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Service Manual

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Nakamichi LX-3

2 Head Cassette Deck



44

LX-3

CONTENTS

1.	General	3
2.	Removal Procedures	5
2. 1.	Top Cover Ass'y	5
2. 2.	Bottom Cover Ass'y	5
2. 3.	Cassette Case Cover Ass'y	5
2. 4.	Front Panel Ass'y	5
2. 5.	Mechanism Ass'y	5
2. 6.	Headphone Jack Ass'y	5
2. 7.	Logic & Power P.C.B. Ass'y	5
2. 8.	Dolby NR P.C.B. Ass'y	5
2. 9.	Main P.C.B. Ass'y and Amp. Switch P.C.B. Ass'y	5
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	7
2. 11.	Rear Panel Ass'y	7
2. 12.	Power Transformer	7
2. 13.	Cassette Case Ass'y and Cover Plate Ass'y	7
2. 14.	Capstan Motor Ass'y and Flywheel Ass'y	7
2. 15.	Sub Mechanism Chassis Ass'y	7
2. 16.	Control Motor Ass'y and Reel Motor Ass'y	7
2. 17.	Cam Control Volume	7
2. 18.	Reel Hub Ass'y and Idler Ass'y	8
2. 19.	Cam Drive Gear and Control Cam	8
2. 20.	Head Mount Base Ass'y	9
2. 21.	Erase Head, Pressure Roller and Tape Guide	9
2. 22.	Record/Playback Head Ass'y	9
3.	Measurement Instruments	9
4.	Mechanical Adjustments	10
4. 1.	Mechanism Control Cam Adjustment	10
4. 2.	Reel Motor Speed Adjustment in Play Mode	11
4. 3.	Record/Playback Head Tilt Adjustment	11
4. 4.	Head Base Stroke Adjustment	12
4. 5.	Erase Head Stroke Adjustment and Tape Guide Height Check	12
4. 6.	Erase Head Height and Tilt Adjustment	13
4. 7.	Back Tension Adjustment	14
4. 8.	Record/Playback Head Height Adjustment and Azimuth Alignment	14
4. 9.	Tape Travelling Adjustment	15
4. 10.	Record Switch Linkage Adjustment	15
4. 11.	Flywheel Helder Adjustment	16
4. 12.	Tape Speed Adjustment	16
4. 13.	Lubrication	16
5.	Parts Location for Electrical Adjustment	17
6.	Electrical Adjustments and Measurements	18
6. 1.	Adjustment and Measurement Instructions	18
6. 2.	Frequency Response Adjustment	21
6. 3.	Dolby NR Circuit Check	22
7.	Mounting Diagrams and Parts List	23
7. 1.	Power Switch P.C.B. Ass'y	24
7. 2.	Shut-off P.C.B. Ass'y	24
7. 3.	LED P.C.B. Ass'y	24
7. 4.	Control Switch P.C.B. Ass'y	24
7. 5.	Counter-1 P.C.B. Ass'y	26
7. 6.	Counter-2 P.C.B. Ass'y	25
7. 7.	Indicator P.C.B. Ass'y	25
7. 8.	Amp. Switch P.C.B. Ass'y	26
7. 9.	Dolby NR P.C.B. Ass'y	27
7. 10.	Logic & Power P.C.B. Ass'y	35

7. 11.	Main P.C.B. Ass'y	39
8.	Mechanism Ass'y and Parts List	45
8. 1.	Synthesis	45
8. 2.	Front Panel Ass'y (A01)	46
8. 3.	Chassis Ass'y (A02)	48
8. 4.	Headphone Holder Ass'y (B01)	49
8. 5.	Mechanism Ass'y LX-3 (B02)	49
8. 6.	Rear Panel Ass'y (B03)	49
8. 7.	Flywheel Holder Ass'y (C01)	49
8. 8.	Sub Mechanism Chassis Ass'y (C02)	49
8. 9.	Main Mechanism Chassis Ass'y (C03)	52
8. 10.	Capstan Motor Ass'y (D01)	52
8. 11.	Reel Motor Ass'y (E01)	52
8. 12.	Control Motor Ass'y (E02)	52
8. 13.	Head Mount Base Ass'y (F01)	53
8. 14.	Supply Pressure Roller Ass'y (F02)	53
8. 15.	Take-up Pressure Roller Ass'y (F03)	53
8. 16.	Head Base Ass'y (F04)	53
8. 17.	Cassette Case Holder L Ass'y (F05)	53
8. 18.	Cassette Case Holder R Ass'y (F06)	53
8. 19.	Auto Shut-off Ass'y (F07)	53
8. 20.	Pneumatic Damper Ass'y (F08)	54
8. 21.	HP-SE Record/Playback Head Ass'y (H01)	54
9.	Overall Timing Chart	54
10.	Eq. Amp. Frequency Response	54
10. 1.	Playback Frequency Response	54
10. 2.	Record Current Frequency Response	54
11.	Block Diagrams	55
11. 1.	Amplifier Section	55
11. 2.	Mechanism Control Section	56
12.	Wiring Diagrams	57
13.	Schematic Diagrams	60
13. 1.	Mechanism Control Section	60
13. 2.	Amplifier Section	61
13. 3.	Attention to Servicemen	65
13. 4.	IC Block Diagrams	65
14.	Specifications	66

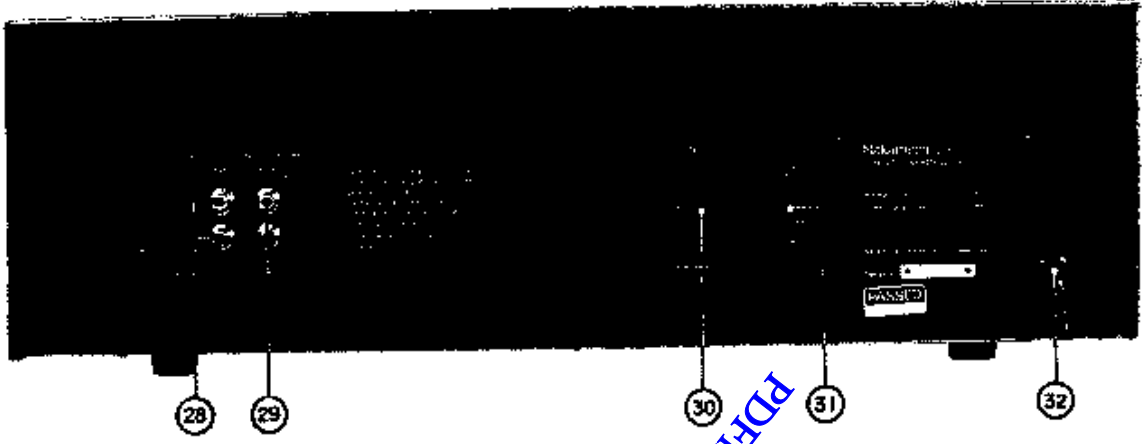


Fig. 1.3 Rear View

- 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.

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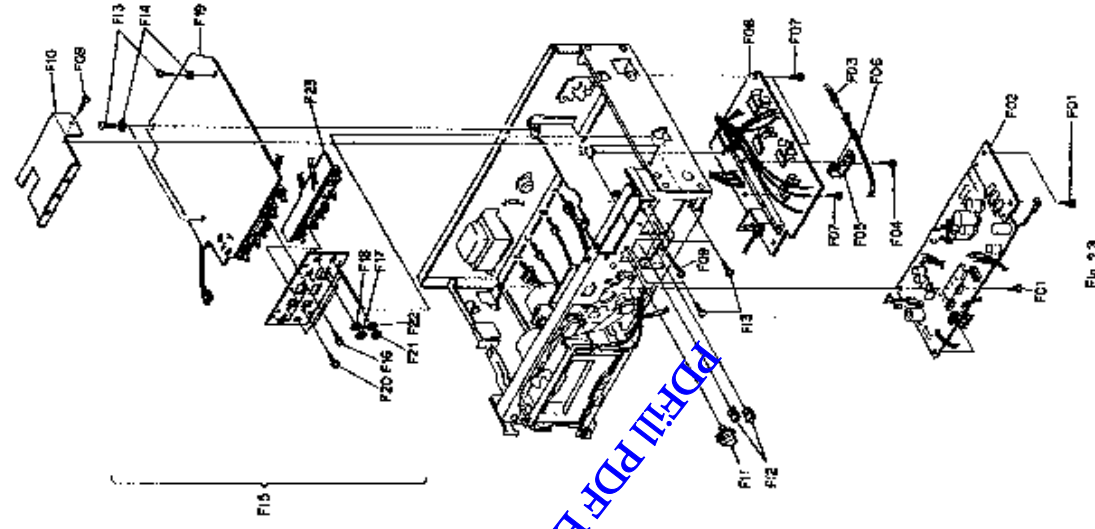


Fig. 2.3

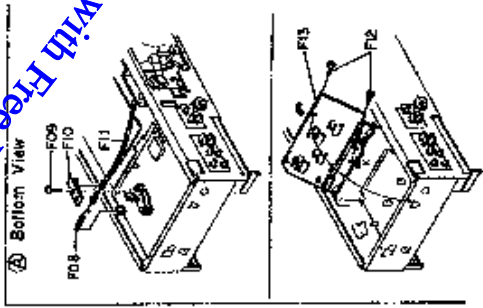
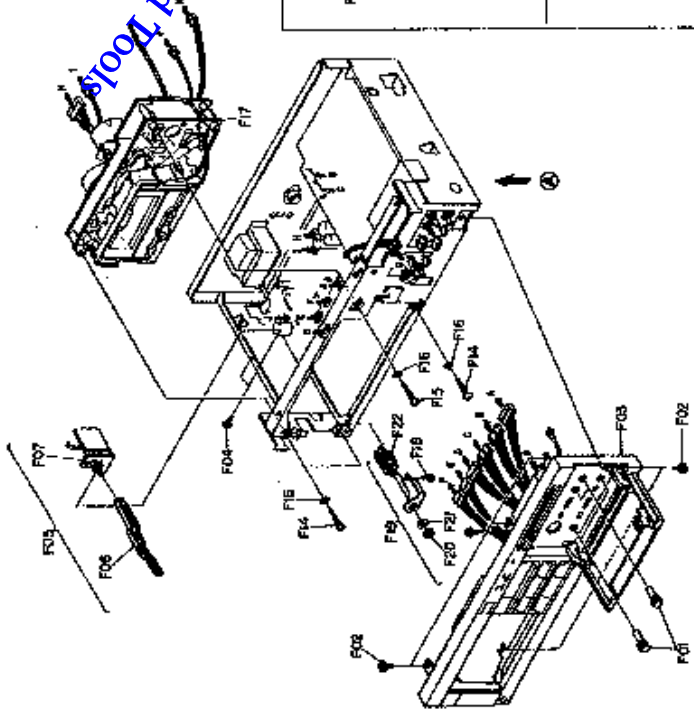


Fig. 2.2

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



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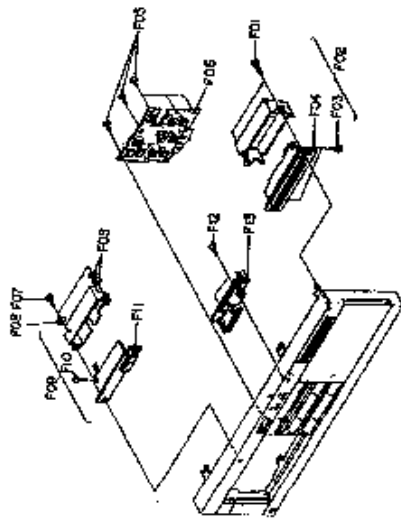


Fig. 2.4

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

2.11. Power Transformer

- Refer to Fig. 2.5.
- (1) Refer to Fig. 2.1. Remove Top Cover Assy and Bottom Cover Assy referring to Items 2.1 and 2.2.
 - (2) Remove F04 and F05, then disassemble F08 (Rear Panel Assy).

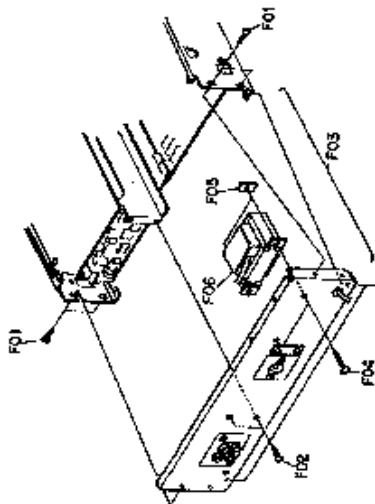


Fig. 2.5

- (3) Remove F06 (Cassette Case Lamp) from Cassette Case Plate, then pull out F04 (Lamp P.C.B.) from F06 (Cassette Case Assy).
- (4) Push the Eject Button to open the Cassette Case Assy.
- (5) Remove F05 and F06, then disassemble F07 (Cassette Case Holder L Assy) by releasing the self-locking pin of Damper Lock Arm and F08 (Cassette Case Assy).
- (6) Remove F09, then disassemble F10 (Cover Plate Assy).

2.14. Cassette Motor Assy and Flywheel Assy

- Refer to Fig. 2.7.
- (1) Refer to Fig. 2.2. Remove Mechanism Assy referring to Item 2.8.
 - (2) Remove F01, F02 and F03, then disassemble F04 (Flywheel Holder Assy) and F05 (Cassette Belt).
 - (3) Remove F06, then disassemble F07 (Cassette Motor Assy).
 - (4) Remove F08, then disassemble F09 (3P Lug Terminal).
 - (5) Remove F10 (Supply Flywheel Assy), then disassemble F11 (Take-up Flywheel Assy).
 - (6) After removing both Flywheel Assemblies, disassemble F12 (Thrust Washer Shim), F13 (Thrust Washer 2.6mm), F14 (Flange Thrust Cap) and F15 (Flange Thrust Spring).

2.15. Sub Mechanism Chassis Assy

- Refer to Fig. 2.8.
- (1) Refer to Fig. 2.7. Remove Flywheel Holder Assy referring to Item 2.14.
 - (2) Remove F01, F02 and F03, then disassemble F04 (Sub Mechanism Chassis Assy).

2.16. Control Motor Assy and Reed Motor Assy

- Refer to Fig. 2.8.
- (1) Remove Sub Mechanism Chassis Assy referring to Item 2.15.
 - (2) Remove F05, then disassemble F06 (Control Motor Assy).
 - (3) Remove F07, then disassemble F08 (Reed Motor Assy).

2.17. Cassette Volume

- Refer to Fig. 2.8.
- (1) Remove Sub Mechanism Chassis Assy referring to Item 2.15.

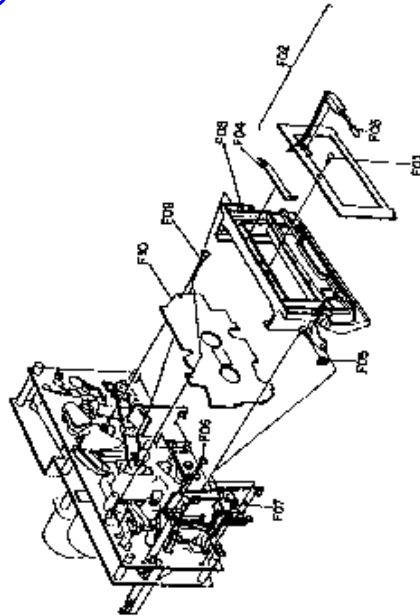


Fig. 2.6

- (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).

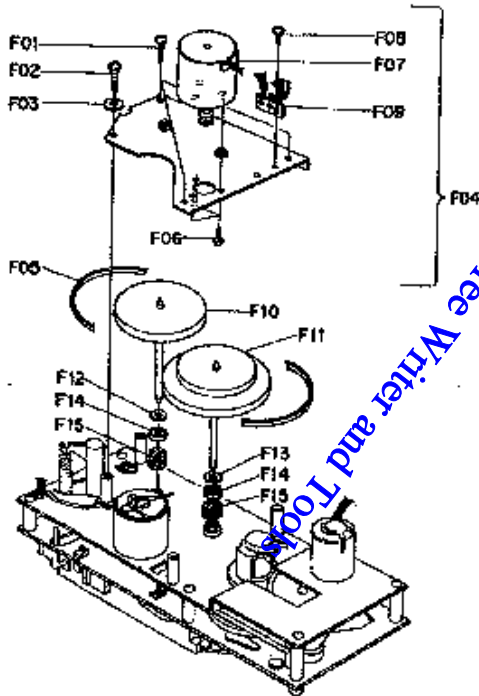


Fig. 2.7

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).

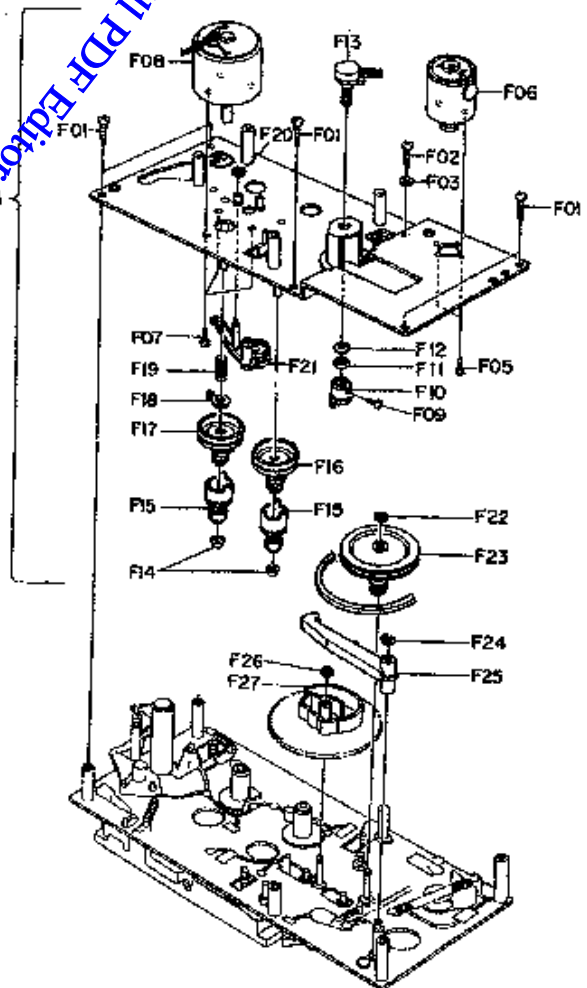


Fig. 2.8

LX-3

2.20. Head Mount Base Ass'y

Refer to Fig. 2.9.

- (1) Refer to Fig. 2.8. 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).

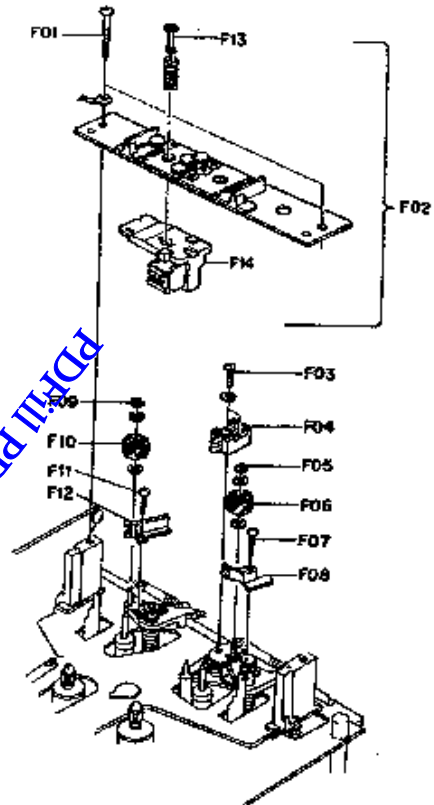


Fig. 2.9

3. MEASUREMENT INSTRUMENTS

- (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)
- (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.

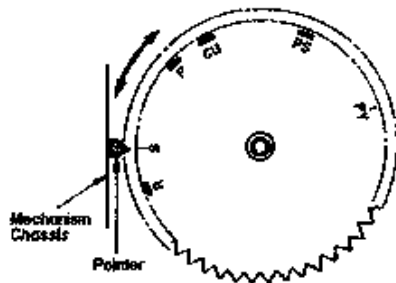


Fig. 4.1

(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

±0.3 V
±0.25 V
±0.4 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.

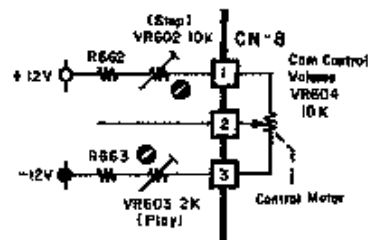


Fig. 4.2

LX-3

- 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 2.8 V (± 0.4 V) than in Pause mode.

- 5) Short both leads of capacitor C804 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 C804 after completion of adjustment.

4.2. Real 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.

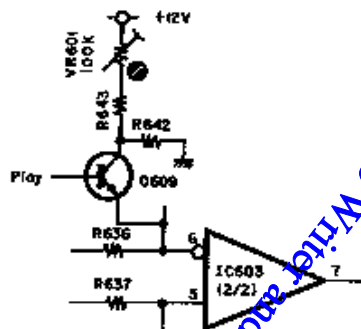


Fig. 4.3

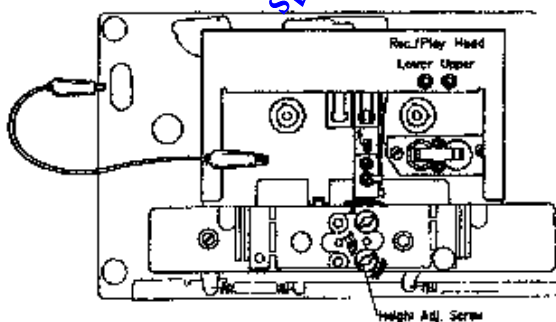


Fig. 4.4

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-8036 (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.

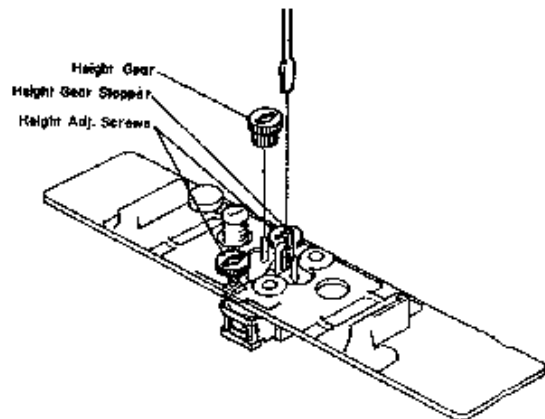


Fig. 4.5

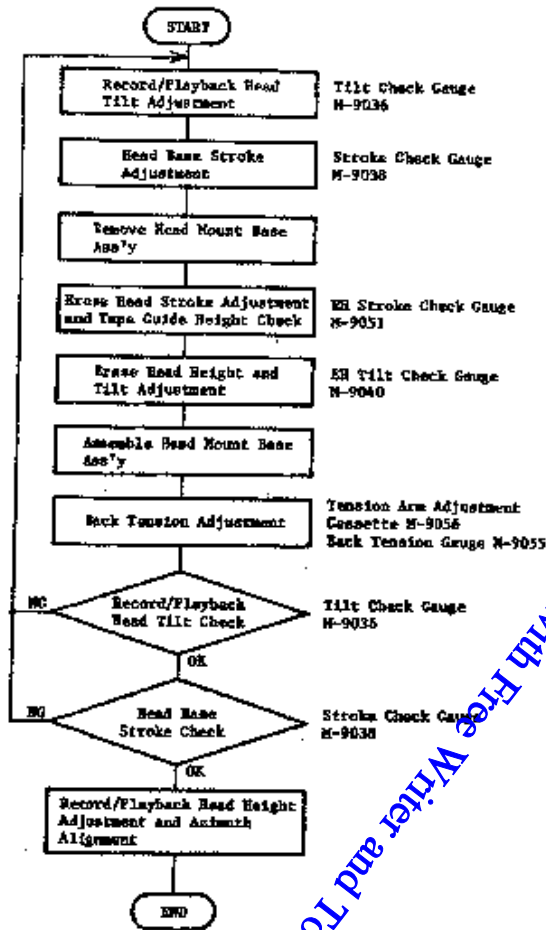


Fig. 6

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).

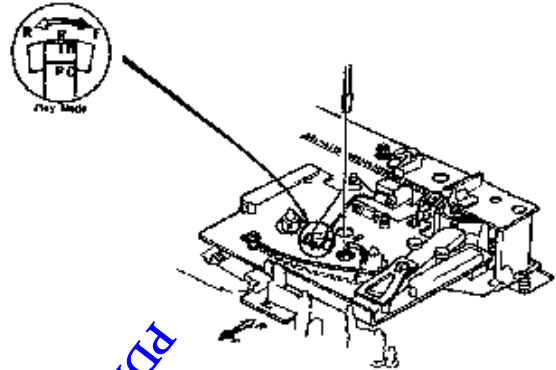


Fig. 4.7

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.

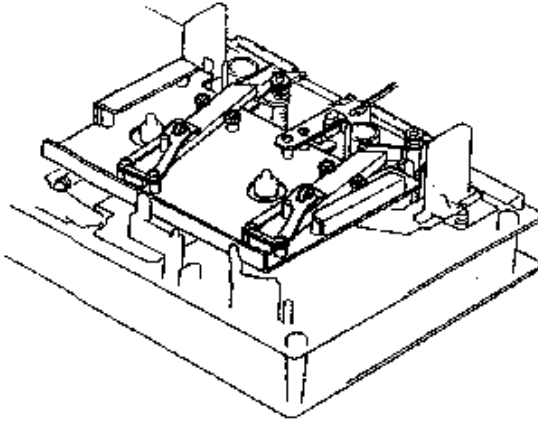


Fig. 4.8

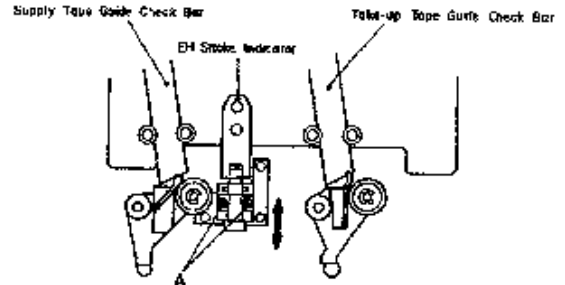


Fig. 4.9

4.8. 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-8040 (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.

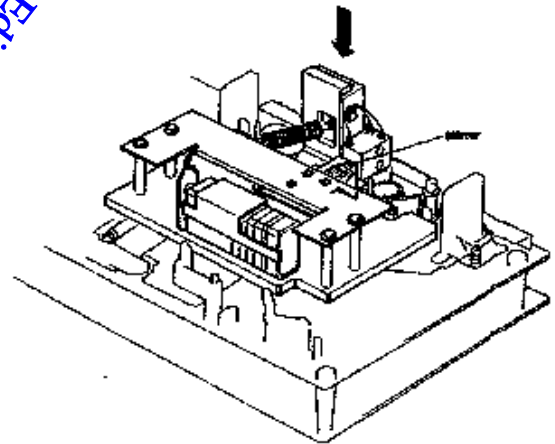


Fig. 4.10

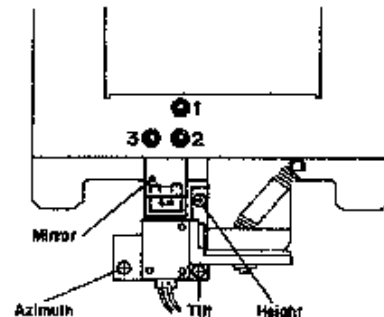


Fig. 4.11

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 Assy 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.

