



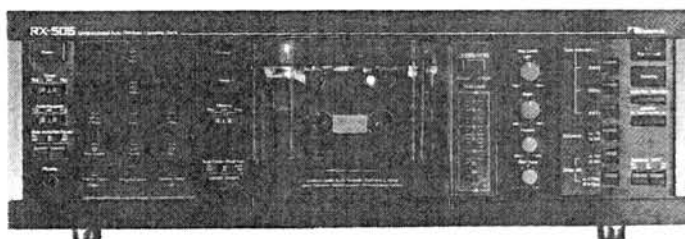
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Service Manual

Nakamichi RX-505 RX-505E

Unidirectional Auto Reverse
Cassette Deck



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1. GENERAL

1.1. Voltage Selector

Voltage selector is installed on the rear panel for Other version of the Nakamichi RX-505/RX-505E. This voltage selector can select either 120 V or 220-240 V at customer's disposal.

1.2. Packing Materials and Owner's Manual

Part No.	Description	Q'ty
0F03741A	Outer Carton (U.S.A., Canada, Australia, Others & Japan)	1
0F03745A	Outer Carton (UK & 220V Class 2)	1
0F03776A	Inner Carton (U.S.A., Canada, Australia, Others & Japan)	1
0F03777A	Inner Carton (UK & 220V Class 2)	1
0F03742A	Packing	2
0D04323A	Owner's Manual RX-505 (U.S.A., Canada & Australia)	1
DA03728A	Owner's Manual RX-505/RX-505E (including French statement) (UK, 220V Class 2 & Others)	1
0D04324A	Owner's Manual RX-505 (Japan)	1

2. MECHANICAL ADJUSTMENTS

2.1. Preparation for Adjustment

Load a Gauge into the RX-505 as follows:

(1) Removal of the Cassette Case Ass'y and Cover Plate Ass'y
Refer to Fig. 2.1.

- (a) Remove the Front Panel Ass'y.
- (b) Turn the Power switch to ON.

- (c) Push the Eject/Load button to slide out the Cassette Compartment.
- (d) Remove F01 (Stopper Ring 3 mm), F02 (Mylar Washer) and F03 (Cassette Case Ass'y).
- (e) Unfasten two screws F04 and remove F05 (Cover Plate Ass'y).

Note: Do not miss the parts removed.

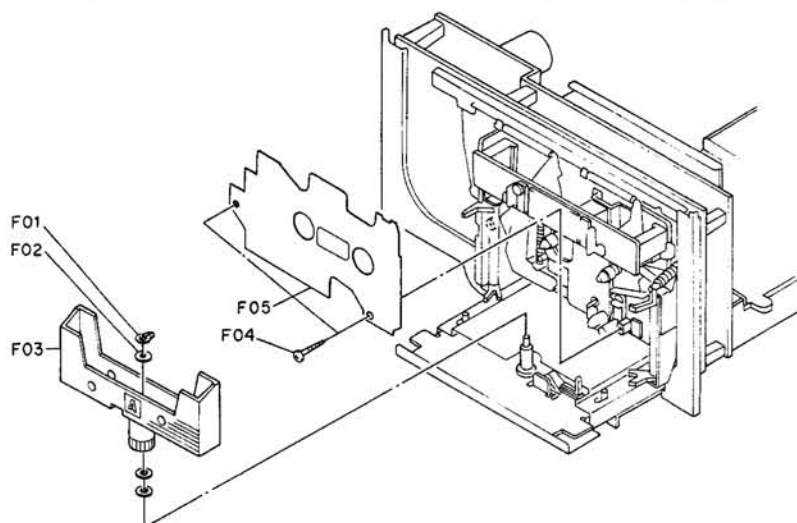


Fig. 2.1

(2) How to Load a Gauge

- Tape the Record Protector switch as shown in Fig. 2.2 to allow easy loading of a Gauge.
- Load a Gauge as follows:
 - Place a Gauge instead of a cassette tape.
 - With pushing the Gauge with your fingers, push the Eject/Load button to load the Gauge.
The Cassette Compartment automatically slides in and then the Lock Arms (Right & Left) secure the Gauge.

(3) After Adjustment

After adjustment, reverse the above steps as follows:

- Push the Eject/Load button to slide out the Cassette Compartment and remove the Gauge.
- Remove the tape of the Record Protector switch.
- Mount the F05 (Cover Plate Ass'y) and F03 (Cassette Case Ass'y).
Note: Mylar washer(s) must be placed on the original places.
- Push the Eject/Load button to slide in the Cassette Compartment.
- Turn the Power switch to OFF.
- Mount the Front Cover.

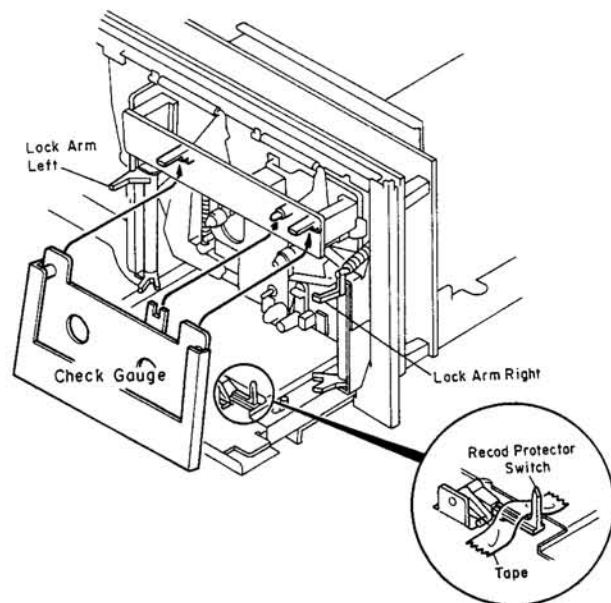


Fig. 2.2

2.2. Mechanism Control Cam Adjustment

(1) Offset Adjustment of Control Motor Driver

(a) Refer to Fig. 2.3.

Adjust VR602 and VR603 on the Logic P.C.B. Ass'y to locate approximately at the middle of the variable range. Then turn ON the Power switch.

VR602 (for Cam position play)

VR603 (for Cam position stop)

- Press the Stop button to set the cassette deck in Stop mode. Adjust VR603 (for stop) so that the "S" mark on the Cam corresponds to the pointer on the mechanism chassis.
- Press the Play button to set the cassette deck in Playback mode. (Cam will rotate, and the position marked with "PY" comes to the pointer.) Adjust VR602 (for play) so that the "PY" mark on the Cam corresponds to the pointer.
- Repeat above (b) and (c) 2 — 3 times so that the "S" and "PY" marks on the Cam correspond to the pointer accurately in Stop and Playback modes respectively.
(This adjustment is required because the position adjusted by one volume will be slightly changed when the other volume is adjusted.)
- Set the cassette deck in F.F., Pause, or Cue mode by pressing each button.
Check to insure that the pointer is in a range of "F", "PS", or "CU" mark respectively.
- If out of the range, precise adjustment for each position according to "(2) Offset Fine Adjustment of Control Motor Driver" will be required.

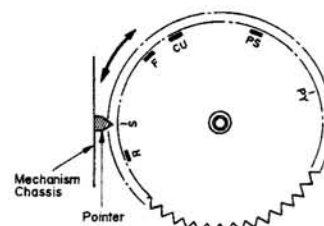


Fig. 2.3

(2) Offset Fine Adjustment of Control Motor Driver

Adjust only if a satisfactory result is not obtained in "(1) Offset Adjustment of Control Motor Driver". This adjustment is made by changing the value of the fixed resistors on the Logic P.C.B.
Note: The value of voltage is typical value.

(a) Observation Point of Reference Voltage

Observe the each voltage at the sliding contact of the Cam Control Volume VR608 in Stop, Fast (F.F. or Rew.), Pause and Playback modes.

(b) Reference Voltage

Reference voltage at the sliding contact of VR608 (Cam Control Volume) in each mode is as follows:

Mode	Reference Voltage (Typical Value)
Stop	0 V
Fast (F.F./Rew.)	-2.0 V
Pause	-6.5 V
Play	-9.1 V

2.0 V $\pm$ 0.25 V

2.6 V $\pm$ 0.4 V

(c) Resistors for Adjustment

Mode	Ref. No.	Typical Value
Fast (F.F./Rew.)	R655	22 k Ω
Pause	R649	76.8 k Ω (F)
Play	R653	10 k Ω

(d) Adjustment Procedures

- Set the cassette deck in Stop mode, then check to insure that the voltage at the sliding contact of VR608 is 0 V ($\pm$ 0.3 V).
- Set the cassette deck in F.F. mode, then adjust the value of R655 so that the voltage at the sliding contact of VR608 will become lower by 2.0 V ($\pm$ 0.25 V) than in Stop mode.
- Press the Pause button to set the cassette deck in Pause mode. Adjust the value of R649 to obtain -6.5 V ($\pm$ 0.4, -0.15 V) at the sliding contact of VR608.
- Set the cassette deck in Playback mode, then adjust the value of R653 so that the voltage at the sliding contact of VR608 will become lower by 2.6 V ($\pm$ 0.4 V) than in Pause mode.

2.3. Reel Motor Speed Adjustment in Play Mode

- Connect a DC voltmeter to TP602 and GND on the Logic P.C.B. Ass'y.
- Without loading a cassette tape, set the cassette deck in Play mode.
- Adjust VR604 on the Logic P.C.B. Ass'y to obtain -4 V on the DC voltmeter.

2.4. Record Head and Playback Head Tilt Adjustment

Note: On items 2.4 — 2.10, refer to Fig. 2.4 flow chart. Refer to Figs. 2.5 and 2.6.

- (1) Load a Tilt Check Gauge M-9039 (DA09039B) in the cassette deck.
- (2) Clip the grounding terminal of the Tilt Check Gauge with one end of the cord with clip, and the chassis of the cassette deck with the other end.
- (3) Remove both of the Height Gears.
- (4) Set the cassette deck in Play mode. Check to insure whether the Beacons Playback Head "Upper" or "Lower" and Record Head "Upper" or "Lower" are illuminating. In order not to give damages onto the head surfaces, push both of slide knobs of the Gauge to the direction of arrow marks, then return them to the original place to be in contact with record head and playback head surfaces after Play mode is securely locked.
- (5) Check to insure freedom from contact between the Gauge and pad lifter.
- (6) Beacon Playback Head "Lower" will light on when height adjustment screw (P) turned clockwise but Playback Head "Upper" when counterclockwise. Adjust so that both "Upper" and "Lower" will light on even when you move the slide knob to the direction of an arrow mark and then return it to the original place.
- (7) Same procedures will apply to the Beacons Record Head "Upper" and "Lower", except for the height adjustment screw (R).

- (8) Set the cassette deck in Stop mode and fit both of the serrated Height Gears. Then set the cassette deck again in Play mode and insure all of the 4 Beacons are illuminating. If not, (3) through (7) will have to be repeated till satisfactory results are obtained.

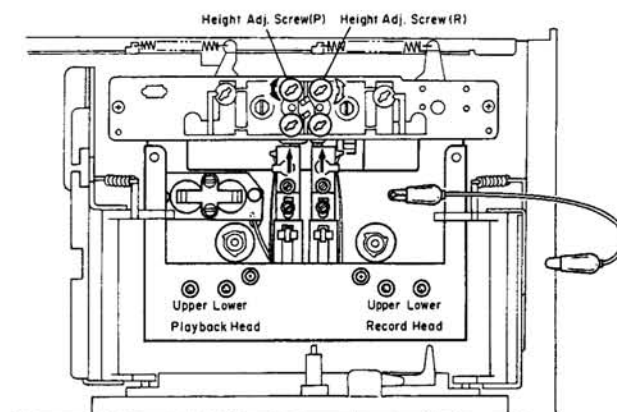


Fig. 2.5

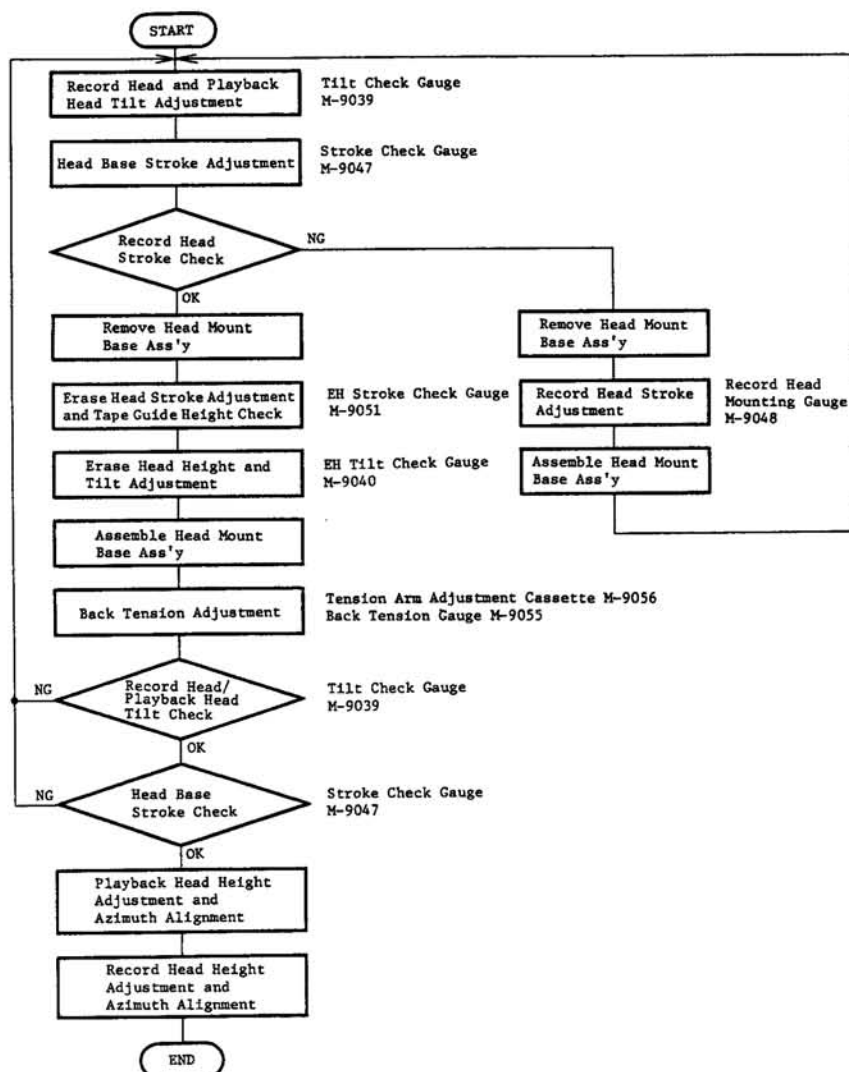


Fig. 2.4

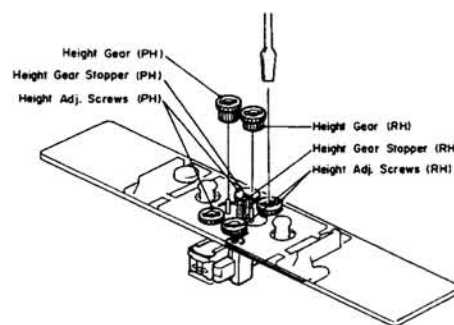


Fig. 2.6

2.5. Head Base Stroke Adjustment

Refer to Fig. 2.7.

Note: Before you conduct this adjustment, adjust with a "Tilt Check Gauge" to insure freedom from tilt on the playback head and record head.

- (1) **Head Base Stroke Adjustment in Play Mode**
 - (a) Load a Stroke Check Gauge M-9047 (DA09047B) in the cassette deck.
 - (b) Move Record Head Indicator and Playback Head Indicator to the direction of arrow mark "A" with your finger tip and then set the cassette deck in Play mode.
Then slowly release the Indicators and insure whether each of the Indicators is in contact with record and playback heads.
 - (c) Check to insure whether the "P" pointer on the Playback Head Indicator locates between the 2 lines on the Indicator Plate.
 - (d) If the playback head stroke is noted to be misaligned, adjustment can be made by moving the stroke adjuster assembled in the head base assembly (either forwardly or backwardly).
 - (e) Check to insure whether the "P" pointer on the Playback Head Indicator locates between the 2 lines on the Record Head Indicator, thus check can be made on record head stroke.
 - (f) If the record head stroke is noted to be misaligned, adjustment can be made with a Record Head Mounting Gauge M-9048 (DA09048B).
- (2) **Head Base Stroke Adjustment in Cue Mode**
 - (a) Load a Stroke Check Gauge M-9047 (DA09047B) in the cassette deck.
 - (b) Move Record Head Indicator and Playback Head Indicator to the direction of arrow mark "A" with your finger tip and then set the cassette deck in Cue mode.
Then slowly release the Indicators and insure whether each of the Indicators is in contact with record and playback heads.
 - (c) Check to insure whether the "C" pointer on the Playback Head Indicator locates between the 2 lines on the Indicator Plate.
 - (d) If the playback head stroke is noted to be misaligned, adjust VR601 on the Logic P.C.B. Ass'y till satisfactory results are obtained.
 - (e) After completion of the Head Base Stroke Adjustment, check to insure accuracy of the Head Base Stroke Adjustment in Play mode.
If the above are inaccurate, items (1) and (2) will have to be repeated till satisfactory results are obtained.

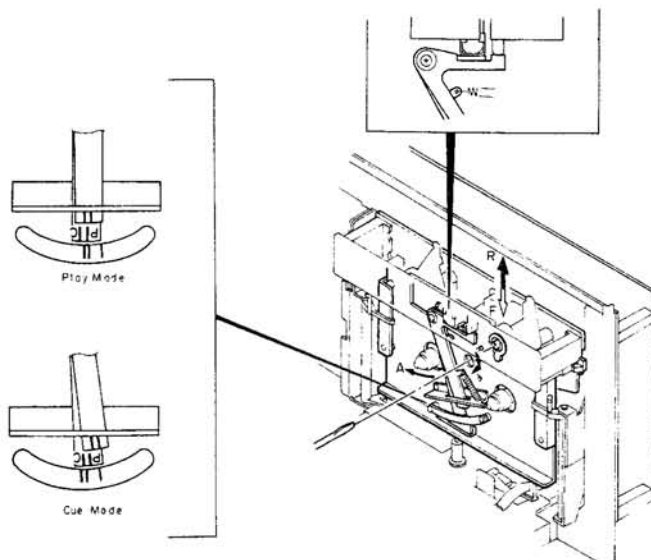


Fig. 2.7

2.6. Erase Head Stroke Adjustment and Tape Guide Height Check

Remove the Head Mount Base Ass'y.

Refer to Figs. 2.8 and 2.9.

- (1) **Erase Head Stroke Adjustment**
 - (a) Load an EH Stroke Check Gauge M-9051 (DA09051B) in the cassette deck.
 - (b) Set the cassette deck in Play mode, thus check can be made on erase head stroke through the EH Stroke Indicator.
 - (c) Check to insure whether the erase head surface is aligned with red line on the EH Stroke Indicator. If not, adjust the erase head stroke by loosening 2 screws A that assemble erase head and erase head plate.
 - (d) After completion of adjustment, 2 pcs. of screws shall be locked with lock tight paint.
- (2) **Supply Tape Guide Height Check**
 - (a) Load an EH Stroke Check Gauge M-9051 (DA09051B) in the cassette deck.
 - (b) Set the cassette deck in Play mode.
 - (c) Slide the Supply Tape Guide Check Bar down against the supply tape guide, and check to insure that the Supply Tape Guide Check Bar is accepted by the supply tape guide.
- (3) **Take-up Tape Guide Height Check**
 - (a) Load an EH Stroke Check Gauge M-9051 (DA09051B) in the cassette deck.
 - (b) Set the cassette deck in Play mode.
 - (c) Slide the Take-up Tape Guide Check Bar down against the take-up tape guide, and check to insure that the Take-up Tape Guide Check Bar is accepted by the take-up tape guide.

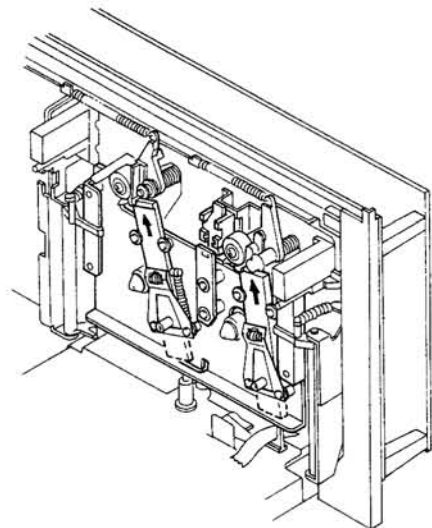


Fig. 2.8

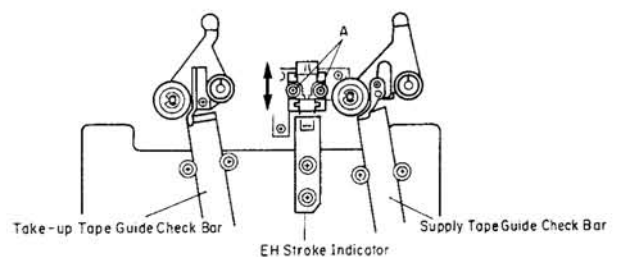


Fig. 2.9

2.7. Erase Head Height and Tilt Adjustment

Refer to Figs. 2.10 and 2.11.

- (1) Remove Head Mount Base Ass'y.
- (2) Load an EH Tilt Check Gauge M-9040 (DA09040B) in the cassette deck.
- (3) Set the cassette deck in Stop mode.
- (4) Check to insure whether one of the 3 Beacons is illuminating. Look down the mirror as shown by an arrow mark and slowly turn the Screw "Height" counterclockwise (or clockwise) so that the two horizontal lines on the mirror will become superposed on the line (in different color) of the erase head, and check to insure whether Beacon "1" is illuminating.
- (5) Turn Screw "Tilt" counterclockwise (or clockwise) to light on Beacon "2". Excessive turning will cause the Beacon "1" to light off. Adjustments of Screw "Tilt" will therefore be conducted till both of the Beacons "1" and "2" illuminate.
- (6) Turn Screw "Azimuth" counterclockwise (or clockwise) to light on Beacon "3". Excessive turning will cause either Beacon "1" or "2" to light off, and therefore adjust Screw "Azimuth" until all of the 3 Beacons "1", "2" and "3" illuminate.
- (7) Check to insure whether the horizontal line on the mirror corresponds to that on the erase head. If not, (4) through (7) will have to be repeated till satisfactory results are obtained.
- (8) After completion of adjustment, 3 pcs. of screws shall be locked with lock tight paint.

Note: Before use of this gauge, check to insure freedom from dust or dirt, or overflow in the groove of the erase head surface.

2.8. Back Tension Adjustment

Refer to Figs. 2.12 — 2.15.

- (1) Load a Tension Arm Adjustment Cassette (DA09056B) in the cassette deck referring to Fig. 2.12.
- (2) Set the cassette deck in Play mode.
- (3) Bend the Back Tension Arm with pliers so that the gap between the Cassette Holding Spring assembled on the Head Base Ass'y and the Back Tension Arm becomes 0.5 mm as shown in Fig. 2.13. Do not bend the top of the Back Tension Arm.
- (4) Set the cassette deck in Stop mode, and remove the Tension Arm Adjustment Cassette (DA09056B), then set the cassette deck in Cue mode. In Cue mode, check to insure that the gap is found between the Supply Reel Hub B Ass'y and the Felt of Back Tension Ass'y as shown in Fig. 2.14.
- (5) Load the Back Tension Gauge (DA09055B) in the cassette deck.
- (6) Set the cassette deck in Play mode and read the torque value of Back Tension Gauge. If the value is in a range of 5 g-cm to 9 g-cm, adjustment is not necessary. If not, change the installation point of the Back Tension Spring as shown in Fig. 2.15, and obtain the torque of 6 g-cm to 8 g-cm range.

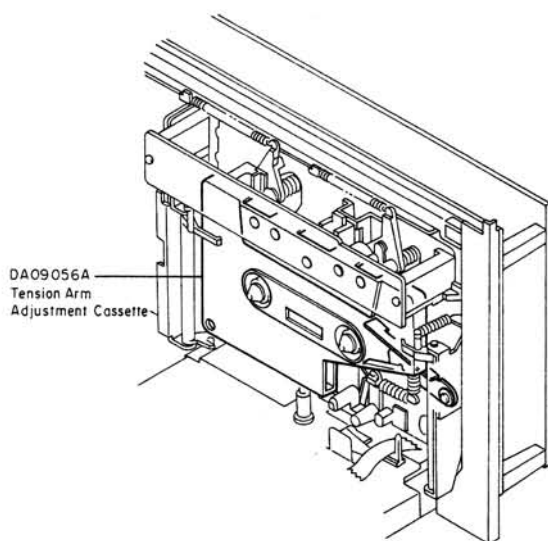


Fig. 2.12

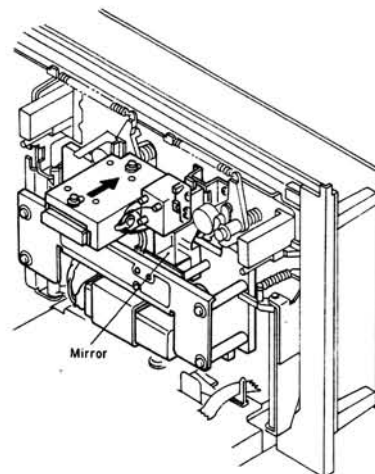


Fig. 2.10

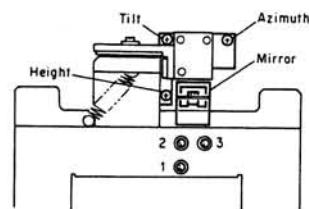


Fig. 2.11

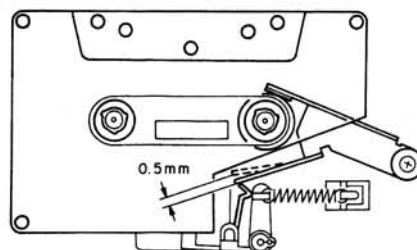


Fig. 2.13

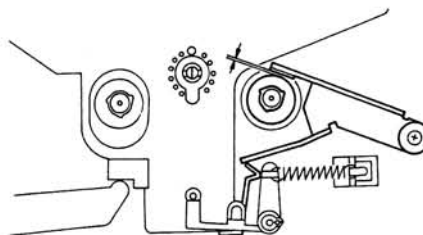


Fig. 2.14

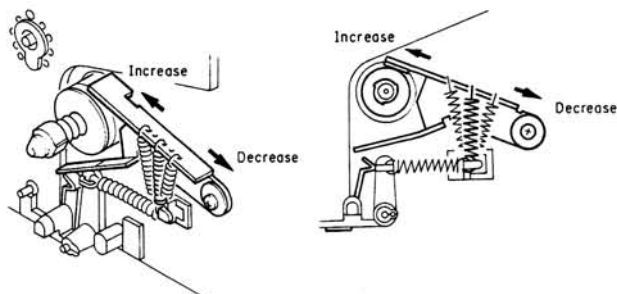


Fig. 2.15

2.9. Playback Head and Record Head Height Adjustment and Azimuth Alignment

(1) Playback Head Height Adjustment and Azimuth Alignment Refer to Fig. 2.16.

- Set the Monitor switch to Tape, then connect a VTVM to the Output Jacks.
- Load a 1 kHz Track Alignment Tape (DA09007B), then set the cassette deck in Play mode.
- Turn the PH Height Gear until the outputs of both channels become minimum.
- Load a 15 kHz Azimuth Tape (DA09004B), then set the cassette deck in Play mode.
- Turn the PH Azimuth Alignment Screw until the outputs of both channels become maximum.
- Repeat above steps (b) through (e) one or two times to obtain optimum performance.

(2) Record Head Height Adjustment and Azimuth Alignment Refer to Figs. 2.16 and 2.17.

- Set the cassette deck in Stop mode.
- Set the Monitor switch to Tape, Eq. switch to 70 μ s and Tape Selector switch to SX.
- Load a reference SX tape (DA09025B) and connect a VTVM to Output Jacks.
- Feed in 400 Hz (0 dB) to the Input Jacks.
- Set the cassette deck in Record and Play mode and turn the RH Height Gear until the outputs of both channels become maximum.
- Feed in 15 kHz (-20 dB) to the Input Jacks and turn the RH Azimuth Alignment Screw until the outputs of both channels become maximum.

- Repeat (d) to (f) one or two times to obtain optimum performance.
- After completion of the above adjustments, feed in 400 Hz (0 dB) and set the cassette deck in Record and Play mode. Record 400 Hz tone to the same portion of both sides A and B of the tape.
- Immerse the recorded tape in a magnetized developing solution. In turn, check to insure that the recording head tracks across the center are separated with a distance of 0.55 to 0.75 mm (typically 0.65 mm) as illustrated in Fig. 2.17. Note: Liquid for tape magnetized development solution "MAGNA-SEE SOUND CRAFT" a product of CBS RECORDS a division of Columbia Broadcasting System, Inc., Danbury, Conn. 06810 U.S.A., or equivalent". After development, clean the tape otherwise pressure rollers and heads will become dirty.

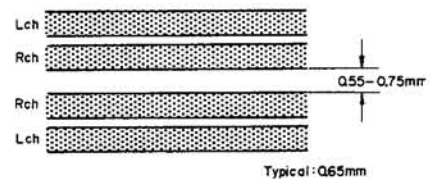


Fig. 2.17

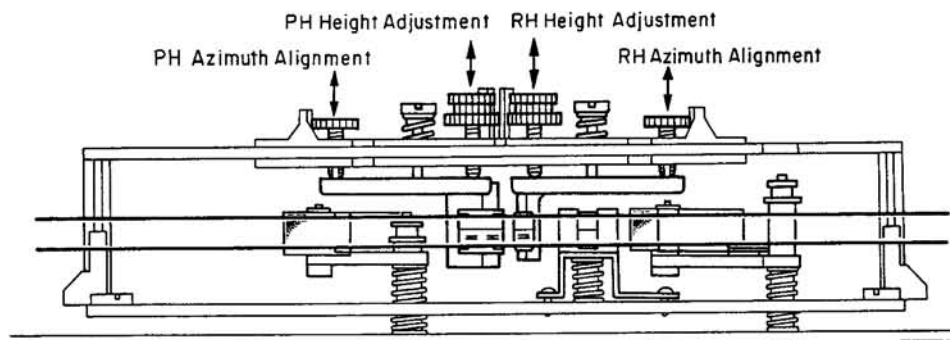


Fig. 2.16

2.10. Record Head Stroke Adjustment

Refer to Figs. 2.18 and 2.19.

Note: This adjustment will be required only to insure freedom from misalignment of the record head stroke in the record head stroke check mode.

- Check the accuracy of the record head stroke.
- Remove Head Mount Base Ass'y.
- Remove the record head assembly.
- Adjustment of Record Head Mounting Gauge M-9048 (DA0-9048B)
 - Mount the Block B onto the Mounting Gauge Plate.
 - Loosen the 2 screws fixing the Block A.
 - As shown in Fig. 2.18, hold the Gauges (3.05 mm and 0.1 mm thickness) between the Block A and Block B, and fix the Block A with screws, pushing the Block A to the 2 guide pins.
- Remove the Block B from the Mounting Gauge Plate.
- As shown in Fig. 2.19, mount the record head assembly onto the Mounting Gauge Plate, then check the location of the record head surface. (If record head touches the Block C, loosen 2 pcs. of screws that assemble record head and record head plate, then place the record head assembly onto the Plate.)
- Remove the record head assembly from the Mounting Gauge Plate.
- Readjustment of Record Head Mounting Gauge M-9048 (DA09048B)

- Mount the Block B onto the Mounting Gauge Plate.
- Loosen the 2 screws fixing the Block A.
- As shown in Fig. 2.18, hold the Gauges (3.05 mm and either one of 0.05, 0.15, 0.2, 0.25, 0.3 or 0.35 mm thickness) between the Block A and Block B, and fix the Block A with screws, pushing the Block A to the 2 guide pins.
- Remove the Block B from the Mounting Gauge Plate.
- Mount the record head assembly onto the Mounting Gauge Plate.
- As shown in Fig. 2.19, loosen 2 pcs. of screws that assemble record head and record head plate. As the location of the Block A is secured by the item (8)-(c), push the record head to the directions A and B, then tighten 2 pcs. of screws.
- Check to insure freedom from gap between the Block C and record head surface, then tighten the 2 pcs. of screws on the record head assembly with lock tight paint.
- Remove the record head assembly from the Mounting Gauge Plate.
- Assemble the record head assembly to the head mount base assembly.
- Assemble the head mount base assembly to the mechanism assembly.
- Check the record head stroke. If the above are inaccurate, items (1) through (16) will have to be repeated till satisfactory results are obtained.

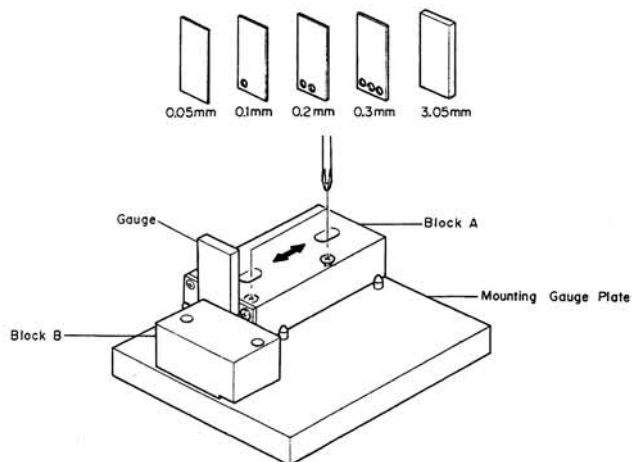


Fig. 2.18

2.11. Tape Travelling Adjustment

Load and playback the Tape Travelling Cassette (DA09071A) and check the following:

- (1) Tape is contact with heads sufficiently.
- (2) Tape waving is small on the heads and pressure rollers.
- (3) Tape is free from waving or slippage from the tape guides.

If either of the above should be noted, adjustment of items 2.4 to 2.10, etc. will be required.

As a case may be, the said waving or slippage may have been caused from defective Supply Pressure Roller Ass'y or Take-up Pressure Roller Ass'y without parallel contact with capstans. If such are noted, the Pressure Roller Assemblies will have to be replaced.

Further, excessively weak take-up torque or strong take-up torque may cause defective tape travelling.

The cassette deck is intended to be an adjustment-free model, however if the similar matters as above should be noted, please replace the Reel Hub Ass'y to obtain appropriate take-up torque.

2.12. Flywheel Holder Adjustment

Refer to Fig. 2.21.

- (1) Tighten the Thrust Screws until the gap between the Flywheel Assemblies and Thrust Screws becomes minimized when both of the Capstan Shafts are moved backwardly and forwardly by hand (the Thrust Springs between the Capstan Flanges and Flywheel Thrust Caps are in a flat state). Excessive tightening of the Thrust Screws however will give damages on the Flywheel Assemblies, to which careful attention is invited.
- (2) Return the Thrust Screws by 1/2 turn.
- (3) Fixing the Thrust Screws with a screwdriver, lock the Lock Nut.
- (4) Apply a quantity of lock tight paint to the Thrust Screws.

