

# SERVICE MANUAL

## PARTS LIST

AKAI STEREO TAPE DECK

MODEL **GX-270D**

GX-270D



## STEREO TAPE DECK

# MODEL GX-270D

|           |                        |    |
|-----------|------------------------|----|
| SECTION 1 | SERVICE MANUAL .....   | 3  |
| SECTION 2 | PARTS LIST .....       | 27 |
| SECTION 3 | SCHEMATIC DIAGRAM..... | 48 |

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## SECTION 1

# SERVICE MANUAL

### TABLE OF CONTENTS

|       |                                                          |    |
|-------|----------------------------------------------------------|----|
| I.    | SPECIFICATIONS .....                                     | 4  |
| II.   | DISMANTLING OF UNIT .....                                | 6  |
| III.  | ARRANGEMENT OF MAIN PARTS .....                          | 8  |
| IV.   | MECHANISM ADJUSTMENTS .....                              | 9  |
|       | 1. BRAKE SOLENOID INSTALLATIONS POSITION ADJUSTMENT ...  | 9  |
|       | 2. PINCH WHEEL PRESSURE ADJUSTMENT .....                 | 9  |
|       | 3. QT MICRO SWITCH (SW2) INSTALLATION ANGLE ADJUSTMENT . | 9  |
|       | 4. BRAKE TENSION ADJUSTMENT .....                        | 10 |
|       | 5. ADJUSTMENT OF REEL TABLE HEIGHT .....                 | 11 |
|       | 6. ADJUSTMENT OF CAPSTAN MOTOR SHAFT LOOSE PLAY .....    | 11 |
|       | 7. ADJUSTMENT OF IMPEDANCE ROLLER SHAFT LOOSE PLAY ....  | 12 |
|       | 8. HEIGHT ADJUSTMENT OF TAPE GUIDE ON TENSION ARM .....  | 12 |
|       | 9. ADJUSTMENT OF TENSION ARM MICROSWITCH SW-9 POSITION . | 12 |
| V.    | HEAD ADJUSTMENT .....                                    | 13 |
| VI.   | AMPLIFIER SYSTEM ADJUSTMENT .....                        | 15 |
|       | 1. POWER SUPPLY VOLTAGE ADJUSTMENT .....                 | 15 |
|       | 2. TAPE SPEED ADJUSTMENT .....                           | 15 |
|       | 3. RECORDING, PLAYBACK AMPLIFIER ADJUSTMENT .....        | 16 |
|       | 4. PEAK LEVEL INDICATOR LIGHTING LEVEL ADJUSTMENT .....  | 17 |
| VII.  | D.C. RESISTANCE OF VARIOUS COILS .....                   | 18 |
| VIII. | CLASSIFICATION OF VARIOUS P.C. BOARDS .....              | 19 |
|       | 1. P.C. BOARD INTERCHANGEABILITY CHART .....             | 19 |
|       | 2. COMPOSITE VIEWS OF COMPONENTS .....                   | 20 |
| IX.   | PEAK LEVEL INDICATOR OPERATION .....                     | 25 |

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.

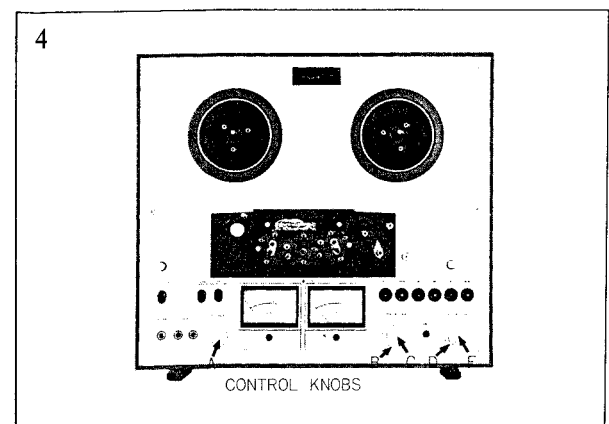
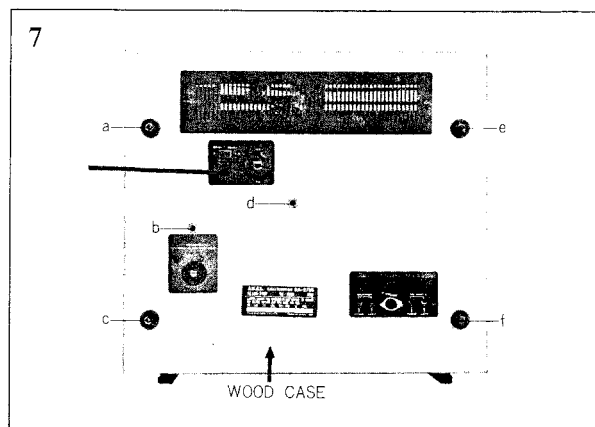
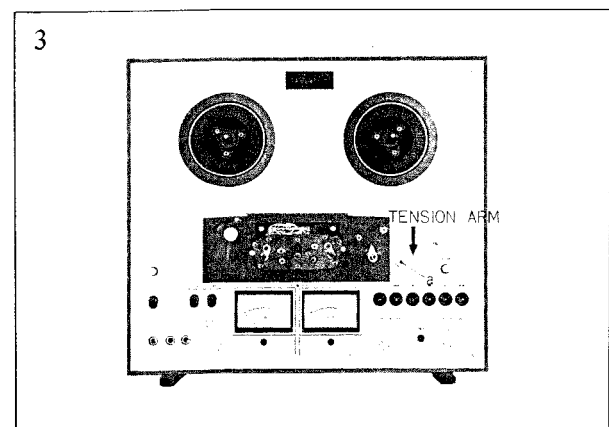
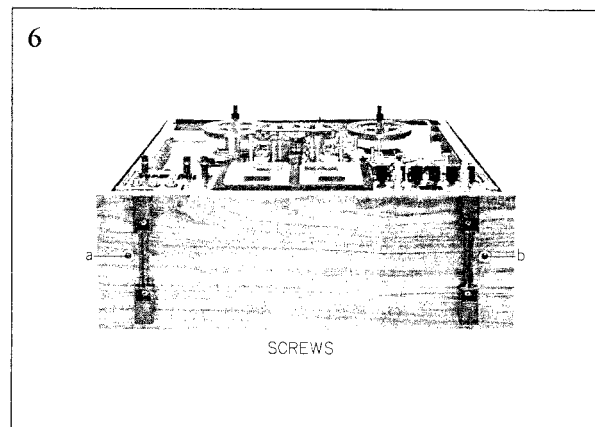
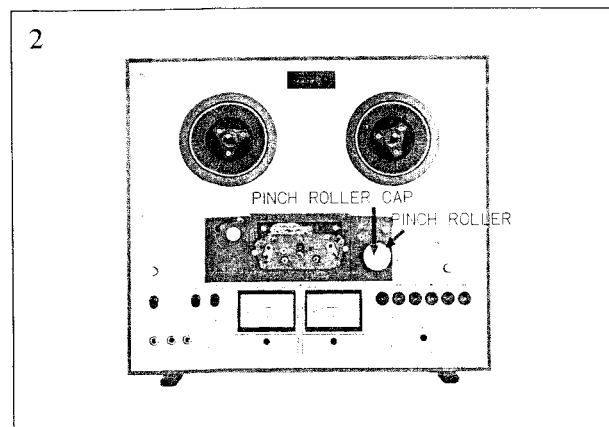
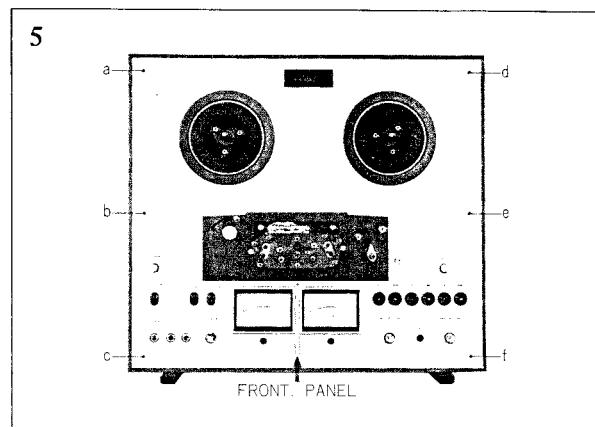
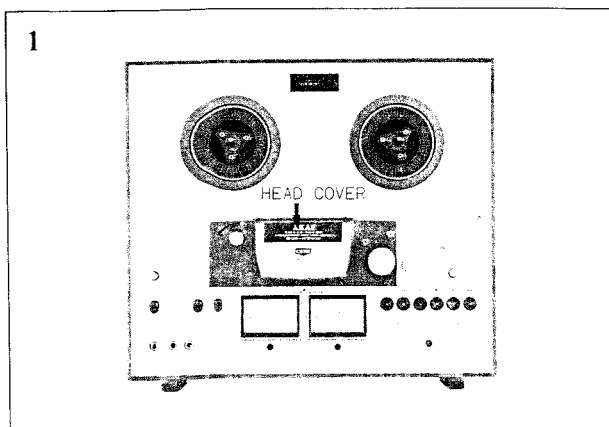
|                                  |            |                                                                                                                                                                                                                                        |
|----------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TRACK SYSTEM                     |            | 4 track 2 channel stereo system                                                                                                                                                                                                        |
| TAPE SPEED                       |            | 7-1/2 and 3-3/4 ips. $\pm 0.7\%$<br>*7-1/2 ips. (19 cm/sec) $\pm 1.0\%$<br>*3-3/4 ips. (9.5 cm/sec) $\pm 1.5\%$                                                                                                                        |
| WOW AND FLUTTER                  |            | Less than 0.07% RMS at 7-1/2 ips.<br>Less than 0.10% RMS at 3-3/4 ips.<br>*Less than 0.10% at 7-1/2 ips. (FWD)<br>*Less than 0.12% at 7-1/2 ips. (REV)<br>*Less than 0.15% at 3-3/4 ips. (FWD)<br>*Less than 0.18% at 3-3/4 ips. (REV) |
| TOTAL WOW AND FLUTTER            |            | *Less than 0.12% at 7-1/2 ips.<br>*Less than 0.18% at 3-3/4 ips.                                                                                                                                                                       |
| FREQUENCY RESPONSE               |            | 30 to 23,000 Hz $\pm 3$ dB at 7-1/2 ips.<br>30 to 19,000 Hz $\pm 3$ dB at 3-3/4 ips.<br>(Using AKAI LN-150-7 tape)<br>30 to 22,000 Hz $\pm 3$ dB at 7-1/2 ips.<br>30 to 18,000 Hz $\pm 3$ dB at 3-3/4 ips.                             |
| DISTORTION                       |            | Less than 1.0%                                                                                                                                                                                                                         |
| TOTAL DISTORTION                 |            | Less than 1.5% at 7-1/2 ips.<br>Less than 2.5% at 3-3/4 ips.                                                                                                                                                                           |
| S/N RATIO                        |            | Better than 54 dB<br>*Better than 50 dB                                                                                                                                                                                                |
| TOTAL S/N RATIO                  |            | *Better than 45 dB                                                                                                                                                                                                                     |
| OUTPUT                           | LINE       | 0.775V (0 $\pm$ 1 dB/0 $\pm$ 1.5 dB, FWD/REV)<br>700 Hz "0" VU pre-recorded tape, output volume maximum.                                                                                                                               |
|                                  | DIN        | 0.5V                                                                                                                                                                                                                                   |
| INPUT                            | MIC        | More than 0.3 mV                                                                                                                                                                                                                       |
|                                  | LINE       | More than 70 mV                                                                                                                                                                                                                        |
|                                  | DIN        | More than 3 mV<br>(At "0" VU output, recording volume maximum)                                                                                                                                                                         |
| RECORDING/PLAYBACK LEVEL         |            | 0.775V (0 $\pm$ 1.5 dB)                                                                                                                                                                                                                |
| CROSS TALK                       |            | Better than 40 dB<br>(1,000 Hz, +3 VU recording)                                                                                                                                                                                       |
| ERASE RATIO                      |            | Better than 70 dB<br>(1,000 Hz, +3 VU recording)                                                                                                                                                                                       |
| PEAK LEVEL INDICATOR             |            | +8 VU $\pm$ 1 dB                                                                                                                                                                                                                       |
| RECORDING BIAS FREQUENCY         |            | 100 $\pm$ 10 kHz                                                                                                                                                                                                                       |
| BIAS LEAK                        |            | Better than -30 dB                                                                                                                                                                                                                     |
| HIGH RANGE 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 TAPE     |            | Approximately 120 seconds using, a 1,800 ft. tape at 50 Hz.                                                                                                                                                                            |
| MOTOR                            | MAIN MOTOR | 2 speed A.C. Servo Control Outer Rotor Motor<br>Type: SCM2-24KJ 4 pole<br>Revolutions: 615 r.p.m. at 7-1/2 ips. (19 cm/sec.)<br>307.5 r.p.m. at 3-3/4 ips. (9.5 cm/sec.)                                                               |
|                                  | REEL MOTOR | Two 6 pole eddy current Outer Rotor Motors<br>Type: 24XO-MR<br>Revolutions: 930 r.p.m. at 50 Hz.<br>1,120 r.p.m. at 60 Hz.                                                                                                             |
| HEAD                             |            |                                                                                                                                                                                                                                        |
| RECORDING/ERASE COMBINATION HEAD |            | Type: RE4-6<br>Gap: Rec; 4 $\mu$<br>Erase; Double Gap<br>Impedance: Rec; 1,400 $\Omega$ $\pm$ 25% at 100 kHz.<br>Erase; 130 $\Omega$ $\pm$ 7% at 100 kHz.<br>D.C. Resistance: Rec; 5.5 $\Omega$<br>Erase; 1.8 $\Omega$                 |
| PLAYBACK HEAD                    |            | Type: P4-202<br>Gap: 1.7 $\pm$ 0.5 $\mu$<br>Impedance: 1,400 $\Omega$ at 1 kHz<br>D.C. Resistance: 268 $\Omega$                                                                                                                        |

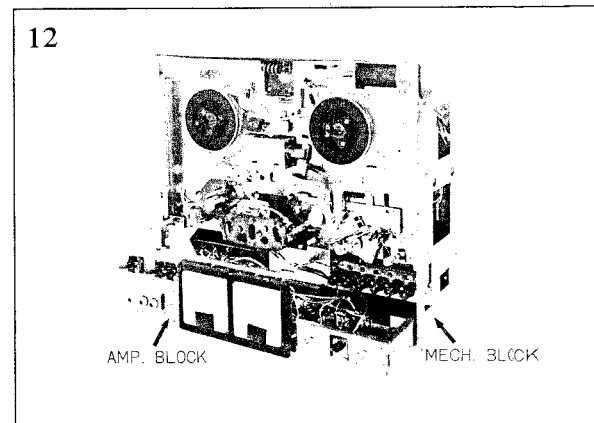
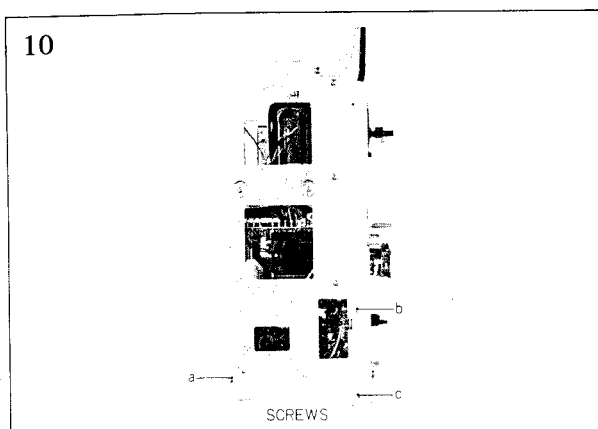
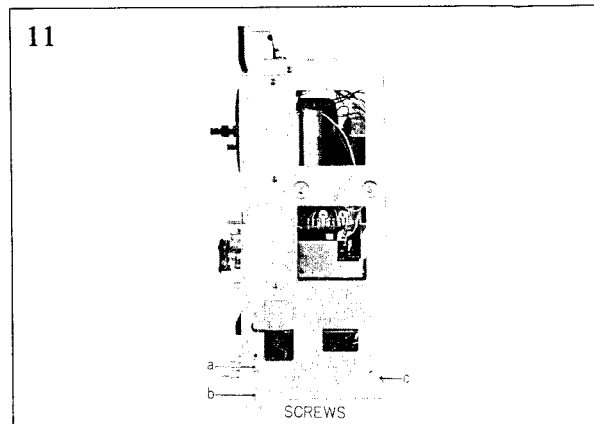
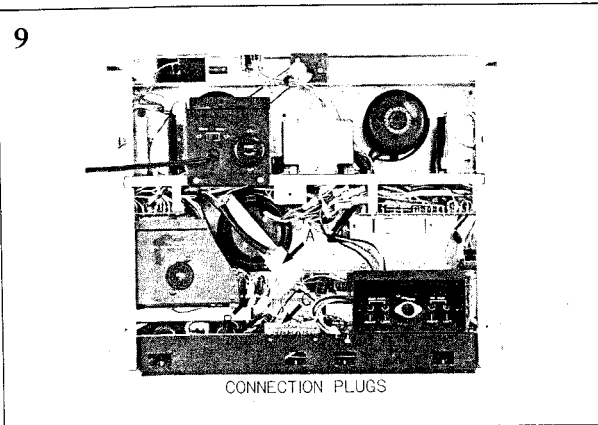
|                                       |                                                   |    |                          |   |
|---------------------------------------|---------------------------------------------------|----|--------------------------|---|
| TRANSISTOR                            | 2SA564 (Q) (R) . . . . .                          | 1  | 2SC1247A (B) (V) . . . . | 1 |
|                                       | 2SC458LG (C) . . . . .                            | 16 | 2SD361 (D) (E) . . . . . | 1 |
|                                       | 2SC945 (P) (Q) (R) . . .                          | 30 | 2SD361 (D1) (D2) . . . . | 1 |
|                                       | 2SC1211 (D) (E) . . . . .                         | 1  | T1P48 . . . . .          | 1 |
| DIODE                                 | 1N34A . . . . .                                   | 2  | 10D2 . . . . .           | 3 |
|                                       | 1S1588 . . . . .                                  | 1  | 10D4 . . . . .           | 7 |
|                                       | 1S2473 . . . . .                                  | 25 | RD5A (M) . . . . .       | 1 |
|                                       | 1S2473VE . . . . .                                | 16 | WZ075 . . . . .          | 2 |
|                                       | 10D05 . . . . .                                   | 5  | GL-31AR . . . . .        | 1 |
| POWER REQUIREMENTS<br>AND 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 (Japan models)         |    |                          |   |
| DIMENSIONS                            | 441(W) x 404(H) x 210(D) mm                       |    |                          |   |
|                                       | (17.4" x 15.9" x 8.3")                            |    |                          |   |
|                                       | (Dimensions include all protruding parts)         |    |                          |   |
| WEIGHT                                | 15.6 kg (34.3 lbs.)                               |    |                          |   |

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

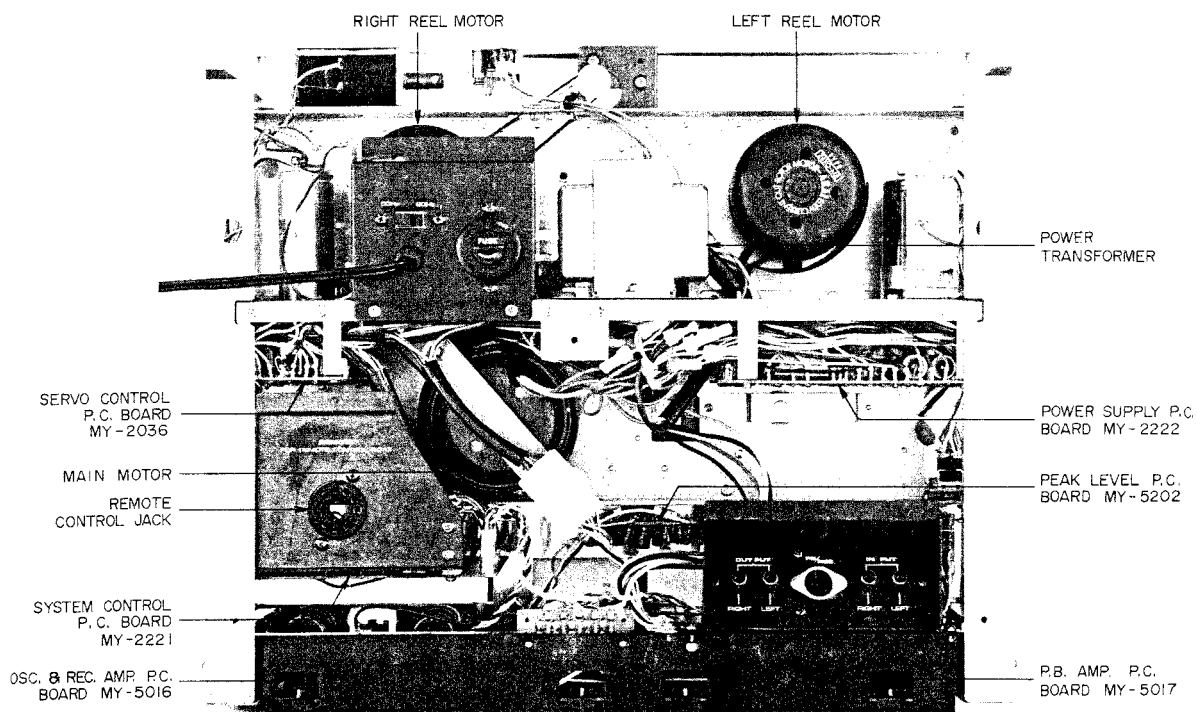
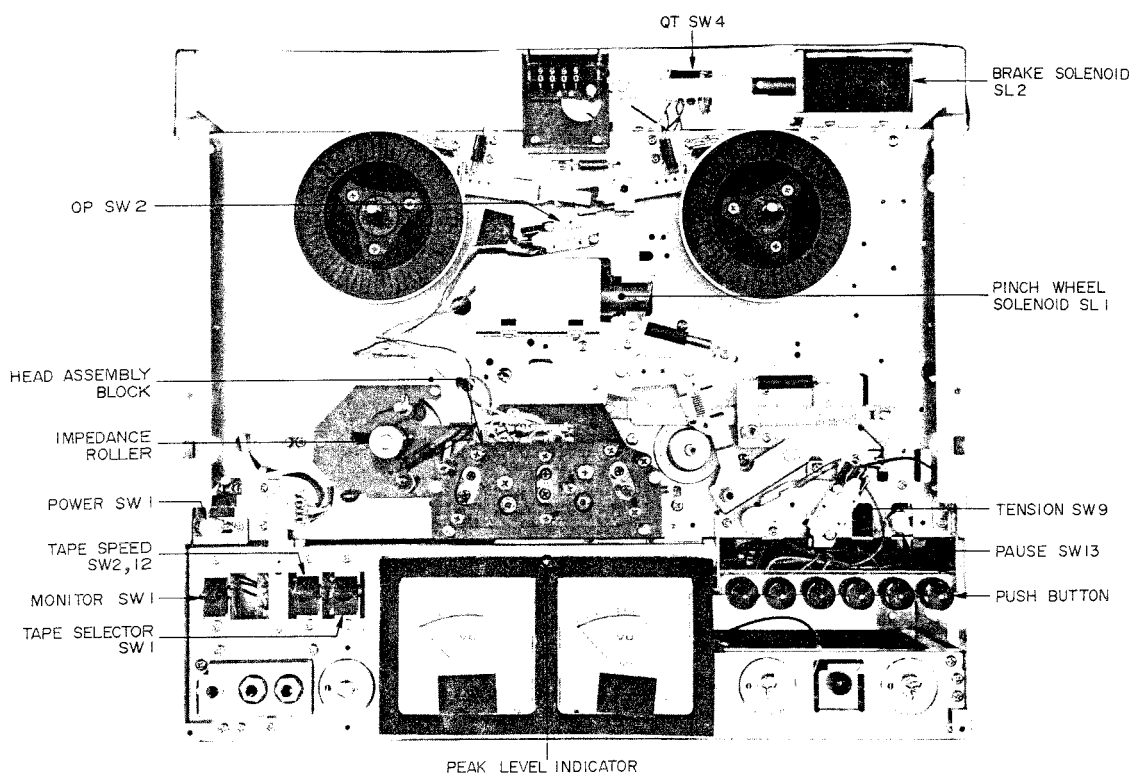
## II. DISMANTLING OF UNIT

