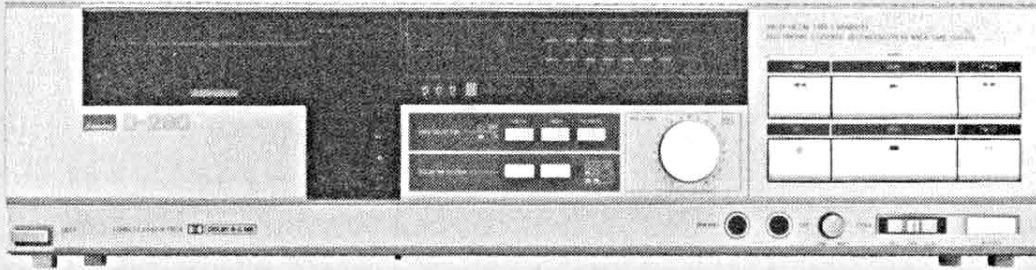


SERVICE MANUAL

STEREO CASSETTE DECK

SANSUI D-290

(Silver & Black Model)



CAUTION

1. Parts identified by the \triangle symbol on the schematic diagram and the parts list are critical for safety. Use only replacement parts that have critical characteristics recommended by the manufacturer.
2. Make leakage-current or resistance measurements to determine that exposed parts are acceptably insulated from the supply circuit before returning the appliance to the customer.

•SPECIFICATIONS

| | |
|--|---|
| Track format..... | 4-track/2-channel system |
| Tape speed..... | 4.8 cm/sec. |
| Heads (2-head configuration) | |
| Rec/pb head..... | HIGH-Bs hard permalloy |
| Erase head..... | Double-gap HIGH-Bs ferrite |
| Motor | Capstan: Electronically Controlled DC Motor Reels: DC Motor |
| Wow/flutter | 0.05% max (WRMS) |
| Fast forwarding (rewinding) time | |
| | Approx. 85 sec. (for C-60 tape) |
| Frequency response (—20 VU recording/playback) | |
| Normal tape (LH) | 20 to 15,000 Hz (30 to 14,000 Hz \pm 3 dB) |
| Chrome tape | 20 to 16,000 Hz (30 to 15,000 Hz \pm 3 dB) |
| Metal tape..... | 20 to 17,000 Hz (30 to 16,000 Hz \pm 3 dB) |
| Signal-to-noise ratio (recording/playback with metal tape) | |
| DOLBY NR OFF | Better than 57 dB |
| DOLBY-B NR ON..... | Better than 67 dB (above 5 kHz) |
| DOLBY-C NR ON..... | Better than 77 dB (above 1 kHz) |
| Erase rate (metal tape) | |
| | 70 dB min (1 kHz) |
| Recording bias frequency | |
| | 85 kHz |
| Input sensitivity/Impedance | |
| LINE IN (REC)..... | 70 mV/100 kohms |
| MIC | 0.5 mV/200 ~ 5,000 ohms |
| Power requiremets | 120/220/240V 50/60 Hz |
| For U.S.A. and Canada | |
| | 120V (60 Hz) |
| Power consumption | 14W |
| Dimensions | 430 mm (16-15/16") W 111 mm (4-3/8") H 234 mm (9-1/4") D |
| Weight | 3.6 kg (7.9 lbs) net 4.6 kg (10.1 lbs) packed |

- * Design and specifications subject to changes without notice for improvements.
- * Noise reduction system manufactured under license from Dolby Laboratories Licensing Corporation.
"Dolby" and the double D symbol are trade marks of Dolby Laboratories Licensing Corporation.



SANSUI ELECTRIC CO., LTD.

CAUTION

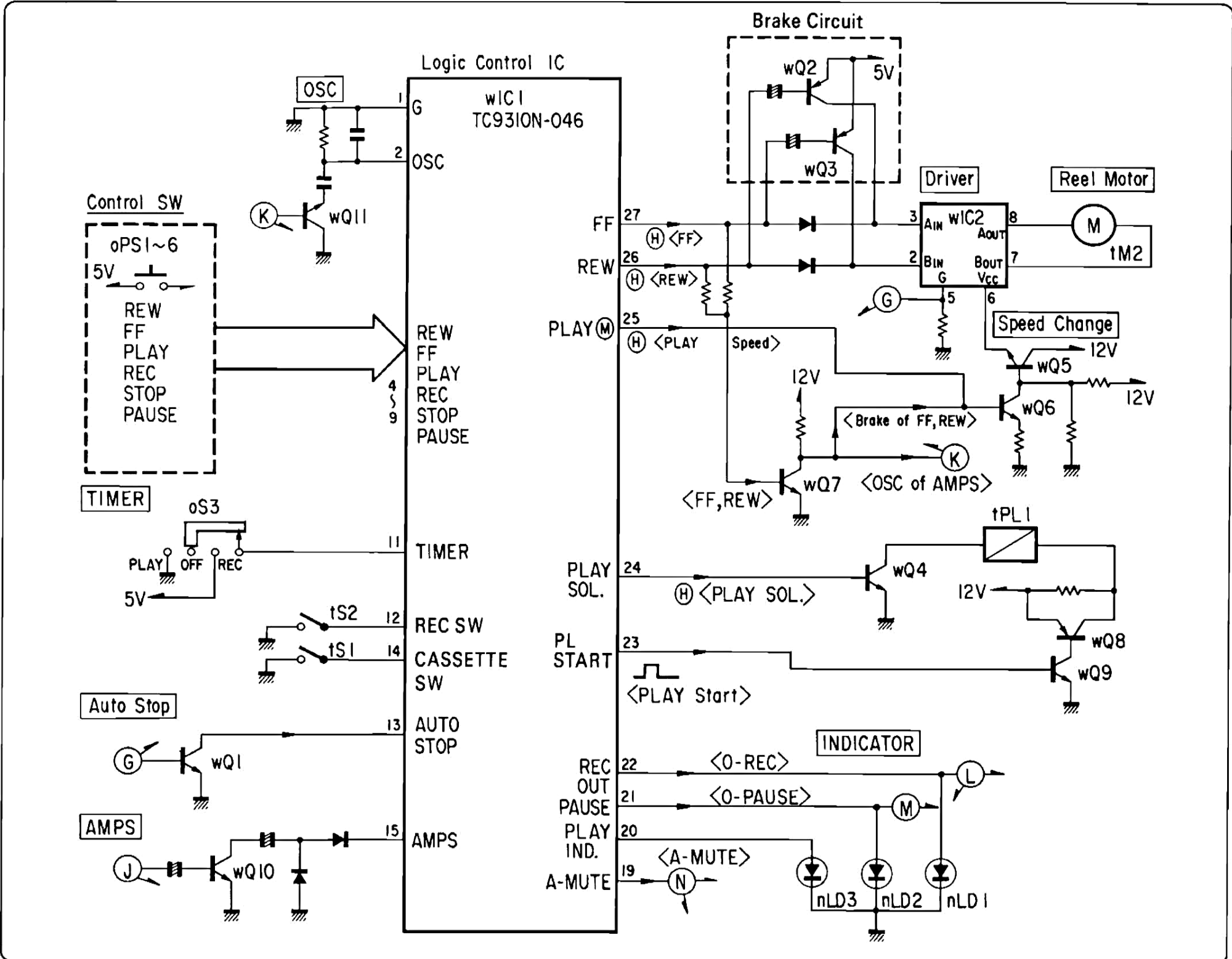
- The symbols, UL, CSA, SA, BS, UK, EU, AS and XX on the parts list and the schematic diagram mean followings respectively.
 UL..... Manufactured for U.S.A market.
 (Underwriters Laboratories approved model.)
 CSA Manufactured for Canadian market.
 SA..... Manufactured for South African market.
 BS, UK Manufactured for United Kingdom market.
 EU Manufactured for European market.
 AS..... Manufactured for Australian market.
 XX..... Standard Version.
 NON MARK Common Parts.
- Some printed circuit boards are not supplied as the assembled. To separate these in this service manual, the stock No's are not indicated at the ends of the board names. However, the individual parts on the circuit boards are provided by orders.
- Since some of capacitors and resistors are omitted from parts lists in this service manual, refer to the Common Parts List for capacitors & resistors, which was issued on February 1983.
- Abbreviations in this service manual are as follows.

•Abbreviations List

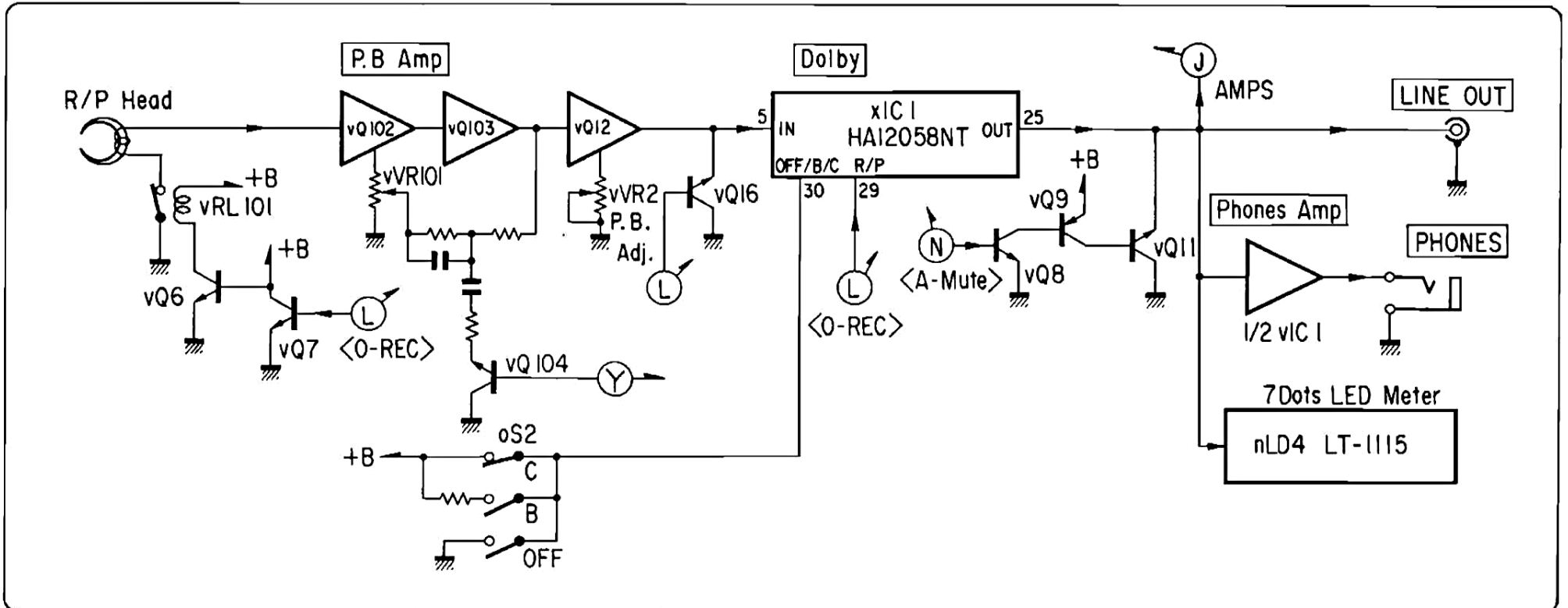
| | | | |
|--------|--|---------|---|
| C.R. | : Carbon Resistor | E.B.L. | : Low Leak Bi-Polar Electrolytic Capacitor |
| S.R. | : Solid Resistor | Ta.C. | : Tantalum Capacitor |
| Ce.R. | : Cement Resistor | F.C. | : Film Capacitor |
| M.R. | : Metal Film Resistor | M.P. | : Metalized Paper Capacitor |
| F.R. | : Fusing Resistor | P.C. | : Polystyrene Capacitor |
| N.I.R. | : Non-Inflammable Resistor | G.C. | : Gimmic Capacitor |
| A.R. | : Array Resistor | A.C. | : Array Capacitor |
| C.C. | : Ceramic Capacitor | V.R. | : Variable Resistor |
| C.T. | : Ceramic Capacitor, Temoerature Compensation | S.V.R. | : Semi Variable Resistor |
| E.C. | : Electrolytic Capacitor | SW. | : Switch |
| E.L. | : Low Leak Electrolytic Capacitor | Chip R. | : Chip Resistor |
| E.B. | : Bi-Polar Electrolytic Capacitor | Chip C. | : Chip Capacitor |

