

HITACHI

SERVICE MANUAL

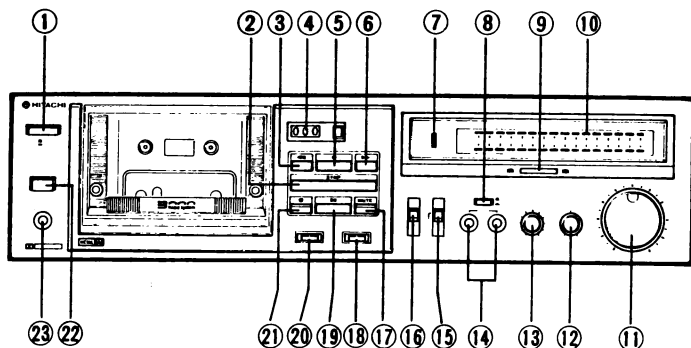
TK

No. 1561E

D-E65

(U, C, FS, BS, AU, W)

The microprocessor (MB8844-340M) mounted in this unit is the same as that of the model D-E55. Their peripheral circuits are partially different, however, they have basically the same functions, so refer to the D-E55 technical information manual (No. 1471) for servicing this unit.



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KEY TO ILLUSTRATIONS

- | | |
|-----------------------------|-----------------------------|
| ① Power (Mains) switch | ⑬ Output level control |
| ② Stop button | ⑭ Microphone sockets |
| ③ Rewind button | ⑮ Dolby NR switch |
| ④ Tape counter | ⑯ Tape select switch |
| ⑤ Playback button | ⑰ REC. Mute button |
| ⑥ Fast forward button | ⑱ Timer switch |
| ⑦ Dolby NR indicator | ⑲ Pause button |
| ⑧ Input select switch | ⑳ Auto/Memory rewind switch |
| ⑨ Monitor switch | ㉑ Record button |
| ⑩ Digital peak meter | ㉒ Eject button |
| ⑪ Recording level control | ㉓ Headphone socket |
| ⑫ Recording balance control | |

SAFETY PRECAUTION

The following precautions should be observed when servicing.

- Since many parts in the unit have special safety related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makes. Critical parts are marked with Δ in the schematic diagram and circuit board diagram.
- Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

STEREO CASSETTE TAPE DECK

May 1981

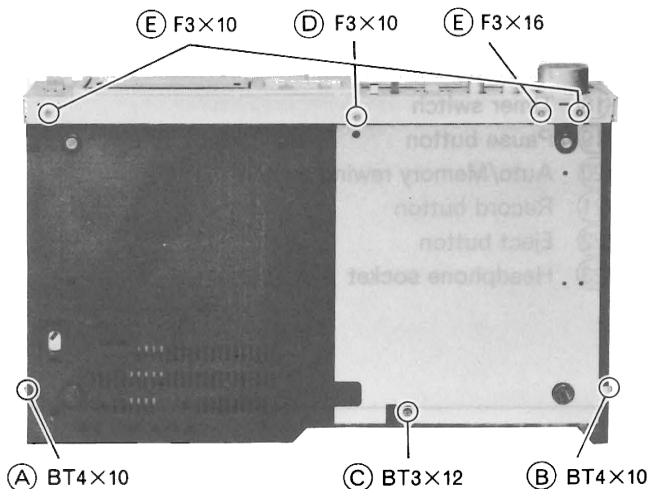
TOKAI WORKS

SPECIFICATIONS

| | | | |
|-------------------------------|---|-----------------------------------|---|
| Semi-conductors : | | Dolby NR ON : | 68 dB (Weighted A, Reference 3% THD Metal Tape) |
| Module : | 1 | | 67 dB* |
| ICs : | 4 | Wow and Flutter : | 0.04% (WRMS) |
| Transistors : | 36 (U, C) | | 0.13%* |
| | 39 (FS, BS, AU, W) | Input Sensitivity and Impedance : | |
| Diodes : | 47 | Microphone : | 0.3mV, 300 ohms~5k ohms |
| LEDs : | 6 | Line in : | 60mV, 50k ohms or more |
| Track System : | 4 track 2 channel stereo | DIN (Record/Playback) : | 0.3mV, 3.3k ohms (FS, BS, AU, W) |
| Tape : | Cassette tape (C-30, 60, 90) | Output Level : | 500mV |
| Tape Speed : | 4.75 cm/s | Output Load Impedance : | |
| Recording System and | | Line out : | 50k ohms or more |
| Bias Frequency : | AC bias, 85 kHz | DIN (Record/Playback) : | 50k ohms or more (FS, BS, AU, W) |
| Erasing System : | AC erase | Headphone : | 8 ohms~2k ohms |
| Erase Ratio : | 65 dB or more (at 1 kHz) | Distortion : | 0.8% (1 kHz, 160nWB/m) |
| Frequency Response : | | Crosstalk : | 60 dB or more (at 1 kHz) |
| ER/UD (NOR) : | 20 Hz~18 kHz | Channel Separation : | 30 dB or more (at 1 kHz) |
| | 30 Hz~16 kHz (± 3 dB) | Power Supply : | AC 120V, 60 Hz (U, C) |
| | 30 Hz~17 kHz* | | AC 100-110V/115-127V/ 200-220V/230-250V, 50/60 Hz (W) |
| EX/SX (CrO ₂) : | 20 Hz~19 kHz | | AC 220V, 50 Hz (FS) |
| | 30 Hz~17 kHz (± 3 dB) | | AC 240V, 50 Hz (BS, AU) |
| | 30 Hz~18 kHz* | Power Consumption : | 22W |
| ME (Metal) : | 20 Hz~20 kHz | Dimensions : | 110(H) \times 435(W) \times 266(D)mm |
| | 30 Hz~18 kHz (± 3 dB) | Weight : | 4.7kg |
| | 30 Hz~19 kHz* | Motor : | Electronically controlled DC motor |
| FeCr : | 20 Hz~18 kHz | Heads : | Cross gap metal R & P head Ferrite metal Erase head |
| | 30 Hz~17 kHz (± 3 dB) | | |
| | 30 Hz~17 kHz* | | |
| S/N (Signal to Noise Ratio) : | | | |
| Dolby NR OFF : | 60 dB (Weighted A, Reference 3% THD Metal Tape) | | |
| | 59 dB* | | |

