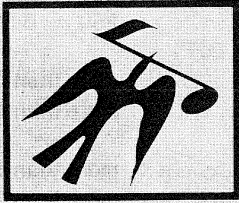


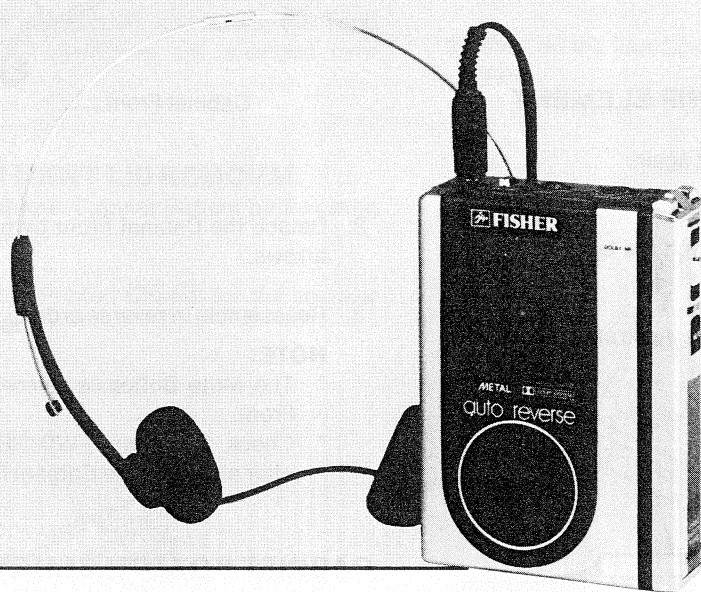
SERVICE MANUAL



FISHER

PH 35

Stereo Mini Cassette Player



THE FIRST NAME IN HIGH FIDELITY

SPECIFICATIONS

| | |
|------------------------------------|---|
| Power Source | |
| DC | 3V |
| | (UM-3, HP 7, AA Cell, Mignonzelle, R 6) x 2 |
| Output Power | |
| Headphones | 25mW x 2 (Max.) |
| Speaker | 220mW (Max.) |
| Current Consumption (at Vol. Min.) | |
| Playback mode | 110mA |
| Fast Forward mode | 140mA |
| Rewind mode | 140mA |
| Tape Speed | 1-7/8ips. \pm 3% |
| Fast Forward Time (with C-60) | 150sec. (Approx.) |
| Rewind Time (with C-60) | 150sec. (Approx.) |
| Torque | |
| Playback | 27 ~ 47g-cm |
| Fast Forward | more than 40g-cm |
| Rewind | more than 40g-cm |

| | |
|---|---------------------------|
| Wow & Flutter | 0.5% (RMS) |
| Frequency Response (Playback, DOLBY: OFF) | |
| Headphones | |
| Fe ₂ O ₃ | 50 ~ 14,000Hz |
| Metal | 50 ~ 16,000Hz |
| Speaker (with Fe ₂ O ₃) | 250 ~ 6,300Hz |
| Signal to Noise Ratio (DOLBY: OFF) | |
| Fe ₂ O ₃ | more than 45dB |
| Metal | more than 48dB |
| Crosstalk (with Fe ₂ O ₃) | |
| Track to Track | more than 55dB |
| Channel Separation (with Fe ₂ O ₃) | more than 35dB |
| Hum & Noise (at Vol. Min.) | -70dBs |
| Terminal Impedance | |
| Headphones | 32 Ω |
| Dimensions (W x H x D) | 81(W) x 109(H) x 30(D) mm |
| Weight (with Batteries) | 300g (Approx.) |

—Specifications subject to change without notice.—

DISASSEMBLY INSTRUCTIONS

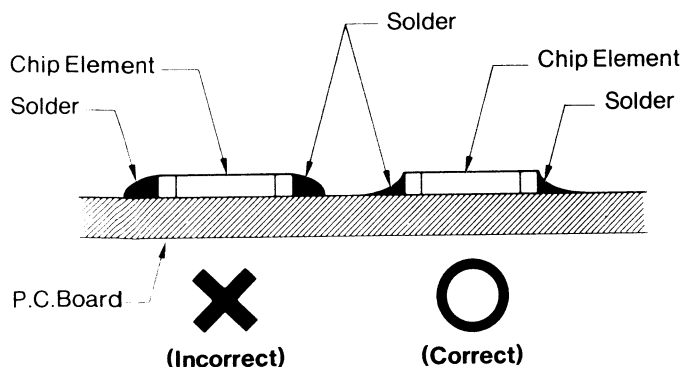
GENERAL REMARKS

- Before disassembling the unit, spread a soft rubber mat or a cloth on the workbench to avoid scratches and grease stains.
- Do not spread anything which is likely to cause static electricity because transistors and ICs may be easily damaged by it.
- Reassemble the unit, noting the kinds of screws and the soldering and arrangement of the leads. Refer to "Circuit Diagram and Exploded Views" for correct assembly.
- Before disassembling the unit, take out the cassette tape and the batteries.

NOTES ON HANDLING THE CHIP ELEMENT

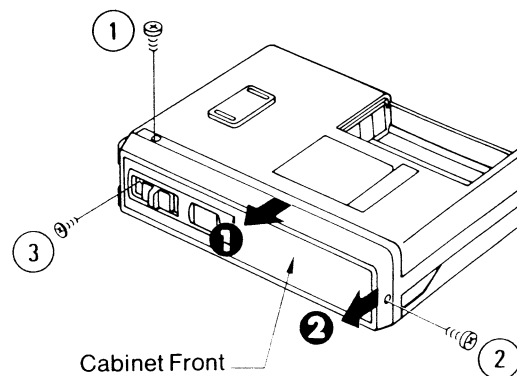
Pay due caution to the following items:

1. Do not use the removed chip element again.
2. Use a soldering iron of less than 30W.
 - * The soldering iron should not touch the body of the chip element.
 - * Complete soldering in a short time.
 - * Apply solder to the chip element as illustrated below.



CABINET FRONT REMOVAL

1. Remove the three screws (1 ~ 3) fastening the Cabinet Front.



2. Detach the Cabinet Front by pulling it in the direction of the arrows.
3. Reassemble in reverse order.

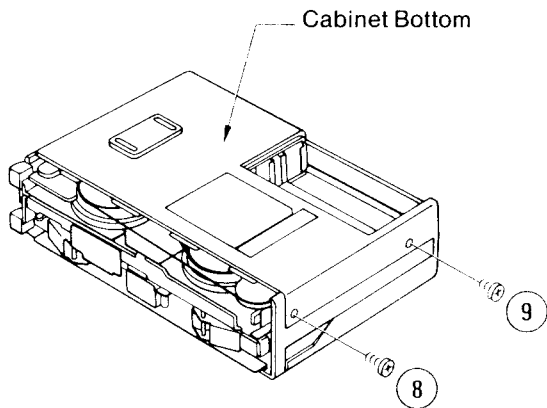
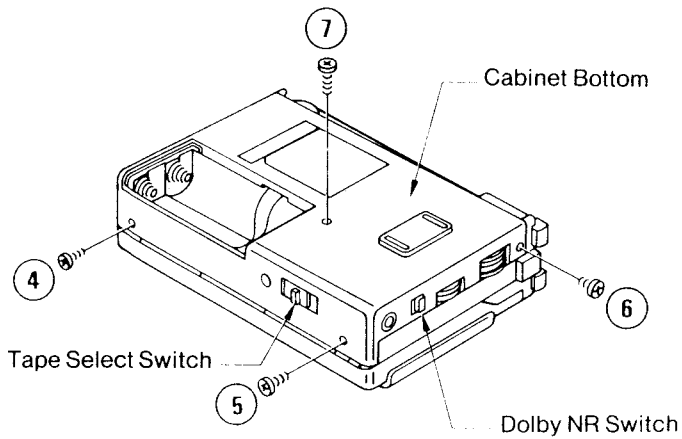
NOTE:

- * The Mute Button is removed together with the Cabinet Front.
- * Check that the F.FWD/REW Lever functions correctly after attaching the Cabinet Front to the unit.

CABINET BOTTOM REMOVAL

1. Detach the Cabinet Front by following its removal instructions. Then, remove the six screws (4 ~ 9) fastening the Cabinet Bottom.
2. Detach the Cabinet Bottom by lifting it in the direction of the arrow.

DISASSEMBLY INSTRUCTIONS (Continued)



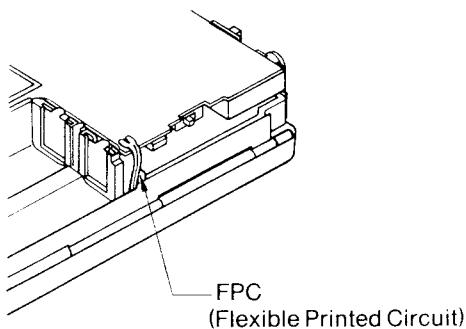
3. Reassemble in reverse order.

NOTE:

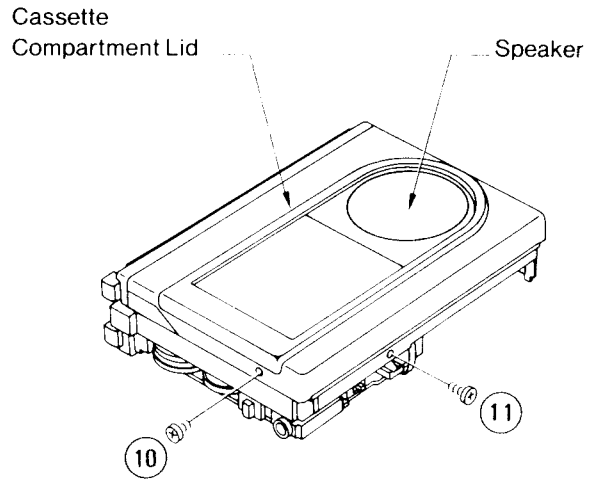
After the Cabinet Bottom is attached, check that the Tape Select and the Dolby NR Switches are changed over correctly.

CASSETTE COMPARTMENT LID REMOVAL

1. Detach the Cabinet Front and Cabinet Bottom by following the instructions for them.
2. Unsolder the FPC (Flexible Printed Circuit) for the speaker from the Amplifier P.C.Board.



3. Detach the Cassette Compartment Lid by removing the two fastening screws (10 and 11).



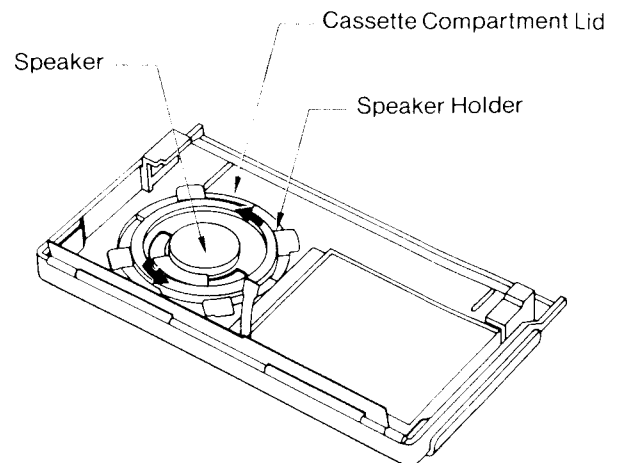
NOTE:

After attaching the Cassette Compartment Lid to the unit, apply paint or glue to the fastening screw (10) from the inside of the Lid to secure it.