1. BLOCK DIAGRAM

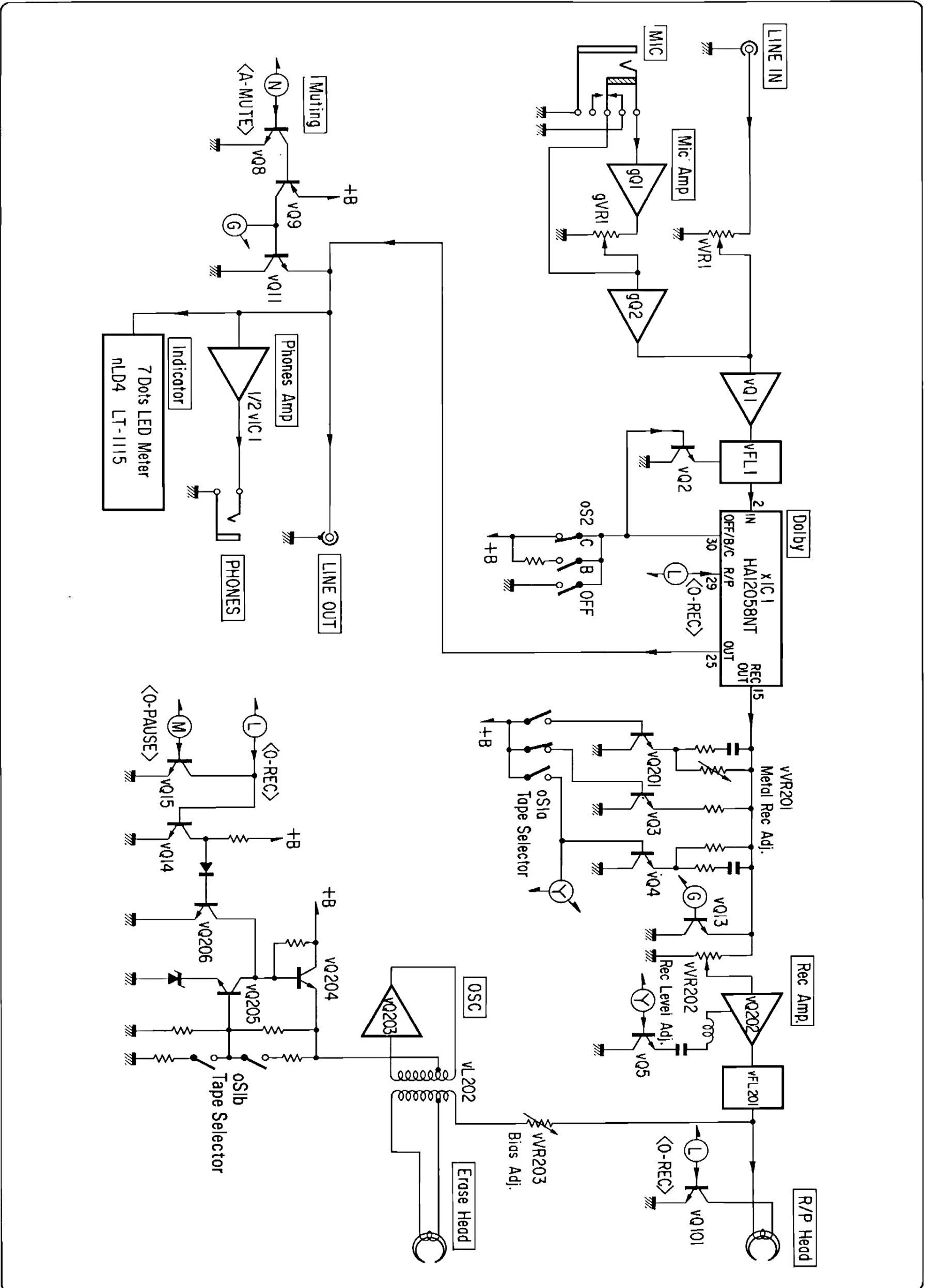
1-1. Logic Control Section



1-2. Playback Section <L-ch>



1-3. Recording Section <L-ch>



2. MODE OPERATION & TIMING CHART OF IC TC9310N-046

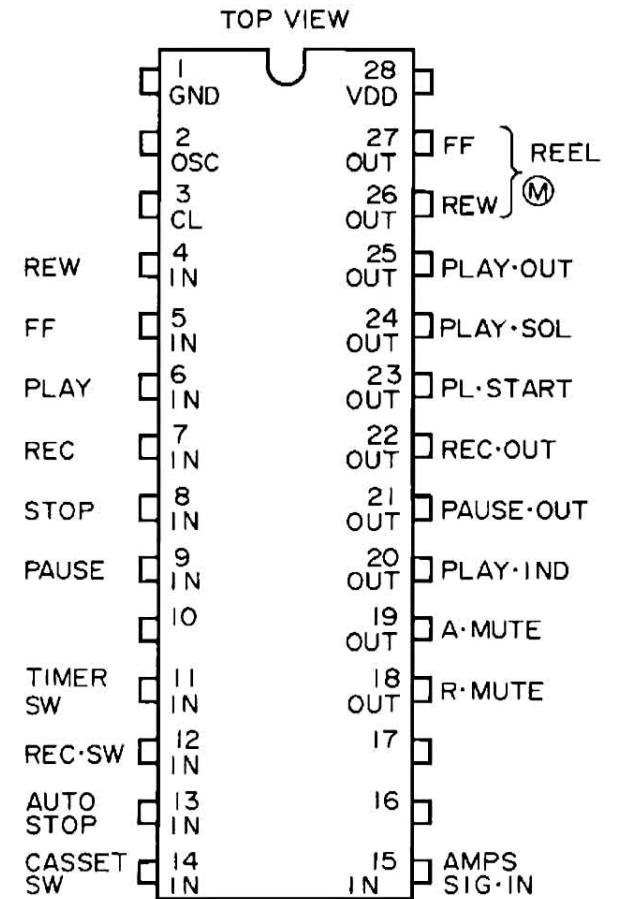
•Mode Operation of IC TC9310N-046

| PRESENT MODE \ INPUT KEY | STOP | PLAY | F.F | REW | REC | PAUSE | AUTO STOP | AMPS SIG.OFF |
|--------------------------|------|------------|-----|--------|---------------|------------|-----------|--------------|
| STOP | — | PLAY | F.F | REW | REC (-) | PAUSE | / | / |
| PLAY | STOP | — | CUE | REVIEW | — | PLAY.PAUSE | STOP | / |
| F.F | STOP | PLAY | — | REW | — | — | STOP | / |
| REW | STOP | PLAY | F.F | — | — | — | STOP | / |
| CUE | STOP | PLAY | — | REW | — | — | STOP | PLAY |
| REVIEW | STOP | PLAY | F.F | — | — | — | STOP | PLAY |
| REC | STOP | — | F.F | REW | — | REC.PAUSE | STOP | / |
| PAUSE | STOP | PLAY.PAUSE | F.F | REW | REC.PAUSE (-) | STOP | / | / |
| PLAY.PAUSE | STOP | — | F.F | REW | REC.PAUSE (-) | PLAY | / | / |
| REC.PAUSE | STOP | — | F.F | REW | — | REC | / | / |

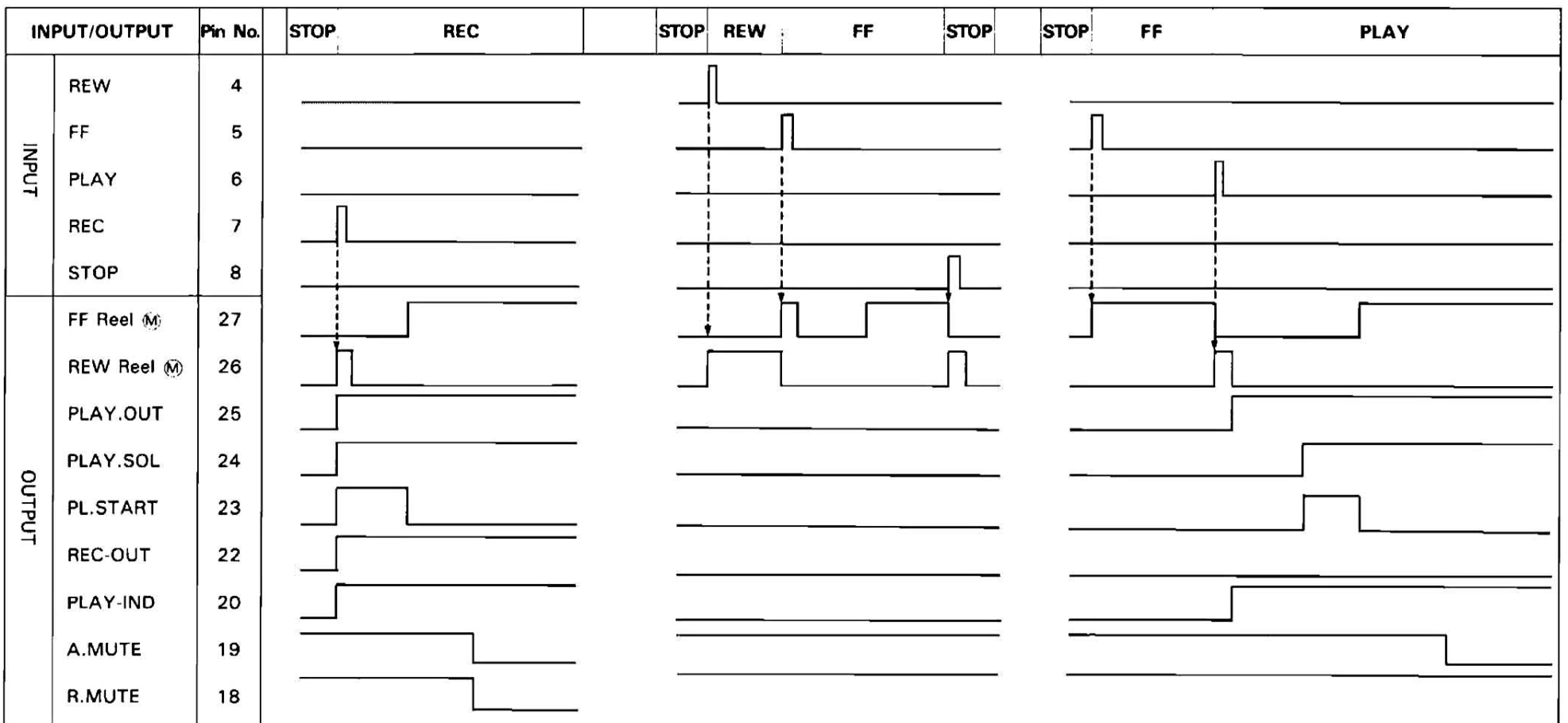
- Note: 1. This table shows operation when one input key is depressed on present mode.
 2. CUE is in the state of PLAY mode under FF operation.
 Review is in the state of PLAY mode under REW operation.

— mark means continuing present mode.
 / mark means non relation with other input ports.

•Pin-connection

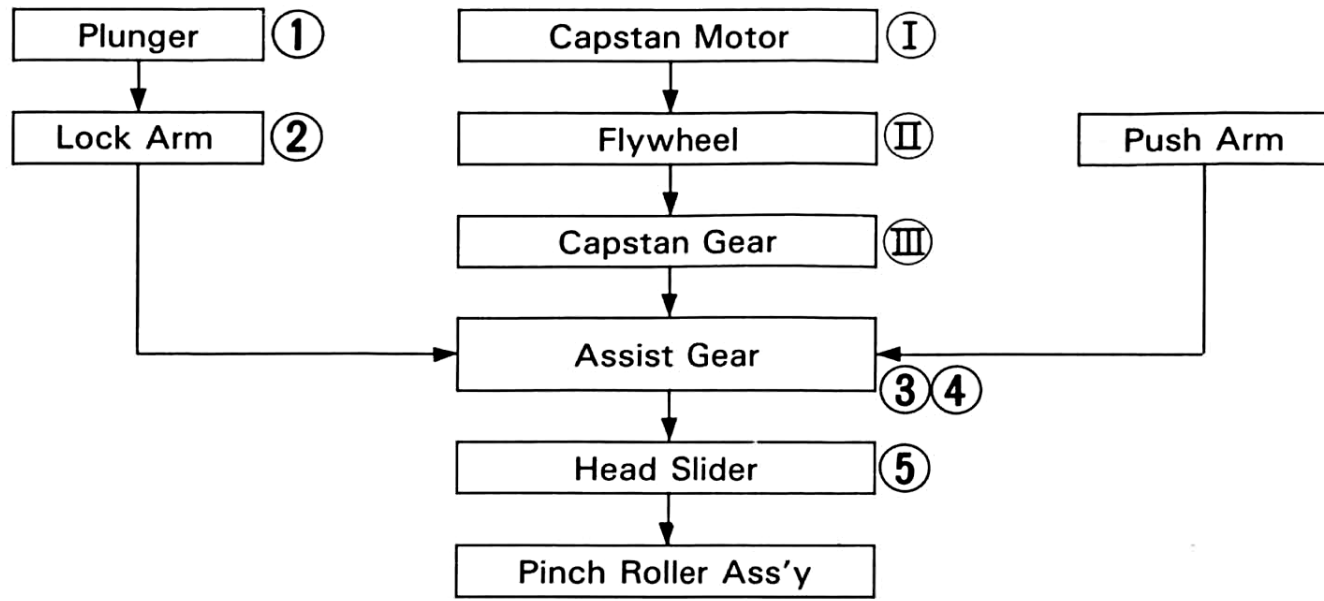


•Microcomputer Timing Chart (REC, REW→FF→STOP, FF→PLAY)



