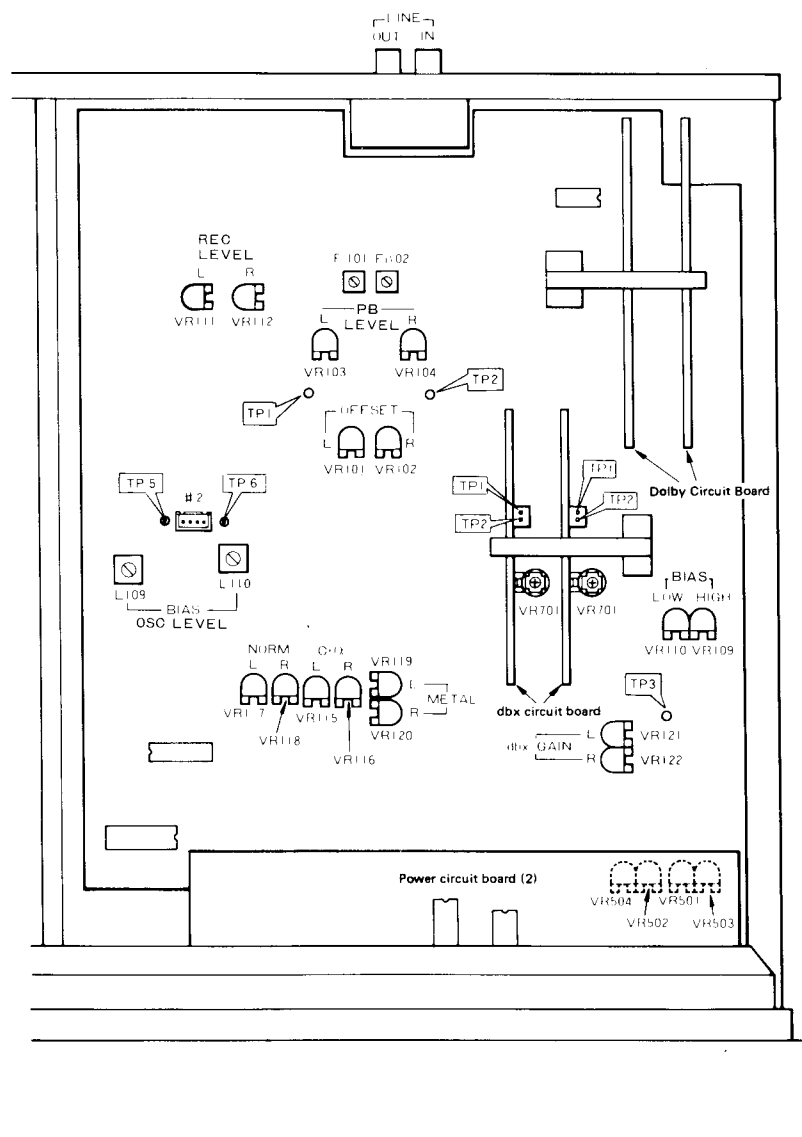
- **PLAYBACK FREQUENCY RESPONSE**



- **RECORDING FREQUENCY RESPONSE**

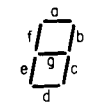


- TEST POINT



LSI DATA TABLES

LM6402G-494

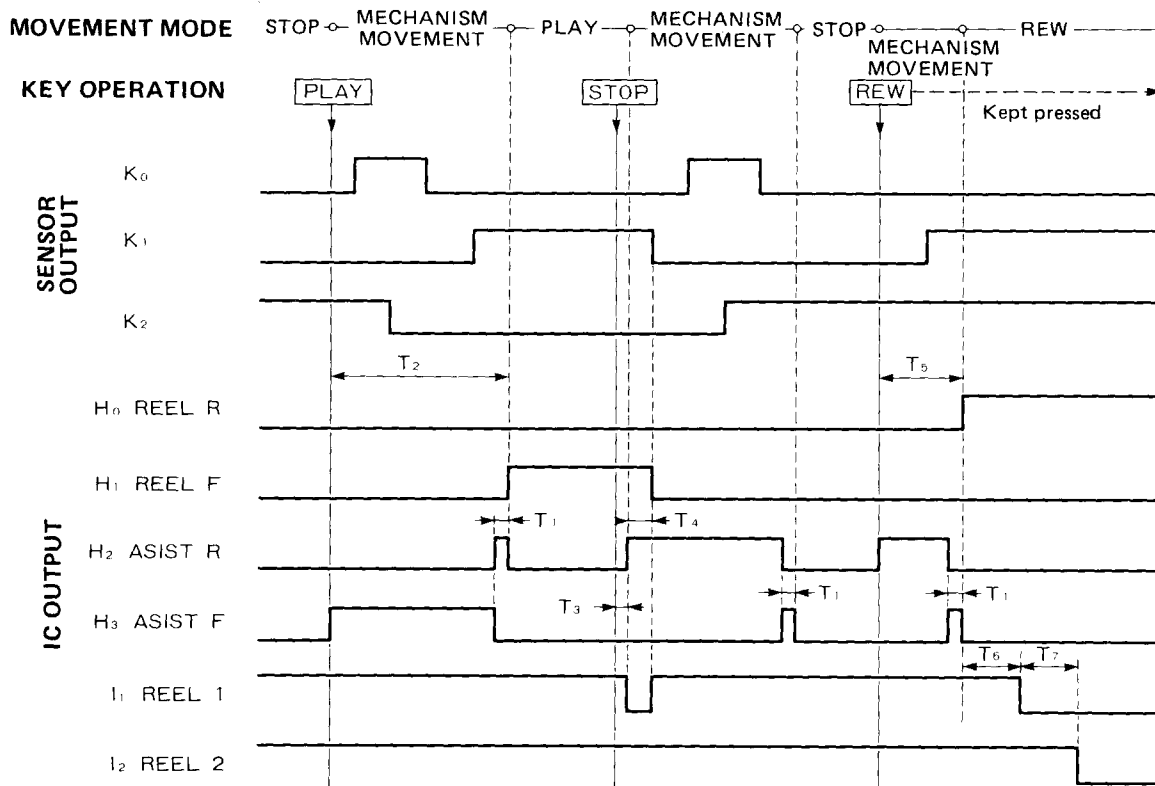
No.	NAME	FUNCTION	No.	NAME	FUNCTION
1	Xtal	CLOCK, Microcomputer (800 kHz)	42	EXtal	CLOCK, Microcomputer (800 kHz)
2	C ₀	(1 figure) KEY SCAN 1 DISPLAY (2 figure) KEY SCAN 2 DIGIT (3 figure) KEY SCAN 3 OUTPUT (4 figure) KEY SCAN 4	41	VDD	+5V
3	C ₁		40	B ₃	PULSE INPUT, Reel stand (Take-up)
4	C ₂		39	B ₂	PULSE INPUT, Reel stand (Supply)
5	C ₃		38	B ₁	KEY SCAN INPUT
6	INT	Not used (+5V)	37	B ₀	
7	RES	RESET, Microcomputer (Reset at "L" level)	36	A ₃	
8	D ₀	DISPLAY DIGIT (Dot) KEY SCAN 5	35	A ₂	
9	D ₁	NORMAL TAPE	34	A ₁	
10	D ₂	CrO ₂ TAPE	33	A ₀	
11	D ₃	METAL TAPE	32	I ₂	Speed Control of Reel Motor 2
12	E ₀	LED SEGMENT OUTPUT  a. MEMORY b. BIAS [▶] [◀] c. ▶ [▶] [◀] d. [▶] [◀] e. TAPE f. O-M REPEAT g. FULL REPEAT —, REC, *, TEST	31	I ₁	Speed Control of Reel Motor 1
13	E ₁		30	I ₀	Not Use
14	E ₂		29	H ₃	Assist Motor Control
15	E ₃		28	H ₂	
16	F ₀		27	H ₁	Reel Motor Control
17	F ₁		26	H ₀	
18	F ₂		25	G ₃	LINE MUTE OUTPUT Signal
19	F ₃		24	G ₂	MONITOR SW Signal
20	TEST	Gnd.	23	G ₁	REC MUTE OUTPUT Signal
21	Vss	Gnd.	22	G ₀	REC BIAS OUTPUT Signal

MODE VS OUTPUT

Terminal	NAME	STOP	FF	FF (High Speed)	REW	REW (High Speed)	PLAY	REC/PAUSE	REC/PLAY	CUE	REVIEW
22 · G ₀	BIAS	H	H	H	H	H	H	—	L	H	H
23 · G ₁	REC MUTE	L	L	L	L	L	L	L	H	L	L
24 · G ₂	MONITOR	—	—	—	—	—	**L	***H	***H	—	—
25 · G ₃	LINE MUTE	*	*	*	*	*	H	*	*	*	*
26 · H ₀	REEL · R	L	L	L	H	H	L	L	L	L	H
27 · H ₁	REEL · F	L	H	H	L	L	H	L	H	H	L
31 · I ₁	REEL 1	H	L	L	L	L	H	H	H	L	L
32 · I ₂	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 14 msec

T_2 : Play operation time ... About 300 msec

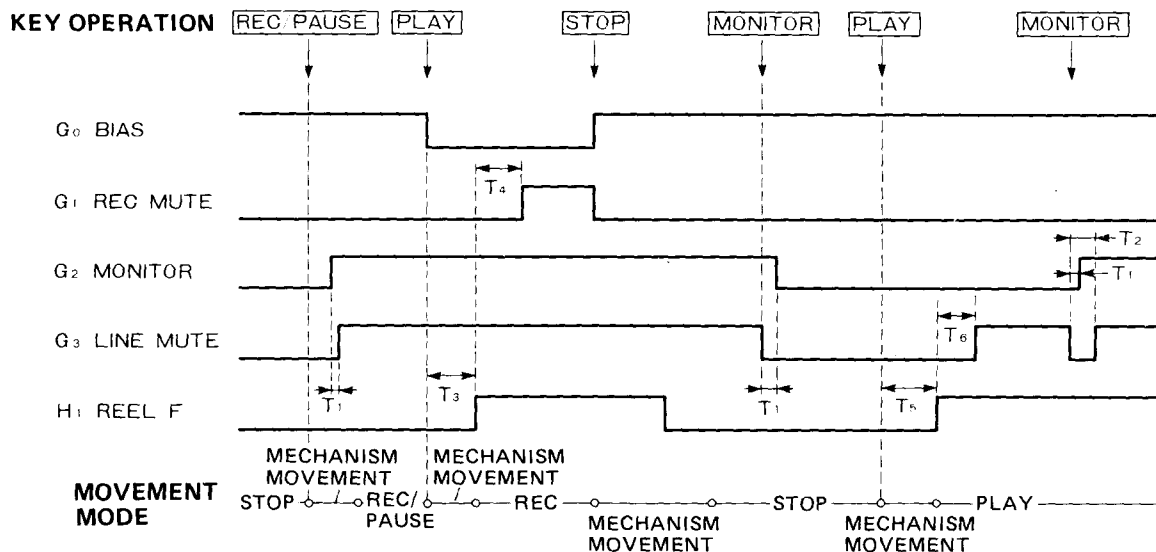
T_3 : Delay of play → STOP ... About 15 msec

T_4 : Reel motor running time before shifting out of the previous mode ... About 50 msec

T_5 : Operation time of STOP → REW ... About 90 msec

T_6 : Delay before fast forward voltage ... About 260 msec

T_7 : Delay before high speed fast forward voltage ... About 300 msec



T_1 : Monitor mute delay ... About 25 μ sec

T_2 : Monitor switching mute ... About 50 msec

T_3 : Operation of PAUSE → PLAY ... About 150 msec

T_4 : REC mute delay ... About 250 msec
(to wait til running is stabilized)

T_5 : PLAY operation ... About 300 msec

T_6 : Line mute delay ... About 250 msec

- Main Circuit Board (1)

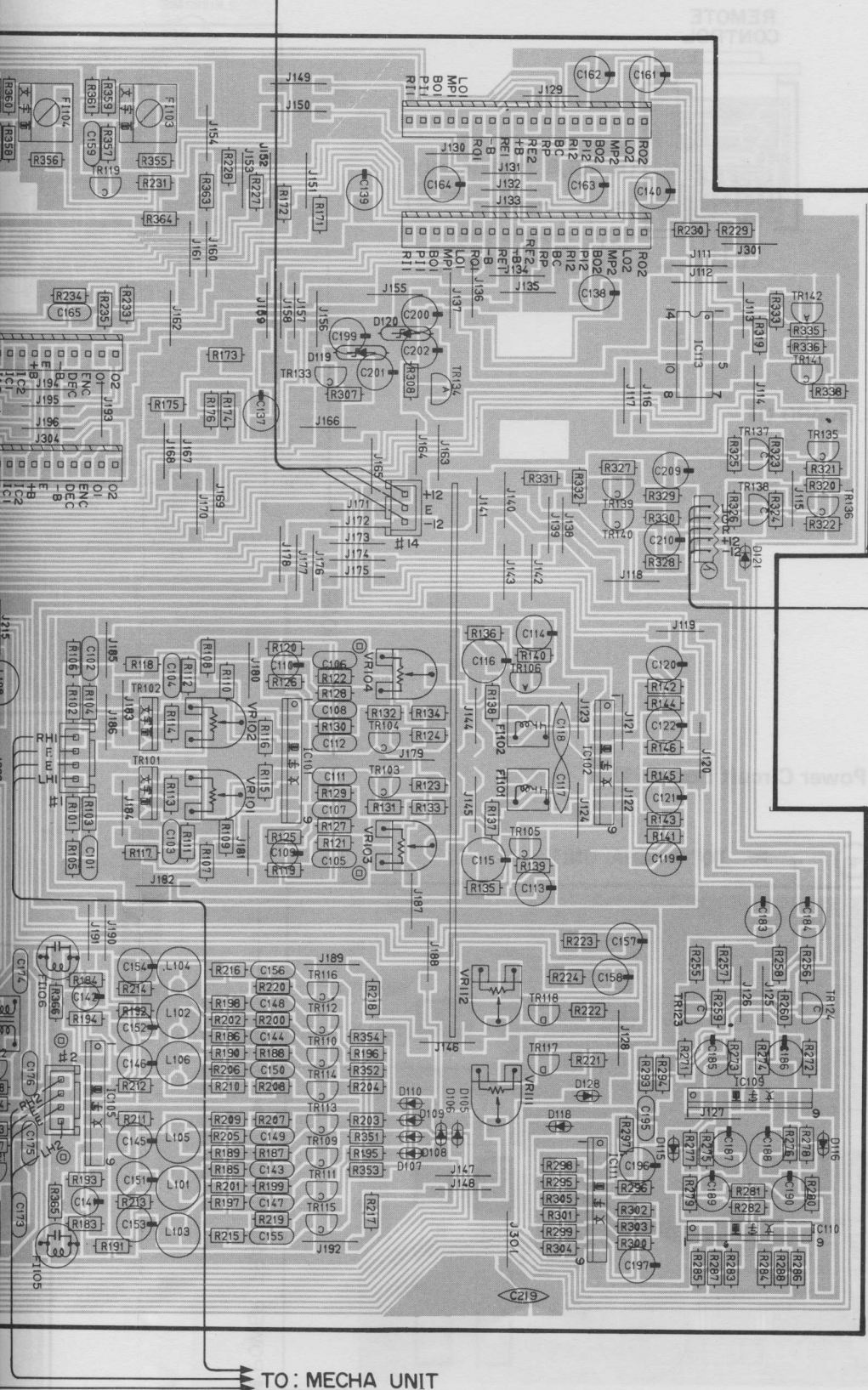
TO: POWER SUPPLY C. BOARD (1) ←



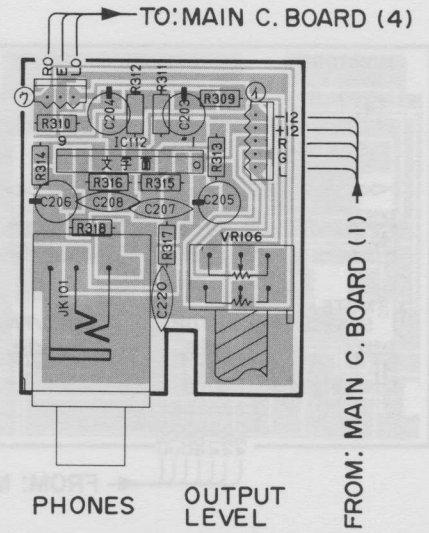
Note)