*According to DIN 45 500

DISASSEMBLY



1. Cassette door

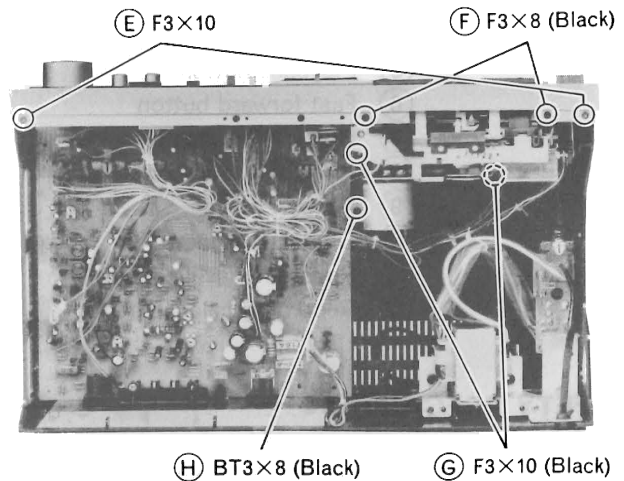
Depress the eject button to open the cassette holder.
Lift up the cassette door to remove it.

2. Upper cover

Remove (A) and (B) (two) screws.

3. Bottom cover

Remove (B), (C) and (D) (three) screws.



4. Front panel

1) Remove three knobs (Recording level, Output level and Recording balance).

2) Remove (D), (E) and (F) (eight) screws.

5. Cassette chassis

1) Remove (F) and (G) (four) screws.

2) Remove (H) screw.

ADJUSTMENT

Perform the following adjustments in the sequence stated after cleaning the head, pressure roller and capstan with a head cleaning stick moistened in alcohol. Also, unless specially indicated otherwise, set the switches and controls to the positions indicated in the table.

| Symbol No. | Switches and Controls | Position | Symbol No. | Switches and Controls | Position |
|------------|-----------------------|-------------|------------|------------------------|----------|
| S1 | Monitor switch | TAPE | RV1L, R | Record level control | Max. |
| S2 | Dolby NR switch | OFF | RV2L, R | Output level control | Max. |
| S3 | Tape select switch | ER/UD (NOR) | RV3 | Record balance control | Center |
| S4 | Input select switch | LINE | | | |

| Item | Adjustments | Measuring Instrument and Connection | | | Check Tape | Mode | Adjusted Position | Adjusted Value | Remarks |
|------|------------------------|---|----------------|-----------------|------------------------------|----------|-------------------------------------|-----------------------------------|------------|
| | | Measuring Instrument | Input Terminal | Output Terminal | | | | | |
| 1 | Tape speed | • Frequency counter | — | LINE OUT | MTT-111, 3000 Hz (3150 Hz*) | Playback | Semi-variable resistor in the motor | 3000 Hz +30 Hz -10 Hz (3150 Hz*) | See Note 1 |
| 2 | Head azimuth | • VTVM | — | LINE OUT | MTT-316, 12.5 kHz | Playback | Azimuth adjusting screw | Output Max. | See Note 2 |
| 3 | Digital peak meter | • Audio oscillator (400Hz) • VTVM | LINE IN | TP1L, R | — | Record | RT4L, R | Digital peak meter indicates 0 dB | See Note 3 |
| 4 | Dolby NR | • Audio oscillator (5 kHz) • VTVM | LINE IN | TP1L, R | — | Record | RT2L, R | Level is boosted by 8 dB | See Note 4 |
| 5 | Playback gain | — | — | — | MTT-150, 400 Hz, 20m Maxwell | Playback | RT1L, R | Digital peak meter indicates 0 dB | See Note 5 |
| 6 | Bias current | Set RT5L, R to the center. | | | ER/UD tape | Record | RT3L, R | Output difference within 1 dB | See Note 6 |
| | | • Audio oscillator (1.2 kHz/12 kHz, 0 dB-23 dB) • Attenuator • VTVM | LINE IN | LINE OUT | | | | | |
| 7 | Record/playback output | • Audio oscillator (400 Hz) • VTVM | LINE IN | LINE OUT | ER/UD tape | Record | RT5L, R | Digital peak meter indicates 0 dB | See Note 7 |

* According to DIN 45 500

Note :

- Adjust within 30 sec. after heat-running for more than 20 minutes.
- When the maximum values of both channels are different, tune to the maximum value of the L channel. In this case, the difference between the maximum values of both channels should be within 2 dB.

- 1) Set the monitor switch to the SOURCE position.
2) Feed a 400 Hz signal to the LINE IN jacks in the recording mode and adjust the audio oscillator output so that the level of TP1L, R become 775 mV.
3) Then, adjust RT4L, R so that the digital peak meter indicates 0 dB.

- 1) Set the monitor switch to the SOURCE position.
2) Feed a 5 kHz signal to the LINE IN jacks in the recording mode and adjust the audio oscillator output so that the level of TP1L, R become -30.4 dBm (23.5mV).
3) Then, adjust RT2L, R so that the level is boosted by 8 dB when the Dolby NR switch is set to ON.
- Playback a test tape (MTT-150, 400 Hz 20m Maxwell) and adjust RT1L, R so that the digital peak meter indicates 0 dB.
- 1) Use Hitachi ER/UD tape.
2) Set RT5L, R to the center.
3) Set the monitor switch to the SOURCE position and feed a 1.2 kHz signal to the LINE IN jacks in the recording mode.
4) Adjust the audio oscillator output so that the digital peak meter indicates 0 dB. Then, adjust the attenuator to lower the output level by 23 dB.

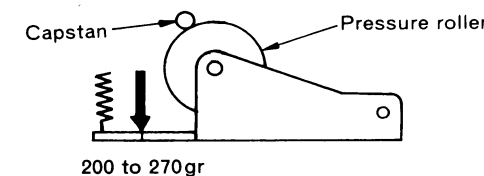
- Set the monitor switch to the TAPE position and read the playback output level of LINE OUT jacks.
- Then, set the audio oscillator frequency to 12 kHz and read the playback output level of LINE OUT jacks.
- Adjust RT3L, R so that the output level difference between two frequencies is within 1 dB.
- 1) Use Hitachi ER/UD tape.
2) Set the monitor switch to the SOURCE position and feed a 400 Hz signal to the LINE IN jacks in the recording mode.
3) Adjust the audio oscillator output so that the level of LINE OUT jacks become 730mV.
4) Set the monitor switch to the TAPE position and adjust RT5L, R so that the digital peak meter indicates 0 dB.