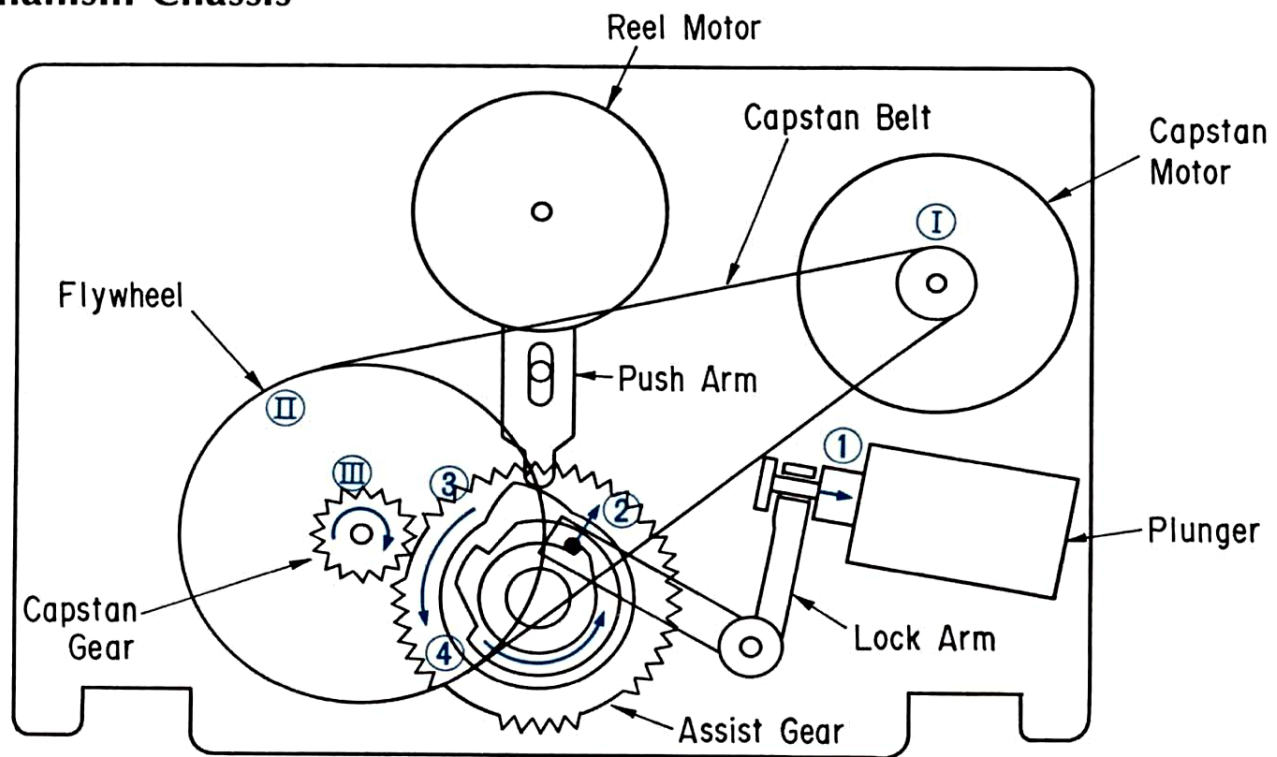
3. OPERATIONS OF PINCH ROLLER

3-1. Torque Transportation Flowchart

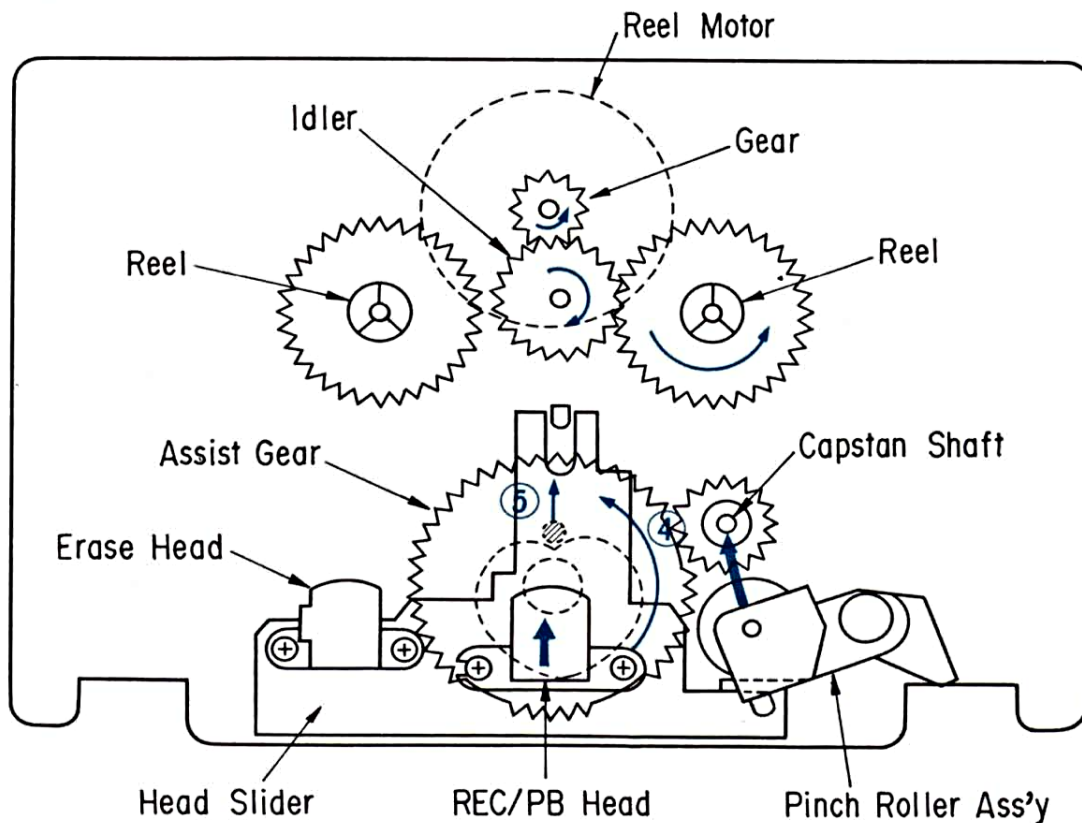


• The pinch roller is brought into pressure contact with the capstan shaft.

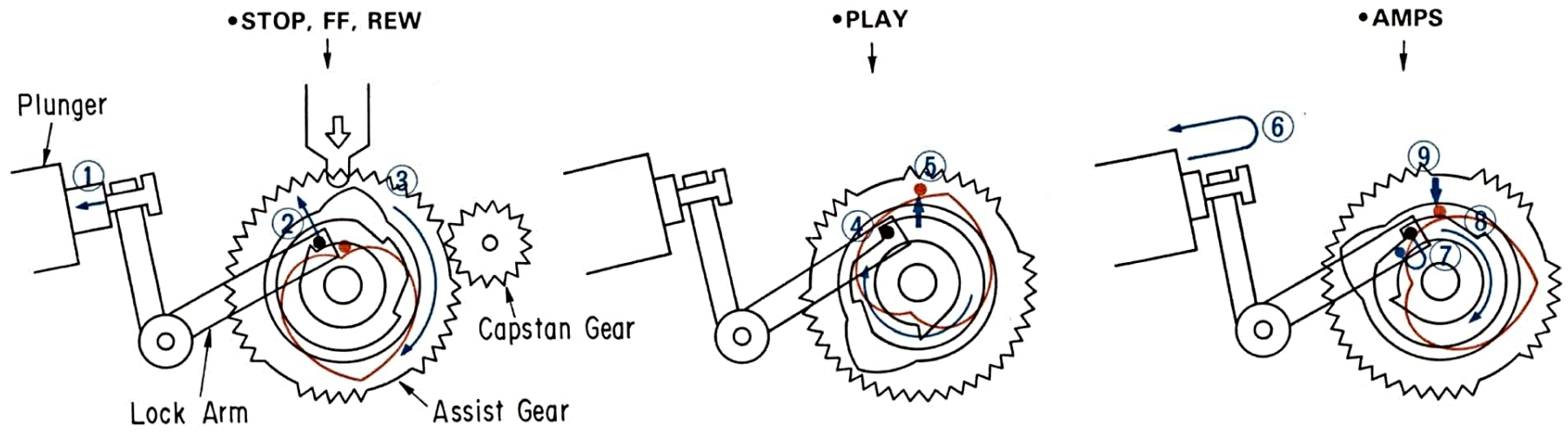
3-2. Rear View of Mechanism Chassis



3-3. Front View of Mechanism Chassis

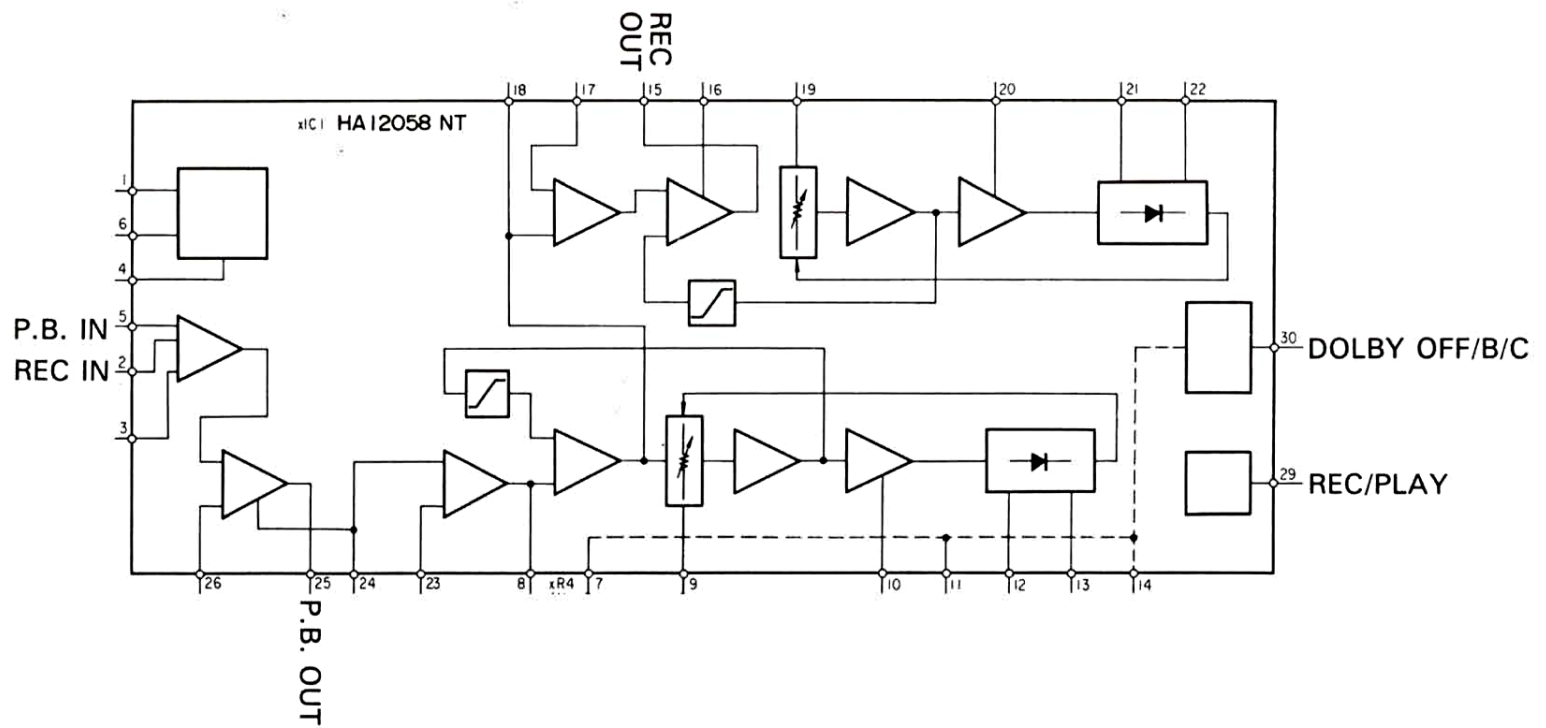


3-4. Cam Positions in the Modes of PLAY, FF, REW & STOP

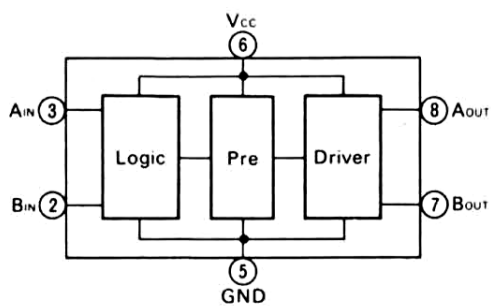


4. INTERIOR BLOCK DIAGRAM OF IC

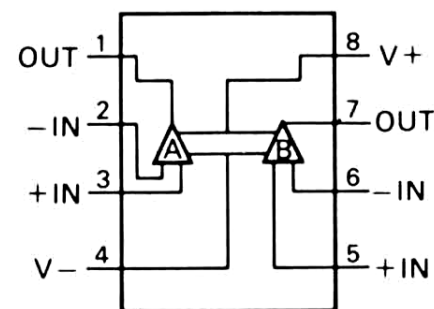
•HA12058NT (Dolby Noise Reduction IC)