文字面 : Letter side

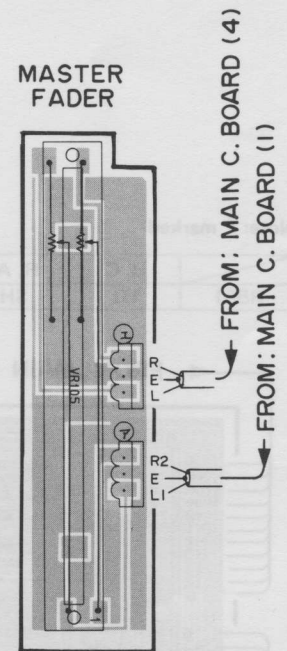
SUPPLY C. BOARD (1)



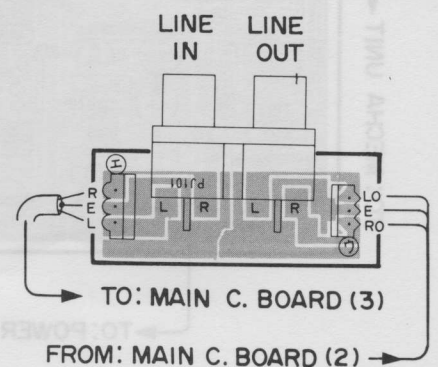
● Main Circuit Board (2)



● Main Circuit Board (3)

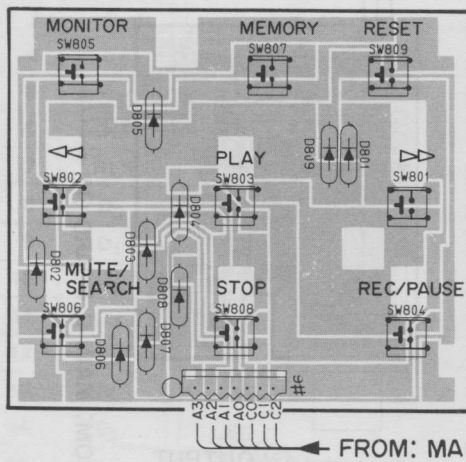


● Main Circuit Board (4)

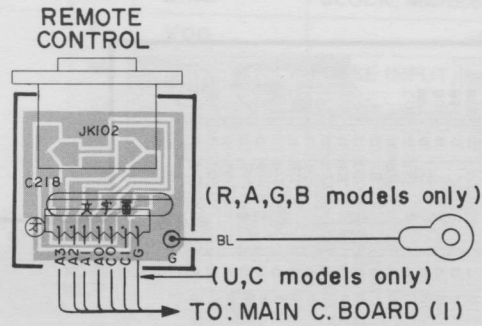


PRINTED CIRCUIT BOARD (Pattern side)

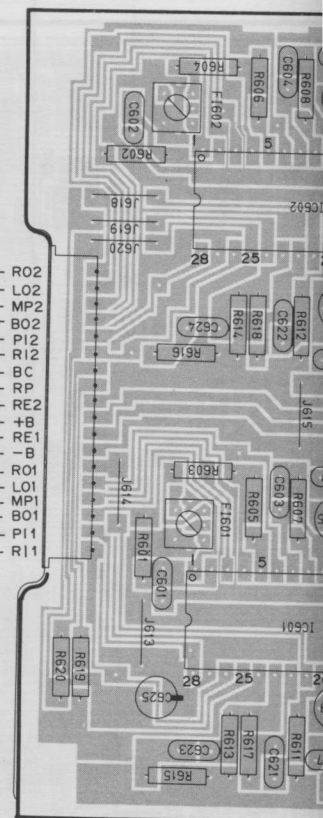
• Operation Circuit Board



• Main Circuit Board (5)



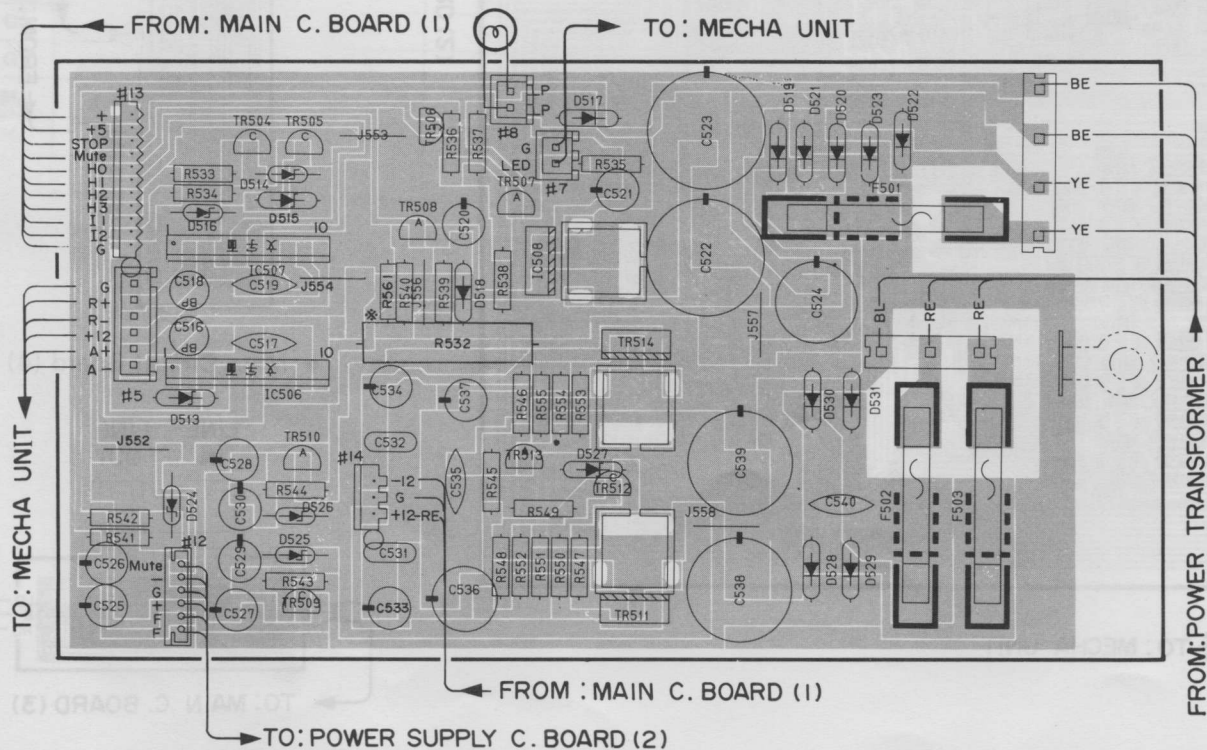
• Dolby Circuit Board



Note: * marked

	U, C	R, A, G, B
R561	1Ω	SHORT

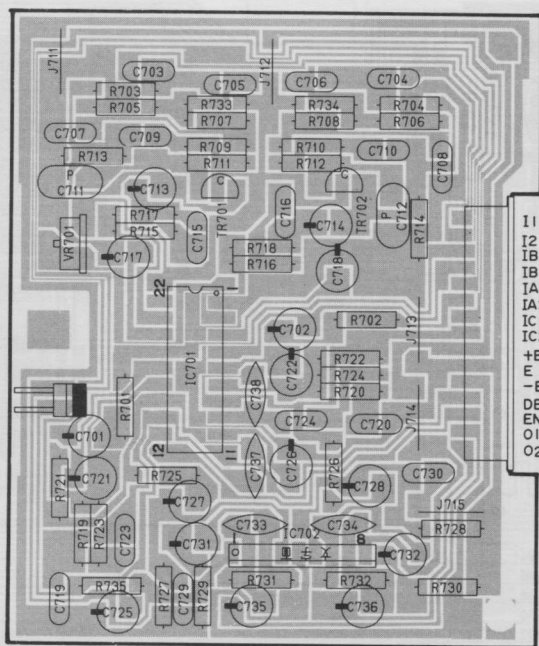
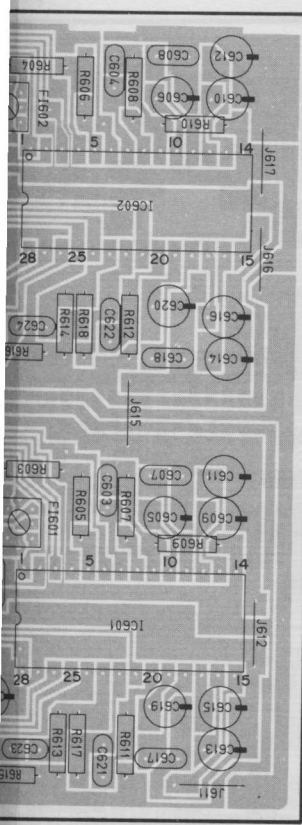
• Power Circuit Board (1)



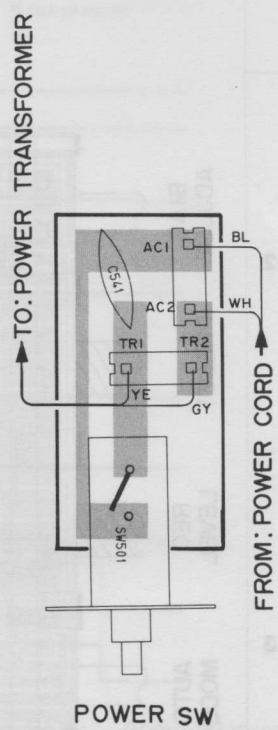
Circuit Board

• dbx Circuit Board

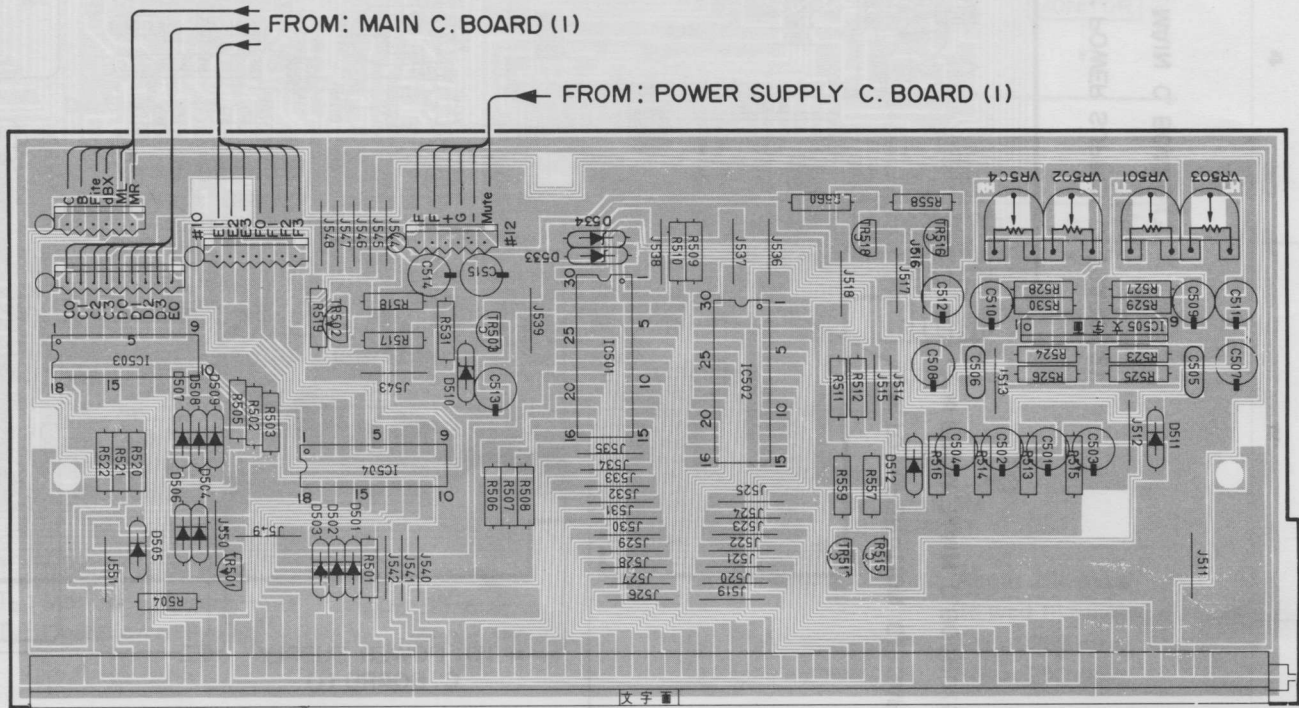
• Power Circuit Board (3)



From: MAIN C. BOARD (1)