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





### III. ARRANGEMENT OF MAIN PARTS



## IV. MECHANISM ADJUSTMENTS

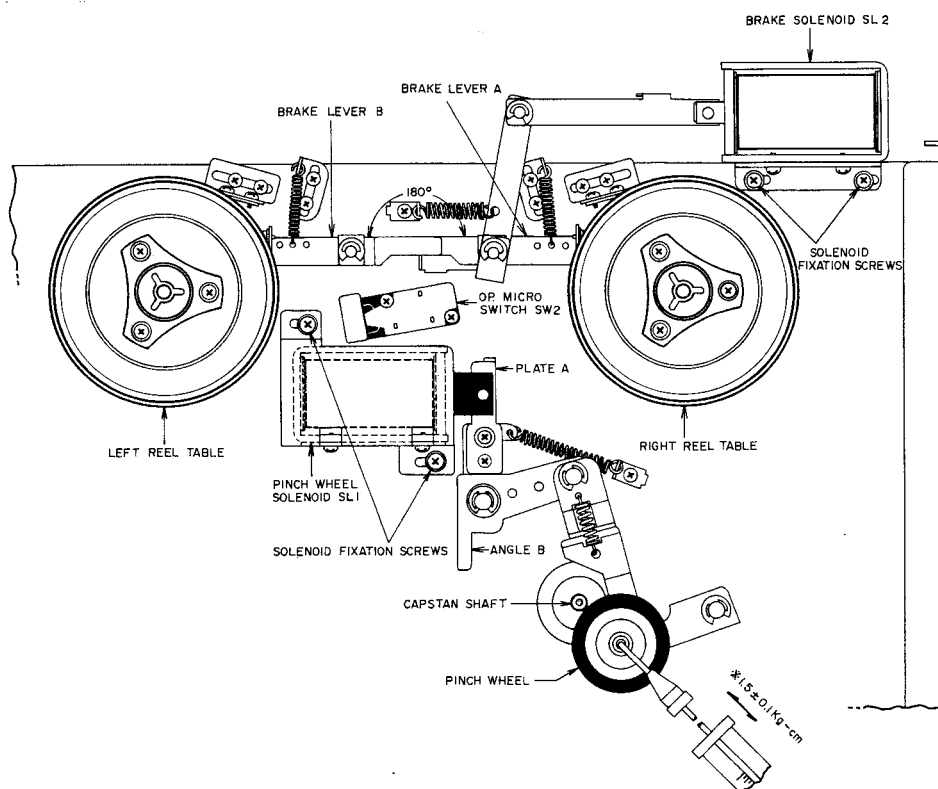


Fig. 1

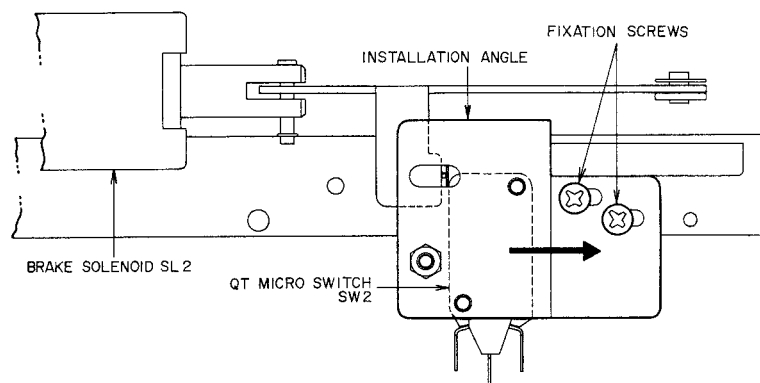


Fig. 2

### 1. BRAKE SOLENOID INSTALLATIONS POSITION ADJUSTMENT (Refer to Fig. 1)

At play mode, confirm that Brake Lever A and Brake Lever B display 180° angle relativity.

If necessary, adjust brake solenoid installation position.

### 2. PINCH WHEEL PRESSURE ADJUSTMENT (Refer to Fig. 1)

1) At play mode, confirm that Plate A and Angle B display 180° angle relativity.

2) Adjust pinch wheel solenoid installation position so that pinch wheel pressure is  $1.5 \pm 0.1$  kgr-cm.

### 3. QT MICRO SWITCH (SW2) INSTALLATION ANGLE ADJUSTMENT (Refer to Fig. 2)

As shown in the figure, position as far toward the arrow mark as possible and fix at that position.

Caution: If this installation position is not proper, the QT micro switch will be damaged when stop is effected from play mode, etc.

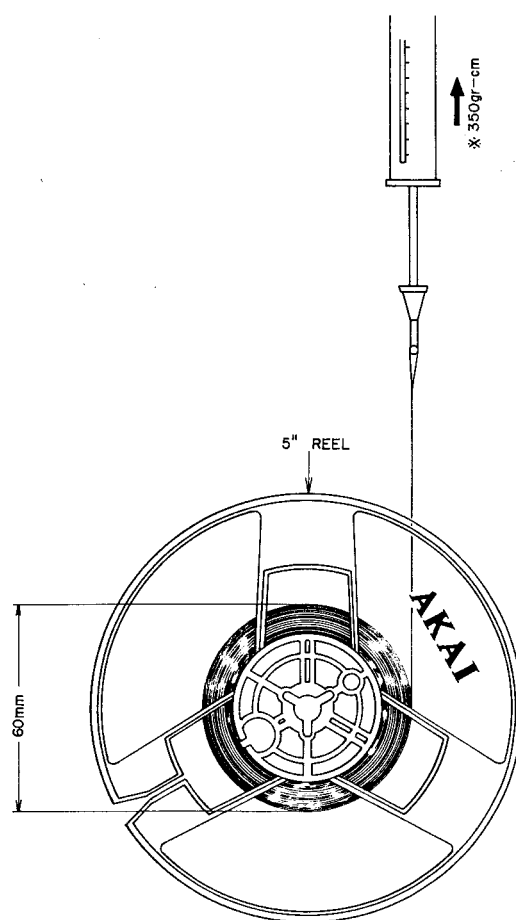


Fig. 3

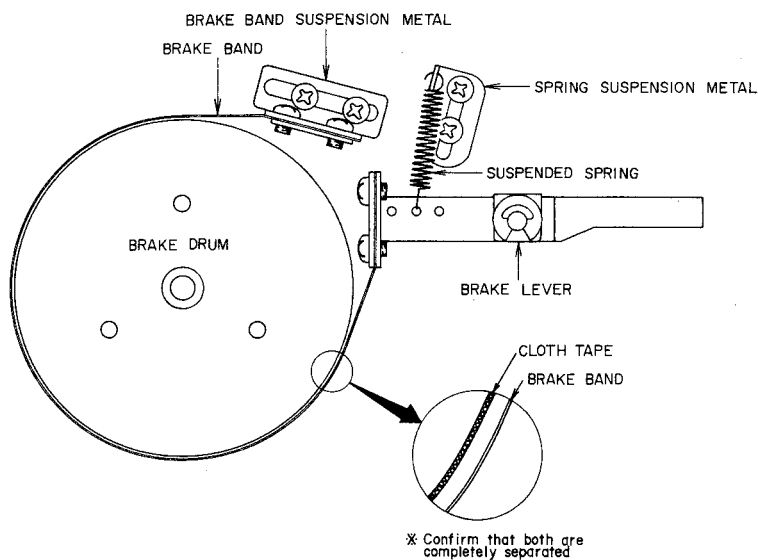


Fig. 4

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

- 1) As shown in Fig. 3, use a 60 mm diameter of 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.

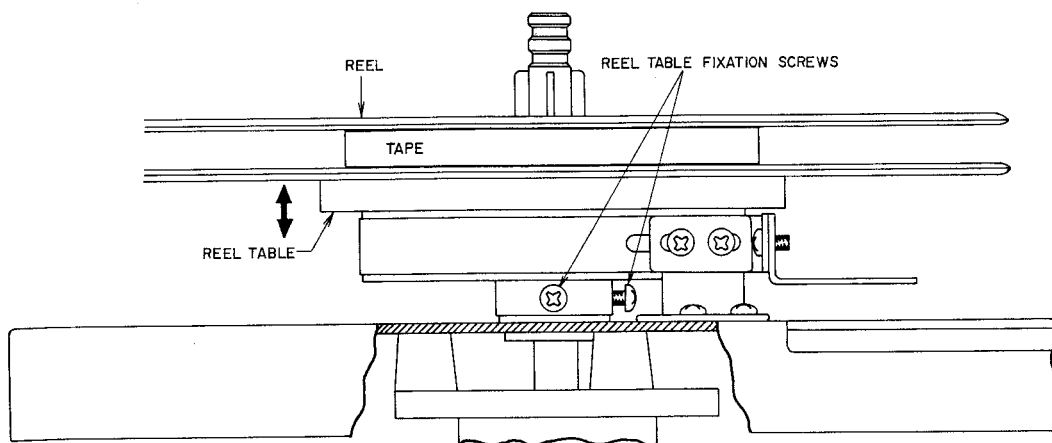


Fig. 5

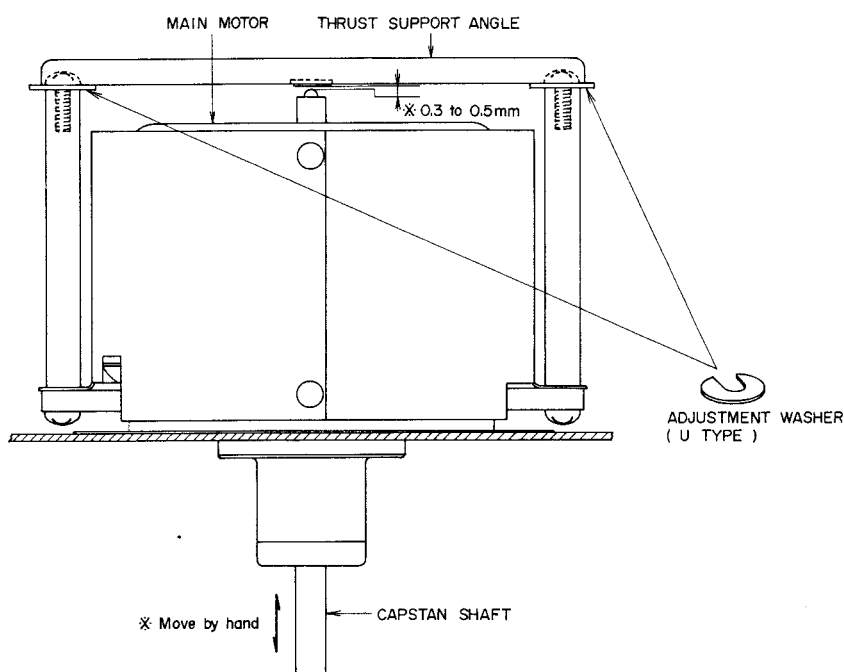


Fig. 6

## 5. 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.

## 6. 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.

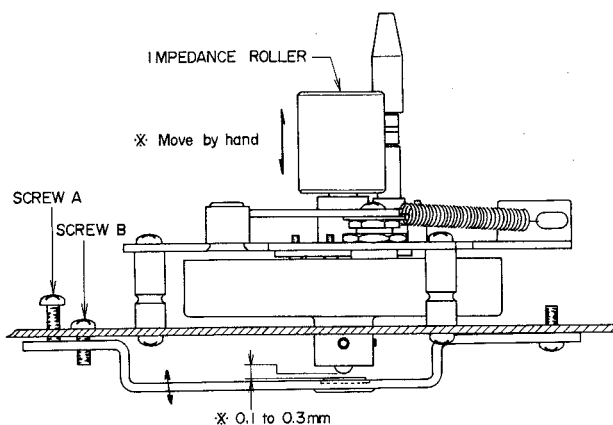


Fig. 7

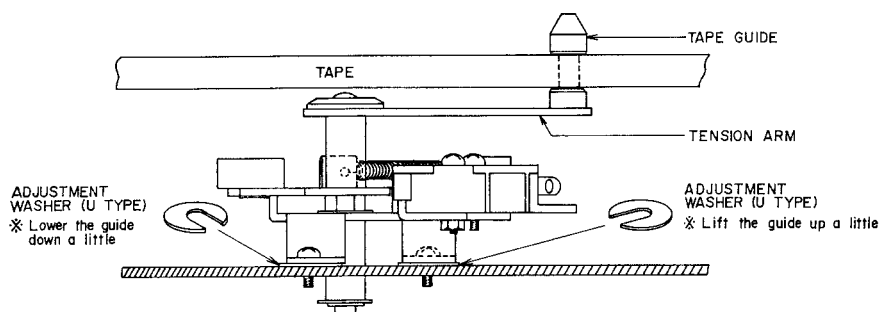


Fig. 8

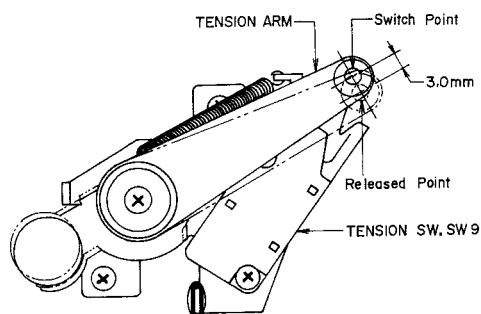


Fig. 9

#### 7. 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.

#### 8. 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.

#### 9. ADJUSTMENT OF TENSION ARM MICROSWITCH SW-9 POSITION

Confirm that the microswitch operates at the position indicated in Fig. 9.

If necessary, move the microswitch to obtain optimum position.

## V. HEAD ADJUSTMENT

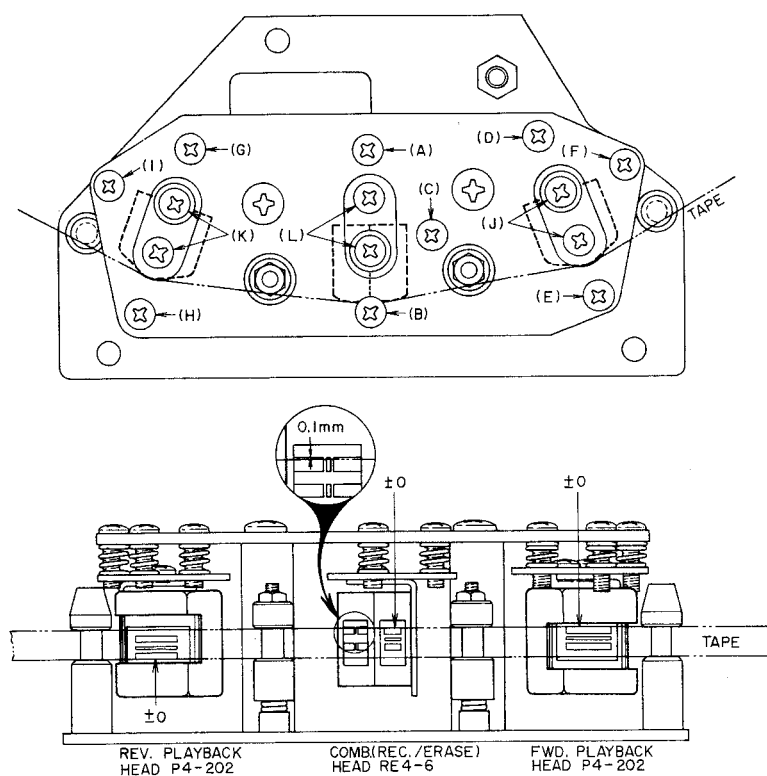


Fig. 10

### NOTES:

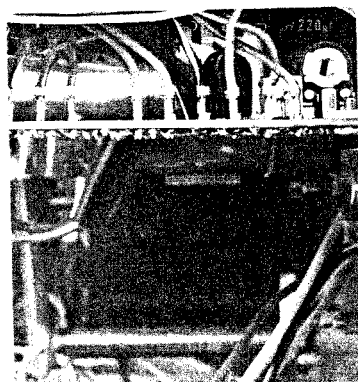
- 1) As perfect head adjustments are vital in attaining top tape deck performance, please be sure that these adjustments are properly carried out.
- 2) Be careful not to use a magnetized screw driver or other magnetized tools in the vicinity of the heads.
- 3) Use only new tape as level variation is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

| Step | Adjustment Item                                | Test Tape Supply Signal                  | Mode | Adjustment Point | Remarks                                                                                                             |
|------|------------------------------------------------|------------------------------------------|------|------------------|---------------------------------------------------------------------------------------------------------------------|
| 1    | 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.                                   |
| 2    | 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.                                   |
| 3    | 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.                                   |
| 4    | FWD Playback Head Azimuth Alignment Adjustment | 8,000 Hz, 3-3/4 ips test tape            | FWD  | (F)              | Maximum output, both channels.                                                                                      |
| 5    | 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. |
| 6    | REV Playback Head Azimuth Alignment Adjustment | 8,000 Hz, 3-3/4 ips test tape            | REV  | (I)              | Maximum output, both channels.                                                                                      |
| 7    | 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. |
| 8    | Combination Head Azimuth Alignment Adjustment  | Scotch #211 tape<br>15,000 Hz<br>-20 dBm | REC  | (C)              | Maximum output, both channels.                                                                                      |
| 9    | Combination Head Gap Alignment Adjustment      | Scotch #211 tape<br>15,000 Hz<br>-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

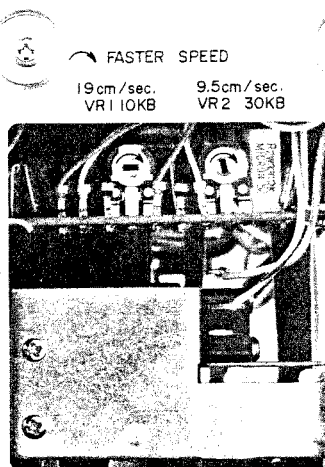
### 1. POWER SUPPLY VOLTAGE ADJUSTMENT



VR1 1KB  
ADJUST TO 24V

Fig. 11

### 2. TAPE SPEED ADJUSTMENT



FASTER SPEED  
19 cm/sec. 9.5 cm/sec.  
VR1 10KB VR2 30KB

19 cm/sec.  $\pm 1\%$   
9.5 cm/sec.  $\pm 1.5\%$  Fig. 12

| Step | Adjustment Item                 | Test Tape                     | Mode     | Adjustment Point | Result               | Remarks                                |
|------|---------------------------------|-------------------------------|----------|------------------|----------------------|----------------------------------------|
| 1    | Power Supply Voltage Adjustment |                               | STOP     | VR1 1 k B        | 24.0V                | Terminal (39), Power Supply P.C. Board |
| 2    | 7-1/2 ips Tape Speed Adjustment | 1,000 Hz, 7-1/2 ips test tape | FWD P.B. | VR1 10 k B       | 1,000 Hz $\pm 1.0\%$ | Tape Speed 7-1/2 ips.                  |
| 3    | 3-3/4 ips Tape Speed Adjustment | 1,000 Hz, 7-1/2 ips test tape | FWD P.B. | VR2 30 k B       | 500 Hz $\pm 1.5\%$   | Tape Speed 3-3/4 ips.                  |

### 3. RECORDING, PLAYBACK AMPLIFIER ADJUSTMENT

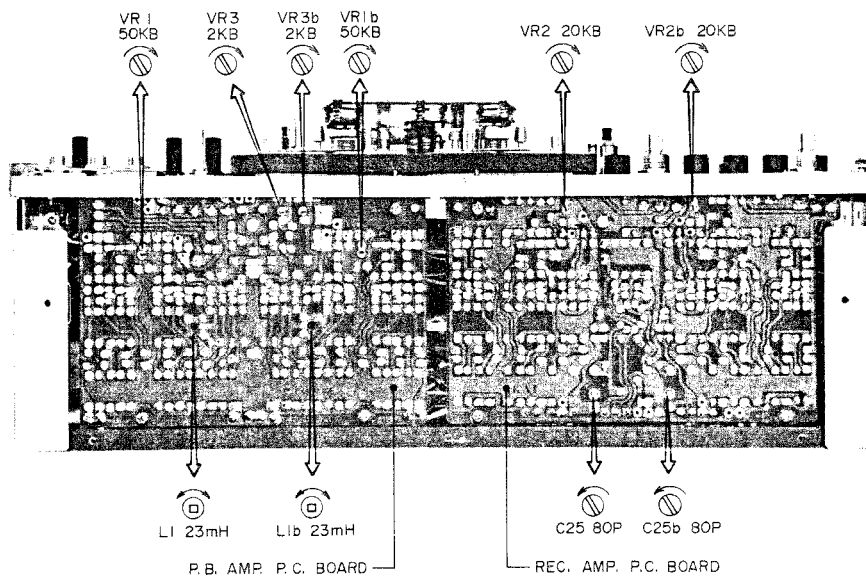


Fig. 13

| Step | Adjustment Item                 | Test Tape Supply Signal                                 | Mode     | Adjustment Point  | Result                     | Remarks                                             |
|------|---------------------------------|---------------------------------------------------------|----------|-------------------|----------------------------|-----------------------------------------------------|
| 1    | Playback Level Adjustment       | 700 Hz, 7-1/2 ips. "0" VU test tape                     | FWD P.B. | VR1 50 k $\Omega$ | 0 $\pm$ 1.0 dB (0.775V)    | Within 0 $\pm$ 1.5 dB at reverse playback           |
| 2    | VU Meter Sensitivity Adjustment | 700 Hz, 7-1/2 ips. "0" VU test tape                     | FWD P.B. | VR3 2 k $\Omega$  | "0" VU                     |                                                     |
| 3    | Recording Level Adjustment      | Scotch #211 tape, 1,000 Hz "0" VU recording             | REC      | VR2 20 k $\Omega$ | 0 $\pm$ 1.5 dB (0.775V)    | Monitor Switch at SOURCE                            |
| 4    | 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 |
| 5    | 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".

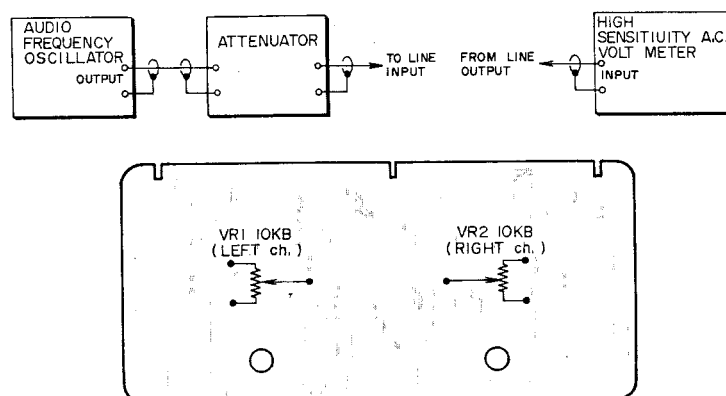


Fig. 14

#### 4. PEAK LEVEL INDICATOR LIGHTING LEVEL ADJUSTMENT (Refer to Fig. 14)

- 1) Connect measuring instruments as shown in Fig. 14 above.
- 2) Set Output Volume to maximum (turn fully clockwise)
- 3) Set Monitor Switch to SOURCE.
- 4) Set Line Controls to 12 o'clock position.
- 5) Supply a 1,000 Hz sine wave signal from the Audio Frequency Oscillator and adjust Peak Level P.C. Board semi-fixed resistor so that the Level Indicator lamp lights when the High Sensitivity A.C. Voltmeter indication reaches 8 dBm.