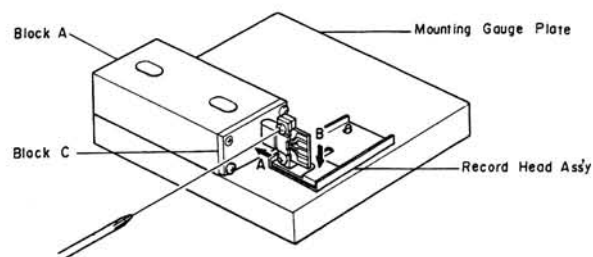


Fig. 2.19



Fig. 2.20

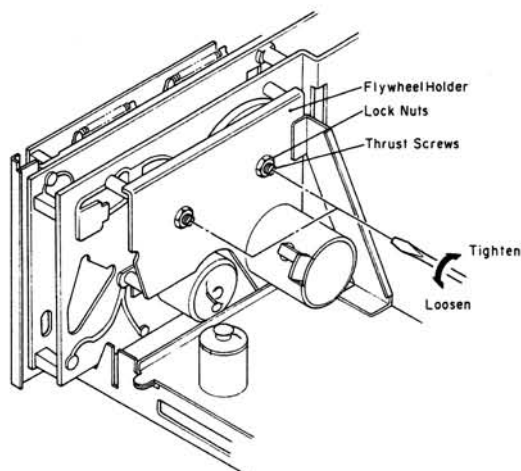


Fig. 2.21

2.13. Tape Speed Adjustment

Refer to Fig. 2.22.

- (1) Remove the Top Cover Ass'y.
- (2) Connect a Frequency Counter to the Output Jack.
- (3) Load a 3 kHz Speed Wow/Flutter Tape (DA09006C) and play it back.
- (4) Adjust the Tape Speed Adjustment Volume (VR501) incorporated in the Capstan Motor to obtain 3,000 Hz on the Frequency counter.
CCW: Motor drives slowly.
CW: Motor drives fast.

2.14. Slide Base Position Adjustment (on the Logic P.C.B. Ass'y)

- (1) Pull out the connector CN604 on the Logic P.C.B. Ass'y.
- (2) Ground TP604 to set the cassette case to its side A.
- (3) Adjust VR607 to obtain a gap of 2 to 4 mm as shown in Fig. 2.23.
- (4) Ground TP603 and TP604 to set the cassette case to its side B.
- (5) Adjust VR606 to obtain a gap of 2 to 4 mm as shown in Fig. 2.23.
- (6) Ground only TP603 to set the cassette case to its eject position.
- (7) Adjust VR605 to the position where the cassette case is about to start rotation.
- (8) Repeat above steps (2) to (7) two or three times.
- (9) Plug CN604 into the original place.

2.15. Lubrication

This is a lubrication-free cassette deck except when parts are replaced. Apply the following lubricant for each replaced part:

- (1) LAUNA #100
Capstan Shaft
Pressure Roller Shaft
Thrust Cap
- (2) FLOIL GB-TS-1
Reel Hub Shaft
Thrust portion on the Capstan Shaft
FLOIL GB-TS-1, made by Kanto Chemicals Co., Ltd. in Japan.
We suggest that you use the above or equivalent type. If unavailable please contact Kanto Chemicals Co., Ltd., 2-7 Kanda Sakuma-cho, Chiyoda-ku, Tokyo 101 Japan.
- (3) Silicon Oil #3000 CST
Air Damper Piston

Note: Excessive lubrication may cause defective damper action as the 0.2ϕ hole at the end of the cylinder may be filled with oil.

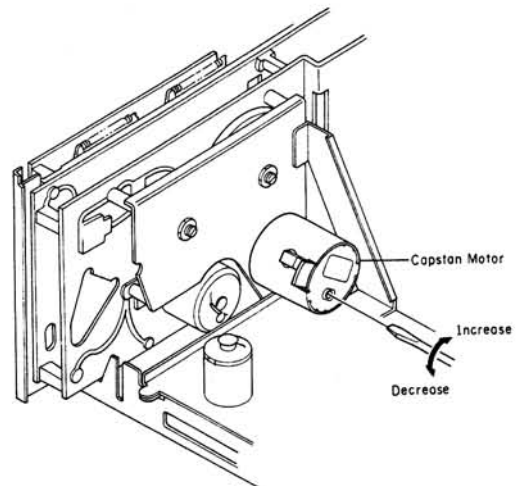


Fig. 2.22

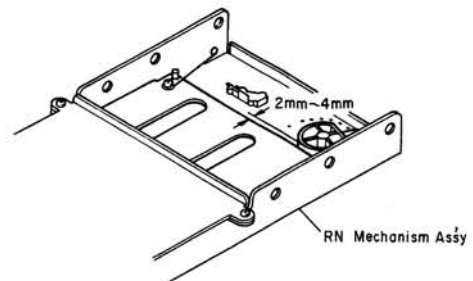


Fig. 2.23

3. PARTS LOCATION FOR ELECTRICAL ADJUSTMENT

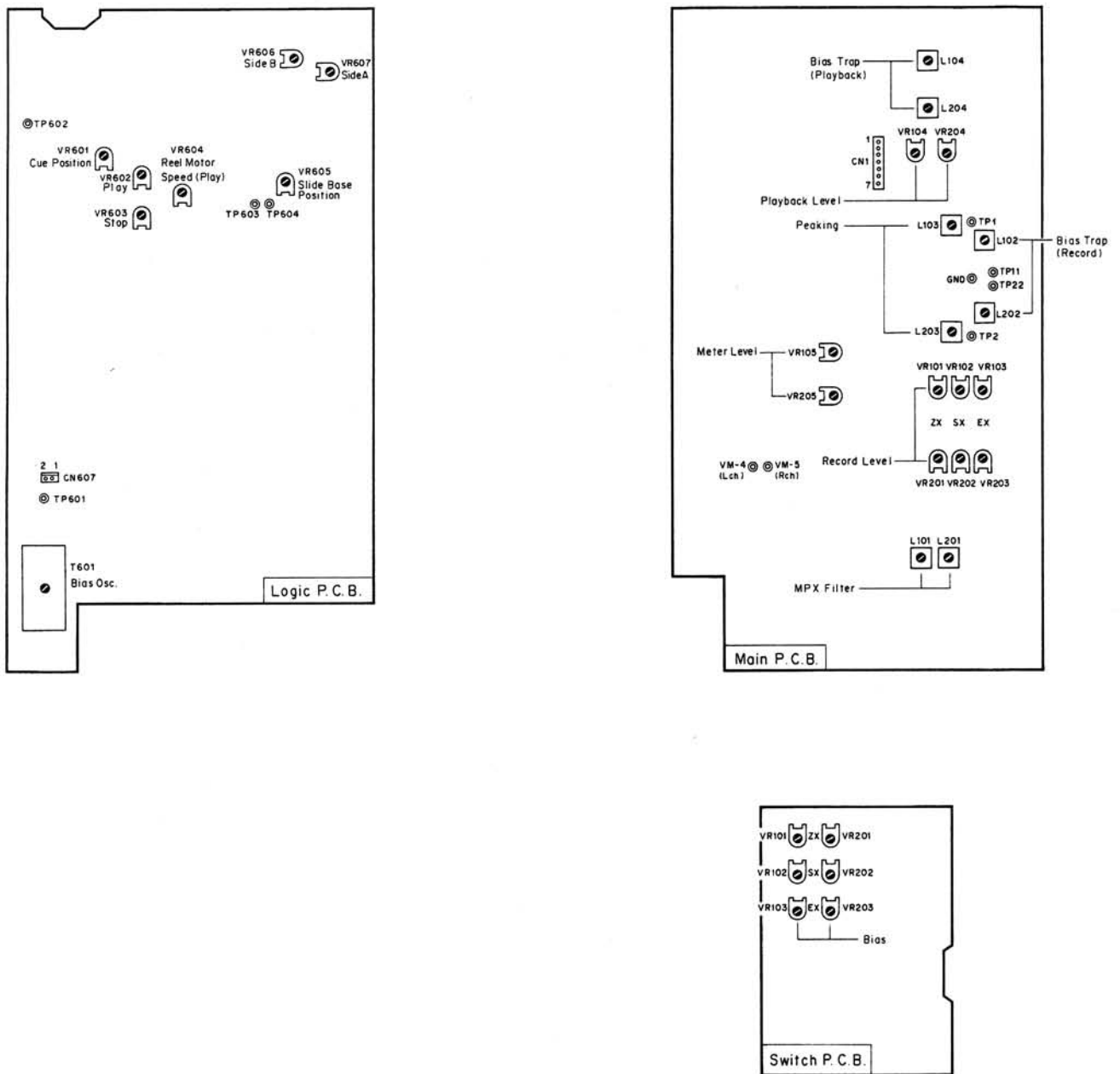


Fig. 3

4. ELECTRICAL ADJUSTMENTS AND MEASUREMENTS

Notes: 1. Electrical adjustment should be performed after mechanical adjustment is completed.

2. Before adjustment, set the Bias Tune control on the Front Panel to its mechanical center position.

4.1. Adjustment and Measurement Instructions

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
1	Tape Speed Adjustment	3 kHz Speed and Wow/Flutter Tape (DA09006C)	Frequency Counter to Output Jacks	Playback Eq. SW — 70 μ s	Tape Speed Adjustment Volume	Adjust the volume incorporated in the capstan motor to obtain 3 kHz $\pm 0.5\%$ on the frequency counter.
2	Meter Level Calibration	400 Hz to Input Jacks	VTVM to VM-4, VM-5 on Main P.C.B.	Monitor SW — Source	Main P.C.B. VR105, VR205	1. Feed in 400 Hz, then adjust the Input Level controls to obtain 1.0 V —1 dB on the VTVM. 2. Adjust VR105 (VR205) so that the 0 dB segment of the level meter starts illuminating. 3. Adjust the Input Level control to obtain 1.0 V on the VTVM, then decrease the generator output level by 20 dB. 4. Check to insure that the segment for —20 dB illuminates.
3	MPX Filter Adjustment	19 kHz ± 100 Hz to Input Jacks	VTVM to Output Jacks	Monitor SW — Source Dolby NR SW — OFF MPX SW — ON	Main P.C.B. L101, L201	1. Turn the Output Level control fully clockwise (maximum position). 2. Adjust the Input Level controls to obtain 1 V on the VTVM. 3. Set the MPX Filter switch to ON, then adjust L101 (L201) to obtain the minimum reading on the VTVM (the minimum reading will be less than —30 dB).
4	Playback Head Track Alignment	1 kHz Track Alignment Tape (DA09007B)	VTVM to Output Jacks	Playback Monitor SW — Tape Eq. SW — 70 μ s Dolby NR SW — OFF MPX SW — OFF	PH Height Gear	Adjust the PH Height Gear to obtain minimum readings of both channels on the VTVM. Refer to "Playback Head Height Adjustment and Azimuth Alignment" in item 2.9.
5	Playback Head Azimuth Alignment	15 kHz Azimuth Tape (DA09004B)	VTVM to Output Jacks	Playback Monitor SW — Tape Eq. SW — 70 μ s Dolby NR SW — OFF MPX SW — OFF	Playback Head Azimuth Alignment Screw	Adjust the Playback Head Azimuth Alignment Screw to obtain maximum readings of both channels on the VTVM. Refer to "Playback Head Height Adjustment and Azimuth Alignment" in item 2.9. Note: Repeat steps 4 and 5 one or two times to obtain optimum performance.
6	Playback Level Calibration	400 Hz Level Tape (DA09005B)	VTVM to VM-4, VM-5 on Main P.C.B.	Same as above	Main P.C.B. VR104, VR204	Adjust VR104 (VR204) to obtain 1.0 V on the VTVM.
7	Playback Frequency Response Adjustment	400 Hz Level Tape (DA09005B) 10 kHz PB Frequency Response Tape (DA09003B) 15 kHz PB Frequency Response Tape (DA09002B) 20 kHz PB Frequency Response Tape (DA09001B)	VTVM to Output Jacks	Playback Monitor SW — Tape Eq. SW — SX Eq. SW — 70 μ s Dolby NR SW — OFF MPX SW — OFF	Main P.C.B. R143, R243 R144, R244	1. Load a 400 Hz level tape and play it back. Adjust the Output Level control to a certain level (0 dB for example). 2. Load 10 kHz, 15 kHz and 20 kHz PB frequency response tapes and adjust the playback head azimuth to obtain maximum levels on the VTVM with each tape. Short R143 (R243) or R144 (R244) to obtain the following levels against the level for the 400 Hz level tape. 10 kHz: —20 dB —2 dB to +2 dB 15 kHz: —20 dB —2 dB to +3 dB 20 kHz: —20 dB —2 dB to +4 dB 3. Conduct step 5 "Playback Head Azimuth Alignment". 4. If above is not sufficient, refer to "Playback Frequency Response Adjustment" in item 4.2.
8	Bias Oscillation Frequency and Erase Current Adjustment		VTVM across the additional 0.1 Ω resistor and Frequency Counter to CN607-1 on Logic P.C.B.	Record, Pause Monitor SW — Source Tape SW — ZX Eq. SW — 70 μ s Dolby NR SW — OFF MPX SW — OFF	Logic P.C.B. T601 R961, R960	1. Connect an additional 0.1 Ω resistor in series to the Erase Head, then connect a VTVM across it. 2. Adjust T601 to obtain 105 kHz on the frequency counter. 3. Check the erase current by the VTVM. Erase current will be in a range of 310 mA to 400 mA (typically approx. 350 mA). If erase current is not sufficient, increase it by shorting R961 or R960. 4. After completion of the erase current adjustment, re-check the bias oscillation frequency. 5. Remove the additional 0.1 Ω resistor.
9	Record Amplifier Equalizer Adjustment	23 kHz (—20 dB) to Input Jacks	VTVM to TP11, TP22 on Main P.C.B.	Same as above	Main P.C.B. L103, L203	1. Remove the bias-cut-jumper from the dip side of the Logic P.C.B. Ass'y. 2. Adjust L103 (L203) to obtain approx. +16 dB at 23 kHz on the VTVM. 3. Re-solder the bias-cut-jumper.
10	Bias Trap Adjustment (Record Amp.)	Remove input signals	VTVM to TP1, TP2 on Main P.C.B.	Same as above	Main P.C.B. L102, L202	Adjust L102 (L202) to obtain minimum reading on the VTVM.

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
11	Bias Trap Adjustment (Playback Amp.)	Remove input signals	VTVM to CN1-1, CN1-2 on Main P.C.B.	Record, Pause Monitor SW — Tape Tape SW — ZX Eq. SW — 70 μ s Dolby NR SW — OFF MPX SW — OFF	Main P.C.B. L104, L204	Adjust L104 (L204) to obtain minimum reading on the VTVM.
12	Record Head Height Adjustment	400 Hz (0 dB) to Input Jacks	VTVM to Output Jacks	Record, Playback Monitor SW — Tape Tape SW — SX Eq. SW — 70 μ s Dolby NR SW — OFF MPX SW — OFF	RH Height Gear	Adjust the RH Height Gear to obtain maximum readings of both channels on the VTVM. Refer to "Record Head Height Adjustment and Azimuth Alignment" in item 2.9.
13	Record Head Azimuth Alignment	15 kHz (—20 dB) to Input Jacks	VTVM to Output Jacks	Same as above	Record Head Azimuth Alignment Screw	Adjust the Record Head Azimuth Alignment Screw to obtain maximum readings of both channels on the VTVM. Refer to "Record Head Height Adjustment and Azimuth Alignment" in item 2.9. Note: Repeat steps 12 and 13 one or two times to obtain optimum performance.
14	Record Level Calibration and Recording Bias Current Adjustment	400 Hz and 15 kHz and 10 kHz/20 kHz (—20 dB) to Input Jacks	VTVM and Distortion Meter to Output Jacks	Record, Playback Tone — 400 Hz/15 kHz Monitor SW — Source/Tape Tape SW — ZX/SX/EX Eq. SW — 70 μ s (ZX/SX) 120 μ s (EX) Dolby NR SW — C-Type/B-Type/OFF MPX SW — OUT	Main P.C.B. (Level) ZX: VR101, VR201 SX: VR102, VR202 EX: VR103, VR203 Switch P.C.B. (Bias) ZX: VR101, VR201 SX: VR102, VR202 EX: VR103, VR203	Adjustment should be made in the order of ZX, SX and EX. 1. Set the Monitor switch to Source and Dolby NR switch to C-Type. 2. Feed in 400 Hz, then set the Input Level controls to obtain 0 dB (1 V) on the VTVM. 3. Set the Monitor switch to Tape. 4. Load a reference ZX tape (DA09037B), reference SX tape (DA09025B) and reference EXII tape (DA09066B). 5. Adjust Record Cal. VR101 (VR201) for ZX, VR102 (VR202) for SX and VR103 (VR203) for EX on the Main P.C.B. Ass'y to center position. 6. Feed in 400 Hz (0 dB), then record and play it back. Adjust Bias VR101 (VR201) for ZX, VR102 (VR202) for SX and VR103 (VR203) for EX on the Switch P.C.B. Ass'y to obtain the maximum readings on the VTVM. 7. Feed in 15 kHz (—20 dB), then adjust Bias VR101 (VR201), VR102 (VR202) and VR103 (VR203) on the Switch P.C.B. Ass'y to obtain the same readings as source monitor levels on the VTVM. 8. Feed in 400 Hz (0 dB), then adjust Record Cal. VR101 (VR201), VR102 (VR202) and VR103 (VR203) on the Main P.C.B. Ass'y to obtain 0 dB on the VTVM. 9. Repeat above 7 and 8 two or three times to obtain optimum performance. 10. Set the Dolby NR switch to OFF. 11. Feed in 10 kHz (—20 dB) and 20 kHz (—20 dB), then record and play them back. Check to insure that the levels are within —20 dB $\pm$ 3 dB against the levels in Dolby NR C-Type. 12. Set the Dolby NR switch to B-Type. 13. Feed in 10 kHz (—20 dB) and 20 kHz (—20 dB), then record and play them back. Check to insure that the levels are within —20 dB $\pm$ 3 dB against the levels in Dolby NR OFF. 14. Check to insure whether the total harmonic distortion is less than 0.9% for ZX tape and 1.0% for SX and EXII tapes. 15. If above is not sufficient, repeat 6 to 14 till satisfactory results are obtained.
15	Overall Frequency Response Adjustment	400 Hz (0 dB) and 20 Hz to 20 kHz (—20 dB) to Input Jacks	VTVM to Output Jacks	Record, Playback Monitor SW — Source/Tape Tape SW — ZX/SX/EX Eq. SW — 70 μ s (ZX/SX) 120 μ s (EX) Dolby NR SW — OFF MPX SW — OUT	Main P.C.B. L103, L203	1. Set the Monitor switch to Source. 2. Feed in 400 Hz (0 dB) and adjust the Input Level controls to obtain 0 dB on the VTVM. 3. Switch the Generator output level to —20 dB. 4. Set the Monitor switch to Tape, then record and play it back. 5. Feed in 20 Hz to 20 kHz (—20 dB), and check to insure whether the output levels are within —20 dB $\pm$ 3 dB. 6. If above is not sufficient, adjust L103 (L203) to obtain approx. —20 dB on the VTVM at 20 kHz. 7. Conduct step 14 "Record Level Calibration and Recording Bias Current Adjustment". 8. If above is not sufficient, precise re-adjustment of step 7 "Playback Frequency Response", replacement of Playback Head or Record Head, check on item 2.11 "Tape Travelling Adjustment" will be required.

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
16	Crosstalk Measurement	1 kHz to Input Jacks	1 kHz Band Pass Filter and VTVM to Output Jacks	Record and Playback Monitor SW — Tape Tape SW — ZX Eq. SW — 70 μ s Dolby NR SW — OFF		1. Erase a reference ZX tape with a bulk eraser. 2. Adjust the Input Level controls to obtain 0 dB on the VTVM, and record the signals on the reference tape. 3. Turn the cassette tape the other way round and play it back. 4. Measure the difference between 2 and 3.
17	Channel Separation Measurement	1 kHz to Input Jacks	Same as above	Same as above		1. Erase a reference ZX tape with a bulk eraser. 2. Adjust the L ch (R ch) Input Level control to obtain 0 dB on the VTVM, and close the R ch (L ch) Input Level control. 3. Record and play it back, then measure the R ch (L ch) level.
18	Erasure Measurement	1 kHz to Input Jacks	Same as above	Same as above		1. Erase a reference ZX tape with bulk eraser. 2. Adjust the Input Level controls to obtain 0 dB on the VTVM, and record the signals on the reference tape. 3. Rewind the tape then close the Input Level controls. 4. Record and play it back, then measure the difference between 2 and 3.
19	Signal to Noise Ratio Measurement	400 Hz to Input Jacks	VTVM and Distortion Meter to Output Jacks	Record and Playback Monitor SW — Tape Tape SW — ZX Eq. SW — 70 μ s Dolby NR SW — B-Type/C-Type		1. Set the Dolby NR switch to B-Type/C-Type. 2. Feed in 400 Hz and record and play it back. 3. Adjust the Input Level controls to obtain 3% total harmonic distortion in Playback mode. 4. Close the Input Level controls, then record. 5. After rewind, play back and check the output level difference between 2 and 3. Note: The filter of IHF-A curve shall be used in the measurements.
20	Total Harmonic Distortion Measurement	400 Hz to Input Jacks	Distortion Meter to Output Jacks	Record and Playback Monitor SW — Tape Tape SW — ZX/SX/EX Eq. SW — 70 μ s (ZX/SX) 120 μ s (EX) Dolby NR SW — OFF		1. Adjust the Input Level controls to obtain 0 dB on the VTVM. 2. Record and play it back. 3. Read the distortion meter and check to insure that the distortion is less than 0.9% for ZX tape and 1.0% for SX and EXII tapes.
21	Wow/Flutter Measurement	3 kHz Speed and Wow/Flutter Tape (DA09006C)	Wow/Flutter Meter to Output Jacks	Playback Monitor SW — Tape Eq. SW — 70 μ s		Play back and read the wow/flutter meter.

4.2. Playback Frequency Response Adjustment

Figs. 4.1 and 4.2 show the playback amp. circuit for adjustment and the playback equalization curve.

This adjustment will be required if playback level is not sufficient during playing back a 20 kHz PB frequency response tape.

The peaking portion of the equalization curve compensates the gap loss of the playback head. Peaking level is varied by the short circuit of R143 (R243) or R144 (R244) on the Main P.C.B.

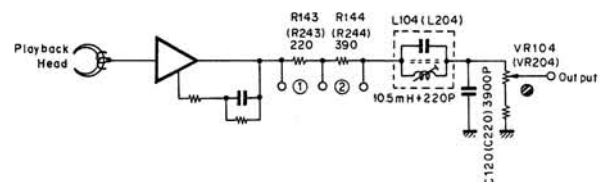


Fig. 4.1

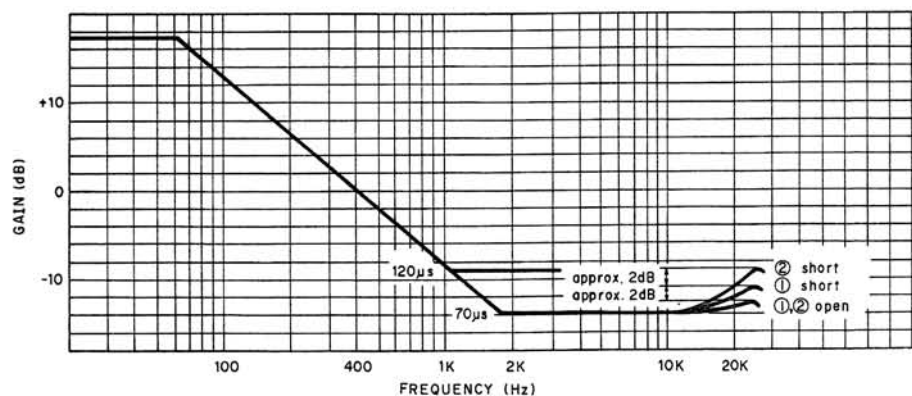


Fig. 4.2

4.3. Dolby NR Circuit Check

Dolby NR circuit incorporates Dolby NR ICs which have no adjustment point.

Perform the following checks and make sure that the IC operates accurately, i.e., accuracy of frequency response through IC.

4.3.1. Dolby NR B-Type Circuit Check

(1) Playback Dolby NR Circuit

Signal Source: 1.4 kHz to CN1-1 (CN1-2) on Dolby NR P.C.B.
Output Connection: VTVM to Output Jacks
Mode: Stop
Monitor SW — Tape
Dolby NR SW — B-Type/OFF

- Connect a VTVM to the Output Jacks.
- Set the Dolby NR switch to B-Type.
Feed in 1.4 kHz to CN1-1 (CN1-2) and adjust the generator output control to obtain 100 mV on the VTVM.
- Set the Dolby NR switch to OFF.
Check to insure that the reading is +3.2 dB $\pm$ 1.5 dB on the VTVM.

(2) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to Output Jacks
Mode: Stop
Monitor SW — Source
Dolby NR SW — B-Type/OFF

- Connect a VTVM to the Output Jack.
- Feed in 1.4 kHz and adjust the Input Level controls to obtain 100 mV/31.6 mV on the VTVM.
- Remove the VTVM from the Output Jacks and reconnect it to CN2-1 (CN2-2) on the Dolby NR P.C.B. Ass'y.
- Check to insure that the reading at CN2-1 (CN2-2) corresponds to the following with Dolby NR switch OFF and B-Type.

Input Level at MS25, MS26	Level at CN2-1, CN2-2	
	Dolby NR OFF	Dolby NR B-Type
100 mV	0 dB	+3.2 dB $\pm$ 1.5 dB
31.6 mV	0 dB	+8.2 dB $\pm$ 1.5 dB

4.3.2. Dolby NR C-Type Circuit Check

(1) Playback Dolby NR Circuit

Signal Source: 1.4 kHz to CN1-1 (CN1-2) on Dolby NR P.C.B.
Output Connection: VTVM to Output Jacks
Mode: Stop
Monitor SW — Tape
Dolby NR SW — C-Type/OFF

- Connect a VTVM to the Output Jacks.
- Set the Dolby NR switch to C-Type.
Feed in 1.4 kHz to CN1-1 (CN1-2) and adjust the generator output control to obtain 100 mV on the VTVM.
- Set the Dolby NR switch to OFF.
Check to insure that the reading is +6.5 dB $\pm$ 1.5 dB on the VTVM.

(2) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to Output Jacks
Mode: Stop
Monitor SW — Source
Dolby NR SW — C-Type/OFF

- Connect a VTVM to the Output Jacks.
- Feed in 1.4 kHz and adjust the Input Level controls to obtain 100 mV/31.6 mV on the VTVM.
- Remove the VTVM from the Output Jacks and reconnect it to CN2-1 (CN2-2) on the Dolby NR P.C.B. Ass'y.
- Check to insure that the reading at CN2-1 (CN2-2) corresponds to the following with Dolby NR switch OFF and C-Type.

Input Level at MS25, MS26	Level at CN2-1, CN2-2	
	Dolby NR OFF	Dolby NR C-Type
100 mV	0 dB	+6.5 dB $\pm$ 1.5 dB
31.6 mV	0 dB	+11.4 dB $\pm$ 1.5 dB

5. MECHANISM ASS'Y AND PARTS LIST

5.1. Synthesis

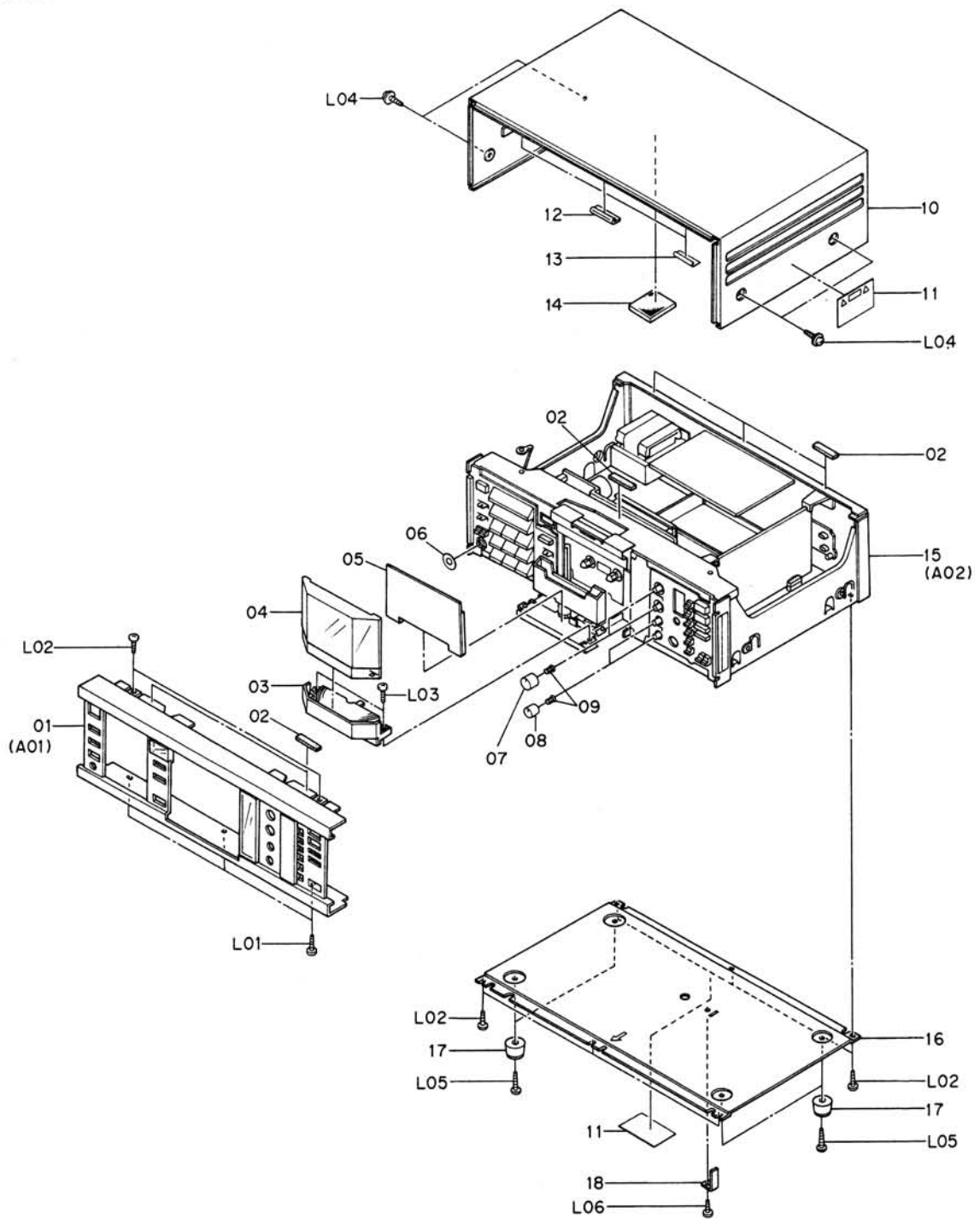


Fig. 5.1

5.2. Front Panel Ass'y (A01)

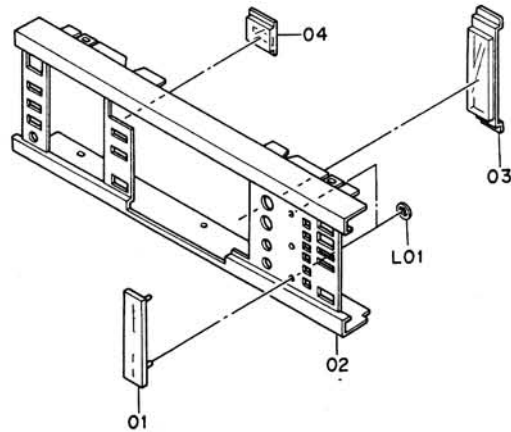


Fig. 5.2

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
		Synthesis		A01	HA04562A	Front Panel Ass'y RX505	1
01	HA04562A	Front Panel Ass'y RX505	1		HA04566A	Front Panel Ass'y RX505E	1
02	OJ04550A	Top Cover Cushion	6	01	OH04335A	Dressing Plate	1
03	HA04564A	CAT Bottom Ass'y	1	02	OH04332A	Front Panel RX505	1
04	OH04345A	CAT Window	1		OH04355A	Front Panel RX505E	1
05	DA03735A	Caution Card Ass'y	1	03	OH04334A	Meter Cover	1
06	OJ04815A	Headphone Himelon	1	04	OH04333A	Counter Lens	1
07	OH04343A	Input Volume Knob	2	—	OJ04627A	Adhesive Tape for Meter IC	2
08	OH04342A	Output Volume Knob	2	—	OJ04745B	Adhesive Tape for Meter Cover	4
09	OH03737A	Volume Knob Base	4	L01	OE00132A	CS-Ring 4mm	2
10	OH04349A	Top Cover	1				
11	OM04377A	Caution Label	2				
12	OJ04715A	Top Cover Cushion	1				
13	OJ04080A	Top Cover Himelon	2				
14	OJ04753A	Vibration Isolating Rubber	1				
15	—	Chassis Ass'y	1				
16	OJ04737A	Bottom Cover	1				
17	OJ03564A	Leg T-H	4				
18	OC08583C	Slide Locker	1				
L01	OE00921A	BT 3x8 @ Binding	3				
		(Black Chromate)					
L02	OE00868A	BT 3x8 @ Binding (Chromate)	8				
L03	OE00818A	M3x8 @ Binding	2				
		(Black Chromate)					
L04	OE03032A	BT 4x8 @ Pan Washer Faced	4				
		(Black Chromate)					
L05	OE00865A	BT 3x10 @ Binding (Chromate)	4				
L06	OE03144A	BT 3x6 @ Binding	1				
		(Red Chromate)					