INSPECTION OF MECHANISM

| Check Item | | Reference Value | Remarks |
|------------|-----------------------------|-------------------|---|
| 1 | Pressure of pressure roller | 200 to 270gr | Note 1 |
| 2 | Torque | Take-up | 35 to 65 gr-cm Measure in playback mode |
| | | Fast forward | 75 to 110 gr-cm Measure in fast forward mode |
| | | Rewind | 75 to 110 gr-cm Measure in rewind mode |
| 3 | Back-tension | Take-up turntable | 1.7 to 4.5 gr-cm Measure in playback mode |
| | | Supply turntable | 1.7 to 4.5 gr-cm Measure in playback mode |
| 4 | Brake-torque | Take-up turntable | 50 to 100gr-cm Measure in stop mode |
| | | Supply turntable | |

Note 1. Pressure of pressure roller

Set this unit in the playback mode and press the pressure roller in the direction of the arrow using a fan type tension gauge, and measure the pressure when the pressure roller is released from the capstan.



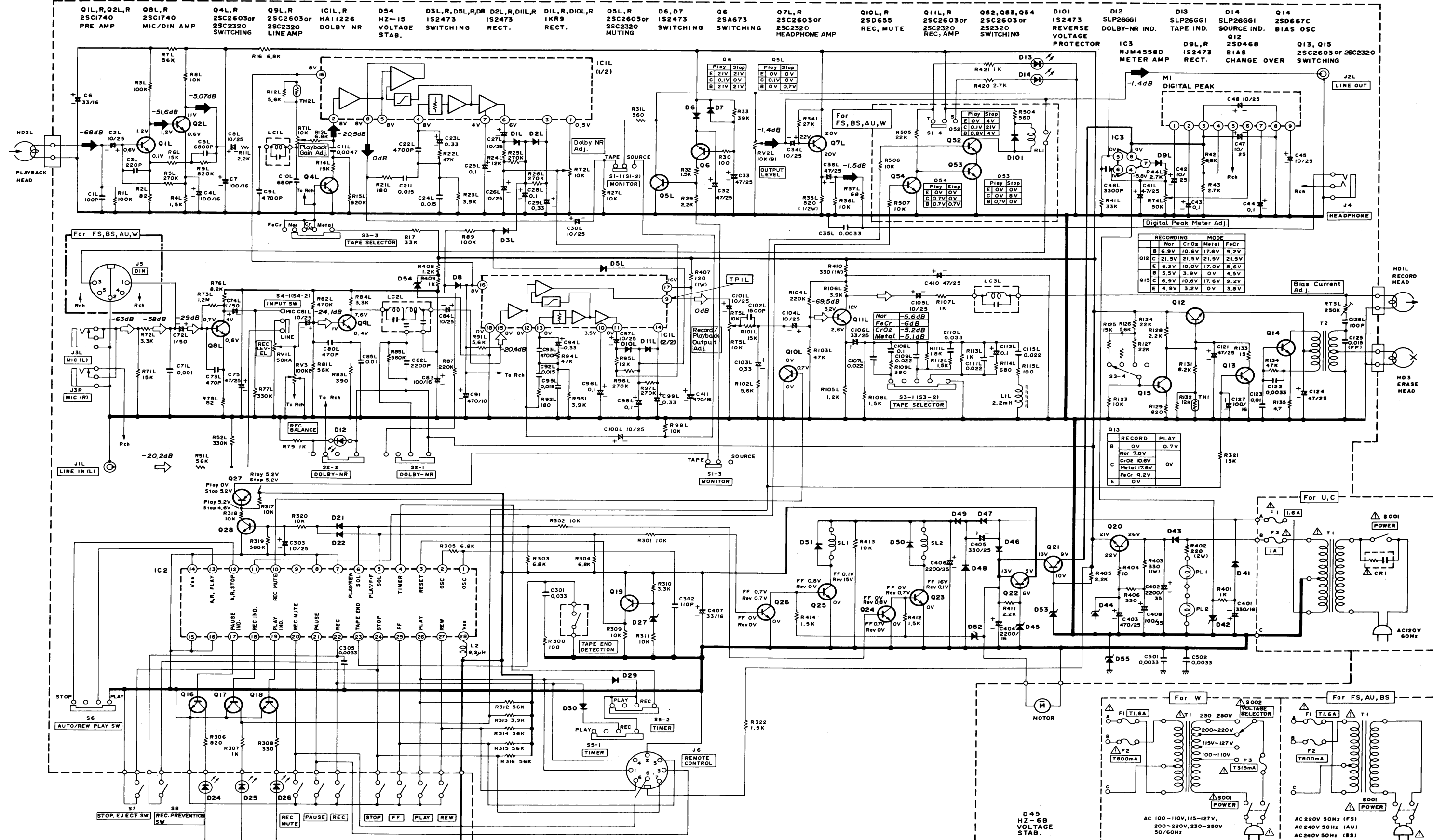
LUBRICATIONS

Lubricate one or two drops of oil to rotating point or lubricate grease to sliding point.
Lubricate the respective parts listed once every 1000 hours or once a year under normal conditions of use.
Avoid oiling them excessively, or rotation may become irregular because of oil splashes.

| Lubrication | | Oil or Grease |
|-----------------------------|---------------------------------|--------------------------|
| Rotary section | Metal and metal | Pan motor oil (10W-40) |
| | Mold and metal | Sonic slider oil (#1600) |
| Sliding section | Metal and metal | Hitasol (MO-138) |
| | Mold and mold Mold and metal | White grease (FL-LUBE-A) |
| Spring resonance prevention | | Froil (GB-TS-1) |