4. Reassemble in reverse order.

SPEAKER REMOVAL

1. Detach the Cassette Compartment Lid by following its removal instructions. Then, detach the Speaker Holder by turning it counterclockwise with the tool.
2. Peel off the four Cushions and detach the Speaker noting the FPC.

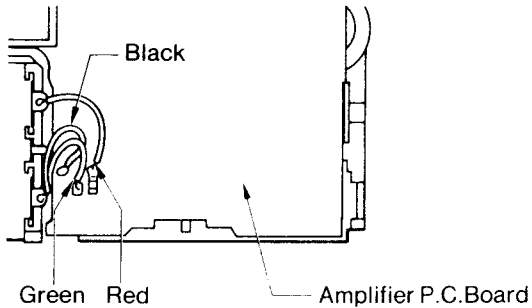


3. Reassemble in reverse order.

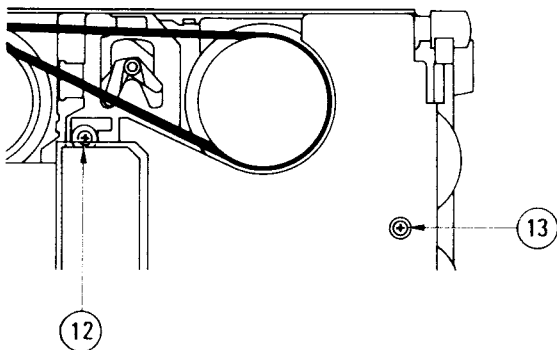
DISASSEMBLY INSTRUCTIONS (Continued)

AMPLIFIER P.C. BOARD REMOVAL

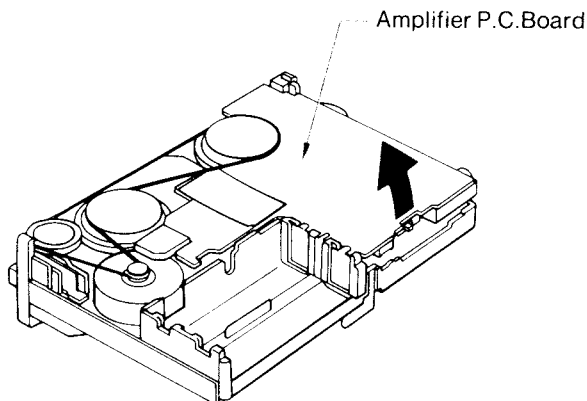
1. Detach the Cabinet Front and Cabinet Bottom by following the instructions for them. Then, unsolder the three leads (red, green, and black), running to the Battery Terminal, from the Amplifier P.C. Board.



2. Remove the two screws (12 and 13) fastening the Amplifier P.C. Board.



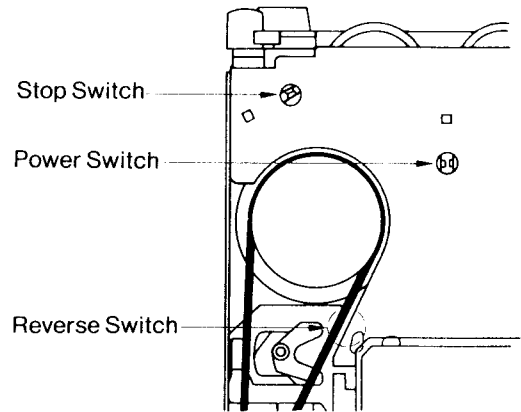
3. Remove the Amplifier P.C. Board by lifting its Ext. Power Jack side in the direction of the arrow noting the lead wires.



4. Reassemble in reverse order.

NOTES ON ATTACHING AMPLIFIER P.C. BOARD

The Amplifier P.C. Board has the Stop Switch, Power Switch and Reverse Switch as illustrated.



Then, the Amplifier P.C. Board is attached to the unit and each of the three Switches has to be in the following condition.

- **STOP SWITCH**

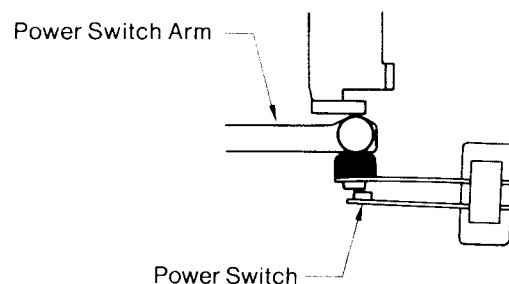
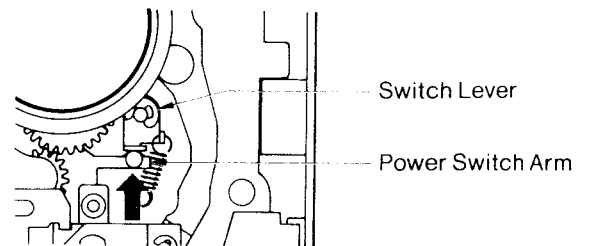
The contacts of this switch are always closed.

The Switch will open while the Stop Button is being pressed.

- **POWER SWITCH**

This Switch will close when the Play Button is pressed.

Push up the Power Switch Arm as illustrated before attaching the P.C. Board

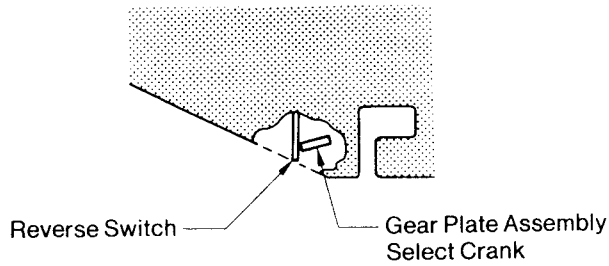


- **REVERSE SWITCH**

This Switch must be positioned to the left side of the Select Crank in the Gear Plate Assembly as illustrated.

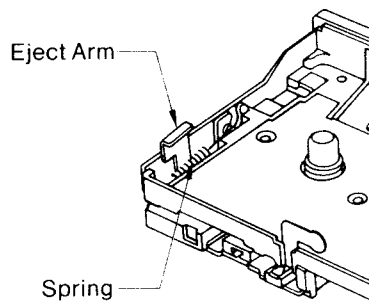
When the Switch is positioned to the right side of the Select Crank, the opposite channel of the tape will be played back from the back to the beginning.

DISASSEMBLY INSTRUCTIONS (Continued)

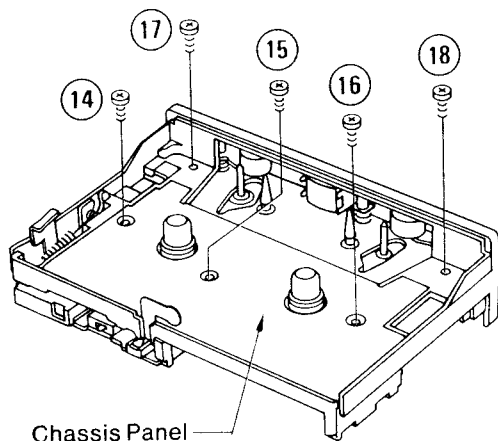


MECHANISM CHASSIS REMOVAL

1. Detach the Cabinet Front, Cabinet Bottom and Cassette Compartment Lid by following the instructions for them.
2. Unsolder the following lead wires from the Amplifier P.C.Board.
 - * Three leads (red, green and black) of the Battery Terminal
 - * Two leads (yellow and blue) of the Dolby NR Indicator
 - * Three leads (yellow, blue, and green) of the Tape Running Direction Indicator P.C.Board
 - * Two leads (blue and white) of the Mute Switch P.C.Board
 - * Unsolder the two leads (blue and white) from the Mute Switch P.C.Board.
3. Detach the Eject Arm by disengaging the Spring from the unit.



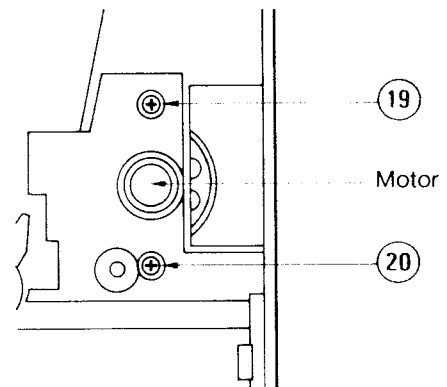
4. Remove the three screws (14 ~ 16) fastening the Chassis Panel and detach the Panel. Then, remove the two screws (17 and 18) fastening the Mechanism Chassis.



5. Remove the Mechanism Chassis together with the Amplifier P.C.Board from the Frame.
6. Reassemble in reverse order.

MOTOR REPLACEMENT

1. Detach the Cabinet Bottom and Cassette Compartment Lid by following the instructions for them. Then, detach the Chassis Panel by removing the three screws (14 ~ 16) fastening it.
2. Unsolder the two leads (blue and black) of the Motor and disengage the Drive Belt.
3. Remove the two screws (19 and 20) fastening the Motor and detach the Motor from the unit.



4. Reassemble in reverse order to replace with a new one. Then, secure the fastening screws with paint or glue.

ADJUSTMENTS

GENERAL REMARKS

- Before the adjustments, wipe off stains on the tape contacting surfaces of the parts and the belt with a soft cloth soaked in alcohol. Trouble may occur because of oil and grease stains.
- Carefully handle the belt because grease easily attaches to it.
- When the batteries are almost used up and the Play Button is pressed, the Slide Base stops halfway, making it difficult to remove the cassette tape from the compartment. To avoid this symptom, press the Stop Button. Then, replace the batteries with new ones.

REQUIRED EQUIPMENT

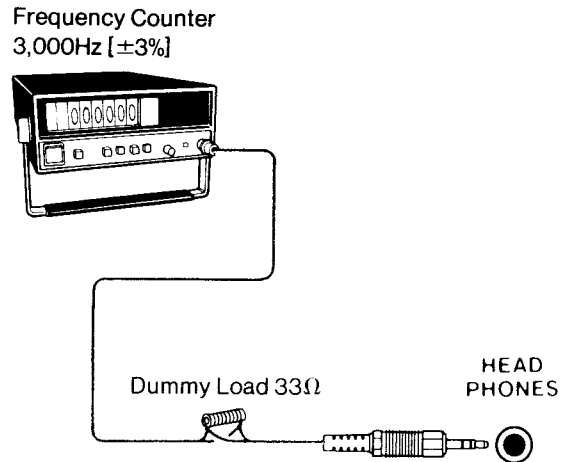
- Dualtrace Synchroscope
- VTVM (2 sets)
- Frequency Counter
- DC Constant-voltage Regulator
- Dummy Load (33Ω)
- Test Tapes
 - * 3kHz Test Tape (Example: TEAC MTT-111) for Tape Speed Adjustment
 - * 10kHz Test Tape (Example: A-BEX TCC-152) for Head Azimuth Adjustment
 - * 400Hz Test Tape (Example: TEAC MTT-150) for Dolby Level Adjustment
- Alignment Tool

NOTE:

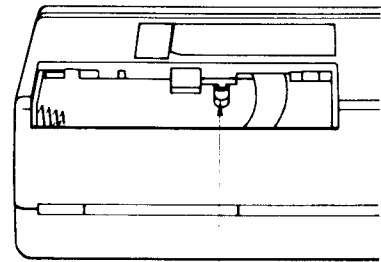
1. This Model adopts the Auto Reverse Mechanism. Then, the tape running direction is distinguished as follows:
 - **Forward Direction;**
The tape is wound counterclockwise.
 - **Reverse Direction;**
The tape is wound clockwise.
2. When adjusting supply 3.0V DC from the constant-voltage regulator to the Ext. Power Jack.
3. Before performing the adjustment, set the controls and switches as follows:
 - * Volume Control Arbitrary
 - * Tone Control Maximum
 - * Dolby NR Switch OFF
 - * Tape Select Switch NORM.
4. When performing the adjustment while playing back the test tape, set the tape running the **Forward Direction** by pressing the Play Button.