5.3. Chassis Ass'y (A02)

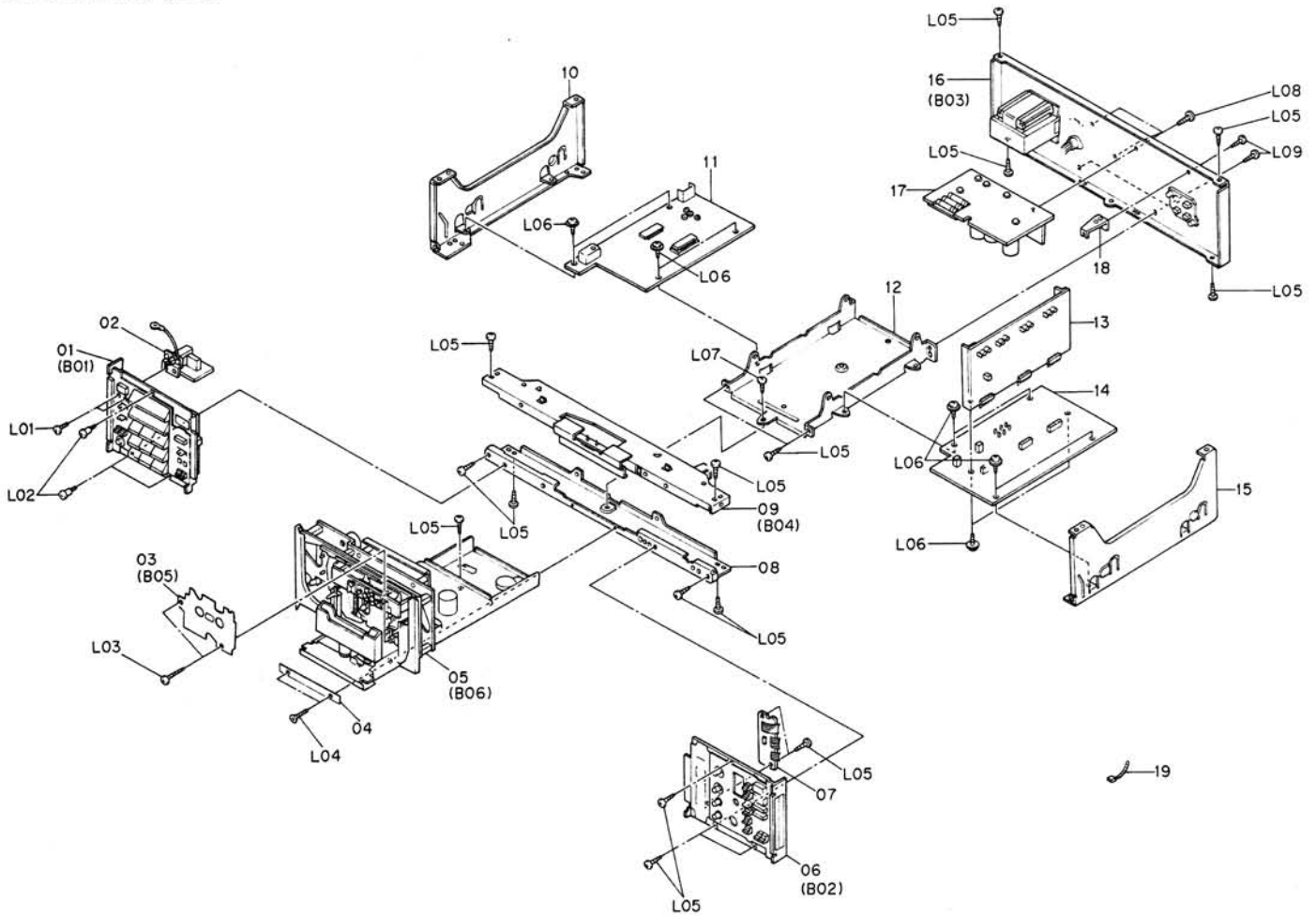


Fig. 5.3

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
A02	—	Chassis Ass'y RX505	1	17	BA05174A	DC Power Supply P.C.B. Ass'y	1
	—	Chassis Ass'y RX505E	1	18	0J04807A	Dolby NR P.C.B. Holder	1
01	HA04559A	Front Panel Escutcheon L Ass'y	1	19	0B08515A	Insu-Lock	16
02	BA05188A	Power Switch P.C.B. Ass'y (RX505 (U.S.A. & Canada))	1	—	0J04816A	CAT Mechanism Cushion	1
	BA05150A	Power Switch P.C.B. Ass'y (RX505 (Japan))	1	—	0B08374A	Fuse 1A (RX505 (U.S.A., Canada & Others))	1
	BA05189A	Power Switch P.C.B. Ass'y (RX505 (Others & Australia) & RX505E)	1	—	0B08962A	Fuse 2.5A (RX505 (U.S.A., Canada & Others))	2
03	CA08507A	Cover Plate Ass'y	1	—	0B08686A	Fuse 1A (RX505 (Japan))	1
04	0J04757A	CAT Mechanism Himelon	1	—	0B08961A	Fuse 2.5A (RX505 (Japan))	2
05	CA08501A	Synthesis Mechanism Ass'y	1	—	0B08347U	Fuse 1AT (RX505 (Australia) & RX505E)	2
06	HA04560A	Front Panel Escutcheon R Ass'y	1	—	0B08457A	Fuse 500mAT (RX505 (Australia) & RX505E)	1
07	BA05142A	Indicator P.C.B. Ass'y	1	—	0M04190A	Fuse Label 1A 250V (RX505 (U.S.A., Canada, Others & Japan))	1
08	0J04732D	Bottom Angle	1	—	0M04409A	Fuse Label 2.5A 250V (RX505 (U.S.A., Canada & Others))	2
09	HA04574A	Upper Angle Ass'y	1	—	0M04096C	Fuse Label 500mAT (RX505 (Australia) & RX505E)	1
10	0J04750A	Side Chassis L	1	—	0M04191A	Fuse Label 1AT 250V (RX505 (Australia) & RX505E)	2
11	BA05173A	Logic P.C.B. Ass'y	1	—	0B08349B	Fuse Clip (RX505 (Australia) & RX505E)	6
12	0J04749A	Center Chassis Ass'y	1	—	0M04343A	Fuse Caution (RX505 (U.S.A. & Canada))	1
13	BA05171A	Dolby NR P.C.B. Ass'y	1	L01	0E00818A	M3x8 ♂ Binding (Black Chromate)	2
14	BA05165A	Main P.C.B. Ass'y	1	L02	0E03135B	M3x8 ♂ Binding (Half threaded)	3
15	0J04751A	Side Chassis R	1	L03	0E00950A	BT 3x14 ♂ Pan (Black Chromate)	2
16	HA04545A	Rear Panel Ass'y RX505 (U.S.A. & Canada)	1	L04	0E03115A	BT 3x8 ♂ Countersunk (Black Chromate)	2
	HA04546A	Rear Panel Ass'y RX505 (Japan)	1				
	HA04547A	Rear Panel Ass'y RX505 (Others) (Australia)	1				
	HA04548A	Rear Panel Ass'y RX505 (Australia)	1				
	HA04549A	Rear Panel Ass'y RX505E (220V Class 2)	1				
	HA04544A	Rear Panel Ass'y RX505E (UK)	1				

5.4. Front Panel Escutcheon L Ass'y (B01)

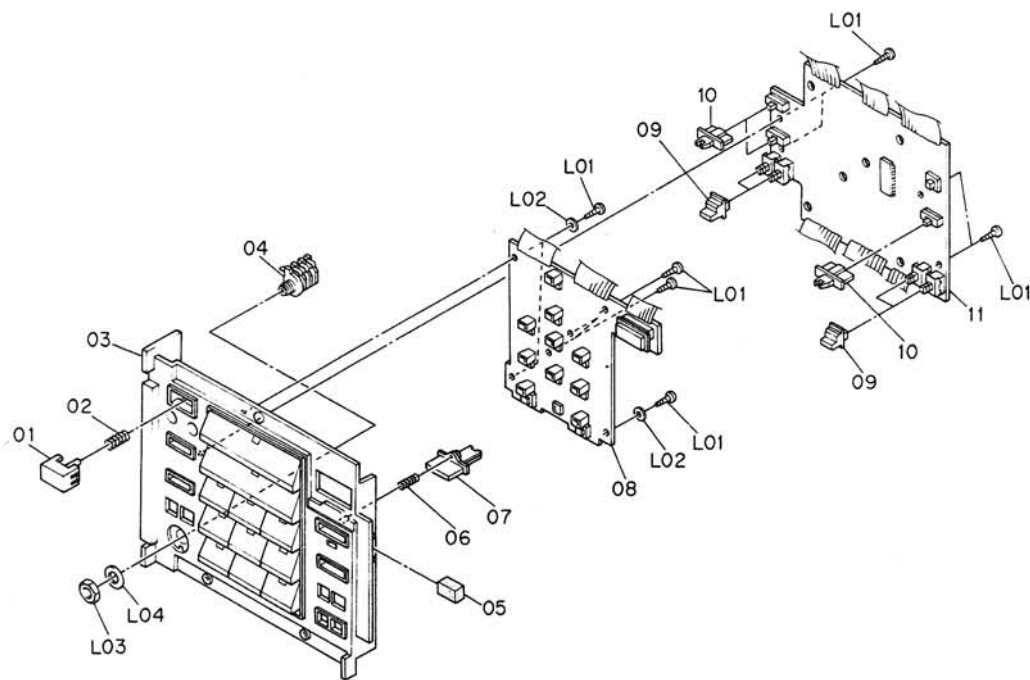


Fig. 5.4

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
L05	0E00868A	BT 3x8 @ Binding (Chromate)	18	B01	HA04559A	Front Panel Escutcheon L Ass'y Serial No.: A80401001 -	1
L06	0E03157A	BT 3x8 @ Binding Washer Faced (Chromate)	10	01	0H04327A	Power Switch Button	1
L07	0E00857A	BT 3x6 @ Binding (Chromate)	1	02	0J04794A	Spring for Power Switch	1
L08	0E00915A	BT 4x8 @ Binding (Black Chromate)	3	03	HA04561B	Front Panel Escutcheon L Sub Ass'y	1
L09	0E00921A	BT 3x8 @ Binding (Black Chromate)	3	04	0B08511A	Headphone Jack	1
				05	0C08611A	Cushion B	1
				06	0J04640A	Spring for Reset Switch	1
				07	0H04328A	Reset Button	1
				08	BA05175A	Control P.C.B. A Ass'y	1
				09	0H04337A	Push Switch Button	4
				10	0H04330A	Slide Switch Knob	3
				11	BA05187A	Control P.C.B. B Ass'y	1
				L01	0E00868A	BT 3x8 @ Binding (Chromate)	10
				L02	0E00157A	Plastic Washer 3mm	3
				L03	—	Headphone Jack Nut	(1)
				L04	—	Headphone Washer	(1)

5.5. Front Panel Escutcheon R Ass'y (B02)

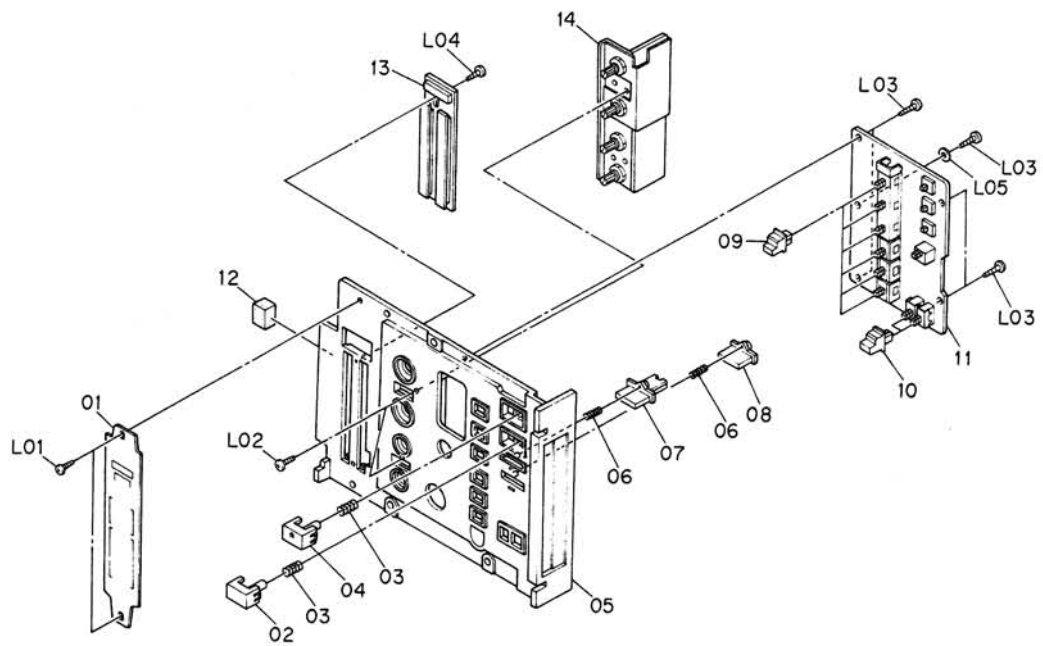


Fig. 5.5

5.6. Rear Panel Ass'y (B03)

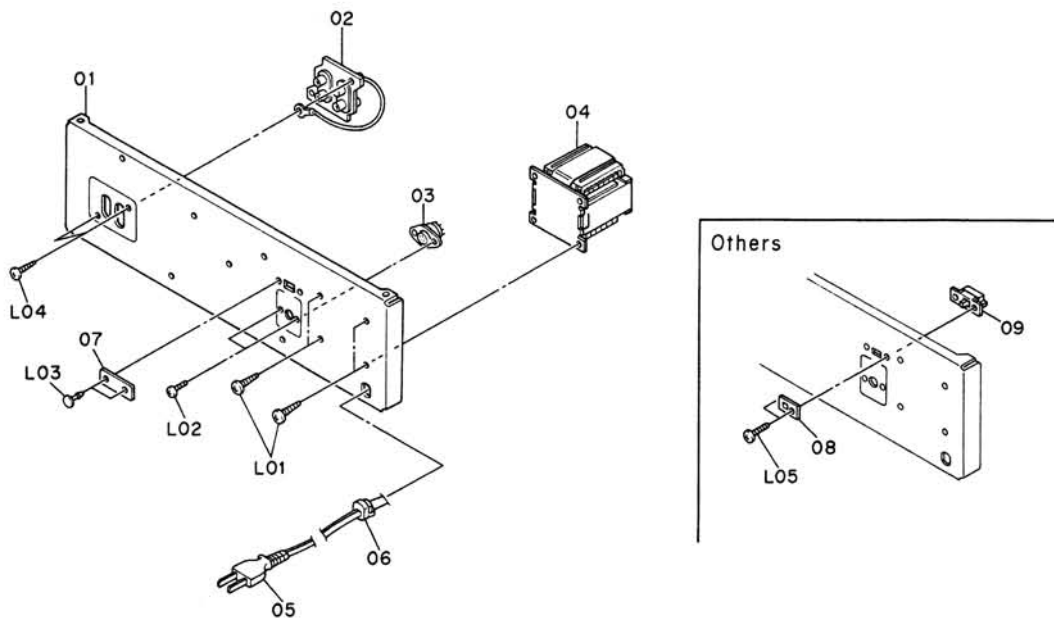


Fig. 5.6

Schematic Ref. No.	Part No.	Description	Q'ty
B02	HA04560A	Front Panel Escutcheon R Ass'y Serial No.: A80401001 -	1
01	OH04341A	Meter Scale	1
02	OH04340A	Reverse Button	1
03	OJ04794A	Spring for Eject Switch	2
04	OH04339A	Eject Button	1
05	OH04336A	Front Panel Escutcheon R	1
06	OJ04640A	Spring for A.R.S. Switch	2
07	OH04328A	A.R.S. Button	1
08	OH04338A	Monitor Switch Button	1
09	OH04370A	Selector Button	6
10	OH04337A	Push Switch Button	2
11	BA05166A	Switch P.C.B. Ass'y	1
12	OC08611A	Cushion B	1
13	BA05214A	Indicator P.C.B. Ass'y & Display Unit	1
14	BA05167A	Volume P.C.B. Ass'y	1
L01	OE00873A	BT 2.6x5 @ Binding (Chromate)	2
L02	OE00896A	M3x6 @ Binding (Chromate)	2
L03	OE00868A	BT 3x8 @ Binding (Chromate)	5
L04	OE00857A	BT 3x6 @ Binding (Chromate)	1
L05	OE00157A	Plastic Washer 3mm	1
B03	HA04545A	Rear Panel Ass'y RX505 (U.S.A. & Canada)	1
	HA04546A	Rear Panel Ass'y RX505 (Japan)	1
	HA04547A	Rear Panel Ass'y RX505 (Others)	1
	HA04548A	Rear Panel Ass'y RX505 (Australia)	1
	HA04544A	Rear Panel Ass'y RX505E (UK)	1
	HA04549A	Rear Panel Ass'y RX505E (220V Class 2) Serial No.: A80401001 -	1
01	OH04351C	Rear Panel RX505	1
	OH04357C	Rear Panel RX505E	1
02	OB81001A	4P Pin Jack	1
03	BA05198A	8P DIN Socket Ass'y (Consisting of followings)	1
	(OB08584A)	8P DIN Socket	(1)
	(OB08752A)	8P-H Connector	(1)
04	OB50019A	Power Transformer 120V (RX505 (U.S.A. & Canada))	1
	OB50018A	Power Transformer 100V (RX505 (Japan))	1
	OB50021A	Power Transformer 115V/230V (RX505 (Others))	1
	OB50020A	Power Transformer 220V/240V (RX505 (Australia) & RX505E)	1
05	OB08533A	Power Cord (RX505 (U.S.A., Canada & Others))	1
	OB08219A	Power Cord (RX505 (Japan))	1
	OB05241A	Power Cord (RX505 (Australia))	1
	OB08093U	Power Cord (RX505E (220V Class 2))	1
	OB08348A	Power Cord (RX505E (UK))	1
06	OB08037U	Cord Bushing C (RX505 & RX505E (220V Class 2))	1
	OB08351A	Cord Bushing 4K-4 (RX505E (UK))	1
07	OJ04601B	Switch Cover (RX505 (U.S.A., Canada, Japan & Australia) & RX505E)	1
08	OM03948A	Voltage Lock Plate D (RX505 (Others))	1
09	OB07092U	Voltage Selector Switch (RX505 (Others))	1
—	OF01071A	Free-up Belt (RX505 (Australia) & RX505E)	1
L01	OE00915A	BT 4x8 @ Binding (Black Chromate)	4
L02	OE03072A	M2.6x6 @ Binding (Black Chromate)	2
L03	OB08583A	Plastic Rivet (RX505 (U.S.A., Canada, Japan & Australia & RX505E))	2
L04	OE00921A	BT 3x8 @ Binding (Black Chromate)	2
L05	OE00818A	M3x8 @ Binding (Black Chromate) (RX505 (Others))	2

5.7. Upper Angle Ass'y (B04)

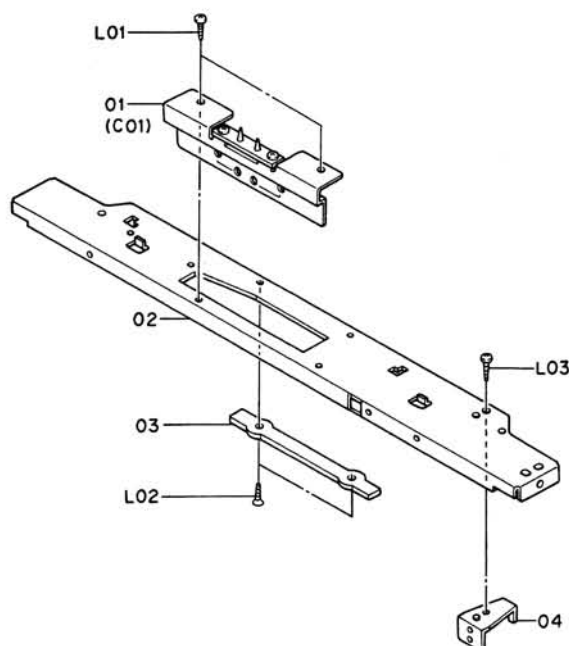


Fig. 5.7

5.8. Cover Plate Ass'y (B05)

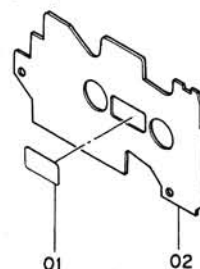


Fig. 5.8

Schematic Ref. No.	Part No.	Description	Q'ty
B04	HA04574A	Upper Angle Ass'y Serial No.: A80401001 -	1
01	HA04575A	Lid Cover Ass'y	1
02	OJ04788B	Upper Angle	1
03	OJ04808A	Holder Plate	1
04	OJ04807A	Dolby NR P.C.B. Holder	1
L01	OE00868A	BT 3x8 @ Binding (Chromate)	2
L02	OE03073A	BT 3x6 @ Countersunk (Black Chromate)	2
L03	OE00818A	M3x8 @ Binding (Black Chromate)	1
B05	CA08507A	Cover Plate Ass'y Serial No.: A80401001 -	1
01	OM04392A	Cassette Label (Gold)	1
02	OC08555A	Cover Plate	1

5.9. Synthesis Mechanism Ass'y (B06)

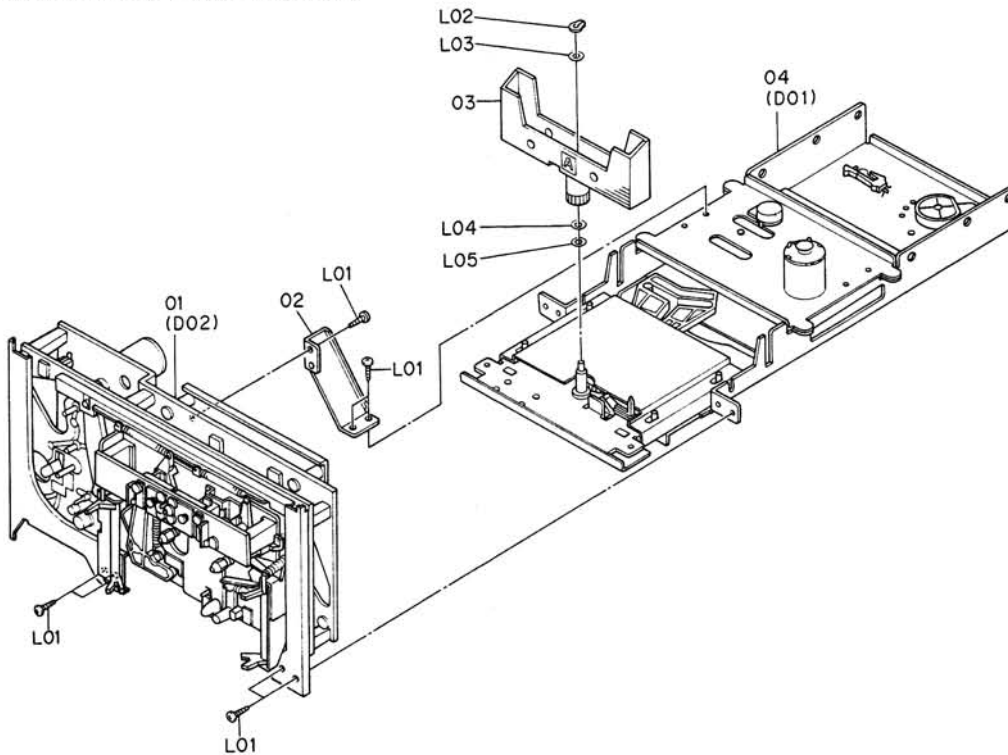


Fig. 5.9

5.10. Lid Cover Ass'y (C01)

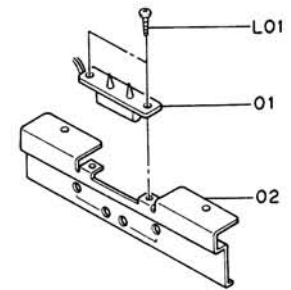


Fig. 5.10

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
B06	CA08501A	Synthesis Mechanism Ass'y Serial No.: A80401001 -	1	D02	CA08520A	Mechanism Ass'y RX505 Serial No.: A80401001 -	1
01	CA08520A	Mechanism Ass'y RX505	1	01	0C08563B	Mechanism Holder L	1
02	0C08597A	Rear Holder	1	02	0C08564B	Mechanism Holder R	1
03	CA08511A	Cassette Case Ass'y	1	03	CA08521A	Sub Mechanism Ass'y	1
04	CA08508A	RN Mechanism Ass'y	1	L01	0E03060A	BT 4x16 @ Binding (Toothed Lock Washer faced)	1
L01	0E00857A	BT 3x6 @ Binding (Chromate)	7	L02	0E03059A	BT 4x15 @ Binding (Toothed Lock Washer faced)	3
L02	0E00837A	Stopper Ring 3mm	1				
L03	0E00254A	Mylar Washer 3.1x7x0.2	1				
L04	0C08347A	Mylar Washer 3.1mm (0.25t)	1				
L05	0C08594A	Mylar Washer 3x0.5	1				
—	0E03163A	Mylar Washer 3x0.13	1	E01	CA08526A	Motor Holder Ass'y Serial No.: A80401001 -	1
C01	HA04575A	Lid Cover Ass'y Serial No.: A80401001 -	1	01	0C08527A	PM Gear	1
01	BA05143A	Lid Lamp P.C.B. Ass'y	1	02	0C08565B	Motor Holder	1
02	0H04377A	Lamp Cover	1	03	CA08527A	Drive Motor Ass'y	1
L01	0E03070A	M2.6x6 @ Binding (Chromate)	2	04	0B07240A	Volume 10K (B)	1
				05	0B82201A	5P-H Connector	1
D01	CA08508A	RN Mechanism Ass'y Serial No.: A80401001 -	1	L01	0E00993A	Stopper Ring 6mm	1
01	CA08526A	Motor Holder Ass'y	1	L02	—	Volume Nut	(1)
02	0C08615A	Slide Cover B	1	L03	—	Volume Washer	(1)
03	0C08099B	Cam Motor Belt	1	L04	0E00120A	M2.6x3 @ Pan (Chromate)	2
04	0C08525A	SD Pulley	1				
05	CA08509A	Slide Chassis Ass'y	1				
06	0C08133A	Skeleton Switch	1				
07	0B82203A	2P-H Connector	1				
08	CA08488A	Main Chassis Ass'y	1				
L01	0E00868A	BT 3x8 @ Binding (Chromate)	4				
L02	0E03022A	BT 2x4 @ Binding (Black Chromate)	2				
L03	0E00222A	E-Ring 2mm	1				
L04	0C08594A	Mylar Washer 3x0.5	1				
L05	0E00181A	E-Ring 3mm	4				
L06	0C08593A	Mylar Washer 4x0.5	8				
L07	0E00840A	BT 2x8 @ Pan (Chromate)	2				

5.11. RN Mechanism Ass'y (D01)

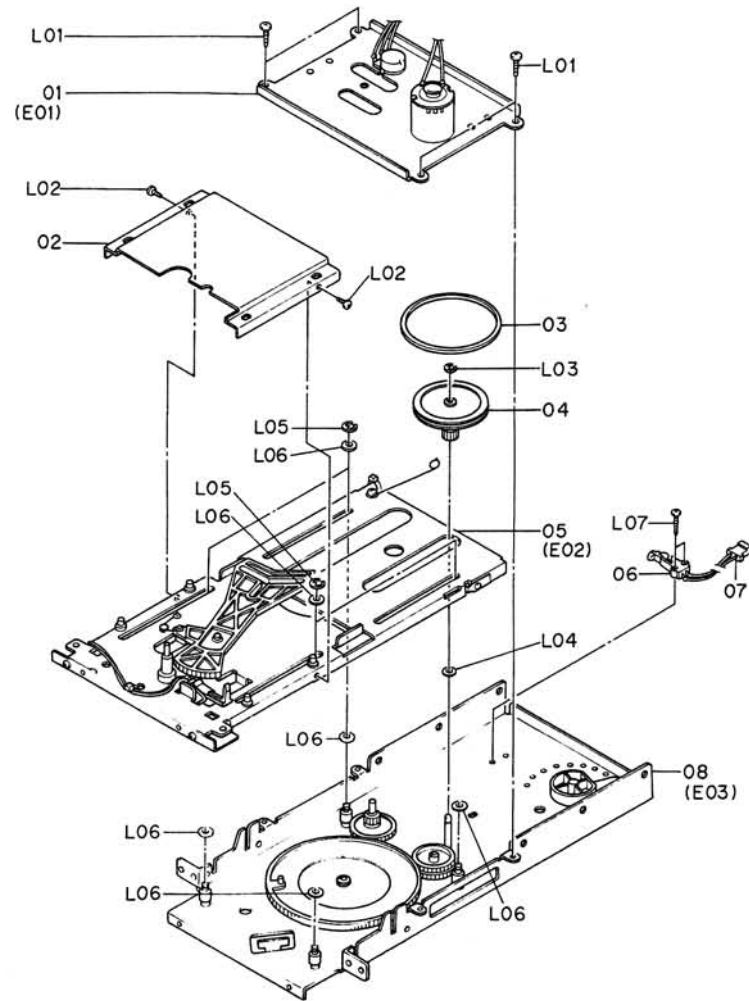


Fig. 5.11

5.12. Mechanism Ass'y RX505 (D02)

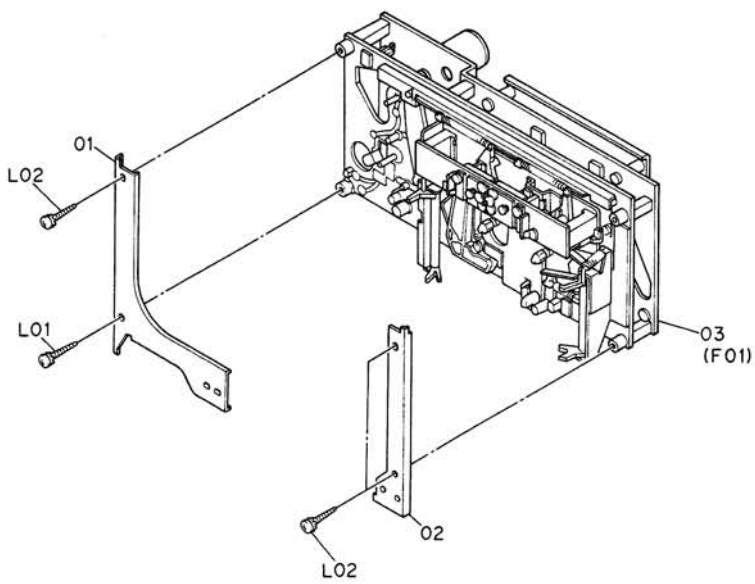


Fig. 5.12

5.13. Motor Holder Ass'y (E01)

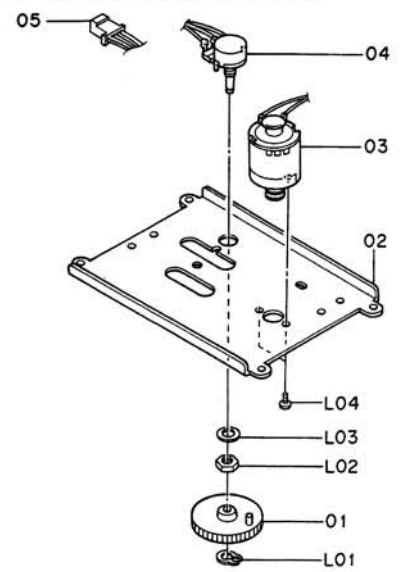


Fig. 5.13

5.14. Slide Chassis Ass'y (E02)

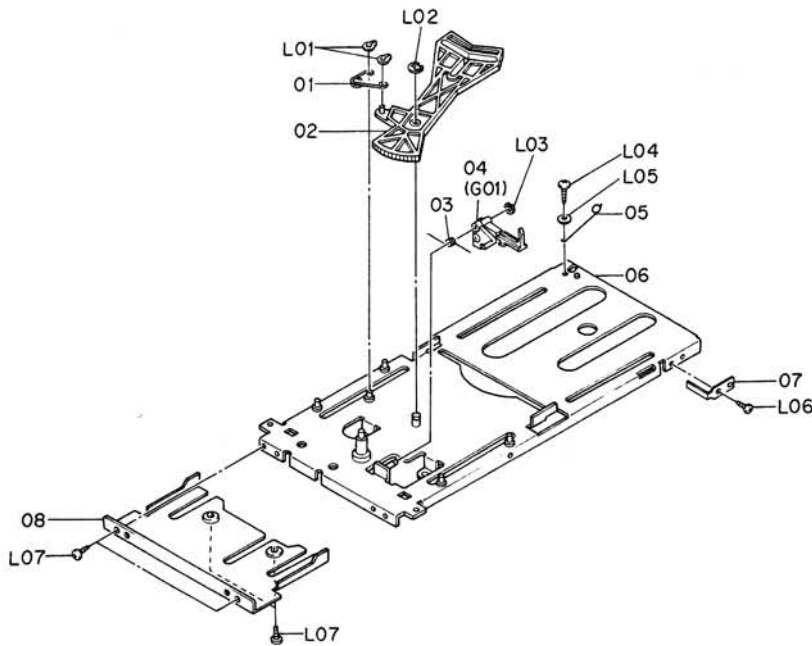


Fig. 5.14

5.15. Main Chassis Ass'y (E03)

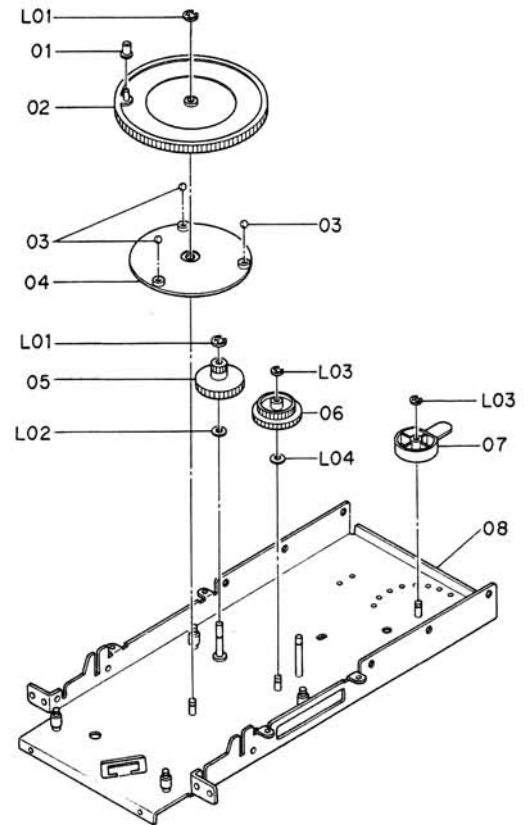


Fig. 5.15

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
E02	CA08509A	Slide Chassis Ass'y Serial No.: A80401001 -	1	F01	CA08521A	Sub Mechanism Ass'y Serial No.: A80401001 -	1
01	OC08548A	R Arm Spring	1	01	CA08017B	Flywheel Holder Ass'y	1
02	OC08529A	R Arm	1	02	OC08096C	Capstan Belt	1
03	OC08547A	Record Protector Switch Spring	1	03	CA08534A	Supply Flywheel Ass'y	1
04	CA08510A	Record Protector Switch Ass'y	1	04	OC08021B	Thrust Washer 3.1mm	1
05	OC08596A	WH Rod	1	05	CA08533A	Take-up Flywheel Ass'y	1
06	CA08475D	Slide Chassis Sub Ass'y	1	06	OC08020B	Thrust Washer 2.6mm	1
07	OC08598A	SS Plate	1	07	OC08243A	Flange Thrust Cap	2
08	OC08552A	Under Cover	1	08	OC08244A	Flange Thrust Spring	2
L01	OE00837A	Stopper Ring 3mm	2	09	CA08513A	Sub Mechanism Chassis Ass'y	1
L02	OE00181A	E-Ring 3mm	1	10	OC08099B	Control Motor Belt	1
L03	OE00042A	E-Ring 1.5mm	1	11	CA08522B	Main Mechanism Chassis Ass'y	1
L04	OE00857A	BT 3x6 @ Binding (Chromate)	1	12	CA08505A	Lock Arm L Ass'y	1
L05	OE00637A	Washer 3.3x7x0.5	1	13	CA08506A	Lock Arm R Ass'y	1
L06	OE03022A	BT 2x4 @ Binding (Black Chromate)	1	14	OB82199A	6P-H Connector	1
L07	OE03133A	BT 2.6x4 @ Binding (Black Chromate)	4	15	OB82204A	3P-H Connector	1
				16	OB8515A	Insu-Lock	10
				17	OC08620A	Head Height Adjustment Gear	2
				L01	OE00833A	BT 3x20 @ Pan (Chromate)	3
				L02	OE00834A	BT 3x30 @ Pan (Chromate)	1
				L03	OE00178A	Washer 3.3x8x0.5	2
				L04	OE00835A	BT 3x25 @ Pan (Chromate)	1
				L05	OE00883A	BT 3x18 @ Pan (Chromate)	5
				L06	OE00846A	BT 3x8 @ Pan (Chromate)	3
E03	CA08488A	Main Chassis Ass'y Serial No.: A80401001 -	1				
01	OC08584A	Collar	1				
02	OC08523A	Main Gear	1				
03	OC08550A	Ball 4mm	3				
04	OC08528A	Retainer	1				
05	OC08526A	PMD Gear	1				
06	OC08524A	SD Gear	1				
07	OC08543A	SS Cam	1				
08	CA08474C	Main Chassis Sub Ass'y	1				
L01	OE00181A	E-Ring 3mm	2				
L02	OC08593A	Mylar Washer 4x0.5	1				
L03	OE00222A	E-Ring 2mm	2				
L04	OC08594A	Mylar Washer 3x0.5	1				

