



STEREO TAPE DECK

MODEL GX-265D

| | | |
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SECTION 1

SERVICE MANUAL

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

I. SPECIFICATIONS

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

| | | |
|-----------------------------|------------------------------|--|
| TRACK SYSTEM | | 4 track 2 channel stereo/monaural system |
| TAPE SPEED | | 7-1/2 and 3-3/4 ips $\pm 0.7\%$ *7-1/2 ips (19 cm/sec) $\pm 0.8\%$ *3-3/4 ips (9.5 cm/sec) $\pm 1.0\%$ |
| WOW AND FLUTER | | Less than 0.06% WRMS at 7-1/2 ips Less than 0.09% WRMS at 3-3/4 ips *Less than 0.1% RMS at 7-1/2 ips (FWD/REV) *Less than 0.15% RMS at 3-3/4 ips (FWD/REV) |
| TOTAL WOW AND FLUTER | | *Less than 0.1% at 7-1/2 ips (FWD/REV) *Less than 0.15% at 3-3/4 ips (FWD/REV) |
| FREQUENCY RESPONSE | | 30 to 25,000 Hz ± 3 dB at 7-1/2 ips 30 to 19,000 Hz ± 3 dB at 3-3/4 ips (Using AKAI LN-150-7 tape) *30 to 22,000 Hz ± 3 dB at 7-1/2 ips *30 to 18,000 Hz ± 3 dB at 3-3/4 ips |
| HARMONIC DISTORTION | | Less than 0.5% |
| TOTAL HARMONIC DISTORTION | | *Less than 1.0% at 7-1/2 ips *Less than 2.0% at 3-3/4 ips |
| SIGNAL TO NOISE RATIO | | *Better than 50 dB |
| TOTAL SIGNAL TO NOISE RATIO | | *Better than 47 dB |
| OUTPUT | LINE DIN PHONE | *0.775V (0 dBm ± 1.0 dB/0 dBm ± 1.5 dB, FWD/REV) 0.5V 30 mV/8 ohm At playback of a 700 Hz "0" VU pre-recorded test tape. (Output Volume at maximum) |
| INPUT | MIC LINE DIN | More than 0.25 mV/5 k ohm More than 70 mV/150 k ohm More than 3 mV At "0" VU output. (Recording Volume at maximum) |
| RECORDING/PLAYBACK LEVEL | | *0.775V (0 dBm ± 1.5 dB) FWD/REV deviation: ± 1.5 dB |
| CROSS TALK | | Better than 40 dB, stereo Better than 55 dB, monaural |
| ERASE RATIO | | Better than 70 dB |
| BIAS FREQUENCY | | 103 kHz $\pm 5\%$ |
| BIAS LEAK | | Better than -30 dB |
| HIGH FREQUENCY DEVIATION | | Between FWD playback channels: within 3 dB Between REV playback channels: within 4 dB Between FWD and REV: within 3.5 dB At playback of an 8,000 Hz 3-3/4 ips pre-recorded test tape at 7-1/2 ips |
| RECORDING TIME | | 90 min stereo recording at 7-1/2 ips, using a 1,800 ft tape |
| F.FWD AND RWD TIME | | Approximately 120 sec at 50 Hz, using a 1,800 ft tape |
| MOTOR | MAIN MOTOR REEL MOTOR | 2 speed AC servo control outer rotor motor Type: SCM2-24KJ 4 pole Revolutions: 615 rpm at 7-1/2 ips (19 cm/sec) 307.5 rpm at 3-3/4 ips (9.5 cm/sec) Two 6 pole eddy current outer rotor motors Type: 24XO-MR Revolutions: 930 rpm at 50 Hz 1,120 rpm at 60 Hz |

| | | |
|---------------------------------------|-------------------------------------|---|
| HEAD | RECORDING/ERASE COMBINATION HEAD | Type: RE4-6 Gap: REC HEAD: 4 microns ERASE HEAD; double gap Impedance: REC HEAD; 1,400 ohm \pm 25% at 100 kHz ERASE HEAD; 130 ohm \pm 7% at 100 kHz DC Resistance: REC HEAD; 5.5 ohm ERASE HEAD; 1.8 ohm |
| | PLAYBACK HEAD | Type: P4-202 Gap: 1.7 \pm 0.5 microns Impedance: 1,400 ohm at 1 kHz DC Resistance: 268 ohm |
| REVERSING TIME | | 5 to 6 sec at 7-1/2 ips (muting interval) |
| TRANSISTOR | | 2SA564(Q)(R) . . . 1 2SC1211(D)(E) . . . 2 2SC458LG(C) . . . 14 2SD361(D1)(D2) . . . 2 2SC945(P)(Q)(R) . . . 18 TIP48 1 2SC945L(Q)(R) 1 |
| DIODE | | 1N34A . . . 2 1S2473VE . . . 6 1N4001 . . . 4 10D2 . . . 4 1N4003 . . . 5 10D4 . . . 1 1S1588 . . . 1 RDS5A(M) . . . 1 1S2473 . . . 1 |
| POWER REQUIREMENTS AND CONSUMPTION | | 100 to 240V AC 50/60 Hz, 90W (Universal models) 240V AC 50 Hz, 90W (BSI Models) 220V AC 50 Hz, 90W (CEE Models) 120V AC 60 Hz, 90W (CSA Models) 100V AC 50/60 Hz, 60/65W (JPN Models) |
| DIMENSIONS | | 440(W) \times 404(H) \times 208(D) mm (17.3" \times 15.9" \times 8.2") Dimensions include all protruding parts. |
| WEIGHT | | 16.6 kg (36.5 lbs) |

- NOTE: 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.

1



2



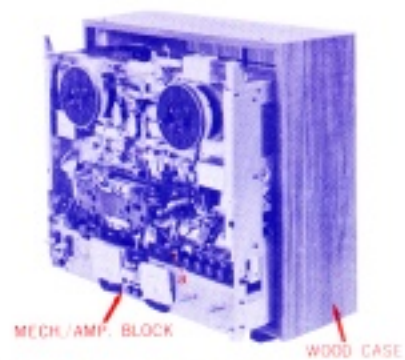
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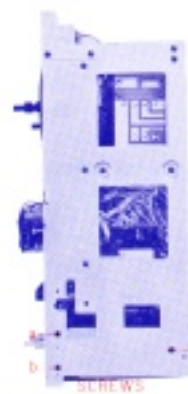
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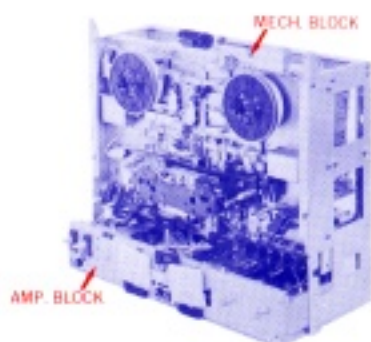
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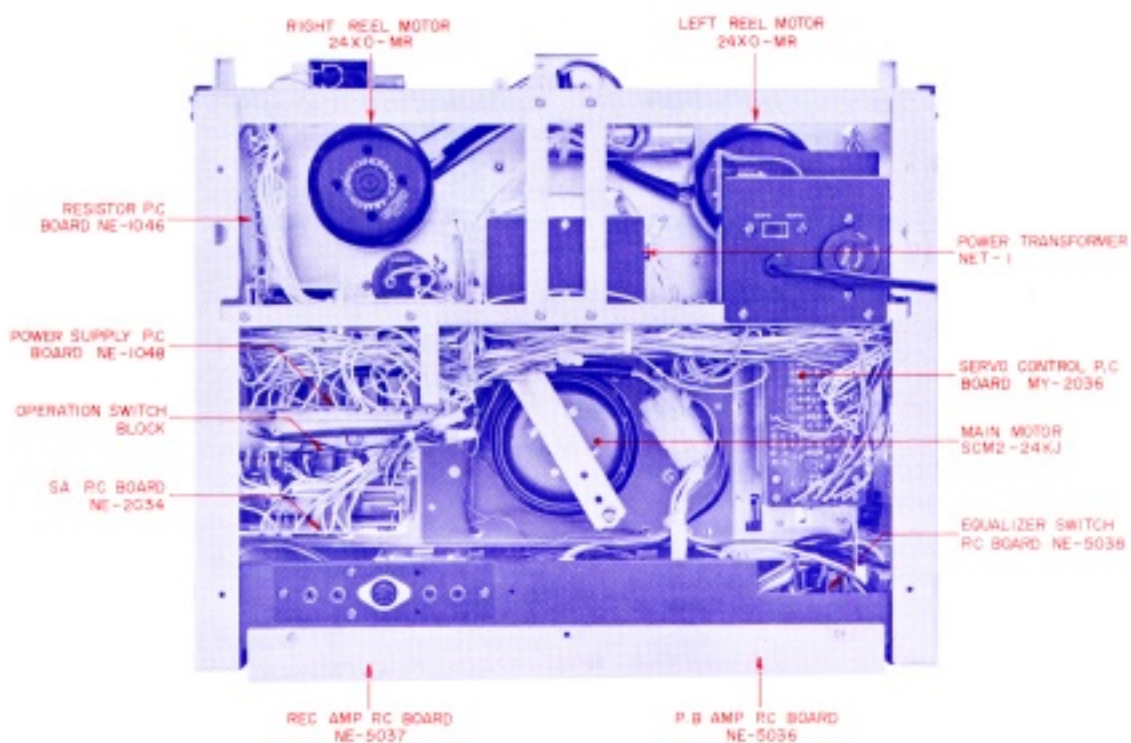
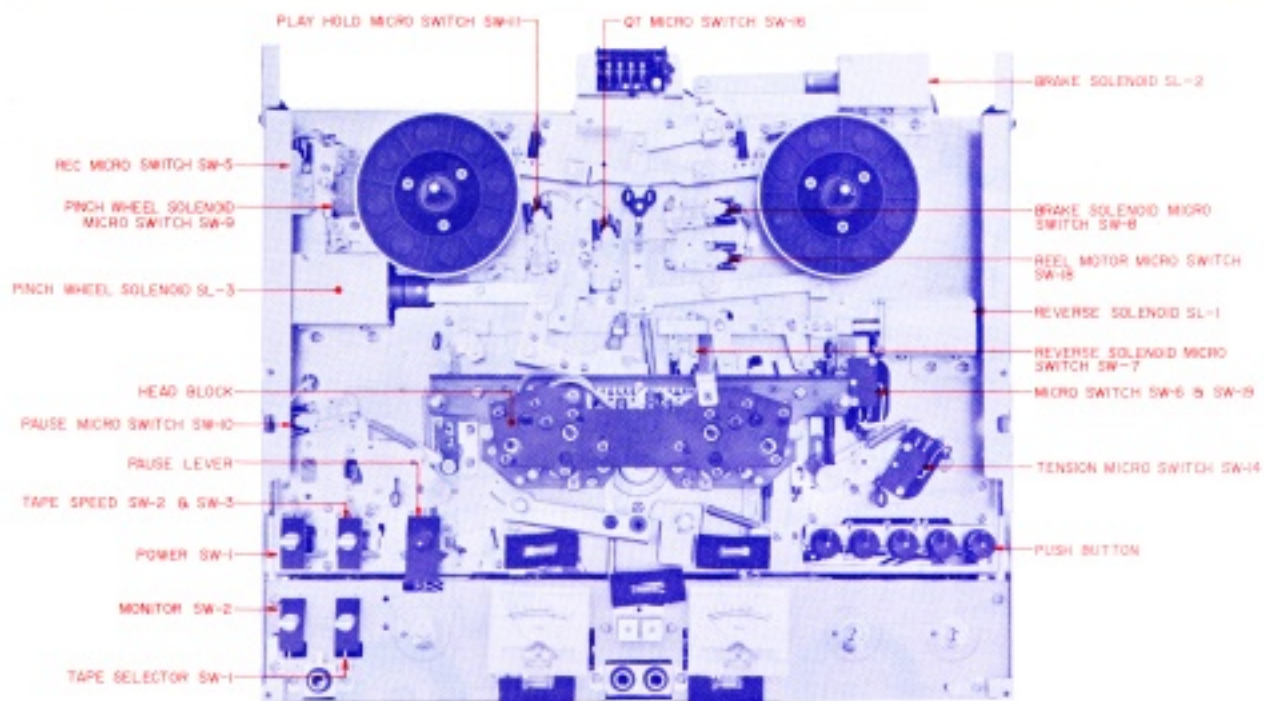
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III. ARRANGEMENT OF PRINCIPAL PARTS



IV. MECHANISM ADJUSTMENT

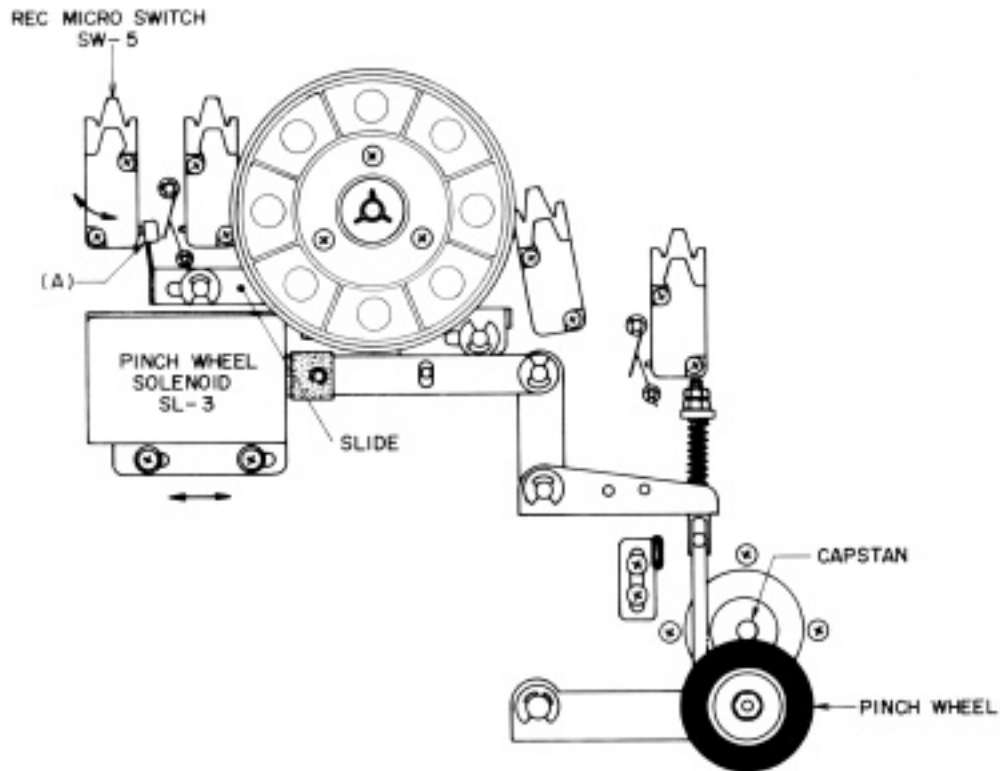


Fig. 1

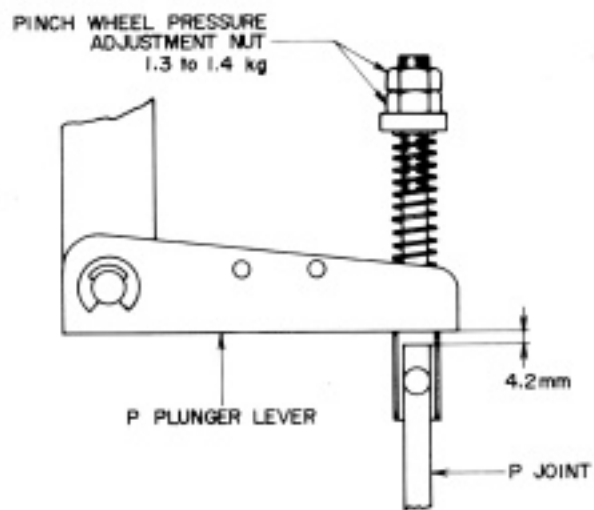


Fig. 2

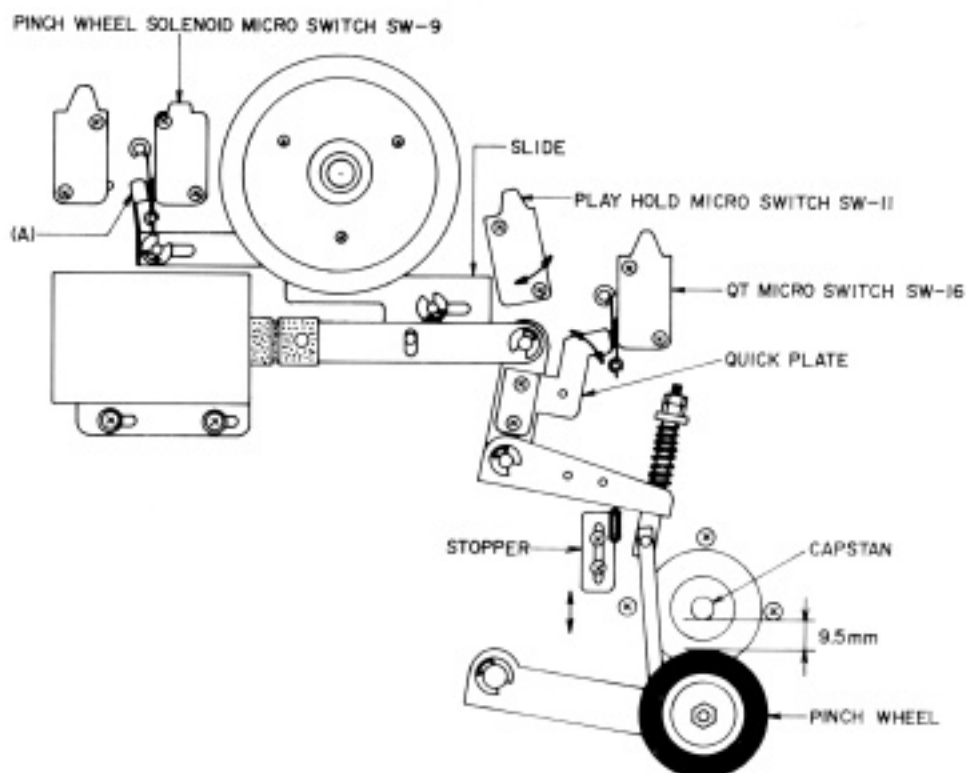


Fig. 3

1. POSITION ADJUSTMENT OF PINCH WHEEL SOLENOID SL-3 (Refer to Fig. 1)

- 1) Remove head block.
- 2) Insert a 4.2 mm gauge (a U type washer etc.) between the P Plunger Lever and P Joint (Refer to Fig. 2).
- 3) Set the deck to playback mode and fix Pinch Wheel Solenoid at position at which the pinch wheel begins to rotate.

2. PINCH WHEEL POSITION ADJUSTMENT AT STOP MODE (Refer to Fig. 3)

- 1) Remove head block.
- 2) Adjust Stopper so that the clearance between Pinch Wheel and Capstan Shaft is 9.5 mm.

3. PINCH WHEEL PRESSURE ADJUSTMENT (Refer to Fig. 2)

Adjust Pinch Wheel Pressure Adjustment Nut so that pinch wheel pressure is 1.3 to 1.4 kg.

4. POSITION ADJUSTMENT OF PLAY HOLD MICROSWITCH SW-11 (Refer to Fig. 3)

Adjust Play Hold Microswitch position so that at stop mode, the Play Hold Microswitch operates properly and the Slide does not contact the body of the microswitch.

5. SLIDE ADJUSTMENT (Refer to Fig. 3)

Adjust part (A) of the Slide so that at stop mode, the Pinch Wheel Solenoid Microswitch operates properly, and part (A) does not strongly hit against the body of the microswitch.

6. POSITION ADJUSTMENT OF QUICK PLATE (Refer to Fig. 3)

Adjust Quick Plate position so that at stop mode, the Quick Tension Microswitch operates properly, and the Quick Plate does not strongly hit against the body of the microswitch.

7. POSITION ADJUSTMENT OF RECORDING MICROSWITCH SW-5 (Refer to Fig. 1)

Adjust part (A) of the Slide so that at playback mode the Recording Microswitch operates properly, and part (A) does not contact the body of the microswitch.