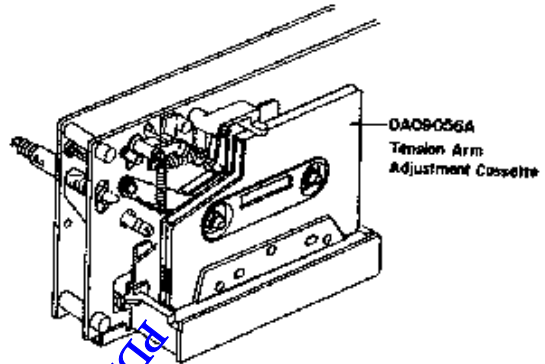


Fig. 4.12

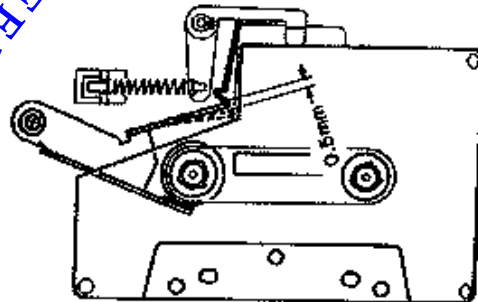


Fig. 4.13

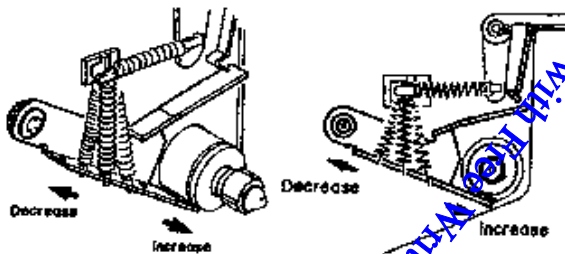


Fig. 4.14

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.

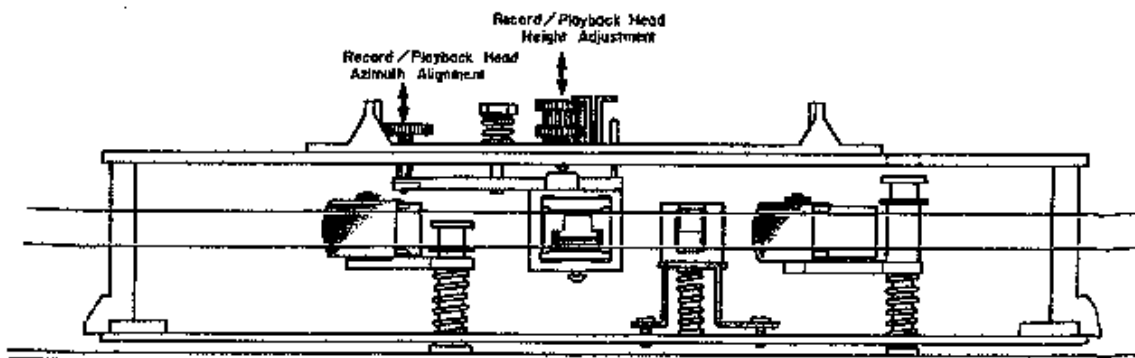


Fig. 4.15

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 (DA08011A) 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.

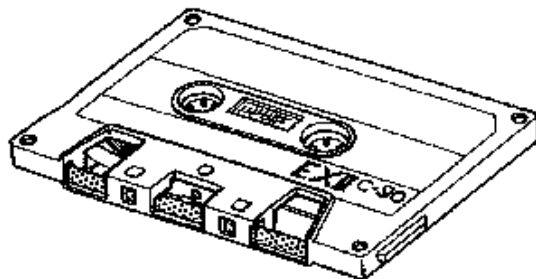


Fig. 4.16

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 point.

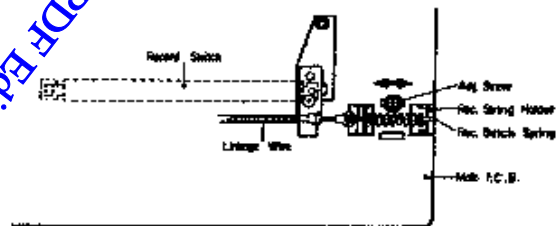


Fig. 4.17

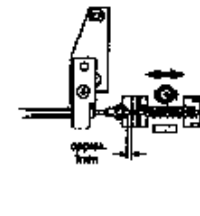


Fig. 4.18

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.

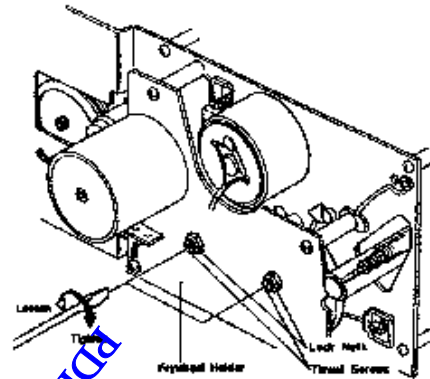


Fig. 4.19

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 (VRE01) incorporated in the Capstan Motor to obtain 3,000 Hz on the Frequency Counter.

CCW: Motor drives slowly.

CW: Motor drives fast.

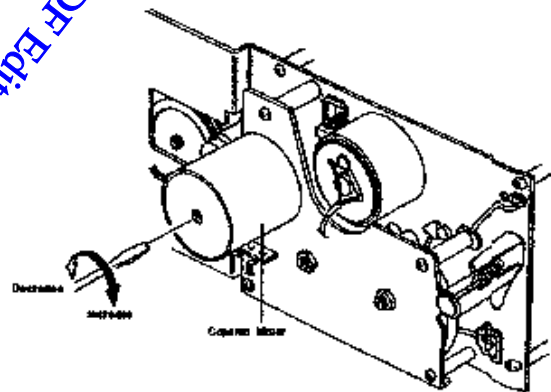


Fig. 4.20

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

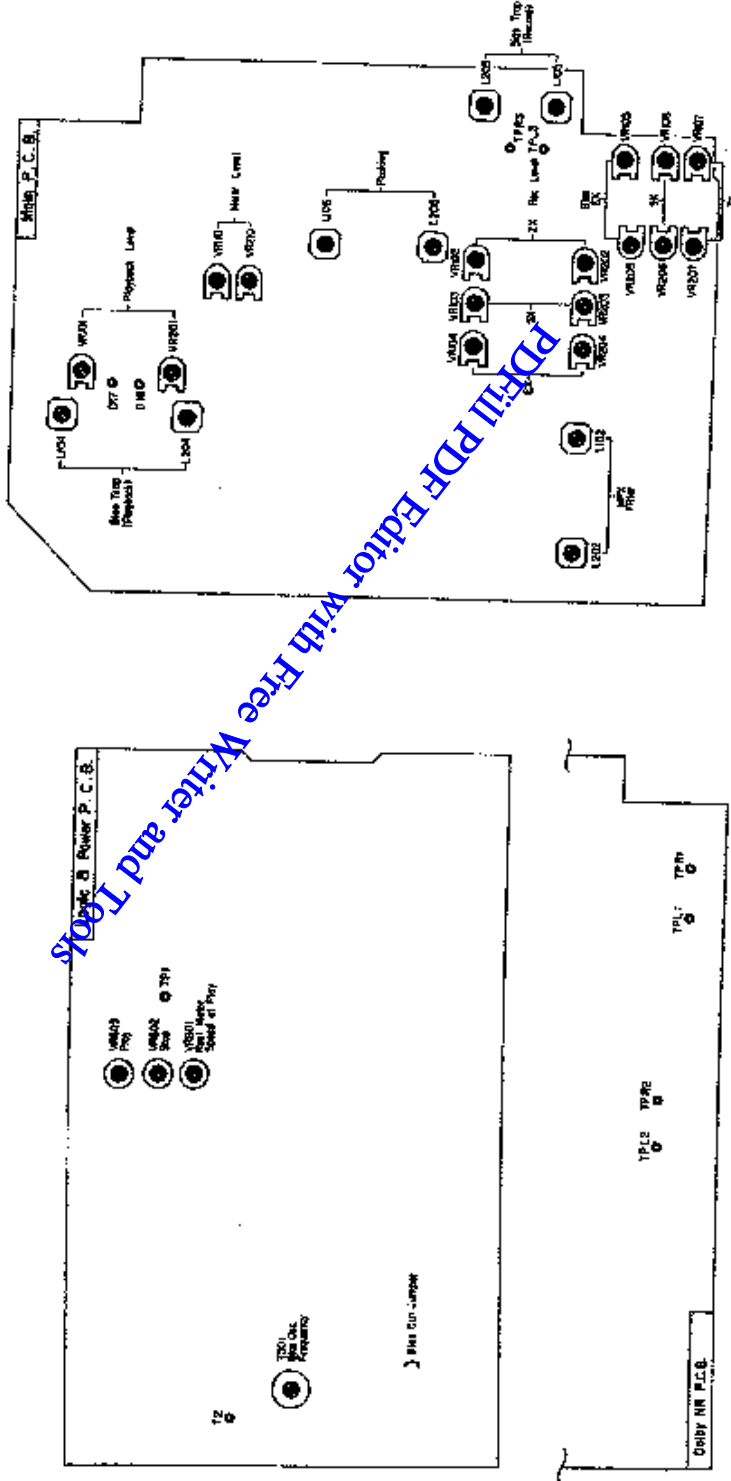


Fig. 5

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	MOUSE	ADJUSTMENT	REMARKS
1	Tape Speed Adjustment	3 Hz Speed and Slow/Pulse Taps (DA00008A)	Frequency Counter to Output Jacks	Playback Re, SW - 70 µs	Generator Motor Governor P.C.B. VR301	Adjust VR301 to obtain 3 kHz ±0.5% (VR301 is incorporated in the generator motor)
2	Motor Level Calibration	400 Hz to Input Jacks	VTVM to TP2, TP2 on Dolby NR P.C.B.	Record/Play 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) to start the 0 dB segment of the test wave form 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	18 kHz ±100 Hz to Input Jacks	VTVM to Output Jacks	Record/Playback MPX SW - OFF	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 reads to IN, then adjust L102 (L202) to obtain the maximum reading on the VTVM (minimum reading will be less than -30 dB).
4	Record/Playback Head Track Alignment	1 kHz Test Alignment Taps (DA00007A)	VTVM to Output Jacks	Playback Re, 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 the Record/Playback Head Height Adjustment and Alignment "Alignment" in Item 4.2.
5	Record/Playback Head Alignment Adjustment	18 kHz Alignment Taps (DA00004A)	VTVM to Output Jacks	Same as above	Record/Playback Head Alignment Adjustment	Adjust the Record/Playback Head Alignment Screw to obtain maximum readings of both channels on the VTVM. Refer to the Record/Playback Head Height Adjustment and Alignment "Alignment" in Item 4.2.
6	Playback Level Calibration	400 Hz Level Taps (DA00006A)	VTVM to TP2, TP2 on Dolby NR P.C.B.	Same as above	Main P.C.B. VR101, VR201	Notes: Repeat steps 4 and 5 one or two times to obtain optimum performance. Adjust VR101 (VR201) to obtain 90 mV on the VTVM.
7	Bias Tone Adjustment (Playback Amp.)	Variable Input Signals	VTVM to D17, D18 on Main P.C.B.	Record/Play Tape SW - ZX Re, SW - 70 µs Dolby NR SW - OFF	Main P.C.B. L104, L204	Adjust L104 (L204) to obtain the maximum reading on the VTVM.
8	Playback Frequency Response Adjustment	400 Hz Level Taps (DA00006A) 10 kHz PR Frequency Taps (DA00005A) 18 kHz PR Frequency Taps (DA00003A) 20 kHz PR Frequency Taps (DA00001A)	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 the test tape and play it back. 2. Load 10 kHz PR and 20 kHz PR frequency response tapes and adjust the recording level head azimuth to obtain maximum level on the VTVM with each tape. 3. Read the maximum level on each tape and check to insure that this level differs less than 400 mV level within the following ranges: 10 kHz (-20 dB) -2 dB to +2 dB 18 kHz (-20 dB) -2 dB to +2 dB 20 kHz (-20 dB) -3 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 Alignment Adjustment".

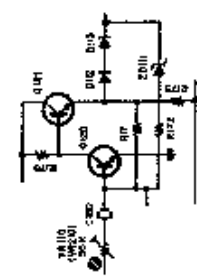


Fig. 6.2. Meter Level

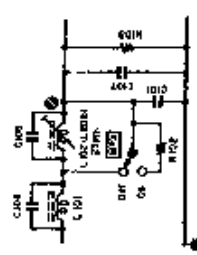


Fig. 6.3. MPX Filter

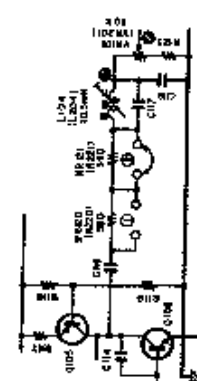
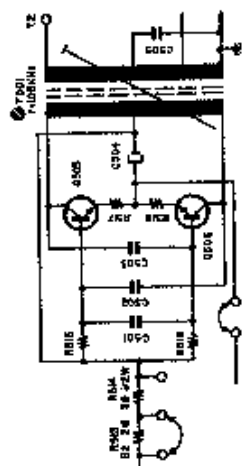
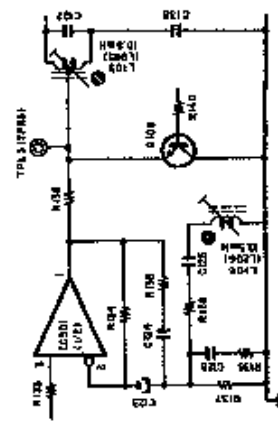
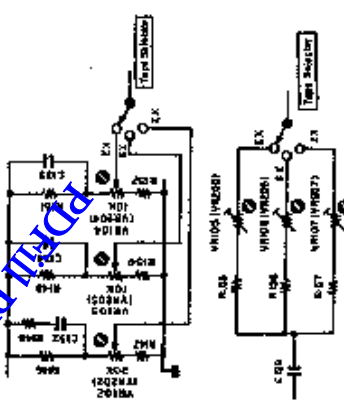


Fig. 6.5. Playback Level
7. Bias Tone (Playback Amp.)
8. Playback Frequency Response

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
9	Blue Oscillator Frequency and Sweep Currents Adjustment		Frequency Counter to T2 on Logic & Power P.C.B. and VTVM across the existing 0.1 Ω resistor	Record, Pause Type SW - ZX Es. SW - 20 dB Dolby NR SW - OFF MPX SW - OFF	Logic & Power P.C.B. T201 R813, R814	<ol style="list-style-type: none"> Connect an additional 0.1 Ω resistor in series to the Erase Head, then connect a VTVM across ZK. Set the Blue Tune Volume to center position. Adjust TEST to obtain 100 kHz on the frequency counter. Check the current by the VTVM, blue current will be in a range of 210 mA to 400 mA, typically approx. 300 mA. If error current is not sufficient, increase it by shorting R813 or R814. After completion of the sweep current adjustment, recheck the blue oscillator frequency.
10	Record Amplifier Equalizer Adjustment	21 kHz (-20 dB) to Input Jacks	VTVM to TP1, TP41 on Dolby NR P.C.B.	Same as above	Main P.C.B. L106, L108	<ol style="list-style-type: none"> Remove the Blue-Tune/Jumper from the slip side of the Logic & Power P.C.B. Adjust L106 (L206) to obtain peak reading at 21 kHz on the VTVM. Re-adjust the blue-current.
11	Blue Tune Adjustment (Record Amp.)	Reference tones signals	VTVM to TP12, TP13 on Main P.C.B.	Same as above	Main P.C.B. L208, L209	<ol style="list-style-type: none"> Set the Blue Tune Volume to center position. Adjust L108 (L208) to obtain the maximum reading on the VTVM. <p>Adjustment should be made in the order of ZX, SP and EX.</p>
12	Record Level Calibration and Preceding 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 TP12, TP13 on Dolby NR P.C.B. and VTVM to TP1, TP11 on Dolby NR P.C.B. and VTVM and Oscillation Meter to Output Jacks	Record and Playback Type SW - ZK/EX/BK Es. SW - 75 or 125 dB 130 pt SW Dolby NR SW - ON (C-Type) MPX SW - OFF	Main P.C.B. (Record Level) ZX: VR100, VR202 EX: VR103, VR203 EK: VR104, VR204 (Es. Current) ZX: VR107, VR207 EX: VR108, VR208 EK: VR109, VR209	<ol style="list-style-type: none"> Set the Blue Tune Volume to center position. Set the Dolby NR switch to C-Type. Connect the VTVM to Output Jacks. Feed in 400 Hz (-20 dB) and 10 kHz (-20 dB), then record, muted and play them back. Adjust Bias VR107 (VR207) to 2.5 V (VR208) for EX and VR109 (VR209) for EXII to obtain the same playback level at 400 Hz (-20 dB) and 18 kHz (-20 dB) on the VTVM. Adjust Record Cal. VR102 (VR202) for ZX, VR103 (VR203) for EX and VR104 (VR204) for EXII to obtain the same playback level at 400 Hz (-20 dB) and 18 kHz (-20 dB), then record, muted and play it back. Adjust Record Cal. VR102 (VR202) for ZX, VR103 (VR203) for EX and VR104 (VR204) for EXII to obtain 0 dB on the VTVM. Repeat above 10 and 11 two or three times to obtain optimum performance. Set the Dolby NR switch to OFF. Feed in 400 Hz (-20 dB), 10 kHz (-20 dB) and 18 kHz (-20 dB), then record, muted and play them back. Check to insure that the playback levels are within -20 dB ± 0.5 dB against the levels in Dolby NR C-Type. Set the Dolby NR switch to B-Type. Feed in 10 kHz (-20 dB) and 18 kHz (-20 dB), then record, muted and play them back. Check to insure that the levels are within -20 dB ± 0.5 dB against the levels in Dolby NR OFF. Check to insure whether the total harmonic distortion is less than 1.2% for ZX, EXII and EX terms. If above is not sufficient, repeat 10 to 11 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) Input Jacks	VTV6 to Output Jacks	Record and Playback Tape BW - ZX (EX/EX) Eq. SW - 20 Hz ZM/DX 120 Hz (EX) Dolby NR SW - OFF MPX SW - OFF	Main P.C.B. L106, L208	<ol style="list-style-type: none"> Set the Bias Tune Volume to center position. Set the LCA of Phase/Phase knob. Feed in 400 Hz, then set the Input Level controls to obtain 0 dB (1 V) on the VTVM. Decrease the preamp output control by 20 dB. Feed in 20 Hz to 18 kHz (-20 dB) and record, rewind and play them back. Be sure to insure whether the output levels are within -20 dB to 0 dB. If above is not sufficient, adjust L105 (L205) to obtain approx. -20 dB on the VTVM, then conduct step 12 "Record Level Calibration and Recording Bias Current Adjustment." If above is not sufficient, check re-adjustment of step 8 "Playback Pre-Equalizer Response", measurement of Record/Playback Head or check on their 4.5 "Tape Traveling Actuator" for any required.
14	Cross-talk Measurement	1 kHz to 18 kHz Input Jacks	1 kHz Band Pass Filter and VTVM to Output Jacks	Record and Playback Tape SW - ZX Eq. SW - 20 Hz Dolby NR SW - OFF MPX SW - OFF		<ol style="list-style-type: none"> Set the Bias Tune Volume to center position. Repeat the step with built speaker. Adjust the Input Level controls to obtain 0 dB on the VTVM, and record the signal on the reference ZX tape (DAUR037A). Turn the control tape the other way round and play it back. 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"> Set the Bias Tune Volume to center position. Feed the bias with built speaker. Adjust L41 on 40 Input Level control to obtain 0 dB on the VTVM, and check it on L40 Input Level control. Repeat, rewind and play it back, then separate the R on L41 off level.
16	Frequency Measurement	100 Hz to 18 kHz Input Jacks	100 Hz Band Pass Filter and VTVM to Output Jacks	Record and Playback Tape SW - ZX Eq. SW - 20 Hz Dolby NR SW - OFF MPX SW - OFF		<ol style="list-style-type: none"> Set the Bias Tune Volume to center position. Repeat the step with built speaker. Adjust the Input Level controls to obtain 0 dB on the VTVM, and record the signal on the reference ZX tape (DAUR037A). Repeat the step, stop Input Level controls, and then record again. Repeat the step, play it back, and then measure the difference between 3 and 4.



STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUSTMENT	REMARKS
17	Signal to Noise Ratio Measurement.	400 Hz to Input Jacks	HFA Curve Filter, Distortion Meter and VTVM to Output Jacks	Record and Playback Tape SW - ZX Eq. SW - 20 μ s Delay NR SW - ON (B-TVM) MPX SW - OFF	1. Set the Bias Tune Volume to center position. 2. Set the Delay NR switch to B-Type (C-Type). 3. Feed in 400 Hz, then Network, record and play it back. 4. Adjust the Input Level control to obtain 8% total harmonic distortion in Playback mode. 5. Close the Input Level control then record. 6. After recording, play back and check the output level difference between 4 and 5.	1. Set the Bias Tune Volume to center position. 2. Set the Delay NR switch to B-Type (C-Type). 3. Record and play it back. 4. Read the distortion meter and check to insure that the distortion is as follows: BXTL 1.2% or less SQ 1.2% or less ZX 1.2% or less
18	Total Harmonic Distortion Measurement	400 Hz to Input Jacks	VTVM and Distortion Meter to Output Jacks	Record Playback Tape SW - ZX (B-TVM) Eq. SW - 20 μ s Delay NR SW - ON (B-TVM) 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: BXTL 1.2% or less SQ 1.2% or less ZX 1.2% or less	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: BXTL 1.2% or less SQ 1.2% or less ZX 1.2% or less
19	Waveform Measurement	3 kHz Burst and Wave/Flutter Tone (D40000A)	Wave/Flutter Meter to Output Jacks	Playback Eq. SW - 70 μ s	Play back and read the separate 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 amp loss of the discback head. Peaking level is varied by the shunt circuit of R120 (R220) or R121 (R221) as illustrated in Fig. 6.7.

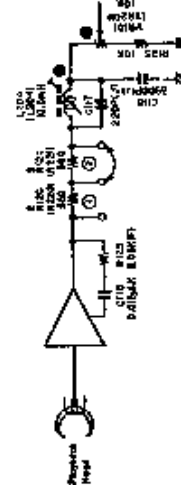


Fig. 6.8 Playback Eq. Amp.

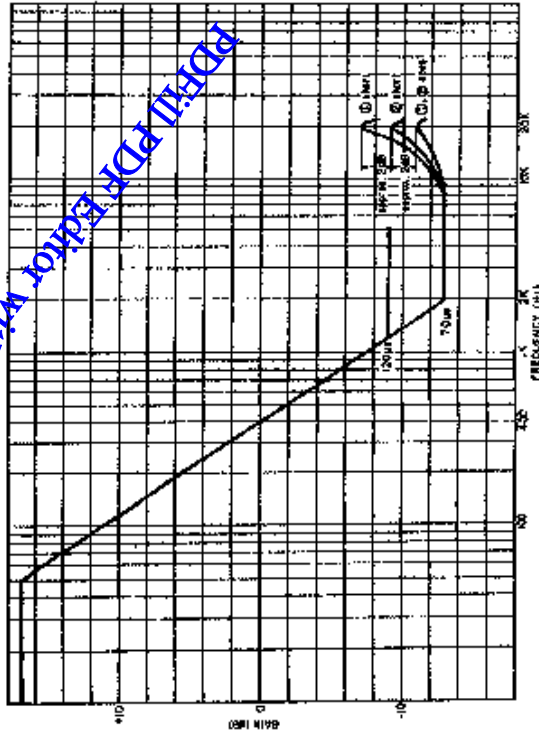


Fig. 6.7 Playback Equalization Curve

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

- Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- 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.
- Set the Dolby NR switch to OFF. Check to insure that the reading is +3.2 dB \pm 1.5 dB on the VTVM.

(2) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to 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

- Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- Feed in 1.4 kHz and adjust the input level controls to obtain 9 mV/2.85 mV on the VTVM.
- Remove the VTVM from TPL2 (TPR2) and reconnect it to IC102-16 (IC202-16).
- 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 \pm 1.5 dB
2.85 mV	0 dB	+8.2 dB \pm 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

- Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- 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.
- Set the Dolby NR switch to OFF. Check to insure that the reading is +6.5 dB \pm 1.5 dB on the VTVM.

(2) Record Dolby NR Circuit

Signal Source: 1.4 kHz to Input Jacks
Output Connection: VTVM to 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

- Connect a VTVM to TPL2 (TPR2) on the Dolby NR P.C.B. Ass'y.
- Feed in 1.4 kHz and adjust the input level controls to obtain 9 mV/2.85 mV on the VTVM.
- Remove the VTVM from TPL2 (TPR2) and reconnect it to IC102-16 (IC202-16).
- 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 \pm 1.5 dB
2.85 mV	0 dB	+11.4 dB \pm 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. Assy (Japan)	LED301 LED302-306 R301,302 303,306 306 R304 R307 SW301-308 SW309,310 CN15 CN17 CN23	BA04692A	Control Switch P.C.B. Assy Serial No.: A31304445 -
	BA04627A	Power Switch P.C.B. Assy (U.S.A. & Canada)		0B07993C	Control Switch P.C.B.
	BA04628A	Power Switch P.C.B. Assy (UK, Australia, 220V Class 2 & Others)		0B06340A	LED Red TLR208
	0B02519B	Power Switch P.C.B.		0B06341A	LED Green TLR208 (5 pcs.)
	0B07406A	Power Switch (Japan)		0B05575A	Carbon Resistor 560 ERD-25T J
	0B07407A	Power Switch (U.S.A. & Canada)		0B01857A	Carbon Resistor 1K ERD-25T J
	0B07408A	Power Switch S.V.G. (UK, Australia, 220V Class 2 & Others)		0B05676A	Carbon Resistor 390K ERD-25T J
	0B06363A	Spark Killer (Japan)		0B07219A	Switch AKC8S
	0B06342A	Spark Killer (U.S.A. & Canada)		0B07396A	Double Action Switch KHFI0901
	0B06356A	Spark Killer (UK, Australia, 220V Class 2 & Others)		0B06928A	9P-H Connector 450mm
	0E00822A	Screw M3x5 Philips Pan Head (2A)		0B06929A	9P-H Connector 450mm
	0E00762A	Eyebolt 2x3 (2 pcs.)		0B06931A	TOP-H Connector 400mm
0J04538A	Power Switch Holder (1 pcs.)	0M04222A	Label CN-15 (1 pcs.)		
C406 R604 R606 PL407 CN13	BA04637A	Shut-off P.C.B. Assy	LED301 LED302-306 R301,302 303,306 306 R304 R307 SW301-308 SW309,310 CN15 CN17 CN23	BA04692A	Control Switch P.C.B. Assy Serial Nos.: A31301001 - A31304445
	0B07839B	Shut-off P.C.B.		0B07993A	Control Switch P.C.B.
	0B06228A	Photo Transistor PH104		0B06340A	LED Red TLR208
	0B06615A	Carbon Resistor 22K ERD-25T J		0B06341A	LED Green TLR208 (5 pcs.)
	0B06215A	Fall Safe Type Resistor 100 RDP-25S J		0B05575A	Carbon Resistor 560 ERD-25T J
	0B06652A	Lamp 12V 25mm		0B01857A	Carbon Resistor 1K ERD-25T J
	0B06847A	9P Connector		0B05676A	Carbon Resistor 390K ERD-25T J
0M04230A	Label CN-13 (1 pcs.)	0B07219A	Switch AKC8S		
LED301 302,303 LED304 306 R301,302 CN24	BA04688A	LED P.C.B. Assy Serial No.: A31304445 -	R304 R307 SW301-308 SW309,310 CN15 CN17 CN23	0B07396A	Double Action Switch KHFI0901
	0B07994C	LED P.C.B.		0B06928A	9P-H Connector 450mm
	0B06340A	LED Red TLR208		0B06929A	9P-H Connector 450mm
	0B06327A	LED		0B06931A	TOP-H Connector 400mm
	0B01857A	Carbon Resistor 1K ERD-25T J		0M04222A	Label CN-15 (1 pcs.)
	0B06957A	9P-H Connector 450mm		0M04224A	Label CN-17 (1 pcs.)
	0E00857A	BT Screw M3x6 Phillips Binding Head (1 pcs.)		0M04332A	Label CN-23 (1 pcs.)
LED301 302,303 LED304 306 R301,302 CN24	BA04693A	LED P.C.B. Assy Serial No.: A31301001 - A31304445	R304 R307 SW301-308 SW309,310 CN15 CN17 CN23	0B07994A	LED P.C.B.
	0B07994A	LED P.C.B.		0B06340A	LED Red TLR208
	0B06340A	LED Red TLR208		0B06327A	LED
	0B06327A	LED		0B01857A	Carbon Resistor 1K ERD-25T J
	0B01857A	Carbon Resistor 1K ERD-25T J		0B06957A	9P-H Connector 450mm
	0B06957A	9P-H Connector 450mm		0E00857A	BT Screw M3x6 Phillips Binding Head (1 pcs.)
	0E00857A	BT Screw M3x6 Phillips Binding Head (1 pcs.)		0J04534A	Fader House (1 pcs.)
0J04534A	Fader House (1 pcs.)	0M04236A	Label CN-24 (1 pcs.)		
0M04236A	Label CN-24 (1 pcs.)				