5.16. Sub Mechanism Ass'y (F01)

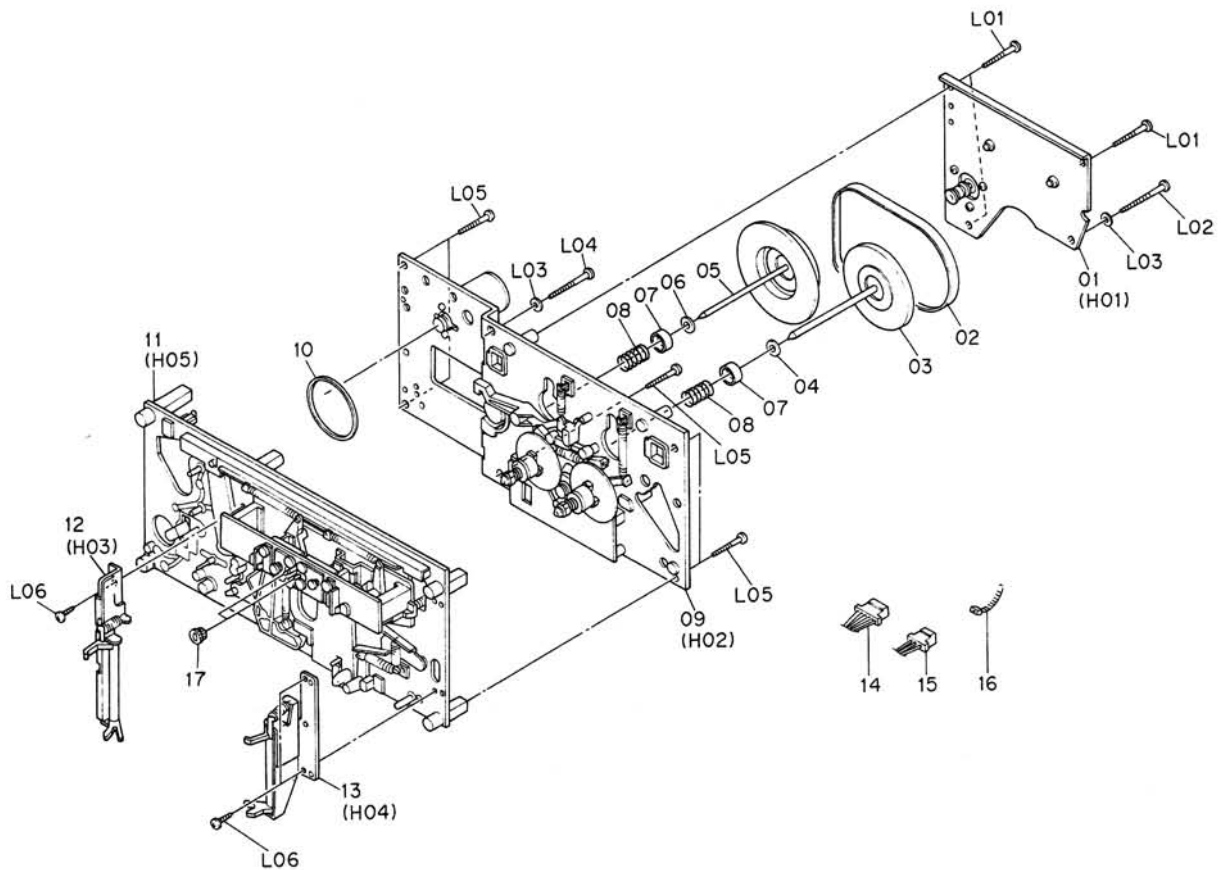


Fig. 5.16

5.17. Record Protector Switch Ass'y (G01)

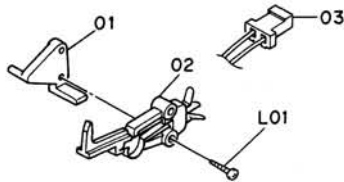


Fig. 5.17

5.18. Flywheel Holder Ass'y (H01)

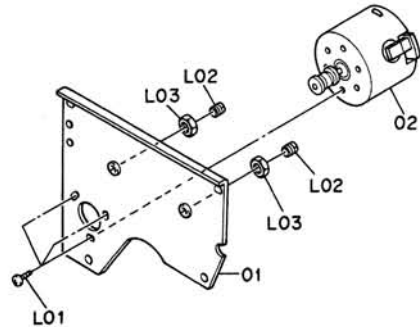


Fig. 5.18

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
G01	CA08510A	Record Protector Switch Ass'y Serial No.: A80401001 -	1	H01	CA08017B	Flywheel Holder Ass'y Serial No.: A80401001 -	1
01	OC08539A	Record Protector Switch Arm	1	01	OC08013I	Flywheel Holder	1
02	OC08540B	Skeleton Switch	1	02	CA08106B	Capstan Motor Ass'y	1
03	OB82075B	2P-H Connector	1	L01	OE00226A	M2.6x4 @ Pan (Chromate)	3
L01	OE00840A	BT 2x8 @ Pan (Chromate)	1	L02	OC08068C	Thrust Screw	2
				L03	OC03857A	Lock Nut	2

5.19. Sub Mechanism Chassis Ass'y (H02)

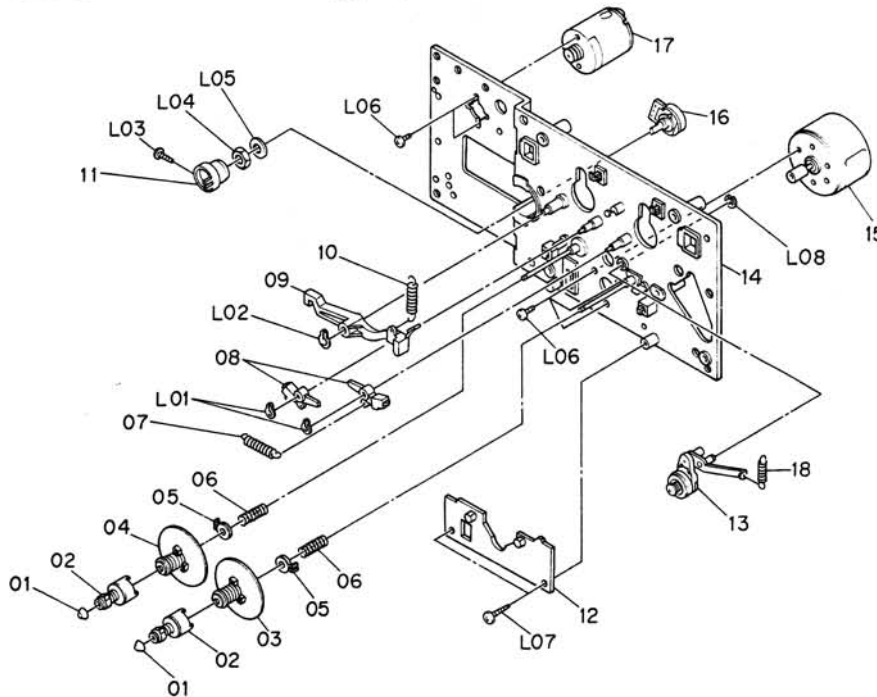


Fig. 5.19

5.20. Lock Arm L Ass'y (H03)

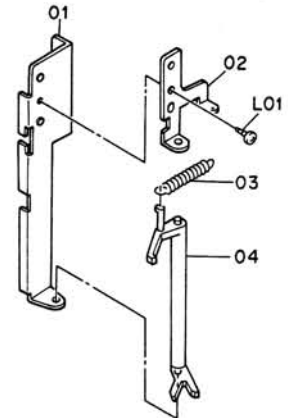


Fig. 5.20

5.21. Lock Arm R Ass'y (H04)

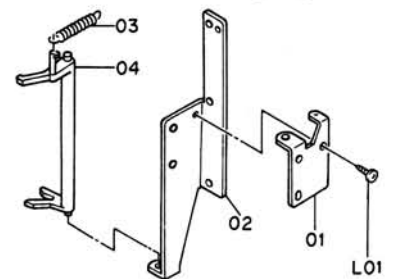


Fig. 5.21

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
H02	CA08513A	Sub Mechanism Chassis Ass'y Serial No.: A80401001 -	1	H04	CA08506A	Lock Arm R Ass'y Serial No.: A80401001 -	1
01	OC08039B	Reel Hub Head	2	01	OC08558A	Lock Arm Holder Right B	1
02	CA08038B	Reel Hub Pulley B Ass'y	2	02	OC08557A	Lock Arm Holder Right A	1
03	CA08515A	Reel Hub Supply Ass'y	1	03	OC08546A	Lock Arm Spring	1
04	CA08514A	Reel Hub Take-up Ass'y	1	04	OC08614A	Lock Arm Right	1
05	CA08039A	Back Tension Ass'y	2	—	OC08599A	Cushion	1
06	OC08610A	Back Tension Spring D	2	L01	OE00941A	BT 3x5 @ Binding (Black Chromate)	1
07	OC08129B	Brake Arm Spring	1				
08	CA08042A	Brake Arm Ass'y	2				
09	OC08030C	Brake Drive Arm	1	H05	CA08522B	Main Mechanism Chassis Ass'y Serial No.: A80401001 -	1
10	OC08128A	Brake Drive Arm Spring	1	01	CA08523A	Head Mount Base Ass'y	1
11	OC08053B	Volume Coupler	1	02	OC08313A	Pressure Roller Arm Bushing	2
12	BA05199A	TS Pulse P.C.B. Ass'y	1	03	CA08464A	Supply Pressure Roller Ass'y	1
13	CA08193A	Idle Arm Ass'y	1	04	OC08121A	Supply Pressure Roller Spring	1
14	CA08194A	Sub Chassis Ass'y B	1	05	OC08122C	Supply Pressure Roller Thrust Spring	1
15	CA08242A	Reel Motor Ass'y	1	06	CA08465A	Take-up Pressure Roller Ass'y	1
16	OB07240A	Volume 10K (B)	1	07	OC08250A	Supply Pressure Roller Spring B	1
17	CA08527A	Control Motor Ass'y	1	08	OC08183B	Take-up Pressure Roller Thrust Spring	1
18	OC08266A	Idle Arm Spring B	1	09	CA08530A	Head Base Ass'y	1
L01	OE00837A	Stopper Ring 3mm	2	10	OC08086B	Head Base Roller	3
L02	OE00838A	Stopper Ring 4mm	1	11	OC08182A	Pressure Roller Drive Bar B	1
L03	OE00859A	BT 2.6x6 @ Binding (Chromate)	1	12	CA08027A	Head Base Drive Arm Ass'y	1
L04	—	Volume Nut	(1)	13	GA02103A	EOK Erase Head	1
L05	—	Volume Washer	(1)	14	CA08026A	Pressure Roller Drive Arm Ass'y	1
L06	OE00226A	M2.6x4 @ Pan (Chromate)	5	15	OC08544B	Cassette Hold Arm	1
L07	OE00831A	BT 3x10 @ Pan (Chromate)	2	16	OC08120A	Cassette Hold Arm Spring	1
L08	OE00698A	E-Ring 2.5mm	1	17	CA08196A	Back Tension Arm Ass'y	1
				18	OC08254A	Back Tension Arm Collar	1
H03	CA08505A	Lock Arm L Ass'y Serial No.: A80401001 -	1	19	CA08347A	Main Chassis Ass'y	1
01	OC08555B	Lock Arm Holder Left A	1	20	CA08028A	Counter-Load Arm Ass'y	1
02	OC08556A	Lock Arm Holder Left B	1	21	OC08371A	Back Tension Arm Spring	1
03	OC08546A	Lock Arm Spring	1	22	OC08152A	Counter-Load Arm Spring Tube	1
04	OC08613A	Lock Arm Left	1	23	OC08029H	Control Cam	1
—	OC08599A	Cushion	1	24	OC08186A	Cam Drive Gear	1
L01	OE00941A	BT 3x5 @ Binding (Black Chromate)	1	25	CA08024A	Capstan Flange ϕ 2.5 Ass'y	1

5.22. Main Mechanism Chassis Ass'y (H05)

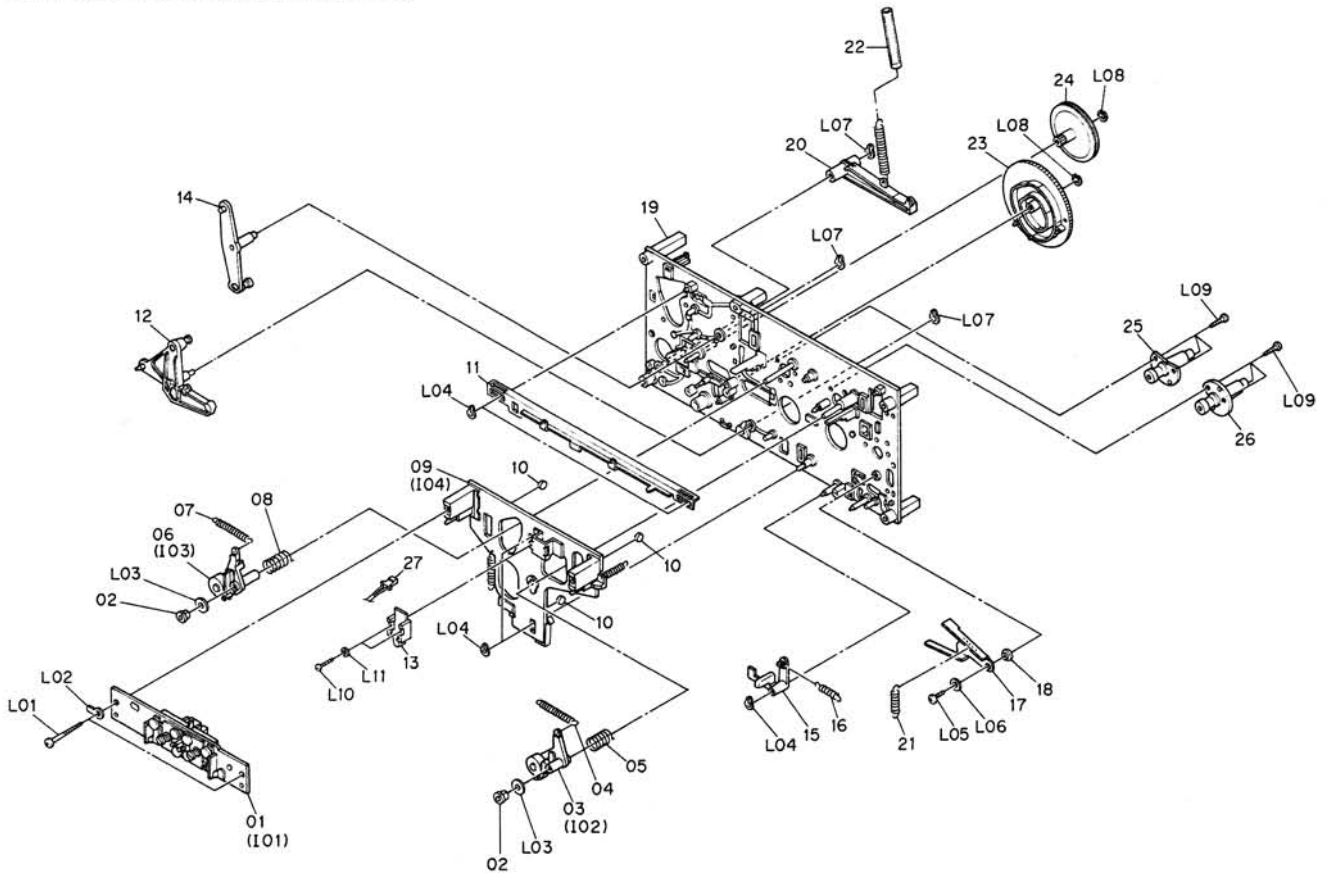


Fig. 5.22

Schematic Ref. No.	Part No.	Description	Qty
26	CA08023A	Capstan Flange ϕ 3.0 Ass'y	1
27	0B82166B	2P-H Connector	1
L01	0E00834A	BT 3x30 ϕ Pan (Chromate)	2
L02	0E00895A	Earth Lug 3mm	1
L03	0E00178A	Washer 3.3x8x0.5	2
L04	0E00837A	Stopper Ring 3mm	5
L05	0E00859A	BT 2.6x6 ϕ Binding (Chromate)	1
L06	0C08255A	Washer 2.6mm	1
L07	0E00838A	Stopper Ring 4mm	3
L08	0E00222A	E-Ring 2mm	2
L09	0E00876A	BT 2.6x8 ϕ Pan (Chromate)	6
L10	0E00951A	M1.7x7 ϕ Pan (Black Chromate)	2
L11	0E00952A	Washer 1.7mm	2
I01	CA08523A	Head Mount Base Ass'y Serial No.: A80401001 -	1
01	0C08621A	Head Height Adjustment Screw	4
02	0C08161B	Spring Stopper	2
03	0C08187B	Head Plate Spring	2
04	0C08619A	Azimuth Alignment Screw	2
05	CA08528A	Head Mount Base Sub Ass'y	1
06	CA08525A	P-8L Playback Head Ass'y	1
07	CA08524A	R-8L Record Head Ass'y	1

5.23. Head Mount Base Ass'y (I01)

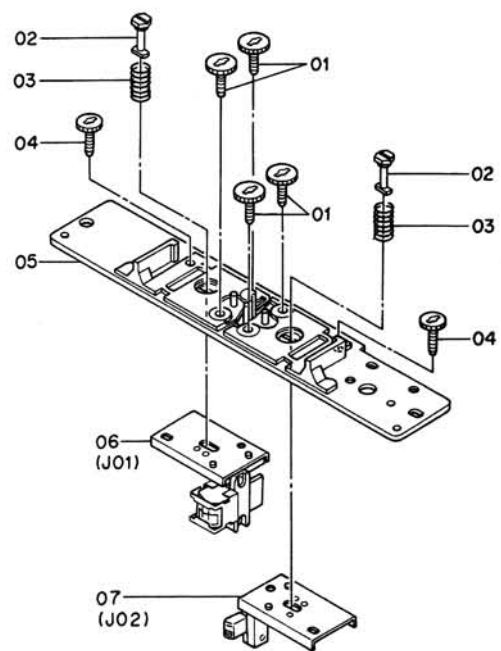


Fig. 5.23

5.24. Supply Pressure Roller Ass'y (I02)

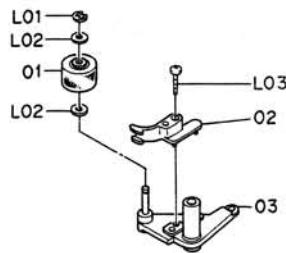


Fig. 5.24

5.25. Take-up Pressure Roller Ass'y (I03)

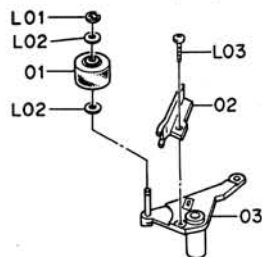


Fig. 5.25

5.26. Head Base Ass'y (I04)

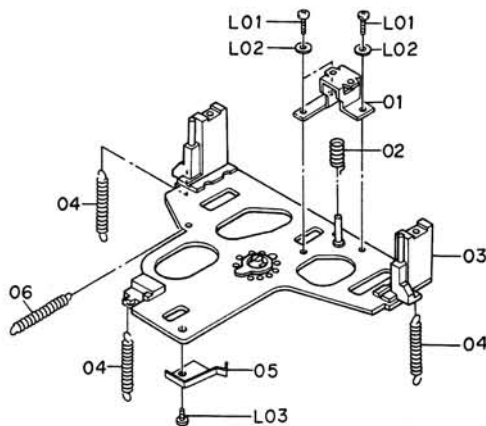


Fig. 5.26

5.27. P-8L Playback Head Ass'y (J01)

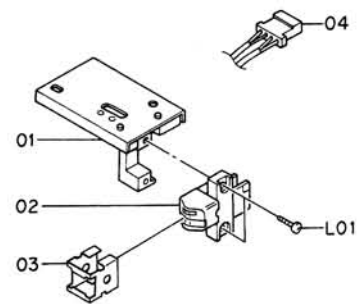


Fig. 5.27

5.28. R-8L Record Head Ass'y (J02)

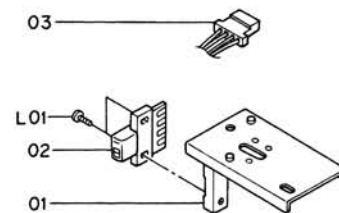


Fig. 5.28

Schematic Ref. No.	Part No.	Description	Qty
I02	CA08464A	Supply Pressure Roller Ass'y Serial No.: A80401001 -	1
01	OC08514A	Pressure Roller	1
02	OC08189C	Supply Tape Guide	1
03	CA08061A	Supply Pressure Roller Arm Sub Ass'y	1
L01	OE00042A	E-Ring 1.5mm	1
L02	OC08024A	Washer 2mm	2
L03	OE00788A	BT 2x8 @ Pan (Black Chromate)	1
I03	CA08465A	Take-up Pressure Roller Ass'y Serial No.: A80401001 -	1
01	OC08514A	Pressure Roller	1
02	OC08181C	Take-up Tape Guide	1
03	CA08073B	Take-up Pressure Roller Arm Sub Ass'y	1
L01	OE00042A	E-Ring 1.5mm	1
L02	OC08024A	Washer 2mm	2
L03	OE00788A	BT 2x8 @ Pan (Black Chromate)	1
I04	CA08530A	Head Base Ass'y Serial No.: A80401001 -	1
01	OC08158D	Erase Head Hold Plate	1
02	OC08166A	Erase Head Hold Plate Spring	1
03	CA08003R	Head Base Ass'y	1
04	OC08175A	Head Base L Spring	3
05	OC08622A	Cassette Hold Spring	1
06	OC08143C	Head Base Drive Arm Spring	1
L01	OE00909A	M2x6 @ Pan (Black Chromate)	3
L02	OE00117A	Washer 2x4.3x0.4	3
L03	OE00853A	BT 2x3 @ Pan (Chromate)	1
J01	CA08525A	P-8L Playback Head Ass'y Serial No.: A80401001 -	1
01	CA08307A	Playback Head Plate	1
02	GA02034A	P-8L Playback Head	1
03	OC08169D	Pad Lifter 54	1
04	OB82195B	4P-H Connector	1
L01	OE00886A	M1.7x6.5 @ Pan (Black Chromate)	2
J02	CA08524A	R-8L Record Head Ass'y Serial No.: A80401001 -	1
01	CA08308B	Record Head Plate	1
02	GA01050A	R-8L Record Head	1
03	OB82196B	4P-H Connector	1
L01	OE00887A	M1.7x4 @ Pan (Black Chromate)	2

6. MOUNTING DIAGRAMS AND PARTS LIST

- Notes: 1. Mounting diagram shows a dip side view of the printed circuit board.
 2. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
 3. Following transistors are interchangeable with each other.
 a. 2SA733, 2SA608SP, 2SA1048, 2SA1175
 b. 2SC945, 2SC536SP, 2SC2458, 2SC2785
 4. Abbreviation for part name:
 TR — Transistor, SiD — Silicon Diode, GD — Germanium Diode, ZD — Zener Diode
 RK — Carbon Resistor, RM — Metal Film Resistor, RF — Fail Safe Type Resistor, RC — Cement Resistor,
 RW — Wire Wound Resistor
 CE — Electrolytic Capacitor, CM — Mylar Capacitor, CC — Ceramic Capacitor, CP — PP Capacitor,
 CT — Tantalum Capacitor, CM — Film Capacitor, C — Mica Capacitor

6.1. Power Switch P.C.B. Ass'y

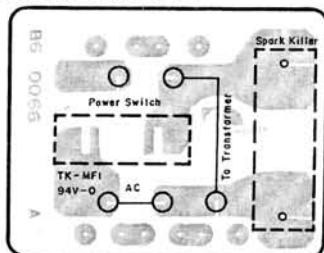


Fig. 6.1

6.3. Lid Lamp P.C.B. Ass'y Mounting diagram is omitted.

6.4. TS Pulse P.C.B. Ass'y

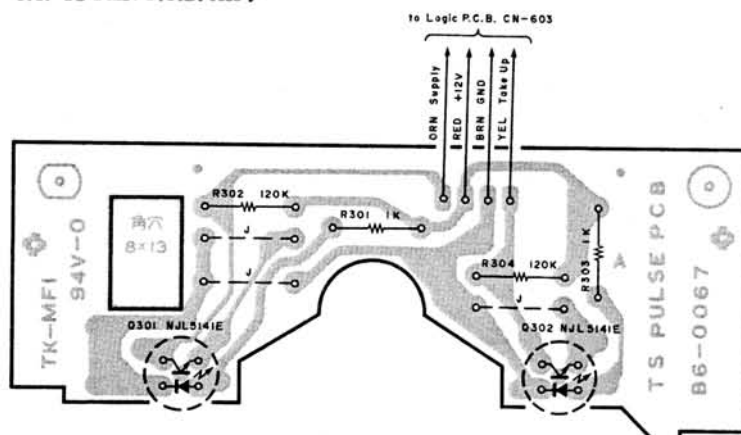


Fig. 6.3

6.2. Fuse P.C.B. Ass'y

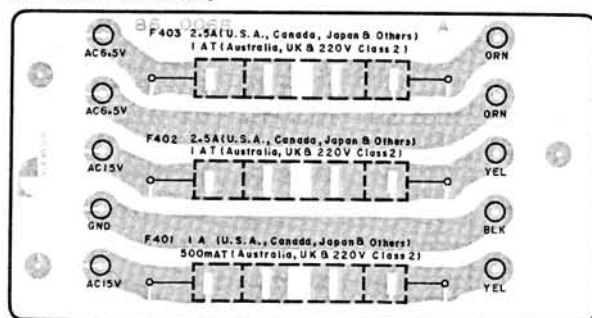


Fig. 6.2

Note: Fuse P.C.B. (OB60068A) is included in DC Power Supply P.C.B. Ass'y. Fuses are included in synthesis mechanism parts list.

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
SW1	BA05188A	Power Switch P.C.B. Ass'y (RX505 (U.S.A. & Canada))		0J04789A	Power Switch Holder (1)	Q301,302	BA05199A	TS Pulse P.C.B. Ass'y
	BA05150A	Power Switch P.C.B. Ass'y (RX505 (Japan))		OE00612A	M3x6 ♂ Pan (2A)		OB60067A	TS Pulse P.C.B. Photo Reflector NJL 5141E
	BA05189A	Power Switch P.C.B. Ass'y (RX505 (Others & Australia) & RX505E)		OE00752A	Eyelet 2x3 (2)		OB06393A	
	OB60066A	Power Switch P.C.B.	PL601 CN610	BA05143A	Lid Lamp P.C.B. Ass'y	R301,303 R302,304	OB01857A	RK 1K 1/4W J
	OB70002A	Power Switch (1)		OB60055A	Lid Lamp P.C.B.		OB05621A	RK 120K 1/4W J
	OB08342A	Spark Killer (RX505 (U.S.A. & Canada)) (1)		OB90010A	Lamp 12V 70 mA		OB82202A	4P-H Connector (1)
	OB08363A	Spark Killer (RX505 (Japan)) (1)		OB82205A	2P-H Connector			
	OB08445A	Spark Killer (RX505 (Others & Australia) & RX505E) (1)		0J04738A	Lamp Holder (1)			
	OB08359A	Spark Killer Cover (RX505 (Others & Australia) & RX505E) (1)						

VR302 100K(A)x2

VR301 10K(A)x2

VR201 100K(A)

VR101 100K(A)

VR PCB

R101 2.2K

R201 2.2K

R102 4.7K

R202 4.7K

R203 390

R204 4.7K

R104 4.7K

C101 500BP1

C201 50V

C202 25C2878

Q101 25C2878

Q201 25C2878

Q102 25C2878

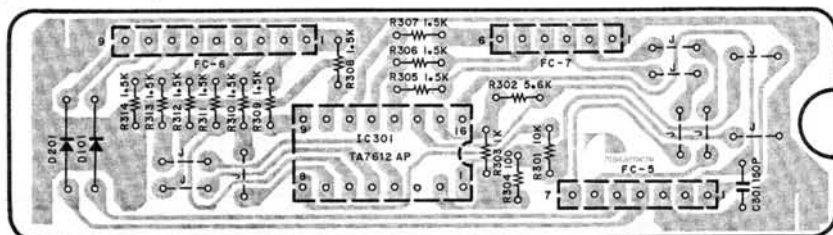
Q202 25C2878

Lch

Rch

GND

6.6. Indicator P.C.B. Ass'y



6.7. Switch P.C.B. Ass'y

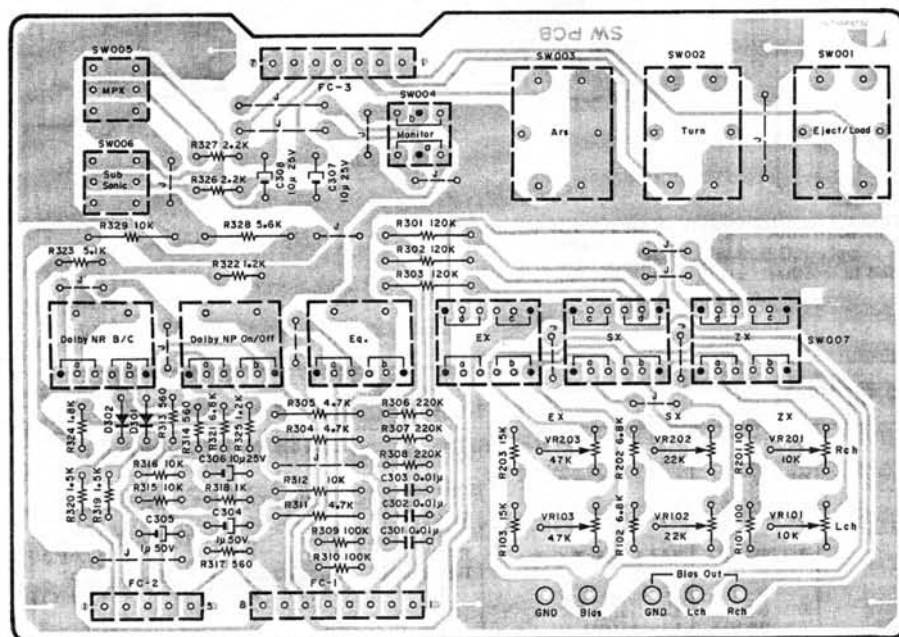


Fig. 6.6

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6.8. Control P.C.B. A Ass'y

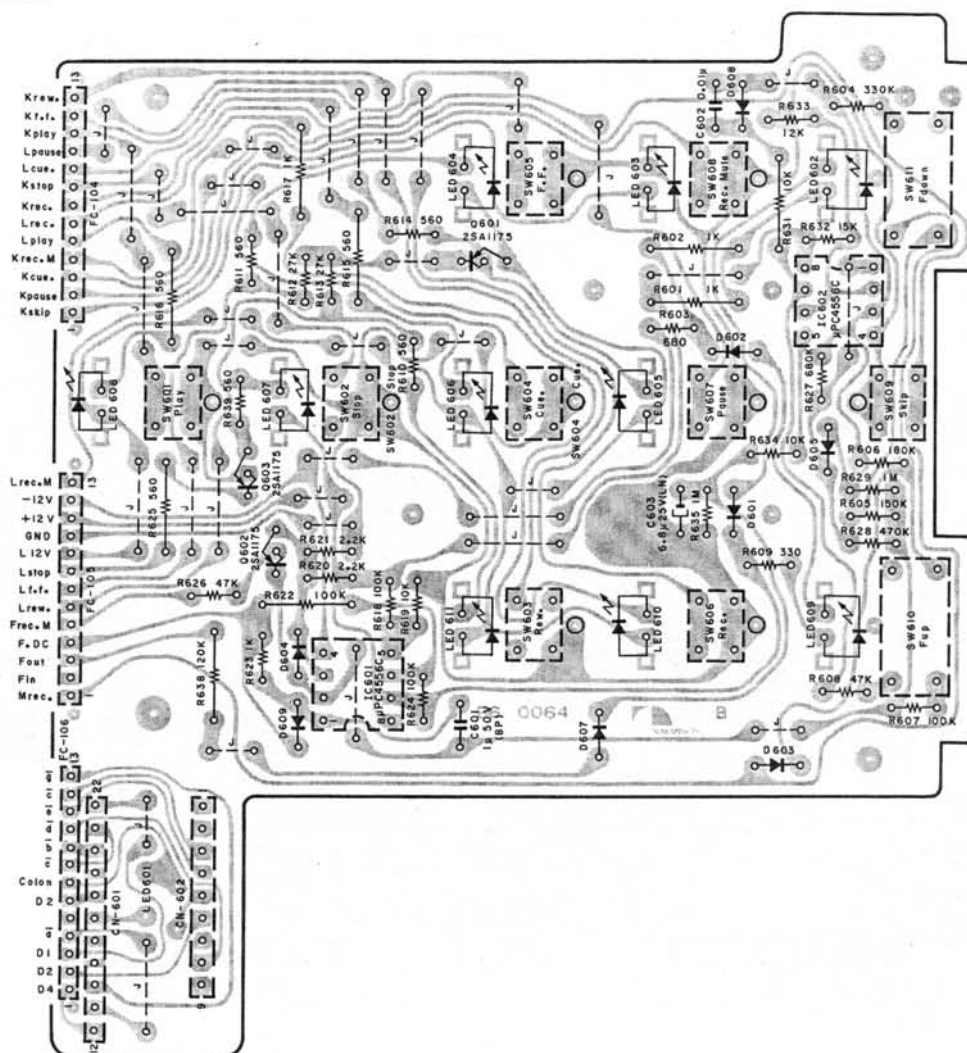


Fig. 6.7

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA05175A	Control P.C.B. A Ass'y	R608,626 R609 R610,611 614,639	OB09717A OB09665A OB09671A	RK 47K 1/6W J RK 330 1/6W J RK 560 1/6W J
IC601,602 Q601,602 603	OB60064B OB06216A OB06455A	Control P.C.B. A IC μ PC4556C TR 2SA1175	R612,613 R615,616 625	OB09711A OB05575A	RK 27K 1/6W J RK 560 1/4W J
LED601 LED602 603,609 610	OB06326A OB06333A	Counter LED LED TLR124A RED	R619,634 R620,621 R622 R623	OB09701A OB09685A OB01889A OB09677A	RK 10K 1/6W J RK 2.2K 1/6W J RK 100K 1/4W J RK 1K 1/6W J
LED604 605,606 607,608 611	OB06334A	LED TLG124A GRN	R627 R628 R629,635 R631	OB09745A OB09741A OB09749A OB01888A	RK 680K 1/6W J RK 470K 1/6W J RK 1M 1/6W J RK 10K 1/4W J
D601,602 603,604 605,607 608,609	OB06398A	SID 1SS176	R632 R633 R638 C601	OB09705A OB09703A OB05621A OB09187A	RK 15K 1/6W J RK 12K 1/6W J RK 120K 1/4W J CE 1 μ 50V (BP)
R601,602 617	OB01857A	RK 1K 1/4W J	C602 C603 SW601-609	OB05681A OB40183A OB70004A	CM 0.01 μ 50V J CE 6.8 μ 25V K (LN) Touch Switch 4.3mm
R603 R604 R605 R606 R607,618 624	OB09673A OB09737A OB09729A OB09731A OB09725A	RK 680 1/6W J RK 330K 1/6W J RK 150K 1/6W J RK 180K 1/6W J RK 100K 1/6W J	SW610,611 CN601 CN602	OB70013A OB81017A OB81016A OJ04797A	Tact Switch IC Socket 11P IC Socket 9P LED House (10)

