

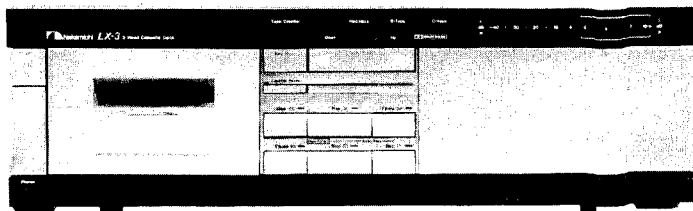
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Service Manual

Nakamichi LX-3

2 Head Cassette Deck



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1. GENERAL

1.1. Control Functions

The Nakamichi LX-3 control functions are shown below:

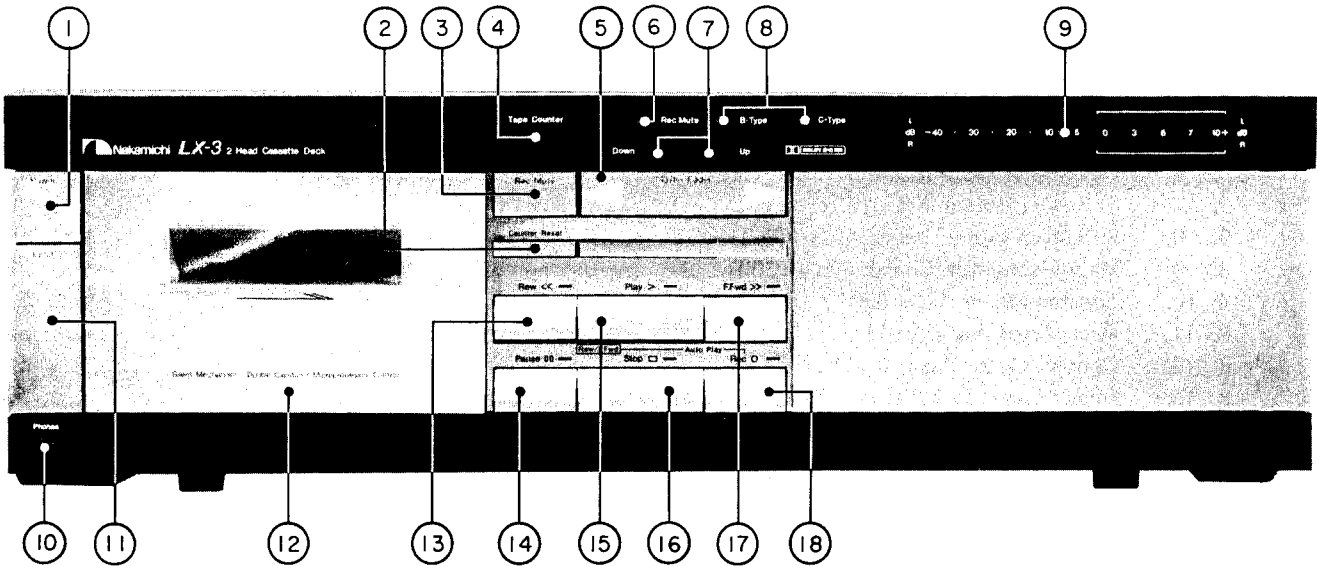


Fig. 1.1 Front View

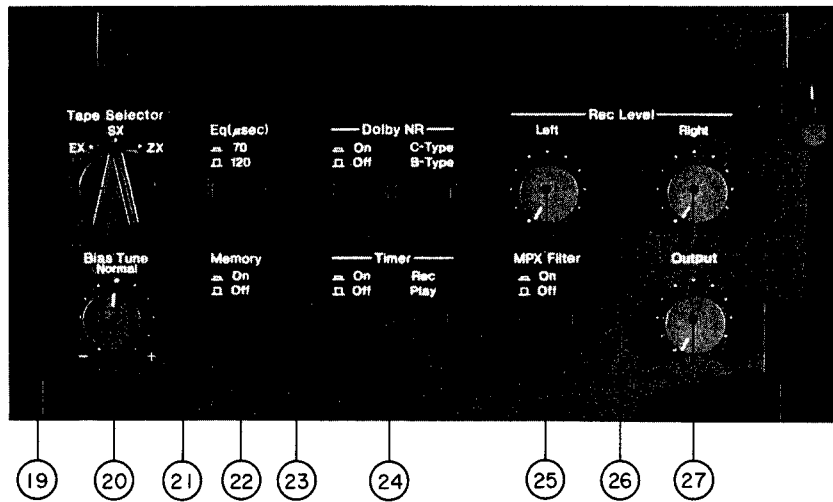


Fig. 1.2 Front View (Hinged Panel Opened)

- | | |
|----------------------------|------------------------------|
| 1. Power Switch | 15. Play Button |
| 2. Counter Reset Button | 16. Stop Button |
| 3. Rec. Mute Button | 17. Fast-Forward Button |
| 4. Tape Counter | 18. Record Button |
| 5. Master Fader Control | 19. Tape Selector Switch |
| 6. Rec. Mute Indicator | 20. Bias Tune Control |
| 7. Master Fader Indicators | 21. Eq. Switch |
| 8. Dolby NR Indicators | 22. Tape Start Memory Switch |
| 9. Peak Level Meters | 23. Dolby NR Switch |
| 10. Headphone Jack | 24. Timer Switch |
| 11. Eject Button | 25. MPX Filter Switch |
| 12. Cassette Holder | 26. Input Level Controls |
| 13. Rewind Button | 27. Output Level Control |
| 14. Pause Button | |

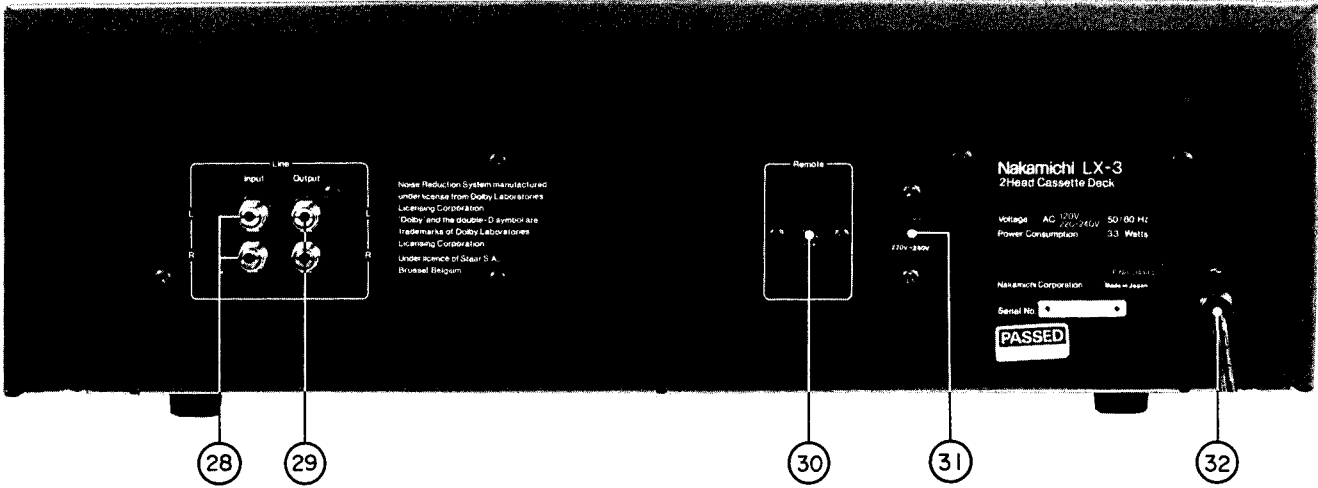


Fig. 1.3 Rear View

- 28. Input Jacks
- 29. Output Jacks
- 30. Remote Control Jack

- 31. Voltage Selector
- 32. Power Cord

1.2. Voltage Selector

Voltage selector is installed on the rear panel for Other Version of the Nakamichi LX-3. This voltage selector can select either 120 V or 220-240 V at customer's disposal.

2. REMOVAL PROCEDURES

2.1. Top Cover Ass'y

Refer to Fig. 2.1.

- (1) Remove F01 and F02, then disassemble F03 (Top Cover Ass'y).

2.2. Bottom Cover Ass'y

Refer to Fig. 2.1.

- (1) Remove F04, then disassemble F05 (Bottom Cover Ass'y).

2.3. Cassette Case Cover Ass'y

Refer to Fig. 2.1.

- (1) Push the Eject Button to open the Cassette Case Ass'y.
- (2) Pull out F06 (Cassette Case Cover Ass'y) upwardly.

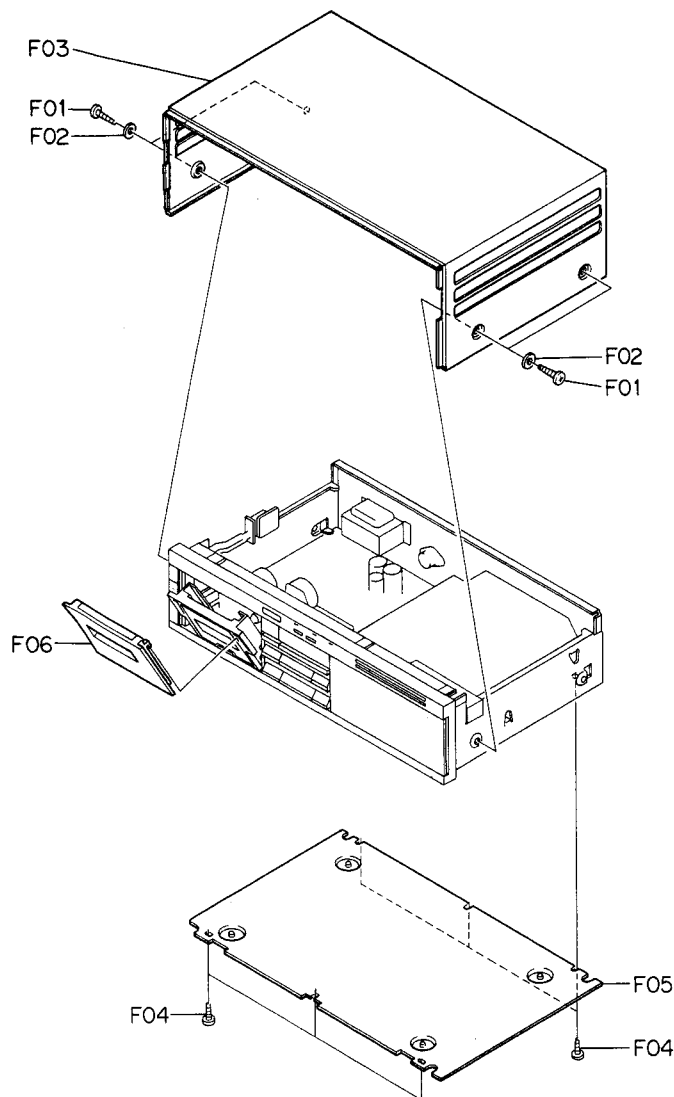


Fig. 2.1

2.4. Front Panel Ass'y

Refer to Fig. 2.2.

- (1) Refer to Fig. 2.1. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.1 and 2.2.
- (2) Pull out F01 (Volume Knobs) and remove F02, then disassemble F03 (Front Panel Ass'y including 6 connectors).

2.5. Mechanism Ass'y

Refer to Fig. 2.2.

- (1) Remove Front Panel Ass'y referring to item 2.4.
- (2) Remove F04, then disassemble F05 (Power Switch P.C.B. Ass'y).
- (3) Remove F06 (Power Switch Joint Bar) by releasing the self-interlocking pin of Power Switch Joint Bar from F07 (Power Switch P.C.B. Ass'y).
- (4) Refer to Bottom View A. Remove F08 and F09, then disassemble F10 (Record Holder) and F11 (Record Switch Linkage Wire).
- (5) Remove F12, then turn F13 (Dolby NR P.C.B. Ass'y) over as an arrow head.
- (6) Remove F14, F15 and F16, then disassemble F17 (Mechanism Ass'y including 5 connectors).

2.6. Headphone Jack Ass'y

- (1) Remove F18, then disassemble F19 (Headphone Jack Ass'y).
- (2) Remove F20 and F21, then disassemble F22 (Headphone Jack).

2.7. Logic & Power P.C.B. Ass'y

Refer to Fig. 2.3.

- (1) Refer to Fig. 2.1. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.1 and 2.2.
- (2) Remove 7 connectors and the wires connected by wrapping from F02 (Logic & Power P.C.B. Ass'y).
- (3) Remove F01, then disassemble F02.

2.8. Dolby NR P.C.B. Ass'y

Refer to Fig. 2.3.

- (1) Refer to Fig. 2.1. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.1 and 2.2.
- (2) Remove F03 and F04, then disassemble F05 (Record Holder) and F06 (Record Linkage Wire).
- (3) Remove F07, then disassemble F08 (Dolby NR P.C.B. Ass'y) by releasing the self-interlocking pin of the P.C.B. Supporters.

2.9. Main P.C.B. Ass'y and Amp. Switch P.C.B. Ass'y

Refer to Fig. 2.3.

- (1) Refer to Fig. 2.2. Remove Front Panel Ass'y referring to item 2.4.
- (2) Remove F09, then disassemble F10 (Amp. Shield Cover Plate).
- (3) Pull out F11 (Selector Knob) and F12 (Switch Knobs).

- (4) Remove F13 and F14, then disassemble F15 (Main P.C.B. Ass'y and Amp. Switch P.C.B. Ass'y).
- (5) Remove F16, F17 and F18, then disassemble F19 (Main P.C.B. Ass'y).
- (6) Remove F20, F21 and F22, then disassemble F23 (Amp. Switch P.C.B. Ass'y).

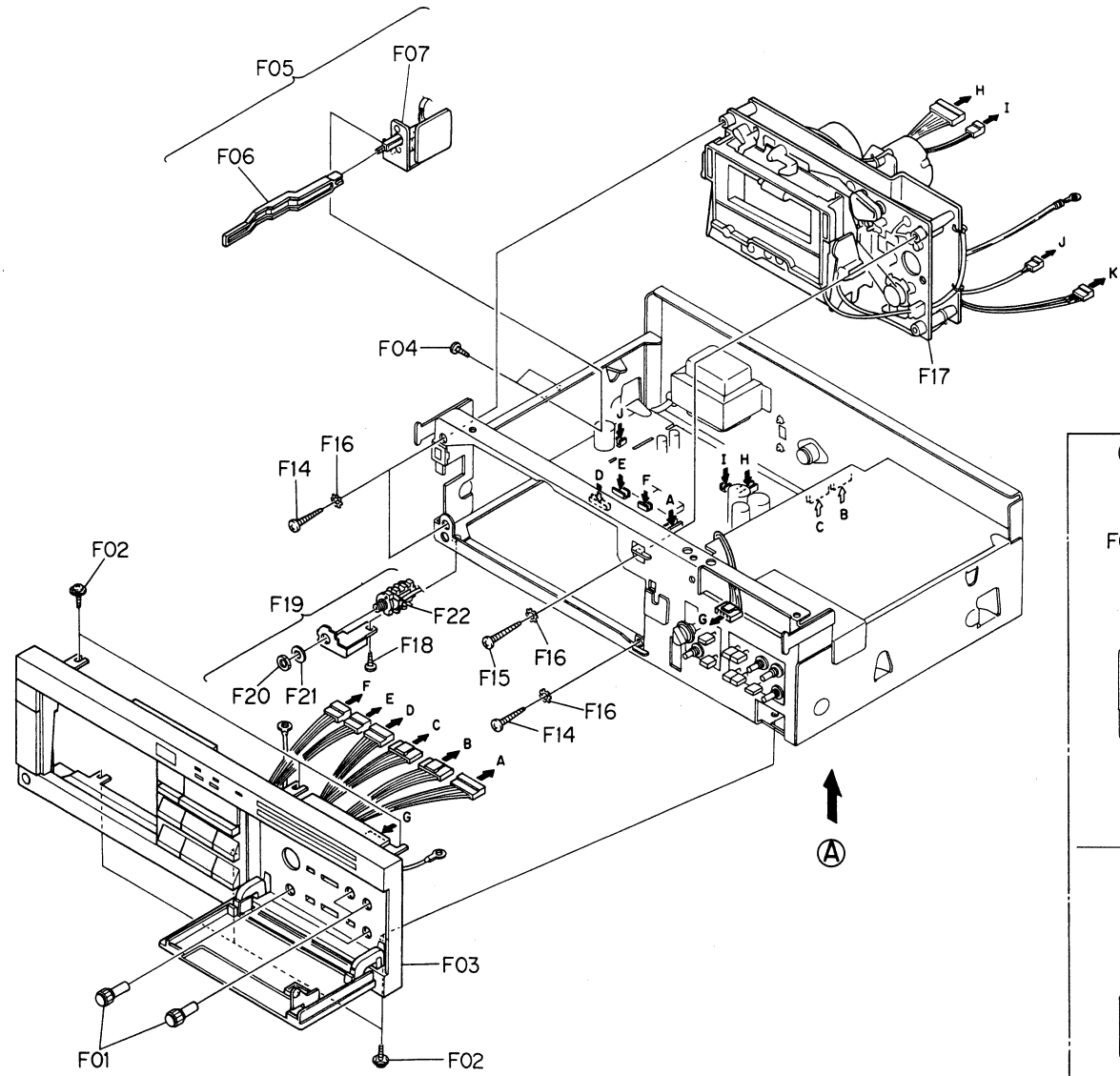


Fig. 2.2

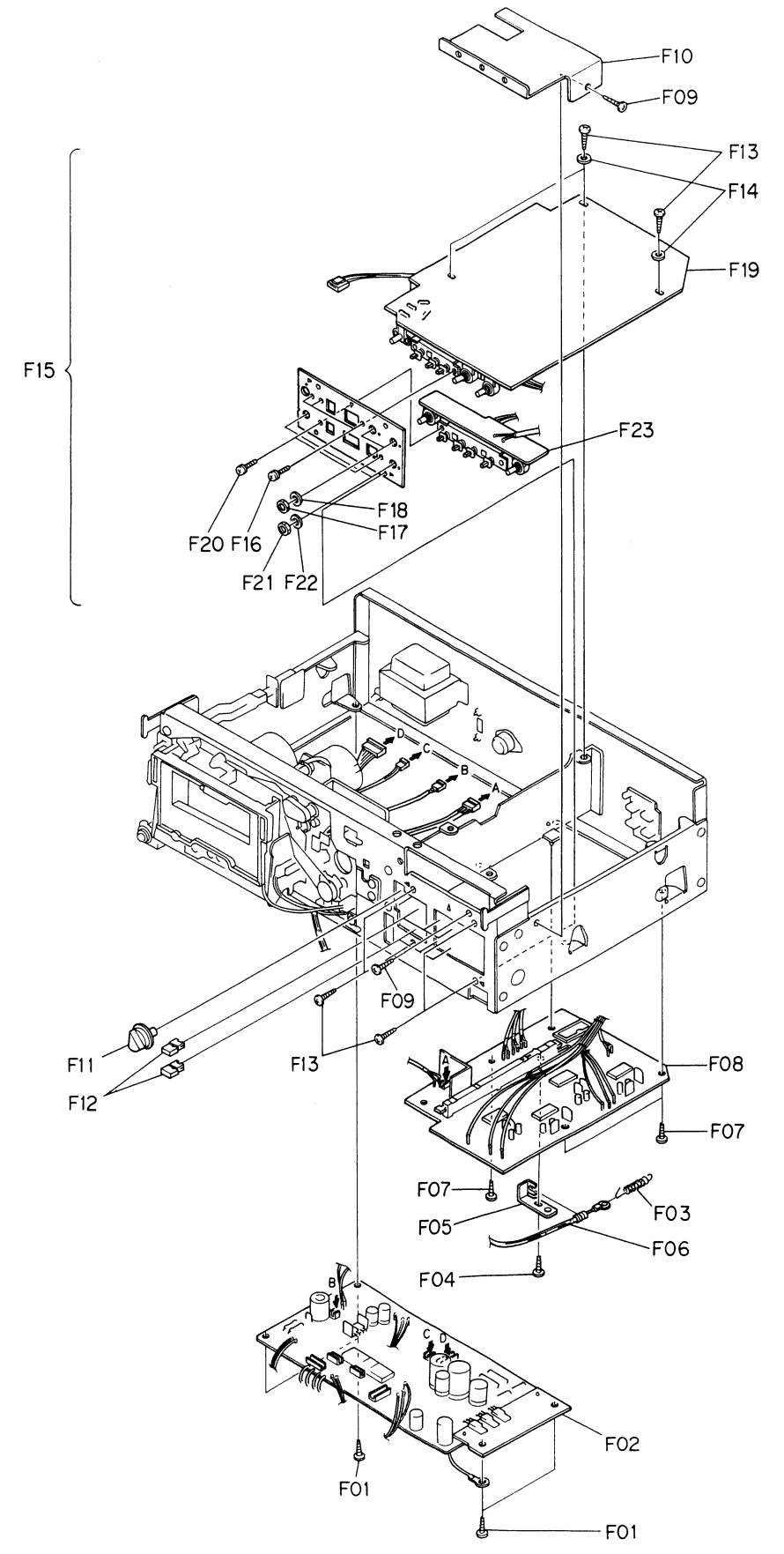
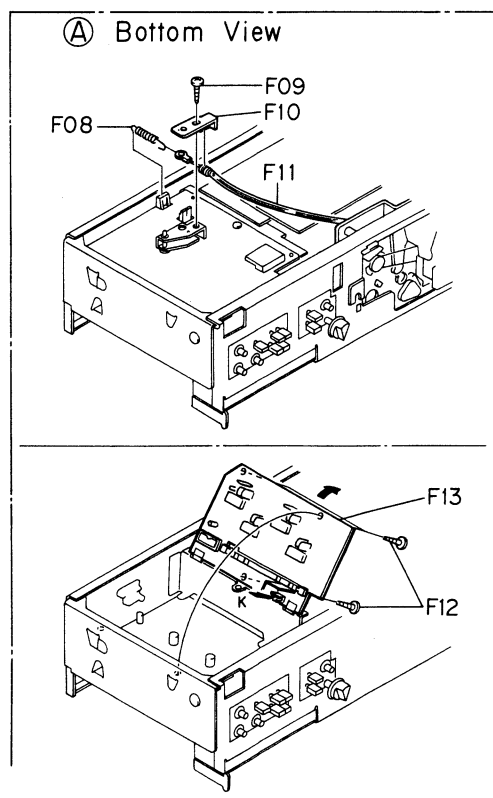


Fig. 2.3

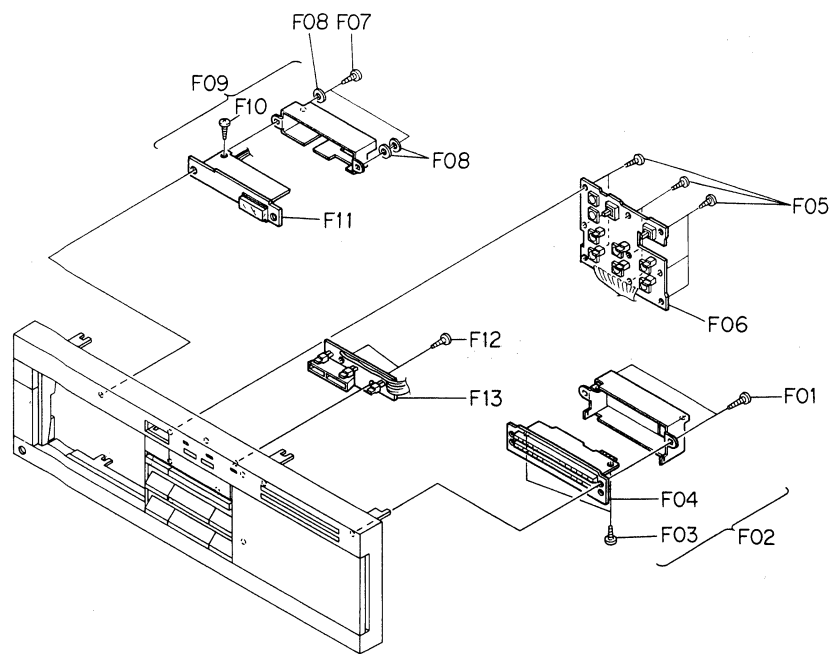


Fig. 2.4

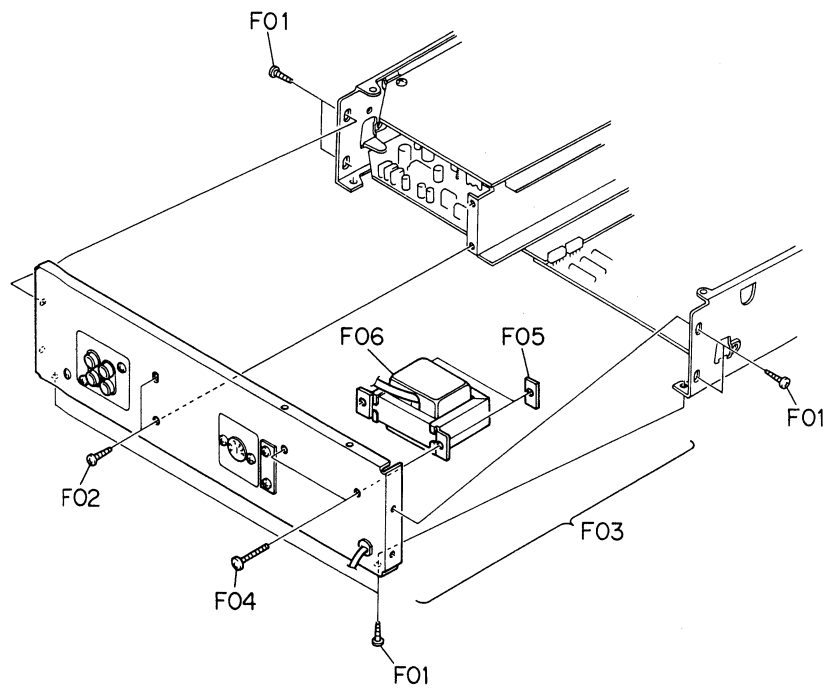


Fig. 2.5

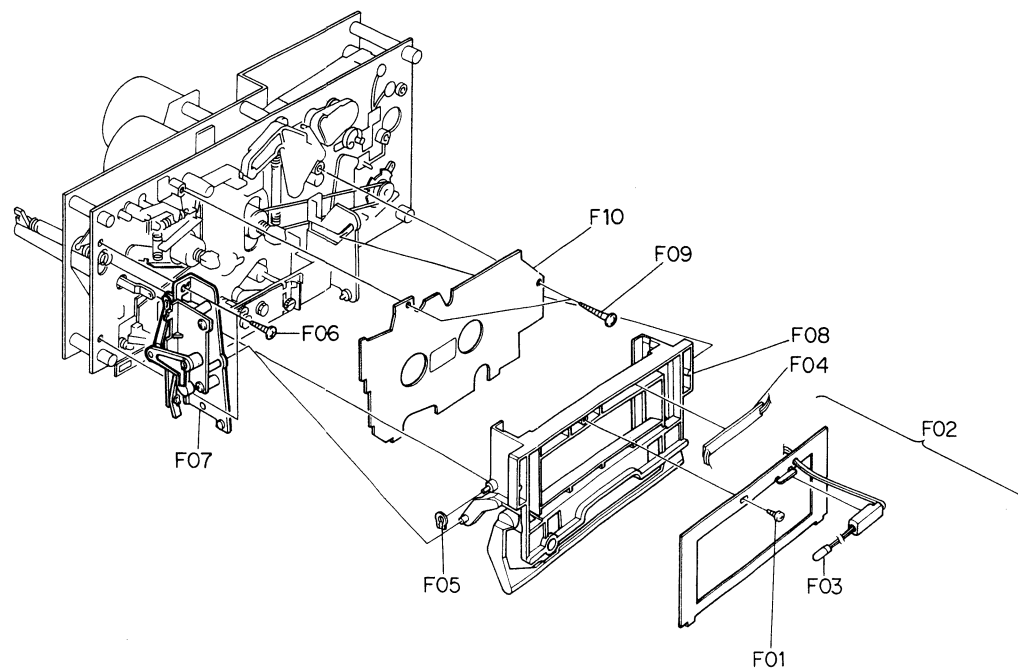


Fig. 2.6

2.10. LED Level Indicator Ass'y, Control Switch P.C.B. Ass'y, Counter P.C.B. Ass'y and LED P.C.B. Ass'y

Refer to Fig. 2.4.

- (1) Refer to Fig. 2.2. Remove Front Panel Ass'y referring to item 2.4.
- (2) Remove F01, then disassemble F02 (LED Level Indicator Ass'y).
- (3) Remove F03, then disassemble F04 (Indicator P.C.B. Ass'y).
- (4) Remove F05, then disassemble F06 (Control Switch P.C.B. Ass'y).
- (5) Remove F07 and F08, then disassemble F09 (Counter P.C.B. Ass'y).
- (6) Remove F10, then disassemble F11 (Counter-1 P.C.B. Ass'y and Counter-2 P.C.B. Ass'y).
- (7) Remove F12, then disassemble F13 (LED P.C.B. Ass'y).

2.11. Rear Panel Ass'y

Refer to Fig. 2.5.

- (1) Refer to Fig. 2.1. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.1 and 2.2.
- (2) Remove F01 and F02, then disassemble F03 (Rear Panel Ass'y).

2.12. Power Transformer

Refer to Fig. 2.5.

- (1) Refer to Fig. 2.1. Remove Top Cover Ass'y and Bottom Cover Ass'y referring to items 2.1 and 2.2.
- (2) Remove F04 and F05, then disassemble F06 (Power Transformer).

2.13. Cassette Case Ass'y and Cover Plate Ass'y

Refer to Fig. 2.6.

- (1) Refer to Fig. 2.2. Remove Mechanism Ass'y referring to item 2.5.
- (2) Remove F01, then disassemble F02 (Cassette Case Plate Ass'y).
- (3) Remove F03 (Cassette Case Lamp) from Cassette Case Plate, then pull out F04 (Lamp P.C.B.) from F08 (Cassette Case Ass'y).
- (4) Push the Eject Button to open the Cassette Case Ass'y.
- (5) Remove F05 and F06, then disassemble F07 (Cassette Case Holder L Ass'y) by releasing the self-interlocking pin of Damper Lock Arm and F08 (Cassette Case Ass'y).
- (6) Remove F09, then disassemble F10 (Cover Plate Ass'y).

2.14. Capstan Motor Ass'y and Flywheel Ass'y

Refer to Fig. 2.7.

- (1) Refer to Fig. 2.2. Remove Mechanism Ass'y referring to item 2.5.
- (2) Remove F01, F02 and F03, then disassemble F04 (Flywheel Holder Ass'y) and F05 (Capstan Belt).
- (3) Remove F06, then disassemble F07 (Capstan Motor Ass'y).
- (4) Remove F08, then disassemble F09 (3P Lug Terminal).
- (5) Remove F10 (Supply Flywheel Ass'y), then disassemble F11 (Take-up Flywheel Ass'y).
- (6) After removing both Flywheel Assemblies, disassemble F12 (Thrust Washer 3mm), F13 (Thrust Washer 2.6mm), F14 (Flange Thrust Cap) and F15 (Flange Thrust Spring).

2.15. Sub Mechanism Chassis Ass'y

Refer to Fig. 2.8.

- (1) Refer to Fig. 2.7. Remove Flywheel Holder Ass'y referring to item 2.14.
- (2) Remove F01, F02 and F03, then disassemble F04 (Sub Mechanism Chassis Ass'y).

2.16. Control Motor Ass'y and Reel Motor Ass'y

Refer to Fig. 2.8.

- (1) Remove Sub Mechanism Chassis Ass'y referring to item 2.15.
- (2) Remove F05, then disassemble F06 (Control Motor Ass'y).
- (3) Remove F07, then disassemble F08 (Reel Motor Ass'y).

2.17. Cam Control Volume

Refer to Fig. 2.8.

- (1) Remove Sub Mechanism Chassis Ass'y referring to item 2.15.

- (2) Remove F09, then disassemble F10 (Volume Coupler).
- (3) Remove F11 and F12, then disassemble F13 (Cam Control Volume).

2.18. Reel Hub Ass'y and Idler Ass'y

Refer to Fig. 2.8.

- (1) Remove Sub Mechanism Chassis Ass'y referring to item 2.15.
- (2) Remove F14 (Reel Hub Head), then disassemble F15 (Reel Hub B Ass'y), F16 (Reel Hub Take-up Ass'y), F17 (Reel Hub Supply Ass'y), F18 (Back Tension Ass'y) and F19 (Back Tension Spring).
- (3) Remove F20, then disassemble F21 (Idler Ass'y).

2.19. Cam Drive Gear and Control Cam

Refer to Fig. 2.8.

- (1) Remove Sub Mechanism Chassis Ass'y referring to item 2.15.
- (2) Remove F22, then disassemble F23 (Cam Drive Gear).
- (3) Remove F24, then disassemble F25 (Counter-Load Arm Ass'y).
- (4) Remove F26, then disassemble F27 (Control Cam).

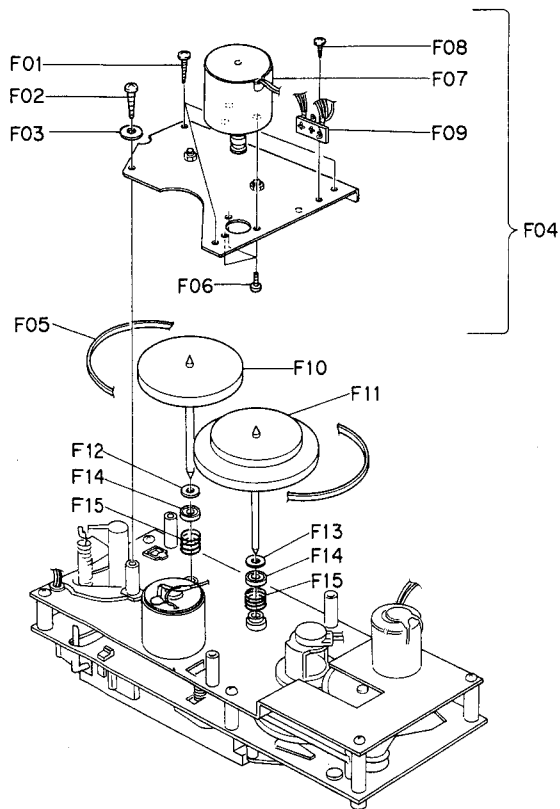


Fig. 2.7

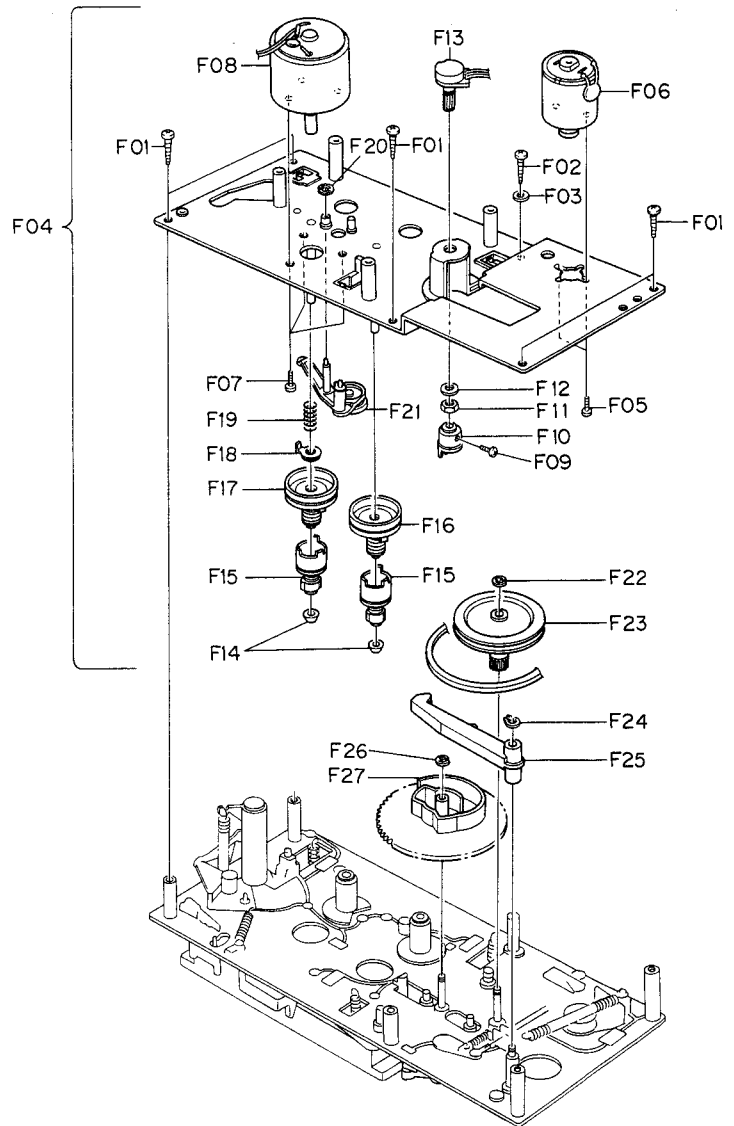


Fig. 2.8

2.20. Head Mount Base Ass'y

Refer to Fig. 2.9.

- (1) Refer to Fig. 2.6. Remove Cassette Case Ass'y referring to item 2.13.
- (2) Remove F01, then disassemble F02 (Head Mount Base Ass'y).

2.21. Erase Head, Pressure Roller and Tape Guide

Refer to Fig. 2.9.

- (1) Remove Head Mount Base Ass'y referring to item 2.20.
- (2) Remove F03, then disassemble F04 (Erase Head).
- (3) Remove F05, then disassemble F06 (Supply Pressure Roller).
- (4) Remove F07, then disassemble F08 (Supply Tape Guide).
- (5) Remove F09, then disassemble F10 (Take-up Pressure Roller).
- (6) Remove F11, then disassemble F12 (Take-up Tape Guide).

2.22. Record/Playback Head Ass'y

Refer to Fig. 2.9.

- (1) Remove Head Mount Base Ass'y referring to item 2.20.
- (2) Turn F13 by 90° by pushing it, then disassemble F14 (Record/Playback Head Ass'y).

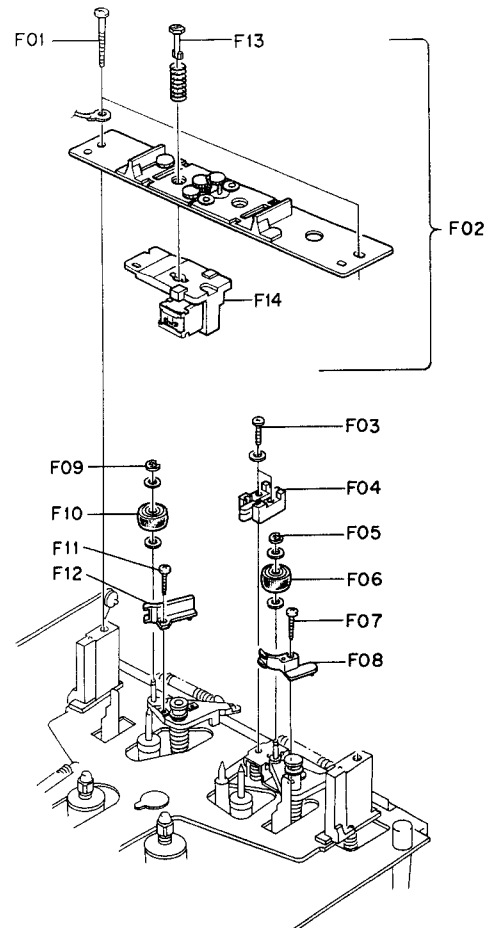


Fig. 2.9

3. MEASUREMENT INSTRUMENTS

- | | |
|--|--|
| <ol style="list-style-type: none"> (1) Audio Generator (20 Hz – 200 kHz) (2) AC Millivolt Meter (with dB measures) (3) Oscilloscope (DC – 5 MHz) (4) Distortion Meter (5) Speed & Wow/Flutter Meter (6) Frequency Counter (DC – 1 MHz) (7) Ohm Meter (8) DC Volt Meter (9) AC Volt Meter (10) Torque Gauge (DA09013A) (11) 15 kHz Azimuth Tape (DA09004A) (12) 3 kHz Speed & Wow/Flutter Tape (DA09006A) (13) 1 kHz Track Alignment Tape (DA09007A) (14) 400 Hz Level Tape (DA09005A) (15) 20 kHz PB Frequency Response Tape (DA09001A) (16) 15 kHz PB Frequency Response Tape (DA09002A) (17) 10 kHz PB Frequency Response Tape (DA09003A) (18) Reference EXII Tape (DA09066A) (19) Reference SX Tape (DA09025A) (20) Reference ZX Tape (DA09037A) (21) Tilt Check Gauge M-9036 (DA09036A) | <ol style="list-style-type: none"> (22) Stroke Check Gauge M-9038 (DA09038A) (23) EH Tilt Check Gauge M-9040 (DA09040A) (24) EH Stroke Check Gauge M-9051 (DA09051A) (25) Back Tension Gauge (DA09055A) (26) Tension Arm Adjustment Cassette (DA09056A) (27) Audio Analyzer T-100
(including Distortion, Wow/Flutter, Speed, Oscillator and dB meters) |
|--|--|

Note: (10) – (27) are the products of Nakamichi Corporation.

4. MECHANICAL ADJUSTMENTS

4.1. Mechanism Control Cam Adjustment

Before adjustment, disassemble the Front Panel Ass'y then remove the Cover Plate Ass'y referring to items 2.4 and 2.13.

(1) Offset Adjustment of Control Motor Driver

- (a) Refer to Figs. 4.1 and 4.2.
Adjust VR602 and VR603 on the Logic & Power 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 stop)
VR603 (for cam position play)
- (b) Press the Stop button to set the LX-3 in Stop mode. Adjust VR602 (for stop) so that the "S" mark on the Cam corresponds to the pointer on the mechanism chassis.
- (c) Press the Play button to set the LX-3 in Playback mode. (Cam will rotate, and the position marked with "PY" comes to the pointer.) Adjust VR603 (for play) so that the "PY" mark on the Cam corresponds to the pointer.
- (d) 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.)
- (e) Set the LX-3 in F.F., Pause, or Record mode by pressing each button and check to insure that the pointer is in a range of "F", "PS", or "R" mark respectively.
- (f) If out of the range, precise adjustment for each position according to "(2) Offset Fine Adjustment of Control Motor Driver" will be required.

(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 & Power P.C.B. Ass'y.

Note: The value of voltage is typical value.

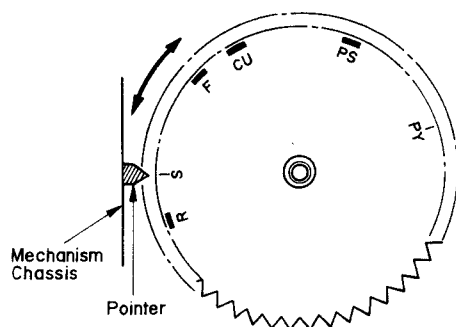


Fig. 4.1

(a) Observation Point of Reference Voltage

Observe the each voltage at the sliding contact of the Cam Control Volume VR604 (10 kΩ) in Stop, Fast (F.F. or Rew.), Pause, Record and Playback modes.

Note: When Record and Play buttons are pressed to set the LX-3 in Record mode, the Cam is first set to the record position in a short period of time then stays at the play position. Therefore to keep the Cam at the record position, following procedure is required:
Short both leads of capacitor C604 (4.7 μF) on the Logic & Power P.C.B. with a jumper wire, then press the Record and Play buttons.

(b) Reference Voltage

Reference voltage at the sliding contact of VR604 (Cam Control Volume) in each mode is as follows:

Mode	Reference Voltage (Typical Value)
Record	1.8 V
Stop	0 V
Fast (F.F./Rew.)	-2.0 V
Pause	-6.5 V
Play	-9.1 V

(c) Resistors for Adjustment

Mode	Ref. No.	Typical Value
Fast (F.F./Rew.)	R647	22 kΩ
Pause	R649	76.8 kΩ (F)
Play	R648	10 kΩ

(d) Adjustment Procedures

- 1) Set the LX-3 in Stop mode, then check to insure that the voltage at the sliding contact of VR604 is 0 V (±0.3 V).
- 2) Set the LX-3 in F.F. mode, then adjust the value of R647 so that the voltage at the sliding contact of VR604 will become lower by 2.0 V (±0.25 V) than in Stop mode.
- 3) Press the Pause button to set the LX-3 in Pause mode. Adjust the value of R649 to obtain -6.5 V (+0.4, -0.15 V) at the sliding contact of VR604.

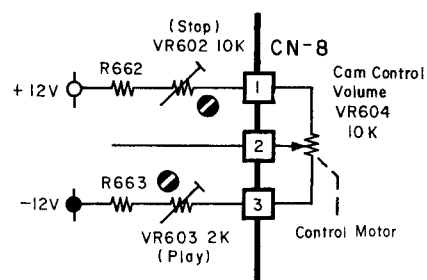


Fig. 4.2

- 4) Set the LX-3 in Playback mode, then adjust the value of R648 so that the voltage at the sliding contact of VR604 will become lower by 2.6 V (± 0.4 V) than in Pause mode.
- 5) Short both leads of capacitor C604 with a jumper wire.
Set the LX-3 in Record mode, then check to insure that the voltage at the sliding contact of VR604 is higher by 1.8 V (± 0.3 V) than in Stop mode.
Note: Remove the short of C604 after completion of adjustment.

4.2. Reel Motor Speed Adjustment in Play Mode

Refer to Fig. 4.3.

- (1) Connect a DC voltmeter to TP1 and GND on the Logic & Power P.C.B. Ass'y.
- (2) Without loading a cassette tape, set the LX-3 in Play mode.
- (3) Adjust VR601 on the Logic & Power P.C.B. Ass'y to obtain -4 V on the DC voltmeter.