VR1 10 kΩ: Left channel

VR2 10 kΩ: Right channel

\* Peak level indicator lighting level specification is  $8 \pm 1$  dBm.

NOTE: Because left-right channel adjustment semi-fixed resistors are separate, adjust respective channels accordingly.

## VII. D.C. RESISTANCE OF VARIOUS COILS

| Part                                | Designation        | D.C. Resistance                                                            |
|-------------------------------------|--------------------|----------------------------------------------------------------------------|
| Main Motor                          | SCM2-24KJ          | Between BLU-RED 100 ohm<br>Between YLW-GRN 180 ohm<br>Pick-up Coil 635 ohm |
| Reel Motor                          | 24XO-MR            | Between BLU-RED 74 ohm<br>Between YLW-GRN 166 ohm                          |
| Pinch Wheel Solenoid                | 1660THT3           | 685 ohm                                                                    |
| QT Solenoid                         | KGS 10CM 1,300 ohm | 1,300 ohm                                                                  |
| RELAY                               | MY4-O-US-AD4 DC24V | 650 ohm                                                                    |
| RELAY                               | MTS-2              | 980 ohm                                                                    |
| Headphone<br>Output Transformer     | N16-535S           | Primary 565 ohm $\pm 15\%$<br>Secondary 0.95 ohm $\pm 15\%$                |
| Oscillator Coil                     | OT-204             | Between 1 – 3 0.3 ohm<br>Between 4 – 6 0.7 ohm<br>Between 7 – 9 8.2 ohm    |
| Playback Head                       | P4-202             | 268 ohm                                                                    |
| Recording/Erase<br>Combination Head | RE4-6              | REC 5.5 ohm<br>Erase 1.8 ohm                                               |

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

## VIII. CLASSIFICATION OF VARIOUS P.C. BOARDS

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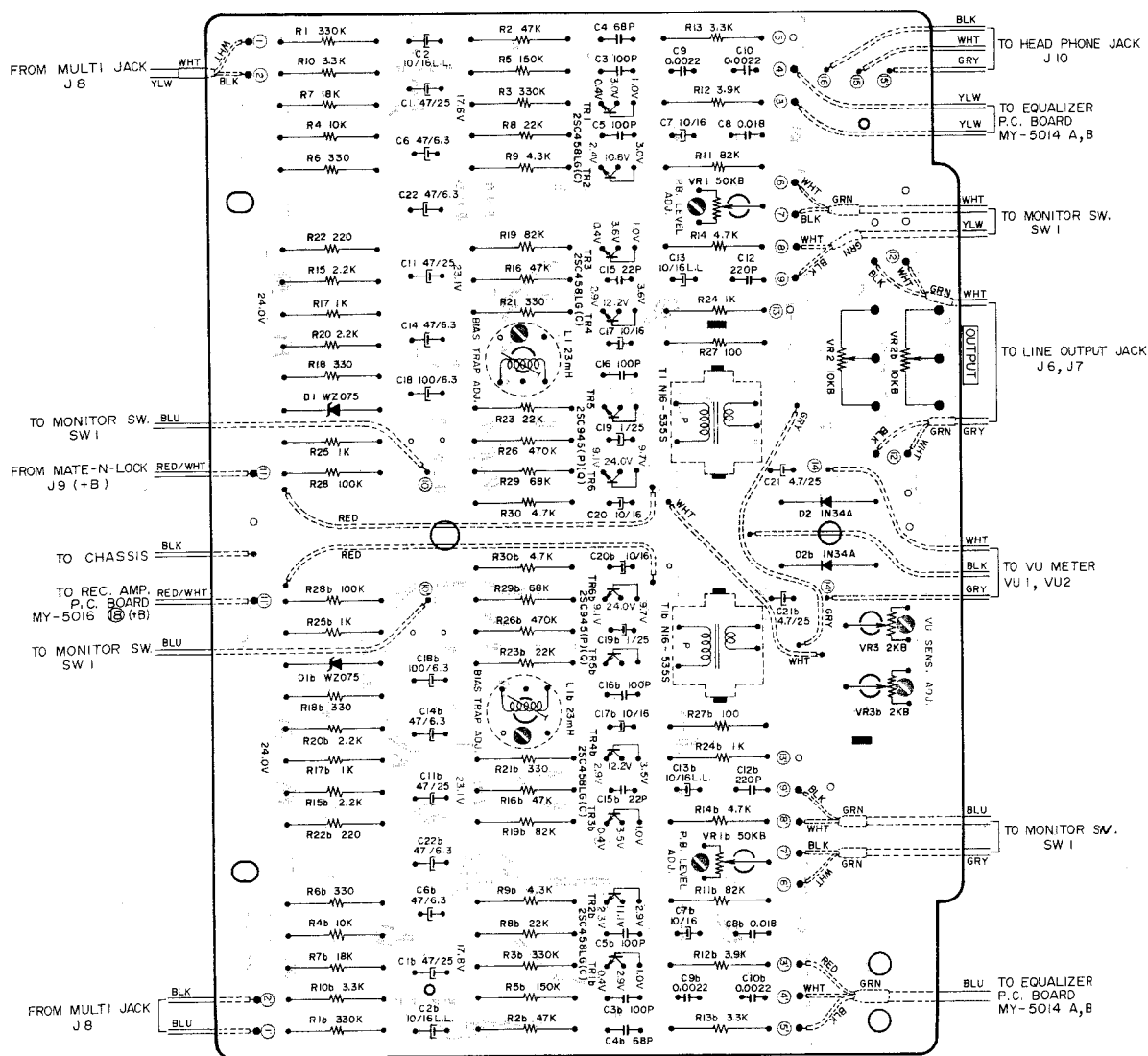
### 1. P.C. BOARD INTERCHANGEABILITY CHART

| P.C. Board                         | Designation |
|------------------------------------|-------------|
| Relay P.C. Board                   | MY-0008     |
| Servo Control P.C. Board           | MY-2036     |
| Transistor P.C. Board              | MY-2054     |
| Equalizer P.C. Board               | MY-5014A.B  |
| OSC. and Recording Amp. P.C. Board | MY-5016     |
| Playback Amp. P.C. Board           | MY-5017     |
| System Control P.C. Board          | MY-2221     |
| Power Supply P.C. Board            | MY-2222     |
| Peak Level P.C. Board              | MY-5202     |

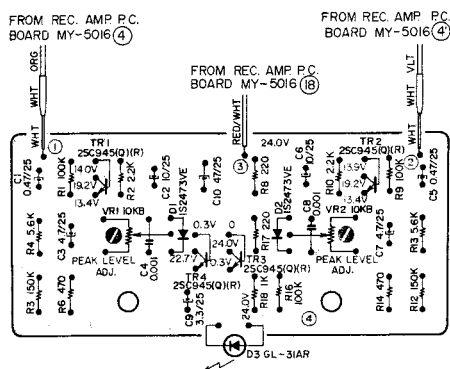
1) OSC. AND REC. AMP. P.C. BOARD MY-5016



## 2) PLAYBACK AMP. P.C. BOARD MY-5017

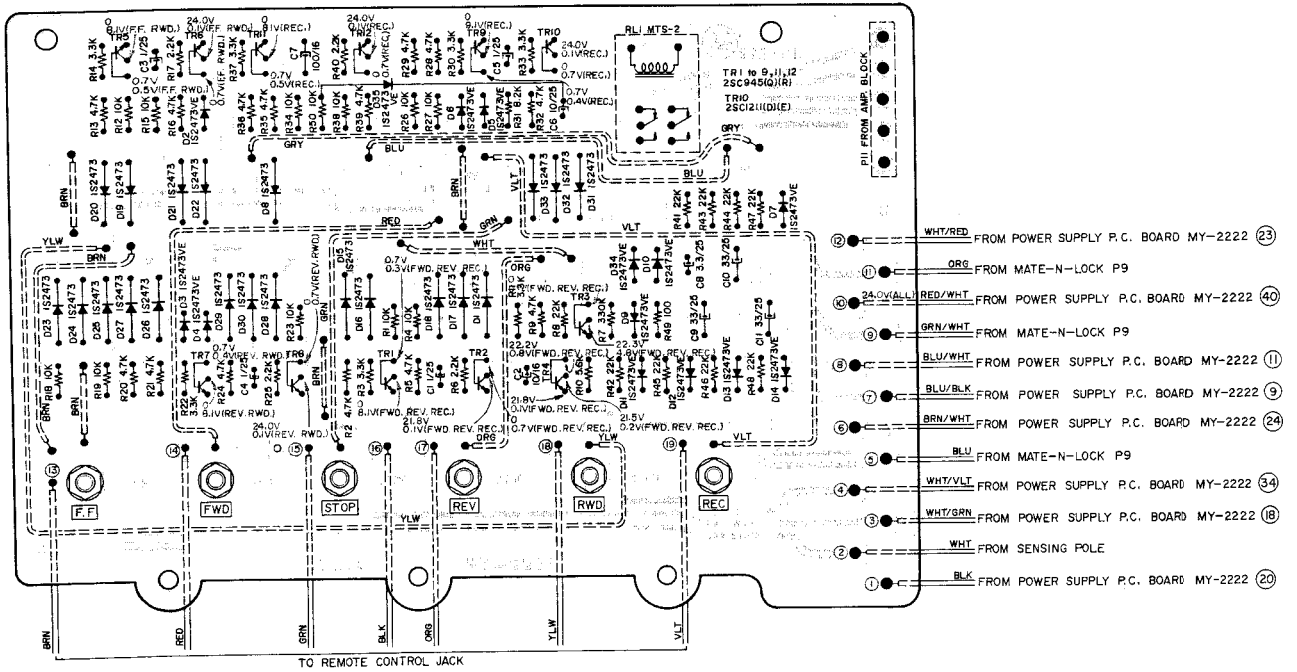


### 3) PEAK LEVEL P.C. BOARD MY-5202

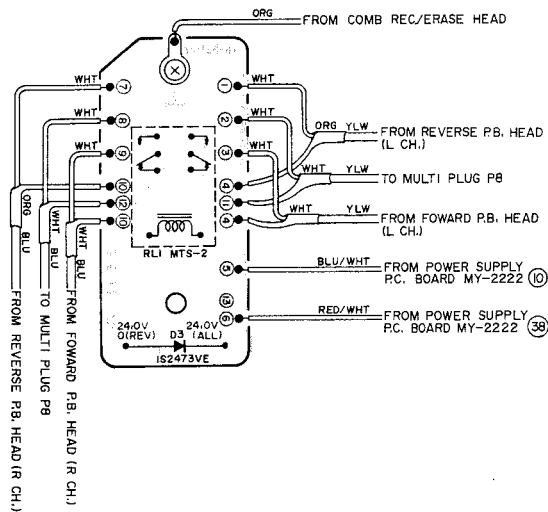




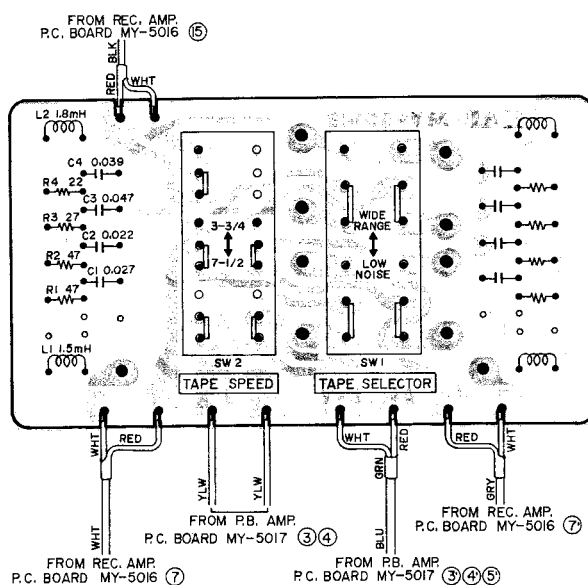
## 6) SYSTEM CONTROL P.C. BOARD MY-2221



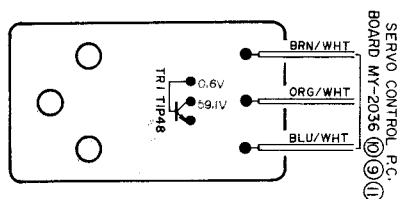
## 7) RELAY P.C. BOARD MY-0008



## 8) EQUALIZER P.C. BOARD MY-5014 A, B



## 9) TRANSISTOR P.C. BOARD MY-2054



## IX. PEAK LEVEL INDICATOR OPERATION

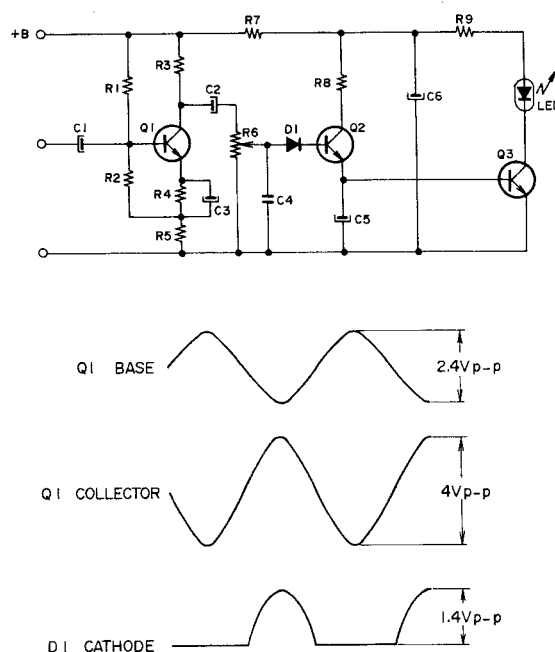


Fig. 15

For optimum recording quality, ideal recording level setting is necessary. However when pulsive signals are introduced, VU Meters do not always accurately register these signals.

Also when recording using the full dynamic margin of the tape is desired, over-recording, which is the source of distortion, is likely to occur. Thus, the peak level indicator is for the purpose of observing the actual peak level for better recording results.

- 1) The peak level indicator circuit is shown in Fig. 15, and is comprised of ordinary Amp (Q1), rectifier diode (D1), switching circuit (Q2, Q3) and luminous diode (LED).
- 2) When the recording signal reaches +8 dBm, D.C. half-wave rectifying current is supplied to the base of transistor Q2 and Q2 lead through is effected (Q2 is turned ON) as illustrated by the lower diagram in Fig. 15.
- 3) Transistor Q2 emitter current becomes the base bias of transistor Q3 and transistor Q3 lead through is effected.
- 4) In other words, transistor Q2, Q3 switching circuit is turned ON, the current from (+B) flows to R7→R9 →LED→Q3 and luminous diode (LED) is activated.
- 5) Transistor Q2 is turned OFF at +6 dBm recording input signal and the switching takes place at +7 dBm. However, because of the slight variation in luminous diode lead through current, there is a  $\pm 1$  dBm switching point deviation.



---

## SECTION 2

# PARTS LIST

### TABLE OF CONTENTS

|    |                                               |    |
|----|-----------------------------------------------|----|
| 1  | HEAD BLOCK .....                              | 30 |
| 2  | REEL MOTOR/REEL TABLE BLOCK .....             | 31 |
| 3  | MAIN MOTOR BLOCK .....                        | 32 |
| 4  | IMPEDANCE ROLLER BLOCK .....                  | 33 |
| 5  | PAUSE SW./TENSION ARM BLOCK .....             | 34 |
| 6  | PINCH ROLLER PLUNGER BLOCK .....              | 35 |
| 7  | OPERATION BLOCK .....                         | 36 |
| 8  | MECH. ASSEMBLY BLOCK .....                    | 37 |
| 9  | POWER SUPPLY BLOCK .....                      | 39 |
| 10 | POWER SUPPLY P.C. BOARD (MY-2222) BLOCK ..... | 40 |
| 11 | SYS. CON. P.C. BOARD (MY-2221) BLOCK .....    | 40 |
| 12 | SERVO P.C. BOARD (MY-2036) BLOCK .....        | 41 |
| 13 | PEAK LEVEL P.C. BOARD (MY-5202) BLOCK .....   | 41 |
| 14 | EQ. P.C. BOARD (MY-5014A) BLOCK .....         | 41 |
| 15 | PB. P.C. BOARD (MY-5017) BLOCK .....          | 41 |
| 16 | REC., OSC. P.C. BOARD (MY-5016) BLOCK .....   | 42 |
| 17 | AMP. ASSEMBLY BLOCK .....                     | 43 |
| 18 | FINAL ASSEMBLY BLOCK .....                    | 44 |
| 19 | LIST OF INTERCHANGEABLE SEMICONDUCTORS .....  | 45 |
|    | INDEX .....                                   | 46 |

Some of the parts in this parts list are only available as a complete assembly, and can not be supplied as individual parts.

## HOW TO USE THIS PARTS LIST

1. This parts list is compiled by various individual blocks based on assembly process.
2. When ordering parts, please describe parts number, serial number, and model number in detail.
3. How to read List

The reference number corresponds with illustration or photo number of that particular parts list.

This number corresponds with the Figure Number.

This number corresponds with the individual parts index number in that figure.

**12-115x**

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

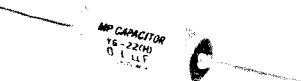
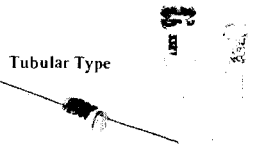
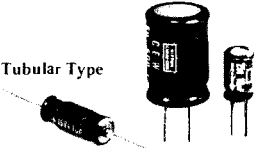
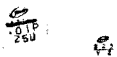
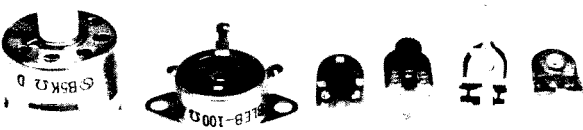
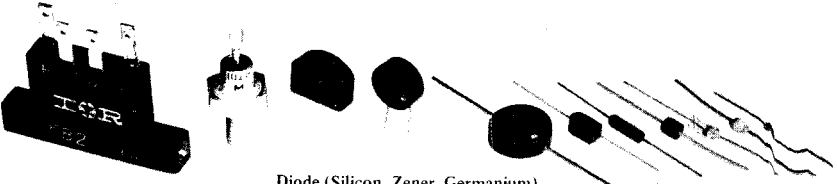
Schematic Diagram Number of individual manufactured part.  
(not required for parts order)

Quantity of particular part required.

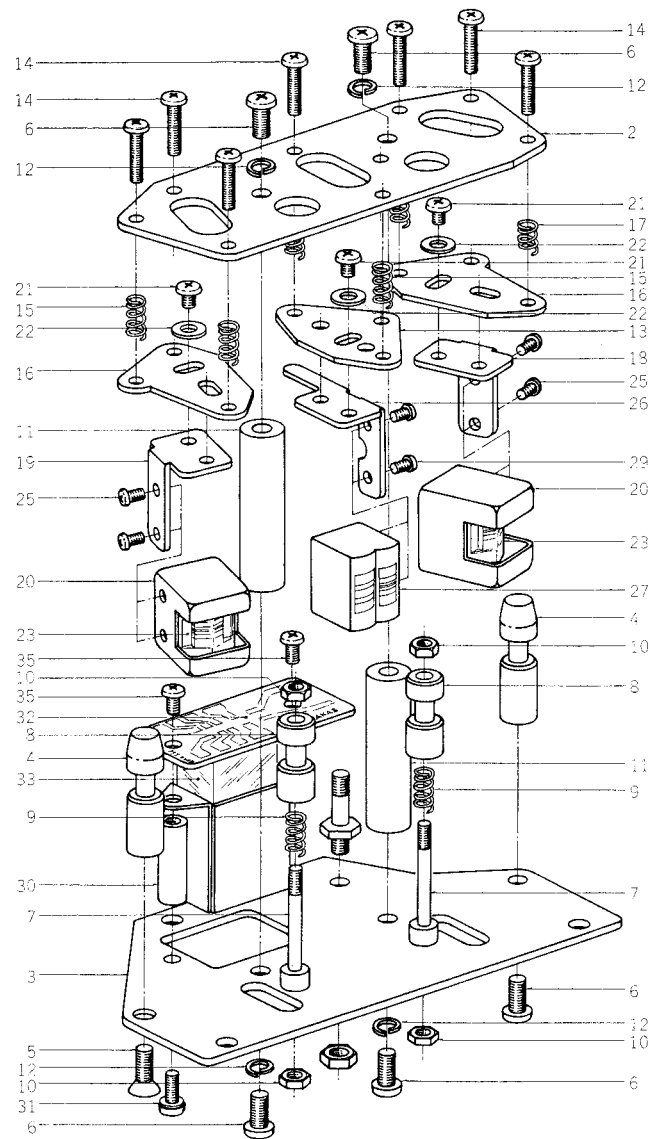
| Ref.<br>No.               | Parts No. | Description                | Schematic<br>No. | Q'ty |
|---------------------------|-----------|----------------------------|------------------|------|
| <b>FLYWHEEL BLOCK #13</b> |           |                            |                  |      |
| 12-115x                   | 800425    | Flywheel Block Assy. Comp. | RDG-13           | 1    |
| 12-116                    | 244506    | Flywheel Only              | RD-233           | 1    |
| 12-117x                   | 244754    | Felt, Flywheel             | RD-275           | 1    |
| 12-118                    | 251324    | Main Metal Case            | RD-236           | 1    |
| 12-119                    | 253080    | Main Metal                 | RD-237           | 1    |

4. The symbol numbers shown on the P.C. Board list can be matched with the Composite Views of Components of the Schematic Diagram or Service Manual.
5. Please utilize separate "Common List for Service Parts" for Resistor Parts orders.
6. The shape of the parts and parts name, etc. can be confirmed by comparing them with the parts shown on the Electrical Parts Table of P.C. Board.
7. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List.  
It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index. (meaning of ref. no. outlined in Item 3 above).
8. Utilize separate "Price List for Parts" to determine unit price. The most simple method of finding parts Price is to utilize the reference number.