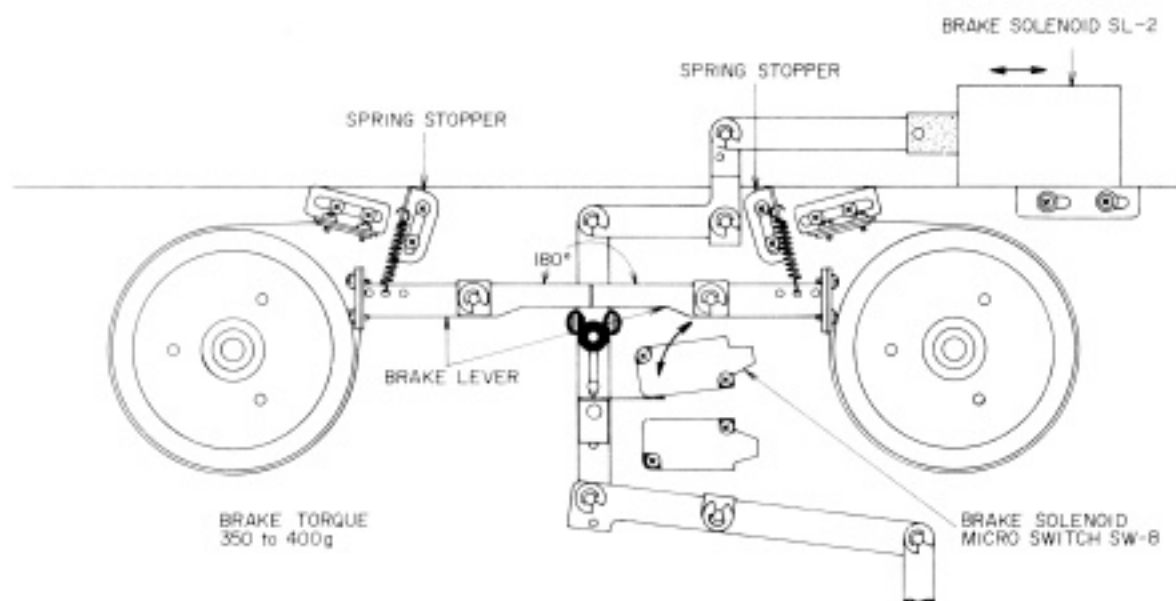


Fig. 4

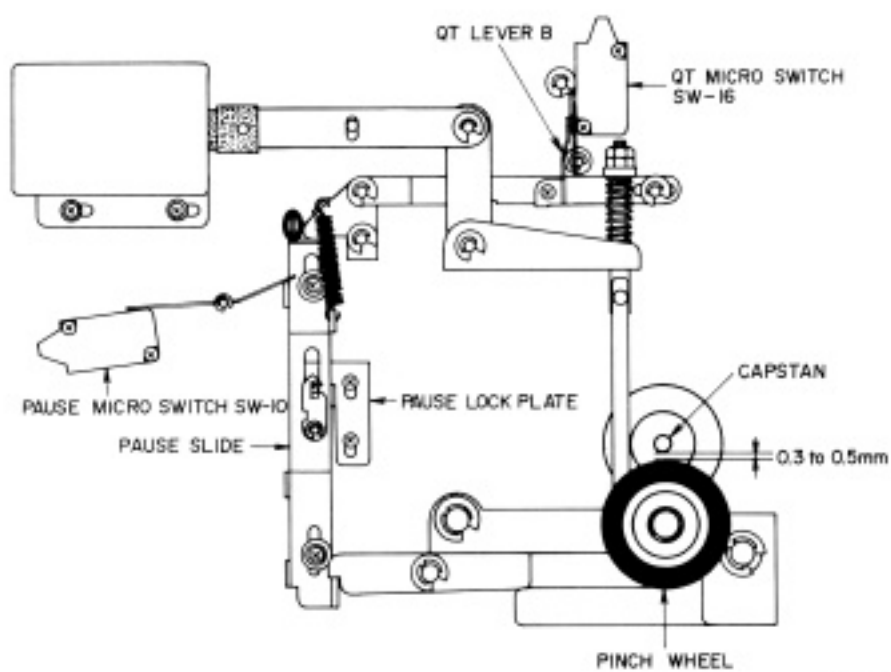


Fig. 5

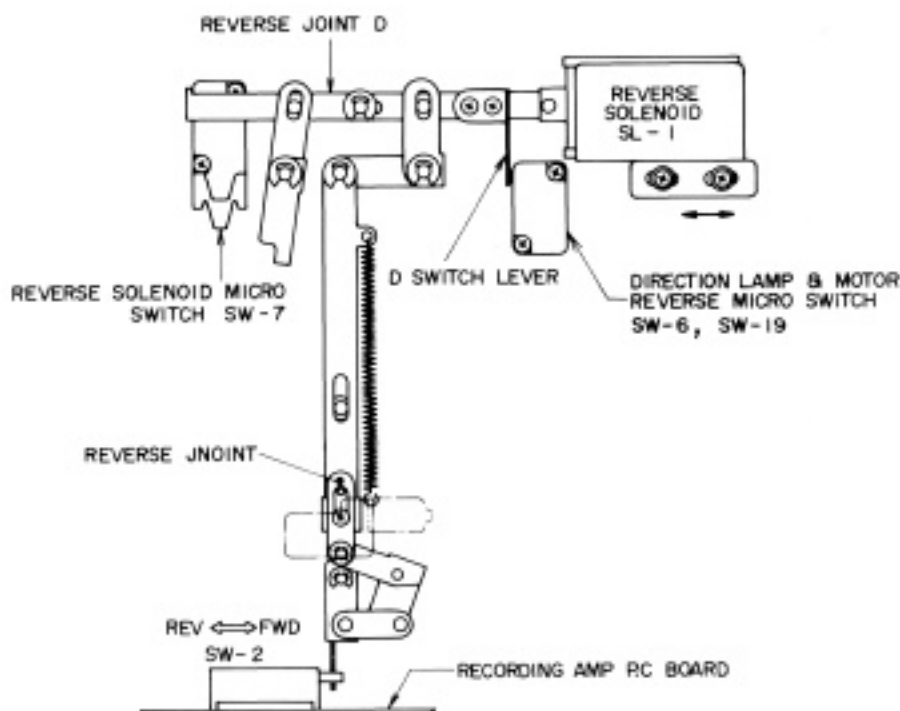


Fig. 6

8. POSITION ADJUSTMENT OF BRAKE SOLENOID SL-2 (Refer to Fig. 4)

Set the deck to playback mode, and fix Brake Solenoid at position at which the left and right brake levers display 180° angle relativity.

9. POSITION ADJUSTMENT OF BRAKE SOLENOID MICROSWITCH SW-8 (Refer to Fig. 4)

Set the deck to playback mode, and adjust Brake Solenoid Microswitch position so that the micro-switch operates properly.

10. BRAKE TENSION ADJUSTMENT (Refer to Fig. 4)

Adjust Spring Stopper position so that the brake tension is 350 to 400g.

11. PAUSE ADJUSTMENT (Refer to Fig. 5)

- 1) At playback mode, lock Pause Lever.
- 2) Adjust Pause Lock Plate position to obtain a 0.3 to 0.5 mm clearance between Pinch Wheel and Capstan.
- 3) When making this adjustment, be careful that the clearance between Pinch Wheel and Capstan does not exceed 0.5 mm.
- 4) Confirm that the Quick Tension Microswitch is pushed when the Pause Lever is depressed and if not, adjust with QT Lever B.

12. POSITION ADJUSTMENT OF REVERSE SOLENOID SL-1 (Refer to Fig. 6)

- 1) Set the deck to reverse mode, and adjust Reverse Solenoid position so that Reverse Joint D activates the Reverse Solenoid Microswitch.
- 2) At this time, be careful that Reverse Joint D does not contact the body of the microswitch.

13. D SWITCH LEVER ADJUSTMENT (Refer to Fig. 6)

Set the deck to reverse mode, and adjust D Switch Lever so that the lever activates the Direction Indicator Lamp and Reel Motor Torque Conversion Microswitches.

14. INSTALLATION POSITION ADJUSTMENT OF REVERSE JOINT (Refer to Fig. 6)

Adjust Reverse Joint installation position so that when the deck is set to reverse mode, FWD ↔ REV Slide Switch of Recording Amp P.C Board (NE-5037) is completely depressed.

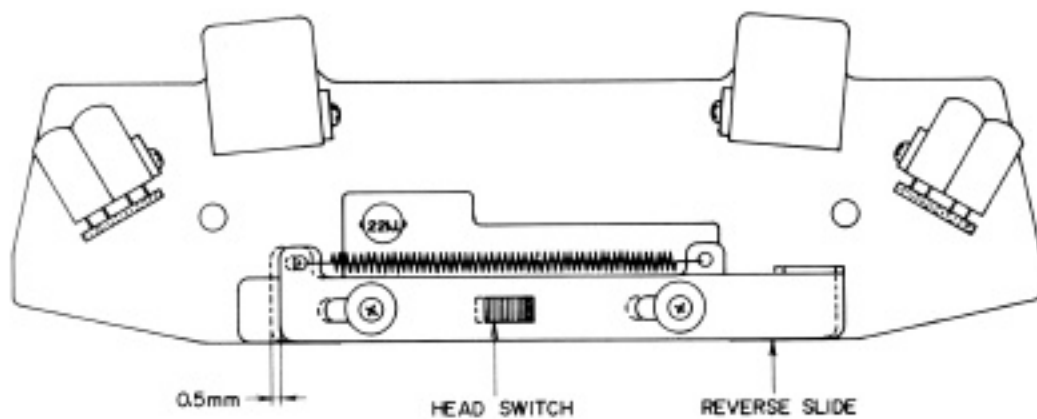


Fig. 7

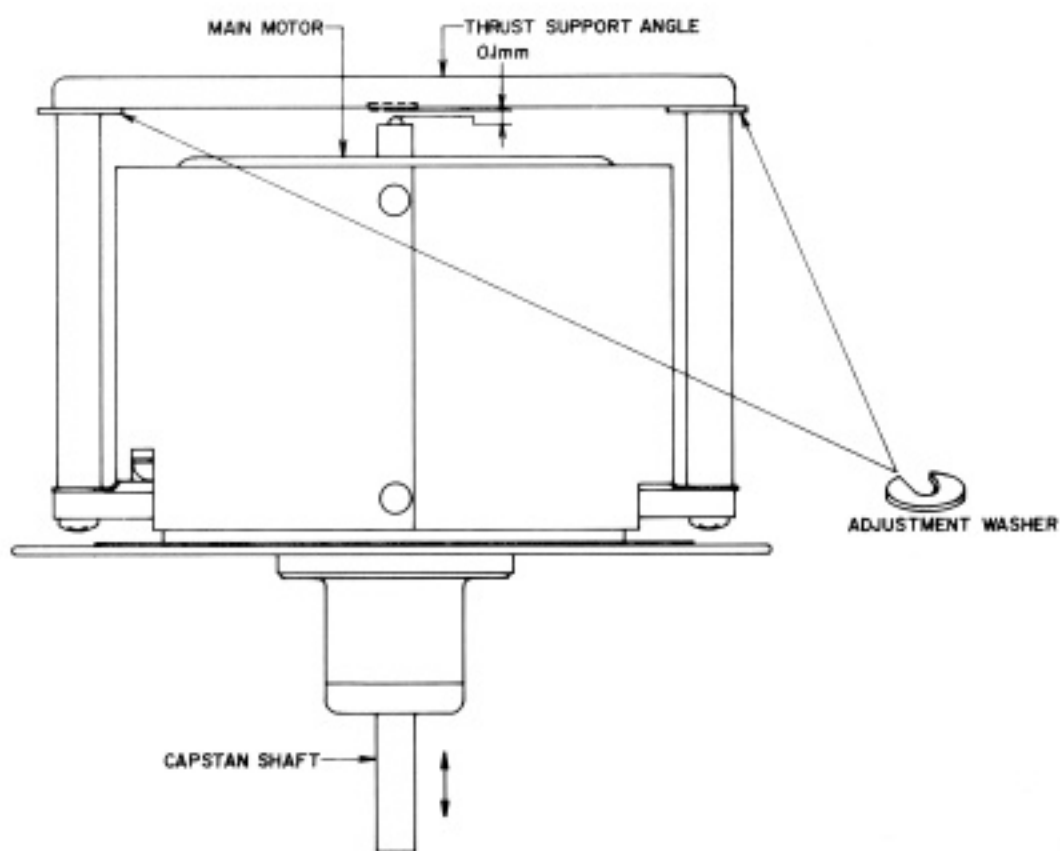


Fig. 8

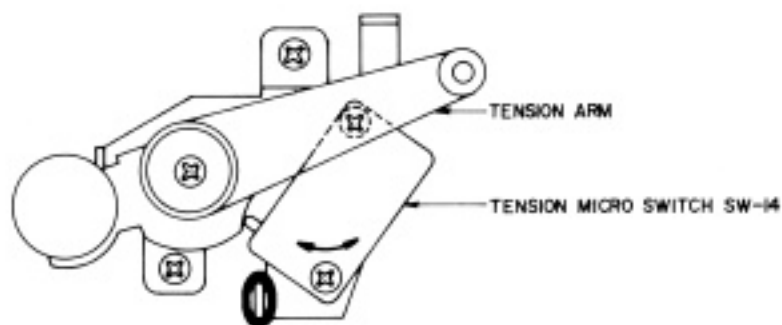


Fig. 9

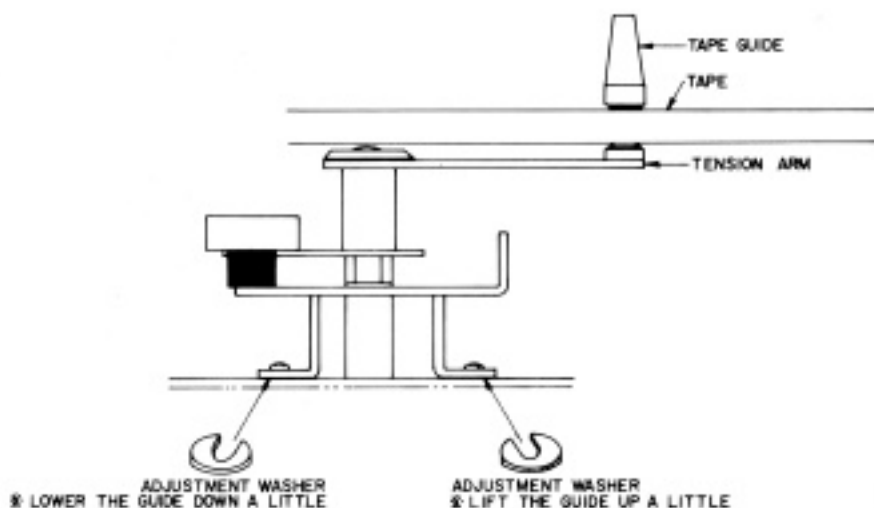


Fig. 10

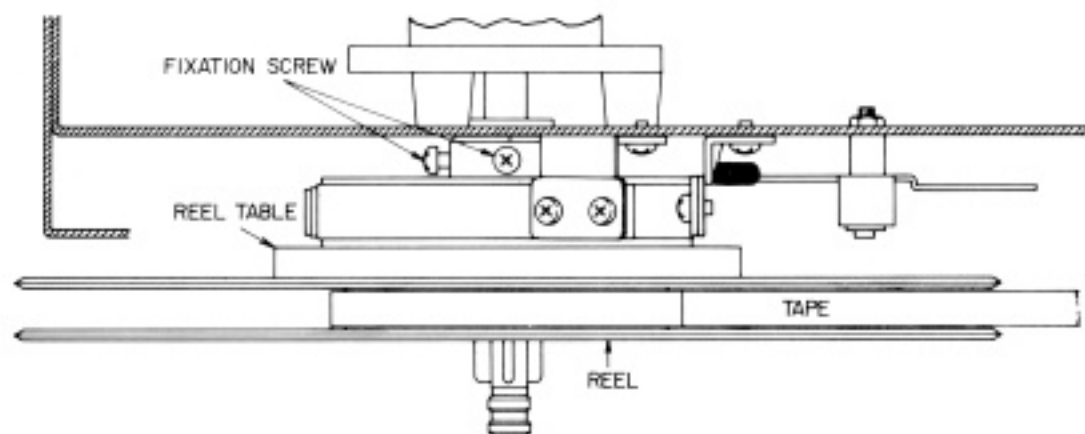


Fig. 11

15. INSTALLATION POSITION ADJUSTMENT OF HEAD SWITCH SW-3 (Refer to Figs. 7 and 12)

Adjust Head Switch installation position so that when the deck is set to reverse mode, the head switch which is mounted on the head block switches to the reverse side and that the reverse slide scope is about 0.5 mm.

16. CAPSTAN SHAFT LOOSE PLAY ADJUSTMENT (Refer to Fig. 8)

Adjust to obtain a clearance of about 0.1 mm between the capstan shaft and thrust support angle.

17. OPERATING POSITION ADJUSTMENT OF TENSION MICROSWITCH SW-14 (Refer to Fig. 9)

Adjust Tension Microswitch position so that when the Tension Arm drops, the microswitch operates perfectly to effect stop mode.

18. TAPE GUIDE HEIGHT ADJUSTMENT (Refer to Fig. 10)

- 1) Adjust Tape Guide height so that the tape does not curl between tape guides on Head Base.
- 2) In case the tape guide is low, adjust by inserting a U Type Washer on the right side in Fig. 10, and in case it is high, adjust by inserting a washer on the left side.

19. REEL TABLE HEIGHT ADJUSTMENT (Refer to Fig. 11)

- 1) Load a tape and set the deck to F.FWD and REV modes. Adjust Reel Table height so that the tape winds on the center of the reels at both modes.
- 2) Tape should wind on center of reel regardless of type of reel used.

V. HEAD ADJUSTMENT

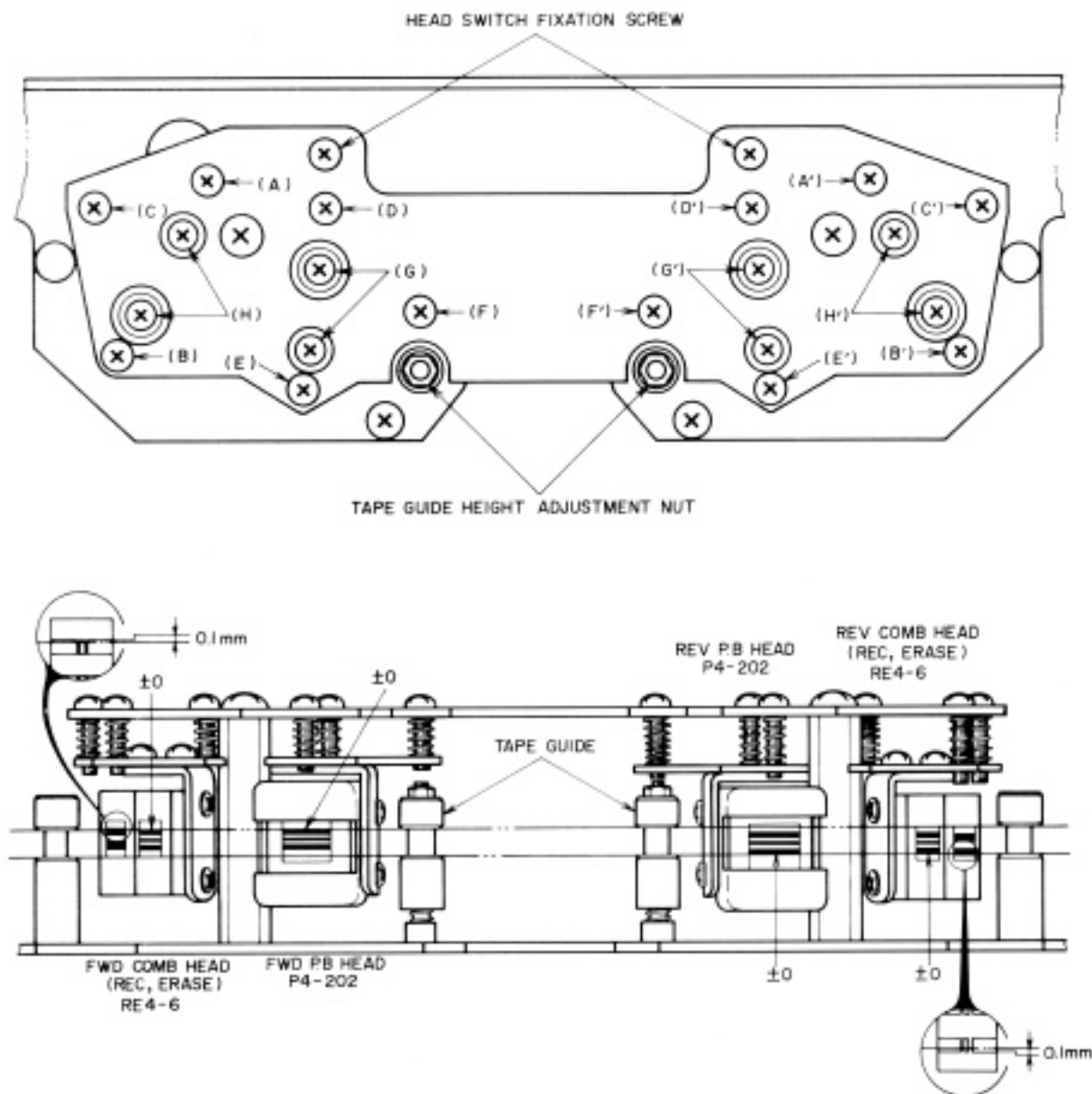


Fig. 12

| Step | Adjustment Item | Test Tape Supply Signal | Mode | Adjustment Point | Remarks |
|------|--|------------------------------------|------|----------------------------------|---|
| 1 | Tape Guide Height Adjustment | Optional | FWD | Tape Guide Height Adjustment Nut | 1) Adjust so that tape travels smoothly and does not twist. 2) Do not thread tape over tension arm. |
| 2 | FWD Comb Head Height Adjustment | Optional | FWD | (A)(B)(C) | Upper edges of channel 1 head core and tape are the same height. |
| 3 | FWD Playback Head Height Adjustment | Optional | FWD | (D)(E)(F) | Upper edges of channel 1 head core and 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 | (G) | Adjust head gap surface so that there is no change in output level when tension is applied to the supply reel side. |
| 6 | FWD Comb Head Azimuth Alignment Adjustment | Scotch #211 Tape, 15,000Hz -20 dBm | REC | (C) | Maximum output, both channels. |
| 7 | FWD Comb Head Gap Alignment Adjustment | Scotch #211 Tape, 15,000Hz -20 dBm | REC | (H) | Adjust head gap surface so that there is no change in output level when tension is applied to the supply reel side. |

Chart 1

- NOTES:
- 1) As perfect head adjustments are vital to tape deck performance, be sure that these adjustments are carried out properly.
 - 2) Be careful not to use a magnetized 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 head demagnetizer before and after head adjustment.
 - 5) Set tape speed to 7-1/2 ips except in steps 6 and 7.
 - 6) Adjustments outlined in Chart 1 are only for FWD side heads. However, adjustments for REV side heads are exactly the same.

