

GX-230D

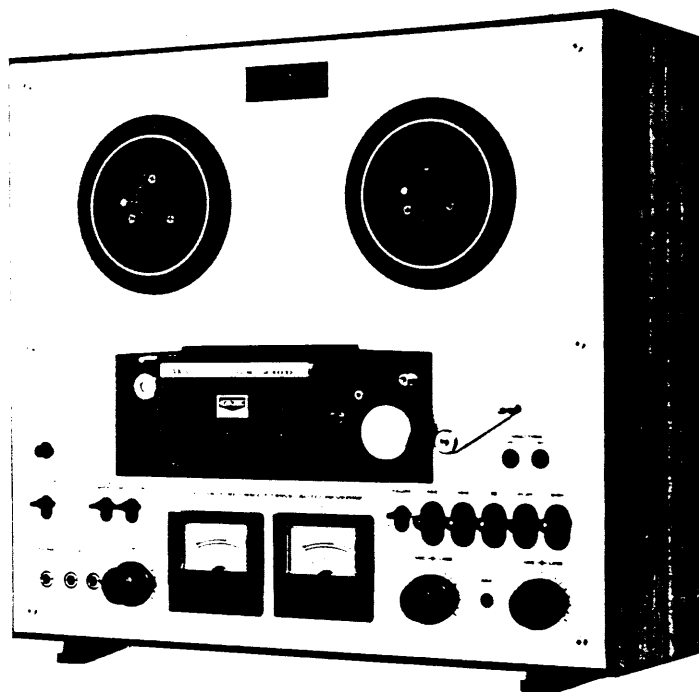
SERVICE MANUAL

PARTS LIST

AKAI STEREO TAPE DECK

MODEL **GX-230D**

ALSO APPLICABLE TO MODEL GX-230



STEREO TAPE DECK
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SECTION 1

SERVICE MANUAL

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For basic adjustments, measuring methods, and operating principles, refer to
GENERAL OPERATING PRINCIPLES AND ADJUSTMENTS.

I. SPECIFICATIONS

An asterisk next to a figure indicates the minimum guaranteed performance.

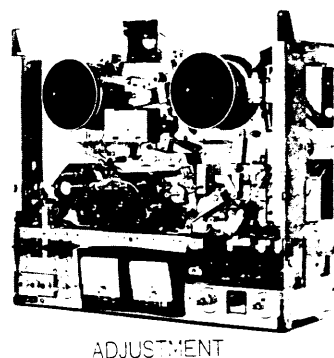
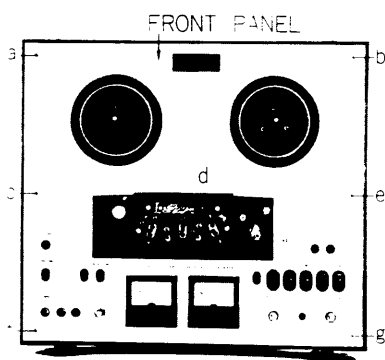
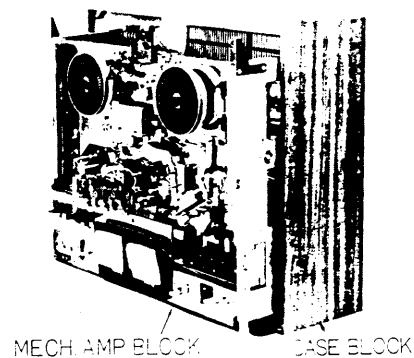
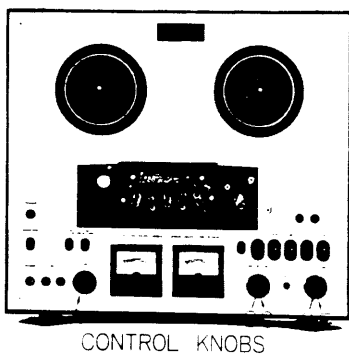
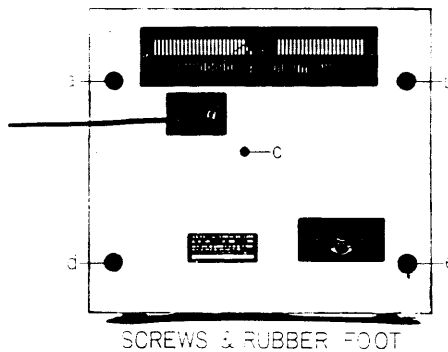
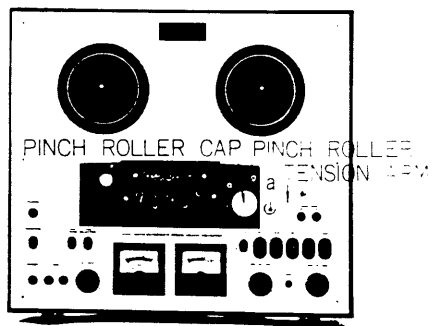
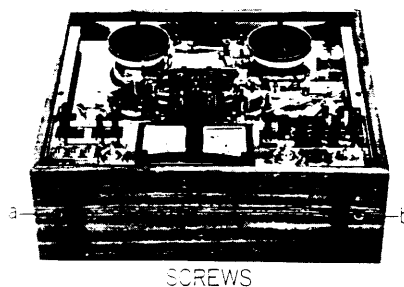
TRACK SYSTEM		4 track 2 channel stereo system
TAPE SPEED		7-1/2 and 3-3/4 ips. $\pm 0.7\%$ *7-1/2 ips. (19 cm/sec.) $\pm 1.0\%$ *3-3/4 ips. (9.5 cm/sec.) $\pm 1.5\%$
WOW & FLUTTER		Less than 0.07% RMS. at 7-1/2 ips. Less than 0.1% RMS. at 3-3/4 ips. *Less than 0.10% at 7-1/2 ips. FWD *Less than 0.12% at 7-1/2 ips. REV *Less than 0.15% at 3-3/4 ips. FWD *Less than 0.18% at 3-3/4 ips. REV
TOTAL WOW & FLUTTER		*Less than 0.12% at 7-1/2 ips. *Less than 0.18% at 3-3/4 ips.
FREQUENCY RESPONSE		30 to 23,000 Hz ± 3 dB at 7-1/2 ips. (with Akai LN Tape) 30 to 19,000 Hz ± 3 dB at 3-3/4 ips. (with Akai LN Tape) 30 to 22,000 Hz ± 3 dB at 7-1/2 ips. 30 to 18,000 Hz ± 3 dB at 3-3/4 ips.
DISTORTION		Less than 1.0%
TOTAL DISTORTION		Less than 1.5% at 7-1/2 ips. Less than 2.5% at 3-3/4 ips.
S/N RATIO		Better than 54 dB *Better than 50 dB
TOTAL S/N RATIO		*Better than 45 dB
OUTPUT	LINE	0.775V (0 ± 1 dB/0 ± 1.5 dB, FWD/REV) 700 Hz "0" VU Prerecorded tape, output volume maximum.
	DIN	0.5V
INPUT	MIC	More than 0.3 mV
	LINE	More than 70 mV
	DIN	More than 3 mV (at "0" VU output, recording volume maximum).
RECORDING/PLAYBACK LEVEL		0.775V (0 ± 1.5 dB)
CROSS TALK		Better than 40 dB (1,000 Hz +3 VU recording)
ERASE RATIO		Better than 70 dB (1,000 Hz +3 VU recording)
RECORDING BIAS FREQUENCY		100 ± 10 kHz
BIAS LEAK		Better than -30 dB
HIGH FREQUENCY DEVIATION		Within 3 dB (8,000 Hz, 3-3/4 ips. tape at 7-1/2 ips.)
RECORDING TIME		90 minutes, stereo recording, using a 1,800 ft. tape at 7-1/2 ips.
FAST FORWARD AND REWIND TIME		Approximately 120 seconds, using a 1,800 ft. tape at 50 Hz.
MOTOR	MAIN MOTOR	2 speed A.C. Servo Control Outer Rotor Motor Type: SCM2-24KJ, 4 pole Revolutions: 615 r.p.m. at 7-1/2 ips. (19 cm/sec.) 307.5 r.p.m. at 3-3/4 ips. (9.5 cm/sec.)
	REEL MOTOR	Two 6-pole eddy current Outer Rotor Motors Type: 24XO-MR Revolutions: 930 r.p.m. at 50 Hz 1,120 r.p.m. at 60 Hz
HEAD COMBINATION RECORDING/ERASE HEAD		Type: RE4-6 Gap: Rec: 4 μ Erase: Double Gap Impedance: Rec: 1,400 ohm $\pm 25\%$ at 100 kHz Erase: 130 ohm $\pm 7\%$ at 100 kHz D.C. Resistance: Rec: 5.5 ohm Erase: 1.8 ohm
	PLAYBACK HEAD	Type: P4-202 Gap: 1.7 μ $\pm 0.5\mu$ Impedance: 1,400 ohm at 1 kHz D.C. Resistance: 268 ohm

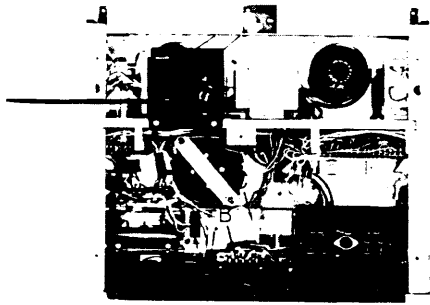
TRANSISTOR	2SA564(P)(Q) . . . 1 2SC458LG(C) . . . 16 2SC945(P)(Q) . . . 20 2SC1247A . . . 1	2SD361(D)(E) . . . 1 2SD361(D1)(D2) . . . 1 T1P48 . . . 1
DIODE	1N34A . . . 2 10D05 . . . 4 10D1 . . . 1 10D2 . . . 4 10D4 . . . 5	1S-1588 . . . 1 1S-2473VE . . . 1 RD-5A(M) . . . 1 5B2 . . . 1 (GX-230 only)
I.C.	STK-015 . . . 2 (GX-230 only)	
POWER SUPPLY AND POWER CONSUMPTION	100 to 240V A.C. 50/60 Hz, 90W Universal Models 240V A.C. 50 Hz, 90W BSI Models 220V A.C. 50 Hz, 90W CEE Models 120V A.C. 60 Hz, 90W CSA Models 100V A.C. 50/60 Hz, 60/65W JPN Models Recorder Type; 120W	
DIMENSIONS	441(W) x 404(H) x 210(D)mm (17.4" x 15.9" x 8.3") Dimensions include all protruding parts.	
WEIGHT	GX-230D 15.2 kg (33.4 lbs.) GX-230 16.7 kg (36.7 lbs.)	

- NOTES: 1. Specifications determined with Scotch #211 tape unless otherwise noted.
2. Specifications Subject to change without notice.

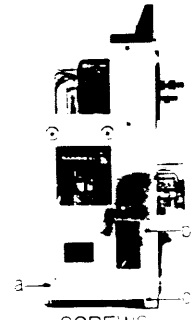
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating disassembly, please disassemble in the order shown in photographs. Reassemble in reverse order.

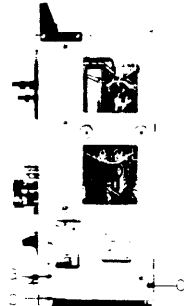




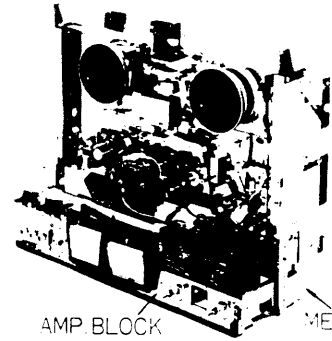
CONNECTION PLUGS



SCREWS



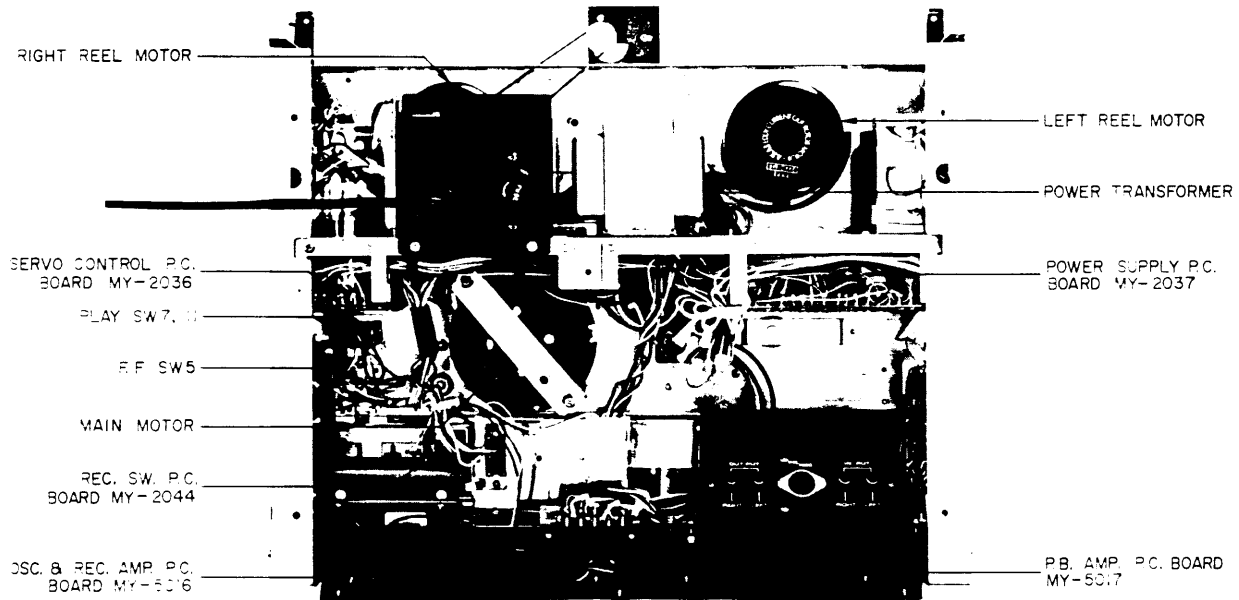
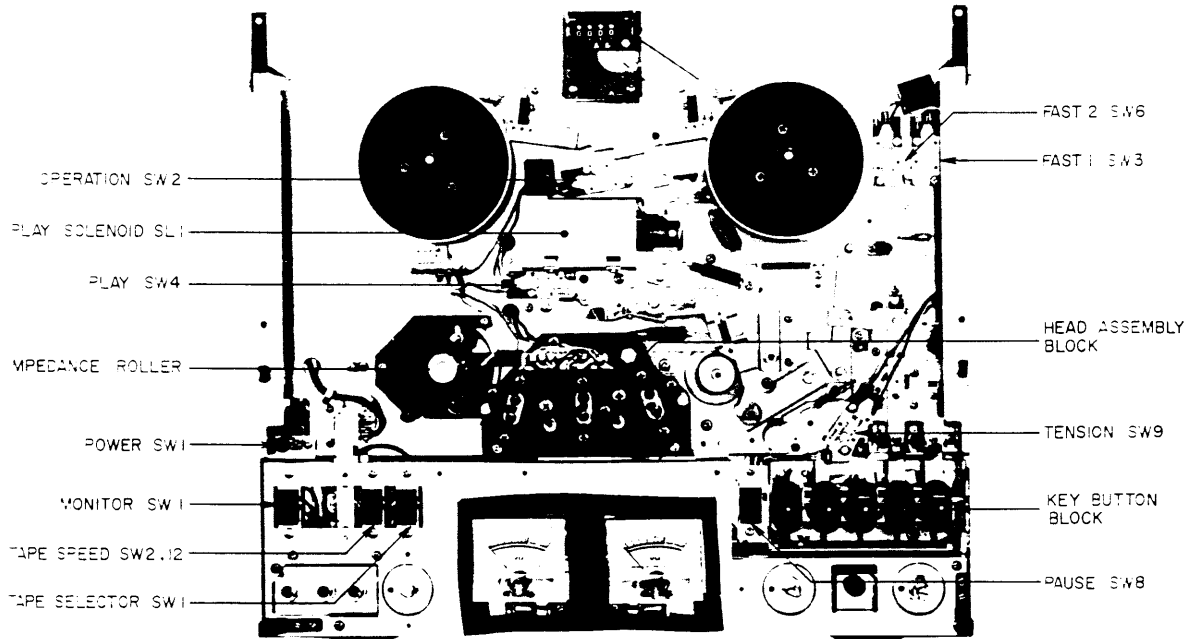
SCREWS



AMP. BLOCK

MECH. BLOCK

III. ARRANGEMENT OF MAIN PARTS



IV. MECHANISM ADJUSTMENT

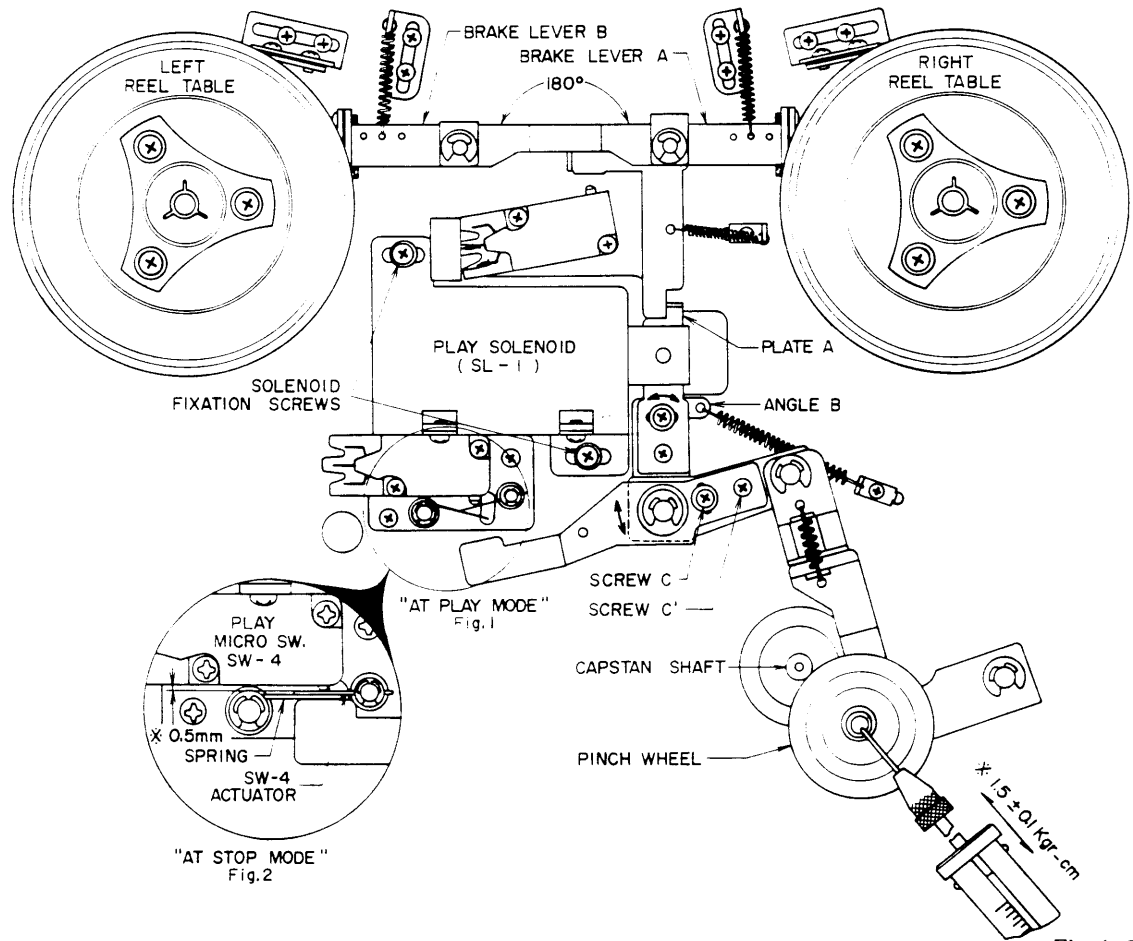


Fig. 1, 2

1. ADJUSTMENT OF PINCH WHEEL PRESSURE (Refer to Figs. 1 and 2)

- 1) Unfasten Microswitch (SW-4) Activation Adjustment Screws C and C'.
- 2) At play mode, confirm that Brake Lever A and Brake Lever B are placed at a 180° angle in relation to each other. If necessary, adjust the angle by changing Play Solenoid (SL-1) position.
- 3) Adjust pinch wheel pressure to $1.5 \pm 0.1 \text{ kgr-cm}$ by re-positioning Plate A and Angle B.
- 4) Then, at stop mode, fasten screws C and C' so that the clearance between the body of Microswitch SW-4 (with time delay) and the actuator of the microswitch is approximately 0.5 mm as shown in Fig. 2.