•BA6208 (Motor Drive IC)



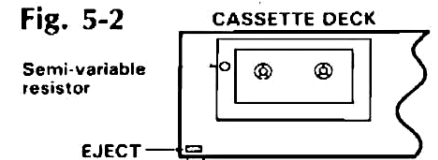
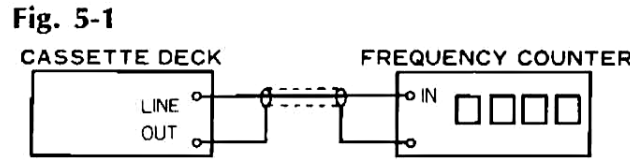
•M5218P (OP AMP. IC)



5. ADJUSTMENTS

5-1. Tape Speed Adjustment

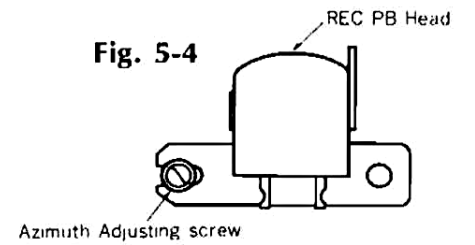
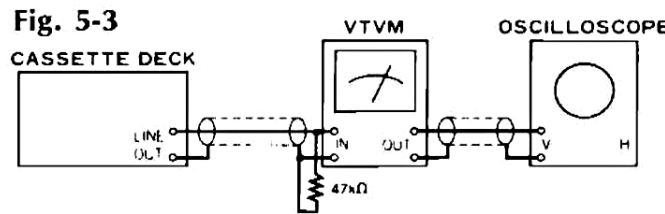
- Note:** 1. Use Sansui Test Tape, SCT-S3K (3 kHz signal is recorded on the tape).
 2. Connections are shown in Fig. 5-1.
 3. Remove the cassette lid. (See Fig.10-2 on page 15)



| STEP | SUBJECT | MEASURE OUTPUT | SETTING | ADJUSTMENT | ADJUST FOR | REMARKS |
|------|-----------------|-------------------------------|---------------------------------|---|---------------|------------------------|
| 1. | Tape Speed Adj. | LINE OUT Frequency counter | Playback the Test Tape SCT-S3K. | Turn semi-variable resistor as Fig. 5-2 | 3000Hz ± 45Hz | Use small screw driver |

5-2. Playback Adjustment

- Note:** 1. Before this adjustment, clean REC/P.B. head surface.
 2. For this adjustment, use Sansui Test Tape, SCT-F10K, and SCT-L400N.
 3. Connections are shown in Fig. 5-3.
 4. DOLBY NR..... OFF
 5. Remove the cassette lid. (See Fig. 10-2 on page 15)

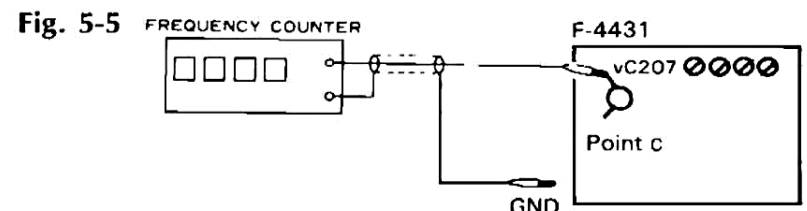


| STEP | SUBJECT | MEASURE OUTPUT | SETTING | ADJUSTMENT | ADJUST FOR | REMARKS |
|------|-------------------------|--|---|---|--------------------------------|---|
| 1. | REC/P.B. Head Adj. | LINE OUT VTVM and Scope | Set TAPE SELECTOR to NORMAL Playback the TEST TAPE SCT-F10K | Adjust the azimuth adjusting screw in Fig. 5-4. | Maximum output from L and R-ch | After this adjustment, lock the screw with paint. |
| 2. | Playback Level Pre Adj. | Between Point (A)/(B) (vC14) & GND VTVM and Scope | Set TAPE SELECTOR to NORMAL Playback the TEST TAPE SCT-L400N | Adjust each vVR101 (F-4430) of L-CH and R-CH | 10mV ± 2dB | See Top View on page 12. |
| 3. | Playback Level Adj. | LINE OUT VTVM and Scope | Same as above | Adjust each vVR2 (F-4440) of L-CH and R-CH | 500mV ± 2dB | See Top View on page 12. |

5-3. Recording Adjustment

1) Bias Frequency Adjustment

- * Perform this adjustment when bias pot or REC/P.B. head replaced.
Note: 1. For this adjustment, use Sansui Test Tape, SCT-MA.
 2. Connections are shown in Fig. 5-5.
 3. DOLBY NR..... OFF

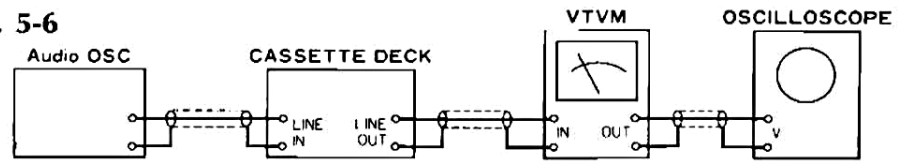


| STEP | SUBJECT | MEASURE OUTPUT | SETTING | ADJUSTMENT | ADJUST FOR | REMARKS |
|------|---------------------|--|---|-----------------------|--------------|--------------------------|
| 1. | Bias Frequency Adj. | Between Point (C) (vC207) & GND Frequency counter | Load Test Tape SCT-MA and set TAPE SELECTOR to METAL. Depress REC button. | Adjust vL202 (F-4431) | 85kHz ± 5kHz | See Top View on page 12. |

2) REC Level & Frequency Response Adjustment

- Note:** 1. Connections are shown in Fig. 5-6.
 2. DOLBY NR..... OFF
 3. REC LEVEL..... Maximum

Fig. 5-6



| STEP | SUBJECT | INPUT SIGNAL | MEASURE OUTPUT | SETTING | ADJUSTMENT | REMARKS |
|------|--------------------------------|---|--------------------------|---|---|--------------------------|
| 1. | REC Level Adj. | Feed 1kHz, 150mV from S.G. into LINE IN. | LINE OUT, VTVM and Scope | Load the Test Tape SCT-SA and set TAPE SELECTOR to HIGH. 1. Depress PAUSE and REC button. 2. Adjust the Audio S.G. output level for obtaining 230mV on VTVM. 3. Push off the PAUSE button, then record the 1kHz signal. 4. Play back the 1kHz signal. 5. Confirm that the output levels on both channels are 230mV ± 2dB on VTVM. | 1. If not, turn each vVR202 (F-4431) of L-CH and R-CH until output level 230mV ± 2dB on both channels are obtained. | See Top View on page 12. |
| 2. | Frequency Response (BIAS) Adj. | Feed 1kHz 15mV (-20dB) and 10kHz 15mV (-20dB) from S.G. into LINE IN. | Seme as above | Load the Test Tape SCT-SA and set TAPE SELECTOR to HIGH. 1. Record the 1kHz and 10kHz signals from S.G. 2. Play back the 1kHz and 10kHz signals, then confirm that both output levels equal. | 1. If not, adjust each vVR203 (F-4431) of L-CH and R-CH slightly until the output levels will be equal. | See Top View on page 12. |
| 3. | Metal REC Level Adj. | Feed 1kHz 150mV from S.G. into LINE IN. | LINE OUT VTVM and Scope | Load the Test Tape SCT-MA and set TAPE SELECTOR to METAL. 1. Depress PAUSE and REC button. 2. Adjust the Audio S.G. output level for obtaining 230mV on VTVM. 3. Push off the PAUSE button, then record the 1kHz signal. 4. Play back the 1kHz signal. 5. Confirm that the output levels on both channels are 230mV ± 2dB on VTVM. | 1. If not, adjust each vVR201 (F-4431) of L-CH and R-CH until output level 230mV ± 2dB on both channels are obtained. | See Top View on page 12. |

◆ List of Sansui Test Tape

| Name of TEST TAPE | Recorded Frequency | Description | Equivalent To |
|-------------------|--------------------|---|---------------|
| SCT-F40 | 40 Hz | Playback Frequency Response Check | — |
| SCT-F1K | 1 kHz | High Frequency Equalization Check | — |
| SCT-F10K | 10 kHz | REC/PB Head Adjustment | — |
| SCT-L400N | 400 Hz | Playback Level and Indicator Level Adjustment | — |
| SCT-S3K | 3 kHz | Speed Check and Wow & Flutter Check | — |
| *SCT-AD NORMAL | — | Recording Bias Adjustment | TDK AD |
| *SCT-SA HIGH | — | REC/PB Level Adjustment | TDK SA |
| *SCT-MA (METAL) | — | Frequency Response Check | TDK MA |

•Note: Some reference tapes marked * are not supplied. As these are equivalent to ones indicated above, please obtain these blank tapes on your side as possible.

◆ TAPE SELECTOR Position

| NORMAL | |
|--------|--|
| FUJI | FL, FX I |
| MAXELL | UL, UD, XL I, XL I-S |
| TDK | D, AD, OD |
| SCOTCH | TARTAN CRYSTAL MASTER 120 |
| SONY | AHF, BHF, CHF Low-Noise |
| AGFA | SUPER SUPER COLOR SUPER FERRO DYNAMIC. |
| BASF | LN Super LH I |

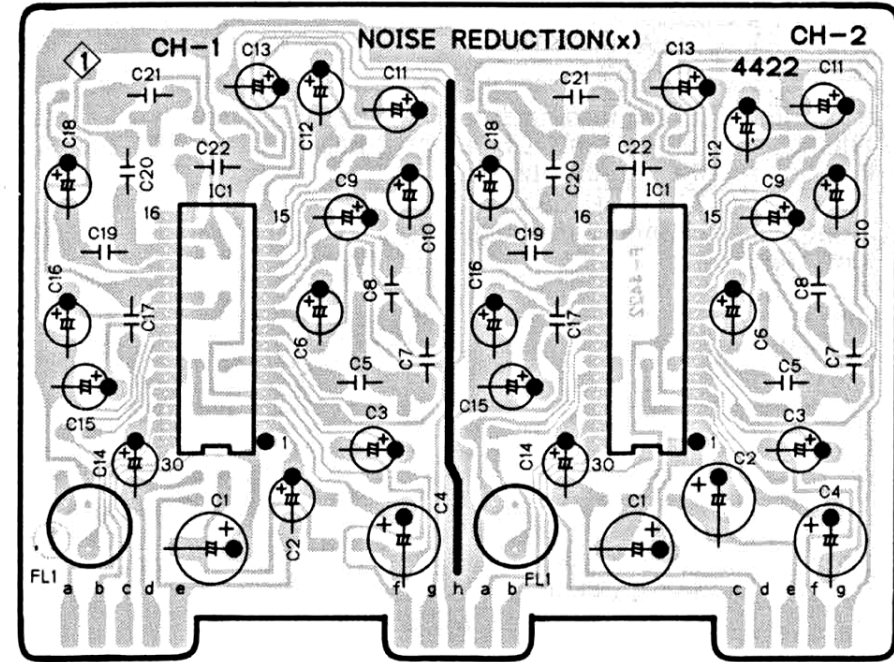
| HIGH | |
|--------|----------------|
| FUJI | FX II |
| MAXELL | XL II, XL II-S |
| TDK | SA, SA-X |
| SCOTCH | MASTER 70 |
| SONY | JHF |
| AGFA | STEREO CHROM |
| BASF | SCR |

| METAL | |
|--------|----------|
| MAXELL | MX |
| TDK | MA-R, MA |
| SCOTCH | Metafine |
| SONY | METALLIC |

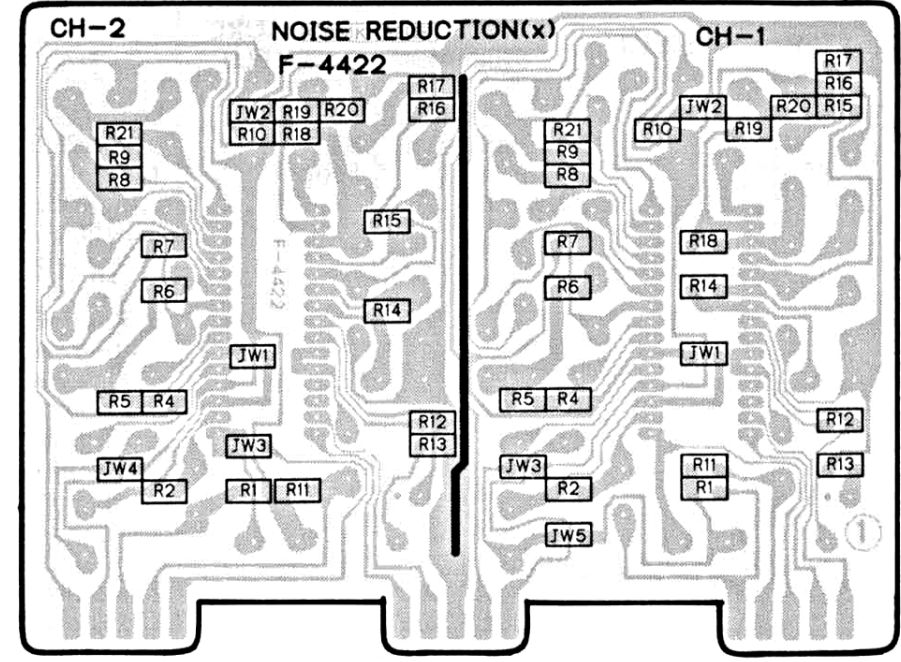
6. PARTS LOCATION & PARTS LIST

6-1. F-4422 Noise Reduction Circuit Board (Stock No. 00777801)