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

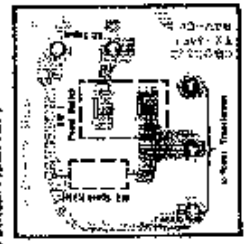


Fig. 7.1

7.A. Control Switch P.C.B. Assy

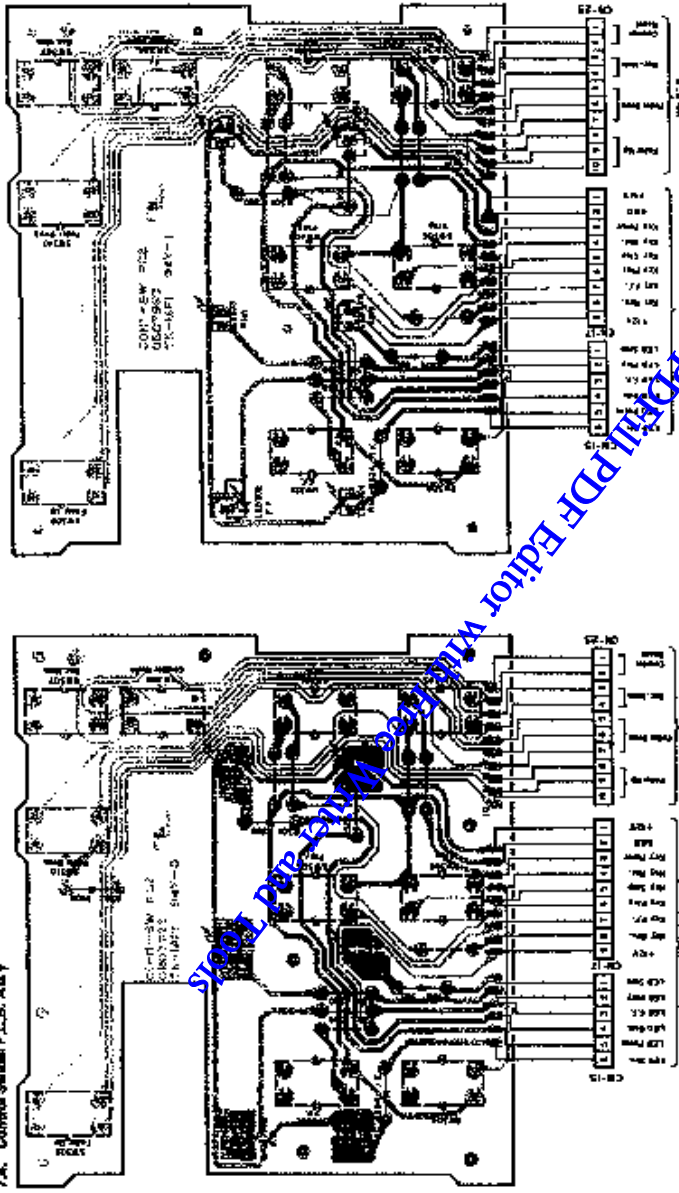


Fig. 7.1.1 Serial No. A31304448

Fig. 7.1.2 Serial No. A31304448

7.2. Shut-off P.C.B. Assy

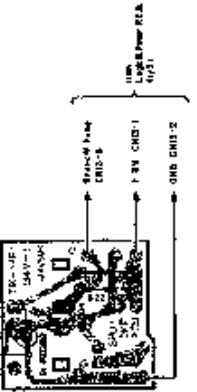


Fig. 7.2

7.3. LED P.C.B. Assy

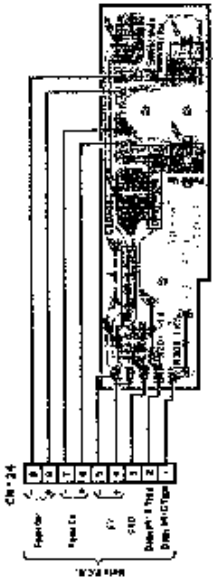


Fig. 7.3.1 Serial No. A31304448

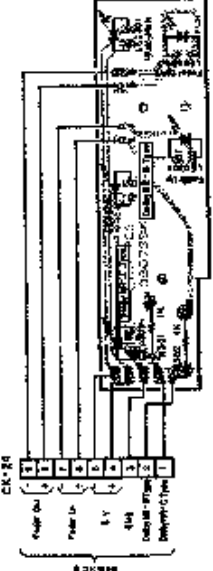


Fig. 7.3.2 Serial No. A31304448

7.8. Amp. Switch P.C.B. Assy

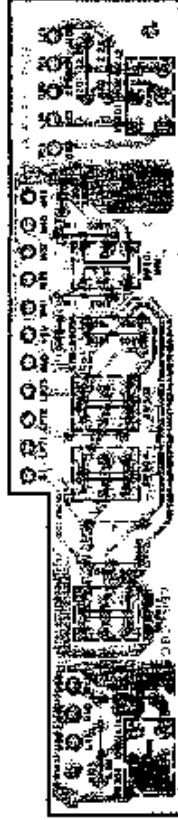


Fig. 7.8.1 Serial No.: A31310063 -



Fig. 7.8.2 Serial No.: A31301001 - A31310063

Reference No. / Part No.	Description	Part No.	Description	Quantity	Part No.	Description
RS26	Carbon Resistor	850	ERD-25T J	1	850	Carbon Resistor
CS10	Mylar Capacitor	680P	ERD-25T J	1	680P	Mylar Capacitor
CS11	Electrolytic Capacitor	47u	ERD-25T J	1	47u	Electrolytic Capacitor
CS14	4K-5 Prot.	12 (res.)	ERD-25T J	1	12 (res.)	4K-5 Prot.
	40 Pin Cable Strain	1 (res.)	ERD-25T J	1	1 (res.)	40 Pin Cable Strain
	40 Pin Cable Strain	1 (res.)	ERD-25T J	1	1 (res.)	40 Pin Cable Strain
	Label 1H-25	1 (res.)	ERD-25T J	1	1 (res.)	Label 1H-25
	Earth Lug B-8	1 (res.)	ERD-25T J	1	1 (res.)	Earth Lug B-8
	Wiper Contact 18103	1 (res.)	ERD-25T J	1	1 (res.)	Wiper Contact 18103
	Inductor P.C.B. Assy	A3130445	A31310062			
	Inductor P.C.B.	MSL2500R				
	Transistor	2SA733				
	Transistor	2SD471				
	Carbon Resistor	470	ERD-25T J			
	Carbon Resistor	85	ERD-25T J			
	Carbon Resistor	12K	ERD-25T J			
	Full Size Type Resistor	22	ERD-25T J			
	Carbon Resistor	500	ERD-25T J			
	Carbon Resistor	500	ERD-25T J			
	Carbon Resistor	500	ERD-25T J			
	Mylar Capacitor	500P	ERD-25T J			
	Electrolytic Capacitor	47u	ERD-25T J			
	BP-4 Peg					
	BP Fine Cable Strain					
	BP Fine Cable Strain					
	Label 1H-25					
	Earth Lug B-5					
	Earth Lug B-5					
	Meter Display 88103					
	Inductor P.C.B. Assy	A3130445	A3130445			
	Inductor P.C.B.	MSL2500R				
	Transistor	2SA733				
	Transistor	2SD471				
	Carbon Resistor	470	ERD-25T J			
	Carbon Resistor	85	ERD-25T J			
	Carbon Resistor	12K	ERD-25T J			
	Full Size Type Resistor	22	ERD-25T J			
	Carbon Resistor	500	ERD-25T J			
	Carbon Resistor	500	ERD-25T J			
	Carbon Resistor	500	ERD-25T J			
	Mylar Capacitor	500P	ERD-25T J			
	Electrolytic Capacitor	47u	ERD-25T J			
	BP-5 Peg					
	BP Fine Cable Strain					
	BP Fine Cable Strain					
	Label 1H-25					
	Earth Lug B-5					
	Earth Lug B-5					
	Meter Display 88103					

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
R145,245 301,302 303,304	0B01889A	Carbon Resistor 100K ERD-25T J		0E00857A	BT Screw M3x6 Phillips Binding Head (1 pcs.)
R161,261	0B09585A	Metal Film Resistor 2.1K SN14K2E F		0J04482A	Shield Case D (1 pcs.)
C101,103 105,108 116,118 120,121 201,203 205,208 216,218 220,221	0B08223A	Electrolytic Capacitor 1μ 50V (LN)		0M04331A	Label CN-22 (1 pcs.)
C102,202 C104,204 C108,122 206,222	0B06587A	Mylar Capacitor 0.015μ 50V J		0J04545A	Dolby NR P.C.B. Shield Plate (1 pcs.)
C107,123 136,207 223,226	0B09240A	PP Capacitor 0.033μ 100V G		- Miscellaneous -	
C109,124 208,224	0B01862A	Electrolytic Capacitor 22μ 16V		0B06000C	Dolby NR P.C.B.
C110,126 210,226	0B01402A	Electrolytic Capacitor 4.7μ 25V		0B08570A	Record Spring Holder (1 pcs.)
C111,211 C112,113 212,213	0B06583A	Mylar Capacitor 0.033μ 50V J		0E00172A	Washer 3mm Toothed Lock (1 pcs.)
C114,115 214,215	0B01780A	Mylar Capacitor 0.1μ 50V J		0E00225A	E-Ring 2mm (1 pcs.)
C117,217	0B09587A	Electrolytic Capacitor 0.33μ 50V (LN) K		0E00657A	Nut Hex. M3 (1 pcs.)
D118,131 218,231	0B09594A	Mylar Capacitor 0.03μ 50V J		0E00446A	BT Screw M3x8 Phillips Pan Head (1 pcs.)
C126,226 C127,227	0B01412A	Electrolytic Capacitor 10μ 16V		0B04531A	Record Switch Shaft B (1 pcs.)
C128,228 C130,230 C132,232	0B06586A	Mylar Capacitor 0.13μ 50V J		0A03922A	Record Arm Assy (1 pcs.)
	0B05786A	Mylar Capacitor 0.047μ 50V J			
	0B08914A	Mylar Capacitor 0.15μ 50V J			
	0B09163A	Electrolytic Capacitor 10μ 16V (BP)			
	0B06584A	Electrolytic Capacitor 470μ 10V			
	0B08714A	IC Socket 16P (4 pcs.)			
	- Line Amp -				
IC301	0B06287A	IC TA75688P-R			
Q107,207	0B01872A	Transistor 2SC945 (L)			
L101,201	0B08676A	Inductor 36mH G			
R146,246 R148,161 248,261	0B01888A	Carbon Resistor 10K ERD-25T J			
R150,154 250,264	0B01867A	Carbon Resistor 1K ERD-25T J			
R162,262	0B06826A	Carbon Resistor 220K ERD-25T J			
R163,263	0B09507A	Metal Film Resistor 3.57K SN14K2E F			
R180,280	0B09582A	Metal Film Resistor 43.2K SN14K2E F			
R182,282	0B09757A	Metal Film Resistor 1.54K SN14K2E F			
R308	0B06936A	Carbon Resistor 10 ERD-25T J			
C133,233	0B06808A	Carbon Resistor 33K ERD-25T J			
C134,234	0B09408A	PP Capacitor 1800P 100V G			
C135,235	0B08223A	Electrolytic Capacitor 1μ 50V (LN)			
C301,302	0B01412A	Electrolytic Capacitor 10μ 16V			
SW301	0B01406A	Electrolytic Capacitor 100μ 16V			
CN22	0B07390A	Record Switch 16N5 CL116R			
	0B0854A	4P-T Post			
	0E00507A	Nut Hex. M3 (1 pcs.)			
	0E00510A	Screw M3x8 Phillips Pan Head (2A) (1 pcs.)			

LX-3

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA0453BA	Dolby NR P.C.B. Assy (U.S.A. & Canada) Serial Nos.: A31301001 - A31304445	R145,245 301,302 303,304	0B01889A	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	0B09685A 0B09223A	Metal Film Resistor 2.1K SN14K2E F Electrolytic Capacitor 1 μ 50V (LN)
IC101,102 201,202	0B08200A	IC μ A7300PC	116,118 120,121 201,203 205,208 216,218 220,221		
Q101-106 201-206	0B01872A	Transistor 2SC945 (L) (12 pcs.)	C102,202 C104,204 C106,122 205,222	0B09557A 0B09408A 0B09681A	Mylar Capacitor 0.015 μ 50V J PP Capacitor 1800P 100V G Mylar Capacitor 0.01 μ 50V J
ZD101,201	0B06315A	Zener Diode 6.5V XZ068	C107,123 136,201 223,236	0B09240A	PP Capacitor 0.033 μ 100V G
D101,103 105,201 203,205	0B06181A	Silicon Diode 1S553	C109,124 206,224 C110,125 210,225	0B01882A 0B01402A	Electrolytic Capacitor 22 μ 16V Electrolytic Capacitor 4.7 μ 25V
D102,202	0B00030A	Germanium Diode 1N60P	C111,211 C112,113 212,213	0B09583A 0B01780A	Mylar Capacitor 0.033 μ 50V J Mylar Capacitor 0.1 μ 50V J
R101,201	0B09568A	Metal Film Resistor 3.6K SN14K2E F	C114,115 214,216	0B09667A	Electrolytic Capacitor 0.33 μ 50V (LM) K
R102,202	0B09420A	Metal Film Resistor 2.2K SN14K2E F	C117,217 C118,131 219,231	0B09584A 0B01412A	Mylar Capacitor 0.03 μ 50V J Electrolytic Capacitor 10 μ 16V
R103,105 130,203 205,230	0B01681A	Carbon Resistor 3.3K ERD-25T J	C126,226 C127,227 C128,228 C130,230 C132,232	0B09556A 0B05785A 0B06914A 0B09163A 0B05884A 0B08714A	Mylar Capacitor 0.13 μ 50V J Mylar Capacitor 0.047 μ 50V J Mylar Capacitor 0.15 μ 50V J Electrolytic Capacitor 10 μ 16V (BP) Electrolytic Capacitor 470 μ 10V IC Socket 16P (4 pcs.)
R104,108 117,118 122,129 136,204 206,217 218,222 228,236	0B0641A	Carbon Resistor 47K ERD-25T J	IC301	- Line Amp. -	
R106,144 206,244	0B01857A	Carbon Resistor 1K ERD-25T J	Q107,207	0B06287A	IC TA75558P-R
R107,136 207,236	0B09667A	Metal Film Resistor 13K SN14K2E F	L101,201	0B01872A	Transistor 2SC945 (L)
R109,209	0B09568A	Metal Film Resistor 3.6K SN14K2E F	R148,248	0B06678A	Inductor 38mH G
R110,121 126,134 147,210 221,226 234,247	0B05776A	Carbon Resistor 1M ERD-25T J	R149,151 249,251	0B01888A 0B01857A	Carbon Resistor 10K ERD-25T J Carbon Resistor 1K ERD-25T J
R111,211 R112,137 212,237	0B06615A 0B09271A	Carbon Resistor 22K ERD-25T J Carbon Resistor 6.2K ERD-25T J	R160,164 250,264	0B06825A	Carbon Resistor 220K ERD-25T J
R113,114 138,140 213,214 238,240	0B06620A	Carbon Resistor 270K ERD-25T J	R182,262 R183,263 R180,260 R182,262 R306 C133,233 C134,234 C135,235	0B09607A 0B09682A 0B09767A 0B09365A 0B05509A 0B09408A 0B09223A	Metal Film Resistor 3.67K SN14K2E F Metal Film Resistor 43.2K SN14K2E F Metal Film Resistor 1.84K SN14K2E F Carbon Resistor 10 ERD-25T J Carbon Resistor 33K ERD-25T J PP Capacitor 1800P 100V G Electrolytic Capacitor 1 μ 50V (LN)
R116,215 R118,216 R119,219 R120,220 R123,139 223,239	0B09335A 0B01683A 0B01846A 0B06522A 0B06626A	Carbon Resistor 680K ERD-25T J Carbon Resistor 15K ERD-25T J Carbon Resistor 4.7K ERD-25T J Carbon Resistor 2.2K ERD-25T J Carbon Resistor 220K ERD-25T J	C301,302 SW301 CN22	0B01412A 0B01400A 0B07390A 0B09554A 0E00507A 0E00610A	Electrolytic Capacitor 10 μ 16V (BP) Electrolytic Capacitor 100 μ 16V Record Switch 16NS CL116R 4P-T Post Nut Hex. M3 (1 pcs.) Screw M3x3 Philips Pan Head (2A) (1 pcs.)
R124,224 R127,227 R128,131 228,231	0B06826A 0B05794A 0B09655A	Carbon Resistor 150K ERD-25T J Carbon Resistor 680 ERD-25T J Carbon Resistor 1.6K ERD-25T J			
R132,232 R133,233 R141,241 R142,146 242,246 305	0B09356A 0B09772A 0B06743A 0B01888A	Metal Film Resistor 4.7K SN14K2E F Metal Film Resistor 3.09K SN14K2E F Carbon Resistor 27K ERD-25T J Carbon Resistor 10K ERD-25T J			
R143,243	0B06577A	Carbon Resistor 33B ERD-25T J			

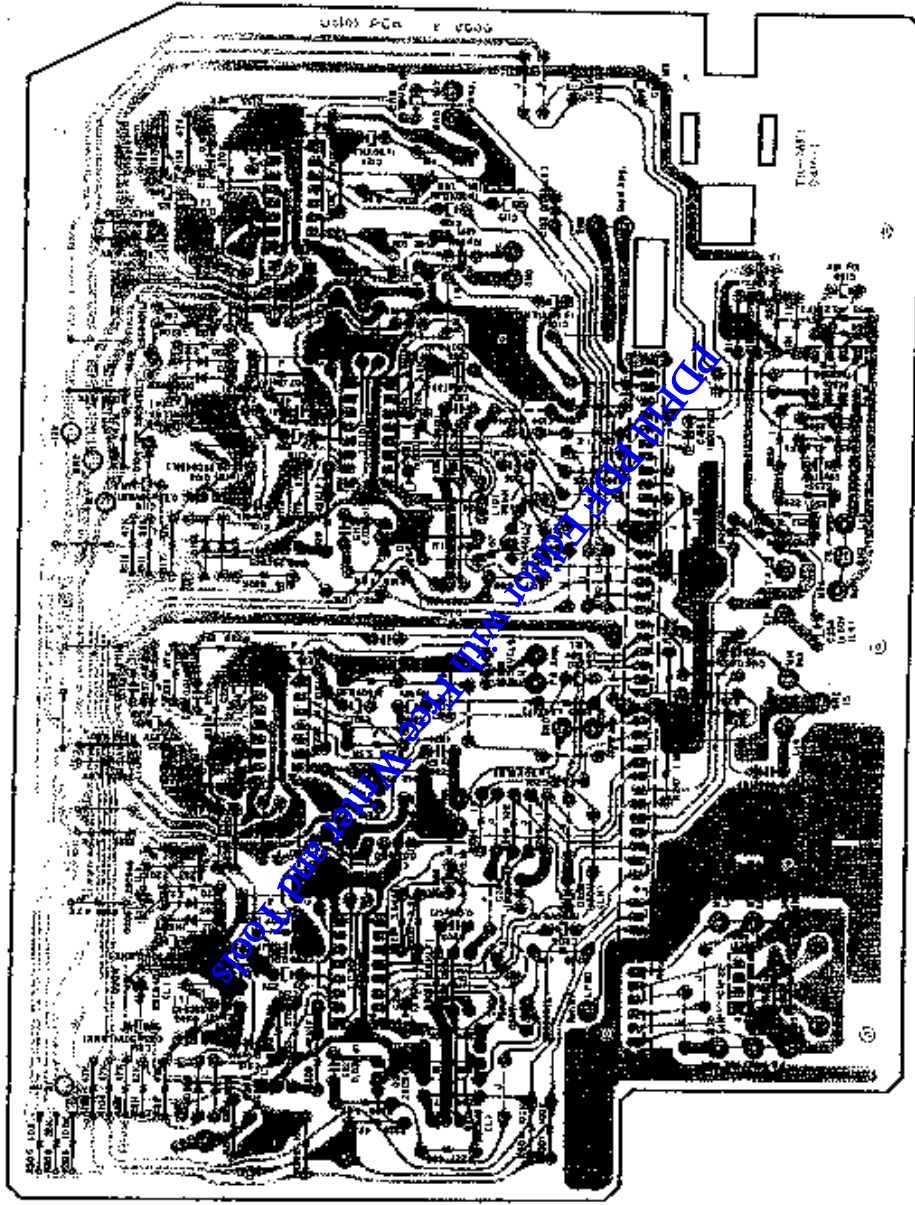


Fig. 7.9.12 Serial No.: A31301001 - A31304446

Note: Diode is (SS5), (SS15), (SS16), or (S1656) unless otherwise specified.

Part No.	Description
06200001	BT Screw M3x0.6 Phillips Backing Head (1 pack)
06200002	Shield Case D (1 pack)
06200003	Label CR102 (1 pack)
06200004	Dobly-NIR P.C.B. Shield Plate (1 pack)
-- Miscellaneous --	
06200005	Dobly-NIR P.C.B. (1 pack)
06200006	Flashed Spring Holder (1 pack)
06200007	Washer Screw Torched Lock (1 pack)
06200008	E-Shell Shim (1 pack)
06200009	Nut Shim (1 pack)
06200010	BT Screw M3x0.6 Phillips Pin Head (1 pack)
06200011	Flashed Shield Mount B (1 pack)
06200012	Flashed Arm Nut (1 pack)

7.9.2. Dolly MR P.C.B. Assy (UK, Anemalis, 220V Class 2, Gibbins & Japen)

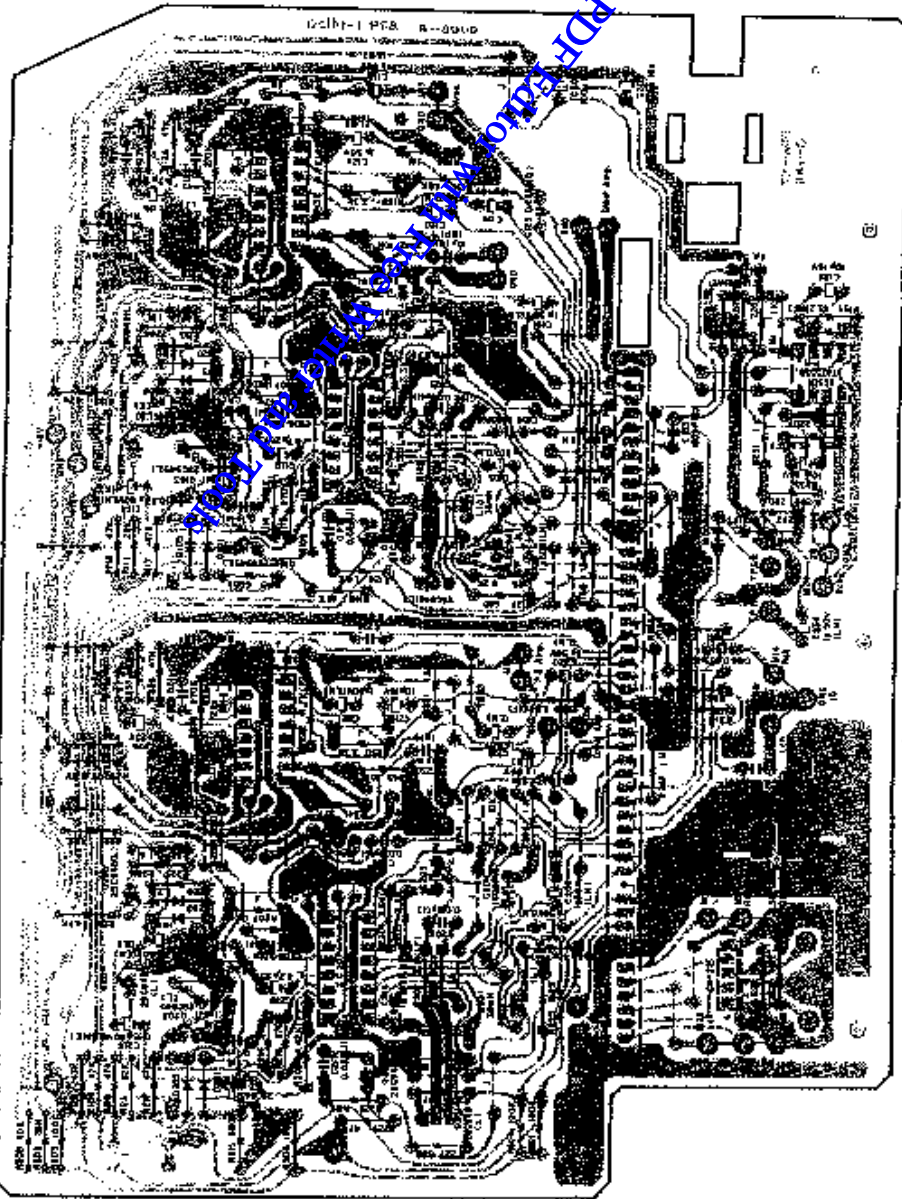


Fig. 7.9.2.1 Serial No: A31304448 --

Note: Diode is 18003, 18083, or 1S1855 unless otherwise specified.