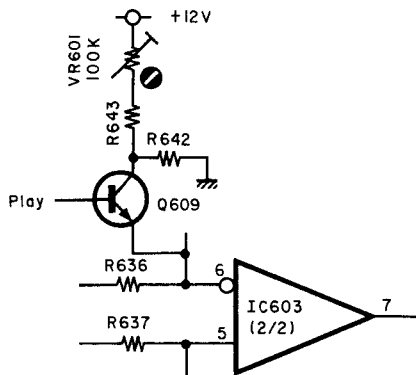


Fig. 4.3

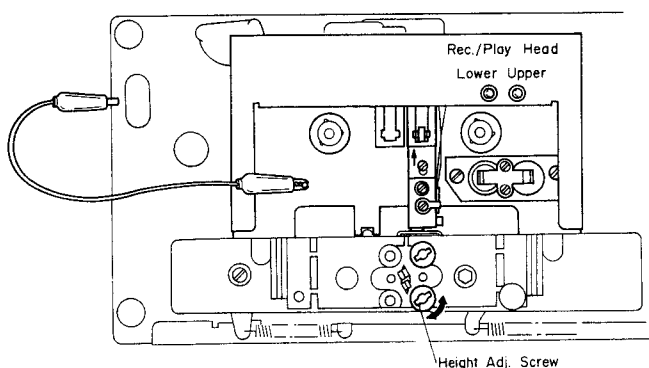


Fig. 4.4

4.3. Record/Playback Head Tilt Adjustment

Note: On items 4.3 – 4.8, refer to Fig. 4.4 flow chart.

Refer to Figs. 4.5 and 4.6.

- (1) Load a Tilt Check Gauge M-9036 (DA09036A) in the LX-3.
- (2) Clip the grounding terminal of the Tilt Check Gauge with one end of the cord with clip, and the chassis of the LX-3 with the other end.
- (3) Remove the Height Gear.
- (4) Set the LX-3 in Play mode. Check to insure whether the Beacon "Upper" or "Lower" is illuminating. In order not to give damages onto the record/playback head surface, push the slide knob of the Gauge to the direction of an arrow mark, then return it to the original place to be in contact with record/playback head surface after Play mode is securely locked.
- (5) Check to insure freedom from contact between the Gauge and pad lifter.
- (6) Beacon "Lower" will light on when height adjustment screw turned clockwise but "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) Set the LX-3 in Stop mode and fit the serrated Height Gear. Then set the LX-3 again in Play mode and insure 2 Beacons "Upper" and "Lower" are illuminating.
If not, (3) through (6) will have to be repeated till satisfactory results are obtained.

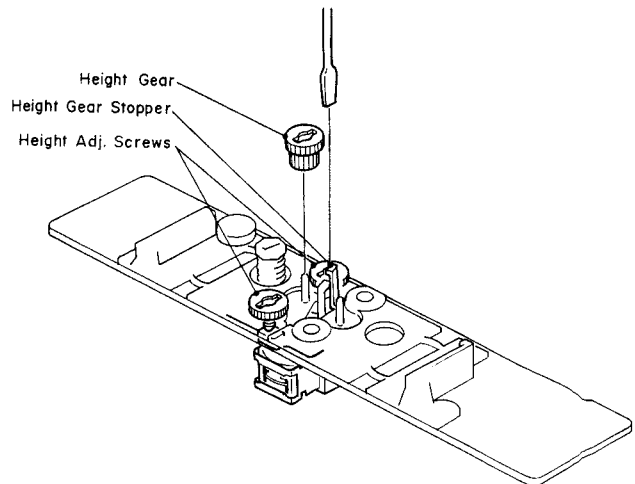


Fig. 4.5

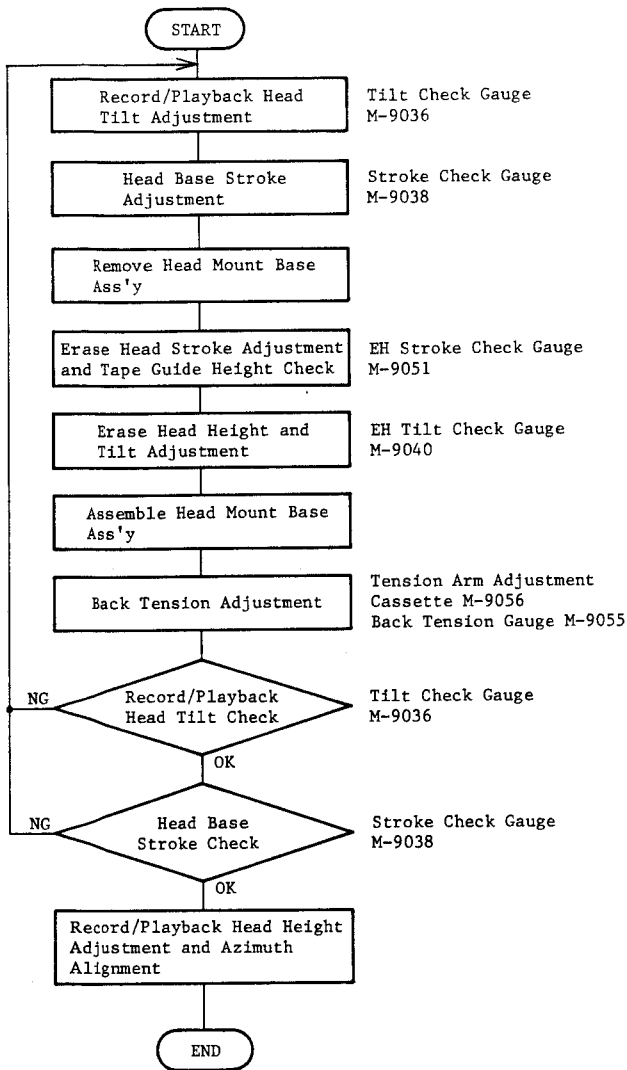


Fig. 4.6

4.4. Head Base Stroke Adjustment

Refer to Fig. 4.7.

Note: Before you conduct "Head Base Stroke Adjustment", adjust with a "Tilt Check Gauge" to insure freedom from tilt on the record/playback head.

- (1) Load a Stroke Check Gauge M-9038 (DA09038A) in the LX-3.
- (2) Set the LX-3 in Play mode.
- (3) Check to insure whether the "P" pointer on the Stroke Indicator locates between 2 lines as marked on the Stroke Check Plate.
- (4) If the record/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).

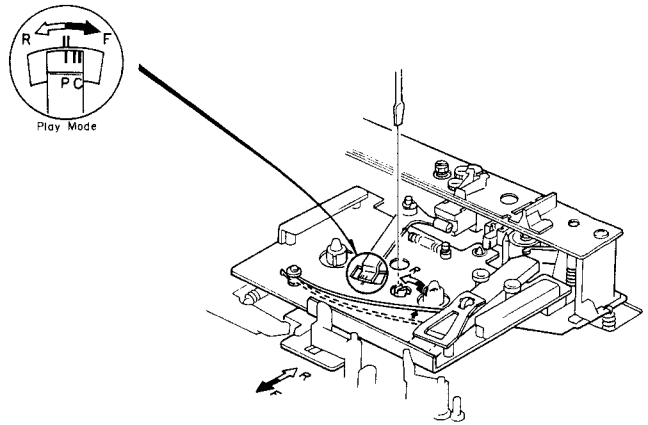


Fig. 4.7

4.5. Erase Head Stroke Adjustment and Tape Guide Height Check

Remove Head Mount Base Ass'y referring to item 2.20. Refer to Figs. 4.8 and 4.9.

(1) Erase Head Stroke Adjustment

- (a) Load an EH Stroke Check Gauge M-9051 (DA0-9051A) in the LX-3.
- (b) Set the LX-3 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 (DA0-9051A) in the LX-3.
- (b) Set the LX-3 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 (DA0-9051A) in the LX-3.
- (b) Set the LX-3 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.

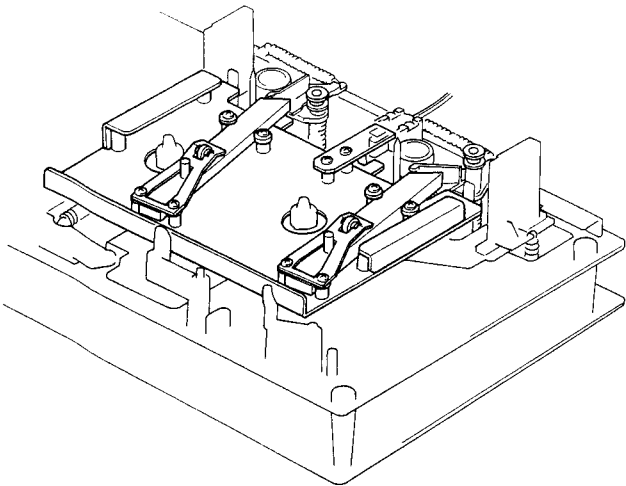


Fig. 4.8

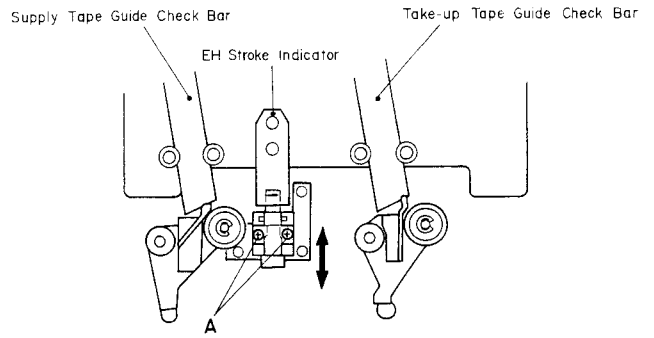


Fig. 4.9

4.6. Erase Head Height and Tilt Adjustment

Refer to Figs. 4.10 and 4.11.

- (1) Remove Head Mount Base Ass'y referring to item 2.20.
- (2) Load an EH Tilt Check Gauge M-9040 (DA09040A) in the LX-3.
- (3) Set the LX-3 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.

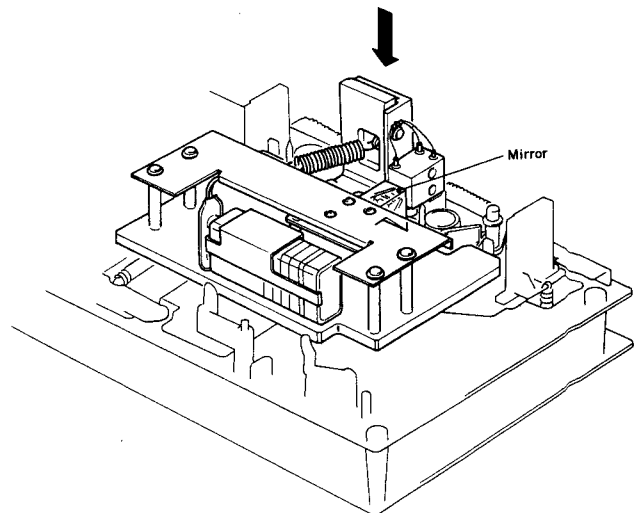


Fig. 4.10

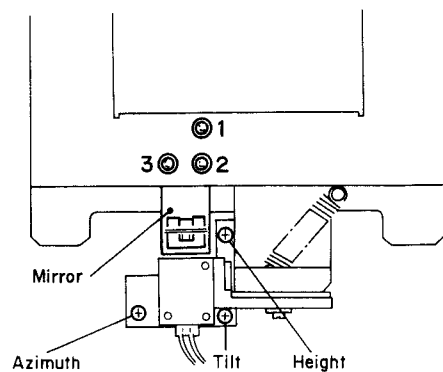


Fig. 4.11

4.7. Back Tension Adjustment

Refer to Figs. 4.12 – 4.14.

- (1) Load a Tension Arm Adjustment Cassette (DA09056A) in the LX-3 referring to Fig. 4.12.
- (2) Set the LX-3 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. 4.13. Do not bend the top of the Back Tension Arm.
- (4) Load the Back Tension Gauge (DA09055A) in the LX-3.
- (5) Set the LX-3 in Play mode and read the torque value of Back Tension Gauge.
If the value is in a range of 6 g-cm to 10 g-cm, adjustment is not necessary. If not, change the installation point of the Back Tension Spring as shown in Fig. 4.14, and obtain the torque of 7 g-cm to 9 g-cm range.

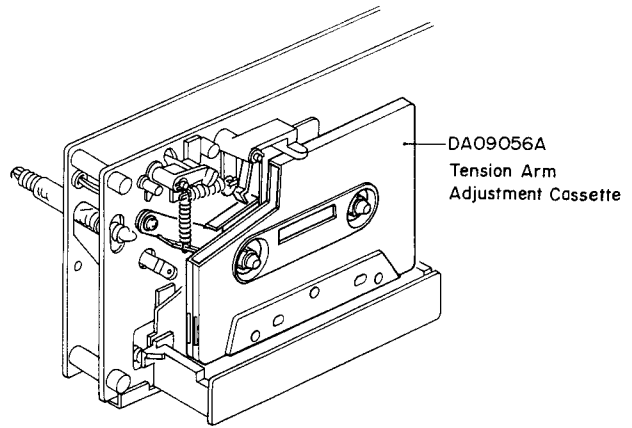


Fig. 4.12

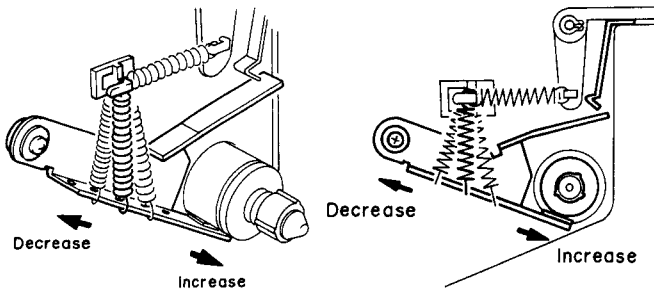


Fig. 4.14

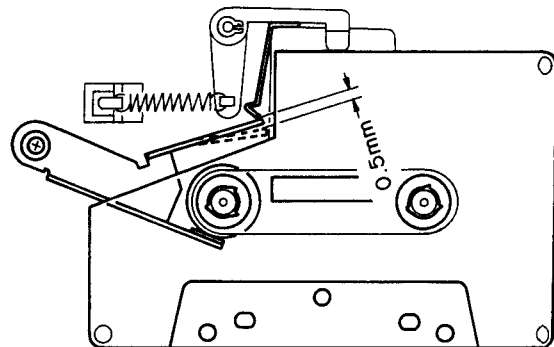


Fig. 4.13

4.8. Record/Playback Head Height Adjustment and Azimuth Alignment

Refer to Fig. 4.15.

- (1) Connect a VTVM to the Output Jacks.
- (2) Load a 1 kHz Track Alignment Tape (DA09007A) in the LX-3.
- (3) Set the LX-3 in Play mode.
- (4) Turn the Height Gear until the outputs of both

channels become minimum.

- (5) Load a 15 kHz Azimuth Tape (DA09004A) in the LX-3.
- (6) Set the LX-3 in Play mode.
- (7) Turn the Azimuth Alignment Screw until the outputs of both channels become maximum.
- (8) Repeat (2) through (7) one or two times to obtain optimum performance.

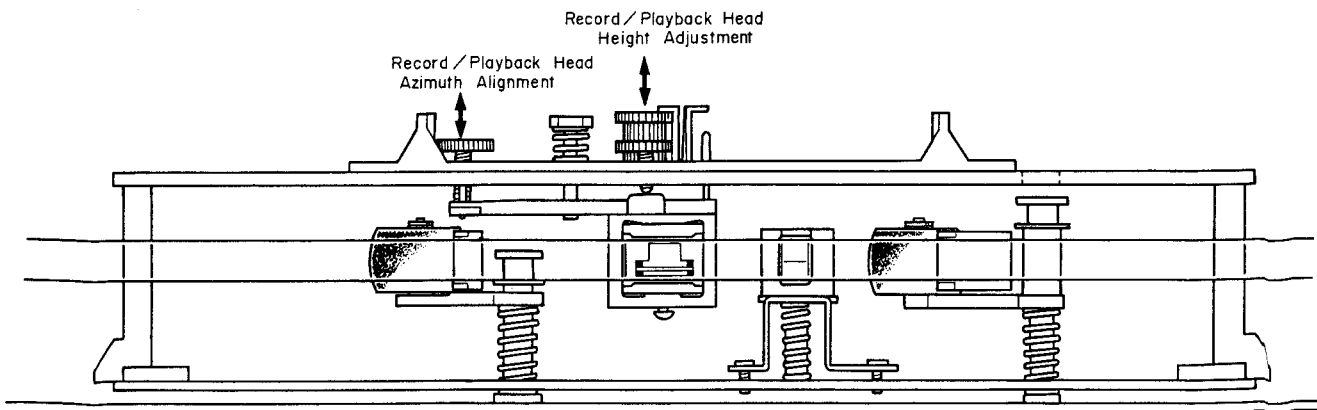


Fig. 4.15

4.9. Tape Travelling Adjustment

The adjustment shall be made with a modified version of the current type EXII C-90 as shown in Fig. 4.16 (error will be made if a current type Tape Travelling Cassette (DA09011A) should be used for this purpose).

While modifying an EXII C-90, the tape guides in the cassette housing shall be kept protected to avoid tilt. Check shall be made in the following procedures:

- (1) An EXII C-90 tape thus modified shall be loaded onto the LX-3.
- (2) Release the back-tension (rotate the Supply Reel and feed out some length of tape) and set the LX-3 in Play mode.
- (3) In this juncture, check to insure whether the tape is free from waving or slippage from the tape guide.
- (4) When the modified EXII C-90 is played back, check to insure whether the tape is freedom from waving from head surface or at pressure rollers.
- (5) If either of waving or slippage from the tape guide should be noted, adjustments of "4.3. Record/Playback Head Tilt Adjustment", "4.4. Head Base Stroke Adjustment", "4.5. Erase Head Stroke Adjustment and Tape Guide Height Check", "4.6. Erase Head Height and Tilt Adjustment", "4.7. Back Tension Adjustment", "4.8. Record/Playback Head Height Adjustment and Azimuth Alignment", 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 LX-3 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.

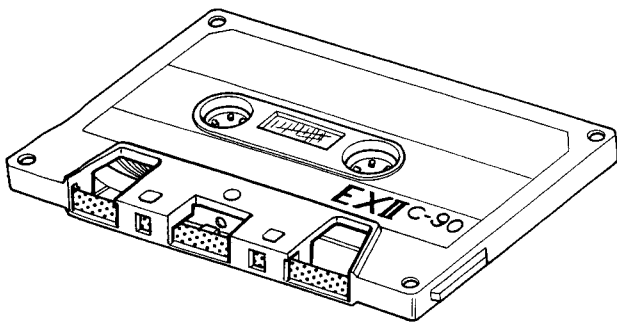


Fig. 4.16

4.10. Record Switch Linkage Adjustment

- (1) Set the LX-3 in Stop mode.
- (2) Loosen the screw of the Record Spring Holder, and shift the Record Spring Holder in order to remove the looseness of the Linkage Wire as shown in Fig. 4.17. Then tighten the screws for fixing the Record Spring Holder. (In this case, the Record Switch should be positioned at play side. If on the record position, it will be defective.)
- (3) Set the LX-3 in Record and Pause mode. Check to insure that the gap between the top of the wire and the Record Spring Holder is approx. 1 mm as shown in Fig. 4.18. (Check that the Record Switch is in record position.)
- (4) Upon completion of the above adjustments, apply a quantity of lock tight paint.

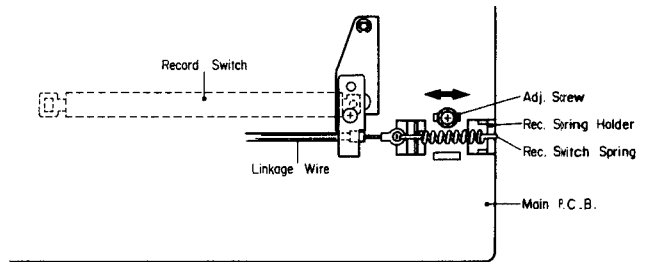


Fig. 4.17

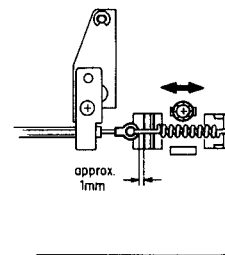


Fig. 4.18

4.11. Flywheel Holder Adjustment

(1) Refer to Fig. 4.19.

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 (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.

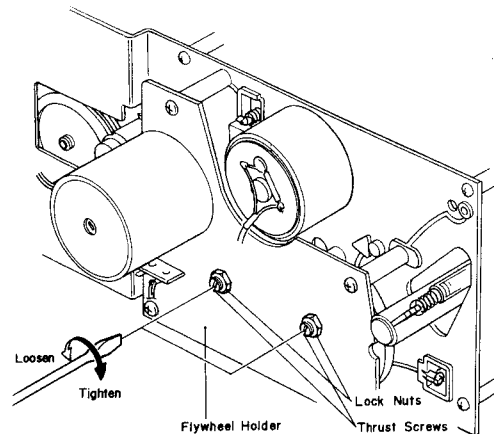


Fig. 4.19

4.12. Tape Speed Adjustment

Refer to Fig. 4.20.

- (1) Remove the Top Cover Ass'y referring to item 2.1.
- (2) Connect a Frequency Counter to the Output Jack.
- (3) Load a 3 kHz Speed Wow/Flutter Tape (DA09006A) 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.

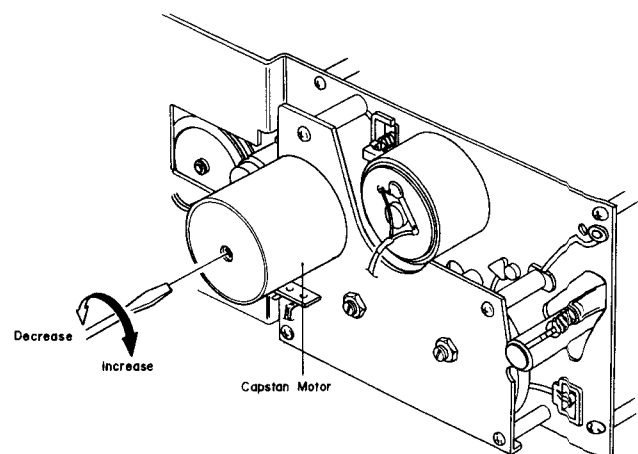


Fig. 4.20

4.13. Lubrication

LX-3 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 Suda-cho Chiyoda-ku, Tokyo 101 Japan.
- (3) Silicon Oil #3000 CST
 - Air Damper Piston

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

5. PARTS LOCATION FOR ELECTRICAL ADJUSTMENT

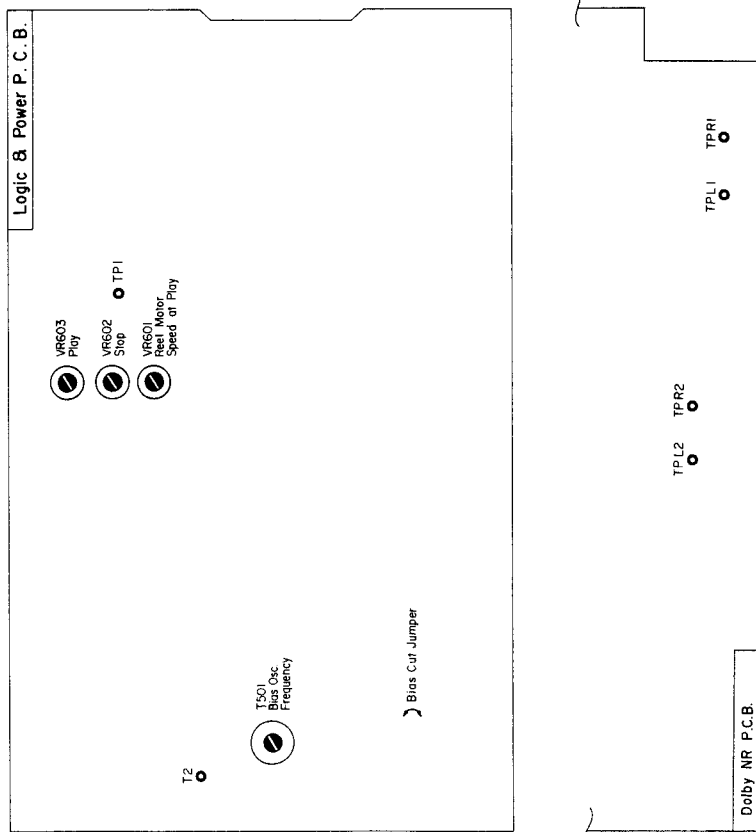
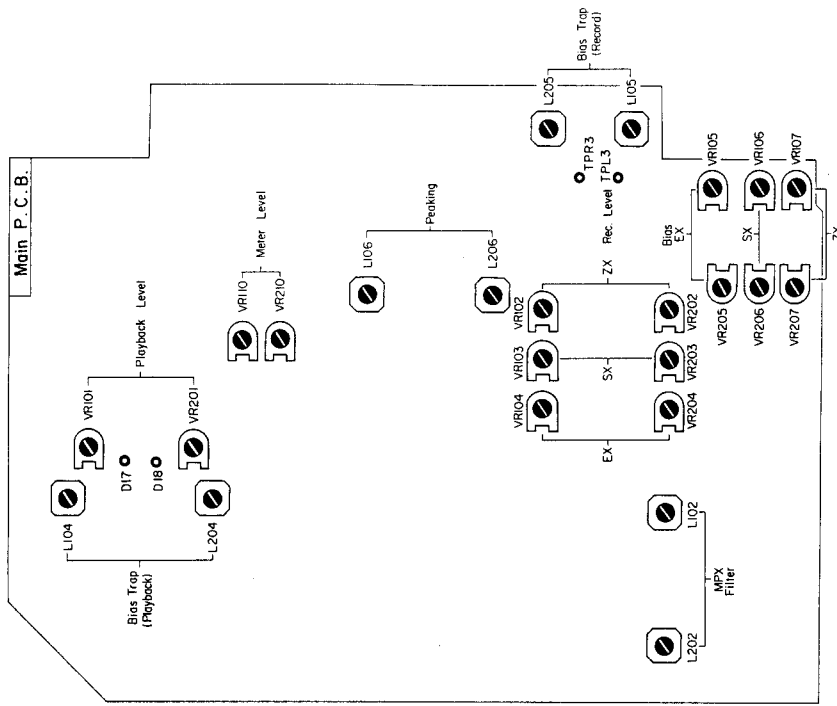


Fig. 5

6. ELECTRICAL ADJUSTMENT AND MEASUREMENTS

6.1. Adjustment and Measurement Instructions Note: Electrical adjustment should be performed after mechanical adjustment is completed.

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
1	Tape Speed Adjustment	3 kHz Speed and Wow/Flutter Tape (DA09006A)	Frequency Counter to Output Jacks	Playback Eq. SW — 70 μs	Capstan Motor Governor P.C.B. VR501	Adjust VR501 to obtain 3 kHz ±0.5%. (VR501 is incorporated in the capstan motor.)
2	Meter Level Calibration	400 Hz to Input Jacks	VTVM to TPL2, TPR2 on Dolby NR P.C.B.	Record, Pause	Main P.C.B. VR110, VR210	1. Feed in 400 Hz, then adjust the Input Level controls to obtain 90 mV —0.5 dB on the VTVM. 2. Adjust VR110 (VR210) so that the 0 dB segment of the level meter starts illuminating. 3. Adjust the Input Level controls to obtain 90 mV 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	Record, Pause MPX SW — OFF/ON	Main P.C.B. L102, L202	1. Adjust the Input Level controls to obtain 0 dB (1 V) on the VTVM. 2. Set the MPX Filter switch to IN, then adjust L102 (L202) to obtain the minimum reading on the VTVM (minimum reading will be less than —30 dB).
4	Record/Playback Head Track Alignment	1 kHz Track Alignment Tape (DA09007A)	VTVM to Output Jacks	Playback Eq. SW — 70 μs Dolby NR SW — OFF MPX SW — OFF	Height Gear	Adjust the Height Gear to obtain minimum readings of both channels on the VTVM. Refer to "Record/Playback Head Height Adjustment and Azimuth Alignment" in item 4.8.
5	Record/Playback Head Azimuth Alignment	15 kHz Azimuth Tape (DA09004A)	VTVM to Output Jacks	Same as above	Record/Playback Head Azimuth Alignment Screw	Adjust the Record/Playback Head Azimuth Alignment Screw to obtain maximum readings of both channels on the VTVM. Refer to "Record/Playback Head Height Adjustment and Azimuth Alignment" in item 4.8. Note: Repeat steps 4 and 5 one or two times to obtain optimum performance.
6	Playback Level Calibration	400 Hz Level Tape (DA09005A)	VTVM to TPL2, TPR2 on Dolby NR P.C.B.	Same as above	Main P.C.B. VR101, VR201	Adjust VR101 (VR201) to obtain 90 mV on the VTVM.
7	Bias Trap Adjustment (Playback Amp.)	Remove input signals	VTVM to D17, D18 on Main P.C.B.	Record/Play Tape SW — ZX Eq. SW — 70 μs Dolby NR SW — OFF	Main P.C.B. L104, L204	Adjust L104 (L204) to obtain the minimum reading on the VTVM.
8	Playback Frequency Response Adjustment	400 Hz Level Tape (DA09005A) 10 kHz PB Frequency Tape (DA09003A) 15 kHz PB Frequency Tape (DA09002A) 20 kHz PB Frequency Tape (DA09001A)	VTVM to Output Jacks	Playback Eq. SW — 70 μs Dolby NR SW — OFF MPX SW — OFF	Main P.C.B. R120, R220 R121, R221	1. Load a 400 Hz level tape and play it back. 2. Load 10 kHz, 15 kHz and 20 kHz PB frequency response tapes and adjust the record/playback head azimuth to obtain maximum levels on the VTVM with each tape. 3. Read the maximum levels with each tape and check to insure that the levels against the 400 Hz level tape are within the following ranges. If not, obtain satisfactory results by shorting R120 (R220) or R121 (R221). 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 Check to insure that the difference in level between 10 kHz (—20 dB) and 20 kHz (—20 dB) is less than 2 dB. 4. Conduct step 5 "Record/Playback Head Azimuth Alignment".

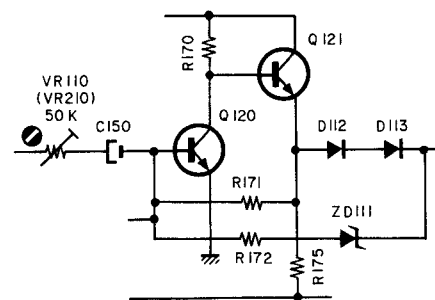


Fig. 6.1 2. Meter Level

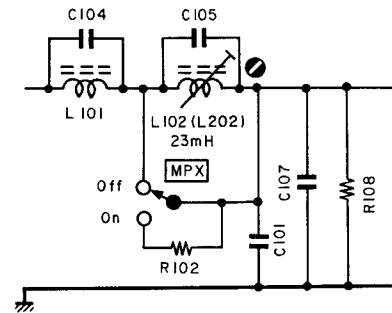


Fig. 6.2 3. MPX Filter

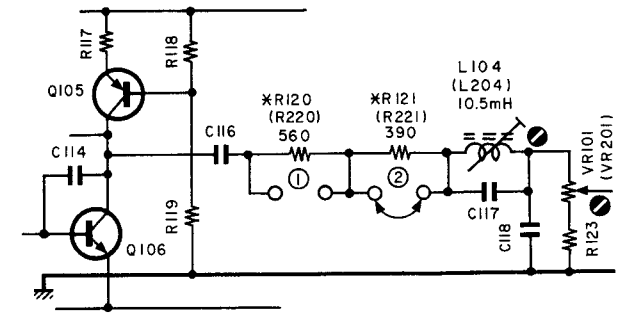


Fig. 6.3 6. Playback Level
7. Bias Trap (Playback Amp.)
8. Playback Frequency Response

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
9	Bias Oscillation Frequency and Erase Current Adjustment		Frequency Counter to T2 on Logic & Power P.C.B. and VTVM across the additional 0.1 Ω resistor	Record, Pause Tape SW – ZX Eq. SW – 70 μ s Dolby NR SW – OFF MPX SW – OFF	Logic & Power P.C.B. T501 R513, R514	<ol style="list-style-type: none"> 1. Connect an additional 0.1 Ω resistor in series to the Erase Head, then connect a VTVM across it. 2. Set the Bias Tune Volume to center position. 3. Adjust T501 to obtain 105 kHz on the frequency counter. 4. 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 R513 or R514. 5. After completion of the erase current adjustment, re-check the bias oscillation frequency.
10	Record Amplifier Equalizer Adjustment	21 kHz (–20 dB) to Input Jacks	VTVM to TPL1, TPR1 on Dolby NR P.C.B.	Same as above	Main P.C.B. L106, L206	<ol style="list-style-type: none"> 1. Remove the bias-cut-jumper from the dip side of the Logic & Power P.C.B. Ass'y. 2. Adjust L106 (L206) to obtain peak reading at 21 kHz on the VTVM. 3. Re-solder the bias-cut-jumper.
11	Bias Trap Adjustment (Record Amp.)	Remove input signals	VTVM to TPL3, TPR3 on Main P.C.B.	Same as above	Main P.C.B. L105, L205	<ol style="list-style-type: none"> 1. Set the Bias Tune Volume to center position. 2. Adjust L105 (L205) to obtain the maximum reading on the VTVM.
12	Record Level Calibration and Recording Bias Current Adjustment	400 Hz (0 dB), 400 Hz (–20 dB), 10 kHz (–20 dB) and 18 kHz (–20 dB) to Input Jacks	VTVM to TPL2, TPR2 on Dolby NR P.C.B. and VTVM to TPL1, TPR1 on Dolby NR P.C.B. and VTVM and Distortion Meter to Output Jacks	Record and Playback Tape SW – ZX/SX/EX Eq. SW – 70 μ s (ZX/SX) 120 μ s (EX) Dolby NR SW – ON (C-Type/ B-Type)/OFF MPX SW – OFF	Main P.C.B. (Record Level) ZX: VR102, VR202 SX: VR103, VR203 EX: VR104, VR204 (Bias Current) ZX: VR107, VR207 SX: VR106, VR206 EX: VR105, VR205	<p>Adjustment should be made in the order of ZX, SX and EX.</p> <ol style="list-style-type: none"> 1. Set the Bias Tune Volume to center position. 2. Set the Dolby NR switch to C-Type. 3. Connect the VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y. 4. Set the LX-3 in Record/Pause mode. 5. Feed in 400 Hz, then adjust the Input Level controls to obtain 90 mV (0 dB) on the VTVM. 6. Load a reference ZX tape (DA09037A), reference SX tape (DA09025A) and reference EXII tape (DA09066A). 7. Adjust Record Cal. VR102 (VR202) for ZX, VR103 (VR203) for SX and VR104 (VR204) for EXII to center position. 8. Connect the VTVM to TPL1 (TPR1) on the Dolby NR P.C.B. Ass'y. Adjust Bias VR107 (VR207) for ZX, VR106 (VR206) for SX and VR105 (VR205) for EXII to obtain the following bias current in Record/Pause mode (the VTVM is connected across a 10-ohm resistor). ZX: approx. 1 mA SX: approx. 0.5 mA EXII: approx. 0.3 mA 9. Connect the VTVM to the Output Jacks. 10. Feed in 400 Hz (–20 dB) and 18 kHz (–20 dB), then record, rewind and play them back. Adjust Bias VR107 (VR207) for ZX, VR106 (VR206) for SX and VR105 (VR205) for EXII to obtain the same playback levels at 400 Hz (–20 dB) and 18 kHz (–20 dB) on the VTVM. 11. Feed in 400 Hz (0 dB), then record, rewind and play it back. Adjust Record Cal. VR102 (VR202) for ZX, VR103 (VR203) for SX and VR104 (VR204) for EXII to obtain 0 dB on the VTVM. 12. Repeat above 10 and 11 two or three times to obtain optimum performance. 13. Set the Dolby NR switch to OFF. 14. Feed in 400 Hz (–20 dB), 10 kHz (–20 dB) and 18 kHz (–20 dB), then record, rewind and play them back. Check to insure that the playback levels are within –20 dB \pm3 dB against the levels in Dolby NR C-Type. 15. Set the Dolby NR switch to B-Type. 16. Feed in 10 kHz (–20 dB) and 18 kHz (–20 dB), then record, rewind and play them back. Check to insure that the levels are within –20 dB \pm2 dB against the levels in Dolby NR OFF. 17. Check to insure whether the total harmonic distortion is less than 1.2% for ZX, EXII and SX tapes. 18. If above is not sufficient, repeat 10 to 17 till satisfactory results are obtained.

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
13	Overall Frequency Response Adjustment	400 Hz (0 dB) and 20 Hz to 18 kHz (-20 dB) to Input Jacks	VTVM to Output Jacks	Record and Playback Tape SW - ZX/SX/EX Eq. SW - 70 μs (ZX/SX) 120 μs (EX) Dolby NR SW - OFF MPX SW - OFF	Main P.C.B. L106, L206	<ol style="list-style-type: none"> 1. Set the Bias Tune Volume to center position. 2. Set the LX-3 in Record/Pause mode. 3. Feed in 400 Hz, then set the Input Level controls to obtain 0 dB (1 V) on the VTVM. 4. Decrease the generator output control by 20 dB. 5. Feed in 20 Hz to 18 kHz (-20 dB) and record, rewind and play them back, then check to insure whether the output levels are within -20 dB ±4 dB. 6. If above is not sufficient, adjust L106 (L206) to obtain approx. -20 dB on the VTVM, then conduct step 12 "Record Level Calibration and Recording Bias Current Adjustment" 7. If above is not sufficient, precise re-adjustment of step 8 "Playback Frequency Response", replacement of Record/Playback Head or check on item 4.9 "Tape Travelling Adjustment" will be required.
14	Crosstalk Measurement	1 kHz to Input Jacks	1 kHz Band Pass Filter and VTVM to Output Jacks	Record and Playback Tape SW - ZX Eq. SW - 70 μs Dolby NR SW - OFF MPX SW - OFF		<ol style="list-style-type: none"> 1. Set the Bias Tune Volume to center position. 2. Erase the tape with bulk eraser. 3. Adjust the Input Level controls to obtain 0 dB on the VTVM, and record the signals on the reference ZX tape (DA09037A). 4. Turn the cassette tape the other way round and play it back. 5. Measure the difference between 3 and 4.
15	Channel Separation Measurement	1 kHz to Input Jacks	Same as above	Same as above		<ol style="list-style-type: none"> 1. Set the Bias Tune Volume to center position. 2. Erase the tape with bulk eraser. 3. Adjust L ch (R ch) Input Level control to obtain 0 dB on the VTVM, and close R ch (L ch) Input Level control. 4. Record, rewind and play it back, then measure the R ch (L ch) level.
16	Erasure Measurement	100 Hz to Input Jacks	100 Hz Band Pass Filter and VTVM to Output Jacks	Record and Playback Tape SW - ZX Eq. SW - 70 μs Dolby NR SW - OFF MPX SW - OFF		<ol style="list-style-type: none"> 1. Set the Bias Tune Volume to center position. 2. Erase the Tape with bulk eraser. 3. Adjust the Input Level controls to obtain 0 dB on the VTVM, and record the signals on the reference ZX tape (DA09037A). 4. Rewind the tape, close Input Level controls, and then record again. 5. Rewind the tape, play it back, and then measure the difference between 3 and 4.

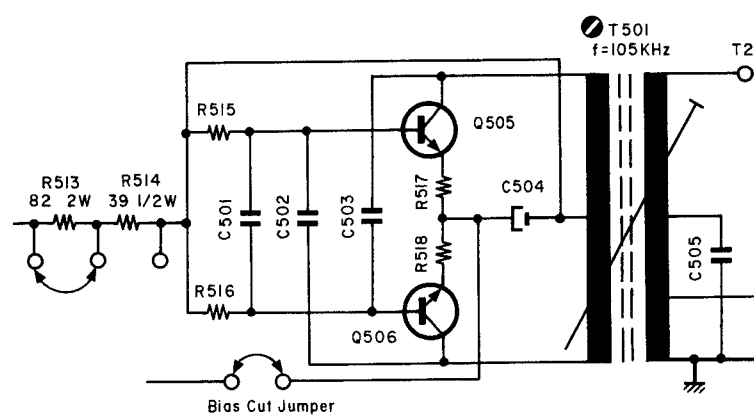


Fig. 6.4

9. Bias Oscillation Frequency and Erase Current

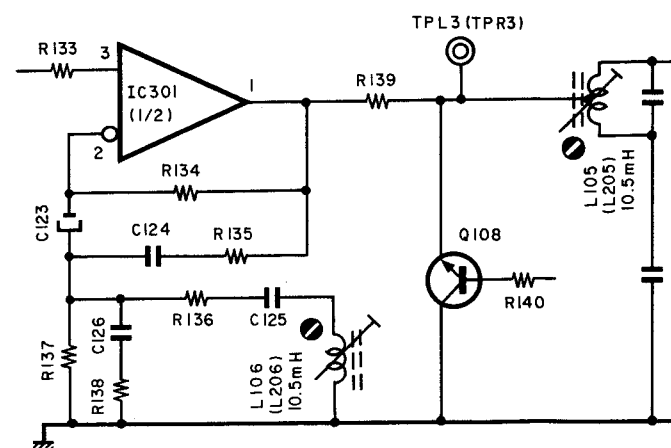


Fig. 6.5

10. Record Amp. Equalizer
11. Bias Trap (Record Amp.)
13. Overall Frequency Response

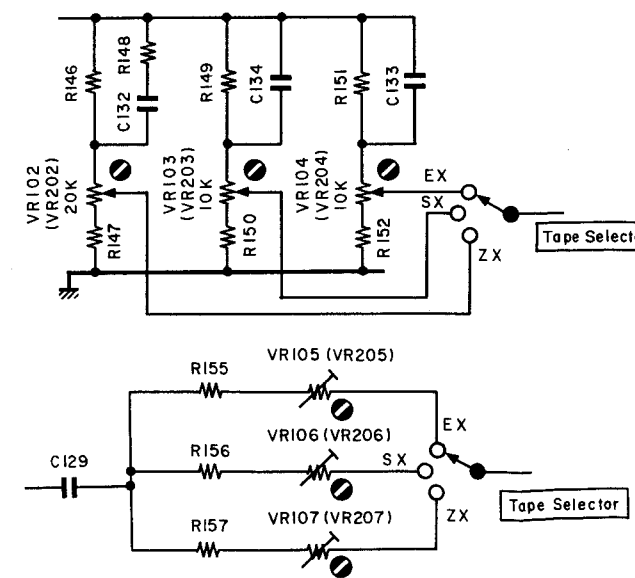


Fig. 6.6

12. Record Level and Recording Bias Current

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
17	Signal to Noise Ratio Measurement	400 Hz to Input Jacks	IHF-A Curve Filter, Distortion Meter and VTVM to Output Jacks	Record and Playback Tape SW – ZX Eq. SW – 70 μ s Dolby NR SW – ON (B-Type/C-Type) MPX SW – OFF		1. Set the Bias Tune Volume to center position. 2. Set the Dolby NR switch to B-Type/C-Type. 3. Feed in 400 Hz, then record, rewind and play it back. 4. Adjust the Input Level controls to obtain 3% total harmonic distortion in Playback mode. 5. Close the Input Level controls then record. 6. After rewind, play back and check the output level difference between 4 and 5. Note: The filter of IHF-A curve shall be used in the measurements.
18	Total Harmonic Distortion Measurement	400 Hz to Input Jacks	VTVM and Distortion Meter to Output Jacks	Record and Playback Tape SW – ZX/SX/EX Eq. SW – 70 μ s (ZX/SX) 120 μ s (EX) Dolby NR SW – OFF MPX SW – OFF		1. Set the Bias Tune Volume to center position. 2. Adjust the Input Level controls to obtain 0 dB on the VTVM. 3. Record and play it back. 4. Read the distortion meter and check to insure that the distortion is as follows: EXII 1.2% or less SX 1.2% or less ZX 1.2% or less
19	Wow/Flutter Measurement	3 kHz Speed and Wow/Flutter Tape (DA09006A)	Wow/Flutter Meter to Output Jacks	Playback Eq. SW – 70 μ s		Play back and read the wow/flutter meter.

6.2. Playback Frequency Response Adjustment

Fig. 6.7 shows a playback equalization curve and Fig. 6.8 is the playback amp. circuit for adjustment.

(1) Peaking Adjustment (for high frequency response)

This adjustment will be required if playback level is not sufficient when 20 kHz PB frequency response tape is played back as referred to step 8 in 6.1 "Adjustment and Measurement Instructions".

Peaking portion compensates the gap loss of the playback head. Peaking level is varied by the short circuit of R120 (R220) or R121 (R221) as illustrated in Fig. 6.7.