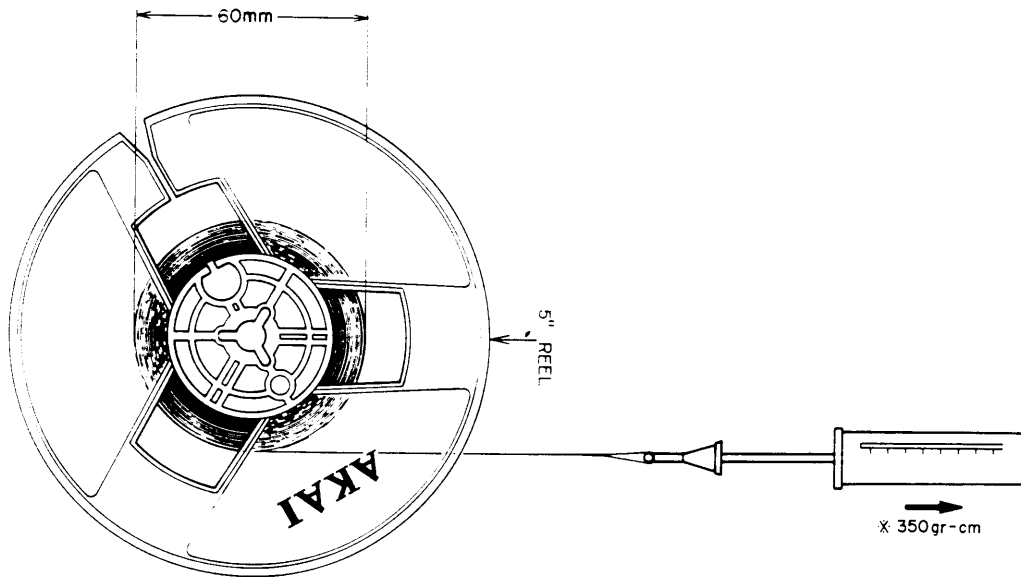


Fig. 3

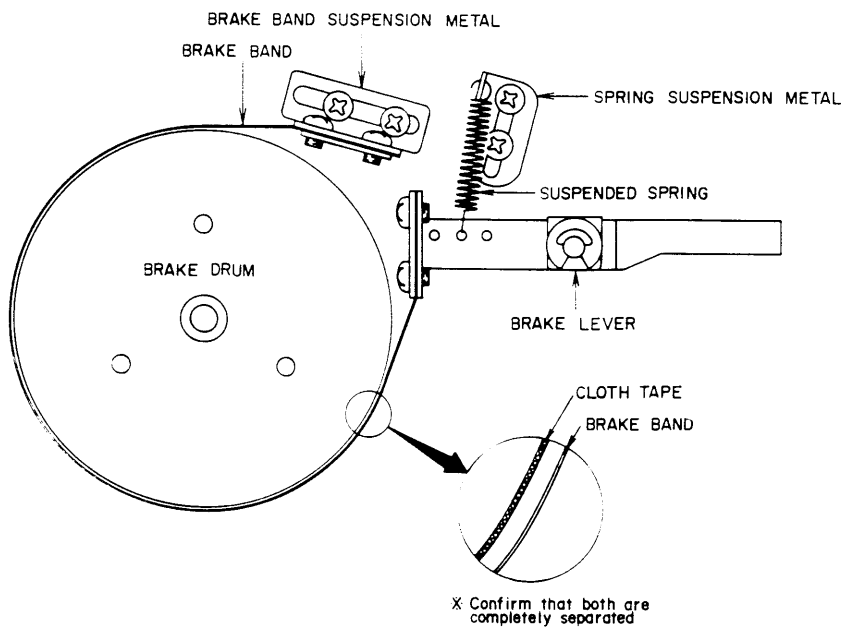


Fig. 4

2. BRAKE TENSION ADJUSTMENT (Refer to Figs. 3 and 4)

- 1) As shown in Fig. 3, use a 60 mm diameter tape wound on a 5" reel and set both left and right brake tension to approximately 350 gr-cm. Deviation of left and right tension must be within 50 gr-cm.
- 2) Brake tension can be adjusted by changing position of the Suspended Spring. If necessary, change

the position of the Spring Suspension Metal or replace the spring.

- 3) At all modes except stop mode, confirm that neither of the brake bands touch the cloth tape around the brake drums.

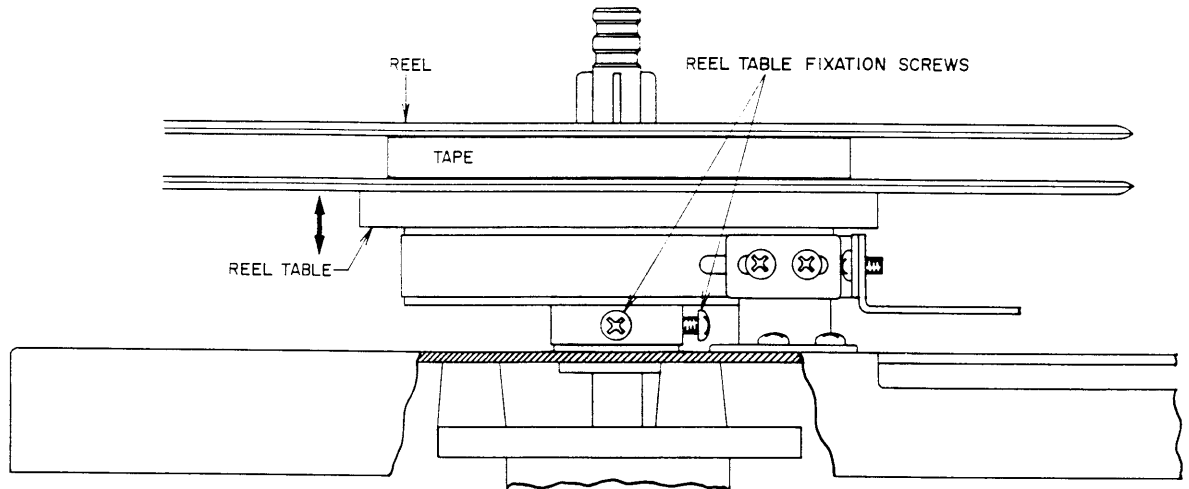
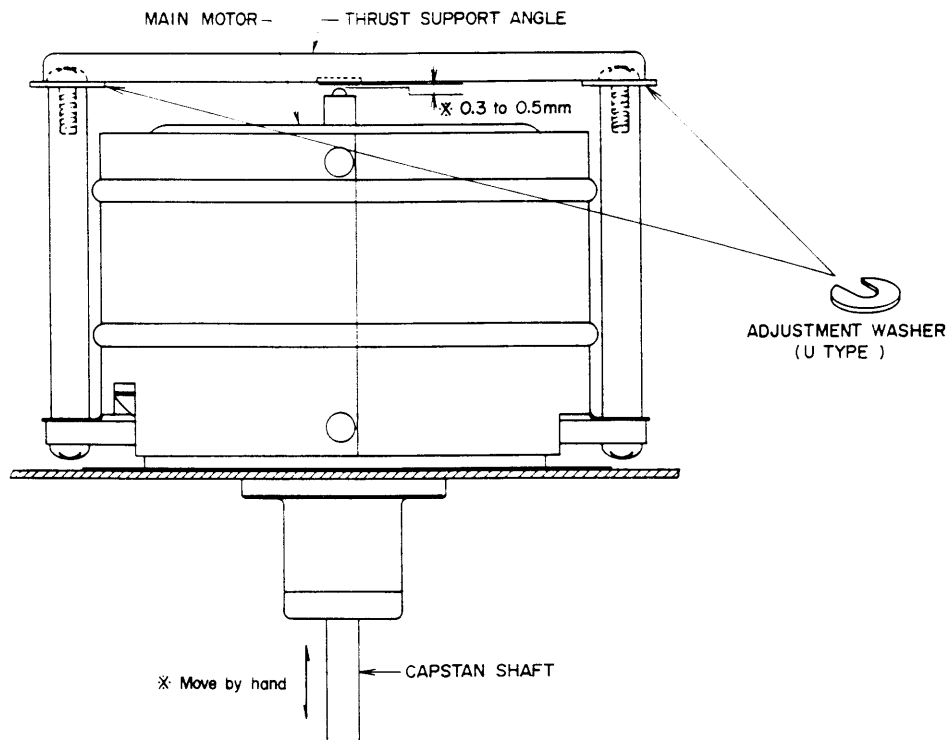


Fig. 5



3. ADJUSTMENT OF REEL TABLE HEIGHT (Refer to Fig. 5)

- 1) Properly load a tape and move the reel table as indicated by the arrow mark in Fig. 5.
- 2) Fasten Reel Table Fixation Screws to maintain optimum position at F. FWD and RWD modes.

NOTE: Tape should wind on center of reel regardless of type reel used.

4. ADJUSTMENT OF CAPSTAN MOTOR SHAFT LOOSE PLAY

As shown in Fig. 6, adjust the loose play by inserting an adjustment washer (U type) to obtain a 0.3 to 0.5 mm degree of loose play when the capstan shaft is moved by hand.

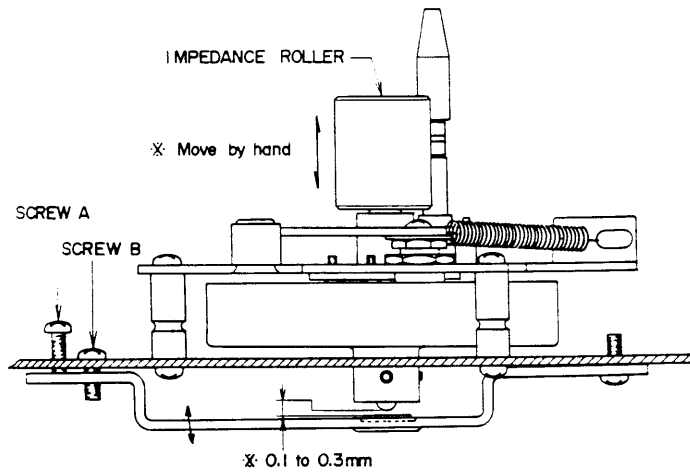


Fig. 7

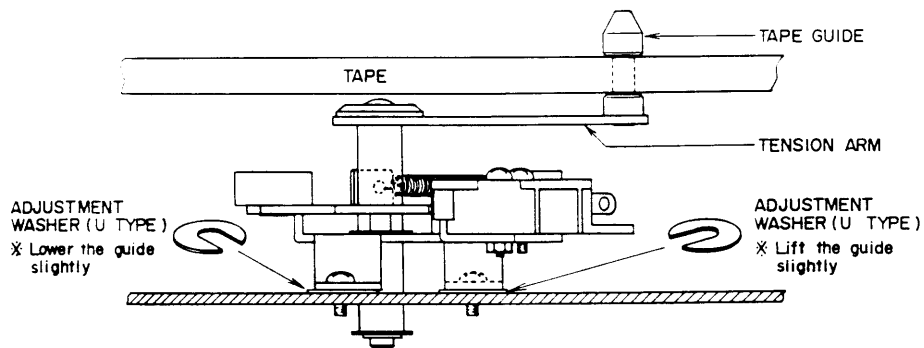


Fig. 8

5. ADJUSTMENT OF IMPEDANCE ROLLER SHAFT LOOSE PLAY (Refer to Fig. 7)

Adjust by turning adjustment screws A and B to obtain a 0.1 to 0.3 mm degree loose play when the shaft is moved by hand.

NOTE: Both A and B screws must be tightened after this procedure.

6. HEIGHT ADJUSTMENT OF TAPE GUIDE ON TENSION ARM

Adjust the height of Tape Guide on Tension Arm by inserting an adjustment washer (U type) as shown in Fig. 8 so that tape travels on the center of the tape guide.

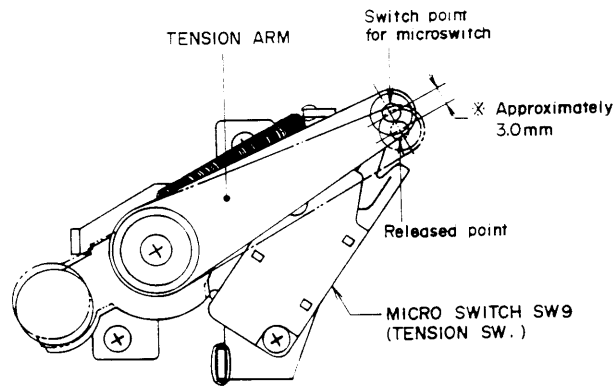


Fig. 9

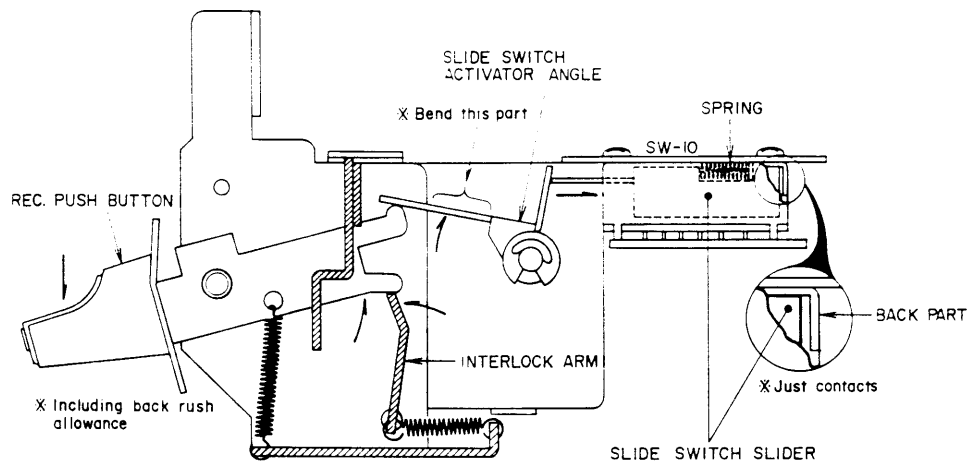


Fig. 10

7. ADJUSTMENT OF TENSION ARM MICRO-SWITCH SW-9 POSITION

Confirm that the microswitch operates at the position indicated in Fig. 9. If necessary, move the micro-switch to obtain optimum position.

8. ADJUSTMENT OF RECORDING SLIDE SWITCH (SW-10) TIMING

As shown in Fig. 10, adjust the switch timing by bending the slide Switch Activator Angle so that the slide switch slider just comes in contact with the back part of the slide switch. At this time, the REC Push Button is fully depressed.

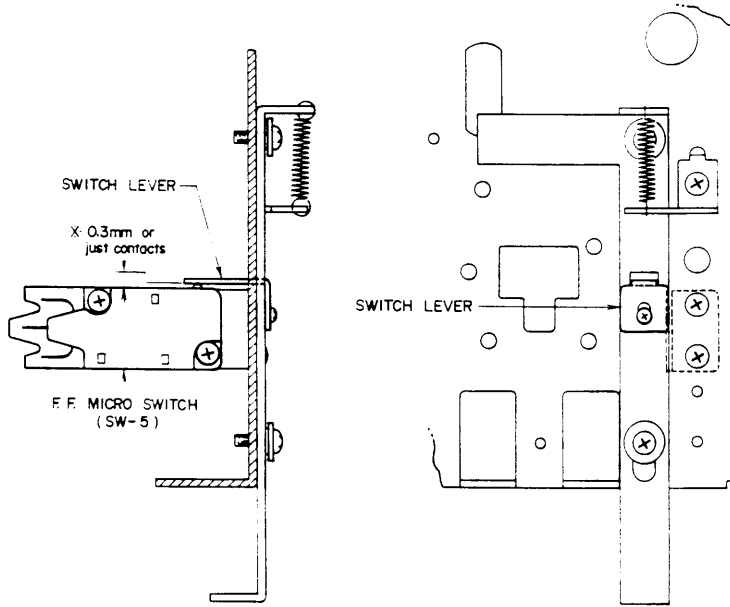


Fig. 11

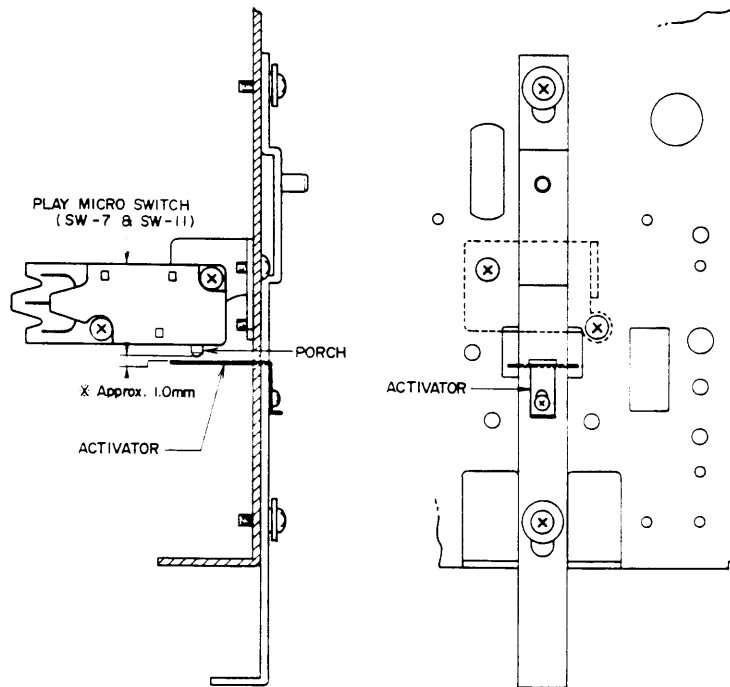


Fig. 12

9. ADJUSTMENT OF FF MICROSWITCH (SW-5) ACTUATOR POSITION

At stop mode, move the microswitch actuator on FF Slide Plate so that the clearance between the actuator and the body of the microswitch is approximately 0.3 mm or just comes in contact as shown in Fig. 11.

10. ADJUSTMENT OF PLAY MICROSWITCH (SW-7 and SW-11) ACTIVATOR POSITION

As shown in Fig. 12, at stop mode, move the microswitch activators on Play Slide Plate so that the clearance between the activator and the porches of the microswitches is approximately 1.0 mm.

V. HEAD ADJUSTMENT

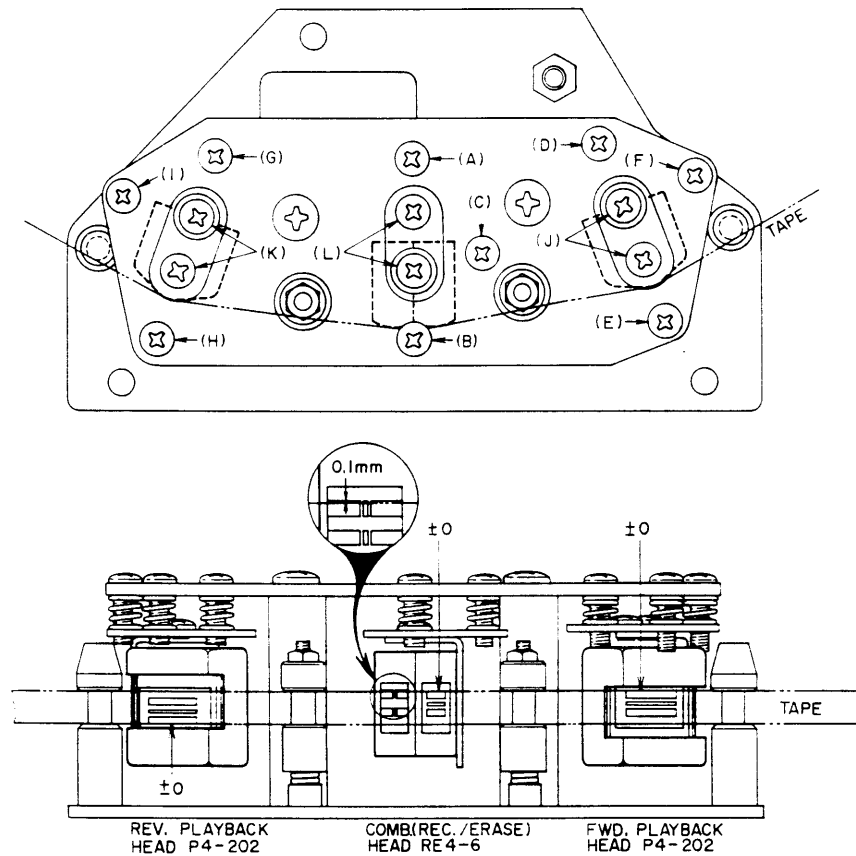


Fig. 13

NOTES:

- 1) As perfect head adjustments are vital in attaining top tape deck performance, please be sure that these adjustments are properly carried out.
- 2) Be careful not to use a magnetized screw driver or other magnetized tools in the vicinity of the heads.
- 3) Use only new tape as level variation is likely to occur when using old tape.
- 4) Demagnetize heads with a Head Demagnetizer before and after head adjustment.

Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Remarks
Combination Head Height Adjustment	optional	FWD	(A)(B)(C)	Upper edge of ch. 1 head core and the upper edge of the tape are the same height.
FWD Playback Head Height Adjustment	optional	FWD	(D)(E)(F)	Upper edge of ch. 1 head core and the upper edge of the tape are the same height.
REV Playback Head Height Adjustment	optional	REV	(G)(H)(I)	Lower edge of ch. 1 head core and the lower edge of the tape are the same height.
FWD Playback Head Azimuth Alignment Adjustment	8,000 Hz. 3-3/4 ips test tape	FWD	(F)	Maximum output, both channels.
FWD Playback Head Gap Alignment Adjustment	8,000 Hz. 3-3/4 ips test tape	FWD	(J)	Adjust head gap surface so that there is no change in output level when tension is applied to the supply reel side.
REV Playback Head Azimuth Alignment Adjustment	8,000 Hz. 3-3/4 ips test tape	REV	(I)	Maximum output, both channels.
REV Playback Head Gap Alignment Adjustment	8,000 Hz. 3-3/4 ips test tape	REV	(K)	Adjust head gap surface so that there is no change in output level when tension is applied to the supply reel side.
Combination Head Azimuth Alignment Adjustment	Scotch #211 tape 15,000 Hz -20 dBm	REC	(C)	Maximum output, both channels.
Combination Head Gap Alignment Adjustment	Scotch #211 tape 15,000 Hz -20 dBm	REC	(L)	Adjust head gap surface so that there is no change in output level when tension is applied to the supply reel side.

NOTE: Set tape speed to 7-1/2 ips. when making all alignment adjustments.