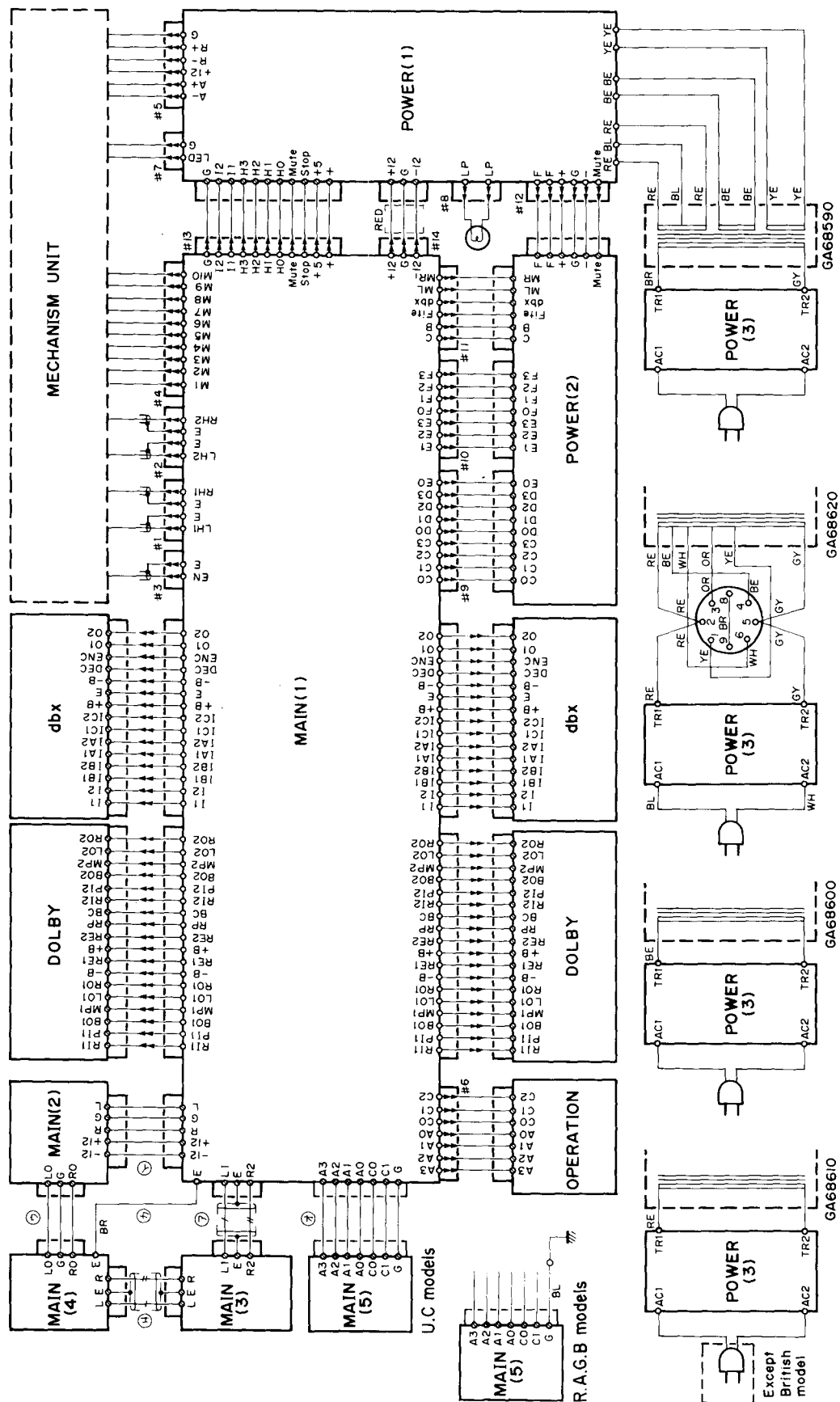
• Power Circuit Board (2)



FROM: MAIN C. BOARD (1)

FROM: POWER SUPPLY C. BOARD (1)

WIRING



U.S.A & Canadian models

General model

European model

Australian & British models

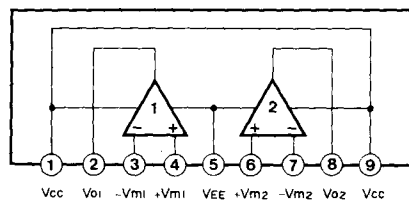
K-1020

IC BLOCK

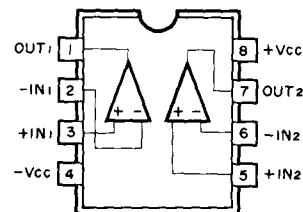
IC101, 102, 104, 107 ~ 111, 505, 702: AN6551 or
NJM4558S or
BA715

IC105, 112: NJM4556S

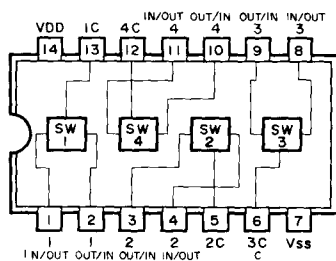
IC106: NJM4560S



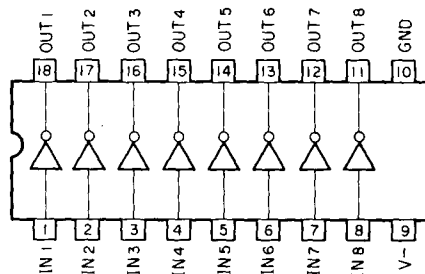
IC103: NJM2043D



IC113: μ PD4066BC or
LC4066B or
M4066BP

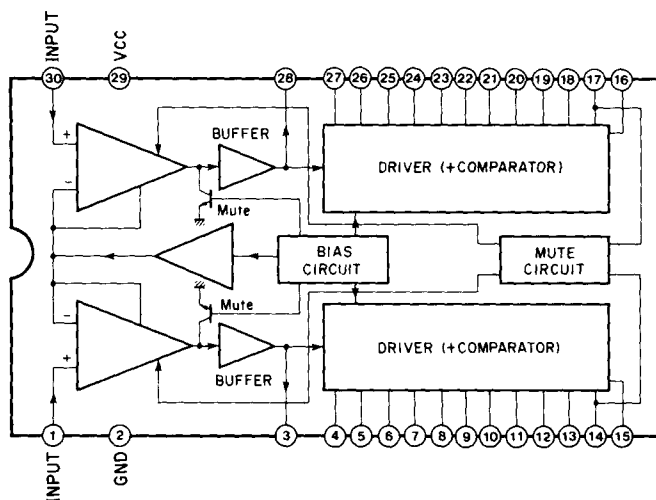
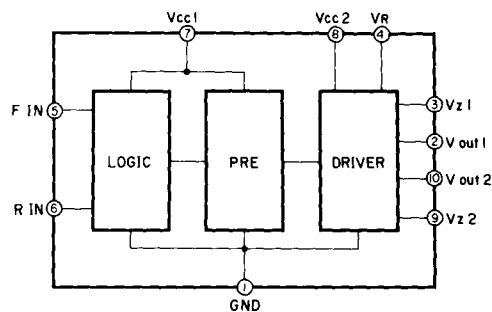


IC114, 503, 504: AN6873 or
LB1241

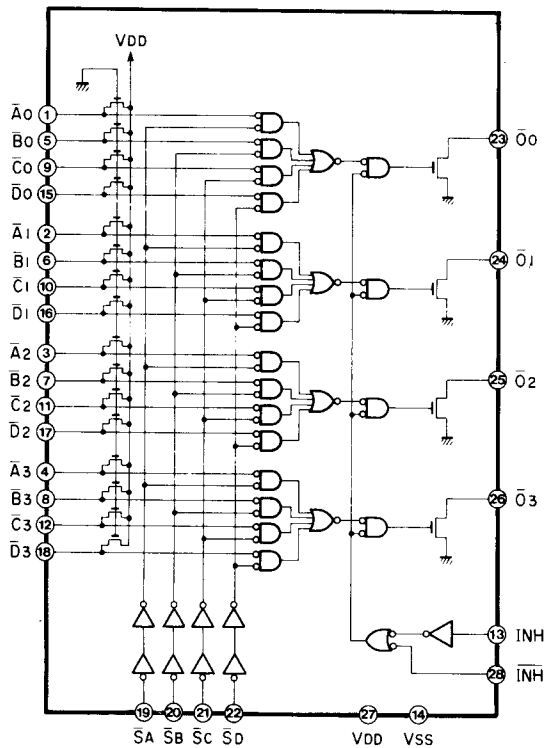


IC501, 502: HA12067NT

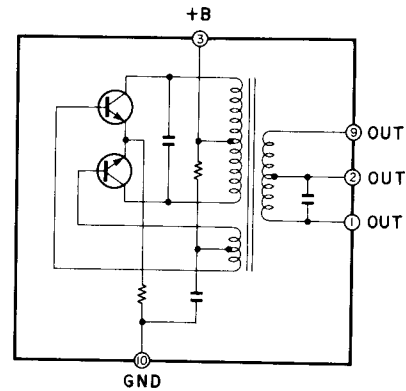
IC506, 507: BA6209



IC115: LC7800



IC117: iG14680

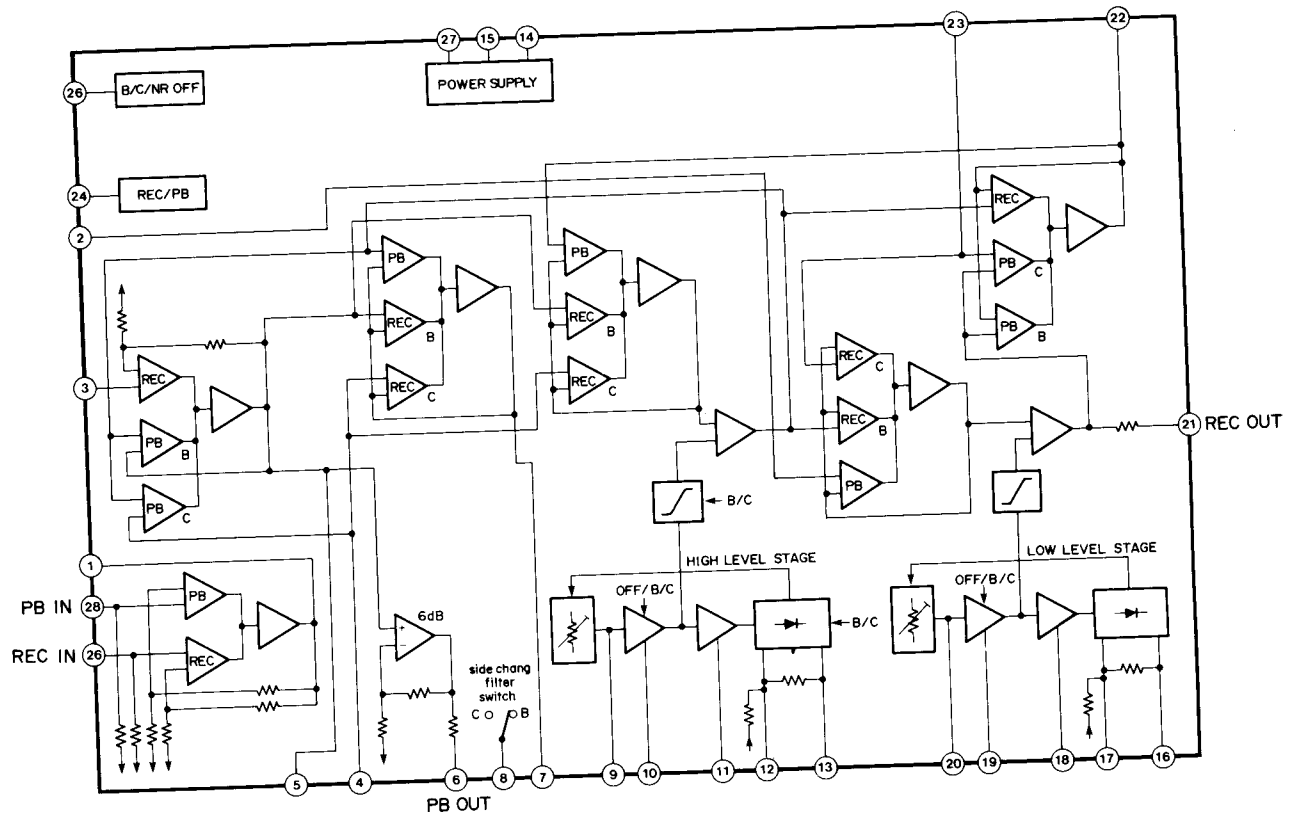


"1" High Level
 "0" Low Level
 "*" don't Care Case

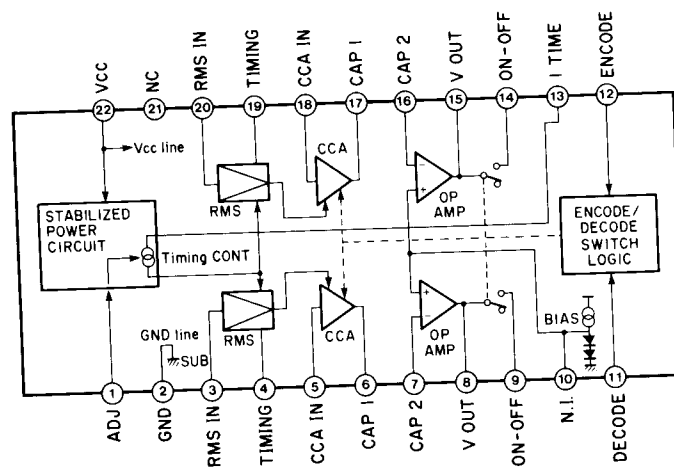
INPUTS																OUTPUTS										
DATA IN												SELECT IN								INHIBIT IN						
A				B				C				D														
A ₀	A ₁	A ₂	A ₃	B ₀	B ₁	B ₂	B ₃	C ₀	C ₁	C ₂	C ₃	D ₀	D ₁	D ₂	D ₃	S _A	S _B	S _C	S _O	I _{NR}	I _{MH}	O ₀	O ₁	O ₂	O ₃	
0																	0				0		0			
	0																0				0			0		
		0															0				0				0	
			0														0				0					0
				0														0			0		0			
					0													0			0			0		
						0												0			0				0	
							0											0			0					0
								0											0		0		0			
									0										0		0			0		
										0									0		0				0	
											0								0		0					0
												0							0		0					
													0						0		0					
														0					0		0					
															0				0		0					
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0					
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0					
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	0					