TAPE SPEED ADJUSTMENT

1. Detach the Battery Compartment Lid and connect the frequency counter to the headphone jack as illustrated. Then, insert the 3kHz test tape (Example: TEAC MTT-111) into the cassette compartment.



2. While playing back the test tape, adjust the tape speed by turning the potentiometer P301 on the Amplifier P.C.Board as illustrated until the frequency counter reads 3,000Hz [±3%].

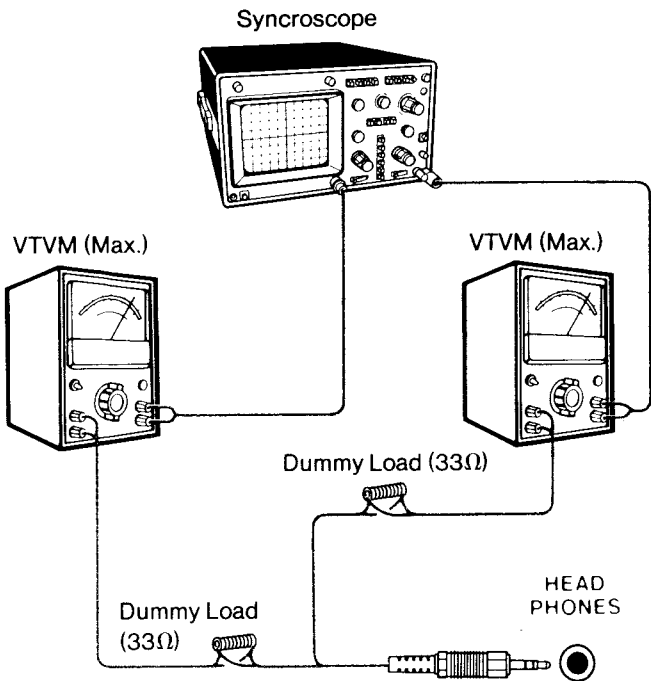


Tape Speed Adjusting Volume

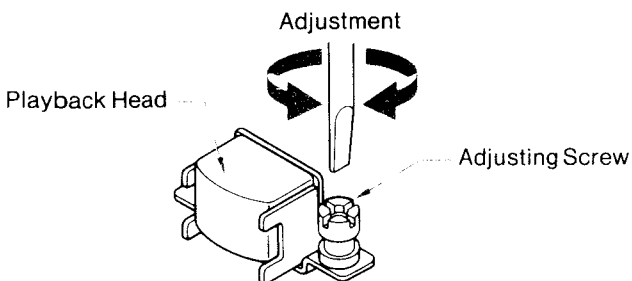
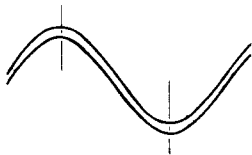
HEAD AZIMUTH ADJUSTMENT

1. Connect the dualtrace synchroscope to the headphone jack as illustrated and insert the 10kHz test tape (Example: A-BEX TCC-152) into the cassette compartment. Set the synchroscope as follows:
 - * MODE CHOP (chopped)
 - * SOURCE INT. (internal) CH1 or CH2
 - * SWEEP MODE AUTO (automatic)
2. While playing back the test tape, turn the azimuth adjusting screw until the amplitudes of both channel output wave forms become maximum and the wave forms overlap as well as possible in the maximum condition of the VTVMs as illustrated.

ADJUSTMENTS (Continued)



3. Set the tape running to the reverse direction and check the Head Azimuth of this direction

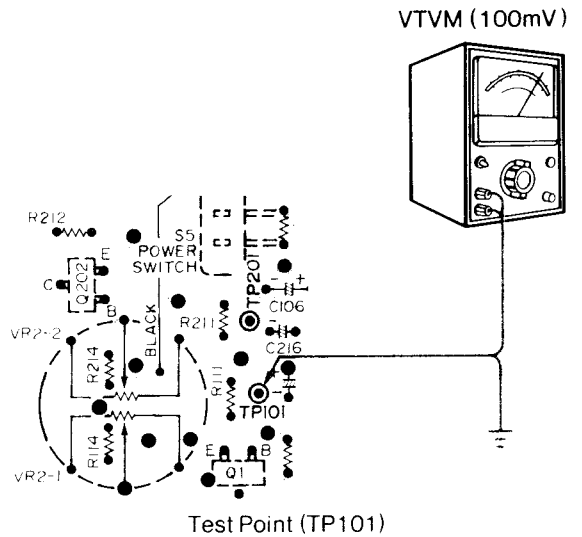


4. After the adjustment, secure the azimuth adjustment screw with paint or glue.

DOLBY LEVEL ADJUSTMENT

LEFT CHANNEL

1. Detach the Cabinet Bottom and connect the VTVM to the test point TP101 as illustrated and then insert the 400Hz test tape (Example: TEAC MTT-150) into the cassette compartment.



2. While playing back the test tape, adjust the potentiometer (P101) until the VTVM reads 100mV.

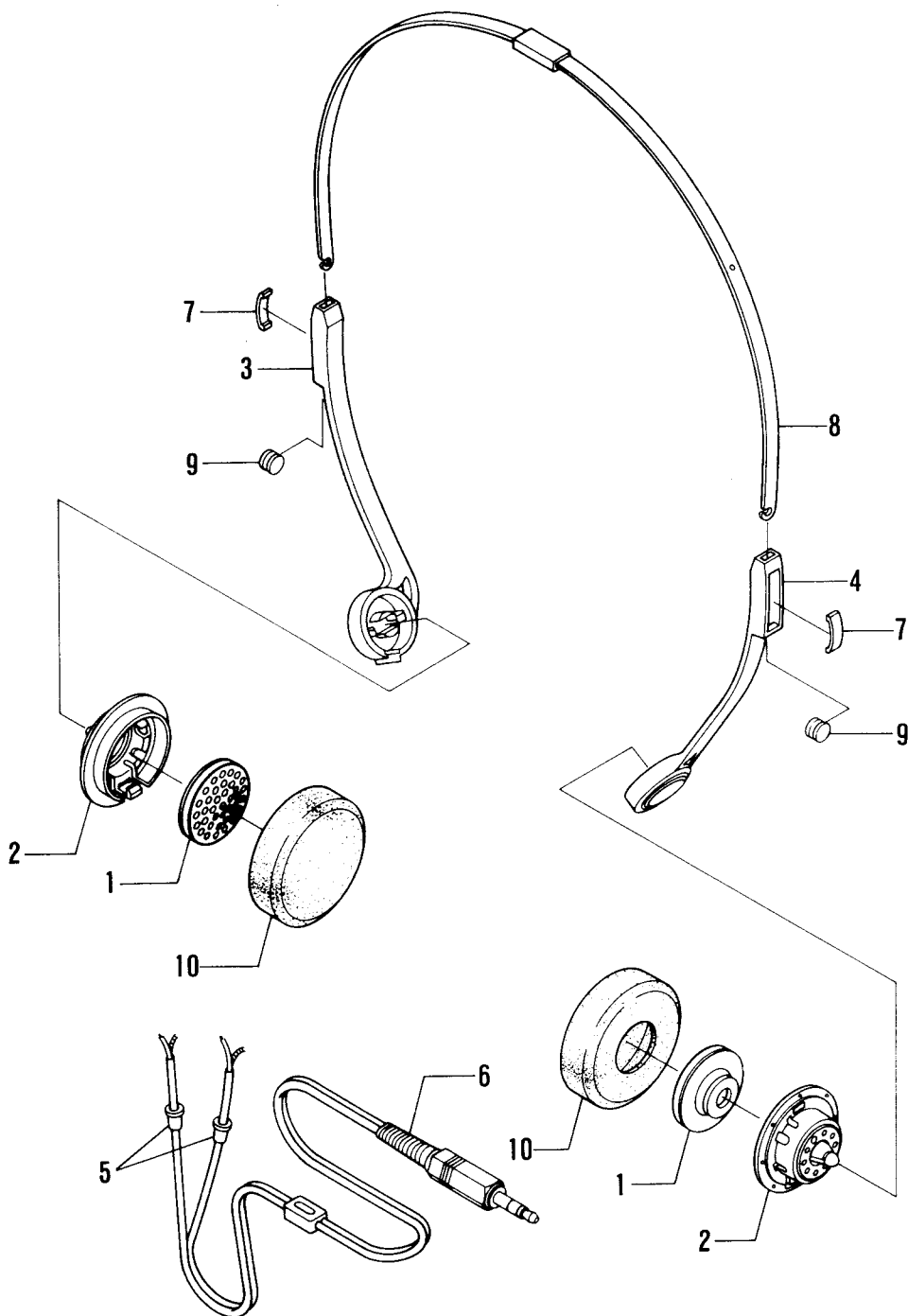
RIGHT CHANNEL

Connect the VTVM to the test point TP201 and adjust the potentiometer (P201) for the right channel by following the same procedure as in "LEFT CHANNEL".