VI. AMPLIFIER SYSTEM ADJUSTMENT

1. POWER SUPPLY VOLTAGE ADJUSTMENT

2. TAPE SPEED ADJUSTMENT

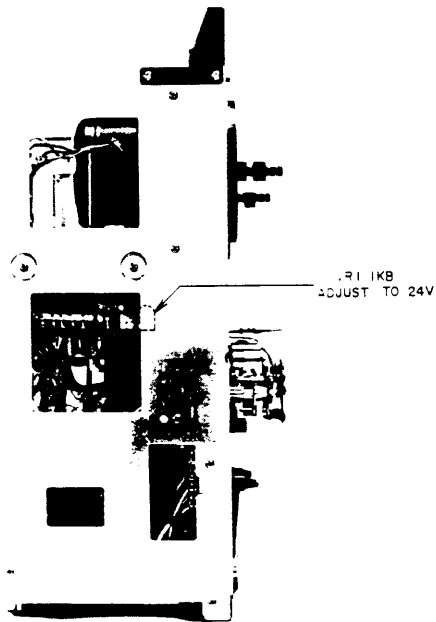


Fig. 14

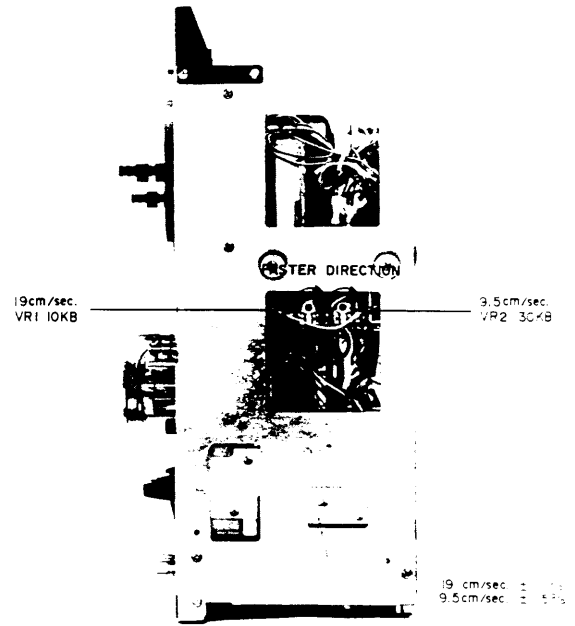
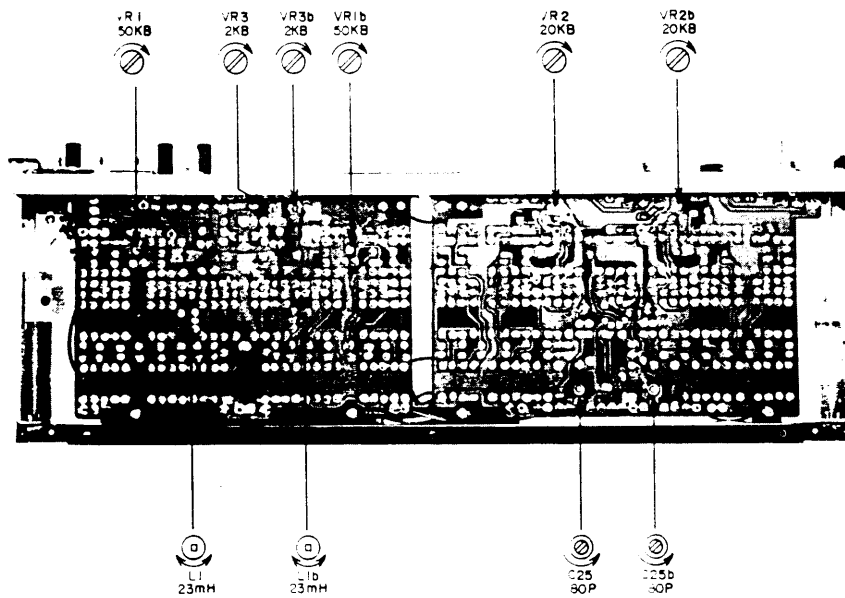


Fig. 15

Adjustment Item	Test Tape	Mode	Adjustment Point	Result	Remarks
Power Supply Voltage Adjustment		STOP	VR1 1 k Ω	24.0V	Terminal ⑮, Power Supply P.C. Board
7-1/2 ips. Tape Speed Adjustment	1,000 Hz. 7-1/2 ips test tape	FWD P.B. \searrow	VR1 10 k Ω	1,000 Hz \pm 1.0%	Tape Speed 7-1/2 ips.
3-3/4 ips. Tape Speed Adjustment	1,000 Hz. 7-1/2 ips. test tape	FWD P.B.	VR2 30 k Ω	500 Hz \pm 1.5%	Tape Speed 3-3/4 ips.

3. RECORDING, PLAYBACK AMPLIFIER ADJUSTMENT



Adjustment Item	Test Tape Supply Signal	Mode	Adjustment Point	Result	Remarks
Playback Level Adjustment	700 Hz, 7-1/2 ips. "O" VU test tape	FWD P.B.	VR1 50 kB	0 ±1.0 dB (0.775V)	within 0 ±1.5 dB at reverse playback
VU Meter Sensitivity Adjustment	700 Hz, 7-1/2 ips. "O" VU test tape	FWD P.B.	VR3 2 kB	"O" VU	
Recording Level Adjustment	Scotch #211 tape, 1,000 Hz "O" VU recording	REC	VR2 20 kB	0 ±1.5 dB (0.775V)	Monitor Switch at SOURCE
Frequency Response Adjustment	Scotch #211 tape, 1,000 Hz, 10,000 Hz -20 dBm recording	REC	C25 80P	1,000 Hz to 10,000 Hz flat	Re-adjust recording level following bias adjustment
Bias Leak Adjustment		REC	L1 23 mH	Less than -30 VU	With Monitor Switch at TAPE and SOURCE Positions.

NOTES:

1. Tape Speed at 7-1/2 ips. (19 cm/sec.)
2. Tape Selector at LOW NOISE.
3. Output volume maximum.
4. New test tape should be used.
5. The letter b following an adjustment parts number indicates "right channel".

VII. D.C. RESISTANCE OF VARIOUS COILS

Part	Designation	D.C. Resistance
Main Motor	SCM2-24KJ	Between BLU-RED 100 ohm Between YLW-GRN 180 ohm Pick-up Coil 635 ohm
Reel Motor	24XO-MR	Between BLU-RED 74 ohm Between YLW-GRN 166 ohm
Play Solenoid	1660 THT3	685 ohm
Shut-Off Solenoid	0730 THT1	15 ohm $\pm 10\%$
Relay	MY4-0-US-AD4 DC24V	650 ohm
Relay	MTS-2	980 ohm
Head phone Output Transformer	N16-535S	Primary 565 ohm $\pm 15\%$ Secondary 0.95 ohm $\pm 15\%$
Oscillator Coil	OT-204	Between 1 - 3 0.3 ohm Between 4 - 6 0.7 ohm Between 7 - 9 268 ohm <i>0.7 ohm</i>
Playback Head	P4-202	268 ohm
Combination Rec./Erase Head	RE4-6	Rec. 5.5 ohm Erase 1.8 ohm

NOTE: Resistance values shown in this chart are average values.

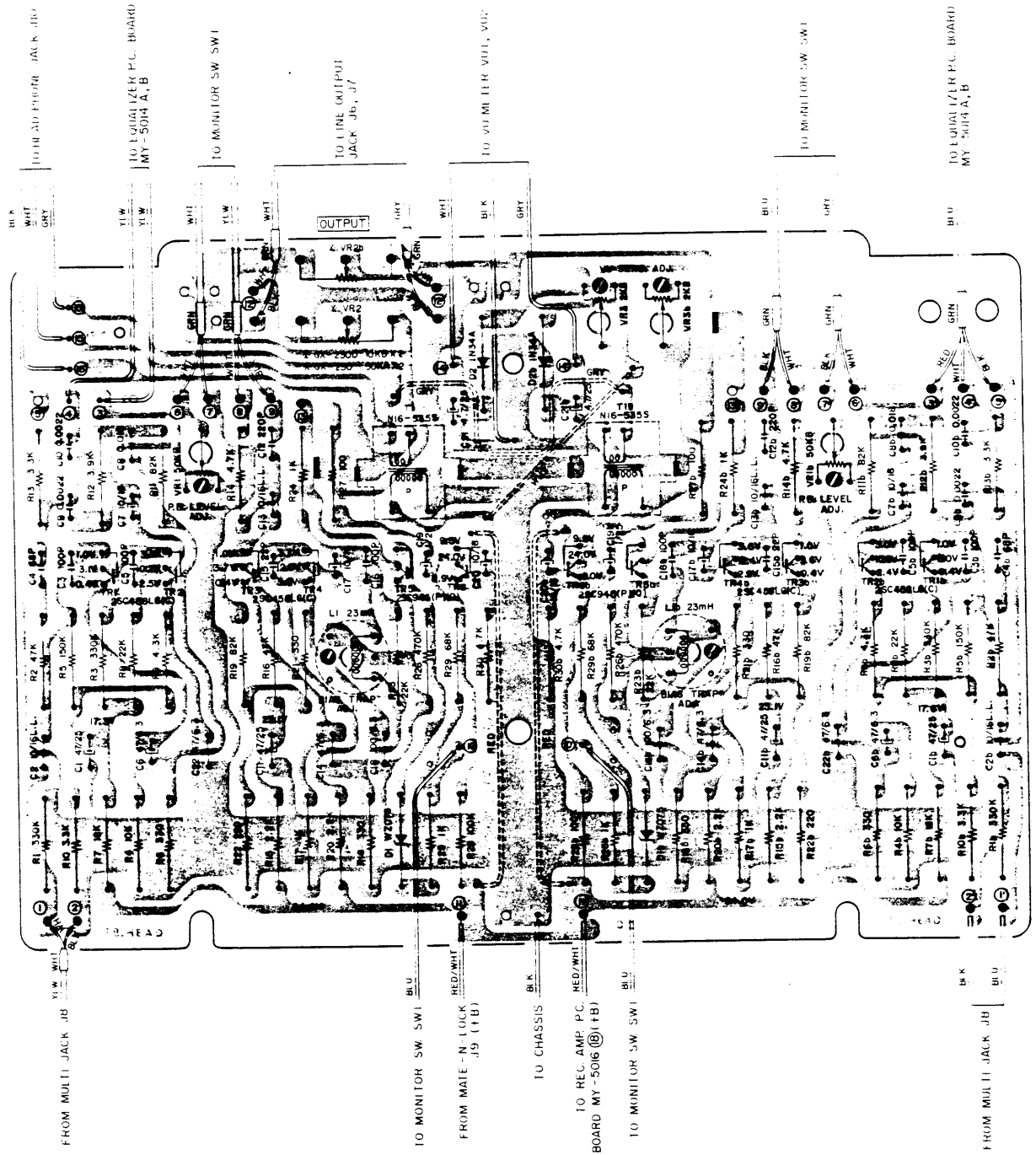
VIII. CLASSIFICATION OF VARIOUS P.C. BOARDS

1. P.C. BOARD INTERCHANGEABILITY CHART

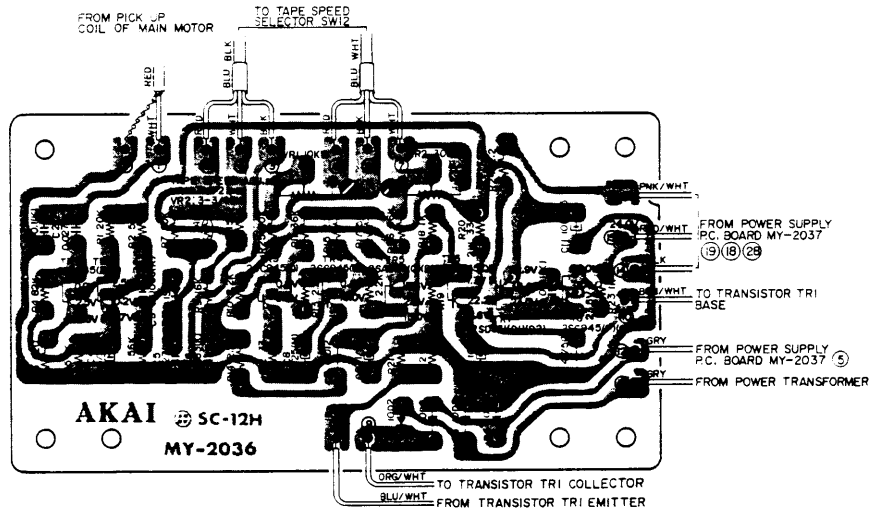
P.C. Board	GX-230D	GX-230
Relay P.C. Board	MY-0008	MY-0008
Servo Control P.C. Board	MY-2036	MY-2036
Power Supply P.C. Board	MY-2037	MY-2037
REC. SW. P.C. Board	MY-2044	MY-2044
Transistor P.C. Board	MY-2054	MY-2054
Equalizer P.C. Board	MY-5014A,B	MY-5014A,B
Lamp P.C. Board	MY-5015	MY-5015
OSC. and Recording Amp. P.C. Board	MY-5016	MY-5016
Playback Amp. P.C. Board	MY-5017*	MY-5017*
Main Amp. P.C. Board		MS-5024

NOTE: Asterisk mark indicates "not interchangeable".

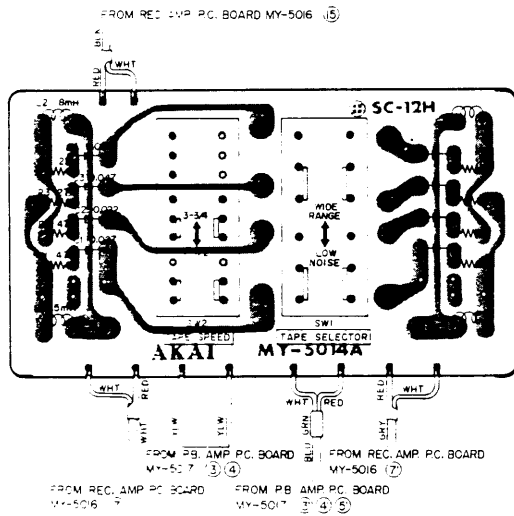
2. Playback Amp. P.C. Board (MY-5017),



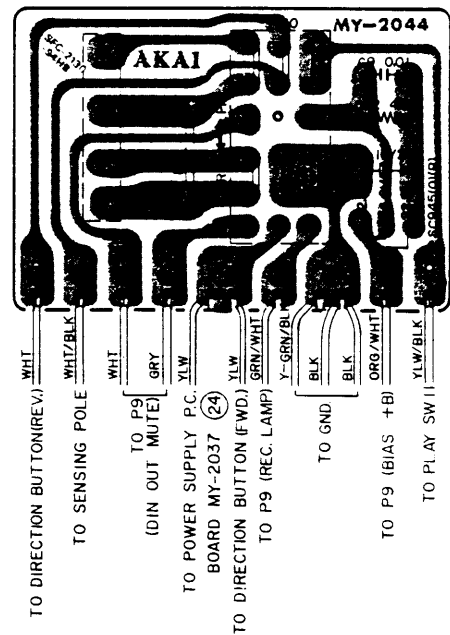
5. Servo Control P.C. Board (MY-2036)



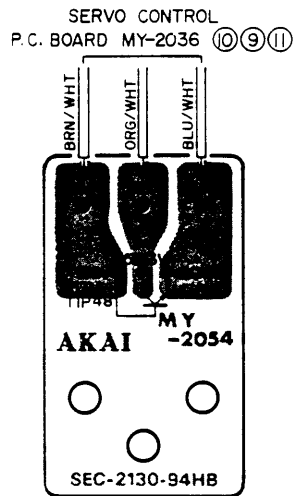
6. Equalizer P.C. Board (MY-5014 A, B)



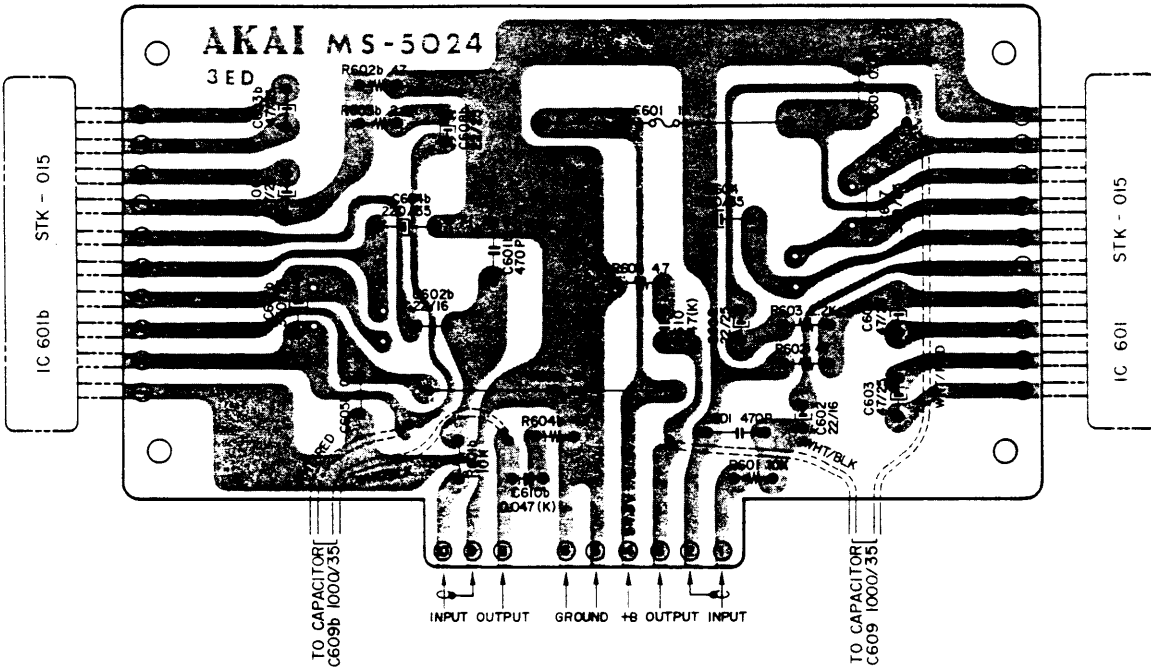
7. REC. SW. P.C. Board (MY-2044)



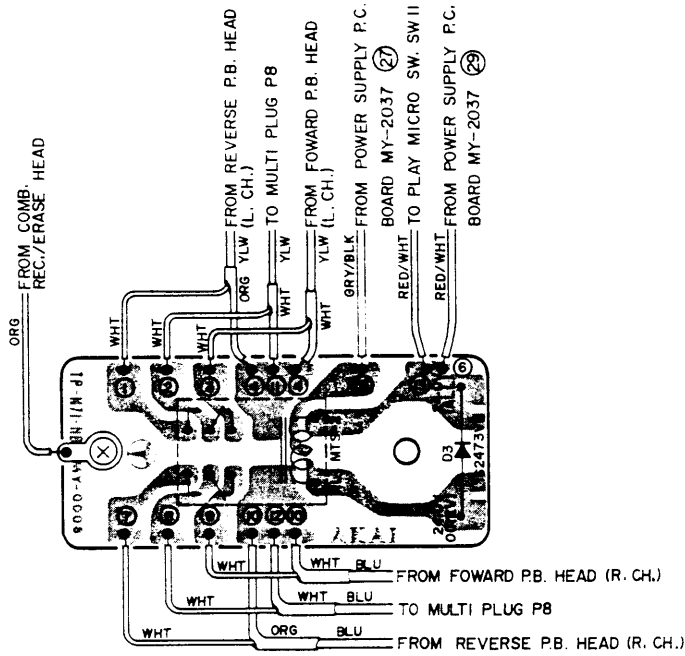
8. Transistor P.C. Board (MY-2054)



9. Main Amp. P.C. Board (MS-5024)



10. Relay P.C. Board (MY-0008)



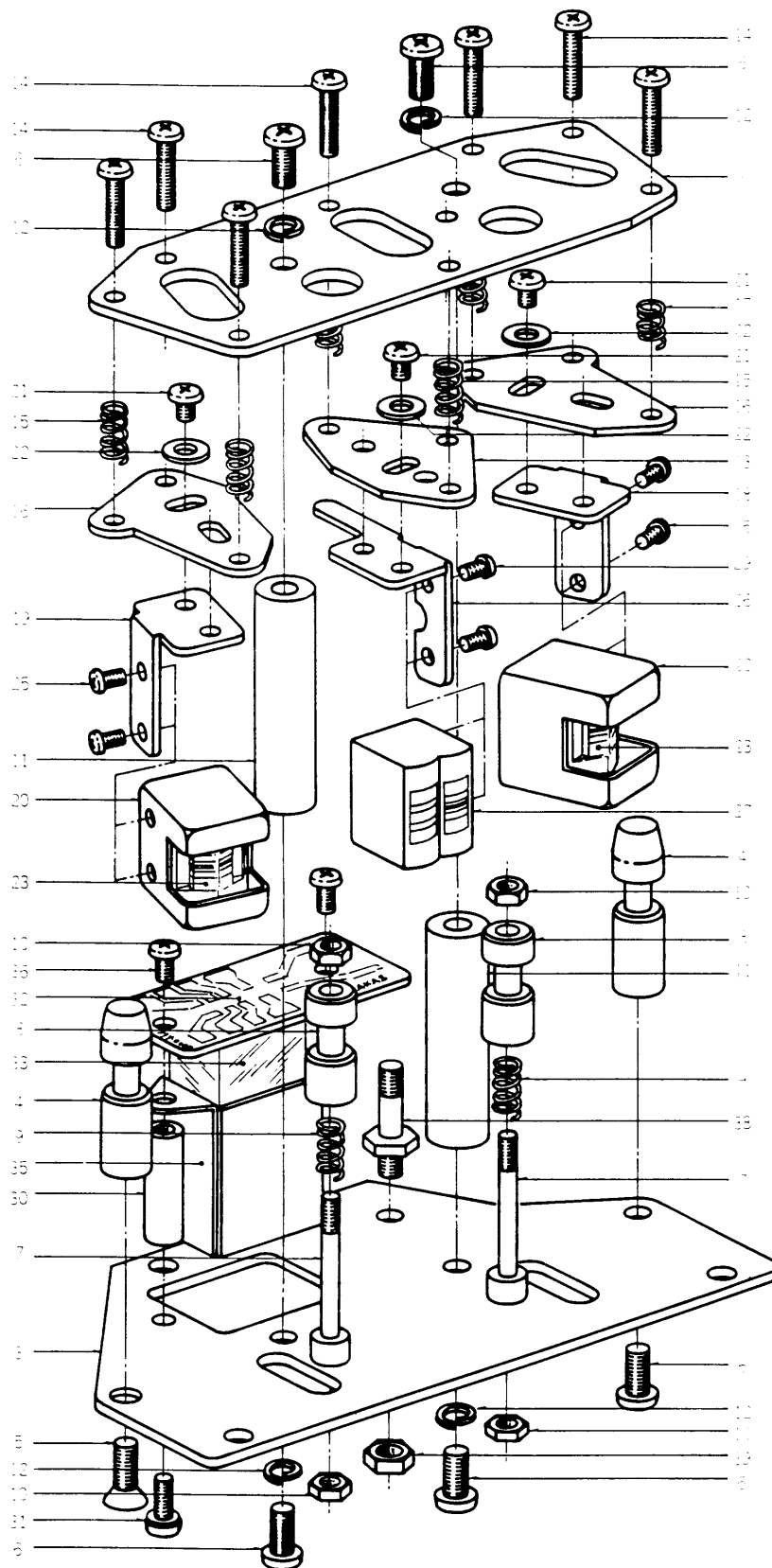
SECTION 2

PARTS LIST

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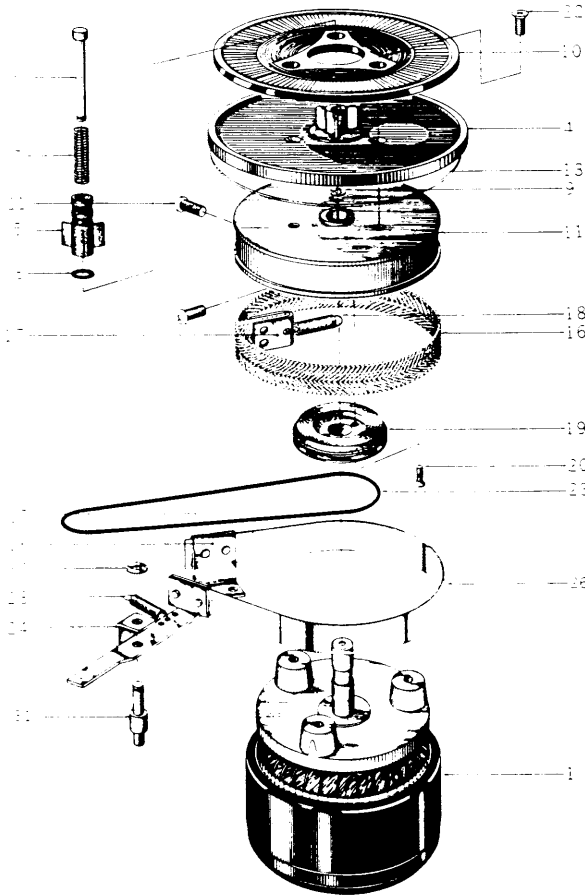
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FIG. 1 HEAD BLOCK



When ordering parts, please describe Parts Number, Serial Number, and Model Number in detail.