6.9. Control P.C.B. B Ass'y

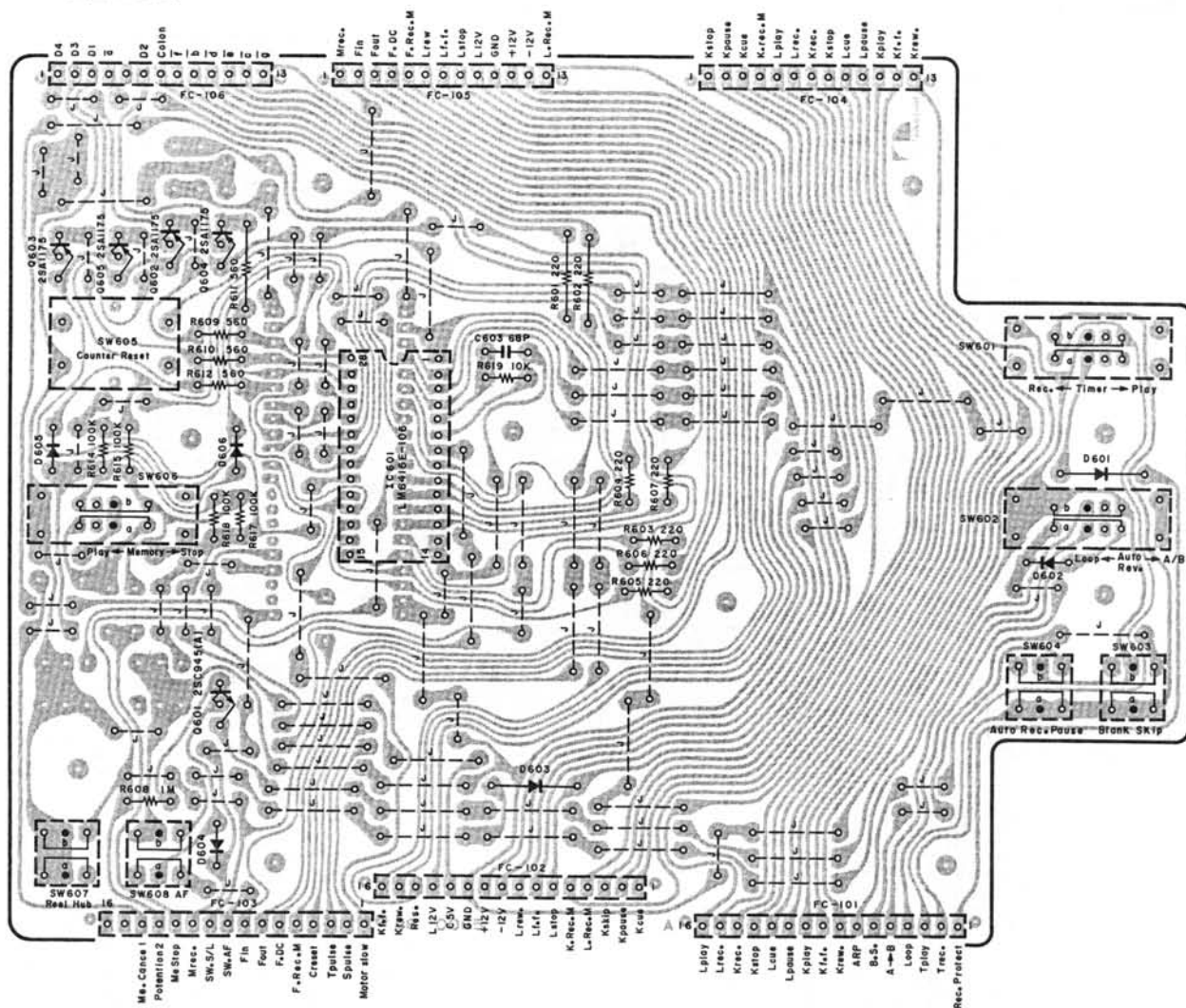


Fig. 6.8

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
IC601 Q601	BA05187A	Control P.C.B. B Ass'y	SW601,602 606	OB07437A	Slide Switch 2-3
	OB60065A	Control P.C.B. B IC LM6416E-106	SW603,604 607,608	OB70014A	Push Switch
Q602,603 604,605	OB06368A	TR 2SC945A (K,P,Q)	SW605	OB07459A	Tact Switch Flat Cable 16P
	OB06100A	TR 2SA1175	FC101,102 103	OB82197A	Flat Cable 13P
D601,603	OB06455A	SID 1SS53	FC104,105 106	OB82198A	P.C.B. Himelon (1)
D602,604 605,606	OB06181A	SID 1SS176			
R601,602	OB01933A	RK 220 1/4W J			
R603,604 605,606 607	OB09661A	RK 220 1/6W J			
R608	OB09749A	RK 1M 1/6W J			
R609,610 612	OB09671A	RK 560 1/6W J			
R611	OB05575A	RK 560 1/4W J			
R614,615 617,618	OB09725A	RK 100K 1/6W J			
R619	OB09701A	RK 10K 1/6W J			
C603	OB09393A	CC 68P 50V J			

6.10. DC Power Supply P.C.B. Ass'y

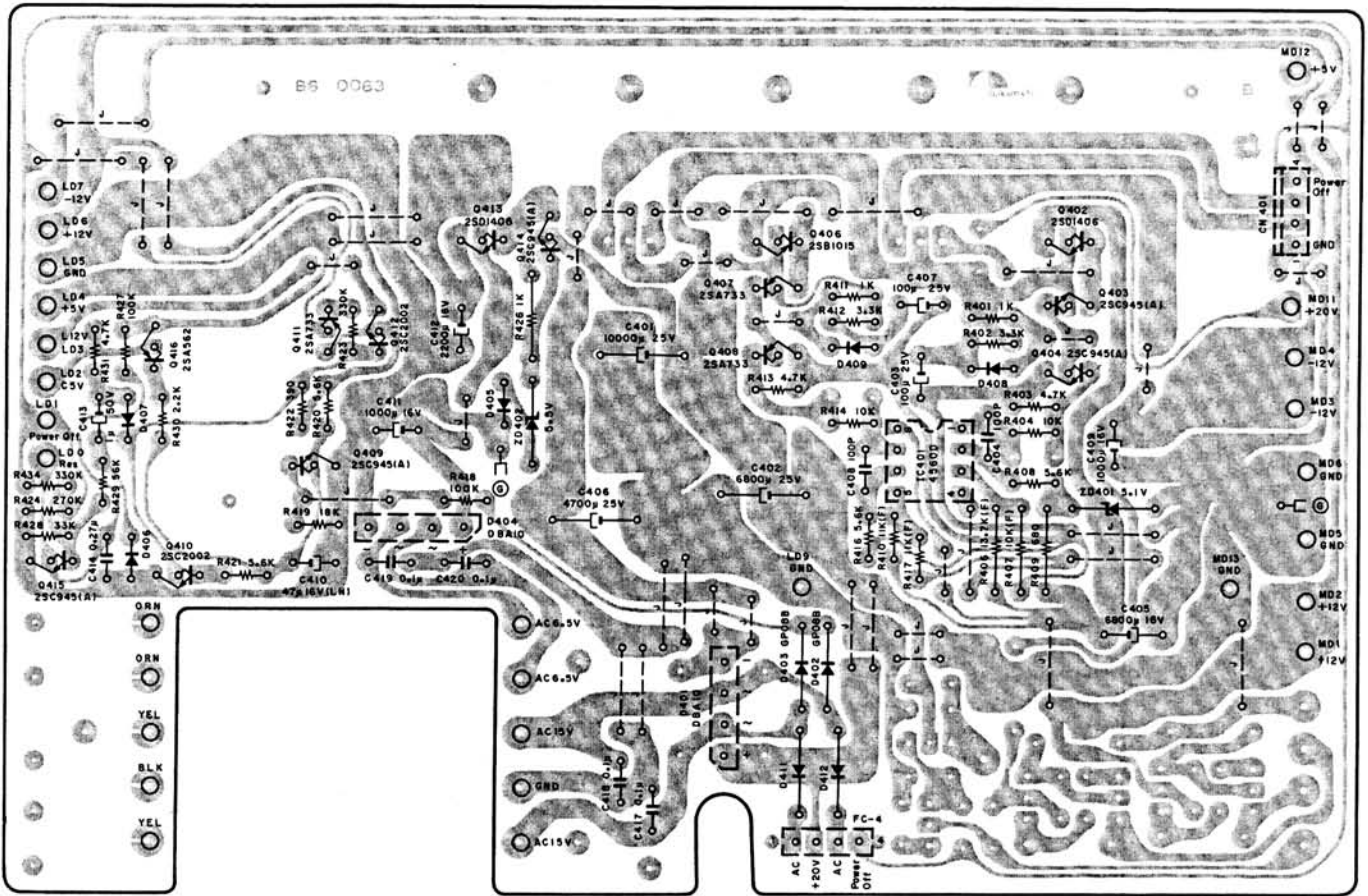


Fig. 6.9

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
IC401 Q402,413 Q403,404 409,414 415 Q406 Q407,408 411 Q410,412 Q416 ZD401 ZD402 D403,404 D402,403 D405,406 407,408 409 D411,412 R401,411 R402,412 R403,413 431 R404,414 R406 R407 R408,416 420,421	BA05174A	DC Power Supply P.C.B. Ass'y	R409	OB05794A	RK 680 1/4W J	OE00607A OE00754A OE00608A	M3x8 @ Pan (3A)	
	OB60063B	DC Power Supply P.C.B.	R410,417	OB22347A	RM 11K 1/4W F		(3)	
	OB06217A	IC 4560D	R418,427	OB09725A	RK 100K 1/6W J		(1)	
	OB06452A	TR 2SD1406	R419	OB09707A	RK 18K 1/6W J		M3x8 @ Pan	
	OB06100A	TR 2SC945A (K,P,Q)	R422	OB09667A	RK 390K 1/6W J		M3x10 @ Pan (3A)	
			R423,434	OB09737A	RK 330K 1/6W J		(Black Chromate)	
			R424	OB09735A	RK 270K 1/6W J		(3)	
			R426	OB01857A	RK 1K 1/4W J			
			R428	OB09713A	RK 33K 1/6W J			
			R429	OB09719A	RK 56K 1/6W J			
			R430	OB09685A	RK 2.2K 1/6W J			
			C401	OB40179A	CE 10000μ 25V			
			C402	OB09374A	CE 6800μ 25V			
			C403,407	OB01272A	CE 100μ 25V			
			C404,408	OB41071A	CC 100P 50V J			
			C405	OB09798A	CE 6800μ 16V			
			C406	OB09799A	CE 4700μ 25V			
			C408,411	OB01397A	CE 1000μ 16V			
			C410	OB09218A	CE 47μ 16V (LN)			
			C412	OB40180A	CE 2200μ 16V			
		C413	OB01405A	CE 1μ 50V				
		C414	OB09873A	CF 0.27μ 50V J				
		C417,418 419,420	OB09292A	CC 0.1μ 50V Z				
			OB81011A	DIP Mate 4P				
			OB82177A	4P Flat Cable (1)				
			OB60068A	Fuse P.C.B. (1)				
			OB08759E	Heat Sink (1)				
			OB90005A	Insu-Lock (1)				
			OE00037A	Earth Lug B-5 (1)				
			OE00507A	Nut Hex. M3 (Chromate) (3)				

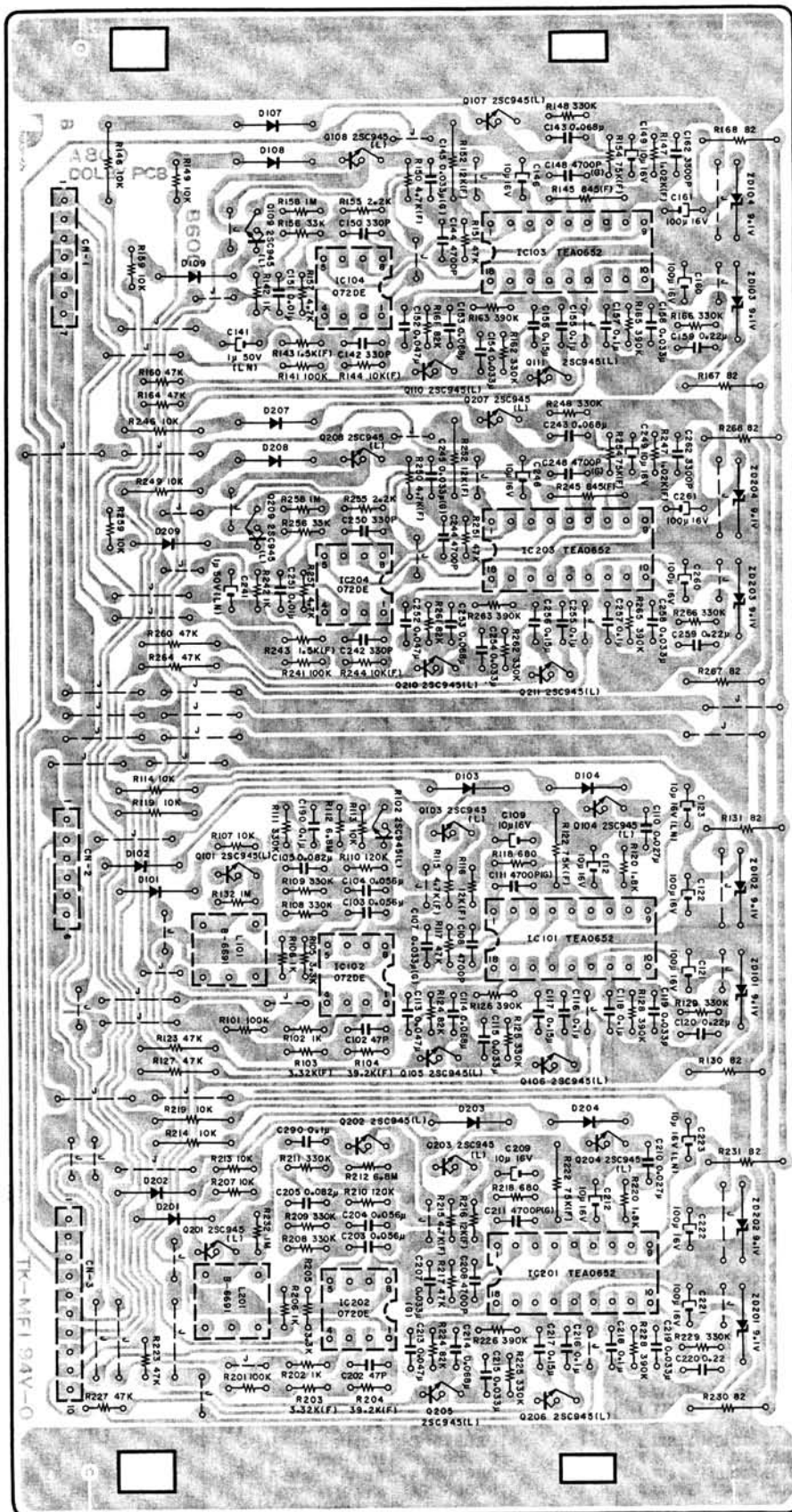


Fig. 6.10

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA05171A	Dolby NR P.C.B. Assy	R148,162 166,248 262,266 R149,159 259	OB09737A	RK 330K 1/6W J
	— Encoder —		R150,250 R151,160 164,251 R152,252 R154,254 R155,255 R156,256 R157,257 R158,258 R161,261 R163,165 263,265 R167,168 267,268 R260,264 C141,241 C142,150 242,250 C143,153 243,253 C144,244 C145,245 C146,149 246,249 C148,248 C151,251 C152,252 C154,158 254,258 C155,157 255,257 C156,256 C159,259 C160,161 260,261 C162,262	OB09701A	RK 10K 1/6W J
IC101,201	OB06382A	IC TEA0652		OB22305A	RM 4.7K 1/4W F
IC102,202	OB11005A	IC NJM072DE		OB09717A	RK 47K 1/6W J
Q101-106	OB01872A	TR 2SC945L (P,Q)		OB22570A	RM 12K 1/4W F
201-206				OB22443A	RM 75K 1/4W F
ZD101,102	OB06232A	ZD 9.1V RD9.1EB2		OB09685A	RK 2.2K 1/6W J
201,202				OB09713A	RK 33K 1/6W J
D101-104	OB06181A	SiD 1SS53		OB09693A	RK 4.7K 1/6W J
201-204				OB09749A	RK 1M 1/6W J
L101,201	OB06691A	L-C Block YEL		OB09723A	RK 82K 1/6W J
R101,201	OB09725A	RK 100K 1/6W J		OB09739A	RK 390K 1/6W J
R102,106	OB09677A	RK 1K 1/6W J		OB09162A	RF 82 1/4W J
202,206				OB05641A	RK 47K 1/4W J
R103,203	OB22287A	RM 3.32K 1/6W F		OB09814A	CE 1μ 50V (LN)
R104,204	OB22410A	RM 39.2K 1/6W F		OB09322A	CP 330P 100V J
R105,205	OB09689A	RK 3.3K 1/6W J		OB09866A	CF 0.068μ 50V J
R107,113	OB09701A	RK 10K 1/6W J		OB05652A	CM 4700P 50V J
207,213				OB09240A	CP 0.033μ 100V G
R108,109	OB09737A	RK 330K 1/6W J		OB01412A	CE 10μ 16V
111,125				OB09191A	CP 4700P 100V G
129,208				OB05681A	CM 0.01μ 50V J
209,211				OB09864A	CF 0.047μ 50V J
225,229				OB09862A	CF 0.033μ 50V J
R110,210	OB09727A	RK 120K 1/6W J		OB09868A	CF 0.1μ 50V J
R112,212	OB09347A	RM 6.8M 1/6W J		OB09870A	CF 0.15μ 50V J
R114,119	OB01888A	RK 10K 1/4W J		OB09972A	CF 0.22μ 50V J
214,219				OB01400A	CE 100μ 16V
R115,215	OB22305A	RM 4.7K 1/4W F		OB01914A	CM 3300P 50V J
R116,216	OB22351A	RM 12K 1/4W F		— Miscellaneous —	
R117,217	OB09717A	RK 47K 1/6W J		OB60061B	Dolby NR P.C.B.
223,227				OB81106A	7P-S Post
R118,218	OB09673A	RK 680 1/6W J		OB81105A	6P-S Post
R120,220	OB09683A	RK 1.8K 1/6W J		OB81109A	10P-S Post
222,222	OB09682A	RM 75K 1/4W F		OJ04795A	P.C.B. Holder (2)
R123,127	OB05641A	RK 47K 1/4W J	CN1		
R124,224	OB09723A	RK 82K 1/6W J	CN2		
R126,128	OB09739A	RK 390K 1/6W J	CN3		
226,228					
R130,131	OB09162A	RF 82 1/4W J			
230,231					
R132,232	OB09749A	RK 1M 1/6W J			
C102,202	OB09242A	C 47P 50V J			
C103,104	OB09865A	CF 0.056μ 50V J			
203,204					
C105,205	OB09867A	CF 0.082μ 50V J			
C107,207	OB09240A	CP 0.033μ 100V G			
C108,208	OB05652A	CM 4700P 50V J			
C109,112	OB01412A	CE 10μ 16V			
209,212					
C110,210	OB09045A	CM 0.027μ 50V J			
C111,211	OB09191A	CP 4700P 100V G			
C113,213	OB09864A	CF 0.047μ 50V J			
C114,214	OB09866A	CF 0.068μ 50V J			
C115,119	OB09862A	CF 0.033μ 50V J			
215,219					
C116,118	OB09868A	CF 0.1μ 50V J			
190,216					
218,290					
C117,217	OB09870A	CF 0.15μ 50V J			
C120,220	OB09872A	CF 0.22μ 50V J			
C121,122	OB01400A	CE 100μ 16V			
221,222					
C123,223	OB09816A	CE 10μ 16V (LN)			
	— Decoder —				
IC103,203	OB06382A	IC TEA0652			
IC104,204	OB11005A	IC NJM072DE			
Q107-111	OB01872A	TR 2SC945L (P,Q)			
207-211					
ZD103,104	OB06232A	ZD 9.1V RD9.1EB2			
203,204					
D107,108	OB06181A	SiD 1SS53			
109,207					
208,209					
R141,241	OB09725A	RK 100K 1/6W J			
R142,242	OB09677A	RK 1K 1/6W J			
R143,243	OB22247A	RM 1.5K 1/4W F			
R144,244	OB09929A	RM 10K 1/4W F			
R145,245	OB22549A	RM 845 1/4W F			
R146,246	OB01888A	RK 10K 1/4W J			
249					
R147,247	OB22230A	RM 1.02K 1/4W F			

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA05173A	Logic P.C.B. Ass'y	R634,958	OB09707A	RK 18K 1/6W J		OE00507A	Nut Hex. M3 (Chromate) (2)
IC601	OB60062B	Logic P.C.B.	R636,646	OB09689A	RK 3.3K 1/6W J		OE00521A	M3x8 @ Pan (Black Chromate) (2)
IC602	OB11019A	IC LM6402G-261	678,957				OJ04485A	Heat Sink B (1)
IC603	OB11025A	IC LM6402G-282	R642	OB22420A	RM 47.5K 1/6W F			
IC604,607	OB11040A	IC LM6417E-338	R643	OB22515A	RM 332K 1/6W F			
IC605	OB06124B	IC NJM4558D	R644	OB01887A	RK 5.6K 1/4W J			
IC606	OB06317A	IC μ PD4030BC	R645,661	OB09699A	RK 8.2K 1/6W J			
Q602,603	OB06143A	IC μ PD4001BC	R647,669	OB09703A	RK 12K 1/6W J			
610,614	OB06100A	TR 2SC945A (K,P,Q)	R648,670	OB09723A	RK 82K 1/6W J			
615,616			R649	OB22444A	RM 76.8K 1/6W F			
617,618			R650	OB05509A	RK 33K 1/4W J			
620,621			R651,652	OB09713A	RK 33K 1/6W J			
626,627			665,688					
629,630			696,699					
633,634			R654,967	OB09731A	RK 180K 1/6W J			
Q604,605	OB06013A	TR 2SA733 (P,Q)	R655	OB05615A	RK 22K 1/4W J			
606,607			R656,657	OB09927A	RM 100K 1/6W F			
619,622			R659,663	OB05671A	RK 2.2M 1/4W J			
631			684,933					
Q608,611	OB06316A	TR 2SD882 (P,Q)	R660	OB09214A	RF 1 1/4W J			
624			R662,932	OB09733A	RK 220K 1/6W J			
Q609,612	OB06303A	TR 2SB772 (P,Q)	952					
625			R664,936	OB09727A	RK 120K 1/6W J			
Q613,632	OB06202A	TR 2SA562TM (Y)	R666	OB09716A	RK 43K 1/6W J			
Q623	OB06129A	FET 2SK117	R667,675	OB09685A	RK 2.2K 1/6W J			
WD601	OB12100A	Double SiD MC921	926,928					
D602-606	OB06398A	SiD 1SS176 (23)	939					
608			R671,921	OB01889A	RK 100K 1/4W J			
611-613			R672	OB09697A	RK 6.8K 1/6W J			
616-620			R673,951	OB09693A	RK 4.7K 1/6W J			
623-631			R674	OB09661A	RK 220 1/6W J			
D607,609	OB06181A	SiD 1SS53	R676,963	OB09321A	RF 4.7 1/4W J			
610,614			R680	OB09741A	RK 470K 1/6W J			
615,621			R681	OB22493A	RM 220K 1/6W F			
622			R682	OB09300A	RM 150K 1/4W F			
X601	OB08908A	Xtal 400 kHz	R683	OB09315A	RM 332K 1/4W F			
X602	OB90009A	Xtal 4.1943 MHz	R685,911	OB09709A	RK 22K 1/6W J			
T601	OB51047A	Bias Osc. Block	927,929					
VR601	OB07257A	Semi-fixed VR 100K	R690,693	OB09745A	RK 680K 1/6W J			
VR602,607	OB07329A	Semi-fixed VR 2K	R691,694	OB09747A	RK 820K 1/6W J			
VR603,606	OB07256A	Semi-fixed VR 10K	937,938					
VR604	OB07405A	Semi-fixed VR 200K	R908,954	OB09695A	RK 5.6K 1/6W J			
VR605	OB07269A	Semi-fixed VR 50K	R912	OB09719A	RK 56K 1/6W J			
R605,626	OB09717A	RK 47K 1/6W J	R917	OB09749A	RK 1M 1/6W J			
668			R930	OB09726A	RK 110K 1/6W J			
R607,608	OB09737A	RK 330K 1/6W J	R945	OB22506A	RM 280K 1/6W F			
609,610			R946,947	OB22531A	RM 453K 1/6W F			
611,612			R948	OB22470A	RM 133K 1/6W F			
613,627			R955	OB09677A	RK 1K 1/6W J			
628,640			R956	OB09671A	RK 560 1/6W J			
641,686			R960	OB09831A	RF 22 1W J			
689,692			R961	OB09936A	RF 10 1/2W J			
910,966			R962	OB01857A	RK 1K 1/4W J			
R614,615	OB09749A	RK 1M 1/6W J	R964	OB09705A	RK 15K 1/6W J			
629,697			C601,603	OB01412A	CE 10 μ 16V			
698,901			621,622					
902,931			C605	OB05557A	CM 0.015 μ 50V J			
942,944			C606,607	OB05652A	CM 4700P 50V J			
R616,621	OB05776A	RK 1M 1/4W J	617					
R617,619	OB09701A	RK 10K 1/6W J	C608,609	OB09283A	CC 220P 50V K			
622,635			C610,611	OB01402A	CE 4.7 μ 25V			
653,679			C612	OB01502A	CE 330 μ 16V			
909,914			C613,623	OB09277A	CC 10P 50V J			
918,920			C614,615	OB01405A	CE 1 μ 50V			
959			C616	OB09372A	CE 2.2 μ 50V			
R618,620	OB09725A	RK 100K 1/6W J	C618	OB01863A	CE 3.3 μ 50V			
637,638			C619	OB09279A	CC 22P 50V K			
639,658			C620	OB41187A	CC 39P 50V J			
687,695			C624	OB09538A	CP 0.018 μ 100V G			
903,904			C625	OB01400A	CE 100 μ 16V			
905,906			C626	OB09187A	CE 1 μ 50V (BP)			
913,915			C627	OB09147A	CE 3.3 μ 50V (LN)			
916,922			C628	OB09292A	CC 0.1 μ 50V Z			
923,941			CN601	OB08653A	3P-T Post			
943,953			CN602	OB08642A	6P-T Post			
965			CN603	OB08654A	4P-T Post			
R623,677	OB01888A	RK 10K 1/4W J	CN604	OB81023A	2P-T Post			
940			CN605,607	OB08656A	2P-T Post			
R624,625	OB05627A	RK 330K 1/4W J	CN606	OB08724A	5P-T Post			
907			CN608	OB02356A	JP Connector 12P			
R630,934	OB09711A	RK 27K 1/6W J	CN609	OB08644A	8P-T Post			
935			CN610	OB02280A	2P-T Post			
R631,632	OB05743A	RK 27K 1/4W J		OB81086A	Wire Mate 3P (6)			
R633	OB09712A	RK 30K 1/6W J		OB08964A	TR Mica TO-126 (2)			

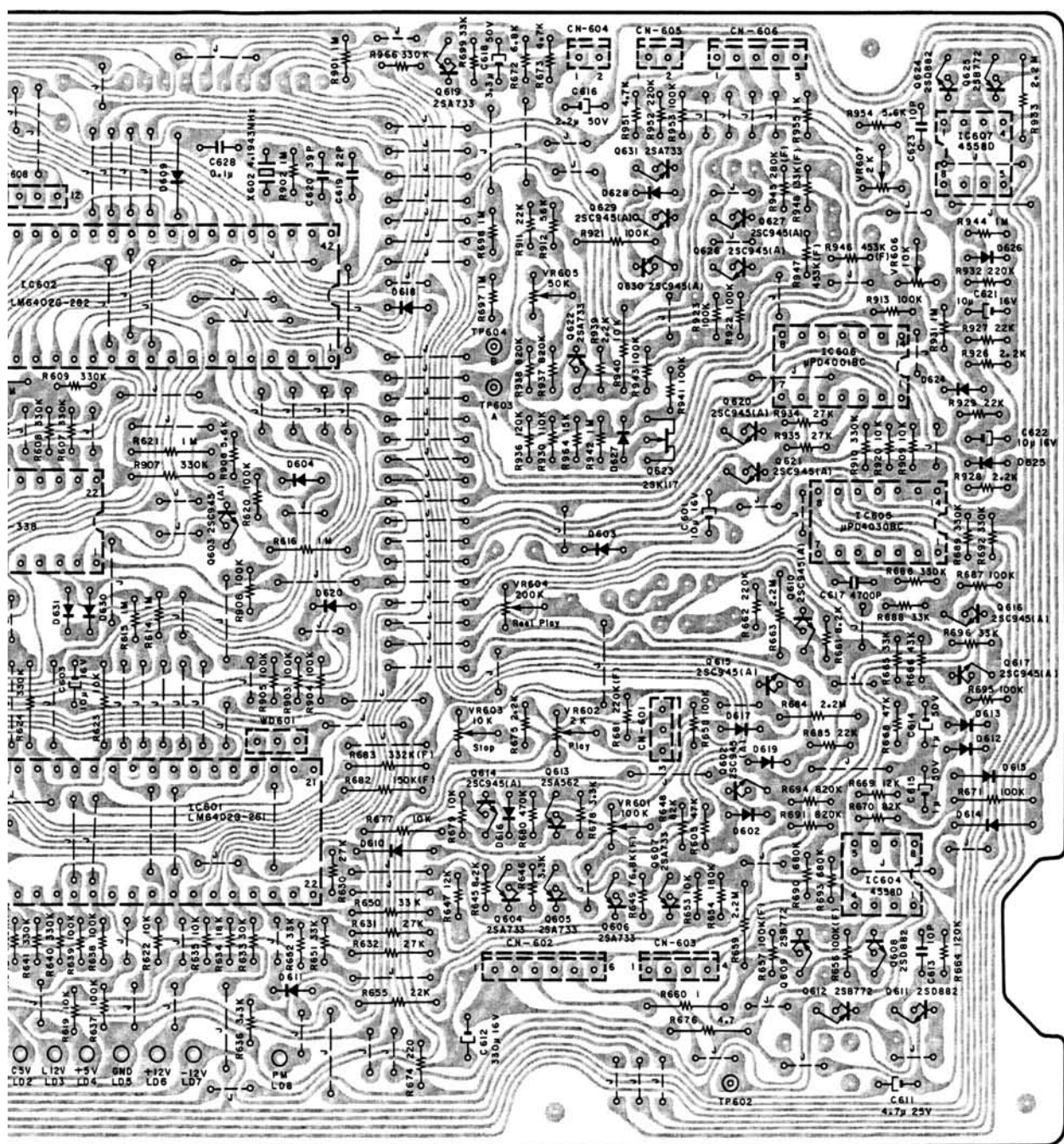


Fig. 6.11

6.12. Logic P.C.B. Ass'y

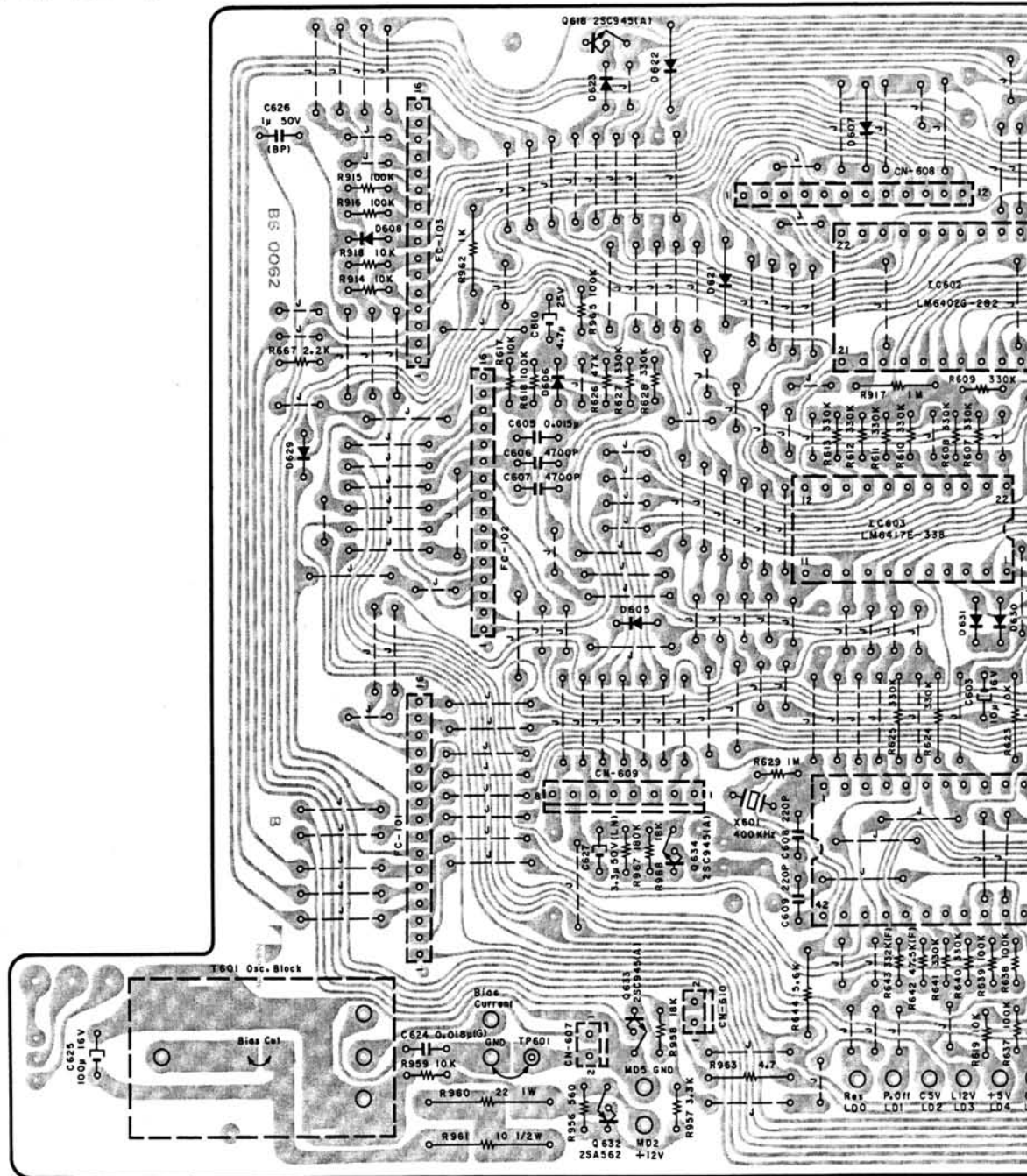


Fig. 6.