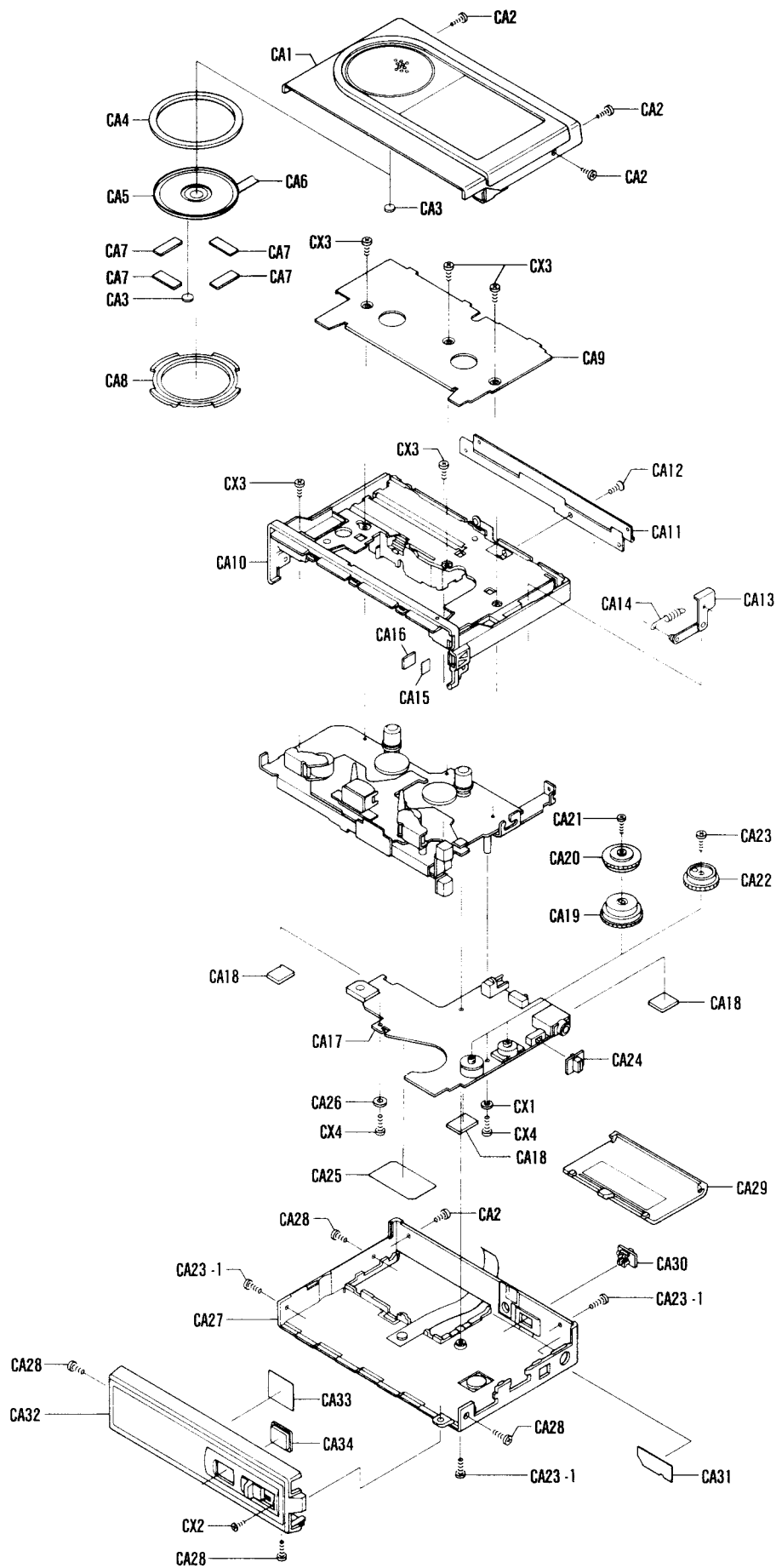
PARTS LIST

| Ref. No. | Part No. | Description | Q'ty | Ref. No. | Part No. | Description | Q'ty |
|--------------------|------------------|--|------|--|------------------|---|------|
| PACKAGE | | | | | | | |
| | 141 6 1419 67603 | Individual Carton | 1 | CA15 | 141 2 2899 21600 | Adhesive Sheet | 1 |
| | 141 6 1449 86100 | Styrofoam Case | 1 | CA16 | 141 2 4469 31801 | Sheet | 1 |
| | 141 6 2519 12090 | Poly Cover | 1 | CA17 | 4 1329 78690 | Amplifier P.C.B. Assy [See PCB1] | 1 |
| | 141 6 3919 43400 | Plain Pad | 1 | CA18 | 141 2 4469 14502 | Cushion | 3 |
| | 141 6 4559 03300 | Serial No. Sheet | 3 | CA19 | 141 2 1639 52300 | Knob, Volume Left | 1 |
| | 141 6 4559 03906 | Red Color Label (Red) | 3 | CA20 | 141 2 1639 52200 | Knob, Volume Right | 1 |
| | 141 6 4559 03909 | White Color Label (White) | 3 | CA21 | 141 2 4219 26800 | Screw | 1 |
| | 141 6 4559 03918 | Gold Color Label (Gold) | 3 | CA22 | 141 2 1639 52100 | Knob, Tone | 1 |
| ACCESSORIES | | | | | | | |
| ‡ | 4 1529 70362 | Headphones | 1 | CA23 | 141 2 4219 10600 | Screw, +M1.7x4.0 (Gold) | 3 |
| | 4 2419 73973 | Cassette | 1 | CA23-1 | 141 2 4219 10601 | Screw, +M1.7x4.0 (Gold) | 1 |
| 141 0 | 1729 00101 | Belt Clip Assy | 1 | CA23-1 | 141 2 4219 10601 | Screw, +M1.7x4.0 (Red) | 4 |
| 141 2 | 1769 07900 | Shoulder Strap | 1 | CA23-1 | 141 2 4219 10601 | Screw, +M1.7x4.0 (White) | 1 |
| 141 2 | 1819 14302 | Carrying Case | 1 | CA23-2 | 141 2 4219 10602 | Screw, +M1.7x4.0 (White) | 3 |
| 142 6 | 4119 31694 | Instruction Book | 1 | CA24 | 141 2 1649 21400 | Knob, Switch, DOLBY NR | 1 |
| HEADPHONES | | | | | | | |
| ‡ | 4 1529 70362 | Headphones | 1 | CA25 | 141 2 3229 41800 | Shield Leaf | 1 |
| 1 | 4 1519 71350 | Ear Speaker | 2 | CA26 | 141 2 4539 19301 | Washer | 1 |
| 2 | 141 2 1259 05000 | Housing | 2 | CA27 | 141 0 1119 91109 | Cabinet Bottom Assy (Red) | 1 |
| 3 | 141 2 1769 08202 | Hanger, Left | 1 | CA27 | 141 0 1119 91110 | Cabinet Bottom Assy (White) | 1 |
| 4 | 141 2 1769 08203 | Hanger, Right | 1 | CA27 | 141 0 1119 91102 | Cabinet Bottom Assy (Gold) | 1 |
| 5 | 141 2 3529 37100 | Tube | 2 | CA28 | 141 2 4219 15400 | Screw, +M1.7x2.0 (Red) | 2 |
| 6 | 4 2369 73660 | Plug Cord | 1 | CA28-1 | 141 2 4219 15401 | Screw, +M1.7x2.0 (Red) | 2 |
| 7 | 141 2 3529 37000 | Slide Adjustor | 2 | CA28-1 | 141 2 4219 15401 | Screw, +M1.7x2.0 (White) | 4 |
| 8 | 141 2 1769 08300 | Slider | 1 | CA28-2 | 141 2 4219 15402 | Screw, +M1.7x2.0 (Gold) | 4 |
| 9 | 141 2 8219 32800 | Stopper | 2 | CA29 | 141 2 1339 29200 | Battery Lid (Red) | 1 |
| 10 | 141 2 4469 42000 | Ear Pad | 2 | CA29 | 141 2 1339 29207 | Battery Lid (White) | 1 |
| | | | | CA29 | 141 2 1339 29202 | Battery Lid (Gold) | 1 |
| CABINET | | | | | | | |
| | 4 2029 71520 | LED, SLC-22UR (DOLBY NR) [D1] (Included in CA10) | 1 | CA30 | 141 2 1649 21000 | Knob, Switch, Tape Select | 1 |
| | 4 2029 72400 | LED Indicator P.C.B. Assy (Included in CA10) [See PCB2] | 1 | CA31 | 141 2 4359 33200 | Insulator | 1 |
| CA1 | 141 0 1249 24508 | Cassette Lid Assy (Red) | 1 | CA32 | 141 0 1119 91009 | Cabinet Front Assy (Red) | 1 |
| CA1 | 141 0 1249 24509 | Cassette Lid Assy (White) | 1 | CA32 | 141 0 1119 91010 | Cabinet Front Assy (White) | 1 |
| CA1 | 141 0 1249 24502 | Cassette Lid Assy (Gold) | 1 | CA32 | 141 0 1119 91002 | Cabinet Front Assy (Gold) | 1 |
| CA2 | 141 2 4219 26700 | Screw, Pan Hd., +M1.4x2.0 (Red) | 4 | CA33 | 141 2 4359 30700 | Insulator | 1 |
| CA2 | 141 2 4219 26701 | Screw, Pan Hd., +M1.4x2.0 (White) | 4 | CA34 | 141 2 1659 08300 | Knob, Mute | 1 |
| CA2 | 141 2 4219 26702 | Screw, Pan Hd., +M1.4x2.0 (Gold) | 4 | CX1 | 110 3 2101 70013 | Spring Washer-2, M1.7 | 1 |
| CA3 | 141 2 4469 14406 | Cushion | 2 | CX2 | 127 3 1214 01618 | PI Screw-1, Flat Hd., +M1.4x1.6 | 1 |
| CA4 | 141 2 2899 31500 | Speaker Sheet | 1 | CX3 | 127 3 1317 03018 | PI Screw-1, Pan Hd., +M1.7x3.0 (Red/Gold) | 5 |
| CA5 | 4 1519 71440 | Speaker (8Ω) [SP1] | 1 | CX3 | 127 3 1317 03014 | PI Screw-1, Pan Hd., +M1.7x3.0 (White) | 5 |
| CA6 | 4 2269 38530 | FPC, Speaker | 1 | CX4 | 127 3 1317 03513 | PI Screw-1, Pan Hd., +M1.7x3.5 | 2 |
| CA7 | 141 2 4469 27600 | Cushion | 4 | NOTES: | | | |
| CA8 | 141 2 3729 03700 | Speaker Holder | 1 | 1. Parts order must contain Model Number, Part Number and Description. | | | |
| CA9 | 141 2 1219 23300 | Chassis Panel (Red/Gold) | 1 | 2. Ordering quantity of screws and resistors must be multiple of 10 pcs. | | | |
| CA9 | 141 2 1219 23302 | Chassis Panel (White) | 1 | | | | |
| CA10 | 141 0 1149 10300 | Completed Frame (Red/Gold) | 1 | | | | |
| CA10 | 141 0 1149 10303 | Completed Frame (White) | 1 | | | | |
| CA11 | 141 2 2519 03305 | Hinge (Red) | 1 | | | | |
| CA11 | 141 2 2519 03313 | Hinge (White) | 1 | | | | |
| CA11 | 141 2 2519 03308 | Hinge (Gold) | 1 | | | | |
| CA12 | 141 2 4219 27600 | Screw, Flat Hd., +M1.7x2.5 | 1 | | | | |
| CA13 | 141 0 2529 00800 | Eject Arm Assy | 1 | | | | |
| CA14 | 141 2 8549 13400 | Spring, Eject | 1 | | | | |