FIG. 2 REEL MOTOR/REEL TABLE BLOCK



Ref. No.	Parts No.	Description	Schematic No.	Q'ty
1-28x	HZ583176	RE4-6 Terminal Plate	TW-0035	1
1-29	ZS477876	Screw, pan head 2x3		2
1-30	MH625094	Relay Prop	MY-0005	2
1-31	ZS369900	Screw, pan head 3x8.		2
		w/washer		
1-32	EA625138	Relay P.C. Board	MY-0008	1
1-33	EP621808	Relay MTS-2	47-2-26	1
1-34x	ED624903	Silicon Diode IS2473	45-3-28	1
1-35	EZ625127	Relay Shield	MY-0007	1
1-36	ZS422076	Screw, pan head 3x5		2
1-37x	EA382713	Head Connector P.C. Board	RD-A8	1
1-38	MH625083	Double Side Screw Prop	MY-0004	1
1-39	ZW416698	Nut M4		1

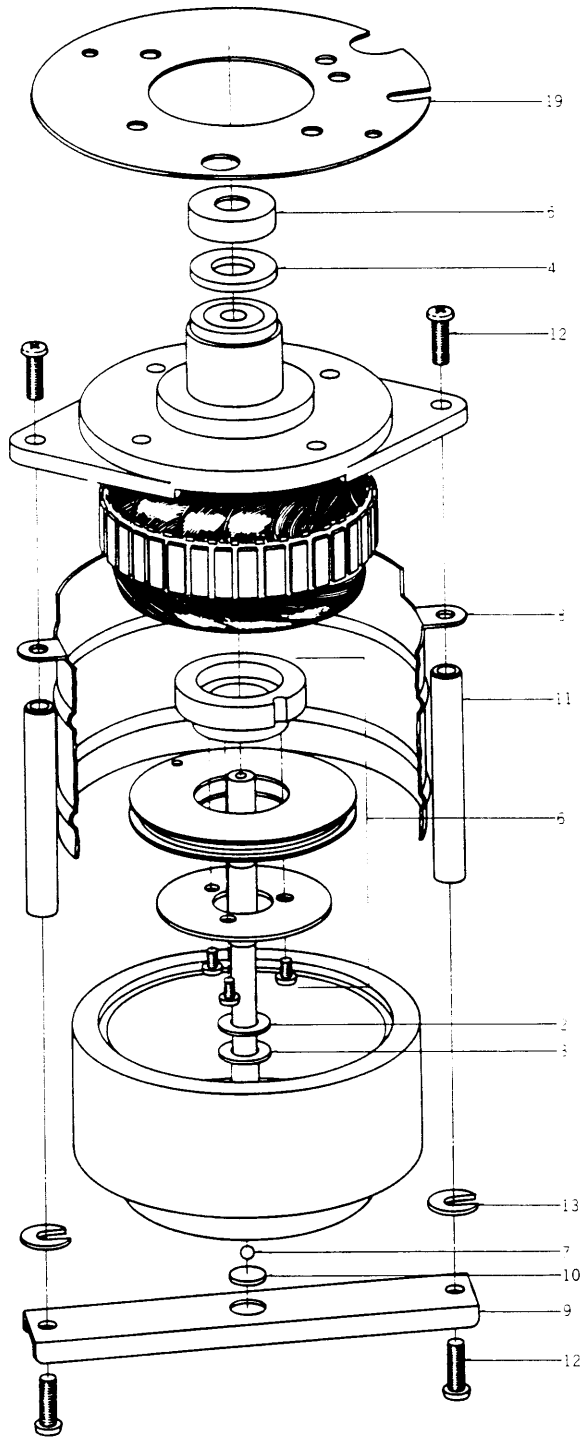
HEAD BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
1-1x	BH622585	Head Block Comp.	MY	1
1-2	HZ626837	Head Base A	MY-0001	1
1-3	HZ626848	Head Base B	MY-0002	1
1-4	MS625072	Tape Guide	MY-0003	2
1-5	ZS414044	Screw, countersunk head 4x8		1
1-6	ZS413201	Screw, pan head 4x8		5
1-7	MH578957	Tape Guide Prop	TD-0003	2
1-8	HZ532710	Tape Guide B	TW-0006	2
1-9	ZG466312	Angle Adjust Spring E	BS-0018	2
1-10	ZW273835	Nut M3		4
1-11	MH529233	Head Base Prop B	ND-0017	2
1-12	ZW273914	Spring Washer M4		4
1-13	HZ532732	CH Retaining Base	TW-0008	1
1-14	ZS608512	Screw, pan head 3x13		9
1-15	ZG466312	Angle Adjust Spring E	BS-0018	6
1-16	HZ532765	PH Retaining Base	TW-0010	2
1-17	ZG303300	Angle Adjust Spring B	RD-55	3
1-18	HA625105	Head Angle A	MY-0006	1
1-19	HA625116	Head Angle B	MY-0006	1
1-20	HZ627546	Head Shield	MY-0010	2
1-21	ZS608477	Screw, pan head 3x4		6
1-22	ZW413256	Washer (SPC) D3.4x7.8x0.5t		3
1-23	HP536501	PB. HEAD P4-202		2
1-24x	EA463206	Terminal P.C. Board A	RD-A36	4
1-25	ZS201508	Screw, pan head 2x4		4
1-26	HA532743	CH Angle A	TW-0009	1
1-27	HR556582	REC./ERASE HEAD RE4-6		1

REEL MOTOR/REEL TABLE BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
2-1	BM314741	Reel Motor (24XO-2) Block Comp.	MR.KD.MS. MC.MY	1
2-2x	BR398430	Supply Reel Table Block Comp.		1
2-3x	BR398441	Take-up Reel Table Block Comp.	KD.KF.MY	1
2-4	MT488147	Reel Table Disk B, RD	KD.KF.MY	1
2-5	MT255420	Reel Retainer	RD-272	1
2-6	MS342000	Reel Shaft	3R-102	1
2-7	ZG255633	Reel Spring	3R-108	1
2-8	MT297663	3R 'O' Ring 2.9x1.65M	3R-109	1
2-9	ZW270088	'E' Ring 1.9M	3R-139	1
2-10	MT397225	Reel Table Rubber	6-1-9	1
2-11	MT495606	Brake Drum (R) A (Take-up)	KD-2017	1
2-12x	MT495617	Brake Drum (L) A (Supply)	MR-216	1
2-13	MT405268	Reel Table Spacer	MR-216	1
2-14x	ZW273778	Earth Lug M3	KD-2018	1
2-15x	ZS425981	Screw, binding head 3x3		2
2-16	MT436860	Brake Cloth Comp.	MR-269	1
2-17	MT317485	U Metal Fitting	MR-218	1
2-18	ZG317496	Felt Tension Spring	MR-260	1
2-19	MR317507	Counter Pulley (Take-up)	MR-217	1
2-20	ZS516644	Screw, countersunk head 2.3x10		2
2-21	ZS424056	Screw, pan head 4x10		2
2-22	ZS403222	Screw, countersunk head 3x10		3
2-23	MB625566	Counter Belt D88.4x1.4	MY-1046	1
2-24	ML314976	Brake Lever A	MR-210	1
2-25	MT314987	Brake Band	MR-213	2
2-26	MZ314998	Brake Band Retaining Plate	MR-212	4
2-27	MZ315000	Brake Band Support	MR-214	2
2-28	MG540551	Brake Spring	ND-1076	2
2-29	ZW290283	'U' Ring 2.85M	6-1-1	1
2-30	MH317373	Brake Lever Prop	MR-102	1

FIG. 3 MAIN MOTOR BLOCK



MAIN MOTOR BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
3-1x	BM600298	Main Motor (SCM2-24KJ) Block		
		Comp.	KJ,MY	1
3-2	ZW597543	Thrust Washer A	KJ-7009	1
3-3	ZW605698	Thrust Washer B	KJ-7009	1
3-4	ZW597622	Felt Washer	KJ-7022	1
3-5	SK597633	Cap	KJ-7023	1
3-6	BZ600300	Detector Gear Block Comp.	KJ,MY,TE-11	
3-7	MV368886	Steel Ball D3		1
3-8	MZ597666	Motor Shield Plate	KJ-7026	1
3-9	MZ597644	Thrust Angle	KJ-7024	1
3-10	MZ597690	Ball Holder	KJ-7029	1
3-11	MS597655	Thrust Holding Prop	KJ-7025	2
3-12	ZS413234	Screw, pan head 4x12		4
3-13	ZW603786	Adjust. Washer (U)	D4x13x0.2t	2
3-14x	ZW603797	Adjust. Washer (U)	D4x13x0.5t	2
3-15x	ZW603764	Adjust. Washer (U)	D4x13x1.2t	2
3-16x	ZW603775	Adjust. Washer (U)	D4x13x1.6t	2
3-17	MZ625577	Motor Shield Plate	MY-1047	1

FIG. 4a OPERATION BLOCK

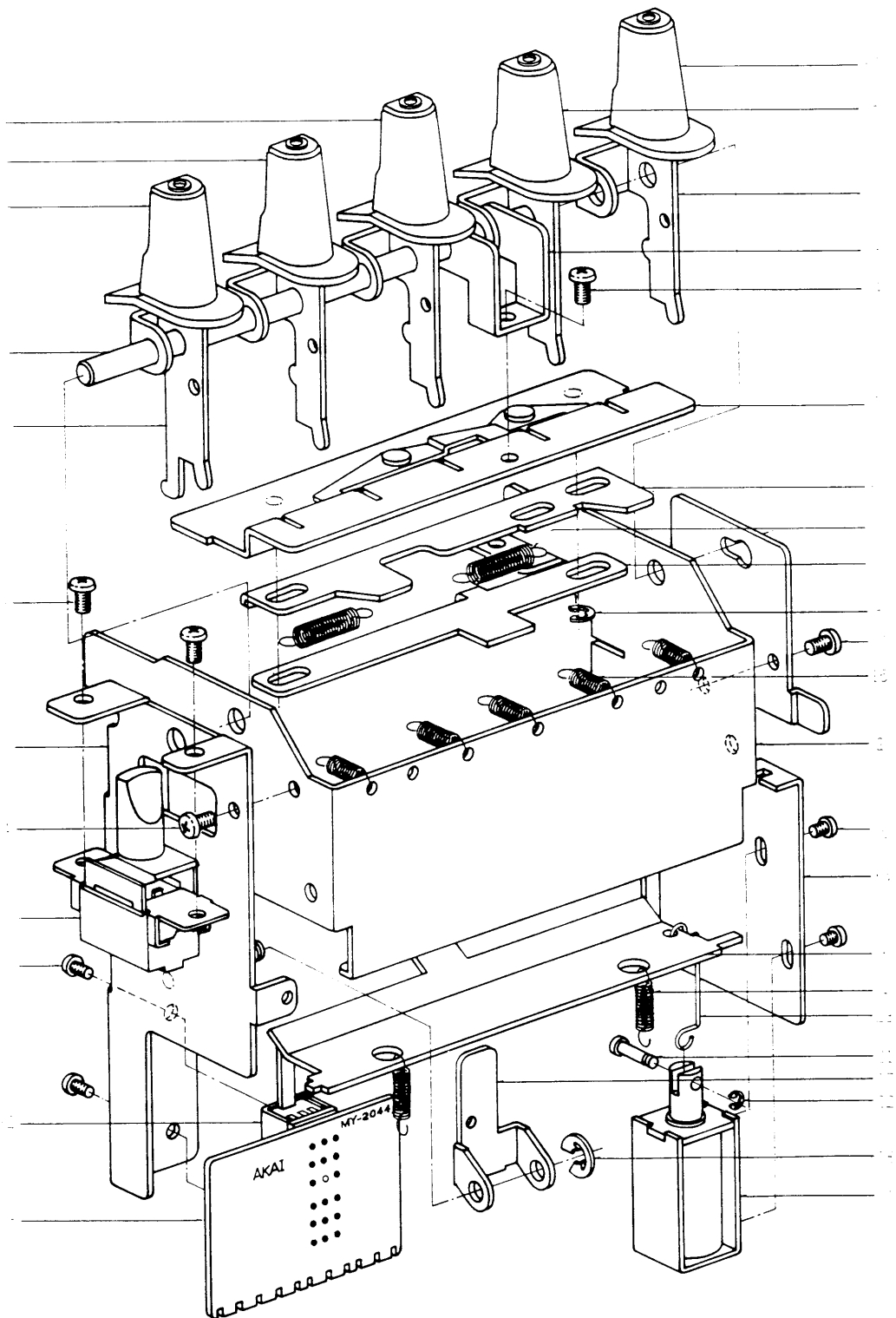
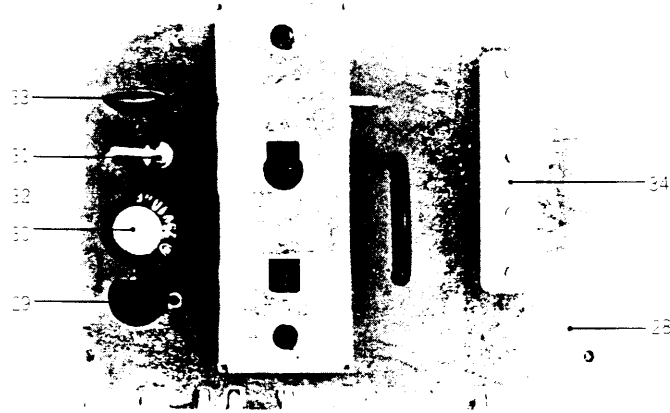


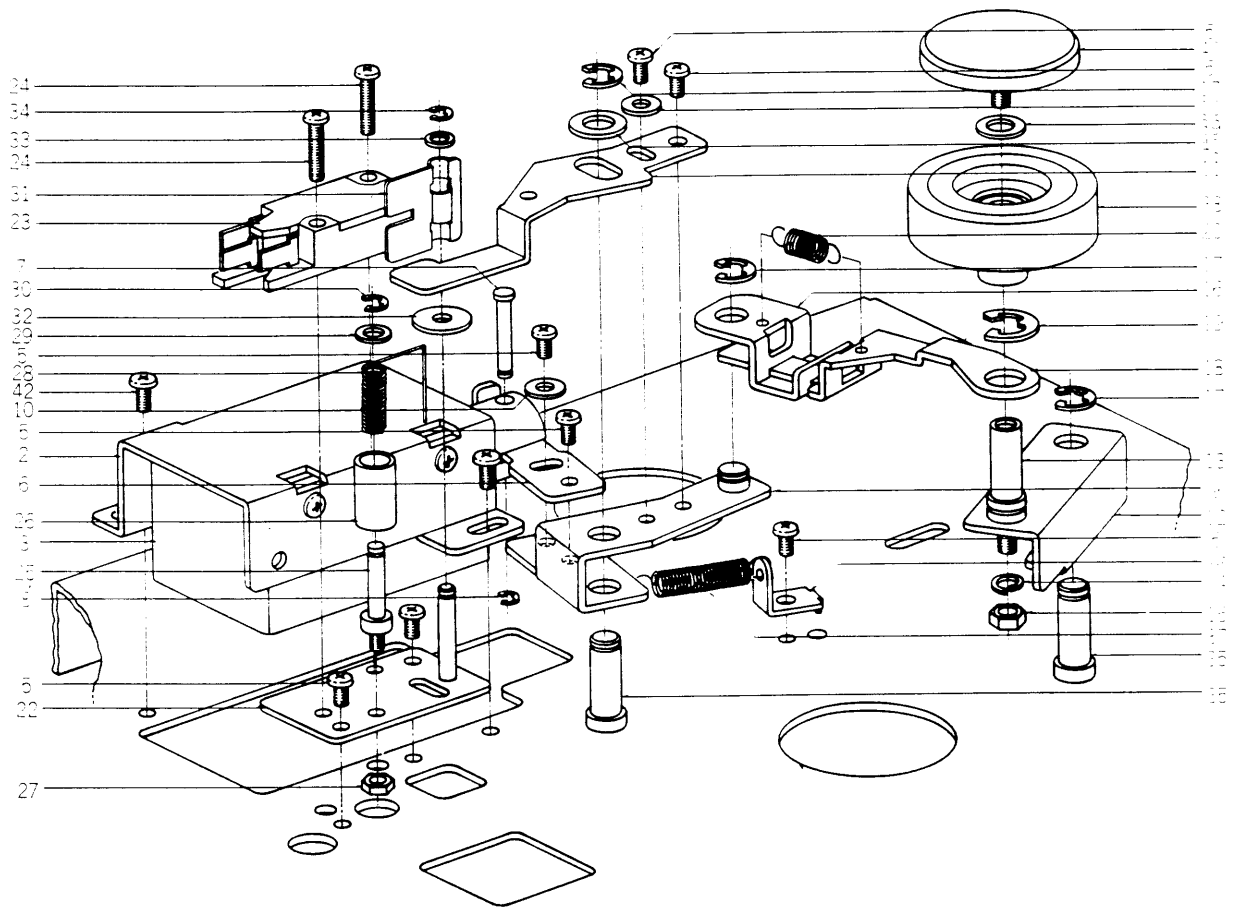
FIG. 4b OPERATION BLOCK



OPERATION BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
4-1x	BZ622484	Operation Block Comp.	MY	1	4-35	ZS432843	Screw, pan head 2.6x4		2
4-2	MZ626850	Button Bracket	MY-2001	1	4-36	SB626962	Operat Button 1 (Red)	MY-6012	1
4-3	MZ625612	Lock Plate	MY-2003	1	4-37	SB626973	Operat Button 2 (Yellow)	MY-6012	2
4-4	ZG568934	Lock Spring	CP-3011	2	4-38	SB626984	Operat Button 3 (Green)	MY-6012	1
4-5	MS625601	Lever Guide, w/pin C	MY-2002	1	4-39	SB626995	Operat Button 4 (White)	MY-6012	1
4-6	MZ625678	Slider Plate A	MY-2009	1					
4-7	MZ625680	Slider Plate B	MY-2010	1					
4-8	ZW270101	'E' Ring 3M	6-1-9	2					
4-9	ZG625331	Wind Spring	MY-1023	2					
4-10	MS625623	Button Shaft	MY-2004	1					
4-11	ML625645	Record Lever	MY-2006	1					
4-12	ML625634	Operat Lever	MY-2005	4					
4-13	MZ625656	Shaft Angle	MY-2007	1					
4-14	ZS422076	Screw, pan head 3x5		7					
4-15	ZG625667	Operat Lever Spring	MY-2008	5					
4-16	MZ625746	Operat Side Plate B, w/sw. Shaft	MY-2016	1					
4-17	ML625724	REC. SW. Lever	MY-2014	1					
4-18	ZW290283	'U' Ring 2.85M	6-1-1	1					
4-19	MZ625735	Operat Side Plate A	MY-2015	1					
4-20	EP494425	Plunger Solenoid 0730THT1	44-1-48	1					
4-21	MH494414	Joint Pin	CG-1206	1					
4-22	ZW270088	'E' Ring 1.9M	6-1-9	1					
4-23	MZ625757	Joint	MY-2017	1					
4-24x	ED224526	Silicon Diode 10D1	45-2-11	1					
4-25	ZS592378	Screw, pan head 2.6x3		2					
4-26	ES621911	Lever SW. J-U2002	25-4-24	1					
4-27x	ER589566	Spark Quencher U/L (DIP Type)0.1μ+120Ω 250WV	41-1-60	1					
4-28	EA615082	REC. SW. P.C. Board	MY-2044	1					
4-29	ET398711	Transistor 2SC945(Q)(R)	45-1-85	1					
4-30	EC220994	Elect./C. 10μF 25WV (Vert. Type)	24-12-9	1					
4-31	ER212883	Carbon/R. RD1/4 4.7k(J) (Stop. Type)	35-10-1	1					
4-32	ES621933	Push SW. UEG-63E08	25-5-150	1					
4-33	EC250885	Mylar 0.01μF(K) 50WV (Vert. Type)	24-1-1	1					
4-34	EZ623878	Pin For V Connector, w/Base RTB-1.5-4	32-1-61	1					

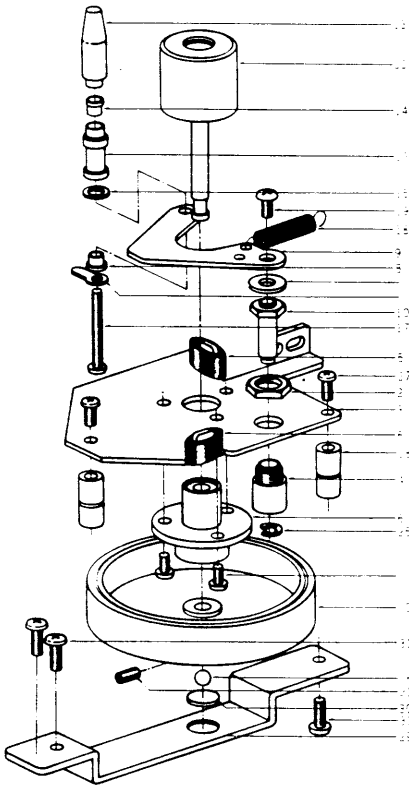
FIG. 5 PINCH ROLLER PLUNGER/QUICK SW. BLOCK