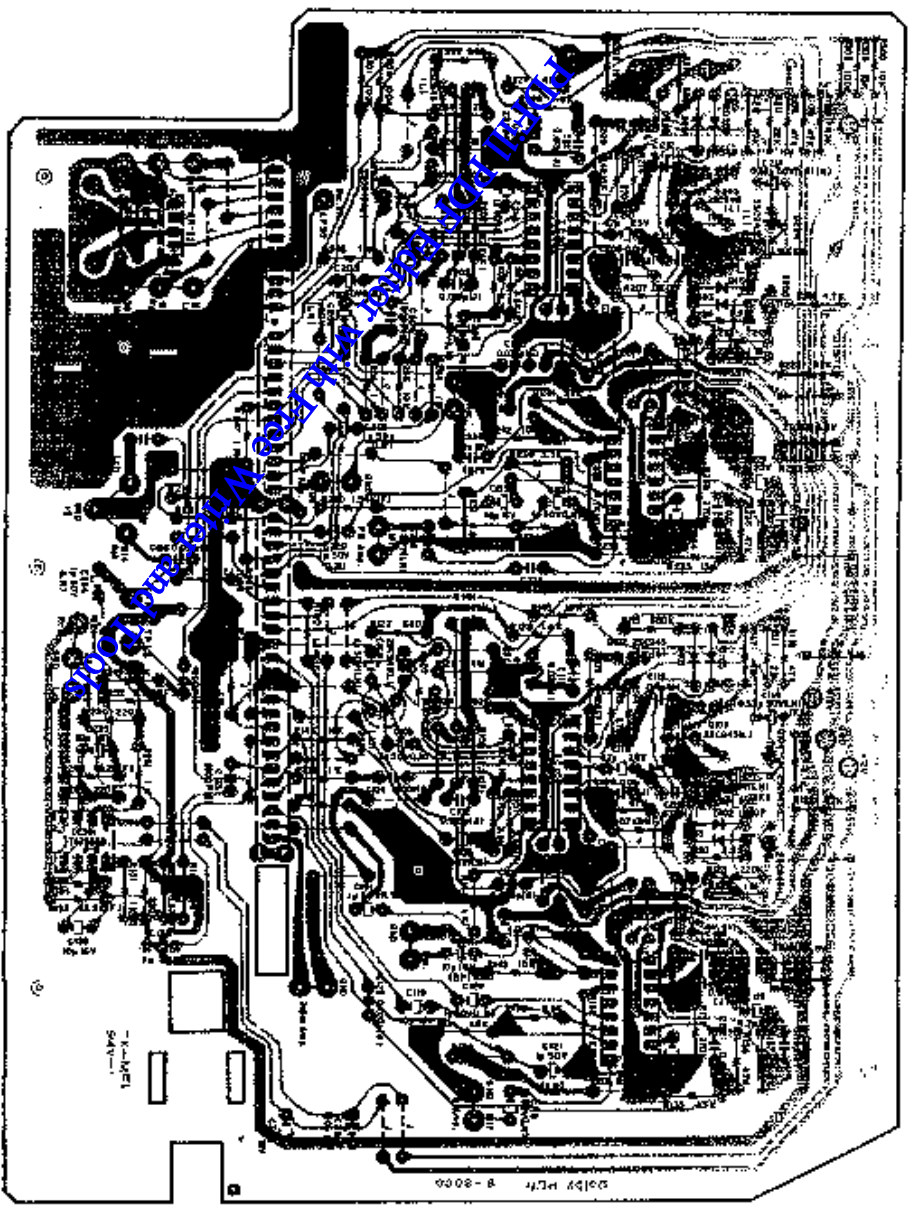
Reference Ref. No.	Part No.	Description
	BA040644	Dolly MR P.C.B. Assy (UK, Anemalis, 220V Class 2, Gibbins & Japen) Serial No: A31304448 --
		-- 2R Dolly MR --
R0101102	0800038A	IC LAC130
R011200	0801872A	Transistor 2C5548 IL
G091404	0800185A	Zener Diode 6.9V X208 (1/2 PWR)
R0101201	0800181A	Silicon Diode 18003
R101103	0800000A	Germanium Diode 1N80P
R101202	0800000A	Metal Film Resistor 3.0K 5% 1/4W 250PPM
R101201	0800000A	Metal Film Resistor 3.0K 5% 1/4W 250PPM
R102202	0800000A	Metal Film Resistor 3.0K 5% 1/4W 250PPM
R102201	0800000A	Metal Film Resistor 3.0K 5% 1/4W 250PPM
R103100	0800000A	Carbon Resistor 5.2K ERD-28T J
R01200	0800000A	Carbon Resistor 47K ERD-28T J
R104106	0801867A	Carbon Resistor 1K ERD-28T J
R104105	0801867A	Metal Film Resistor 10K 5% 1/4W 250PPM
R104104	0801867A	Metal Film Resistor 4.43K 5% 1/4W 250PPM
R104103	0801867A	Carbon Resistor 1M ERD-28T J
R104102	0801867A	Carbon Resistor 20K ERD-28T J
R104101	0801867A	Carbon Resistor 20K ERD-28T J
R105114	0800000A	Carbon Resistor 20K ERD-28T J
R105113	0800000A	Carbon Resistor 20K ERD-28T J
R105112	0800000A	Carbon Resistor 20K ERD-28T J
R105111	0800000A	Carbon Resistor 20K ERD-28T J
R105110	0800000A	Carbon Resistor 20K ERD-28T J
R105109	0800000A	Carbon Resistor 20K ERD-28T J
R105108	0800000A	Carbon Resistor 20K ERD-28T J
R105107	0800000A	Carbon Resistor 20K ERD-28T J
R105106	0800000A	Carbon Resistor 20K ERD-28T J
R105105	0800000A	Carbon Resistor 20K ERD-28T J
R105104	0800000A	Carbon Resistor 20K ERD-28T J
R105103	0800000A	Carbon Resistor 20K ERD-28T J
R105102	0800000A	Carbon Resistor 20K ERD-28T J
R105101	0800000A	Carbon Resistor 20K ERD-28T J
R106200	0800000A	Carbon Resistor 20K ERD-28T J
R106101	0800000A	Carbon Resistor 20K ERD-28T J
R107101	0800000A	Carbon Resistor 20K ERD-28T J
R108200	0800000A	Carbon Resistor 20K ERD-28T J
R108101	0800000A	Carbon Resistor 20K ERD-28T J
R109200	0800000A	Carbon Resistor 20K ERD-28T J
R110101	0800000A	Carbon Resistor 20K ERD-28T J
R120101	0800000A	Carbon Resistor 20K ERD-28T J
R121101	0800000A	Carbon Resistor 20K ERD-28T J
R122101	0800000A	Carbon Resistor 20K ERD-28T J
R123101	0800000A	Carbon Resistor 20K ERD-28T J
R124101	0800000A	Carbon Resistor 20K ERD-28T J
R125101	0800000A	Carbon Resistor 20K ERD-28T J
R126101	0800000A	Carbon Resistor 20K ERD-28T J
R127101	0800000A	Carbon Resistor 20K ERD-28T J
R128101	0800000A	Carbon Resistor 20K ERD-28T J
R129101	0800000A	Carbon Resistor 20K ERD-28T J
R130101	0800000A	Carbon Resistor 20K ERD-28T J
R131101	0800000A	Carbon Resistor 20K ERD-28T J
R132101	0800000A	Carbon Resistor 20K ERD-28T J
R133101	0800000A	Carbon Resistor 20K ERD-28T J
R134101	0800000A	Carbon Resistor 20K ERD-28T J
R135101	0800000A	Carbon Resistor 20K ERD-28T J
R136101	0800000A	Carbon Resistor 20K ERD-28T J
R137101	0800000A	Carbon Resistor 20K ERD-28T J
R138101	0800000A	Carbon Resistor 20K ERD-28T J
R139101	0800000A	Carbon Resistor 20K ERD-28T J
R140101	0800000A	Carbon Resistor 20K ERD-28T J
R141101	0800000A	Carbon Resistor 20K ERD-28T J
R142101	0800000A	Carbon Resistor 20K ERD-28T J
R143101	0800000A	Carbon Resistor 20K ERD-28T J
R144101	0800000A	Carbon Resistor 20K ERD-28T J
R145101	0800000A	Carbon Resistor 20K ERD-28T J
R146101	0800000A	Carbon Resistor 20K ERD-28T J
R147101	0800000A	Carbon Resistor 20K ERD-28T J
R148101	0800000A	Carbon Resistor 20K ERD-28T J
R149101	0800000A	Carbon Resistor 20K ERD-28T J
R150101	0800000A	Carbon Resistor 20K ERD-28T J
R151101	0800000A	Carbon Resistor 20K ERD-28T J
R152101	0800000A	Carbon Resistor 20K ERD-28T J
R153101	0800000A	Carbon Resistor 20K ERD-28T J
R154101	0800000A	Carbon Resistor 20K ERD-28T J
R155101	0800000A	Carbon Resistor 20K ERD-28T J
R156101	0800000A	Carbon Resistor 20K ERD-28T J
R157101	0800000A	Carbon Resistor 20K ERD-28T J
R158101	0800000A	Carbon Resistor 20K ERD-28T J
R159101	0800000A	Carbon Resistor 20K ERD-28T J
R160101	0800000A	Carbon Resistor 20K ERD-28T J
R161101	0800000A	Carbon Resistor 20K ERD-28T J
R162101	0800000A	Carbon Resistor 20K ERD-28T J
R163101	0800000A	Carbon Resistor 20K ERD-28T J
R164101	0800000A	Carbon Resistor 20K ERD-28T J
R165101	0800000A	Carbon Resistor 20K ERD-28T J
R166101	0800000A	Carbon Resistor 20K ERD-28T J
R167101	0800000A	Carbon Resistor 20K ERD-28T J
R168101	0800000A	Carbon Resistor 20K ERD-28T J
R169101	0800000A	Carbon Resistor 20K ERD-28T J
R170101	0800000A	Carbon Resistor 20K ERD-28T J
R171101	0800000A	Carbon Resistor 20K ERD-28T J
R172101	0800000A	Carbon Resistor 20K ERD-28T J
R173101	0800000A	Carbon Resistor 20K ERD-28T J
R174101	0800000A	Carbon Resistor 20K ERD-28T J
R175101	0800000A	Carbon Resistor 20K ERD-28T J
R176101	0800000A	Carbon Resistor 20K ERD-28T J
R177101	0800000A	Carbon Resistor 20K ERD-28T J
R178101	0800000A	Carbon Resistor 20K ERD-28T J
R179101	0800000A	Carbon Resistor 20K ERD-28T J
R180101	0800000A	Carbon Resistor 20K ERD-28T J
R181101	0800000A	Carbon Resistor 20K ERD-28T J
R182101	0800000A	Carbon Resistor 20K ERD-28T J
R183101	0800000A	Carbon Resistor 20K ERD-28T J
R184101	0800000A	Carbon Resistor 20K ERD-28T J
R185101	0800000A	Carbon Resistor 20K ERD-28T J
R186101	0800000A	Carbon Resistor 20K ERD-28T J
R187101	0800000A	Carbon Resistor 20K ERD-28T J
R188101	0800000A	Carbon Resistor 20K ERD-28T J
R189101	0800000A	Carbon Resistor 20K ERD-28T J
R190101	0800000A	Carbon Resistor 20K ERD-28T J
R191101	0800000A	Carbon Resistor 20K ERD-28T J
R192101	0800000A	Carbon Resistor 20K ERD-28T J
R193101	0800000A	Carbon Resistor 20K ERD-28T J
R194101	0800000A	Carbon Resistor 20K ERD-28T J
R195101	0800000A	Carbon Resistor 20K ERD-28T J
R196101	0800000A	Carbon Resistor 20K ERD-28T J
R197101	0800000A	Carbon Resistor 20K ERD-28T J
R198101	0800000A	Carbon Resistor 20K ERD-28T J
R199101	0800000A	Carbon Resistor 20K ERD-28T J
R200101	0800000A	Carbon Resistor 20K ERD-28T J

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
R145,245 301,302 303,304	0B01889A	Carbon Resistor 100K ERD-25T J		0E00857A	BT Screw M3x8 Phillips Binding Head (1 pcs.)
R161,261	0B06685A	Metal Film Resistor 2.1K SN14K2E F		0J04482A	Shield Case D (1 pcs.)
C101,103 106,108 116,118 120,121 201,203 205,208 216,218 220,221	0B09223A	Electrolytic Capacitor 1 μ 50V (LN)		0MD4331A	Label CN-22 (1 pcs.)
C102,202 C104,204 C106,122 206,222	0B06667A	Mylar Capacitor 0.015 μ 50V J		0J04548A	Dolby NR P.C.B. Shield Plate (1 pcs.)
C107,123 136,207 223,226	0B09240A	PP Capacitor 0.033 μ 100V G	R125,225	- Miscellaneous -	
C109,124 209,224	0B01862A	Electrolytic Capacitor 22 μ 16V	0B08000C	Dolby NR P.C.B.	
C110,126 210,226	0B01402A	Electrolytic Capacitor 4.7 μ 25V	0B01856A	Carbon Resistor 8.2K ERD-25T J	
C111,211 C112,113 212,213	0B06683A	Mylar Capacitor 0.033 μ 50V J	0B08570A	Record Spring Holder (1 pcs.)	
C114,115 214,215	0B01780A	Mylar Capacitor 0.1 μ 50V	0E00177A	Washer 3mm Toothed Lock (1 pcs.)	
C117,217 C119,131 219,221	0B09687A	Electrolytic Capacitor 0.33 μ 50V (LN) K	0E00222A	E-Ring 2mm (1 pcs.)	
C126,226 C127,227 C128,228	0B06694A	Mylar Capacitor 0.03 μ 50V J	0E00507A	Nut Hex. M3 (1 pcs.)	
C130,230 C132,232	0B01412A	Electrolytic Capacitor 10 μ 16V	0E00846A	BT Screw M3x8 Phillips Pan Head (1 pcs.)	
	0B06685A	Mylar Capacitor 0.13 μ 50V J	0J04531A	Record Switch Shaft B (1 pcs.)	
	0B06786A	Mylar Capacitor 0.047 μ 50V J	JA03922A	Record Arm Ass'y (1 pcs.)	
	0B06914A	Mylar Capacitor 0.15 μ 50V J			
	0B09163A	Electrolytic Capacitor 10 μ 16V (BP)			
	0B05884A	Electrolytic Capacitor 470 μ 10V			
	0B06714A	IC Socket (2P) (4 pcs.)			
	- Line Amp. -				
IC301	0B06287A	IC TA75588P-R			
Q107,207	0B01872A	Transistor 2SC945 (L)			
L101,201	0B06678A	Inductor 36mH G			
R148,248	0B01888A	Carbon Resistor 10K ERD-25T J			
R149,161 249,261	0B01857A	Carbon Resistor 1K ERD-25T J			
R150,154 250,264	0B06626A	Carbon Resistor 220K ERD-25T J			
R152,262	0B09607A	Metal Film Resistor 3.57K SN14K2E F			
R153,263	0B06682A	Metal Film Resistor 43.2K SN14K2E F			
R160,260	0B06787A	Metal Film Resistor 1.54K SN14K2E F			
R162,262	0B06936A	Carbon Resistor 10 ERD-25T J			
R306	0B05509A	Carbon Resistor 33K ERD-25T J			
C133,233	0B09409A	PP Capacitor 1800P 100V G			
C134,234	0B09223A	Electrolytic Capacitor 1 μ 50V (LN)			
C135,235	0B01412A	Electrolytic Capacitor 10 μ 16V			
C301,302	0B01400A	Electrolytic Capacitor 100 μ 16V			
SW301	0B07390A	Record Switch 18MS CL116R			
CN22	0B06654A	4P-T Post			
	0E00507A	Nut Hex. M3 (1 pcs.)			
	0E00810A	Screw M3x8 Phillips Pan Head (2A) (1 pcs.)			

LX-3

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA04844A	Dolby NR P.C.B. Assy (UK, Australia, 220V Class 2, Others & Japan) Serial Nos.: A31301001 - A31304445	R145,245 301,302 303,304 R161,261 C101,103 105,106 116,118 120,121 201,203 206,208 216,218 220,221 C102,202 C104,204 C106,122 206,222 C107,121 136,200 223,238 C109,124 209,224 C110,126 210,226 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	OB01889A OB06685A OB09223A OB06557A OB06409A OB06681A OB09240A OB01862A OB01402A OB06683A OB01780A OB06667A OB06694A OB01412A OB06668A OB06796A OB06914A OB09163A OB06834A OB09714A	Carbon Resistor 100K ERD-25T J Metal Film Resistor 2.1K SN14K2E F Electrolytic Capacitor 1 μ 50V (LN) Mylar Capacitor 0.01 μ 50V J PP Capacitor 1800P 100V G Mylar Capacitor 0.01 μ 50V J PP Capacitor 0.033 μ 100V G Electrolytic Capacitor 22 μ 16V Electrolytic Capacitor 4.7 μ 25V Mylar Capacitor 0.033 μ 50V J Mylar Capacitor 0.1 μ 50V J Electrolytic Capacitor 0.33 μ 50V (LN) K Mylar Capacitor 0.03 μ 50V J Electrolytic Capacitor 70 μ 16V Mylar Capacitor 0.1 μ 50V J Mylar Capacitor 0.047 μ 50V J Mylar Capacitor 0.15 μ 50V J Electrolytic Capacitor 10 μ 16V (BP) Electrolytic Capacitor 470 μ 10V IC Socket 16P (4 ps.)
	- RF Dolby NR -				
IC101,102 201,202 Q101-106 201-206 ZD101,201 D101,103 105,201 203,206 D102,202 R101,201 R102,202 R103,105 130,203 205,230 R104,106 117,118 122,129 136,204 206,217 216,222 229,236 R106,144 206,244 R107,136 207,235 R109,209 R110,121 126,134 147,210 221,226 234,247 R111,211 R112,137 212,237 R113,114 138,140 213,214 238,240 R115,216 R116,216 R119,219 R120,220 R123,139 223,239 R124,224 R127,227 R128,131 228,231 R132,232 R133,233 R141,241 R142,146 242,248 305 R143,243	OB06338A OB01872A OB06315A OB06181A OB06030A OB06569A OB06420A OB01681A OB06641A OB01857A OB06657A OB06568A OB06776A OB06615A OB06271A OB06620A OB09335A OB01683A OB01846A OB06822A OB06625A OB06628A OB06794A OB06655A OB06356A OB06772A OB06743A OB01898A OB06577A	IC LA2730 Transistor 2SC945 (L) (12 pcs.) Zener Diode 6.8V XZ068 Silicon Diode 1S853 Germanium Diode 1N60P Metal Film Resistor 3.6K SN14K2E F Metal Film Resistor 2.2K SN14K2E F Carbon Resistor 3.3K ERD-25T J Carbon Resistor 47K ERD-25T J Carbon Resistor 1K ERD-25T J Metal Film Resistor 13K SN14K2E F Metal Film Resistor 4.2K SN14K2E F Carbon Resistor 1M ERD-25T J Carbon Resistor 22K ERD-25T J Carbon Resistor 6.2K ERD-25T J Carbon Resistor 270K ERD-25T J Carbon Resistor 680K ERD-25T J Carbon Resistor 16K ERD-25T J Carbon Resistor 4.7K ERD-25T J Carbon Resistor 2.2K ERD-25T J Carbon Resistor 220K ERD-25T J Carbon Resistor 150K ERD-25T J Carbon Resistor 680 ERD-25T J Carbon Resistor 1.6K ERD-25T J Metal Film Resistor 4.7K SN14K2E F Metal Film Resistor 3.69K SN14K2E F Carbon Resistor 27K ERD-25T J Carbon Resistor 10K ERD-25T J Carbon Resistor 330 ERD-25T J	IC301 Q107,207 L101,201 R148,248 R149,151 R180,154 250,254 R162,262 R163,263 R160,260 R162,262 R306 C133,233 C134,234 C135,235 C301,302 SW301 CN22	OB06267A OB01872A OB06676A OB01888A OB01887A OB06625A OB06607A OB06682A OB06757A OB06936A OB06608A OB06409A OB09223A OB01412A OB01400A OB07390A OB0664A OB06607A OB0610A	IC TA76558P-R Transistor 2SC945 (L) Inductor 38mH 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 1 μ 50V (LN) Electrolytic Capacitor 10 μ 16V Electrolytic Capacitor 100 μ 16V Record Switch 16NS CL116R 4P-T Post Nut Hex, M3 (1 ps.) Screw M3x8 Philips Pan Head (2A) (1 ps.)

Part No.	Description	Quantity
0800087A	BT Remote Model Philips Sinding Head	(1 per.)
0204620A	Shield Case D	(3 per.)
0204621A	Label CR-22	(5 per.)
0204624A	Dobby NR P.C.L. Guard Film	(1 per.)
— Miscellaneous —		
0200000A	Dobby NR P.C.S. S.C. SPROCKET 1	(1 per.)
0200001A	Control Assembly	(1 per.)
0200010A	Shutter Spring Assembly	(1 per.)
0200011A	Shutter Spring Assembly (Lack)	(1 per.)
0200012A	Shutter Spring Assembly (Lack)	(1 per.)
0200022A	Spring Spring	(1 per.)
0200023A	Spring Spring	(1 per.)
0200024A	Spring Spring	(1 per.)
0200025A	BT Spring Head Phillips #10 - Head	(1 per.)
0200026A	Phenolic Switch Switch B	(1 per.)
0200027A	Phenolic Switch Switch B	(1 per.)
0200028A	Phenolic Switch Switch B	(1 per.)
0200029A	Phenolic Switch Switch B	(1 per.)
0200030A	Phenolic Switch Switch B	(1 per.)
0200031A	Phenolic Switch Switch B	(1 per.)
0200032A	Phenolic Switch Switch B	(1 per.)
0200033A	Phenolic Switch Switch B	(1 per.)
0200034A	Phenolic Switch Switch B	(1 per.)
0200035A	Phenolic Switch Switch B	(1 per.)
0200036A	Phenolic Switch Switch B	(1 per.)
0200037A	Phenolic Switch Switch B	(1 per.)
0200038A	Phenolic Switch Switch B	(1 per.)
0200039A	Phenolic Switch Switch B	(1 per.)
0200040A	Phenolic Switch Switch B	(1 per.)
0200041A	Phenolic Switch Switch B	(1 per.)
0200042A	Phenolic Switch Switch B	(1 per.)
0200043A	Phenolic Switch Switch B	(1 per.)
0200044A	Phenolic Switch Switch B	(1 per.)
0200045A	Phenolic Switch Switch B	(1 per.)
0200046A	Phenolic Switch Switch B	(1 per.)
0200047A	Phenolic Switch Switch B	(1 per.)
0200048A	Phenolic Switch Switch B	(1 per.)
0200049A	Phenolic Switch Switch B	(1 per.)
0200050A	Phenolic Switch Switch B	(1 per.)
0200051A	Phenolic Switch Switch B	(1 per.)
0200052A	Phenolic Switch Switch B	(1 per.)
0200053A	Phenolic Switch Switch B	(1 per.)
0200054A	Phenolic Switch Switch B	(1 per.)
0200055A	Phenolic Switch Switch B	(1 per.)
0200056A	Phenolic Switch Switch B	(1 per.)
0200057A	Phenolic Switch Switch B	(1 per.)
0200058A	Phenolic Switch Switch B	(1 per.)
0200059A	Phenolic Switch Switch B	(1 per.)
0200060A	Phenolic Switch Switch B	(1 per.)
0200061A	Phenolic Switch Switch B	(1 per.)
0200062A	Phenolic Switch Switch B	(1 per.)
0200063A	Phenolic Switch Switch B	(1 per.)
0200064A	Phenolic Switch Switch B	(1 per.)
0200065A	Phenolic Switch Switch B	(1 per.)
0200066A	Phenolic Switch Switch B	(1 per.)
0200067A	Phenolic Switch Switch B	(1 per.)
0200068A	Phenolic Switch Switch B	(1 per.)
0200069A	Phenolic Switch Switch B	(1 per.)
0200070A	Phenolic Switch Switch B	(1 per.)
0200071A	Phenolic Switch Switch B	(1 per.)
0200072A	Phenolic Switch Switch B	(1 per.)
0200073A	Phenolic Switch Switch B	(1 per.)
0200074A	Phenolic Switch Switch B	(1 per.)
0200075A	Phenolic Switch Switch B	(1 per.)
0200076A	Phenolic Switch Switch B	(1 per.)
0200077A	Phenolic Switch Switch B	(1 per.)
0200078A	Phenolic Switch Switch B	(1 per.)
0200079A	Phenolic Switch Switch B	(1 per.)
0200080A	Phenolic Switch Switch B	(1 per.)
0200081A	Phenolic Switch Switch B	(1 per.)
0200082A	Phenolic Switch Switch B	(1 per.)
0200083A	Phenolic Switch Switch B	(1 per.)
0200084A	Phenolic Switch Switch B	(1 per.)
0200085A	Phenolic Switch Switch B	(1 per.)
0200086A	Phenolic Switch Switch B	(1 per.)
0200087A	Phenolic Switch Switch B	(1 per.)
0200088A	Phenolic Switch Switch B	(1 per.)
0200089A	Phenolic Switch Switch B	(1 per.)
0200090A	Phenolic Switch Switch B	(1 per.)
0200091A	Phenolic Switch Switch B	(1 per.)
0200092A	Phenolic Switch Switch B	(1 per.)
0200093A	Phenolic Switch Switch B	(1 per.)
0200094A	Phenolic Switch Switch B	(1 per.)
0200095A	Phenolic Switch Switch B	(1 per.)
0200096A	Phenolic Switch Switch B	(1 per.)
0200097A	Phenolic Switch Switch B	(1 per.)
0200098A	Phenolic Switch Switch B	(1 per.)
0200099A	Phenolic Switch Switch B	(1 per.)
0200100A	Phenolic Switch Switch B	(1 per.)



Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
C411	0B0562A 0B0515A	Mylar Capacitor 0.082u 50V J Imm-Lock (2 pcs.)	R663 R664 R665,666 R667 R669 R682	0B05676A 0B09300A 0B09756A 0B09451A 0B08216A 0B05676A	Carbon Resistor 560 ERD-25T J Metal Film Resistor 150K SN14K2E F Metal Film Resistor 330K SN14K2E F Metal Film Resistor 47K SN14K2E F Fail Safe Type Resistor 10 RDF-25S J Carbon Resistor 470 ERD-25T J
	- Logic -		C601,604 C602 C603 C805,806 C807 C808,809 810 C811,812 CN13,16 17 CN14 CN15 CN18	0B01402A 0B05652A 0B01802A 0B01406A 0B08277A 0B01502A 0B08283A 0B08285A 0B0843A 0B0842A 0B0853A 0B0864A 0E00807A 0E00624A	Electrolytic Capacitor 4.7u 25V Mylar Capacitor 4700P 50V J Mylar Capacitor 2200P 50V J Electrolytic Capacitor 1u 50V Ceramic Capacitor 10P 50V J Electrolytic Capacitor 330u 16V Ceramic Capacitor 220P 50V K SP-T Post 7P-T Post 6P-T Post 3P-T Post Transistor Mica TO-126 (2 pcs.) Nut Hex. M3 (2 pcs.) Screw M3x10 Phillips Pan Head (2A) (1 pcs.)
IC501	0B06324A	IC LM8402A-052		0J0485A 0M04222A 0M04223A 0M04224A 0M04230A 0M04231A	Heat Sink B (1 pcs.) Label CN-15 (1 pcs.) Label CN-16 (1 pcs.) Label CN-17 (1 pcs.) Label CN-13 (1 pcs.) Label CN-14 (1 pcs.)
IC602	0B06317A	IC uPD4030BC		- Miscellaneous -	
IC603	0B06124B	IC IC4668D		0B02501C	Logic & Power P.C.B.
Q601,602 609,613 Q604,606 606,624 Q607 Q609,621 Q610 Q611 Q603,604 605,606 610 X601 VR601 VR602 VR603 R601,602 603,604 605,606 609,617 668 R607,610 613,616 618 620-627 629,643 660,691 R608 R611,644 645,646 650,670 R612 R614,616 642,648 652,653 654,666 698,699 R619,671 672 R628,665 R631 R632,659 701 R633 R634 R635 R636 R637 R638 R639 R641 R647,700 R649 R651 R657,666 R661 R662	0B06100A 0B06013A 0B06065A 0B06089A 0B06316A 0B06303A 0B01809A 0B08908A 0B07257A 0B07256A 0B07329A 0B05627A 0B01899A 0B05784A 0B05509A 0B05692A 0B01888A 0B05622A 0B01682A 0B05776A 0B06671A 0B09075A 0B06680A 0B08750A 0B05641A 0B09263A 0B06621A 0B05668A 0B09217A 0B05615A 0B09751A 0B06640A 0B09289A 0B09472A 0B01857A	Transistor 2SD471 Transistor 2SB584 Transistor 2SD682 Transistor 2SB772 Silicon Diode TS1655 Crystal 400kHz 4BR400BT Semi-fixed Volume 100K Semi-fixed Volume 10K Semi-fixed Volume 2K Carbon Resistor 330K ERD-25T J Carbon Resistor 100K ERD-25T J (17 pcs.) Carbon Resistor 560K ERD-25T J Carbon Resistor 33K ERD-25T J Carbon Resistor 68K ERD-25T J Carbon Resistor 10K ERD-25T J Carbon Resistor 2.2K ERD-25T J Carbon Resistor 6.8K ERD-25T J Carbon Resistor 1M ERD-25T J Carbon Resistor 2.2M ERD-25T J Carbon Resistor 30K ERD-25T J Carbon Resistor 18K ERD-25T J Carbon Resistor 43K ERD-25T J Carbon Resistor 47K ERD-25T J Carbon Resistor 12K ERD-25T J Carbon Resistor 120K ERD-25T J Carbon Resistor 82K ERD-25T J Fail Safe Type Resistor 5.6RDF-25S J Carbon Resistor 22K ERD-25T J Metal Film Resistor 76.8K SN14K2E F Carbon Resistor 160K ERD-25T J Metal Film Resistor 100K SN14K2E F Metal Film Resistor 220K SN14K2E F Carbon Resistor 1K ERD-25T J	F401,402 F401,402 F401,402 F403 F403 F403 F403 0E00037A 0E00657A 0M03782A 0M0408C 0M04191A Q401,410 Q404 QJ04525A	0B08061A 0B08347U 0B08374A 0B08886A 0B08880A 0B08348A 0E00037A 0E00657A 0M03782A 0M0408C 0M04191A 0B06255A 0B06256A 0B08601A 0B08602A 0E00807A 0E00608A	Fuse 2.5A 250V (Japan) Fuse T1A 250V (UK, Australia & 220V Class 2) Fuse 1A 250V (U.S.A., Canada & Others) Fuse 1A 250V (Japan) Fuse T500mA 250V (UK, Australia & 220V Class 2) Fuse Clip (UK, Australia & 220V Class 2) (5 pcs.) Earth Lug 6-5 (1 pcs.) ST Screw M3x6 Phillips Binding Head (2 pcs.) Fuse Label 1A 250V (U.S.A., Canada, Japan & Others) (1 pcs.) Fuse Label T500mA (UK, Australia & 220V Class 2) (1 pcs.) Fuse Label T1A 250V (UK, Australia & 220V Class 2) (2 pcs.) Transistor 2SD880 (Y) Transistor 2SB834 (Y, GR) Transistor Mica TO-220 (3 pcs.) Transistor Bushing TD-220 (3 pcs.) Nut Hex. M3 (3 pcs.) Screw M3x10 Phillips Pan Head (3A) (3 pcs.) Heat Sink (1 pcs.)
					*: Depends on the versions.