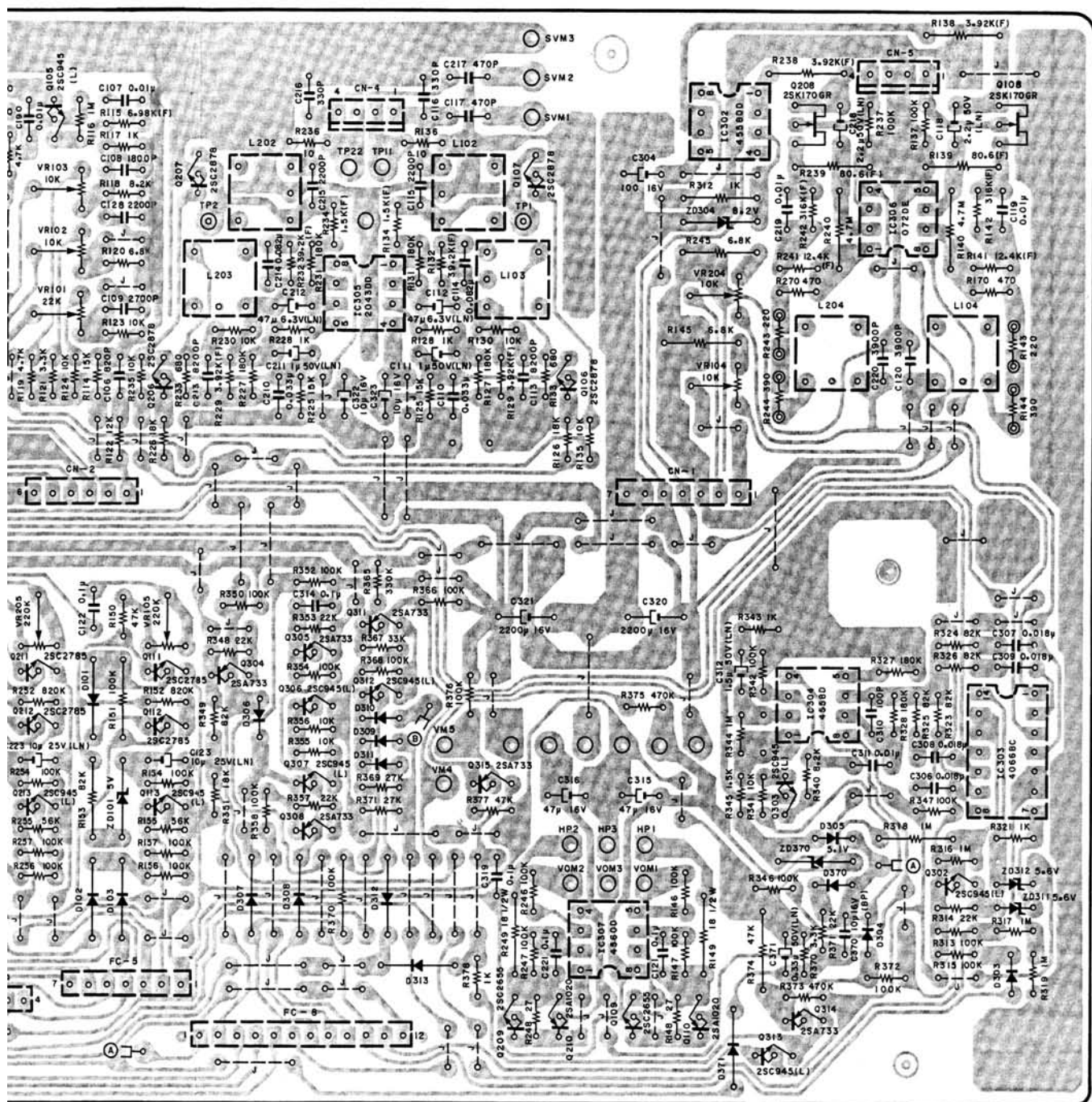


Fig. 6.12

6.13. Main P.C.B. Assy

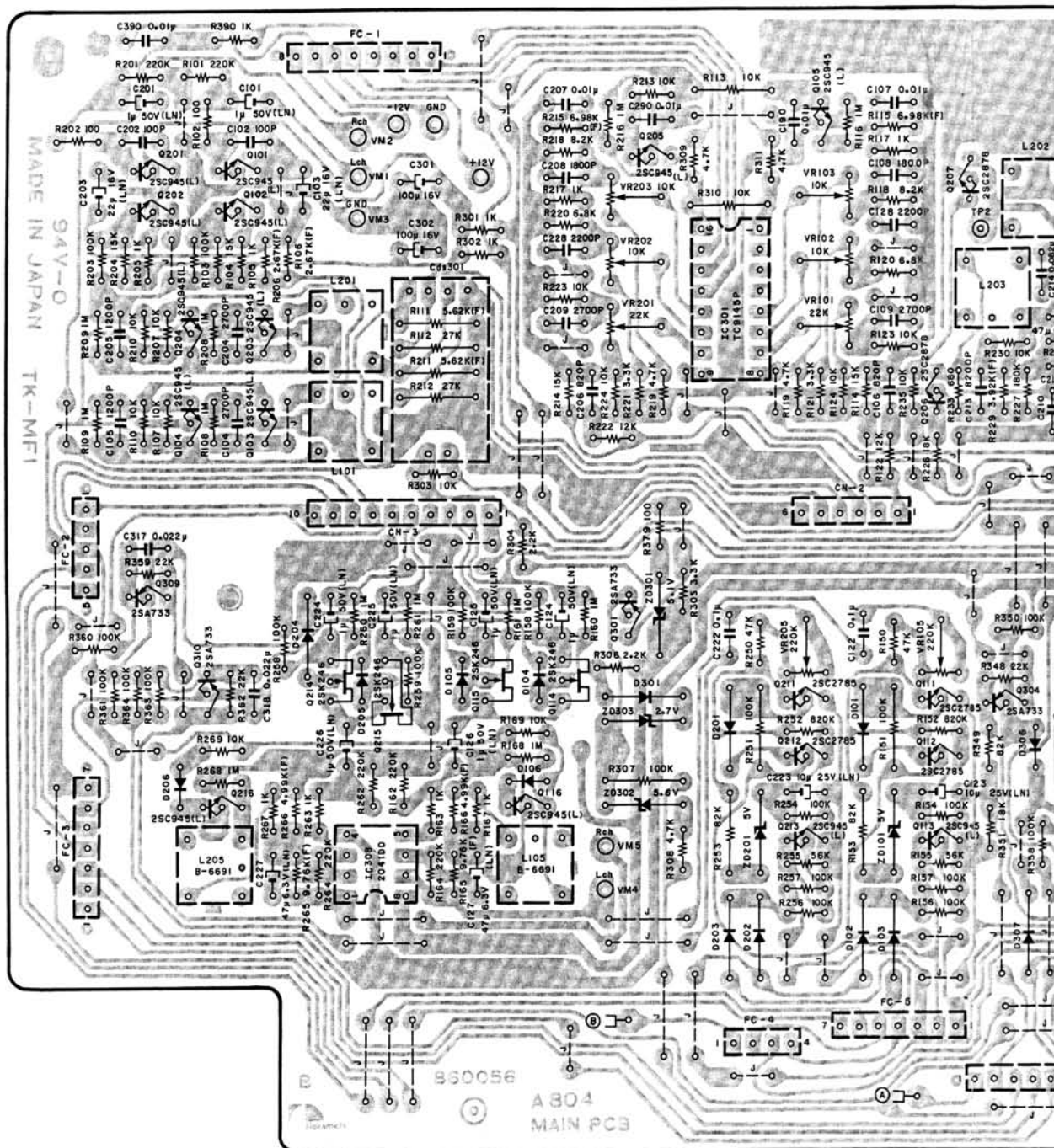


Fig. 6.12

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA05165A	Main P.C.B. Ass'y	R120,220	OB09697A	RK 6.8K 1/6W J		— Logic Interface —	
	— Line Input —		R121,221	OB09689A	RK 3.3K 1/6W J		OB06013A	TR 2SA733 (P,Q)
			R122,222	OB09703A	RK 12K 1/6W J	Q304,305		
			R123,124	OB09701A	RK 10K 1/6W J	308,311		
Q101-104	OB01872A	TR 2SC945L (P,Q)	213,223			314,315		
201-204			224			Q306,307		
Q301	OB06013A	TR 2SA733 (P,Q)	C106,206	OB09783A	CP 820P 100V J	312,313	OB01872A	TR 2SC945L (P,Q)
ZD301	OB06230A	ZD 5.1V RD5.1EB2	C107,207	OB05681A	CM 0.01μ 50V J	D306,309	OB06398A	SiD 1SS176
ZD302	OB06290A	ZD 5.6V RD5.6EB2	C108,208	OB01913A	CM 1800P 50V J	310,311		
D301	OB06181A	SiD 1SS53	C109,209	OB09189A	CM 2700P 50V J	D307,308	OB06181A	SiD 1SS53
L101,201	OB06690A	L-C Block BLUE	C128,228	OB01802A	CM 2200P 50V J	312,313		
R101,201	OB09733A	RK 220K 1/6W J	C190,290	OB09290A	CM 0.01μ 50V J	R348,353	OB09709A	RK 22K 1/6W J
R102,202	OB09653A	RK 100 1/6W J				357		
379				— Rec. Eq. Amp. —		R349	OB09723A	RK 82K 1/6W J
R103,203	OB09725A	RK 100K 1/6W J	IC305	OB06387A	IC 2043DD	R350,352	OB09725A	RK 100K 1/6W J
R104,204	OB09705A	RK 15K 1/6W J	Q106,107	OB06299A	TR 2SC2878	354,358		
R105,205	OB09677A	RK 1K 1/6W J	206,207			366,368		
301,302			L102,202			376		
390			L103,203	OB06705A	Trap Coil 1.05 mH	R351	OB09707A	RK 18K 1/6W J
R106,206	OB22275A	RM 2.67K 1/6W F	R125,225	OB51045A	L-C Block	R355,356	OB09701A	RK 10K 1/6W J
R107,110	OB09701A	RK 10K 1/6W J	R126,226	OB09705A	RK 15K 1/6W J	R365	OB09737A	RK 330K 1/6W J
207,210			R127,131	OB09707A	RK 18K 1/6W J	R367	OB09713A	RK 33K 1/6W J
303			227,231	OB09731A	RK 180K 1/6W J	R369,371	OB09711A	RK 27K 1/6W J
R108,109	OB09749A	RK 1M 1/6W J	R128,228			R370	OB01889A	RK 100K 1/4W J
208,209			R129,229	OB09677A	RK 1K 1/6W J	R373,375	OB09741A	RK 470K 1/6W J
R111,211	OB09427A	RM 5.62K 1/4W F	R130,135	OB22296A	RM 3.92K 1/6W F	R374	OB05641A	RK 47K 1/4W J
R112,212	OB05743A	RK 27K 1/4W J	230,235	OB09701A	RK 10K 1/6W J	R377	OB09717A	RK 47K 1/6W J
R304,306	OB09685A	RK 2.2K 1/6W J	R132,232			R378	OB09677A	RK 1K 1/6W J
R305	OB09689A	RK 3.3K 1/6W J	R133,233	OB22410A	RM 39.2K 1/4W F	C314,319	OB09868A	CF 0.1μ 50V J
R307	OB01889A	RK 100K 1/4W J	R134,234	OB09673A	RK 680 1/6W J	C320,321	OB01406A	CE 2200μ 16V
R308	OB09693A	RK 4.7K 1/6W J	R136,236	OB22247A	RM 1.5K 1/6W F			
C101,201	OB09814A	CE 1μ 50V (LN)	C110,210	OB09629A	RK 10 1/6W J		— Headphone Amp. —	
C102,202	OB09282A	CC 100P 50V K	C111,211	OB09862A	CF 0.033μ 50V J	IC307	OB06217A	IC NJM4560D
C103,203	OB09932A	CE 22μ 16V (LN)	C112,212	OB09814A	CE 1μ 50V (LN)	Q109,209	OB06429A	TR 2SC2655 (Y)
C104,204	OB09189A	CM 2700P 50V J	C113,213	OB09815A	CE 47μ 6.3V (LN)	Q110,210	OB10015A	TR 2SA1020 (O,Y)
C105,205	OB05687A	CM 1200P 50V J	C114,214	OB05814A	CE 8200P 50V J	R146,147	OB09725A	RK 100K 1/6W J
C301,302	OB01400A	CE 100μ 16V	C115,215	OB09867A	CF 0.082μ 50V J	246,247		
C390	OB09290A	C 0.01μ 50V J	C116,216	OB09834A	CP 2200P 100V J	R148,248	OB09639A	RK 27 1/6W J
C391	OB09868A	CF 0.1μ 50V J	C117,217	OB09322A	CP 330P 100V J	R149,249	OB09536A	RF 18 1/2W J
Cds301	OB06325B	Photocoupler MCD7214F	C322,323	OB09286A	CC 470P 50V K	C121,221	OB09868A	CF 0.1μ 50V J
			CN4	OB01412A	CE 10μ 16V	C315,316	OB01409A	CE 47μ 25V
	— Line Amp. —			OB02281A	4P-T Post		— Music Sensor —	
IC308	OB11004A	IC NJM2041DD	IC302	OB06146A	IC 4558DD	IC303	OB06144A	IC μPD4066BC
Q114,115	OB10022A	FET 2SK246	IC306	OB11005A	IC NJM072DE	IC304	OB06124B	IC NJM4558D
Q116,216			Q108,208	OB06376A	FET 2SK170 (GR)	Q302,303	OB01872A	TR 2SC945L (P,Q)
Q309,310	OB01872A	TR 2SC945L (P,Q)	ZD304	OB06418A	ZD 8.2V RD8.2JB2	ZD304	OB12119A	ZD 4.7V RD4.7EB1
D104,105	OB06013A	TR 2SA733 (P,Q)	L104,204	OB06717A	Trap Unit	ZD311,312	OB12003A	ZD 5.6V RD5.6JB2T
106,205	OB06398A	SiD 1SS176	VR104,204	OB32008A	Semi-fixed VR 10K	ZD370	OB06230A	ZD 5.1V RD5.1EB2
206			R137,237	OB09725A	RK 100K 1/6W J	D303,370	OB06398A	SiD 1SS176
D204			R138,238	OB09768A	RM 3.92K 1/4W F	371		
L105,205	OB06181A	SiD 1SS53	R139,239	OB22553A	RM 80.6 1/4W F	D304,305	OB06181A	SiD 1SS53
R158,159	OB06691A	L-C Block YEL	R140,240	OB22548A	RM 4.7M 1/4W J	R313,315	OB09725A	RK 100K 1/6W J
258,259	OB09725A	RK 100K 1/6W J	R141,241	OB22353A	RM 12.4K 1/6W F	342,346		
360,361			R142,242	OB22512A	RM 316K 1/6W F	347,372		
363,364			R143,243	OB09661A	RK 220 1/6W J	R314,371	OB09709A	RK 22K 1/6W J
R160,161	OB09749A	RK 1M 1/6W J	R144,244	OB09667A	RK 390 1/6W J	R316,317	OB09749A	RK 1M 1/6W J
168,260			R145,245	OB01682A	RK 6.8K 1/4W J	319,344		
261,268			R170,270	OB09669A	RK 470 1/6W J	R318	OB05776A	RK 1M 1/4W J
R162,164	OB09733A	RK 220K 1/6W J	R312	OB01857A	RK 1K 1/4W J	R321,343	OB09677A	RK 1K 1/6W J
262,264			C118,218	OB09933A	CE 2.2μ 50V (LN)	R323,324	OB09723A	RK 82K 1/6W J
R163,167	OB09677A	RK 1K 1/6W J	C119,219	OB09591A	CP 0.01μ 100V J	325,326		
263,267			C120,220	OB01804A	CM 3900P 50V J	R327,328	OB09731A	RK 180K 1/6W J
R165,265	OB22342A	RM 9.76K 1/6W F	C304	OB01400A	CE 100μ 16V	R340	OB09699A	RK 8.2K 1/6W J
R166,266	OB22308A	RM 4.99K 1/6W F	CN5	OB08654A	4P-T Post	R341	OB09701A	RK 10K 1/6W J
R169,269	OB09701A	RK 10K 1/6W J				R345	OB09681A	RK 1.5K 1/6W J
R359,362	OB09709A	RK 22K 1/6W J		— Meter Amp. —		R370	OB09689A	RK 3.3K 1/6W J
C124,125	OB09814A	CE 1μ 50V (LN)				C306,307	OB05832A	CM 0.018μ 50V J
126,224			Q111,112	OB06456A	TR 2SC2785	308,309		
225,226			211,212			C310	OB09282A	CC 100P 50V K
C127,227	OB09815A	CE 47μ 6.3V (LN)	Q113,213	OB01872A	TR 2SC945L (P,Q)	C311	OB05681A	CM 0.01μ 50V J
C317,318	OB05582A	CM 0.022μ 50V J	ZD101,201	OB12101A	ZD 5V 5C-1	C312	OB09221A	CE 1.5μ 50V (LN)
	— Rec. Cal. —		D101,102	OB06181A	SiD 1SS53	C370	OB40184A	CE 10μ 16V (BP)
			103,201			C371	OB09327A	CE 0.33μ 50V (LN)
			202,203				— Miscellaneous —	
IC301	OB11027A	IC TC9145P	VR105,205	OB32026A	Semi-fixed VR 220K	CN1	OB60056B	Main P.C.B.
Q105,205	OB01872A	TR 2SC945L (P,Q)	R150,250	OB09717A	RK 47K 1/6W J	CN2	OB81111A	7P-T Post
VR101,201	OB32009A	Semi-fixed VR 22K	R151,251	OB01889A	RK 100K 1/4W J	CN3	OB81110A	6P-T Post
VR102,103	OB32008A	Semi-fixed VR 10K	R152,252	OB09743A	RK 820K 1/6W J		OB81114A	10P-T Post
202,203			R153,253	OB05668A	RK 82K 1/4W J		OB81087A	Wire Mate 4P (1)
R113,310	OB01888A	RK 10K 1/4W J	R154,156	OB09725A	RK 100K 1/6W J		OB81088A	Wire Mate 5P (1)
R114,214	OB09705A	RK 15K 1/6W J	157,254				OB81090A	Wire Mate 7P (2)
R115,215	OB22326A	RM 6.98K 1/4W F	256,257				OB81091A	Wire Mate 8P (1)
R116,216	OB09749A	RK 1M 1/6W J	R155,255					
R117,217	OB09677A	RK 1K 1/6W J	C122,222	OB09719A	RK 56K 1/6W J			
R118,218	OB09699A	RK 8.2K 1/6W J	C123,223	OB09868A	CF 0.1μ 50V J			
R119,219	OB09693A	RK 4.7K 1/6W J		OB09148A	CE 10μ 25V (LN)			
309,311								

7. SCHEMATIC DIAGRAMS

7.1. Attention to Servicemen

(1) Caution

- If a part is in need of removing (or replacing) for service, it should be remounted (or replaced with specified parts) by the same methods as before after servicing.
- The appliance should be used only specified parts for preventing a risk of fire and electric shock and maintaining the characteristics.
- Before returning the repaired appliance to a customer, check to insure that the exposed part is accurately insulated from the Power Supply by measuring the leakage current or the insulation resistance between them.

(2) Parts Replacement

Following parts shall be replaced with the specified ones. Refer to the Parts List.

- Power Supply Circuit
Power Cord
Power Transformer: T1
- Power Switch P.C.B. Ass'y
Power Switch: SW1
Spark Killer: M2
- Fuse P.C.B. Ass'y
Fuses: F401, 402, 403
- DC Power Supply P.C.B. Ass'y
Transistors: Q402, 406, 413, 416
Diode Bridges: D401, 404
- Logic P.C.B. Ass'y
Transistors: Q608, 609, 611, 612, 624, 625
Fail Safe Type Resistors: R660, 676, 960, 961, 963
- Main P.C.B. Ass'y
Fail Safe Type Resistors: R149, 249
- Dolby NR P.C.B. Ass'y
Fail Safe Type Resistors: R130, 131, 167, 168, 230, 231, 267, 268

7.2. IC Block Diagrams

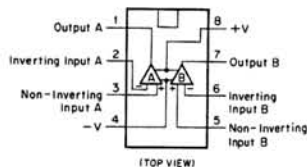


Fig. 7.2.1 Operational Amp. IC 4558D, 4558DD, 4556C, 4560D, 2041DD, 2043DD, 072DE

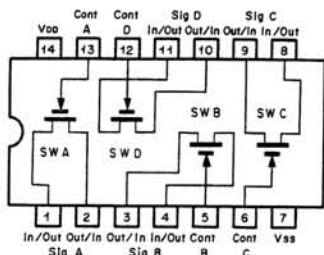


Fig. 7.2.2 Bilateral Switch C-MOS IC μ PD4066BC

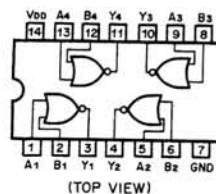


Fig. 7.2.3 NOR Gate C-MOS IC μ PD4001BC

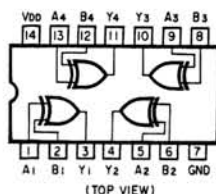


Fig. 7.2.4 Exclusive OR Gate C-MOS IC μ PD4030BC

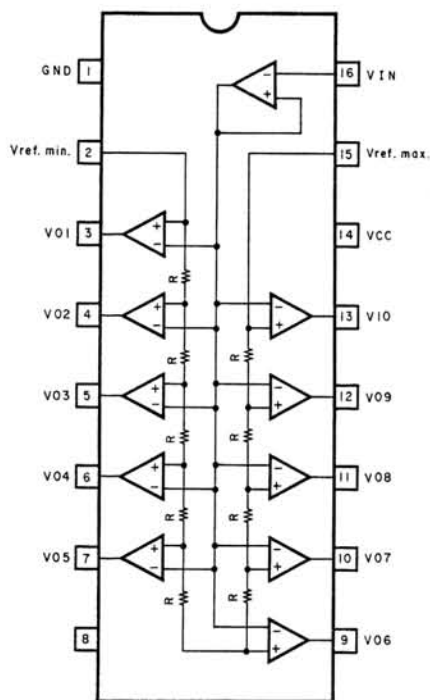


Fig. 7.2.5 Level Meter Driver TA7612AP

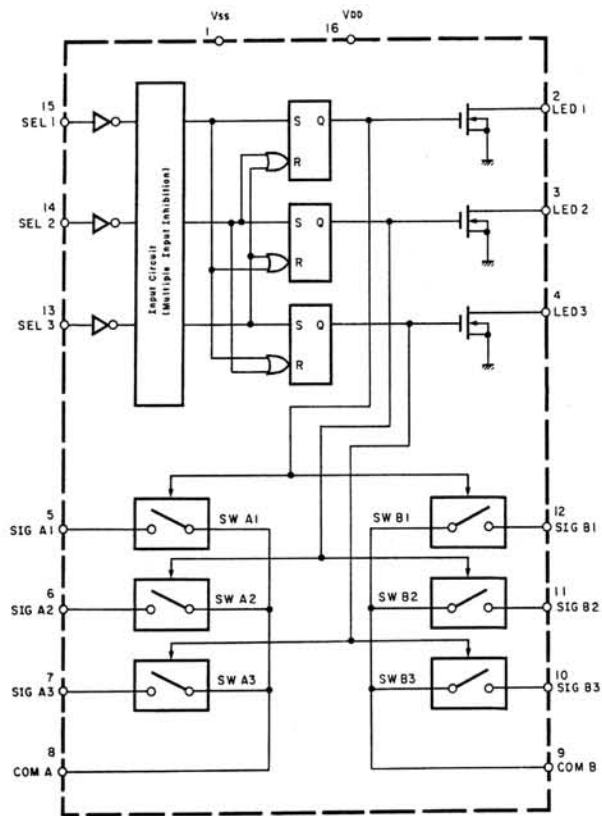


Fig. 7.2.6 Analog Switch Selector TC9145P

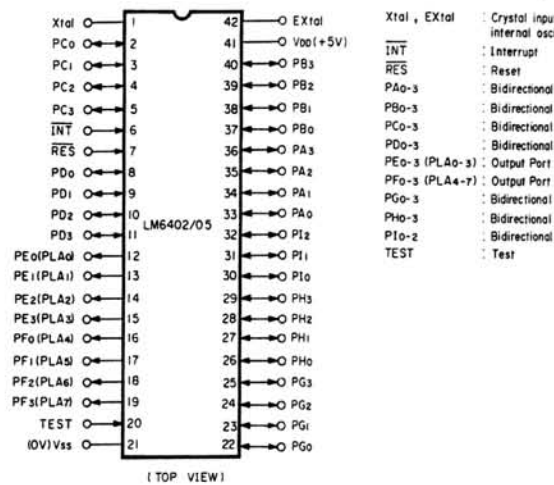
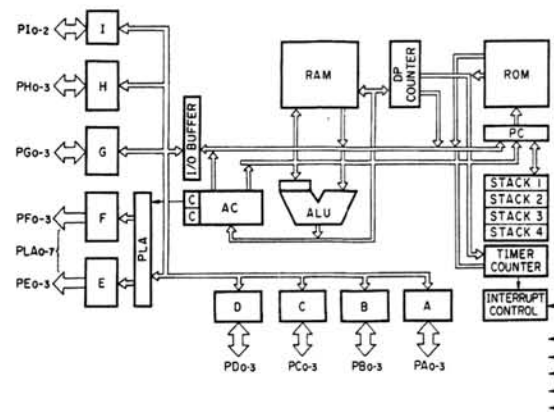


Fig. 7.2.8 4-Bit Micro-processor LM6402G

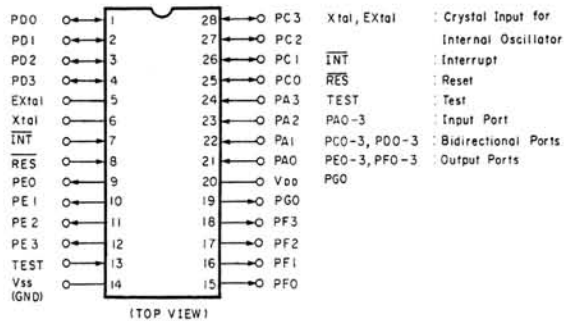
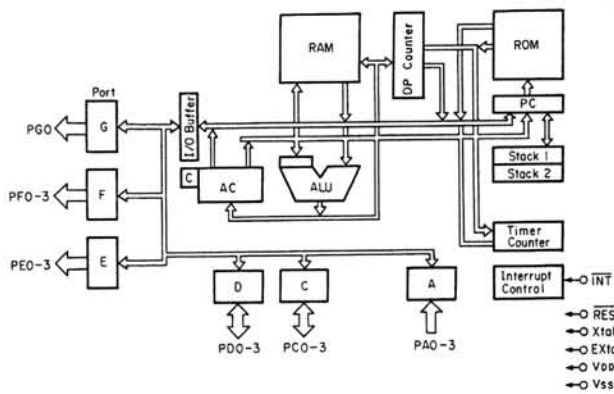


Fig. 7.2.7 4-Bit Micro-processor LM6416E-106

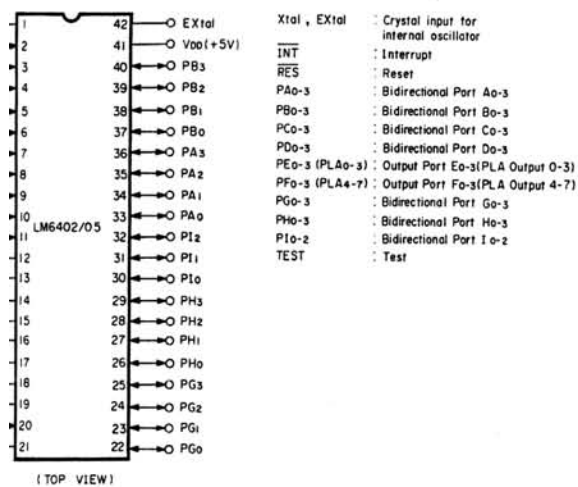
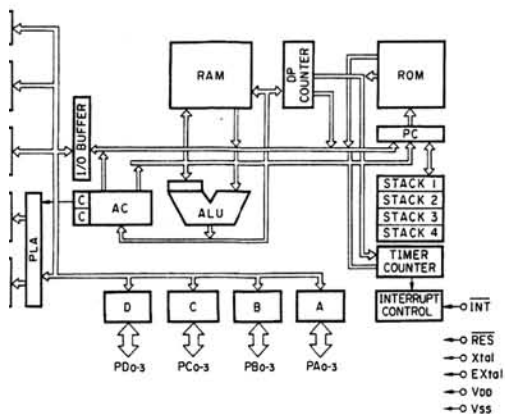


Fig. 7.2.8 4-Bit Micro-processor LM6402G

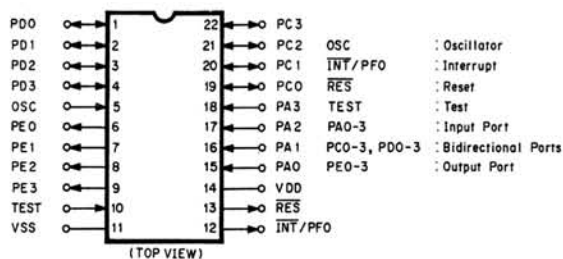
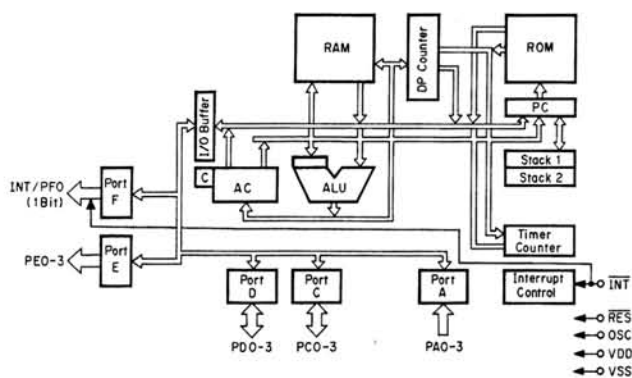
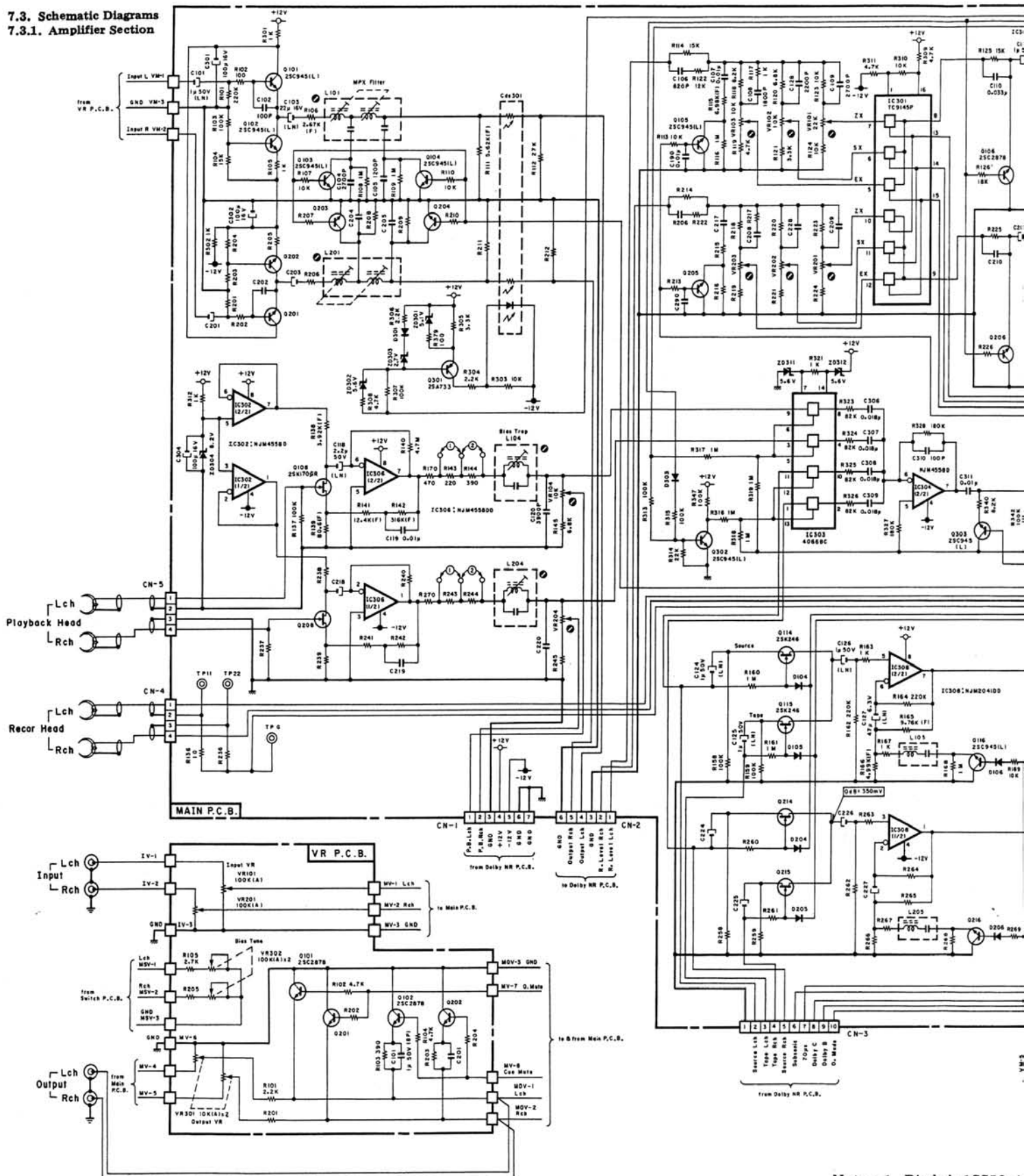