K-1020

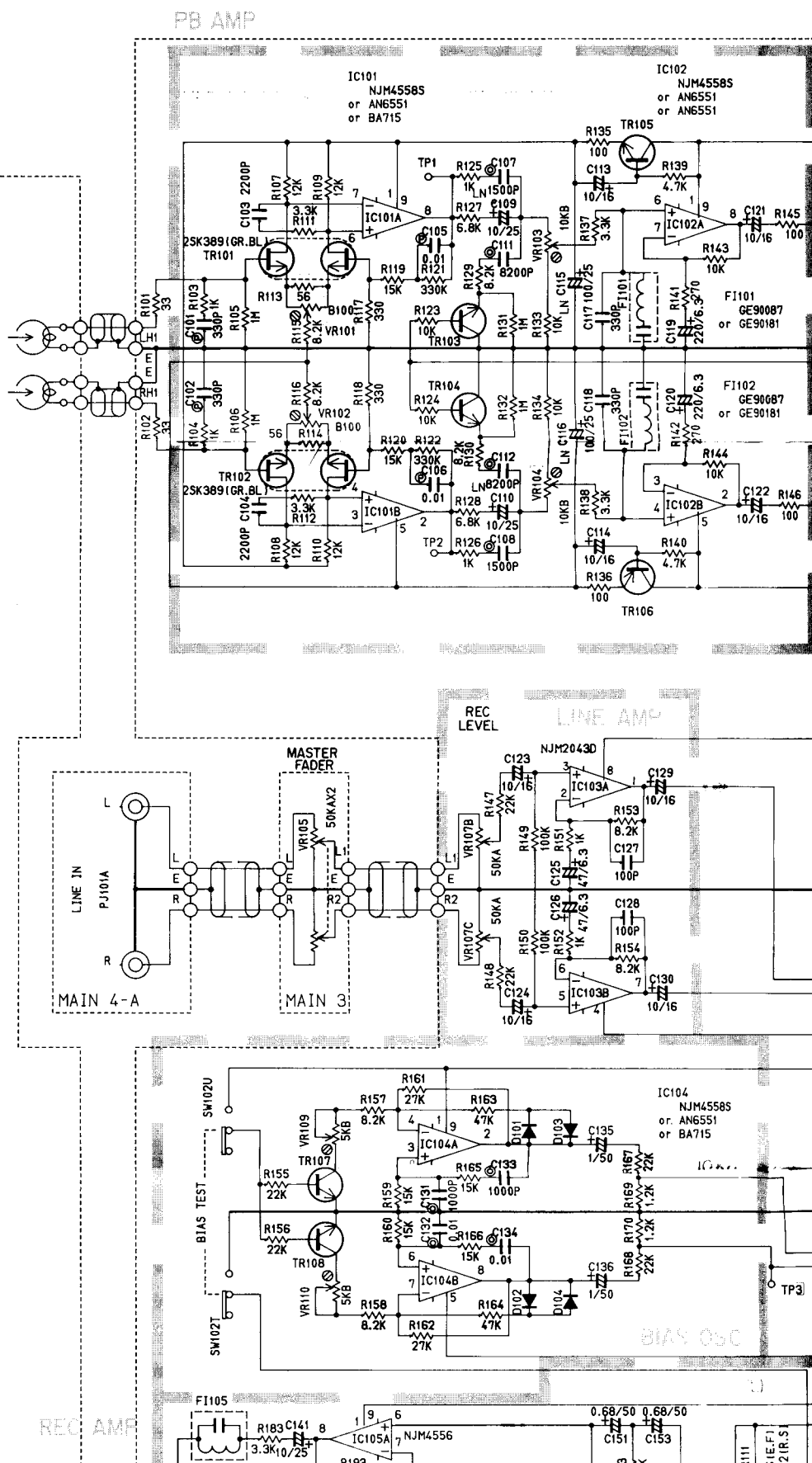
IC601, 602: TEA0665

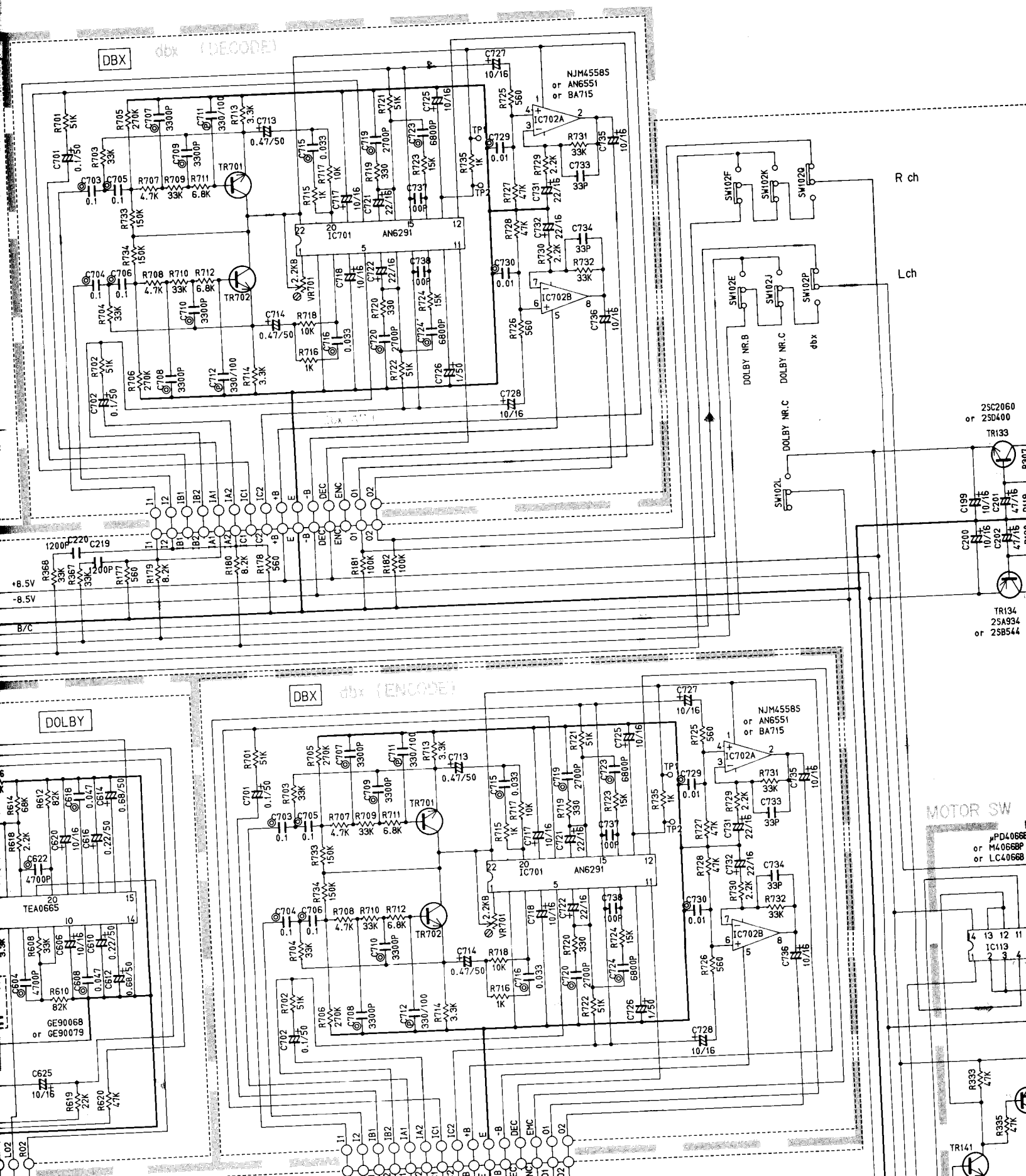


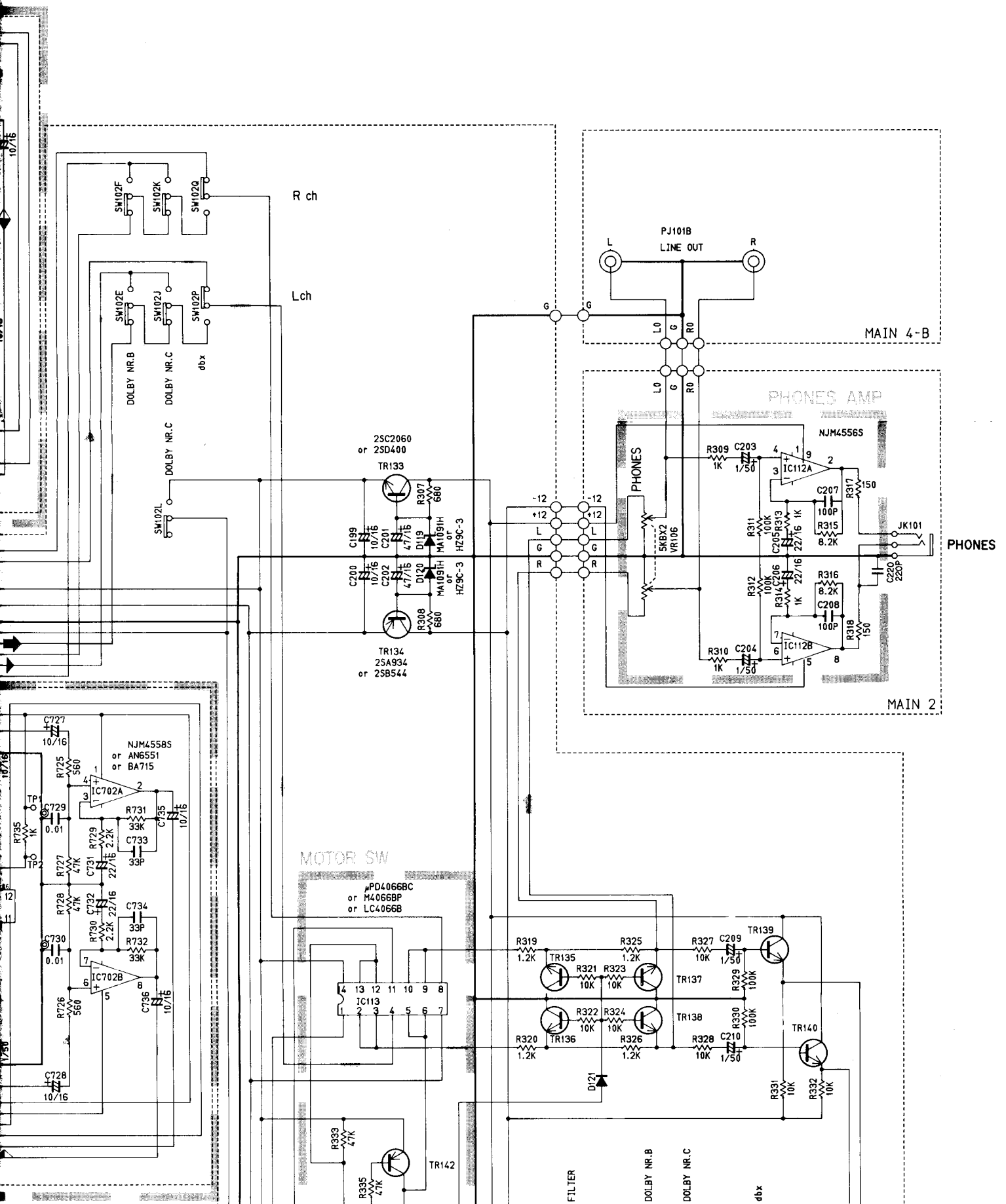
IC701: AN6291

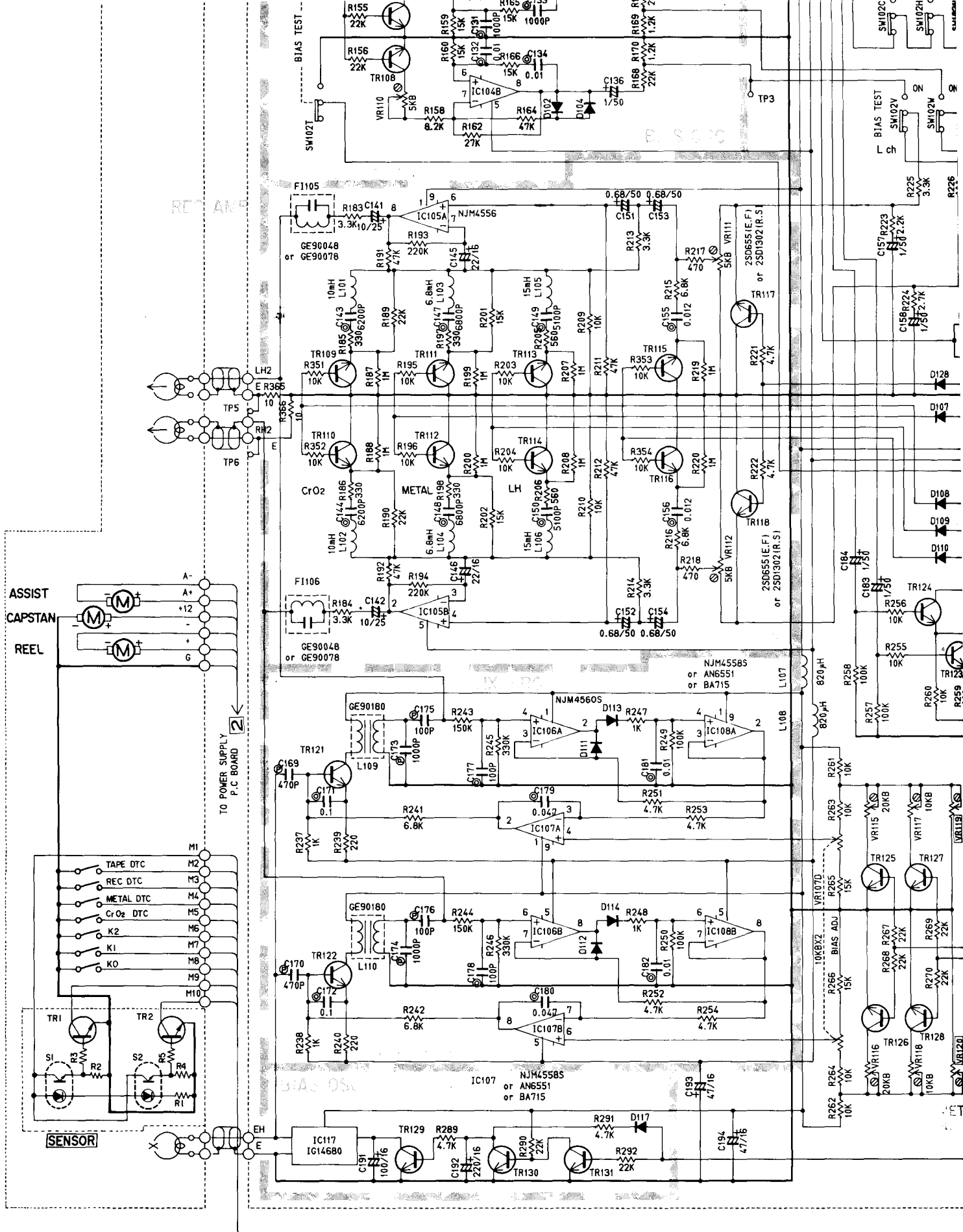


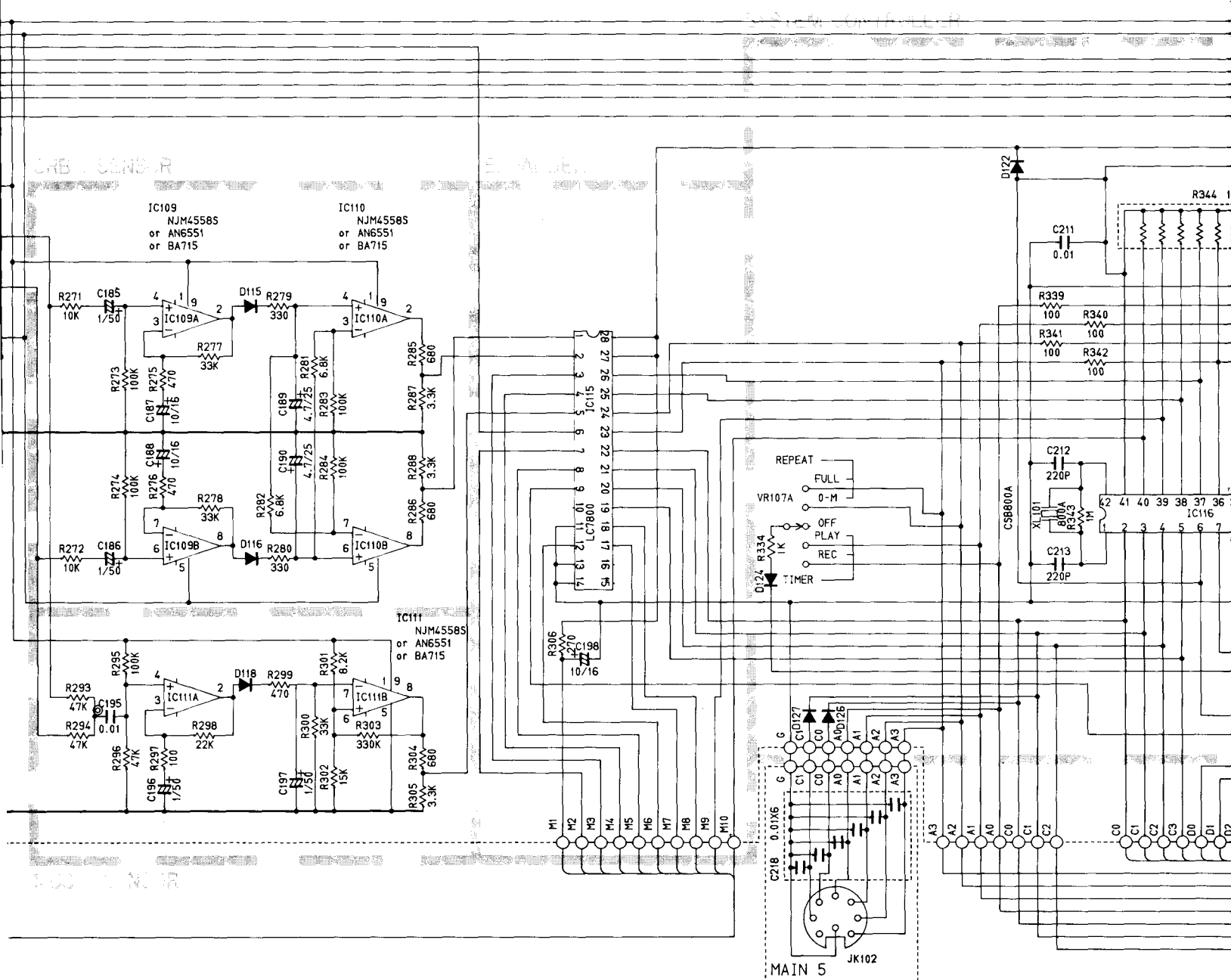
SCHEMATIC DIAGRAM

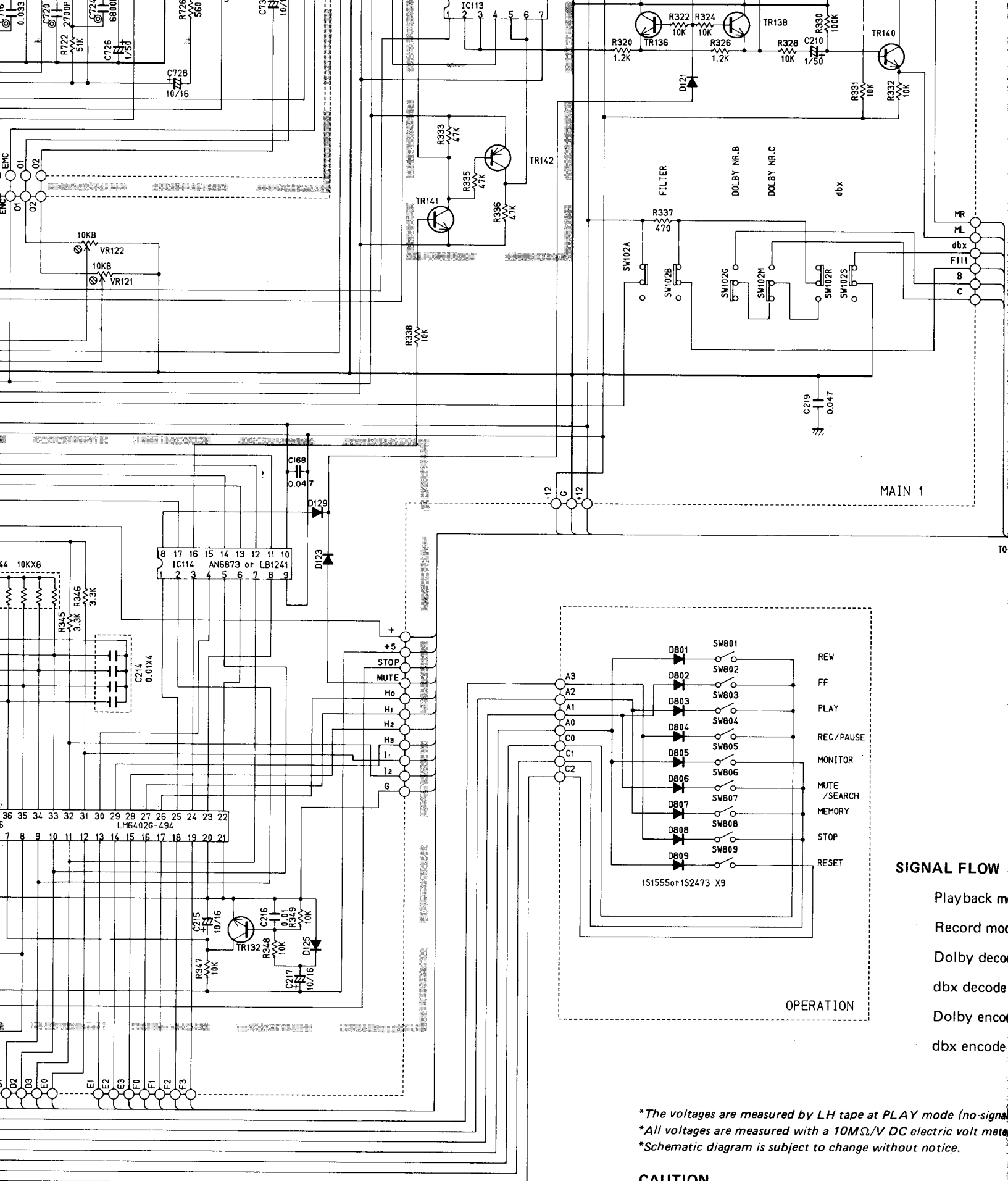












SIGNAL FLOW

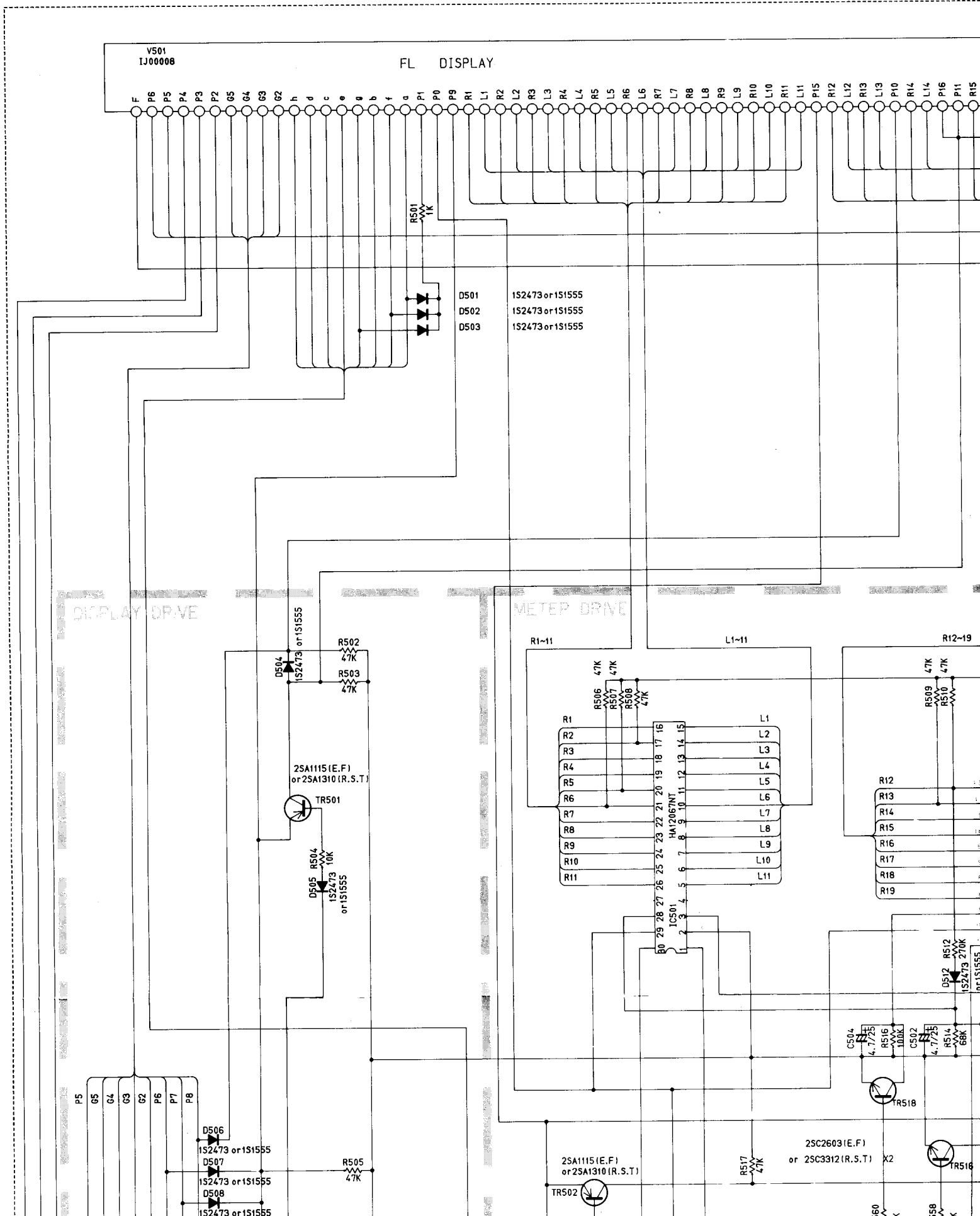
Playback m
Record mo
Dolby deco