PINCH ROLLER PLUNGER/QUICK SW. BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
PINCH ROLLER PLUNGER BLOCK					QUICK SW. BLOCK				
5-1x	BZ622596	Pinch Roller Plunger Block Comp.	MY	1	5-21x	BS622620	Quick SW. Block Comp.	MY	1
5-2	MZ625768	Plunger Bracket	MY-2018	1	5-22	EZ625781	Quick SW. Table, w/prop	MY-2020	1
5-3	EP573658	Plunger Solenoid 1660THT-3	44-1-66	1	5-23	ES562465	Micro SW. K-1	25-1-26	1
5-4x	ED224550	Silicon Diode 10D4	45-2-16	1	5-24	ZS483502	Screw, pan head 3x13		2
5-5	ZS422076	Screw, pan head 3x5		7	5-25	MH528513	SW. Pin	ND-1055	1
5-6	MZ625770	Plunger Plate	MY-2019	1	5-26	MH527635	SW. Pipe	ND-1054	1
5-7	MH533913	Connecting Pin	TW-2010	1	5-27	ZW273756	Nut M3		1
5-8	ZW270088	'E' Ring 1.9M	6-1-9	2	5-28	ZG529211	SW. Spring	ND-1053	1
5-9	ML625386	Plunger Lever, w/pin B	MY-1028	1	5-29	ZW259738	Washer (Polyslider) D4.1x7x0.2St		1
5-10	ZW555693	Washer D3.2x8x0.5t		2	5-30	ZW270101	'E' Ring 3M	6-1-9	1
5-11	ML625397	Quick SW. Lever	MY-1030	1	5-31	MZ529391	Quick Plate	ND-1063	1
5-12	MZ625421	Pinch Roller Arm	MY-1032	1	5-32	ZW622001	Washer D3.1x13x0.5t		1
5-13	MS625432	Pinch Roller Shaft	MY-1033	1	5-33	ZW622012	Washer D3.1x5x0.2t		1
5-14	ZW273914	Spring Washer M4		1	5-34	ZW270088	'E' Ring 1.9M	6-1-9	1
5-15	ZW416698	Nut M4		1	5-35	MS625184	Pinch Roller Arm Shaft	MY-1006	2
5-16	MZ625443	Pinch Roller Plate A	MY-1034	1	5-36	MZ582030	Spring Hanger	TD-1018	1
5-17	ZW270134	'E' Ring 5M	6-1-9	3	5-37	ZG580768	Spoke Spring	TD-2077	1
5-18	MZ625454	Pinch Roller Plate B	MY-1035	1	5-38	MP625048	Pinch Roller H, LC	LC-321	1
5-19	ZW334653	'E' Ring 7M	6-1-9	1	5-39	ZW260010	Washer (PBP) D6.1x10x0.1t		1
5-20	ZG625465	Pinch Roller Spring	MY-1086	1	5-40	SK631326	Pinch Roller Cap C	MS-6020	1
					5-41	ZW621876	Washer D6.2x13x1t		1
					5-42	ZG608321	Screw, pan head 3x6, w/washer		2

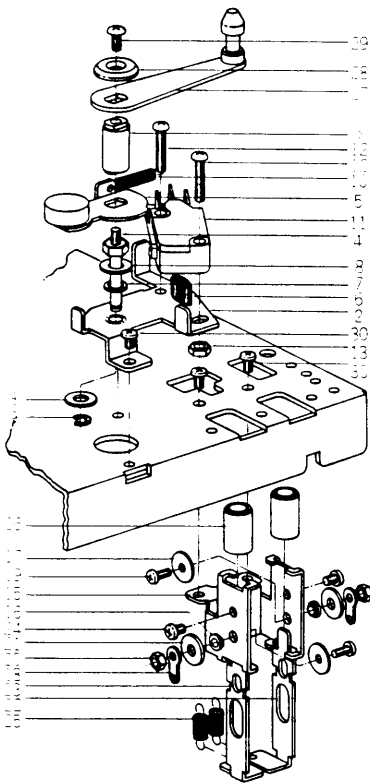
FIG. 6 IMPEDANCE ROLLER BLOCK



IMPEDANCE ROLLER BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
6-1x	BI600355	Impedance Roller Block Comp.	KJ.MY	1
6-2	ZW603990	Metal Nut	6-3-9	1
6-3	MZ597071	Impedance Base	KJ-2027	1
6-4	MV597082	Sensing Shaft Metal	KJ-2028	1
6-5	MZ606712	Stopper Rubber KJ	KJ-2060	2
6-6	MZ597093	Metal Case, w/metal		1
6-7	ZS499331	Screw, pan head 2.3x5	KJ-2029	3
6-8	EZ606701	Insulator Collar (L)	KJ-2039	1
6-9	MZ597137	Sensing Arm	KJ-2036	1
6-10	MS597148	Sensing Shaft	KJ-2037	1
6-11	ZW604012	Washer D4.3x11x0.1t		3
6-12	MZ597172	Sensing Post (Lower)	KJ-2040	1
6-13	MZ597150	Sensing Post (Upper)	KJ-2038	1
6-14	SE597161	Insulated Collar S	KJ-2039	1
6-15	ZW601075	Washer D4.1x7x0.1t		1
6-16	ZW273633	Earth Lug M2.3		1
6-17	ZS484828	Screw, binding head 2.3x25		1
6-18	ZG646020	Z Arm Spring	MY-2059	1
6-19	ZS201150	Screw, truss head 3x6 (black)		1
6-20	MI597183	Flywheel	KJ-2041	1
6-21	ZS593796	Set Screw, hexagon socket 3x6 (Flat/p.)		2
6-22	MR597115	Impedance Roller, w/shaft	KJ-2033	1
6-23x	MZ597126	Roller Plate	KJ-2035	1
6-24x	ZW649618	Washer D4x10x1t		1
6-25	ZW270101	'E' Ring 3M	6-1-9	1
6-26	MV537862	Steel Ball D4		1
6-27x	ZS422076	Screw, pan head 3x5		3
6-28	MH625162	Z Block Prop	MY-1004	3
6-29	MZ596823	Thrust Plate	KJ-1004	1
6-30	ZW593212	Washer D8x1t		1
6-31	ZS421806	Screw, pan head 3x8		3

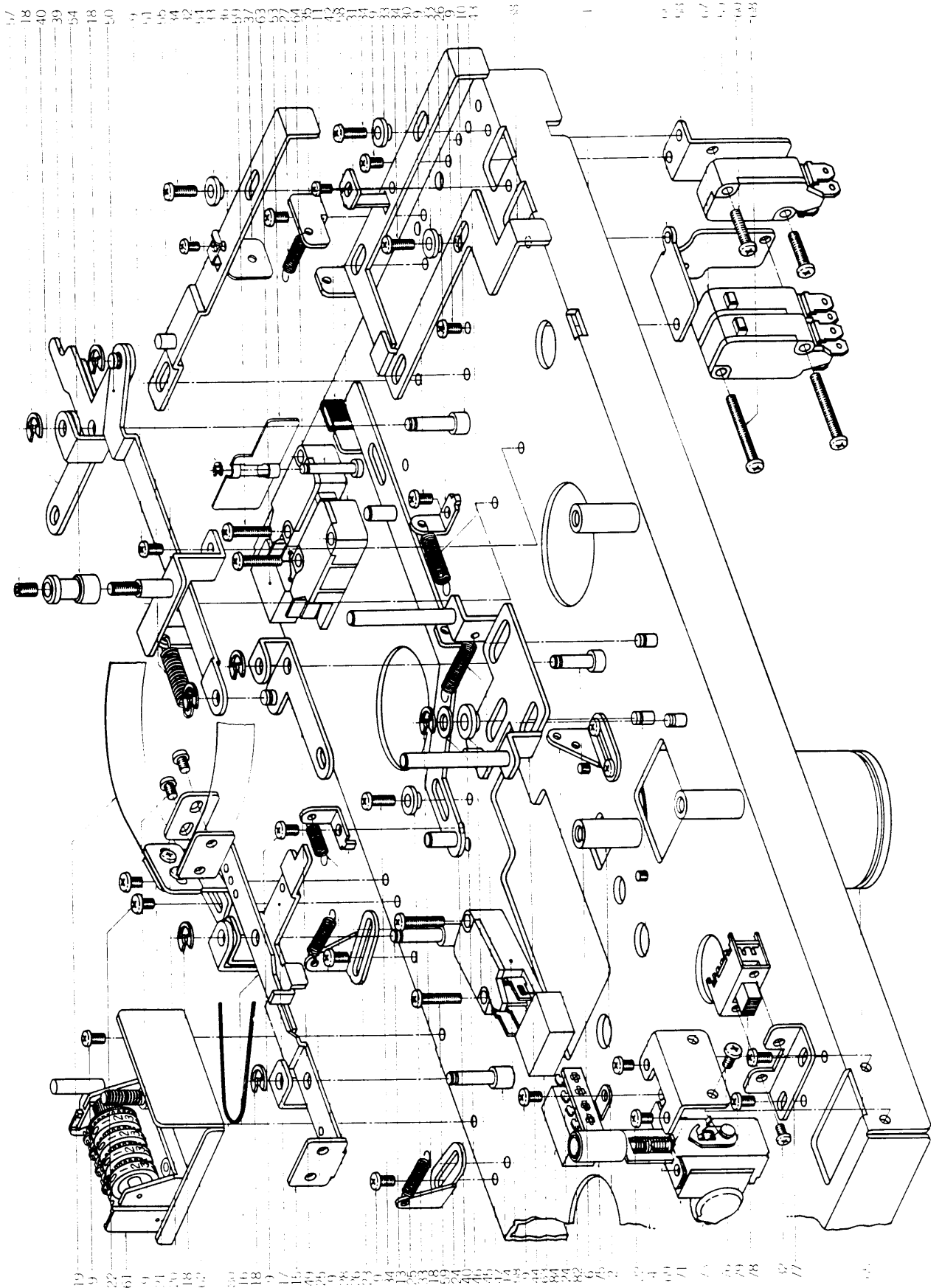
FIG. 7 TENSION ARM/DIRECTION SW. BLOCK



TENSION ARM/DIRECTION SW. BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
TENSION ARM BLOCK				
7-1x	BZ622618	Tension Arm Block Comp.	MY	1
7-2	MZ625803	Tension Arm Table, w/metal	MY-2022	1
7-3	MS625825	Tension Shaft A	MY-2024	1
7-4	MS615014	Tension Shaft B	MY-2032	1
7-5	MZ627265	Tension SW. Cam, w/counter weight	MY-2025	1
7-6	MZ810191	Cushion Rubber, RD	RD-278	1
7-7	ZW601075	Washer D4.1x7x0.1t		1
7-8	ZW419646	Washer (SPC) D4.5x9.8x0.5t		2
7-9	ZW270101	'E' Ring 3M	6-1-9	1
7-10	ZG614970	Tension Spring	MY-2026	1
7-11	ES562465	Micro SW. K-1	ZS-1-26	1
7-12	ZS422965	Screw, pan head 3x15		2
7-13	ZW273756	Nut M3		1
DIRECTION SW. BLOCK				
7-14x	BS622642	Direction SW. Block Comp.	MY	1
7-15	MZ614981	Direction SW. Table	MY-2027	1
7-16	MZ316822	Insulator Collar B	MR-225	2
7-17	HZ542092	Insulated Washer	MC-0213	2
7-18	ZW316800	Earth Lug M2.6		2
7-19	ZS464692	Screw, binding head 2.3x6		2
7-20	ZW273688	Nut M2.3		2
7-21	ZW563218	Washer (Bake) D3.2x10x1t		2
7-22	ML614992	Direction Lever A	MY-2028	1
7-23	ML615003	Direction Lever B	MY-2028	1
7-24	ZS417216	Screw, pan head 3x4		2
7-25	ZG317777	Pull Spring	MR-47	2
7-26	SB614428	Power Button B	A5-5021	2
7-27	ME580465	Tension Arm, w/guide B	TD-2039	1
7-28	ZW535094	Decorative Washer	TW-2077	1
7-29	ZS200395	Screw, countersunk head 3x6		1
7-30	ZS422076	Screw, pan head 3x5		2

FIG. 8 MECH. ASSEMBLY BLOCK



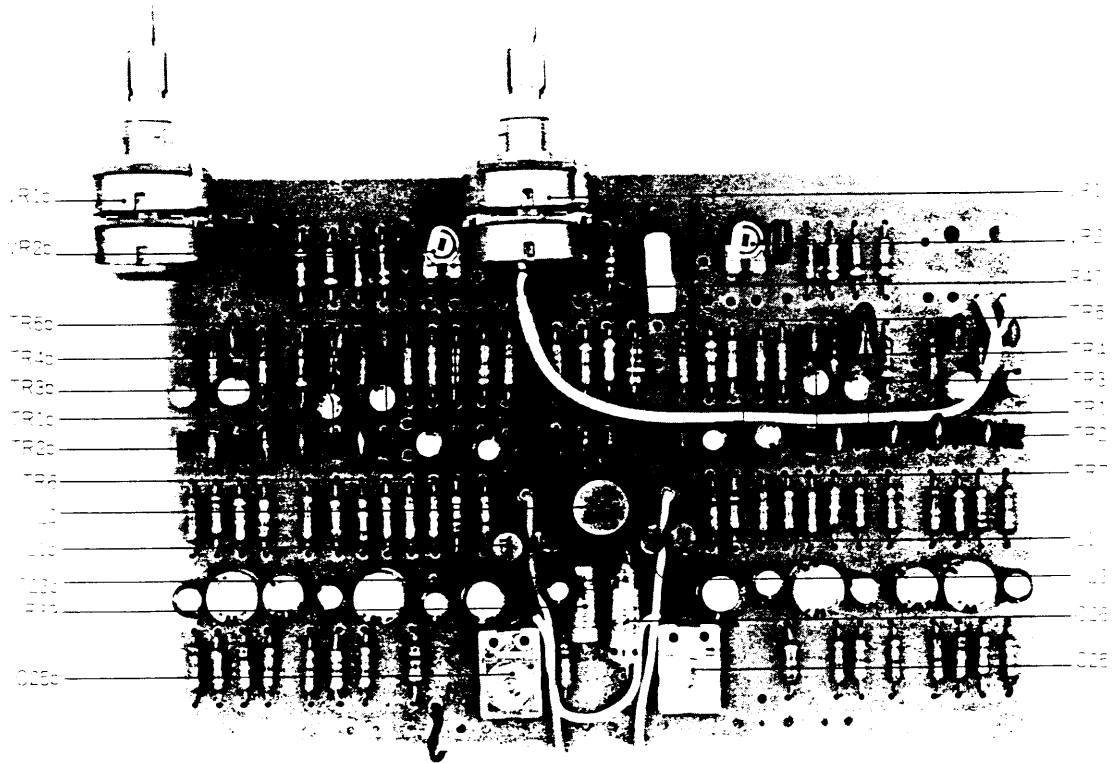
MECH. ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
8-1	MZ627142	Mech. Frame	MY-1001	1	8-45	ZW580173	Guide Washer	TD-1055	3
8-2	MH625140	Head Base Prop	MY-1002	3	8-46	ZW420682	Washer (Nylon) D4.2x9x0.5t		3
8-3x	ZS413201	Screw, pan hed 4x8		3	8-47	ZG535105	Tension Arm Spring	TW-2078	1
8-4	MH581927	Shifter Guide Post	TD-1006	3	8-48x	MZ314673	Reel Motor Shield	MR-123	1
8-5x	ZW273756	Nut M3		3	8-49	ML625353	Shifter Lever, w/pin 2	MY-1025	1
8-6	MZ625151	Shifter Lever Post	MY-1003	1	8-50	MZ625364	Connecting Plate	MY-1026	1
8-7x	ZW416698	Nut M4		4	8-51	ZG625375	Play Spring	MY-1027	1
8-8x	MH625162	Z Block Prop	MY-1004	3	8-52x	ZG580768	Spoke Spring	TD-2077	1
8-9	ZS422076	Screw, pan head 3x5		36	8-53	MZ625500	Quick Plate	MY-1040	1
8-10	MH625173	Lever Prop	MY-1005	1	8-54	ZW270088	'E' Ring 1.9M	6-1-9	1
8-11	MZ625498	SW. Post	MY-1039	1	8-55	MZ625511	Reverse Guide Table. w/prop	MY-1041	1
8-12x	ZW273756	Nut M3		1	8-56	HZ315090	Reverse Guide	RD-225	1
8-13	MH625195	Brake Lever Prop	MY-1007	1	8-57	ZS344463	Set Screw, hexagon socket 4x6 (cup/p.)		1
8-14	MH317373	Brake Lever Prop	MR-102	1	8-58	EZ625522	SW. Angle A	MY-1042	1
8-15	ML396810	Brake Lever B	KD-1038	1	8-59	ES573456	Micro SW. K-2	25-1-30	3
8-16	ML314976	Brake Lever A	MR-210	1	8-60	ZS483502	Screw, pan head 3x13		8
8-17	ML625206	Brake Lever C	MY-1009	1	8-61	MC621887	Counter MP-490-21	9-1-38	1
8-18	ZW290283	'U' Ring 2.85M	6-1-1	9	8-62	MZ625487	Counter Base	MY-1038	1
8-19	MT314987	Brake Band	MR-213	2	8-63	ER376435	Spark Quencher U/L 0.1μ+120Ω 250WV	411-35	2
8-20	MZ314998	Brake Band Retaining Plate	MR-212	4	8-64	ES562465	Micro SW. K-1	25-1-26	1
8-21	MZ31500	Brake Band Support	MR-214	2	8-65	EC520626	MP/C. (3+1)μFx2 250WV AC (Lug Type Uni/D.)	24-9-74	1
8-22	ZS417216	Screw, pan head 3x4		6	8-66	EZ625533	SW. Angle B	MY-1043	1
8-23	MZ397080	Spring Rack	KD-1010	1	8-67	ES573478	Micro SW. K-3	25-1-31	2
8-24	MZ314605	Spring Rack, MR	MR-104	2	8-68	ZS608264	Screw, pan head 3x25		2
8-25	ZG540551	Brake Spring	ND-1076	2	8-69	EZ625544	Power SW. Table	MY-1044	1
8-26	MZ582030	Spring Hanger	TD-1018	2	8-70x	EA626411	Power SW. P.C. Board	MY-1054	1
8-27	ZG625217	Lever Spring	MY-1010	2	8-71	ES479395	Push SW. TV-3 JH5	25-5-62	1
8-28	ZG371114	Reset Lever Spring	ED-219	1	8-72x	ES621178	Push SW. S-J4162 (CEE)	25-5-145	1
8-29x	ER589566	Spark Quencher U/L (Dip Type) 0.1μ+120Ω 250WV	41-1-60	1	8-73	EC551160	Ceramic/C. NB821 YZ 0.01μF(Z) 1.4kVW	24-5-55	2
8-30	MZ625228	FF Plate	MY-1011	1	8-74x	EC565896	Ceramic/C. DP6600 YM 0.01μF(P) 1.4kVW (JPN, CAS)	24-5-58	1
8-31	ML625230	SW. Lever	MY-1012	1	8-75	SB614428	Power Button B	A5-5021	1
8-32	ZS432843	Screw, pan head 2.6x4		4	8-76	ZS325495	Tapping Screw #2 3x6		1
8-33	ZW625241	Graduated Washer	MY-1013	8	8-77	MZ625555	Speed SW. Table	MY-1045	1
8-34	ZS421806	Screw, pan hed 3x8		8	8-78	ES621898	Slide SW. SSC342B	25-3-109	1
8-35	MZ625307	Spring Rack	MY-1020	1	8-79	ZS432674	Screw, pan head 3x3		1
8-36	MZ625252	Play Plate, w/pin	MY-1014	1	8-80	MB625566	Counter Belt D88.4x1.4	MY-1046	1
8-37	ZG625263	SW. Spring	MY-1015	1	8-81x	EJ205986	Cramp Terminal 2-SD	32-1-8	1.5
8-38	MZ625274	RWD Plate	MY-1016	1	8-82	EJ255093	Lug Plate VB1L1	33-4-1	1
8-39	ML625285	Play Lever, w/pin	MY-1017	1	8-83	EJ255115	Lug Plate VB2L2	33-4-3	1
8-40	ML625296	Wind Lever, w/pin	MY-1019	1	8-84	ER554556	Cement/R. 5W 39Ω(K) (Wire-wound Type)	35-16-3	1
8-41	MZ625318	Brake Plate, w/pin	MY-1021	1					
8-42	MZ810191	Cushion Rubber, RD	RD-278	1					
8-43	ZG456186	Lock Lever Spring	CC-1119	1					
8-44	MZ625342	Shifter Plate, w/pin	MY-1024	1					