VI. AMPLIFIER SYSTEM ADJUSTMENT

1. DC POWER SUPPLY VOLTAGE ADJUSTMENT (Refer to Fig. 13)

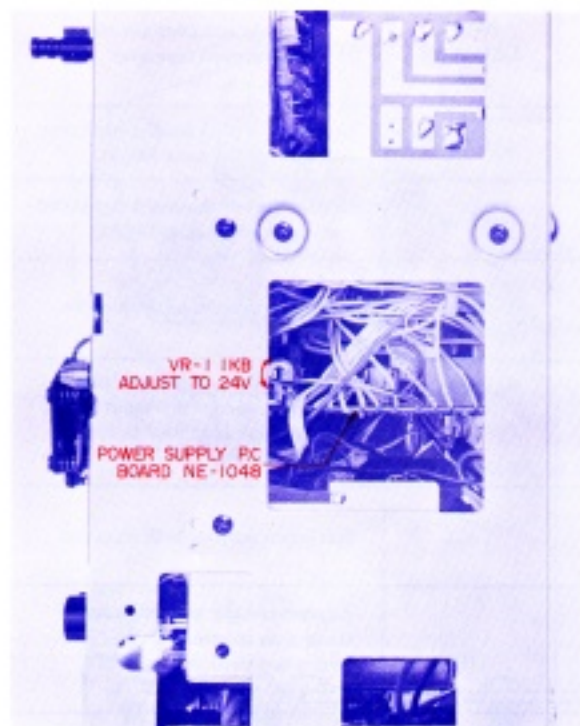


Fig. 13

2. TAPE SPEED ADJUSTMENT (Refer to Fig. 14)



Fig. 14

3. RECORDING AND PLAYBACK AMPLIFIER ADJUSTMENT (Refer to Fig. 15)

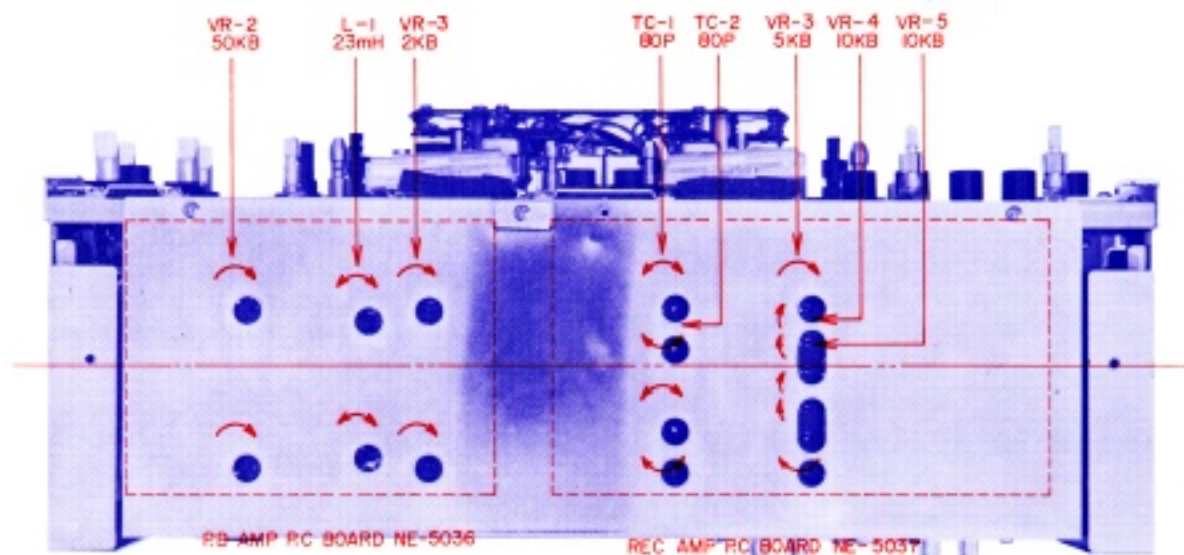


Fig. 15

| 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 | VR-2 50 kΩ | 0±1.0 dB (0.775V) | Within 0 ±1.5 dB at Reverse mode. |
| 2 | VU Meter Sensitivity Adjustment | 700 Hz 7-1/2 ips 0 VU Test Tape | FWD | VR-3 2 kΩ | 0 VU | |
| 3 | Monitor Level Adjustment | 1,000 Hz -20 dBm | STOP | VR-3 5 kΩ | 0 dBm (0 VU) | Line REC Volume maximum. Monitor Switch "SOURCE". |
| 4 | FWD Recording Level Adjustment | Scotch #211 Tape 1,000 Hz 0 VU recording | FWD-REC | VR-5 20 kΩ | 0±1.5 dB (0.775V) | Monitor Switch "TAPE". |
| 5 | REV Recording Level Adjustment | Scotch #211 Tape 1,000 Hz 0 VU recording | REV-REC | VR-4 20 kΩ | 0±1.5 dB (0.775V) | Monitor Switch "TAPE". |
| 6 | FWD Frequency Response Adjustment | Scotch #211 Tape 1,000 Hz, 10,000 Hz -20 VU recording | FWD-REC | TC-2 80P | 1,000 Hz, 10,000 Hz flat | Tape Speed 3-3/4 ips. Recheck Recording Level. |
| 7 | REV Frequency Response Adjustment | Scotch #211 Tape 1,000 Hz, 10,000 Hz -20 VU recording | REV-REC | TC-1 80P | 1,000 Hz, 10,000 Hz flat | Tape Speed 3-3/4 ips. Recheck Recording Level. |
| 8 | Bias Leak Adjustment | | REC | L-1 23 mH | Less than -30 dB | |

Chart 2

- NOTES:
- 1) Set tape speed to 7-1/2 ips except in Steps 6 and 7.
 - 2) Tape Selector at "LOW NOISE".
 - 3) Monitor Switch at "TAPE" except in Step 3.
 - 4) Output Volume at maximum.
 - 5) New test tape should be used.
 - 6) Adjustment of step 8 made from the face side of Playback Amp P.C Board.
 - 7) The letter b following an adjustment part number indicates "Right Channel".

VII. DC RESISTANCE OF VARIOUS COILS

| Part | Designation | DC Resistance |
|-------------------------------------|--------------------|---|
| Main Motor | SCM2-24KJ | Between BLU-RED: 100 ohm Between YLW-GRN: 180 ohm Pick-up Coil: 635 ohm |
| Reel Motor | 24XO-MR | Between BLU-RED: 74 ohm Between YLW-GRN: 1,660 ohm |
| Pinch Wheel Solenoid | 1660 PHT3 | 700 ohm |
| Brake Solenoid | 1240 PHT | 590 ohm |
| Reverse Solenoid | 1240 PHT-I | 370 ohm $\pm 10\%$ |
| Reverse Relay | MY4-O-US-AD4 DC24V | 650 ohm |
| Headphone Output Transformer | N16-535S | Primary: 565 ohm $\pm 15\%$ Secondary: 0.95 ohm $\pm 15\%$ |
| Oscillator Coil | OT-204 | Between 1-3: 0.3 ohm Between 4-6: 0.7 ohm Between 7-9: 8.2 ohm |
| Playback Head | P4-202 | 268 ohm |
| Recording/Erase Combination Head | RE4-6 | Recording: 5.5 ohm Erase: 1.8 ohm |

Chart 3

NOTE: The resistance values shown in this chart are average values.

VIII. CLASSIFICATION OF VARIOUS P. C BOARDS

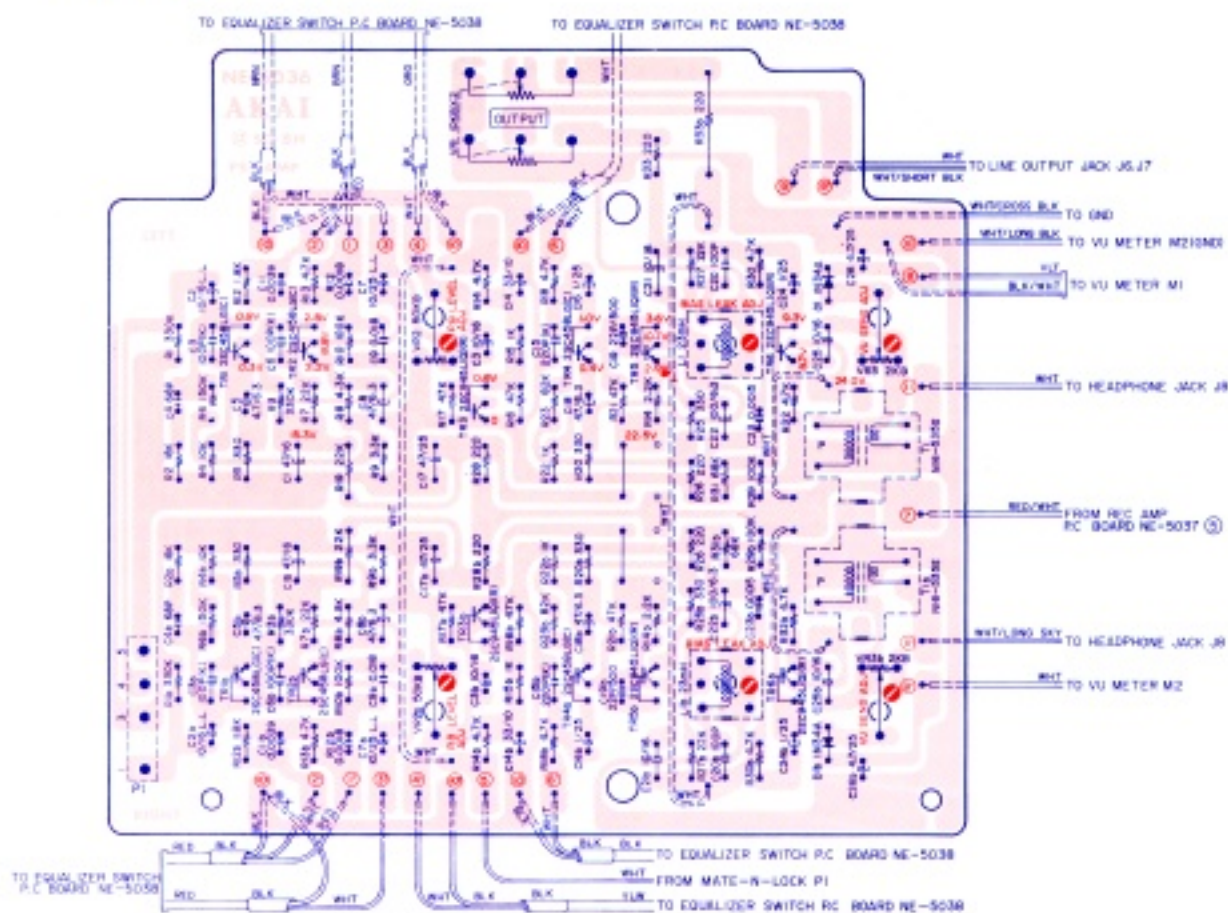
1. RELATION OF P.C BOARD TITLE AND NUMBER

| P.C Board Title | P.C Board Number |
|------------------------------------|------------------|
| Resistor P.C Bord | NE-1046 |
| Direction Indicator Lamp P.C Board | NE-1047 |
| Power Supply P.C Board | NE-1048 |
| SA P.C Board | NE-2034 |
| Playback Amp P.C Board | NE-5036 |
| Recording Amp P.C Board | NE-5037 |
| Equalizer Switch P.C Board | NE-5038 |
| Servo-Control P.C Board | MY-2036 |
| Transistor P.C Board | MY-2054 |

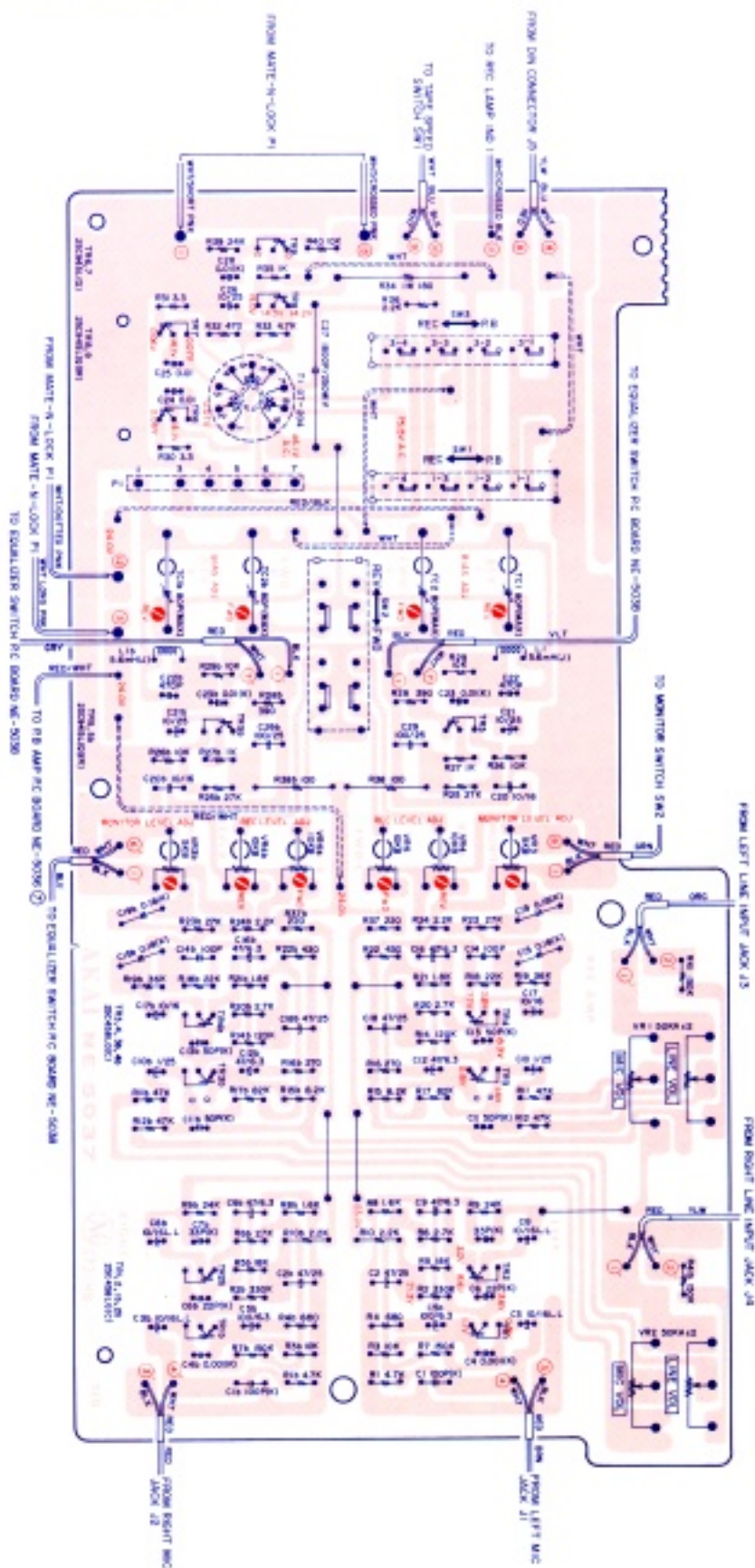
Chart 4

2. COMPOSITION OF VARIOUS P.C BOARDS

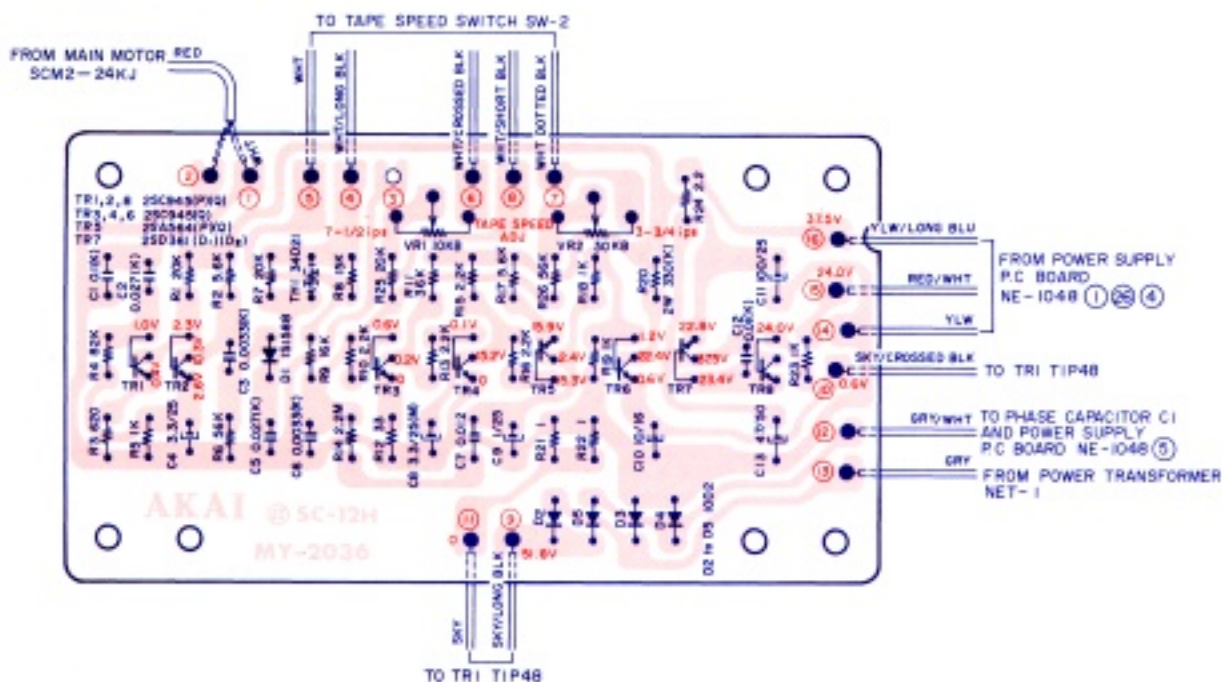
1) P.B AMP P.C BOARD (NE-5036)



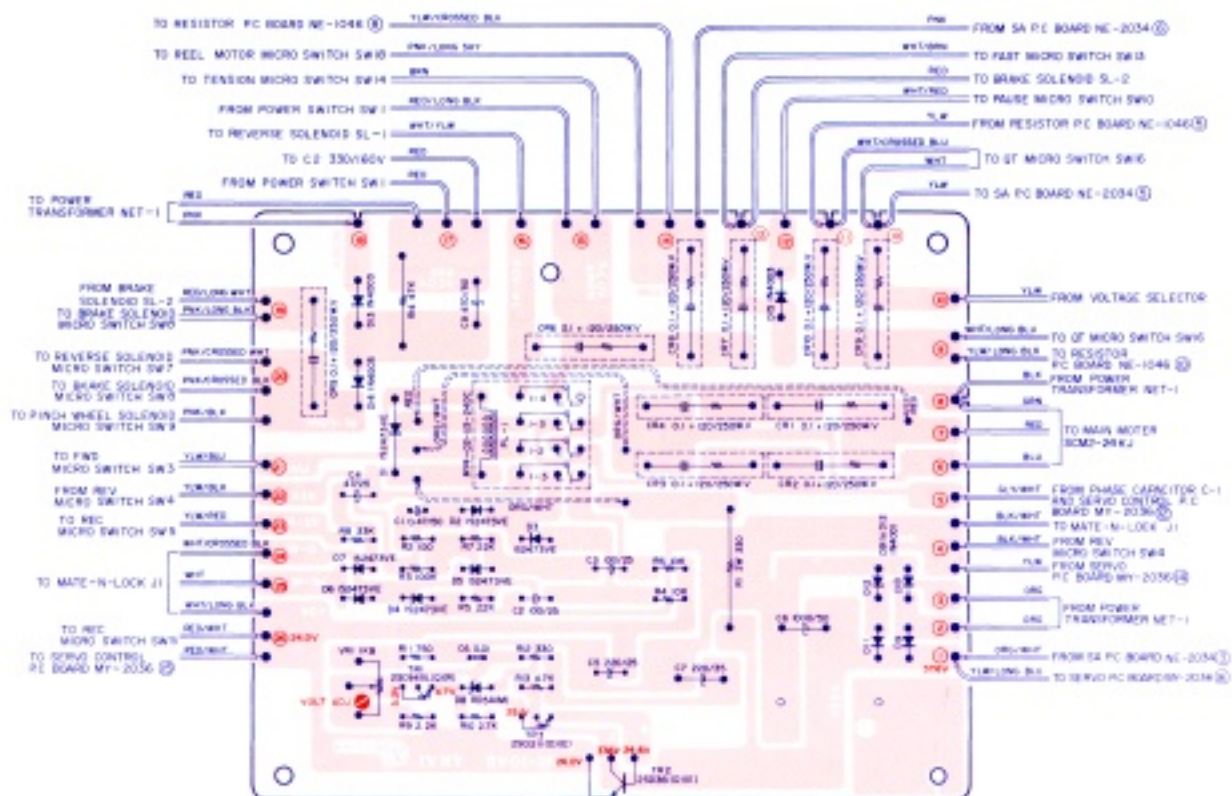
2) REC AMP P.C BOARD (NE-5037)



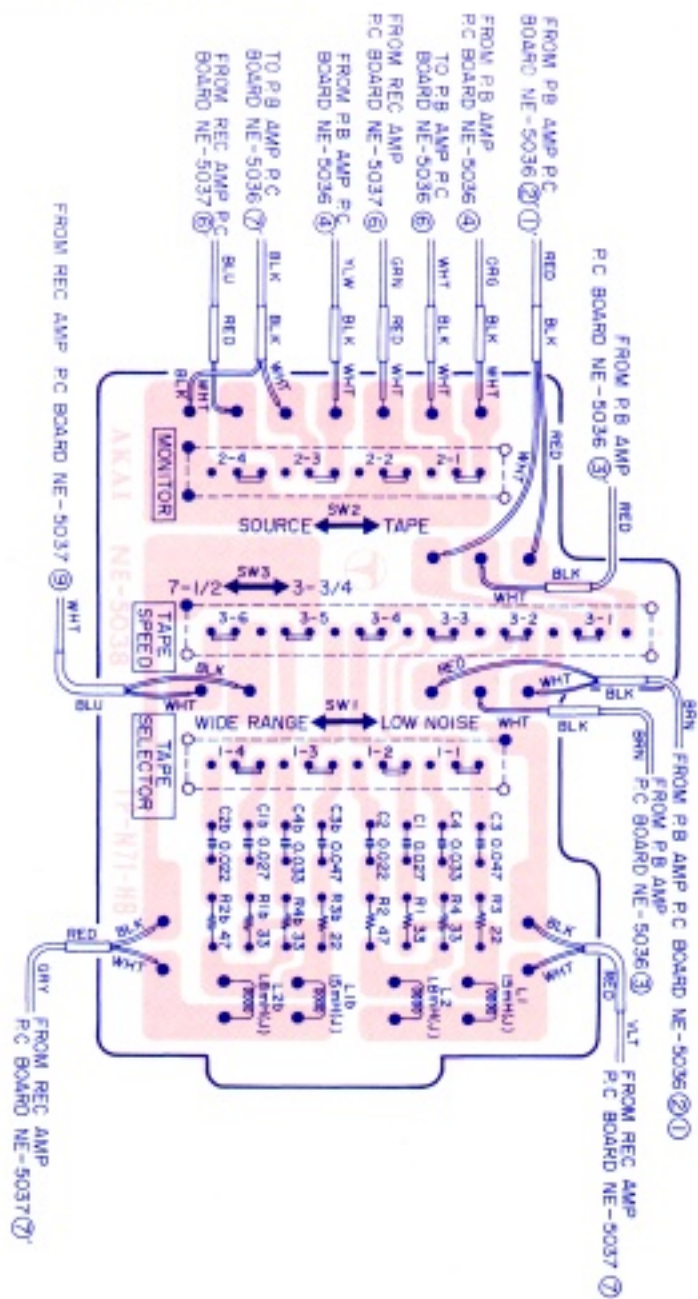
3) SERVO CONTROL P.C BOARD (MY-2036)