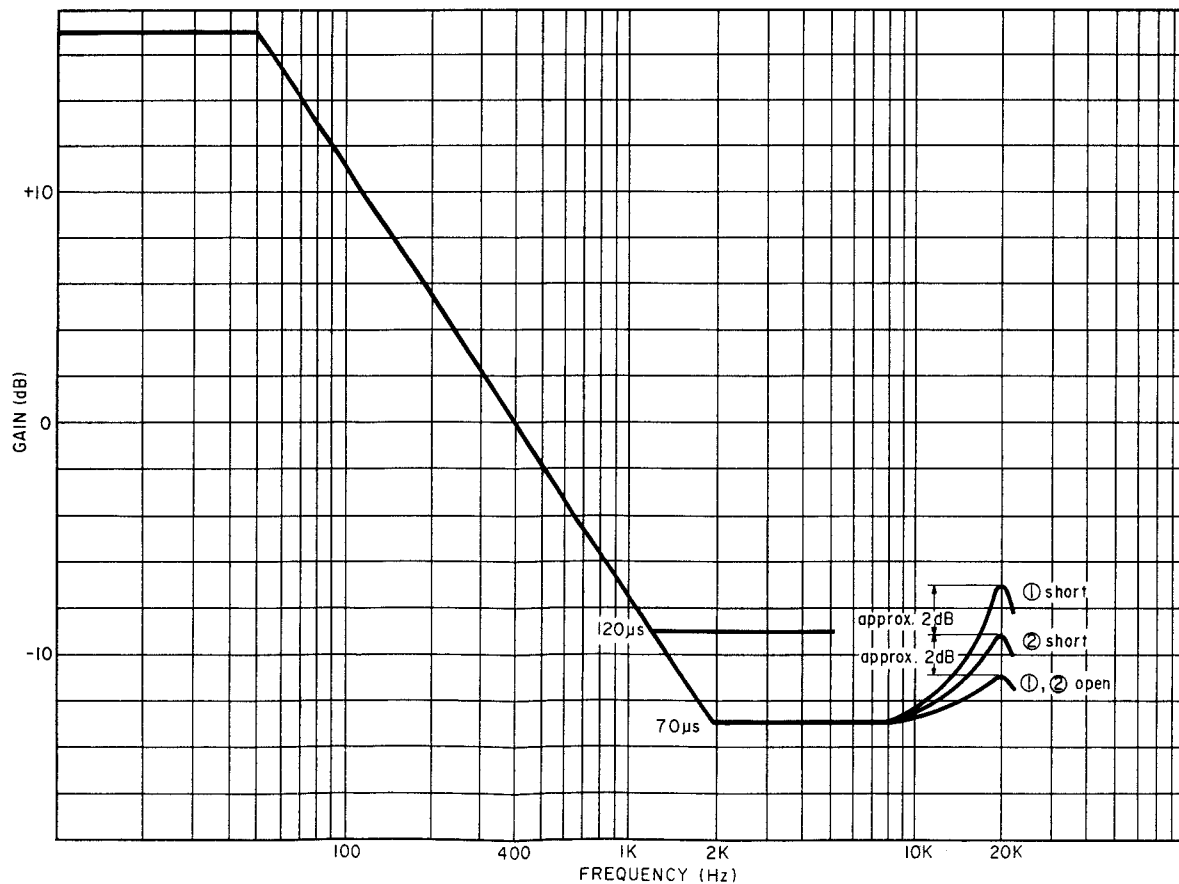


Fig. 6.7 Playback Equalization Curve

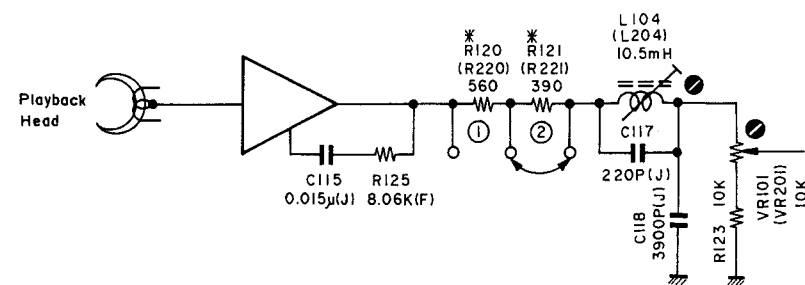


Fig. 6.8 Playback Eq. Amp.

6.3. 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.

6.3.1. Dolby NR B-Type Circuit Check

(1) Playback Dolby NR Circuit

Signal Source: 1.4 kHz to negative side of C101 (C201) on Dolby NR P.C.B. (Positive side is connected to IC101-9 (IC201-9)).

Output Connection: VTVM to test point TPL2 (TPR2) on Dolby NR P.C.B.

Mode: Stop
Dolby NR SW – ON (B-Type)/
OFF

- (a) Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- (b) Set the Dolby NR switch to B-Type. Feed in 1.4 kHz and adjust the generator output control to obtain 9 mV on the VTVM.
- (c) Set the Dolby NR switch to OFF. Check to insure that the reading is +3.2 dB ±1.5 dB on the VTVM.

(2) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to test point TPL2 (TPR2) and IC102-16 (IC202-16) on Dolby NR P.C.B.

Mode: Record/Pause
Dolby NR SW – ON (B-Type)/
OFF

- (a) Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- (b) Feed in 1.4 kHz and adjust the Input level controls to obtain 9 mV/2.85 mV on the VTVM.
- (c) Remove the VTVM from TPL2 (TPR2) and reconnect it to IC102-16 (IC202-16).
- (d) Check to insure that the reading at IC102-16 (IC202-16) corresponds to the following with Dolby NR switch OFF and B-Type.

Input Level at TPL2 (TPR2)	Level at IC102-16 (IC202-16)	
	Dolby NR OFF	Dolby NR B-Type
9 mV	0 dB	+3.2 dB ±1.5 dB
2.85 mV	0 dB	+8.2 dB ±1.5 dB

6.3.2. Dolby NR C-Type Circuit Check

(1) Playback Dolby NR Circuit

Signal Source: 1.4 kHz to negative side of C101 (C201) on Dolby NR P.C.B. (Positive side is connected to IC101-9 (IC201-9)).

Output Connection: VTVM to test point TPL2 (TPR2) on Dolby NR P.C.B.

Mode: Stop
Dolby NR SW – ON (C-Type)/
OFF

- (a) Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- (b) Set the Dolby NR switch to C-Type. Feed in 1.4 kHz and adjust the generator output control to obtain 9 mV on the VTVM.
- (c) Set the Dolby NR switch to OFF. Check to insure that the reading is +6.5 dB ±1.5 dB on the VTVM.

(2) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to test point TPL2 (TPR2) and IC102-16 (IC202-16) on Dolby NR P.C.B.

Mode: Record/Pause
Dolby NR SW – ON (C-Type)/
OFF

- (a) Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- (b) Feed in 1.4 kHz and adjust the Input level controls to obtain 9 mV/2.85 mV on the VTVM.
- (c) Remove the VTVM from TPL2 (TPR2) and reconnect it to IC102-16 (IC202-16).
- (d) Check to insure that the reading at IC102-16 (IC202-16) corresponds to the following with Dolby NR switch OFF and C-Type.

Input Level at TPL2 (TPR2)	Level at IC102-16 (IC202-16)	
	Dolby NR OFF	Dolby NR C-Type
9 mV	0 dB	+6.5 dB ±1.5 dB
2.85 mV	0 dB	+11.4 dB ±1.5 dB

7. MOUNTING DIAGRAMS AND PARTS LIST

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
SW1 SW1 SW1 M2 M2 M2	BA04626A	Power Switch P.C.B. Ass'y (Japan)	LED301 LED302-306 R301,302 303,305 306 R304 R307 SW301-308 SW309,310 CN15 CN17 CN23	BA04592A	Control Switch P.C.B. Ass'y Serial No.: A31304446 -
	BA04627A	Power Switch P.C.B. Ass'y (U.S.A. & Canada)		OB07993C	Control Switch P.C.B.
	BA04628A	Power Switch P.C.B. Ass'y (UK, Australia, 220V Class 2 & Others)		OB06340A	LED Red TLR208
	OB02519B	Power Switch P.C.B.		OB06341A	LED Green TLG208 (5 pcs.)
	OB07406A	Power Switch (Japan)		OB05575A	Carbon Resistor 560 ERD-25T J
	OB07407A	Power Switch (U.S.A. & Canada)		OB01857A	Carbon Resistor 1K ERD-25T J
	OB07408A	Power Switch S.V.B. (UK, Australia, 220V Class 2 & Others)		OB05676A	Carbon Resistor 390K ERD-25T J
	OB08363A	Spark Killer (Japan)		OB07219A	Switch AKC8S
	OB08342A	Spark Killer (U.S.A. & Canada)		OB07396A	Double Action Switch KHF10901
	OB08955A	Spark Killer (UK, Australia, 220V Class 2 & Others)		OB08928A	6P-H Connector 450mm
	OE00622A	Screw M3x5 Philips Pan Head (2A) (2 pcs.)		OB08929A	9P-H Connector 450mm
	OE00752A	Eyelet 2x3 (2 pcs.)		OB08931A	10P-H Connector 400mm
	OJ04536A	Power Switch Holder (1 pce.)		OM04222A	Label CN-15 (1 pce.)
			OM04224A	Label CN-17 (1 pce.)	
			OM04332A	Label CN-23 (1 pce.)	
Q405 R604 R605 PL407 CN13	BA04637A	Shut-off P.C.B. Ass'y	LED301 LED302-306 R301,302 303,305 306 R304 R307 SW301-308 SW309,310 CN15 CN17 CN23	BA04592A	Control Switch P.C.B. Ass'y Serial Nos.: A31301001 - A31304445
	OB07839B	Shut-off P.C.B.		OB07993A	Control Switch P.C.B.
	OB06228A	Photo Transistor PH104		OB06340A	LED Red TLR208
	OB05615A	Carbon Resistor 22K ERD-25T J		OB06341A	LED Green TLG208 (5 pcs.)
	OB09215A	Fail Safe Type Resistor 100 RDF-25S J		OB05575A	Carbon Resistor 560 ERD-25T J
	OB08552A	Lamp 12V 25mA		OB01857A	Carbon Resistor 1K ERD-25T J
	OB08947A	9P Connector		OB05676A	Carbon Resistor 390K ERD-25T J
OM04230A	Label CN-13 (1 pce.)	OB07219A	Switch AKC8S		
LED301 302,303 LED304 305 R301,302 CN24	BA04593A	LED P.C.B. Ass'y Serial No.: A31304446 -	SW301-308 SW309,310 CN15 CN17 CN23	OB07396A	Double Action Switch KHF10901
	OB07994C	LED P.C.B.		OB08928A	6P-H Connector 450mm
	OB06340A	LED Red TLR208		OB08929A	9P-H Connector 450mm
	OB06327A	LED		OB08931A	10P-H Connector 400mm
	OB01857A	Carbon Resistor 1K ERD-25T J		OM04222A	Label CN-15 (1 pce.)
	OB08967A	9P-H Connector 450mm		OM04224A	Label CN-17 (1 pce.)
	OE00857A	BT Screw M3x6 Philips Binding Head (1 pce.)		OM04332A	Label CN-23 (1 pce.)
OJ04534A	Fader House (1 pce.)				
OM04236A	Label CN-24 (1 pce.)				
LED301 302,303 LED304 305 R301,302 CN24	BA04593A	LED P.C.B. Ass'y Serial Nos.: A31301001 - A31304445			
	OB07994A	LED P.C.B.			
	OB06340A	LED Red TLR208			
	OB06327A	LED			
	OB01857A	Carbon Resistor 1K ERD-25T J			
	OB08967A	9P-H Connector 450mm			
	OE00857A	BT Screw M3x6 Philips Binding Head (1 pce.)			
OJ04534A	Fader House (1 pce.)				
OM04236A	Label CN-24 (1 pce.)				

Note: Mounting diagram shows a dip side view of the printed circuit board.

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

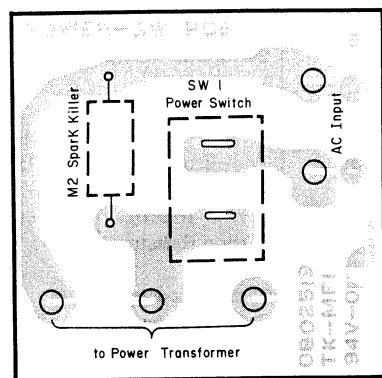


Fig. 7.1

7.4. Control Switch P.C.B. Ass'y

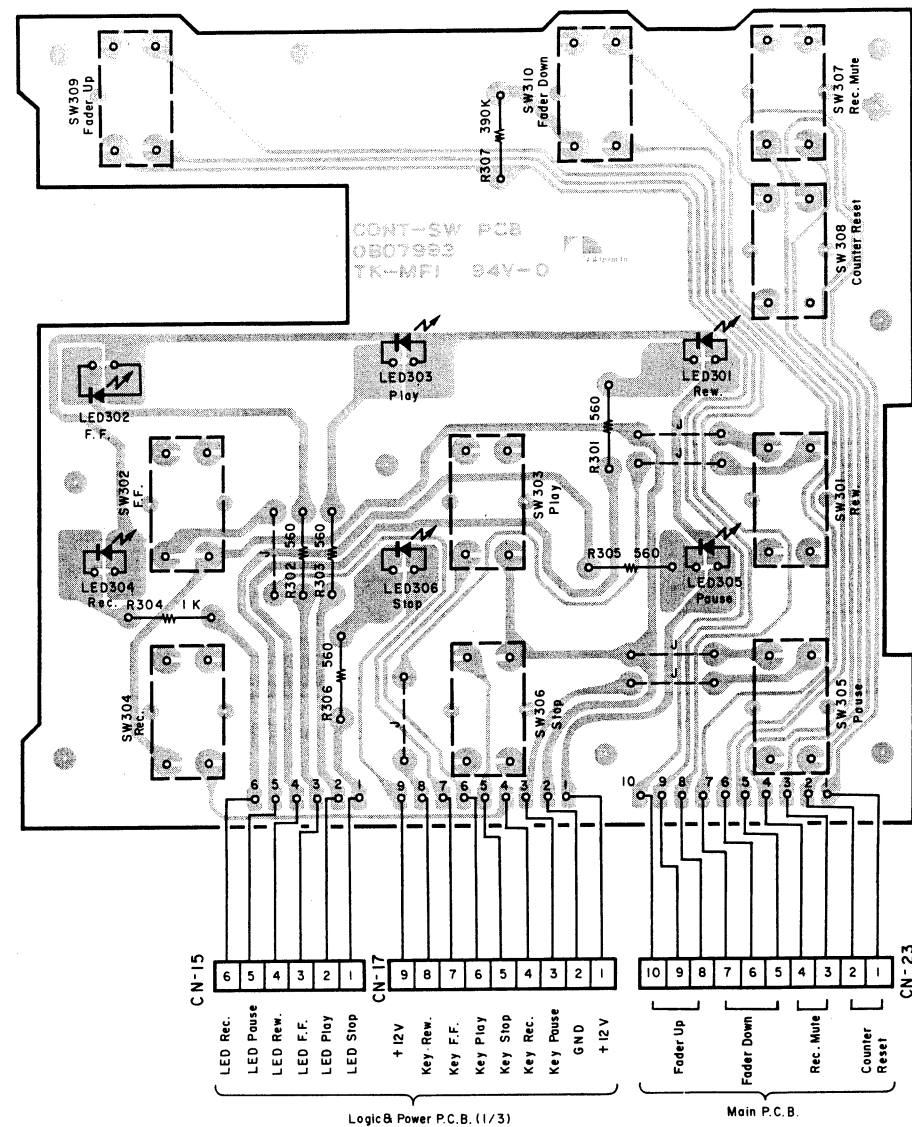


Fig. 7.4.1 Serial No.: A31304446 -

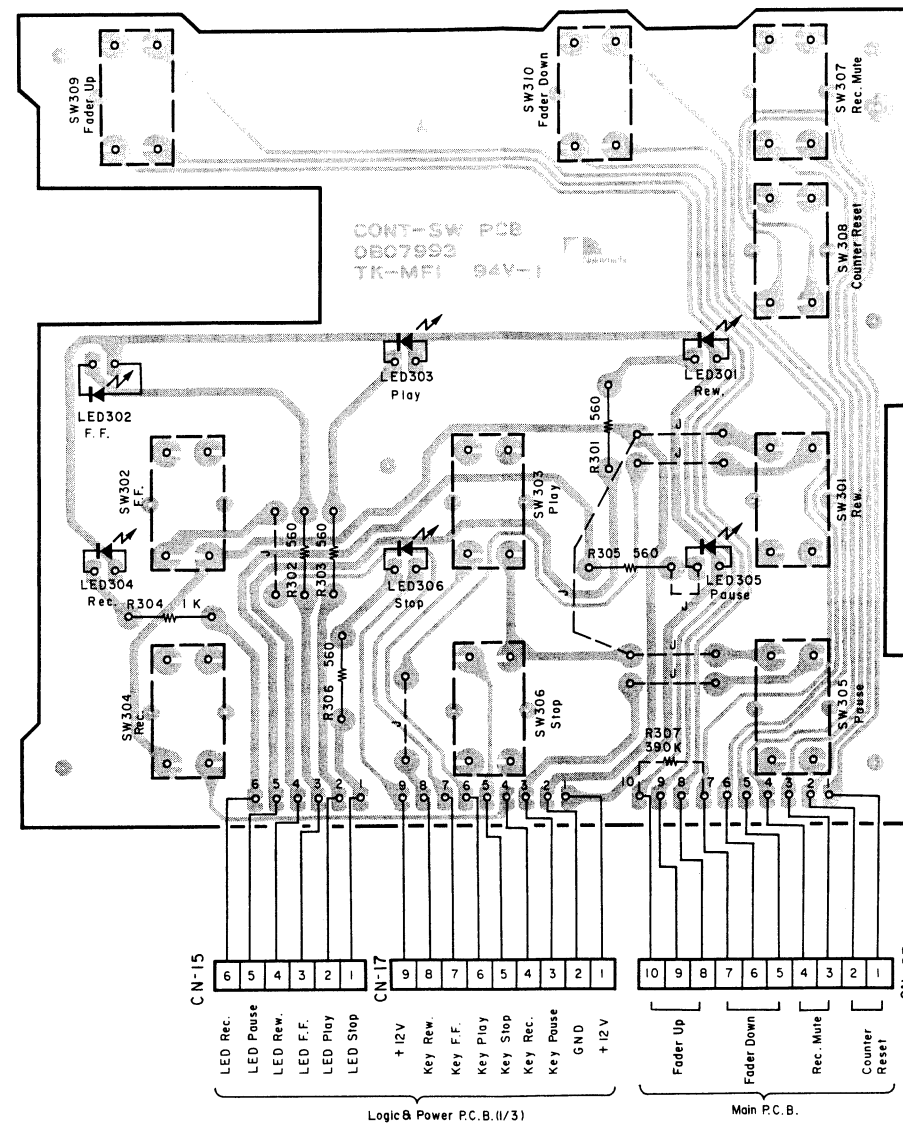


Fig. 7.4.2 Serial Nos.: A31301001 - A31304445

7.2. Shut-off P.C.B. Ass'y

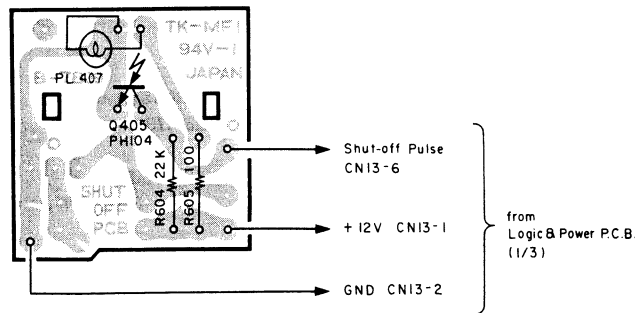


Fig. 7.2

7.3. LED P.C.B. Ass'y

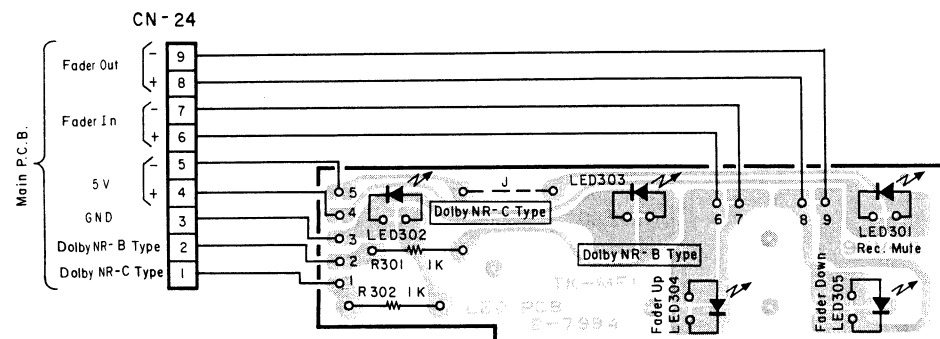


Fig. 7.3.1 Serial No.: A31304446 -

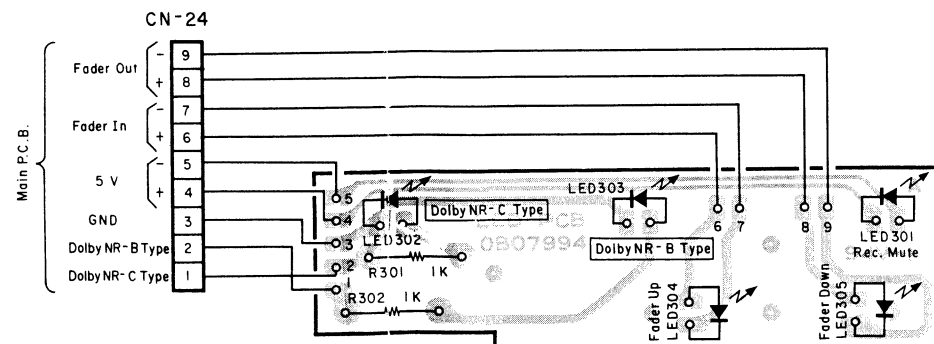


Fig. 7.3.2 Serial Nos.: A31301001 - A31304445

7.5. Counter-1 P.C.B. Ass'y

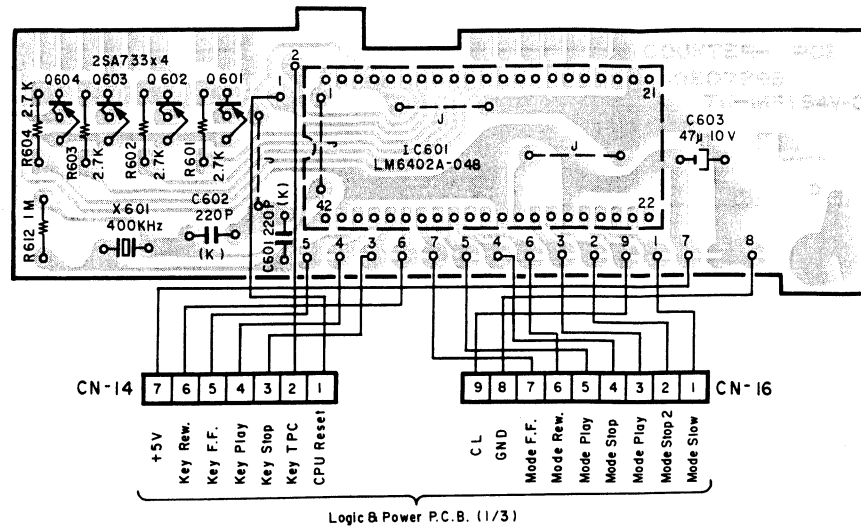


Fig. 7.5.1 Serial No.: A31304446 -

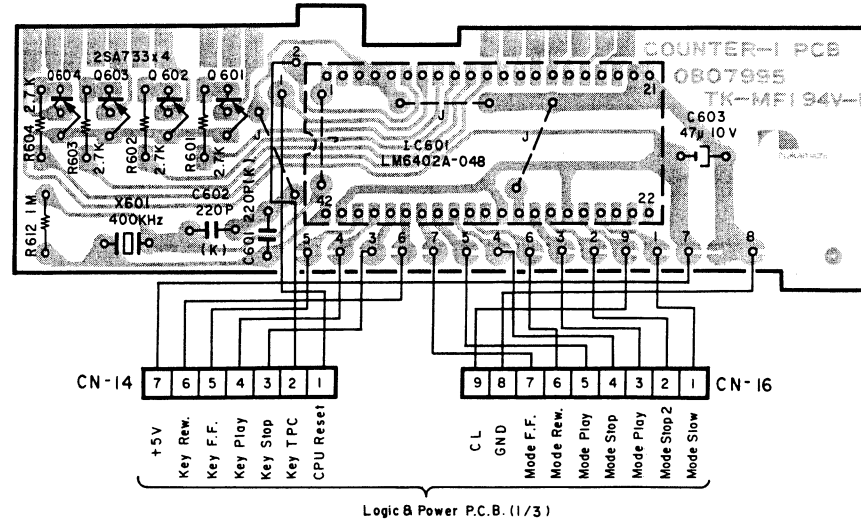


Fig. 7.5.2 Serial Nos.: A31301001 - A31304445

7.6. Counter-2 P.C.B. Ass'y

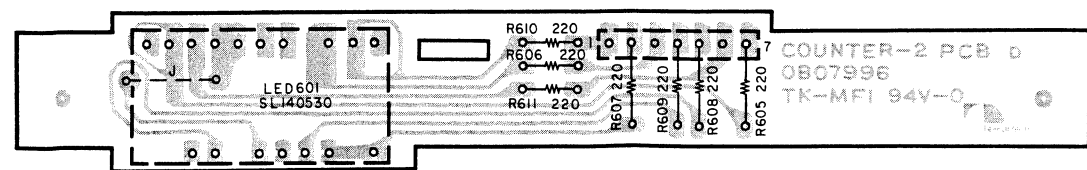


Fig. 7.6

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

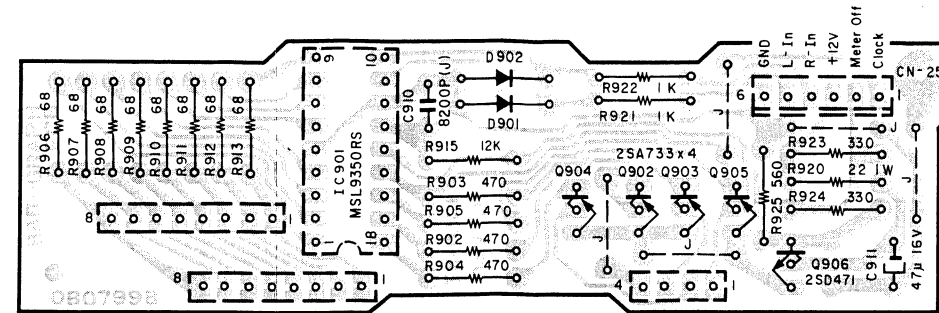


Fig. 7.7.1 Serial No.: A31310053 -

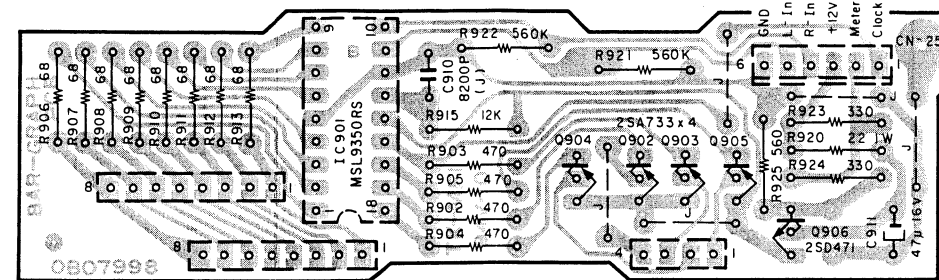


Fig. 7.7.2 Serial Nos.: A31304446 - A31310052

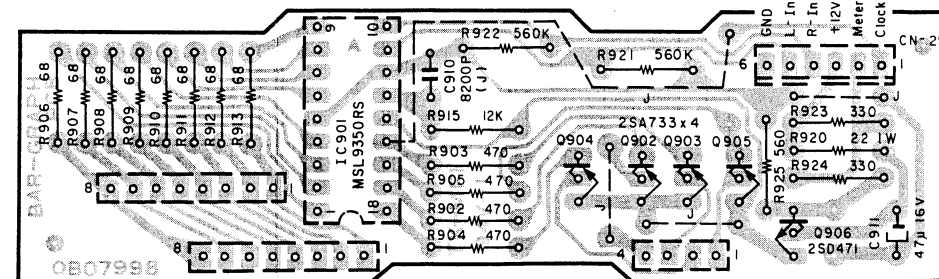


Fig. 7.7.3 Serial Nos.: A31301001 - A31304445

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04589A	Counter-1 P.C.B. Ass'y Serial No.: A31304446 -
IC601	OB07995D	Counter-1 P.C.B.
Q601,602	OB06320A	IC LM6402A-048
603,604	OB06013A	Transistor 2SA733
X601	OB08908A	Crystal 400kHz 4BR400BT
R601,602	OB09687A	Carbon Resistor 2.7K ERD-16T J
603,604		
R612	OB09749A	Carbon Resistor 1M ERD-16T J
C601,602	OB09283A	Ceramic Capacitor 220P 50V K
C603	OB01836A	Electrolytic Capacitor 47μ 10V
CN14	OB08930B	7P-H Connector
CN16	OB08929A	9P-H Connector 450mm
	OM04223A	Label CN-16 (1 pce.)
	OM04231A	Label CN-14 (1 pce.)
	OE00037A	Earth Lug B-5 (1 pce.)
	BA04589A	Counter-1 P.C.B. Ass'y Serial Nos.: A31301001 - A31304445
IC601	OB07995A	Counter-1 P.C.B.
Q601,602	OB06320A	IC LM6402A-048
603,604	OB06013A	Transistor 2SA733
X601	OB08908A	Crystal 400kHz 4BR400BT
R601,602	OB09687A	Carbon Resistor 2.7K ERD-16T J
603,604		
R612	OB09749A	Carbon Resistor 1M ERD-16T J
C601,602	OB09283A	Ceramic Capacitor 220P 50V K
C603	OB01836A	Electrolytic Capacitor 47μ 10V
CN14	OB08930B	7P-H Connector
CN16	OB08929A	9P-H Connector 450mm
	OM04223A	Label CN-16 (1 pce.)
	OM04231A	Label CN-14 (1 pce.)
	OE00037A	Earth Lug B-5 (1 pce.)
	BA04590A	Counter-2 P.C.B. Ass'y
LED601	OB07996D	Counter-2 P.C.B.
R605-611	OB06342A	Counter LED SL-1405-20
	OB09661A	Carbon Resistor 220 ERD-16T J
		(7 pcs.)
	OJ04582A	Counter Spacer (1 pce.)
	BA04591A	Indicator P.C.B. Ass'y Serial No.: A31310053 -
IC901	OB07998C	Indicator P.C.B.
Q902,903	OB06284A	IC MSL9350RS
904,905	OB06013A	Transistor 2SA733
Q906	OB06066A	Transistor 2SD471
D901,902	OB06181A	Silicon Diode 1SS53
R902,903	OB05576A	Carbon Resistor 470 ERD-25T J
904,905		
R906-913	OB01704A	Carbon Resistor 68 ERD-25T J
		(8 pcs.)
R915	OB09263A	Carbon Resistor 12K ERD-25T J
R920	OB09378A	Fail Safe Type Resistor 22 RSF-1B J
R921,922	OB01857A	Carbon Resistor 1K ERD-25T J
R923,924	OB05577A	Carbon Resistor 330 ERD-25T J

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
R925 C910 C911 CN24	OB05575A OB05814A OB01403A OB08933A OB05266A OB05267A OM04237A OE00037A OB08957A	Carbon Resistor 560 ERD-25T J Mylar Capacitor 8200P 50V J Electrolytic Capacitor 47μ 16V 6P-S Post 8P Flat Cable 50mm (2 pcs.) 4P Flat Cable 50mm (1 pce.) Label CN-25 (1 pce.) Earth Lug B-5 (1 pce.) Meter Display SB103 (1 pce.)		BA04742A OB07997C OB07347A OB07416A OB05622A OB05776A OB01682A OB01889A	Amp. Switch P.C.B. Ass'y Serial No.: A31310053 – Amp. Switch P.C.B. Volume 10K (A) x 2 Volume 100K (A) x 2 Carbon Resistor 2.2K ERD-25T J Carbon Resistor 1M ERD-25T J Carbon Resistor 6.8K ERD-25T J Carbon Resistor 100K ERD-25T J
	BA04591A	Indicator P.C.B. Ass'y Serial Nos.: A31304446 – A31310052		OB01804A OB07401A	Mylar Capacitor 3900P 50V J Push Switch
IC901 Q902,903 904,905 Q906 R902,903 904,905 R906-913	OB07998B OB06284A OB06013A OB06066A OB05576A OB01704A	Indicator P.C.B. IC MSL9350RS Transistor 2SA733 Transistor 2SD471 Carbon Resistor 470 ERD-25T J Carbon Resistor 68 ERD-25T J (8 pcs.)		BA04625A OB07997B OB07347A OB07355A OB05622A OB05776A OB01889A	Amp. Switch P.C.B. Ass'y Serial Nos.: A31301001 – A31310052 Amp. Switch P.C.B. Volume 10K (A) x 2 Volume 5K (B) x 2 Carbon Resistor 2.2K ERD-25T J Carbon Resistor 1M ERD-25T J Carbon Resistor 100K ERD-25T J
R915 R920 R921,922 R923,924 R925 C910 C911 CN24	OB09263A OB09378A OB05784A OB05577A OB05575A OB05814A OB01403A OB08933A OB05266A OB05267A OM04237A OE00037A OB08957A	Carbon Resistor 12K ERD-25T J Fail Safe Type Resistor 22 RSF-1B J Carbon Resistor 560K ERD-25T J Carbon Resistor 330 ERD-25T J Carbon Resistor 560 ERD-25T J Mylar Capacitor 8200P 50V J Electrolytic Capacitor 47μ 16V 6P-S Post 8P Flat Cable 50mm (2 pcs.) 4P Flat Cable 50mm (1 pce.) Label CN-25 (1 pce.) Earth Lug B-5 (1 pce.) Meter Display SB103 (1 pce.)	VR301 VR302 R101,201 R102,202 R304,305 306 C101,201 SW301,302 303,304	BA04591A OB07998A OB06284A OB06013A OB06066A OB05576A OB01704A	Indicator P.C.B. Ass'y Serial Nos.: A31301001 – A31304445 Indicator P.C.B. IC MSL9350RS Transistor 2SA733 Transistor 2SD471 Carbon Resistor 470 ERD-25T J Carbon Resistor 68 ERD-25T J (8 pcs.) Carbon Resistor 12K ERD-25T J Fail Safe Type Resistor 22 RSF-1B J Carbon Resistor 560K ERD-25T J Carbon Resistor 330 ERD-25T J Carbon Resistor 560 ERD-25T J Mylar Capacitor 8200P 50V J Electrolytic Capacitor 47μ 16V 6P-S Post 8P Flat Cable 50mm (2 pcs.) 4P Flat Cable 50mm (1 pce.) Label CN-25 (1 pce.) Earth Lug B-5 (1 pce.) Meter Display SB103 (1 pce.)
IC901 Q902,903 904,905 Q906 R902,903 904,905 R906-913	OB07998A OB06284A OB06013A OB06066A OB05576A OB01704A	Indicator P.C.B. IC MSL9350RS Transistor 2SA733 Transistor 2SD471 Carbon Resistor 470 ERD-25T J Carbon Resistor 68 ERD-25T J (8 pcs.)		BA04591A OB07998A OB06284A OB06013A OB06066A OB05576A OB01704A	Indicator P.C.B. Ass'y Serial Nos.: A31301001 – A31304445 Indicator P.C.B. IC MSL9350RS Transistor 2SA733 Transistor 2SD471 Carbon Resistor 470 ERD-25T J Carbon Resistor 68 ERD-25T J (8 pcs.) Carbon Resistor 12K ERD-25T J Fail Safe Type Resistor 22 RSF-1B J Carbon Resistor 560K ERD-25T J Carbon Resistor 330 ERD-25T J Carbon Resistor 560 ERD-25T J Mylar Capacitor 8200P 50V J Electrolytic Capacitor 47μ 16V 6P-S Post 8P Flat Cable 50mm (2 pcs.) 4P Flat Cable 50mm (1 pce.) Label CN-25 (1 pce.) Earth Lug B-5 (1 pce.) Meter Display SB103 (1 pce.)
R915 R920 R921,922 R923,924 R925 C910 C911 CN24	OB09263A OB09378A OB05784A OB05577A OB05575A OB05814A OB01403A OB08933A OB05266A OB05267A OM04237A OE00037A OB08957A	Carbon Resistor 12K ERD-25T J Fail Safe Type Resistor 22 RSF-1B J Carbon Resistor 560K ERD-25T J Carbon Resistor 330 ERD-25T J Carbon Resistor 560 ERD-25T J Mylar Capacitor 8200P 50V J Electrolytic Capacitor 47μ 16V 6P-S Post 8P Flat Cable 50mm (2 pcs.) 4P Flat Cable 50mm (1 pce.) Label CN-25 (1 pce.) Earth Lug B-5 (1 pce.) Meter Display SB103 (1 pce.)	VR301 VR302 R101,201 R102,202 R304,305 306 C101,201 SW301,302 303,304	BA04591A OB07998A OB06284A OB06013A OB06066A OB05576A OB01704A	Indicator P.C.B. Ass'y Serial Nos.: A31301001 – A31304445 Indicator P.C.B. IC MSL9350RS Transistor 2SA733 Transistor 2SD471 Carbon Resistor 470 ERD-25T J Carbon Resistor 68 ERD-25T J (8 pcs.) Carbon Resistor 12K ERD-25T J Fail Safe Type Resistor 22 RSF-1B J Carbon Resistor 560K ERD-25T J Carbon Resistor 330 ERD-25T J Carbon Resistor 560 ERD-25T J Mylar Capacitor 8200P 50V J Electrolytic Capacitor 47μ 16V 6P-S Post 8P Flat Cable 50mm (2 pcs.) 4P Flat Cable 50mm (1 pce.) Label CN-25 (1 pce.) Earth Lug B-5 (1 pce.) Meter Display SB103 (1 pce.)

7.8. Amp. Switch P.C.B. Ass'y

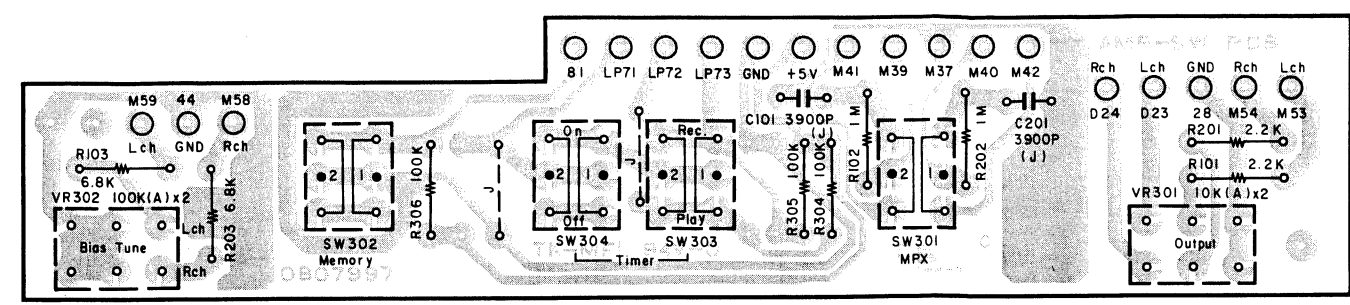


Fig. 7.8.1 Serial No.: A31310053 –

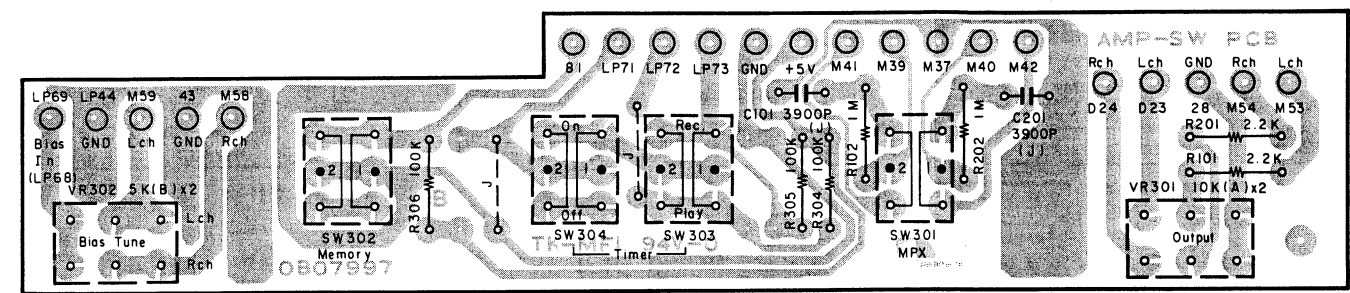


Fig. 7.8.2 Serial Nos.: A31301001 – A31310052

7.9. Dolby NR P.C.B. Ass'y

7.9.1. Dolby NR P.C.B. Ass'y (U.S.A. & Canada)

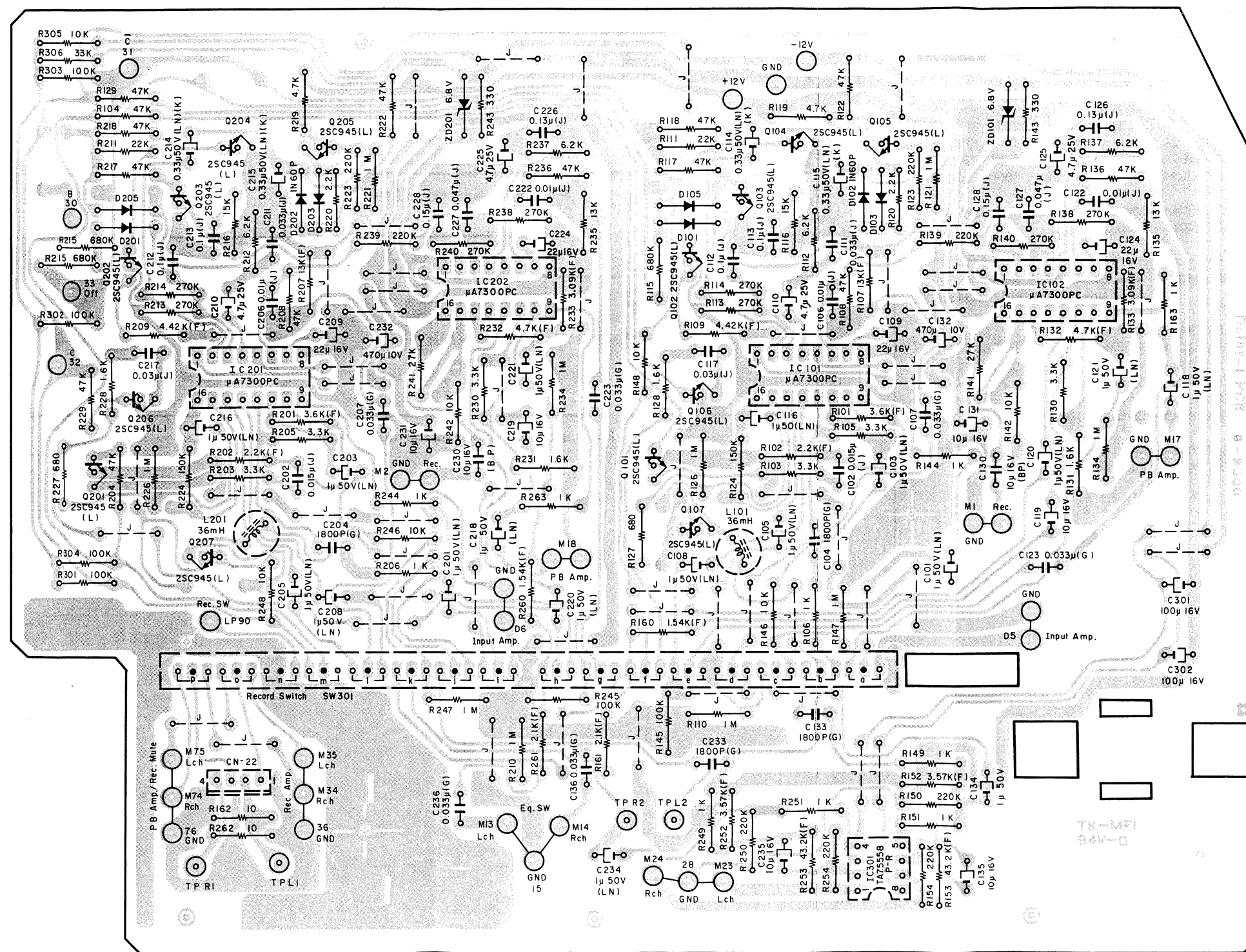


Fig. 7.9.1.1 Serial No.: A31304446 -

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04538A	Dolby NR P.C.B. Ass'y (U.S.A. & Canada) Serial No.: A31304446 -
	- RP Dolby NR -	
IC101,102	OB06200A	IC μ A7300PC
201,202		
Q101-106	OB01872A	Transistor 2SC945 (L) (12 pcs.)
201-206		
ZD101,201	OB06315A	Zener Diode 6.8V XZ068
D101,103	OB06181A	Silicon Diode 1SS53
105,201		
203,205		
D102,202	OB00030A	Germanium Diode 1N60P
R101,201	OB09568A	Metal Film Resistor 3.6K SN14K2E F
R102,202	OB09420A	Metal Film Resistor 2.2K SN14K2E F
R103,105	OB01681A	Carbon Resistor 3.3K ERD-25T J
130,203		
205,230		
R104,108	OB05641A	Carbon Resistor 47K ERD-25T J
117,118		
122,129		
136,204		
208,217		
218,222		
229,236		
R106,144	OB01857A	Carbon Resistor 1K ERD-25T J
163,206		
244,263		
R107,135	OB09557A	Metal Film Resistor 13K SN14K2E F
207,235		
R109,209	OB09558A	Metal Film Resistor 4.42K SN14K2E F
R110,121	OB05776A	Carbon Resistor 1M ERD-25T J
126,134		
147,210		
221,226		
234,247		
R111,211	OB05615A	Carbon Resistor 22K ERD-25T J
R112,137	OB09271A	Carbon Resistor 6.2K ERD-25T J
212,237		
R113,114	OB05620A	Carbon Resistor 270K ERD-25T J
138,140		
213,214		
238,240		
R115,215	OB09335A	Carbon Resistor 680K ERD-25T J
R116,216	OB01683A	Carbon Resistor 15K ERD-25T J
R119,219	OB01846A	Carbon Resistor 4.7K ERD-25T J
R120,220	OB05622A	Carbon Resistor 2.2K ERD-25T J
R123,139	OB05625A	Carbon Resistor 220K ERD-25T J
223,239		
R124,224	OB05626A	Carbon Resistor 150K ERD-25T J
R127,227	OB05794A	Carbon Resistor 680 ERD-25T J
R128,131	OB09565A	Carbon Resistor 1.6K ERD-25T J
228,231		
R132,232	OB09356A	Metal Film Resistor 4.7K SN14K2E F
R133,233	OB09772A	Metal Film Resistor 3.09K SN14K2E F
R141,241	OB05743A	Carbon Resistor 27K ERD-25T J
R142,146	OB01888A	Carbon Resistor 10K ERD-25T J
242,246		
305		
R143,243	OB05577A	Carbon Resistor 330 ERD-25T J

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
R145,245 301,302 303,304	OB01889A	Carbon Resistor 100K ERD-25T J		OE00857A	BT Screw M3x6 Philips Binding Head (1 pce.)
R161,261	OB09585A	Metal Film Resistor 2.1K SN14K2E F		OJ04482A	Shield Case D (1 pce.)
C101,103 105,108 116,118 120,121 201,203 205,208 216,218 220,221	OB09223A	Electrolytic Capacitor 1μ 50V (LN)		OM04331A	Label CN-22 (1 pce.)
C102,202	OB05557A	Mylar Capacitor 0.015μ 50V J		OJ04545A	Dolby NR P.C.B. Shield Plate (1 pce.)
C104,204	OB09409A	PP Capacitor 1800P 100V G		- Miscellaneous -	
C106,122 206,222	OB05681A	Mylar Capacitor 0.01μ 50V J		OB08000C	Dolby NR P.C.B.
C107,123 136,207 223,236	OB09240A	PP Capacitor 0.033μ 100V G		OB08570A	Record Spring Holder (1 pce.)
C109,124 209,224	OB01862A	Electrolytic Capacitor 22μ 16V		OE00172A	Washer 3mm Toothed Lock (1 pce.)
C110,125 210,225	OB01402A	Electrolytic Capacitor 4.7μ 25V		OE00222A	E-Ring 2mm (1 pce.)
C111,211	OB05583A	Mylar Capacitor 0.033μ 50V J		OE00507A	Nut Hex. M3 (1 pce.)
C112,113 212,213	OB01780A	Mylar Capacitor 0.1μ 50V J		OE00846A	BT Screw M3x8 Philips Pan Head (1 pce.)
C114,115 214,215	OB09567A	Electrolytic Capacitor 0.33μ 50V(LN) K		OJ04531A	Record Switch Shaft B (1 pce.)
C117,217	OB09594A	Mylar Capacitor 0.03μ 50V J		JA03922A	Record Arm Ass'y (1 pce.)
C119,131 219,231	OB01412A	Electrolytic Capacitor 10μ 16V			
C126,226	OB09566A	Mylar Capacitor 0.13μ 50V J			
C127,227	OB05796A	Mylar Capacitor 0.047μ 50V J			
C128,228	OB05914A	Mylar Capacitor 0.15μ 50V J			
C130,230	OB09163A	Electrolytic Capacitor 10μ 16V (BP)			
C132,232	OB05884A	Electrolytic Capacitor 470μ 10V			
	OB08714A	IC Socket 16P (4 pcs.)			
	- Line Amp. -				
IC301	OB06287A	IC TA75558P-R			
Q107,207	OB01872A	Transistor 2SC945 (L)			
L101,201	OB06676A	Inductor 36mH G			
R148,248	OB01888A	Carbon Resistor 10K ERD-25T J			
R149,151 249,251	OB01857A	Carbon Resistor 1K ERD-25T J			
R150,154 250,254	OB05625A	Carbon Resistor 220K ERD-25T J			
R152,252	OB09507A	Metal Film Resistor 3.57K SN14K2E F			
R153,253	OB09582A	Metal Film Resistor 43.2K SN14K2E F			
R160,260	OB09757A	Metal Film Resistor 1.54K SN14K2E F			
R162,262	OB05936A	Carbon Resistor 10 ERD-25T J			
R306	OB05509A	Carbon Resistor 33K ERD-25T J			
C133,233	OB09409A	PP Capacitor 1800P 100V G			
C134,234	OB09223A	Electrolytic Capacitor 1μ 50V (LN)			
C135,235	OB01412A	Electrolytic Capacitor 10μ 16V			
C301,302	OB01400A	Electrolytic Capacitor 100μ 16V			
SW301	OB07390A	Record Switch 16NS CL116R			
CN22	OB08654A	4P-T Post			
	OE00507A	Nut Hex. M3 (1 pce.)			
	OE00510A	Screw M3x8 Philips Pan Head (2A) (1 pce.)			