HEADPHONE EXPLODED VIEW



CABINET EXPLODED VIEW



MECHANISM PARTS LIST

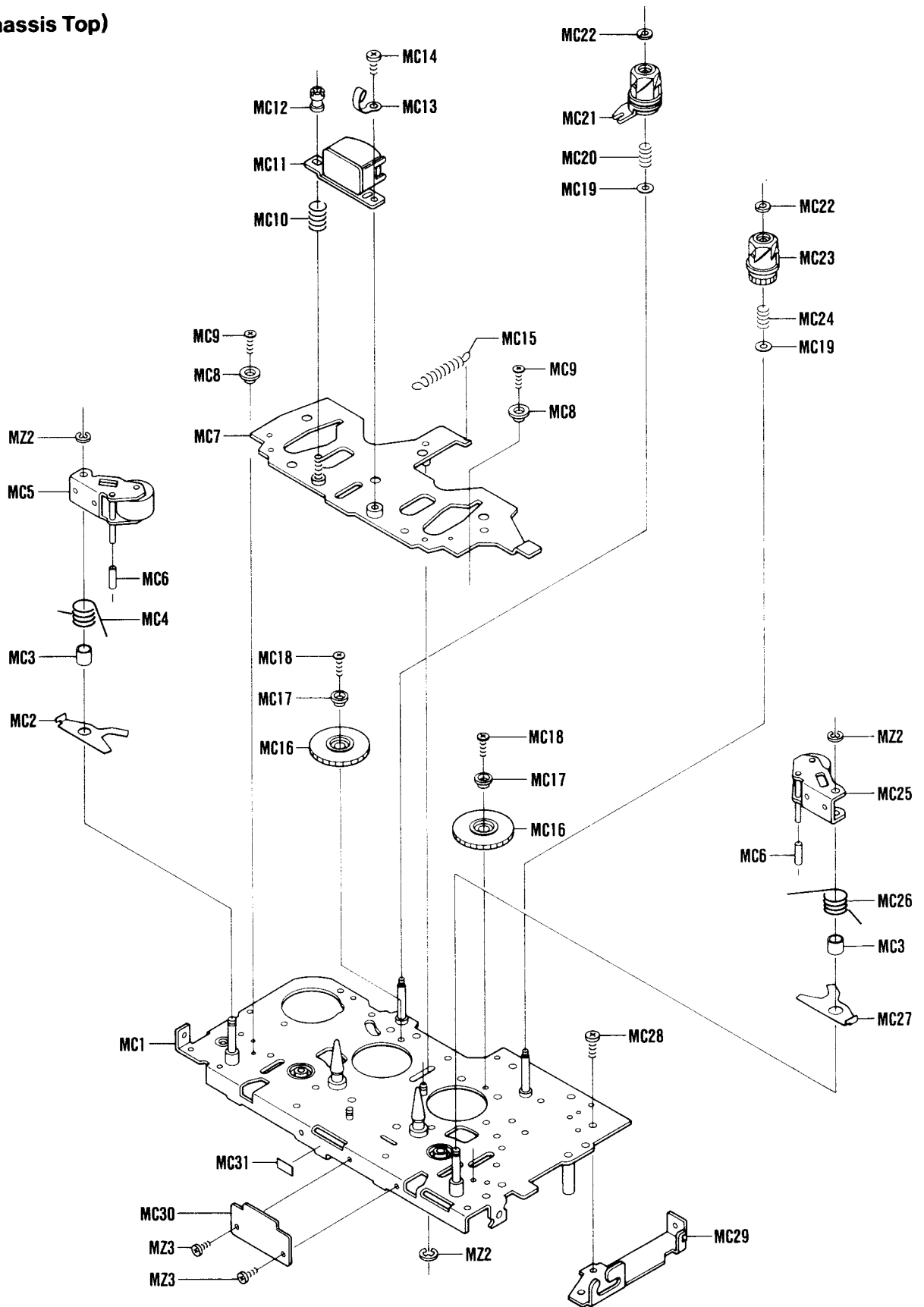
| Ref. No. | Part No. | Description | Q'ty | Ref. No. | Part No. | Description | Q'ty |
|------------------|------------------|-----------------------------------|------|----------|------------------|--------------------------------|------|
| MECHANISM | | | | | | | |
| MC1 | 141 0 3119 22500 | Chassis Assy | 1 | MC64 | 141 2 8549 07900 | Spring, Switch Lever | 2 |
| MC2 | 141 2 7439 31501 | Pinch Roller Post Arm | 1 | MC65 | 141 2 8529 13800 | Spring, Gear Lock Arm | 1 |
| MC3 | 141 2 8259 11400 | Pinch Roller Post | 2 | MC66 | 141 2 3519 63600 | Holder Spring | 1 |
| MC4 | 141 2 8529 13600 | Spring, Reverse Pinch Roller Arm | 1 | MC67 | 141 2 8529 13700 | Spring, Fast Lever | 1 |
| MC5 | 141 0 5459 02101 | Pinch Roller Arm Assy, Reverse | 1 | MC68 | 141 2 4579 04700 | Washer | 1 |
| MC6 | 141 2 8259 11600 | Spindle Pinch Roller | 2 | MC69 | 141 2 4219 30200 | Screw, +M1.4x5.0 | 1 |
| MC7 | 141 0 7319 25800 | Slide Base Assy | 1 | MC70 | 141 2 5519 48600 | Slow Gear | 2 |
| MC8 | 141 2 3529 34500 | Spacer, Slide Base | 2 | MC71 | 141 2 7439 32800 | Power Gear Lock Arm | 1 |
| MC9 | 141 2 4219 27600 | Screw, Flat Hd., +M1.7x2.5 | 2 | MC72 | 141 2 5519 49400 | Power Gear | 1 |
| MC10 | 141 2 8559 02300 | Spring, Azimuth | 1 | MC73 | 141 2 5519 48800 | Free Gear | 1 |
| MC11 | 4 2429 72370 | Play Head [HD1] | 1 | MC74 | 141 0 3519 21800 | Worm Bracket Assy | 1 |
| MC12 | 141 2 4179 02200 | Nut, Head | 1 | MC75 | 141 2 5519 48200 | Worm Gear | 1 |
| MC13 | 141 2 4729 08400 | Lug | 1 | MC76 | 141 2 8549 20000 | Spring, Lever | 1 |
| MC14 | 141 2 4219 10801 | Screw, +M2.0x2.5 | 1 | MC77 | 141 2 8529 13900 | Spring, Power Gear Arm | 1 |
| MC15 | 141 2 8549 17800 | Spring, Base Slide | 1 | MC78 | 141 2 7439 32400 | Power Gear Arm | 1 |
| MC16 | 141 2 5519 48700 | Gear Wind | 2 | MC79 | 141 2 7319 56300 | Sensor Lever | 1 |
| MC17 | 141 2 3529 34800 | Spacer, Gear Rewind | 2 | MC80 | 141 2 4539 26200 | Washer | 1 |
| MC18 | 141 2 4219 27500 | Screw, +M1.4x3.0 | 2 | MC81 | 141 2 4539 31600 | Washer | 1 |
| MC19 | 141 2 4539 27602 | Washer | 6 | MC82 | 141 2 7439 32600 | Cancel Arm | 1 |
| MC20 | 141 2 8559 05400 | Spring, Supply | 1 | MC83 | 141 2 8529 14100 | Spring, Reverse Cancel | 1 |
| MC21 | 141 0 5369 02000 | Supply Reel Assy | 1 | MC84 | 141 2 8549 12700 | Spring, Base Lock Arm | 1 |
| MC22 | 141 2 4539 17500 | Washer | 12 | MC85 | 141 0 3519 21900 | Bracket Lever Slow Assy | 1 |
| MC23 | 141 0 5369 02100 | Take-up Reel Assy | 1 | MZ1 | 112 3 1301 20082 | E Ring, M1.2 | 10 |
| MC24 | 141 2 8559 05100 | Spring, Back Tension | 1 | MZ2 | 112 3 1301 50082 | E Ring, M1.5 | 6 |
| MC25 | 141 0 5459 02100 | Pinch Roller Arm Assy, Forward | 1 | MZ3 | 127 3 1314 01613 | PI Screw-1, Pan Hd., +M1.4x1.6 | 5 |
| MC26 | 141 2 8529 13500 | Spring, Pinch Roller Arm, Forward | 1 | MZ4 | 127 3 1314 04013 | PI Screw-1, Pan Hd., +M1.4x4.0 | 1 |
| MC27 | 141 2 7439 31500 | Post, Pinch Roller Arm | 1 | MZ5 | 127 3 1317 02013 | PI Screw-1, Pan Hd., +M1.7x2.0 | 2 |
| MC28 | 141 2 4219 09000 | Screw, +M2.0x2.0 | 1 | MZ6 | 127 3 1317 02518 | PI Screw-1, Pan Hd., +M1.7x2.5 | 1 |
| MC29 | 141 2 2529 05900 | Eject Bracket | 1 | MZ7 | 128 3 1314 02513 | PI Screw-3, Pan Hd., +M1.4x2.5 | 1 |
| MC30 | 4 2319 75930 | Push Switch (Mute) [S4] | 1 | | | | |
| MC31 | 141 2 2899 30600 | Adhesive Sheet | 2 | | | | |
| MC32 | 141 0 7419 37700 | Stop Lever Assy | 1 | | | | |
| MC33 | 141 2 4579 03800 | Washer | 1 | | | | |
| MC34 | 141 2 8549 12800 | Spring, Play Lever | 2 | | | | |
| MC35 | 141 0 7419 37800 | Play Lever Assy | 1 | | | | |
| MC36 | 141 2 4539 27601 | Washer | 2 | | | | |
| MC37 | 141 0 5219 09700 | Completed Flywheel | 2 | | | | |
| MC38 | 141 2 5649 21600 | Drive Belt | 1 | | | | |
| MC39 | 141 0 3169 08200 | Gear Plate Assy | 1 | | | | |
| MC40 | 141 2 8549 18000 | Spring, Arm Gear | 2 | | | | |
| MC41 | 141 2 4219 28400 | Screw, Pan Hd., +M1.4x2.5 | 2 | | | | |
| MC42 | 141 0 5519 09700 | Friction Assy | 2 | | | | |
| MC43 | 141 2 4729 08300 | Fix Lead Plate | 1 | | | | |
| MC44 | 141 2 8559 05000 | Spring, Cancel Lever | 1 | | | | |
| MC45 | 141 2 7419 86300 | Cancel Lever | 1 | | | | |
| MC46 | 141 2 7419 85700 | Lock Lever | 1 | | | | |
| MC47 | 141 0 7439 11600 | Fast Lock Arm Assy | 1 | | | | |
| MC48 | 141 2 8549 17900 | Spring, Select Arm | 1 | | | | |
| MC49 | 141 0 7319 25700 | Power Plate Assy | 1 | | | | |
| MC50 | 141 2 8519 60600 | Spring, Tension | 1 | | | | |
| MC51 | 141 2 5519 48100 | Pulley, Worm | 1 | | | | |
| MC52 | 141 2 4539 18200 | Washer | 4 | | | | |
| MC53 | 4 5279 71260 | Motor [M1] | 1 | | | | |
| MC54 | 141 2 4579 04400 | E Ring | 2 | | | | |
| MC55 | 141 2 7419 85800 | Reverse Lever | 1 | | | | |
| MC56 | 141 2 8259 11500 | Reverse Lever Roller | 2 | | | | |
| MC57 | 141 0 7419 37500 | Trigger Lever Assy | 1 | | | | |
| MC58 | 141 2 8549 17700 | Spring, Review Lever | 1 | | | | |
| MC59 | 141 2 7419 85600 | Switch Lever | 1 | | | | |
| MC60 | 141 2 8549 18100 | Spring, Switch Lever | 1 | | | | |
| MC61 | 141 2 7439 32700 | Power Switch Arm | 1 | | | | |
| MC62 | 141 2 4539 15700 | Washer | 3 | | | | |
| MC63 | 141 2 7439 32900 | Switch Act Arm | 1 | | | | |