## ELECTRICAL PARTS TABLE

|                                                                                                                                                                                             |                                                                                                                                                      |                                                                                                                                              |                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Because the indication of resistors and capacitors in the P.C. Board photos are being eliminated, please confirm parts name and shape by comparing them with the parts shown in this table. |                                                                                                                                                      |                                                                                                                                              |                                                                                                                                                 |
| 1                                                                                                                                                                                           | <br>Solid Resistor                                                  | 2<br>Stopper Type<br><br>Insulator Type<br>Carbon Resistor | 3<br><br>Metal Oxide Film Resistor                           |
| 4<br><br>Cement Resistor                                                                                   | 5<br><br>Wire-Wound Resistor                                        | 6<br><br>Thermistor                                        | 7<br><br>Enamel Resistor                                     |
| 1<br><br>MP Capacitor (Tubular Type)                                                                       | 2<br><br>Plastic Capacitor                                          | 3<br><br>Mylar Capacitor                                   | 4<br><br>VFM (Hi-Q) Capacitor                                |
| 5<br><br>Mylar Capacitor                                                                                 | 6<br><br>Tantalum Capacitor                                       | 7<br><br>Oil Capacitor (Tubular Type)                    | 8<br>Vertical Type<br><br>Tubular Type<br>Styrol Capacitor |
| 9<br><br>Electrolytic Capacitor (Tubular Type)                                                           | 10<br>Vertical Type<br><br>Tubular Type<br>Electrolytic Capacitor | 11<br><br>Ceramic Capacitor                              | 12<br><br>Metalized Mylar (Paper) Capacitor                |
| 13<br><br>Trimmer Condenser                                                                              |                                                                                                                                                      | VR<br><br>Semi-Fixed Volume                              |                                                                                                                                                 |
| L<br><br>Ferri Inductor                                                                                  | TR<br><br>Transistor                                             |                                                                                                                                              |                                                                                                                                                 |
| CR<br><br>Spark Quencher                                                                                 | D<br><br>Diode (Silicon, Zener, Germanium)                       |                                                                                                                                              |                                                                                                                                                 |

1 ILLUSTRATION OF HEAD BLOCK

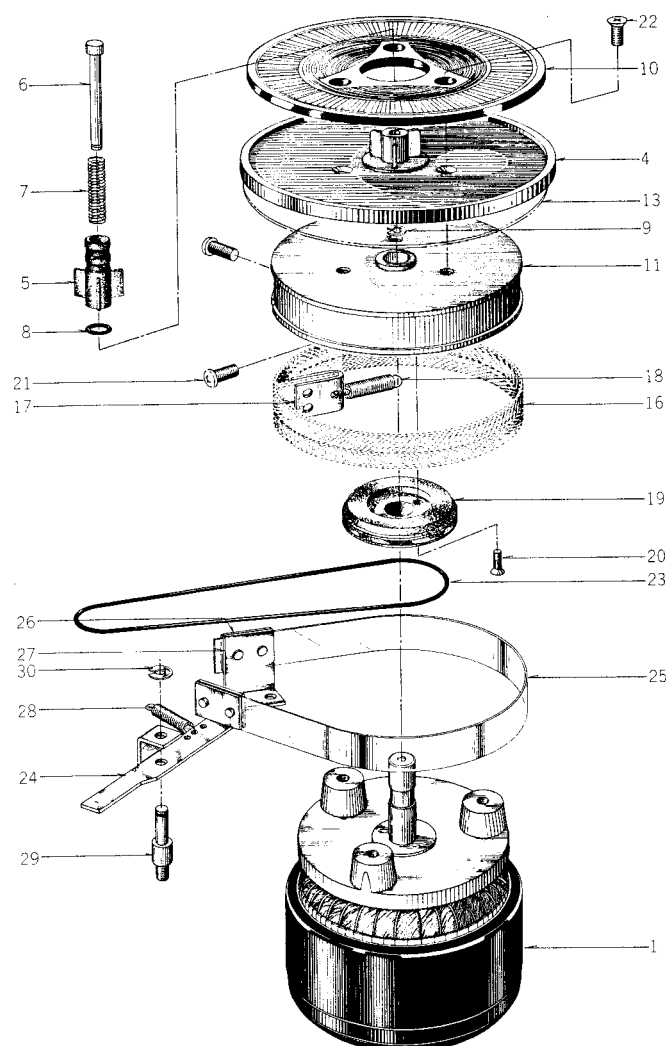


HEAD BLOCK

| Ref. No. | Parts No. | Description                 | Schematic No. | Q'ty | Ref. No. | Parts No. | Description                | Schematic No. | Q'ty |
|----------|-----------|-----------------------------|---------------|------|----------|-----------|----------------------------|---------------|------|
| 1-1x     | BH622585  | Head Block Comp.            | MY            | 1    | 1-20     | HZ627546  | Head Shield                | MY-0010       | 2    |
| 1-2      | HZ626837  | Head Base A                 | MY-0001       | 1    | 1-21     | ZS608477  | Screw, pan head 3x4        |               | 6    |
| 1-3      | HZ626848  | Head Base B                 | MY-0002       | 1    | 1-22     | ZW413256  | Washer (SPC) D3.4x7.8x0.5t |               | 3    |
| 1-4      | MS625072  | Tape Guide                  | MY-0003       | 2    | 1-23     | HP536501  | PB HEAD P4-202             |               | 2    |
| 1-5      | ZS414044  | Screw, countersunk head 4x8 |               | 1    | 1-24x    | EA463206  | Terminal P.C. Board A      | RD-A36        | 4    |
| 1-6      | ZS413201  | Screw, pan head 4x8         |               | 3    | 1-25     | ZS201508  | Screw, pan head 2x4        |               | 4    |
| 1-7      | MH573957  | Tape Guide Prop             | TD-0003       | 2    | 1-26     | HA532743  | CH Angle A                 | TW-0009       | 1    |
| 1-8      | HZ532710  | Tape Guide B                | TW-0006       | 2    | 1-27     | HR556582  | REC./ERASE HEAD RE4-6      |               | 1    |
| 1-9      | ZG466312  | Angle Adjust Spring E       | BS-0018       | 2    | 1-28x    | HZ583176  | RE4-6 Terminal Plate       | TW-0035       | 1    |
| 1-10     | ZW273835  | Nut M3                      |               | 4    | 1-29     | ZS477876  | Screw, pan head 2x3        |               | 2    |
| 1-11     | MH529233  | Head Base Prop B            | ND-0017       | 2    | 1-30     | MH625094  | Relay Prop                 | MY-0005       | 2    |
| 1-12     | ZW273914  | Spring Washer M4            |               | 4    | 1-31     | ZS369900  | Screw, pan head 3x8,       |               |      |
| 1-13     | HZ532732  | CH Retaining Base           | TW-0008       | 1    |          |           | w/washer                   |               | 2    |
| 1-14     | ZS608512  | Screw, pan head 3x13        |               | 9    | 1-32     | EA625138  | Relay P.C. Board           | MY-0008       | 1    |
| 1-15     | ZG466312  | Angle Adjust Spring E       | BS-0018       | 6    | 1-33     | EP621808  | Relay MTS-2                | 47-2-26       | 1    |
| 1-16     | HZ532765  | PH Retaining Base           | TW-0010       | 2    | 1-34x    | ED624903  | Silicon Diode IS2473       | 45-3-28       | 1    |
| 1-17     | ZG303300  | Angle Adjust Spring B       | RD-55         | 3    | 1-35     | ZS422076  | Screw, pan head 3x5        |               | 2    |
| 1-18     | HA625105  | Head Angle A                | MY-0006       | 1    | 1-36x    | EA382713  | Head Connector P.C. Board  | RD-A8         | 1    |
| 1-19     | HA625116  | Head Angle B                | MY-0006       | 1    |          |           |                            |               |      |

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

## 2 ILLUSTRATION OF REEL MOTOR/REEL TABLE BLOCK

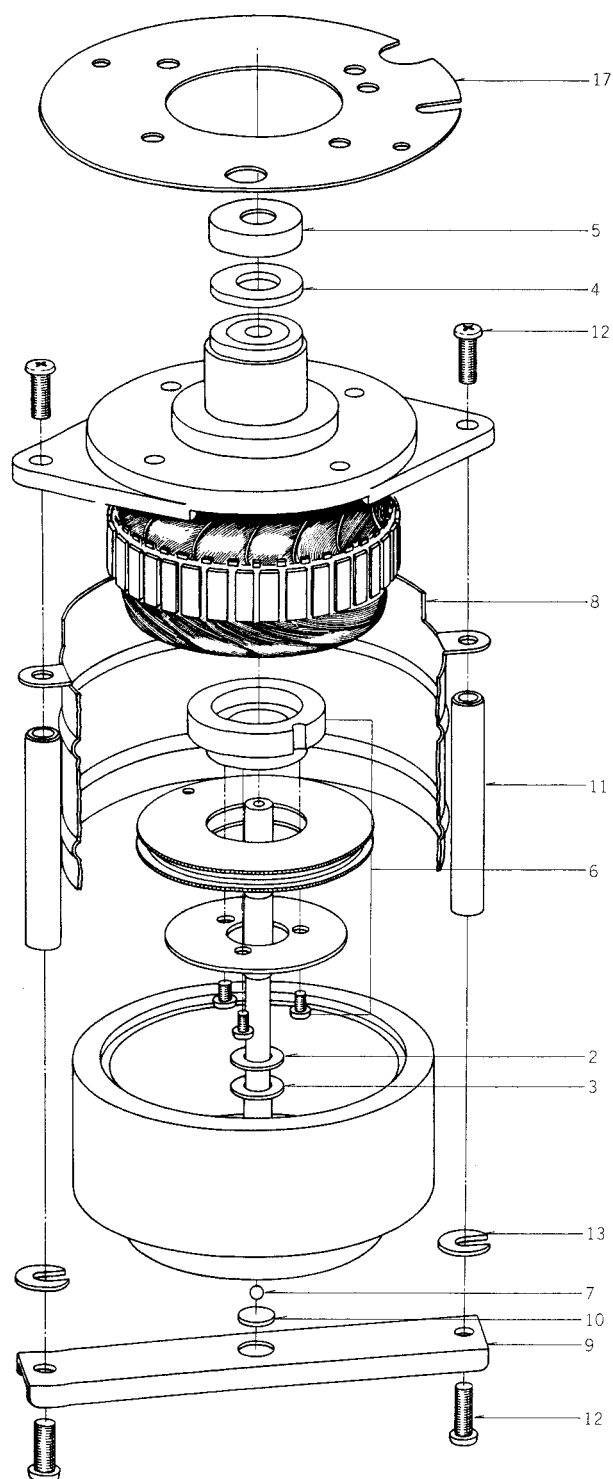


### REEL MOTOR/REEL TABLE BLOCK

| Ref. No. | Parts No. | Description                        | Schematic No.           | Q'ty | Ref. No. | Parts No. | Description                       | Schematic No. | Q'ty |
|----------|-----------|------------------------------------|-------------------------|------|----------|-----------|-----------------------------------|---------------|------|
| 2-1      | BM314741  | Reel Motor (24XO-2)<br>Block Comp. | ND,MC,KF,KH<br>KD,MR,MS | 1    | 2-17     | MT317485  | U Metal Fitting                   | MI- 218       | 1    |
| 2-2x     | BR398430  | Supply Reel Table Block<br>Comp.   | KD, KF                  | 1    | 2-18     | ZG317496  | Felt Tension Spring               | MI- 260       | 1    |
| 2-3x     | BR398441  | Take-up Reel Table Block<br>Comp.  | KD, KF                  | 1    | 2-19     | MR317507  | Counter Pulley (Take-up)          | MI- 217       | 1    |
| 2-4      | MT488147  | Reel Table Disk B, RD              | RD-272                  | 1    | 2-20     | ZS516644  | Screw, countersunk head<br>2.3x10 |               | 2    |
| 2-5      | MT255420  | Reel Retainer                      | 3R-102                  | 1    | 2-21     | ZS424056  | Screw, pan head 4x10              |               | 2    |
| 2-6      | MS342000  | Reel Shaft                         | 3R-108                  | 1    | 2-22     | ZS403222  | Screw, countersunk head<br>3x10   |               | 3    |
| 2-7      | ZG255633  | Reel Spring                        | 3R-109                  | 1    | 2-23     | MB625566  | Counter Belt D88.4x1.4            | MI- 1046      | 1    |
| 2-8      | MT297663  | 3R 'O' Ring 2.9x1.65M              | 3R-139                  | 1    | 2-24     | ML314976  | Brake Lever A                     | MI- 210       | 1    |
| 2-9      | ZW270088  | 'E' Ring 1.9M                      | 6-1-9                   | 1    | 2-25     | MT314987  | Brake Band                        | MI- 213       | 1    |
| 2-10     | MT397225  | Reel Table Rubber                  | KD-2017                 | 1    | 2-26     | MZ314998  | Brake Band Retaining Plate        | MI- 212       | 4    |
| 2-11     | MT495606  | Brake Drum (R) (Take-up)           | MR-216                  | 1    | 2-27     | MZ315000  | Brake Band Support                | MI- 214       | 2    |
| 2-12x    | MT495617  | Brake Drum (L) A (Supply)          | MR-216                  | 1    | 2-28     | ZG315011  | Brake Lever Spring                | MI- 116       | 2    |
| 2-13     | MT405268  | Reel Table Spacer                  | KD-2018                 | 1    | 2-29     | MH337373  | Brake Lever Prop                  | MI- 102       | 1    |
| 2-14x    | ZW273778  | Earth Lug M3                       |                         | 2    | 2-30     | ZW290283  | 'U' Ring 2.85M                    | 6-1           | 1    |
| 2-15x    | ZS425981  | Screw, binding head 3x3            |                         | 2    |          |           |                                   |               |      |
| 2-16     | MT436860  | Brake Cloth Comp.                  | MR-269                  | 1    |          |           |                                   |               |      |

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

### 3 ILLUSTRATION OF MAIN MOTOR BLOCK

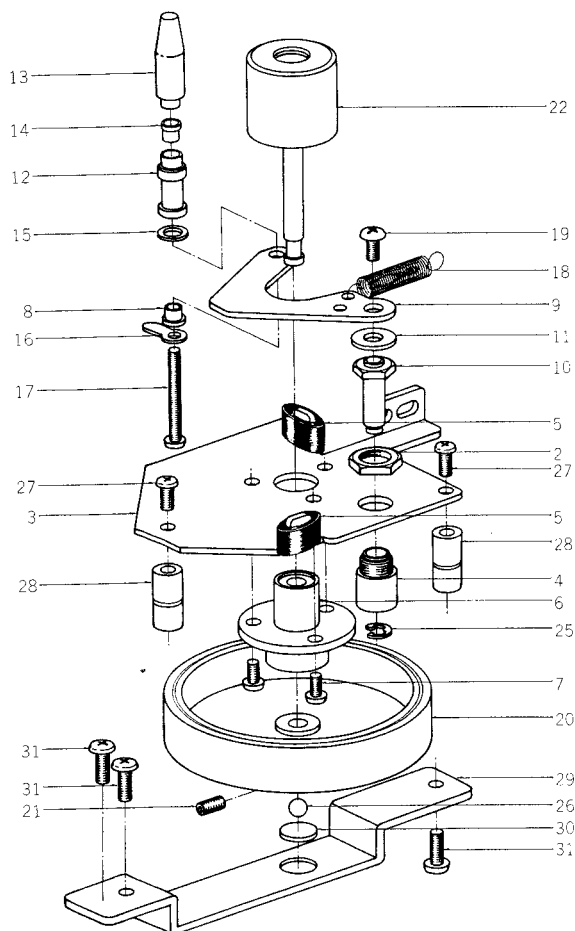


#### MAIN MOTOR BLOCK

| Ref. No. | Parts No. | Description               | Schematic No. | Q'ty |
|----------|-----------|---------------------------|---------------|------|
| 3-1x     | BM600298  | Main Motor 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  | Detactor Gear Block Comp. | MY,TE,NE      | 1    |
| 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    |

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

## 4 ILLUSTRATION OF IMPEDANCE ROLLER BLOCK

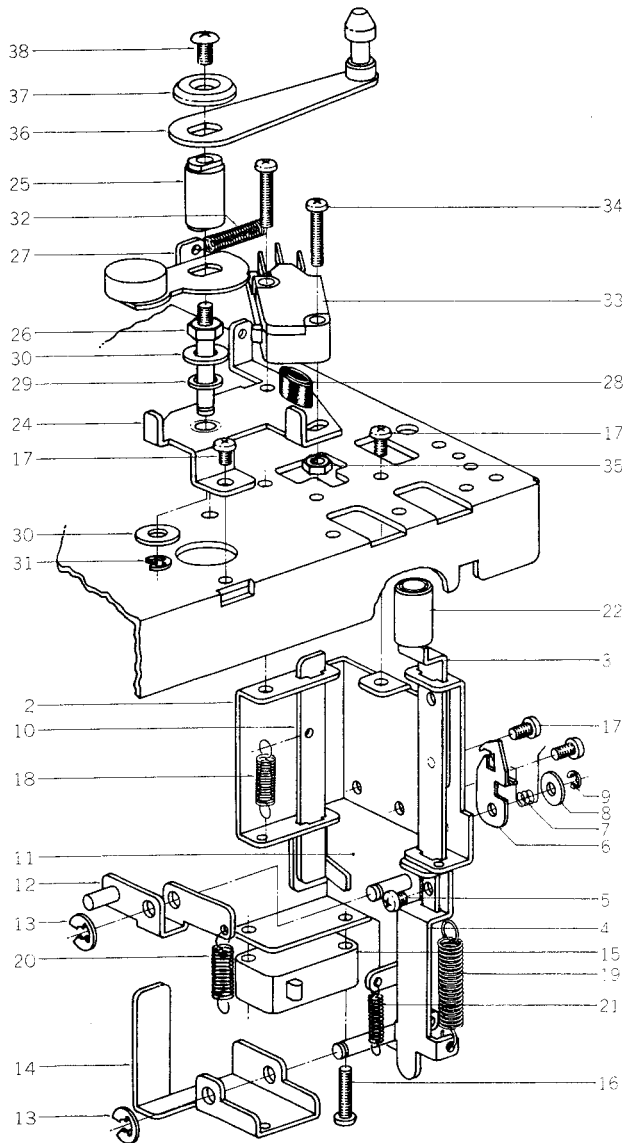


### IMPEDANCE ROLLER BLOCK

| Ref. No. | Parts No. | Description                             | Schematic No. | Q'ty |
|----------|-----------|-----------------------------------------|---------------|------|
| 4-1x     | BI657112  | Impedance Roller Block                  |               |      |
|          |           | Comp.                                   | MY            | 1    |
| 4-2      | ZW603990  | Metal Nut                               | 6-39          | 1    |
| 4-3      | MZ651881  | Impedance Table                         | MY2065        | 1    |
| 4-4      | MV597082  | Sensing Shaft Metal                     | KJ:028        | 1    |
| 4-5      | MZ606712  | Stopper Rubber KJ                       | KJ:060        | 2    |
| 4-6      | MZ597093  | Metal Case, w/metal                     | KJ:029        | 1    |
| 4-7      | ZS499331  | Screw, pan head 2.3x5                   |               | 3    |
| 4-8      | EZ606701  | Insulator Collar L                      | KJ:039        | 1    |
| 4-9      | MZ597137  | Sensing Arm                             | KJ:036        | 1    |
| 4-10     | MS597148  | Sensing Shaft                           | KJ:037        | 1    |
| 4-11     | ZW604012  | Washer D4.3x11x0.1t                     |               | 3    |
| 4-12     | MZ597172  | Sensing Post (Lower)                    | KJ:040        | 1    |
| 4-13     | MZ597150  | Sensing Post (Upper)                    | KJ:038        | 1    |
| 4-14     | SE597161  | Insulated Collar                        | KJ:039        | 1    |
| 4-15     | ZW601075  | Washer D4.1x7x0.1t                      |               | 1    |
| 4-16     | ZW273633  | Earth Lug M2.3                          |               | 1    |
| 4-17     | ZS484828  | Screw, binding head 2.3x25              |               | 1    |
| 4-18     | ZG646020  | Z Arm Spring                            | MY2059        | 1    |
| 4-19     | ZS201150  | Screw, truss head 3x6 (Black)           |               | 1    |
| 4-20     | MI651903  | Flywheel                                | MY2066        | 1    |
| 4-21     | ZS593796  | Set Screw, hexagon Socket 3x6 (Flat/P.) |               | 2    |
| 4-22     | MR597115  | Impedance Roller, w/shaft               | KJ:033        | 1    |
| 4-23x    | MZ597126  | Roller Plate                            | KJ:035        | 1    |
| 4-24x    | ZW649618  | Washer (Teflon) D4x10x1t.               |               | 1    |
| 4-25     | ZW270101  | 'E' Ring 3M                             | 6-14          | 1    |
| 4-26     | MV537862  | Steel Ball D4                           |               | 1    |
| 4-27     | ZS422076  | Screw, pan head 3x5                     |               | 3    |
| 4-28     | MH625162  | Z Block Prop                            | MY2004        | 3    |
| 4-29     | MZ596823  | Thrust Plate                            | KJ:004        | 1    |
| 4-30     | ZW593212  | Washer D8x1t                            |               | 1    |
| 4-31     | ZS421806  | Screw, pan head 3x8                     |               | 3    |

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

## 5 ILLUSTRATION OF PAUSE SW./TENSION ARM BLOCK

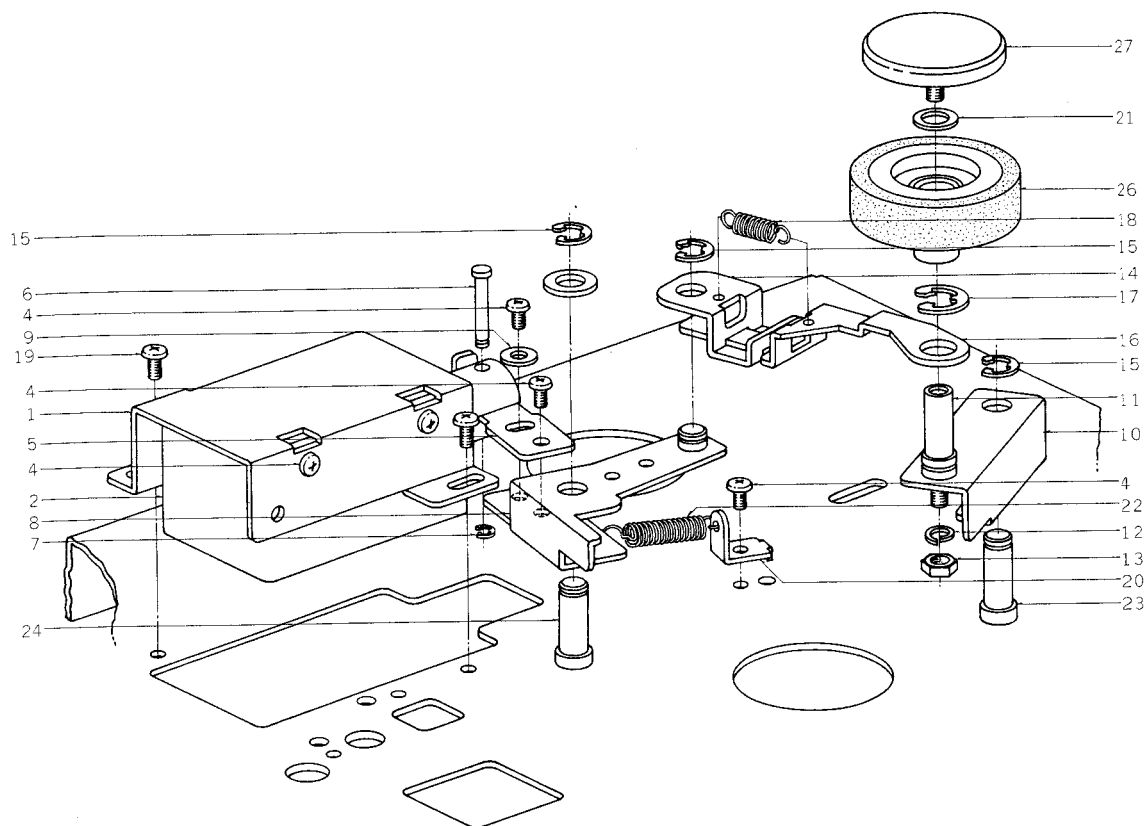


### PAUSE SW./TENSION ARM BLOCK

| Ref. No.                 | Parts No. | Description                       | Schematic No. | Q'ty |
|--------------------------|-----------|-----------------------------------|---------------|------|
| <b>PAUSE SW. BLOCK</b>   |           |                                   |               |      |
| 5-1x                     | BZ624813  | Pause SW. Block Comp.             | MY-11         | 1    |
| 5-2                      | MZ631001  | Pause Lever Bracket, w/shaft      | MY-2214       | 1    |
| 5-3                      | ML630955  | Pause Button Lever A, w/pin C     | MY-2209       | 1    |
| 5-4                      | ML630966  | Pause Button Lever B              | MY-2210       | 1    |
| 5-5                      | ZS432674  | Screw, pan head 3x3               |               | 1    |
| 5-6                      | TC515575  | SW. Lock Cam B                    | CG-2301       | 1    |
| 5-7                      | ZG632553  | Button Lock Spring C              | CG-2303       | 1    |
| 5-8                      | ZW452373  | Washer (SPC) D3x8x0.5t            |               | 1    |
| 5-9                      | ZW270088  | 'E' Ring 1.9M                     | 6-1-9         | 1    |
| 5-10                     | ML630990  | Lock Lever                        | MY-2213       | 1    |
| 5-11                     | MZ631012  | Switch Bracket, w/pin             | MY-2215       | 1    |
| 5-12                     | ML630977  | Pause Lever, w/pin                | MY-2211       | 1    |
| 5-13                     | ZW290283  | 'U' Ring 2.85M                    | 6-1-1         | 2    |
| 5-14                     | ML630988  | SW. Lever                         | MY-2212       | 1    |
| 5-15                     | ES249974  | Micro SW. M-8-3 U/L               | 25-1-4        | 1    |
| 5-16                     | ZS483502  | Screw, pan head 3x13              |               | 2    |
| 5-17                     | ZS422076  | Screw, pan head 3x5               |               | 5    |
| 5-18                     | ZG394378  | Return Spring                     | CS-2106       | 1    |
| 5-19                     | ZG314706  | Spring IB                         | MR-115        | 1    |
| 5-20                     | ZG316833  | DS Spring                         | MR-257        | 1    |
| 5-21                     | ZG371114  | Reset Lever Spring                | ED-219        | 1    |
| 5-22                     | SK631282  | Push Button Knob H                | 91-5051       | 1    |
| <b>TENSION ARM BLOCK</b> |           |                                   |               |      |
| 5-23x                    | BZ622618  | Tension Arm Block Comp.           | MY            | 1    |
| 5-24                     | MZ625803  | Tension Arm Table, w/metal        | MY-2022       | 1    |
| 5-25                     | MA625825  | Tension Shaft A                   | MY-2024       | 1    |
| 5-26                     | MS615014  | Tension Shaft B                   | MY-2032       | 1    |
| 5-27                     | MZ627265  | Tension SW. Cam, w/counter weight | MY-2025       | 1    |
| 5-28                     | MZ810191  | Cushion Rubber, RD                | RD-278        | 1    |
| 5-29                     | ZW601075  | Washer D4.1x7x0.1t                |               | 1    |
| 5-30                     | ZW419646  | Washer (SPC) D4.5x9.8x0.5t        |               | 2    |
| 5-31                     | ZW270101  | 'E' Ring 3M                       | 6-1-9         | 1    |
| 5-32                     | ZG614970  | Tension Spring                    | MY-2026       | 1    |
| 5-33                     | ES562465  | Micro SW. K-1                     | 25-1-26       | 1    |
| 5-34                     | ZS422965  | Screw, pan head 3x15              |               | 2    |
| 5-35                     | ZW273756  | Nut M3                            |               | 1    |
| 5-36                     | ML580465  | Tension Arm, w/guide B            | TD-2039       | 1    |
| 5-37                     | ZW535094  | Decorative Washer                 | TE-2077       | 1    |
| 5-38                     | ZS200395  | Screw, countersunk head 3x6       |               | 1    |
| 5-39                     | ZS422076  | Screw, pan head 3x5               |               | 2    |