POWER SUPPLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
9-1	MZ627017	Power Chassis	MY-2029	1	9-60x	EJ364915	Multi-Jack 10P		
9-2	BT621922	Power Trans. MYT-1	38-4-314	1			PB01-10S-24E2G (230)	31-4-15	1
9-3x	BT621944	Power Trans. MYT-1A (230)	38-4-315	1	9-61	MZ629414	Reinforcement Bracket	MY-2055	1
9-4x	BT621988	Power Trans. MYT-11			9-62x	MZ259233	Wire Band C	3A-745	1
		(JPN, CSA)	38-4-316	1	9-63x	ZW273881	Earth Lug M4 (CEE)		1
9-5x	BT621990	Power Trans. MYT-12 (CEE)	38-4-317	1	9-64x	ZW273892	Toothed Lock Washer M4 (CEE)		1
9-6	MZ627636	Trans. Shield Plate	MY-2053	1	9-65x	ZS413201	Screw, pan head 4x8 (CEE)		1
9-7	ZS424056	Screw, pan head 4x10		2	9-66x	ZW416698	Nut M4 (CEE)		1
9-8	EZ486617	Trans. Reinforcement Plate B	LF-5222	2	9-67	ES479485	Slide SW. S-1	25-3-66	1
9-9	ZW413188	Nut M4		2	9-68x	ZS414178	Screw, truss head 3x5, w/washer		2
9-10	EC364858	Elect. 330μF 160WV			9-69x	SM647245	Cycle Name Plate	MY-2058	1
		(Lug Type)	24-10-56	1					
9-11	ER365016	Carbon/R. RD1/4 220k(J)			9-70	EZ615058	P.C. Board Holder A	MY-2040	1
		(Insu. Type)	35-9-5	1	9-71	EZ615060	P.C. Board Holder B	MY-2-41	1
9-12	EC593763	MP/C. 3.5+1.5μF 150WV AC			9-72	EZ615071	P.C. Board Holder C	MY-2042	1
		(Lug Type Uni/D.)	24-9-88	1	9-73x	EJ300508	Mate-N-Lock Plug Housing 9P		
9-13	ZS325495	Tapping Screw #2 3x6		18			1-480274-0	52-1-7	1
9-14x	ED224572	Silicon Diode 5B2 (230)	45-2-20	1	9-74x	EJ373634	Socket Contact 61115-1	52-1-1	9
9-15x	EC401580	Elect. 2200μF 50WV			9-75x	EA624521	Fuse P.C. Board MY-1-A		
		(Lug Type) (230)	24-10-44	1			(JPN, CAS)	33-2-46	1
9-16x	ZW562476	Earth Lug M3 (230)		1	9-76x	EA624532	Fuse P.C. Board MY-1-B		
9-17x	ZW273802	Toothed Lock Washer M3					(JPN, CSA)	33-2-47	1
		(230)		1	9-77x	EA624554	Fuse P.C. Board MY-2-A (CEE)	33-2-48	1
9-18	ER575640	Cement/R. H(20+20)			9-78x	EA624565	Fuse P.C. Board MY-2-B (CEE)	33-2-49	1
		B(43+220+180)K	35-16-54	1	9-79x	EA615093	Fuse P.C. Board MY-1		
9-19x	EZ632068	Jack Silk Plate (230)	MY-2056	1			(JPN, CSA)	MY-2045	1
9-20x	MZ615104	SP Jack Bracket (230)	MY-2047	1	9-80x	EA614632	Fuse P.C. Board MY-2 (CEE)	MY-2046	1
9-21x	EJ328364	Mic. Jack 2PMJ3 (230)	31-2-20	2					
9-22x	ZW272722	Toothed Lock Washer M9							
		D9.3x13x0.5t (230)		2					
9-23x	ZW560237	E Jack Nut (230)		2					
9-24x	ZW393164	Washer (SUP) D9.1x11.7x0.25t							
		(230)		2					
9-25x	EZ623237	Mech. Harness	26-6-221	1					
9-26x	MZ623913	Mech. Harness MY-2 (JPN, CSA, CEE)	26-6-222	1					
9-27x	EZ624047	Cord Retainer	2-7-48	4					
9-28	MZ626861	VS Table A	MY-2030	1					
9-29x	MZ625858	VS Table B (CSA, CEE)	MY-2030	1					
9-30x	MZ647133	VS Base C (JPN)	MY-2030	1					
9-31	EJ233370	Socket S-18010 (Volt. Selector)	40-2-3	1					
9-32	ZS481724	ISO Screw, truss head 3x6		2					
9-33	EA628075	Transistor P.C. Board	MY-2054	1					
9-34	ET621786	Transistor T1P-48	45-1-197	1					
9-35	ZS421806	Screw, pan head 3x8		1					
9-36	ZW273756	Nut M3		1					
9-37	ZS422076	Screw, pan head 3x5		2					
9-38x	ZS462925	Tapping Screw #2 4x8 (BR)		4					
9-39x	EZ614586	Fuse Table MY	MY-2043	2					
9-40x	ZS379350	ISO Screw, pan head 3x6		4					
9-41x	ZS455207	Tapping Screw #2 3x5 (BR)		4					
9-42	EF563703	Fuse 2A 250V	39-1-50	1					
9-43x	EF563703	Fuse 2A 250V (JPN)	39-1-50	2					
9-44x	EF563681	Fuse 1A 250V (JPN)	39-1-50	4					
9-45x	EF511637	Fuse ULMF61M 250V 1A							
		(CSA)	39-1-45	4					
9-46x	EF602550	Fuse 1.25AT 250V (CEE)	39-1-53	1					
9-47x	EF601942	Fuse (SEMKO) 630MAT (CEE)	39-1-53	1					
9-48x	EF624543	Fuse ULMF61M 250V 2A							
		(CSA)	39-1-45	2					
9-49	EJ631945	Strain Relief SR-4N-4	2-7-49	1					
9-50x	EZ246936	Strain Relief SR-6W-1							
		(WG, 3 core)	2-7-8	1					
9-51x	EW374894	U/L AC Cord 3M	26-3-19	1					
9-52x	EW524845	AC Cord 2.5M (J)	26-3-31	1					
9-53x	EW516600	Power Cord VM-0065 (CEE)	26-3-28	1					
9-54x	EW604585	Power Cord BSI	26-3-37	1					
9-55x	EJ205986	Cramp Terminal 2-SD	32-1-8	2					
9-56x	ES479395	Push SW. TV-3 JH5 (JPN, CSA)	25-5-62	1					
9-57x	ES621178	Push SW. S-J4162 (CEE)	25-5-145	1					
9-58x	EJ297066	Mate-N-Lock Plug Housing 3P							
		1-480304-0 (230)	52-1-5	1					
9-59x	EJ373634	Socket Contact 61115-1 (230)	52-1-1	1					

FIG. 10 REC. OSC. P.C. BOARD (MY-5016) BLOCK

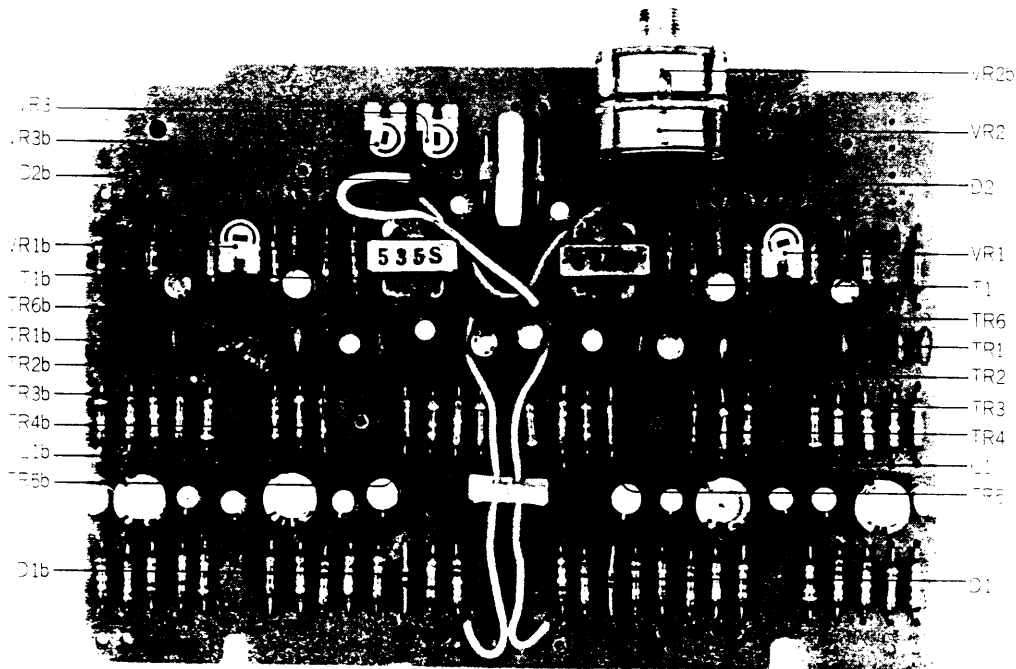


REC., OSC. P.C. BOARD (MY-5016) BLOCK

Symbol No.	Parts No.	Description	Q'ty	Symbol No.	Parts No.	Description	Schematic No.	Q'ty
10-1x	BA622721	Rec., Osc. P.C. Board Comp.	1	10-C9	EC329771	Elect. 47 μ F 6.3WV		2
10-TR1 to 4	ET523405	Transistor 2SC458LG(C)	8	10-C10	EC377212	VFM 47PF(J) 50WV		2
10-TR5 to 7	ET478001	Transistor 2SC945(P)(Q)	4	10-C11	EC320051	Elect. 10 μ F 16WV		2
10-L1	EO321254	Ferri Inductor FL7H 5.6MH(J)	2	10-C12	EC220678	Elect. 47 μ F 25WV		2
10-L2	EO383365	OSC. Coil OT-204	1	10-C13	EC329771	Elect. 47 μ F 6.3WV		2
10-VR1	EV622078	Double Vol. V24L5DPHN		10-C14	EC399565	VFM 22PF(J) 50WV		2
		A50kx2	2	10-C15	EC290520	VFM 100PF(J) 50WV		2
10-VR2	EV522797	Semi-fixed/Vol. V8K4-1 20 KB	2	10-C16	EC379170	Mylar 0.1 μ F(J) 50WV		2
10-R39	ER515070	Metal Oxide Film/R. 2W		10-C17	EC320051	Elect. 10 μ F 16WV		2
		150 Ω (K)	1	10-C18	EC329771	Elect. 47 μ F 6.3WV		2
10-R40	ER426892	Solid/R. RC1/2 2.4k(J)	1	10-C19	EC389496	Mylar 0.068 μ F(J) 50WV		2
		Capacitor, Vertical Type		10-C20	EC220151	Elect. 100 μ F 25WV		2
10-C1	EC290520	VFM 100PF(J) 50WV	2	10-C21	EC320051	Elect. 10 μ F 16WV		2
10-C2	EC220678	Elect. 47 μ F 25WV	2	10-C22	EC220994	Elect. 10 μ F 25WV		2
10-C3	EC432810	Elect. 10 μ F 16WV NL	2	10-C23	EC405898	Styrol 470PF(J) 50WV		2
10-C4	EC290520	VFM 100PF(J) 50WV	2	10-C24	EC250841	Mylar 0.01 μ F(J) 50WV		2
10-C5	EC220364	Elect. 100 μ F 6.3WV	2	10-C25	EC558202	Trimmer TM-80A		2
10-C6,7	EC399565	VFM 22PF(J) 50WV	4	10-C26	EC558235	Styrol 1800PF(J) 250WV		1
10-C8	EC320051	Elect. 10 μ F 16WV	2	10-C27,28	EC250841	Mylar 0.01 μ F(J) 50WV		2
				10-C29	EC450055	Elect. 1 μ F 25WV		1

Carbon Resistor Omitted

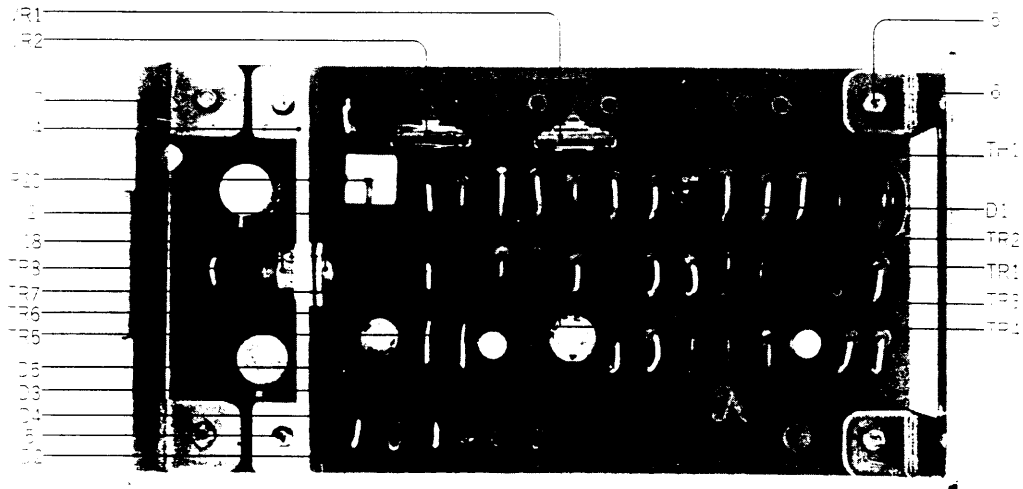
FIG. 11 P.B. P.C. BOARD (MY-5017) BLOCK



PB. P.C. BOARD (MY-5017) BLOCK

Symbol No.	Parts No.	Description	Q'ty	Symbol No.	Parts No.	Description	Schematic No.	Q'ty
11-1x	BA622732	PB. P.C. Board Comp. (MY-5017) (230D)	1	11-C16	EC290520	VFM 100PF(J) 50WV		2
11-2x	BA622743	PB. P.C. Board Comp. (MY-5017) (230)	1	11-C17	EC320051	Elect. 10 μ F 16WV		2
11-TR1to4	ET523405	Transistor 2SC458LG(C)	8	11-C18	EC220364	Elect. 100 μ F 6.3WV		2
11-TR5,6	ET478001	Transistor 2SC945(P)(Q)	4	11-C19	EC450055	Elect. 1 μ F 25WV		2
11-D1	ED570475	Zener Diode WZ-075	2	11-C20	EC320051	Elect. 10 μ F 16WV		2
11-D2	ED219464	Germanium Diode 1N34A	2	11-C21	EC450527	Elect. 4.7 μ F 25WV		2
11-L1	EO496361	Inductor 6070GE 23 MH(J)	2	11-C22	EC329771	Elect. 47 μ F 6.3WV		2
11-T1	BT517274	Headphone Trans. N16-535S	2	11-C23	EC368256	Elect. 0.47 μ F 25WV		2
11-VR1	EV464220	Semi-fixed/Vol. V8K4-1 50 k Ω	2			Carbon Resistor Omitted		
11-VR2	EV622967	2-axial 2-throw/Vol. 50 k Ω x2 (Friction Type)	1					
11-VR3	EV464196	Semi-fixed/Vol. V8K4-1 2k Ω	2					
		Capacitor, Vertical Type						
11-C1	EC220678	Elect. 47 μ F 25WV	2					
11-C2	EC432810	Elect. 10 μ F 16WV NL	2					
11-C3	EC290520	VFM 100PF(J) 50WV	2					
11-C4	EC467133	VFM 68PF(J) 50WV	2					
11-C5	EC290520	VFM 100PF(J) 50WV	2					
11-C6	EC329771	Elect. 47 μ F 6.3WV	2					
11-C7	EC320051	Elect. 10 μ F 16WV	2					
11-C8	EC389485	Mylar 0.018 μ F(J) 50WV	2					
11-C9,10	EC250683	Mylar 0.0022 μ F(J) 50WV	4					
11-C11	EC220678	Elect. 47 μ F 25WV	2					
11-C12	EC329850	VFM 220PF(J) 50WV	2					
11-C13	EC432810	Elect. 10 μ F 16WV NL	2					
11-C14	EC329771	Elect. 47 μ F 6.3WV	2					
11-C15	EC399565	VFM 22PF(J)	2					

FIG. 12 SERVO P.C. BOARD (MY-2036) BLOCK



SERVO P.C. BOARD (MY-2036) BLOCK

Symbol No.	Parts No.	Description	Schematic No.	Q'ty
12-1x	BA622574	Servo P.C. Board Comp. (MY-2036)		1
12-TR1,2	ET478001	Transistor 2SC945(P)(Q)		2
12-TR3,4	ET399846	Transistor 2SC945(Q)		2
12-TR5	ET538154	Transistor 2SA564(Q)(R)		1
12-TR6	ET399846	Transistor 2SC945(Q)		1
12-TR7	ET623867	Transistor 2SD361(D1)(D2)		1
12-TR8	ET478001	Transistor 2SC945(P)(Q)		1
12-TH1	ED593357	Thermister 34D21		1
12-D1	ED557447	Silicon Diode 1S1588		1
12-D2to5	ED224548	Silicon Diode 10D2		4
12-VR1	EV621955	Semi-fixed/Vol. V10K8-1-5 B10k		1
12-VR2	EV621966	Semi-fixed/Vol. V10K8-1-5 B30k		1
12-2	ZS421806	Screw, pan head 3x8		1
12-3	ZW273756	Nut M3		1
12-4	EZ615047	Heat-sink Plate A		1
12-5	ZS422076	Screw, pan head 3x5		6
12-6	EZ615060	P.C. Board Holder B		1
12-7	EZ615071	P.C. Board Holder C		1
12-R20	ER593346	Cement/R. 2W 330Ω(K) (Wire-wound Type)		1
Capacitor, Vertical Type				
12-C1	EC251291	Mylar 0.1μF(K) 50WV		1
12-C2	EC251122	Mylar 0.027μF(K) 50WV		1
12-C3	EC250582	Mylar 0.0033μF(K) 50WV		1
12-C4	EC331828	Elect. 3.3μF 25WV		1
12-C5	EC251122	Mylar 0.027μF(K) 50WV		1
12-C6	EC250582	Mylar 0.0033μF(K) 50WV		1
12-C7	EC311793	Mylar 0.012μF(J) 50WV		1
12-C8	EC557166	Solid Aluminum 3.3μF 25WV		1
12-C9	EC450055	Elect. 1μF 25WV		1
12-C10	EC320051	Elect. 10μF 16WV		1
12-C11	EC220151	Elect. 100μF 25WV		1
12-C12	EC250885	Mylar 0.01μF(K) 50WV		1
12-C13	EC346735	Elect. 47μF 50WV		1

Carbon Resistor Omitted

FIG. 13a EQ. P.C. BOARD (MY-5014A) BLOCK

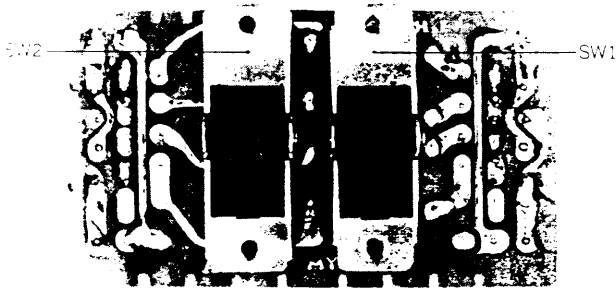
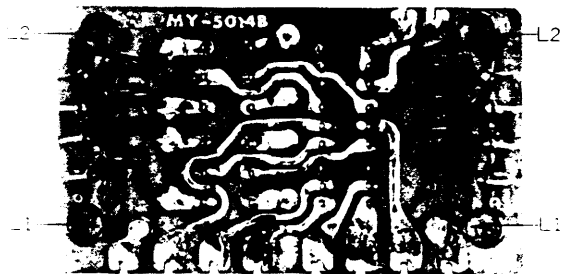


FIG. 13b EQ. P.C. BOARD (MY-5014B) BLOCK

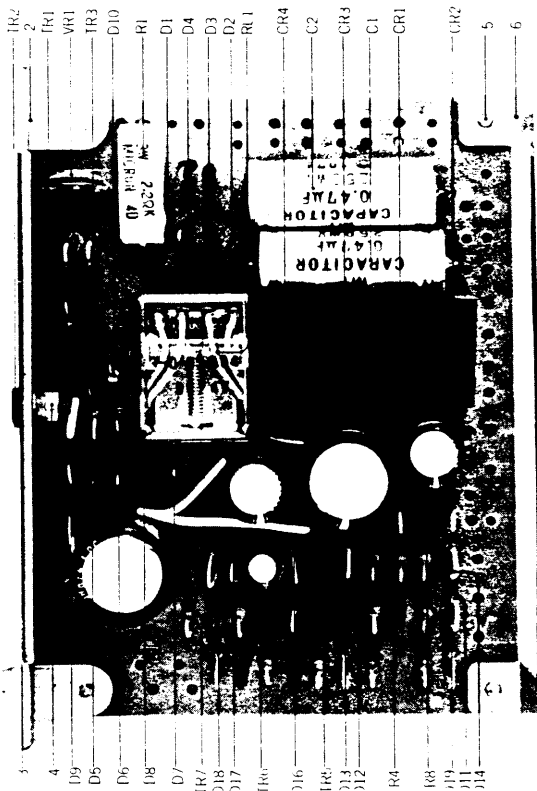


EQ. P.C. BOARD (MY-5014A) BLOCK

Symbol No.	Parts No.	Description	Schematic No.	Q'ty
13-1x	BA622710	EQ. P.C. Board Comp. (MY-5014A)		1
13-SW1	ES622023	Lever SW. J-L6004		1
13-SW2	ES622034	Lever SW. J-L7003		1
13-L1	EO369178	Ferri Inductor FL7H 1.5 MH(J)		2
13-L2	EO380564	Ferri Inductor FL7H 1.8 MH(J)		2
Capacitor, Vertical Type				
13-C1	EC329861	Mylar 0.027 μ F(J) 50WV		2
13-C2	EC368335	Mylar 0.022 μ F(J) 50WV		2
13-C3	EC379214	Mylar 0.047 μ F(J) 50WV		2
13-C4	EC379192	Mylar 0.039 μ F(J) 50WV		2

Carbon Resistor Omitted

FIG. 14 POWER SUPPLY P.C. BOARD (MY-2037)



POWER SUPPLY P.C. BOARD (MY-2037) BLOCK

Symbol No.	Parts No.	Description	Schematic No.	Q'ty
14-1x	BA622563	Power Supply P.C. Board Comp. (MY-2037)		1
14-TR1	ET538694	Transistor 2SC1247A		1
14-TR2	ET537300	Transistor 2SD361(D)(E)		1
14-TR3to7	ET478001	Transistor 2SC9459 (P)(Q)		6
14-D1to4	ED224550	Silicon Diode 10D4		4
14-D5to8	ED494583	Silicon Diode 10D05		4
14-D9	ED560913	Silicon Diode 1S2473 VE		1
14-D10	ED357794	Zener Diode RD-5A(M)		1
14-D11to17	ED560913	Silicon Diode 1S2473 VE		8
14-CR1to4	ER376435	Spark Quencher U/L 0.1 μ +120 Ω 250WV		4
14-RL1	EP628763	Relay MY4-0-US DC24V		1
14-VR1	EV554670	Semi-fixed/Vol. V10K8-1-5 1KB		1
14-2	EZ626894	Heat-sink Plate B		1
14-3	ZS421806	Screw, pan head 3x8		1
14-4	ZW273756	Nut M3		1
14-5	ZS379350	ISO Screw, pan head 3x6		4
14-6	EZ615058	P.C. Board Holder A		1
Capacitor, Vertical Type				
14-C1,2	EC350987	MP 0.47 μ F(M) 250V AC (Tub. Type)		2
14-C3	EC564952	Elect. 470 μ F 50WV		1
14-C4	EC372148	Elect. 220 μ F 35WV		1
14-C5	EC250885	Mylar 0.01 μ F(K) 50WV		1
14-C6	EC313121	Elect. 220 μ F 25WV		1
14-C7	EC564952	Elect. 470 μ F 50WV		1
14-C8,9	EC250885	Mylar 0.01 μ F(K) 50WV		2
14-C10	EC251087	Mylar 0.022 μ F(K) 50WV		1
14-C11	EC220612	Elect. 33 μ F 25WV		1
14-C12	EC251087	Mylar 0.022 μ F(K) 50WV		1