Schematic Ref. No.	Part No.	Description
	0E00857A	BT Screw M3x6 Philips Binding Head (1 pce.)
	0J04482A	Shield Case D (1 pce.)
	0M04331A	Label CN-22 (1 pce.)
	0J04545A	Dolby NR P.C.B. Shield Plate (1 pce.)
- Miscellaneous -		
	0B08000A	Dolby NR P.C.B.
	0B08570A	Record Spring Holder (1 pce.)
	0E00172A	Washer 3mm Toothed Lock (1 pce.)
	0E00222A	E-Ring 2mm (1 pce.)
	0E00507A	Nut Hex. M3 (1 pce.)
	0E00846A	BT Screw M3x8 Philips Pan Head (1 pce.)
	0J04531A	Record Switch Shaft B (1 pce.)
	JA03922A	Record Arm Ass'y (1 pce.)

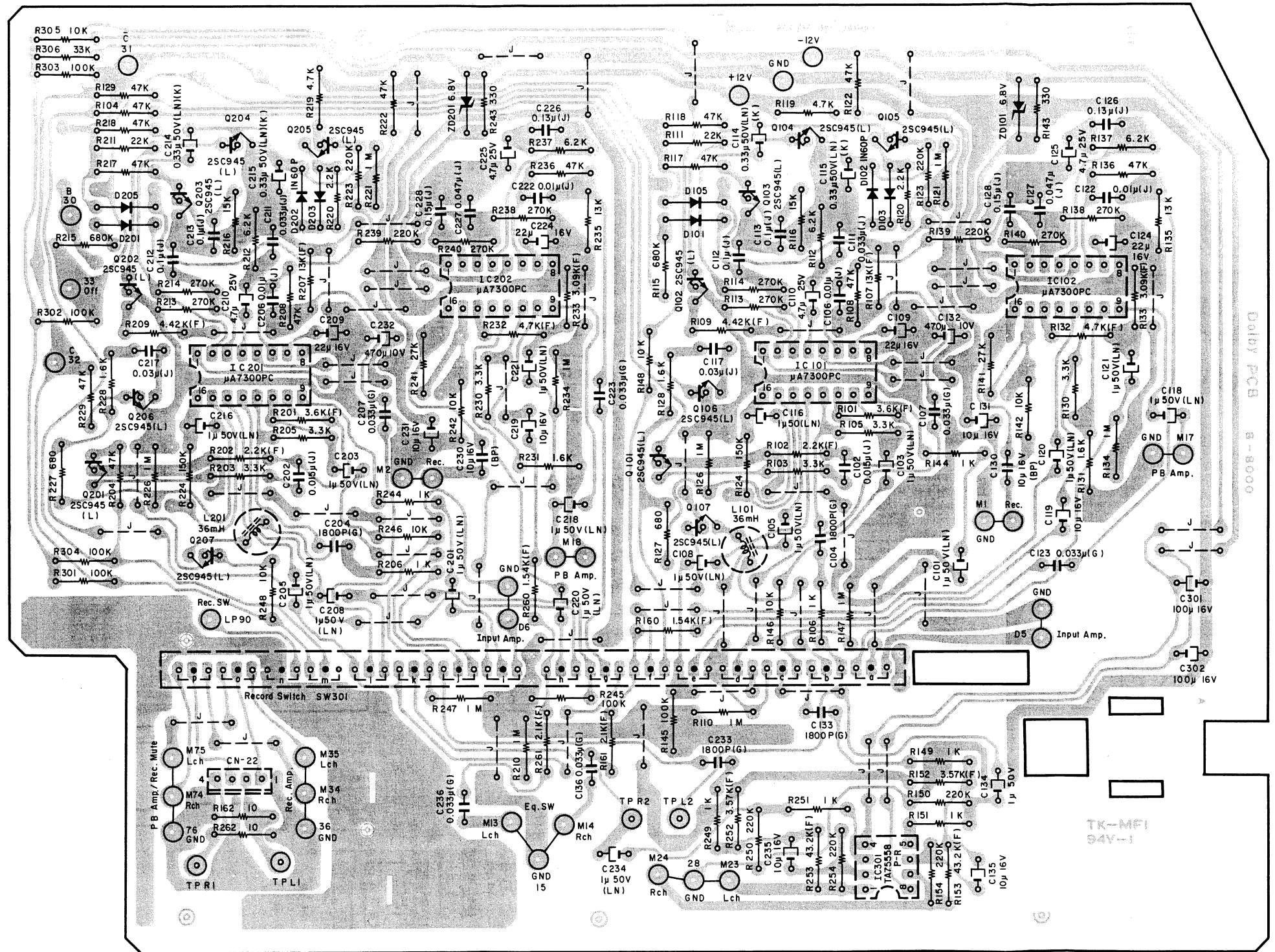


Fig. 7.9.1.2 Serial Nos.: A31301001 – A31304445

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

7.9.2. Dolby NR P.C.B. Ass'y (UK, Australia, 220V Class 2, Others & Japan)

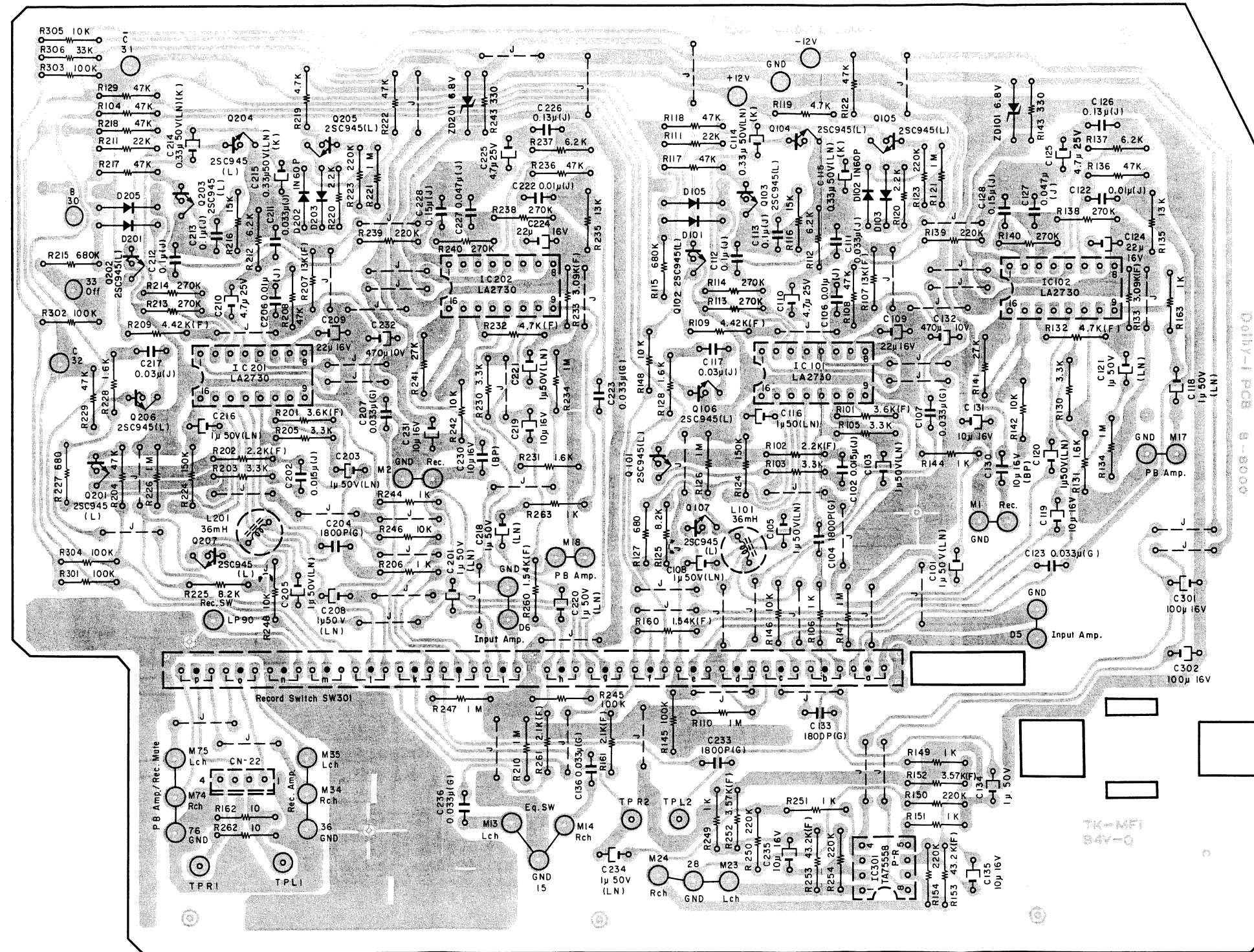


Fig. 7.9.2.1 Serial No.: A31304446 -

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04644A	Dolby NR P.C.B. Ass'y (UK, Australia, 220V Class 2, Others & Japan) Serial No.: A31304446 -
	- RP Dolby NR -	
IC101,102	OB06338A	IC LA2730
201,202		
Q101-106	OB01872A	Transistor 2SC945 (L) (12 pcs.)
201-206		
ZD101,201	OB06315A	Zener Diode 6.8V XZ068
D101,103	OB06181A	Silicon Diode 1S553
105,201		
203,205		
D102,202	OB00030A	Germanium Diode 1N60P
R101,201	OB09568A	Metal Film Resistor 3.6K SN14K2E F
R102,202	OB09420A	Metal Film Resistor 2.2K SN14K2E F
R103,105	OB01681A	Carbon Resistor 3.3K ERD-25T J
130,203		
205,230		
R104,108	OB05641A	Carbon Resistor 47K ERD-25T J
117,118		
122,129		
136,204		
208,217		
218,222		
229,236		
R106,144	OB01857A	Carbon Resistor 1K ERD-25T J
163,206		
244,263		
R107,135	OB09557A	Metal Film Resistor 13K SN14K2E F
207,235		
R109,209	OB09558A	Metal Film Resistor 4.42K SN14K2E F
R110,121	OB05776A	Carbon Resistor 1M ERD-25T J
126,134		
147,210		
221,226		
234,247		
R111,211	OB05615A	Carbon Resistor 22K ERD-25T J
R112,137	OB09271A	Carbon Resistor 6.2K ERD-25T J
212,237		
R113,114	OB05620A	Carbon Resistor 270K ERD-25T J
138,140		
213,214		
238,240		
R115,215	OB09335A	Carbon Resistor 680K ERD-25T J
R116,216	OB01683A	Carbon Resistor 15K ERD-25T J
R119,219	OB01846A	Carbon Resistor 4.7K ERD-25T J
R120,220	OB05622A	Carbon Resistor 2.2K ERD-25T J
R123,139	OB05625A	Carbon Resistor 220K ERD-25T J
223,239		
R124,224	OB05626A	Carbon Resistor 150K ERD-25T J
R127,227	OB05794A	Carbon Resistor 680 ERD-25T J
R128,131	OB09565A	Carbon Resistor 1.6K ERD-25T J
228,231		
R132,232	OB09356A	Metal Film Resistor 4.7K SN14K2E F
R133,233	OB09772A	Metal Film Resistor 3.09K SN14K2E F
R141,241	OB05743A	Carbon Resistor 27K ERD-25T J
R142,146	OB01888A	Carbon Resistor 10K ERD-25T J
242,246		
305		
R143,243	OB05577A	Carbon Resistor 330 ERD-25T J

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
R145,245 301,302 303,304	OB01889A	Carbon Resistor 100K ERD-25T J		OE00857A	BT Screw M3x6 Philips Binding Head (1 pce.)
R161,261	OB09585A	Metal Film Resistor 2.1K SN14K2E F		OJ04482A	Shield Case D (1 pce.)
C101,103 105,108 116,118 120,121 201,203 205,208 216,218 220,221	OB09223A	Electrolytic Capacitor 1μ 50V (LN)		OM04331A	Label CN-22 (1 pce.)
C102,202 C104,204 C106,122 206,222	OB05557A OB09409A OB05681A	Mylar Capacitor 0.015μ 50V J PP Capacitor 1800P 100V G Mylar Capacitor 0.01μ 50V J		OJ04545A	Dolby NR P.C.B. Shield Plate (1 pce.)
C107,123 136,207 223,236	OB09240A	PP Capacitor 0.033μ 100V G		- Miscellaneous -	
C109,124 209,224	OB01862A	Electrolytic Capacitor 22μ 16V	R125,225	OB08000C	Dolby NR P.C.B.
C110,125 210,225	OB01402A	Electrolytic Capacitor 4.7μ 25V		OB01856A	Carbon Resistor 8.2K ERD-25T J
C111,211 C112,113 212,213	OB05583A OB01780A	Mylar Capacitor 0.033μ 50V J Mylar Capacitor 0.1μ 50V J		OB08570A	Record Spring Holder (1 pce.)
C114,115 214,215	OB09567A	Electrolytic Capacitor 0.33μ 50V (LN) K		OE00172A	Washer 3mm Toothed Lock (1 pce.)
C117,217 C119,131 219,231	OB09594A OB01412A	Mylar Capacitor 0.03μ 50V J Electrolytic Capacitor 10μ 16V		OE00222A	E-Ring 2mm (1 pce.)
C126,226 C127,227 C128,228	OB09566A OB05796A OB05914A	Mylar Capacitor 0.13μ 50V J Mylar Capacitor 0.047μ 50V J Mylar Capacitor 0.15μ 50V J		OE00507A	Nut Hex. M3 (1 pce.)
C130,230 C132,232	OB09163A OB05884A OB08714A	Electrolytic Capacitor 10μ 16V (BP) Electrolytic Capacitor 470μ 10V IC Socket 16P (4 pcs.)		OE00846A	BT Screw M3x8 Philips Pan Head (1 pce.)
- Line Amp. -				OJ04531A	Record Switch Shaft B (1 pce.)
IC301	OB06287A	IC TA75558P-R		JA03922A	Record Arm Ass'y (1 pce.)
Q107,207	OB01872A	Transistor 2SC945 (L)			
L101,201	OB06676A	Inductor 36mH G			
R148,248	OB01888A	Carbon Resistor 10K ERD-25T J			
R149,151 249,251	OB01857A	Carbon Resistor 1K ERD-25T J			
R150,154 250,254	OB05625A	Carbon Resistor 220K ERD-25T J			
R152,252	OB09507A	Metal Film Resistor 3.57K SN14K2E F			
R153,253	OB09582A	Metal Film Resistor 43.2K SN14K2E F			
R160,260	OB09757A	Metal Film Resistor 1.54K SN14K2E F			
R162,262	OB05936A	Carbon Resistor 10 ERD-25T J			
R306	OB05509A	Carbon Resistor 33K ERD-25T J			
C133,233	OB09409A	PP Capacitor 1800P 100V G			
C134,234	OB09223A	Electrolytic Capacitor 1μ 50V (LN)			
C135,235	OB01412A	Electrolytic Capacitor 10μ 16V			
C301,302	OB01400A	Electrolytic Capacitor 100μ 16V			
SW301	OB07390A	Record Switch 16NS CL116R			
CN22	OB08654A	4P-T Post			
	OE00507A	Nut Hex. M3 (1 pce.)			
	OE00510A	Screw M3x8 Philips Pan Head (2A) (1 pce.)			

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA04644A	Dolby NR P.C.B. Ass'y (UK, Australia, 220V Class 2, Others & Japan) Serial Nos.: A31301001 - A31304445	R145,245 301,302 303,304	OB01889A	Carbon Resistor 100K ERD-25T J
	- RP Dolby NR -		R161,261 C101,103 105,108 116,118 120,121 201,203 205,208 216,218 220,221	OB09585A OB09223A	Metal Film Resistor 2.1K SN14K2E F Electrolytic Capacitor 1μ 50V (LN)
IC101,102 201,202	OB06338A	IC LA2730	C102,202 C104,204 C106,122 206,222 C107,123 136,207 223,236 C109,124 209,224 C110,125 210,225 C111,211 C112,113 212,213 C114,115 214,215 C117,217 C119,131 219,231 C126,226 C127,227 C128,228 C130,230 C132,232	OB05557A OB09409A OB05681A OB09240A OB01862A OB01402A OB05583A OB01780A OB09567A OB09594A OB01412A OB09566A OB05796A OB05914A OB09163A OB05884A OB08714A	Mylar Capacitor 0.015μ 50V J PP Capacitor 1800P 100V G Mylar Capacitor 0.01μ 50V J PP Capacitor 0.033μ 100V G Electrolytic Capacitor 22μ 16V Electrolytic Capacitor 4.7μ 25V Mylar Capacitor 0.033μ 50V J Mylar Capacitor 0.1μ 50V J Electrolytic Capacitor 0.33μ 50V(LN) K Mylar Capacitor 0.03μ 50V J Electrolytic Capacitor 10μ 16V Mylar Capacitor 0.13μ 50V J Mylar Capacitor 0.047μ 50V J Mylar Capacitor 0.15μ 50V J Electrolytic Capacitor 10μ 16V (BP) Electrolytic Capacitor 470μ 10V IC Socket 16P (4 pins.)
Q101-106 201-206	OB01872A	Transistor 2SC945 (L) (12 pcs.)	IC301 Q107,207 L101,201 R148,248 R149,151 249,251 R150,154 250,254 R152,252 R153,253 R160,260 R162,262 R306 C133,233 C134,234 C135,235 C301,302 SW301 CN22	- Line Amp. - OB06287A OB01872A OB06676A OB01888A OB01857A OB05625A OB09507A OB09582A OB09757A OB05936A OB05509A OB09409A OB09223A OB01412A OB01400A OB07390A OB08654A OE00507A OE00510A	IC TA75558P-R Transistor 2SC945 (L) Inductor 36mH G Carbon Resistor 10K ERD-25T J Carbon Resistor 1K ERD-25T J Carbon Resistor 220K ERD-25T J Metal Film Resistor 3.57K SN14K2E F Metal Film Resistor 43.2K SN14K2E F Metal Film Resistor 1.54K SN14K2E F Carbon Resistor 10 ERD-25T J Carbon Resistor 33K ERD-25T J PP Capacitor 1800P 100V G Electrolytic Capacitor 1μ 50V (LN) Electrolytic Capacitor 10μ 16V Electrolytic Capacitor 100μ 16V Record Switch 16NS CL116R 4P-T Post Nut Hex. M3 (1 pc.e.) Screw M3x8 Philips Pan Head (2A) (1 pc.e.)
ZD101,201	OB06315A	Zener Diode 6.8V XZ068			
D101,103 105,201 203,205	OB06181A	Silicon Diode 1SS53			
D102,202	OB00030A	Germanium Diode 1N60P			
R101,201	OB09568A	Metal Film Resistor 3.6K SN14K2E F			
R102,202	OB09420A	Metal Film Resistor 2.2K SN14K2E F			
R103,105 130,203 205,230	OB01681A	Carbon Resistor 3.3K ERD-25T J			
R104,108 117,118 122,129 136,204 208,217 218,222 229,236	OB05641A	Carbon Resistor 47K ERD-25T J			
R106,144 206,244	OB01857A	Carbon Resistor 1K ERD-25T J			
R107,135 207,235	OB09557A	Metal Film Resistor 13K SN14K2E F			
R109,209	OB09558A	Metal Film Resistor 4.42K SN14K2E F			
R110,121 126,134 147,210 221,226 234,247	OB05776A	Carbon Resistor 1M ERD-25T J			
R111,211	OB05615A	Carbon Resistor 22K ERD-25T J			
R112,137 212,237	OB09271A	Carbon Resistor 6.2K ERD-25T J			
R113,114 138,140 213,214 238,240	OB05620A	Carbon Resistor 270K ERD-25T J			
R115,215	OB09335A	Carbon Resistor 680K ERD-25T J			
R116,216	OB01683A	Carbon Resistor 15K ERD-25T J			
R119,219	OB01846A	Carbon Resistor 4.7K ERD-25T J			
R120,220	OB05622A	Carbon Resistor 2.2K ERD-25T J			
R123,139 223,239	OB05625A	Carbon Resistor 220K ERD-25T J			
R124,224	OB05626A	Carbon Resistor 150K ERD-25T J			
R127,227	OB05794A	Carbon Resistor 680 ERD-25T J			
R128,131 228,231	OB09565A	Carbon Resistor 1.6K ERD-25T J			
R132,232	OB09356A	Metal Film Resistor 4.7K SN14K2E F			
R133,233	OB09772A	Metal Film Resistor 3.09K SN14K2E F			
R141,241	OB05743A	Carbon Resistor 27K ERD-25T J			
R142,146 242,246 305	OB01888A	Carbon Resistor 10K ERD-25T J			
R143,243	OB05577A	Carbon Resistor 330 ERD-25T J			

Schematic Ref. No.	Part No.	Description	
R125,225	0E00857A	BT Screw M3x6 Philips Binding Head (1 pce.)	
	0J04482A	Shield Case D (1 pce.)	
	0M04331A	Label CN-22 (1 pce.)	
	0J04545A	Dolby NR P.C.B. Shield Plate (1 pce.)	
	- Miscellaneous -		
	0B08000A	Dolby NR P.C.B.	
	0B01856A	Carbon Resistor 8.2K ERD-25T J	
	0B08570A	Record Spring Holder (1 pce.)	
	0E00172A	Washer 3mm Toothed Lock (1 pce.)	
	0E00222A	E-Ring 2mm (1 pce.)	
	0E00507A	Nut Hex. M3 (1 pce.)	
	0E00846A	BT Screw M3x8 Philips Pan Head (1 pce.)	
	0J04531A	Record Switch Shaft B (1 pce.)	
	JA03922A	Record Arm Ass'y (1 pce.)	

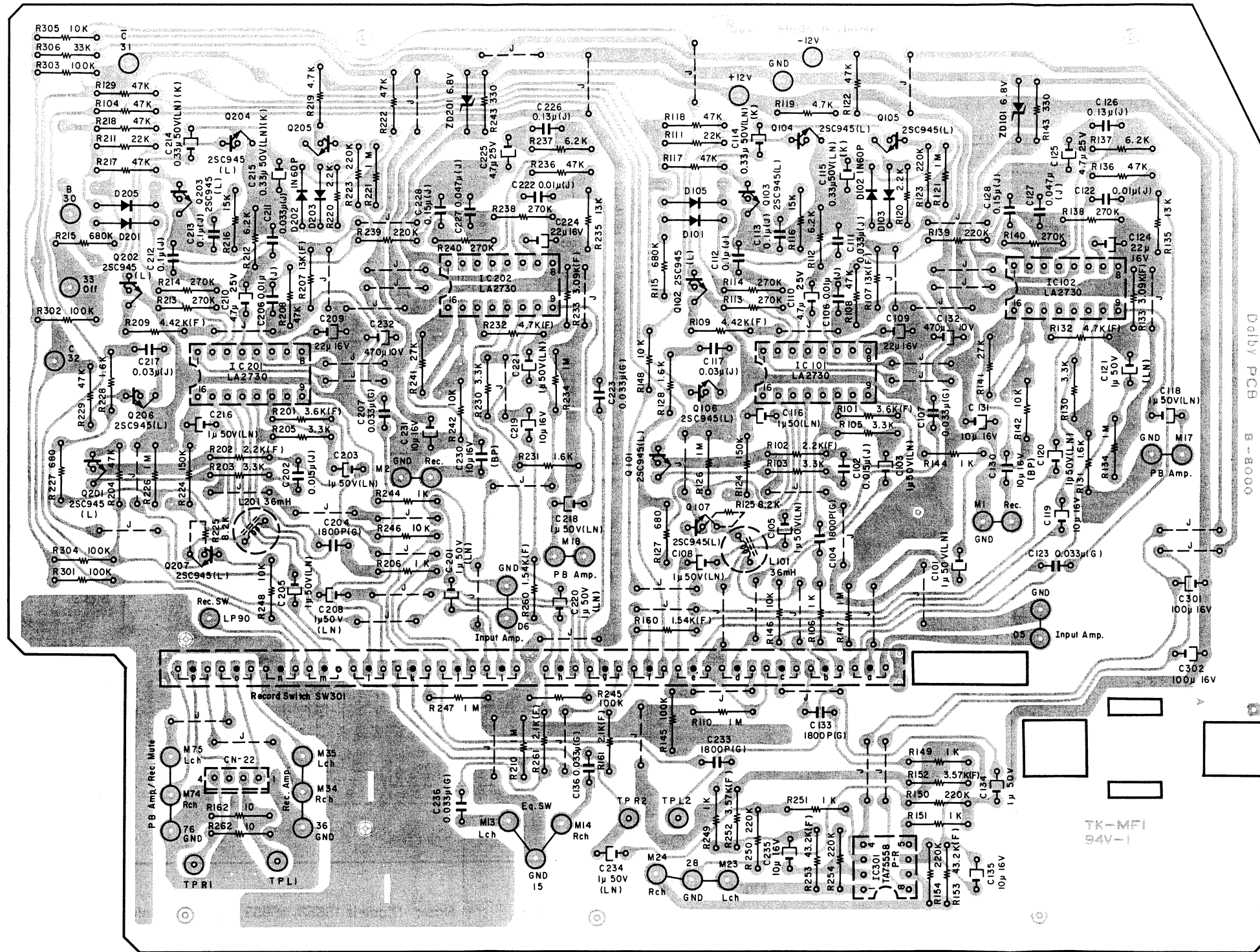


Fig. 7.9.2.2 Serial Nos.: A31301001 - A31304445

Note: Diode is 1S53, 1S953, or 1S1555 unless otherwise specified.

7.10. Logic & Power P.C.B. Ass'y

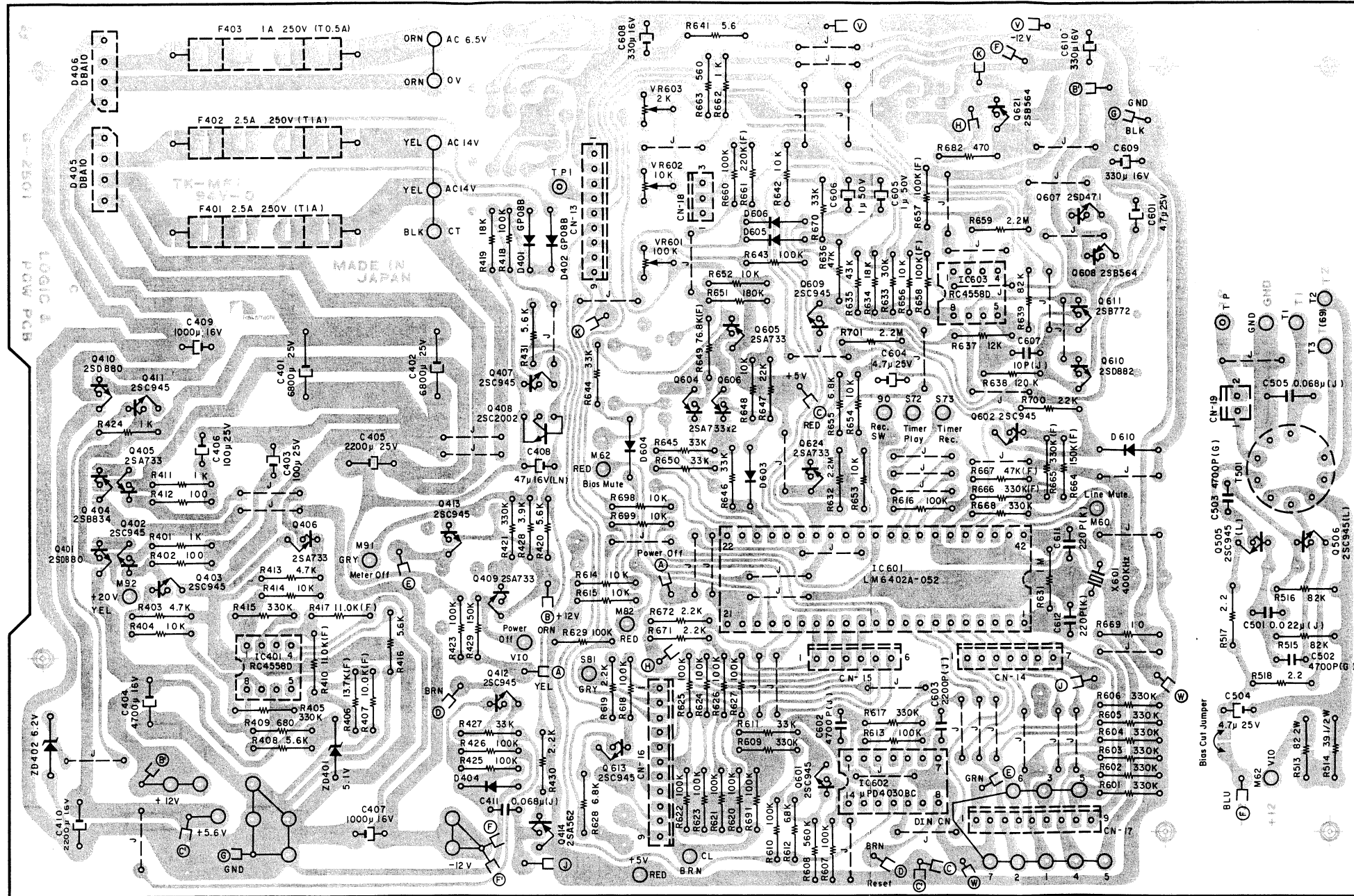


Fig. 7.10.1 Serial No.: A31304446 -

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

Schematic Ref. No.	Part No.	Description
	BA04640A	Logic & Power P.C.B. Ass'y (U.S.A., Canada & Others)
	BA04635A	Logic & Power P.C.B. Ass'y (Japan)
	BA04636A	Logic & Power P.C.B. Ass'y (UK, Australia & 220V Class 2)
		Serial No.: A31304446 -
	- Bias Osc. -	
Q505,506	OB01872A	Transistor 2SC945 (L)
T501	OB06613A	Osc. Coil
R513	OB09295A	Fail Safe Type Resistor 82 RSF-2B J
R514	OB09296A	Fail Safe Type Resistor 39 RSF-1/2B J
R515,516	OB05668A	Carbon Resistor 82K ERD-25T J
R517,518	OB09212A	Fail Safe Type Resistor 2.2RDF-25S J
C501	OB09405A	PP Capacitor 0.022μ 100V J
C502,503	OB09191A	PP Capacitor 4700P 100V G
C504	OB01402A	Electrolytic Capacitor 4.7μ 25V
C505	OB09254A	PP Capacitor 0.068μ 100V J
CN19	OB08656A	2P-T Post
	OJ04450A	Osc. Coil Cap (1 pce.)
	- Power Supply -	
IC401	OB06124B	IC RC4558D
Q402,403	OB06100A	Transistor 2SC945 (A)
407,411		
412,413		
Q405,406	OB06013A	Transistor 2SA733
409		
Q408	OB06322A	Transistor 2SC2002
Q414	OB01426A	Transistor 2SA562
ZD401	OB06058A	Zener Diode 5.1V YZ051
ZD402	OB06314A	Zener Diode 6.2V YZ062
D401,402	OB06109A	Silicon Diode GP08B
D404	OB01909A	Silicon Diode 1S1555
D405,406	OB06282A	Diode Bridge DBA10
R401,411	OB01857A	Carbon Resistor 1K ERD-25T J
424		
R402,412	OB01679A	Carbon Resistor 100 ERD-25T J
R403,413	OB01846A	Carbon Resistor 4.7K ERD-25T J
R404,414	OB01888A	Carbon Resistor 10K ERD-25T J
R405,415	OB05627A	Carbon Resistor 330K ERD-25T J
421		
R406	OB09523A	Metal Film Resistor 13.7K SN14K2E F
R407	OB09203A	Metal Film Resistor 10K SN14K2E F
R408,416	OB01887A	Carbon Resistor 5.6K ERD-25T J
420,431		
R409	OB05794A	Carbon Resistor 680 ERD-25T J
R410,417	OB09128A	Metal Film Resistor 11K SN14K2E F
R418,423	OB01889A	Carbon Resistor 100K ERD-25T J
425,426		
R419	OB05560A	Carbon Resistor 18K ERD-25T J
R427	OB05509A	Carbon Resistor 33K ERD-25T J
R428	OB05675A	Carbon Resistor 3.9K ERD-25T J
R429	OB05626A	Carbon Resistor 150K ERD-25T J
R430	OB05622A	Carbon Resistor 2.2K ERD-25T J
C401,402	OB09374A	Electrolytic Capacitor 6800μ 25V
C403,406	OB01272A	Electrolytic Capacitor 100μ 25V
C404	OB09377A	Electrolytic Capacitor 4700μ 16V
C405	OB05654A	Electrolytic Capacitor 2200μ 25V
C407,409	OB01397A	Electrolytic Capacitor 1000μ 16V
C408	OB09218A	Electrolytic Capacitor 47μ 16V (LN)
C410	OB01406A	Electrolytic Capacitor 2200μ 16V

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
C411	OB05682A OB08515A	Mylar Capacitor 0.068μ 50V J Insu-Lock (2 pcs.)	R663	OB05575A	Carbon Resistor 560 ERD-25T J
	— Logic —		R664	OB09300A	Metal Film Resistor 150K SN14K2E F
IC601	OB06324A	IC LM6402A-052	R665,666	OB09756A	Metal Film Resistor 330K SN14K2E F
IC602	OB06317A	IC μPD4030BC	R667	OB09451A	Metal Film Resistor 47K SN14K2E F
IC603	OB06124B	IC RC4558D	R669	OB09216A	Fail Safe Type Resistor 10 RDF-25S J
Q601,602 609,613	OB06100A	Transistor 2SC945 (A)	R682	OB05576A	Carbon Resistor 470 ERD-25T J
Q604,605 606,624	OB06013A	Transistor 2SA733	C601,604	OB01402A	Electrolytic Capacitor 4.7μ 25V
Q607	OB06066A	Transistor 2SD471	C602	OB05652A	Mylar Capacitor 4700P 50V J
Q608,621	OB06069A	Transistor 2SB564	C603	OB01802A	Mylar Capacitor 2200P 50V J
Q610	OB06316A	Transistor 2SD882	C605,606	OB01405A	Electrolytic Capacitor 1μ 50V
Q611	OB06303A	Transistor 2SB772	C607	OB09277A	Ceramic Capacitor 10P 50V J
D603,604 605,606 610	OB01909A	Silicon Diode 1S1555	C608,609 610	OB01502A	Electrolytic Capacitor 330μ 16V
X601	OB08908A	Crystal 400kHz 4BR400BT	C611,612	OB09283A	Ceramic Capacitor 220P 50V K
VR601	OB07257A	Semi-fixed Volume 100K	CN13,16	OB08645A	9P-T Post
VR602	OB07256A	Semi-fixed Volume 10K	17		
VR603	OB07329A	Semi-fixed Volume 2K	CN14	OB08643A	7P-T Post
R601,602 603,604 605,606 609,617 668	OB05627A	Carbon Resistor 330K ERD-25T J	CN15	OB08642A	6P-T Post
R607,610 613,616 618	OB01889A	Carbon Resistor 100K ERD-25T J (17 pcs.)	CN18	OB08653A	3P-T Post
R608	OB05784A	Carbon Resistor 560K ERD-25T J		OB08964A	Transistor Mica TO-126 (2 pcs.)
R611,644 645,646 650,670	OB05509A	Carbon Resistor 33K ERD-25T J		0E00507A	Nut Hex. M3 (2 pcs.)
R612	OB05692A	Carbon Resistor 68K ERD-25T J		0E00624A	Screw M3x10 Philips Pan Head (2A) (1 pce.)
R614,615 642,648 652,653 654,656 698,699	OB01888A	Carbon Resistor 10K ERD-25T J		0J04485A	Heat Sink B (1 pce.)
R619,671 672	OB05622A	Carbon Resistor 2.2K ERD-25T J		0M04222A	Label CN-15 (1 pce.)
R628,655	OB01682A	Carbon Resistor 6.8K ERD-25T J		0M04223A	Label CN-16 (1 pce.)
R631	OB05776A	Carbon Resistor 1M ERD-25T J		0M04224A	Label CN-17 (1 pce.)
R632,659 701	OB05671A	Carbon Resistor 2.2M ERD-25T J		0M04230A	Label CN-13 (1 pce.)
R633	OB09075A	Carbon Resistor 30K ERD-25T J		0M04231A	Label CN-14 (1 pce.)
R634	OB05560A	Carbon Resistor 18K ERD-25T J			
R635	OB09750A	Carbon Resistor 43K ERD-25T J		— Miscellaneous —	
R636	OB05641A	Carbon Resistor 47K ERD-25T J		OB02501C	Logic & Power P.C.B.
R637	OB09263A	Carbon Resistor 12K ERD-25T J	F401,402	OB08962A	Fuse 2.5A 250V (U.S.A., Canada & Others)
R638	OB05621A	Carbon Resistor 120K ERD-25T J	F401,402	OB08961A	Fuse 2.5A 250V (Japan)
R639	OB05668A	Carbon Resistor 82K ERD-25T J	F403	OB08347U	Fuse T1A 250V (UK, Australia & 220V Class 2)
R641	OB09217A	Fail Safe Type Resistor 5.6RDF-25S J	F403	OB08374A	Fuse 1A 250V (U.S.A., Canada & Others)
R647,700	OB05615A	Carbon Resistor 22K ERD-25T J	F403	OB08686A	Fuse 1A 250V (Japan)
R649	OB09751A	Metal Film Resistor 76.8K SN14K2E F		OB08960A	Fuse T500mA 250V (UK, Australia & 220V Class 2)
R651	OB05640A	Carbon Resistor 180K ERD-25T J		OB08349A	Fuse Clip (UK, Australia & 220V Class 2) (6 pcs.)
R657,658	OB09269A	Metal Film Resistor 100K SN14K2E F		0E00037A	Earth Lug B-5 (1 pce.)
R661	OB09472A	Metal Film Resistor 220K SN14K2E F		0E00857A	BT Screw M3x6 Philips Binding Head (2 pcs.)
R662	OB01857A	Carbon Resistor 1K ERD-25T J	Q401,410 Q404	0M03782A	Fuse Label 1A 250V (U.S.A., Canada, Japan & Others) (1 pce.)
				0M04096C	Fuse Label T500mA (UK, Australia & 220V Class 2) (1 pce.)
				0M04191A	Fuse Label T1A 250V (UK, Australia & 220V Class 2) (2 pcs.)
				OB06255A	Transistor 2SD880 (Y)
				OB06256A	Transistor 2SB834 (Y, GR)
				OB08601A	Transistor Mica TO-220 (3 pcs.)
				OB08602A	Transistor Bushing TO-220 (3 pcs.)
				0E00507A	Nut Hex. M3 (3 pcs.)
				0E00608A	Screw M3x10 Philips Pan Head (3A) (3 pcs.)
				0J04526A	Heat Sink (1 pce.)

*: Depends on the versions.