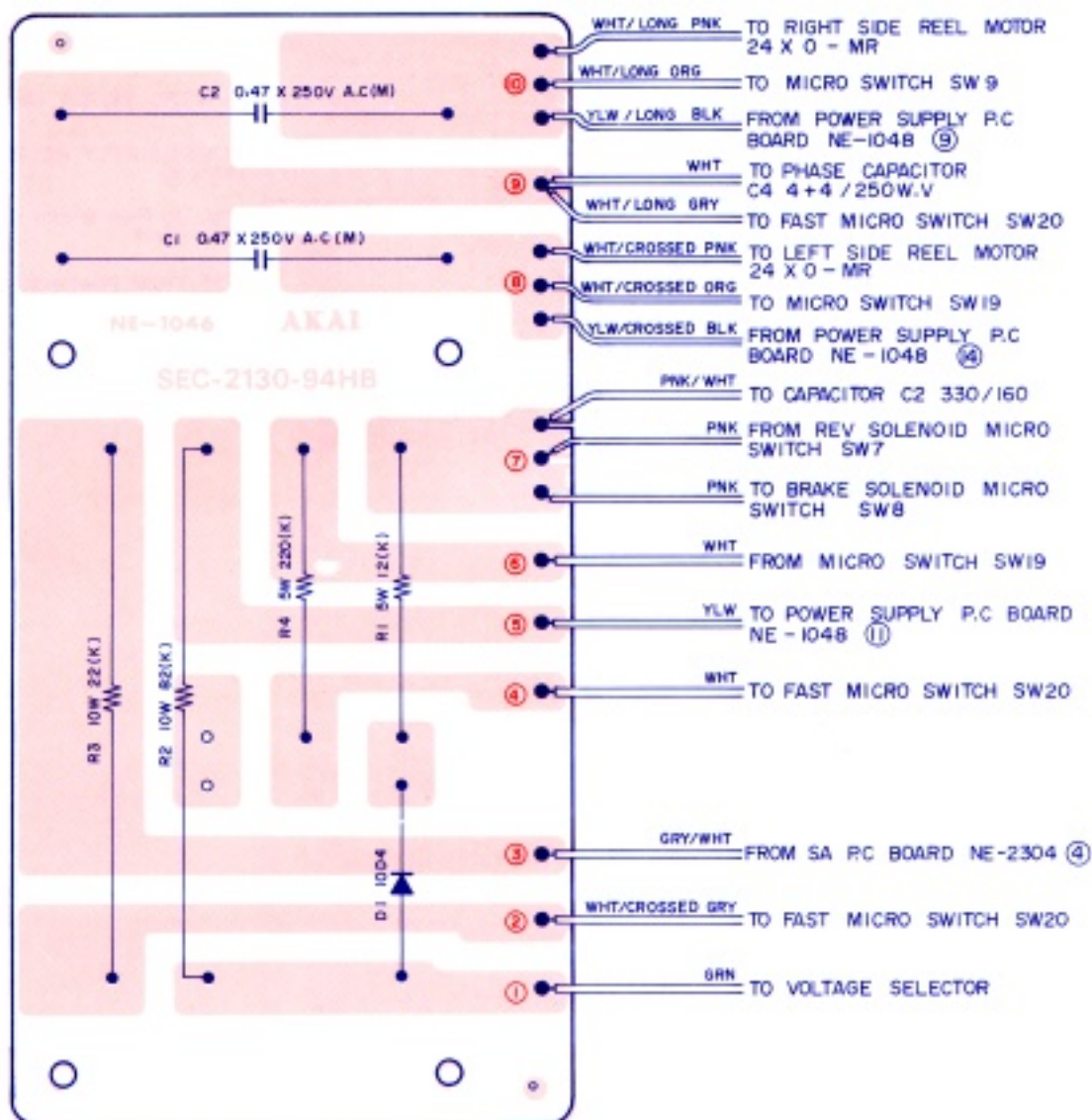
4) POWER SUPPLY P.C BOARD (NE-1048)



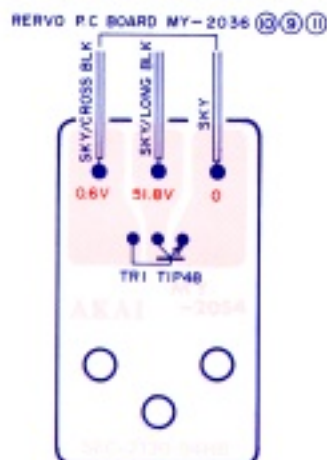
5) EQUALIZER SWITCH P.C BOARD (NE-5038)



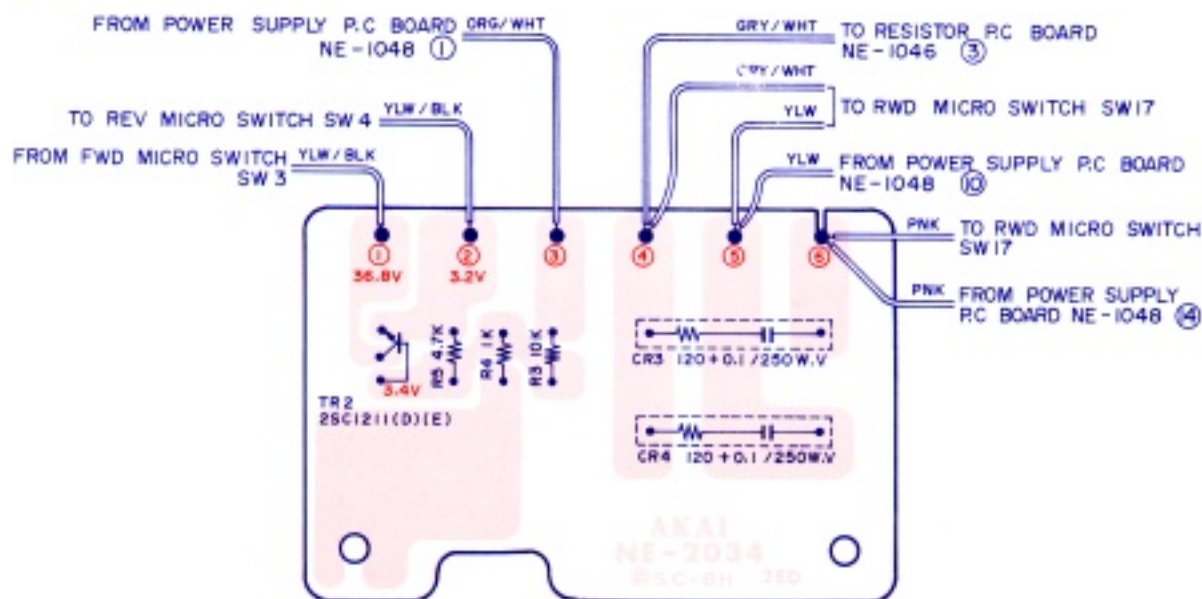
6) RESISTOR P.C BOARD (NE-1046)



7) TRANSISTOR P.C BOARD (MY-2054)



8) SA P.C BOARD (NE-2034)



9) DIRECTION INDICATOR LAMP P.C BOARD (NE-1047)



SECTION 2

PARTS LIST

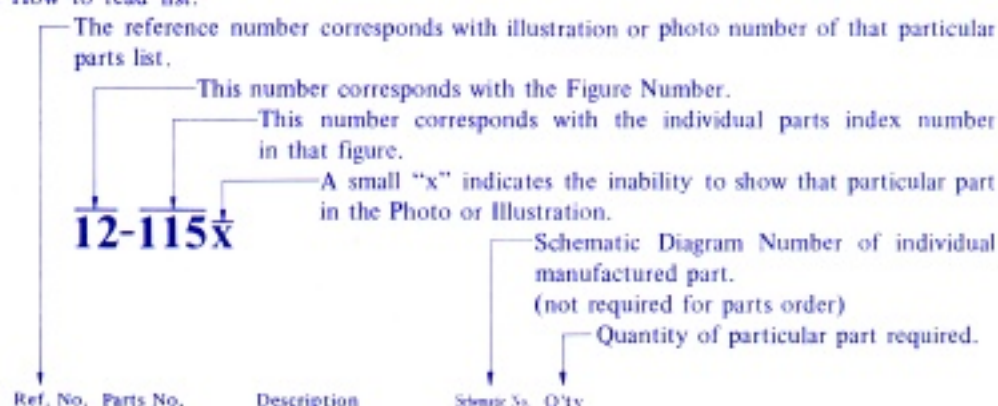
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Some of the parts in this parts list are only available as a complete assembly, and can not be supplied as individual parts.

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.



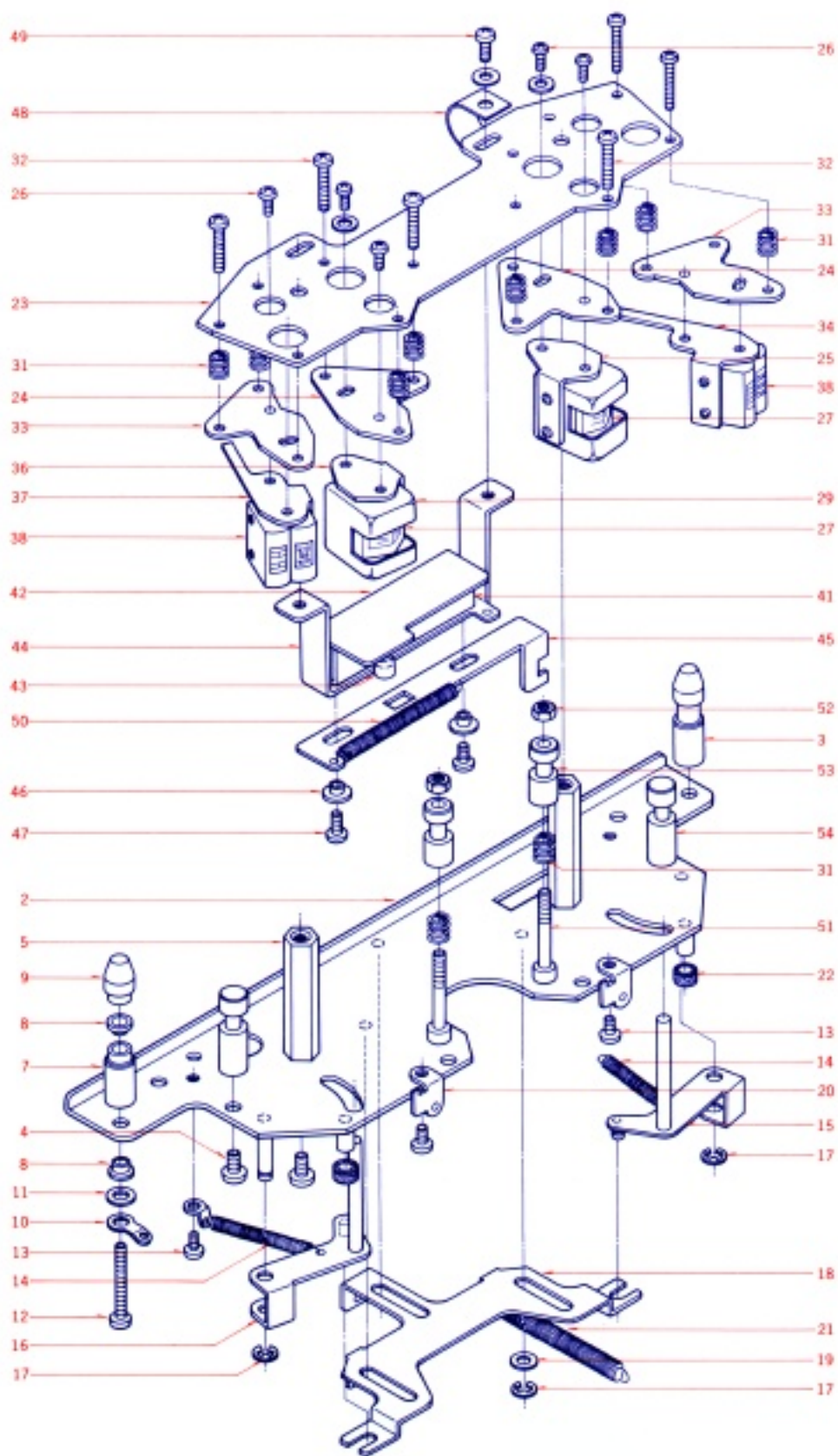
| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|---------------------------|-----------|----------------------------|---------------|------|
| FLYWHEEL BLOCK #13 | | | | |
| 12-115x | 800425 | Flywheel Block Assy. Comp. | 810-213 | 1 |
| 12-116 | 244506 | Flywheel Only | 810-231 | 1 |
| 12-117x | 244754 | Felt, Flywheel | 810-275 | 1 |
| 12-118 | 251324 | Main Metal Case | 810-236 | 1 |
| 12-119 | 253080 | Main Metal | 810-237 | 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 LIST TABLE

| | | | |
|---|--|--|--|
| <p>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.</p> | <p>1</p>  <p>Solid Resistor</p> | <p>2</p> <p>Stopper Type</p>  <p>Insulator Type</p> <p>Carbon Resistor</p> | <p>3</p>  <p>Metal Oxide Film Resistor</p> |
| <p>4</p>  <p>Cement Resistor</p> | <p>5</p>  <p>Wire-Wound Resistor</p> | <p>6</p>  <p>Thermistor</p> | <p>7</p>  <p>Enamel Resistor</p> |
| <p>1</p>  <p>MP Capacitor (Tubular Type)</p> | <p>2</p>  <p>Plastic Capacitor</p> | <p>3</p>  <p>Mylar Capacitor</p> | <p>4</p>  <p>VFM (BI-Q) Capacitor</p> |
| <p>5</p>  <p>Mylar Capacitor</p> | <p>6</p>  <p>Tantalum Capacitor</p> | <p>7</p>  <p>Oil Capacitor (Tubular Type)</p> | <p>8</p> <p>Vertical Type</p> <p>(Tubular Type)</p>  <p>Styrol Capacitor</p> |
| <p>9</p>  <p>Electrolytic Capacitor (Tubular Type)</p> | <p>10</p> <p>Vertical Type</p> <p>(Tubular Type)</p>  <p>Electrolytic Capacitor</p> | <p>11</p>  <p>Ceramic Capacitor</p> | <p>12</p>  <p>Metalized Mylar (Paper) Capacitor</p> |
| <p>13</p>  <p>Trimmer Condenser</p> | | <p>VR</p>  <p>Semi-Fixed Volume</p> | |
| <p>L</p>  <p>Ferrit Inductor</p> | <p>TR</p>  <p>Transistor</p> | | |
| <p>CR</p>  <p>Spark Quencher</p> | <p>D</p>  <p>Diode (Silicon, Zener, Germanium)</p> | | |

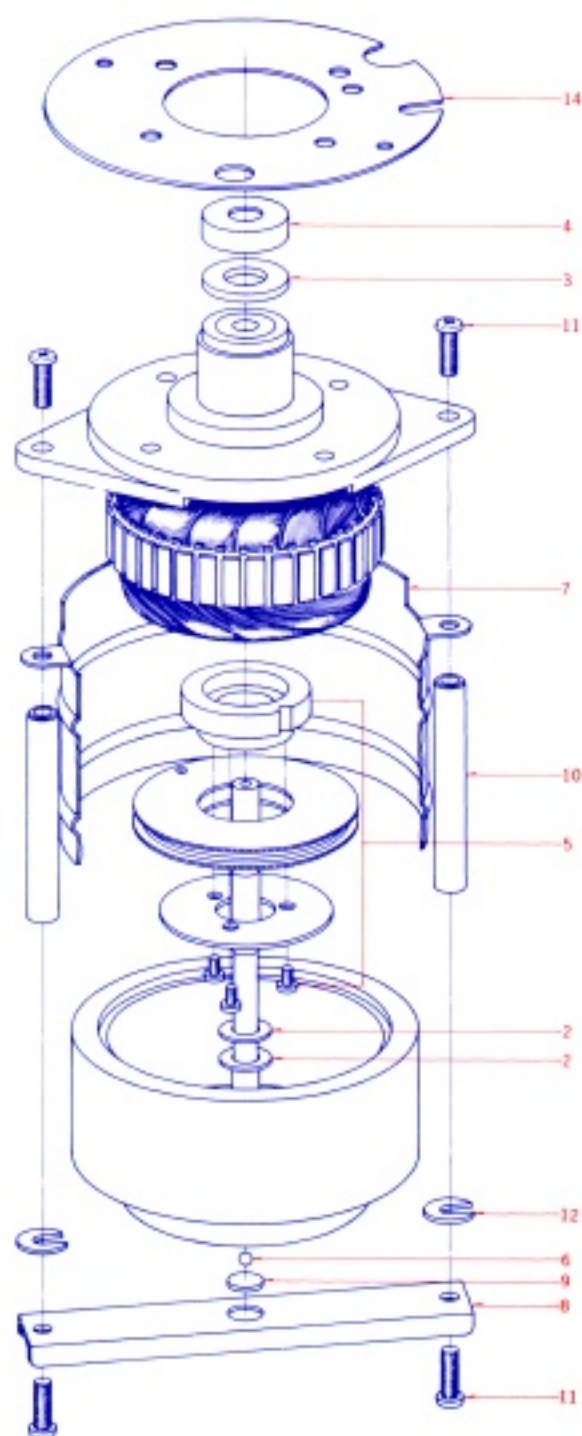
1 ILLUSTRATION OF HEAD BLOCK



1) HEAD BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--|---------------|------|
| 1-1x | BH636726 | Head Block Comp. | NE | 1 |
| 1-2 | HZ643342 | Head Sub Chassis, w/prop | NE-000 | 1 |
| 1-3 | MS643048 | Tape Guide | NE-002 | 1 |
| 1-4 | ZS413201 | Screw, Pan Head 4x8 | | 1 |
| 1-5 | MH529233 | Head Base Prop B | ND-007 | 2 |
| 1-6 | ZS416687 | Screw, Binding Head 4x8 | | 2 |
| 1-7 | MS643050 | Sensing Guide A | NE-002 | 1 |
| 1-8 | HZ527455 | Sensing Spacer | ND-001 | 2 |
| 1-9 | MS643061 | Sensing Guide B | NE-004 | 1 |
| 1-10 | ZW562476 | Earth Lug M3 | | 2 |
| 1-11 | ZW425002 | Washer (SPC) D3.1x8x0.5t | | 1 |
| 1-12 | ZS413785 | Screw, Binding Head 3x12 | | 1 |
| 1-13 | ZS323728 | Screw, Binding Head 3x5 | | 4 |
| 1-14 | ZG232121 | Tension Lever Spring | HH-10 | 2 |
| 1-15 | ML665460 | Shifter Lever A, w/pin | NE-009 | 1 |
| 1-16 | ML665471 | Shifter Lever B, w/pin | NE-009 | 1 |
| 1-17 | ZW270101 | 'E' Ring 3mm | 6-14 | 3 |
| 1-18 | HL527444 | Shifter Lever C | ND-002 | 1 |
| 1-19 | ZW396437 | Washer (Polyslider) D5.1x10.3x0.25t | | 3 |
| 1-20 | HL528074 | Shifter Spring Hook | ND-008 | 2 |
| 1-21 | ZG527477 | Shifter Spring | ND-008 | 2 |
| 1-22 | MZ810191 | Cushion Rubber, RD | RD-29 | 2 |
| 1-23 | HZ527466 | Head Chassis | ND-002 | 1 |
| 1-24 | HZ527501 | PB Head Base | ND-002 | 2 |
| 1-25 | HA529470 | PB Head Angle A | ND-004 | 1 |
| 1-26 | ZS396000 | Screw, Binding Head 3x4 | | 3 |
| 1-27 | HP536501 | PB Head P4-202 | | 2 |
| 1-28x | EA463206 | Terminal P.C. Board A | RD-A36 | 2 |
| 1-29 | HZ527512 | Head Shield | ND-002 | 2 |
| 1-30x | ZS460440 | Screw, Pan Head 2x4 | | 4 |
| 1-31 | ZG466312 | Angle Adjust Spring E | BS-008 | 14 |
| 1-32 | ZS562432 | Screw, Binding Head 3x13 | | 12 |
| 1-33 | HZ527490 | Erase Head Base | ND-002 | 2 |
| 1-34 | HA527940 | REC/E. Head Angle A | ND-005 | 1 |
| 1-35x | ZS461395 | Screw, Round Head 2x3 | | 2 |
| 1-36 | HA529481 | PB Head angle B | ND-004 | 1 |
| 1-37 | HA527951 | REC/E. Head Angle B | ND-005 | 1 |
| 1-38 | HR556582 | REC/ERASE HEAD RE4-6 | | 2 |
| 1-39x | ZS461395 | Screw, Round Head 2x3 | | 2 |
| 1-40x | HZ583176 | RE4-6 Terminal Plate | TW-025 | 2 |
| 1-41 | ES520672 | Slide Switch SL-282B4 | 25-3-8 | 1 |
| 1-42 | EA527523 | Head Change P.C Board | ND-025 | 1 |
| 1-43 | EO346500 | Ferri Inductor FL7H 220 µH(J) | D-1-3 | 1 |
| 1-44 | HZ529288 | Reverse Switch Base | ND-002 | 1 |
| 1-45 | HL527433 | Reverse Lever | ND-004 | 1 |
| 1-46 | ZW527422 | Graduated Washer | ND-005 | 2 |
| 1-47 | ZS487866 | Screw, Round Head 2.6x6 | | 1 |
| 1-48 | HZ531584 | Earth Plate | ND-060 | 1 |
| 1-49 | ZS304806 | Screw, Binding Head 3x5 | | 2 |
| 1-50 | ZG227452 | Spring D | 90-118 | 1 |
| 1-51 | MH578957 | Tape Guide Prop | TD-002 | 2 |
| 1-52 | ZW273756 | Nut M3 | | 4 |
| 1-53 | HZ532710 | Tape Guide B | TW-006 | 2 |
| 1-54 | HZ528581 | Tape Guide A | ND-006 | 2 |
| 1-55x | ZS413201 | Screw, Pan Head 4x8 | | 2 |
| 1-56x | EJ623891 | Terminal, V Connector SVF-01T-1.5A | II-1-136 | 10 |
| 1-57x | EJ624420 | Housing, V Connector 6P-SVF | II-1-130 | 1 |
| 1-58x | EJ623880 | Housing, V Connector 4P-SVF | II-1-135 | 1 |