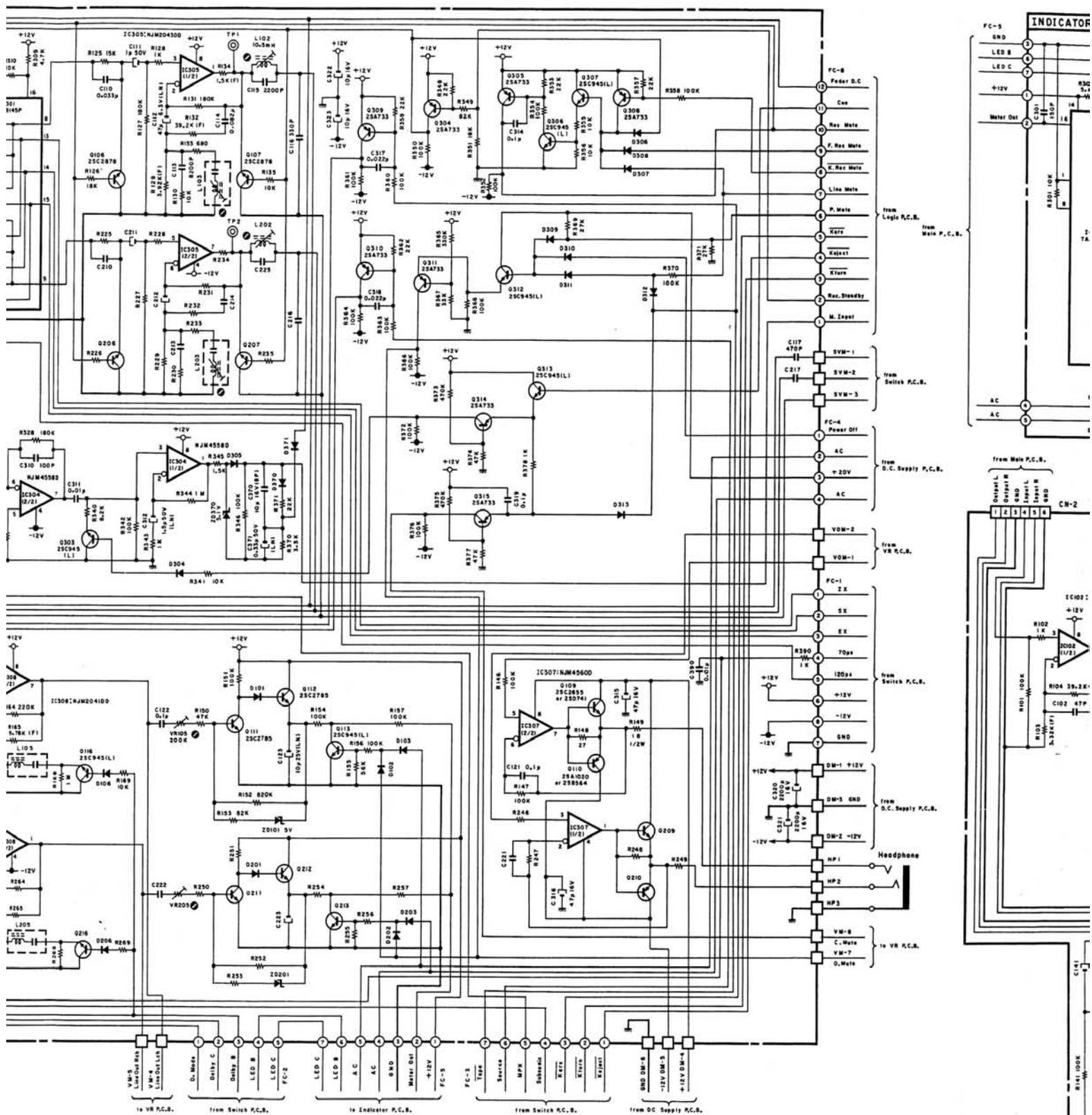
Fig. 7.2.9 4-Bit Micro-processor LM6417E-338

7.3. Schematic Diagrams

7.3.1. Amplifier Section



- Notes: 1. Diode is 1SS53, 1
 2. Resistor and capa
 3. 2SA733, 2SA608;
 4. 2SC945, 2SC5365



Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
 Resistor and capacitor marked with * show typical value.
 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

Fig. 7.3.1

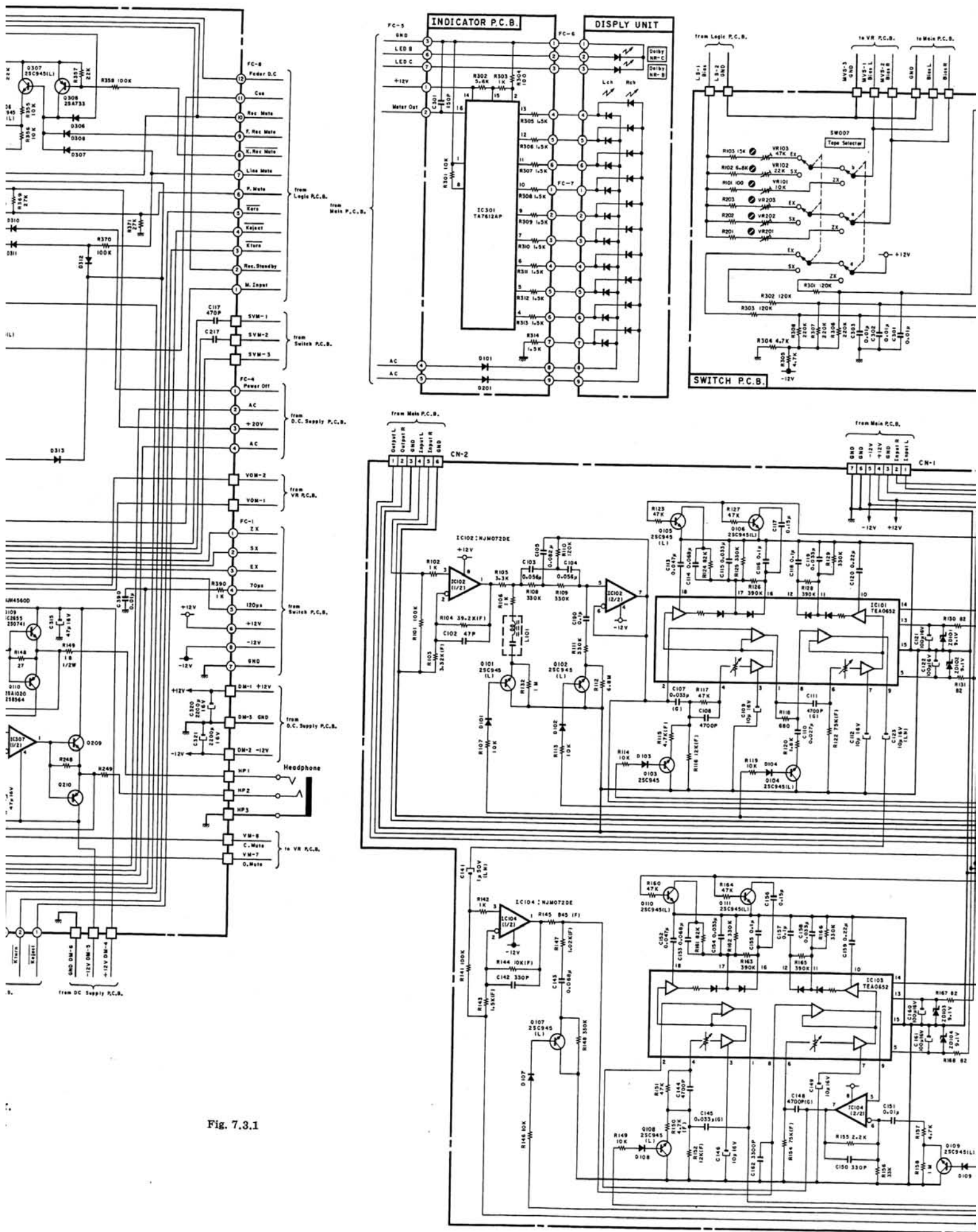
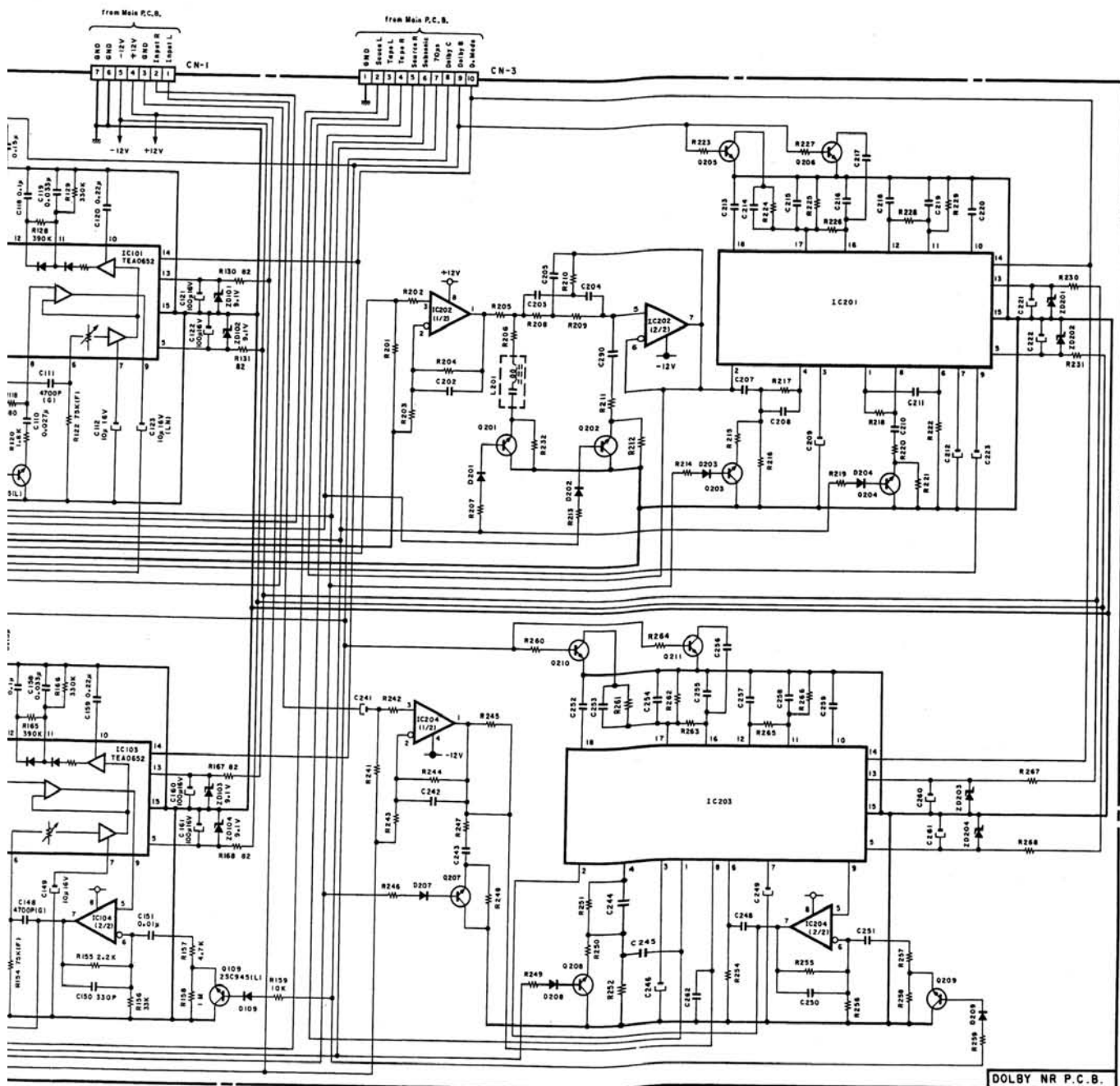
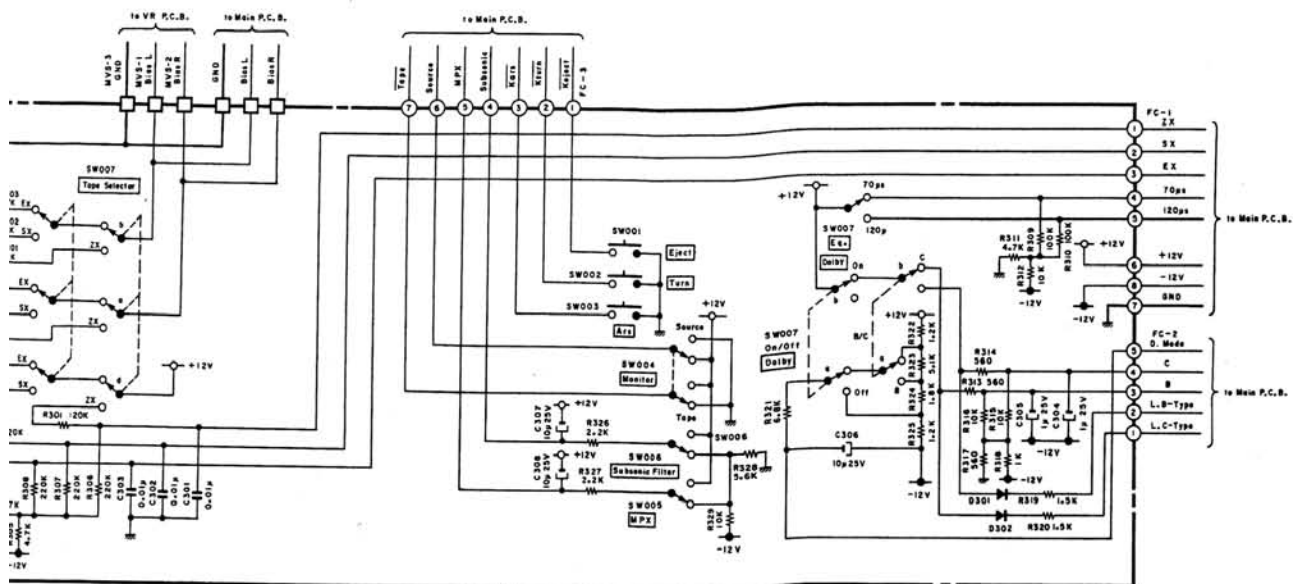
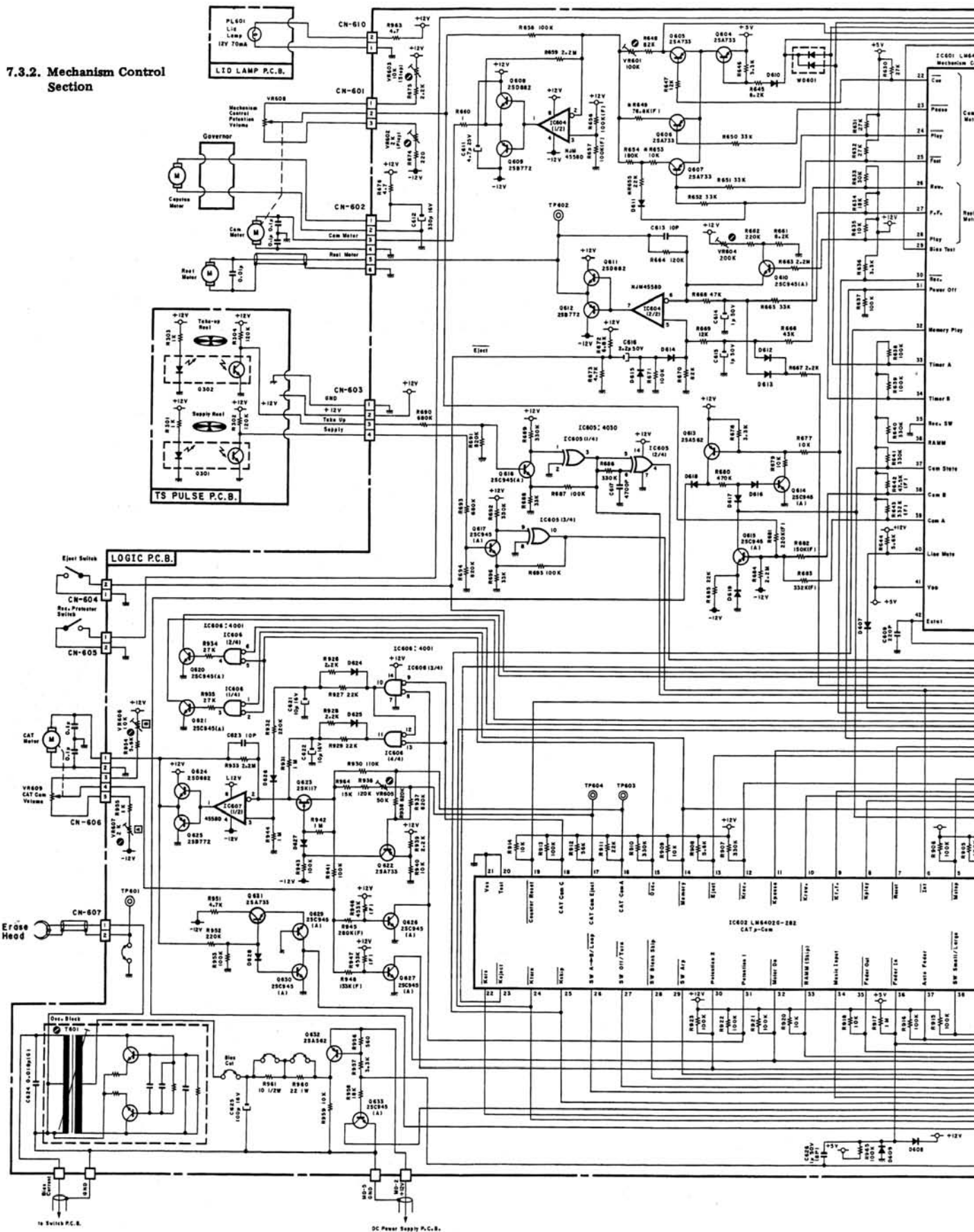


Fig. 7.3.1



7.3.2. Mechanism Control Section



- Notes:
1. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
 2. Resistor and capacitor marked with * show typical value.
 3. 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
 4. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

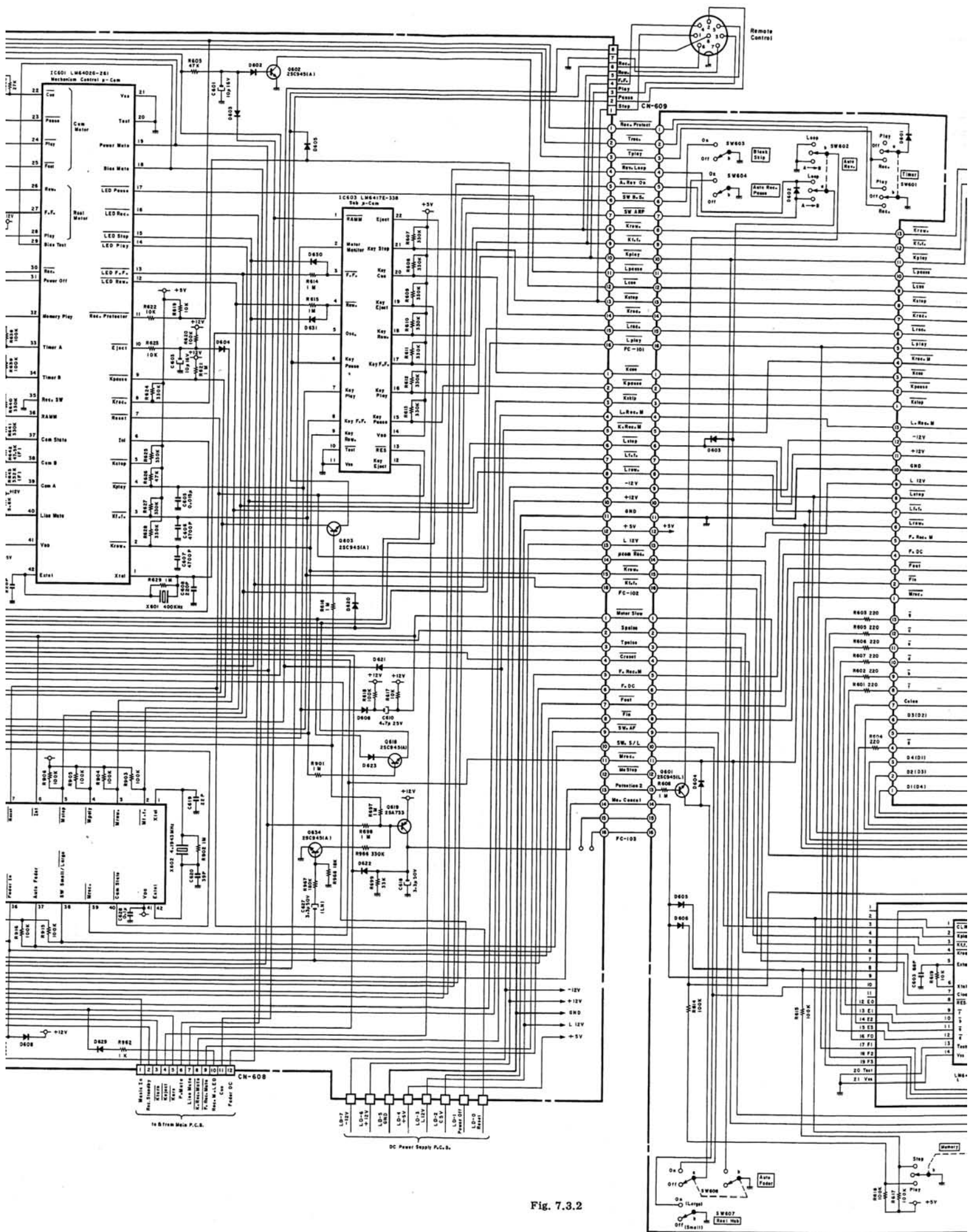
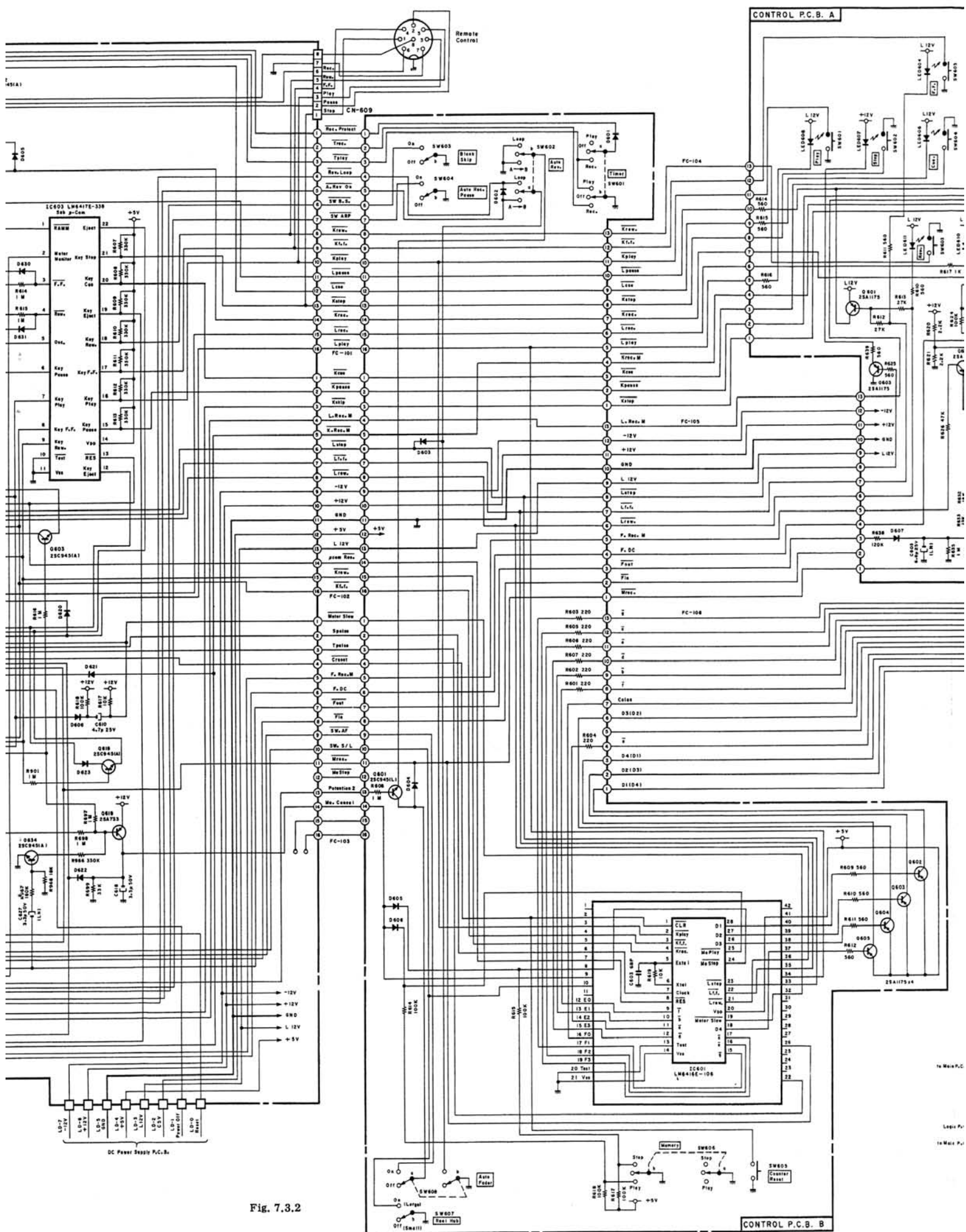


Fig. 7.3.2



WARNING:

Parts marked with the symbol  have critical characteristics.

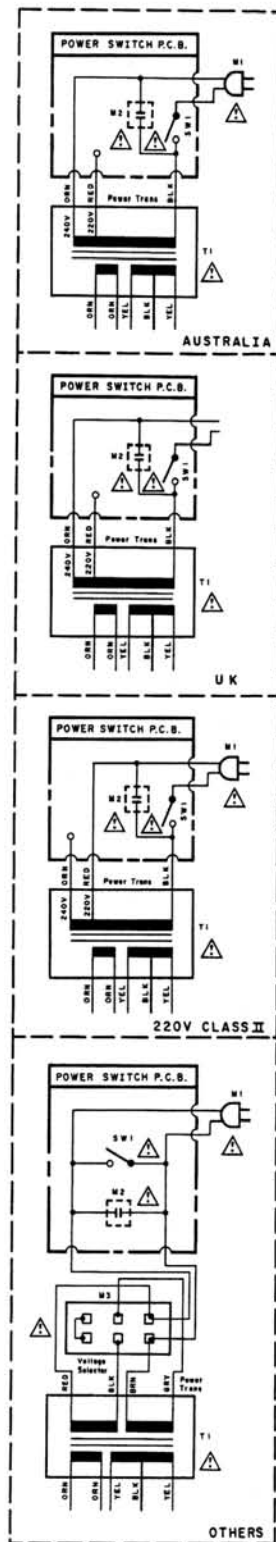
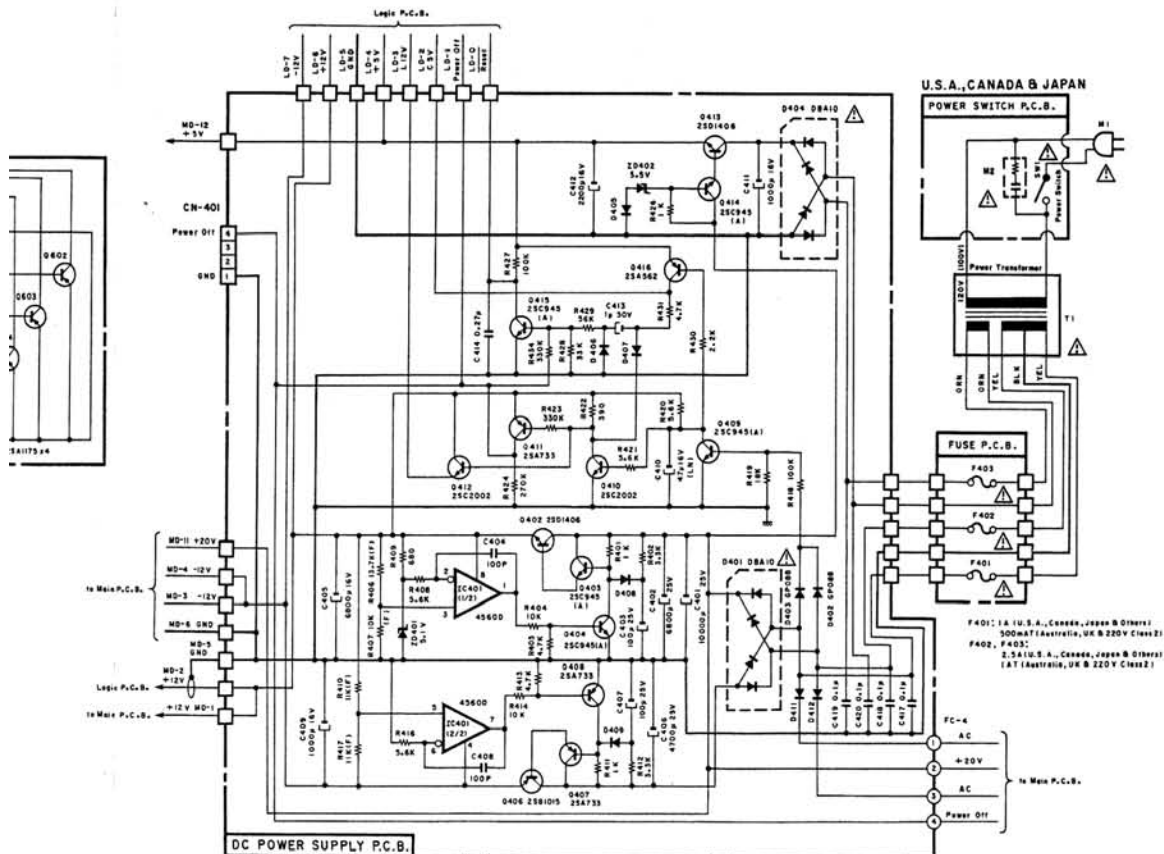
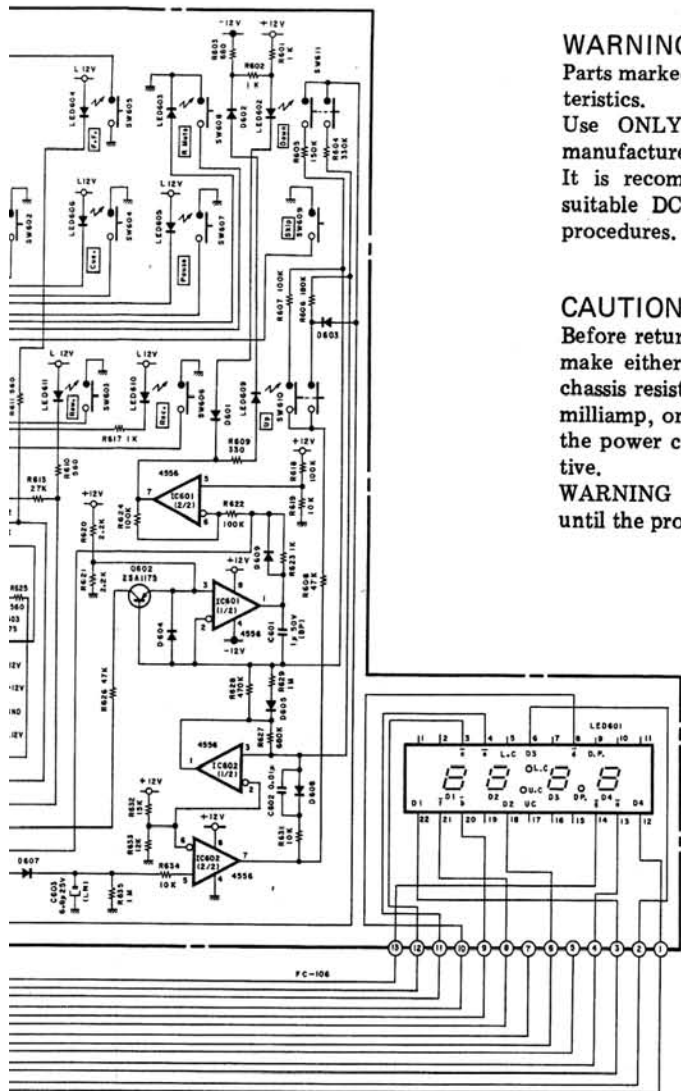
Use ONLY replacement parts recommended by the manufacturer.

It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp, or if the resistance from chassis to either side of the power cord is less than 240 k ohms, the unit is defective.

WARNING — DO NOT return the unit to the customer until the problem is located and corrected.