dbx decode
Dolby enco
dbx encode

*The voltages are measured by LH tape at PLAY mode (no-signal)
*All voltages are measured with a 10MΩ/V DC electric volt meter
*Schematic diagram is subject to change without notice.

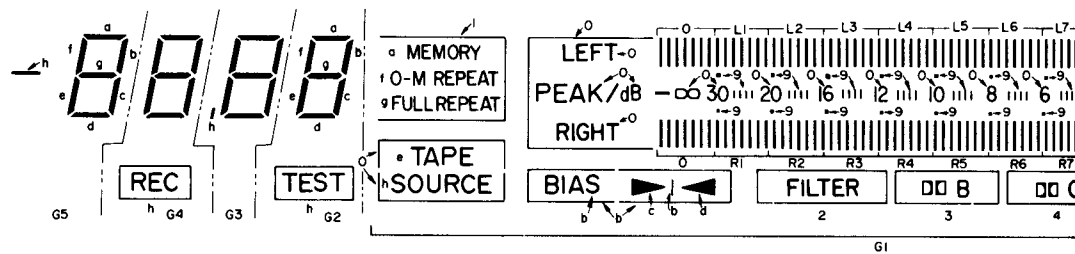
CAUTION

- Components having special characteristics are marked Δ and should be replaced with parts having specifications equal to those original.