2 ILLUSTRATION OF MAIN MOTOR BLOCK



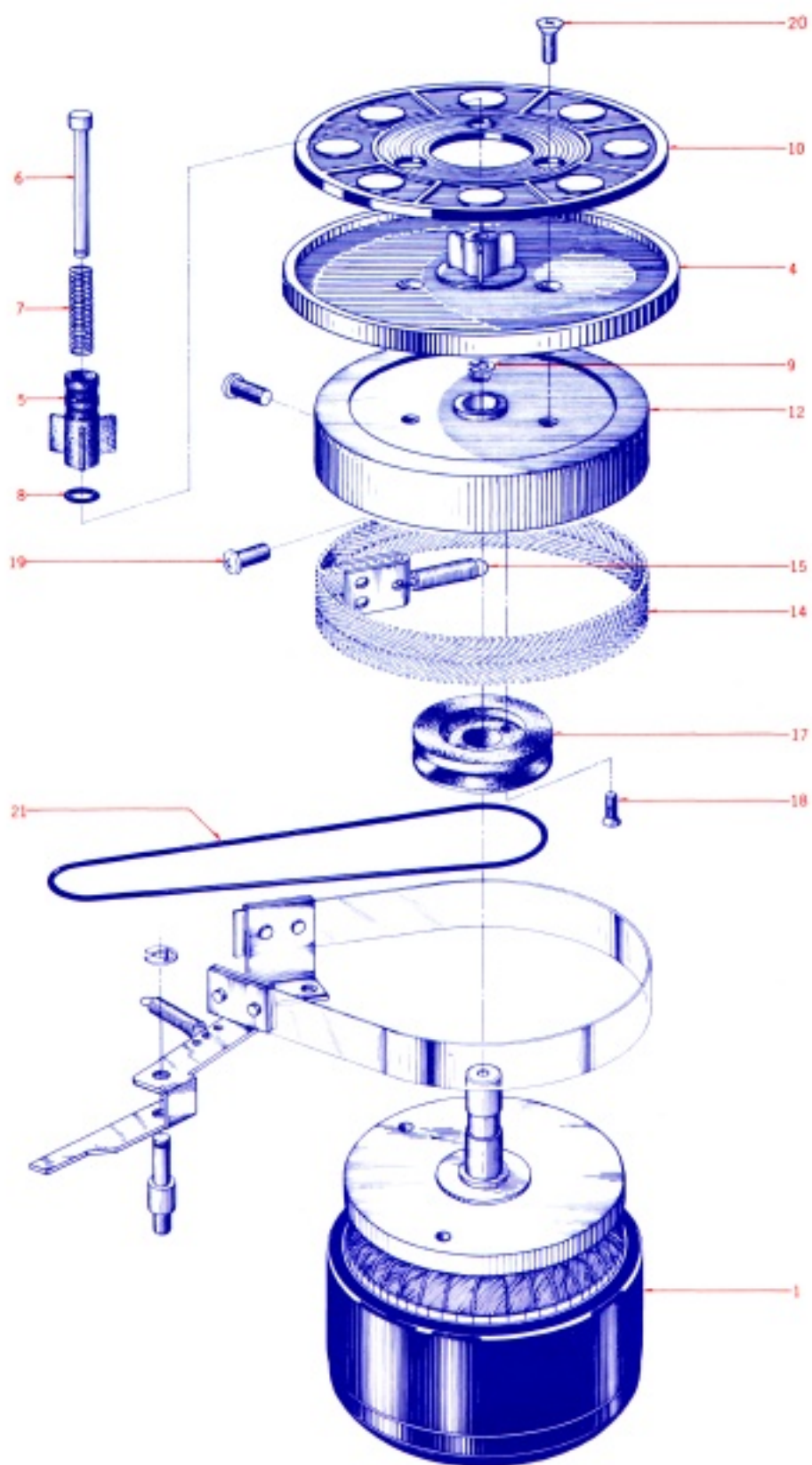
2) MAIN MOTOR BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|---------------------------|---------------|------|
| 2-1x | BM636704 | Main Motor Block Comp. | KJ.MY.NE | 1 |
| 2-2 | ZW597543 | Thrust Washer A | KJ-708 | 2 |
| 2-3 | ZW597622 | Felt Washer | KJ-702 | 1 |
| 2-4 | SK597633 | Cap | KJ-703 | 1 |
| 2-5 | BZ600300 | Detector Gear Block Comp. | KJ.MY.NE | 1 |
| 2-6 | MV368886 | Steel Ball D3 | | 1 |
| 2-7 | MZ597666 | Motor Shield Plate | KJ-706 | 1 |
| 2-8 | MZ597644 | Thrust Angle | KJ-704 | 1 |
| 2-9 | MZ597690 | Ball Holder (Nylon) | KJ-705 | 1 |
| 2-10 | MS597655 | Thrust Holding Prop | KJ-705 | 2 |
| 2-11 | ZS413234 | Screw, Pan Head 4x12 | | 4 |
| 2-12 | ZW603786 | Adjust. Washer (U) | | 2 |
| | | D4x1.3x0.21 | | 2 |
| 2-13x | ZW603775 | Adjust. Washer (U) | | 2 |
| | | D4x1.3x1.61 | | 2 |
| 2-14 | MZ625577 | motor Shield Plate | MY-107 | 1 |

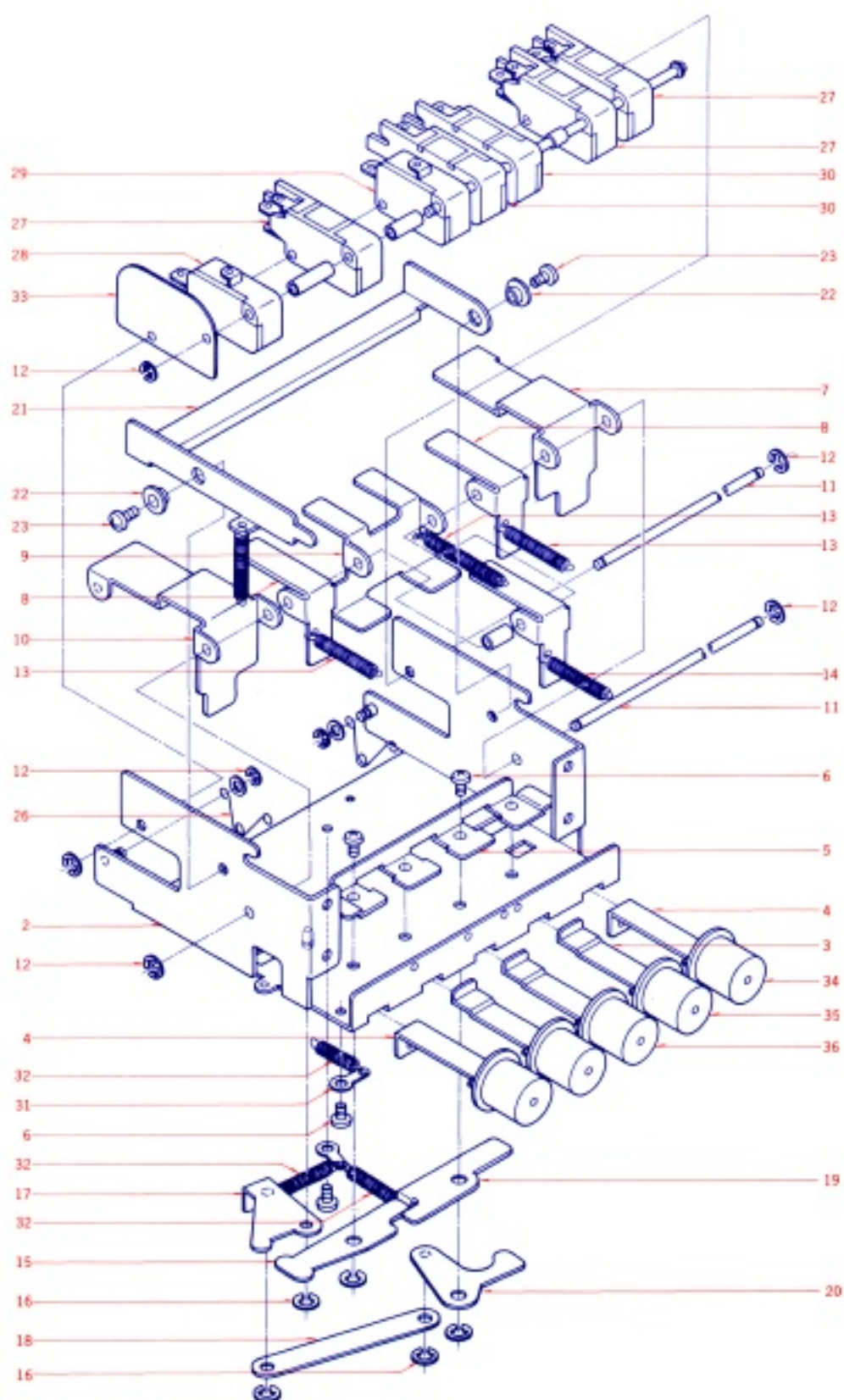
3) REEL MOTOR/REEL TABLE BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--------------------------------------|---------------|------|
| 3-1 | BM314741 | Torque Motor (24XO-2) Block Comp. | MR.MS.KD | 1 |
| 3-2x | BR482400 | Supply Reel Table Block Comp. | KH.ND.NE | 1 |
| 3-3x | BR482411 | Take-Up Reel Table Block Comp. | KH.ND.NE | 1 |
| 3-4 | MT488147 | Reel Table Disk B, RD | RD-272 | 1 |
| 3-5 | MT255420 | Reel Retainer | 3R-102 | 1 |
| 3-6 | MS342000 | Reel Shaft | 3R-108 | 1 |
| 3-7 | ZG255633 | Reel Spring | 3R-109 | 1 |
| 3-8 | MT297663 | O' Ring (3R) 2.9x1.65mm | 3R-138 | 1 |
| 3-9 | ZW270088 | E' Ring 1.9mm | E-1-9 | 1 |
| 3-10 | MT473422 | Reel Table Rubber, KH | KH-200 | 1 |
| 3-11x | MT473444 | Brake Drum (Left) (Supply) | KH-201 | 1 |
| 3-12 | MT473433 | Brake Drum (Right) (Take-Up) | KH-201 | 1 |
| 3-13x | ZW273778 | Earth Lug M3 | | 1 |
| 3-14 | MT436860 | Brake Cloth Comp. | MR-288 | 1 |
| 3-15 | ZG317496 | Felt Tension Spring | MR-288 | 1 |
| 3-16x | ZS425981 | Screw, Binding Head 3x3 | | 1 |
| 3-17 | MR317507 | Counter Pulley (Take-Up) | MR-217 | 1 |
| 3-18 | ZS365973 | Screw, Countersunk Head | | 2 |
| | | 2.3x12 | | 2 |
| 3-19 | ZS424056 | Screw, Pan Head 4x10 | | 2 |
| 3-20 | ZS403212 | Screw, Countersunk Head | | 3 |
| | | 3x10 | | 3 |
| 3-21 | MB527556 | Counter Belt D=93x1.5 | SD-302 | 1 |

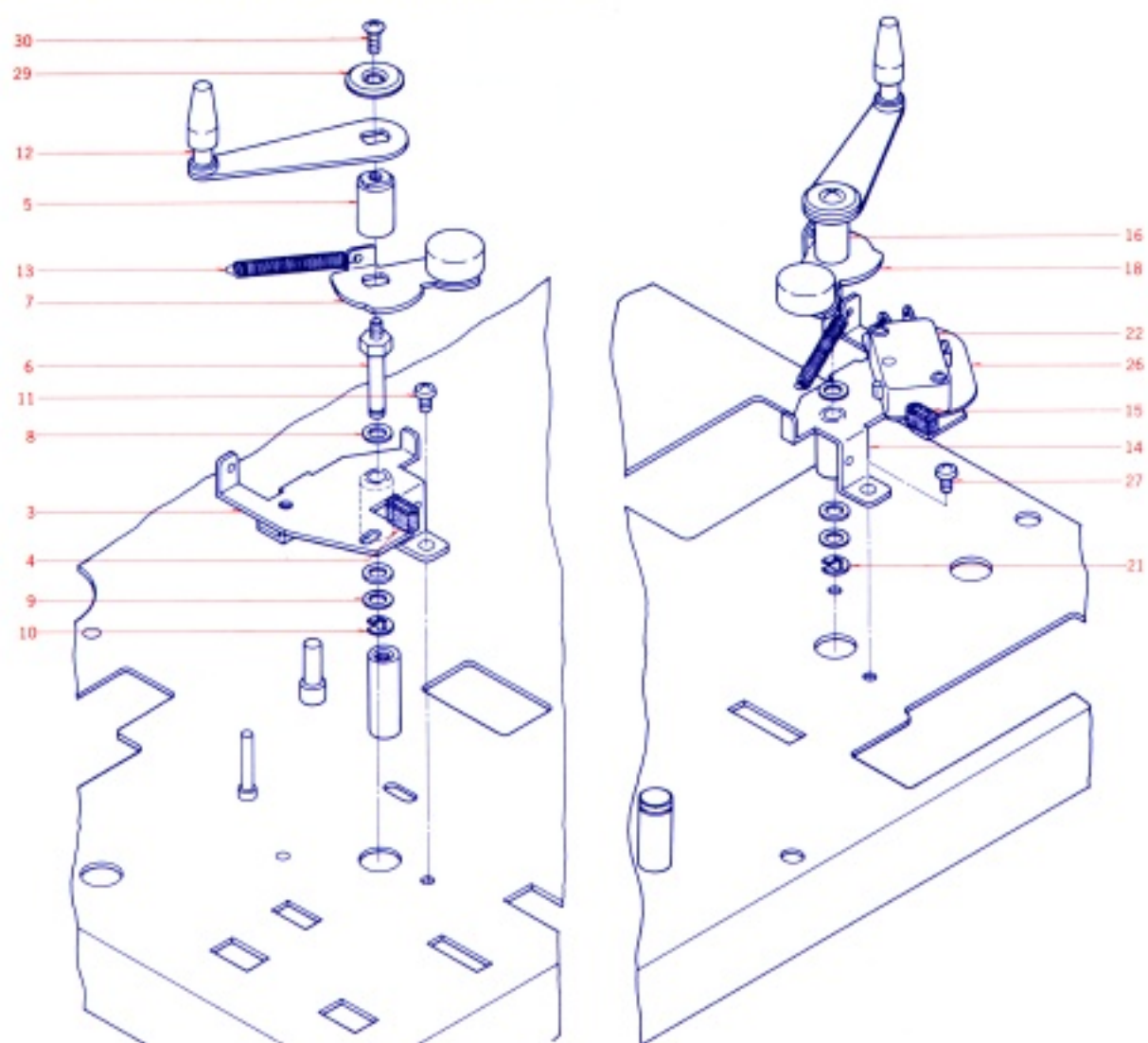
3 ILLUSTRATION OF REEL MOTOR/REEL TABLE BLOCK



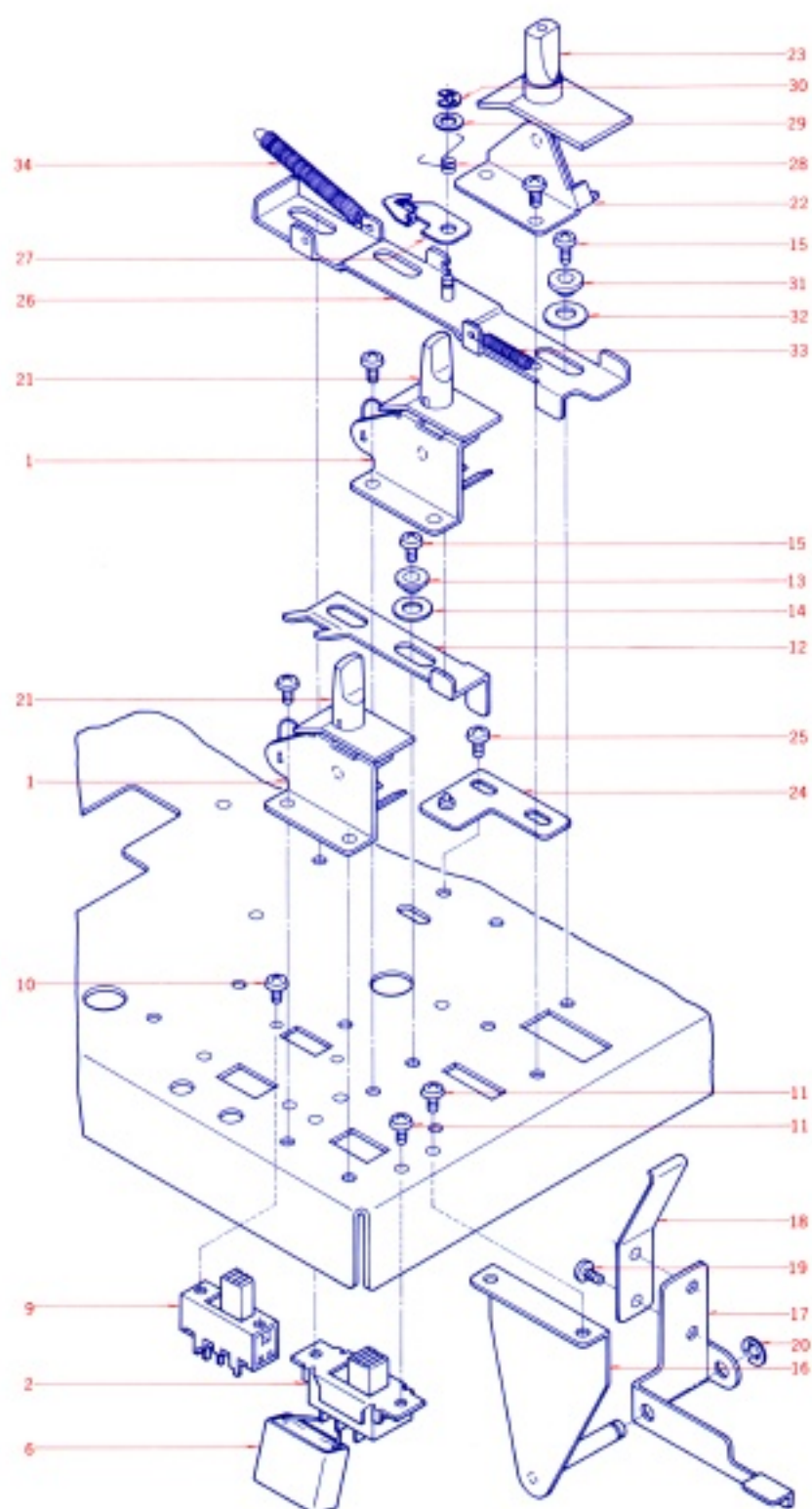
4 ILLUSTRATION OF OPERATION BLOCK



5 ILLUSTRATION OF TENSION ARM BLOCK



6 ILLUSTRATION OF LEVER SWITCH/PAUSE SWITCH BLOCK



4) OPERATION BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|-------------------------------|---------------|------|
| 4-1x | BZ636715 | Operation Block Comp. | NE | 1 |
| 4-2 | MZ643972 | Operation Box | NE-2001 | 1 |
| 4-3 | MZ640135 | Slide Plate A | NE-2002 | 3 |
| 4-4 | MZ640146 | Slide Plate B | NE-2002 | 2 |
| 4-5 | MZ640247 | Slide Limiter | NE-2012 | 1 |
| 4-6 | ZS417216 | Screw, Pan Head 3x4 | | 8 |
| 4-7 | MZ640168 | Switch Plate B | NE-2005 | 1 |
| 4-8 | MZ640157 | Switch Plate A | NE-2004 | 1 |
| 4-9 | MZ640181 | Switch Plate D | NE-2006 | 1 |
| 4-10 | MZ640170 | Switch Plate C | NE-2005 | 1 |
| 4-11 | MS640192 | Operation Shaft | NE-2007 | 3 |
| 4-12 | ZW270088 | 'E' Ring 1.9mm | | 6 |
| 4-13 | ZG644152 | Return Spring A | NE-2020 | 3 |
| 4-14 | ZG644185 | Return Spring B | NE-2022 | 1 |
| 4-15 | MZ640203 | Operation Cam B | NE-2008 | 1 |
| 4-16 | ZW280283 | 'U' Ring 2.85mm | 6-1-1 | 6 |
| 4-17 | MZ640236 | Operation Cam E, w/pin | NE-2011 | 1 |
| 4-18 | MZ640258 | Cam Joint | NE-2013 | 1 |
| 4-19 | MZ640214 | Operation Cam C | NE-2009 | 1 |
| 4-20 | MZ640225 | Operation Cam D | NE-2010 | 1 |
| 4-21 | MZ640260 | Reset Arm | NE-2004 | 1 |
| 4-22 | ZW625241 | Graduated Washer | MY-2023 | 2 |
| 4-23 | ZS379350 | Iso Screw, Pan Head 3x6 | | 2 |
| 4-24x | ZS422076 | Screw, Pan Head 3x5 | | 1 |
| 4-25x | ZS608275 | Screw, Pan Head 3x5, w/washer | | 1 |
| 4-26 | ZG640304 | Reset Spring | NE-2018 | 2 |
| 4-27 | ES562465 | Micro Switch K-1 | 25-1-26 | 3 |
| 4-28 | ES250064 | Micro Switch V-1A44 U/L | 25-1-7 | 1 |
| 4-29 | ES403727 | Micro Switch V-1A106 U/L | 25-1-20 | 1 |
| 4-30 | ES573456 | Micro Switch K-2 | 25-1-20 | 2 |
| 4-31 | ZW562476 | Earth Lug M3 | | 3 |
| 4-32 | ZG644163 | OP Spring | NE-2025 | 5 |
| 4-33 | MZ402377 | Micro Insulator D | KD-2050 | 1 |
| 4-34 | SB631146 | Push Button D (Yellow) | CP-2024 | 2 |
| 4-35 | SB631157 | Push Button E (Green) | CP-2024 | 2 |
| 4-36 | SB631168 | Push Button F (White) | CP-2024 | 1 |