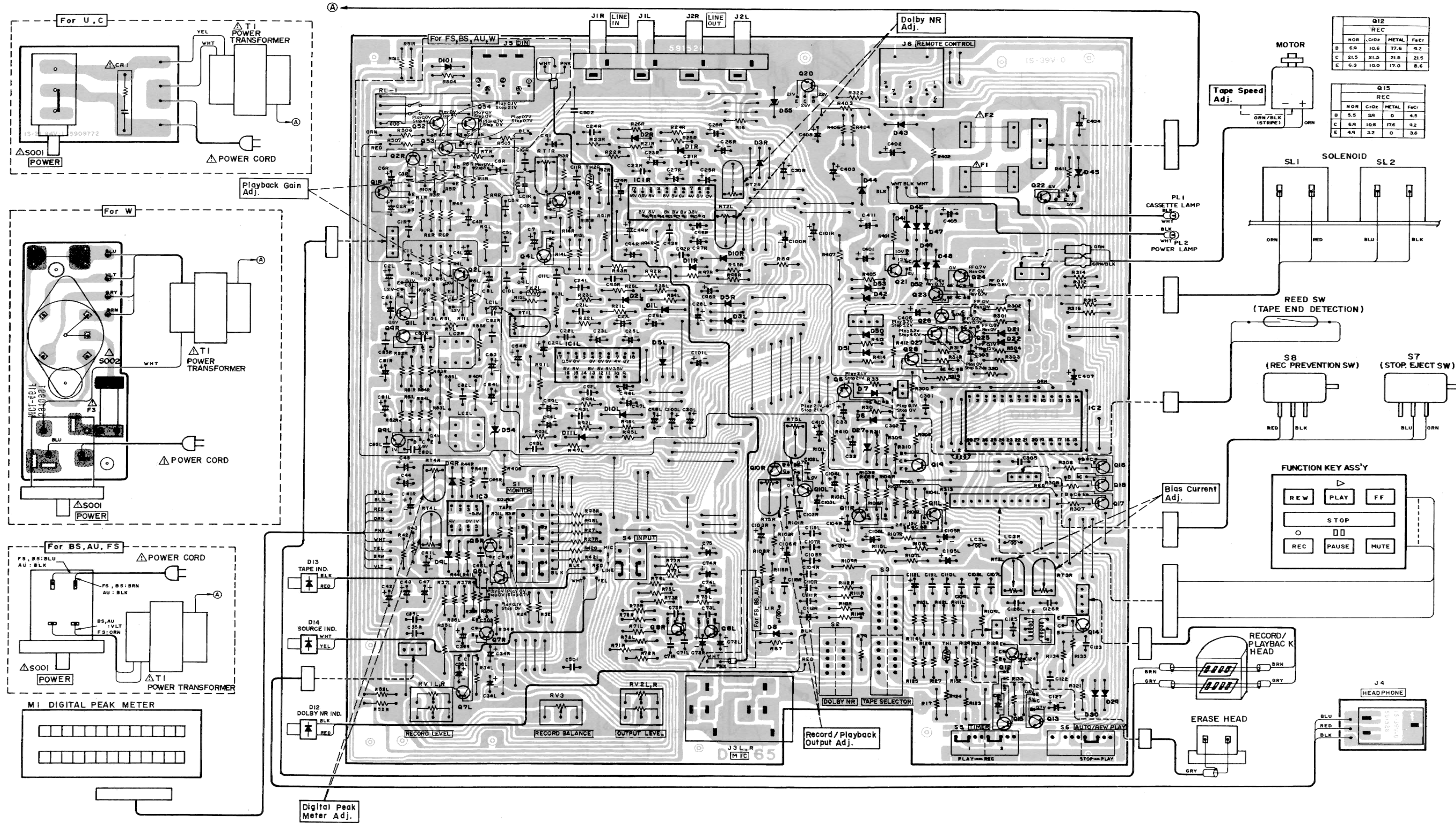
SCHEMATIC DIAGRAM

RECORDING MODE PLAYBACK MODE



- Q16, Q17, Q18
25C2603 or
25C2320
SWITCHING
- D24
PAUSE IND.
- D25
REC IND.
- D26
PLAY IND.
- Q27
25A673
SWITCHING
- Q28
25C2603 or
25C2320
FUNCTION
CONTROL
- IC2
M8844
- D21, D22
IS2473
SWITCHING
- D29, D30
IS2473
SWITCHING
- D27
RD2.7E
VOLTAGE
STAB.
- Q19
25A673
VOLTAGE
STAB.
- D52
HZ - 6B
VOLTAGE
STAB.
- D46, D47, D48, D49
SMA
RECT.
- Q23, Q25
25C1162
SWITCHING
- Q24, Q26
25C2603 or
25C2320
SWITCHING
- D50, D51
SMA
REVERSE
VOLTAGE
PROTECTOR
- Q22
25C1162
VOLTAGE
STAB.
- D53
HZ - 11A
VOLTAGE
STAB.
- Q21
25D468
VOLTAGE
STAB.
- Q20
25C1061
VOLTAGE
STAB.
- D44
HZ - 22
VOLTAGE
STAB.
- D55
HZ - 6B
VOLTAGE
STAB.
- D41, D43
SMA
RECT.
- D42
HZ - 6
VOLTAGE
STAB.

CIRCUIT BOARD DIAGRAM



| Q12 REC | | | | |
|---------|------|-------|------|------|
| NOR | COR | METAL | FeCr | |
| B | 6.4 | 10.6 | 17.6 | 4.2 |
| C | 21.5 | 21.5 | 21.5 | 21.5 |
| E | 6.3 | 10.0 | 17.0 | 6.6 |

| Q15 REC | | | | |
|---------|-----|-------|------|-----|
| NOR | COR | METAL | FeCr | |
| B | 5.5 | 3.0 | 0 | 4.5 |
| C | 6.8 | 10.6 | 17.6 | 4.2 |
| E | 4.9 | 3.2 | 0 | 3.6 |

EXPLODED VIEW (Mechanism-FL-31A)