■ SCHEMATIC DIAGRAM

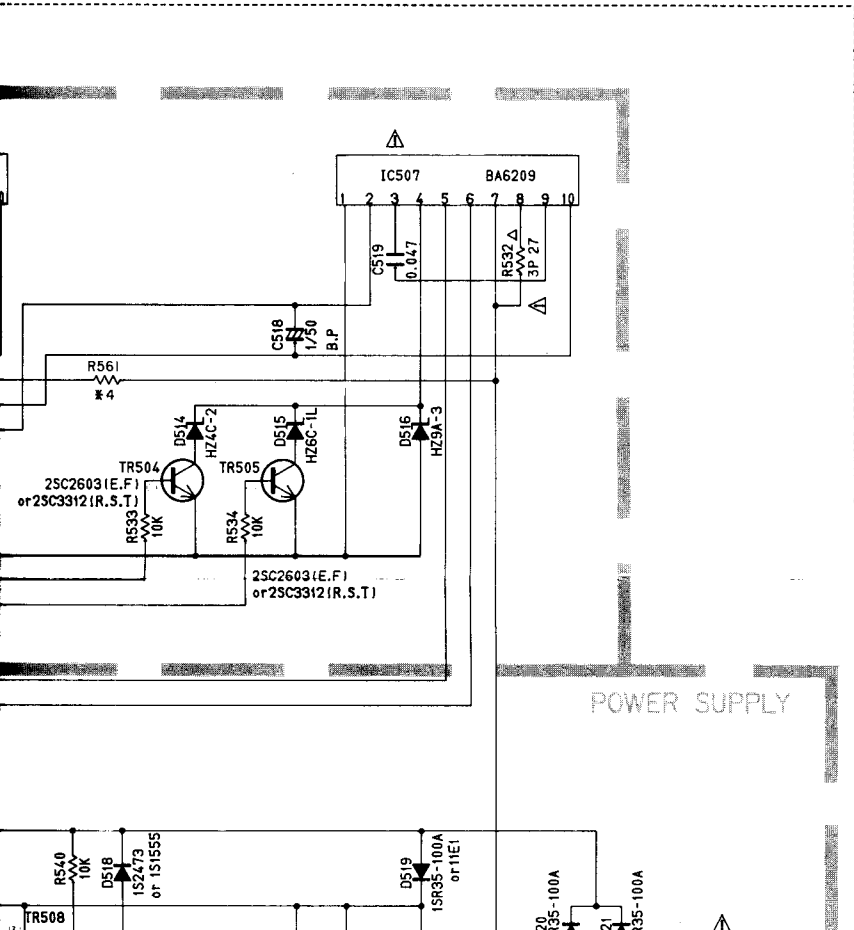


V50I (Display Unit)

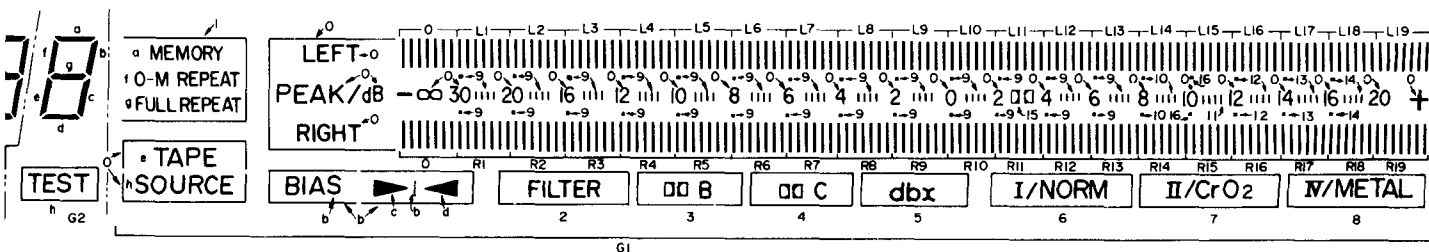


Pin assignment

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Assignment	F	P6	P5	P4	P3	P2	G5	G4	G3	G2	h	d	c	e	g	b
Pin No.	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Assignment	R3	L3	R4	L4	R5	L5	R6	L6	R7	L7	R8	L8	R9	L9	R10	L10
Pin No.	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
Assignment	L14	P16	P11	R15	L15	P12	R16	L16	P13	R17	L17	P14	R18	L18	R19	L19

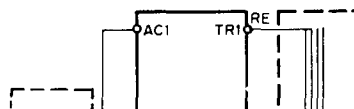


V501 (Display Unit)

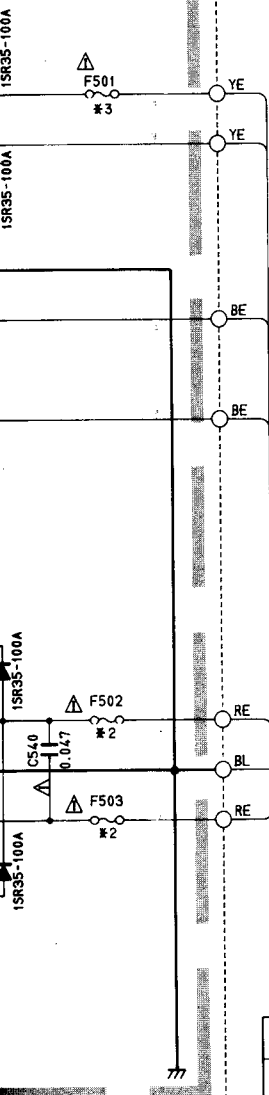


	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
5	P4	P3	P2	G5	G4	G3	G2	h	d	c	e	g	b	f	a	P1	P0	P9	R1	L1	R2	L2
3	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
4	L4	R5	L5	R6	L6	R7	L7	R8	L8	R9	L9	R10	L10	R11	L11	P15	R12	L12	R13	L13	P10	R14
3	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70					
1	R15	L15	P12	R16	L16	P13	R17	L17	P14	R18	L18	R19	L19	P8	P7	G1	F					

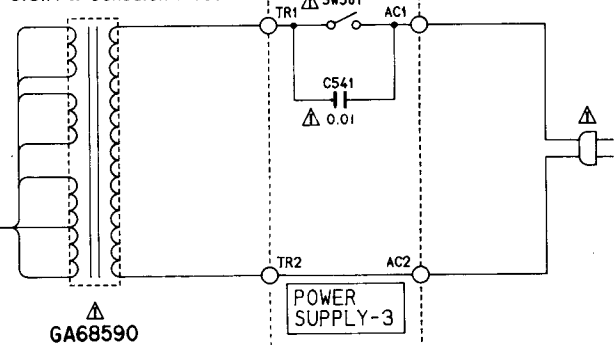
Australian & British models



POWER SUPPLY

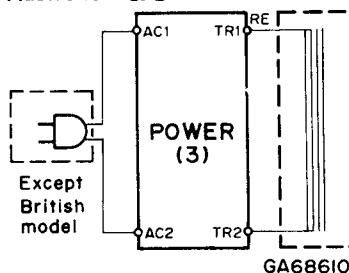


U.S.A & Canadian models

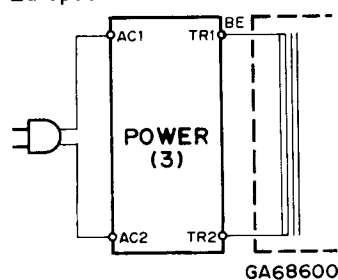


	R	U	C	A	G	B
*2 F502,503	T1.0A 250V	1.0A 250V	→	T800mA 250V		→
*3 F501	T2.0A 250V	2.0A 250V	→	T1.0A 250V		→
*4 R561	SHORT	I	I	SHORT		→

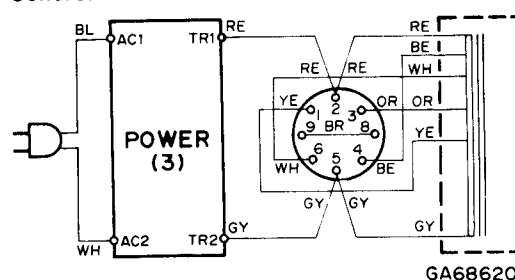
Australian & British models



European model



General model



VOLTAGE SELECTOR

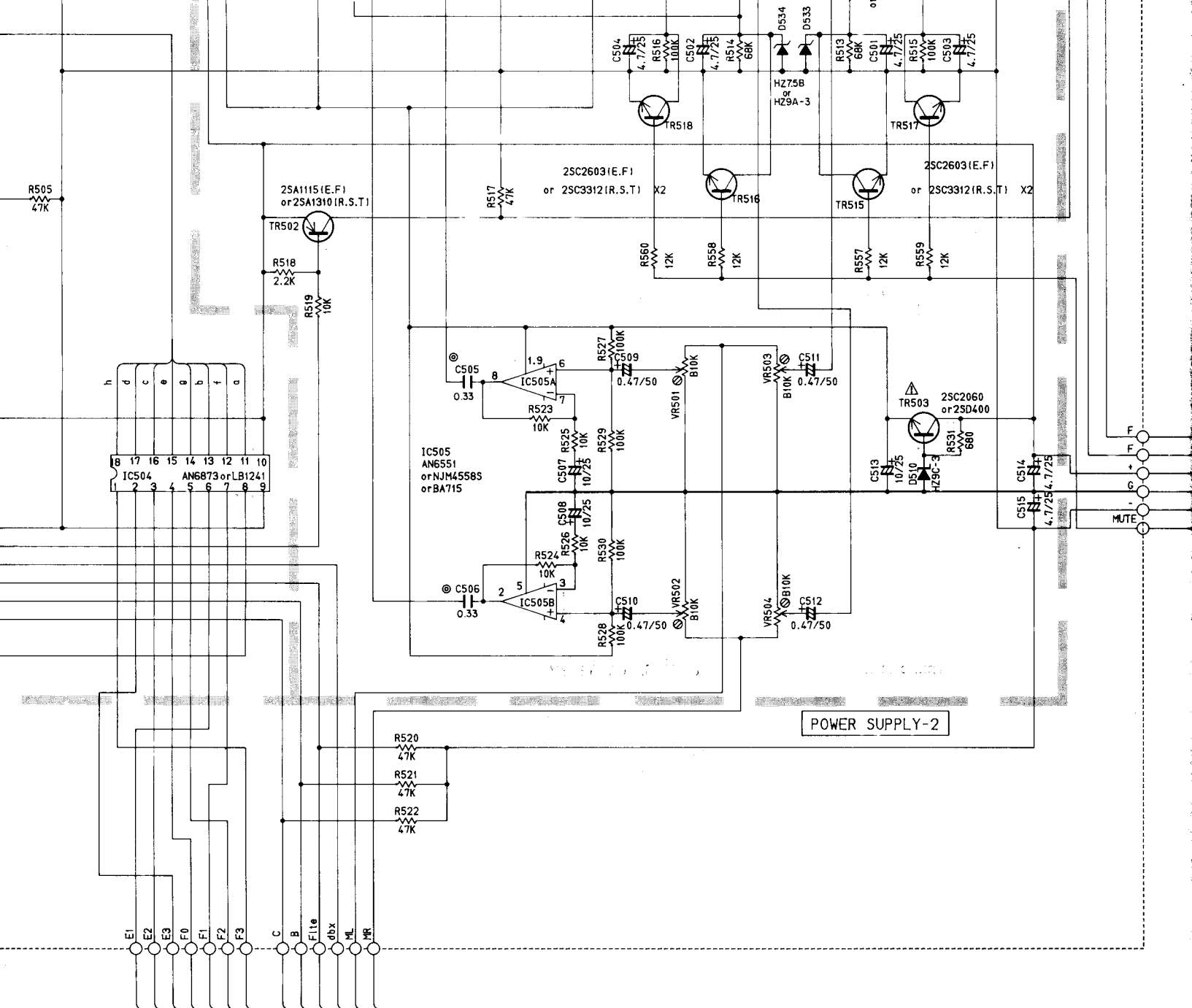
Voltage	Terminal No.	
110V	5-4	2-1
120V	6-5	3-2
220V	7-1	8-4
240V	7-6	8-3

Special characteristics are marked Δ and must be
specifications equal to those originally installed.

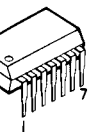
*The voltages are measured by LH tape at PLAY mode (no-signal condition)

*All voltages are measured with a 10M Ω /V DC electric volt meter.

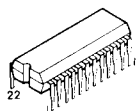
*Schematic diagram is subject to change without notice.



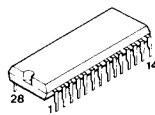
066BC
66B
66BP



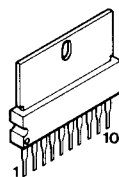
AN6291



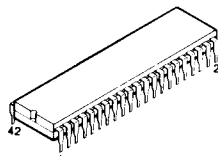
TEA0665



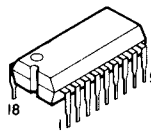
BA6209



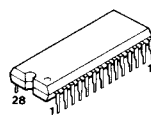
LM6402G-494



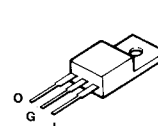
LB1241
AN6873



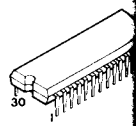
LC7800



AN78M05
NJM78M05A



HA12067NT



6

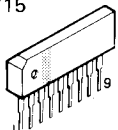
7

8

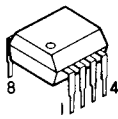
9

0

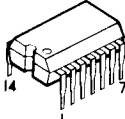
NJM4558S
NJM4556S
AN6551
BA715



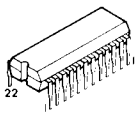
NJM2043D



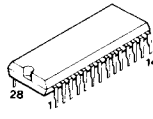
μPD4066BC
LC4066B
M4066BP



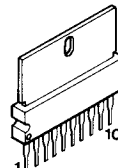
AN6291



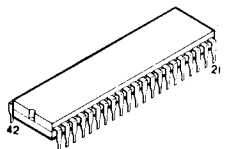
TEA0665



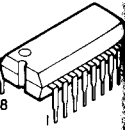
BA6209



LM6402G-494



LB1241
AN6873



PARTS LIST

■ WARNING

UL Standard 1270 requires that components marked \triangle be replacement with parts having specifications equal to those originally installed.

- Carbon resistors of this cassette deck are $\frac{1}{4}W$. There is no discription about them in this parts list. Use the "Part No." HJ35○○○○ or equivalent.