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

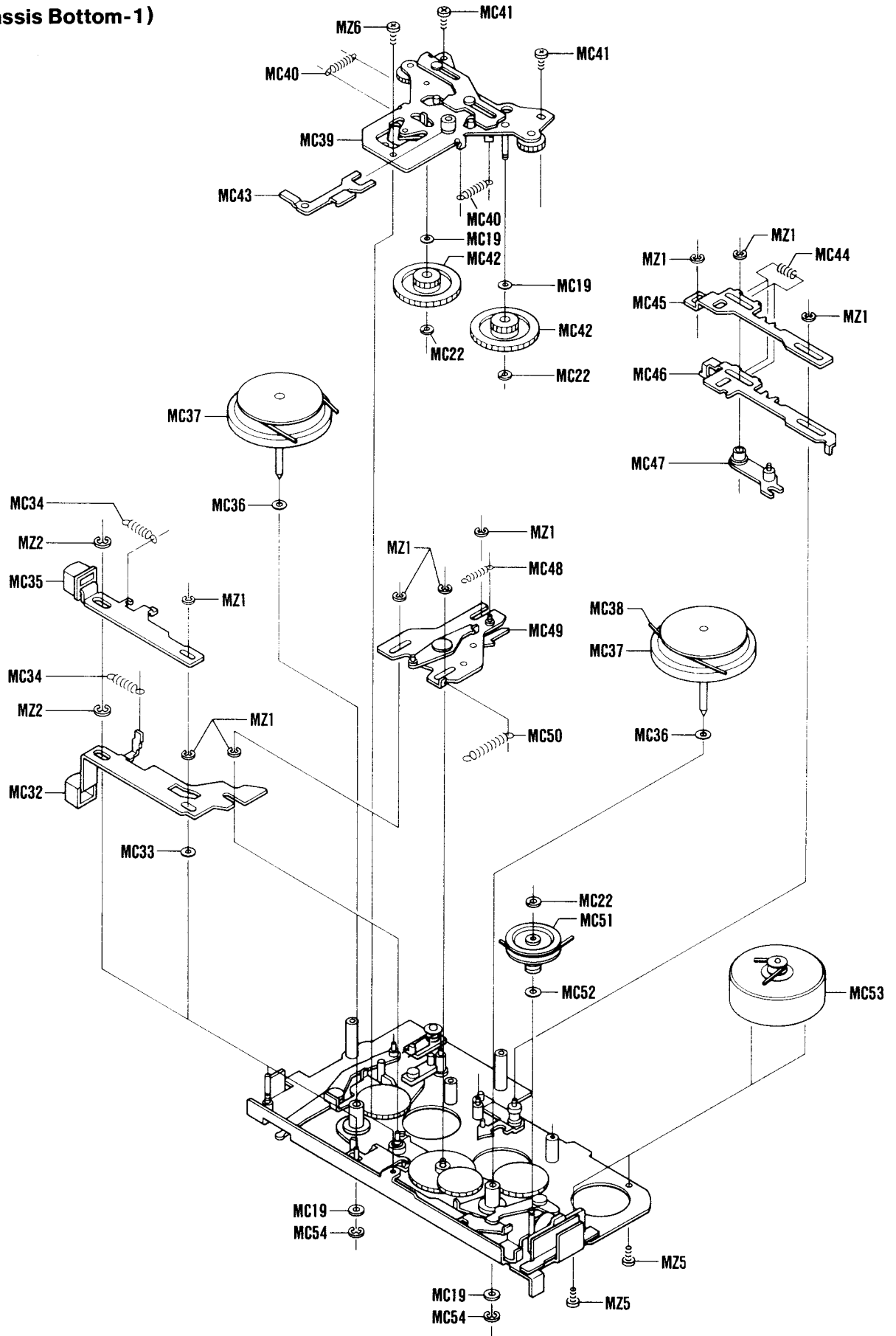
MECHANISM EXPLODED VIEW

(Chassis Top)



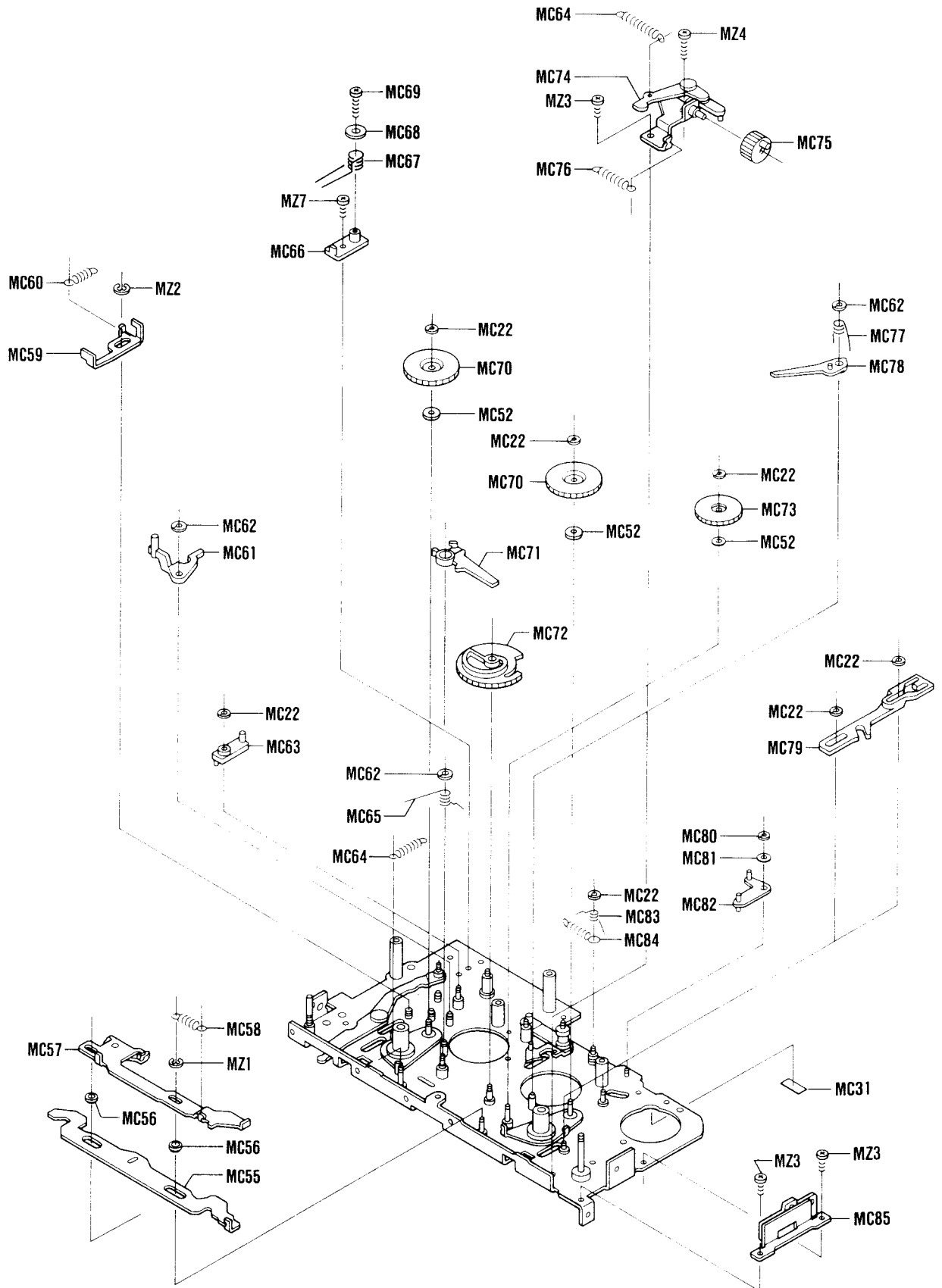
MECHANISM EXPLODED VIEW (Continued)

(Chassis Bottom-1)



MECHANISM EXPLODED VIEW (Continued)

(Chassis Bottom-2)