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

## 6 ILLUSTRATION OF PINCH ROLLER PLUNGER BLOCK

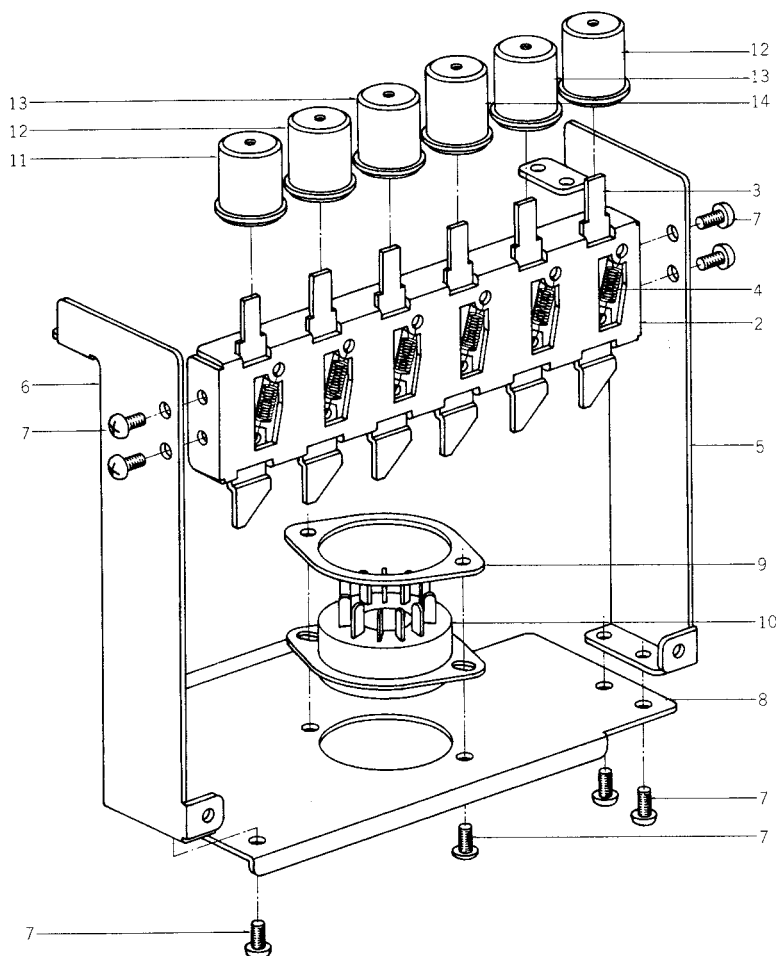


### PINCH ROLLER PLUNGER BLOCK

| Ref. No. | Parts No. | Description                | Schematic No. | Q'ty |
|----------|-----------|----------------------------|---------------|------|
| 6-1      | MZ625768  | Plunger Bracket            | MY2018        | 1    |
| 6-2      | EP573658  | Plunger Solenoid 1660THT-3 | 44-166        | 1    |
| 6-3x     | ED224550  | Silicon Diode 10D4         | 45-116        | 1    |
| 6-4      | ZS422076  | Screw, pan head 3x5        |               | 4    |
| 6-5      | MZ625770  | Plunger Plate              | MY2019        | 1    |
| 6-6      | MH533913  | Connecting Pin             | TW2010        | 1    |
| 6-7      | ZW270088  | 'E' Ring 1.9M              | 6-14          | 2    |
| 6-8      | ML627254  | Plunger Lever B, w/pin     | MY2205        | 1    |
| 6-9      | ZW555693  | Washer D3.2x8x0.5t         |               | 1    |
| 6-10     | MZ625421  | Pinch Roller Arm           | MY1032        | 1    |
| 6-11     | MS625432  | Pinch Roller Shaft         | MY1033        | 1    |
| 6-12     | ZW273914  | Spring Washer M4           |               | 1    |
| 6-13     | ZW416693  | Nut M4                     |               | 1    |
| 6-14     | MZ625443  | Pinch Roller Plate A       | MY1034        | 1    |
| 6-15     | ZW270134  | 'E' Ring 5M                | 6-14          | 3    |
| 6-16     | MZ625454  | Pinch Roller Plate B       | MY1035        | 1    |
| 6-17     | ZW334653  | 'E' Ring 7M                | 6-14          | 1    |
| 6-18     | ZG625465  | Pinch Roller Spring        | MY1036        | 1    |
| 6-19     | ZS379350  | ISO Screw, pan head 3x6    |               | 1    |
| 6-20     | MZ582030  | Spring Hanger              | TD1018        | 1    |
| 6-21     | ZW260010  | Washer (PBP) D6.1x10x0.1t  |               | 1    |
| 6-22     | ZG580768  | Spoke Spring               | TD1077        | 1    |
| 6-23     | MS625184  | Pinch Roller Arm Shaft     | MY1006        | 2    |
| 6-24x    | ZW416698  | Nut M4                     |               | 2    |
| 6-25x    | ZW273914  | Spring Washer M4           |               | 1    |
| 6-26     | MP625048  | Pinch Roller H, LC-321     |               | 1    |
| 6-27     | SK631326  | Pinch Roller Cap C         | MS1020        | 1    |

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

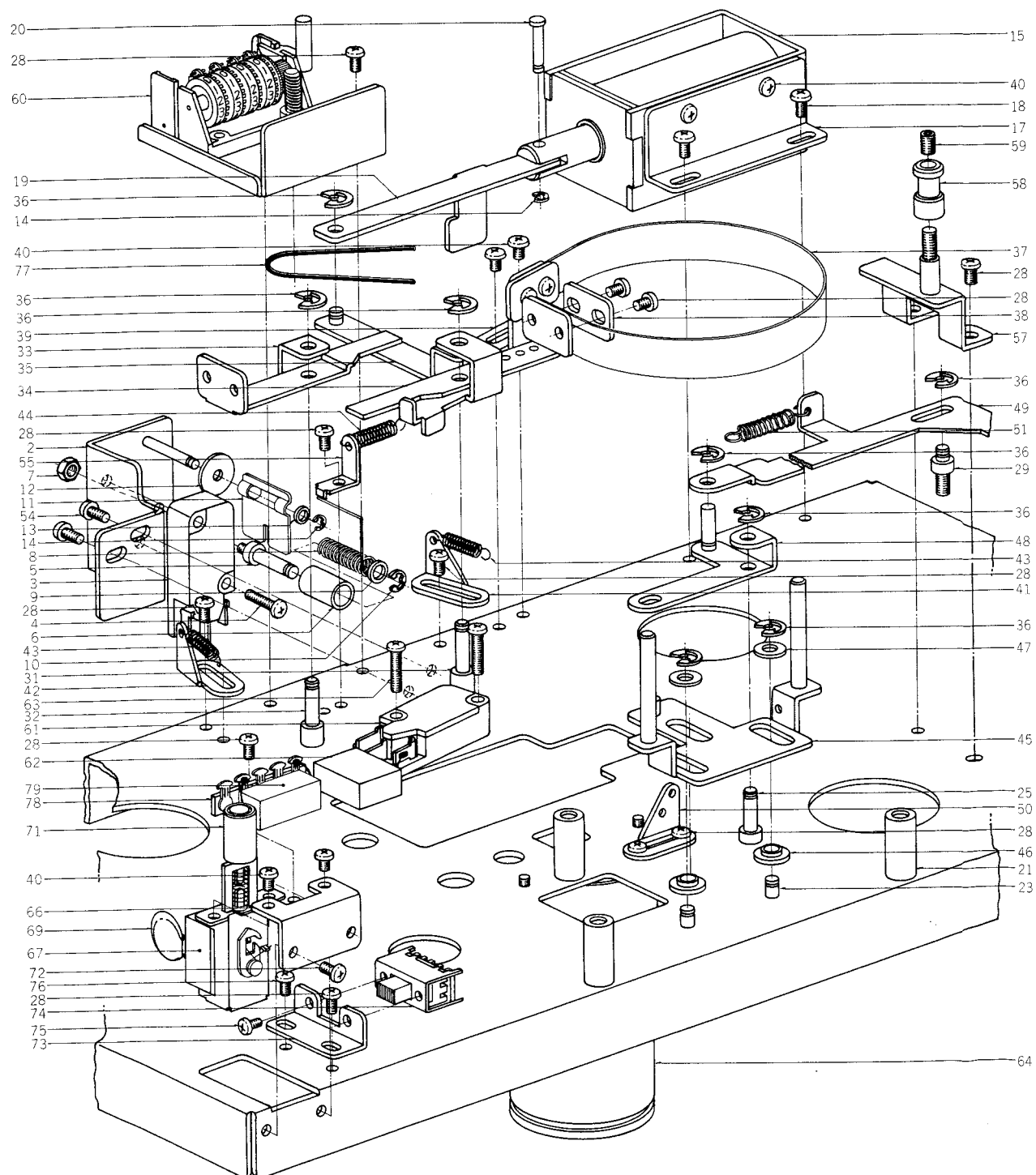
## 7 ILLUSTRATION OF OPERATION BLOCK



### OPERATION BLOCK

| Ref. No. | Parts No. | Description                    | Schematic No. | Q'ty |
|----------|-----------|--------------------------------|---------------|------|
| 7-1x     | BZ624780  | Operation Block Comp.          | MY-II         | 1    |
| 7-2      | MZ630876  | Lever Bracket                  | MY-2201       | 1    |
| 7-3      | ML630887  | Operation Lever                | MY-2202       | 6    |
| 7-4      | ZG456120  | Setting Lever Spring           | CS-1187       | 6    |
| 7-5      | MZ630898  | Operation Side Plate A (Right) | MY-2203       | 1    |
| 7-6      | MZ630900  | Operation Side Plate B (Left)  | MY-2203       | 1    |
| 7-7      | ZS325495  | Tapping Screw #2 3x6           |               | 8    |
| 7-8      | MZ630911  | Remo-Con Plate                 | MY-2204       | 1    |
| 7-9      | MZ302400  | Remote Control Socket          |               |      |
|          |           | Mt. Plate                      | PX-515        | 1    |
| 7-10     | EJ222748  | Socket, Sub Magnale #311SG     | 31-1-39       | 1    |
| 7-11     | SB631135  | Push Button C (Red)            | CW-2014       | 1    |
| 7-12     | SB631146  | Push Button D (Yellow)         | CW-2014       | 2    |
| 7-13     | SB631157  | Push Button E (Green)          | CW-2014       | 2    |
| 7-14     | SB631168  | Push Button F (White)          | CW-2014       | 1    |

## 8 ILLUSTRATION OF MECH. ASSEMBLY BLOCK

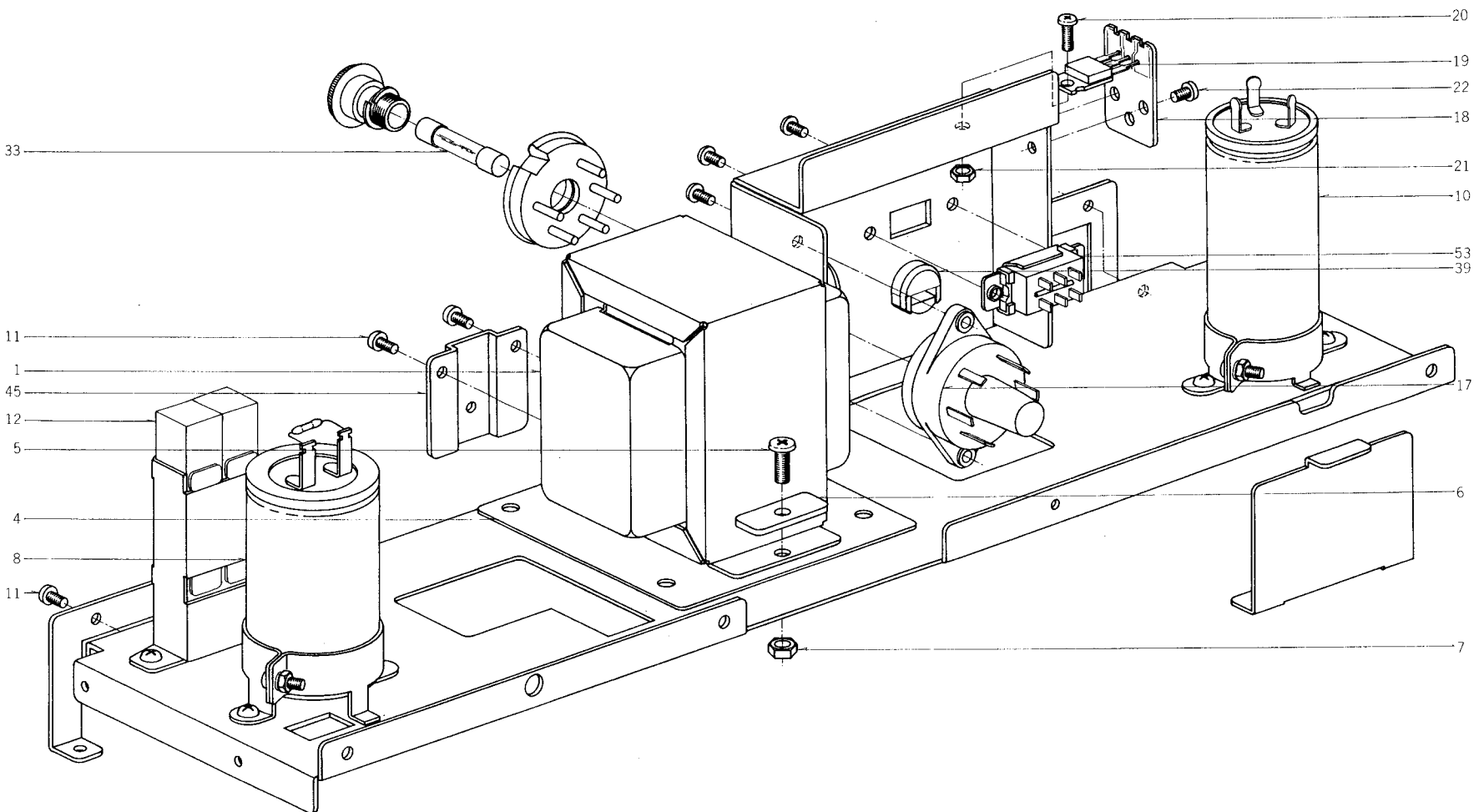


## MECH. ASSEMBLY BLOCK

| Ref. No.                    | Parts No. | Description                                   | Schematic No. | Q'ty | Ref. No. | Parts No. | Description            | Schematic No. | Q'ty |
|-----------------------------|-----------|-----------------------------------------------|---------------|------|----------|-----------|------------------------|---------------|------|
| <b>QUICK SW. BLOCK</b>      |           |                                               |               |      | 8-66     | EZ625544  | Power SW. Table        | MY-1044       | 1    |
| 8-1x                        | BS622631  | Quick SW. Block Comp.                         | MY-II         | 1    | 8-67     | ES479395  | Push SW. TV-3 JH5      | 25-5-62       | 1    |
| 8-2                         | MZ630944  | Micro SW. Table, w/Prop                       | MY-2208       | 1    | 8-68x    | ES621178  | Push SW. S-J4162 (CEE) | 25-5-145      | 1    |
| 8-3                         | ES573478  | Micro SW. K-3                                 | 25-1-31       | 1    | 8-69     | EC551160  | Ceramic/C. NB821 YZ    | 24-5-55       | 2    |
| 8-4                         | ZS483502  | Screw, pan head 3x13                          |               | 2    |          |           | 0.01μF(Z) 1.4KWV       |               |      |
| 8-5                         | MH528513  | SW. Pin                                       | ND-1055       | 1    | 8-70x    | EC565896  | Ceramic/C. DP6600YM    | 24-5-58       | 1    |
| 8-6                         | MH527635  | SW. Pipe                                      | ND-1054       | 1    |          |           | 0.01μF(P) 1.4KWV       |               |      |
| 8-7                         | ZW273756  | Nut M3                                        |               | 1    |          |           | (CSA, JPN)             | 91-5051       | 1    |
| 8-8                         | ZG529211  | SW. Spring                                    | ND-1053       | 1    | 8-71     | SK631304  | Push Button Knob I     |               | 1    |
| 8-9                         | ZW259738  | Washer (Polyslider)                           |               | 1    | 8-72     | ZS325495  | Tapping Screw #2 3x6   |               | 2    |
|                             |           | D4.1x7x0.25t                                  |               | 1    | 8-73     | MZ625555  | Speed SW. Table        | MY-1045       | 1    |
| 8-10                        | ZW270101  | 'E' Ring 3M                                   | 6-1-9         | 1    | 8-74     | ES621898  | Slide SW. SSC342B      | 25-3-109      | 1    |
| 8-11                        | MZ529391  | Quick Plate                                   | ND-1063       | 1    | 8-75     | ZS432843  | Screw, pan head 2.6x4  |               | 2    |
| 8-12                        | ZW622001  | Washer D3.1x13x0.5t                           |               | 1    | 8-76     | ZS432674  | Screw, pan head 3x3    |               | 1    |
| 8-13                        | ZW622012  | Washer D3.1x5x0.2t                            |               | 1    | 8-77     | MB625566  | Counter Belt           | MY-1046       | 1    |
| 8-14                        | ZW270088  | 'E' Ring 1.9M                                 | 6-1-9         | 2    | 8-78     | EJ255115  | Lug Plate VB2L2        | 33-4-3        | 1    |
| <b>BRAKE PLUNGER BLOCK</b>  |           |                                               |               |      | 8-79     | ER554556  | Cement/R. 5W 39Ω(K)    | 35-16-3       | 1    |
| 8-15                        | EP650081  | Plunger Solenoid SDC-1064                     | 44-1-75       | 1    |          |           | (Wire-wound Type)      |               |      |
| 8-16x                       | ED224550  | Silicon Diode 10D4                            | 45-2-16       | 1    |          |           |                        |               |      |
| 8-17                        | MZ630933  | Plunger Bracket B                             | MY-2207       | 1    |          |           |                        |               |      |
| 8-18                        | ZS422076  | Screw, pan head 3x5                           |               | 2    |          |           |                        |               |      |
| 8-19                        | MZ630922  | Plunger Joint                                 | MY-2206       | 1    |          |           |                        |               |      |
| 8-20                        | MH257477  | Connecting Pin                                | RD-211        | 1    |          |           |                        |               |      |
| <b>MECH. ASSEMBLY BLOCK</b> |           |                                               |               |      |          |           |                        |               |      |
| 8-21                        | MH625140  | Head Base Prop                                | MY-1002       | 3    |          |           |                        |               |      |
| 8-22x                       | ZS413201  | Screw, pan head 4x8                           |               | 3    |          |           |                        |               |      |
| 8-23                        | MH581927  | Shifter Guide Post                            | TD-1006       | 3    |          |           |                        |               |      |
| 8-24x                       | ZW273756  | Nut M3                                        |               | 3    |          |           |                        |               |      |
| 8-25                        | MZ625151  | Shifter Lever Post                            | MY-1003       | 1    |          |           |                        |               |      |
| 8-26x                       | ZW416693  | Nut M4                                        |               | 1    |          |           |                        |               |      |
| 8-27                        | MH625162  | Z Block Prop                                  | MY-1004       | 3    |          |           |                        |               |      |
| 8-28                        | ZS422076  | Screw, pan head 3x5                           |               | 45   |          |           |                        |               |      |
| 8-29                        | MZ627210  | Joint Lever Post                              | MY-1203       | 1    |          |           |                        |               |      |
| 8-30x                       | ZW416698  | Nut M4                                        |               | 3    |          |           |                        |               |      |
| 8-31                        | MH625195  | Brake Lever Prop                              | MY-1007       | 1    |          |           |                        |               |      |
| 8-32                        | MH337373  | Brake Lever Prop                              | MR-102        | 1    |          |           |                        |               |      |
| 8-33                        | ML396810  | Brake Lever B                                 | KD-1038       | 1    |          |           |                        |               |      |
| 8-34                        | ML314976  | Brake Lever A                                 | MR-210        | 1    |          |           |                        |               |      |
| 8-35                        | ML627232  | Brake Lever D, w/pin                          | MY-1205       | 1    |          |           |                        |               |      |
| 8-36                        | ZW290283  | 'U' Ring 2.85M                                | 6-1-1         | 9    |          |           |                        |               |      |
| 8-37                        | MT314987  | Brake Band                                    | MR-213        | 2    |          |           |                        |               |      |
| 8-38                        | MZ314998  | Brake Band Retaining Plate                    | MR-212        | 4    |          |           |                        |               |      |
| 8-39                        | MZ315000  | Brake Band Support                            | MR-214        | 2    |          |           |                        |               |      |
| 8-40                        | ZS417216  | Screw, pan head 3x4                           |               | 6    |          |           |                        |               |      |
| 8-41                        | MZ397080  | Spring Rack                                   | KD-1010       | 1    |          |           |                        |               |      |
| 8-42                        | MZ314605  | Spring Rack, MR                               | MR-104        | 1    |          |           |                        |               |      |
| 8-43                        | ZG315011  | Brake Lever Spring                            | MR-116        | 2    |          |           |                        |               |      |
| 8-44                        | ZG371114  | Reset Lever Spring                            | ED-219        | 1    |          |           |                        |               |      |
| 8-45                        | MZ625342  | Shifter Plate, w/pin                          | MY-1024       | 1    |          |           |                        |               |      |
| 8-46                        | ZW580173  | Guide Washer                                  | TD-1055       | 3    |          |           |                        |               |      |
| 8-47                        | ZW420682  | Washer (Nylon) D4.2x9x0.5t                    |               | 3    |          |           |                        |               |      |
| 8-48                        | ML627197  | Shifter Lever B, w/pin                        | MY-1201       | 1    |          |           |                        |               |      |
| 8-49                        | ML627221  | Joint Lever                                   | MY-1204       | 1    |          |           |                        |               |      |
| 8-50                        | MZ314605  | Spring Rack, MR                               | MR-104        | 1    |          |           |                        |               |      |
| 8-51                        | ZG625375  | Play Spring                                   | MY-1027       | 1    |          |           |                        |               |      |
| 8-52x                       | ZW621876  | Washer D6.2x13x1t                             |               | 1    |          |           |                        |               |      |
| 8-53x                       | ZW270134  | 'E' Ring 5M                                   | 6-1-9         | 2    |          |           |                        |               |      |
| 8-54                        | ZS608321  | Screw, pan head 3x6,<br>w/washer              |               | 2    |          |           |                        |               |      |
| 8-55                        | MZ582030  | Spring Hanger                                 | TD-1018       | 1    |          |           |                        |               |      |
| 8-56x                       | ZG580768  | Spoke Spring                                  | TD-2077       | 1    |          |           |                        |               |      |
| 8-57                        | MZ625511  | Reverse Guide Table                           | MY-1041       | 1    |          |           |                        |               |      |
| 8-58                        | HZ315090  | Reverse Guide                                 | RD-225        | 1    |          |           |                        |               |      |
| 8-59                        | ZS344463  | Set Screw, hexagon socket<br>4x6 (cup/p.)     |               | 1    |          |           |                        |               |      |
| 8-60                        | MC621887  | Counter MP-490-21                             | 9-1-38        | 1    |          |           |                        |               |      |
| 8-61                        | ES573456  | Micro SW. K-2                                 | 25-1-30       | 1    |          |           |                        |               |      |
| 8-62                        | ER376435  | Spark Quencher U/L                            |               | 1    |          |           |                        |               |      |
|                             |           | 0.1μ+120Ω 250WV                               | 41-1-35       | 1    |          |           |                        |               |      |
| 8-63                        | ZS483502  | Screw, pan head 3x13                          |               | 2    |          |           |                        |               |      |
| 8-64                        | EC520626  | MP/C. (3+1)μFx2 250WV<br>AC (Lug Type UNI/D.) | 24-9-74       | 1    |          |           |                        |               |      |
| 8-65x                       | EC536927  | MP/C. 3μFx2 250WV AC<br>(Lug Type UNI/D.)     | 24-9-79       | 1    |          |           |                        |               |      |