8. TIMING CHART AND EQ. AMP. FREQUENCY RESPONSE

8.1. Overall Timing Chart

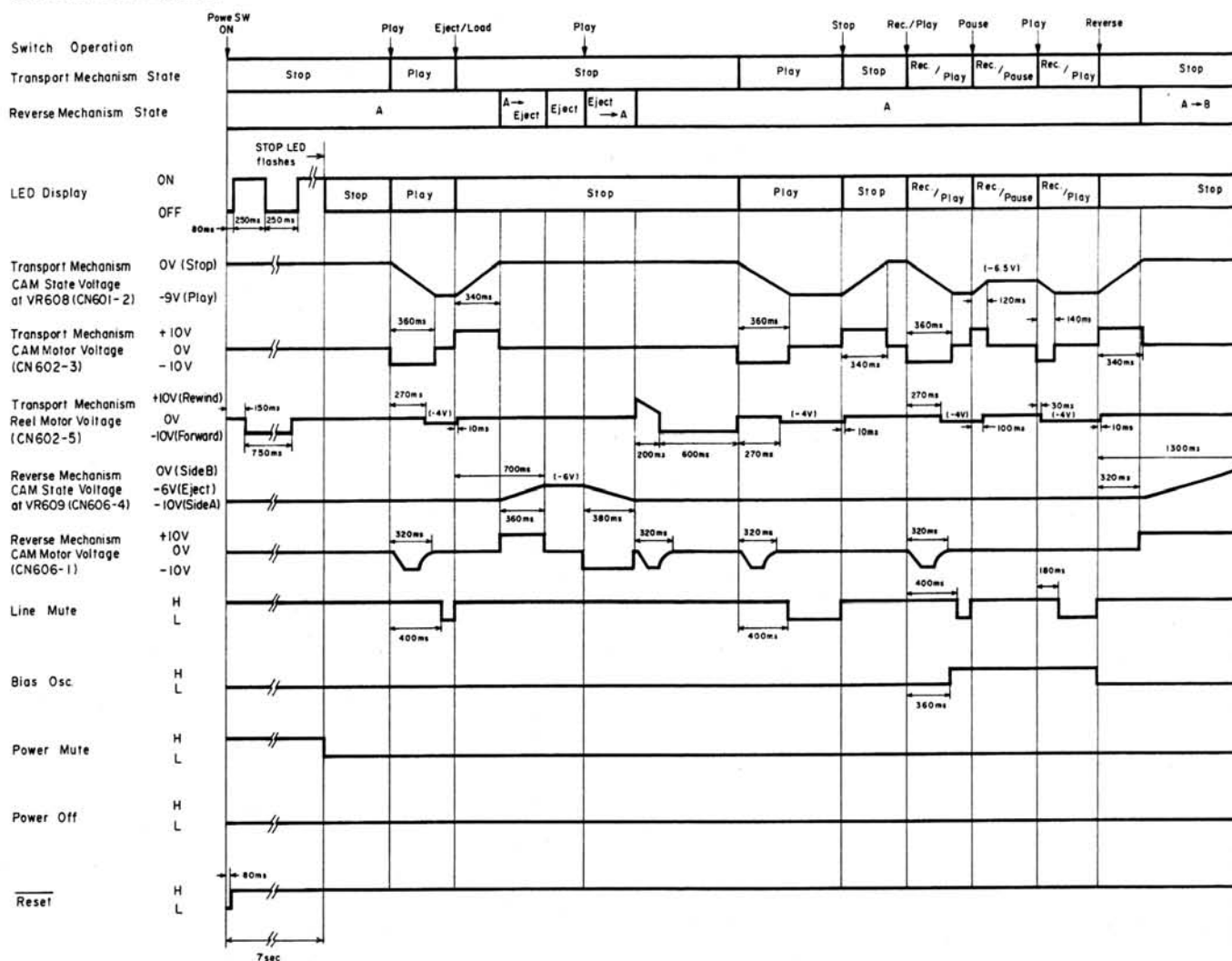


Fig. 8.1

8.2. Eq. Amp. Frequency Response

(1) Playback Frequency Response

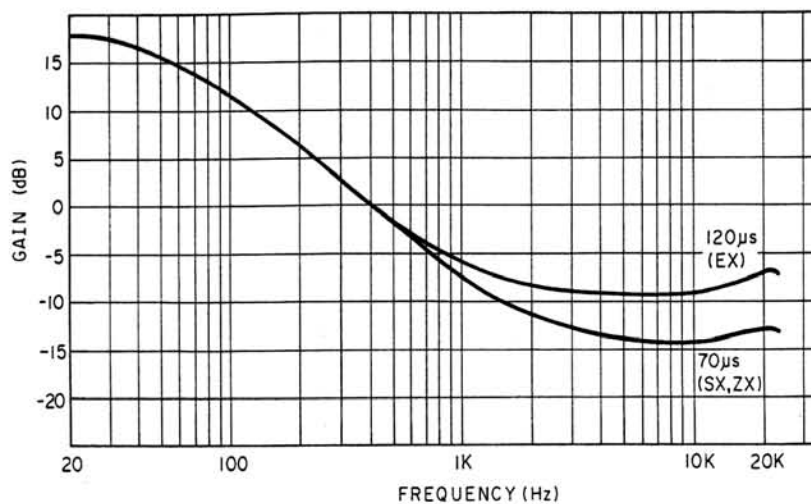
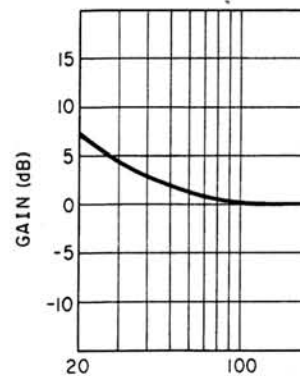


Fig. 8.2.1

(2) Record Current Frequency Response



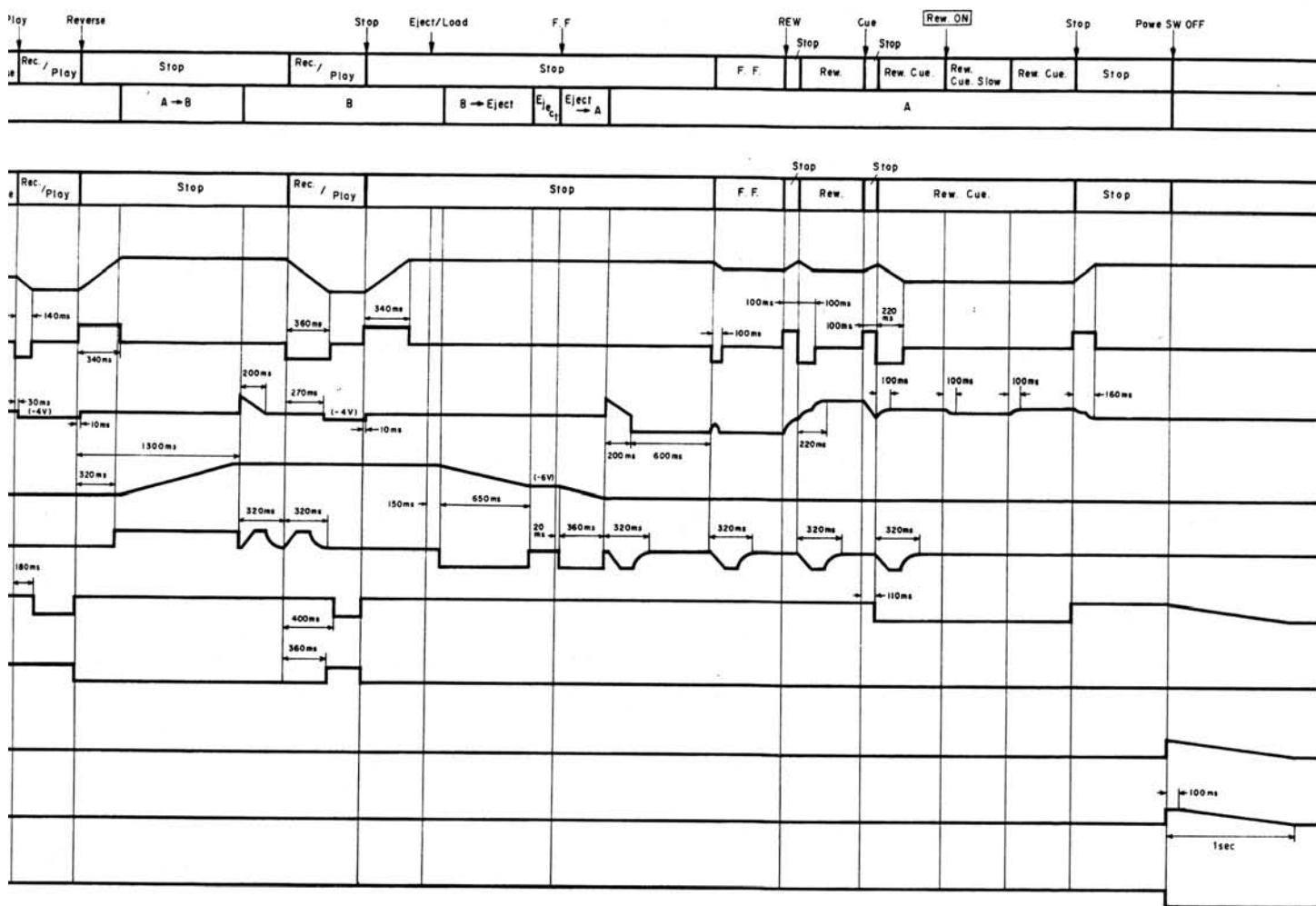


Fig. 8.1

Record Current Frequency Response

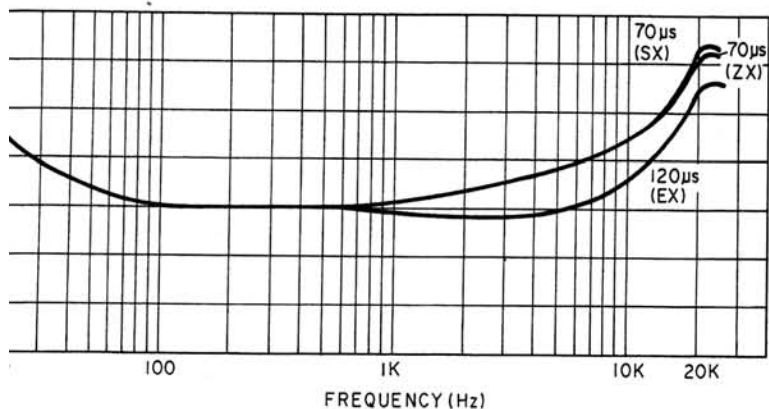
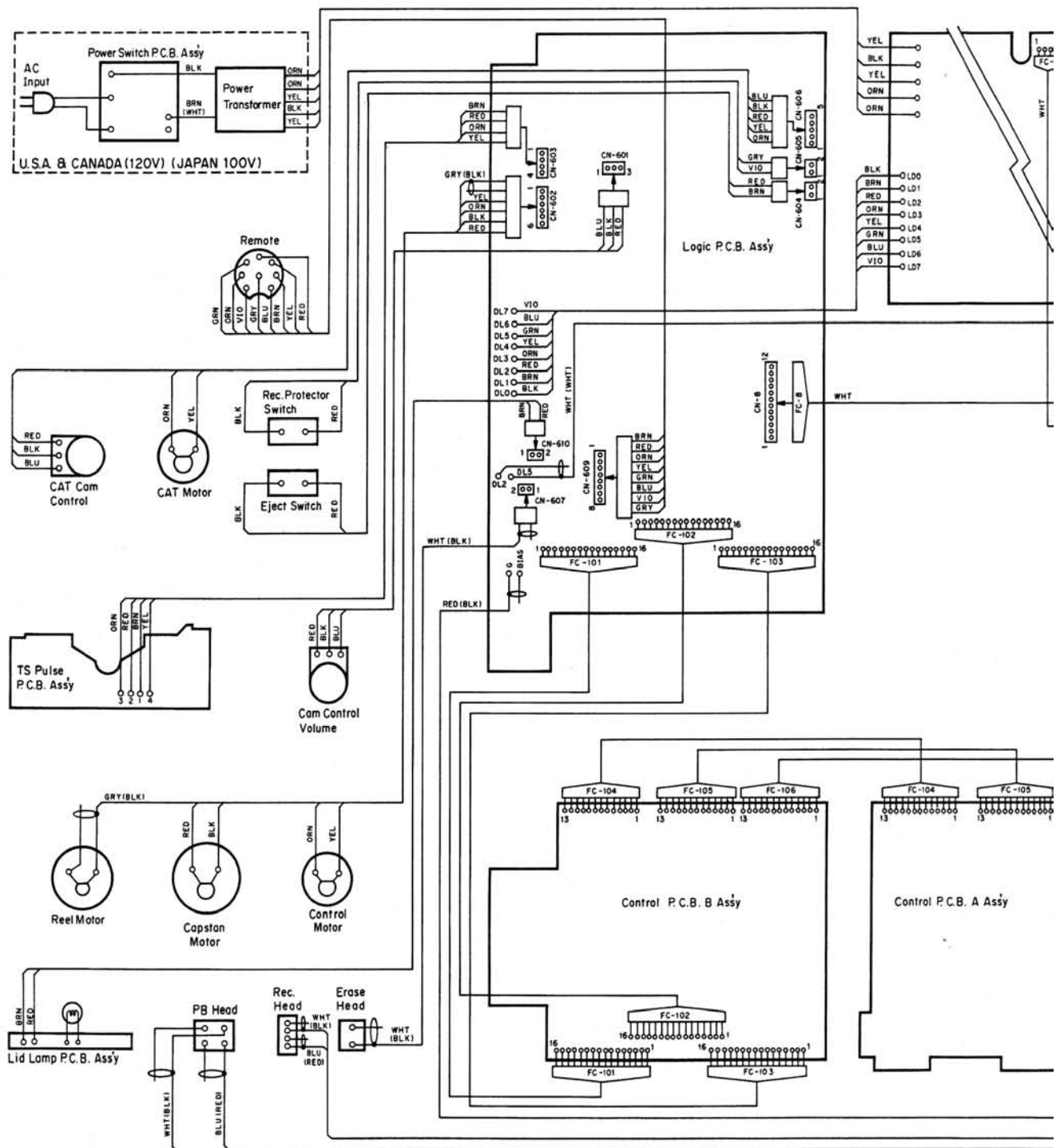
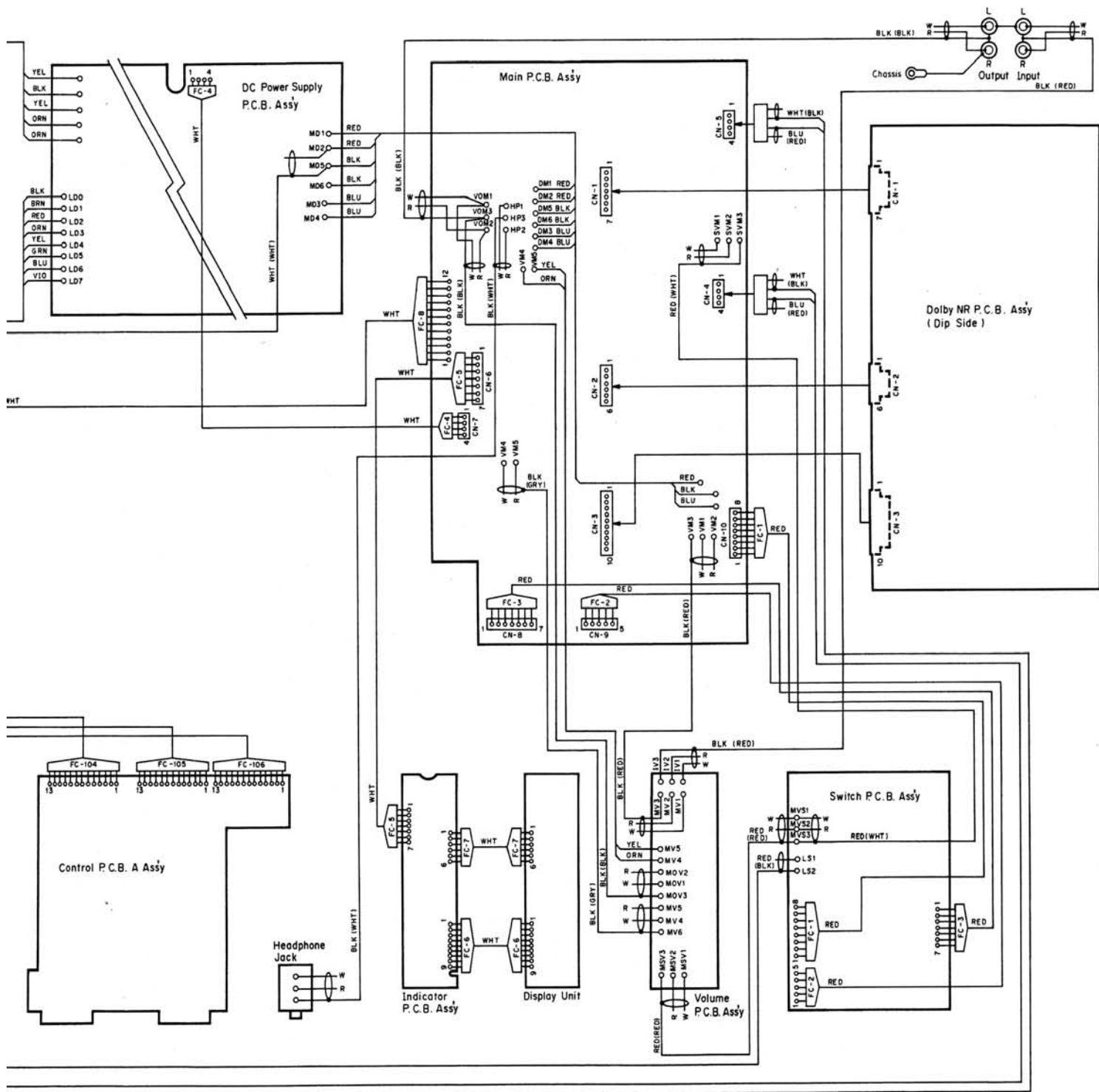


Fig. 8.2.2

9. WIRING DIAGRAM





Notes: 1. Table of wire colors

BRN — Brown	BLU — Blue
RED — Red	VIO — Violet
ORN — Orange	GRY — Gray
YEL — Yellow	WHT — White
GRN — Green	BLK — Black

2. Component side view of the P.C.B. is illustrated unless otherwise specified.

3. Wire tube color is shown in ().

10. BLOCK DIAGRAMS

10.1. Amplifier Section

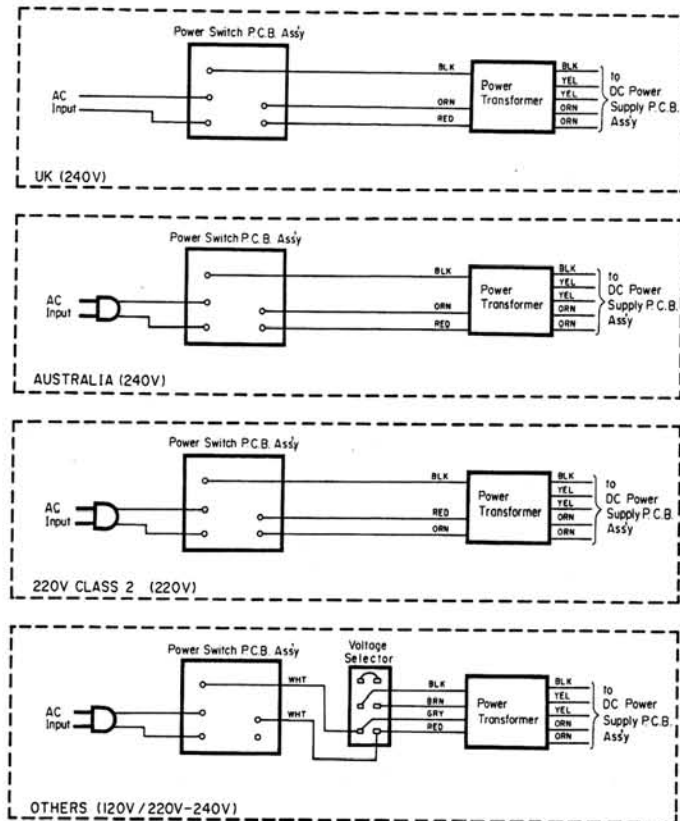
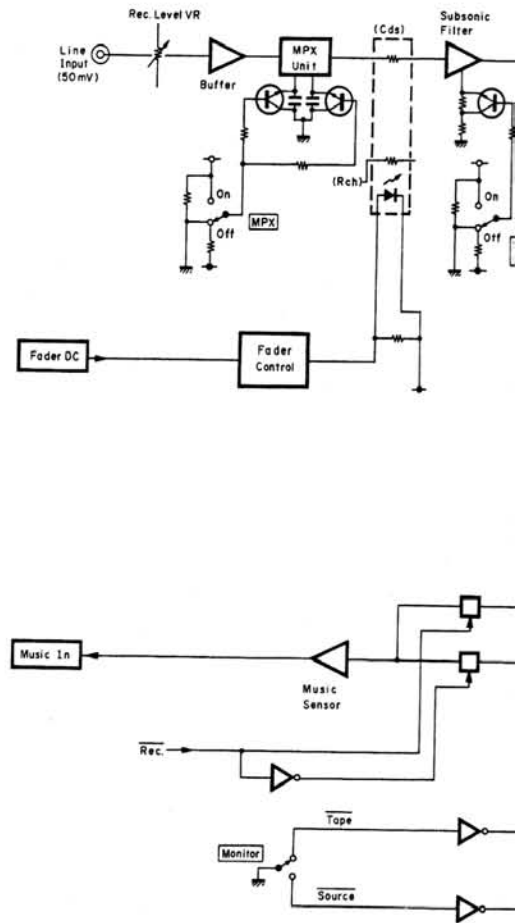


Fig. 9.2



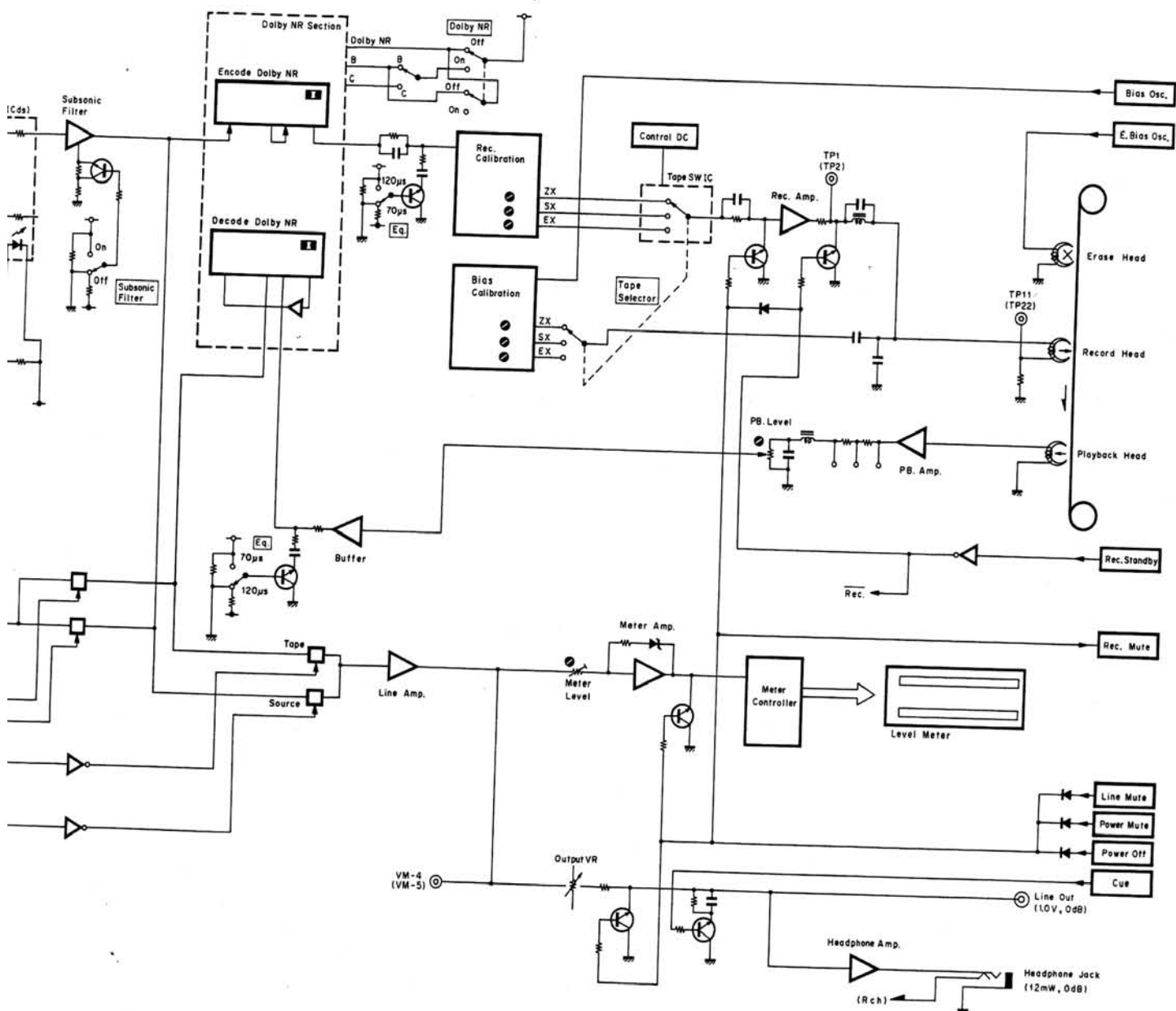


Fig. 10.1

10.2. Mechanism Control Section

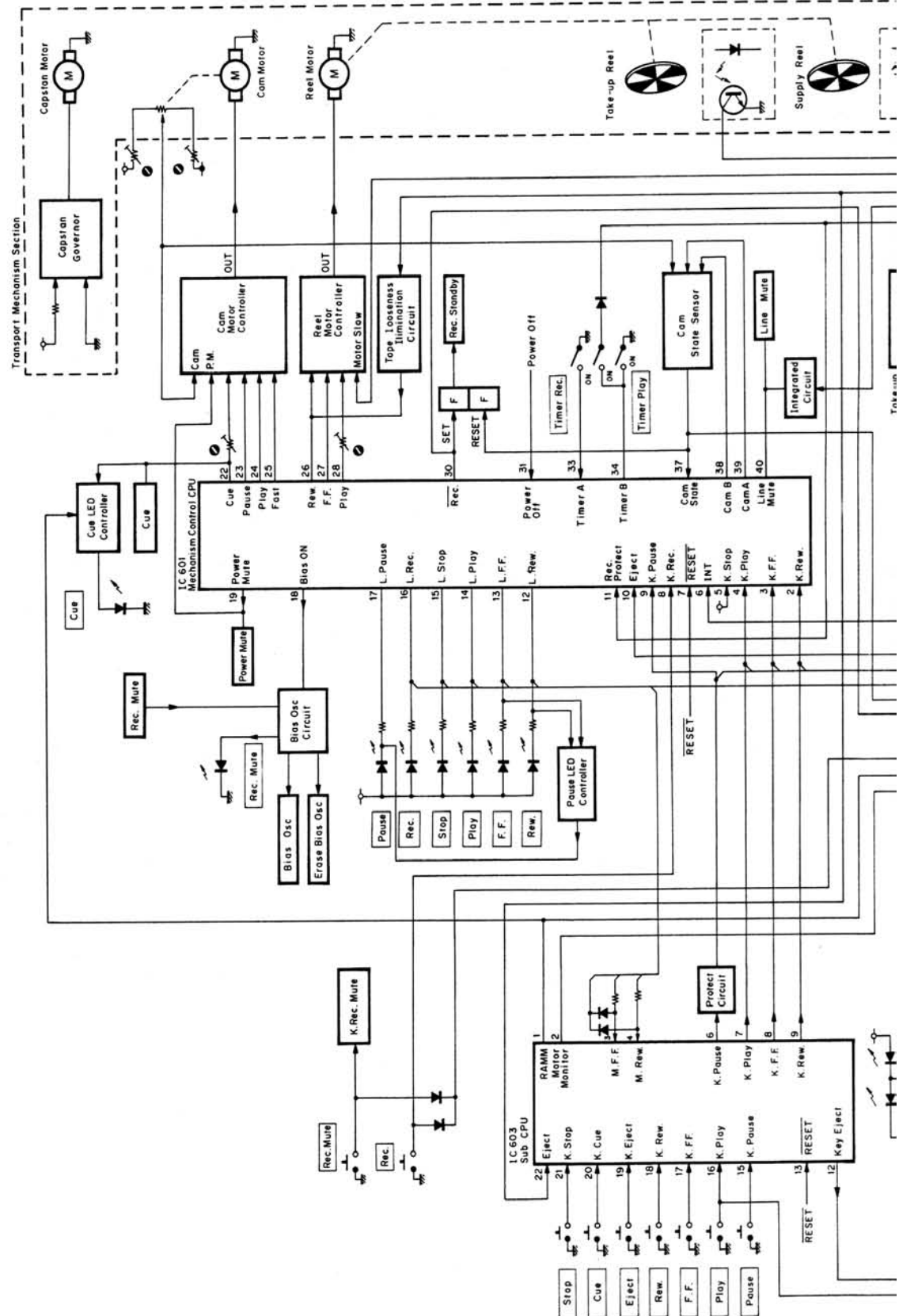


Fig. 10.2

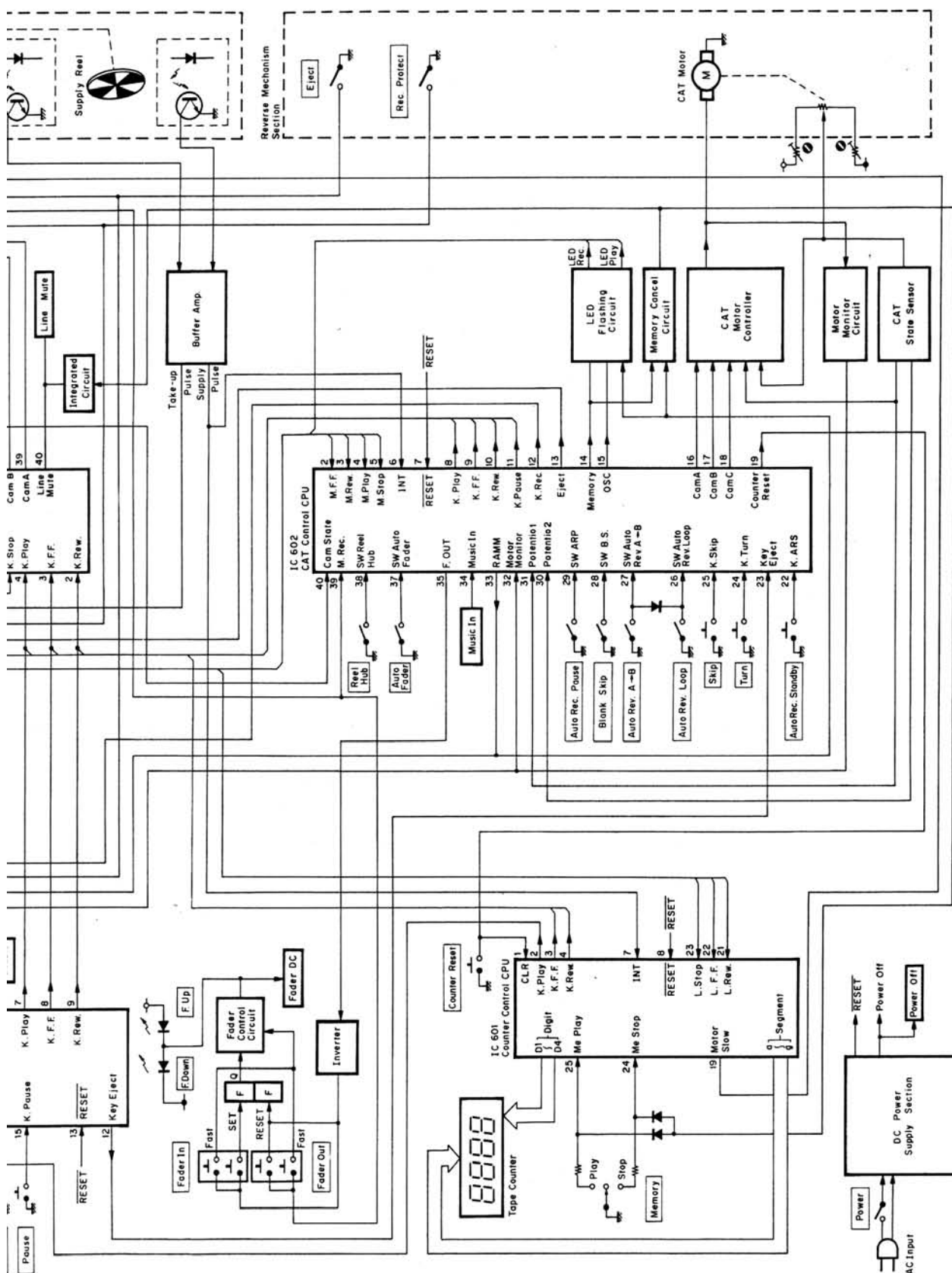


Fig. 10.2

11. SPECIFICATIONS

Track Configuration	4 Tracks/2-Channel Stereo (auto-reverse recording and playback)
Heads	3 (Erase Head x 1, Record Head x 1, Playback Head x 1)
Motors (Tape Transport)	PLL Servo Motor (Capstan Drive) x 1 DC Motor (Reel Drive) x 1
Power Source	100, 120, 120/220-240, 220 or 240 V AC; 50/60 Hz (According to country of sale)
Power Consumption	33 W max.
Tape Speed	1-7/8 ips. (4.8 cm/sec.)
Wow and Flutter	Less than 0.04% WTD RMS Less than 0.08% WTD Peak
Frequency Response	20 Hz — 20,000 Hz ± 3 dB (recording level -20 dB)
Signal to Noise Ratio	Dolby C-Type NR on <70 μ s, ZX tape> Better than 70 dB (400 Hz, 3% THD, IHF A-WTD RMS) Dolby B-Type NR on <70 μ s, ZX tape> Better than 64 dB (400 Hz, 3% THD, IHF A-WTD RMS)
Total Harmonic Distortion	Less than 0.9% (400 Hz, 0 dB, ZX tape) Less than 1.0% (400 Hz, 0 dB, SX, EXII tape)
Erasure	Better than 60 dB (100 Hz, 0 dB)
Separation	Better than 36 dB (1 kHz, 0 dB)
Crosstalk	Better than 60 dB (1 kHz, 0 dB)
Bias Frequency	105 kHz
Input (Line)	50 mV/70 k Ω
Output (Line)	1.0 V (400 Hz, 0 dB, output level control at max.) 2.2 k Ω
(Headphones)	12 mW (400 Hz, 0 dB, output level control at max.) 8 Ω load
Fast-Winding Time	Approx. 60 seconds (with C-60 cassette)
Dimensions	450 (W) x 144 (H) x 300 (D) millimeters 17-3/4 (W) x 5-11/16 (H) x 11-13/16 (D) inches
Approximate Weight	10 kg 22 lb. 1 oz.

- Specification and appearance design are subject to change for further improvement without notice.
- Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation.
- The word "DOLBY" and the Double-D-Symbol are trademarks of Dolby Laboratories Licensing Corporation.

Service Manual

Nakamichi RX-505, RX-505E

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