Top View (Component Side) with Bottom Side Pattern



Chip Parts View with Bottom Side Pattern



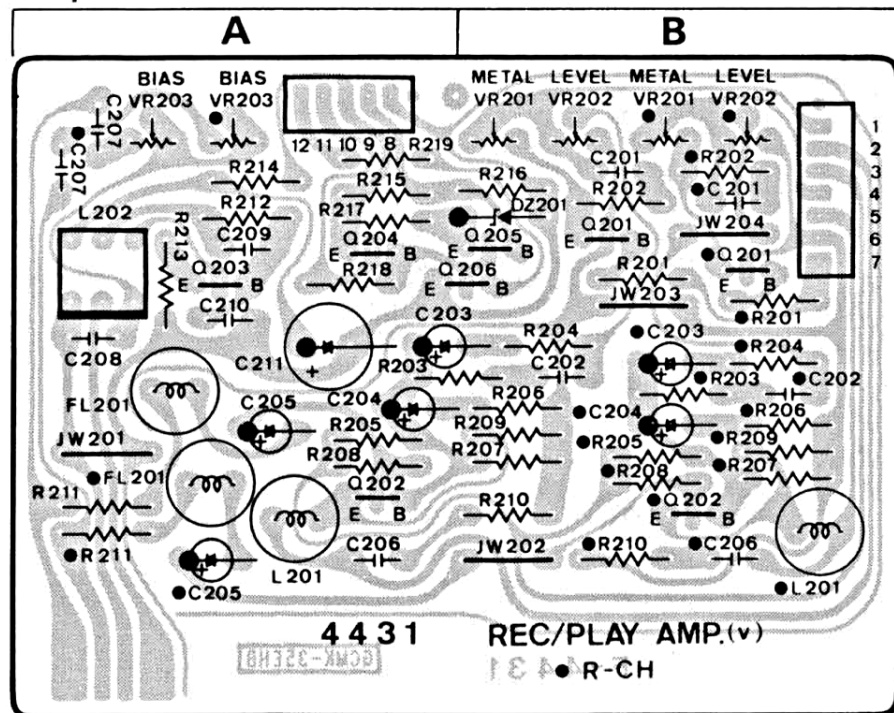
Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------------|
| •IC | | |
| xIC1 | 46671900 | HA12058NT |
| xJW1 | 46741100 | Cross Conductor (Chip) |
| xJW2 | 46741100 | Cross Conductor (Chip) |
| xJW3 | 46741100 | Cross Conductor (Chip) |
| xJW4 | 46741100 | Cross Conductor (Chip) |
| xJW5 | 46741100 | Cross Conductor (Chip) |
| xR1 | 46754000 | 470kΩ 1/8W Chip R. |
| xR2 | 46749400 | 5.6kΩ 1/8W Chip R. |
| xR4 | 46749800 | 8.2kΩ 1/8W Chip R. |
| xR5 | 46748800 | 3.3kΩ 1/8W Chip R. |
| xR6 | 46750900 | 24kΩ 1/8W Chip R. |
| xR7 | 46749500 | 6.2kΩ 1/8W Chip R. |
| xR8 | 46752200 | 82kΩ 1/8W Chip R. |

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------|
| xR9 | 46754800 | 1MΩ 1/8W Chip R. |
| xR10 | 46752200 | 82kΩ 1/8W Chip R. |
| xR11 | 46752200 | 82kΩ 1/8W Chip R. |
| xR12 | 46748800 | 3.3kΩ 1/8W Chip R. |
| xR13 | 46747600 | 1kΩ 1/8W Chip R. |
| xR14 | 46752200 | 82kΩ 1/8W Chip R. |
| xR15 | 46749500 | 6.2kΩ 1/8W Chip R. |
| xR16 | 46752200 | 82kΩ 1/8W Chip R. |
| xR17 | 46746800 | 470Ω 1/8W Chip R. |
| xR18 | 46749200 | 4.7kΩ 1/8W Chip R. |
| xR19 | 46750000 | 10kΩ 1/8W Chip R. |
| xR20 | 46752000 | 68kΩ 1/8W Chip R. |
| xR21 | 46754800 | 1MΩ 1/8W Chip R. |
| xFL1 | 46177600 | TRAP FILTER, 19.8kHz |

6-2. F-4431 Rec Amp Circuit Board (Stock No. 00779001)

Component Side



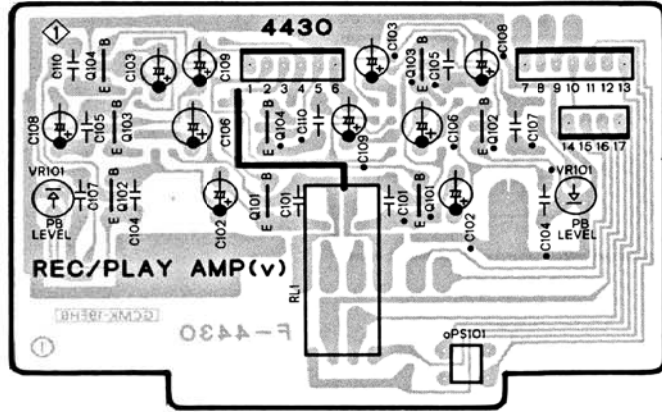
Parts List

| Parts No. | Stock No. | Description |
|--------------|-------------|---------------------------------------|
| •Transistor | | |
| vQ201 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ202 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ203 | 46725801 | 2SC1627A |
| vQ204 | 03086101 | 2SD357 |
| vQ205 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ206 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| •Zener Diode | | |
| vDZ201 | 46109400 | 05Z3.0-Y |
| vC208 | 46657000 | 3900pF 100V F.C. |
| vFL201 | 42904400 | Peaking Coil |
| vL201 | 46313900 | Inductor 2.7mH |
| vL202 | 46362200 | Bias OSC Coil |
| vVR201 | 07262200 | 100kΩ(B) S.V.R., Metal Rec Level Adj. |
| vVR202 | 07262100 | 50kΩ(B) S.V.R., Rec Level Adj. |
| vVR203 | 07262200 | 100kΩ(B) S.V.R., Bias Adj. |

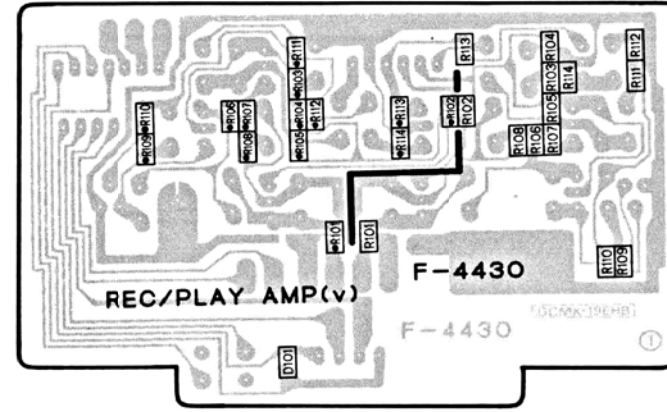
•Note: On this circuit board, the left channel is specified by "●" mark on top of the parts No.

6-3. F-4430 Playback Amp Circuit Board (Stock No. 00778901)

Top View (Component Side) with Bottom Side Pattern



Chip Parts View with Bottom Side Pattern



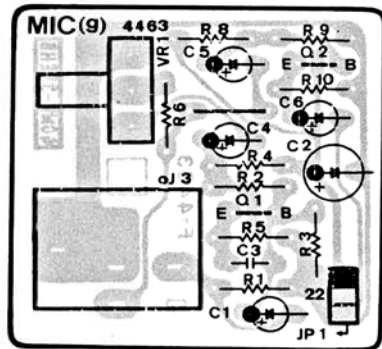
Parts List

| Parts No. | Stock No. | Description |
|-------------|-------------|--------------------|
| •Transistor | | |
| vQ101 | 46359801 | 2SC2001 |
| vQ102 | 46577801 | 2SC2320L |
| vQ103 | 46577801 | 2SC2320L |
| vQ104 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| •Diode | | |
| vD101 | 46852000 | RLS-73 |
| vR101 | 46742800 | 10Ω 1/8W Chip R. |
| vR102 | 46749200 | 4.7kΩ 1/8W Chip R. |
| vR103 | 46753200 | 220kΩ 1/8W Chip R. |
| vR104 | 46751600 | 47kΩ 1/8W Chip R. |
| vR105 | 46750400 | 15kΩ 1/8W Chip R. |

| Parts No. | Stock No. | Description |
|-----------|-------------|----------------------------|
| vR106 | 46753200 | 220kΩ 1/8W Chip R. |
| vR107 | 46744000 | 33Ω 1/8W Chip R. |
| vR108 | 46747800 | 1.2kΩ 1/8W Chip R. |
| vR109 | 46746800 | 470Ω 1/8W Chip R. |
| vR110 | 46752800 | 150kΩ 1/8W Chip R. |
| vR111 | 46748600 | 2.7kΩ 1/8W Chip R. |
| vR112 | 46748400 | 2.2kΩ 1/8W Chip R. |
| vR113 | 46750000 | 10kΩ 1/8W Chip R. |
| vR114 | 46753200 | 220kΩ 1/8W Chip R. |
| vVR101 | 46839300 | 1kΩ S.V.R., P.B Level Adj. |
| vRL101 | 11504700 | Relay |
| | or 11504701 | Relay |

6-4. F-4463 Mic Amp Circuit Board (Stock No. 00783701)

Component Side

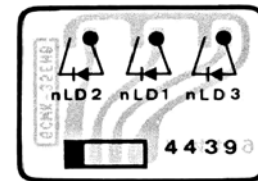


Parts List

| Parts No. | Stock No. | Description |
|-------------|-------------|-------------------|
| •Transistor | | |
| gQ1 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| gQ2 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| gVR1 | 07106701 | 20kΩ(A) V.R., MIC |
| oJ3 | 46502200 | JACK, MIC |

6-5. F-4439 Rec, Play & Pause Indi. Circuit Board

Component Side

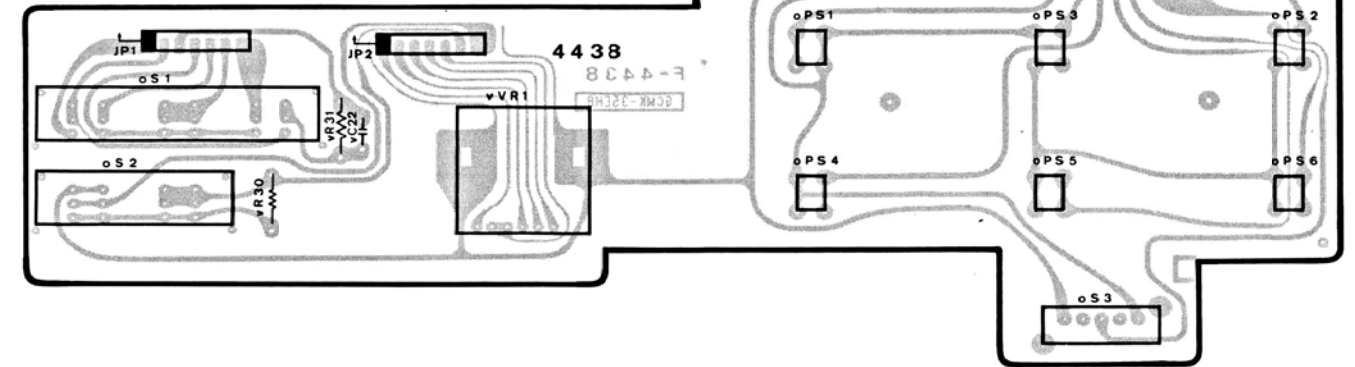


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------|
| •LED | | |
| nLD1 | 46176900 | TLS-123 |
| nLD2 | 07251000 | TLY-123 |
| nLD3 | 07250900 | TLG-123A |