K-1020

■ ELECTRICAL PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※	NA 08 61 80	Operation Circuit Board	オペレーションシート				
	iF 00 00 40	Diode	IS1555	ダイオード	D801~809		
	KA 90 63 80	Switch	5MEVQ-QRB-04M	ライトタッチスイッチ	SW801~809		
※	NA 08 62 00	Main Circuit Board	メインシート	Silver		J	
※	NA 08 62 10	"	"	Silver		U, C	
※	NA 08 62 20	"	"	Black		J	
※	NA 08 62 30	"	"	Black		U, C	
※	NA 08 62 40	"	"	Silver		R, A, G, B	
※	NA 08 62 50	"	"	Black		R, A, G, B	
	FG 41 21 00	Ceramic Cap	100pF 50V	セラコン	C127, 128, 177, 178, 207, 208		
	FG 41 22 20	"	220pF 50V	"	C212, 213, 220		
	FG 41 23 30	"	330pF 50V	"	C117, 118		
	FG 44 41 00	"	0.01 μ F 50V	"	C211, 216		
	FG 44 44 70	"	0.047 μ F 50V	"	C168, 219		
	UM 05 71 00	Electrolytic Cap	10 μ F 25V	ケミコン	C109, 110, 141, 142		
	UM 05 81 00	"	100 μ F 25V	"	C115, 116		
	FZ 00 35 70	Capacitor Array	0.01 μ F×6	コンデンサーアレー	C218	R, U, A, G, C, B	
	FZ 00 37 50	"	0.01 μ F×4	"	C214		
	UA 25 33 30	Mylar Cap	3300pF 50V	マイラーコン	C159, 160		
	FA 15 35 10	"	5100pF 50V	"	C149, 150		
	FA 15 36 20	"	6200pF 50V	"	C143, 144, 147, 148		
	UA 25 36 80	"	6800pF 50V	"	C165, 166		
	UA 25 38 20	"	8200pF 50V	"	C111, 112		
	UA 25 31 00	"	1000pF 50V	"	C131, 133		
	FA 15 31 20	"	1200pF 50V	"	C219, 220		
	UA 25 31 50	"	1500pF 50V	"	C107, 108		
	UA 25 32 20	"	2200pF 50V	"	C103, 104		
	UA 25 41 00	"	0.01 μ F 50V	"	C132, 134, 181, 182, 195		
	UA 25 41 20	"	0.012 μ F 50V	"	C155, 156		
	UA 25 44 70	"	0.047 μ F 50V	"	C179, 180		
	UA 25 51 00	"	0.1 μ F 50V	"	C171, 172		
	UW 93 82 20	Electrolytic Cap	220 μ F 16V	ケミコン	C192		
	UT 45 21 00	Polypropylene Film Cap	100pF 100V	ポリプロコン	C175, 176		
	UT 45 23 30	"	330pF 100V	"	C101, 102		
	UT 45 24 70	"	470pF 100V	"	C169, 170		
	FT 15 31 00	"	1000pF 100V	"	C173, 174		
	UT 45 41 00	"	0.01 μ F 100V	"	C105, 106		
	UW 91 74 70	Electrolytic Cap	47 μ F 6.3V	ケミコン	C125, 126		
	UW 91 82 20	"	220 μ F 6.3V	"	C119, 120		
	UW 93 71 00	"	10 μ F 16V	"	C113, 114, 121~124, 129, 130, 187, 188, 198~200, 215, 217		
	UW 93 72 20	"	22 μ F 16V	"	C145, 146, 205, 206		
	UW 93 74 70	"	47 μ F 16V	"	C193, 194, 201, 202		
	UW 93 81 00	"	100 μ F 16V	"	C191		
	UW 94 64 70	"	4.7 μ F 25V	"	C137~140, 161~164, 189, 190		
	UW 56 56 80	"	0.68 μ F 50V	"	C151~154		
	UW 96 61 00	"	1 μ F 50V	"	C135, 136, 157, 158, 183~186, 196, 197, 203, 204, 209, 210		
	GE 20 05 10	Dolby Filter	ドルビーフィルター	Fi103, 104	K-720		
	GE 90 04 80	Bias Trap Coil	バイアストラップコイル	Fi105, 106	併用		
	GE 90 07 80	"	105kHz	"	interchangeable		

New Parts (新規部品)

K-1020

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※	GE 90 08 70	Bias Trap Coil	105kHz	バイアストラップコイル	C101,102	併用	
	GE 90 18 10	"	105kHz	"	"	interchangeable	
※	GE 90 09 60	Coil	820 μ H	コ イ ル	L107, 108		
	GE 90 16 10	"	6.8mH	"	L103, 104		
	GE 90 16 30	"	10mH	"	L101, 102		
	GE 90 16 50	"	15mH	"	L105, 106		
	GE 90 18 00	"		ステップアップコイル	L108, 109		
※	GG 00 07 20	Ceramic Crystal Unit	CSB800A	セラミック発振子	XL101		
	HQ 40 02 70	Slide Potentiometer	A50k Ω ×2	スライド可変抵抗器	VR105		
	HS 11 06 20	Switch Potentiometer Unit		スイッチ・可変抵抗器ユニット	VR107		
	HS 41 27 40	Potentiometer	A5k Ω ×2	可 変 抵 抗 器	VR106		
	HT 37 03 00	Pre-Set Potentiometer	B100 Ω	半 固 定 抵 抗	VR101, 102		
	HT 37 03 70	"	B5k Ω	"	VR109~112		
	HT 37 03 80	"	B10k Ω	"	VR103, 104, 117, 118, 121, 122		
	HT 37 03 90	"	B20k Ω	"	VR115, 116, 119, 120		
	HV 45 51 50	Flame Proof Carbon Resistor	150 Ω	不燃化カーボン抵抗	R239, 240		
	HZ 00 28 80	Resistor Array	10k Ω ×8	抵 抗 ア レ ー	R344		
※	iA 11 15 10	Transistor	2SA1115 (E, F)	ト ラ ン ジ ス タ	TR106, 142		
	iA 09 34 00	"	2SA934	"	TR134	併用	
	iB 05 44 20	"	2SB544	"	"	interchangeable	
	iC 26 03 10	"	2SC2603 (E, F)	"	TR103~105, 107~116, 119~132, 135~141		
	iC 20 60 00	"	2SC2060	"	TR133	併用	
	iD 04 00 00	"	2SD400	"	"	interchangeable	
	iD 06 55 10	"	2SD655 (E, F)	"	TR117, 118	併用	
	iD 13 02 00	"	2SD1302 (R, S)	"	"	interchangeable	
	iE 10 45 00	Dual FET	2SK389 (GR, BL)	デュアル F E T	TR101, 102		
	iF 00 61 30	Diode	1SS133	ダ イ オ ー ド	D101~118, 121~125, 128, 129		
	iF 00 61 30	"	1SS133	"	D126, 127		R,U,A,G,C,B
	iF 00 33 20	Zener Diode	HZ9C-3	ツェナーダイオード	D119, 120	併用	
	iF 00 68 80	"	MA1091-H	"	"	interchangeable	
	iG 07 74 00	IC	NJM4556S	I C	IC105, 112		
	iG 12 18 00	"	NJM4560S	"	IC106		
※	iG 03 47 00	"	AN6551	"	IC101, 102, 104, 107~111	併用	
	iG 07 68 00	"	NJM4558S	"	"	interchangeable	
	iG 13 22 00	"	BA715	"	"		
	iG 12 15 00	"	NJM2043D	"	IC103		
	iG 06 16 00	"	μ PD4066BC	"	IC113	併用	
	iG 08 92 00	"	LC4066B	"	"	interchangeable	
	iG 11 05 00	"	M4066BP	"	"		
	iG 14 59 00	"	AN6873	"	IC114	併用	K-720
	iG 14 62 00	"	LB1241	"	"	interchangeable	
	iG 14 63 00	"	LC7800	"	IC115		K-720
※	iG 14 64 00	"	LM6402G-494	"	IC116		
※	iG 14 68 00	Bias Osc Block		バイアス発振ブロック	IC117		
※	KA 80 49 50	Push Switch		プッシュスイッチ	SW102		

※New Parts (新規部品)

※New Pa

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	LB 30 21 40	Phone Jack					
	LB 30 21 50	"	ヘッドホンジャック	JK101 Black			
	LB 60 50 30	DIN Jack	8P	" Silver			
			D I N ジャック	JK102		R,U,C,A,G,B	
	LB 40 12 90	Pin Jack	4P	ピンジャック	PJ101		
	LA 00 41 20	Test Point Pin					
	BB 07 04 20	Bus Bar	I=100	テストポイントピン			
			バスバ				
※	NA 08 62 60	Power Circuit Board		電 源 シ ー ト			
※	NA 08 62 70	"		"		J	
※	NA 08 62 80	"		"		U, C	
※	NA 08 64 50	"		"		A, G, B	
	FG 44 41 00	Ceramic Cap	0.01 μ F 50V	セラコン	C535	R	
	FG 44 44 70	"	0.047 μ F 50V	"	C517, 519, 540		
	Fi 40 41 00	"	0.01 μ F AC250V	"	C541	J	
	Fi 41 41 00	"	0.01 μ F	"	"	R,U,A,G,C,B	
	UA 55 53 30	Mylar Cap	0.33 μ F 50V	マイラーコン	C531, 532, 505, 506		
	Ui 93 98 20	Electrolytic Cap	8200 μ F 16V	ケミコン	C522, 523		
	UK 16 61 00	"	1 μ F 50V	B P コ ン	C516, 518		
	UW 94 64 70	"	4.7 μ F 25V	ケミコン	C501~504,514,515		
	UW 94 71 00	"	10 μ F 25V	"	C507,508,513,521,525~528,533,534		
	UW 94 72 20	"	22 μ F 25V	"	C529		
	UW 94 81 00	"	100 μ F 25V	"	C537, 530		
	UW 96 54 70	"	0.47 μ F 50V	"	C509~512		
	UW 83 91 00	"	1000 μ F 16V	"	C524		
	UW 94 82 20	"	220 μ F 25V	"	C536		
	UW 94 92 20	"	2200 μ F 25V	"	C538, 539		
	UW 94 74 70	"	47 μ F 25V	"	C520		
	HL 33 42 70	Metal Oxide Film Resistor	27 Ω 3P	酸金抵抗	R532		
	HT 37 03 80	Pre-Set Potentiometer	B10k Ω	半固定抵抗	VR501~504		
	iA 09 34 00	Transistor	2SA934	トランジスタ	TR510 併用		
	iB 05 44 20	"	2SB544	"	" Interchangeable		
	iA 11 15 10	"	2SA1115 (E, F)	"	TR501,502,507,508,513		
	iB 07 50 00	"	2SB750	"	TR514		
	iC 19 83 00	"	2SC1983	"	TR511		
	iC 26 03 10	"	2SC2603 (E, F)	"	TR504~506,512,515~518		
	iC 20 60 00	"	2SC2060	"	TR503,509 併用		
	iD 04 00 00	"	2SD400	"	" Interchangeable		
	iF 00 17 00	Zener Diode	RD15EB3	ツェナーダイオード	D525, 526		
	iF 00 25 60	"	HZ9A-3	"	D516, 534, 533		
	iF 00 15 10	"	HZ6C-1L	"	D515, 527		
	iF 00 00 40	Diode	IS1555	ダイオード	D501~509,511,512,518		
	iF 00 33 20	Zener Diode	HZ9C-3	ツェナーダイオード	D510, 513		
	iF 00 38 20	"	HZ4A2	"	D524		
	iF 00 38 90	"	HZ4C2	"	D514		
	iH 00 14 30	Diode	1SR35-100A	ダイオード	D517,519~523,528~531		
	iF 00 15 40	Zener Diode	HZ9A	ツェナーダイオード	D533, 534 併用		
	iF 00 64 70	"	MTZ7.5B	"	" Interchangeable		

*New Parts (新規部品)

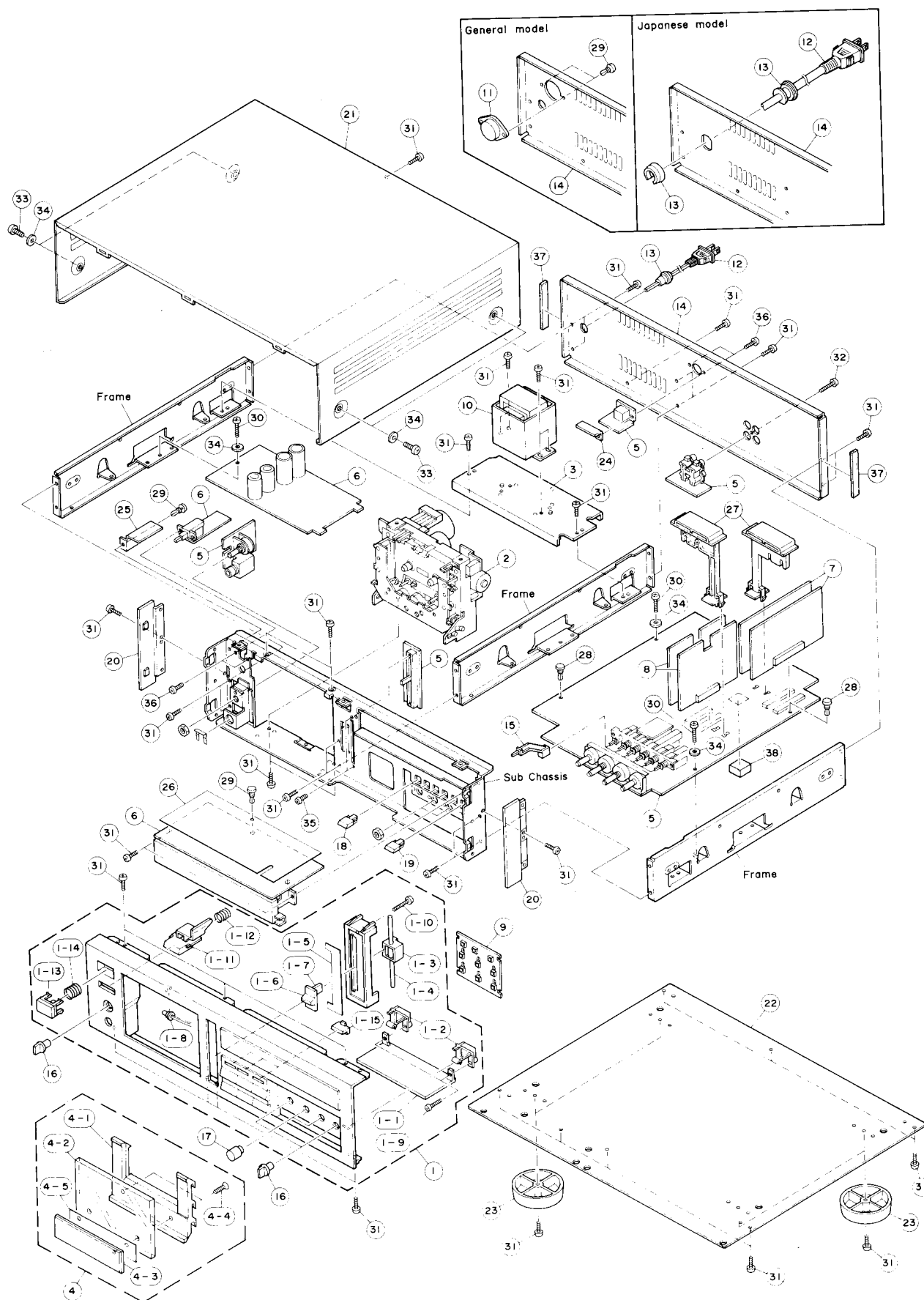
Ref. No.	Part No.	Description	部 品 名		Remarks	Common Model	Markets	ランク
	iG 07 53 00	IC	AN78M05	I C	IC508 併用			△
	iG 07 56 00	"	MJM78M05A	"	" Interchangeable			△
	iG 03 47 00	"	AN6551	"	IC505 併用			
	iG 07 68 00	"	NJM4558S	"	" Interchangeable			
	iG 13 22 00	"	BA715	"	"			△
	iG 10 11 00	"	BA6209	"	IC506, 507			
	iG 14 60 00	"	HA12067NT	"	IC501, 502	K-720		
	iG 14 59 00	"	AN6873	"	IC503,504 併用	"		
※	iG 14 62 00	"	LB1241	"	" Interchangeable			
※	iJ 00 00 80	Display Unit		蛍 光 表 示 管	V501			
	KA 80 32 90	Power Switch	SDLC1P002	パ ワ ー ス イ ッ チ	SW501 併用			△
	KA 80 36 10	"	ESB8213A-F	"	" Interchangeable			△
	KB 00 03 30	Fuse	T1.0A 250V	ヒ ュ ー ズ	F502, 503		J, R	△
	KB 00 07 20	"	T800mA 250V	"	"		A, G, B	△
	KB 00 10 60	"	1.0A 250V	"	"		U, C	△
	KB 00 03 50	"	T2.0A 250V	"	F501		J, R	△
	KB 00 07 30	"	T1.0A 250V	"	"		A, G, B	△
	KB 00 12 40	"	2.0A 250V	"	"		U, C	△
	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 30	"	P=7.5 4P i-Type	"				
※	LB 20 18 80	Fuse Holder Pin		ヒューズホルダーピン				
	AA 62 43 00	Holder, FL		F L ホ ル ダ ー				
	BB 06 62 90	Ground Washer		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				
※	Ei 03 00 66	Binding Head Tapping Screw	3×6 ZMC2-Y	バインドタッピングネジ	PACK			
※	CB 63 91 70	Filter, FL		F L フィ ル タ ー				
※	NA 08 62 90	Dolby Circuit Board		ド ル ビ ー シ ー ト				
	UA 25 34 70	Mylar Cap	4700pF 50V	マ イ ラ ー コ ン	C603, 604, 621, 622			
	UA 25 31 00	"	1000pF 50V	"	C601, 602			
	UA 25 41 00	"	0.01μF 50V	"	C623, 624			
	UA 25 44 70	"	0.047μF 50V	"	C607, 608, 617, 618			
	UW 93 71 00	Electrolytic Cap	10μF 16V	ケ ミ コ ン	C605,606,619,620,625			
	UW 56 52 20	"	0.22μF 50V	"	C609, 610, 615, 616			
	UW 56 56 80	"	0.68μF 50V	"	C611~614			
	GE 90 06 80	Coil	20kHz	スキューイングコイル	Fi601,602 併用			
	GE 90 07 90	"	19kHz	トラップコイル	" Interchangeable			
※	iG 14 47 00	IC	TEA0665	I C	IC601, 602			
	LB 02 01 80	Connector	18P	S H V Q コネクター		K-720		
	NA 08 63 00	dbx Circuit Board		d b x シ ー ト		K-720		
	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			