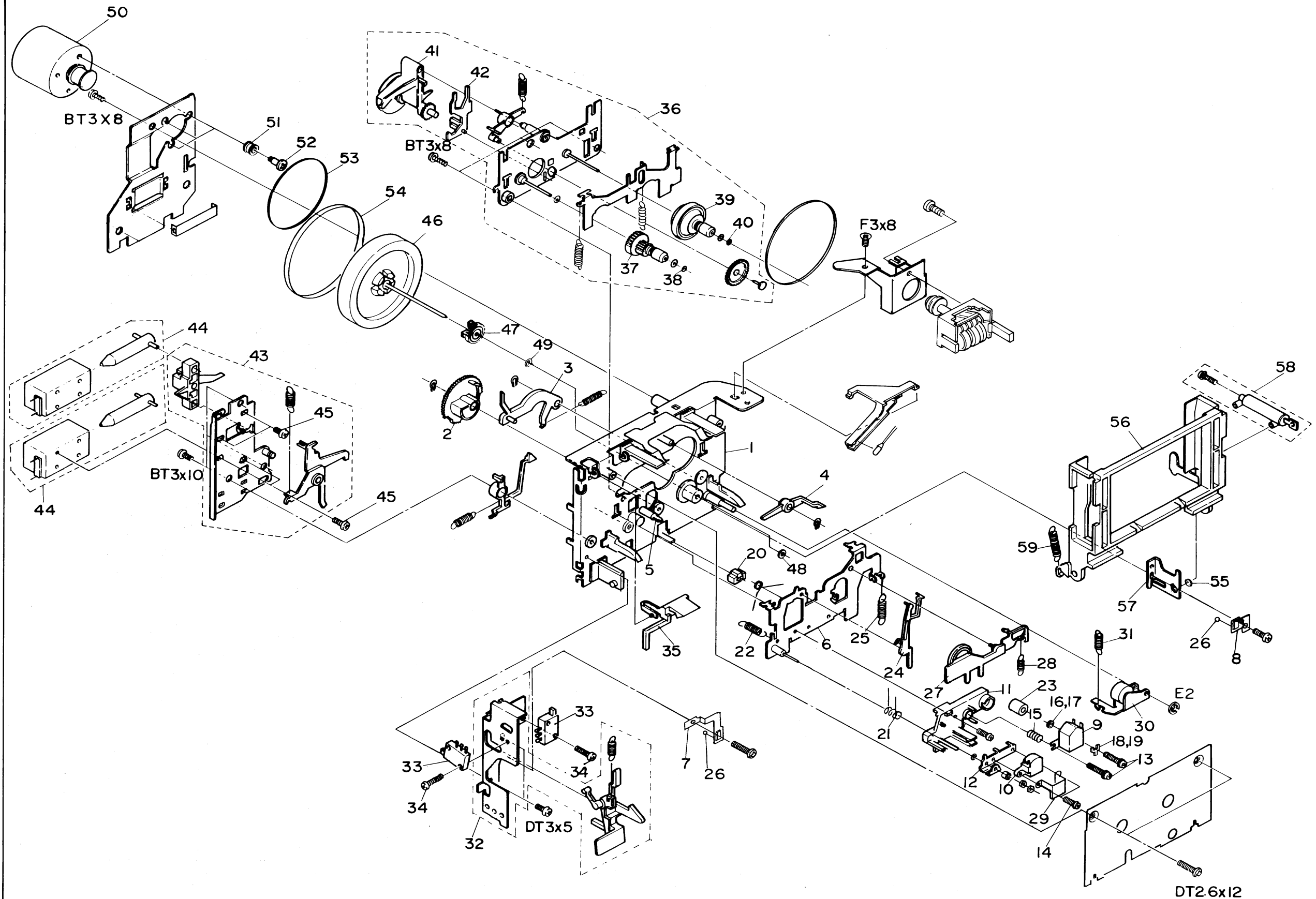
Note

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

| Circuit No. | |
|-------------|---|
| Value | No indicated Ω(Ohm) M : 1000 kΩ |
| Tolerance | No indicated ±5% K : ±10% M : ±20% |
| Wattage | No indicated ¼W |
| Sort | No indicated Carbon film RC : Composition RW : Wire wound RS : Oxide metal film RN : Fixed metal film |

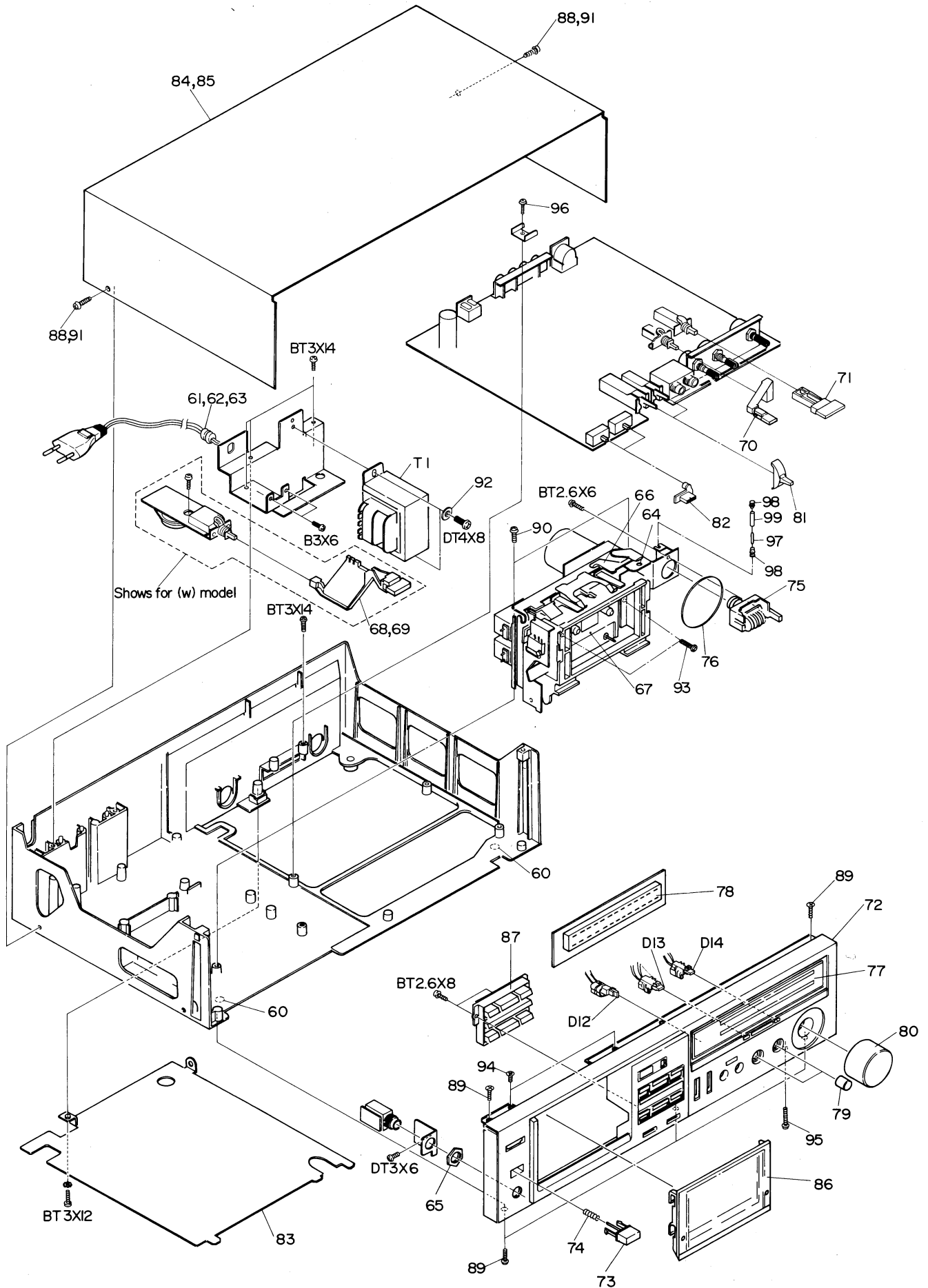
| Circuit No. | |
|-------------|---|
| Value | No indicated μF P : PF |
| Tolerance | No indicated ±10% J : ± 5% M : ±20% Z : +80% -20% D : ±0.5pF C : ±0.25pF |
| Sort | Ceramic |
| | Electrolitic |
| | Mylar |
| | Polyester |
| | Styrol |
| Voltage | No indicated 50WV |