6-6. F-4438 Control SW. Circuit Board

Component Side



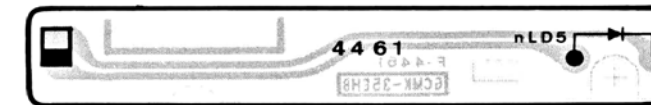
Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-----------------|
| oPS1 | 46133300 | Push SW., REW |
| oPS2 | 46133300 | Push SW., F.FWD |
| oPS3 | 46133300 | Push SW., PLAY |
| oPS4 | 46133300 | Push SW., REC |
| oPS5 | 46133300 | Push SW., STOP |
| oPS6 | 46133300 | Push SW., PAUSE |

| Parts No. | Stock No. | Description |
|-----------|-----------|---------------------------|
| oS1 | 46917200 | Push SW., TAPE SELECTOR |
| oS2 | 46916900 | Push SW., DOLBY NR SYSTEM |
| oS3 | 46178400 | Silde SW., TIMER |
| vVR1 | 46917400 | 50kΩ V.R., REC LEVEL |

6-7. F-4461 Indicator Circuit Board

Component Side

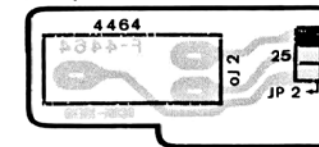


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|-------------|
| •LED | | |
| nLD5 | 46921900 | LD-702GG |

6-8. F-4464 Phones Jack Circuit Board

Component Side

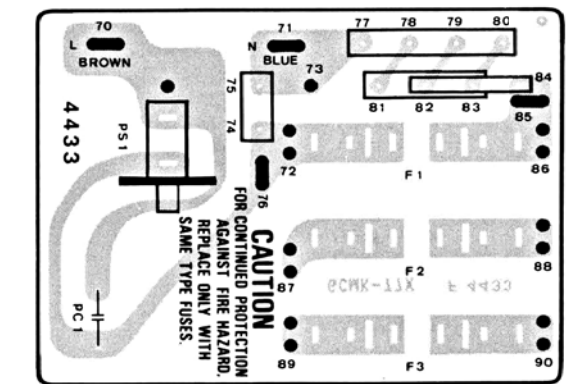


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|--------------|
| oJ2 | 46265700 | JACK, PHONES |

6-9. F-4433 Power SW. Circuit Board

Component Side

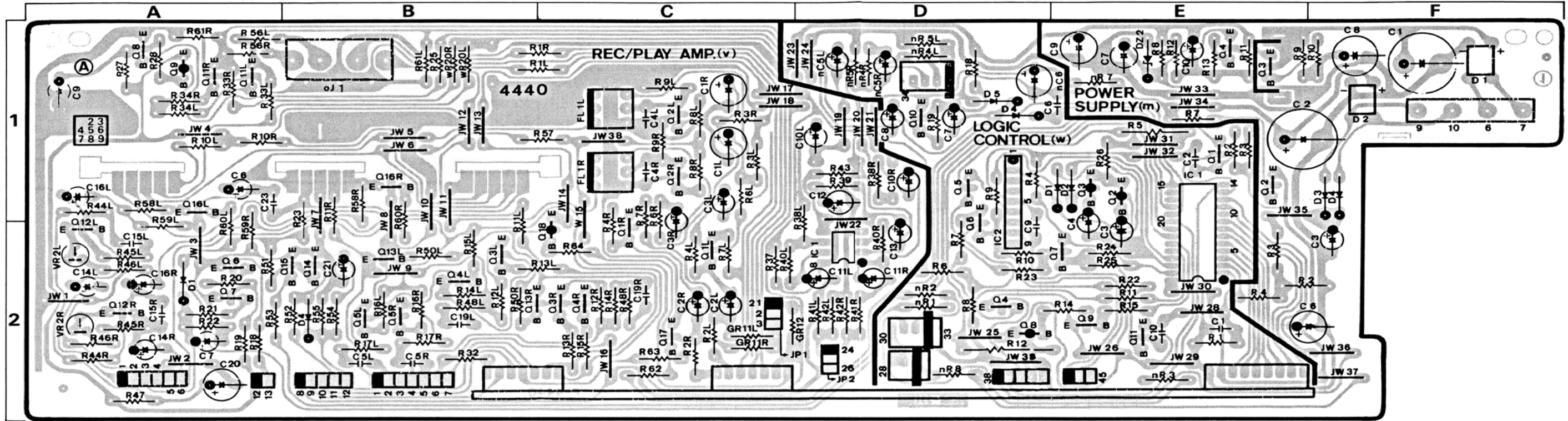


Parts List

| Parts No. | Stock No. | Description |
|-----------|-----------|------------------|
| Δ pC1 | 46425800 | 0.01μF 400V C.C. |
| Δ pS1 | 46360300 | Push SW., POWER |

6-10. F-4440 Main Circuit Board (Stock No. 00779201)

Component Side



Parts List

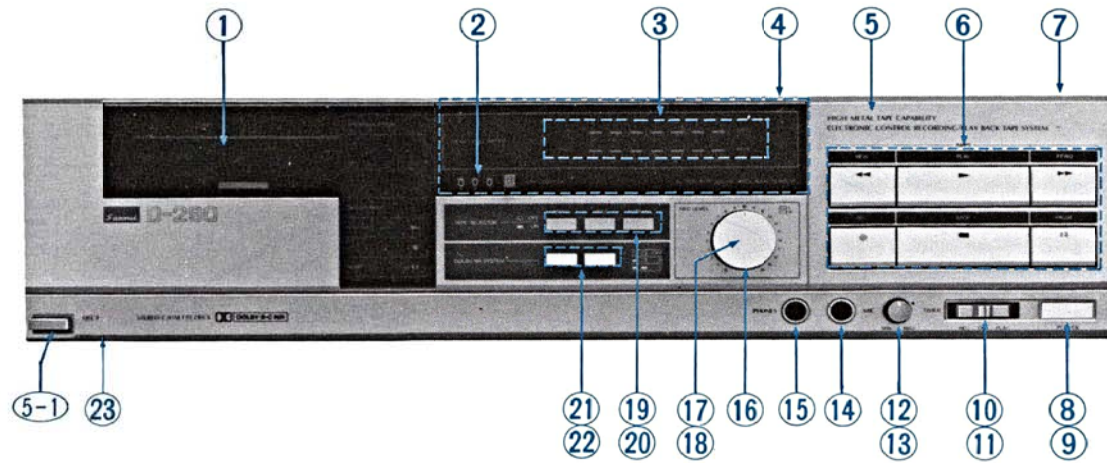
| Parts No. | Stock No. | Description |
|---------------------|-------------|---|
| •Transistor | | |
| △ mQ2 | 03085201 | 2SD438 |
| △ mQ3 | 03083901 | 2SD313AL |
| mQ4 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| •Diode | | |
| △ mD1 | 46273600 | DBB10-B |
| △ mD2 | 46273600 | DBB10-B |
| △ mD3 | 03117600 | 1S2473T77 |
| △ mD4 | or 46086000 | 1S1588TP-3 |
| △ | 03117600 | 1S2473T77 |
| △ | or 46086000 | 1S1588TP-3 |
| •Zener Diode | | |
| mDZ2 | 46111500 | 05Z5.6-Y |
| △ mR7 | 00135300 | 47Ω 1/2W N.I.R. |
| ○J1 | 46371500 | 4P TERMINAL BOARD, LINE IN/ LINE OUT |
| •Transistor | | |
| vQ1 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ2 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ3 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ4 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ5 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ6 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ7 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ8 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |

| Parts No. | Stock No. | Description |
|--------------------|-------------|-----------------------------|
| vQ9 | 46367001 | 2SA1115 |
| | or 46392001 | 2SA1175 |
| vQ11 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ12 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ13 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ14 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ15 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| vQ16 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| •IC | | |
| vic1 | 46580100 | M5218P |
| •Diode | | |
| vd1 | 03117600 | 1S2473T77 |
| | or 46086000 | 1S1588TP-3 |
| vd4 | 03117600 | 1S2473T77 |
| | or 46086000 | 1S1588TP-3 |
| △ vR18 | 46681300 | 10Ω 1/4W F.R. |
| vFL1 | 46177500 | Dolby Filter |
| vVR2 | 46839200 | 470Ω S.V.R., P.B Level Adj. |
| •Transistor | | |
| wQ1 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| wQ2 | 46719800 | DTA124 |
| wQ3 | 46719800 | DTA124 |
| wQ4 | 46359801 | 2SC2001 |
| wQ5 | 03085201 | 2SD438 |
| wQ6 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |

| Parts No. | Stock No. | Description |
|---------------|-------------|---------------|
| wQ7 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| wQ8 | 46359701 | 2SA952 |
| wQ9 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| wQ10 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| wQ11 | 46367101 | 2SC2603 |
| | or 46391901 | 2SC2785 |
| •IC | | |
| wIC1 | 46916800 | TC9310N-046 |
| wIC2 | 46149600 | BA6208 |
| •Diode | | |
| wD1 | 03117600 | 1S2473T77 |
| | or 46086000 | 1S1588TP-3 |
| wD2 | 03117600 | 1S2473T77 |
| | or 46086000 | 1S1588TP-3 |
| wD4 | 03117600 | 1S2473T77 |
| | or 46086000 | 1S1588TP-3 |
| wD5 | 03117600 | 1S2473T77 |
| | or 46086000 | 1S1588TP-3 |
| △ wR5 | 46242000 | 47Ω 1W N.I.R. |
| △ wR12 | 00191900 | 82Ω 2W N.I.R. |

7. OTHER PARTS

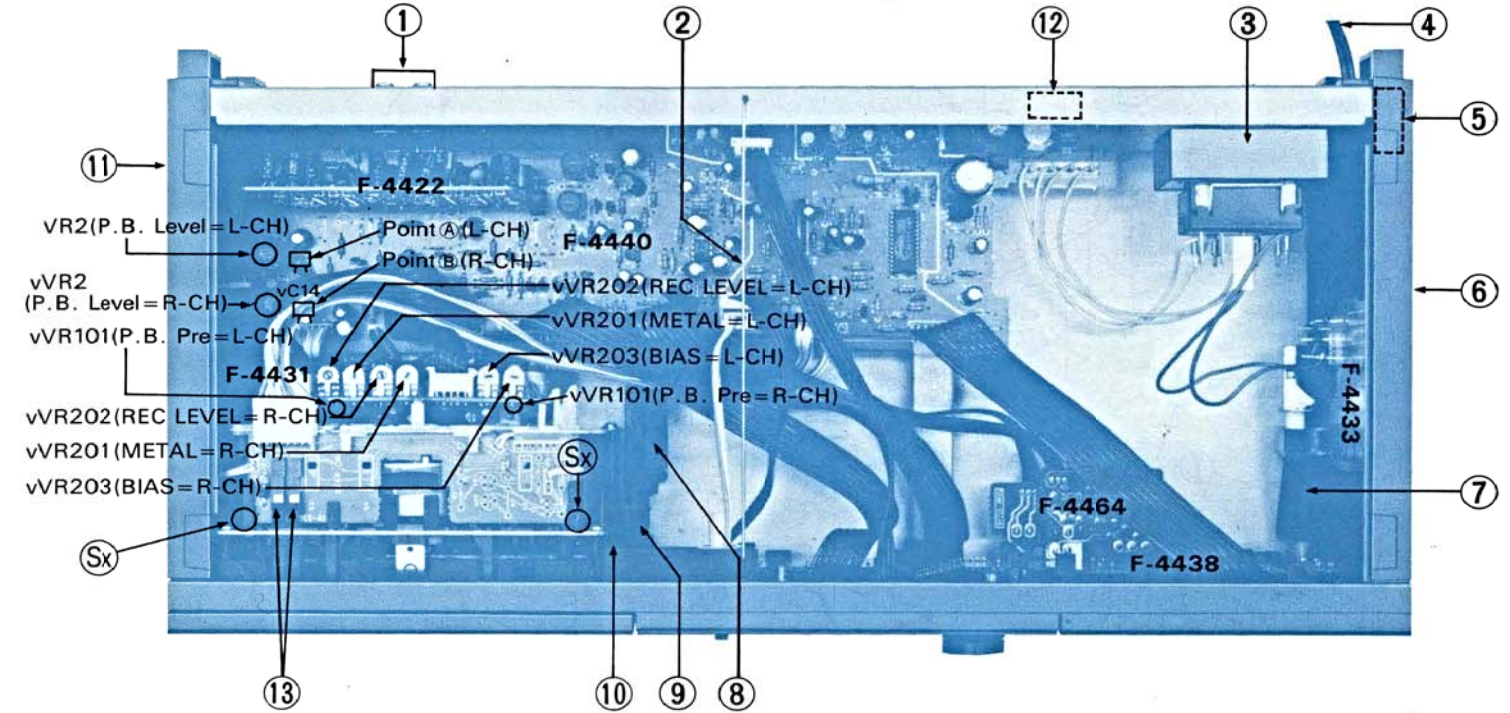
7-1. Front View



Parts List

| Parts No. | Stock No. | Description |
|-----------------------------|-----------|--|
| <Common Parts> | | |
| 2 | 46899300 | Tape Counter |
| 3 | 46917500 | LED LEVEL METER (LT-1115) |
| 4 | 47484200 | Meter Window Cover |
| 5-1 | 47350900 | Knob, EJECT |
| 6 | 46133300 | Push SW., REW, F.FWD, PLAY, REC, STOP, PAUSE |
| 8 | 47257100 | Knob, POWER |
| 9 | 46360300 | Push SW., POWER |
| 10 | 47353000 | Slide Knob, TIMER |
| 11 | 46178400 | Slide SW., TIMER |
| 13 | 07106701 | 20kΩ(A) V.R., MIC |
| 14 | 46502200 | Jack, MIC |
| 15 | 46265700 | Jack, PHONES |
| 18 | 46917400 | 50kΩ V.R., REC LEVEL |
| 19 | 47353200 | Knob, TAPE SELECTOR |
| 20 | 46917200 | Push SW., TAPE SELECTOR |
| 21 | 47353100 | Knob, DOLBY NR SYSTEM |
| 22 | 46916900 | Push SW., DOLBY NR SYSTEM |
| 23 | 47352100 | Spring, EJECT |
| <Silver Model> | | |
| 1 | 47379000 | Cassette Lid Ass'y |
| 5 | 47427600 | Front Panel Ass'y |
| 7 | 47338600 | Bonnet |
| 12 | 47496000 | Knob, MIC |
| 16 | 47256610 | Knob, REC LEVEL (L) |
| 17 | 47502400 | Knob, REC LEVEL (R) |
| <Black Model> | | |
| 1 | 47379100 | Cassette Lid Ass'y |
| 5 | 47427700 | Front Panel Ass'y |
| 7 | 47352300 | Bonnet |
| 12 | 07680600 | Knob, MIC |
| 16 | 47427400 | Knob, REC LEVEL (L) |
| 17 | 47502500 | Knob, REC LEVEL (R) |