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

# 9 ILLUSTRATION OF POWER SUPPLY BLOCK



## POWER SUPPLY BLOCK

| Ref. No. | Parts No. | Description                                         | Schematic No. | Q'ty |
|----------|-----------|-----------------------------------------------------|---------------|------|
| 9-1      | BT621922  | Power Trans. MYT-1                                  | 38-4-314      | 1    |
| 9-2x     | BT621988  | Power Trans. MYT-11<br>(JPN, CSA)                   | 38-4-316      | 1    |
| 9-3x     | BT621990  | Power Trans. MYT-12 (CEE)                           | 38-4-317      | 1    |
| 9-4      | MZ627636  | Trans. Shield Plate                                 | MY-2053       | 1    |
| 9-5      | ZS424056  | Screw, pan head 4x10                                |               | 2    |
| 9-6      | EZ486617  | Trans. Reinforcement Plate B                        | LF-5222       | 2    |
| 9-7      | ZW413188  | Nut M4                                              |               | 2    |
| 9-8      | EC364858  | Elect./C. 330 $\mu$ F 160WV<br>(Lug Type)           | 24-10-56      | 1    |
| 9-9x     | ER365016  | Carbon/R. RD1/4 220k(J)<br>(Insu. Type)             | 35-9-5        | 1    |
| 9-10     | EC593763  | MP/C. 3.5+1.5 $\mu$ F 150WV<br>AC (Lug Type UNI/D.) | 24-9-88       | 1    |
| 9-11     | ZS325495  | Tapping Screw #2 3x6                                |               | 15   |
| 9-12     | ER575640  | Cement/R. H(20+20)B<br>(43+220+180)K                | 35-16-54      | 1    |
| 9-13x    | EZ624047  | Cord Retainer                                       | 2-7-48        | 4    |
| 9-14x    | MZ626861  | VS Table A                                          | MY-2030       | 1    |
| 9-15x    | MZ625858  | VS Table B (CSA, CEE)                               | MY-2030       | 1    |
| 9-16x    | MZ647133  | VS Base C (JPN)                                     | MY-2030       | 1    |
| 9-17     | EJ233370  | Socket (Volt. Selector)<br>S-18010                  | 40-2-3        | 1    |
| 9-18     | EA628075  | Transistor P.C. Board                               | MY-2054       | 1    |
| 9-19     | ET621786  | Transistor T1P-48                                   | 45-1-197      | 1    |
| 9-20     | ZS421806  | Screw, pan head 3x8                                 |               | 1    |
| 9-21     | ZW273756  | Nut M3                                              |               | 1    |
| 9-22     | ZS422076  | Screw, pan head 3x5                                 |               | 2    |
| 9-23x    | EA624521  | Fuse P.C. Board MY-1(A)<br>(JPN, CSA)               | 33-2-46       | 1    |
| 9-24x    | EA624532  | Fuse P.C. Board MY-1(B)<br>(JPN, CSA)               | 33-2-47       | 1    |
| 9-25x    | EA624554  | Fuse P.C. Board MY-2(A)<br>(CEE)                    | 33-2-48       | 1    |
| 9-26x    | EA624565  | Fuse P.C. Board MY-2(B)<br>(CEE)                    | 33-2-49       | 1    |
| 9-27x    | EA615093  | Fuse P.C. Board MY-1<br>(JPN, CSA)                  | MY-2045       | 1    |
| 9-28x    | EA614632  | Fuse P.C. Board MY-2<br>(JPN, CSA)                  | MY-2046       | 1    |
| 9-29x    | ZS462925  | Tapping Screw #2 4x8 (BR)                           |               | 4    |
| 9-30x    | EZ614586  | Fuse Table MY (CSA, CEE,<br>JPN)                    | MY-2043       | 2    |
| 9-31x    | ZS279350  | ISO Screw, pan head 3x6                             |               | 4    |
| 9-32x    | ZS455207  | Tapping Screw #2 3x5 (BR)                           |               | 4    |
| 9-33     | EF563703  | Fuse 2A 250V                                        | 39-1-50       | 1    |
| 9-34x    | EF563681  | Fuse 1A 250V (JPN)                                  | 39-1-50       | 4    |
| 9-35x    | EF511637  | Fuse ULMF61M 250V 1A<br>(CSA)                       | 39-1-45       | 4    |
| 9-36x    | EF602550  | Fuse 1.25AT 250V (CEE)                              | 39-1-53       | 1    |
| 9-37x    | EF601942  | Fuse 630MAT (SEMKO)                                 | 39-1-53       | 1    |
| 9-38x    | EF624543  | Fuse ULMF61M 250V 2A<br>(CSA)                       | 39-1-45       | 2    |
| 9-39     | EJ631945  | Strain Relief SR-4N-4                               | 2-7-49        | 1    |
| 9-40x    | EW374894  | U/L AC cord 3M                                      | 26-3-19       | 1    |
| 9-41x    | EW524845  | AC Cord 2.5M (JPN)                                  | 26-3-31       | 1    |
| 9-42x    | EW516600  | Power Cord VM-0065 (CEE)                            | 26-3-28       | 1    |
| 9-43x    | EW604585  | Power Cord BSI                                      | 26-3-37       | 1    |
| 9-44x    | EJ205986  | Cramp Terminal 2-SD                                 | 32-1-8        | 2    |
| 9-45     | MZ629414  | Reinforcement Bracket                               | MY-2055       | 1    |
| 9-46x    | MZ259233  | Wire Band C                                         | 3A-745        | 1    |
| 9-47x    | ZW273881  | Earth Lug M4 (CEE)                                  |               | 1    |
| 9-48x    | ZW273892  | Toothed Lock Washer M4<br>(CEE)                     |               | 1    |
| 9-49x    | ZS413201  | Screw, pan head 4x8 (CEE)                           |               | 1    |
| 9-50x    | ZW416693  | Nut M4 (CEE)                                        |               | 1    |
| 9-51x    | EJ300508  | Mate-N-Lock Plug Housing<br>9P 1-480274-0           | 52-1-7        | 1    |
| 9-52x    | EJ373634  | Socket Contact 61115-1                              | 52-1-1        | 7    |
| 9-53     | ES479485  | Slide SW. S-1                                       | 25-3-66       | 1    |
| 9-54x    | ZS414178  | Screw, truss head 3x5,<br>w/washer                  |               | 2    |
| 9-55x    | SM647245  | Cycle Name Plate                                    | MY-2058       | 1    |

## 10 POWER SUPPLY P.C. BOARD (MY-2222) BLOCK

| Symbol No.               | Parts No. | Description                                         | Q'ty |
|--------------------------|-----------|-----------------------------------------------------|------|
| 10-1                     | BA624802  | Power Supply P.C. Board<br>Comp. (MY-2222)          | 1    |
| 10-TR1                   | ET511920  | Transistor 2SC1247A (B) (V)                         | 1    |
| 10-TR2                   | ET398711  | Transistor 2SC945 (Q) (R)                           | 1    |
| 10-TR3                   | ET537300  | Transistor 2SD361 (D) (E)                           | 1    |
| 10-D1to4                 | ED494583  | Silicon Diode 10D05                                 | 4    |
| 10-D5                    | ED357794  | Zener Diode RD-5A(M)                                | 1    |
| 10-D6to8                 | ED624903  | Silicon Diode IS2473                                | 3    |
| 10-D9to13                | ED224550  | Silicon Diode 10D4                                  | 5    |
| 10-RL1,2                 | EP638763  | Relay MY4-O-US DC24V                                | 2    |
| 10-RL3                   | EP616500  | Relay LC1-C-JT DC24V                                | 1    |
| 10-CR1to7                | ER376435  | Spark Quencher U/L<br>0.1 $\mu$ +120 $\Omega$ 250WV | 7    |
| 10-VR1                   | EV554670  | Semi-fixed/Vol. V10K8-1-5 1kB                       | 1    |
| 10-2                     | EZ626894  | Heat-sink Plate B                                   | 1    |
| 10-3                     | ZS421806  | Screw, pan head 3x8                                 | 1    |
| 10-4                     | ZW273756  | Nut M3                                              | 1    |
| 10-5                     | ZS422076  | Screw, pan head 3x5                                 | 2    |
| 10-6                     | EZ615058  | P.C. Board Holder A                                 | 1    |
| 10-7                     | ZS325495  | Tapping Screw #2 3x6                                | 2    |
| Capacitor, Vertical Type |           |                                                     |      |
| 10-C1                    | EC564952  | Elect. 470 $\mu$ F 50WV                             | 1    |
| 10-C2                    | EC372148  | Elect. 220 $\mu$ F 35WV                             | 1    |
| 10-C3                    | EC250885  | Mylar 0.01 $\mu$ F (K) 50WV                         | 1    |
| 10-C4                    | EC313121  | Elect. 220 $\mu$ F 25WV                             | 1    |
| 10-C5,6                  | EC462611  | MP/C. 0.47 $\mu$ F (K) 250WV<br>(Tub. Type)         | 2    |

Carbon Resistor Omitted

## 11 SYS. CON. P.C. BOARD (MY-2221) BLOCK

| Symbol No.               | Parts No. | Description                               | Q'ty |
|--------------------------|-----------|-------------------------------------------|------|
| 11-1                     | BA624791  | Sys. Con. P.C. Board Comp.<br>(MY-2221)   | 1    |
| 11-TR1to9                | ET398711  | Transistor 2SC945 (Q) (R)                 | 11   |
| 11-TR10                  | ET511694  | Transistor 2SC1211 (D) (E)                | 1    |
| 11-TR11,12               | ET398711  | Transistor 2SC945 (Q) (R)                 | 2    |
| 11-D1                    | ED624903  | Silicon Diode IS2473                      | 1    |
| 11-D2to7                 | ED560913  | Silicon Diode IS2473 VE                   | 6    |
| 11-D8                    | ED624903  | Silicon Diode IS2473                      | 1    |
| 11-D9to14                | ED560913  | Silicon Diode IS2473 VE                   | 5    |
| 11-D15to33               | ED624903  | Silicon Diode IS2473                      | 18   |
| 11-D34,35                | ED560913  | Silicon Diode IS2473 VE                   | 2    |
| 11-RL1                   | EP621808  | Relay MTS-2                               | 1    |
| 11-P11                   | EZ624071  | Pin for V Connector, w/base<br>RTB-1, 5-6 | 1    |
| 11-2                     | ZS609298  | Screw, flat fillister head 3x6            | 6    |
| 11-3                     | ZW273756  | Nut M3                                    | 6    |
| 11-4                     | ZW273802  | Toothed Lock Washer M3                    | 6    |
| Capacitor, Vertical Type |           |                                           |      |
| 11-C1                    | EC450055  | Elect. 1 $\mu$ F 25WV                     | 1    |
| 11-C2                    | EC320051  | Elect. 10 $\mu$ F 16WV                    | 1    |
| 11-C3to5                 | EC450055  | Elect. 1 $\mu$ F 25WV                     | 3    |
| 11-C6                    | EC220994  | Elect. 10 $\mu$ F 25WV                    | 1    |
| 11-C7                    | EC220127  | Elect. 100 $\mu$ F 16WV                   | 1    |
| 11-C8                    | EC331328  | Elect. 3.3 $\mu$ F 25WV                   | 1    |
| 11-C9to11                | EC456041  | Elect. 33 $\mu$ F 25WV                    | 3    |

Carbon Resistor Omitted

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

| Symbol No.               | Parts No. | Description                      | Q'ty |
|--------------------------|-----------|----------------------------------|------|
| 12-1                     | BA622574  | Servo P.C. Board Comp. (MY-2036) | 1    |
| 12-TR1,2                 | ET478001  | Transistor 2SC945 (P) (Q)        | 3    |
| 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-D1                    | ED557447  | Silicon Diode 1S1588             | 1    |
| 12-D2to5                 | ED224548  | Silicon Diode 10D2               | 4    |
| 12-TH1                   | ED593357  | Thermister 34D21                 | 1    |
| 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)            | 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                    | EC487157  | NP/C. 0.47μF (M) 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

## 13 PEAK LEVEL P.C. BOARD (MY-5202) BLOCK

| Symbol No.               | Parts No. | Description                           | Q'ty |
|--------------------------|-----------|---------------------------------------|------|
| 13-1                     | BA624835  | Peak Level P.C. Board Comp. (MY-5202) | 1    |
| 13-TR1to4                | ET398711  | Transistor 2SC945 (Q) (R)             | 4    |
| 13-D1,2                  | ED560913  | Silicon Diode 1S2473 VE               | 2    |
| 13-D3                    | ED591333  | Luminous Diode GL-31AR                | 1    |
| 13-VR1,2                 | EV520806  | Semi-fixed/Vol. V8K4-1 10 kB          | 2    |
| 13-2                     | MZ631045  | Peak Level Table                      | 1    |
| 13-3                     | EZ631080  | Diode Bracket                         | 1    |
| 13-4                     | ZS325495  | Tapping Screw #2 3x6                  | 2    |
| Capacitor, Vertical Type |           |                                       |      |
| 13-C1                    | EC368256  | Elect. 0.47μF 25WV                    | 1    |
| 13-C2                    | EC220994  | Elect. 10μF 25WV                      | 1    |
| 13-C3                    | EC450527  | Elect. 4.7μF 25WV                     | 1    |
| 13-C4                    | EC350875  | Mylar 0.001μF (J) 50WV                | 1    |
| 13-C5                    | EC368256  | Elect. 0.47μF 25WV                    | 1    |
| 13-C6                    | EC220994  | Elect. 10μF 25WV                      | 1    |
| 13-C7                    | EC340527  | Elect. 4.7μF 25WV                     | 1    |
| 13-C8                    | EC350875  | Mylar 0.001μF (J) 50WV                | 1    |
| 13-C9                    | EC331828  | Elect. 3.3μF 25WV                     | 1    |
| 13-C10                   | EC220678  | Elect. 47μF 25WV                      | 1    |

Carbon Resistor Omitted

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

| Symbol No.               | Parts No. | Description                     | Q'ty |
|--------------------------|-----------|---------------------------------|------|
| 14-1                     | BA622710  | EQ. P.C. Board Comp. (MY-5014A) | 1    |
| 14-SW1                   | ES622023  | Lever SW. J-L6004               | 1    |
| 14-SW2                   | ES622034  | Lever SW. J-L7003               | 1    |
| 14-L1                    | EO369178  | Ferri Inductor FL7H 1.5 MH (J)  | 2    |
| 14-L2                    | EO380564  | Ferri Inductor FL7H 1.8 MH (J)  | 2    |
| Capacitor, Vertical Type |           |                                 |      |
| 14-C1                    | EC329861  | Mylar 0.027μF (J) 50WV          | 2    |
| 14-C2                    | EC368335  | Mylar 0.022μF (J) 50WV          | 2    |
| 14-C3                    | EC379214  | Mylar 0.047μF (J) 50WV          | 2    |
| 14-C4                    | EC379192  | Mylar 0.039μF (J) 50WV          | 2    |

Carbon Resistor Omitted

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

| Symbol No.               | Parts No. | Description                            | Q'ty |
|--------------------------|-----------|----------------------------------------|------|
| 15-1                     | BA622732  | PB. P.C. Board Comp. (MY-5017)         | 1    |
| 15-TR1to4                | ET234854  | Transistor 2SC458LG (C)                | 8    |
| 15-TR5,6                 | ET478001  | Transistor 2SC945 (P) (Q)              | 4    |
| 15-D1                    | ED570475  | Zener Diode WZ-075                     | 2    |
| 15-D2                    | ED219464  | Germanium Diode 1N34A                  | 2    |
| 15-L1                    | EO496361  | Inductor 6070GE 23MH (J)               | 2    |
| 15-T1                    | BT517274  | Headphone Trans. N16-53S               | 2    |
| 15-VR1                   | EV464220  | Semi-fixed/Vol. V8K4-1 50 kB           | 2    |
| 15-VR2                   | EV622056  | Co-axial 2-throw Vol. V24L5GPHN B10Kx2 | 1    |
| 15-VR3                   | EV464196  | Semi-fixed/Vol. V8K4-1 2kB             | 2    |
| Capacitor, Vertical Type |           |                                        |      |
| 15-C1                    | EC220678  | Elect. 47μF 25WV                       | 2    |
| 15-C2                    | EC432810  | Elect. 10μF 16WV NL                    | 2    |
| 15-C3                    | EC290520  | VFM 100PF (J) 50WV                     | 2    |
| 15-C4                    | EC467133  | VFM 68PF (J) 50WV                      | 2    |
| 15-C5                    | EC290520  | VFM 100PF (J) 50WV                     | 2    |
| 15-C6                    | EC329771  | Elect. 47μF 6.3WV                      | 2    |
| 15-C7                    | EC320051  | Elect. 10μF 16WV                       | 2    |
| 15-C8                    | EC389485  | Mylar 0.018μF (J) 50WV                 | 2    |
| 15-C9,10                 | EC250683  | Mylar 0.0022μF (J) 50WV                | 4    |
| 15-C11                   | EC220678  | Elect. 47μF 25WV                       | 2    |
| 15-C12                   | EC329850  | VFM 220PF (J) 50WV                     | 2    |
| 15-C13                   | EC432810  | Elect. 10μF 16WV NL                    | 2    |
| 15-C14                   | EC329771  | Elect. 47μF 6.3WV                      | 2    |
| 15-C15                   | EC399565  | VFM 22PF (J) 50WV                      | 2    |
| 15-C16                   | EC290520  | VFM 100PF (J) 50WV                     | 2    |
| 15-C17                   | EC320051  | Elect. 10μF 16WV                       | 2    |
| 15-C18                   | EC220364  | Elect. 100μF 6.3WV                     | 2    |
| 15-C19                   | EC450055  | Elect. 1μF 25WV                        | 2    |
| 15-C20                   | EC320051  | Elect. 10μF 16WV                       | 2    |
| 15-C21                   | EC450527  | Elect. 4.7μF 25WV                      | 2    |
| 15-C22                   | EC329771  | Elect. 47μF 6.3WV                      | 2    |

Carbon Resistor Omitted

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

## BLOCK

| Symbol No.               | Parts No. | Description                              | Q'ty |
|--------------------------|-----------|------------------------------------------|------|
| 16-1                     | BA622721  | Rec., Osc. P.C. Board Comp.<br>(MY-5016) | 1    |
| 16-TR1to4                | ET234854  | Transistor 2SC458LG (C)                  | 8    |
| 16-TR5,6,7               | ET478001  | Transistor 2SC945 (P) (Q)                | 4    |
| 16-L1                    | EO321254  | Ferri Inductor FL7H 5.6MH (J)            | 2    |
| 16-L2                    | EO333365  | Osc. Coil OT-204                         | 1    |
| 16-VR1                   | EV622078  | Double Vol. V24L5DPHN<br>A50Kx2          | 2    |
| 16-VR2                   | EV522797  | Semi-fixed/Vol. V8K4-1 20 kB             | 2    |
| 16-R39                   | ER515070  | Metal Oxide Film/R. 2W<br>150Ω (K)       | 1    |
| 16-R40                   | ER426892  | Solid/R. RC1/2 2.4k (J)                  | 1    |
| Capacitor, Vertical Type |           |                                          |      |
| 16-C1                    | EC290520  | VFM 100PF (J) 50WV                       | 2    |
| 16-C2                    | EC220678  | Elect. 47μF 25WV                         | 2    |
| 16-C3                    | EC432810  | Elect. 10μF 16WV NL                      | 2    |
| 16-C4                    | EC290520  | VFM 100PF (J) 50WV                       | 2    |
| 16-C5                    | EC220364  | Elect. 100μF 6.3WV                       | 2    |
| 16-C6,7                  | EC399565  | VFM 22PF (J) 50WV                        | 4    |
| 16-C8                    | EC320051  | Elect. 10μF 16WV                         | 2    |
| 16-C9                    | EC329771  | Elect. 47μF 6.3WV                        | 2    |
| 16-C10                   | EC377212  | VFM 47PF (J) 50WV                        | 2    |
| 16-C11                   | EC320051  | Elect. 10μF 16WV                         | 2    |
| 16-C12                   | EC220678  | Elect. 47μF 25WV                         | 2    |
| 16-C13                   | EC329771  | Elect. 47μF 6.3WV                        | 2    |
| 16-C14                   | EC399565  | VFM 22PF (J) 50WV                        | 2    |
| 16-C15                   | EC290520  | VFM 100PF (J) 50WV                       | 2    |
| 16-C16                   | EC379170  | Mylar 0.1μF (J) 50WV                     | 2    |
| 16-C17                   | EC320051  | Elect. 10μF 16WV                         | 2    |
| 16-C18                   | EC329771  | Elect. 47μF 6.3WV                        | 2    |
| 16-C19                   | EC389496  | Mylar 0.068μF (J) 50WV                   | 2    |
| 16-C20                   | EC220151  | Elect. 100μF 25WV                        | 2    |
| 16-C21                   | EC320051  | Elect. 10μF 16WV                         | 2    |
| 16-C22                   | EC220994  | Elect. 10μF 25WV                         | 2    |
| 16-C23                   | EC405898  | Styrol 470PF (J) 50WV                    | 2    |
| 16-C24                   | EC250841  | Mylar 0.01μF (J) 50WV                    | 2    |
| 16-C25                   | EC558202  | Trimmer TM-80A 80PF                      | 2    |
| 16-C26                   | EC558235  | Styrol 1800PF (J) 250WV                  | 1    |
| 16-C27,28                | EC250841  | Mylar 0.01μF (J) 50WV                    | 2    |
| 16-C29                   | EC450055  | Elect. 1μF 25WV                          | 1    |