LX-3

Schematic Ref. No.	Part No.	Description	Schematic Ref. No.	Part No.	Description
	BA04640A	Logic & Power P.C.B. Assy (U.S.A., Canada & Others)	C411	0806682A	Mylar Capacitor 0.068µ 50V J
	BA04636A	Logic & Power P.C.B. Assy (Japan)	0906515A	0906515A	Incu-Lock (2 pcs.)
	BA04638A	Logic & Power P.C.B. Assy (UK, Australia & 220V Class 2)	--	--	Logic --
		Serial Nos.: A31301001 - A31304445	IC601	0806326A	IC LM6402A-052
	-- Slew Cap.		IC602	0806317A	IC µPD4030BC
Q605,506	0801672A	Transistor 2SC945 (L)	IC603	0806124B	IC RC4558D
T501	0806613A	Coil Cap	Q601,602	0906100A	Transistor 2SC945 (A)
R513	0809295A	Fail Safe Type Resistor 82 RSF-2B J	609,613		
R514	0809296A	Fail Safe Type Resistor 39 RSF-1/2B J	Q604,605	0806013A	Transistor 2SA733
R515,516	0806668A	Carbon Resistor 82K ERD-25T J	606,624		
R517,518	0809212A	Fail Safe Type Resistor 2.2RDF-25S J	Q607	0806025A	Transistor 2SD471
C501	0809405A	PP Capacitor 0.022µ 100V J	Q608,621	0806039A	Transistor 2SB564
C502,503	0809191A	PP Capacitor 4700P 100V G	Q610	0806316A	Transistor 2SD882
C504	0801402A	Electrolytic Capacitor 4.7µ 25V	Q611	0806303A	Transistor 29B772
C506	0809254A	PP Capacitor 0.068µ 100V J	D603,604	0801909A	Silicon Diode 1S1855
CN19	0809659A	2P-T Post	605,606		
	JD4460A	Coil Cap (1 pcs.)	610		
	-- Power Supply --		X601	0806906A	Crystal 400kHz 4BR400BT
IC401	0806124B	IC RC4558D	V601	0807267A	Semi-fixed Volume 100K
Q402,403	0806100A	Transistor 2SC945 (A)	V602	0807266A	Semi-fixed Volume 10K
407,411			VR603	0807329A	Semi-fixed Volume 2K
412,413			R601,602	0806627A	Carbon Resistor 330K ERD-25T J
Q405,406	0806013A	Transistor 2SA733	603,604		
409			605,606		
Q408	0806322A	Transistor 2SC402	609,617		
Q414	0801426A	Transistor 2SA562	668		
ZD401	0806058A	Zener Diode 5.1V YZ051	R607,610	0801889A	Carbon Resistor 100K ERD-25T J
ZD402	0806314A	Zener Diode 6.2V YZ062	613,616		
D401,402	0806109A	Silicon Diode GP088	818		
D404	0801808A	Silicon Diode 1S1855	620,627		
D405,406	0806282A	Diode Bridge DBA10	629,643		
R401,411	0801857A	Carbon Resistor 1K ERD-25T J	660,691		
424			R608	0805784A	Carbon Resistor 580K ERD-25T J
R402,412	0801678A	Carbon Resistor 100 ERD-25T J	R611,644	0806508A	Carbon Resistor 33K ERD-25T J
R403,413	0801846A	Carbon Resistor 4.7K ERD-25T J	645,646		
R404,414	0801898A	Carbon Resistor 10K ERD-25T J	650,670		
R405,415	0805627A	Carbon Resistor 330K ERD-25T J	R612	0805692A	Carbon Resistor 68K ERD-25T J
421			R614,615	0801888A	Carbon Resistor 10K ERD-25T J
R406	0809523A	Metal Film Resistor 13.7K SN14K2E F	642,648		
R407	0809203A	Metal Film Resistor 10K SN14K2E F	652,653		
R408,416	0801897A	Carbon Resistor 5.6K ERD-25T J	654,656		
420,431			690,699		
R409	0805794A	Carbon Resistor 680 ERD-25T J	R619,671	0805822A	Carbon Resistor 2.2K ERD-25T J
R410,417	0809328A	Metal Film Resistor 11K SN14K2E F	672		
R418,423	0801889A	Carbon Resistor 100K ERD-25T J	R628,655	0801682A	Carbon Resistor 6.8K ERD-25T J
425,426			R631	0805776A	Carbon Resistor 1M ERD-25T J
R419	0805660A	Carbon Resistor 18K ERD-25T J	R632,659	0806671A	Carbon Resistor 2.2M ERD-25T J
R427	0805909A	Carbon Resistor 33K ERD-25T J	701		
R428	0806675A	Carbon Resistor 3.9K ERD-25T J	R633	0806078A	Carbon Resistor 30K ERD-25T J
R429	0806626A	Carbon Resistor 150K ERD-25T J	R634	0805560A	Carbon Resistor 18K ERD-25T J
R430	0805622A	Carbon Resistor 2.2K ERD-25T J	R636	0809790A	Carbon Resistor 43K ERD-25T J
C401,402	0809374A	Electrolytic Capacitor 6800µ 25V	R638	0805641A	Carbon Resistor 47K ERD-25T J
C403,406	0801272A	Electrolytic Capacitor 100µ 25V	R637	0809263A	Carbon Resistor 12K ERD-25T J
C404	0809377A	Electrolytic Capacitor 4700µ 16V	R638	0805821A	Carbon Resistor 120K ERD-25T J
C405	0806654A	Electrolytic Capacitor 2200µ 25V	R639	0805668A	Carbon Resistor 82K ERD-25T J
C407,409	0801397A	Electrolytic Capacitor 1000µ 16V	R641	0808217A	Fail Safe Type Resistor 5.6RDF-2B J
C408	0808251A	Electrolytic Capacitor 33µ 16V	R647,700	0806515A	Carbon Resistor 22K ERD-25T J
C410	0801406A	Electrolytic Capacitor 2200µ 16V	R649	0809751A	Metal Film Resistor 76.8K SN14K2E F
			R651	0806640A	Carbon Resistor 180K ERD-25T J
			R657,658	0809269A	Metal Film Resistor 100K SN14K2E F
			R661	0809472A	Metal Film Resistor 220K SN14K2E F
			R662	0801857A	Carbon Resistor 1K ERD-25T J

LX-3

7.11. Main P.C.B. Assy

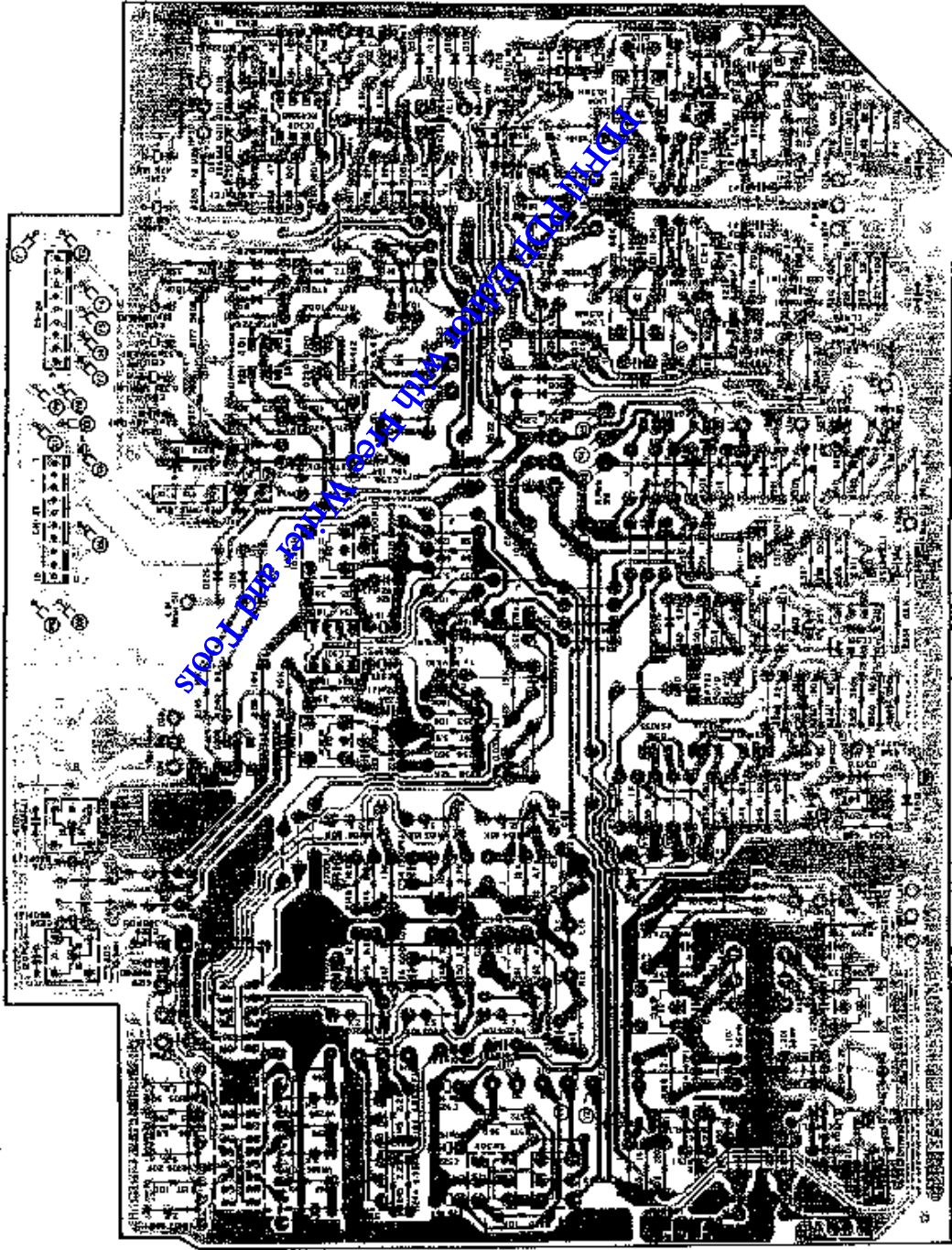


Fig. 7.11.1. Serial No.: AD1310063 -

Note: Drawn to 15853, 15963, or 151655 unless otherwise specified.

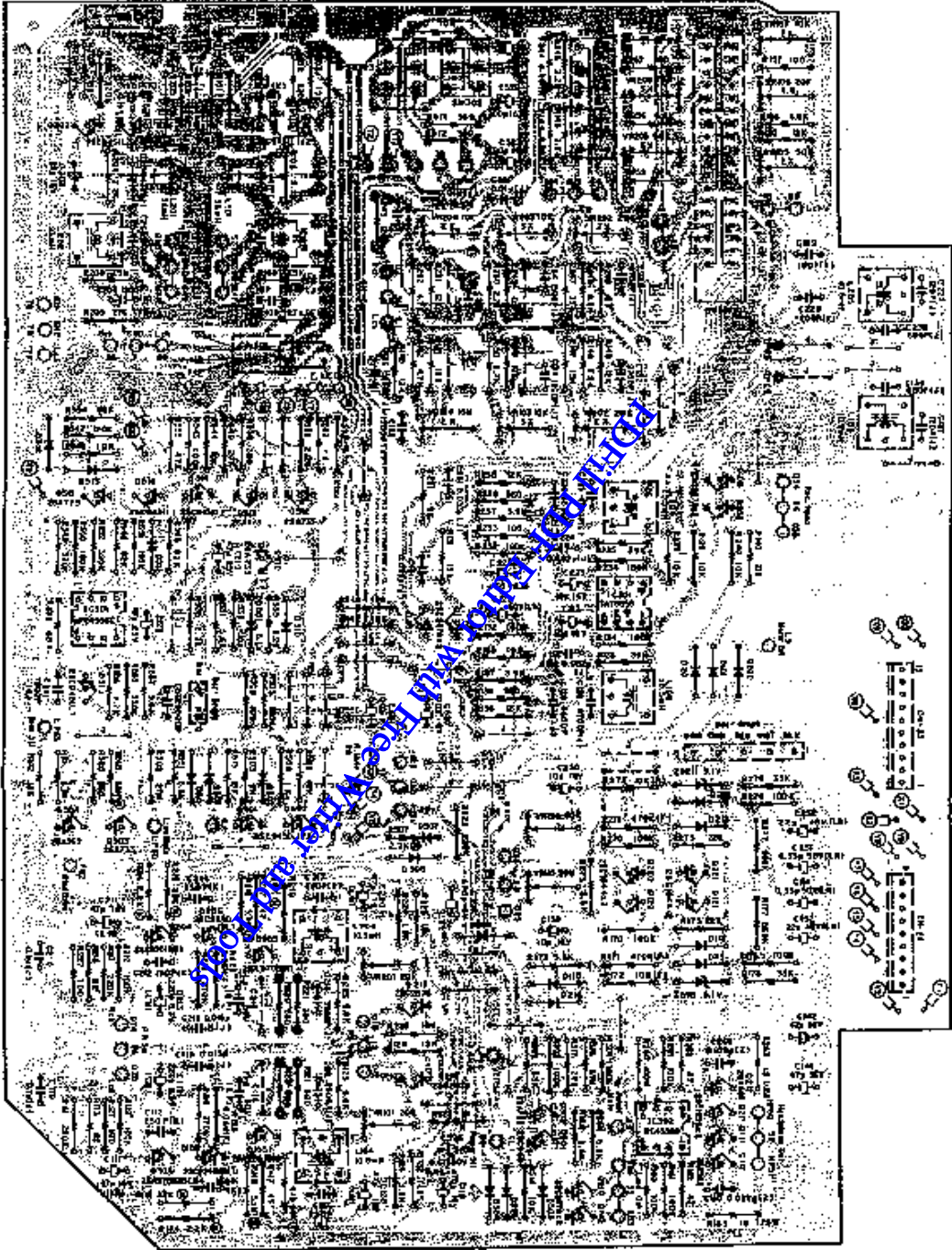


Fig. 7-112 Serial Num. A313044B - A313102E

Note: Check if 1SS39, 1SB39, or 1S1 555 unless otherwise specified.

6.2. Front Panel Assy (A01)

Drawn/Rev. No.	Part No.	Description	Qty
A01	HA010000	Front Panel Assy Serial No.: A31310003 -	1
01	01000001	Power Switch Button	1
02	01000002	Power Switch Button Spring	1
03	01000003	Effort Button	1
04	01000004	Effort Button Spring	1
05	01000005	Frame Switch Button	1
06	01000006	Frame Switch Button Spring	1
07	01000007	Frame Switch Button	1
08	01000008	Frame Switch Button Spring	1
09	01000009	Frame Switch Button	1
10	01000010	Frame Switch Button Spring	1
11	01000011	LED Lens	1
12	01000012	Central Button L	1
13	01000013	Central Button R	1
14	01000014	Central Button Spring	1
15	01000015	Central Button	1
16	01000016	Central Button Spring	1
17	01000017	Central Button	1
18	01000018	Central Button Spring	1
19	01000019	Central Button	1
20	01000020	Central Button Spring	1
21	01000021	Central Button	1
22	01000022	Central Button Spring	1
23	01000023	Central Button	1
24	01000024	Central Button Spring	1
25	01000025	Central Button	1
26	01000026	Central Button Spring	1
27	01000027	Central Button	1
28	01000028	Central Button Spring	1
29	01000029	Central Button	1
30	01000030	Central Button Spring	1
31	01000031	Central Button	1
32	01000032	Central Button Spring	1
33	01000033	Central Button	1
34	01000034	Central Button Spring	1
35	01000035	Central Button	1
36	01000036	Central Button Spring	1
37	01000037	Central Button	1
38	01000038	Central Button Spring	1
39	01000039	Central Button	1
40	01000040	Central Button Spring	1
41	01000041	Central Button	1
42	01000042	Central Button Spring	1
43	01000043	Central Button	1
L01	05000001	BT Screw Head Phillips Binding Head	12
L02	05000002	BT Screw Head Phillips Binding Head	6
L03	05000003	Washer	6
L04	05000004	Washer	6
L05	05000005	Stopper Ring CS Screw	2
L06	05000006	Stopper Ring CS Screw	2
L07	05000007	BT Screw Head Phillips Pan Head (Dryness)	2
L08	05000008	BT Screw Head Phillips Pan Head (Dryness)	2
L09	05000009	BT Screw Head Phillips Binding Head	3
L10	05000010	BT Screw Head Phillips Binding Head	1
L11	05000011	BT Screw Head Phillips Binding Head	1

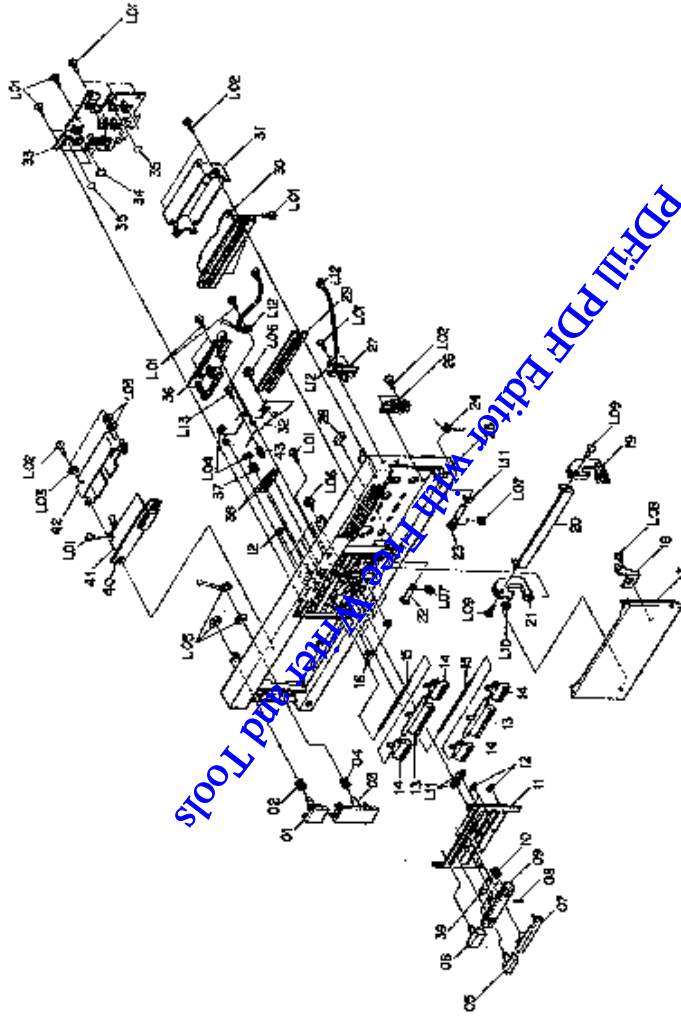


Fig. 6.2.1 Serial No.: A31310003 -

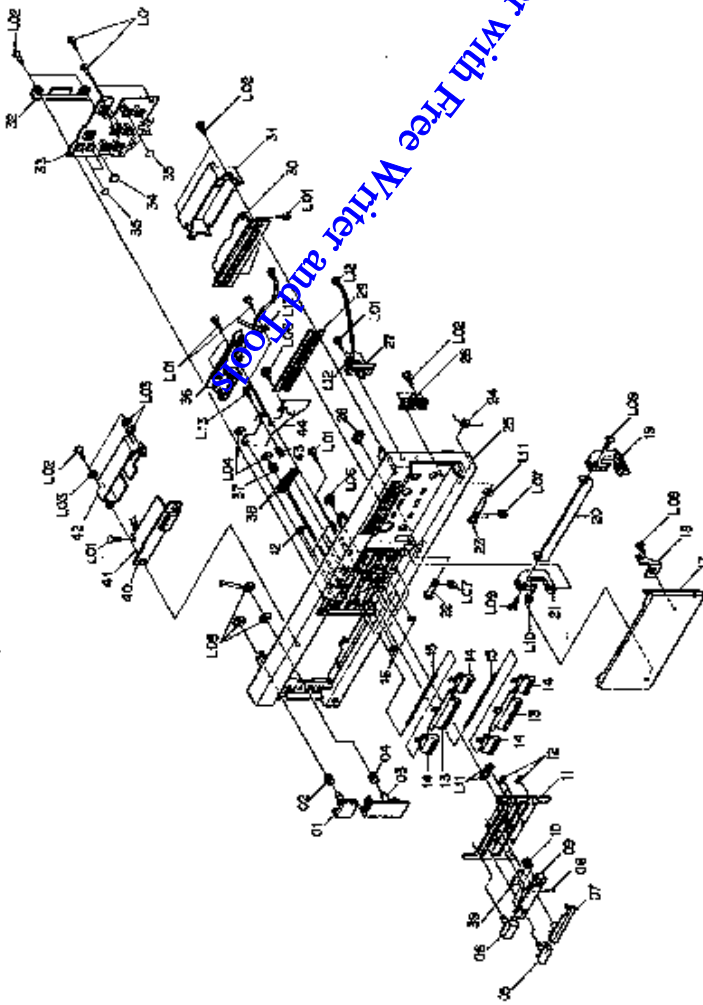


Fig. 8.2.2 Serial No.: A31301001 - A31310052

Subassembly Ref. No.	Part No.	Description	Qty	Part No.	Description	Qty
01	01040233	Power Switch Button	1	01040238	Control Button S	4
02	01040234	Power Switch Button Spring	1	01040239	Control Button Sheet	2
03	01040235	Elect Button	1	01040240	Control Button Cuplion	2
04	01040236	Elect Button Spring	1	01040241	Front Door	1
05	01040237	Mech Switch Button	1	01040242	Adjustment Lid Holder Assy	1
06	01040238	Mech Switch Button Spring	1	01040243	Door Arm R	1
07	01040239	Button Reattachment L	1	01040244	Door Arm L	1
08	01040240	Fader Sheet	1	01040245	Door Arm Sheet L	1
09	01040241	Fader Button	1	01040246	Door Arm Sheet R	1
10	01040242	Fader Button Spring	1	01040247	Door Spring	1
11	01040243	Fader Button Sheet	1	01040248	Door Lock	1
12	01040244	LED Lamp	1	01040249	Door Cushion	1
13	01040245	LED Lamp Spring	1	01040250	Door Cushion	1
14	01040246	Control Button L	2	01040251	Indicator P.C.B. Assy	1
15	01040247	Control Button R	2			
16	01040248	Control Button Spring	2			
17	01040249	Control Button Sheet	1			
18	01040250	Control Button Cuplion	1			
19	01040251	Front Door	1			
20	01040252	Adjustment Lid Holder Assy	1			
21	01040253	Door Arm R	1			
22	01040254	Door Arm L	1			
23	01040255	Door Arm Sheet L	1			
24	01040256	Door Arm Sheet R	1			
25	01040257	Door Spring	1			
26	01040258	Door Lock	1			
27	01040259	Door Cushion	1			
28	01040260	Door Cushion	1			
29	01040261	Indicator P.C.B. Assy	1			
30	01040262	Indicator P.C.B. Assy	1			
31	01040263	Indicator P.C.B. Assy	1			
32	01040264	Indicator P.C.B. Assy	1			
33	01040265	Indicator P.C.B. Assy	1			
34	01040266	Indicator P.C.B. Assy	1			
35	01040267	Indicator P.C.B. Assy	1			
36	01040268	Indicator P.C.B. Assy	1			
37	01040269	Indicator P.C.B. Assy	1			
38	01040270	Indicator P.C.B. Assy	1			
39	01040271	Indicator P.C.B. Assy	1			
40	01040272	Indicator P.C.B. Assy	1			
41	01040273	Indicator P.C.B. Assy	1			
42	01040274	Indicator P.C.B. Assy	1			

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8.3. Chassis Assy (A02)

Subassembly Ref. No.	Part No.	Description	Qty	Subassembly Ref. No.	Part No.	Description	Qty
16	BA04742K	Anti Switch P.C.B. Assy	1	11	BA04628A	Power Switch P.C.B. Assy (Japan)	1
17	QJ44320A	Side Chassis L	1		BA04627A	Power Switch P.C.B. Assy (U.S.A. & Canada)	1
18	QJ44321C	Center Chassis	1		SA04628A	Power Bottom P.C.B. Assy	1
19	QJ44471A	Side Chassis R	1			DJK 220V Class 2, Australia & Other	1
20	QJ44448E	MPK Shield P/ps	1	12	0102690B	Type Selector Switch Knob	1
21	BA04644A	Deliv. NR P.C.B. Assy (Japan, U.K., 220V Class 2, Australia & Other)	1	13	0104084B	Push Button	2
				14	0004754A	Switch Holder	1
				15	BA04659A	Main P.C.B. Assy	1
22	BA04638A	Deliv. NR P.C.B. Assy (U.S.A. & Canada)	1	16	BA04659A	Auto. Switch P.C.B. Assy	1
23	0609771A	Hinge	2	17	0102620A	Sub Chassis L	1
24	QJ44388A	Recessed Switch Spring	1	18	0102621B	Sub Chassis R	1
25	QJ44359A	Recessed Switch Holder	1	19	0004643A	Center Chassis	1
				20	0004643A	MPK Shield P/ps	1
				21	BA04640A	Deliv. NR P.C.B. Assy (Japan, U.S.A., Canada & Other)	1
26	BA04640A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1		BA04638A	Deliv. NR P.C.B. Assy (U.S.A. & Canada)	1
					BA04639A	Deliv. NR P.C.B. Assy (U.S.A. & Canada)	1
				22	0202771A	Hinge	2
				23	QJ44388A	Recessed Switch Spring	1
				24	QJ44359A	Recessed Switch Holder	1
				25	BA04638A	Logic & Power P.C.B. Assy (Japan, U.S.A. & Canada)	1
				26	BA04639A	Logic & Power P.C.B. Assy (Japan, U.S.A. & Canada)	1
27	0609815A	Front Seat	20		BA04638A	Logic & Power P.C.B. Assy (Japan, U.S.A. & Canada)	1
28	QJ44415A	Front Bushing 30mm	2		BA04640A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1
29	QJ44415A	Front Bushing 30mm	1		BA04640A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1
L01	0502027A	BT Screw M3x5 Phillips Binding Head	32	26	BA04638A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1
L02	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	5		BA04639A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1
L03	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	1		BA04639A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1
L04	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	4		BA04639A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1
L05	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	1		BA04639A	Logic & Power P.C.B. Assy (U.S.A., Canada & Other)	1
L06	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	4	27	0202771A	Hinge	2
L07	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	3	28	QJ44415A	Front Bushing 30mm	2
L08	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	6	29	QJ44415A	Front Bushing 30mm	1
L09	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	12	L01	0502027A	BT Screw M3x5 Phillips Binding Head	32
L10	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	29	L02	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	5
A02	0502044A	Volume Washer	1	L03	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	1
				L04	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	4
				L05	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	1
				L06	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	4
				L07	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	3
				L08	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	6
				L09	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	12
				L10	0502044A	BT Screw M3x5 Phillips Binding Head (Black Chromate)	29
01	0502044A	Volume Washer	1				
02	0502044A	Volume Washer	1				
03	0502044A	Volume Washer	1				
04	0502044A	Volume Washer	1				
05	0502044A	Volume Washer	1				
06	0502044A	Volume Washer	1				
07	0502044A	Volume Washer	1				
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10	0502044A	Volume Washer	1				