7-2. Top View

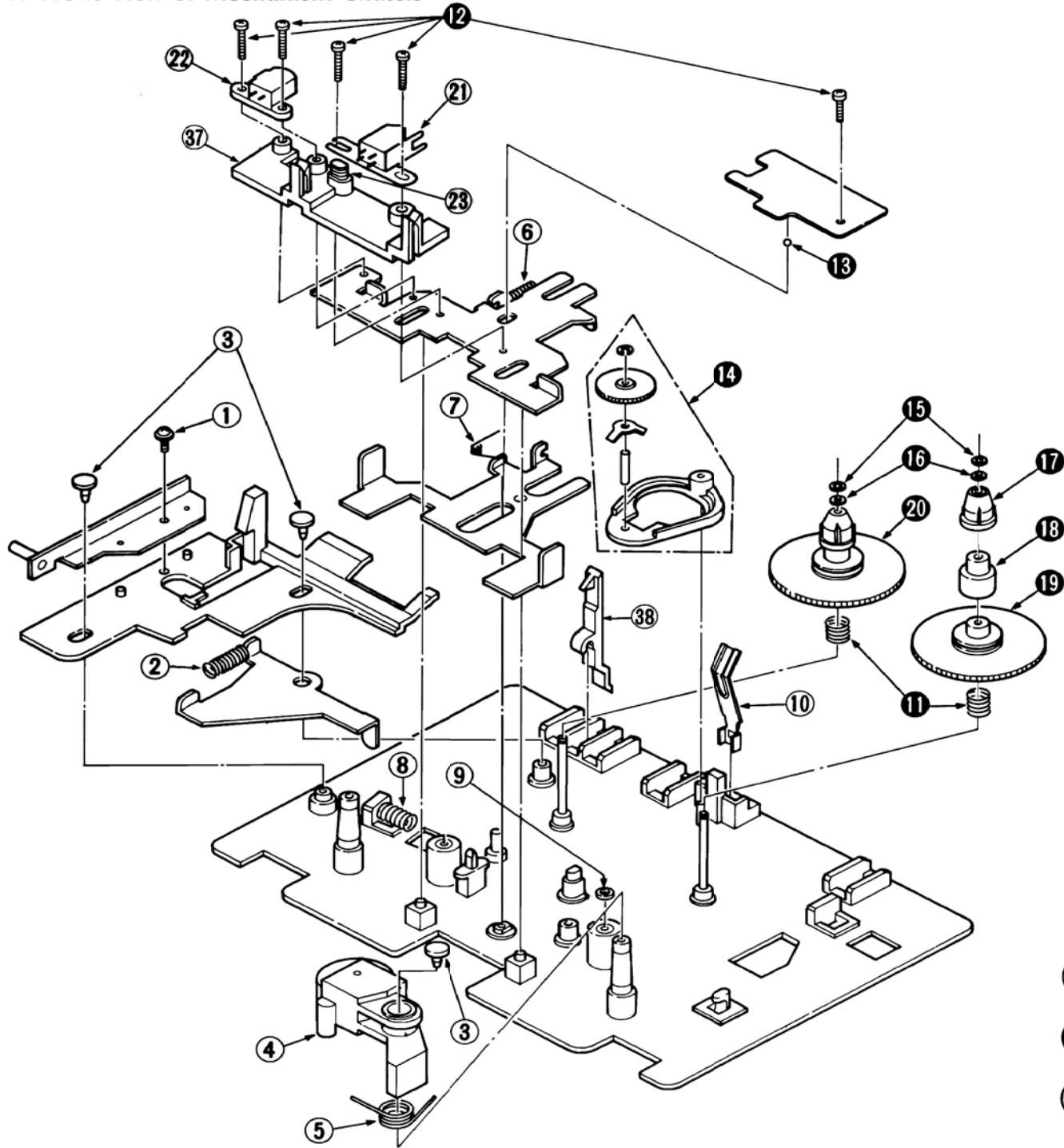


Parts List

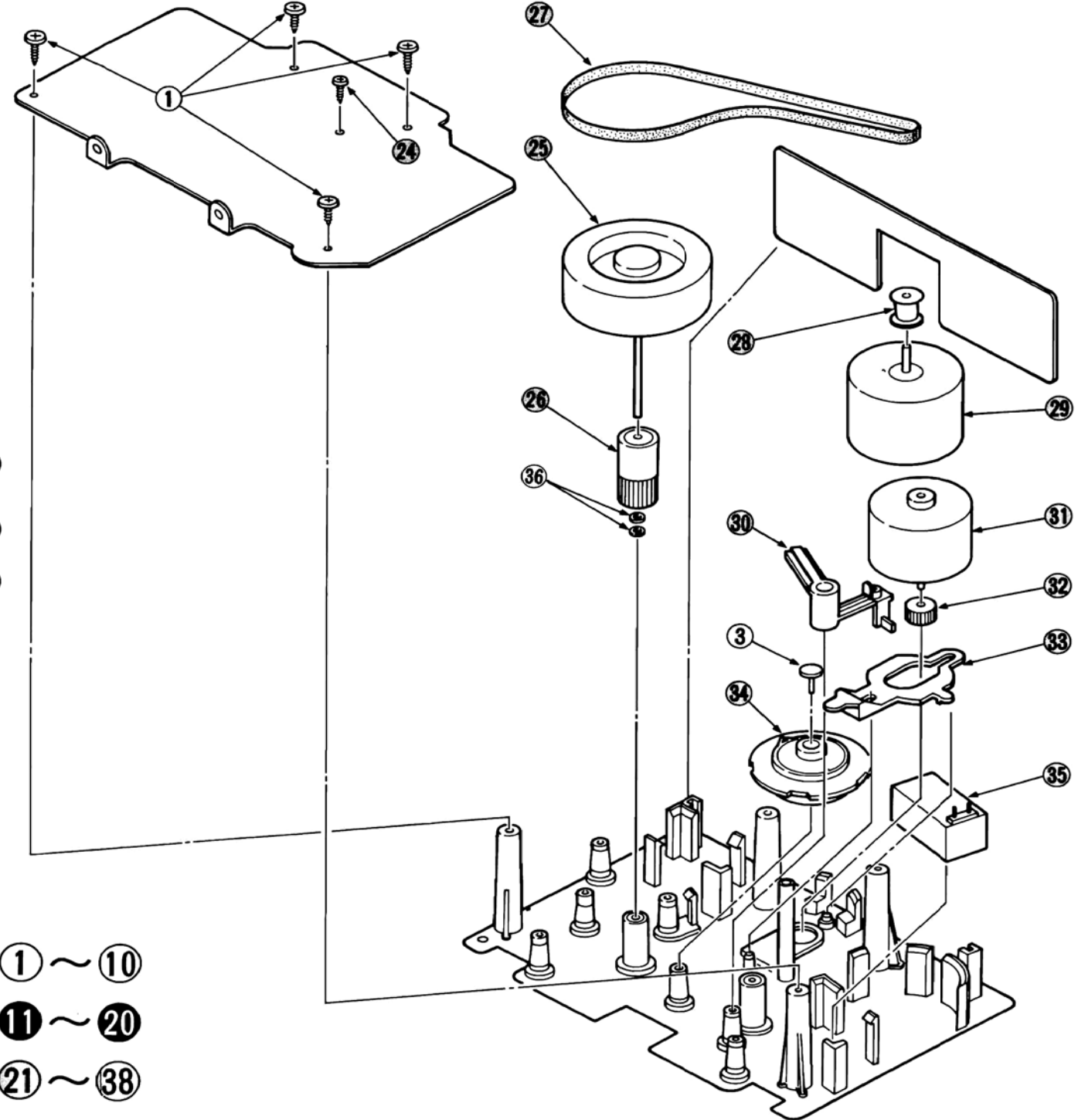
| Parts No. | Stock No. | Description |
|-----------|-----------|--------------------------------------|
| 1 | 46371500 | 4P Terminal Board, LINE IN/LINE OUT |
| 2 | 47103100 | Tention Wire |
| 3 | 15015201 | Power Transformer (XX) |
| 3 | 15015202 | Power Transformer (UL, CSA) |
| 3 | 15015205 | Power Transformer (EU, BS, AS) |
| 4 | 38005700 | Power Supply Cord (XX, UL, CSA) |
| 4 | 38004500 | Power Supply Cord (EU) |
| 4 | 38004300 | Power Supply Cord (BS) |
| 4 | 07204200 | Power Supply Cord (AS) |
| 5 | 47157300 | AC Cord Cover |
| 6 | 47174920 | Right Side Panel Ass'y |
| | 47491000 | Right Side Panel Ass'y |
| | | <Silver Model> |
| | | <Black Model> |
| 7 | 47351100 | Joint Shaft |
| 8 | 46370300 | Eject Damper Ass'y |
| 9 | 47375700 | Damper Holder |
| 10 | 47378200 | Counter Belt |
| 11 | 47174810 | Left Side Panel Ass'y |
| | | <Silver Model> |
| | | <Black Model> |
| 12 | 07204700 | Slide SW., Voltage Selector (EU, BS) |
| 13 | 47292700 | Leaf Switch, harf |

8. EXPLODED VIEW OF MECHANISM ASS'Y & PARTS LIST

8-1. Front View of Mechanism Chassis



8-2. Rear View of Mechanism Chassis



•Shapes of standard mechanical parts

- 1. Pan Head Tapping Screw . . . PT Type
- 2. Washer Head Tapping Screw . . . WT Type
- 3. Pan Head Screw . . . P Type
- 4. Pan Head SEMS A Screw . . . PSA Type
- 5. Pan Head SEMS B Screw . . . PSB Type
- 6. Binding Head SEMS F Screw . . . BSF Type
- 7. Binding Head Screw . . . B Type
- 8. Flat Counter Sunk Head Screw . F Type
- 9. Flat Counter Sunk Wood Screw . . . FC Type
- 10. Round Head Wood Screw . . . RH Type
- 11. Hex. Socket Setscrew . . . SC Type
- 12. Slot Type Setscrew . . . SS Type
- 13. Binding Head SEMS B Screw . . . BSB Type
- 14. Spring Washer . . . S Type
- 15. Plain Washer . . . P Type
- 16. Retaining Ring (E Washer) . E Type
- 17. Toothed Lock Washer (External) . . . TLE Washer
- 18. Wave Washer
- 19. Hexagon Nut H Type Nut

- ① ~ ⑩
- ⑪ ~ ⑳
- ㉑ ~ ㉚

| Parts No. | Stock No. | Description |
|-----------|-----------|--------------------------|
| 1 | 46731200 | Tapping Screw, M2.6 x 8 |
| 2 | 47406000 | Spring, eject |
| 3 | 47420900 | Plastic Tack |
| 4 | 47281800 | Pinchroller Ass'y |
| 5 | 47405500 | Spring, pinchroller |
| 6 | 47406200 | Spring, head base |
| 7 | 47405600 | Spring, head slider |
| 8 | 47405900 | Spring, plunger solenoid |
| 9 | 47404700 | Washer, φ2.5 |