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA04640A	Logic & Power P.C.B. Ass'y (U.S.A., Canada & Others)	C411	OB05682A	Mylar Capacitor 0.068μ 50V J
	BA04635A	Logic & Power P.C.B. Ass'y (Japan)		OB08515A	Insu-Lock (2 pcs.)
	BA04636A	Logic & Power P.C.B. Ass'y (UK, Australia & 220V Class 2) Serial Nos.: A31301001 - A31304445		- Logic -	
	- Bias Osc. -		IC601	OB06324A	IC LM6402A-052
Q505,506	OB01872A	Transistor 2SC945 (L)	IC602	OB06317A	IC μPD4030BC
T501	OB06613A	Osc. Coil	IC603	OB06124B	IC RC4558D
R513	OB09295A	Fail Safe Type Resistor 82 RSF-2B J	Q601,602	OB06100A	Transistor 2SC945 (A)
R514	OB09296A	Fail Safe Type Resistor 39 RSF-1/2B J	Q604,605	OB06013A	Transistor 2SA733
R515,516	OB05668A	Carbon Resistor 82K ERD-25T J	Q606,624		
R517,518	OB09212A	Fail Safe Type Resistor 2.2RDF-25S J	Q607	OB06066A	Transistor 2SD471
C501	OB09405A	PP Capacitor 0.022μ 100V J	Q608,621	OB06069A	Transistor 2SB564
C502,503	OB09191A	PP Capacitor 4700P 100V G	Q610	OB06316A	Transistor 2SD882
C504	OB01402A	Electrolytic Capacitor 4.7μ 25V	Q611	OB06303A	Transistor 2SB772
C505	OB09254A	PP Capacitor 0.068μ 100V J	D603,604	OB01909A	Silicon Diode 1S1555
CN19	OB08656A	2P-T Post	605,606		
	OJ04450A	Osc. Coil Cap (1 pce.)	610		
	- Power Supply -		X601	OB08908A	Crystal 400kHz 4BR400BT
IC401	OB06124B	IC RC4558D	VR601	OB07257A	Semi-fixed Volume 100K
Q402,403	OB06100A	Transistor 2SC945 (A)	VR602	OB07256A	Semi-fixed Volume 10K
407,411			VR603	OB07329A	Semi-fixed Volume 2K
412,413			R601,602	OB05627A	Carbon Resistor 330K ERD-25T J
Q405,406	OB06013A	Transistor 2SA733	603,604		
409			605,606		
Q408	OB06322A	Transistor 2SC2002	609,617		
Q414	OB01426A	Transistor 2SA562	668		
ZD401	OB06058A	Zener Diode 5.1V YZ051	R607,610	OB01889A	Carbon Resistor 100K ERD-25T J
ZD402	OB06314A	Zener Diode 6.2V YZ062	613,616		(17 pcs.)
D401,402	OB06109A	Silicon Diode GP08B	618		
D404	OB01909A	Silicon Diode 1S1555	620-627		
D405,406	OB06282A	Diode Bridge DBA10	629,643		
R401,411	OB01857A	Carbon Resistor 1K ERD-25T J	660,691		
424			R608	OB05784A	Carbon Resistor 560K ERD-25T J
R402,412	OB01679A	Carbon Resistor 100 ERD-25T J	R611,644	OB05509A	Carbon Resistor 33K ERD-25T J
R403,413	OB01846A	Carbon Resistor 4.7K ERD-25T J	645,646		
R404,414	OB01888A	Carbon Resistor 10K ERD-25T J	650,670		
R405,415	OB05627A	Carbon Resistor 330K ERD-25T J	R612	OB05692A	Carbon Resistor 68K ERD-25T J
421			R614,615	OB01888A	Carbon Resistor 10K ERD-25T J
R406	OB09523A	Metal Film Resistor 13.7K SN14K2E F	642,648		
R407	OB09203A	Metal Film Resistor 10K SN14K2E F	652,653		
R408,416	OB01887A	Carbon Resistor 5.6K ERD-25T J	654,656		
420,431			698,699		
R409	OB05794A	Carbon Resistor 680 ERD-25T J	R619,671	OB05622A	Carbon Resistor 2.2K ERD-25T J
R410,417	OB09128A	Metal Film Resistor 11K SN14K2E F	672		
R418,423	OB01889A	Carbon Resistor 100K ERD-25T J	R628,655	OB01682A	Carbon Resistor 6.8K ERD-25T J
425,426			R631	OB05776A	Carbon Resistor 1M ERD-25T J
R419	OB05560A	Carbon Resistor 18K ERD-25T J	R632,659	OB05671A	Carbon Resistor 2.2M ERD-25T J
R427	OB05509A	Carbon Resistor 33K ERD-25T J	701		
R428	OB05675A	Carbon Resistor 3.9K ERD-25T J	R633	OB09075A	Carbon Resistor 30K ERD-25T J
R429	OB05626A	Carbon Resistor 150K ERD-25T J	R634	OB05560A	Carbon Resistor 18K ERD-25T J
R430	OB05622A	Carbon Resistor 2.2K ERD-25T J	R635	OB09750A	Carbon Resistor 43K ERD-25T J
C401,402	OB09374A	Electrolytic Capacitor 6800μ 25V	R636	OB05641A	Carbon Resistor 47K ERD-25T J
C403,406	OB01272A	Electrolytic Capacitor 100μ 25V	R637	OB09263A	Carbon Resistor 12K ERD-25T J
C404	OB09377A	Electrolytic Capacitor 4700μ 16V	R638	OB05621A	Carbon Resistor 120K ERD-25T J
C405	OB05654A	Electrolytic Capacitor 2200μ 25V	R639	OB05668A	Carbon Resistor 82K ERD-25T J
C407,409	OB01397A	Electrolytic Capacitor 1000μ 16V	R641	OB09217A	Fail Safe Type Resistor 5.6RDF-25S J
C408	OB09251A	Electrolytic Capacitor 33μ 16V	R647,700	OB05615A	Carbon Resistor 22K ERD-25T J
C410	OB01406A	Electrolytic Capacitor 2200μ 16V	R649	OB09751A	Metal Film Resistor 76.8K SN14K2E F
			R651	OB05640A	Carbon Resistor 180K ERD-25T J
			R657,658	OB09269A	Metal Film Resistor 100K SN14K2E F
			R661	OB09472A	Metal Film Resistor 220K SN14K2E F
			R662	OB01857A	Carbon Resistor 1K ERD-25T J

Schematic Ref. No.	Part No.	Description
R663	OB05575A	Carbon Resistor 560 ERD-25T J
R664	OB09300A	Metal Film Resistor 150K SN14K2E F
R665,666	OB09756A	Metal Film Resistor 330K SN14K2E F
R667	OB09451A	Metal Film Resistor 47K SN14K2E F
R669	OB09216A	Fail Safe Type Resistor 10 RDF-25S J
R682	OB05576A	Carbon Resistor 470 ERD-25T J
C601,604	OB01402A	Electrolytic Capacitor 4.7μ 25V
C602	OB05652A	Mylar Capacitor 4700P 50V J
C603	OB01802A	Mylar Capacitor 2200P 50V J
C605,606	OB01405A	Electrolytic Capacitor 1μ 50V
C607	OB09277A	Ceramic Capacitor 10P 50V J
C608,609	OB01502A	Electrolytic Capacitor 330μ 16V
610		
C611,612	OB09283A	Ceramic Capacitor 220P 50V K
CN13,16	OB08645A	9P-T Post
17		
CN14	OB08643A	7P-T Post
CN15	OB08642A	6P-T Post
CN18	OB08653A	3P-T Post
	OB08964A	Transistor Mica TO-126 (2 pcs.)
	OE00507A	Nut Hex. M3 (2 pcs.)
	OE00624A	Screw M3x10 Philips Pan Head (2A)
		(1 pce.)
	OJ04485A	Heat Sink B (1 pce.)
	OM04222A	Label CN-15 (1 pce.)
	OM04223A	Label CN-16 (1 pce.)
	OM04224A	Label CN-17 (1 pce.)
	OM04230A	Label CN-13 (1 pce.)
	OM04231A	Label CN-14 (1 pce.)
- Miscellaneous -		
	OB02501A	Logic & Power P.C.B.
F401,402	OB08962A	Fuse 2.5A 250V (U.S.A., Canada & Others)
F401,402	OB08961A	Fuse 2.5A 250V (Japan)
F401,402	OB08347U	Fuse T1A 250V (UK, Australia & 220V Class 2)
F403	OB08374A	Fuse 1A 250V (U.S.A., Canada & Others)
F403	OB08686A	Fuse 1A 250V (Japan)
F403	OB08960A	Fuse T500mA 250V (UK, Australia & 220V Class 2)
	OB08349A	Fuse Clip (UK, Australia & 220V Class 2) (6 pcs.)
	OE00037A	Earth Lug B-5 (1 pce.)
*	OE00857A	BT Screw M3x6 Philips Binding Head (2 pcs.)
	OM03782A	Fuse Label 1A 250V (U.S.A., Canada, Japan & Others) (1 pce.)
	OM04096C	Fuse Label T500mA (UK, Australia & 220V Class 2) (1 pce.)
	OM04191A	Fuse Label T1A 250V (UK, Australia & 220V Class 2) (2 pcs.)
Q401,410	OB06255A	Transistor 2SD880 (Y)
Q404	OB06256A	Transistor 2SB834 (Y, GR)
	OB08601A	Transistor Mica TO-220 (3 pcs.)
	OB08602A	Transistor Bushing TO-220 (3 pcs.)
	OE00507A	Nut Hex. M3 (3 pcs.)
	OE00608A	Screw M3x10 Philips Pan Head (3A) (3 pcs.)
	OJ04526A	Heat Sink (1 pce.)
*: Depends on the versions.		

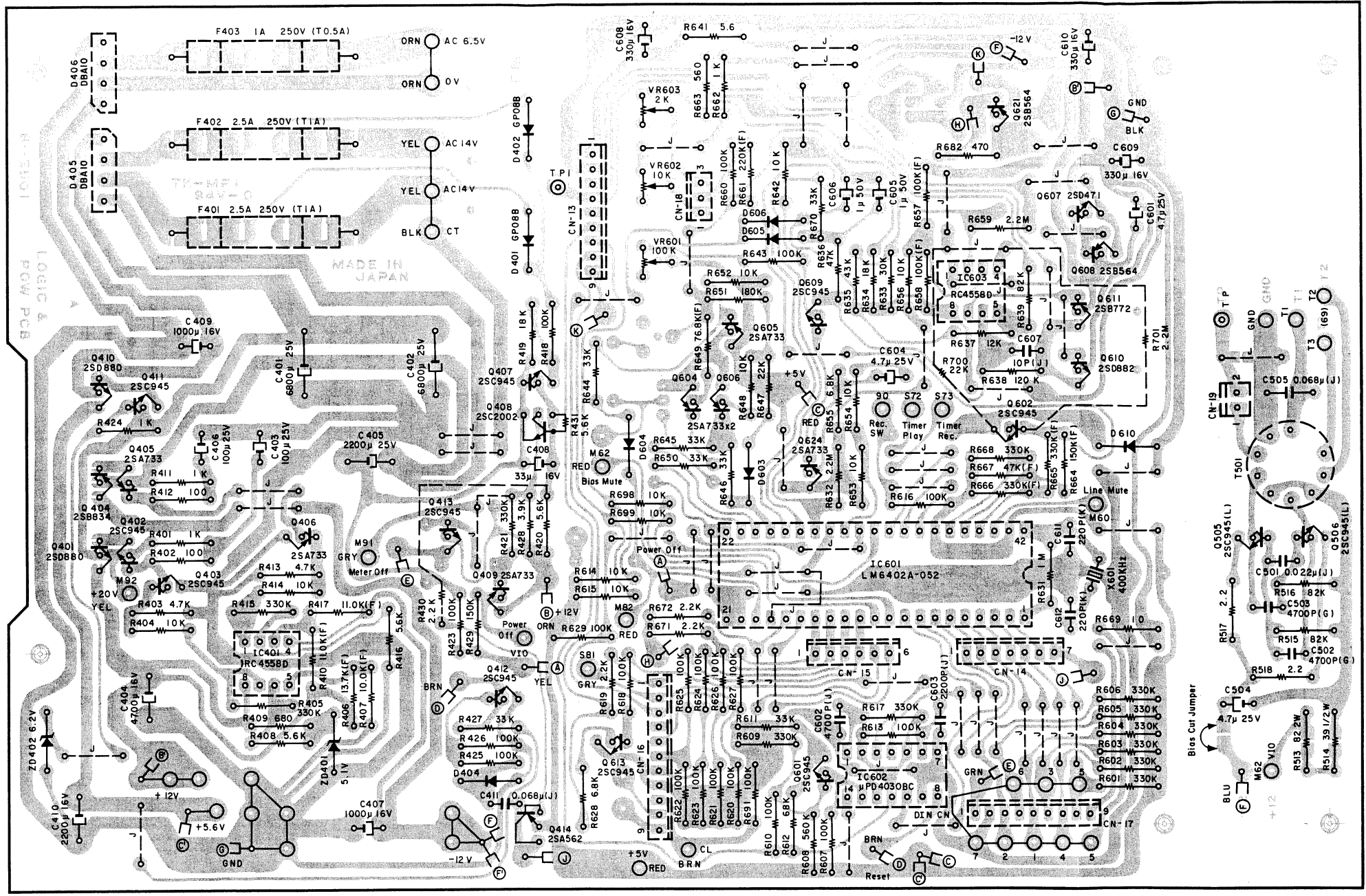


Fig. 7.10.2 Serial Nos.: A31301001 - A31304445

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

7.11. Main P.C.B. Ass'y

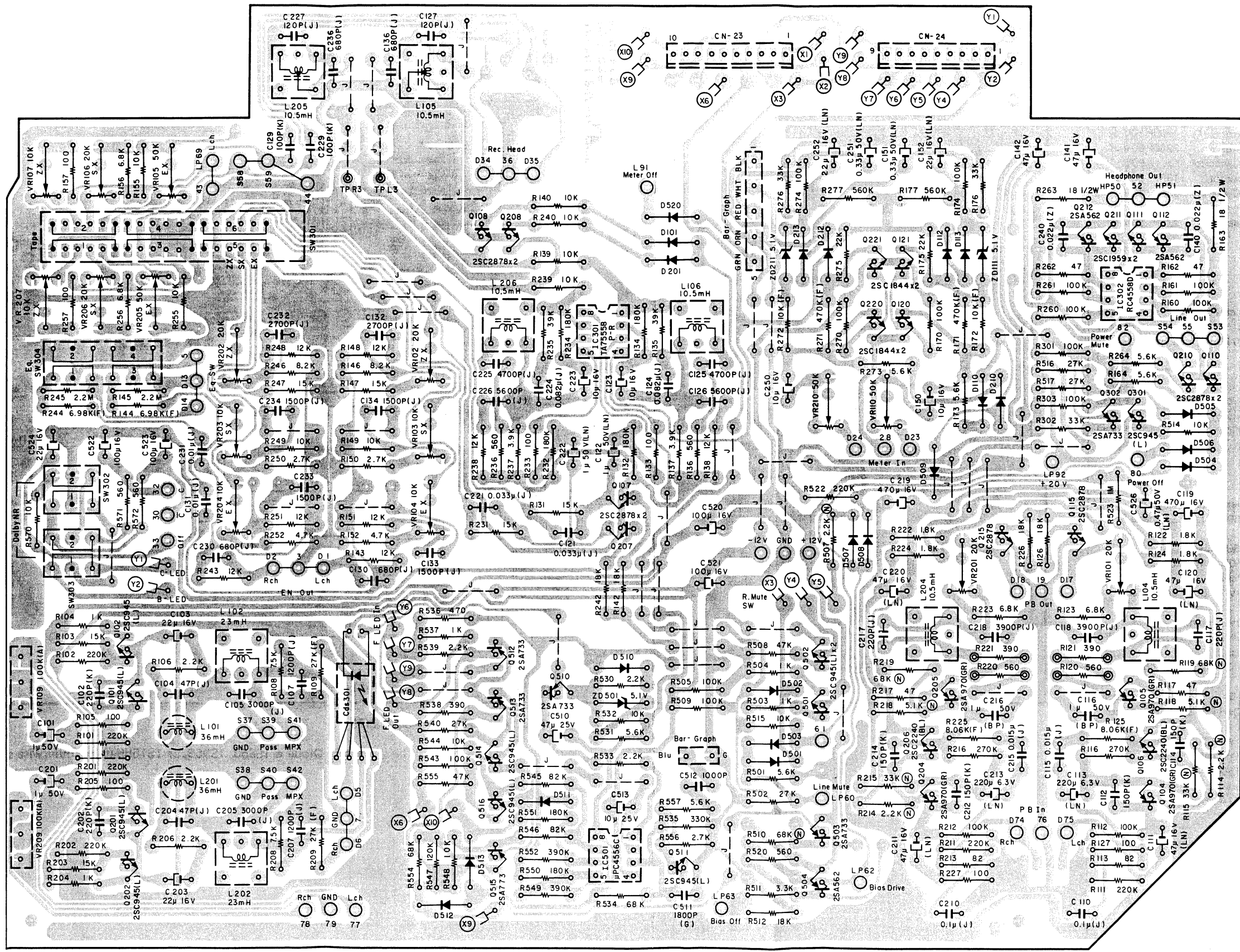


Fig. 7.11.1 Serial No.: A31310053 -

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

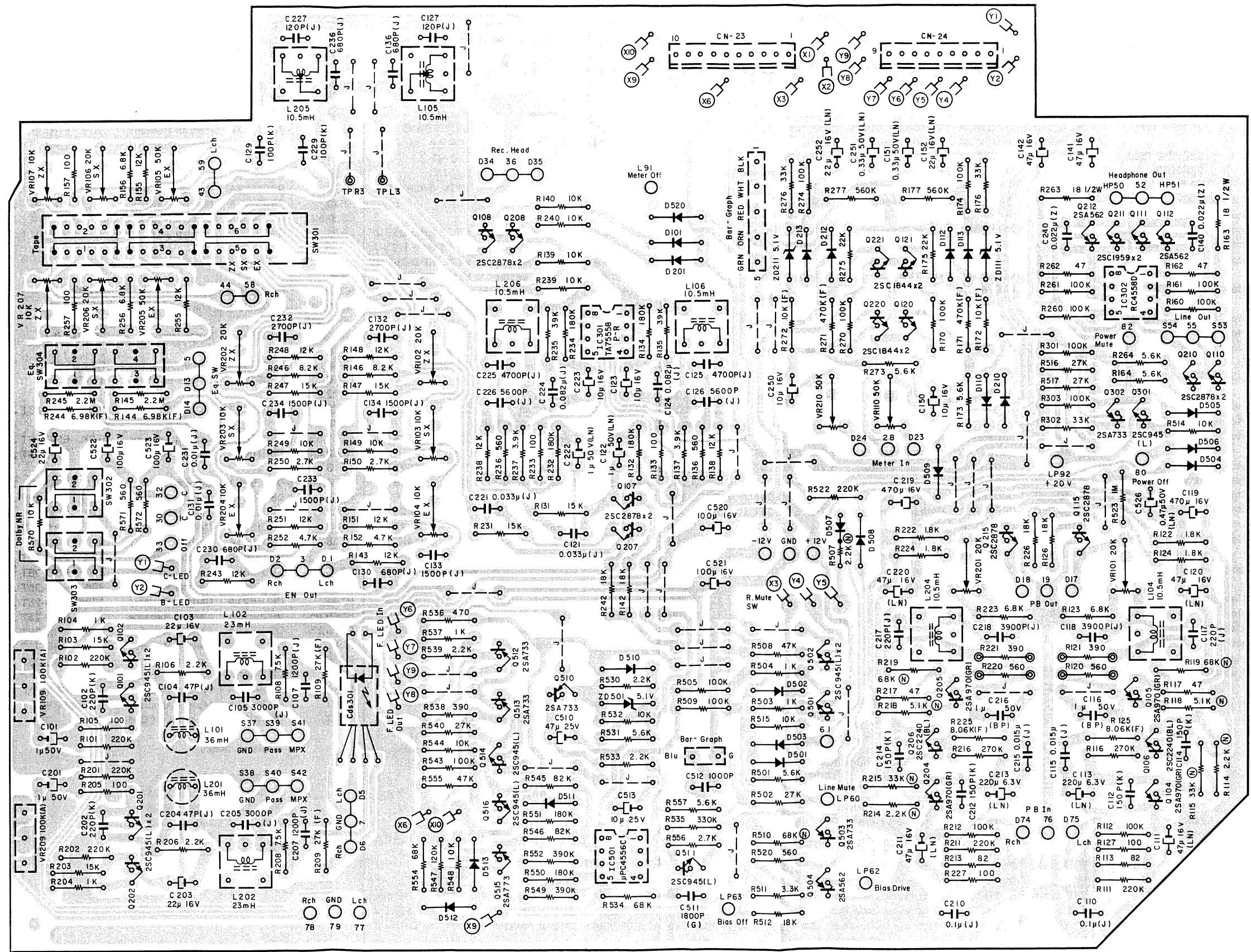


Fig. 7.11.2 Serial Nos.: A31304446 – A31310052

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

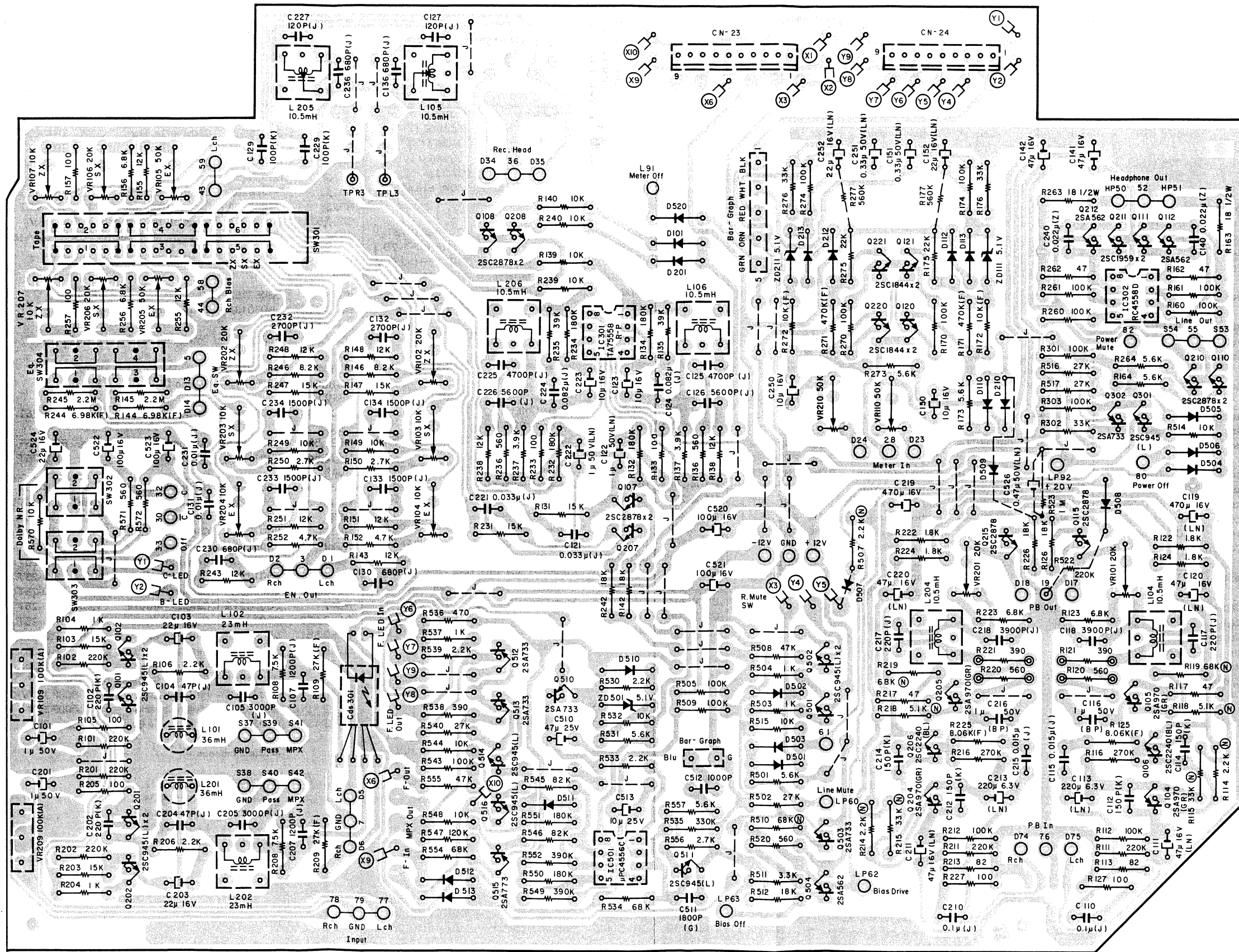


Fig. 7.11.3 Serial Nos.: A31301001 – A31304445

Note: Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.

8. MECHANISM ASS'Y AND PARTS LIST

8.1. Synthesis

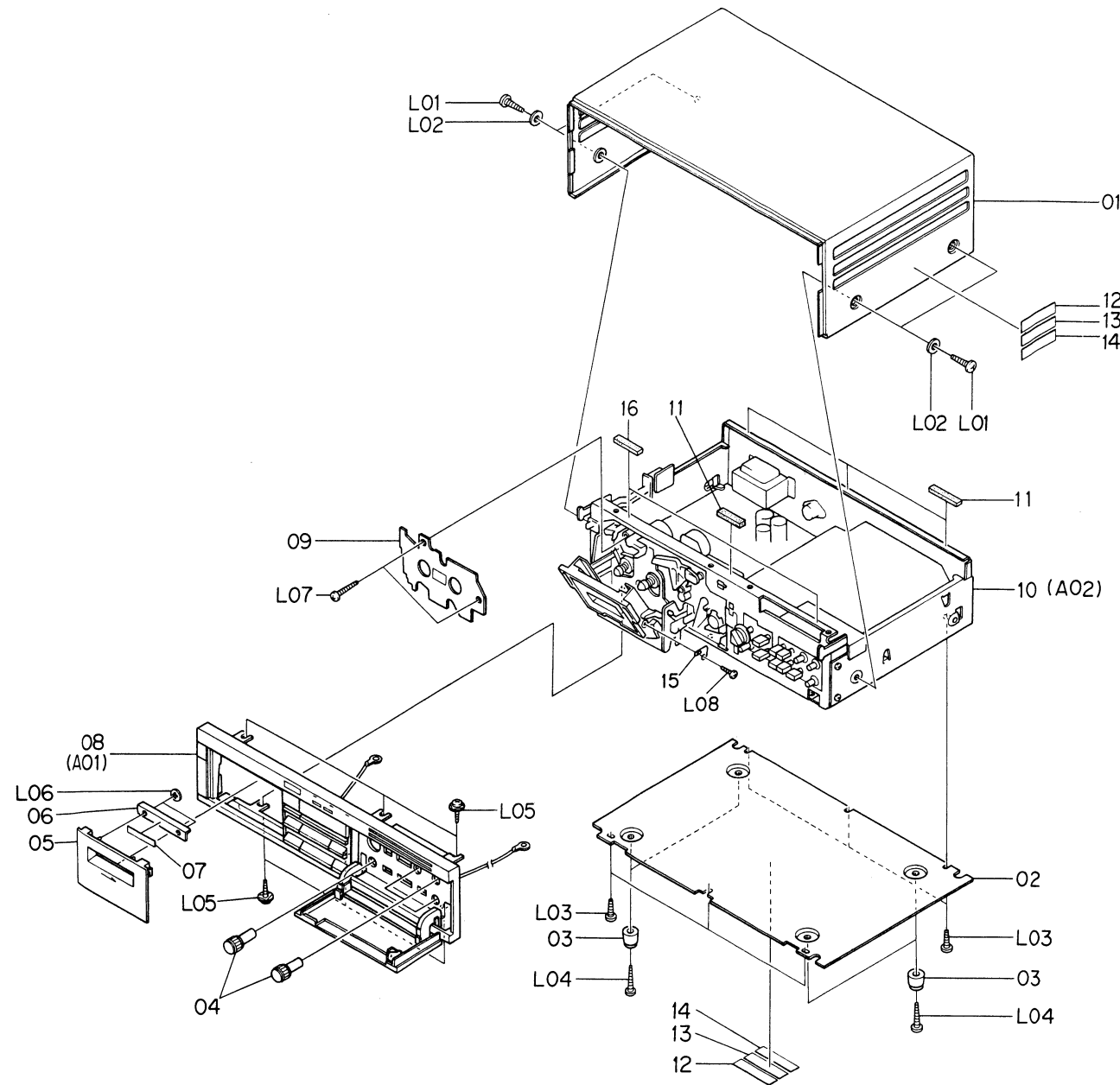


Fig. 8.1

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
	HA04252A	Synthesis (Japan)	1		HA04252A	Synthesis (Japan)	1
	HA04253A	Synthesis (U.S.A. & Canada)	1		HA04253A	Synthesis (U.S.A. & Canada)	1
	HA04254A	Synthesis (220V Class 2)	1		HA04254A	Synthesis (220V Class 2)	1
	HA04255A	Synthesis (UK)	1		HA04255A	Synthesis (UK)	1
	HA04256A	Synthesis (Australia)	1		HA04256A	Synthesis (Australia)	1
	HA04257A	Synthesis (Others)	1		HA04257A	Synthesis (Others)	1
		Serial No.:				Serial Nos.:	
		A31310053 -				A31301001 - A31310052	
01	0H04049B	Top Cover	1	01	0H04049B	Top Cover	1
02	0J04477A	Bottom Cover	1	02	0J04477A	Bottom Cover	1
03	0J03564A	Leg T-H	4	03	0J03564A	Leg T-H	4
04	0H03891A	Control Volume Knob	4	04	0H03891A	Control Volume Knob	4
05	0H04050C	Cassette Case	1	05	0H04050C	Cassette Case	1
06	0H04067A	Cassette Case Holder	1	06	0H04067A	Cassette Case Holder	1
07	0J04572A	Adhesive Tape	1	07	0J04572A	Adhesive Tape	1
08	HA04258A	Front Panel Ass'y	1	08	HA04258A	Front Panel Ass'y	1
09	HA04259A	Cover Plate Ass'y	1	09	HA04259A	Cover Plate Ass'y	1
10	JA03896B	Chassis Ass'y (Japan)	1	10	JA03896A	Chassis Ass'y (Japan)	1
	JA03897B	Chassis Ass'y (U.S.A. & Canada)	1		JA03897A	Chassis Ass'y (U.S.A. & Canada)	1
	JA03898B	Chassis Ass'y (220V Class 2)	1		JA03898A	Chassis Ass'y (220V Class 2)	1
	JA03899B	Chassis Ass'y (UK)	1		JA03899A	Chassis Ass'y (UK)	1
	JA03900B	Chassis Ass'y (Australia)	1		JA03900A	Chassis Ass'y (Australia)	1
	JA03901B	Chassis Ass'y (Others)	1		JA03901A	Chassis Ass'y (Others)	1
11	0J04550A	Top Cover Cushion	4	11	0J04550A	Top Cover Cushion	4
12	0M03883B	Lamp Caution Label (U.S.A. & Canada)	1	12	0M03883B	Lamp Caution Label (U.S.A. & Canada)	1
13	0M03800A	Caution Label H (U.S.A. & Canada)	1	13	0M03800A	Caution Label H (U.S.A. & Canada)	1
14	0M04314A	UL Caution Label (U.S.A. & Canada)	1	14	0M04314A	UL Caution Label (U.S.A. & Canada)	1
	0M04101B	Caution Label (Japan, 220V Class 2, UK, Australia & Others)	1		0M04101B	Caution Label (Japan, 220V Class 2, UK, Australia & Others)	1
15	0J04592B	Cassette Case Earth Spring	1	15	0J04592B	Cassette Case Earth Spring	1
16	0J04587A	Front Cushion	2	16	0J04587A	Front Cushion	2
L01	0E00915A	BT Screw M4x8 Philips Binding Head (Black Chromate)	4	L01	0E00915A	BT Screw M4x8 Philips Binding Head (Black Chromate)	4
L02	0E00736A	Washer 4mm (Black Chromate)	4	L02	0E00736A	Washer 4mm (Black Chromate)	4
L03	0E00857A	BT Screw M3x6 Philips Binding Head	6	L03	0E00857A	BT Screw M3x6 Philips Binding Head	6
L04	0E00865A	BT Screw M3x10 Philips Binding Head	4	L04	0E00865A	BT Screw M3x10 Philips Binding Head	4
L05	0E00943A	BT Screw M3x8 Philips Binding Head (Polywave)	6	L05	0E00943A	BT Screw M3x8 Philips Binding Head (Polywave)	6
L06	0E00967A	Stopper Ring 3mm	2	L06	0E00967A	Stopper Ring 3mm	2
L07	0E00950A	BT Screw M3x14 Philips Pan Head (Black Chromate)	2	L07	0E00950A	BT Screw M3x14 Philips Pan Head (Black Chromate)	2
L08	0E00840A	BT Screw M2x8 Philips Pan Head	1	L08	0E00840A	BT Screw M2x8 Philips Pan Head	1

8.2. Front Panel Ass'y (A01)

Schematic Ref. No.	Part No.	Description	Q'ty
A01	HA04258A	Front Panel Ass'y Serial No.: A31310053 -	1
01	0H04033B	Power Switch Button	1
02	0J04514C	Power Switch Button Spring	1
03	0H04035B	Eject Button	1
04	0J04513A	Eject Button Spring	1
05	0H04037B	Reset Switch Button	1
06	0H04036B	Mute Switch Button	1
07	0H04040B	Button Escutcheon L	1
08	0J04517A	Fader Shaft	1
09	0H04045C	Fader Button	1
10	0J04511A	Fader Button Spring	2
11	0H04043D	Front Escutcheon	1
12	0H04041A	LED Lens	9
13	0H04034B	Control Button L	2
14	0H04038B	Control Button S	4
15	0J04508C	Control Button Shaft	2
16	0J04510A	Control Button Cushion	6
17	0H04057C	Front Door	1
18	JA03921A	Adjustment Lid Holder Ass'y	1
19	0H04048B	Door Arm R	1
20	0H04046B	Joint Plate	1
21	0H04047B	Door Arm L	1
22	0J04551B	Door Arm Shaft L	1
23	0J04509B	Door Arm Shaft R	1
24	0J04516B	Door Spring	1
25	0H04044D	Front Panel	1
26	0J04553A	Damper	1
27	JA03923A	Lock Lever Ass'y	1
28	0J04560A	Door Cushion	1
29	0H04000A	Meter Cover	1
30	BA04591A	Indicator P.C.B. Ass'y	1
31	0J04519A	Meter Shield Case	1
32	0J04594A	Earth Sheet A	1
33	BA04592A	Control Switch P.C.B. Ass'y	1
34	0J04557A	Fader Rubber S	2
35	0J04568A	Control Switch Spacer	4
36	BA04593A	LED P.C.B. Ass'y	1
37	0J04512A	Reset Spring	1
38	0H04031A	Fader Lens	2
39	0J04558A	Fader Rubber L	1
40	BA04590A	Counter-2 P.C.B. Ass'y	1
41	BA04589A	Counter-1 P.C.B. Ass'y	1
42	0J04518B	Counter Shield Cover	1
43	0J04593B	Fader Earth Spring	1
L01	0E00857A	BT Screw M3x6 Philips Binding Head	17
L02	0E00868A	BT Screw M3x8 Philips Binding Head	6
L03	0E00637A	Washer 3.3mm	3
L04	0E00252A	Stopper Ring CS 3mm	2
L05	0E03014A	Stopper Ring CS 4mm	3
L06	0E00920A	BT Screw M3x6 Philips Pan Head (Polywave)	2
L07	0E00181A	E-Ring 3mm	3
L08	0E00965A	BT Screw M3x6 Philips Binding Head (Nickel)	1
L09	0E00593A	Screw M3x6 Philips Binding Head (Bronze)	2
L10	0J04310A	Washer FT40	1
L11	0J04354A	Washer FT30	2

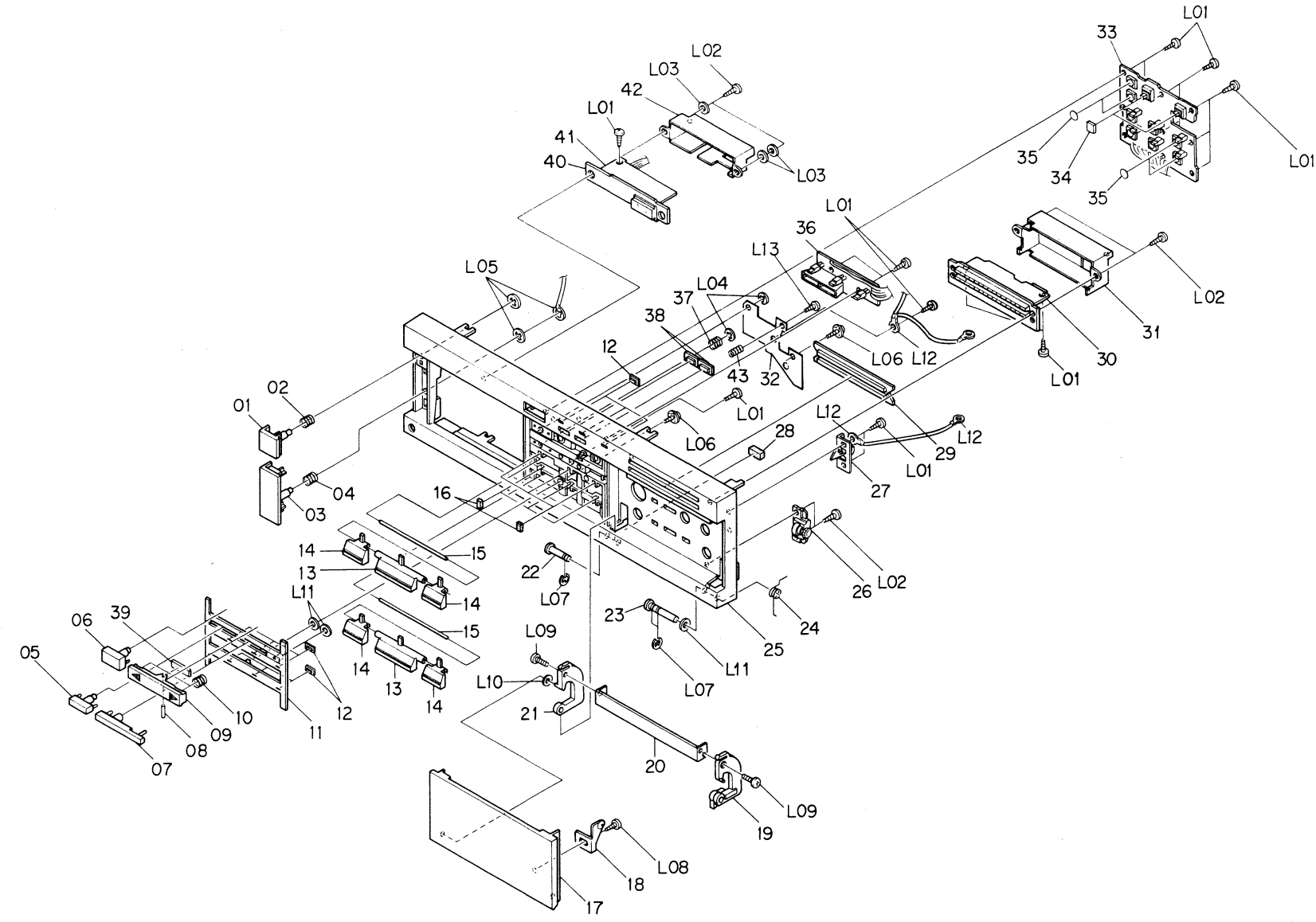


Fig. 8.2.1 Serial No.: A31310053 -

Schematic Ref. No.	Part No.	Description	Q'ty
L12	0E00037A	Earth Lug B-5	5
L13	0E03013A	BT Screw M3x5 Philips Binding Head	1

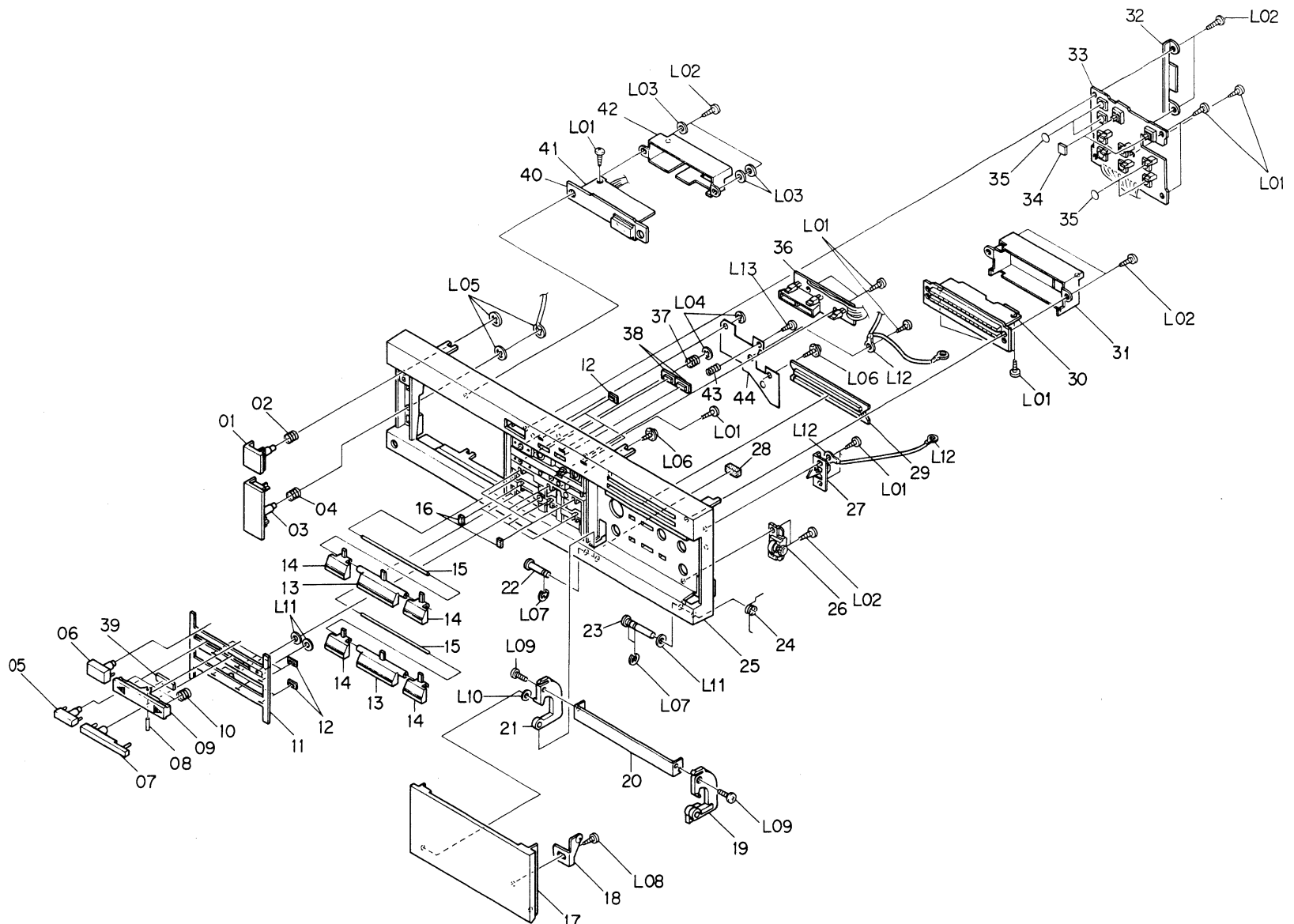


Fig. 8.2.2 Serial Nos.: A31301001 – A31310052

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
A01	HA04258A	Front Panel Ass'y Serial Nos.: A31301001 – A31310052	1	14	0H04038B	Control Button S	4
01	0H04033B	Power Switch Button	1	15	0J04508C	Control Button Shaft	2
02	0J04514C	Power Switch Button Spring	1	16	0J04510A	Control Button Cushion	6
03	0H04035B	Eject Button	1	17	0H04057C	Front Door	1
04	0J04513A	Eject Button Spring	1	18	JA03921A	Adjustment Lid Holder Ass'y	1
05	0H04037B	Reset Switch Button	1	19	0H04048B	Door Arm R	1
06	0H04036B	Mute Switch Button	1	20	0H04046B	Joint Plate	1
07	0H04040B	Button Escutcheon L	1	21	0H04047B	Door Arm L	1
08	0J04517A	Fader Shaft	1	22	0J04551B	Door Arm Shaft L	1
09	0H04045C	Fader Button	1	23	0J04509B	Door Arm Shaft R	1
10	0J04511A	Fader Button Spring	2	24	0J04516B	Door Spring	1
11	0H04043D	Front Escutcheon	1	25	0H04044D	Front Panel	1
12	0H04041A	LED Lens	9	26	0J04553A	Damper	1
13	0H04034B	Control Button L	2	27	JA03923A	Rock Lever Ass'y	1
				28	0J04560A	Door Cushion	1
				29	0H04000A	Meter Cover	1
				30	BA04591A	Indicator P.C.B. Ass'y	1

Schematic Ref. No.	Part No.	Description	Q'ty
31	0J04519A	Meter Shield Case	1
32	0J04574A	Control P.C.B. Holder	1
33	BA04592A	Control Switch P.C.B. Ass'y	1
34	0J04557A	Fader Rubber S	2
35	0J04568A	Control Switch Spacer	4
36	BA04593A	LED P.C.B. Ass'y	1
37	0J04512A	Reset Spring	1
38	0H04031A	Fader Lens	2
39	0J04558A	Fader Rubber L	1
40	BA04590A	Counter-2 P.C.B. Ass'y	1
41	BA04589A	Counter-1 P.C.B. Ass'y	1
42	0J04518B	Counter Shield Cover	1
43	0J04593B	Fader Earth Spring	1
44	0J04594B	Earth Sheet A	1
L01	0E00857A	BT Screw M3x6 Philips Binding Head	17
L02	0E00868A	BT Screw M3x8 Philips Binding Head	6
L03	0E00637A	Washer 3.3mm	3
L04	0E00252A	Stopper Ring CS 3mm	2
L05	0E03014A	Stopper Ring CS 4mm	3
L06	0E00920A	BT Screw M3x6 Philips Pan Head (Polywave)	2
L07	0E00181A	E-Ring 3mm	3
L08	0E00965A	BT Screw M3x6 Philips Binding Head (Nickel)	1
L09	0E00593A	Screw M3x6 Philips Binding Head (Bronze)	2
L10	0J04310A	Washer FT40	1
L11	0J04354A	Washer FT30	2
L12	0E00037A	Earth Lug B-5	5
L13	0E03013A	BT Screw M3x5 Philips Binding Head	1
A02	JA03896B	Chassis Ass'y (Japan)	1
	JA03897B	Chassis Ass'y (U.S.A. & Canada)	1
	JA03898B	Chassis Ass'y (220V Class 2)	1
	JA03899B	Chassis Ass'y (UK)	1
	JA03900B	Chassis Ass'y (Australia)	1
	JA03901B	Chassis Ass'y (Others)	1
		Serial No.: A31310053 –	
01	JA03911A	Headphone Holder Ass'y	1
02	0J04527A	Mechanism Bracket	1
03	0J04522D	Front Chassis	1
04	0B02228B	Cassette Case Lamp	1
05	0J04506C	Lamp Holder	1
06	0J04469A	Cassette Case Plate	1
07	0B02542A	Cassette Case Lamp P.C.B.	1
08	CA08335A	Mechanism Ass'y LX-3	1
09	0J04535A	Arm Holder	1
10	0J04524A	Power Switch Bar	1
11	BA04626A	Power Switch P.C.B. Ass'y (Japan)	1
	BA04627A	Power Switch P.C.B. Ass'y (U.S.A. & Canada)	1
	BA04628A	Power Switch P.C.B. Ass'y (UK, 220V Class 2, Australia & Others)	1
12	0H03890B	Tape Selector Switch Knob	1
13	0H04054B	Push Button	7
14	0J04525A	Switch Holder	1
15	BA04559B	Main P.C.B. Ass'y	1