5) TENSION ARM BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|-----------------------------------|---------------|------|
| 5-1x | BZ636761 | Tension Arm (Left) Block Comp. | NE | 1 |
| 5-2x | BZ636750 | Tension Arm (Right) Block Comp. | NE | 1 |
| 5-3 | MZ638943 | Tension Arm Base (Left), w/metal | NE-2025 | 1 |
| 5-4 | MB428343 | Stopper Rubber, KD | KD-1000 | 1 |
| 5-5 | MS625825 | Tension Shaft A | MY-2024 | 1 |
| 5-6 | MS615014 | Tension Shaft B | MY-2022 | 1 |
| 5-7 | MZ627265 | Tension Switch Cam, w/weight | MY-2025 | 1 |
| 5-8 | ZW419646 | Washer (SPC) D4.5x9.8x0.5t | | 1 |
| 5-9 | ZW601075 | Washer D4.1x7x0.1t | | 1 |
| 5-10 | ZW270101 | 'E' Ring 3mm | 6-1-9 | 1 |
| 5-11 | ZS422076 | Screw, Pan Head 3x5 | | 2 |
| 5-12 | MZ644196 | Tension Arm, w/post | NE-2023 | 1 |
| 5-13 | ZG580746 | Tension Spring | TD-2024 | 1 |
| 5-14 | MZ644062 | Tension Arm Base (Right), w/metal | NE-2025 | 1 |
| 5-15 | MZ810191 | Cushion Rubber, RD | RD-278 | 1 |

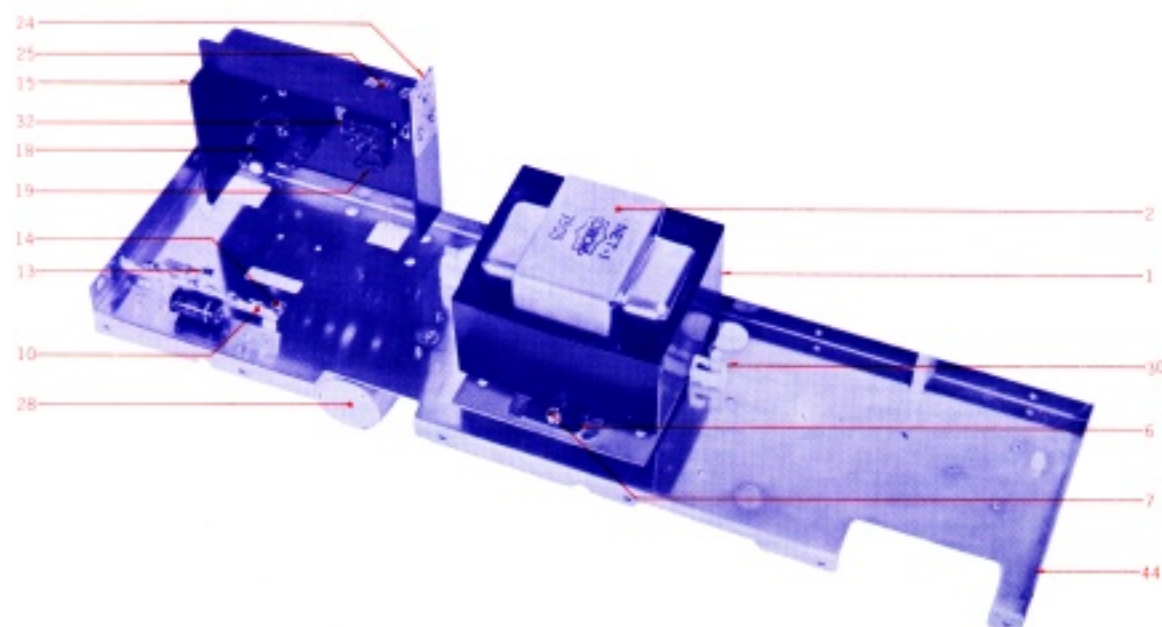
| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|------------------------------|---------------|------|
| 5-16 | MS625825 | Tension Shaft A | MY-2024 | 1 |
| 5-17x | MS615014 | Tension Shaft B | MY-2022 | 1 |
| 5-18 | MZ627265 | Tension Switch Cam, w/weight | MY-2025 | 1 |
| 5-19x | ZW419646 | Washer (SPC) D4.5x9.8x0.5t | | 1 |
| 5-20x | ZW601075 | Washer D4.1x7x0.1t | | 1 |
| 5-21 | ZW270101 | 'E' Ring 3mm | | 1 |
| 5-22 | ES250064 | Micro Switch V-1A44 U/L | 25-1-7 | 1 |
| 5-23x | ZW397146 | Micro Switch Nut | KD-1027 | 1 |
| 5-24x | ZS608253 | Screw, Pan Head 3x20 | | 1 |
| 5-25x | ZS422965 | Screw, Pan Head 3x15 | | 1 |
| 5-26 | MZ402377 | Micro Insulator D | KD-2050 | 1 |
| 5-27 | ZS422076 | Screw, Pan Head 3x5 | | 2 |
| 5-28x | ZG580746 | Tension Spring | TD-2024 | 1 |
| 5-29 | ZW535094 | Decorative Washer | TE-2027 | 2 |
| 5-30 | ZS200395 | Screw, Countersunk Head 3x6 | | 2 |

6) LEVER SWITCH/PAUSE SWITCH BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|---------------------------|-----------|--|---------------|------|
| LEVER SWITCH BLOCK | | | | |
| 6-1 | BS636794 | Lever Switch Block Comp. | NE | 2 |
| 6-2 | ES479485 | Slide Switch S-1 | 25-3-6 | 1 |
| 6-3x | ES641068 | Slide Switch JE06 (JPN) | 25-3-13 | 1 |
| 6-4x | ES642677 | Slide Switch JE08 (CEE) | 25-3-18 | 1 |
| 6-5x | ES641092 | Slide Switch JE07 (CSA) | 25-3-15 | 1 |
| 6-6 | EC551160 | Ceramic/C. NB821 YZ 0.01μF 1.4KWV | 26-5-2 | 1 |
| 6-7x | EC565896 | Ceramic/C. DP6600 YM 0.01μF 1.4KWV(CSA) | 26-5-2 | 1 |
| 6-8x | MZ643072 | Switch Joint (CEE) | NE-1002 | 1 |
| 6-9 | ES481656 | Slide Switch SSD02239 | 25-3-7 | 1 |
| 6-10 | ZS479474 | Screw, Pan Head 2.6x5 | | 2 |
| 6-11 | ZS422076 | Screw, Pan Head 3x5 | | 4 |
| 6-12 | MZ643083 | Speed Switch Slide | NE-1003 | 1 |
| 6-13 | ZW625241 | Graduated Washer | MY-2023 | 1 |
| 6-14 | ZW374545 | Washer, (PBP) D5.1x10.3x0.4t | | 2 |
| 6-15 | ZS379350 | Iso Screw, Pan Head 3x5 | | 4 |
| 6-16 | MZ643094 | Speed Switch Stand, w/prop | NE-1004 | 1 |
| 6-17 | ML643105 | Speed Switch Lever A | NE-1005 | 1 |
| 6-18 | ML643116 | Speed Switch Lever B | NE-1006 | 1 |
| 6-19 | ZS417216 | Screw, Pan Head 3x4 | | 2 |
| 6-20 | ZW290283 | 'U' Ring 2.85mm | 6-1-1 | 1 |
| 6-21 | SK638976 | Knob 1-C | CP-2011 | 2 |
| PAUSE SWITCH BLOCK | | | | |
| 6-22 | BS636805 | Pause Switch Block Comp. | NE | 1 |
| 6-23 | SK644117 | Pause Knob | NE-2020 | 1 |
| 6-24 | MZ643151 | Pause Lock Table, w/pin | NE-1011 | 1 |
| 6-25 | ZS323728 | Screw, Binding Head 3x5 | | 2 |
| 6-26 | MZ643138 | Pause Slide, w/shaft | NE-1008 | 1 |
| 6-27 | TC515575 | Switch Lock Cam B | CG-2301 | 1 |
| 6-28 | ZG514440 | Button Lock Spring B | CG-2302 | 1 |
| 6-29 | ZW424495 | Washer, (SPC) D3.1x8x1t | | 1 |
| 6-30 | ZW270088 | 'E' Ring 1.9mm | 6-1-9 | 1 |
| 6-31 | ZW625241 | Graduated Washer | MY-1013 | 2 |
| 6-32 | ZW374545 | Washer, (PBP) D5.1x10.3x0.4t | | 2 |
| 6-33 | ZG567696 | Azimuth Spring 2 | CP-1040 | 1 |
| 6-34 | ZG232121 | Tension Lever Spring | MH-10 | 1 |

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

7 PHOTO OF POWER SUPPLY BLOCK

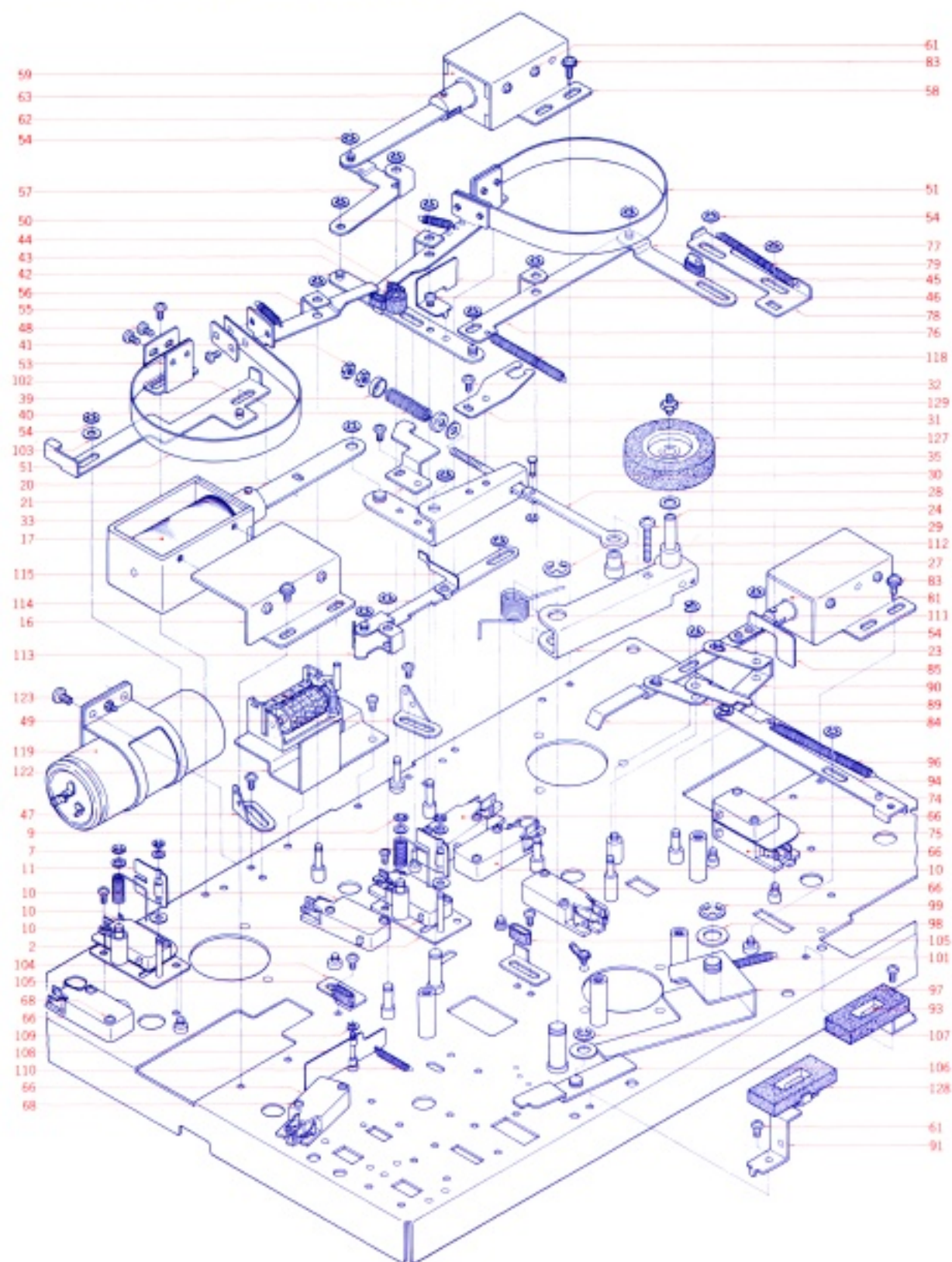


7) POWER SUPPLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty | Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|----------|-----------|--|---------------|------|----------|-----------|---------------------------------|---------------|------|
| 7-1 | MZ627636 | Trans. Shield Plate | MY-283 | 1 | 7-31x | EJ639134 | 9P Socket Housing 103-3-9R | II-1-148 | 1 |
| 7-2 | BT638864 | Power Trans. NET-1 | 38-4-36 | 1 | 7-32 | ES479485 | Slide Switch S-1 | 35-3-96 | 1 |
| 7-3x | BT642666 | Power Trans. NET-4 (CEE) | 38-4-38 | 1 | 7-33x | ZS383951 | Screw, Truss Head 3x5 | | 2 |
| 7-4x | BT642655 | Power Trans. NET-3 (CSA) | 38-4-37 | 1 | 7-34x | SM647245 | Cycle Name Plate | MY-288 | 1 |
| 7-5x | BT642644 | Power Trans. NET-2 (JPN) | 38-4-36 | 1 | 7-35x | EZ461125 | Trans. Shield Plate C | MC-507 | 1 |
| 7-6 | EZ486617 | Trans. Reinforcement Plate B | LF-522 | 2 | 7-36x | EZ549314 | Trans. Shield Cushion | MU-503 | 4 |
| 7-7 | ZS424056 | Screw, Pan Head 4x10 | | 1 | 7-37x | EZ655198 | Fuse Holder 5P Base (CSA) | 40-1-71 | 1 |
| 7-8x | ZW416698 | Nut M4 | | 2 | 7-38x | EZ658721 | Fuse Holder 5P (JPN) | 40-1-73 | 1 |
| 7-9x | ZS413201 | Screw, Pan Head 4x8 (CEE) (CSA) | | 4 | 7-39x | EJ642712 | Fuse Holder NE (CEE) | 40-1-65 | 1 |
| 7-10 | EJ343934 | Lug Plate KPL5L | 30-3-12 | 1 | 7-40x | EF593706 | Fuse 500mAT (CEE) | 39-1-53 | 4 |
| 7-11x | EC646031 | Elect./C. (Tub. Type) 4.7μF 160WV | 38-13-17 | 1 | 7-41x | EF623103 | Fuse, (SEMKO Type) 1AT (CEE) | 39-1-53 | 1 |
| 7-12x | ER411873 | Metal Oxide Film/R, 1W 100Ω(K) | 35-15-10 | 1 | 7-42x | EF277402 | Fuse, ST-2 1A (CSA) | 39-1-56 | 4 |
| 7-13 | ED570295 | Silicon Diode 1N4003 | 4-2-41 | 1 | 7-43x | EF588420 | Fuse, 1A 125V (JPN) | 39-1-52 | 5 |
| 7-14 | ZS325495 | Tapping Screw #2 3x6 BR | | 2 | 7-44 | MZ640348 | Center Frame | NE-106 | 1 |
| 7-15 | MZ626861 | VS Table A | MY-288 | 1 | | | | | |
| 7-16x | MZ625858 | VS Table B (CEE)(CSA) | MY-288 | 1 | | | | | |
| 7-17x | MZ647133 | VS Base C (JPN) | MY-288 | 1 | | | | | |
| 7-18 | EJ233370 | Socket (Volt. Selector) S-18010 | 40-2-3 | 1 | | | | | |
| 7-19 | EJ631945 | Strain Relief SR-4N-4 | 1-7-48 | 1 | | | | | |
| 7-20x | EJ246936 | Strain Relief SR-6W-1 (WG,3 Core)(CEE) | 1-7-4 | 1 | | | | | |
| 7-21x | EW540123 | AC Cord (CUL) 2.5M | 36-3-28 | 1 | | | | | |
| 7-22x | EW516600 | AC Cord VM-0065 (CEE) | 36-3-28 | 1 | | | | | |
| 7-23x | EW524845 | AC Cord 2.5M (JPN) | 36-3-31 | 1 | | | | | |
| 7-24 | EA628075 | Transistor P.C. Board | MY-284 | 1 | | | | | |
| 7-25 | ET621786 | Transistor TIP-48 | 40-1-107 | 1 | | | | | |
| 7-26x | ZS422076 | Screw, Pan Head 3x5 | | 2 | | | | | |
| 7-27x | ZS379350 | Iso Screw, Pan Head 3x6 | | 1 | | | | | |
| 7-28 | EC647381 | MP/C. (Lug Type Uni/D.) 3.5+1.5μF 150WV | 38-4-106 | 1 | | | | | |
| 7-29x | ZS325495 | Tapping Screw, #2 3x6 BR | | 2 | | | | | |
| 7-30 | EJ496686 | Wire Clip 220-JD486010-119 | 1-7-18 | 6 | | | | | |