Carbon Resistor Omitted

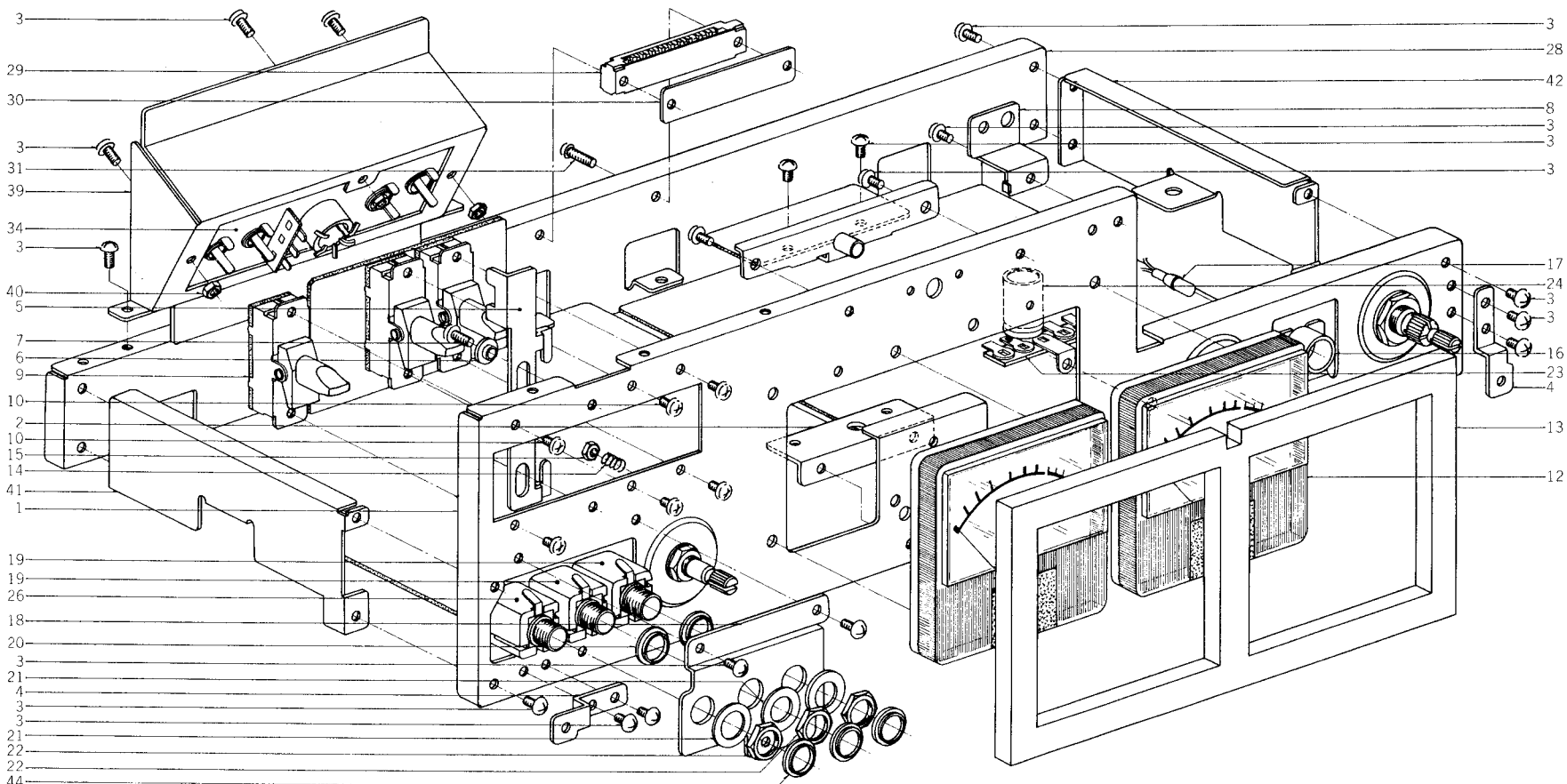
# AMP. ASSEMBLY BLOCK

| Ref. No.            | Parts No. | Description                              | Schematic No. | Q'ty |
|---------------------|-----------|------------------------------------------|---------------|------|
| FRONT CHASSIS BLOCK |           |                                          |               |      |
| 17-1                | TA627028  | Front Chassis A                          | MY-5001       | 1    |
| 17-2                | EZ615115  | P.C. Board Support                       | MY-5004       | 1    |
| 17-3                | ZS325495  | Tapping Screw #2 3x6                     |               | 32   |
| 17-4                | SZ615137  | Panel Support                            | MY-5008       | 2    |
| 17-5                | ML615126  | Connecting Lever                         | MY-5005       | 1    |
| 17-6                | ZW625241  | Graduated Washer                         | MY-1013       | 2    |
| 17-7                | ZS447840  | Tapping Screw #2 3x8 (BR)                |               | 2    |
| 17-8                | SZ615148  | Amp. Support                             | MY-5009       | 1    |
| 17-9                | ES621977  | Lever SW. J-L6005                        | 25-12-19      | 1    |
| 17-10               | ZS422076  | Screw, pan head 3x5                      |               | 6    |
| 17-11x              | EJ641441  | 6P Connector Assy.                       | MY-5206       | 1    |
| 17-12               | EM573748  | VU Meter KL-280B-28C<br>(Yellow)         | 46-1-86       | 2    |
| 17-13               | SZ631091  | Meter Cushion B                          | MY-6203       | 1    |
| 17-14               | ZG580533  | Cramp Spring                             | TD-2046       | 4    |
| 17-15               | ZW273756  | Nut M3                                   |               | 4    |
| 17-16               | EZ586326  | Lamp Holder                              | LF-5324       | 1    |
| 17-17               | EL593662  | Cord Lamp 5.5V 60MA<br>(220MMx2)         | 28-2-37       | 1    |
| 17-18               | MZ627287  | Jack Bracket                             | MY-5019       | 1    |
| 17-19               | EJ592435  | Mic. Jack 2PMJ4                          | 31-2-44       | 2    |
| 17-20               | EZ225180  | Nylon Collar, Jack                       | LD-520        | 2    |
| 17-21               | EZ225101  | Jack Fiber D9.1x15.4x0.5t                | DX-510        | 2    |
| 17-22               | ZW554624  | E Jack Nut                               | 7-1-56        | 3    |
| 17-23               | EJ255115  | Lug Plate VB2L2                          | 33-4-3        | 1    |
| 17-24               | EC220768  | Elect. 470μF 10WV                        | 24-12-9       | 1    |
| 17-25x              | ED494583  | Silicon Diode 10D05                      | 45-2-42       | 1    |
| 17-26               | EJ601481  | Mic. Jack 3PMJ4                          | 31-2-45       | 1    |
| 17-27x              | ZW436026  | Washer (SPC) D9.2x15x0.5t                |               | 1    |
| REAR CHASSIS BLOCK  |           |                                          |               |      |
| 17-28               | MZ627030  | Rear Chassis                             | MY-5002       | 1    |
| 17-29               | EJ364915  | Multi-Jack 10P<br>PB01-10S-24E2G         | 31-4-15       | 1    |
| 17-30               | EZ530021  | Jack Nut Plate                           | ND-5052       | 1    |
| 17-31               | ZS462947  | Screw, pan head 2.3x12                   |               | 2    |
| 17-32x              | ZW562476  | Earth Lug M3                             |               | 1    |
| 17-33x              | EJ373623  | Pin Contact 61116-1                      | 52-1-1        | 9    |
| JACK PLATE BLOCK    |           |                                          |               |      |
| 17-34               | EJ621191  | Jack Plate KJ                            | 31-5-118      | 1    |
| 17-35x              | ER440921  | Carbon/R. RD1/4 27k (J)<br>(Insu. Type)  | 35-9-5        | 2    |
| 17-36x              | ER214290  | Carbon/R. RD1/4 4.7k (J)<br>(Insu. Type) | 35-9-5        | 2    |
| 17-37x              | ER345677  | Carbon/R. RD1/4 15k (J)<br>(Insu. Type)  | 35-9-5        | 2    |
| 17-38x              | ER324685  | Carbon/R. RD1/4 33k (J)<br>(Insu. Type)  | 35-9-5        | 2    |
| 17-39               | EZ626927  | Jack Plate Bracket                       | MY-5006       | 1    |
| 17-40               | ZW554940  | Nut M3                                   |               | 4    |

## AMP. ASSEMBLY BLOCK

|        |          |                   |         |   |
|--------|----------|-------------------|---------|---|
| 17-41  | SZ626905 | Amp. Side Plate A | MY-5003 | 1 |
| 17-42  | SZ626916 | Amp. Side Plate B | MY-5003 | 1 |
| 17-43x | EZ627041 | Amp. Shield Plate | MY-5007 | 1 |
| 17-44  | EZ436217 | Collar For Jack   | MC-5006 | 3 |

17 ILLUSTRATION OF AMP. ASSEMBLY BLOCK



## 18 PHOTO OF FINAL ASSEMBLY BLOCK



### FINAL ASSEMBLY BLOCK

| Ref. No.                    | Parts No. | Description                      | Schematic No. | Q'ty |
|-----------------------------|-----------|----------------------------------|---------------|------|
| <b>FRONT PANEL BLOCK</b>    |           |                                  |               |      |
| 18-1x                       | BZ622394  | Front Panel Block Comp.          | MY-II         | 1    |
| 18-2                        | SP631124  | Front Panel C                    | MY-6201       | 1    |
| 18-3                        | SE626940  | Reel Table Escutcheon            | MY-6004       | 2    |
| 18-4x                       | ZW575730  | Speed Nut 3 (P Type)             | 6-3 6         | 12   |
| 18-5                        | SC627107  | Head Cover Base                  | MY-6005       | 1    |
| 18-6                        | SE626951  | Counter Escutcheon               | MY-6006       | 1    |
| 18-7                        | SE613888  | Button Escutcheon A              | CW-6021       | 2    |
| 18-8                        | SE613866  | Button Escutcheon C              | CW-6016       | 6    |
| 18-9                        | SE612055  | Lamp Lens A (Red)                | CH-6314       | 1    |
| 18-10                       | SE631102  | VU Escutcheon                    | MY-6205       | 2    |
| 18-11x                      | ZS575392  | Screw, pan head 2.6x8            |               | 8    |
| 18-12x                      | MH615161  | Head Cover Prop                  | MY-6008       | 2    |
| 18-13x                      | ZW416698  | Nut M4                           |               | 2    |
| <b>CASE BLOCK</b>           |           |                                  |               |      |
| 18-14                       | BC627186  | Case C                           | MY-6013       | 1    |
| 18-15                       | SZ622070  | Square Foot                      | MY-6026       | 2    |
| 18-16x                      | ZS200610  | Tapping Screw #1 4x12<br>(Truss) |               | 4    |
| 18-17x                      | ZS392141  | Tapping Screw #1 3x8<br>(Truss)  |               | 2    |
| 18-18x                      | SE627120  | Ventilator                       | MY-6014       | 1    |
| <b>FINAL ASSEMBLY BLOCK</b> |           |                                  |               |      |
| 18-19x                      | SZ627085  | Side Plate A (Right)             | MY-6001       | 1    |
| 18-20x                      | SZ627096  | Side Plate B (Left)              | MY-6001       | 1    |
| 18-21x                      | ZS325495  | Tapping Screw #2 3x6             |               | 16   |
| 18-22x                      | SZ627298  | Panel Support B (Right)          | MY-6002       | 1    |
| 18-23x                      | SZ627311  | Panel Support C (Left)           | MY-6002       | 1    |
| 18-24                       | ZS613901  | Panel Screw                      | CW-6031       | 6    |
| 18-25x                      | EF563681  | Fuse 1A 250V                     | 39-1-50       | 1    |
| 18-26                       | SC627118  | Head Cover                       | MY-6011       | 1    |
| 18-27                       | SM598983  | GX Symbol Plate                  | KJ-6021       | 1    |
| 18-28                       | SM630865  | Head Cover Name Plate            |               |      |
|                             |           | GX-270D                          | MY-6209       | 1    |
| 18-29                       | SK631056  | Single Knob                      | MY-6208       | 1    |
| 18-30                       | SK631078  | Double Knob (Upper)              | MY-6206       | 2    |
| 18-31                       | SK631067  | Double Knob (Lower)              | MY-6207       | 2    |

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

## 19 LIST OF INTERCHANGEABLE SEMICONDUCTORS

As far as service is concerned, in case the original parts cannot be obtained, the interchangeable parts listed below can be substituted.

| ORIGINAL PARTS                       |                      |                                                                | INTERCHANGEABLE PARTS                                                                     |                                              |
|--------------------------------------|----------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------------------|
| Description                          | Parts No.            | Utilizing P.C. Board                                           | Description                                                                               | Parts No.                                    |
| 2SC945 (Q), (R)                      | ET398711             | MY-2036<br>MY-2221<br>MY-2222<br>MY-5016<br>MY-5017<br>MY-5202 | 2SC711 (E), (F)<br>2SC536 (E), (F)<br>2SC1647 (R), (S), (E)<br>2SC1641 (Q), (R), (S), (E) | ET453486<br>ET370607<br>ET623733<br>ET603843 |
| 2SC458LG (C)                         | ET234854             | MY-5016<br>MY-5017                                             | 2SC693U (F)<br>2SC1312S (G), (H)                                                          | ET315472<br>ET603257                         |
| 2SC1211 (D), (E)                     | ET511694             | MY-2221                                                        | 2SC1175 (E), (F)<br>2SC1247A (B), (V)                                                     | ET622080<br>ET511920                         |
| 2SC1247A (B), (V)                    | ET511920             | MY-2222                                                        | 2SC1211 (D), (E)<br>2SC1175 (E), (F)                                                      | ET511694<br>ET622080                         |
| 2SA564 (Q), (R)                      | ET538154             | MY-2036                                                        | 2SA733 (Q), (R)<br>2SA628 (D), (E)<br>2SA640 (E), (F)                                     | ET538378<br>ET538110<br>ET623790             |
| 2SD361 (D), (E)<br>2SD361 (D1), (D2) | ET537300<br>ET623867 | MY-2222<br>MY-2221                                             | 2SC1449 (K), (L), (H)<br>2SC1061 (B), (C)                                                 | ET635815<br>ET375603                         |
| TIP-48                               | ET621786             | MY-2036                                                        | TIP-47                                                                                    | ET621775                                     |
| 10D05                                | ED494583             | MY-2222                                                        | 1N4001                                                                                    | ED511097                                     |
| 10D2                                 | ED224548             | MY-2036                                                        | 1N4004<br>10D4                                                                            | ED570273<br>ED224550                         |
| 10D4                                 | ED224550             | MY-2222                                                        | 10D6<br>1N4004                                                                            | ED224561<br>ED570273                         |

# INDEX

| 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. |
|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| BA622574  | 12-1                  | EC329771  | 16-C18                | EJ255115  | 17-23                 | EZ486617  | 9-6                   | MT397225  | 2-10                  |
| BA622710  | 14-1                  | EC329850  | 15-C12                | EJ300508  | 9-51x                 | EZ530021  | 17-30                 | MT405268  | 2-13                  |
| BA622721  | 16-1                  | EC329861  | 14-C1                 | EJ364915  | 17-29                 | EZ586326  | 17-16                 | MT436860  | 2-16                  |
| BA622732  | 15-1                  | EC331328  | 11-C8                 | EJ373623  | 17-33x                | EZ606701  | 4-8                   | MT488147  | 2-4                   |
| BA624791  | 11-1                  | EC331828  | 12-C4                 | EJ373634  | 9-52x                 | EZ614586  | 9-30x                 | MT495606  | 2-11                  |
| BA624802  | 10-1                  | EC331828  | 13-C9                 | EJ592435  | 17-19                 | EZ615047  | 12-4                  | MT495617  | 2-12x                 |
| BA624835  | 13-1                  | EC346735  | 12-C13                | EJ601481  | 17-26                 | EZ615058  | 10-6                  | MV368886  | 3-7                   |
| BC627186  | 18-14                 | EC350875  | 13-C4                 | EJ621191  | 17-34                 | EZ615060  | 12-6                  | MV537862  | 4-26                  |
| BH622585  | 1-1x                  | EC350875  | 13-C8                 | EJ631945  | 9-39                  | EZ615071  | 12-7                  | MV597082  | 4-4                   |
| BL657112  | 4-1x                  | EC364858  | 9-8                   | EJ641441  | 17-11x                | EZ615115  | 17-2                  | MZ259233  | 9-46x                 |
| BM314741  | 2-1                   | EC368256  | 13-C1                 | EL593662  | 17-17                 | EZ624047  | 9-13x                 | MZ302400  | 7-9                   |
| BM600298  | 3-1x                  | EC368256  | 13-C5                 | EM573748  | 17-12                 | EZ624071  | 11-P11                | MZ314605  | 8-42                  |
| BR398430  | 2-2x                  | EC368335  | 14-C2                 | EO321254  | 16-L1                 | EZ625544  | 8-66                  | MZ314605  | 8-50                  |
| BR398441  | 2-3x                  | EC372148  | 10-C2                 | EO333365  | 16-L2                 | EZ626894  | 10-2                  | MZ314998  | 2-26                  |
| BS622631  | 8-1x                  | EC377212  | 16-C10                | EO369178  | 14-L1                 | EZ626927  | 17-39                 | MZ314998  | 8-38                  |
| BT517274  | 15-T1                 | EC379170  | 16-C16                | EO380564  | 14-L2                 | EZ627041  | 17-43x                | MZ315000  | 2-27                  |
| BT621922  | 9-1                   | EC379192  | 14-C4                 | EO496361  | 15-L1                 | EZ631080  | 13-3                  | MZ315000  | 8-39                  |
| BT621988  | 9-2x                  | EC379214  | 14-C3                 | EP573658  | 6-2                   | HA532743  | 1-26                  | MZ397080  | 8-41                  |
| BT621990  | 9-3x                  | EC389485  | 15-C8                 | EP616500  | 10-RL3                | HA625105  | 1-18                  | MZ529391  | 8-11                  |
| BZ600300  | 3-6                   | EC389496  | 16-C19                | EP621808  | 1-33                  | HA625116  | 1-19                  | MZ582030  | 6-20                  |
| BZ622394  | 18-1x                 | EC399565  | 15-C15                | EP621808  | 11-RL1                | HP536501  | 1-23                  | MZ582030  | 8-55                  |
| BZ622618  | 5-23x                 | EC399565  | 16-C6,7               | EP638763  | 10-RL1,2              | HR556582  | 1-27                  | MZ596823  | 4-29                  |
| BZ624780  | 7-1x                  | EC399565  | 16-C14                | EP650081  | 8-15                  | HZ315090  | 8-58                  | MZ597093  | 4-6                   |
| BZ624813  | 5-1x                  | EC405898  | 16-C23                | ER214290  | 17-36x                | HZ532710  | 1-8                   | MZ597126  | 4-23x                 |
| EA382713  | 1-36x                 | EC432810  | 15-C2                 | ER324685  | 17-38x                | HZ532732  | 1-13                  | MZ597137  | 4-9                   |
| EA463206  | 1-24x                 | EC432810  | 15-C13                | ER345677  | 17-37x                | HZ532765  | 1-16                  | MZ597150  | 4-13                  |
| EA614632  | 9-28x                 | EC432810  | 16-C3                 | ER365016  | 9-9x                  | HZ583176  | 1-28x                 | MZ597172  | 4-12                  |
| EA615093  | 9-27x                 | EC450055  | 11-C1                 | ER376435  | 8-62                  | HZ626837  | 1-2                   | MZ597644  | 3-9                   |
| EA624521  | 9-23x                 | EC450055  | 11-C3to5              | ER376435  | 10-CR1to7             | HZ626848  | 1-3                   | MZ597666  | 3-8                   |
| EA624532  | 9-24x                 | EC450055  | 12-C9                 | ER426892  | 16-R40                | HZ627546  | 1-20                  | MZ597690  | 3-10                  |
| EA624554  | 9-25x                 | EC450055  | 15-C19                | ER440921  | 17-35x                | MA625825  | 5-25                  | MZ606712  | 4-5                   |
| EA624565  | 9-26x                 | EC450055  | 16-C29                | ER515070  | 16-R39                | MB625566  | 2-23                  | MZ625151  | 8-25                  |
| EA625138  | 1-32                  | EC450527  | 13-C3                 | ER554556  | 8-79                  | MB625566  | 8-77                  | MZ625342  | 8-45                  |
| EA628075  | 9-18                  | EC450527  | 13-C7                 | ER575640  | 9-12                  | MC621887  | 8-60                  | MZ625421  | 6-10                  |
| EC220127  | 11-C7                 | EC450527  | 15-C21                | ER593346  | 12-R20                | MH257477  | 8-20                  | MZ625443  | 6-14                  |
| EC220151  | 12-C11                | EC456041  | 11-C9to11             | ES249974  | 5-15                  | MH333737  | 2-29                  | MZ625454  | 6-16                  |
| EC220151  | 16-C20                | EC462611  | 10-C5,6               | ES479395  | 8-67                  | MH333737  | 8-32                  | MZ625511  | 8-57                  |
| EC220364  | 15-C18                | EC467133  | 15-C4                 | ES479485  | 9-53                  | MH527635  | 8-6                   | MZ625555  | 8-73                  |
| EC220364  | 16-C5                 | EC487157  | 12-C7                 | ES562465  | 5-33                  | MH528513  | 8-5                   | MZ625577  | 3-17                  |
| EC220678  | 13-C10                | EC520626  | 8-64                  | ES573456  | 8-61                  | MH529233  | 1-11                  | MZ625768  | 6-1                   |
| EC220678  | 15-C1                 | EC536927  | 8-65x                 | ES573478  | 8-3                   | MH533913  | 6-6                   | MZ625770  | 6-5                   |
| EC220678  | 15-C11                | EC551160  | 8-69                  | ES621178  | 8-68x                 | MH573957  | 1-7                   | MZ625803  | 5-24                  |
| EC220678  | 16-C2                 | EC557166  | 12-C8                 | ES621898  | 8-74                  | MH581927  | 8-23                  | MZ625858  | 9-15x                 |
| EC220678  | 16-C12                | EC558202  | 16-C25                | ES621977  | 17-9                  | MH615161  | 18-12x                | MZ626861  | 9-14x                 |
| EC220768  | 17-24                 | EC558235  | 16-C26                | ES622023  | 14-SW1                | MH625094  | 1-30                  | MZ627030  | 17-28                 |
| EC220994  | 11-C6                 | EC564952  | 10-C1                 | ES622034  | 14-SW2                | MH625140  | 8-21                  | MZ627210  | 8-29                  |
| EC220994  | 13-C2                 | EC565896  | 8-70x                 | ET234854  | 15-TR1to4             | MH625162  | 4-28                  | MZ627265  | 5-27                  |
| EC220994  | 13-C6                 | EC593763  | 9-10                  | ET234854  | 16-TR1to4             | MH625162  | 8-27                  | MZ627287  | 17-18                 |
| EC220994  | 16-C22                | ED219464  | 15-D2                 | ET398711  | 10-TR2                | MH625195  | 8-31                  | MZ627636  | 9-4                   |
| EC250582  | 12-C3                 | ED224548  | 12-D2to5              | ET398711  | 11-TR1to9             | MI651903  | 4-20                  | MZ629414  | 9-45                  |
| EC250582  | 12-C6                 | ED224550  | 6-3x                  | ET398711  | 11-TR11,12            | ML314976  | 2-24                  | MZ630876  | 7-2                   |
| EC250683  | 15-C9,10              | ED224550  | 8-16x                 | ET398711  | 13-TR1to4             | ML314976  | 8-34                  | MZ630898  | 7-5                   |
| EC250841  | 16-C24                | ED224550  | 10-D9to13             | ET399846  | 12-TR3,4              | ML396810  | 8-33                  | MZ630900  | 7-6                   |
| EC250841  | 16-C27,28             | ED357794  | 10-D5                 | ET399846  | 12-TR6                | ML580465  | 5-36                  | MZ630911  | 7-8                   |
| EC250885  | 10-C3                 | ED494583  | 10-D1to4              | ET478001  | 12-TR8                | ML615126  | 17-5                  | MZ630922  | 8-19                  |
| EC250885  | 12-C12                | ED494583  | 17-25x                | ET478001  | 12-TR1,2              | ML627197  | 8-48                  | MZ630933  | 8-17                  |
| EC251122  | 12-C2                 | ED557447  | 12-D1                 | ET478001  | 15-TR5,6              | ML627221  | 8-49                  | MZ630944  | 8-2                   |
| EC251122  | 12-C5                 | ED560913  | 11-D2to7              | ET478001  | 16-TR5,6,7            | ML627232  | 8-35                  | MZ631001  | 5-2                   |
| EC251291  | 12-C1                 | ED560913  | 11-D9to14             | ET511694  | 11-TR10               | ML627254  | 6-8                   | MZ631012  | 5-11                  |
| EC290520  | 15-C17                | ED560913  | 11-D34,35             | ET511920  | 10-TH1                | ML630887  | 7-3                   | MZ631045  | 13-2                  |
| EC290520  | 15-C5                 | ED560913  | 13-D1,2               | ET537300  | 10-TR3                | ML630955  | 5-3                   | MZ647133  | 9-16x                 |
| EC290520  | 15-C16                | ED570475  | 15-D1                 | ET538154  | 12-TR5                | ML630966  | 5-4                   | MZ651881  | 4-3                   |
| EC290520  | 16-C1                 | ED591333  | 13-D3                 | ET621786  | 9-19                  | ML630977  | 5-12                  | MZ810191  | 5-28                  |
| EC290520  | 16-C4                 | ED593357  | 12-TH1                | ET623867  | 12-TR7                | ML630988  | 5-14                  | SB631135  | 7-11                  |
| EC290520  | 16-C15                | ED624903  | 1-34x                 | EV464196  | 15-VR3                | ML630990  | 5-10                  | SB631146  | 7-12                  |
| EC313121  | 10-C4                 | ED624903  | 10-D6to8              | EV464220  | 15-VR1                | MP625048  | 6-26                  | SB631157  | 7-13                  |
| EC320051  | 11-C2                 | ED624903  | 11-D1                 | EV520806  | 13-VR1,2              | MR317507  | 2-19                  | SB631168  | 7-14                  |
| EC320051  | 12-C10                | ED624903  | 11-D8                 | EV522797  | 16-VR2                | MR597115  | 4-22                  | SC627107  | 18-5                  |
| EC320051  | 15-C7                 | ED624903  | 11-D15to33            | EV554670  | 10-VR1                | MS342000  | 2-6                   | SC627118  | 18-26                 |
| EC320051  | 15-C17                | EF511637  | 9-35x                 | EV621955  | 12-VR1                | MS597148  | 4-10                  | SE597161  | 4-14                  |
| EC320051  | 15-C20                | EF563681  | 9-34x                 | EV621966  | 12-VR2                | MS597655  | 3-11                  | SB612055  | 18-9                  |
| EC320051  | 16-C8                 | EF563681  | 18-25x                | EV622056  | 15-VR2                | MS615014  | 5-26                  | SE613866  | 18-8                  |
| EC320051  | 16-C11                | EF563703  | 9-33                  | EV622078  | 16-VR1                | MS625072  | 1-4                   | SE613888  | 18-7                  |
| EC320051  | 16-C17                | EF601942  | 9-37x                 | EW374894  | 9-40x                 | MS625184  | 6-23                  | SE626940  | 18-3                  |
| EC320051  | 16-C21                | EF602550  | 9-36x                 | EW516600  | 9-42x                 | MS625432  | 6-11                  | SE626951  | 18-6                  |
| EC329771  | 15-C6                 | EF624543  | 9-38x                 | EW524845  | 9-41x                 | MT255420  | 2-5                   | SE627120  | 18-18x                |
| EC329771  | 15-C14                | EJ205986  | 9-44x                 | EW604585  | 9-43x                 | MT297663  | 2-8                   | SE631102  | 18-10                 |
| EC329771  | 15-C22                | EJ222748  | 7-10                  | EZ225101  | 17-21                 | MT314987  | 2-25                  | SK597633  | 3-5                   |
| EC329771  | 16-C9                 | EJ233370  | 9-17                  | EZ225180  | 17-20                 | MT314987  | 8-37                  | SK631056  | 18-29                 |
| EC329771  | 16-C13                | EJ255115  | 8-78                  | EZ436217  | 17-44                 | MT317485  | 2-17                  | SK631067  | 18-31                 |