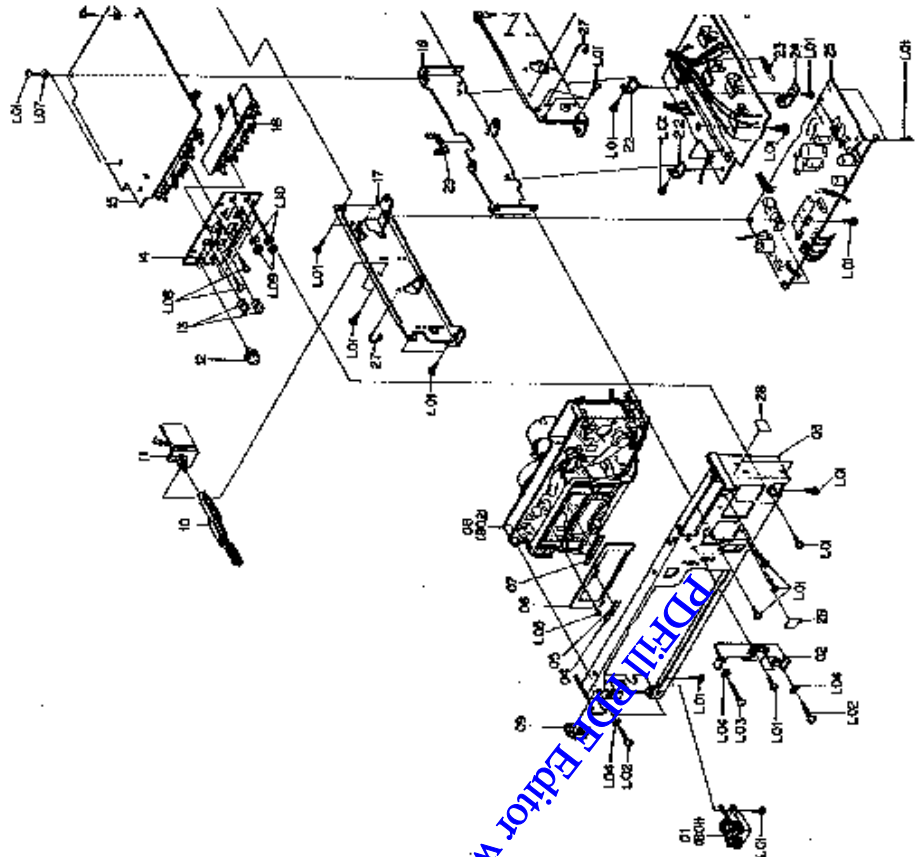


Fig. 8.3

8.3. Grenet Army (A02)

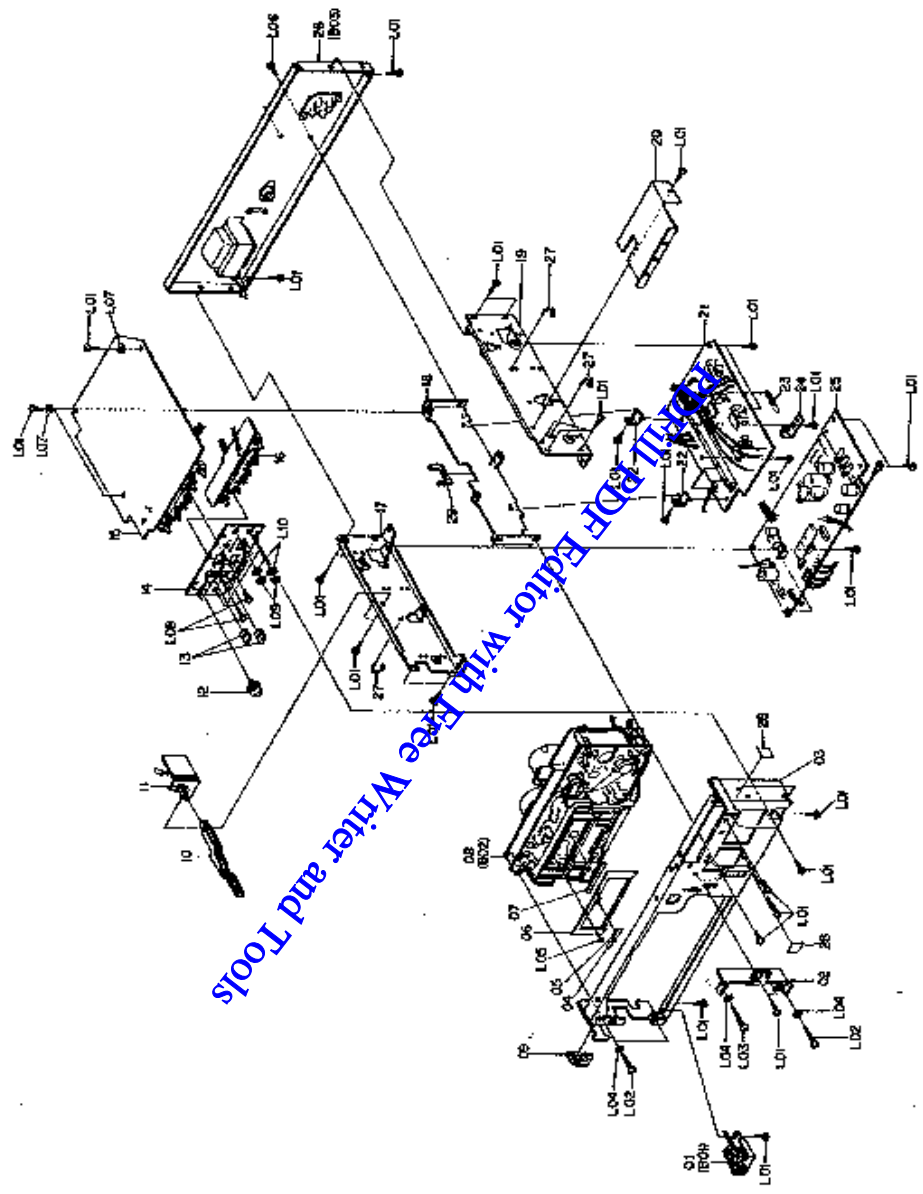


Fig. 8.3

Qty	Shorthand Ref. No.	Part No.	Description	Qty
1	11	BA04628A	Power Button P.C.B. Army (Japan)	1
1		BA04627A	Power Button P.C.B. Army (U.S.A. & Canada)	1
1		BA04626A	Power Button P.C.B. Army (U.K. 220V Class 2, Australia & Other)	1
1	12	DI0009008	Tape Selector Switch Knob	1
1	13	DI0406048	Push Button	2
1	14	DI040635A	Button Holder	1
1	15	BA04625A	Main P.C.B. Army	1
2	16	BA04625A	Anti-Switch P.C.B. Army	1
1	17	DI040635A	Slide Switch L	1
1	18	DI040635A	Slide Switch R	1
1	19	DI040635A	Center Channel	1
1	20	DI040635A	Side Channel R	1
1	21	BA04644A	Deliver 18V P.C.B. Army (Japan, U.K. 220V Class 2, Australia & Other)	1
1		BA04639A	Deliver 18V P.C.B. Army (U.S.A. & Canada)	1
2	22	DI040635A	Hinge	2
1	23	DI040635A	Record Switch Spring	1
1	24	DI040635A	Record Switch Holder	1
1	25	BA04639A	Logic & Power P.C.B. Army (Japan, U.K. & Power P.C.B. Army (U.S.A. & Canada & Other))	1
20		BA04639A	Logic & Power P.C.B. Army (U.S.A., Canada & Other)	1
1		BA04640A	Logic & Power P.C.B. Army (U.S.A., Canada & Other)	1
1	26	HA04280A	Rear Panel Army (Japan)	1
1		HA04281A	Rear Panel Army (U.S.A. & Canada)	1
1		HA04282A	Rear Panel Army (220V Class 2)	1
1		HA04283A	Rear Panel Army (U.K.)	1
1		HA04284A	Rear Panel Army (Australia)	1
1		HA04285A	Rear Panel Army (Other)	1
20	27	DI040635A	Wash-Lock	20
3	28	DI040635A	Front Feet	3
1	29	DI040635A	Free Running Wheel	1
32	L01	DI040635A	BT Battery M3x8 Philips Binding Head (Chromate)	32
3	L02	DI040635A	BT Screw (M4x10 Philips Binding Head (Black Chromate))	3
1	L03	DI040635A	BT Battery M4x10 Philips Binding Head (Chromate)	1
1	L04	DI040635A	Washer 4mm	1
1	L05	DI040635A	BT Battery M3x8 Philips Binding Head (Black Chromate)	1
2	L06	DI040635A	BT Screw M3x8 Philips Binding Head (Black Chromate)	2
1	L07	DI040635A	Washer 3mm	1
1	L08	DI040635A	Screw M3x8 Philips Flat Head (Zn)	1
1	L09	DI040635A	Volume Nut	1
1	L10	DI040635A	Volume Washer	1



8.4. Headphone Holder Assy (8007)

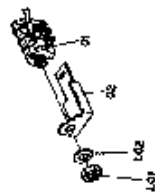
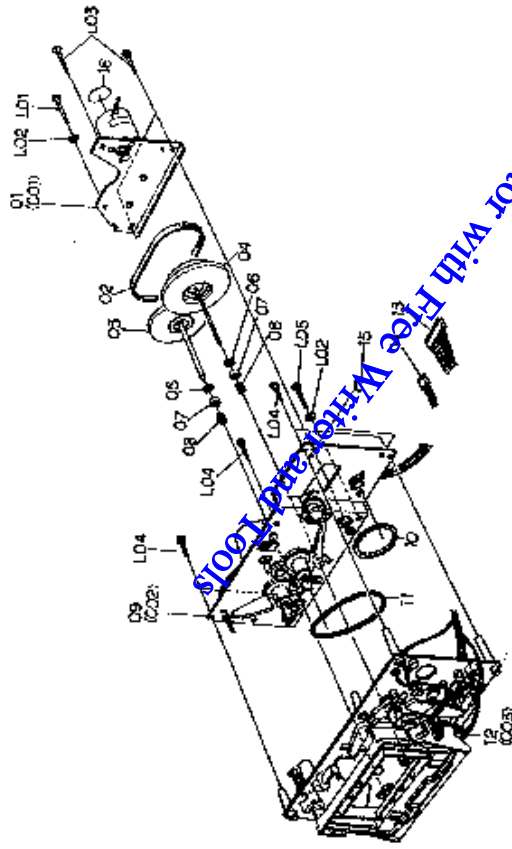


Fig. B.2

8.5. Mechanism Assy LK-3 (8002)



8.6. Rear Panel Assy (8003)

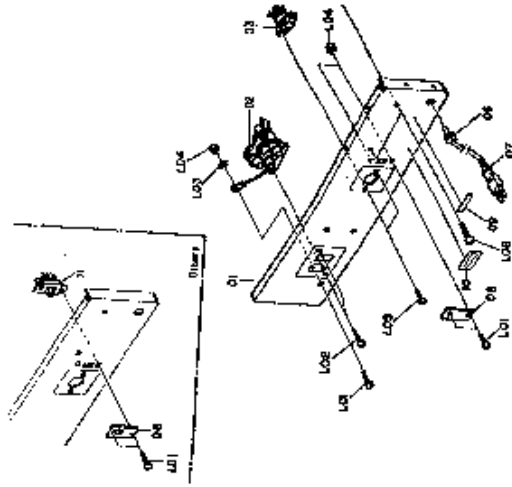
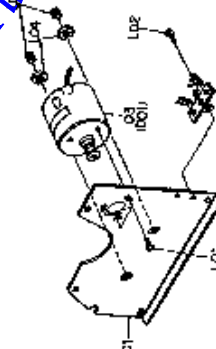


Fig. B.5

Sub-assembly Ref. No.	Part No.	Description	Qty	Reference Part No.	Part No.	Description	Qty
801	JAC2811A	Headphone Holder Assy Serial No. 431501001 -	1	08	CA00805A	Sub Mechanism Chassis Assy	1
01	0A08511A	Headphone Jack	1	10	0C00808B	Control Motor Belt	1
02	0A08520C	Headphone Jack Holder	1	12	0C00809B	Converter Belt B	1
L01	-	Headphone Jack Holder	1	13	CA00833A	Mini Mechanism Chassis Assy	1
L02	-	Headphone Jack Nut	1	14	0A08817A	SP-4 Connector	1
			1	15	0A08875A	SP-4 Connector	1
			1	16	0C00818A	Anti-Lock	1
802	CA00833A	Mechanism Assy LK-3 Serial No. 431501001 -	1	17	0A04200A	Motor Lead	10
01	CA00833A	Flywheel Holder Assy	1	L01	0A04200A	Mechanism Serial No. 348	1
02	0C00808C	Capstan Belt	1	L02	0A04200A	Label CH-70	1
03	CA08185A	Subsidiary Flywheel Assy	1	L03	0E00835A	Washer 3mm	1
04	CA08109A	Radius Flywheel Assy E	1	L04	0E00176A	BT Screw M3x20 Phillips Pan Head	1
05	0C008021B	Thrust Washer Assy	1	L05	0E00835A	Washer 3mm	1
06	0C008020B	Thrust Washer 3.5mm	1	L06	0E00835A	BT Screw M3x18 Phillips Pan Head	1
07	0C008245A	Flange Thrust Cap	1	L07	0E00835A	BT Screw M3x20 Phillips Pan Head	1
08	0C008244A	Flange Thrust Spring	2				

Fig. B.7



8.8. Belt Mechanism Chassis Assy (002)

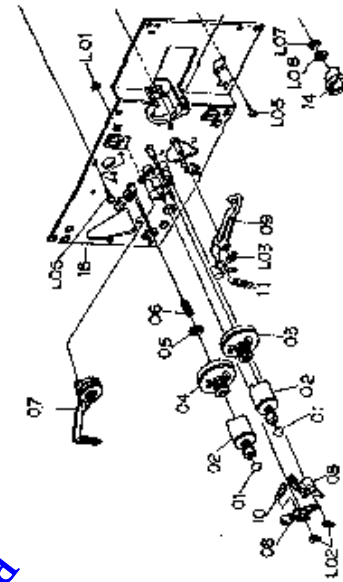


Fig. B.8

B.5. Mechanism Assy LX-3 (902)

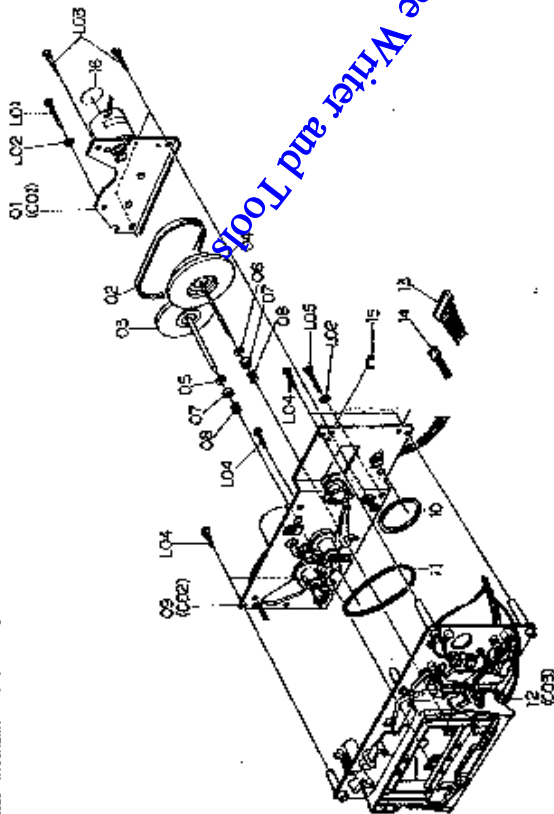


Fig. B.5

B.6. Rear Panel Assy (800)

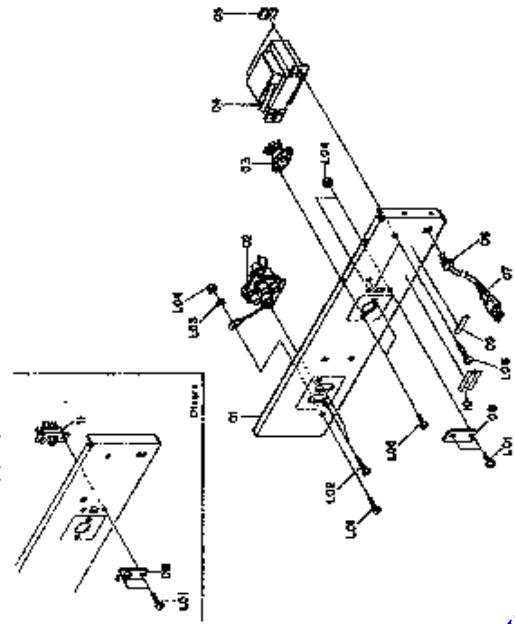


Fig. B.6

B.7. Flywheel Holder Assy (C01)

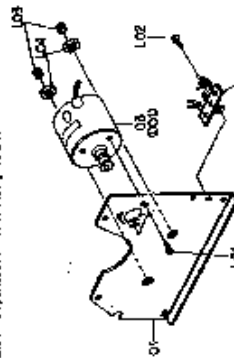


Fig. B.7

B.8. Sub Mechanism Assy (C02)

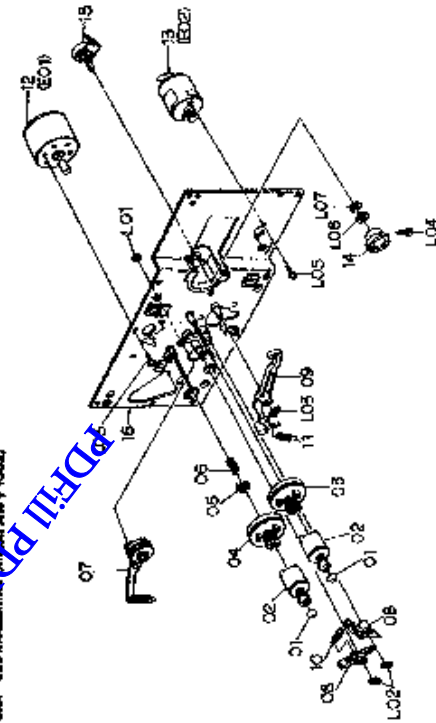


Fig. B.8

Description	Qty	Part No.	Quantity	Classification	Qty
Rear Assy	1	CA08355A	1	Sub Mechanism Chrome Assy	1
1 -	10	0000208	1	Control Motor Belt	1
1 -	11	0000208	1	Control Motor Belt	1
1 -	12	CA08356A	1	Counter Belt B	1
1 -	13	CA08356A	1	Main Mechanism Chrome Assy	1
1 -	14	0838877A	1	SP-44 Connector	1
1 -	15	0838877A	1	SP-44 Connector	1
1 -	16	0838877A	1	SP-44 Connector	1
1 -	17	0838877A	1	SP-44 Connector	1
1 -	18	0838877A	1	SP-44 Connector	1
1 -	19	0838877A	1	SP-44 Connector	1
1 -	20	0838877A	1	SP-44 Connector	1
1 -	21	0838877A	1	SP-44 Connector	1
1 -	22	0838877A	1	SP-44 Connector	1
1 -	23	0838877A	1	SP-44 Connector	1
1 -	24	0838877A	1	SP-44 Connector	1
1 -	25	0838877A	1	SP-44 Connector	1
1 -	26	0838877A	1	SP-44 Connector	1
1 -	27	0838877A	1	SP-44 Connector	1
1 -	28	0838877A	1	SP-44 Connector	1
1 -	29	0838877A	1	SP-44 Connector	1
1 -	30	0838877A	1	SP-44 Connector	1
1 -	31	0838877A	1	SP-44 Connector	1
1 -	32	0838877A	1	SP-44 Connector	1
1 -	33	0838877A	1	SP-44 Connector	1
1 -	34	0838877A	1	SP-44 Connector	1
1 -	35	0838877A	1	SP-44 Connector	1
1 -	36	0838877A	1	SP-44 Connector	1
1 -	37	0838877A	1	SP-44 Connector	1
1 -	38	0838877A	1	SP-44 Connector	1
1 -	39	0838877A	1	SP-44 Connector	1
1 -	40	0838877A	1	SP-44 Connector	1
1 -	41	0838877A	1	SP-44 Connector	1
1 -	42	0838877A	1	SP-44 Connector	1
1 -	43	0838877A	1	SP-44 Connector	1
1 -	44	0838877A	1	SP-44 Connector	1
1 -	45	0838877A	1	SP-44 Connector	1
1 -	46	0838877A	1	SP-44 Connector	1
1 -	47	0838877A	1	SP-44 Connector	1
1 -	48	0838877A	1	SP-44 Connector	1
1 -	49	0838877A	1	SP-44 Connector	1
1 -	50	0838877A	1	SP-44 Connector	1
1 -	51	0838877A	1	SP-44 Connector	1
1 -	52	0838877A	1	SP-44 Connector	1
1 -	53	0838877A	1	SP-44 Connector	1
1 -	54	0838877A	1	SP-44 Connector	1
1 -	55	0838877A	1	SP-44 Connector	1
1 -	56	0838877A	1	SP-44 Connector	1
1 -	57	0838877A	1	SP-44 Connector	1
1 -	58	0838877A	1	SP-44 Connector	1
1 -	59	0838877A	1	SP-44 Connector	1
1 -	60	0838877A	1	SP-44 Connector	1
1 -	61	0838877A	1	SP-44 Connector	1
1 -	62	0838877A	1	SP-44 Connector	1
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1 -	65	0838877A	1	SP-44 Connector	1
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1 -	67	0838877A	1	SP-44 Connector	1
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1 -	71	0838877A	1	SP-44 Connector	1
1 -	72	0838877A	1	SP-44 Connector	1
1 -	73	0838877A	1	SP-44 Connector	1
1 -	74	0838877A	1	SP-44 Connector	1
1 -	75	0838877A	1	SP-44 Connector	1
1 -	76	0838877A	1	SP-44 Connector	1
1 -	77	0838877A	1	SP-44 Connector	1
1 -	78	0838877A	1	SP-44 Connector	1
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1 -	83	0838877A	1	SP-44 Connector	1
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1 -	85	0838877A	1	SP-44 Connector	1
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1 -	88	0838877A	1	SP-44 Connector	1
1 -	89	0838877A	1	SP-44 Connector	1
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1 -	91	0838877A	1	SP-44 Connector	1
1 -	92	0838877A	1	SP-44 Connector	1
1 -	93	0838877A	1	SP-44 Connector	1
1 -	94	0838877A	1	SP-44 Connector	1
1 -	95	0838877A	1	SP-44 Connector	1
1 -	96	0838877A	1	SP-44 Connector	1
1 -	97	0838877A	1	SP-44 Connector	1
1 -	98	0838877A	1	SP-44 Connector	1
1 -	99	0838877A	1	SP-44 Connector	1
1 -	100	0838877A	1	SP-44 Connector	1

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	OC080131	Flywheel Holder	1				
01	0H04052A	Rear Panel	1	02	0B04042A	Earth Terminal 1L2P	1				
02	BA04630A	Pin Jack Ass'y	1	03	CA08116B	Capstan Motor Ass'y	1				
03	BA04629A	8P DIN Socket Ass'y	1	L01	DE00226A	Screw M2.6x4 Philips Pan Head	3				
04	0B06663A	Power Transformer (Others)	1	L02	QE00843A	BT Screw M3x5 Philips Binding Head	1				
	0B06664B	Power Transformer (220V Class 2, UK & Australia)	1	L03	OC08068C	Thrust Screw	2				
	0B06665A	Power Transformer (U.S.A. & Canada)	1	L04	OC03857A	Lock Nut	2				
	0B06666A	Power Transformer (Japan)	1	C02	CA08066A	Sub Mechanism Chassis Ass'y Serial No.: A31301001 -	1				
05	OC01162B	Bolt Receptacle Plate	2					01	OC08038B	Reel Hub Head	2
06	0B08037U	Cord Bushing (U.S.A., Canada, Japan, 220V Class 2, Australia & Others)	1					02	CA08038B	Reel Hub B Supply Ass'y	2
								03	CA08037A	Reel Hub Take-up Ass'y	1
	0B08351A	Cord Bushing 4K-4 (UK)	1					04	CA08064A	Reel Hub Supply Ass'y	1
07	0B08533A	Power Cord (U.S.A. & Canada)	1					06	CA08039A	Back Tension Ass'y	1
	0B08216B	Power Cord (Japan)	1					06	OC08268A	Back Tension Spring C	1
	0B08093U	Power Cord (220V Class 2)	1					07	CA08183A	Idler Ass'y	1
	0B08348A	Power Cord (UK)	1					08	CA08042A	Brake Ass'y	1
	0B05241A	Power Cord (Australia)	1					09	OC08030C	Brake Drive Arm	1
	0B08533A	Power Cord (Others)	1					10	OC08129A	Brake Arm Spring	1
08	0J03663C	Switch Cover (U.S.A., Canada, Japan, 220V Class 2, UK & Australia)	1					11	OC08128A	Brake Drive Arm Spring	1
								12	CA08242A	Reel Motor Ass'y	1
								13	CA08034A	Control Motor Ass'y	1
								14	OC08063B	Volume Coupler	1
	0M03946A	Voltage Selector Lock Plate C (Others)	1					15	0B07248A	Volume Control 10K (B)	1
	0M03797A	Voltage Label 240V (UK & Australia)	1					16	CA08194A	Sub Chassis Ass'y	1
	0M03786A	Voltage Label 220V (220V Class 2)	1	L01	DE00598A	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	0E00868A	BT Screw M2.6x6 Philips Binding Head	1				
L01	0E00694A	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								