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When replacing capacitors marked with *, use specified ones stated on parts list since required temperature characteristics.



Note : Components marked without numbers in this drawing are not specified as replacement parts.

EXPLODED VIEW (Cabinet)

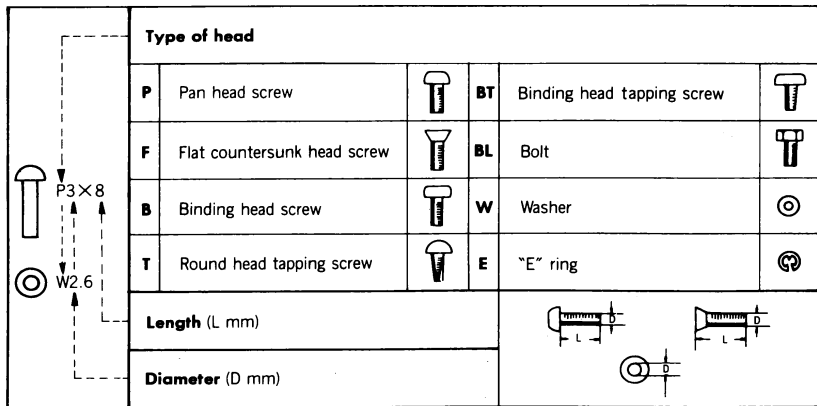


REPLACEMENT PARTS LIST

| SYMBOL-NO | P-NO | DESCRIPTION | SYMBOL-NO | P-NO | DESCRIPTION |
|-----------------|---------|--|---------------|---------|--|
| CAPACITORS | | | | | |
| △ CR1 | 0219902 | CR PACK 120 OHM 0.0033MF 450V (U) | Q 2LR | 5321296 | TRANSISTOR 2SC1740LN-RS |
| △ CR1 | 0219907 | CR PACK (C) | Q 4LR | 5322623 | TRANSISTOR 2SC2320EF |
| C502 | 0209023 | CERAMIC DISC (RESISTOR SHAPE) 3300P F+-30 | Q 5LR | 5322623 | TRANSISTOR 2SC2320EF |
| C503 | 0209023 | CERAMIC DISC (RESISTOR SHAPE) 3300P F+-30 | Q 6 | 5320593 | TRANSISTOR 2SA673C |
| RESISTORS | | | Q 7LR | 5322623 | TRANSISTOR 2SC2320EF |
| RT 1LR | 5007477 | SEMI VARIABLE 10K OHM | Q 8LR | 5321296 | TRANSISTOR 2SC1740LN-RS |
| RT 2LR | 5007477 | SEMI VARIABLE 10K OHM | Q 9LR | 5322623 | TRANSISTOR 2SC2320EF |
| RT 3LR | 5007482 | SEMI VARIABLE 250K OHM | Q10LR | 5322381 | TRANSISTOR 2SD655E |
| RT 4LR | 5007479 | SEMI VARIABLE 50K OHM | Q11LR | 5322623 | TRANSISTOR 2SC2320EF |
| RT 5LR | 5007477 | SEMI VARIABLE 10K OHM | Q12 | 5321213 | TRANSISTOR 2SD468C |
| RV 1LR | 5000617 | VARIABLE RESISTOR 50K OHM (A) | Q13 | 5322623 | TRANSISTOR 2SC2320EF |
| RV 2LR | 5000872 | VARIABLE RESISTOR 10K OHM (B) | Q14 | 5322651 | TRANSISTOR 2SD667C |
| RV 3 | 5000851 | VARIABLE RESISTOR 100K OHM(B) | Q15 | 5322623 | TRANSISTOR 2SC2320EF |
| R135 | 0170473 | FUSE RESISTOR 4.7 OHM+-5X | Q16-18 | 5322623 | TRANSISTOR 2SC2320EF |
| SEMI-CONDUCTORS | | | Q19 | 5320593 | TRANSISTOR 2SA673C |
| D 1LR | 5331503 | DIODE 1KR9 | Q20 | 5321301 | TRANSISTOR 2SC1061 |
| D 2LR | 5330573 | DIODE 1S2473 | Q21 | 5321213 | TRANSISTOR 2SD468C |
| D 3LR | 5330573 | DIODE 1S2473 | Q22 | 5320643 | TRANSISTOR SILICON 2SC1162 |
| D 5LR | 5330573 | DIODE 1S2473 | Q23 | 5320643 | TRANSISTOR SILICON 2SC1162 |
| D 6 | 5330573 | DIODE 1S2473 | Q24 | 5322623 | TRANSISTOR 2SC2320EF |
| D 7 | 5330573 | DIODE 1S2473 | Q25 | 5320643 | TRANSISTOR SILICON 2SC1162 |
| D 8 | 5330573 | DIODE 1S2473 | Q26 | 5322623 | TRANSISTOR 2SC2320EF |
| D 9LR | 5330573 | DIODE 1S2473 | Q27 | 5320593 | TRANSISTOR 2SA673C |
| D 10LR | 5331503 | DIODE 1KR9 | Q28 | 5322623 | TRANSISTOR 2SC2320EF |
| D 11LR | 5330573 | DIODE 1S2473 | Q52-54 | 5322623 | TRANSISTOR 2SC2320EF (FS,BS,AU,W) |
| D 12 | 5380362 | LED SLP26GG1 | TH 1 | 5340232 | THERMISTER 112103-2 |
| D 13 | 5380362 | LED SLP26GG1 | TH 2LR | 5340231 | THERMISTER 112302-2 |
| D 14 | 5380361 | LED SLP26UR1 | TRANSFORMERS | | |
| D 21 | 5330573 | DIODE 1S2473 | △ T 1 | 5212881 | POWER TRANSFORMER (U,C) |
| D 22 | 5330573 | DIODE 1S2473 | △ T 1 | 5212882 | POWER TRANSFORMER (FS) |
| D 27 | 5330847 | DIODE RD2.7E-B2 | △ T 1 | 5212883 | POWER TRANSFORMER (BS) |
| D 29 | 5330573 | DIODE 1S2473 | △ T 1 | 5212884 | POWER TRANSFORMER (AU) |
| D 30 | 5330573 | DIODE 1S2473 | △ T 1 | 5212885 | POWER TRANSFORMER (W) |
| D 41 | 5331422 | DIODE SM-1A-02 | T 2 | 5260442 | BIAS OSCILLATOR |
| D 42 | 5330392 | ZENER DIODE SILICON HZ6B | COILS | | |
| D 43 | 5331422 | DIODE SM-1A-02 | L 1LR | 5150363 | CHOKE COIL 2.2 MH |
| D 44 | 5331491 | ZENER DIODE HZ22-1 | L 2 | 5152073 | CHOKE COIL 8.2MICROH |
| D 45 | 5330392 | ZENER DIODE SILICON HZ6B | MISCELLANEOUS | | |
| D 46-51 | 5331422 | DIODE SM-1A-02 | | 5658061 | LED SOCKET (FOR D12, D13) |
| D 52 | 5330392 | ZENER DIODE SILICON HZ6B | | 5658071 | LED SOCKET (FOR D14) |
| D 53 | 5330551 | ZENER DIODE HZ11A | △ | 5746158 | POWER CORD (FS, W) |
| D 54 | 5330541 | ZENER DIODE HZ-15 | △ | 5746342 | POWER CORD (BS) |
| D 55 | 5330392 | ZENER DIODE SILICON HZ6B | △ | 5746442 | POWER CORD (U,C) |
| D101 | 5330573 | DIODE 1S2473 (FS,BS,AU,W) | △ | 5746571 | POWER CORD (AU) |
| IC 1LR | 5350561 | IC HA 11226 | PL1 | 5762035 | PILOT LAMP (FOR CASSETTE ILLUMINATION) |
| IC 2 | 5365473 | IC MB8844-340 | PL2 | 5762036 | PILOT LAMP (FOR POWER SWITCH) |
| IC 3 | 5350601 | IC NJM4558D | △ F 1 | 5721061 | FUSE 1.6A (FS,BS,AU,W) |
| Q 1LR | 5321296 | TRANSISTOR 2SC1740LN-RS | △ F 1 | 5721161 | FUSE 1.6A (U,C) |