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
16	BA04742A	Amp. Switch P.C.B. Ass'y	1	11	BA04626A	Power Switch P.C.B. Ass'y (Japan)	1
17	OJ04520A	Side Chassis L	1		BA04627A	Power Switch P.C.B. Ass'y (U.S.A. & Canada)	1
18	OJ04521C	Center Chassis	1		BA04628A	Power Switch P.C.B. Ass'y (UK, 220V Class 2, Australia & Others)	1
19	OJ04471A	Side Chassis R	1	12	0H03890B	Tape Selector Switch Knob	1
20	OJ04548B	MPX Shield Plate	1	13	0H04054B	Push Button	7
21	BA04644A	Dolby NR P.C.B. Ass'y (Japan, UK, 220V Class 2, Australia & Others)	1	14	OJ04525A	Switch Holder	1
	BA04538A	Dolby NR P.C.B. Ass'y (U.S.A. & Canada)	1	15	BA04559A	Main P.C.B. Ass'y	1
22	0B08771A	Hinge	2	16	BA04625A	Amp. Switch P.C.B. Ass'y	1
23	OJ04398A	Record Switch Spring	1	17	OJ04520A	Side Chassis L	1
24	OJ04533A	Record Switch Holder	1	18	OJ04521B	Center Chassis	1
25	BA04635A	Logic & Power P.C.B. Ass'y (Japan)	1	19	OJ04471A	Side Chassis R	1
	BA04636A	Logic & Power P.C.B. Ass'y (UK, 220V Class 2 & Australia)	1	20	OJ04548B	MPX Shield Plate	1
	BA04640A	Logic & Power P.C.B. Ass'y (U.S.A., Canada & Others)	1	21	BA04644A	Dolby NR P.C.B. Ass'y (Japan, UK, 220V Class 2, Australia & Others)	1
26	HA04260A	Rear Panel Ass'y (Japan)	1		BA04538A	Dolby NR P.C.B. Ass'y (U.S.A. & Canada)	1
	HA04261A	Rear Panel Ass'y (U.S.A. & Canada)	1	22	0B08771A	Hinge	2
	HA04262A	Rear Panel Ass'y (220V Class 2)	1	23	OJ04398A	Record Switch Spring	1
	HA04263A	Rear Panel Ass'y (UK)	1	24	OJ04533A	Record Switch Holder	1
	HA04264A	Rear Panel Ass'y (Australia)	1	25	BA04635A	Logic & Power P.C.B. Ass'y (Japan)	1
	HA04265A	Rear Panel Ass'y (Others)	1		BA04636A	Logic & Power P.C.B. Ass'y (UK, 220V Class 2 & Australia)	1
27	0B08515A	Insu-Lock	20		BA04640A	Logic & Power P.C.B. Ass'y (U.S.A., Canada & Others)	1
28	OJ04583A	Front Seal	3	26	HA04260A	Rear Panel Ass'y (Japan)	1
29	OJ04418A	Free Bushing 70mm	1		HA04261A	Rear Panel Ass'y (U.S.A. & Canada)	1
L01	0E00857A	BT Screw M3x6 Philips Binding Head	32		HA04262A	Rear Panel Ass'y (220V Class 2)	1
L02	0E00944A	BT Screw M4x15 Philips Binding Head (Black Chromate)	3		HA04263A	Rear Panel Ass'y (UK)	1
L03	0E00924A	BT Screw M4x16 Philips Binding Head (Chromate)	1		HA04264A	Rear Panel Ass'y (Australia)	1
L04	0E00078A	Washer 4mm	4		HA04265A	Rear Panel Ass'y (Others)	1
L05	0E00962A	BT Screw M2x6 Philips Binding Head (Black Chromate)	1	27	0B08515A	Insu-Lock	20
L06	0E00860A	BT Screw M3x6 Philips Binding Head (Black Chromate)	2	28	OJ04583A	Front Seal	3
L07	0E00157A	Washer 3mm	1	29	OJ04418A	Free Bushing 70mm	1
L08	0E00612A	Screw M3x6 Philips Pan Head (2A)	5	L01	0E00857A	BT Screw M3x6 Philips Binding Head	32
L09	-	Volume Nut	(2)	L02	0E00944A	BT Screw M4x15 Philips Binding Head (Black Chromate)	3
L10	-	Volume Washer	(2)	L03	0E00924A	BT Screw M4x16 Philips Binding Head (Chromate)	1
A02	JA03896A	Chassis Ass'y (Japan)	1	L04	0E00078A	Washer 4mm	4
	JA03897A	Chassis Ass'y (U.S.A. & Canada)	1	L05	0E00962A	BT Screw M2x6 Philips Binding Head (Black Chromate)	1
	JA03898A	Chassis Ass'y (220V Class 2)	1	L06	0E00860A	BT Screw M3x6 Philips Binding Head (Black Chromate)	2
	JA03899A	Chassis Ass'y (UK)	1	L07	0E00157A	Washer 3mm	1
	JA03900A	Chassis Ass'y (Australia)	1	L08	0E00612A	Screw M3x6 Philips Pan Head (2A)	5
	JA03901A	Chassis Ass'y (Others)	1	L09	-	Volume Nut	(2)
		Serial Nos.: A31301001 - A31310052		L10	-	Volume Washer	(2)
01	JA03911A	Headphone Holder Ass'y	1				
02	OJ04527A	Mechanism Bracket	1				
03	OJ04522C	Front Chassis	1				
04	0B02228B	Cassette Case Lamp	1				
05	OJ04506C	Lamp Holder	1				
06	OJ04469A	Cassette Case Plate	1				
07	0B02542A	Cassette Case Lamp P.C.B.	1				
08	CA08335A	Mechanism Ass'y LX-3	1				
09	OJ04535A	Arm Holder	1				
10	OJ04524A	Power Switch Bar	1				

8.3. Chassis Ass'y (A02)

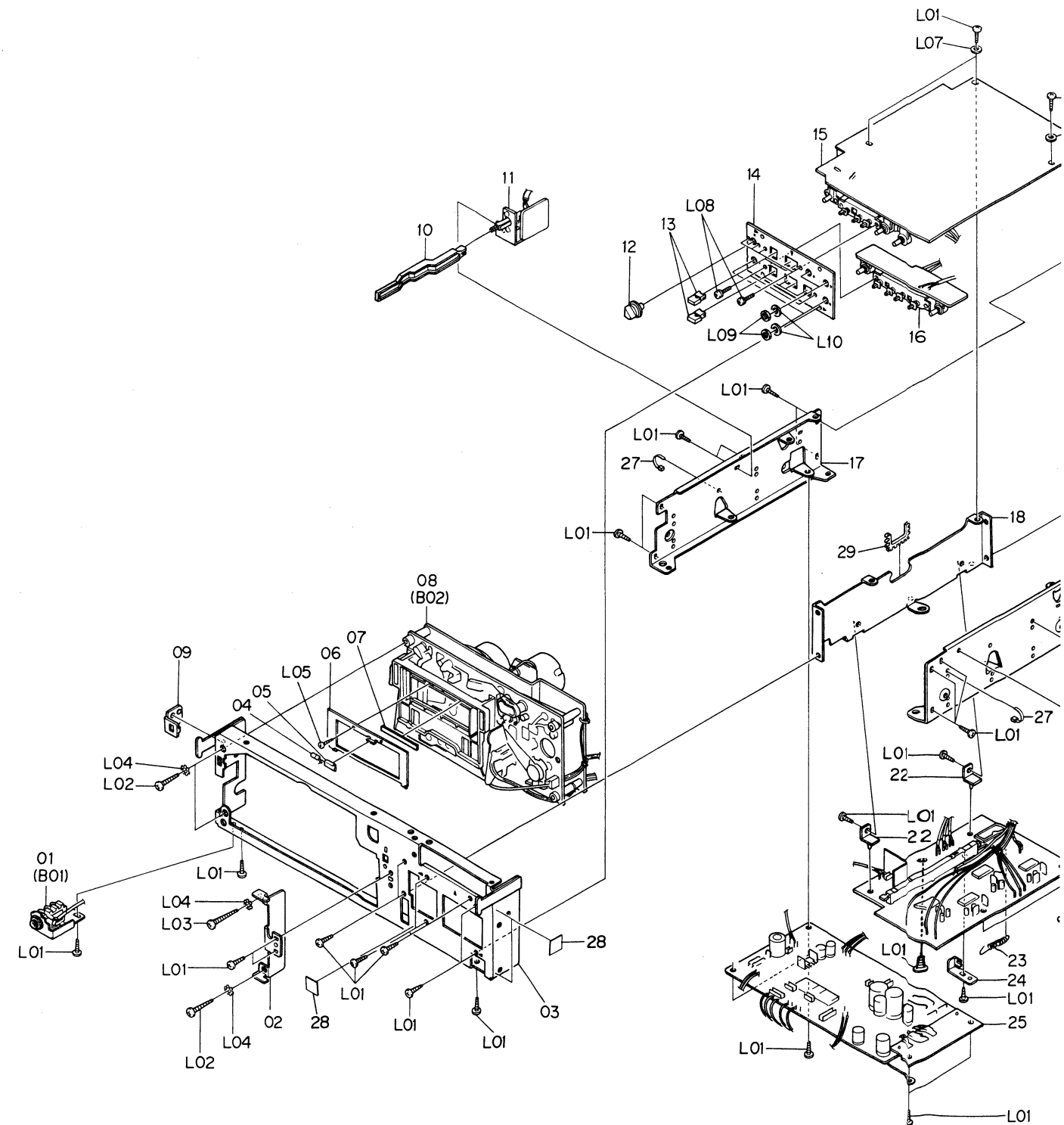


Fig. 8.3

8.4. Headphone Holder Ass'y (B01)

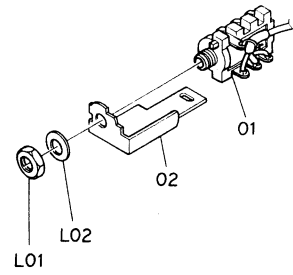


Fig. 8.4

8.5. Mechanism Ass'y LX-3 (B02)

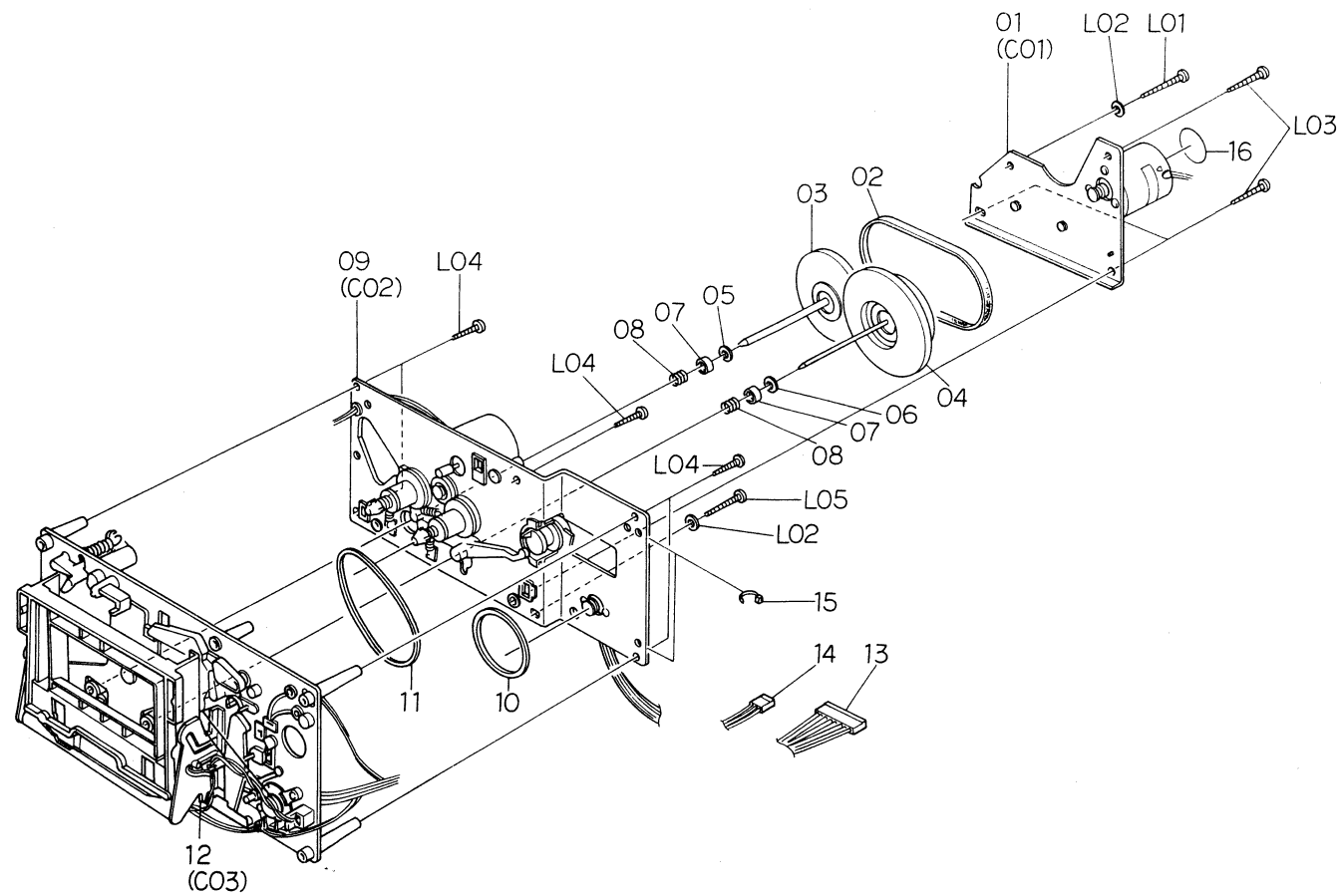


Fig. 8.5

8.6. Rear Panel Ass'y (B03)

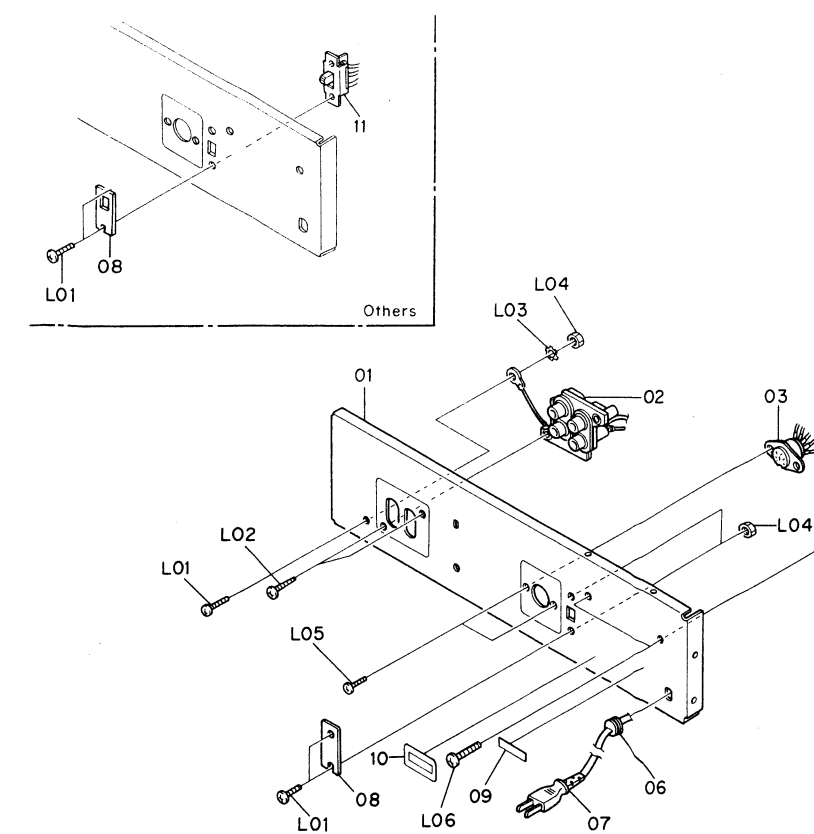


Fig. 8.6

8.7. Flywheel Holder Ass'y (C01)

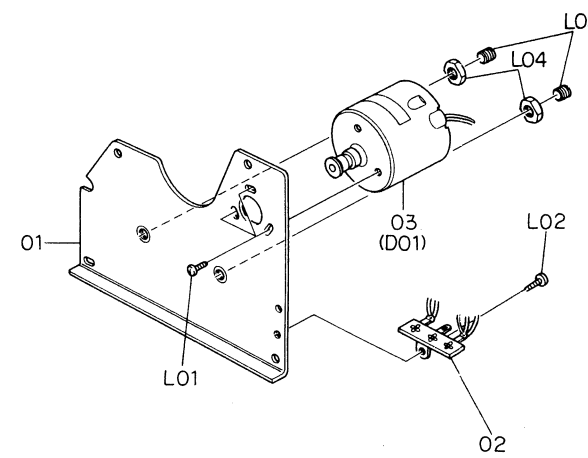


Fig. 8.7

8.8. Sub Mechanism Chassis Ass'y (C02)

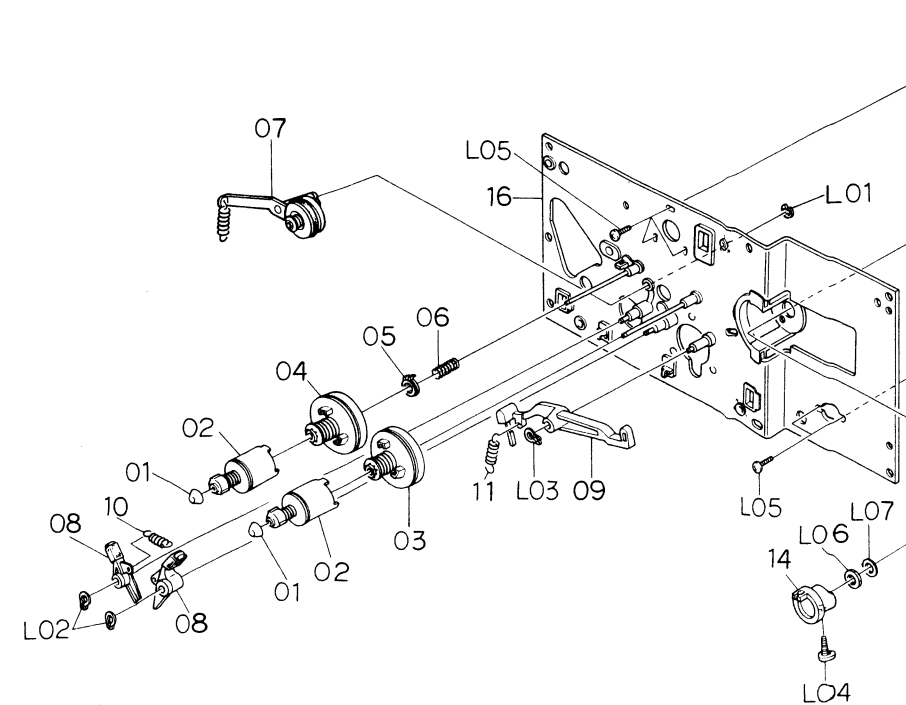


Fig. 8.8

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
B01	JA03911A	Headphone Holder Ass'y Serial No.: A31301001 —	1	09	CA08355A	Sub Mechanism Chassis Ass'y	1
01	0B08511A	Headphone Jack	1	10	0C08099B	Control Motor Belt	1
02	0J04528C	Headphone Jack Holder	1	11	0C08098B	Counter Belt B	1
L01	—	Headphone Jack Washer	(1)	12	CA08336A	Main Mechanism Chassis Ass'y	1
L02	—	Headphone Jack Nut	(1)	13	0B08947A	9P-H Connector	1
				14	0B08672A	3P-H Connector	1
				15	0B08515A	Insu-Lock	10
				16	0M04230A	Motor Label	1
				—	0M04328A	Mechanism Serial No. Seal	1
				—	0M04230A	Label CN-13	1
B02	CA08335A	Mechanism Ass'y LX-3 Serial No.: A31301001 —	1	L01	0E00834A	BT Screw M3x30 Philips Pan Head	1
01	CA08333A	Flywheel Holder Ass'y	1	L02	0E00178A	Washer 3mm	2
02	0C08096C	Capstan Belt	1	L03	0E00833A	BT Screw M3x20 Philips Pan Head	3
03	CA08169A	Supply Flywheel Ass'y E	1	L04	0E00883A	BT Screw M3x18 Philips Pan Head	5
04	CA08107A	Take-up Flywheel Ass'y	1	L05	0E00835A	BT Screw M3x25 Philips Pan Head	1
05	0C08021B	Thrust Washer 3.1mm	1				
06	0C08020B	Thrust Washer 2.6mm	1				
07	0C08243A	Flange Thrust Cap	2				
08	0C08244A	Flange Thrust Spring	2				

8.5. Mechanism Ass'y LX-3 (B02)

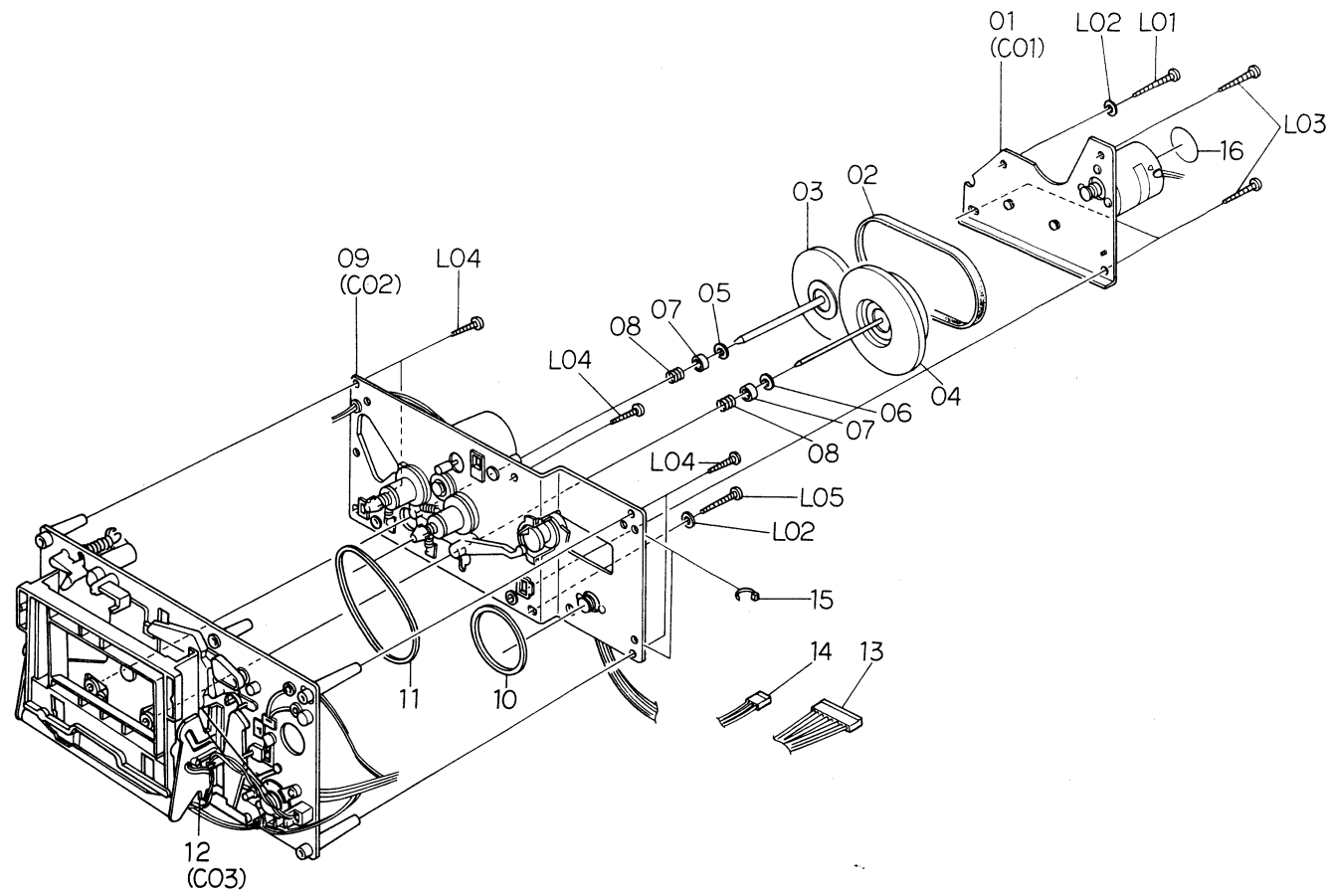


Fig. 8.5

8.6. Rear Panel Ass'y (B03)

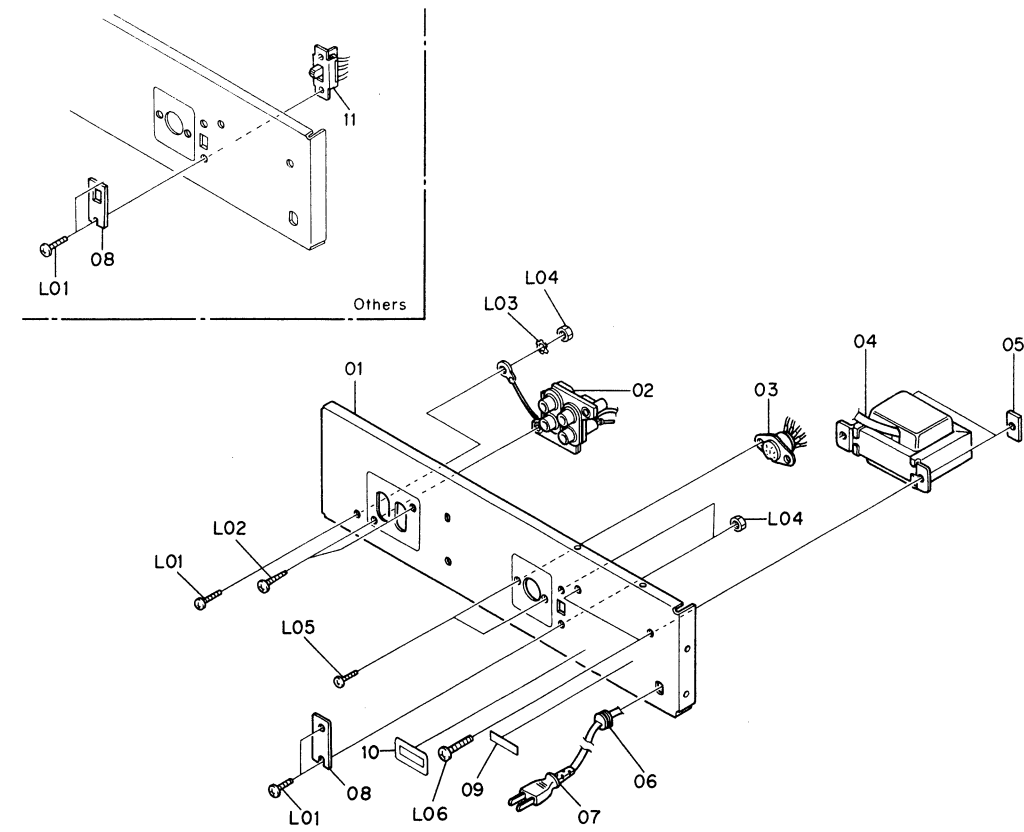


Fig. 8.6

8.7. Flywheel Holder Ass'y (C01)

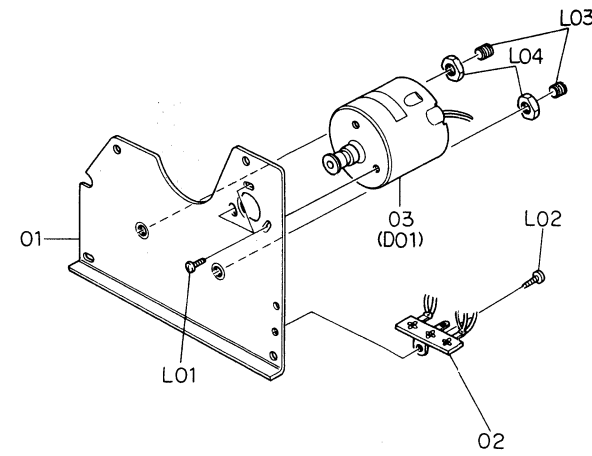


Fig. 8.7

8.8. Sub Mechanism Chassis Ass'y (C02)

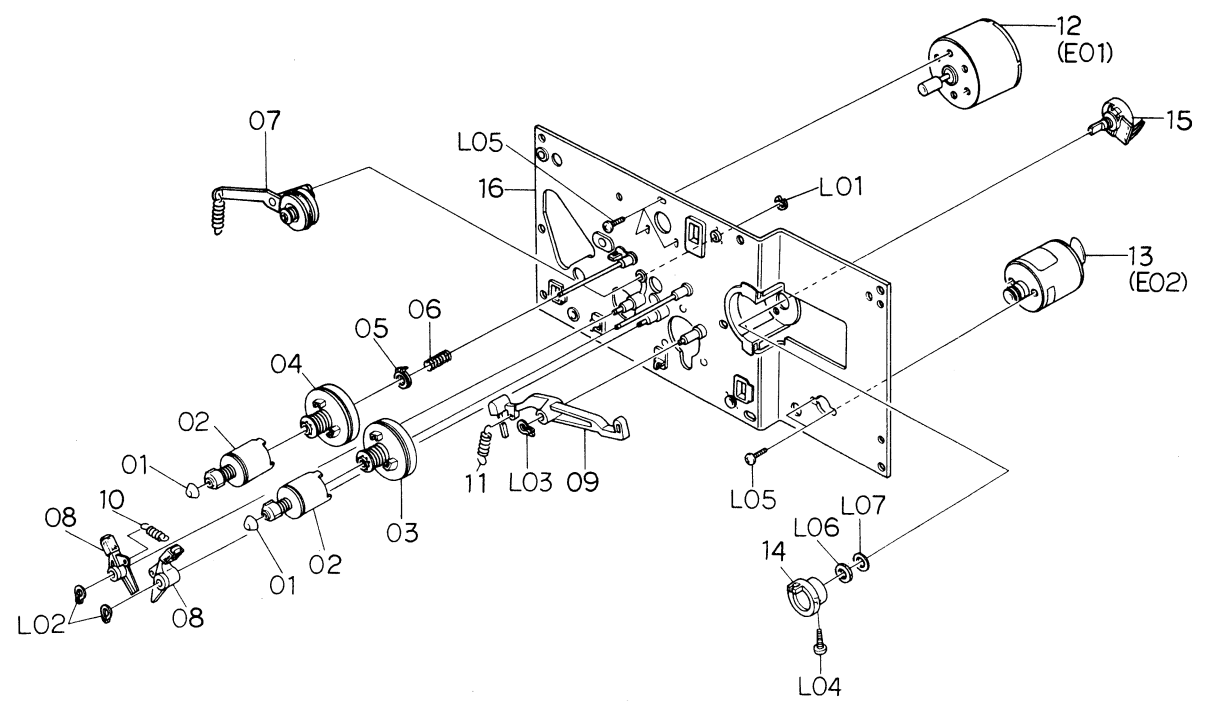


Fig. 8.8

Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
Holder Ass'y	1	09	CA08355A	Sub Mechanism Chassis Ass'y	1
1 -		10	OC08099B	Control Motor Belt	1
		11	OC08098B	Counter Belt B	1
		12	CA08336A	Main Mechanism Chassis Ass'y	1
1 -		13	OB08947A	9P-H Connector	1
1 -		14	OB08672A	3P-H Connector	1
1 -		15	OB08515A	Insu-Lock	10
1 -		16	OM04230A	Motor Label	1
		-	OM04328A	Mechanism Serial No. Seal	1
		-	OM04230A	Label CN-13	1
Ass'y LX-3	1	L01	0E00834A	BT Screw M3x30 Philips Pan Head	1
1 -		L02	0E00178A	Washer 3mm	2
		L03	0E00833A	BT Screw M3x20 Philips Pan Head	3
er Ass'y	1	L04	0E00883A	BT Screw M3x18 Philips Pan Head	5
1 -		L05	0E00835A	BT Screw M3x25 Philips Pan Head	1
rel Ass'y E	1				
rel Ass'y	1				
3.1mm	1				
2.6mm	1				
Cap	2				
Spring	2				

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty				
B03	HA04260A	Rear Panel Ass'y (Japan)	1	C01	CA08333A	Flywheel Holder Ass'y Serial No.: A31301001 -	1				
	HA04261A	Rear Panel Ass'y (U.S.A. & Canada)	1								
	HA04262A	Rear Panel Ass'y (220V Class 2)	1								
	HA04263A	Rear Panel Ass'y (UK)	1								
	HA04264A	Rear Panel Ass'y (Australia)	1								
	HA04265A	Rear Panel Ass'y (Others) Serial No.: A31301001 -	1								
01	0H04052A	Rear Panel	1	L03	0C08068C	Thrust Screw	2				
02	BA04630A	Pin Jack Ass'y	1	L04	0C03857A	Lock Nut	2				
03	BA04629A	8P DIN Socket Ass'y	1	C02	CA08355A	Sub Mechanism Chassis Ass'y Serial No.: A31301001 -	1				
04	0B06663A	Power Transformer (Others)	1								
	0B06664B	Power Transformer (220V Class 2, UK & Australia)	1								
	0B06665A	Power Transformer (U.S.A. & Canada)	1					01	0C08039B	Reel Hub Head	2
	0B06666A	Power Transformer (Japan)	1					02	CA08038B	Reel Hub B Supply Ass'y	2
05	0C01162B	Bolt Receptacle Plate	2					03	CA08037A	Reel Hub Take-up Ass'y	1
06	0B08037U	Cord Bushing (U.S.A., Canada, Japan, 220V Class 2, Australia & Others)	1					04	CA08064A	Reel Hub Supply Ass'y	1
								05	CA08039A	Back Tension Ass'y	1
	0B08351A	Cord Bushing 4K-4 (UK)	1					06	0C08269A	Back Tension Spring C	1
07	0B08533A	Power Cord (U.S.A. & Canada)	1					07	CA08193A	Idler Ass'y	1
	0B08219B	Power Cord (Japan)	1					08	CA08042A	Brake Ass'y	1
	0B08093U	Power Cord (220V Class 2)	1					09	0C08030C	Brake Drive Arm	1
	0B08348A	Power Cord (UK)	1					10	0C08129A	Brake Arm Spring	1
	0B05241A	Power Cord (Australia)	1					11	0C08128A	Brake Drive Arm Spring	1
	0B08533A	Power Cord (Others)	1					12	CA08242A	Reel Motor Ass'y	1
08	0J03663C	Switch Cover (U.S.A., Canada, Japan, 220V Class 2, UK & Australia)	1					13	CA08034A	Control Motor Ass'y	1
								14	0C08053B	Volume Coupler	1
	0M03946A	Voltage Selector Lock Plate C (Others)	1	15	0B07240A	Volume Control 10K (B)	1				
09	0M03797A	Voltage Label 240V (UK & Australia)	1	16	CA08194A	Sub Chassis Ass'y	1				
	0M03796A	Voltage Label 220V (220V Class 2)	1	L01	0E00698A	E-Ring 2.5mm	1				
	0M04293A	Voltage Label 120V/220V-240V (Others)	1	L02	0E00837A	Stopper Ring 3mm	2				
10	0M03551B	Pass Label	1	L03	0E00838A	Stopper Ring 4mm	1				
11	0B07092U	Voltage Selector (Others)	1	L04	0E00859A	BT Screw M2.6x6 Philips Binding Head	1				
L01	0E00594A	Screw M3x8 Philips Binding Head (Bronze)	3	L05	0E00226A	Screw M2.6x4 Philips Pan Head	5				
L02	0E00921A	BT Screw M3x8 Philips Binding Head (Black Chromate)	2	L06	-	Volume Nut	(1)				
L03	0E00172A	Washer 3mm Toothed Lock	1	L07	-	Volume Washer	(1)				
L04	0E00507A	Nut Hex. M3	3								
L05	0E00714A	Screw M2.6x6 Philips Binding Head (Bronze)	2								
L06	0E00953A	Screw M4x10 Philips Binding Head (Black Chromate)	2								
-	0M04320A	Serial Number Plate	1								
-	0M04113A	LA Label (U.S.A. & Canada)	1								
-	0M04185A	FSZ Label (220V Class 2)	1								
-	0M04263A	EP Label (220V Class 2)	1								
-	0M03844B	BS Code Label (UK)	1								
-	0J03644A	Chobert Rivet	2								

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
C03	CA08336A	Main Mechanism Chassis Ass'y Serial No.: A31301001 —	1	D01	CA08118B	Capstan Motor Ass'y Serial No.: A31301001 —	1
01	CA08350A	Cassette Case Holder L Ass'y	1	01	0C08219A	Capstan Motor	1
02	0C08151A	Lid Arm Spring Tube	1	02	0C08212C	Capstan Motor Pulley	1
03	CA08022A	Cassette Case Holder R Ass'y	1	03	0M04077A	Motor Seal	1
04	CA08349A	Cassette Case Ass'y	1	E01	CA08242A	Reel Motor Ass'y Serial No.: A31301001 —	1
05	CA08337A	Head Mount Base Ass'y	1				
06	0C08121A	Supply Pressure Roller Spring	1				
07	0C08250A	Supply Pressure Roller Spring B	1				
08	0C08313A	Pressure Roller Arm Bushing	2				
09	CA08053B	Supply Pressure Roller Ass'y	1				
10	0C08122B	Supply Pressure Roller Thrust Spring	1				
11	CA08079B	Take-up Pressure Roller Ass'y	1	E02	CA08034A	Control Motor Ass'y Serial No.: A31301001 —	1
12	0C08183B	Take-up Pressure Roller Thrust Spring	1				
13	CA08338A	Head Base Ass'y	1				
14	0C08182A	Pressure Roller Drive Bar B	1				
15	0C08086B	Head Base Roller	3				
16	0C08050B	Record Sensor	1				
17	0C08051E	Cassette Hold Arm	1				
18	0C08120A	Cassette Hold Arm Spring	1	01	0C08137A	Control Motor	1
19	CA08196A	Back Tension Ass'y	1	02	0C08064A	Control Motor Pulley	1
20	0C08254A	Back Tension Arm Collar	1	03	0B09292A	Ceramic Capacitor 0.1μ 50V Z	1
21	CA08027A	Head Base Drive Arm Ass'y	1	04	0M03985A	Control Motor Label	1
22	0C08143C	Head Base Drive Arm Spring	1	05	0M03988A	Motor Seal B	1
23	CA08025A	Record Arm Ass'y	1				
24	0C08038D	Record Trigger	1				
25	0C08112A	Flip-Flop Spring	1				
26	CA08026A	Pressure Roller Drive Arm Ass'y	1				
27	CA08353A	Auto Shut-off Ass'y	1				
28	0C08119A	Record Protector	1				
29	0C08194C	Damper Lock Arm	1				
30	0C08153A	Damper Lock Arm Spring Tube	1				
31	0C08116A	Record Arm Spring	1				
32	CA08030A	Pneumatic Damper Ass'y	1				
33	CA08023A	Supply Capstan Flange Ass'y	1				
34	CA08024A	Take-up Capstan Flange Ass'y	1				
35	0C08186A	Cam Drive Gear	1				
36	0C08029H	Control Cam	1				
37	0C08117A	Counter-Load Arm Spring	1				
38	0C08152A	Counter-Load Arm Spring Tube	1				
39	CA08028A	Counter-Load Arm Ass'y	1				
40	0C08123B	Record Switch Linkage Wire	1				
41	0C08037E	Record Arm B	1				
42	0C08116A	Record Arm Spring	1				
43	CA08347A	Main Chassis Ass'y	1				
L01	0E00837A	Stopper Ring 3mm	11				
L02	0E00834A	BT Screw M3x30 Philips Pan Head	2				
L03	0E00831A	BT Screw M3x10 Philips Pan Head	3				
L04	0E00254A	Washer 3.1mm	2				
L05	0E00222A	E-Ring 2mm	2				
L06	0E00876A	BT Screw M2.6x8 Philips Pan Head	8				
L07	0E00178A	Washer 3mm	2				
L08	0E00879A	BT Screw M2x15 Philips Pan Head	1				
L09	0E00838A	Stopper Ring 4mm	3				
L10	0E00846A	BT Screw M3x8 Philips Pan Head	3				
L11	0E00895A	Earth Lug 3mm	2				
L12	0E00859A	BT Screw M2.6x6 Philips Binding Head	1				
L13	0C08255A	Washer 2.6mm	1				