P.C.BOARD PARTS LIST

| Ref. No. | Part No. | Description | Q'ty | Ref. No. | Part No. | Description | Q'ty | |
|------------------------------|------------------|--|------------------------------|----------|------------------|------------------|------------------------------|------------------------------|
| AMPLIFIER P.C.B. ASSY | | | | | | | | |
| PCB1 | 4 1329 78690 | Amplifier P.C.B. Assy | 1 | C205 | CG2 7 3250 KH00A | Chip | 0.027 μ F 25V \pm 10% | |
| | 141 2 2449 34800 | Sheet | 1 | C206 | CT1 0 5100 M00CV | Tantalume | 1 μ F 10V \pm 20% | |
| | 141 2 2449 34800 | Mylar Sheet | 1 | C207 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | |
| S1 | 141 2 8539 49200 | Spring Switch (Reverse) | 1 | C208 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | |
| S2 | 4 2319 75810 | Slide Switch (Tape Select) | 1 | C209 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | |
| S3 | 4 2319 75810 | Slide Switch (DOLBY NR) | 1 | C210 | CG3 3 3250 KH00A | Chip | 0.033 μ F 25V \pm 10% | |
| S5 | 4 2319 74490 | Leaf Switch (Power) | 1 | C211 | CG4 7 2500 KH00B | Chip | 0.0047 μ F 50V \pm 10% | |
| S6 | 4 2319 74490 | Leaf Switch (Stop) | 1 | C212 | CD4 7 5160 0004V | Electrolytic | 4.7 μ F 16V | |
| J1 | 4 2359 75500 | 1P Jack (Headphones) | 1 | C213 | CG1 0 3250 KH00A | Chip | 0.01 μ F 25V \pm 10% | |
| J2 | 4 2359 74320 | Ext. Power Socket | 1 | C214 | CG3 3 3250 KH00A | Chip | 0.033 μ F 25V \pm 10% | |
| VR1 | 4 2229 74010 | Rotary Volume (Tone, A-20k Ω) | 1 | C215 | CT1 0 4350 M00CV | Tantalume | 0.1 μ F 35V \pm 20% | |
| VR2 | 4 2229 73692 | Volume Control (Volume, A-20k Ω) | 1 | C216 | CD1 0 663A 0004V | Electrolytic | 10 μ F 6.3V | |
| P301 | 4 2229 74060 | Potentiometer (B-10k Ω) | 1 | C217 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | |
| D2 | 4 2029 71320 | Diode, MA151WK | 1 | C218 | CG6 8 0500 KD00B | Chip | 68pF 50V \pm 10% | |
| Q1 | 203 5 4422 81260 | Transistor, 2SC 2812 | 1 | C219 | CT2 2 630A M00NV | Tantalume | 22 μ F 3V \pm 20% | |
| Q2 | 203 5 4422 81260 | Transistor, 2SC 2812 | 1 | C220 | CD4 7 640A 0002V | Electrolytic | 47 μ F 4V | |
| Q101 | 203 5 4422 81260 | Transistor, 2SC 2812 | 1 | C221 | CG1 5 3250 KH00A | Chip | 0.015 μ F 25V \pm 10% | |
| Q102 | 203 5 4422 81260 | Transistor, 2SC 2812 | 1 | C222 | CD2 2 740A 0002V | Electrolytic | 220 μ F 4V | |
| Q201 | 203 5 4422 81260 | Transistor, 2SC 2812 | 1 | C223 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | |
| Q202 | 203 5 4422 81260 | Transistor, 2SC 2812 | 1 | C224 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | |
| IC1 | 4 2069 71850 | IC, BAF3404 | 1 | C301 | CD4 7 5160 0004V | Electrolytic | 4.7 μ F 16V | |
| IC2 | 4 2069 71800 | IC, BAF1102 | 1 | C302 | CD2 2 740A 0002V | Electrolytic | 220 μ F 4V | |
| IC3 | 4 2069 71860 | IC, AN7118 | 1 | C303 | CT2 2 540A M00CV | Tantalume | 2.2 μ F 4V \pm 20% | |
| IC301 | 206 5 3285 52210 | IC, LA5522 | 1 | R1 | RG2 2 1101 JB000 | Chip | 220 Ω 1/10W \pm 5% | |
| C1 | CD2 2 740A 0002V | Electrolytic | 220 μ F 4V | 1 | R2 | RG2 7 1101 JB000 | Chip | 270 Ω 1/10W \pm 5% |
| C2 | CT4 7 630A M00FV | Tantalume | 47 μ F 3V \pm 20% | 1 | R3 | RG1 0 3101 JB000 | Chip | 10k Ω 1/10W \pm 5% |
| C3 | CT2 2 540A 000CV | Tantalume | 2.2 μ F 4V | 1 | R4 | RG4 7 0101 KB000 | Chip | 47 Ω 1/10W \pm 10% |
| C4 | CD1 0 663A 0004V | Electrolytic | 10 μ F 6.3V | 1 | R5 | RG1 0 3101 JB000 | Chip | 10k Ω 1/10W \pm 5% |
| C5 | CD1 0 740A 0002V | Electrolytic | 100 μ F 4V | 1 | R6 | RG5 6 1101 JB000 | Chip | 560 Ω 1/10W \pm 5% |
| C6 | CD3 3 663A 0004V | Electrolytic | 33 μ F 6.3V | 1 | R7 | RG1 0 3101 JB000 | Chip | 10k Ω 1/10W \pm 5% |
| C7 | CD1 0 663A 0004V | Electrolytic | 10 μ F 6.3V | 1 | R9 | RG8 2 2101 JB000 | Chip | 8.2k Ω 1/10W \pm 5% |
| C8 | CD2 2 740A 0002V | Electrolytic | 220 μ F 4V | 1 | R10 | RG1 2 3101 JB000 | Chip | 12k Ω 1/10W \pm 5% |
| C9 | CD4 7 640A 0002V | Electrolytic | 47 μ F 4V | 1 | R11 | RG1 2 3101 JB000 | Chip | 12k Ω 1/10W \pm 5% |
| C10 | CD2 2 740A 0002V | Electrolytic | 220 μ F 4V | 1 | R12 | RG5 6 1101 JB000 | Chip | 560 Ω 1/10W \pm 5% |
| C11 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | 1 | R13 | RP1 0 5121 JV000 | Pretty Carbon | 1M Ω 1/8W \pm 5% |
| C101 | CT4 7 630A M00NV | Tantalume | 47 μ F 3V \pm 20% | 1 | R101 | RG1 0 1101 JB000 | Chip | 100 Ω 1/10W \pm 5% |
| C102 | CG2 2 3250 KH00A | Chip | 0.022 μ F 25V \pm 10% | 1 | R102 | RG6 8 2101 JB000 | Chip | 6.8k Ω 1/10W \pm 5% |
| C103 | CT1 0 5100 M00CV | Tantalume | 1 μ F 10V \pm 20% | 1 | R103 | RG1 8 4101 JB000 | Chip | 180k Ω 1/10W \pm 5% |
| C104 | CG1 8 3250 KH00A | Chip | 0.018 μ F 25V \pm 10% | 1 | R104 | RG2 2 2101 JB000 | Chip | 2.2k Ω 1/10W \pm 5% |
| C105 | CG2 7 3250 KH00A | Chip | 0.027 μ F 25V \pm 10% | 1 | R105 | RG3 3 2101 JB000 | Chip | 3.3k Ω 1/10W \pm 5% |
| C106 | CT1 0 5100 M00CV | Tantalume | 1 μ F 10V \pm 20% | 1 | R106 | RG2 2 2101 JB000 | Chip | 2.2k Ω 1/10W \pm 5% |
| C107 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | 1 | R107 | RG3 3 2101 JB000 | Chip | 3.3k Ω 1/10W \pm 5% |
| C108 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | 1 | R108 | RG4 7 3101 JB000 | Chip | 47k Ω 1/10W \pm 5% |
| C109 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | 1 | R109 | RG2 2 4101 JB000 | Chip | 220k Ω 1/10W \pm 5% |
| C110 | CG3 3 3250 KH00A | Chip | 0.033 μ F 25V \pm 10% | 1 | R110 | RG8 2 4101 JB000 | Chip | 820k Ω 1/10W \pm 5% |
| C111 | CG4 7 2500 KH00B | Chip | 0.0047 μ F 50V \pm 10% | 1 | R111 | RG1 5 3101 JB000 | Chip | 15k Ω 1/10W \pm 5% |
| C112 | CD4 7 5160 0004V | Electrolytic | 4.7 μ F 16V | 1 | R112 | RG1 0 1101 JB000 | Chip | 100 Ω 1/10W \pm 5% |
| C113 | CG1 0 3250 KH00A | Chip | 0.01 μ F 25V \pm 10% | 1 | R113 | RG4 7 A121 KA000 | Chip | 4.7 Ω 1/8W \pm 10% |
| C114 | CG3 3 3250 KH00A | Chip | 0.033 μ F 25V \pm 10% | 1 | R114 | RG1 0 3101 JB000 | Chip | 10k Ω 1/10W \pm 5% |
| C115 | CT1 0 4350 M00CV | Tantalume | 0.1 μ F 35V \pm 20% | 1 | R115 | RG1 0 3101 JB000 | Chip | 10k Ω 1/10W \pm 5% |
| C116 | CD1 0 663A 0004V | Electrolytic | 10 μ F 6.3V | 1 | R116 | RG5 6 1101 JB000 | Chip | 560 Ω 1/10W \pm 5% |
| C117 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | 1 | R117 | RP9 1 2121 JV000 | Pretty Carbon | 9.1k Ω 1/8W \pm 5% |
| C118 | CG6 8 0500 KD00B | Chip | 68pF 50V \pm 10% | 1 | R118 | RP2 2 2121 JV000 | Pretty Carbon | 2.2k Ω 1/8W \pm 5% |
| C119 | CD2 2 663A 0004V | Electrolytic | 22 μ F 6.3V | 1 | R201 | RG1 0 1101 JB000 | Chip | 100 Ω 1/10W \pm 5% |
| C120 | CD4 7 640A 0002V | Electrolytic | 47 μ F 4V | 1 | R202 | RG6 8 2101 JB000 | Chip | 6.8k Ω 1/10W \pm 5% |
| C121 | CG1 5 3250 KH00A | Chip | 0.015 μ F 25V \pm 10% | 1 | R203 | RG1 8 4101 JB000 | Chip | 180k Ω 1/10W \pm 5% |
| C122 | CD2 2 740A 0002V | Electrolytic | 220 μ F 4V | 1 | R204 | RG2 2 2101 JB000 | Chip | 2.2k Ω 1/10W \pm 5% |
| C123 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | 1 | R205 | RG3 3 2101 JB000 | Chip | 3.3k Ω 1/10W \pm 5% |
| C124 | CG1 0 2500 KH00B | Chip | 0.001 μ F 50V \pm 10% | 1 | R206 | RG2 2 2101 JB000 | Chip | 2.2k Ω 1/10W \pm 5% |
| C201 | CT4 7 630A M00NV | Tantalume | 47 μ F 3V \pm 20% | 1 | R207 | RG3 3 2101 JB000 | Chip | 3.3k Ω 1/10W \pm 5% |
| C202 | CG2 2 3250 KH00A | Chip | 0.022 μ F 25V \pm 10% | 1 | R208 | RG4 7 3101 JB000 | Chip | 47k Ω 1/10W \pm 5% |
| C203 | CT1 0 5100 M00CV | Tantalume | 1 μ F 10V \pm 20% | 1 | R209 | RG2 2 4101 JB000 | Chip | 220k Ω 1/10W \pm 5% |
| C204 | CG1 8 3250 KH00A | Chip | 0.018 μ F 25V \pm 10% | 1 | R210 | RG8 2 4101 JB000 | Chip | 820k Ω 1/10W \pm 5% |
| | | | | 1 | R211 | RG1 5 3101 JB000 | Chip | 15k Ω 1/10W \pm 5% |

P.C.BOARD PARTS LIST (Continued)

| Ref. No. | Part No. | Description | Q'ty |
|----------|------------------|------------------------------|------|
| R212 | RG1 0 1101 JB000 | Chip 100Ω 1/10W ±5% | 1 |
| R213 | RG4 7 A121 KA000 | Chip 4.7Ω 1/8W ±10% | 1 |
| R214 | RG1 0 3101 JB000 | Chip 10kΩ 1/10W ±5% | 1 |
| R215 | RG1 0 3101 JB000 | Chip 10kΩ 1/10W ±5% | 1 |
| R216 | RG5 6 1101 JB000 | Chip 560Ω 1/10W ±5% | 1 |
| R217 | RP9 1 2121 JV000 | Pretty Carbon 9.1kΩ 1/8W ±5% | 1 |
| R218 | RP2 2 2121 JV000 | Pretty Carbon 2.2kΩ 1/8W ±5% | 1 |
| R301 | RG3 3 2101 JB000 | Chip 3.3kΩ 1/10W ±5% | 1 |
| R302 | RG1 8 1101 JB000 | Chip 180Ω 1/10W ±5% | 1 |
| R303 | RG5 1 2101 JB000 | Chip 5.1kΩ 1/10W ±5% | 1 |

LED INDICATOR P.C.B. ASSY

| | | | |
|------|--------------|---------------------------|---|
| PCB2 | 4 2029 72400 | LED Indicator P.C.B. Assy | 1 |
| | 4 2269 38510 | PCB, LED | 1 |
| D101 | 4 2029 72280 | LED, SLT-25 (Forward) | 1 |
| D201 | 4 2029 72280 | LED, SLT-25 (Reverse) | 1 |

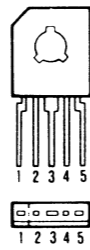
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

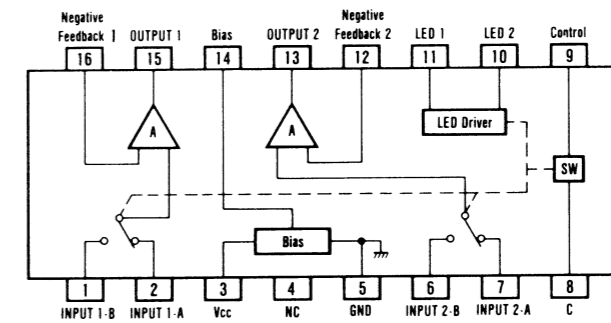
IC & TRANSISTOR LEAD IDENTIFICATION

| TRANSISTOR | FRONT VIEW | BOTTOM VIEW |
|--|------------|-------------|
| 2SC2812 | | |
| TERMINAL NAME | | |
| B → BASE C → COLLECTOR E → EMITTER | | |