LX-3

Schematic Ref. No.	Part No.	Description	Qty	Schematic Ref. No.	Part No.	Description	Qty
C03	CA08336A	Main Mechanism Chassis Ass'y Serial No.: A31301001 -	1	D01	CA08118B	Capstan Motor Ass'y Serial No.: A31301001 -	1
G1	CA08350A	Cassette Case Holder L Ass'y	1	01	DC08219A	Capstan Motor	1
02	OC08181A	Lid Arm Spring Tube	1	02	OC08212C	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	01	OC08292A	Reel Motor	1
06	DC08127A	Supply Pressure Roller Spring	1	02	OC0803F	Reel Motor Pulley	1
07	OC08250A	Supply Pressure Roller Spring B	1	03	0B08290A	Ceramic Capacitor 0.01µ 50V Z	1
08	OC08113A	Pressure Roller Arm Bushing	2	E02	CA08034A	Control Motor Ass'y Serial No.: A31301001 -	1
08	CA08063B	Supply Pressure Roller Ass'y	1	01	OC08137A	Control Motor	1
10	OC08122B	Supply Pressure Roller Thrust Spring	1	02	OC08064A	Control Motor Pulley	1
11	CA08079B	Take-up Pressure Roller Ass'y	1	03	0B08292A	Ceramic Capacitor 0.1µ 50V Z	1
12	OC08183B	Take-up Pressure Roller Thrust Spring	1	04	0M03985A	Control Motor Label	1
13	CA08338A	Head Base Ass'y	1	05	0M03985A	Motor Seal B	1
14	OC08192A	Pressure Roller Drive Bar B	1				
15	OC08088B	Head Base Roller	3				
16	OC08060B	Record Sensor	1				
17	OC08061E	Cassette Hold Arm	1				
18	OC08120A	Cassette Hold Arm Spring	1				
19	CA08196A	Back Tension Ass'y	1				
20	OC08254A	Back Tension Arm Collar	1				
21	CA08027A	Head Base Drive Arm Ass'y	1				
22	OC08143C	Head Base Drive Arm Spring	1				
23	CA08025A	Record Arm Ass'y	1				
24	OC08038D	Record Trigger	1				
25	OC08112A	Flip-Flop Spring	1				
26	CA08028A	Pressure Roller Drive Arm Ass'y	1				
27	CA08353A	Auto Shut-off Ass'y	1				
28	OC08116A	Record Protector	1				
29	OC08194C	Damper Lock Arm	1				
30	OC08163A	Damper Lock Arm Spring Tube	1				
31	OC08115A	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	OC08185A	Cam Drive Gear	1				
36	OC08029H	Control Cam	1				
37	OC08117A	Counter-Load Arm Spring	1				
38	OC08152A	Counter-Load Arm Spring Tube	1				
39	CA08028A	Counter-Load Arm Ass'y	1				
40	OC08123B	Record Switch Linkage Wire	1				
41	OC08037E	Record Arm B	1				
42	OC08116A	Record Arm Spring	1				
43	CA08347A	Main Chassis Ass'y	1				
L01	0E00637A	Stopper Ring 3mm	11				
L02	0E00634A	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	0E00675A	BT Screw M2.6x8 Philips Pan Head	8				
L07	0E00178A	Washer 3mm	2				
L08	0E00879A	BT Screw M2x16 Philips Pan Head	1				
L09	0E00838A	Stopper Ring 4mm	3				
L10	0E00465A	BT Screw M3x8 Philips Pan Head	3				
L11	0E00895A	Earth Lug 3mm	2				
L12	0E00858A	BT Screw M2.6x6 Philips Binding Head	1				
L13	OC08255A	Washer 2.5mm	1				

8.9. Main-Mechanism Chassis Assy (D01)

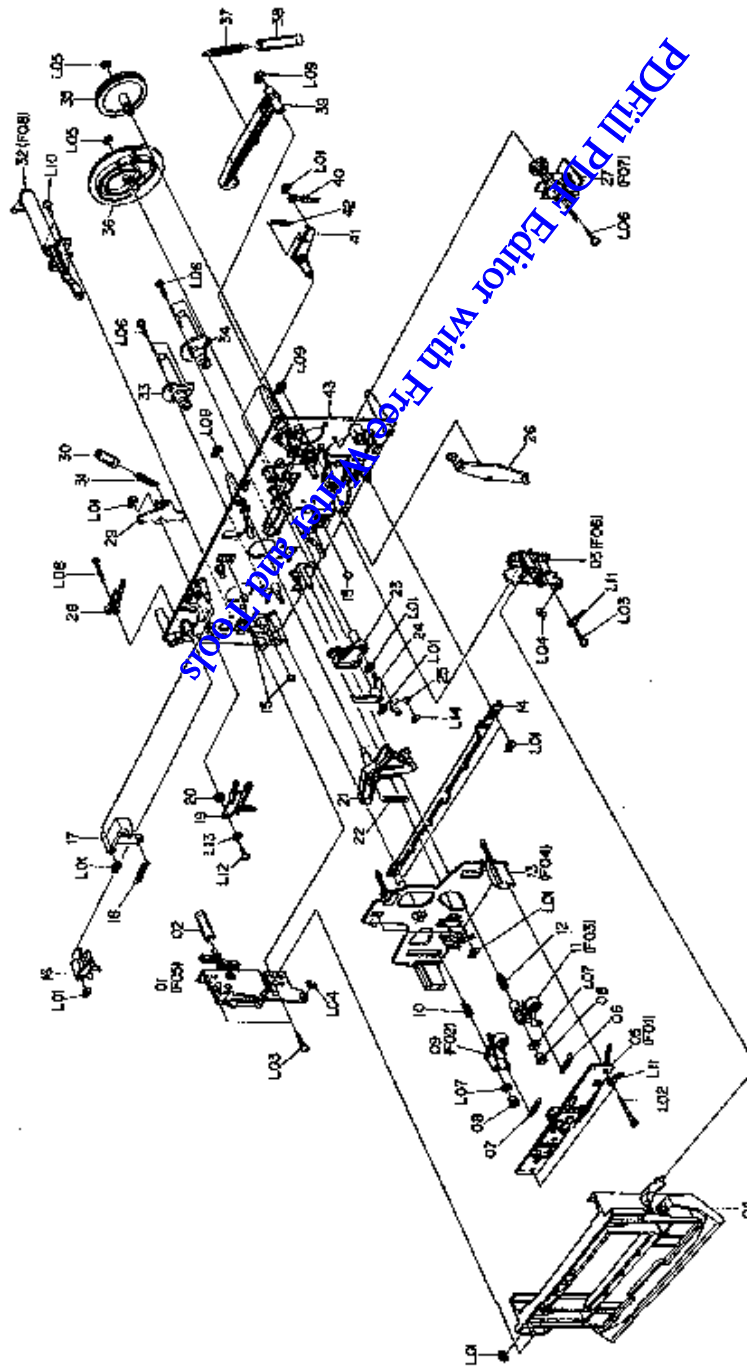


Fig. 8.9

8.10. Capstan Minor Assy (D01)

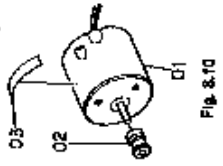


Fig. 8.10

8.11. Reel Minor Assy (D01)



Fig. 8.11

8.12. Coupled Minor Assy (D01)

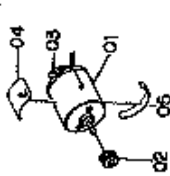


Fig. 8.12

8.13. Head Mount Beam Assy (F03)

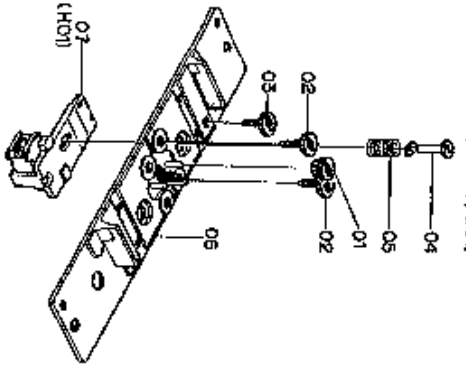


FIG. 8.13

8.16. Head Base Assy (F04)

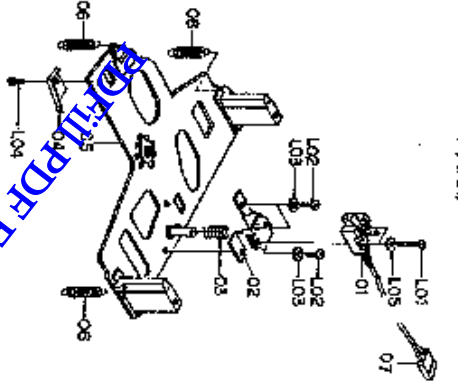


FIG. 8.16

8.18. Camera Case Holder R Assy (F06)

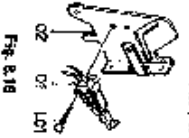


FIG. 8.18

8.19. Auto Shut-off Assy (F07)

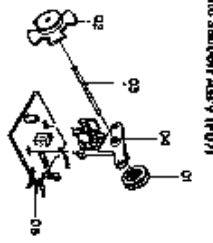


FIG. 8.19

8.14. Supply Pressure Roller Assy (F02)

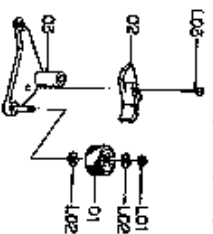


FIG. 8.14

8.17. Camera Case Holder L Assy (F05)

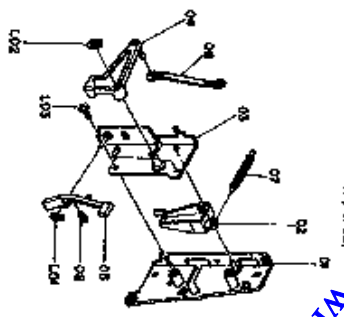


FIG. 8.17

8.15. Take-up Pressure Roller Assy (F03)

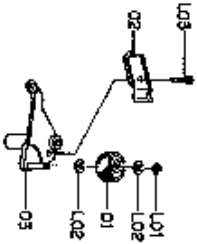


FIG. 8.15

Electronic Part No.	Description	Qty	Interchangeable Part No.	Description	Qty
F01	HEAD MOUNT BEAM ASSY Serial No.: A31301001 -	1	CA080297A	Head Beam Assy Serial No.: A31301001 -	1
01	02080292C	1	02080292A	Head Beam L Spring	1
02	02080272F	1	02080272E	2PH Connector	1
03	02080282A	2	02080282A	Spring (M1.2x2 Phillips Pan Head)	2
04	02080181B	1	02080181A	Bracket (Stamped)	1
05	02080181C	1	02080181A	Bracket (Stamped)	1
06	02080282B	1	02080282A	Spring (M2.0 Phillips Pan Head)	1
07	02080282A	1	02080282A	BT Screw (M2.0 Phillips Pan Head) Length: 1.7mm	1
F02	CA080292B	1	CA080292A	Camera Case Holder L Assy Serial No.: A31301001 -	1
01	02080181A	1	02080292A	Camera Case Holder R Assy Serial No.: A31301001 -	1
02	02080181C	1	02080292B	Head Beam L Spring	1
03	02080181B	1	02080292A	2PH Connector	1
04	02080272F	1	02080272E	Bracket (Stamped)	1
05	02080282A	1	02080282A	Spring (M1.2x2 Phillips Pan Head)	1
06	02080181C	1	02080181A	Bracket (Stamped)	1
07	02080282B	1	02080282A	Spring (M2.0 Phillips Pan Head)	1
08	02080282A	1	02080282A	BT Screw (M2.0 Phillips Pan Head) Length: 1.7mm	1
L01	02080181C	1	02080181A	Bracket (Stamped)	1
L02	02080181B	1	02080181A	Bracket (Stamped)	1
L03	02080282A	1	02080282A	Spring (M2.0 Phillips Pan Head) Length: 1.7mm	1
F06	CA080292A	1	CA080292A	Camera Case Holder R Assy Serial No.: A31301001 -	1
01	02080181A	1	02080181A	Bracket (Stamped)	1
02	02080181C	1	02080181A	Bracket (Stamped)	1
L01	02080282A	2	02080282A	Spring (M2.0 Phillips Pan Head)	2
L02	02080282A	1	02080282A	Spring (M2.0 Phillips Pan Head)	1
L03	02080282A	1	02080282A	Spring (M2.0 Phillips Pan Head)	1
F07	CA080292A	1	CA080292A	Auto Shut-off Assy Serial No.: A31301001 -	1
01	02080292A	1	02080292A	Auto Shut-off Assy A	1
02	02080292B	1	02080292B	Auto Shut-off Assy B	1
03	02080292C	1	02080292C	Auto Shut-off Assy C	1
04	02080292D	1	02080292D	Auto Shut-off Assy D	1
05	02080292E	1	02080292E	Auto Shut-off Assy E	1
06	02080292F	1	02080292F	Auto Shut-off Assy F	1

10. EQ. AMP. FREQUENCY RESPONSE

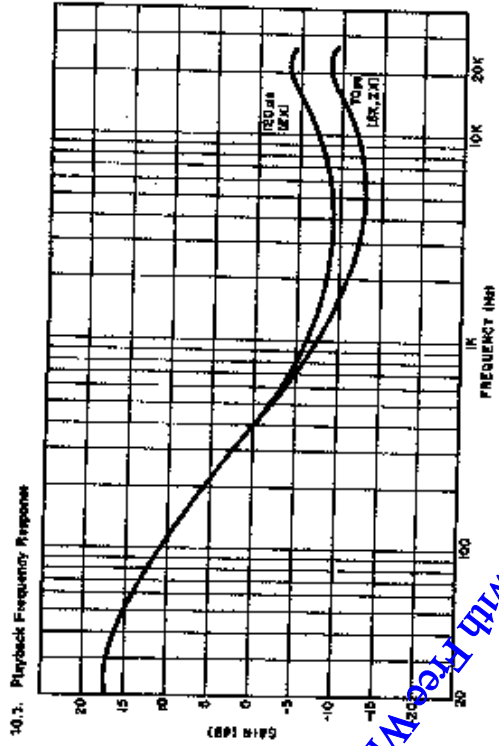


Fig. 10.1

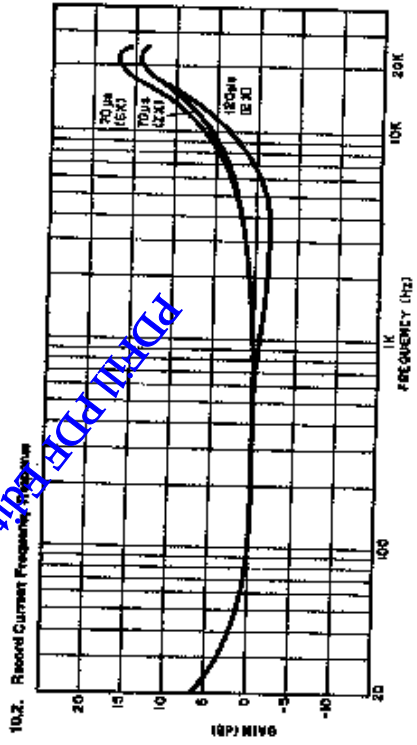


Fig. 10.2

8.21. RP-98 Record/Playback Head Assy (H01)

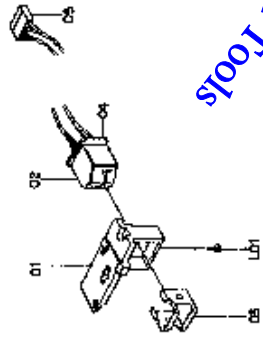


Fig. 8.21

8.20. Pneumatic Damper Assy (F08)

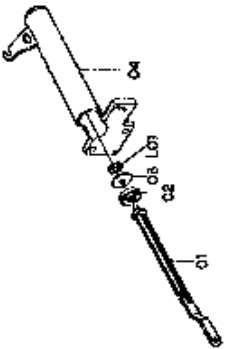


Fig. 8.20

Subassembly Ref. No.	Part No.	Description	Qty	Subassembly Ref. No.	Part No.	Description	Qty
F08	0200030A	Pneumatic Damper Assy AS1501001 -	1	H01	0200030A	RP-98 Record/Playback Head Assy Serial No. AJ1301001 -	1
01	0200030C	Damper Platen	1	01	0200217A	Head Plate	1
02	0200102C	Damper Ring	1	02	0201994A	RP-98 Record/Playback Head	1
03	0200030C	Damper Platen	1	03	0200218B	Pad Lipper BE	1
04	0200030C	Damper Platen	1	04	0202787A	Head Former P.C.B.	1
L01	0200030A	Stopper Ring 08 2mm	1	05	0200030C	RP-14 Connector	1
				L01	0200037A	Screw M3.5x4 Phillips Pan-Head	1
					0204031A	Label CR-32	1

9. OVERALL TIMING CHART

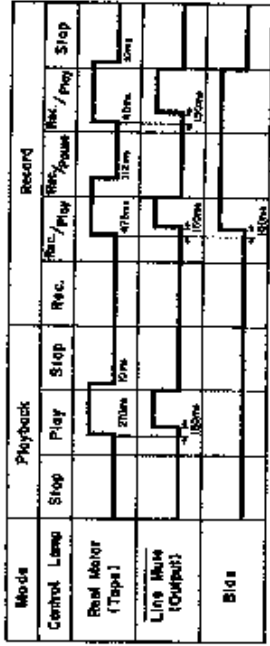


Fig. 9

11.2. Mechanism Control Section

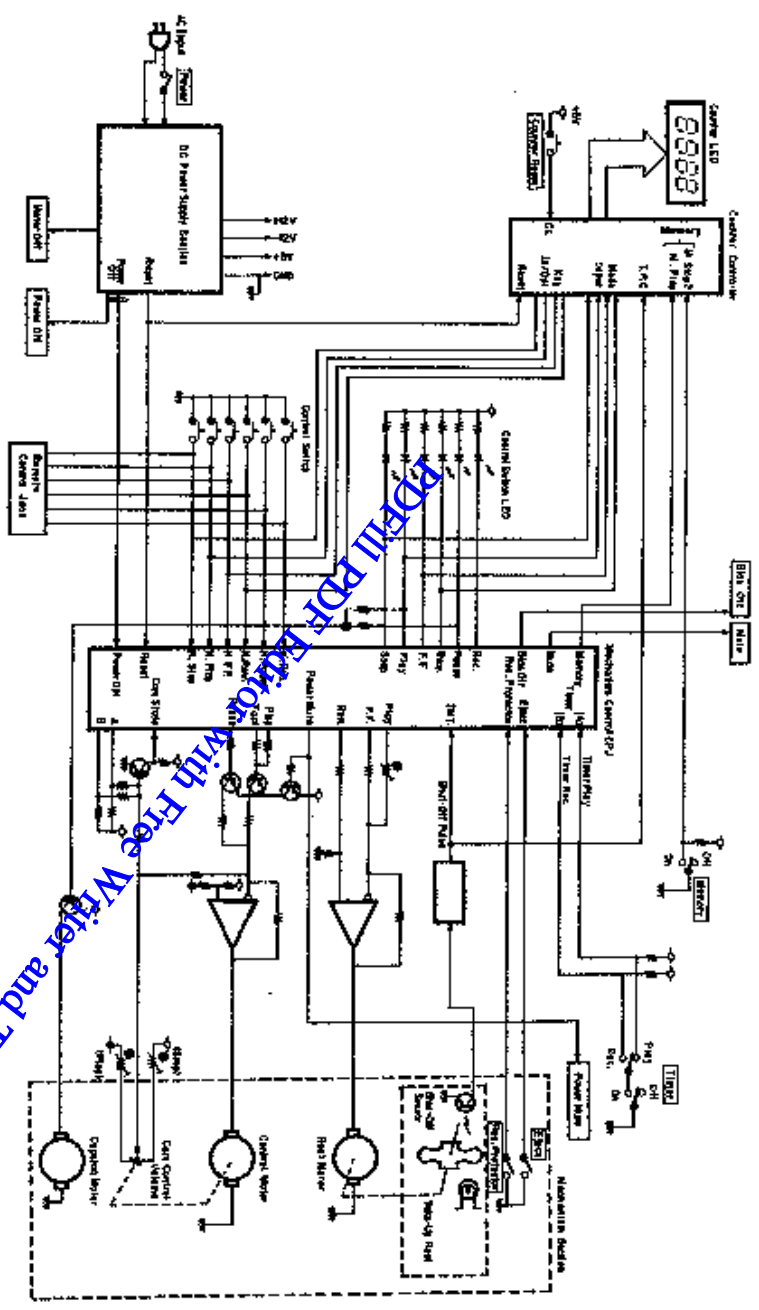


Fig. 11.2

12. WIRING DIAGRAM

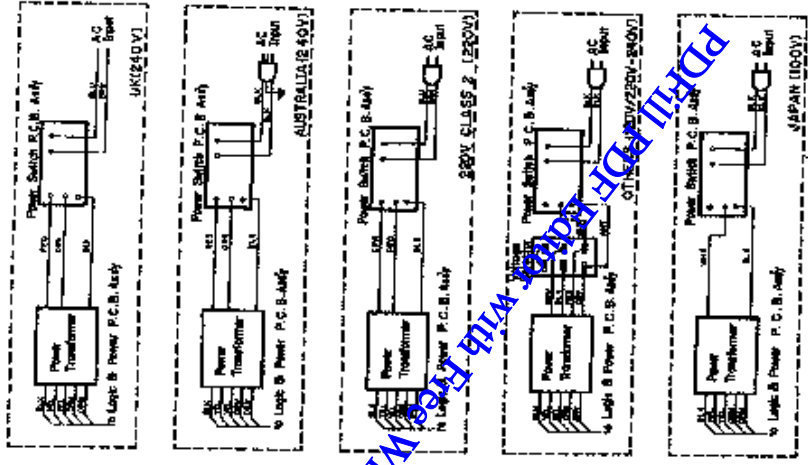


Fig. 12.1

Notes: 1. Table of wire colors

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

2. Wire size color is shown in { 1.
3. Component side view of the P.C.B. is illustrated unless otherwise specified.

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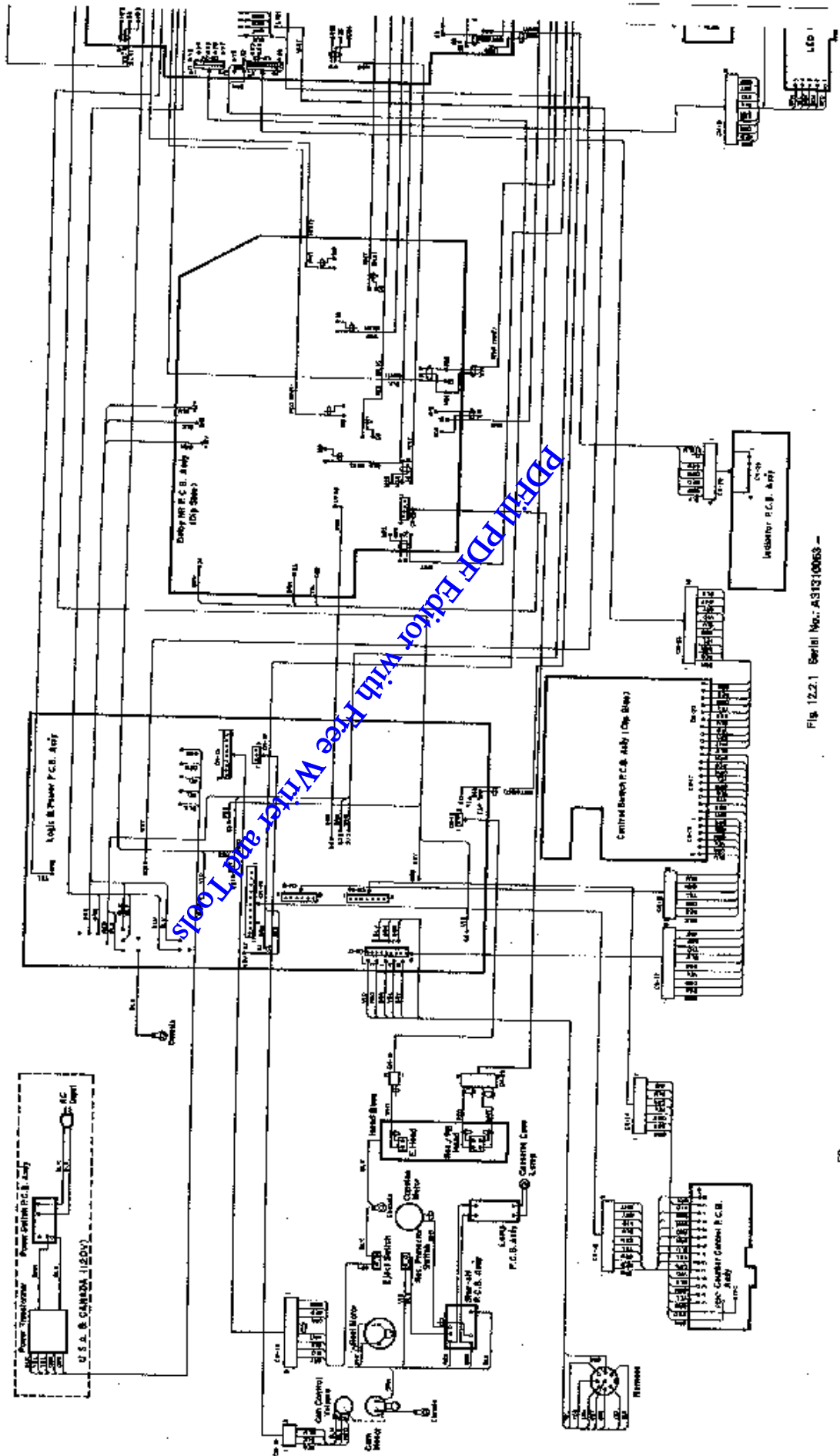