8.9. Main Mechanism Chassis Ass'y (C03)

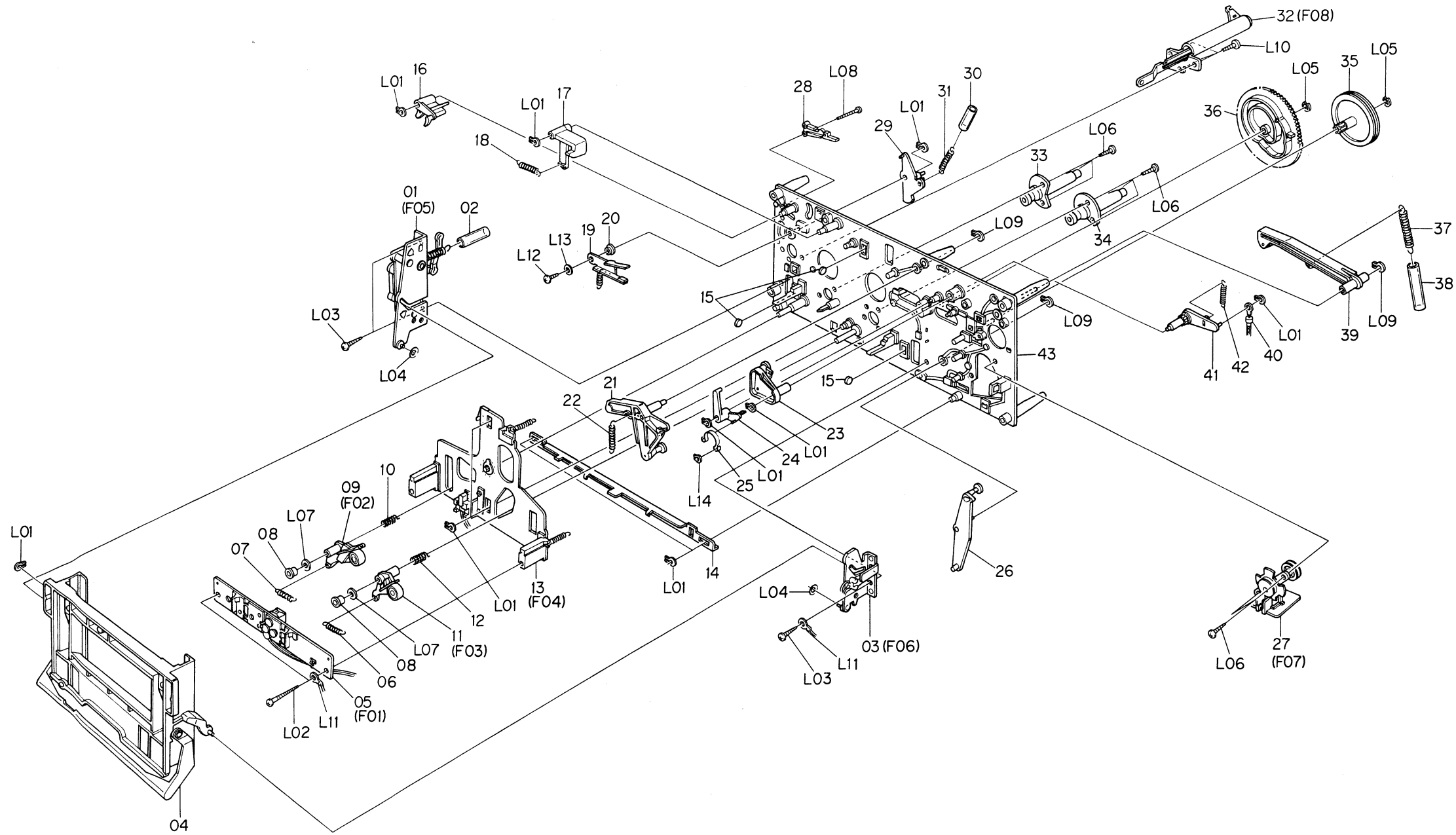


Fig. 8.9

8.10. Capstan Motor Ass'y (D01)

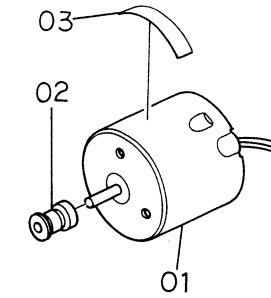


Fig. 8.10

8.11. Reel Motor Ass'y (E01)

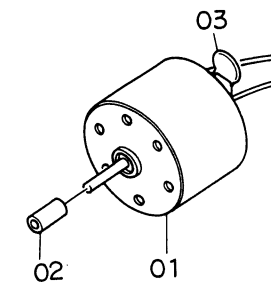


Fig. 8.11

8.12. Control Motor Ass'y (E02)

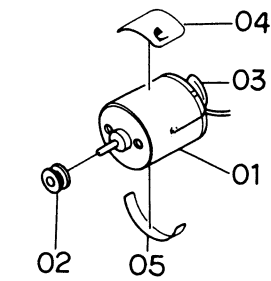


Fig. 8.12

8.13. Head Mount Base Ass'y (F01)

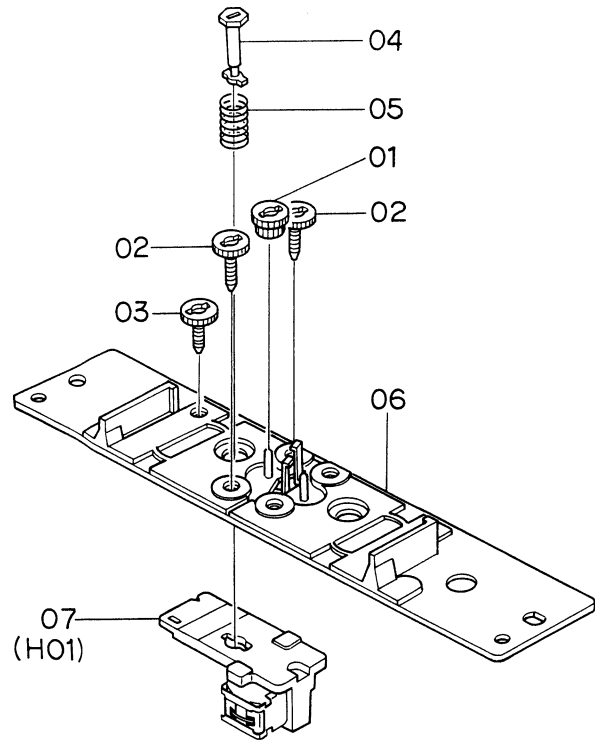


Fig. 8.13

8.14. Supply Pressure Roller Ass'y (F02)

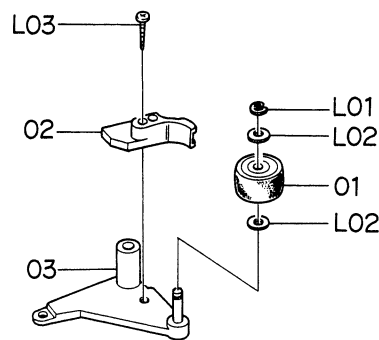


Fig. 8.14

8.15. Take-up Pressure Roller Ass'y (F03)

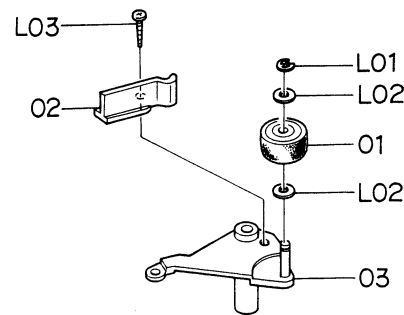


Fig. 8.15

8.16. Head Base Ass'y (F04)

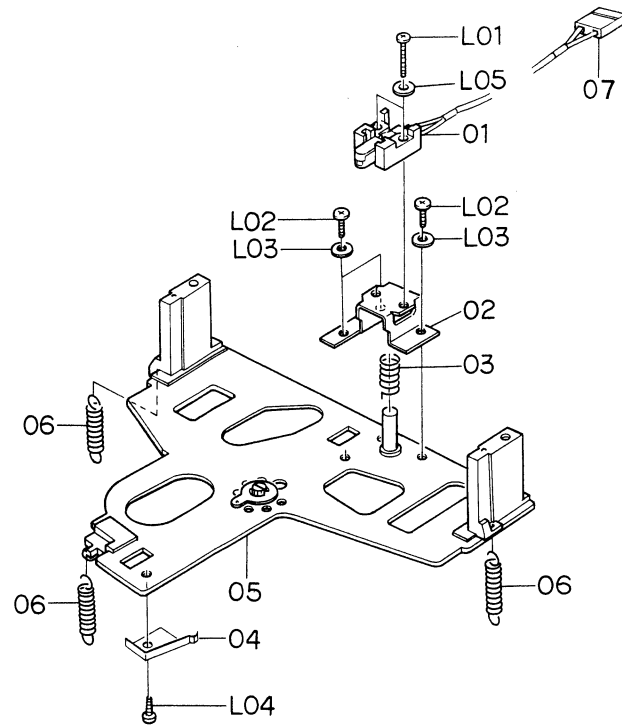


Fig. 8.16

8.17. Cassette Case Holder L Ass'y (F05)

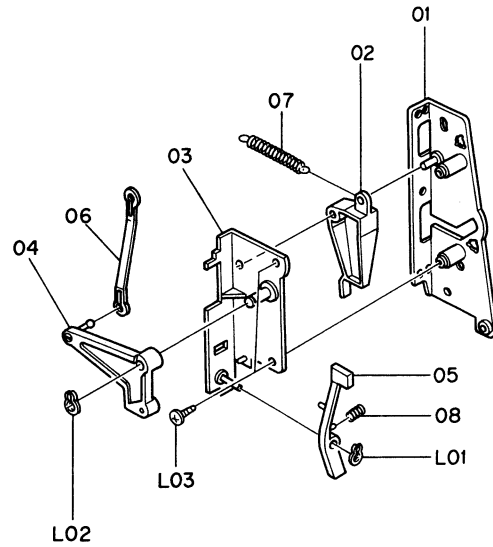


Fig. 8.17

8.18. Cassette Case Holder R Ass'y (F06)

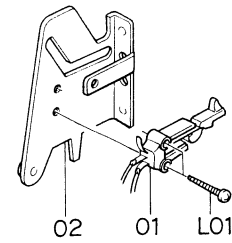


Fig. 8.18

8.19. Auto Shut-off Ass'y (F07)

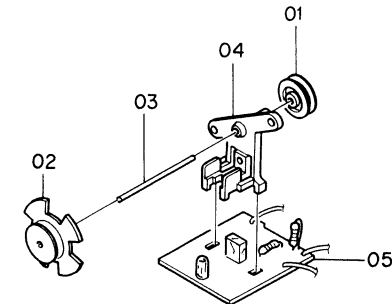


Fig. 8.19

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty		
F01	CA08337A	Head Mount Base Ass'y Serial No.: A31301001 -	1	05	CA08003R	Head Base Ass'y	1		
	01	0C08028C	Head Height Adjustment Gear	1	06	0C08175A	Head Base L Spring	3	
	02	0C08027F	Head Height Adjustment Screw	2	07	0B08949A	2P-H Connector	1	
	03	0C08026D	Azimuth Alignment Screw	1	L01	0E00951A	Screw M1.7x7 Philips Pan Head (Black Chromate)	2	
	04	0C08161B	Spring Stopper	1	L02	0E00909A	Screw M2x6 Philips Pan Head	3	
	05	0C08131C	Head Plate Spring	1	L03	0E00117A	Washer 2mm	3	
	06	CA08083D	Head Mount Base Sub Ass'y	1	L04	0E00853A	BT Screw M2x3 Philips Pan Head	1	
07	CA08334A	RP-9E Record/Playback Head Ass'y	1	L05	0E00952A	Washer 1.7mm	2		
F02	CA08053B	Supply Pressure Roller Ass'y Serial No.: A31301001 -	1	F05	CA08350A	Cassette Case Holder L Ass'y Serial No.: A31301001 -	1		
	01	0C08164G	Pressure Roller		1	01	CA08326A	Cassette Case Holder L Sub Ass'y	1
	02	0C08189C	Supply Tape Guide		1	02	0C08073C	Lid Arm A	1
	03	CA08061A	Supply Pressure Roller Arm Ass'y		1	03	0C08306A	Eject Arm Holder	1
	L01	0E00042A	E-Ring 1.5mm		1	04	0C08307A	Eject Arm A	1
	L02	0C08024A	Washer 2mm		2	05	0C08197C	Eject Arm B	1
	L03	0E00788A	BT Screw M2x8 Philips Pan Head (Black Chromate)		1	06	0C08199B	Eject Arm Joint	1
F03	CA08079B	Take-up Pressure Roller Ass'y Serial No.: A31301001 -	1	07	0C08114A	Lid Arm Spring	1		
	01	0C08164G	Pressure Roller	1	08	0C08211C	Eject Arm Spring	1	
	02	0C08181C	Take-up Tape Guide	1	L01	0E00837A	Stopper Ring 3mm	1	
	03	CA08073B	Take-up Pressure Roller Arm Ass'y	1	L02	0E00838A	Stopper Ring 4mm	1	
	L01	0E00042A	E-Ring 1.5mm	1	L03	0E00865A	BT Screw M3x10 Philips Binding Head	2	
	L02	0C08024A	Washer 2mm	2	F06	CA08022A	Cassette Case Holder R Ass'y Serial No.: A31301001 -	1	
	L03	0E00788A	BT Screw M2x8 Philips Pan Head (Black Chromate)	1		01	0C08133A	Eject Sensor	1
F04	CA08338A	Head Base Ass'y Serial No.: A31301001 -	1	02		CA08044A	Cassette Case Holder R Sub Ass'y	1	
	01	GA02103A	EOK Erase Head	1		L01	0E00840A	BT Screw M2x8 Philips Pan Head	2
	02	0C08158D	Erase Head Hold Plate	1		F07	CA08353A	Auto Shut-off Ass'y Serial No.: A31301001 -	1
	03	0C08166A	Erase Head Hold Plate Spring	1			01	0C08047A	Shut-off Pulley A
04	0C08174D	Cassette Hold Spring	1	02			0C08309A	Shut-off Pulley B	1
				03	0C08088B		Shut-off Pulley Shaft	1	
				04	0C08207B	Shut-off Pulley Holder	1		
				05	BA04637A	Shut-off P.C.B. Ass'y	1		

8.20. Pneumatic Damper Ass'y (F08)

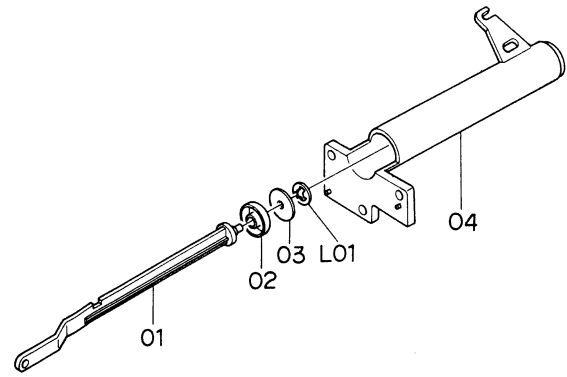


Fig. 8.20

8.21. RP-9E Record/Playback Head Ass'y (H01)

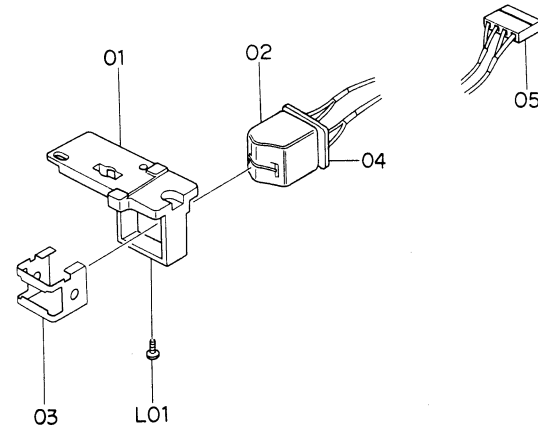


Fig. 8.21

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
F08	CA08030A	Pneumatic Damper Ass'y Serial No.: A31301001 -	1	H01	CA08334A	RP-9E Record/Playback Head Ass'y Serial No.: A31301001 -	1
01	0C08058C	Damper Piston	1	01	0C08217A	Head Plate	1
02	0C08102C	Damper Ring	1	02	0G01294A	RP-9E Record/Playback Head	1
03	0C08010C	Damper Plate	1	03	0C08216B	Pad Lifter 9E	1
04	0C08059D	Sylinder	1	04	0B07857A	Head Terminal P.C.B.	1
L01	0E00874A	Stopper Ring CS 2mm	1	05	0B08952B	4P-H Connector	1
				L01	0E00887A	Screw M1.7x4 Philips Pan Head	1
				-	0M04331A	Label CN-22	1

9. OVERALL TIMING CHART

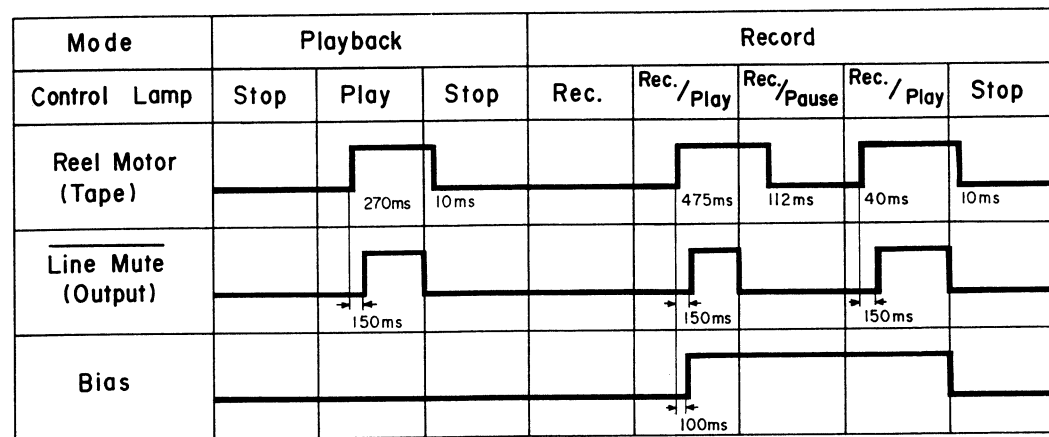


Fig. 9

10. EQ. AMP. FREQUENCY RESPONSE

10.1. Playback Frequency Response

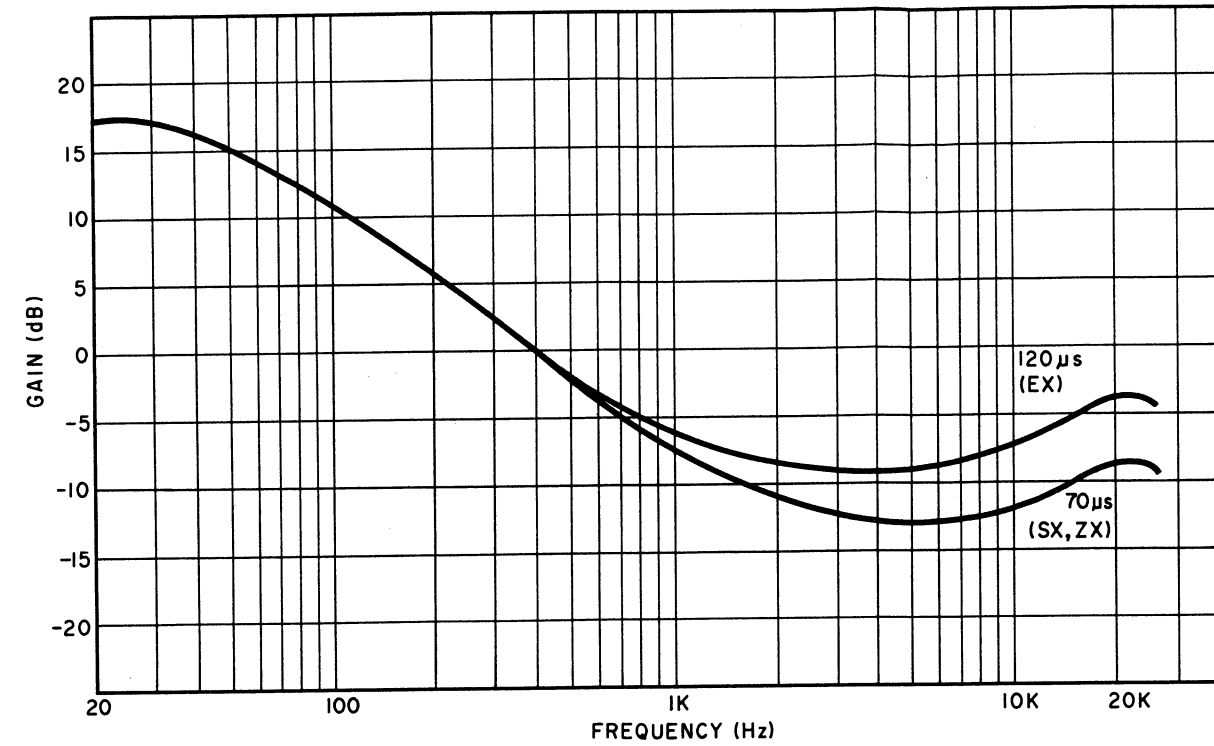


Fig. 10.1

10.2. Record Current Frequency Response

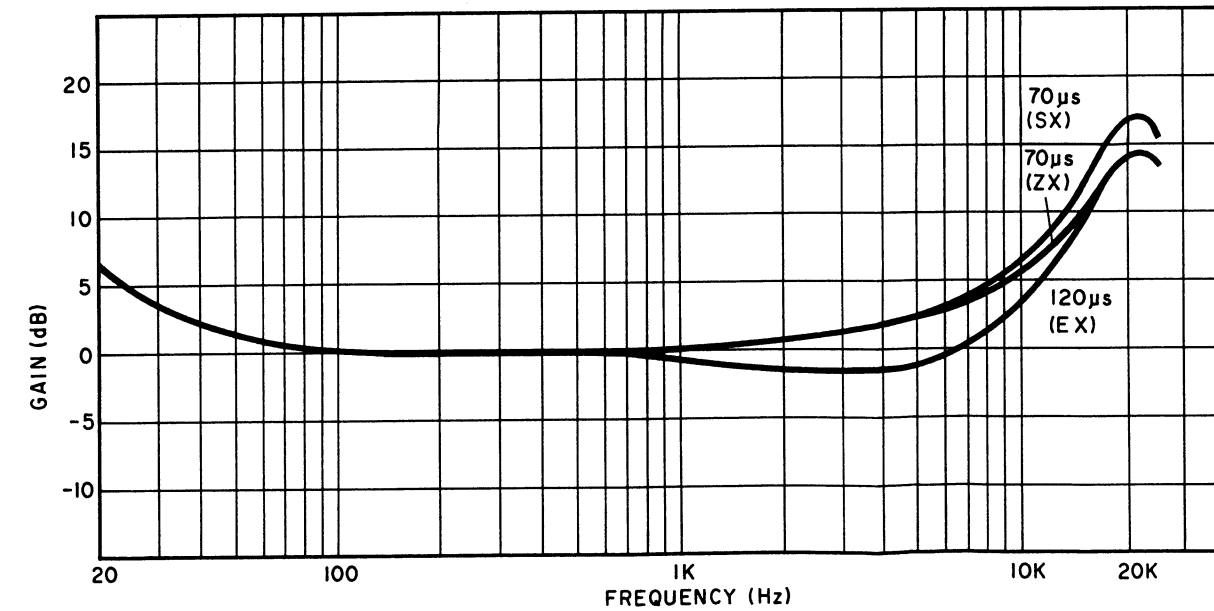


Fig. 10.2

11. BLOCK DIAGRAMS

11.1. Amplifier Section

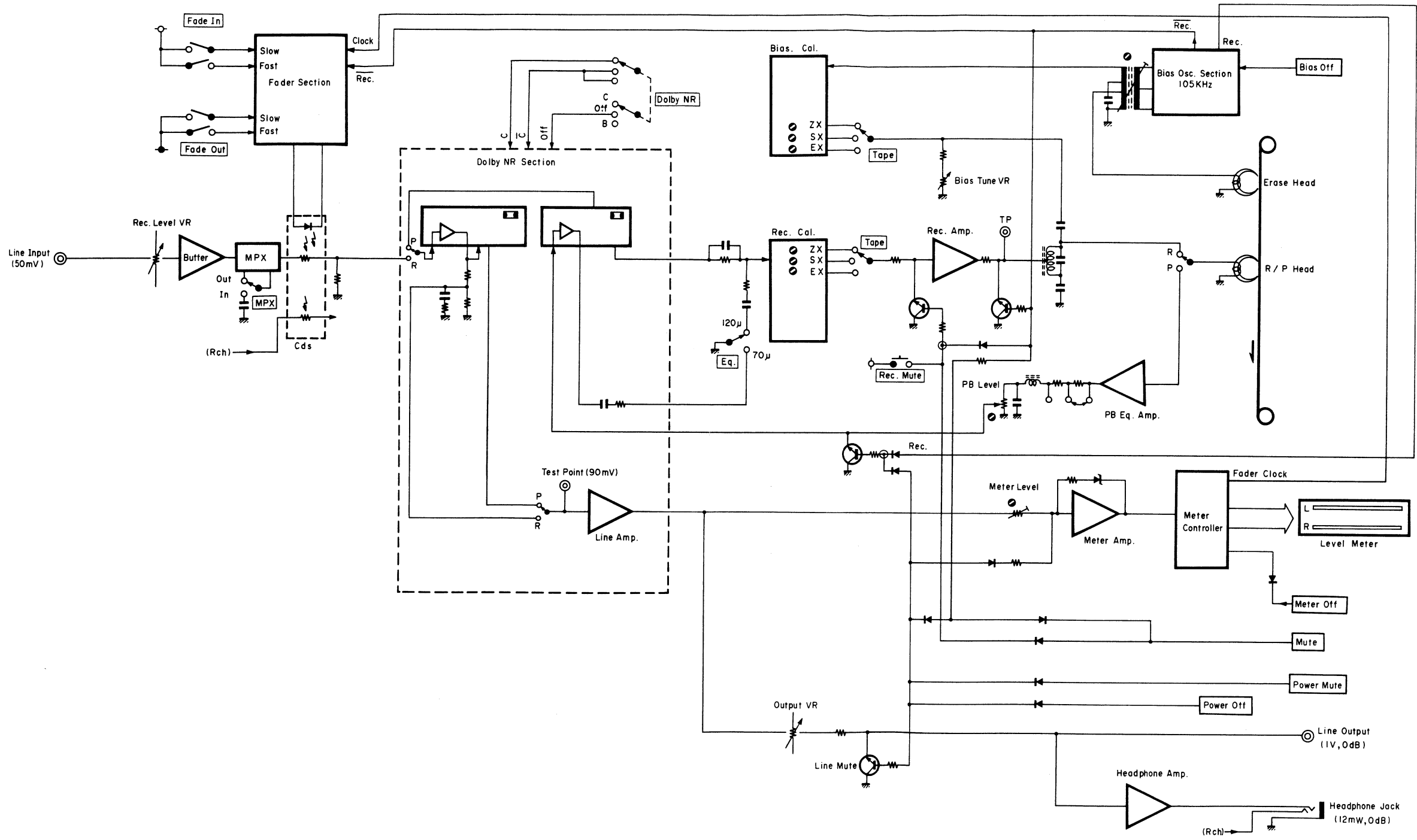


Fig. 11.1

11.2. Mechanism Control Section

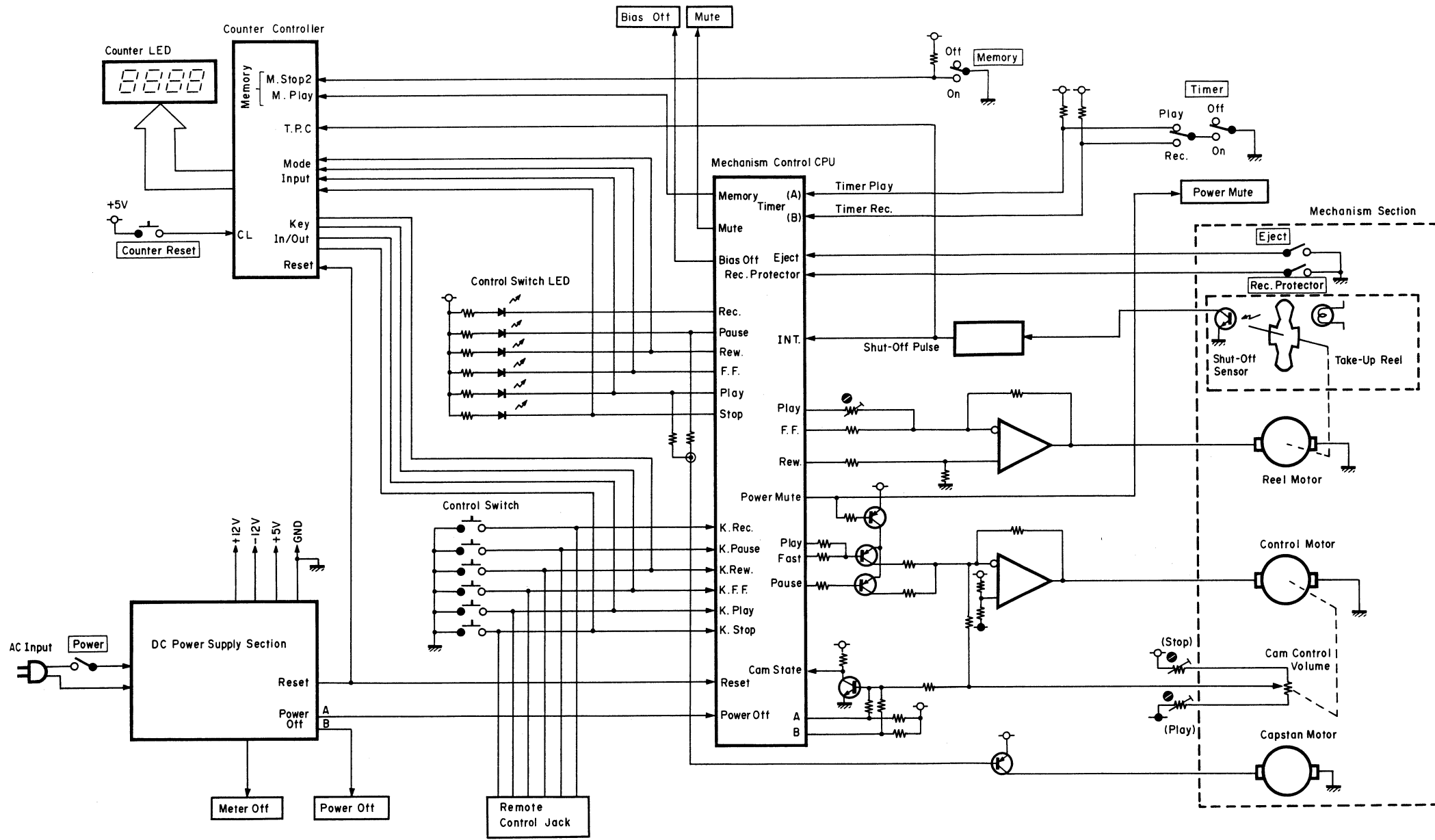
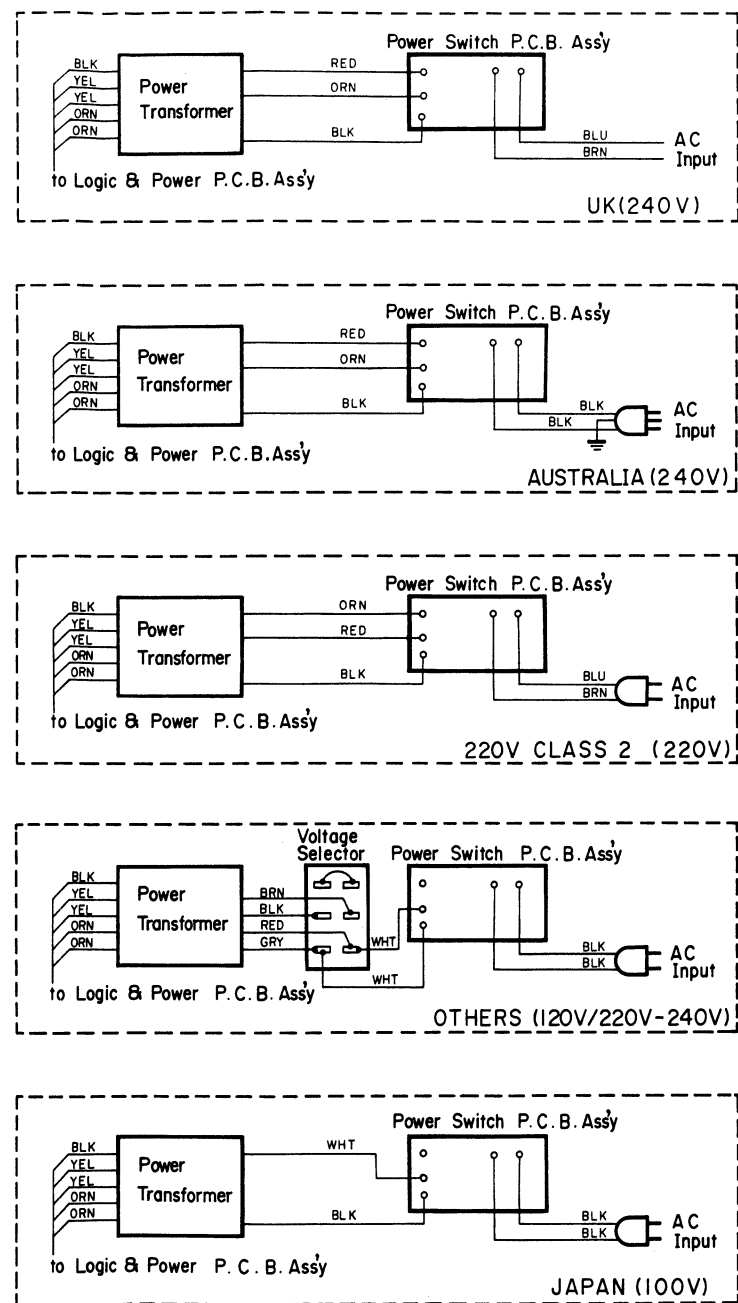


Fig. 11.2

12. WIRING DIAGRAM



Notes: 1. Table of wire colors

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

- 2. Wire tube color is shown in ().
- 3. Component side view of the P.C.B. is illustrated unless otherwise specified.

Fig. 12.1

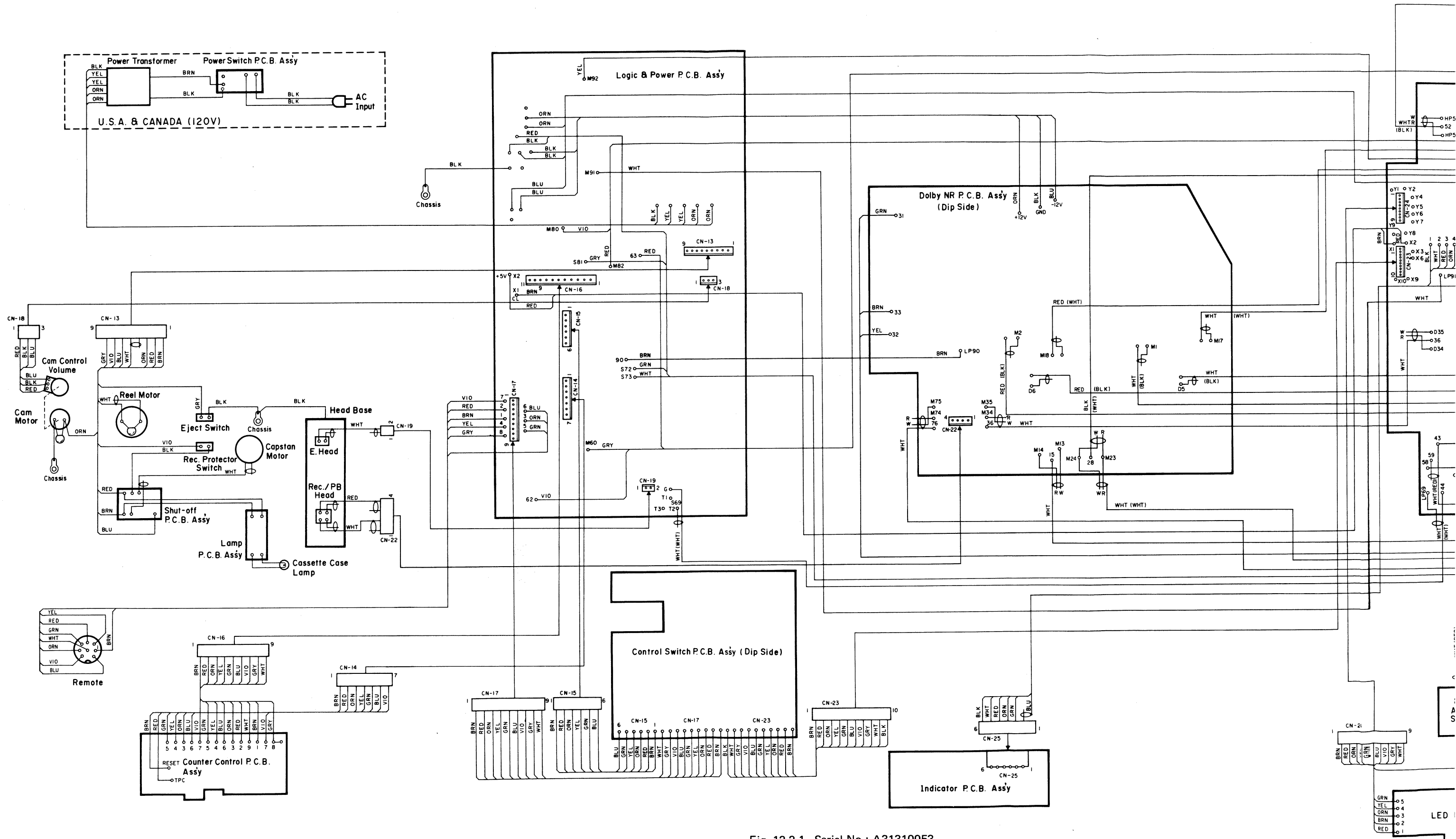


Fig. 12.2.1 Serial No.: A31310053 -

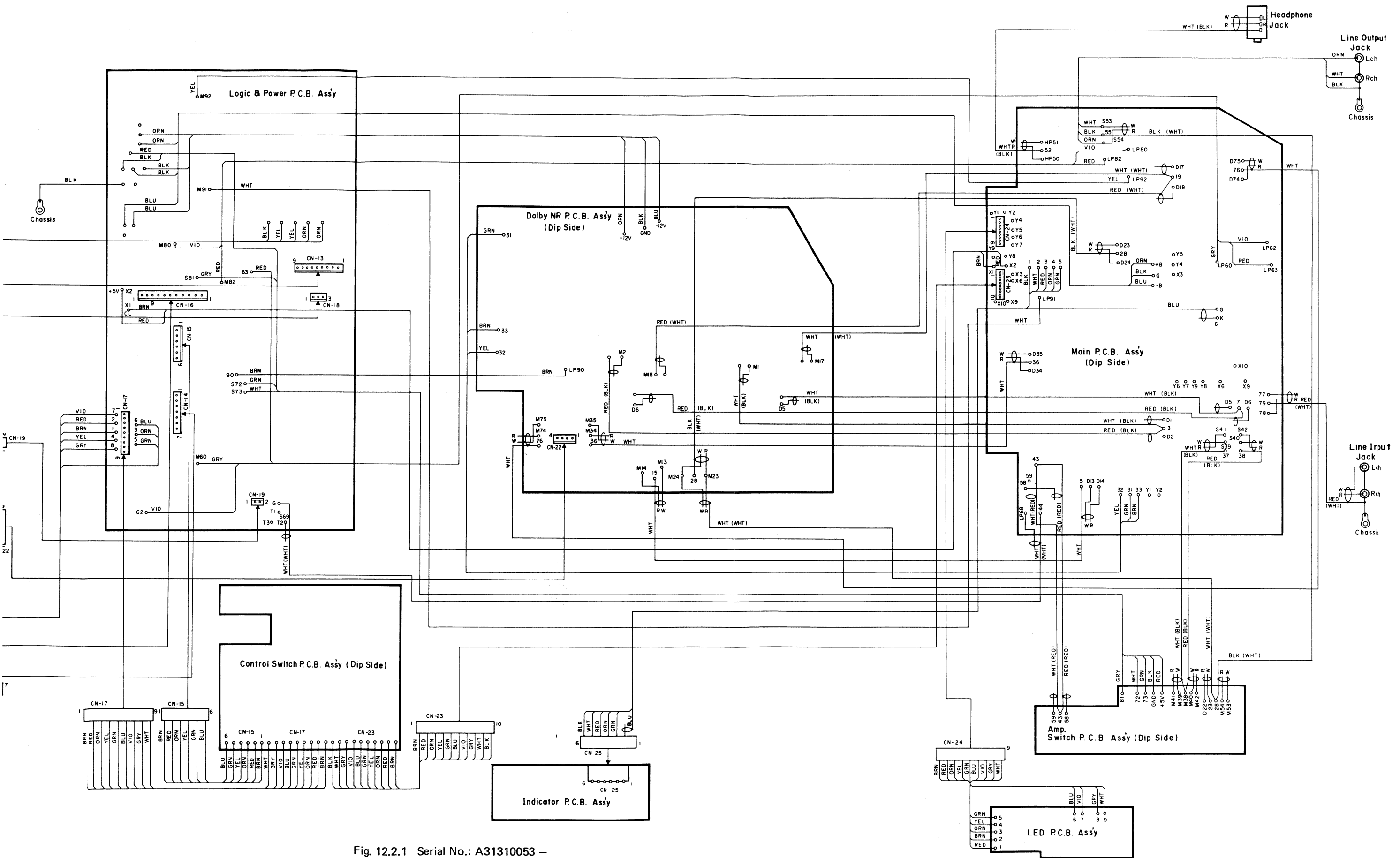


Fig. 12.2.1 Serial No.: A31310053 -

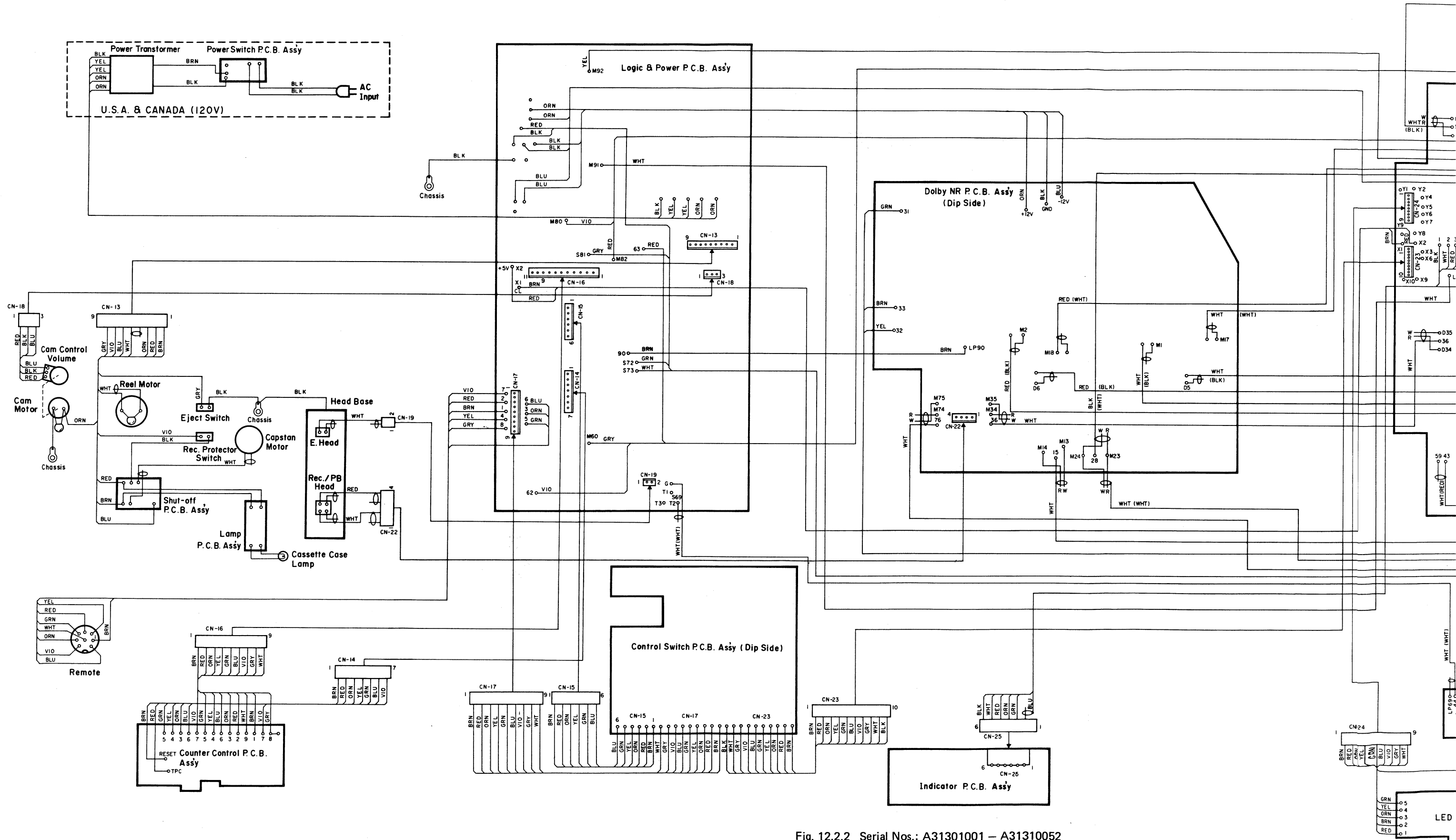


Fig. 12.2.2 Serial Nos.: A31301001 - A31310052

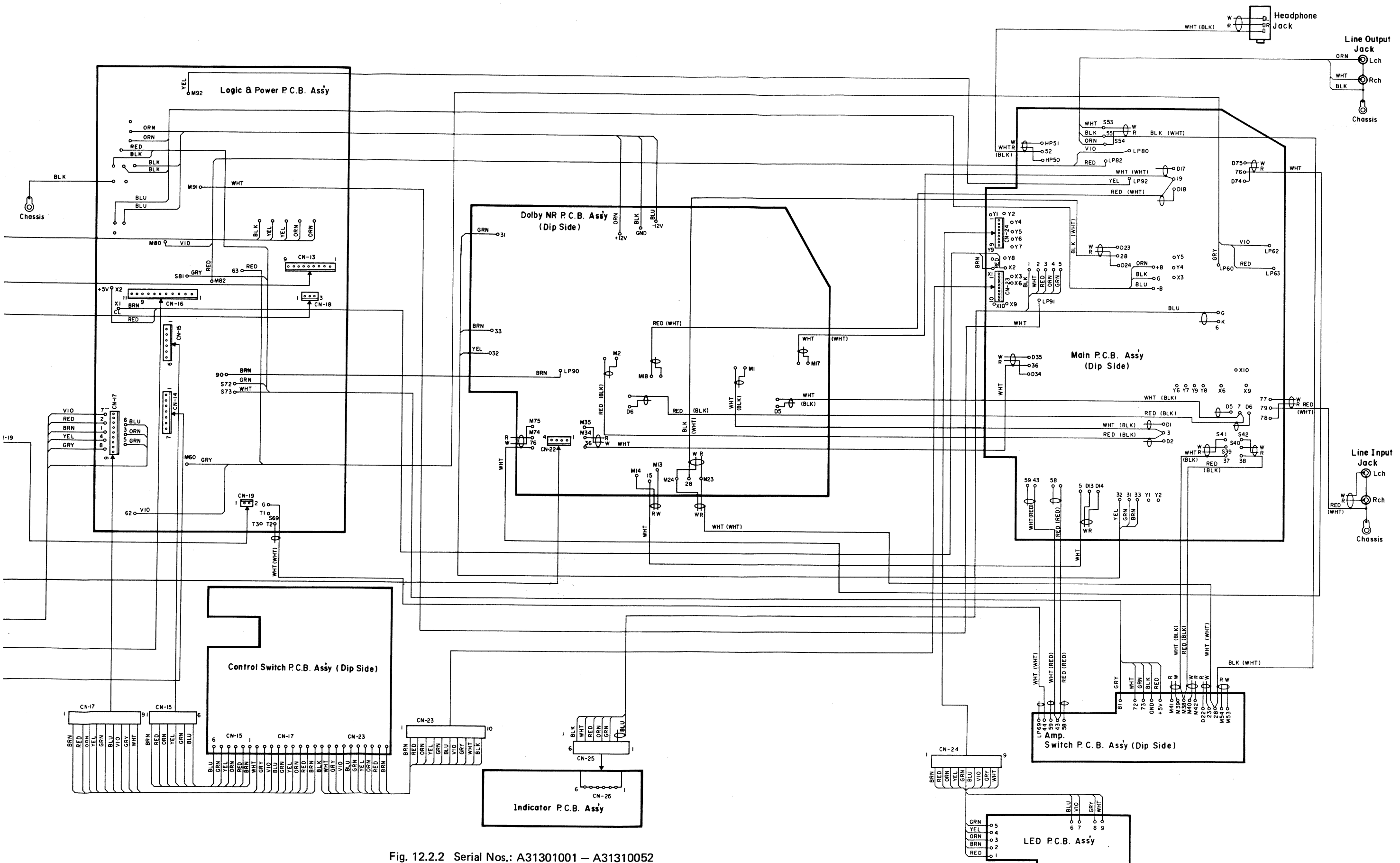


Fig. 12.2.2 Serial Nos.: A31301001 – A31310052

Notes.: 1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
 2. Resistor and capacitor marked with * show typical value.