Carbon Resistor Omitted

FIG. 15 MAIN AMP. (MS-5024) BLOCK

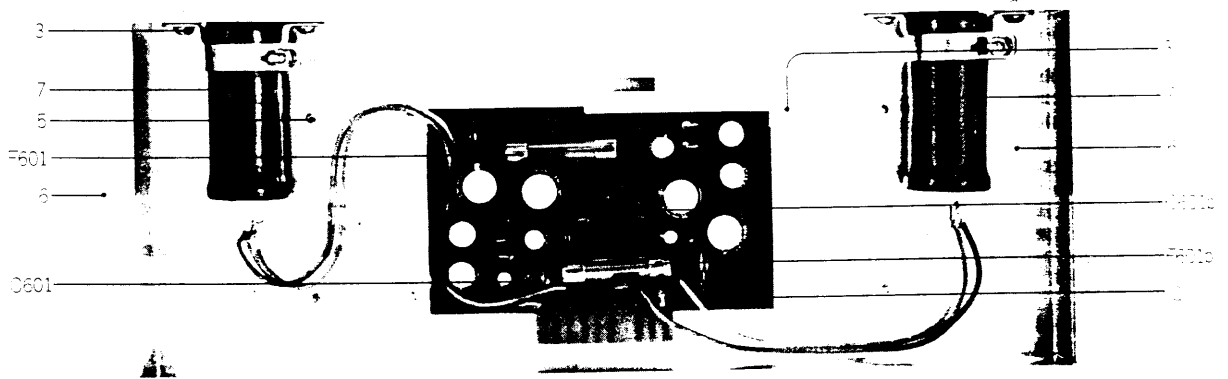
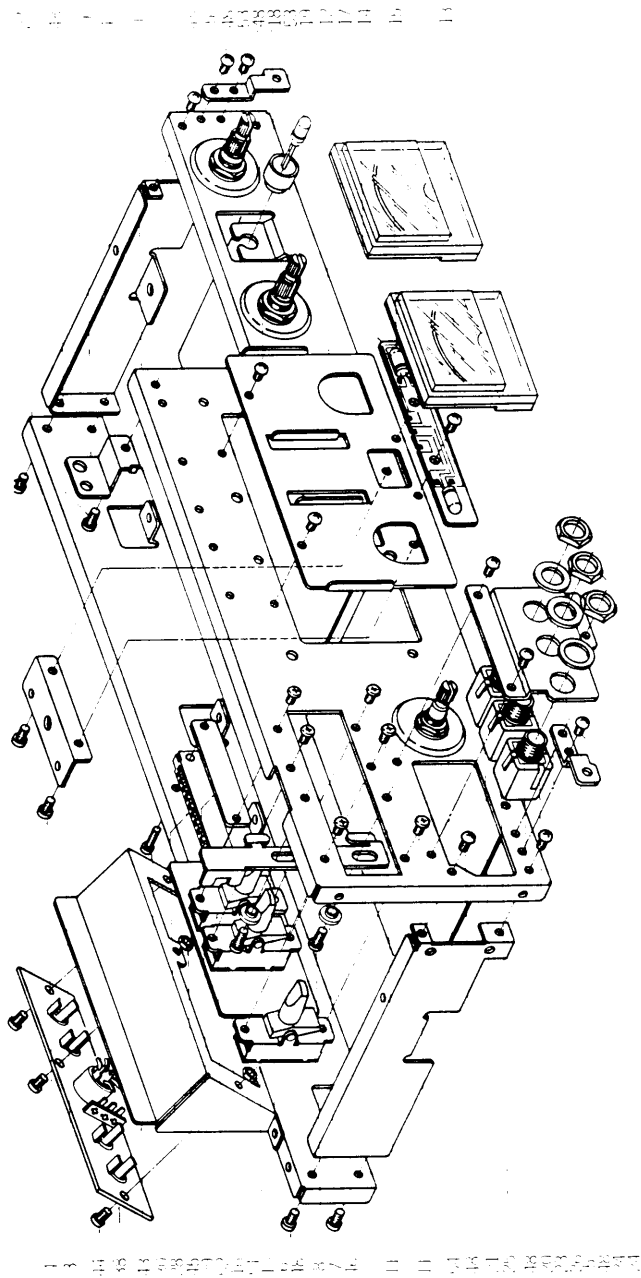


FIG. 16 AMP. ASSEMBLY BLOCK



MAIN AMP. (MS-5024) BLOCK

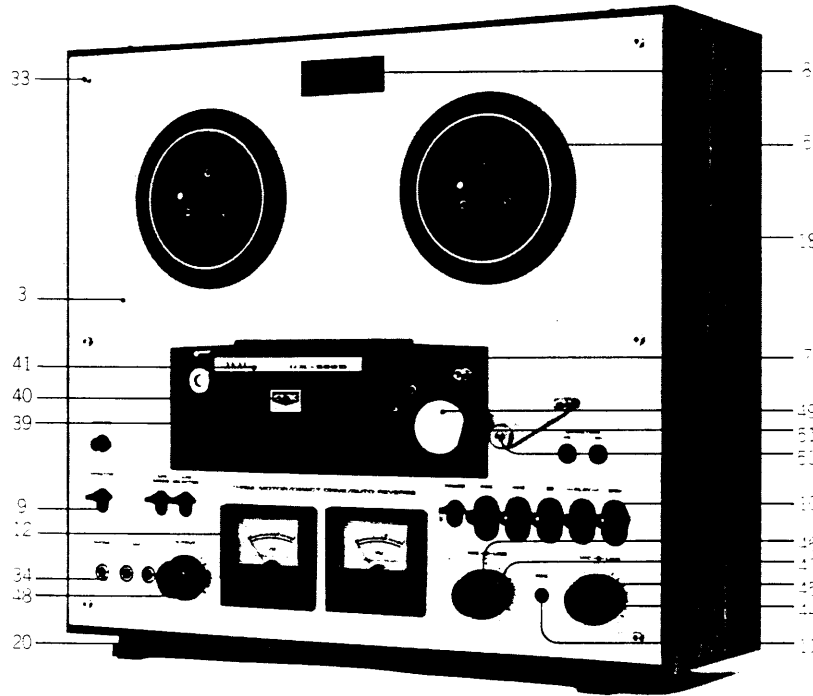
Symbol No.	Parts No.	Description	Schematic No.	Q'ty
MAIN AMP. BLOCK				
15-1x	BA622405	Main Amp. Block Comp. (230)		1
15-2	BA426183	Main Amp. P.C. Board Comp. (230)		1
15-3	ZS325495	Tapping Screw #2 3x6		8
15-4	EI425193	I.C. Power Amp. STK-015		2
15-5	ZS447805	Tapping Screw #2 3x12 (BR)		4
15-6	EZ627074	Heat-sink Plate, Main Amp.		1
15-7	EC233100	Elect. 1000 μ F 35WV		2
MAIN AMP. P.C. BOARD BLOCK				
15-8x	BA426183	Main Amp. P.C. Board Comp. (230)		1
15-F601	EF460653	Fuse ST-1 1A		2
Capacitor, Vertical Type				
15-C601	EC337487	Hi-Q 470PF(J) 50WV		2
15-C602	EC331705	Elect. 22 μ F 16WV		2
15-C603	EC220678	Elect. 47 μ F 25WV		2
15-C604	EC372148	Elect. 220 μ F 35WV		2
15-C605	EC251291	Mylar 0.1 μ F(K) 50WV		2
15-C606	EC220678	Elect. 47 μ F 25WV		2
15-C607	EC324538	Elect. 330 μ F 25WV		2
15-C608	EC350684	Elect. 22 μ F 25WV		2
15-C610	EC308711	Mylar 0.047 μ F(K) 50WV		2

Carbon Resistor Omitted

AMP. ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty
FRONT CHASSIS BLOCK				
16-1	TA627028	Front Chassis A	MY-5001	1
16-2x	TA628187	Front Chassis B (230)	MY-5001	1
16-3	EZ615115	P.C. Board Support	MY-5004	1
16-4	ZS325495	Tapping Screw #2 3x6		13
16-5	SZ615137	Panel Support	MY-5008	2
16-6	ML615126	Connecting Lever	MY-5005	1
16-7	ZW625241	Graduated Washer	MY-1013	2
16-8	ZS447840	Tapping Screw #2 3x8 (BR)		2
16-9	SZ615148	Amp. Support	MY-5009	1
16-10	ES621977	Lever SW. J-L6005	25-12-19	1
16-11	ZS422076	Screw, pan head 3x5		6
16-12	EZ626938	VU Adapter	MY-5018	1
16-13	ZS609118	Tapping Screw #2 3x5 pan head		2
16-14	EA627276	VU Lamp P.C. Board	MY-5015	1
16-15	EL621167	Pilot Lamp 5.5V 60MA	28-2-36	2
16-16	BA622710	EQ. P.C. Board Comp. MY	MY-5014A	1
16-17	EM558180	VU Meter KL-243S-5	46-1-74	2
16-18	EZ586326	Lamp Holder	LF-5324	1
16-19	EL593662	Cord Lamp 5.5V 60MA (220MMx2)	28-2-37	1
16-20	MZ627287	Jack Bracket	MY-5019	1
16-21	EJ592435	Mic. Jack 2PMJ4	31-2-44	2
16-22x	EZ225180	Nylon Collar, Jack	LD-520	2
16-23	EZ225101	Jack Fiber D9.1x15.4x0.5t	DX-510	2
16-24	ZW554624	E Jack Nut	7-1-56	3
16-25	EJ601481	Mic. Jack 3PMJ4	31-2-45	1
16-26	ZW436026	Washer (SPC) D9.2x15x0.5t		1
REAR CHASSIS BLOCK				
16-27	MZ627030	Rear Chassis	MY-5002	1
16-28	EJ364915	Multi-Jack 10P PB01-10S-24E2G	31-4-15	1
16-29	EZ530021	Jack Nut Plate	ND-5052	1
16-30	ZS462947	Screw, pan head 2.3x12		2
16-31x	ZW562476	Earth Lug M3		1
16-32x	ZS379350	ISO Screw, pan head 3x6		1
16-33x	ZW273802	Toothed Lock Washer M3		1
16-34x	ZW273756	Nut M3		1
16-35x	EJ557245	Nylon Clip SN-3A	2-7-29	1
16-36x	ZS447840	Tapping Screw #2 3x8 (BR)		1
16-37x	EJ373691	Mate-N-Lock Cap Housing 9P 1-480277-0	52-1-2	1
JACK PLATE BLOCK				
16-38	BJ622776	Jack Plate Block Comp.	MY	1
16-39x	ER440921	Carbon/R. RD1/4 27k(J) (Insu. Type)	35-9-5	2
16-40x	ER214290	Carbon/R. RD1/4 4.7k(J) (Insu. Type)	35-9-5	2
16-41x	ER345677	Carbon/R. RD1/4 15k(J) (Insu. Type)	35-9-5	2
16-42x	ER324685	Carbon/R. RD1/4 33k(J) (Insu. Type)	35-9-5	2
16-43	EZ626927	Jack Plate Bracket	MY-5006	1
16-44	ZS355522	Screw, pan head 3x6		4
16-45	ZW554940	Nut M3		4
AMP. ASSEMBLY BLOCK				
16-46	SZ626905	Amp. Side Plate A	MY-5003	1
16-47	SZ626916	Amp. Side Plate B	MY-5003	1
16-48	ZS325495	Tapping Screw #2 3x6		15
16-49x	EZ627041	Amp. Shield Plate	MY-5007	1
16-50x	EJ514607	Wire Clip 220-JD485210-01 (Nylon)	2-7-18	3
16-51	ES622023	Lever SW. J-L6004	25-12-18	1
16-52	ES622034	Lever SW. J-L7003	25-12-20	1
16-53	EV622078	Double Vol. V24L5DPHN A50Kx2	36-3-60	2
16-54	EV622967	2-axial 2-throw/Vol. 50kAx2 (Friction Type)	36-3-61	1

FIG. 17 FINAL ASSEMBLY BLOCK



FINAL ASSEMBLY BLOCK

Ref. No.	Parts No.	Description	Schematic No.	Q'ty	Ref. No.	Parts No.	Description	Schematic No.	Q'ty
FRONT PANEL BLOCK					FINAL ASSEMBLY BLOCK				
17-1x	BZ622372	Front Panel Block Comp. (230D)	MY	1	17-26x	SZ627085	Side Plate A (Right)	MY-6001	1
17-2x	BZ622383	Front Panel Block Comp. (230)	MY	1	17-27x	SZ627096	Side Plate B (Left)	MY-6001	1
17-3	SP627153	Front Panel A	MY-6003	1	17-28x	ZS325495	Tapping Screw #2 3x6		20
17-4x	SP626815	Front Panel B (230)	MY-6003	1	17-29x	SZ627298	Panel Support B	MY-6002	1
17-5	SE626940	Reel Table Escutcheon	MY-6004	2	17-30x	SZ627311	Panel Support C	MY-6002	1
17-6x	ZW575730	Speed Nut (P Type) 3	6-3-6	12	17-31x	SA428714	LM Rubber Foot, w/screw	LM-404	4
17-7	SC627107	Head Cover Base	MY-6005	1	17-32x	ZW324281	Screw, pan head 4x25	MY-6016	4
17-8	SE626951	Counter Escutcheon	MY-6006	1	17-33	ZS613901	Panel Screw	CW-6031	6
17-9	SE613888	Button Escutcheon A	CW-6021	3	17-34	EZ436217	Collar For Jack	MY-5006	3
17-10	SE627300	Operation Button Escutcheon	MY-6007	1	17-35x	EZ627355	Meter Cushion		1
17-11	SE612055	Lamp Lens A (Red)	CH-6314	1	17-36x	EF563681	Fuse 1A 250V	39-1-50	1
17-12	SE627006	Meter Escutcheon	MY-6018	2	17-37x	ZS608657	Screw, pan head 4x15		1
17-13x	ZS447840	Tapping Screw #2 3x8 (BR)		8	17-38x	ZW603123	Washer D4.5x13x1t		1
17-14x	MH615161	Head Cover Prop	MY-6008	2	17-39	SC627118	Head Cover	MY-6011	1
17-15x	ZW416698	Nut M4		2	17-40	SM598983	GX Symbol Plate	KJ-6021	1
CASE BLOCK					17-41	SM627333	Model Name Plate GX-230D	MY-6010	1
17-16x	BC622348	Case Block Comp. (230D)	MY	1	17-42x	SM627322	Model Name Plate GX-230	MY-6010	1
17-17x	BC622350	Case Block Comp. (230)	MY	1	17-43x	SZ639562	Head Cover Retainer B	ND-6018	2
17-18	BC627164	Case A (230D)	MY-6013	1	17-44	SK612033	Double Knob (Upper)	CH-6312	3
17-19x	BC627175	Case B (230)	MY-6013	1	17-45	SK548627	Double Knob Upper Rubber Ring	MU-6215	4
17-20	SZ632070	Square Foot, w/rubber	MY-6026	2	17-46	SK612044	Double Knob (Lower)	CH-6313	3
17-21x	ZS200610	Tapping Screw #1 4x12 (Truss)		4	17-47	SK549865	Double Knob Rubber Ring A	TW-6306	3
17-22x	ZS392141	Tapping Screw #1 3x8 (Truss)		2	17-48	SK612156	Single Knob (1), w/knob (2)	CH-6307	1
17-23x	SE627120	Ventilator	MY-6014	1	17-49	SK631326	Pinch Roller Cap C	MS-6020	1
17-24x	ZW603123	Washer D4.5x13x1t		2	17-50	ZS200395	Screw, countersunk head 3x6		1
17-25x	ZS608670	Screw, pan head 4x30		2	17-51	MP625048	Pinch Roller H. LC D=38	LC-321	1

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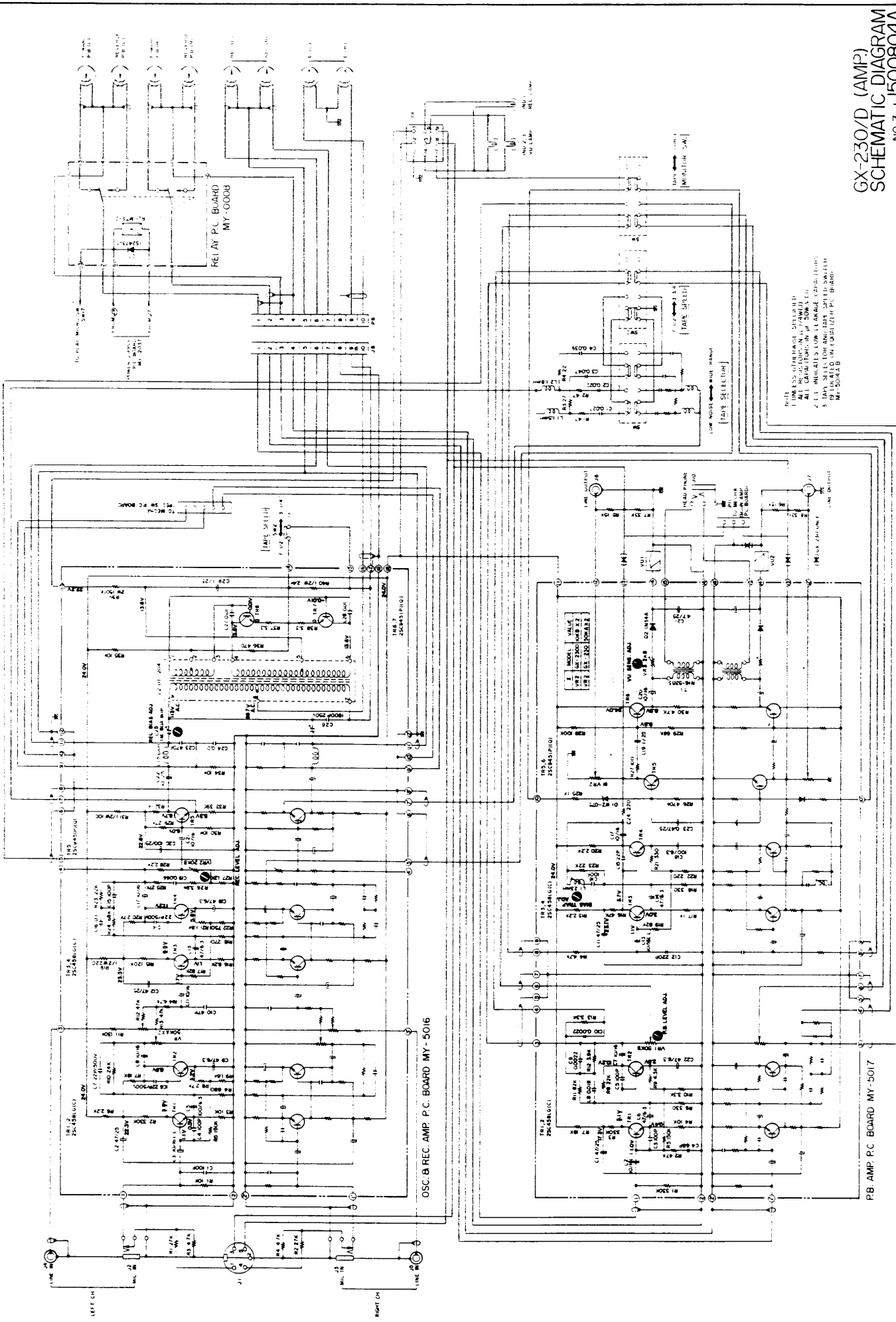
Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
BA426183	15-2	EC290520	11-C5	EF563703	9-43x	ET538694	14-TR1	MH625162	6-28
BA426183	15-8x	EC290520	11-C16	EF601942	9-47x	ET621786	9-34	MH625162	8-8x
BA622405	15-1x	EC308711	15-C610	EF602550	9-46x	ET623867	12-TR7	MH625173	8-10
BA622563	14-1x	EC311793	12-C7	EF624543	9-48x	EV464196	11-VR3	MH625195	8-13
BA622574	12-1x	EC313121	14-C6	EI425193	15-4	EV464220	11-VR1	MI597183	6-20
BA622710	13-1x	EC320051	10-C8	EJ205986	8-81x	EV522797	10-VR2	ML314976	2-24
BA622710	16-16	EC320051	10-C11	EJ205986	9-55x	EV554670	14-VR1	ML314976	8-16
BA622721	10-1x	EC320051	10-C17	EJ233370	9-31	EV621955	12-VR1	ML396810	8-15
BA622732	11-1x	EC320051	10-C21	EJ255093	8-82	EV621966	12-VR2	ML580465	7-27
BA622743	11-2x	EC320051	11-C7	EJ255115	8-83	EV622078	10-VR1	ML614992	7-22
BC622348	17-16x	EC320051	11-C17	EJ297066	9-58x	EV622078	16-53	ML615003	7-23
BC622350	17-17x	EC320051	11-C20	EJ300508	9-73x	EV622967	11-VR2	ML615126	16-6
BC627164	17-18	EC320051	12-C10	EJ328364	9-21x	EV622967	16-54	ML625206	8-17
BC627175	17-19x	EC324538	15-C607	EJ364915	9-60x	EW374894	9-51x	ML625230	8-31
BH622585	1-1x	EC329771	10-C9	EJ364915	16-28	EW516600	9-53x	ML625285	8-39
BI600355	6-1x	EC329771	10-C13	EJ373634	9-59x	EW524845	9-52x	ML625296	8-40
BJ622776	16-38	EC329771	10-C18	EJ373634	9-74x	EW604585	9-54x	ML625353	8-49
BM314741	2-1	EC329771	11-C6	EJ373691	16-37x	EZ225101	16-23	ML625386	5-9
BM600298	3-1x	EC329771	11-C14	EJ514607	16-50x	EZ225180	16-22x	ML625397	5-11
BR398430	2-2x	EC329771	11-C22	EJ557245	16-35x	EZ246936	9-50x	ML625634	4-12
BR398441	2-3x	EC329850	11-C12	EJ592435	16-21	EZ436217	17-34	ML625645	4-11
BS622620	5-21x	EC329861	13-C1	EJ601481	16-25	EZ486617	9-8	ML625724	4-17
BS622642	7-14x	EC331705	15-C602	EJ631945	9-49	EZ530021	16-29	MP625048	5-38
BT517274	11-T1	EC331828	12-C4	EL593662	16-19	EZ586326	16-18	MP625048	17-51
BT621922	9-2	EC337487	15-C601	EL621167	16-15	EZ606701	6-8	MR317507	2-19
BT621944	9-3x	EC346735	12-C13	EM558180	16-17	EZ614586	9-39x	MR597115	6-22
BT621988	9-4x	EC350684	15-C608	EO321254	10-L1	EZ615047	12-4	MS342000	2-6
BT621990	9-5x	EC350987	14-C1,2	EO369178	13-L1	EZ615058	9-70	MS597148	6-10
BZ600300	3-6	EC364858	9-10	EO380564	13-L2	EZ615058	14-6	MS597655	3-11
BZ622372	17-1x	EC368256	11-C23	EO383365	10-L2	EZ615060	9-71	MS615014	7-4
BZ622383	17-2x	EC368335	13-C2	EO496361	11-L1	EZ615060	12-6	MS625072	1-4
BZ622484	4-1x	EC372148	14-C4	EP494425	4-20	EZ615071	9-72	MS625184	5-35
BZ622596	5-1x	EC372148	15-C604	EP573658	5-3	EZ615071	12-7	MS625432	5-13
BZ622618	7-1x	EC377212	10-C10	EP621808	1-33	EZ615115	16-3	MS625601	4-5
EA382713	1-37x	EC379170	10-C16	EP638763	14-RL1	EZ623237	9-25x	MS625623	4-10
EA463206	1-24x	EC379192	13-C4	ER212883	4-31	EZ623878	4-34	MT255420	2-5
EA614632	9-80x	EC379214	13-C3	ER214290	16-40x	EZ624047	9-27x	MT255420	2-5
EA615082	4-28	EC389485	11-C8	ER324685	16-42x	EZ625127	1-35	MT297663	2-8
EA615093	9-79x	EC389496	10-C19	ER345677	16-41x	EZ625522	8-58	MT314987	2-25
EA624521	9-75x	EC399565	10-C6,7	ER365016	9-11	EZ625533	8-66	MT314987	8-19
EA624532	9-76x	EC399565	10-C14	ER376435	8-63	EZ625544	8-69	MT317485	2-17
EA624554	9-77x	EC399565	11-C15	ER376435	14-CR1to4	EZ625781	5-22	MT397225	2-10
EA624565	9-78x	EC401580	9-15x	ER426892	10-R40	EZ626894	14-2	MT405268	2-13
EA625138	1-32	EC405898	10-C23	ER440921	16-39x	EZ626927	16-43	MT436860	2-16
EA626411	8-70x	EC432810	10-C3	ER515070	10-R39	EZ626938	16-12	MT488147	2-4
EA627276	16-14	EC432810	11-C2	ER554556	8-84	EZ627041	16-49x	MT495606	2-11
EA628075	9-33	EC432810	11-C13	ER575640	9-18	EZ627074	15-6	MT495617	2-12x
EC220151	12-C11	EC450055	10-C29	ER589566	4-27x	EZ627355	17-35x	MV537862	6-26
EC220151	10-C20	EC450055	11-C19	ER589566	8-29x	EZ632068	9-19x	MV368886	3-7
EC220364	10-C5	EC450055	12-C9	ER593346	12-R20	HA532743	1-26	MV597082	6-4
EC220364	11-C18	EC450527	11-C21	ES622023	13-SW1	HA635105	1-18	MZ259233	9-62x
EC220612	14-C11	EC467133	11-C4	ES622023	16-51	HA625116	1-19	MZ314605	8-24
EC220678	10-C2	EC520626	8-65	ES622034	13-SW2	HP536501	1-23	MZ314673	8-48x
EC220678	10-C12	EC551160	8-73	ES622034	16-52	HR556582	1-27	MZ314998	2-26
EC220678	11-C1	EC557166	12-C8	ES479395	8-71	HZ315090	8-56	MZ314998	8-20
EC220678	11-C11	EC558202	10-C25	ES479395	9-56x	HZ532710	1-8	MZ315000	2-27
EC220678	15-C603	EC558235	10-C26	ES479485	9-67	HZ532732	1-13	MZ315000	8-21
EC220678	15-C606	EC564952	14-C3	ES562465	5-23	HZ532765	1-16	MZ316822	7-16
EC220994	10-C22	EC564952	14-C7	ES562465	7-11	HZ542092	7-17	MZ397080	8-23
EC220994	4-30	EC565896	8-74x	ES562465	8-64	HZ583176	1-28x	MZ529391	5-31
EC233100	15-7	EC593763	9-12	ES573456	8-59	HZ626837	1-2	MZ582030	5-36
EC250582	12-C3	ED219464	11-D2	ES573478	8-67	HZ626848	1-3	MZ582030	8-26
EC250582	12-C6	ED224526	4-24x	ES621178	8-72x	HZ627546	1-20	MZ596823	6-29
EC250683	11-C9,10	ED224548	12-D2to5	ES621178	9-57x	MB625566	2-23	MZ597071	6-3
EC250841	10-C24	ED224550	5-4x	ES621898	8-78	MB625566	8-80	MZ597093	6-6
EC250841	10-C27,28	ED224550	14-D1to4	ES621911	4-26	MC621887	8-61	MZ597126	6-23x
EC250885	4-33	ED224572	9-14x	ES621933	4-32	MG540551	2-28	MZ597137	6-9
EC250885	12-C12	ED357794	14-D10	ES621977	16-10	MH317373	2-30	MZ597150	6-13
EC250885	14-C5	ED494583	14-D5to8	ET398711	4-29	MH317373	8-14	MZ597172	6-12
EC250885	14-C8,9	ED557447	12-D1	ET399846	12-TR3,4	MH494414	4-21	MZ597644	3-9
EC251087	14-C10	ED560913	14-D9	ET399846	12-TR6	MH527635	5-26	MZ597666	3-8
EC251087	14-C12	ED560913	14-D11to17	ET478001	10-TR5to7	MH528513	5-25	MZ597690	3-10
EC251122	12-C2	ED570475	11-D1	ET478001	11-TR5,6	MH529233	1-11	MZ606712	6-5
EC251122	12-C5	ED593357	12-TH1	ET478001	12-TR1,2	MH533913	5-7	MZ614981	7-15
EC251291	12-C1	ED624903	1-34x	ET478001	12-TR8	MH578957	1-7	MZ615104	9-20x
EC251291	15-C605	EF460653	15-F601	ET478001	14-TR3to7	MH581927	8-4	MZ623913	9-26x
EC290520	10-C1	EF511637	9-45x	ET523405	10-TR1to4	MH615161	17-14x	MZ625151	8-6
EC290520	10-C4	EF563681	9-44x	ET523405	11-TR1to4	MH625083	1-38	MZ625228	8-30
EC290520	10-C15	EF563681	17-36x	ET537300	14-TR2	MH625094	1-30	MZ625252	8-36
EC290520	11-C3	EF563703	9-42	ET538154	12-TR5	MH625140	8-2	MZ625274	8-38