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

8 ILLUSTRATION OF MECH. ASSEMBLY BLOCK



8) MECH. ASSEMBLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty | Ref. No. | Parts No. | Description | Schematic No. | Q'ty |
|-----------------------------------|-----------|---------------------------------------|---------------|------|-----------|-----------|---|---------------|------|
| QUICK SWITCH BLOCK | | | | | 8-64x | ZW270088 | 'E' Ring 1.9mm | 6-14 | 1 |
| 8-1x | BS636917 | Quick Switch Block | | | 8-65x | MZ250413 | Micro Insulator C | RC-107 | 1 |
| | | Comp. | NE | 2 | 8-66 | ES573456 | Micro Switch K-2 | 2-1-30 | 5 |
| 8-2 | EZ625781 | Quick Switch Table, w/prop | MY-200 | 1 | 8-67x | ZW397146 | Micro Switch Nut | KD-187 | 1 |
| 8-3x | ZS483502 | Screw, Pan Head 3x13 | | 2 | 8-68 | ZS608264 | Screw, Pan Head 3x25 | | 2 |
| 8-4x | MH528513 | Switch Pin | ND-100 | 1 | 8-69x | ZS483502 | Screw, Pan Head 3x13 | | 4 |
| 8-5x | MH527635 | Switch Pipe | ND-104 | 1 | 8-70x,71x | EC551160 | Ceramic/C. NB821YZ 0.01µF(Z) 1.4KWV | 2-5-55 | 2 |
| 8-6x | ZW273756 | Nut M3 | | 1 | 8-72x,73x | ZS608264 | Screw, Pan Head 3x25 | | 4 |
| 8-7 | ZG529211 | Switch Spring | ND-100 | 1 | 8-74 | ES250064 | Micro Switch V-1A44 U/L | 2-1-7 | 1 |
| 8-8x | ZW259738 | Washer (Polyslider) D4.1x7x0.25t | | 1 | 8-75 | MZ402377 | Micro Insulator D | KD-206 | 1 |
| 8-9 | ZW270101 | 'E' Ring 3 mm | 6-14 | 1 | 8-76 | ML643252 | Stop Lever A, w/pin | NE-100 | 1 |
| 8-10 | ES562465 | Micro Switch K-1 | 2-1-3 | 2 | 8-77 | MZ643274 | Reset Slide B | NE-102 | 1 |
| 8-11 | MZ529391 | Quick Plate | ND-100 | 1 | 8-78 | MZ643263 | Reset Slide A | NE-101 | 1 |
| 8-12x | ZW622001 | Washer, D3.1x13x0.5t | | 1 | 8-79 | ZG669543 | Reset Spring (2) | NE-107 | 1 |
| 8-13x | ZW622012 | Washer, D3.1x5x0.2t | | 1 | 8-80x | MZ640023 | Plunger Base | NE-102 | 1 |
| 8-14x | ZW270088 | 'E' Ring 1.9mm | 6-14 | 1 | 8-81 | EP665087 | Plunger Solenoid 1240PHT1 | 4-1-75 | 1 |
| PINCH ROLLER PLUNGER BLOCK | | | | | 8-82x | ED570295 | Silicon Diode 1N4003 | 4-2-41 | 1 |
| 8-15x | BZ636816 | Pinch Roller Plunger Block Comp. | NE | 1 | 8-83 | ZS422076 | Screw, Pan Head 3x5 | | 2 |
| 8-16 | MZ640034 | Plunger Bracket | NE-100 | 1 | 8-84 | MZ529650 | Reverse Joint D | ND-100 | 1 |
| 8-17 | EP638706 | Plunger Solenoid 1660PHT | 4-1-3 | 1 | 8-85 | ML640001 | D Switch Lever | NE-100 | 1 |
| 8-18x | ER376435 | Spark Quencher U/L 0.1µ+120Ω 250WV | 6-1-5 | 1 | 8-86x | ZS417216 | Screw, Pan Head 3x4 | | 2 |
| 8-19x | ZS422076 | Screw, Pan Head 3x5 | | 2 | 8-87x | MH257477 | Connecting Pin | RD-211 | 1 |
| 8-20 | MZ643331 | P Plunger joint | NE-109 | 1 | 8-88x | ZW270088 | 'E' Ring 1.9mm | 6-14 | 1 |
| 8-21 | MH533913 | Connecting Pin | TF-200 | 1 | 8-89 | MZ527883 | Reverse Joint B | ND-101 | 1 |
| 8-22x | ZW270088 | 'E' Ring 1.9mm | 6-14 | 1 | 8-90 | ML640091 | Reverse Lever D, w/pin | NE-190 | 1 |
| 8-23 | ML528445 | P Lever | ND-100 | 1 | 8-91 | MZ640045 | D Lamp Table | NE-105 | 2 |
| 8-24 | MS527591 | Pinch Roller Shaft | ND-100 | 1 | 8-92x | EA642598 | Lamp P.C. Board | NE-197 | 2 |
| 8-25x | ZW274026 | Spring Washer, M5 | | 1 | 8-93 | EL621167 | Pilot Lamp 5.5V 60mA | 2-2-36 | 2 |
| 8-26x | ZW413278 | Nut M5 | | 1 | 8-94 | MZ642533 | Reverse Slide, w/pin | NE-184 | 1 |
| 8-27 | MH529727 | P Joint Pin B | ND-104 | 1 | 8-95x | MZ669532 | Cushion, Prevention Shock | NE-100 | 1 |
| 8-28 | MZ527848 | P Joint | ND-105 | 1 | 8-96 | ZG643285 | Reset Spring | NE-103 | 1 |
| 8-29 | ZS444262 | Iso Screw, Binding Head 4x18 | | 1 | 8-97 | MZ643173 | Pause Arm B | NE-102 | 1 |
| 8-30 | ML644084 | P Plunger Lever, w/pin | NE-107 | 1 | 8-98 | ZW393851 | Washer, (Nylon) D8.1x13x0.8t | | 1 |
| 8-31 | MZ529378 | Shifter Adjuster | ND-102 | 1 | 8-99 | ZW334653 | 'E' Ring 7mm | | 1 |
| 8-32 | ZS417216 | Screw, Pan Head 3x4 | | 2 | 8-100x | ZW274026 | Spring Washer M5 | | 1 |
| 8-33 | MZ644106 | Quick Plate | NE-105 | 1 | 8-101 | ZG580768 | Spoke Spring | TD-207 | 1 |
| 8-34x | ZS417216 | Screw, Pan Head 3x4 | | 2 | 8-102 | MZ643320 | Intermittently Slide, w/pin | NE-187 | 1 |
| 8-35 | MZ529356 | Pinch Roller Joint B | ND-107 | 1 | 8-103 | ZW383635 | Washer, (Polyslider) D4.2x7x0.25t | | 2 |
| 8-36x | MZ528557 | P Joint Pin A | ND-100 | 1 | 8-104 | MZ640067 | Stopper | NE-107 | 2 |
| 8-37x | ZW270088 | 'E' Ring 1.9mm | 6-14 | 1 | 8-105 | MZ810191 | Cushion Rubber, RD | RD-27 | 2 |
| 8-38x | ZW345442 | Washer (Nylon)D4.2x9x11 | | 1 | 8-106 | MZ643162 | Pause Arm A | NE-101 | 1 |
| 8-39 | MZ802980 | Spring Holder | RD-27 | 2 | 8-107 | ZW270134 | 'E' Ring 5mm | 6-14 | 1 |
| 8-40 | ZG644095 | Cramp Spring | NE-100 | 1 | 8-108 | MZ640080 | Quick Plate | NE-100 | 1 |
| 8-41 | ZW413188 | Nut M4 | | 2 | 8-109 | ZW270088 | 'E' Ring 1.9mm | 6-14 | 1 |
| MECH. ASSEMBLY BLOCK | | | | | 8-110 | ZG232121 | Tension Lever Spring | MH-14 | 1 |
| 8-42 | ML643241 | Brake Lever | NE-109 | 1 | 8-111 | ZG640124 | P Spring | NE-108 | 1 |
| 8-43 | MZ397181 | Lever Cushion | KD-100 | 1 | 8-112 | ZW270156 | 'E' Ring 6mm | 6-14 | 1 |
| 8-44 | MB606712 | Stopper Rubber KJ | KJ-200 | 2 | 8-113 | ML643206 | QT Lever A, w/pin | NE-115 | 1 |
| 8-45 | MZ529244 | Switch Plate | ND-101 | 1 | 8-114 | MZ643228 | QT Joint | NE-117 | 1 |
| 8-46 | ZS417216 | Screw, Pan Head 3x4 | | 1 | 8-115 | ML643217 | QT Lever B | NE-116 | 1 |
| 8-47 | MZ314605 | Spring Rack, MR | MR-10 | 1 | 8-116x | ZS417261 | Screw, Pan Head 3x4 | | 1 |
| 8-48 | ZS323728 | Screw, Binding Head 3x5 | | 26 | 8-117x | MZ640326 | Frame Shield | NE-104 | 1 |
| 8-49 | MZ397080 | Spring Rack | KD-100 | 1 | 8-118 | ZG527938 | FF Reset Spring | ND-104 | 1 |
| 8-50 | ML314976 | Brake Lever A | MR-210 | 1 | 8-119 | EC638875 | MP/C. (Lug Type) UN1/D, 4µF x 2 250WV AC | 2-9-97 | 1 |
| 8-51 | MT314987 | Brake Band | MR-212 | 2 | 8-120x | EC642690 | MP/C. (Lug Type) 2+3µF 250V AC (CSA) | 2-9-102 | 1 |
| 8-52x | MZ314998 | Brake Band Retaining Plate | MR-212 | 4 | 8-121x | ZS325495 | Tapping Screw, #2 3x6BR | | 2 |
| 8-53 | MZ315000 | Brake Band Support | MR-214 | 2 | 8-122 | MZ640056 | Counter Base | NE-106 | 1 |
| 8-54 | ZW290283 | 'U' Ring 2.85mm | 6-1-1 | 23 | 8-123 | MC638684 | Counter MP490-23 | 9-1-4 | 1 |
| 8-55 | ZG315011 | Brake Lever Spring | MR-116 | 2 | 8-124x | EC364858 | Elect./C. (Lug Type) 330µF 160WV | 2-10-36 | 1 |
| 8-56 | ML396810 | Brake Lever B | KD-100 | 1 | 8-125x | EF563703 | Fuse 2A 250V | 2-1-50 | 1 |
| 8-57 | ML529525 | Brake Lever A | ND-109 | 1 | 8-126x | ZS325495 | Tapping Screw #2 3x6BR | | 10 |
| 8-58 | MZ640023 | Plunger Base | NE-102 | 1 | 8-127 | MP275984 | Pinch Roller RD D=40 | RD-221 | 1 |
| 8-59 | EP638695 | Plunger Solenoid 1240PHT | 4-1-3 | 1 | 8-128 | ZS642723 | Lamp Cover A | NE-102 | 2 |
| 8-60x | ED570295 | Silicon Diode 1N4003 | 4-2-41 | 1 | 8-129 | ZS527681 | Pinch Roller Set Screw | ND-101 | 1 |
| 8-61 | ZS422076 | Screw, Pan Head 3x5 | | 10 | | | | | |
| 8-62 | MZ529863 | Pinch Roller Joint | ND-104 | 1 | | | | | |
| 8-63 | MH257477 | Connecting Pin | RD-211 | 1 | | | | | |

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

9 P.C. BOARDS

(1) P.B AMP P.C BOARD (NE-5036) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|--|------|
| (1)-1 | BA636862 | P.B Amp P.C Board Comp. (NE-5036) | 1 |
| (1)-TR1,2 | ET234854 | Transistor 2SC458LG(C) | 4 |
| (1)-TR3 | ET398711 | Transistor 2SC945(Q)(R) | 2 |
| (1)-TR4 | ET234854 | Transistor 2SC458LG(C) | 2 |
| (1)-TR5,6 | ET398711 | Transistor 2SC945L(Q)(R) | 4 |
| (1)-D1 | ED219464 | Germanium Diode 1N34A | 2 |
| (1)-T1 | BT517274 | Head Phone Trans. N16-535S | 2 |
| (1)-VR1 | EV622056 | Co-Axial 2-Throw Vol. V24LSGPHN 10k x 2 | 1 |
| (1)-VR2 | EV464220 | Semi-Fixed/Vol. V8K4-1 50k | 2 |
| (1)-VR3 | EV464196 | Semi-Fixed/Vol. V8K4-1 2k | 2 |
| (1)-L1 | EO624857 | Inductor GE6070A 23mH | 2 |
| (1)-P1 | EZ623878 | Pin For V Connector, w/base RTB-1.5-4 | 1 |
| (1)-2 | EJ539662 | Wrapping Post 1x17 | 26 |
| Capacitor, Vertical Type | | | |
| (1)-C1 | EC320040 | Elect. 47 μ F 16WV | 2 |
| (1)-C2 | EC432810 | Elect. 10 μ F 16WV NL | 2 |
| (1)-C3 | EC290520 | VFM 100pF(J) 50WV | 2 |
| (1)-C4 | EC467133 | VFM 68pF(J) 50WV | 2 |
| (1)-C5 | EC329771 | Elect. 47 μ F 6.3WV | 2 |
| (1)-C6 | EC290531 | VFM 100pF(K) 50WV | 2 |
| (1)-C7 | EC517138 | Elect. 10 μ F 25WV NL | 2 |
| (1)-C8 | EC329771 | Elect. 47 μ F 6.3WV | 2 |
| (1)-C9 | EC389485 | Mylar 0.018 μ F(J) 50WV | 2 |
| (1)-C11 | EC379787 | Mylar 0.0039 μ F(J) 50WV | 2 |
| (1)-C12 | EC424708 | Mylar 0.0018 μ F(J) 50WV | 2 |
| (1)-C13 | EC320051 | Elect. 10 μ F 16WV | 2 |
| (1)-C14 | EC220590 | Elect. 33 μ F 10WV | 2 |
| (1)-C15 | EC290564 | VFM 220pF(K) 50WV | 2 |
| (1)-C16 | EC450055 | Elect. 1 μ F 25WV | 2 |
| (1)-C17 | EC220678 | Elect. 47 μ F 25WV | 2 |
| (1)-C18 | EC329771 | Elect. 47 μ F 6.3WV | 2 |
| (1)-C19 | EC556525 | FM 22pF(K) 500WV | 2 |
| (1)-C20 | EC290531 | VFM 100pF(K) 50WV | 2 |
| (1)-C21 | EC320051 | Elect. 10 μ F 16WV | 2 |
| (1)-C22 | EC220364 | Elect. 100 μ F 6.3WV | 2 |
| (1)-C23 | EC389474 | Mylar 0.0015 μ F(J) 50WV | 2 |
| (1)-C24 | EC450055 | Elect. 1 μ F 25WV | 2 |
| (1)-C25 | EC320051 | Elect. 10 μ F 16WV | 2 |
| (1)-C26 | EC350706 | Elect. 4.7 μ F 16WV | 2 |

Carbon Resistor Omitted

(2) REC AMP P.C BOARD (NE-5037) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|--|------|
| (2)-1 | BA636873 | Rec Amp P.C Board Comp. (NE-5037) | 1 |
| (2)-TR1to4 | ET234854 | Transistor 2SC458LG(C) | 8 |
| (2)-TR5to7 | ET398711 | Transistor 2SC945(Q)(R) | 4 |
| (2)-TR8,9 | ET399846 | Transistor 2SC945(Q) | 1 |
| (2)-VR1,2 | EV622078 | Double Vol. V24LSDPHN 50k x 2 | 2 |
| (2)-VR3 | EV464207 | Semi-Fixed/Vol. V8K4-1 5k | 2 |
| (2)-VR4,5 | EV520806 | Semi-Fixed/Vol. V8K4-1 10k | 4 |
| (2)-SW1,2 | ES494302 | Slide Switch CL104B | 2 |
| (2)-SW3 | EC520795 | Slide Switch CL204EO | 1 |
| (2)-L1 | EO321254 | Ferri Inductor FL7H 5.6mH(J) | 2 |
| (2)-T1 | EO383365 | OSC Coil OT-204 | 1 |
| (2)-TC1,2 | EC558202 | Trimmer/C. TM-80A | 4 |
| (2)-P1 | EZ624071 | Pin For V Connector, w/base RTB-1.5-6 | 1 |
| (2)-2 | EJ539662 | Wrapping Post 1x17 | 23 |
| Capacitor, Vertical Type | | | |
| (2)-C1 | EC290531 | VFM 100pF(K) 50WV | 2 |
| (2)-C2 | EC220678 | Elect. 47 μ F 25WV | 2 |
| (2)-C3 | EC432810 | Elect. 10 μ F 16WV NL | 2 |
| (2)-C4 | EC250604 | Mylar 0.001 μ F(K) 50WV | 2 |
| (2)-C5 | EC220386 | Elect. 100 μ F 6.3WV | 2 |
| (2)-C6 | EC556525 | FM 22pF(K) 500WV | 2 |
| (2)-C7 | EC394918 | VFM 33pF(K) 50WV | 2 |
| (2)-C8 | EC432810 | Elect. 10 μ F 16WV NL | 2 |
| (2)-C9 | EC329771 | Elect. 47 μ F 6.3WV | 2 |
| (2)-C10 | EC450055 | Elect. 1 μ F 25WV | 2 |
| (2)-C11 | EC357827 | VFM 50pF(K) 50WV | 2 |
| (2)-C12 | EC329771 | Elect. 47 μ F 6.3WV | 2 |
| (2)-C13 | EC357827 | VFM 50pF(K) 50WV | 2 |
| (2)-C14 | EC290520 | VFM 100pF(J) 50WV | 2 |
| (2)-C15 | EC333562 | Mylar 0.18 μ F(K) 50WV | 2 |
| (2)-C16 | EC329771 | Elect. 47 μ F 6.3WV | 2 |
| (2)-C17 | EC320051 | Elect. 10 μ F 16WV | 2 |
| (2)-C18 | EC220678 | Elect. 47 μ F 25WV | 2 |
| (2)-C19 | EC333562 | Mylar 0.18 μ F(K) 50WV | 2 |
| (2)-C20 | EC320051 | Elect. 10 μ F 16WV | 2 |
| (2)-C21 | EC220994 | Elect. 10 μ F 25WV | 2 |
| (2)-C22 | EC405898 | Styroil 470pF(J) 50WV | 2 |
| (2)-C23 | EC250885 | Mylar 0.01 μ F(K) 50WV | 2 |
| (2)-C24 | EC250841 | Mylar 0.01 μ F(J) 50WV | 1 |
| (2)-C25 | EC250841 | Mylar 0.01 μ F(J) 50WV | 1 |
| (2)-C26 | EC220994 | Elect. 10 μ F 25WV | 1 |
| (2)-C27 | EC558235 | Styroil 1800pF(J) 250WV | 1 |
| (2)-C28 | EC250885 | Mylar 0.01 μ F(K) 50WV | 1 |
| (2)-C29 | EC220151 | Elect. 100 μ F 25WV | 2 |

Carbon Resistor Omitted

**(3) SERVO CONTROL P.C. BOARD
(MY-2036) BLOCK**

| Symbol No. | Parts No. | Description | Q'ty |
|------------|-----------|--|------|
| (3)-1 | BA636748 | Servo Control P.C Board Comp. (MY-2036) | 1 |
| (3)-TR1,2 | ET639437 | Transistor 2SC945L(P)(Q) | 2 |
| (3)-TR3,4 | ET399846 | Transistor 2SC945(Q) | 2 |
| (3)-TR5 | ET538154 | Transistor 2SA564(Q)(R) | 1 |
| (3)-TR6 | ET399846 | Transistor 2SC945(Q) | 1 |
| (3)-TR7 | ET623867 | Transistor 2SD361(D1)(D2) | 1 |
| (3)-TR8 | ET639437 | Transistor 2SC945L(P)(Q) | 1 |
| (3)-VR1 | EV621955 | Semi-Fixed Vol. V10K8-1-5 10k Ω | 1 |
| (3)-VR2 | EV621966 | Semi-Fixed Vol. V10K8-1-5 30k Ω | 1 |
| (3)-D1 | ED557447 | Silicon Diode 1S1588 | 1 |
| (3)-D2to5 | ED224548 | Silicon Diode 10D2 | 4 |
| (3)-TH1 | ED593357 | Thermistor 34D21 | 1 |
| (3)-R20 | ER593346 | Cement/R. (Wire-Wound Type) 2W 330 Ω (K) | 1 |
| (3)-2 | ZS421806 | Screw, Pan Head 3x8 | 1 |
| (3)-3 | ZW273756 | Nut M3 | 1 |
| (3)-4 | EZ615047 | Heat-Sink Plate A | 1 |
| (3)-5 | ZS422076 | Screw, Pan Head 3x5 | 2 |
| (3)-6 | MZ640315 | Servo Holder | 1 |
| (3)-7 | ZS422076 | Screw, Pan Head 3x5 | 4 |

Capacitor, Vertical Type

| | | | |
|---------|----------|---------------------------------|---|
| (3)-C1 | EC251291 | Mylar 0.1 μ F(K) 50WV | 1 |
| (3)-C2 | EC251122 | Mylar 0.027 μ F(K) 50WV | 1 |
| (3)-C3 | EC250582 | Mylar 0.0033 μ F(K) 50WV | 1 |
| (3)-C4 | EC331828 | Elect. 3.3 μ F 25WV | 1 |
| (3)-C5 | EC251122 | Mylar 0.027 μ F(K) 50WV | 1 |
| (3)-C6 | EC250582 | Mylar 0.0033 μ F(K) 50WV | 1 |
| (3)-C7 | EC311793 | Mylar 0.012 μ F(K) 50WV | 1 |
| (3)-C8 | EC557166 | Solid Aluminum 3.3 μ F 25WV | 1 |
| (3)-C9 | EC450055 | Elect. 1 μ F 25WV | 1 |
| (3)-C10 | EC320051 | Elect. 10 μ F 16WV | 1 |
| (3)-C11 | EC220151 | Elect. 100 μ F 25WV | 1 |
| (3)-C12 | EC250885 | Mylar 0.01 μ F 50WV | 1 |
| (3)-C13 | EC346735 | Elect. 47 μ F 50WV | 1 |

Carbon Resistor Omitted

(4) POWER SUPPLY P.C BOARD (NE-1048) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|---------------------------------|-----------|--|------|
| (4)-1 | BA636737 | Power Supply P.C Board Comp. (NE-1048) | 1 |
| (4)-TR1 | ET398711 | Transistor 2SC945L(Q)(R) | 1 |
| (4)-TR2 | ET511694 | Transistor 2SC1211(D)(E) | 1 |
| (4)-TR3 | ET537300 | Transistor 2SD361(D)(E) | 1 |
| (4)-R1 | ER517094 | Metal Oxide Film/R. 2W 330 Ω (K) | 1 |
| (4)-VR1 | EV554670 | Semi-Fixed Vol. V10K8-1-5 1k Ω | 1 |
| (4)-CR1to10 | ER376435 | Spark Quencher U/L 0.1 μ F+120 Ω 250WV | 10 |
| (4)-RL1 | EP638763 | Relay MY4-0-US DC24V | 1 |
| (4)-D1 | ED624903 | Silicon Diode 1S2473 | 1 |
| (4)-D2to7 | ED560913 | Silicon Diode 1S2473 VE | 6 |
| (4)-D8 | ED357794 | Zener Diode RD-5A(M) | 1 |
| (4)-D9to12 | ED511097 | Silicon Diode 1N4001 | 4 |
| (4)-D13to15 | ED570295 | Silicon Diode 1N4003 | 3 |
| (4)-2 | MZ640102 | Sys. Con. Holder A | 1 |
| (4)-3 | MZ640113 | Sys. Con. Holder B | 1 |
| (4)-4 | ZS325495 | Tapping Screw #2 3x6 BR | 2 |
| (4)-5 | EZ626894 | Heat-Sink Plate B | 1 |
| (4)-6 | ZS421806 | Screw, Pan Head 3x8 | 1 |
| (4)-7 | ZW273756 | Nut M3 | 1 |
| (4)-8 | ZS417216 | Screw, Pan Head 3x4 | 2 |
| Capacitor, Vertical Type | | | |
| (4)-C1 | EC450281 | Elect. 0.47 μ F 50WV | 1 |
| (4)-C2,3 | EC220151 | Elect. 100 μ F 25WV | 1 |
| (4)-C4 | EC220678 | Elect. 47 μ F 25WV | 1 |
| (4)-C5 | EC313121 | Elect. 220 μ F 25WV | 1 |
| (4)-C7 | EC372148 | Elect. 220 μ F 35WV | 1 |
| (4)-C8 | EC565345 | Elect. 100 μ F 50WV | 1 |
| (4)-C9 | EC564952 | Elect. 470 μ F 50WV | 1 |

Carbon Resistor Omitted

**(5) EQUALIZER SWITCH P.C BOARD
(NE-5038) BLOCK**

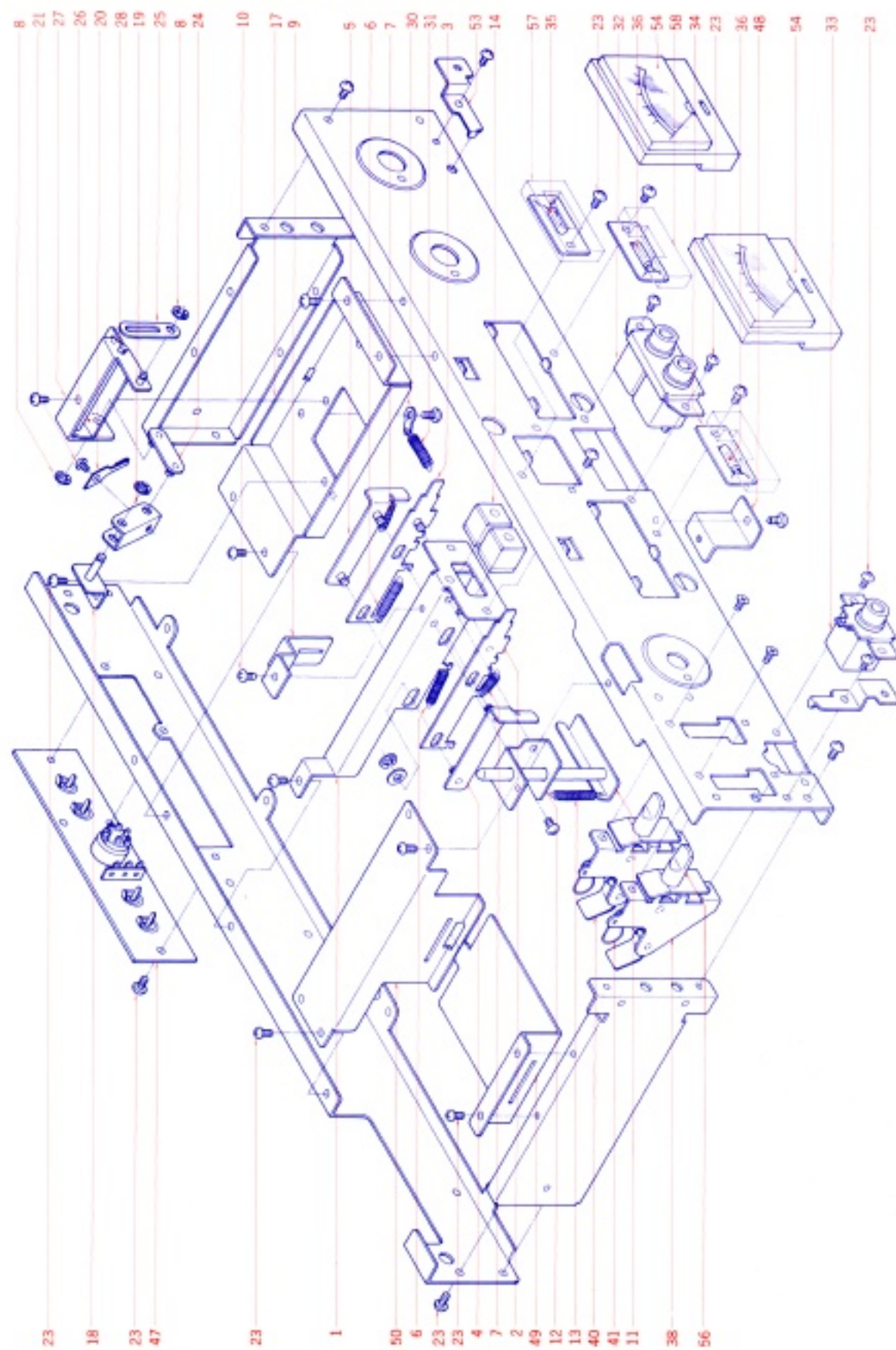
| Symbol No. | Parts No. | Description | Q'ty |
|------------|-----------|--|------|
| (5)-1 | BA636884 | Equalizer Switch P.C. Board Comp. (NE-5038) | 1 |
| (5)-L1 | EO369178 | Ferrite Inductor FL7H 1.5mH(J) | 2 |
| (5)-L2 | EO380564 | Ferrite Inductor FL7H 1.8mH(J) | 2 |
| (5)-SW1 | ES494302 | Slide Switch CL104B | 2 |
| (5)-SW2 | ES496642 | Slide Switch CL106B (CL162A25) | 1 |
| (5)-2 | EJ539662 | Wrapping Post 1x17 | 19 |
| | | Capacitor, Vertical Type | |
| (5)-C1 | EC329861 | Mylar 0.027 μ F(J) 50WV | 2 |
| (5)-C2 | EC368335 | Mylar 0.022 μ F(J) 50WV | 2 |
| (5)-C3 | EC379214 | Mylar 0.047 μ F(J) 50WV | 2 |
| (5)-C4 | EC379157 | Mylar 0.033 μ F(K) 50WV | 2 |