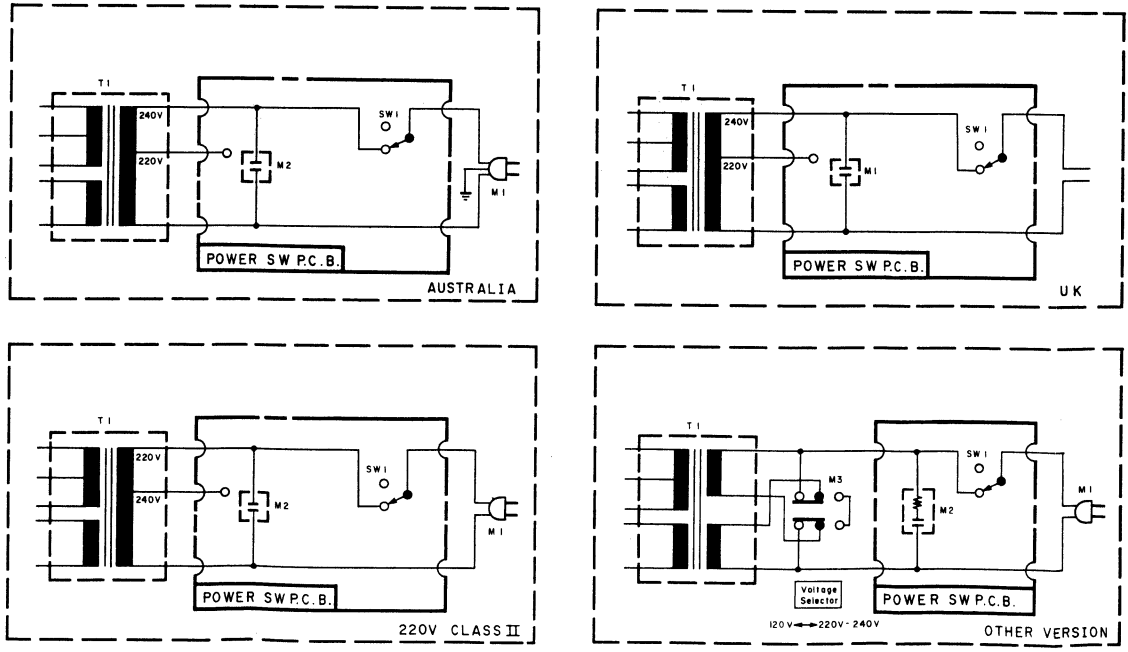
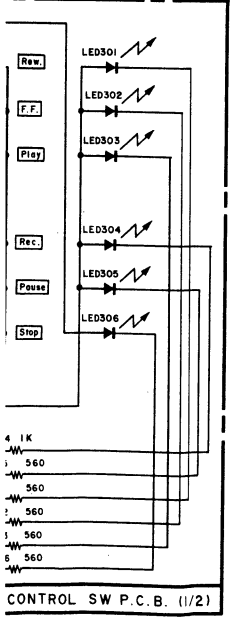
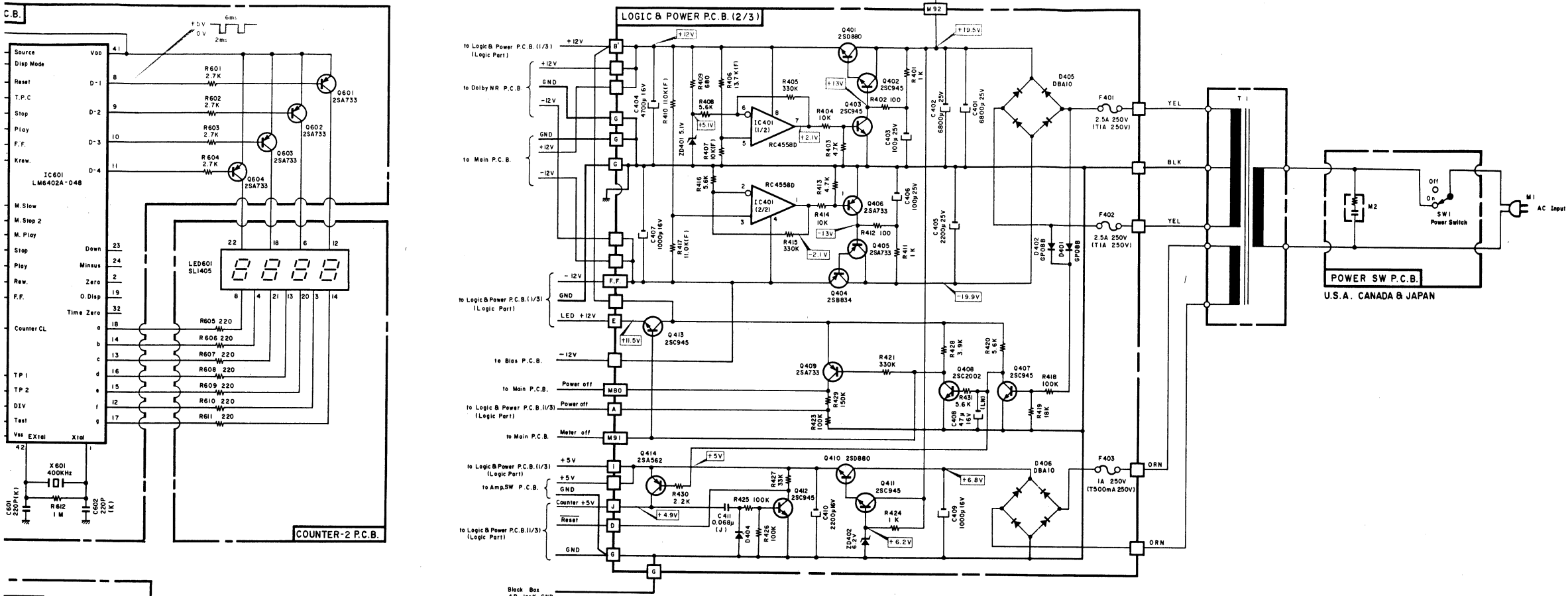


Fig. 13.1

13.2. Amplifier Section
13.2.1. Amplifier Section
(U.S.A. & Canada)

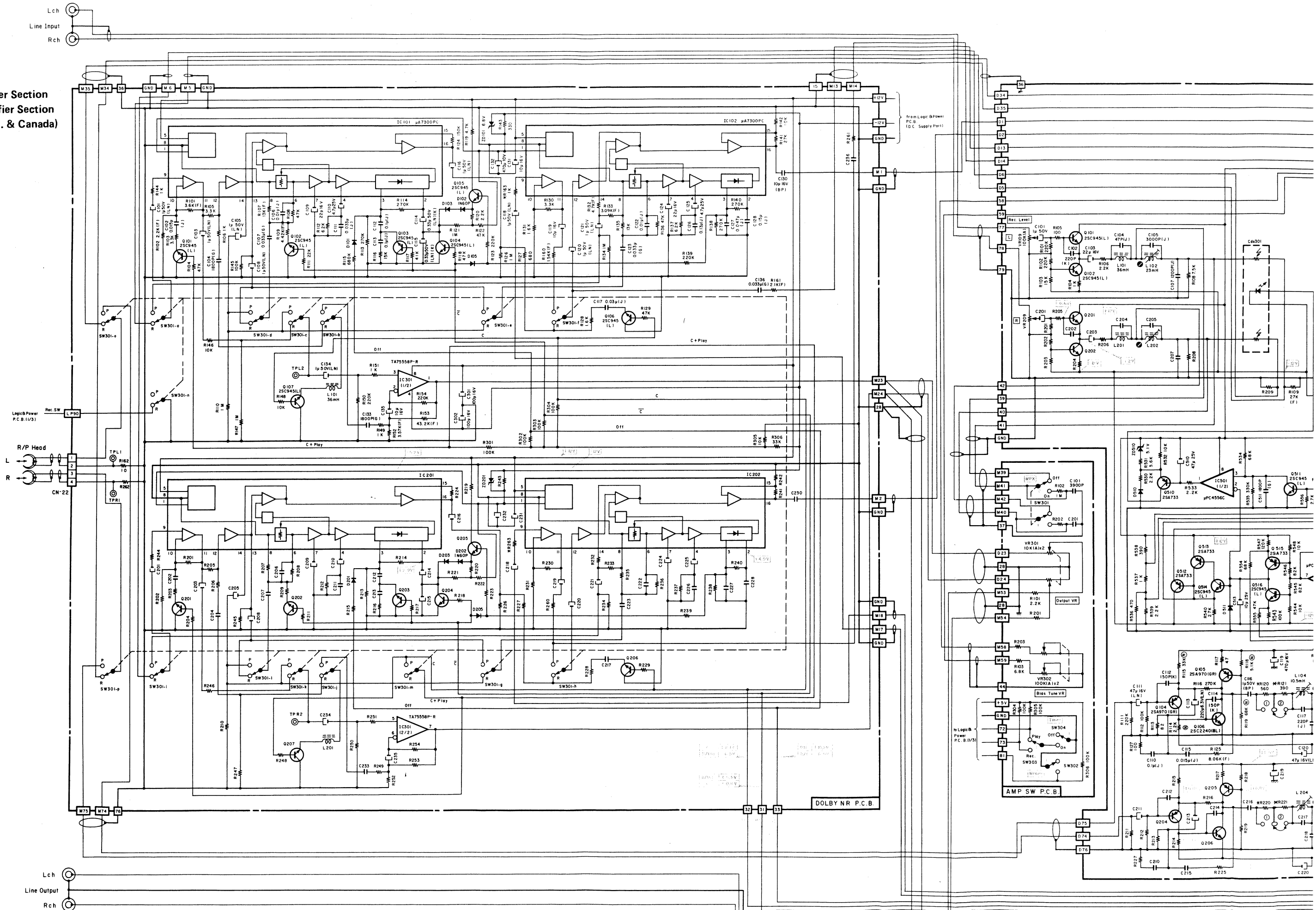
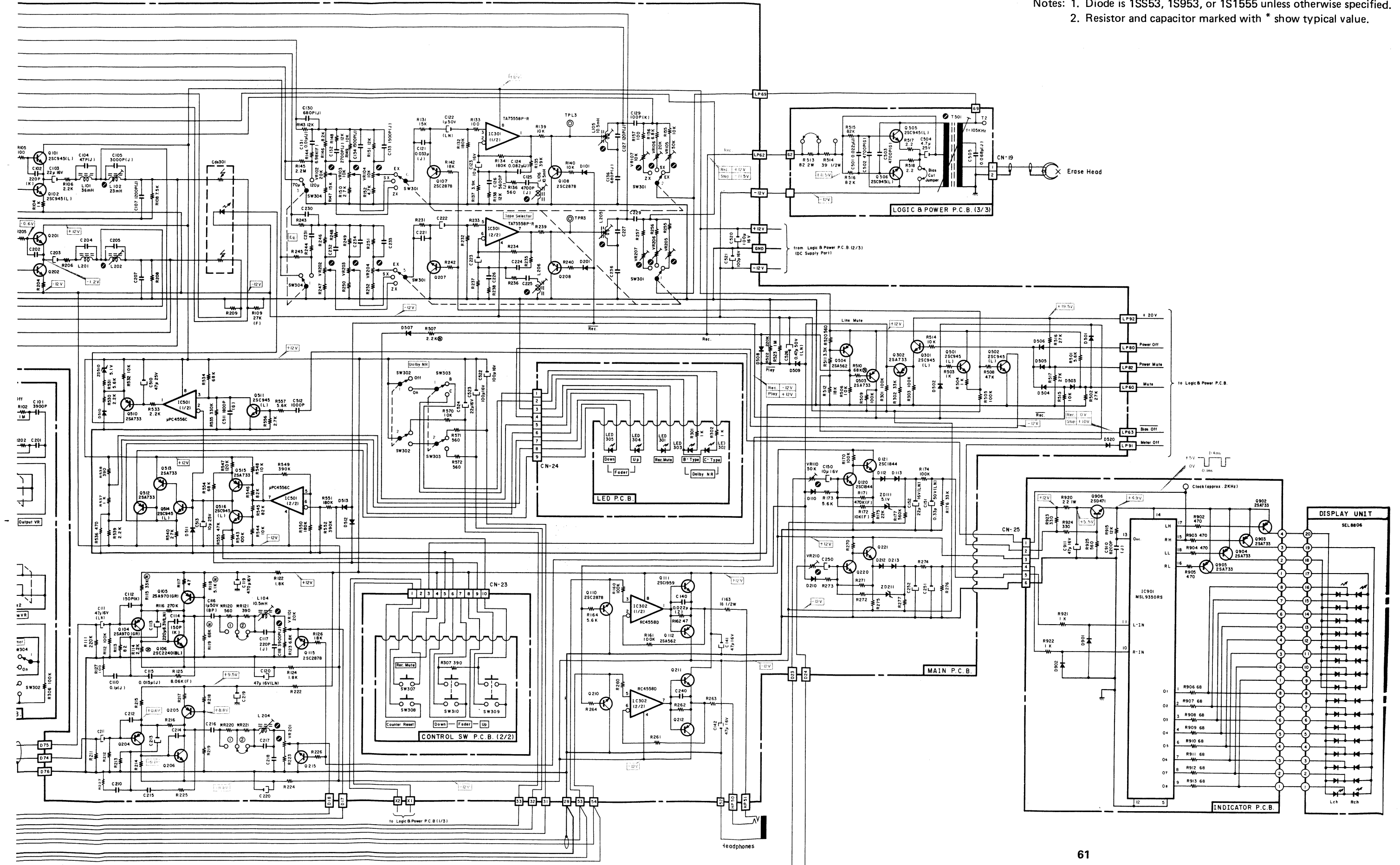


Fig. 13.2.1.1 Serial No.: A31310053 - (U.S.A. & Canada)

- Notes: 1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
 2. Resistor and capacitor marked with * show typical value.



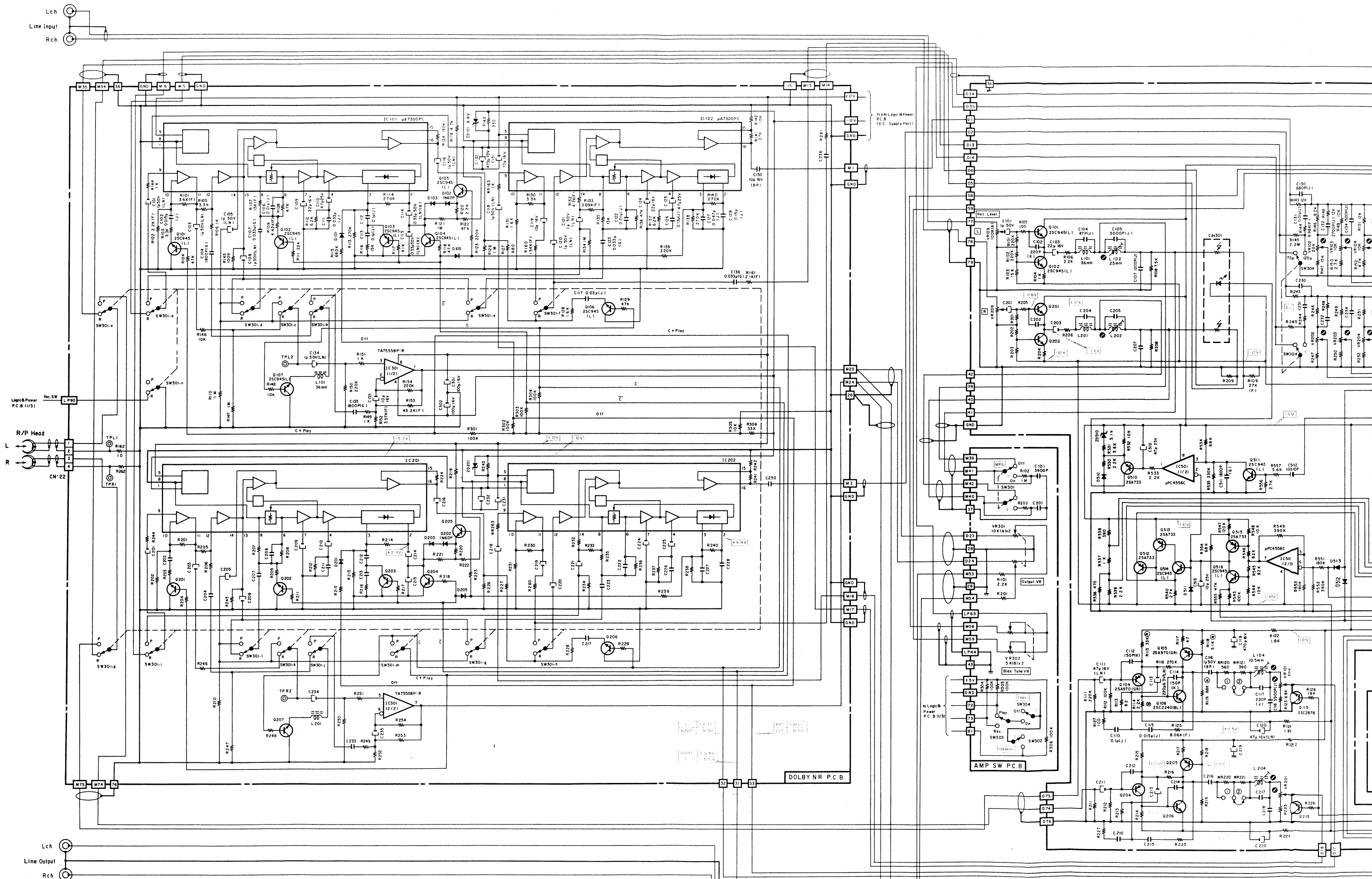
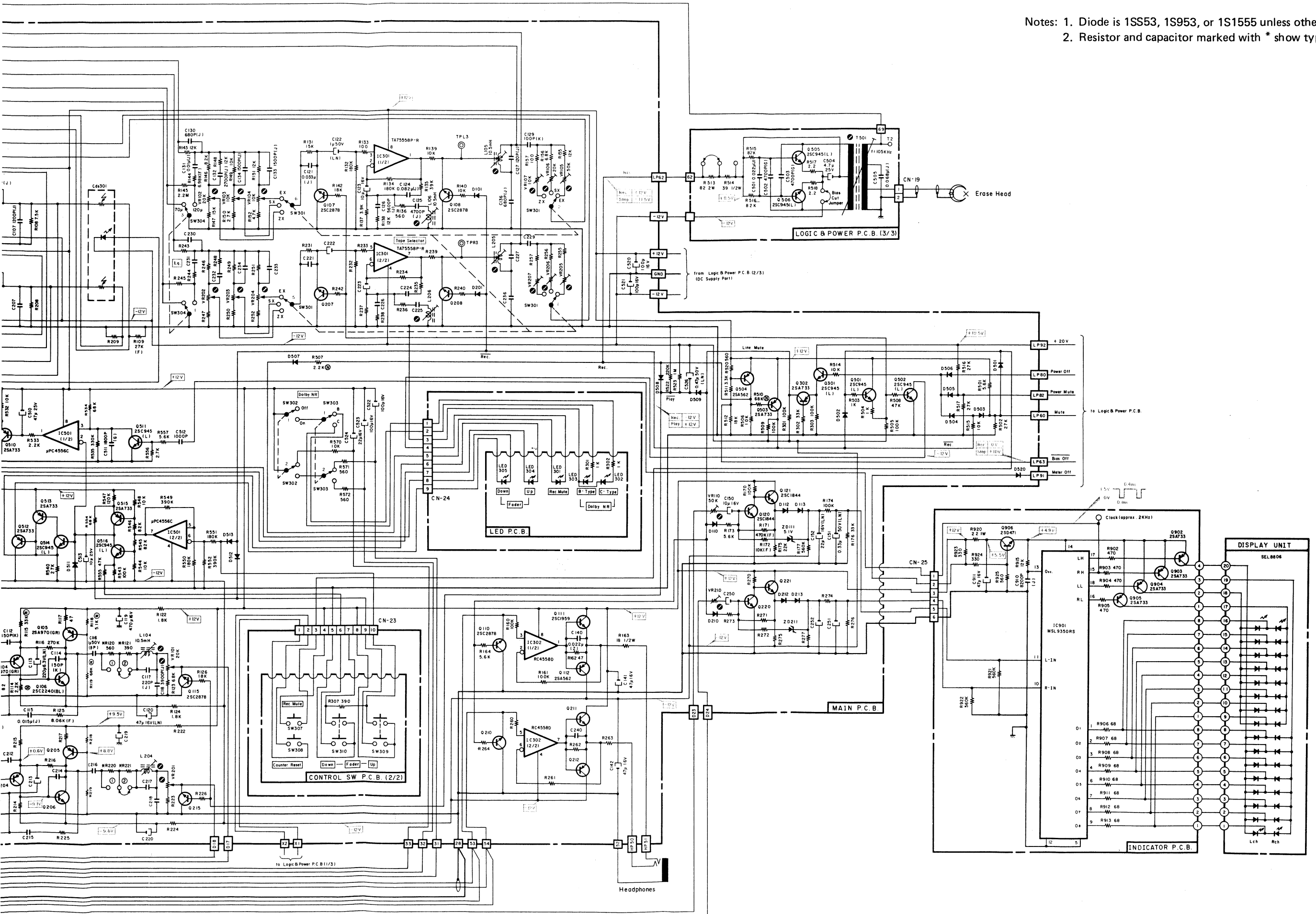


Fig. 13.2.1.2 Serial No.: A31301001 – A31310052 (U.S.A. & Canada)

Notes: 1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.



Erase Head

LOGIC & POWER P.C.B. (3/3)

LED P.C.B.

MAIN P.C.B.

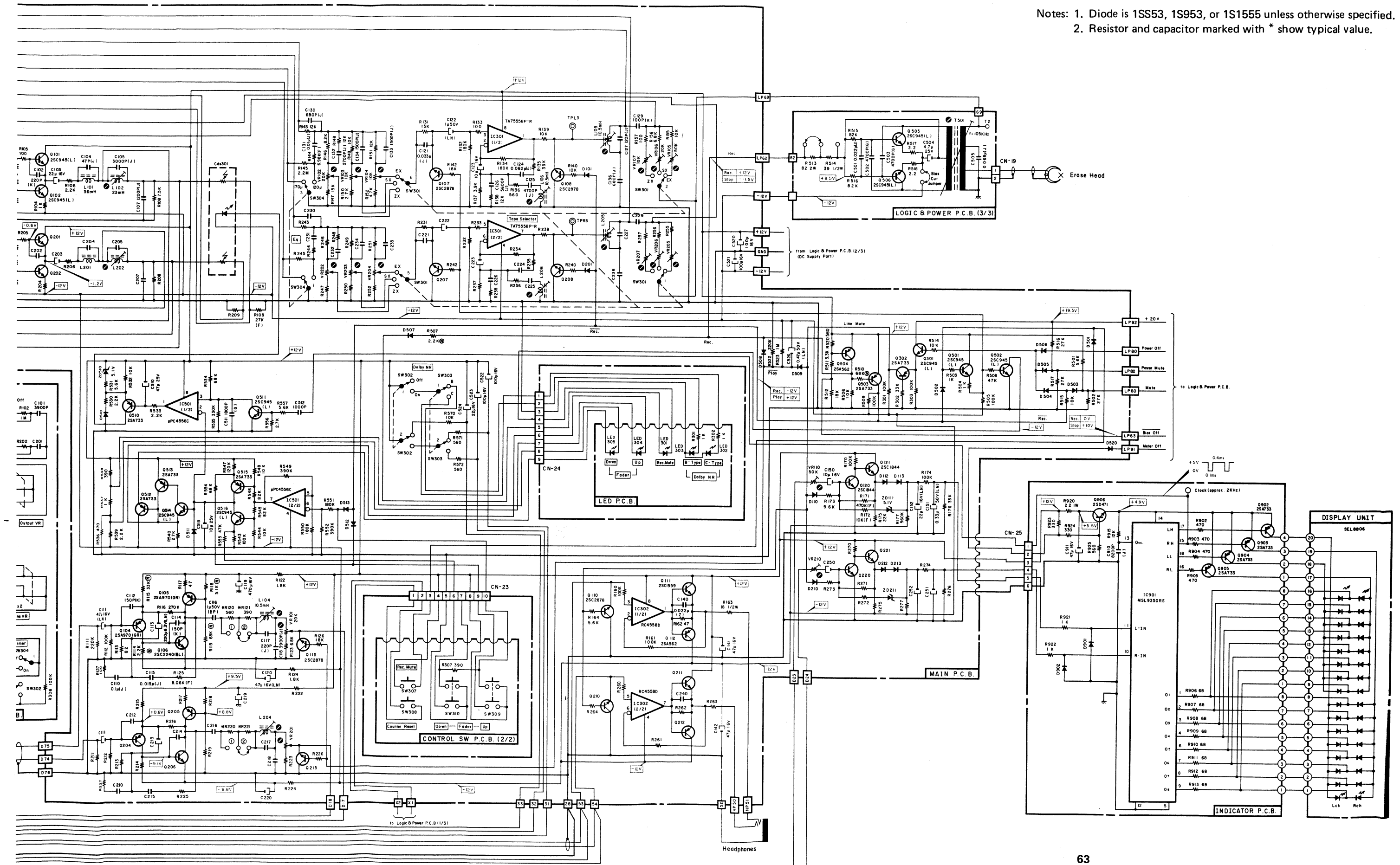
CONTROL SW P.C.B. (2/2)

DISPLAY UNIT

INDICATOR P.C.B.

Headphones

- Notes: 1. Diode is 1S53, 1S953, or 1S1555 unless otherwise specified.
 2. Resistor and capacitor marked with * show typical value.



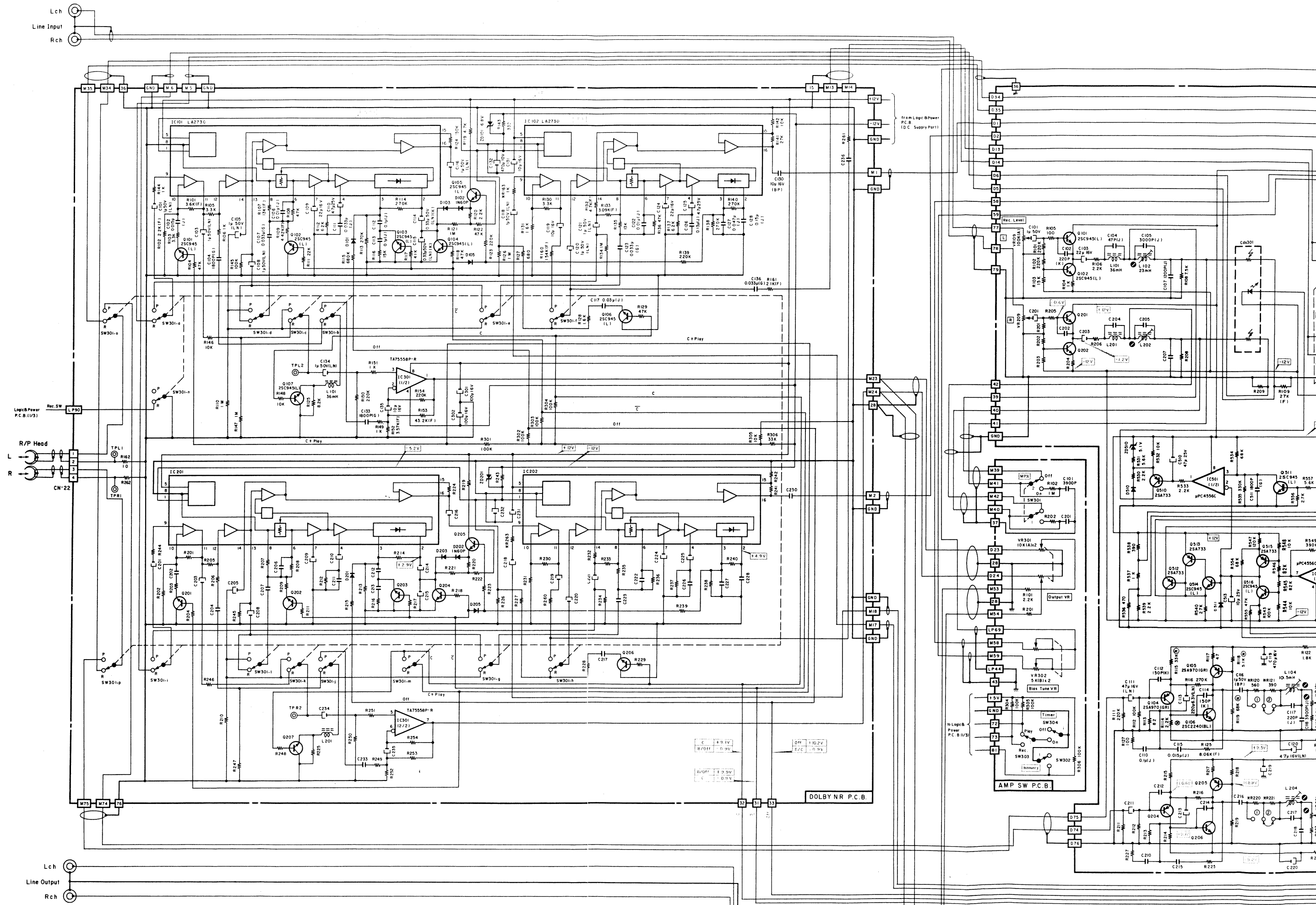
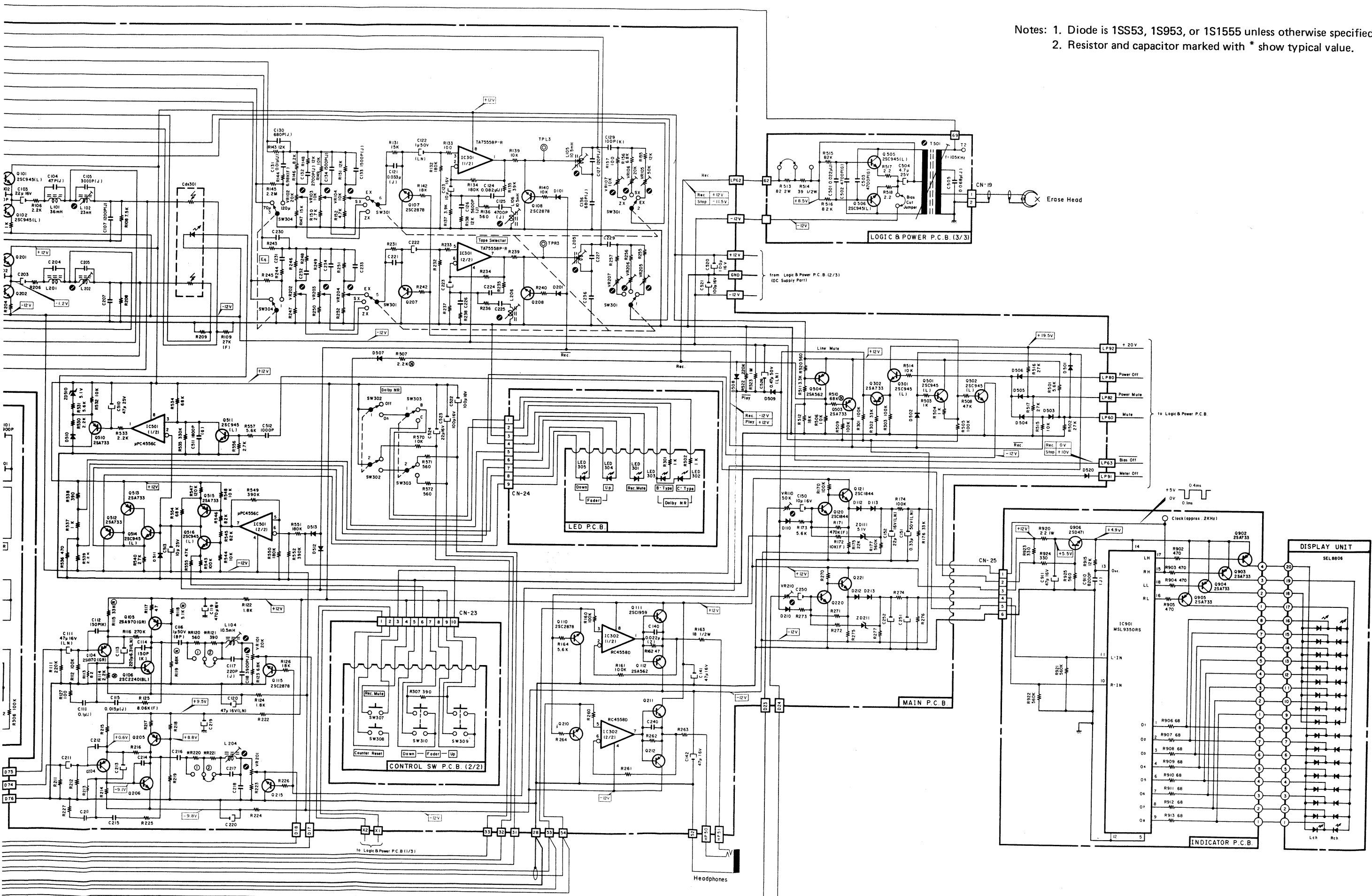


Fig. 13.2.2.2 Serial Nos.: A31301001 – A31310052
(UK, Australia, 220V Class 2, Others & Japan)

Notes: 1. Diode is 1SS53, 1S953, or 1S1555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.



13.3. Attention to Servicemen

(1) Parts Replacement

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

- (a) Power Supply Circuit
 - Power Cord
 - Power Transformer: T1
- (b) Power Switch P.C.B. Ass'y
 - Power Switch: SW1
 - Spark Killer
- (c) Logic & Power P.C.B. Ass'y
 - Fuses: F401, 402, 403
 - Power Transistors: Q401, 404, 408, 410, 414, 607, 608, 610, 611, 621
 - Diode Bridges: D405, 406
 - Fail Safe Type Resistors: R513, 514, 517, 518, 641, 669
- (d) Main P.C.B. Ass'y
 - Power Transistors: Q111, 112, 211, 212, 504
 - Fail Safe Type Resistors: R163, 263
- (e) Shut-off P.C.B. Ass'y
 - Fail Safe Type Resistor: R605
- (f) Indicator P.C.B. Ass'y
 - Power Transistor: Q906
 - Fail Safe Type Resistor: R920

(2) Insulation Check

Before returning the repaired LX-3 to a customer, check to insure that the exposed part is accurately insulated from the AC line by measuring the leakage current or the insulation resistance between them.

13.4. IC Block Diagrams

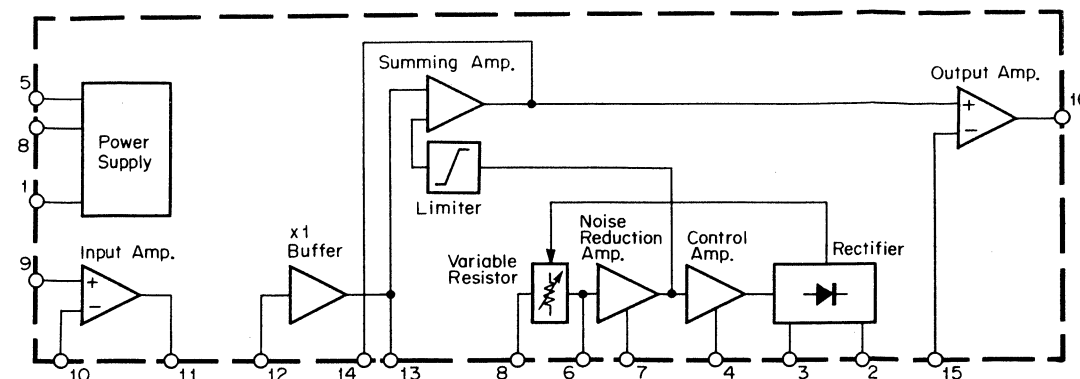


Fig. 13.3 Dolby NR IC μ A7300PC, LA2730

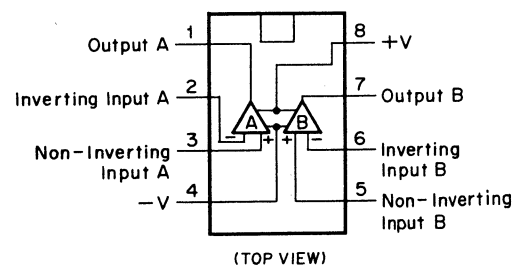


Fig. 13.4 Operational Amp. IC RC4558D, μ PC4556C, TA75558P-R

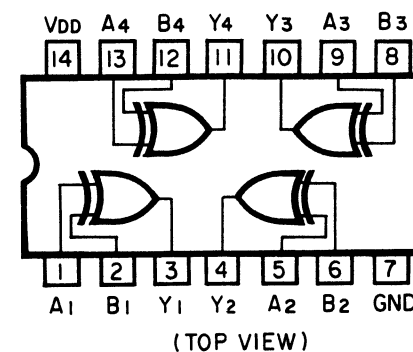


Fig. 13.5 Exclusive OR Gate C-MOS IC μ PD4030BC

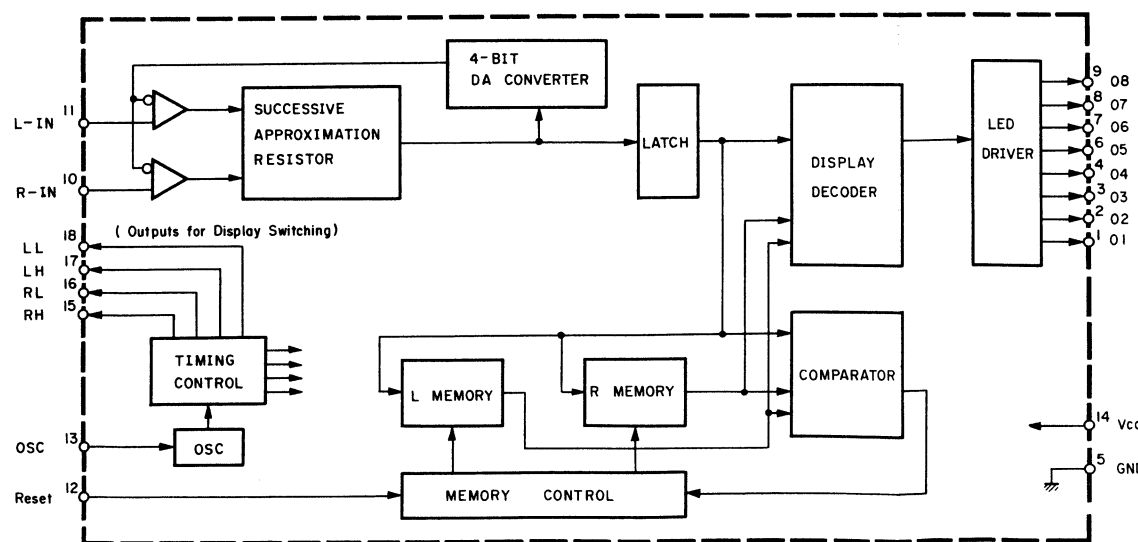
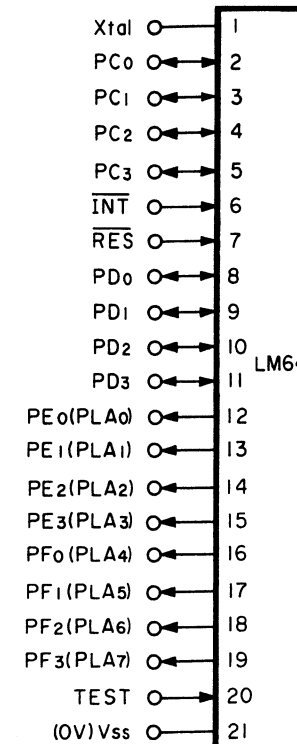
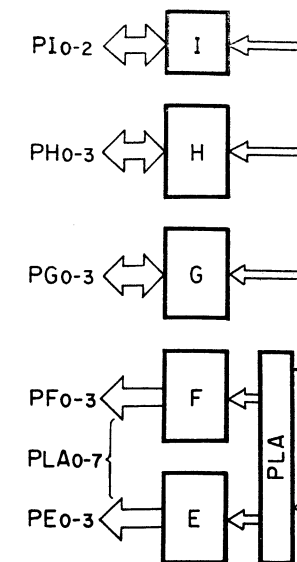


Fig. 13.6 Level Meter Control IC MSL9350RS



(TO

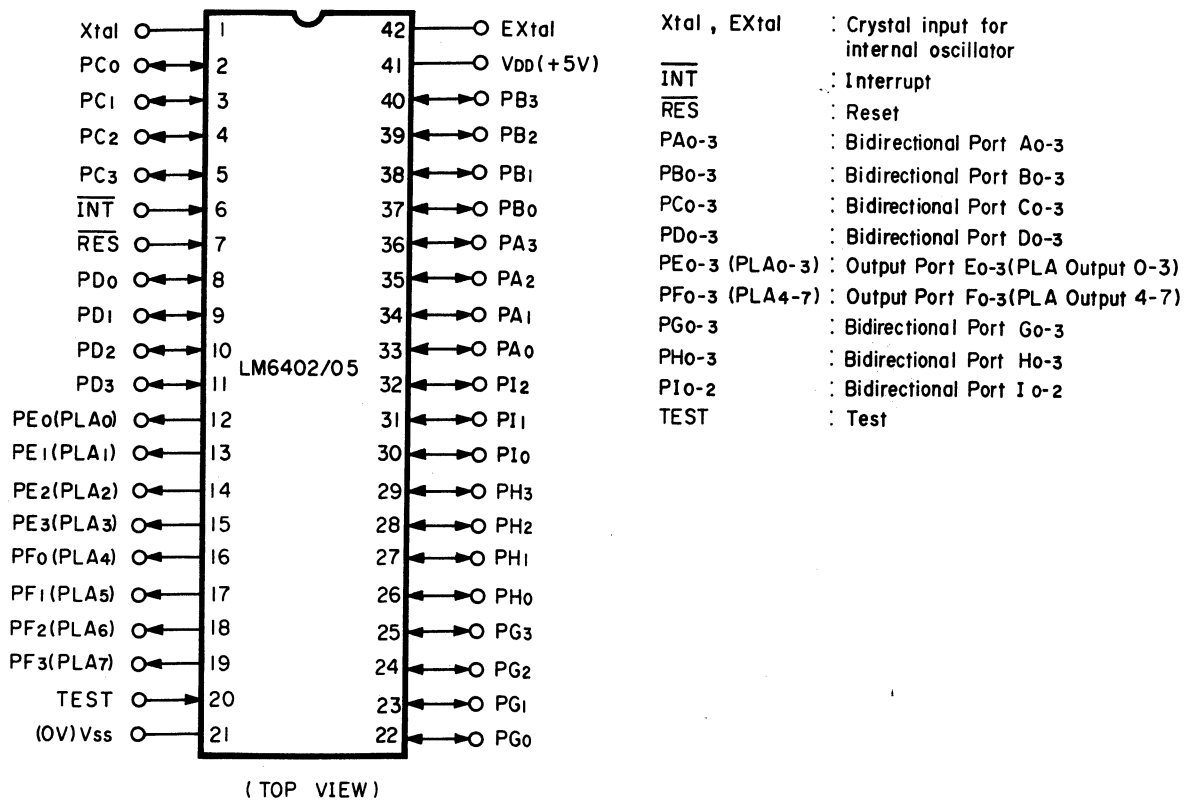
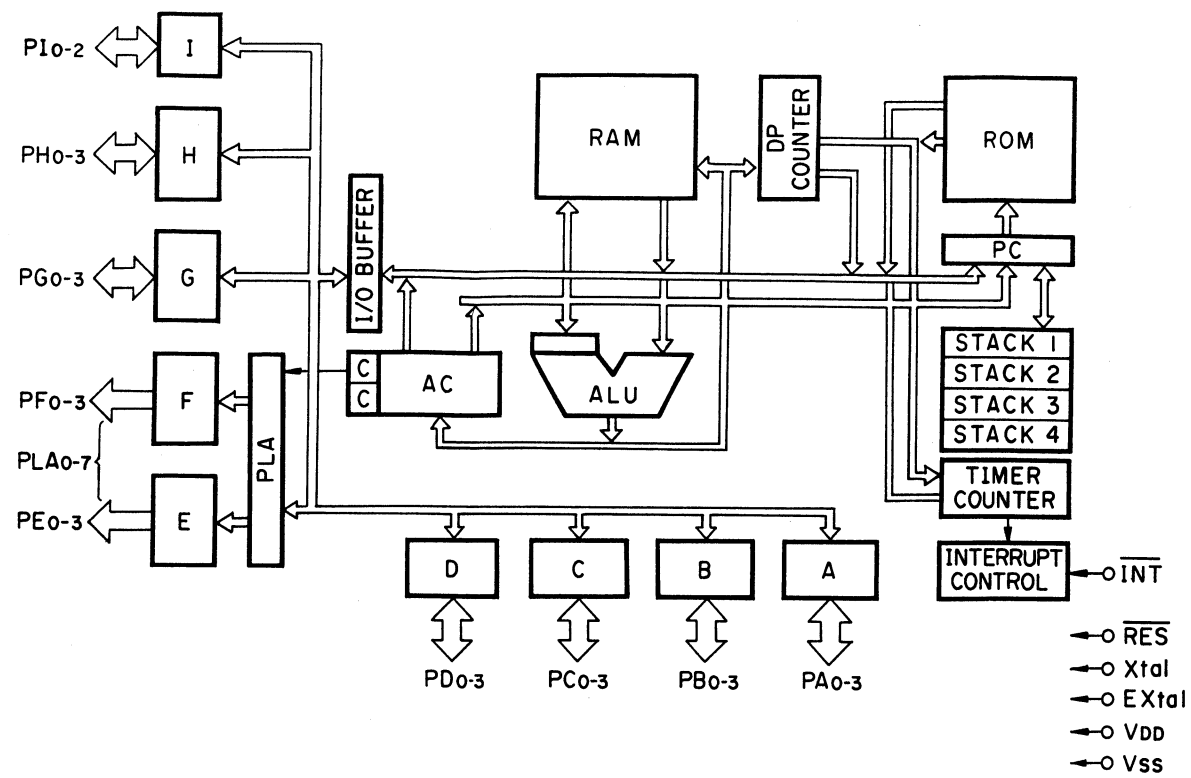


Fig. 13.7 4-Bit Micro-processor LM6402A-052/048

14. SPECIFICATIONS

Track Configuration	4 Tracks/2-Channel Stereo
Heads	2 (Record/Playback Head x 1, Erase Head x 1)
Motors (Tape Transport)	DC 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) \pm 0.5%
Wow and Flutter	Less than 0.11% Wtd peak Less than 0.06% Wtd rms
Frequency Response	20 Hz–20,000 Hz (recording level –20 dB, ZX, SX, EXII Tape)
Signal to Noise Ratio	Dolby C-Type NR on <70 μs, ZX Tape> Better than 68 dB (400 Hz, 3% THD, IHF A-Wtd rms) Dolby B-Type NR on <70 μs, ZX Tape> Better than 62 dB (400 Hz, 3% THD, IHF A-Wtd rms)
Total Harmonic Distortion	Less than 1.2% (400 Hz, 0 dB, ZX, EXII Tape) Less than 1.2% (400 Hz, 0 dB, SX 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 ohms
Output (Line)	1 V (400 Hz, 0 dB, Output Level Control at max.), 2.2 k ohms
(Headphones)	12 mW (400 Hz, 0 dB, Output Level Control at max.), 8-ohm load
Dimensions	450 (W) x 135 (H) x 307 (D) millimeters 17-3/4 (W) x 5-5/16 (H) x 12-1/16 (D) inches
Approximate Weight	8.5 kg 18 lb. 12 oz

- Specifications and appearance design are subject to change for further improvement without notice.
- Dolby NR 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 LX-3

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