Parts No.	Ref. No. & Symbol No.	Parts No. &	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.	Parts No.	Ref. No. & Symbol No.
MZ625307	8-35	ZG303300	1-17	ZS484828	6-17	ZW603775	3-16x		
MZ625318	8-41	ZG317496	2-18	ZS483504	5-24	ZW603786	3-13		
MZ625342	8-44	ZG317777	7-25	ZS483502	8-60	ZW603797	3-14x		
MZ625364	8-50	ZG371114	8-28	ZS499331	6-7	ZW603990	6-2		
MZ625421	5-12	ZG456186	8-43	ZS516644	2-20	ZW604012	6-11		
MZ625443	5-16	ZG466312	1-9	ZS592378	4-25	ZW605698	3-3		
MZ625454	5-18	ZG466312	1-15	ZS593796	6-21	ZW621876	5-41		
MZ625487	8-62	ZG529211	5-28	ZS608264	8-68	ZW622001	5-32		
MZ625498	8-11	ZG535105	8-47	ZS608477	1-21	ZW622012	5-33		
MZ625500	8-53	ZG540551	8-25	ZS608512	1-14	ZW625241	8-33		
MZ625511	8-55	ZG568934	4-4	ZS608657	17-37x	ZW625241	16-7		
MZ625555	8-77	ZG580768	5-37	ZS608670	17-25x	ZW649618	6-24x		
MZ625577	3-17	ZG580768	8-52x	ZS609118	16-13				
MZ625612	4-3	ZG608321	5-42	ZS613901	17-33				
MZ625656	4-13	ZG614970	7-10	ZW259738	5-29				
MZ625678	4-6	ZG625217	8-27	ZW260010	5-39				
MZ625680	4-7	ZG625263	8-37	ZW270088	2-9				
MZ625735	4-19	ZG625331	4-9	ZW270088	4-22				
MZ625746	4-16	ZG625375	8-51	ZW270088	5-8				
MZ625757	4-23	ZG625465	5-20	ZW270088	5-34				
MZ625768	5-2	ZG625667	4-15	ZW273688	7-20				
MZ625770	5-6	ZG646020	6-18	ZW270088	8-54				
MZ625803	7-2	ZG200395	7-29	ZW270101	4-8				
MZ625858	9-29x	ZS200395	17-50	ZW270101	5-30				
MZ626850	4-2	ZS200610	17-21x	ZW270101	6-25				
MZ626861	9-28	ZS201150	6-19	ZW270101	7-9				
MZ627017	9-1	ZS201508	1-25	ZW270134	5-17				
MZ627030	16-27	ZS325495	8-76	ZW290283	2-29				
MZ627142	8-1	ZS325495	9-13	ZW290283	4-18				
MZ627265	7-5	ZS325495	15-3	ZW290283	8-18				
MZ627287	16-20	ZS325495	16-4	ZW272722	9-22x				
MZ627636	9-6	ZS325495	16-48	ZW273633	6-16				
MZ629414	9-61	ZS325495	17-28x	ZW273756	5-27				
MZ647133	9-30x	ZS344463	8-57	ZW273756	7-13				
MZ810191	7-6	ZS355522	16-44	ZW273756	8-5x				
MZ810191	8-42	ZS369900	1-31	ZW273756	8-12x				
SA428714	17-31x	ZS379350	9-40x	ZW273756	9-36				
SB614428	7-26	ZS379350	14-5	ZW273756	12-3				
SB614428	8-75	ZS379350	16-32x	ZW273756	14-4				
SB626962	4-36	ZS392141	17-22x	ZW273756	16-34x				
SB626973	4-37	ZS403222	2-22	ZW273778	2-14x				
SB626984	4-38	ZS413201	1-6	ZW273802	9-17x				
SB626995	4-39	ZS413201	8-3x	ZW273802	16-33x				
SC627107	17-7	ZS413201	9-65x	ZW273835	1-10				
SC627118	17-39	ZS413234	3-12	ZW273881	9-63x				
SE597161	6-14	ZS404044	1-5	ZW273892	9-64x				
SE612055	17-11	ZS414178	9-68x	ZW273914	1-12				
SE613888	17-9	ZS417216	7-24	ZW273914	5-14				
SE626940	17-5	ZS417216	8-22	ZW316800	7-18				
SE626951	17-8	ZS421806	6-31	ZW324281	17-32x				
SE627006	17-12	ZS421806	8-34	ZW334653	5-19				
SE627120	17-23x	ZS421806	9-35	ZW393164	9-24x				
SE627300	17-10	ZS421806	12-2	ZW413188	9-9				
SK548627	17-45	ZS421806	14-3	ZW413256	1-22				
SK549865	17-47	ZS422076	1-36	ZW416698	1-39				
SK597633	3-5	ZS422076	4-14	ZW416698	5-15				
SK612033	17-44	ZS422076	5-5	ZW416698	8-7x				
SK612044	17-46	ZS422076	6-27x	ZW416698	9-66x				
SK612156	17-48	ZS422076	7-30	ZW416698	17-15x				
SK631326	5-40	ZS422076	8-9	ZW419646	7-8				
SK631326	17-49	ZS422076	9-37	ZW420682	8-46				
SM598983	17-40	ZS422076	12-5	ZW436026	16-26				
SM627322	17-42x	ZS422076	16-11	ZW535094	7-28				
SM627333	17-41	ZS422965	7-12	ZW554624	16-24				
SM647245	9-69x	ZS424056	9-7	ZW554940	16-45				
SP627153	17-3	ZS424056	2-21	ZW555693	5-10				
SP626815	17-4x	ZS425981	2-15x	ZW560237	9-23x				
SZ615137	16-5	ZS432674	8-79	ZW562476	9-16x				
SZ615148	16-9	ZS432843	4-35	ZW562476	16-31x				
SZ626905	16-46	ZS432843	8-32	ZW563218	7-21				
SZ626916	16-47	ZS447805	15-5	ZW575730	17-6x				
SZ627085	17-26x	ZS447840	16-8	ZW580173	8-45				
SZ627096	17-27x	ZS447840	16-36x	ZW593212	6-30				
SZ627298	17-29x	ZS447840	17-13x	ZW597543	3-2				
SZ627311	17-30x	ZS455207	9-41x	ZW597622	3-4				
SZ632070	17-20	ZS462925	9-38x	ZW601075	6-15				
SZ639562	17-43x	ZS462947	16-30	ZW601075	7-7				
TA627028	16-1	ZS464692	7-19	ZW603123	17-24x				
TA628187	16-2x	ZS477876	1-29	ZW603123	17-38x				
TG255633	2-7	ZS481724	9-32	ZW603764	3-15x				

SECTION 3

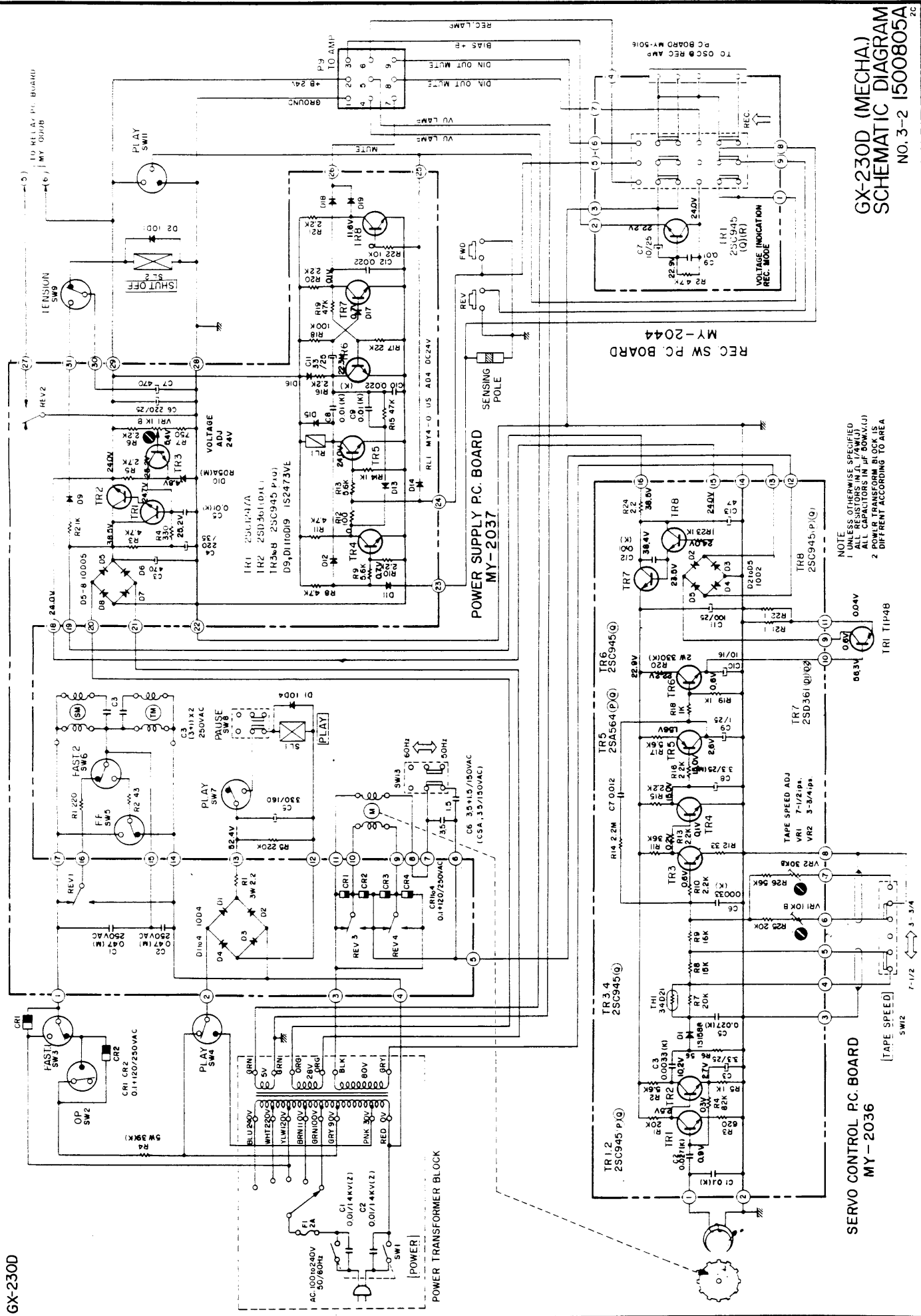
SCHEMATIC DIAGRAM

1. GX-230/D SCHEMATIC DIAGRAM
2. GX-230D SCHEMATIC DIAGRAM
3. GX-230 SCHEMATIC DIAGRAM



GX-230/D (AMP)
SCHEMATIC DIAGRAM
 NO 3-1 1500804A

NOTE:
 1. ALL CAPACITORS UNLESS OTHERWISE SPECIFIED ARE IN MICROFARADS.
 2. ALL CAPACITORS IN P.P. 50KV E.C.
 3. ALL CAPACITORS IN P.P. 50KV E.C.
 4. ALL CAPACITORS IN P.P. 50KV E.C.
 5. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE OF MIL-SPEC GRADE.
 6. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE OF MIL-SPEC GRADE.
 7. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE OF MIL-SPEC GRADE.
 8. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE OF MIL-SPEC GRADE.
 9. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE OF MIL-SPEC GRADE.
 10. UNLESS OTHERWISE SPECIFIED, ALL COMPONENTS ARE OF MIL-SPEC GRADE.



GX-230D (MECHA)
SCHEMATIC DIAGRAM
 NO.3-2 1500805A

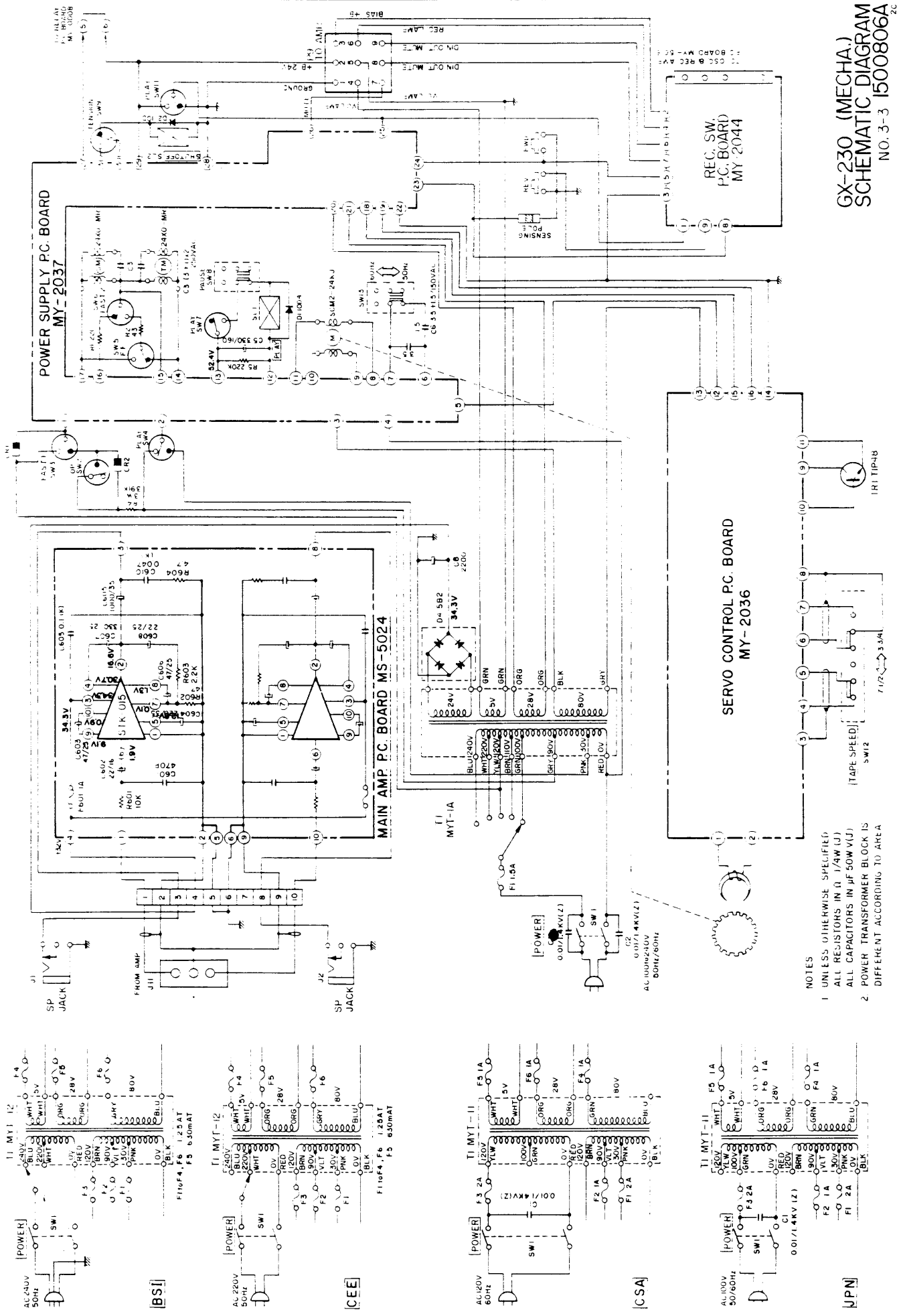
NOTE
 1 UNLESS OTHERWISE SPECIFIED
 ALL RESISTORS IN Ω, 1/4W, 1%
 2 DIFFERENT ACCORDING TO AREA

SERVO CONTROL PC BOARD
 MY-2036

REC SW PC BOARD
 MY-2044

POWER SUPPLY PC BOARD
 MY-2037

[TAPE SPEED] SW2
 1-1/2 3-3/4



**GX-230 (MECHA.)
SCHEMATIC DIAGRAM**
NO. 3-3 1500806A

- NOTES
- 1 UNLESS OTHERWISE SPECIFIED ALL RESISTORS IN Ω , μ W (J) ALL CAPACITORS IN μ F 50WV(U)
 - 2 POWER TRANSFORMER BLOCK IS DIFFERENT ACCORDING TO AREA