※New Parts (新規部品)

[illegible]

※New Parts (新規部品)

EXPLODED VIEW

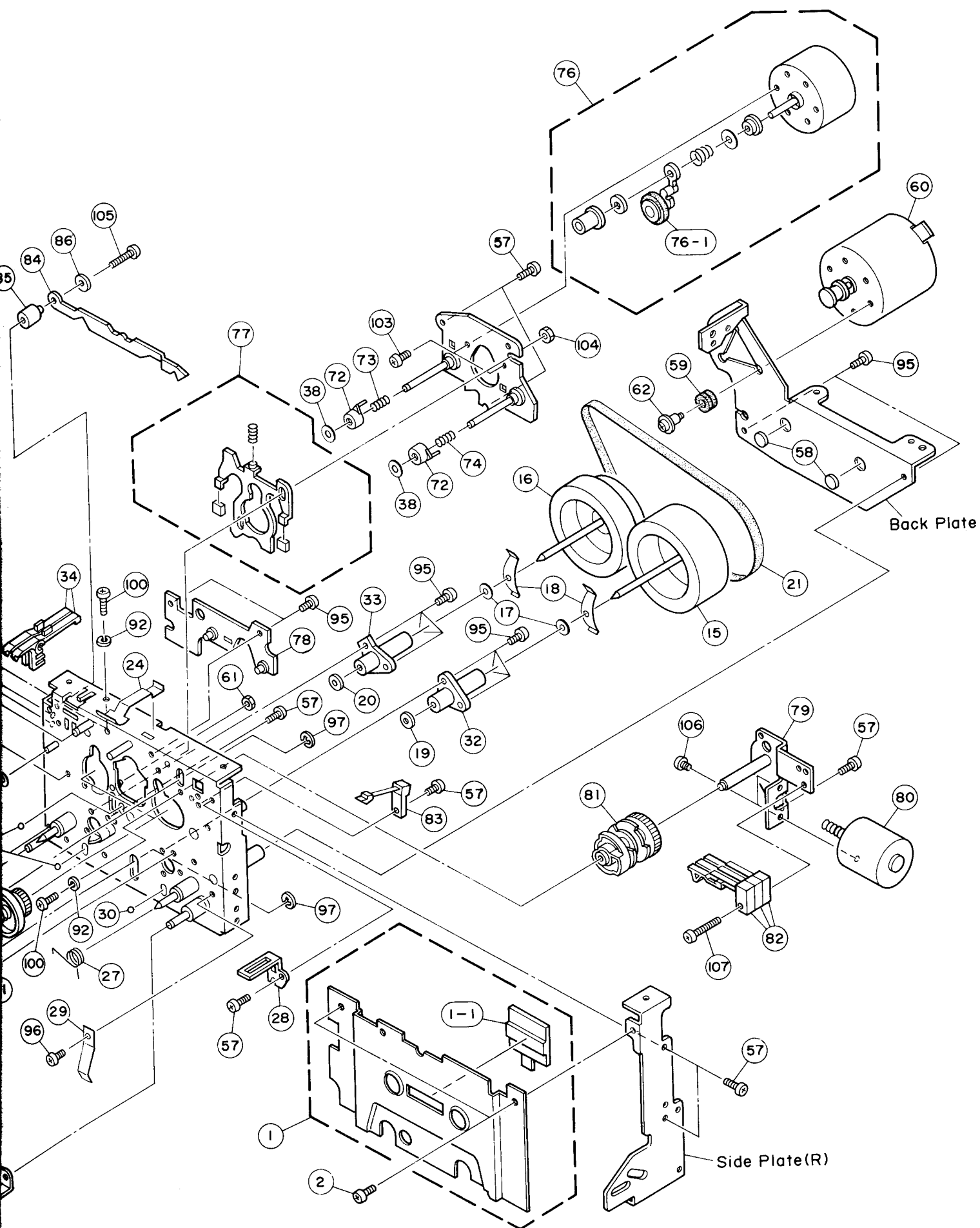


MECHANISM PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※ 1	NB 62 45 20	Panel Unit	パ ネ ル ユ ニ ッ ト	Silver		J	
※ "	NB 62 45 30	"	"	Black		J	
※ "	NB 62 47 30	"	"	Silver		R,U,A,G,C,B	
※ "	NB 62 47 40	"	"	Black		R,U,A,G,C,B	
※ 1-1	BA 09 13 50	Pocket Panel	ポ ケ ッ ト パ ネ ル	Silver			
※ "	BA 09 13 60	"	"	Black			
※ 1-2	CB 63 64 20	Arm	ア ー ム				
※ 1-3	CB 63 64 30	Slider	ス ラ イ ダ ー				
※ 1-4	AA 61 93 20	Shaft (L)	シ ャ フ ト (L)				
※ 1-5	BA 09 13 70	Plate, VR	V R プ レ ー ト	Silver	CD-X1		
※ "	BA 09 13 80	"	"	Black			
※ 1-6	BA 09 18 60	Slide Knob	ス ラ イ ド ツ マ ミ	Silver			
※ "	BA 09 18 70	"	"	Black			
※ 1-7	AA 62 41 50	Slide Lever	ス ラ イ ド レ バ ー	Silver			
※ "	AA 62 41 60	"	"	Black			
※ 1-8	JB 00 12 50	Lamp	150mA 8V バ イ ロ ッ ト ラ ン プ				
※ 1-9	Ei 12 60 86	Binding Head Tapping Screw	2.6X8 ZMC2-Y バ イ ン ド タ ッ ピ ン グ ネ ジ	Silver PACK			
※ "	Ei 32 60 86	"	2.6X8 FCRM3-BI	Black PACK			
※ 1-10	Ei 03 01 26	"	3X12 ZMC2-Y	PACK			
※ 1-11	CB 63 63 70	Button, EJ	ボ タ ン E J	Silver			
※ "	CB 63 63 80	"	"	Black			
※ 1-12	AA 62 43 20	Spring	ス プ リ ン グ				
※ 1-13	NB 61 41 30	Button (P) Ass'y	ボ タ ン (P) A s s 'y	Silver			
※ "	NB 61 41 40	"	"	Black	A-700		
※ 1-14	AA 61 78 80	Spring	ス プ リ ン グ				
※ 1-15	CB 63 64 10	Push Button	プ ッ シ ュ ボ タ ン	Silver			
※ "	CB 64 33 80	"	"	Black			
※ 2	NB 62 50 20	Mechanism Unit	メ カ ユ ニ ッ ト				
※ 3	BA 09 14 90	Holder, Transformer	ト ラ ン ス ホ ル ダ ー				
※ 4	NB 62 46 20	Lid Ass'y	リ ッ ド A s s 'y	Silver			
※ "	NB 62 46 30	"	"	Black			
※ 4-1	CB 63 74 10	Holder	ガ ラ ス ホ ル ダ ー				
※ 4-2	CG 06 12 30	Lid Glass	リ ッ ド ガ ラ ス				
※ 4-3	BA 09 16 30	Lid Panel	リ ッ ド パ ネ ル	Silver			
※ "	BA 09 16 40	"	"	Black			
※ 4-4	EB 33 01 06	Flat Head Screw	3X10 FCRM3-BI 皿 小 ネ ジ	PACK			
※ 4-5	CA 07 73 50	Lid Sheet	リ ッ ド シ ー ト				
※ 5	NA 08 62 00	Main Circuit Board	メ イ ン シ ー ト	Silver		J	
※ "	NA 08 62 10	"	"	"		U, C	
※ "	NA 08 62 20	"	"	Black		J	
※ "	NA 08 62 30	"	"	"		U, C	
※ "	NA 08 62 40	"	"	Silver		R, A, G, B	
※ "	NA 08 62 50	"	"	Black		R, A, G, B	
※ 6	NA 08 62 60	Power Circuit Board	電 源 シ ー ト			J	
※ "	NA 08 62 70	"	"			U, C	
※ "	NA 08 62 80	"	"			A, G, B	
※ "	NA 08 64 50	"	"			R	
※ 7	NA 08 62 90	Dolby Circuit Board	ド ル ビ ー シ ー ト				
※ 8	NA 08 63 00	dbx Circuit Board	d b x シ ー ト				
※ 9	NA 08 61 80	Operation Circuit Board	オ ペ レ ー シ ョ ン シ ー ト		K-720		
※ 10	GA 68 58 00	Power Transformer	電 源 ト ラ ン ス			J	
※ "	GA 68 59 00	"	"			U, C	
※ "	GA 68 60 00	"	"			G	

※New Parts (新規部品)

30



MECHANISM PARTS(MECHA UNIT)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※	NB 62 50 20	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A s s'y				
	1-1 iF 00 35 70	LED (Yellow)	L E D (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 06 20	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 06 70	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	φ2.6×φ4.7×t0.5 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A s s'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 キャブスタンスタンド				
※	33 XX 64 08 90	"	φ2.2 "				
※	34 XX 64 09 00	Lever, REC	R E C 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	φ1.8×φ3.8×t0.5 ポリスライダーワッシャー		K-720		
	38 XX 64 03 60	"	φ2.1×φ4.5×t0.1 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A s s'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	φ4.4×φ10×t0.5 平 座 金				
※	51 XX 64 10 50	Washer	4.4×10.4×1.0 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	ワ ッ シ ャ ー				
※ 55	XX 64 10 90	Plate	S W 取 付 板				
※ 56	XX 64 11 00	Screw	ビ ス				
※ 57	XX 62 36 50	Pan Head Screw	ナ ベ 小 ネ ジ				
※ 58	XX 64 11 10	Thrust Stand	M2.5x6 ZMC2-Y 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	六 角 ナ ッ ト	PACK			
※ 62	XX 64 11 30	Screw	M2.6 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	座 金				
※ 70	XX 64 12 10	"	φ2.2×φ5×t0.2 ポリスライダークワッシャー				
※ 71	XX 64 12 20	Reel Base Ass'y	φ1.8×φ3.2×t0.5 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 12 70	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				
※ 77	XX 64 12 90	Lever Ass'y, Brake	ブ レ ー キ 板 組				
※ 78	XX 64 13 00	Sensor Circuit Board	セ ン サ ー 基 板 組				
※ 79	XX 64 13 10	PAD Holder	P A D ホ ル ダ ー				
※ 80	XX 64 13 20	PAD Motor	P A D 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	M3x4 ZMC2-Y ナ ベ 小 ネ ジ	PACK			
90	ED 02 01 26	Binding Head Screw	M2x12 ZMC2-Y バ イ ン ド 小 ネ ジ	PACK			
91	EA 02 00 46	Pan Head Screw	M2x4 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	M2.5x5 ZMC2-Y ナ ベ 小 ネ ジ				
96	XX 62 36 70	Truss Head Tapping Screw	2x3.2 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	M2x3 止 メ ネ ジ				
99	EA 02 51 00	Pan Head Screw	M2.5x10 ZMC2-Y ナ ベ 小 ネ ジ				
100	EA 02 00 56	"	M2x5 ZMC2-Y "	PACK			
101	EX 60 01 20	CS-Ring	CS2.4mm C S リ ン グ				
102	EN 39 00 20	Flat Head Tapping Screw	2.6x8 ZMC2-Y サ ラ タ ッ ピ ン グ ネ ジ				
103	EA 02 60 36	Pan Head Screw	M2.6x3 ZMC2-Y ナ ベ 小 ネ ジ	PACK			

※New Parts (新規部品)

[illegible]

※New Parts (新規部品)

K-1020

YAMAHA

K-1020