| SYMBOL-NO | P-NO | DESCRIPTION | SYMBOL-NO | P-NO | DESCRIPTION |
|-------------------------------------|---------|---------------------------------------|---------------|---------|--|
| MISCELLANEOUS | | | | | |
| △ F 2 | 5720175 | FUSE 0.8A (FS,BS,AU, W) | 23 | 7574847 | COLLAR |
| △ F 2 | 5721164 | FUSE 1A (U,C) | 24 | 6761741 | REWIND ARM |
| △ F 3 | 5720171 | FUSE (W) | 25 | 6301022 | SPRING |
| J1LR, J2LR | 5676261 | PIN JACK ASSEMBLY (LINE IN, LINE OUT) | 26 | 0948492 | BALL - 2MMD |
| J 3LR | 5679742 | MIC JACK | 27 | 6761707 | TAKE UP IDLER ASSEMBLY |
| J 4 | 5674193 | HEADPHONE JACK | 28 | 6320578 | SPRING FOR TAKE UP IDLER |
| J 5 | 5651141 | 5P DIN SOCKET (FS,BS,AU, W) | 29 | 6990651 | INSULATION PLATE FOR HEAD |
| J 6 | 5677131 | 8P DIN SOCKET (REMOTE) | 30 | 7330581 | PRESSURE ROLLER ARM ASSEMBLY |
| LC 1LR | 5120562 | TRAP COIL | 31 | 6301361 | SPRING |
| LC 2LR | 5161665 | DOLBY FILTER | 32 | 7330662 | EJECT HOLDER ASSEMBLY |
| LC 3LR | 5120562 | TRAP COIL | 33 (S7, 8) | 5633361 | PUSH SWITCH |
| RL 1 | 5641141 | REED RELAY (FS,BS,AU, W) | 34 | 0671310 | DT SCREW-2.6MMDX10MM |
| S 1 | 5634415 | PUSH SWITCH (MONITOR) | 35 | 6761814 | RECORD PREVENTION ARM |
| S 2 | 5604227 | LEVER SWITCH (DOLBY NR) | 36 | 6761696 | REEL BASE ASSEMBLY |
| S 3 | 5604501 | LEVER SWITCH (TAPE SELECTOR) | 37 | 6414202 | TURNTABLE ASSEMBLY (SUPPLY) |
| S 4 | 5634415 | PUSH SWITCH (INPUT) | 38 | 7778185 | POLY SLIDER WASHER |
| S 5 | 5624281 | SLIDE SWITCH (TIMER) | 39 | 6414213 | TURNTABLE ASSEMBLY (TAKE UP) |
| S 6 | 5624281 | SLIDE SWITCH (AUTO REWIND) | 40 | 7778185 | POLY SLIDER WASHER |
| △ S001 | 5633482 | PUSH SWITCH (POWER)(U, C) | 41 | 6761672 | FF/REWIND ARM ASSEMBLY |
| △ S001 | 5633541 | PUSH SWITCH (POWER)(FS, BS, AU) | 42 | 6761732 | SELECT SLIDER |
| △ S001 | 5633641 | PUSH SWITCH (POWER)(W) | 43 | 7330726 | SOLENOID PLATE ASSEMBLY |
| △ S002 | 5605083 | ROTARY SWITCH (VOLTAGE SELECTOR)(W) | 44 | 5642831 | DC SOLENOID |
| FOR ACCESSORIES | | | 45 | 8741403 | BIND SCREW-3MMDX3MM |
| | 7740321 | HEAD CLEANING STICK | 46 | 6373751 | FLYWHEEL ASSEMBLY |
| | 5895501 | PATCH CORD | 47 | 6430932 | FLYWHEEL GEAR |
| △ | 5662021 | SOCKET ADAPTER (W) | 48 | 7786623 | POLY SLIDER WASHER |
| FOR CASSETTE DECK ASSEMBLY (FL-31A) | | | 49 | 7772623 | SPRING |
| 1 | 7341351 | CHASSIS BASE ASSEMBLY | 50 | 5576761 | DC MOTOR ASSEMBLY |
| 2 | 6430886 | PLAY GEAR | 51 | 6589591 | RUBBER PLATE |
| 3 | 6761783 | PLAY ARM | 52 | 7539007 | SPECIAL SCREW |
| 4 | 6761821 | PICK UP ARM | 53 | 6355193 | BELT |
| 5 | 7740246 | FELT | 54 | 6357301 | FLYWHEEL BELT |
| 6 | 7339092 | HEAD PLATE ASSEMBLY | 55 | 7779793 | POLYESTER WASHER |