Carbon Resistor Omitted

(6) RESISTOR P.C BOARD (NE-1046) BLOCK

| Symbol No. | Parts No. | Description | Q'ty |
|------------|-----------|--|------|
| (6)-1 | BA636772 | Resistor P.C Board Comp. (NE-1046) | 1 |
| (6)-2 | BA636783 | Resistor P.C. Board Comp. (NE-1046)(CSA) | 1 |
| (6)-D1 | ED570295 | Silicon Diode 1N4003 | 1 |
| (6)-3 | MZ528164 | Resistor Mt. Metal Fitting | 1 |
| (6)-4 | ZS325495 | Tapping Screw, #2 3x6 BR | 4 |
| (6)-R1 | ER554905 | Cement/R. (Wire-Wound Type) 5W 12 Ω (K) | 1 |
| (6)-R2 | ER638774 | Cement/R. (Wire-Wound Type) 10W 82 Ω (K) | 1 |
| (6)-R2 | ER649978 | Cement/R. (Wire-Wound Type) 5W 250 Ω (K) (CSA) | 1 |
| (6)-R3 | ER638785 | Cement/R. (Wire-Wound Type) 10W 22 Ω (K) | 1 |
| (6)-R4 | ER651317 | Cement/R. (Wire-Wound Type) 5W 220 Ω (K) | 1 |
| (6)-R4 | ER649967 | Cement/R. (Wire-Wound Type) 10W 39 Ω (K) (CSA) | 1 |
| (6)-C1,2 | EC565885 | MP/C. (Tub. Type) 0.47 μ F(M) 250WV AC | 2 |

10 ILLUSTRATION OF AMP ASSEMBLY BLOCK



10) AMP ASSEMBLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Qty |
|----------------------------|-----------|--|---------------|-----|
| REC LEVER BLOCK | | | | |
| 10-1 | MZ643860 | Recording Lever Base | NE-504 | 1 |
| 10-2 | ML643915 | Recording Lever A, w/pin | NE-505 | 1 |
| 10-3 | ML639033 | Recording Lever B, w/pin | NE-505 | 1 |
| 10-4 | ML643926 | Recording Lever C, w/pin | NE-506 | 1 |
| 10-5 | ML639101 | Recording Lever D, w/pin | NE-506 | 1 |
| 10-6 | ZG643037 | Recording Lever Spring A | NE-505 | 2 |
| 10-7 | ZG643026 | Recording Lever Spring B | NE-502 | 2 |
| 10-8 | ZW270101 | 'E' Ring 3M | 6-1-9 | 9 |
| 10-9 | MZ643037 | Stopper | NE-507 | 1 |
| 10-10 | ZS417216 | Screw, pan head 3x4 | | 3 |
| 10-11 | MZ643950 | Lock Plate, w/con rod | NE-509 | 1 |
| 10-12 | MZ643961 | Rod Stand | NE-509 | 1 |
| 10-13 | ZG643015 | Lock Spring | NE-503 | 1 |
| 10-14 | SK643004 | Rec Knob | NE-508 | 2 |
| 10-15x | ZW601075 | Washer D4.1x7x0.1t | | 2 |
| 10-16x | ZW322525 | Washer (PBP) D4.1x7x0.2t | | 2 |
| REVERSE LEVER BLOCK | | | | |
| 10-17 | MZ642993 | Reverse Lever Table | NE-505 | 1 |
| 10-18 | MZ642936 | Lever Holder B, w/pin | NE-505 | 1 |
| 10-19 | ML642960 | Reverse Lever G | NE-508 | 1 |
| 10-20 | ZG642914 | Reverse Spring | NE-503 | 1 |
| 10-21 | ZS432674 | Screw, pan head 3x3 | | 1 |
| 10-22x | ZW290283 | 'U' Ring 2.85M | 6-1-1 | 1 |
| 10-23 | ZS325495 | Tapping Screw #2 3x6 | | 53 |
| 10-24 | ML642971 | Reverse Lever B, w/pin | NE-507 | 1 |
| 10-25 | MZ655975 | Reverse Slide Joint | NE-501 | 1 |
| 10-26 | MZ642958 | Lever Holder A | NE-505 | 1 |
| 10-27 | ML642982 | Reverse Lever A | NE-505 | 1 |
| 10-28 | MS642947 | Reverse Lever Shaft | NE-500 | 1 |
| 10-29x | ZW653163 | Retaining Ring CS Type 3 | 6-1-14 | 1 |
| 10-30 | ZW562476 | Earth Lug M3 | | 1 |
| 10-31 | ZG642903 | Reverse Return Spring | NE-504 | 1 |
| AMP CHASSIS BLOCK | | | | |
| 10-32 | EJ639292 | 2-through Jack | 31-2-58 | 1 |
| 10-33 | EJ639303 | Head Phone Jack | 31-2-59 | 1 |
| 10-34 | EA642598 | Lamp P.C. Board | NE-1047 | 3 |
| 10-35 | EL619064 | Lamp 24V 35MA | 28-2-40 | 1 |
| 10-36 | EL621167 | Pilot Lamp 5.5V 60MA | 28-2-36 | 2 |
| 10-37x | EZ642892 | Meter Cushion | NE-509 | 2 |
| 10-38 | MZ644040 | M Switch Base, w/prop | NE-507 | 2 |
| 10-39x | ZW270088 | 'E' Ring 1.9M | 6-1-9 | 2 |
| 10-40 | MZ644027 | M Joint | NE-500 | 2 |
| 10-41 | ZG644016 | Return Spring | NE-501 | 2 |
| 10-42x | ML580408 | SW. Lever | TD-202 | 2 |
| 10-43x | ZW322525 | Washer (PBP) D4.1x7x0.2t | | 2 |
| 10-44x | ZW589893 | Washer D4.1x7x0.4t | | 2 |
| 10-45x | ZW381881 | Washer D4.3x13x1t | | 2 |
| 10-46x | ZS369145 | ISO Screw, countersunk head 3x5 D=5 | | 4 |
| 10-47 | EZ638921 | Jack Plate NE | 31-5-123 | 1 |
| AMP ASSEMBLY BLOCK | | | | |
| 10-48 | MZ643994 | P.C. Board Holder | NE-505 | 1 |
| 10-49 | EZ643904 | EQ Shield Plate | NE-503 | 1 |
| 10-50 | EZ644051 | EQ P.C. Board Holder | NE-503 | 1 |
| 10-51x | EJ639112 | 9P Plug Housing 103-3-9P | 4-1-85 | 1 |
| 10-52x | EJ639145 | M Terminal 103-3P9 | 31-1-84 | 7 |
| 10-53 | MZ644005 | Panel Mt. Plate | NE-506 | 2 |
| 10-54 | EM558180 | VU Meter KL-243S-5 | 46-1-34 | 2 |
| 10-55x | EZ643871 | Amp. Shield | NE-505 | 1 |
| 10-56 | SK638976 | Knob 1-C | CP-501 | 2 |
| 10-57 | SZ642723 | Lamp Cover A | NE-602 | 1 |
| 10-58 | SZ642802 | Lamp Cover B | NE-602 | 2 |

11 PHOTO OF FINAL ASSEMBLY BLOCK



11) FINAL ASSEMBLY BLOCK

| Ref. No. | Parts No. | Description | Schematic No. | Q'ty | Ref. No. | Parts No. | Description | Schematic No. | Q'ty | |
|--------------------------|-----------|--------------------------------|---------------|------|-----------------------------|-----------|-----------------------|---------------|--------|---|
| FRONT PANEL BLOCK | | | | | FINAL ASSEMBLY BLOCK | | | | | |
| 11-1X | BZ636895 | Front Panel Block Comp. | NE | 1 | 11-20x | SE627120 | Ventilator | MX-604 | 1 | |
| 11-2 | SP643364 | Panel | NE-600 | 1 | 11-21x | SM642835 | Jack Name Plate | NE-601 | 1 | |
| 11-3 | SC642745 | Head Cover Base | NE-602 | 1 | 11-22 | ZS613901 | Panel Screw | CW-603 | 6 | |
| 11-4x | MZ642881 | Pinch Roller Mask | NE-603 | 1 | 11-23x | MH642857 | Head Cover Prop | NE-609 | 2 | |
| 11-5x | ZW447568 | Tapping Screw #1 3x6 Truss | | 2 | 11-24 | SC642734 | Head Cover | NE-607 | 1 | |
| 11-6 | SE642870 | Panel Escutcheon | NE-604 | 2 | 11-25x | MZ642868 | Head Cover Support | NE-608 | 2 | |
| 11-7 | SZ639685 | Lamp Lens B-1 | NE-605 | 1 | 11-26x | SM642756 | Head Cover Name Plate | NE | NE-610 | 1 |
| 11-8x | SE639674 | Rec Knob Escutcheon | NE-606 | 1 | 11-27x | HZ645311 | Head Cover Shield | NE-602 | 1 | |
| 11-9 | SE642767 | VU Meter Escutcheon | NE-604 | 2 | 11-28 | SK646053 | Pinch Roller Cap B | ND-603 | 1 | |
| 11-10x | ZS379405 | ISO Screw, binding head 3x6 | | 8 | 11-29 | SK631078 | Double Knob (Upper) | MY-626 | 2 | |
| 11-11 | SE581602 | Reel Table Escutcheon 2 | TD-601 | 2 | 11-30 | SK631067 | Double Knob (Lower) | MY-627 | 2 | |
| 11-12 | SE613866 | Button Escutcheon C | CW-605 | 5 | 11-31 | SK631056 | Single Knob | MY-628 | 1 | |
| 11-13 | SE626951 | Counter Escutcheon | MY-606 | 1 | 11-32x | EF563681 | Fuse 1A 250V | 38-1-50 | 1 | |
| 11-14x | SE534238 | DL Escutcheon | TM-606 | 2 | | | | | | |
| CASE BLOCK | | | | | | | | | | |
| 11-15 | BC639088 | Case | NE-606 | 1 | | | | | | |
| 11-16 | SZ632070 | Square Foot | MY-605 | 2 | | | | | | |
| 11-17x | SA632081 | Rubber Foot | MY-607 | 4 | | | | | | |
| 11-18x | ZW424980 | Tapping Screw #2 4x12 Truss | | 4 | | | | | | |
| 11-19x | SZ480712 | Dust Cover Pin | LE-603 | 2 | | | | | | |

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

12 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. |
| 2SC458LG (C) | ET234854 | NE-5036 NE-5037 | 2SC693U (F) | ET315472 |
| | | | 2SC1312R (G),(H) | ET610413 |
| | | | 2SC1312S (G),(H) | ET603257 |
| 2SC945L (Q),(R) | ET398711 | NE-5036 | 2SC711 (E),(F) | ET453486 |
| 2SC945 (P),(Q) | ET478001 | NE-5037 | 2SC1647 (R)(S)(E) | ET623733 |
| 2SC945 (Q) | ET399846 | MY-2036 | 2SC1641(Q)(R)(S)(E) | ET603843 |
| 2SC1211 (D),(E) | ET511694 | NE-1048 | 2SC1247A (B),(V) | ET511920 |
| 2SD361 (D1),(D2) | ET623867 | NE-1048 | 2SD361 (D),(E) | ET537300 |
| | | | 2SC1061 (B),(C) | ET375603 |
| | | | 2SC1449 (K)(L)(H) | ET635815 |
| 2SA564 (Q),(R) | ET538154 | MY-2036 | 2SA733 (Q),(R) | ET538378 |
| | | | 2SA628 (D),(E) | ET538110 |
| | | | 2SA640 (E),(F) | ET623790 |
| TIP-48 | ET621786 | | TIP-47 | ET621775 |
| RD-5A(M) | ED357794 | NE-1048 | XZ-049 | ED570521 |
| 1N4001 | ED511097 | | 10D05 | ED494583 |
| 1N4003 | ED570295 | See Note-1 | 10D2 | ED224548 |
| 1N4003 | ED570295 | NE-1046 | 10D4 | ED224550 |
| | | See Note-2 | | |

Note-1 Mech Block and Power Supply P.C Board NE-1048

Note-2 Resistor P.C Board NE1046 only

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. |
|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|-----------|-----------------------|
| MZ643994 | 10-48 | ZS304806 | 1-49 | ZW270101 | 5-21 | | | | |
| MZ644005 | 10-53 | ZS323728 | 1-13 | ZW270101 | 8-9 | | | | |
| MZ644027 | 10-40 | ZS323728 | 6-25 | ZW270101 | 10-8 | | | | |
| MZ644040 | 10-38 | ZS323728 | 8-48 | ZW270134 | 8-107 | | | | |
| MZ644062 | 5-14 | ZS325495 | (4)-4 | ZW270156 | 8-112 | | | | |
| MZ644106 | 8-33 | ZS325495 | (6)-4 | ZW273756 | 1-52 | | | | |
| MZ644196 | 5-12 | ZS325495 | 7-14 | ZW273756 | (3)-3 | | | | |
| MZ647133 | 7-17x | ZS325495 | 7-29x | ZW273756 | (4)-7 | | | | |
| MZ652533 | 8-94 | ZS325495 | 8-121x | ZW273756 | 8-6x | | | | |
| MZ655975 | 10-25 | ZS325495 | 8-126x | ZW273778 | 3-13x | | | | |
| MZ669532 | 8-95x | ZS325495 | 10-23 | ZW274026 | 8-25x | | | | |
| MZ802980 | 8-39 | ZS365973 | 3-18 | ZW274026 | 8-100x | | | | |
| MZ810191 | 1-22 | ZS369145 | 10-46x | ZW290283 | 4-16 | | | | |
| MZ810191 | 5-15 | ZS379350 | 4-23 | ZW290283 | 6-20 | | | | |
| MZ810191 | 8-105 | ZS379350 | 6-15 | ZW290283 | 8-54 | | | | |
| SA632081 | 11-17x | ZS379350 | 7-27x | ZW290283 | 10-22x | | | | |
| SB631146 | 4-34 | ZS379405 | 11-10x | ZW322525 | 10-16x | | | | |
| SB631157 | 4-35 | ZS383951 | 7-33x | ZW322525 | 10-43x | | | | |
| SB631168 | 4-36 | ZS396000 | 1-26 | ZW334653 | 8-99 | | | | |
| SC642734 | 11-24 | ZS403222 | 3-20 | ZW345442 | 8-38x | | | | |
| SC642745 | 11-3 | ZS413201 | 1-4 | ZW374545 | 6-14 | | | | |
| SE534238 | 11-14x | ZS413201 | 1-55x | ZW374545 | 6-32 | | | | |
| SE581602 | 11-11 | ZS413201 | 7-9x | ZW381881 | 10-45x | | | | |
| SE613866 | 11-12 | ZS413234 | 2-11 | ZW383635 | 8-103 | | | | |
| SE626951 | 11-13 | ZS413785 | 1-12 | ZW393851 | 8-98 | | | | |
| SE627120 | 11-20x | ZS416687 | 1-6x | ZW396437 | 1-19 | | | | |
| SE639674 | 11-8x | ZS417216 | 4-6 | ZW397146 | 5-23x | | | | |
| SE642767 | 11-9 | ZS417216 | (4)-8 | ZW397146 | 8-67x | | | | |
| SE642870 | 11-6 | ZS417216 | 6-19 | ZW413188 | 8-41 | | | | |
| SK597633 | 2-4 | ZS417216 | 8-32 | ZW413278 | 8-26x | | | | |
| SK631056 | 11-31 | ZS417216 | 8-34x | ZW416698 | 7-8x | | | | |
| SK631067 | 11-30 | ZS417216 | 8-46 | ZW419646 | 5-8 | | | | |
| SK631078 | 11-29 | ZS417216 | 8-86x | ZW419646 | 5-19x | | | | |
| SK638976 | 6-21 | ZS417216 | 8-116x | ZW424495 | 6-29 | | | | |
| SK638976 | 10-56 | ZS417216 | 10-10 | ZW424980 | 11-18x | | | | |
| SK643004 | 10-14 | ZS421806 | (3)-2 | ZW425002 | 1-11 | | | | |
| SK644117 | 6-23 | ZS421806 | (4)-6 | ZW447568 | 11-5x | | | | |
| SK646053 | 11-28 | ZS422076 | (3)-7 | ZW527422 | 1-46 | | | | |
| SM642756 | 11-26x | ZS422076 | (3)-7 | ZW535094 | 5-29 | | | | |
| SM642835 | 11-21x | ZS422076 | 4-24x | ZW562476 | 1-10 | | | | |
| SM647245 | 7-34x | ZS422076 | 5-11 | ZW562476 | 4-31 | | | | |
| SP643364 | 11-2 | ZS422076 | 5-27 | ZW562476 | 10-30 | | | | |
| SZ480712 | 11-19x | ZS422076 | 6-11 | ZW589893 | 10-44x | | | | |
| SZ632070 | 11-16 | ZS422076 | 7-26x | ZW597543 | 2-2 | | | | |
| SZ639685 | 11-7 | ZS422076 | 8-19x | ZW597622 | 2-3 | | | | |
| SZ642723 | 8-128 | ZS422076 | 8-61 | ZW601075 | 5-9 | | | | |
| SZ642723 | 10-57 | ZS422076 | 8-83 | ZW601075 | 5-20x | | | | |
| SZ642802 | 10-58 | ZS422965 | 5-25x | ZW601075 | 10-15x | | | | |
| TC515575 | 6-27 | ZS424056 | 3-19 | ZW603775 | 2-13x | | | | |
| ZG227452 | 1-50 | ZS424056 | 7-7 | ZW603786 | 2-12 | | | | |
| ZG232121 | 1-14 | ZS425981 | 3-16x | ZW622001 | 8-12x | | | | |
| ZG232121 | 6-34 | ZS432674 | 10-21 | ZW622012 | 8-13x | | | | |
| ZG232121 | 8-110 | ZS444262 | 8-29 | ZW625241 | 4-22 | | | | |
| ZG255633 | 3-7 | ZS460440 | 1-30x | ZW625241 | 6-13 | | | | |
| ZG315011 | 8-55 | ZS461395 | 1-35x | ZW625241 | 6-31 | | | | |
| ZG317496 | 3-15 | ZS461395 | 1-39x | ZW653163 | 10-29x | | | | |
| ZG466312 | 1-31 | ZS479474 | 6-10 | | | | | | |
| ZG514440 | 6-28 | ZS483502 | 8-3x | | | | | | |
| ZG527477 | 1-21 | ZS483502 | 8-69x | | | | | | |
| ZG527938 | 8-118 | ZS487866 | 1-47 | | | | | | |
| ZG529211 | 8-7 | ZS527681 | 8-129 | | | | | | |
| ZG567696 | 6-33 | ZS562432 | 1-32 | | | | | | |
| ZG580746 | 5-13 | ZS608253 | 5-24x | | | | | | |
| ZG580746 | 5-28x | ZS608264 | 8-68 | | | | | | |
| ZG580768 | 8-101 | ZS608264 | 8-72x, 73x | | | | | | |
| ZG640124 | 8-111 | ZS608275 | 4-25x | | | | | | |
| ZG640304 | 4-26 | ZS613901 | 11-22 | | | | | | |
| ZG642903 | 10-31 | ZW259738 | 8-8x | | | | | | |
| ZG642914 | 10-20 | ZW270088 | 3-9 | | | | | | |
| ZG643015 | 10-13 | ZW270088 | 4-12 | | | | | | |
| ZG643026 | 10-7 | ZW270088 | 6-30 | | | | | | |
| ZG643037 | 10-6 | ZW270088 | 8-14x | | | | | | |
| ZG643285 | 8-96 | ZW270088 | 8-22x | | | | | | |
| ZG644016 | 10-41 | ZW270088 | 8-37x | | | | | | |
| ZG644095 | 8-40 | ZW270088 | 8-64x | | | | | | |
| ZG644152 | 4-13 | ZW270088 | 8-88x | | | | | | |
| ZG644163 | 4-32 | ZW270088 | 8-109 | | | | | | |
| ZG644185 | 4-14 | ZW270088 | 10-39x | | | | | | |
| ZG669543 | 8-79 | ZW270101 | 1-17 | | | | | | |
| ZS200395 | 5-30 | ZW270101 | 5-10 | | | | | | |