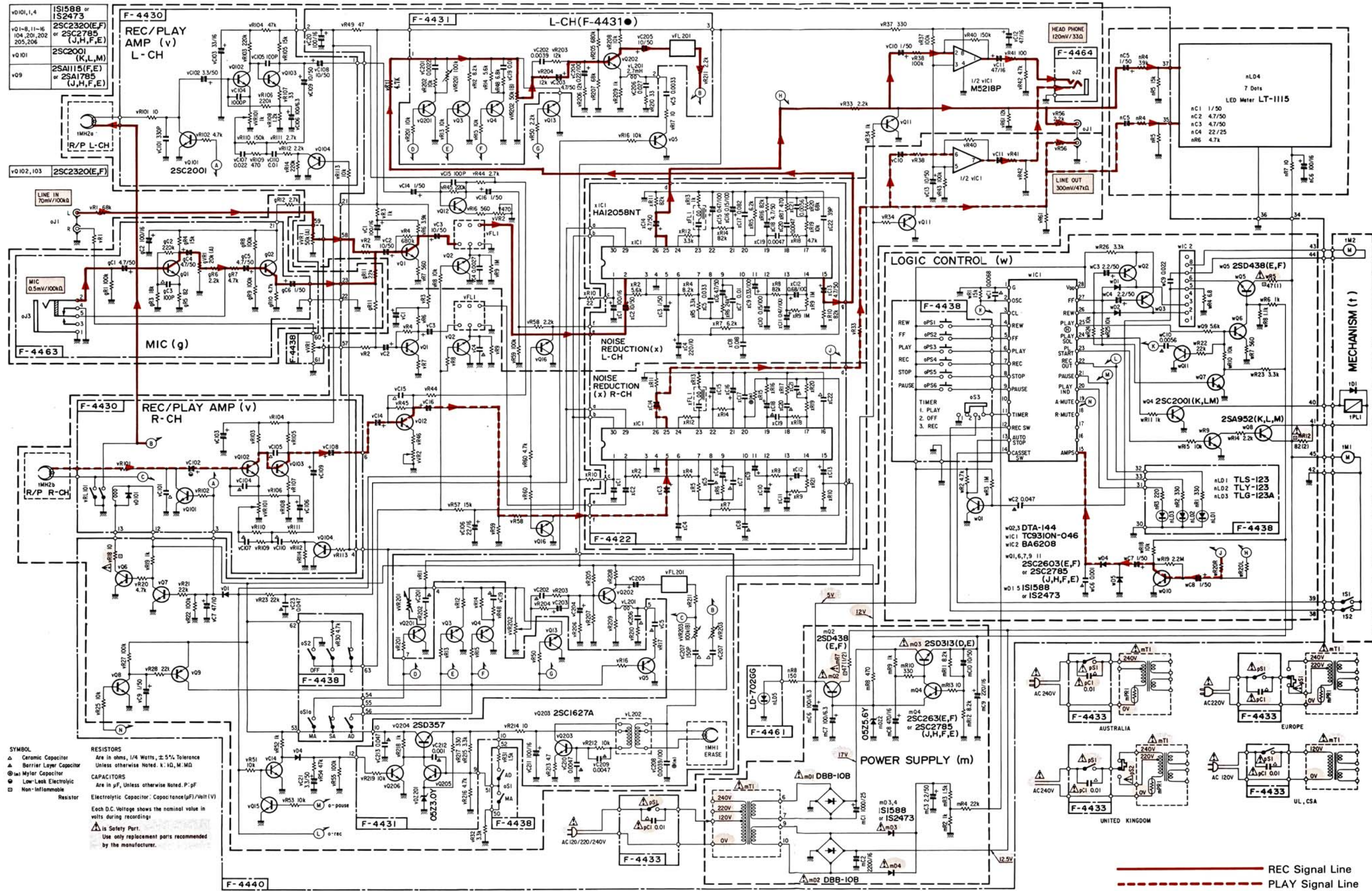
| Parts No. | Stock No. | Description |
|-----------|-----------|-----------------------------|
| 10 | 47293500 | Spring, half |
| 11 | 47405700 | Spring, reel |
| 12 | 00420900 | Binding Head Screw, M2 x 12 |
| 13 | 47404900 | Steel Ball, φ2 |
| 14 | 47405000 | Arm Ass'y |
| 15 | 47404800 | Washer, 1.6 x 3.5 |
| 16 | 47497100 | Washer, d=2.0 |
| 17 | 47281000 | Sprocket |
| 18 | 47281100 | Reel Damper |

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------------|
| 19 | 47283300 | Reel Gear |
| 20 | 47283400 | Reel Gear A |
| 21 | 47155700 | REC/PB Head |
| 22 | 07997400 | Erase Head |
| 23 | 47406100 | Spring, azimuth |
| 24 | 46268900 | Pan Head Deltite Screw, M2.6 x 6 |
| 25 | 47282900 | Flywheel Ass'y |
| 26 | 47281200 | Capstan Gear |
| 27 | 47405100 | Belt |
| 28 | 47283200 | Pulley |

| Parts No. | Stock No. | Description |
|-----------|-----------|--------------------|
| 29 | 46737400 | Capstan Motor |
| 30 | 47281600 | Lock Arm |
| 31 | 46737500 | Reel Motor |
| 32 | 47293100 | Gear, reel motor |
| 33 | 47293800 | Arm (B) |
| 34 | 47283800 | Assist Gear |
| 35 | 47292600 | Plunger Solenoid |
| 36 | 47404600 | Washer, 2.5 x 0.25 |
| 37 | 47284100 | Head Base |
| 38 | 47292400 | Sensor Arm (A) |

9. SCHEMATIC DIAGRAM

*Design and specifications subject to change without notice for improvement.
 *La présentation et les spécifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations éventuelles.
 *Änderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



SYMBOL
 Δ Ceramic Capacitor
 ▽ Barrier Layer Capacitor
 ⊖ Mylar Capacitor
 ⊕ Low-Leak Electrolytic
 □ Non-Inflammable Resistor

RESISTORS
 Are in ohms, 1/4 Watts, ±5% Tolerance
 Unless otherwise noted: k: 10, M: 10⁶
CAPACITORS
 Are in μF, Unless otherwise noted: p: pF
 Each D.C. Voltage shows the nominal value in volts during recording
 ⚠ is Safety Part.
 Use only replacement parts recommended by the manufacturer.

- 2SA952
- 2SC1627
- 2SC2001
- 2SC230L
- 2SD438
- 2SA1115
- 2SC2603
- 2SD313AL
- 2SD357
- 2SA1175
- 2SC2785
- DTA124
- BA6208
- HA1205BNT
- TC9310N-046
- Det. or SHI or Line
- DBB10-B
- 05Z3.0
- 05Z5.6
- 1SS1588TP-3
- 1S2473T77

— REC Signal Line
 - - - PLAY Signal Line

1
 2
 3
 4
 5

10. MAIN PARTS REPLACEMENT (See Exploded View on page 13)

A. Bonnet (See Fig. 10-1)

- 1) Remove two screws (S_A).
- 2) Push the rear side of the bonnet to remove the hooks and then remove bonnet.

B. Bottom Plate

- 1) Remove two screws (S_B). (Fig. 10-1)
 - 2) Push the rear side of the bottom plate to remove the hooks and then remove bottom plate.
- * Install the bottom plate after matching eject spring with Point (A) of bottom plate. (Fig. 10-4)

C. Side Panel L (R) (See Fig. 10-5)

- 1) Remove bonnet and bottom plate.
- 2) Shift the position of the side panel L (R) 1.5 cm in the arrow direction.
- 3) Remove the hooks (2) of the side panel from front panel and then pull it to the arrow direction (3) to remove the side panel L (R).

D. F-4430 and F-4431 Circuit Board

- 1) Remove the bonnet and bottom plate.
- 2) Extract four connectors from circuit boards at mechanism ass'y.
- 3) Remove the protection cover on F-4430 circuit board.
- 4) Loosen two screws fastening F-4430 circuit board.

E. Mechanism Ass'y

- 1) Take off the lid ass'y.
- 2) Remove the bonnet and bottom plate.
- 3) Extract five connectors from circuit boards at mechanism ass'y.
- 4) Remove F-4430 and F-4431 circuit board.
- 5) Remove the side panel L.
- 6) Loosen four screws (S_C) fixing mechanism ass'y. (See Top View on page 12)
- 7) Loosen the screw (S_D) fixing channel to remove the mechanism ass'y. (Fig. 10-1)
- 8) Take off counter belt.

F. Rec/PB Head (21)

- 1) Remove the mechanism ass'y from set.
- 2) Unsolder head read wires.
- 3) Loosen two screws.

G. Pinch roller Ass'y (4)

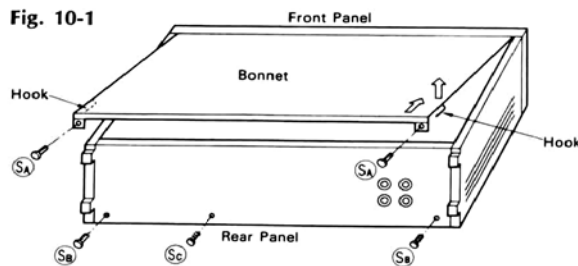
- 1) Remove the mechanism ass'y from set.
- 2) Pull out the lock pin (3).
- 3) Take out the pinchroller ass'y.

H. Reel Gear (19), (20)

- 1) Remove the mechanism ass'y from set.
- 2) Take off two washer (15), (16) to pull out reel gear.

I. Capstan Motor (29), Reel Motor (31), Capstan Belt (27), Flywheel (25), Plunger Solenoid (35)

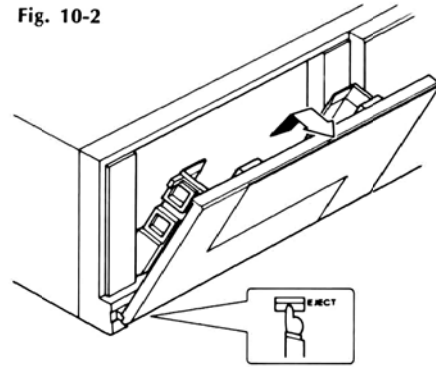
- 1) Remove the F-4430 and F-4431 circuit board.
- 2) Remove the mechanism ass'y from set.
- 3) Loosen five screws (1), (24) fastening sub chassis (36).



J. Lid Ass'y

Depress the EJECT switch to open the cassette holder, and pull the cover up and then toward you to remove it as shown in the figure.

Fig. 10-2



Re-attach the cover to the cassette holder by following the procedure for its removal in reverse.

Fig. 10-3

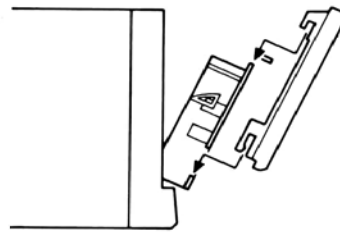


Fig. 10-4

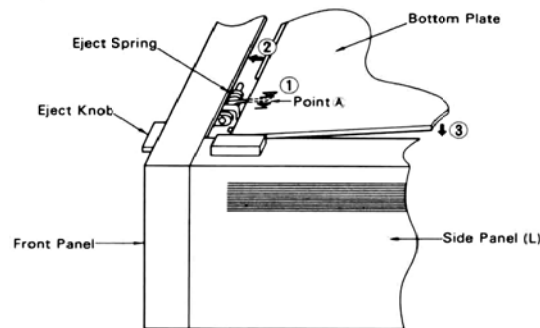
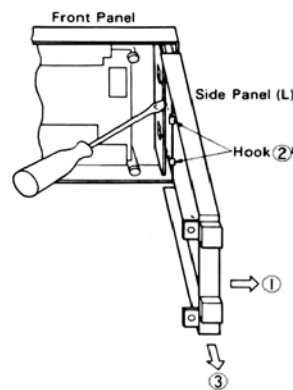
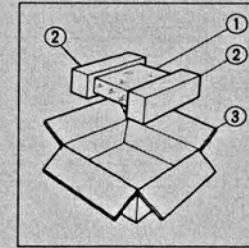


Fig. 10-5



11. PACKING LIST

| Parts No. | Stock No. | Description |
|-----------|-----------|----------------------------|
| 1 | 91263810 | Vinyl Cover |
| 2 | 47379700 | Styrofoam Packing |
| 3 | 47378400 | Carton Case <Silver Model> |
| | 47378500 | Carton Case <Black Model> |



12. ACCESSORY LIST

| Stock No. | Description |
|-------------|-----------------------|
| 07193400 | PJP Cord x 2 |
| or 38103300 | PJP Cord x 2 |
| 94300500 | Head Cleaner |
| 46797900 | Operating Instruction |

Sansui

SANSUI ELECTRIC CO., LTD.:

SANSUI ELECTRONICS CORPORATION:

SANSUI ELECTRONICS (U.K.) LTD.:
SANSUI ELECTRONICS G.M.B.H.:

14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
17150 South Margay Ave. Carson, California 90746 U.S.A.
3036 Koapaka Street Honolulu, Hawaii 96819 U.S.A.

Unit 10A, Lyon Industrial Estate, Rockware Avenue, Geenford, Middx UB6, OAA, England
Pau Ehrich Strasse 8, 6074 Rödermark 2, West Germany