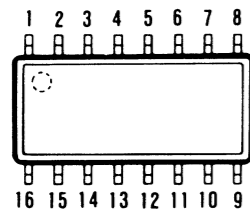
LA5522 FRONT/BOTTOM VIEW



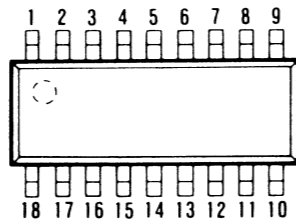
BA3404F BLOCK DIAGRAM



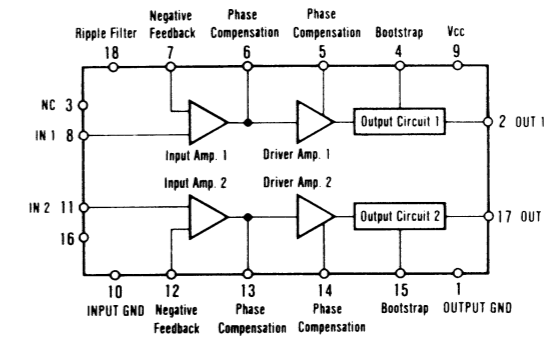
BA3404F BOTTOM VIEW



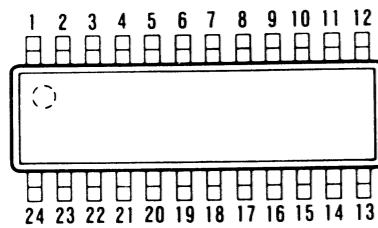
AN-7118 BOTTOM VIEW



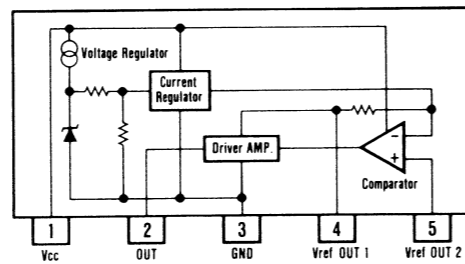
AN-7118 BLOCK DIAGRAM



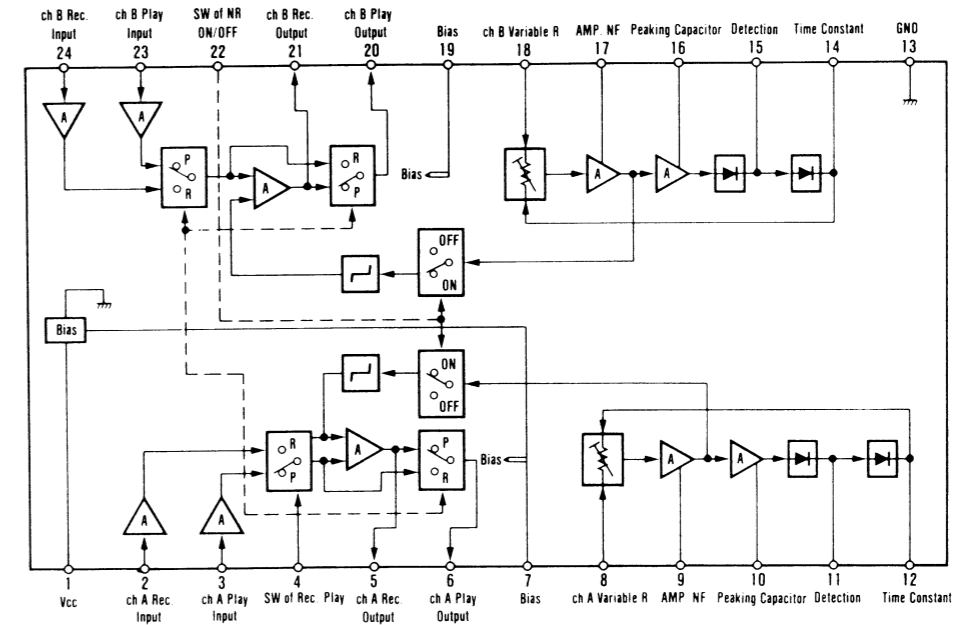
BA1102F BOTTOM VIEW



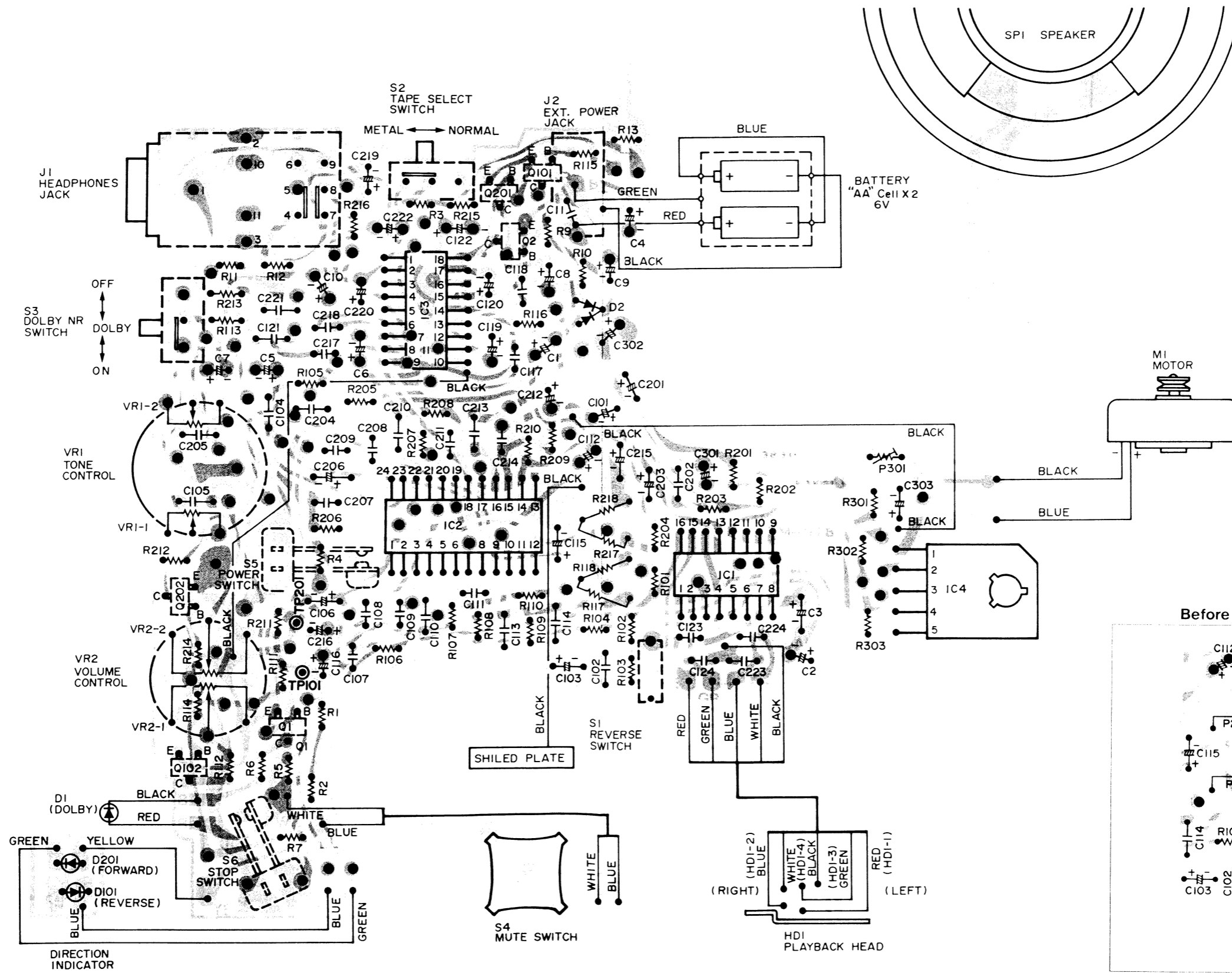
LA5522 BLOCK DIAGRAM



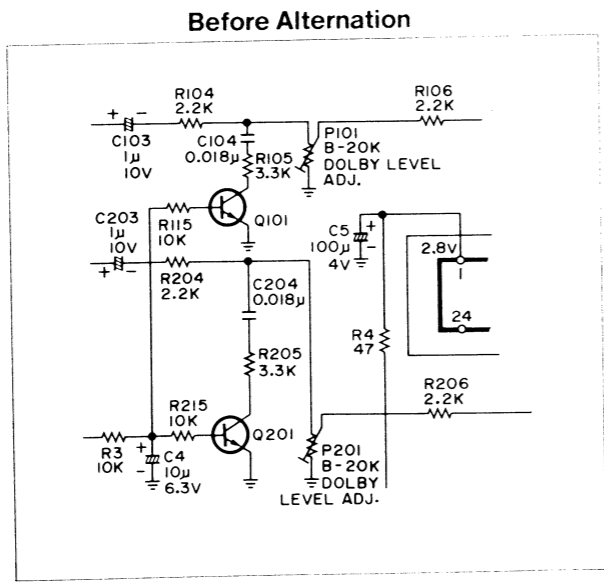
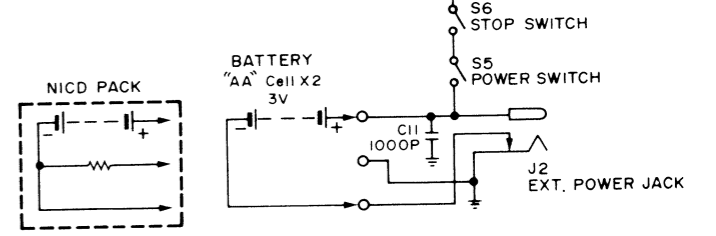
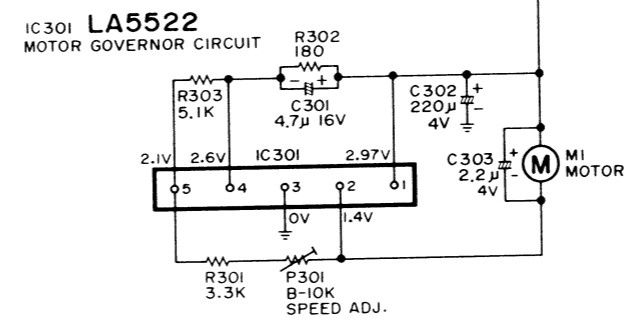
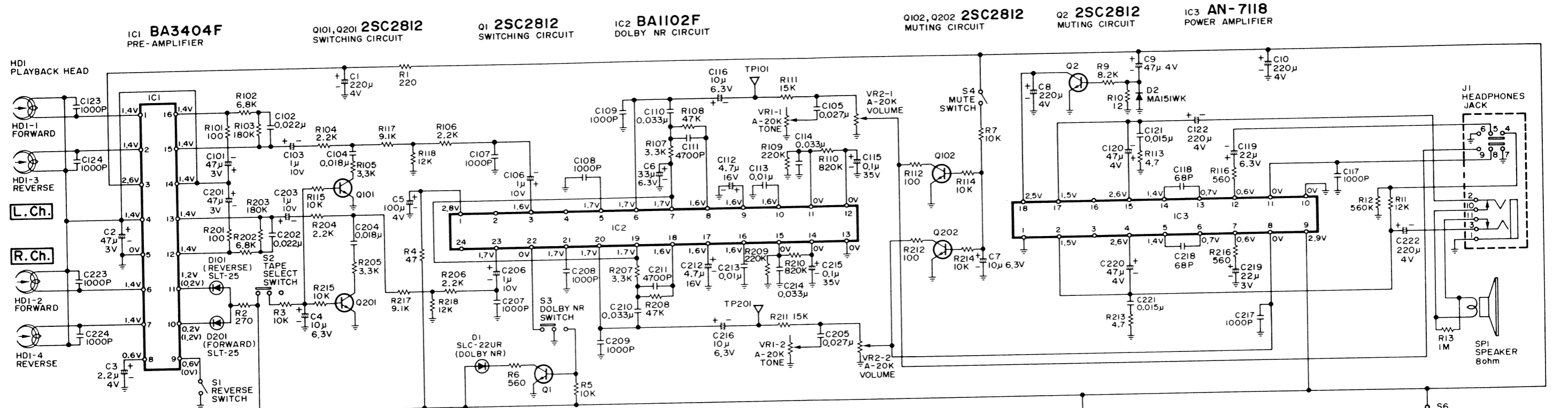
BA1102F BLOCK DIAGRAM



AMPLIFIER P.C.BOARD



SCHEMATIC DIAGRAM



| No. | Name | Position |
|-----|--------------------|----------|
| S1 | Reverse Switch | OFF |
| S2 | Tape Select Switch | METAL |
| S3 | DOLBY NR Switch | ON |
| S4 | Mute Switch | OFF |
| S5 | Power Switch | OFF |
| S6 | Stop Switch | OFF |