| 7 | 7339801 | HEAD PLATE HOLDER (A) | 56 | 6761844 | CASSETTE HOLDER |
| 8 | 7339811 | HEAD PLATE HOLDER (B) | 57 | 7330602 | CASSETTE HOLDER SUPPORT |
| 9 | 5449011 | RECORD PLAYBACK HEAD | 58 | 6763431 | DAMPER ASSEMBLY |
| 10 | 5445351 | ERASE HEAD | 59 | 6301723 | SPRING FOR EJECT SLIDER |
| 11 | 6765393 | HEAD BASE | MISCELLANEOUS | | |
| 12 | 7336803 | ERASE HEAD PLATE | 60 | 7740603 | FELT LEG |
| 13 | 7775211 | SPECIAL SCREW | △ 61 | 0043793 | BUSHING (U,C,AU) |
| 14 | 8741105 | BIND SCREW | △ 62 | 6711351 | BUSHING (BS) |
| 15 | 6321733 | HEAD SPRING C | △ 63 | 6794081 | BUSHING (FS, W) |
| 16 | 7771441 | WASHER - 2 MMD | 64 | 7779977 | WASHER |
| 17 | 7771442 | WASHER-2MMD | 65 | 7772951 | NUT |
| 18 | 7332761 | HEAD SPACER | 66 | 6761962 | LAMP HOLDER |
| 19 | 7332762 | HEAD SPACER | 67 | 6633913 | CASSETTE METAL ASSEMBLY |
| 20 | 6581042 | RUBBER FOR RECORD PREVENTION | 68 | 6290751 | PUSH BUTTON ASSEMBLY (POWER)(U, C, FS, BS, AU) |
| 21 | 6546831 | SPRING FOR ERASE HEAD | 69 | 6290752 | PUSH BUTTON ASSEMBLY (POWER) (W) |
| 22 | 6302375 | SPRING | 70 | 6764932 | PUSH BUTTON ASSEMBLY (INPUT) |
| | | | 71 | 6767111 | PUSH BUTTON ASSEMBLY (MONITOR) |
| | | | 72 | 6224782 | FRONT PANEL ASSEMBLY |

| SYMBOL-NO | P-NO | DESCRIPTION | SYMBOL-NO | P-NO | DESCRIPTION |
|---------------|---------|---|-----------|---------|--------------------------------------|
| MISCELLANEOUS | | | 86 | 6093331 | CASSETTE DOOR ASSEMBLY |
| 73 | 6053532 | EJECT BUTTON ASSEMBLY | 87 | 5639501 | FUNCTION SWITCH ASSEMBLY WITH BUTTON |
| 74 | 6303115 | SPRING FOR EJECT BUTTON | 88 | 8699610 | BT BIND SCREW-4MMDX10MM (U,C) |
| 75 | 5559443 | COUNTER | 89 | 7781581 | BT FLAT SCREW-3MMDX10MM |
| 76 | 6354471 | COUNTER BELT | 90 | 7781582 | FLAT SCREW-3MMDX10MM (BLACK) |
| 77 | 6767021 | LED FRAME ASSEMBLY | 91 | 7781731 | BT BIND SCREW-4MMDX10MM (FS,BS,AU,W) |
| 78 | 5310521 | LED METER | 92 | 0626577 | SPECIAL WASHER |
| 79 | 6288303 | KNOB ASSEMBLY-12MMD (REC BALANCE, OUTPUT) | 93 | 0678312 | DT SCREW-2.6MMDX12MM (BLACK) |
| 80 | 6288183 | KNOB ASSEMBLY-38MMD (REC LEVEL) | 94 | 8602408 | DT FLAT SCREW-3MMDX8MM (BLACK) |
| 81 | 6299221 | LEVER KNOB (TAPE,DOLBY NR) | 95 | 7781587 | BT FLAT SCREW-3MMDX16MM |
| 82 | 6295611 | SLIDE KNOB (AUTO REWIND, TIMER) | 96 | 8699408 | BT BIND HEAD SCREW-3MMDX8MM (BLACK) |
| 83 | 6042804 | BOTTOM COVER | 97 | 5641092 | REED RELAY |
| 84 | 6044231 | UPPER COVER (FS,BS,AU,W) | 98 | 6576271 | RELAY CAP |
| 85 | 6044232 | UPPER COVER (U,C) | 99 | 7575542 | TUBE |



When ordering hardware excluding stated on these lists, be sure to make your orders with type and size.

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