# INDEX

| 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. |
|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| SK631078  | 18-30                 | ZS422076  | 17-10                 | ZW601075  | 4-15                  |           |                       |           |                       |
| SK631282  | 5-22                  | ZS422965  | 5-34                  | ZW601075  | 5-29                  |           |                       |           |                       |
| SK631304  | 8-71                  | ZS424056  | 2-21                  | ZW603764  | 3-15x                 |           |                       |           |                       |
| SK631326  | 6-27                  | ZS424056  | 9-5                   | ZW603775  | 3-16x                 |           |                       |           |                       |
| SM598983  | 18-27                 | ZS425981  | 2-15x                 | ZW603786  | 3-13                  |           |                       |           |                       |
| SM630865  | 18-28                 | ZS432674  | 5-5                   | ZW603797  | 3-14x                 |           |                       |           |                       |
| SM647245  | 9-55x                 | ZS432674  | 8-76                  | ZW603990  | 4-2                   |           |                       |           |                       |
| SP631124  | 18-2                  | ZS432843  | 8-75                  | ZW604012  | 4-11                  |           |                       |           |                       |
| SZ615137  | 17-4                  | ZS447840  | 17-7                  | ZW605698  | 3-3                   |           |                       |           |                       |
| SZ615148  | 17-8                  | ZS455207  | 9-32x                 | ZW621876  | 8-52x                 |           |                       |           |                       |
|           |                       |           |                       |           |                       |           |                       |           |                       |
| SZ622070  | 18-15                 | ZS462925  | 9-29x                 | ZW622001  | 8-12                  |           |                       |           |                       |
| SZ626905  | 17-41                 | ZS462947  | 17-31                 | ZW622012  | 8-13                  |           |                       |           |                       |
| SZ626916  | 17-42                 | ZS477876  | 1-29                  | ZW625241  | 17-6                  |           |                       |           |                       |
| SZ627085  | 18-19x                | ZS483502  | 5-16                  | ZW649618  | 4-24x                 |           |                       |           |                       |
| SZ627096  | 18-20x                | ZS483502  | 8-4                   |           |                       |           |                       |           |                       |
| SZ627298  | 18-22x                | ZS483502  | 8-63                  |           |                       |           |                       |           |                       |
| SZ627311  | 18-23x                | ZS484828  | 4-17                  |           |                       |           |                       |           |                       |
| SZ631091  | 17-13                 | ZS499331  | 4-7                   |           |                       |           |                       |           |                       |
| TA627028  | 17-1                  | ZS516644  | 2-20                  |           |                       |           |                       |           |                       |
| TC515575  | 5-6                   | ZS575392  | 18-11x                |           |                       |           |                       |           |                       |
|           |                       |           |                       |           |                       |           |                       |           |                       |
| ZG255633  | 2-7                   | ZS593796  | 4-21                  |           |                       |           |                       |           |                       |
| ZG303300  | 1-17                  | ZS608321  | 8-54                  |           |                       |           |                       |           |                       |
| ZG314706  | 5-19                  | ZS608477  | 1-21                  |           |                       |           |                       |           |                       |
| ZG315011  | 2-28                  | ZS608512  | 1-14                  |           |                       |           |                       |           |                       |
| ZG315011  | 8-43                  | ZS609298  | 11-2                  |           |                       |           |                       |           |                       |
| ZG316833  | 5-20                  | ZS613901  | 18-24                 |           |                       |           |                       |           |                       |
| ZG317496  | 2-18                  | ZW259738  | 8-9                   |           |                       |           |                       |           |                       |
| ZG371114  | 5-21                  | ZW260010  | 6-21                  |           |                       |           |                       |           |                       |
| ZG371114  | 8-44                  | ZW270088  | 2-9                   |           |                       |           |                       |           |                       |
| ZG394378  | 5-18                  | ZW270088  | 5-9                   |           |                       |           |                       |           |                       |
|           |                       |           |                       |           |                       |           |                       |           |                       |
| ZG456120  | 7-4                   | ZW270088  | 6-7                   |           |                       |           |                       |           |                       |
| ZG466312  | 1-9                   | ZW270088  | 8-14                  |           |                       |           |                       |           |                       |
| ZG466312  | 1-15                  | ZW270101  | 4-25                  |           |                       |           |                       |           |                       |
| ZG529211  | 8-8                   | ZW270101  | 5-31                  |           |                       |           |                       |           |                       |
| ZG580533  | 17-14                 | ZW270101  | 8-10                  |           |                       |           |                       |           |                       |
| ZG580768  | 6-22                  | ZW270134  | 6-15                  |           |                       |           |                       |           |                       |
| ZG580768  | 8-56x                 | ZW270134  | 8-53x                 |           |                       |           |                       |           |                       |
| ZG614970  | 5-32                  | ZW273633  | 4-16                  |           |                       |           |                       |           |                       |
| ZG625375  | 8-51                  | ZW273756  | 5-35                  |           |                       |           |                       |           |                       |
| ZG625465  | 6-18                  | ZW273756  | 8-7                   |           |                       |           |                       |           |                       |
|           |                       |           |                       |           |                       |           |                       |           |                       |
| ZG632553  | 5-7                   | ZW273756  | 8-24x                 |           |                       |           |                       |           |                       |
| ZG646020  | 4-18                  | ZW273756  | 9-21                  |           |                       |           |                       |           |                       |
| ZS200395  | 5-38                  | ZW273756  | 10-4                  |           |                       |           |                       |           |                       |
| ZS200610  | 18-16x                | ZW273756  | 11-3                  |           |                       |           |                       |           |                       |
| ZS201150  | 4-19                  | ZW273756  | 12-3                  |           |                       |           |                       |           |                       |
| ZS201508  | 1-25                  | ZW273756  | 17-15                 |           |                       |           |                       |           |                       |
| ZS325495  | 7-7                   | ZW273778  | 2-14x                 |           |                       |           |                       |           |                       |
| ZS325495  | 8-72                  | ZW273802  | 11-4                  |           |                       |           |                       |           |                       |
| ZS325495  | 9-11                  | ZW273835  | 1-10                  |           |                       |           |                       |           |                       |
| ZS325495  | 10-7                  | ZW273881  | 9-47x                 |           |                       |           |                       |           |                       |
|           |                       |           |                       |           |                       |           |                       |           |                       |
| ZS325495  | 13-4                  | ZW273892  | 9-48x                 |           |                       |           |                       |           |                       |
| ZS325495  | 17-3                  | ZW273914  | 1-12                  |           |                       |           |                       |           |                       |
| ZS325495  | 18-21x                | ZW273914  | 6-12                  |           |                       |           |                       |           |                       |
| ZS344463  | 8-59                  | ZW273914  | 6-25x                 |           |                       |           |                       |           |                       |
| ZS369900  | 1-31                  | ZW290283  | 2-30                  |           |                       |           |                       |           |                       |
| ZS379350  | 6-19                  | ZW290283  | 5-13                  |           |                       |           |                       |           |                       |
| ZS379350  | 9-31x                 | ZW290283  | 8-36                  |           |                       |           |                       |           |                       |
| ZS392141  | 18-17x                | ZW334653  | 6-17                  |           |                       |           |                       |           |                       |
| ZS403222  | 2-22                  | ZW413188  | 9-7                   |           |                       |           |                       |           |                       |
| ZS413201  | 1-6                   | ZW413256  | 1-22                  |           |                       |           |                       |           |                       |
|           |                       |           |                       |           |                       |           |                       |           |                       |
| ZS413201  | 8-22x                 | ZW416693  | 6-13                  |           |                       |           |                       |           |                       |
| ZS413201  | 9-49x                 | ZW416693  | 8-26x                 |           |                       |           |                       |           |                       |
| ZS413234  | 3-12                  | ZW416693  | 9-50x                 |           |                       |           |                       |           |                       |
| ZS414044  | 1-5                   | ZW416698  | 6-24x                 |           |                       |           |                       |           |                       |
| ZS414178  | 9-54x                 | ZW416698  | 8-30x                 |           |                       |           |                       |           |                       |
| ZS417216  | 8-40                  | ZW416698  | 18-13x                |           |                       |           |                       |           |                       |
| ZS421806  | 4-31                  | ZW419646  | 5-30                  |           |                       |           |                       |           |                       |
| ZS421806  | 9-20                  | ZW420682  | 8-47                  |           |                       |           |                       |           |                       |
| ZS421806  | 10-3                  | ZW436026  | 17-27x                |           |                       |           |                       |           |                       |
| ZS421806  | 12-2                  | ZW452373  | 5-8                   |           |                       |           |                       |           |                       |
|           |                       |           |                       |           |                       |           |                       |           |                       |
| ZS422076  | 1-35                  | ZW535094  | 5-37                  |           |                       |           |                       |           |                       |
| ZS422076  | 4-27                  | ZW554624  | 17-22                 |           |                       |           |                       |           |                       |
| ZS422076  | 5-17                  | ZW554940  | 17-40                 |           |                       |           |                       |           |                       |
| ZS422076  | 5-39                  | ZW555693  | 6-9                   |           |                       |           |                       |           |                       |
| ZS422076  | 6-4                   | ZW562476  | 17-32x                |           |                       |           |                       |           |                       |
| ZS422076  | 8-18                  | ZW575730  | 18-4x                 |           |                       |           |                       |           |                       |
| ZS422076  | 8-28                  | ZW580173  | 8-46                  |           |                       |           |                       |           |                       |
| ZS422076  | 9-22                  | ZW593212  | 4-30                  |           |                       |           |                       |           |                       |
| ZS422076  | 10-5                  | ZW597543  | 3-2                   |           |                       |           |                       |           |                       |
| ZS422076  | 12-5                  | ZW597622  | 3-4                   |           |                       |           |                       |           |                       |

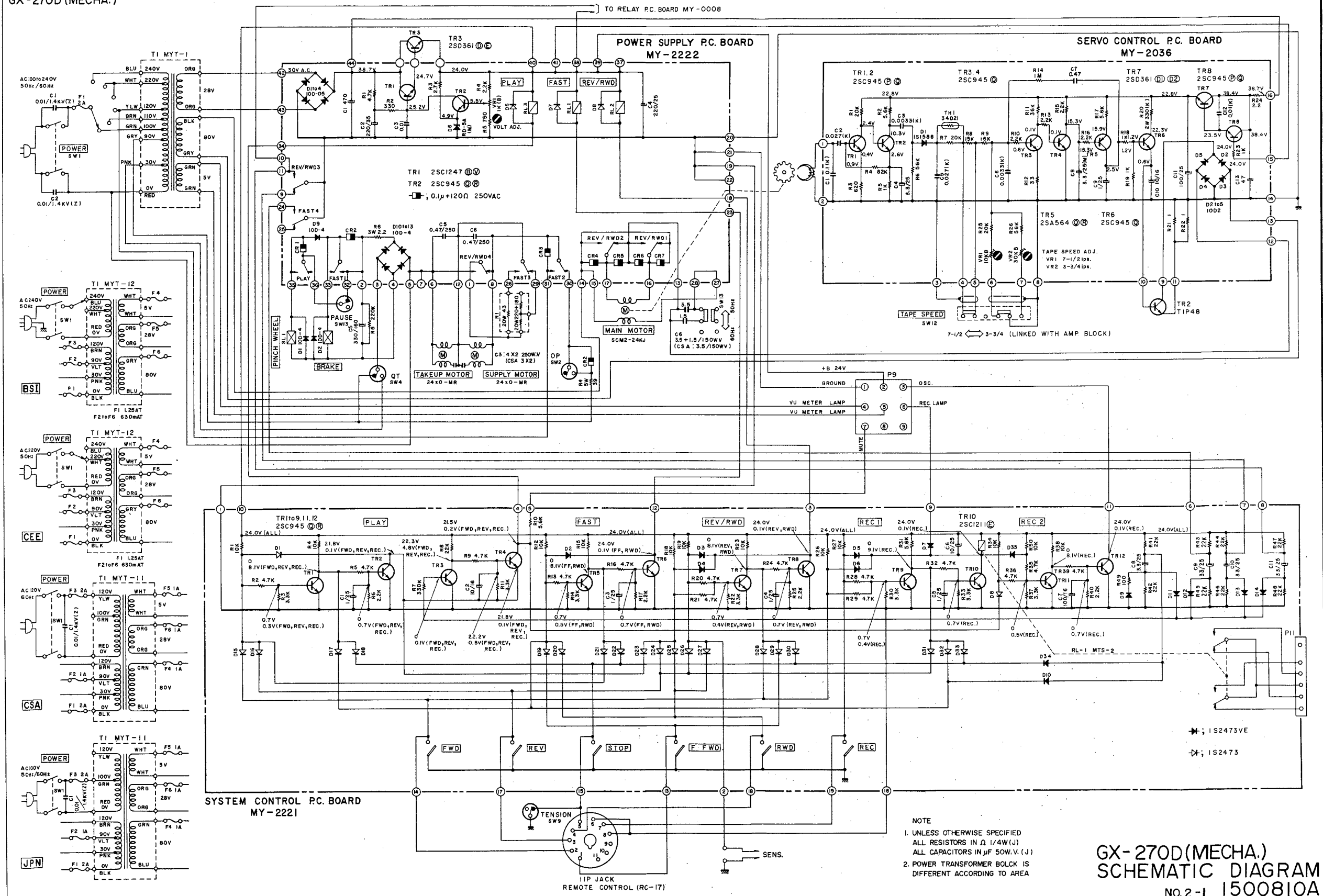
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SECTION 3

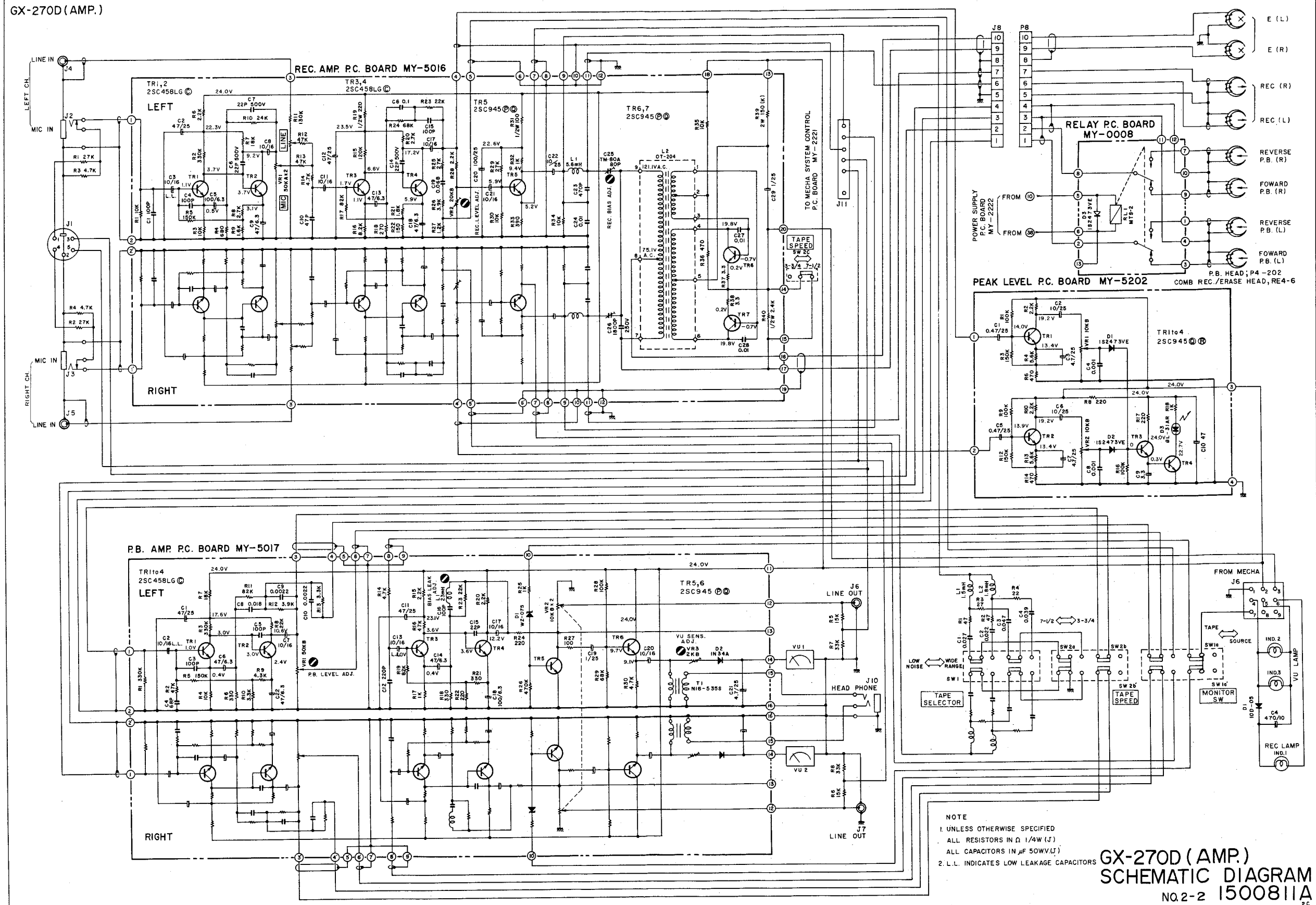
**SCHEMATIC DIAGRAM**

1. GX-270D SCHEMATIC DIAGRAM

GX-270D (MECHA.)



GX-270D (AMP.)



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