Fig. 12.2.1 Serial No. A31310063 -

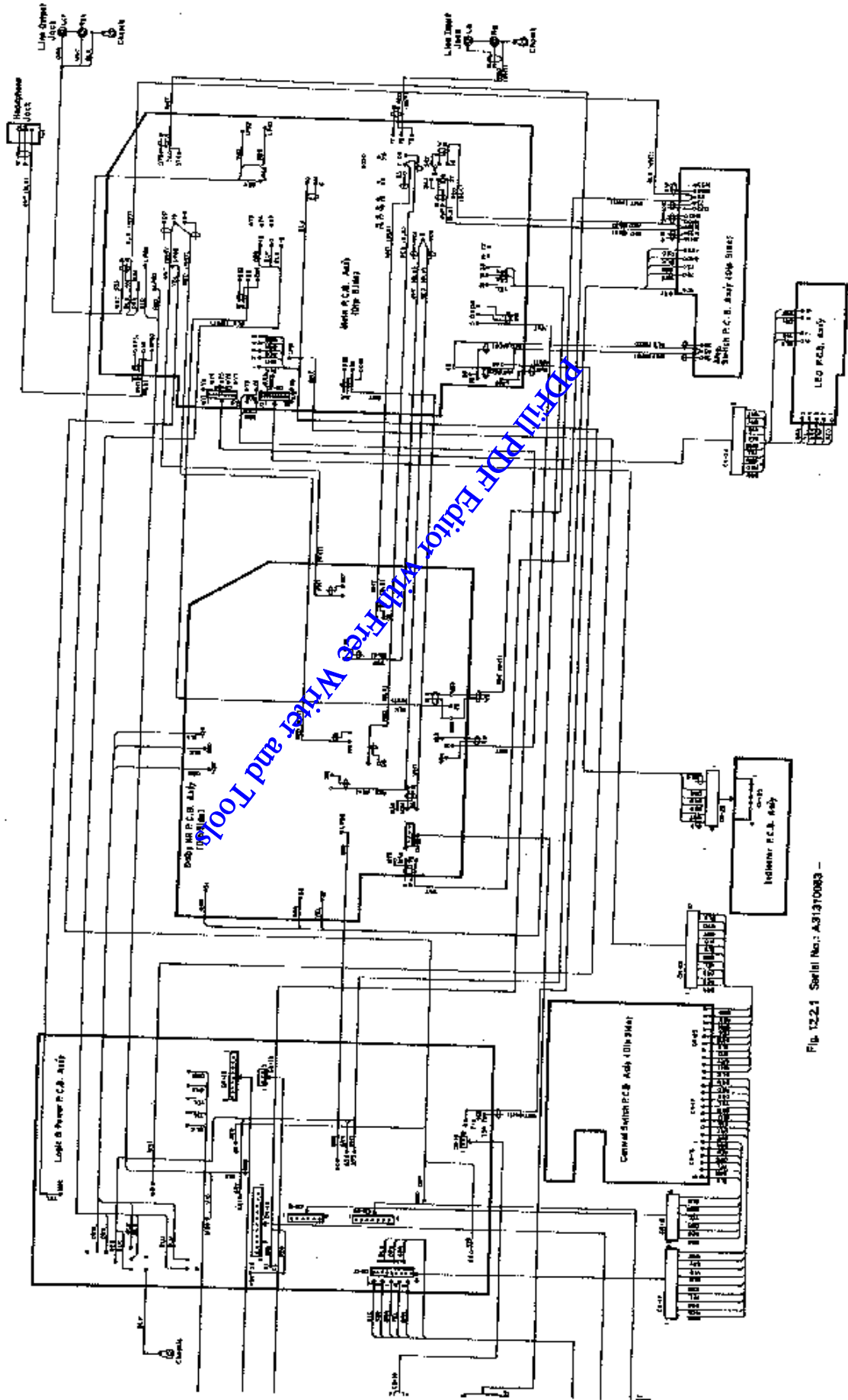


Fig. 13.2.1 Serial No.: A31310083 -

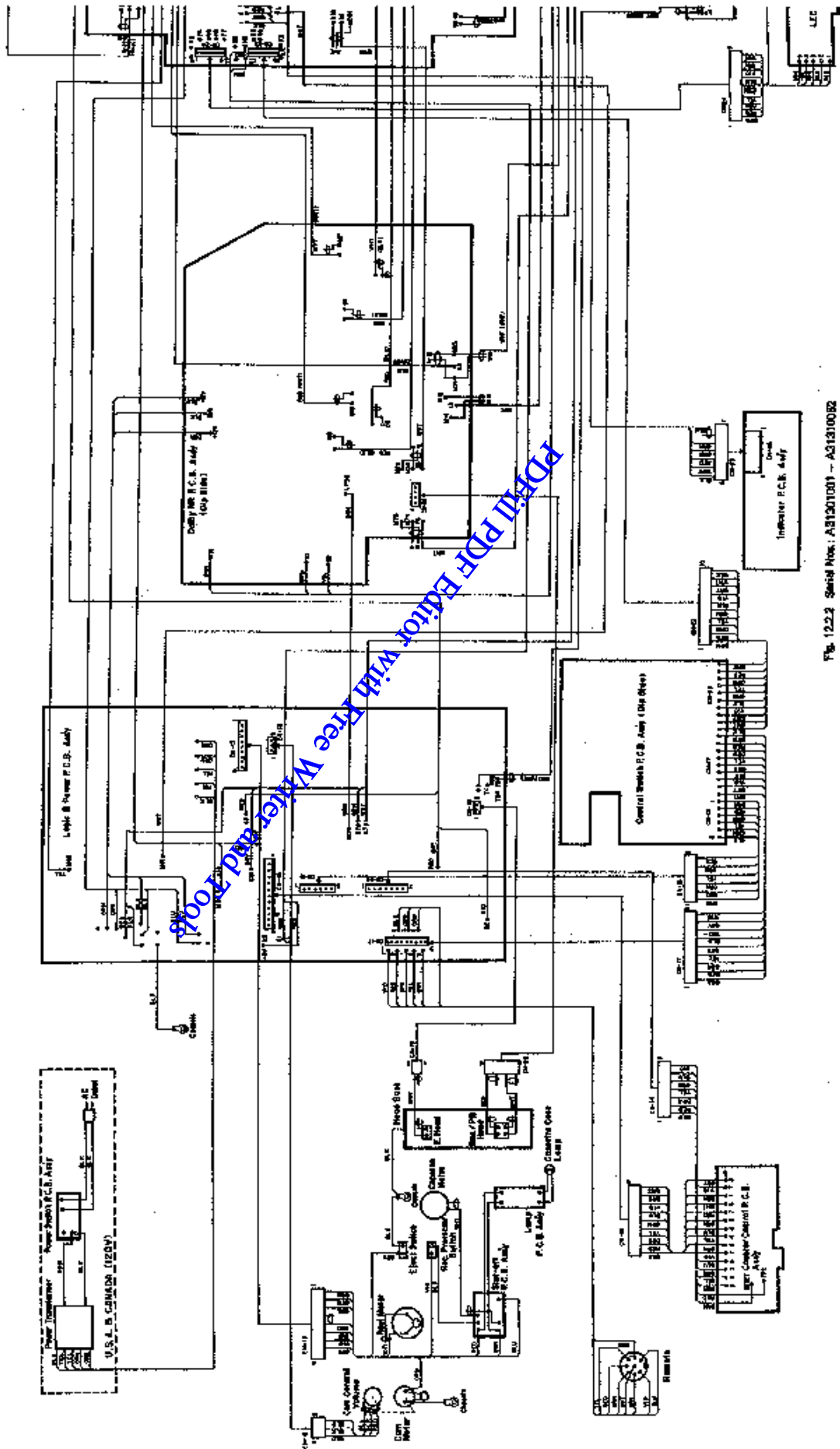


Fig. 12.2.2 Sample Nos. AB1301001 - A3131002

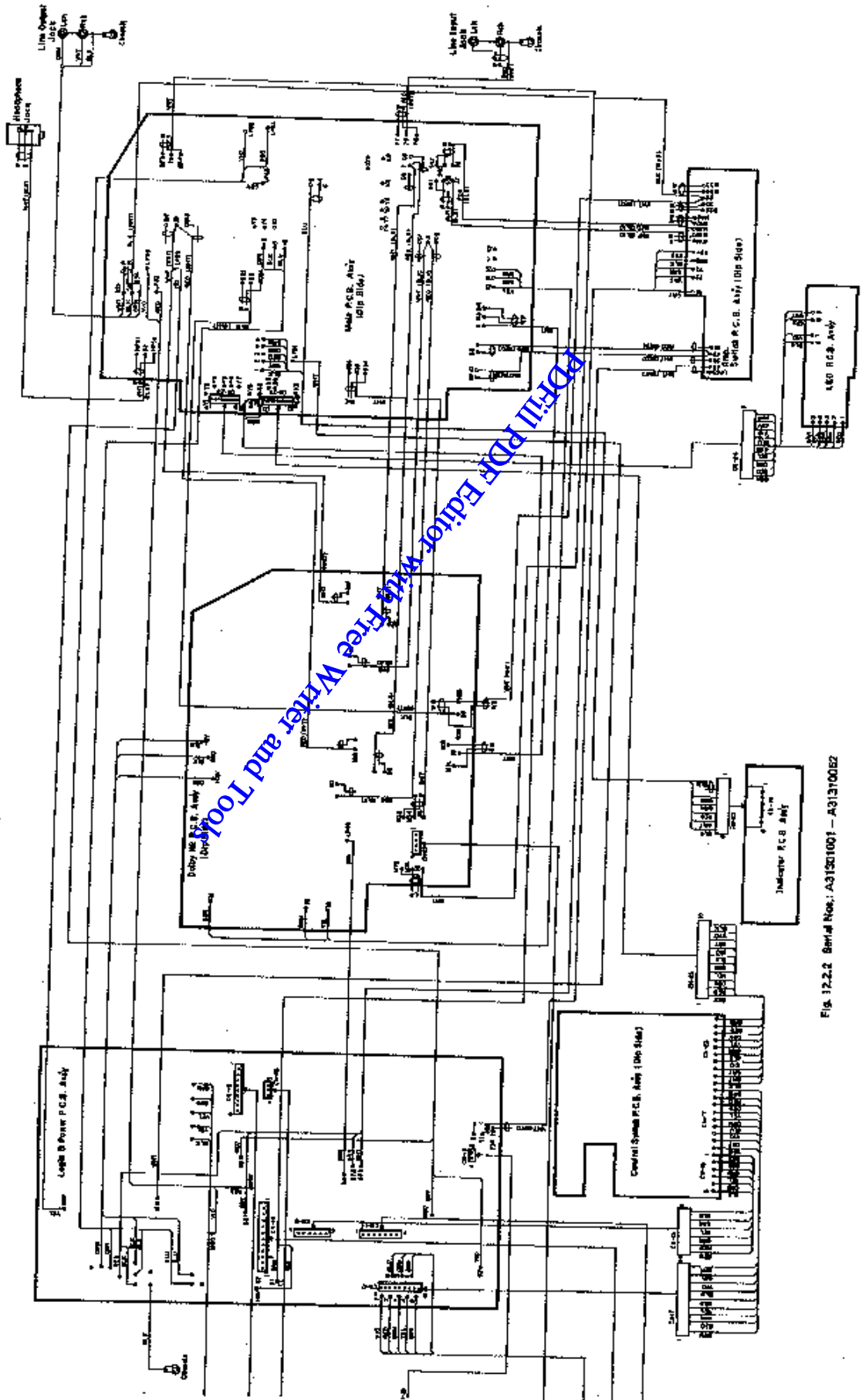


Fig. 12.2.2 Serial Nos. A31301001 - A31310002

13. SCHEMATIC DIAGRAMS

13.1. Machine Control of Barson

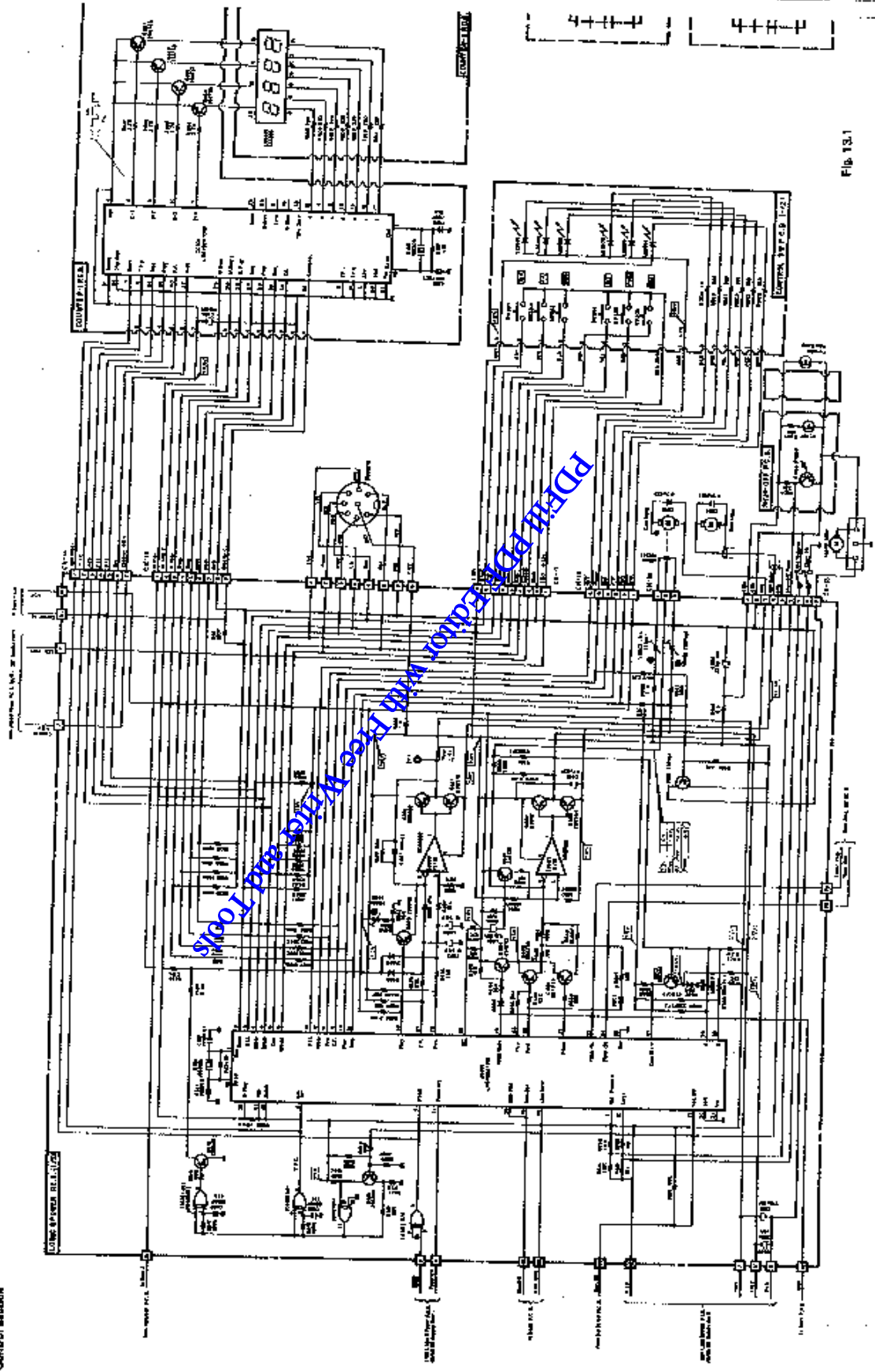


Fig 13.1

Models: 1. Diode is 1SS80, 1SS83, or 1S1806 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.

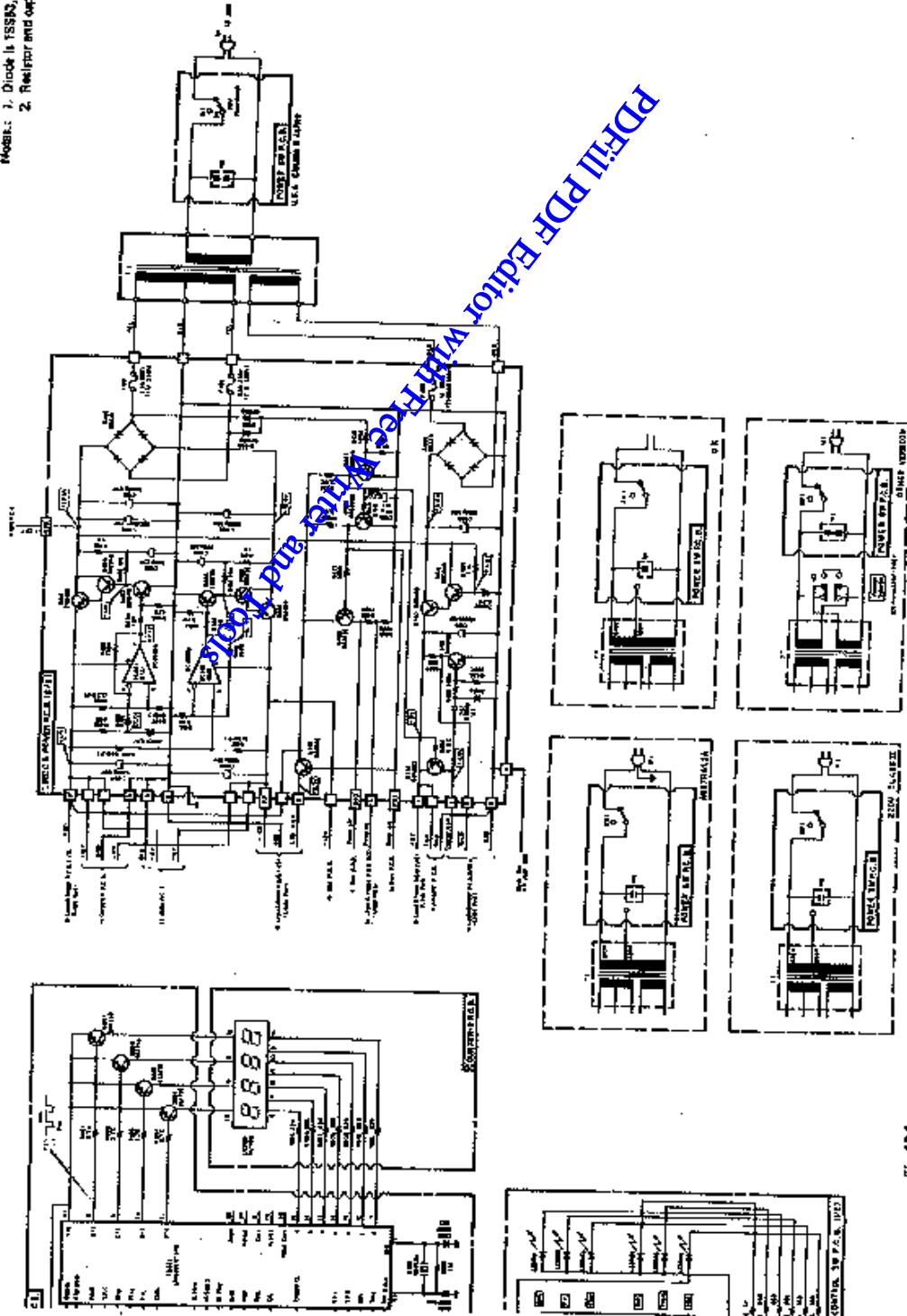


Fig. 13.1

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

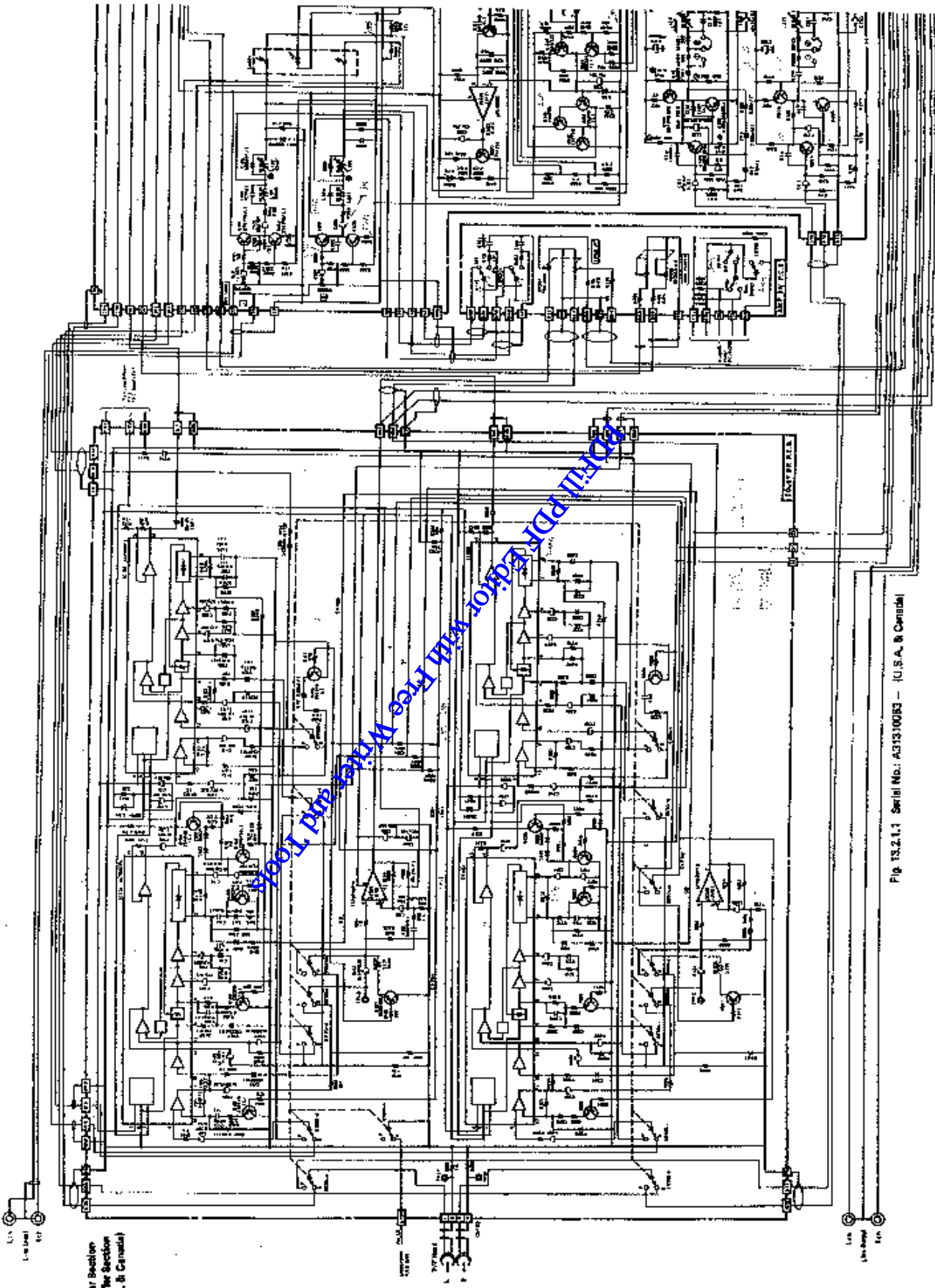
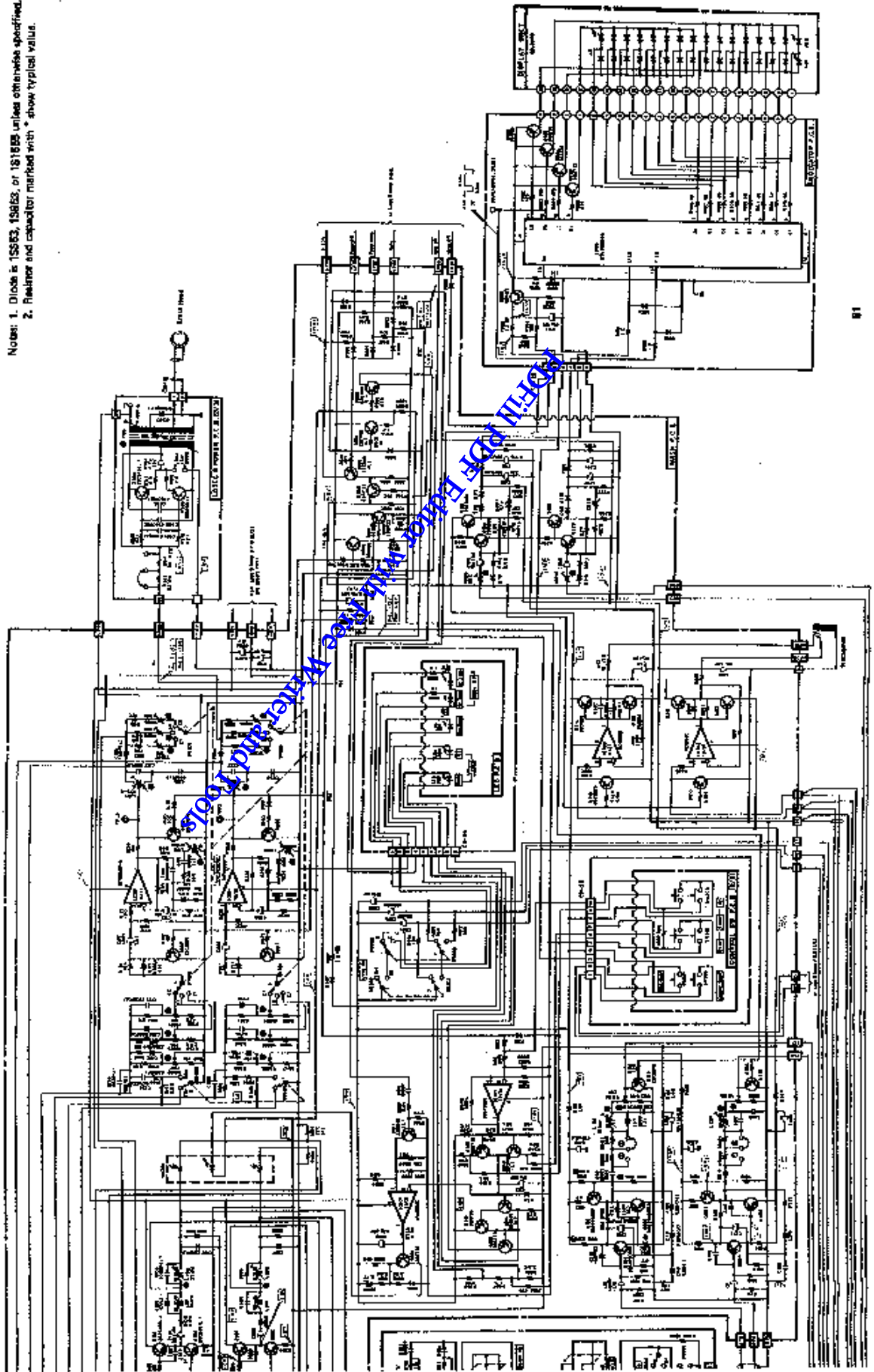


Fig. 13.2.1.1 Serial No. A31310053 - (U.S.A. & Canada)

- Notes: 1. Diode is 1S583, 1S683, or 1S1689 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.



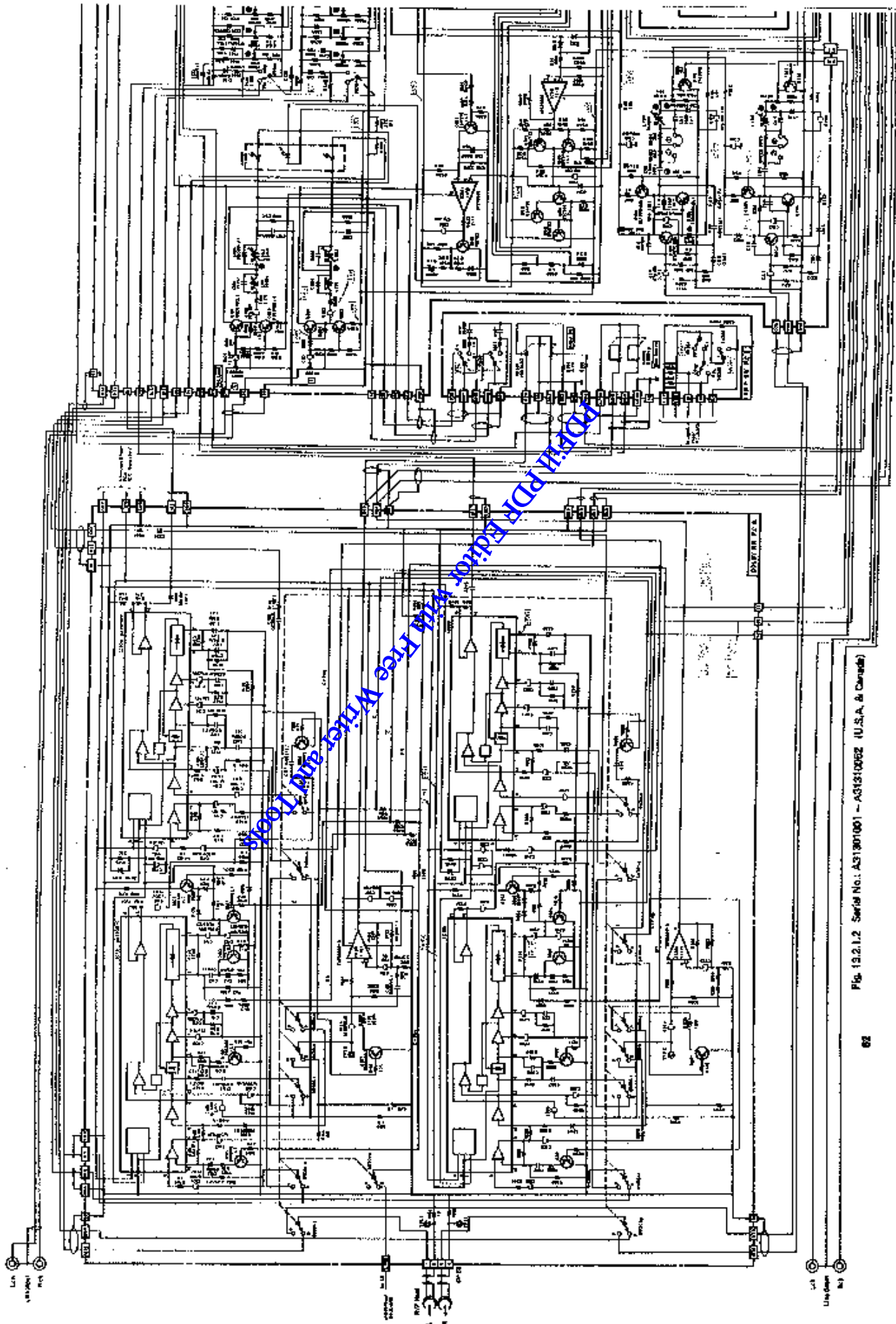
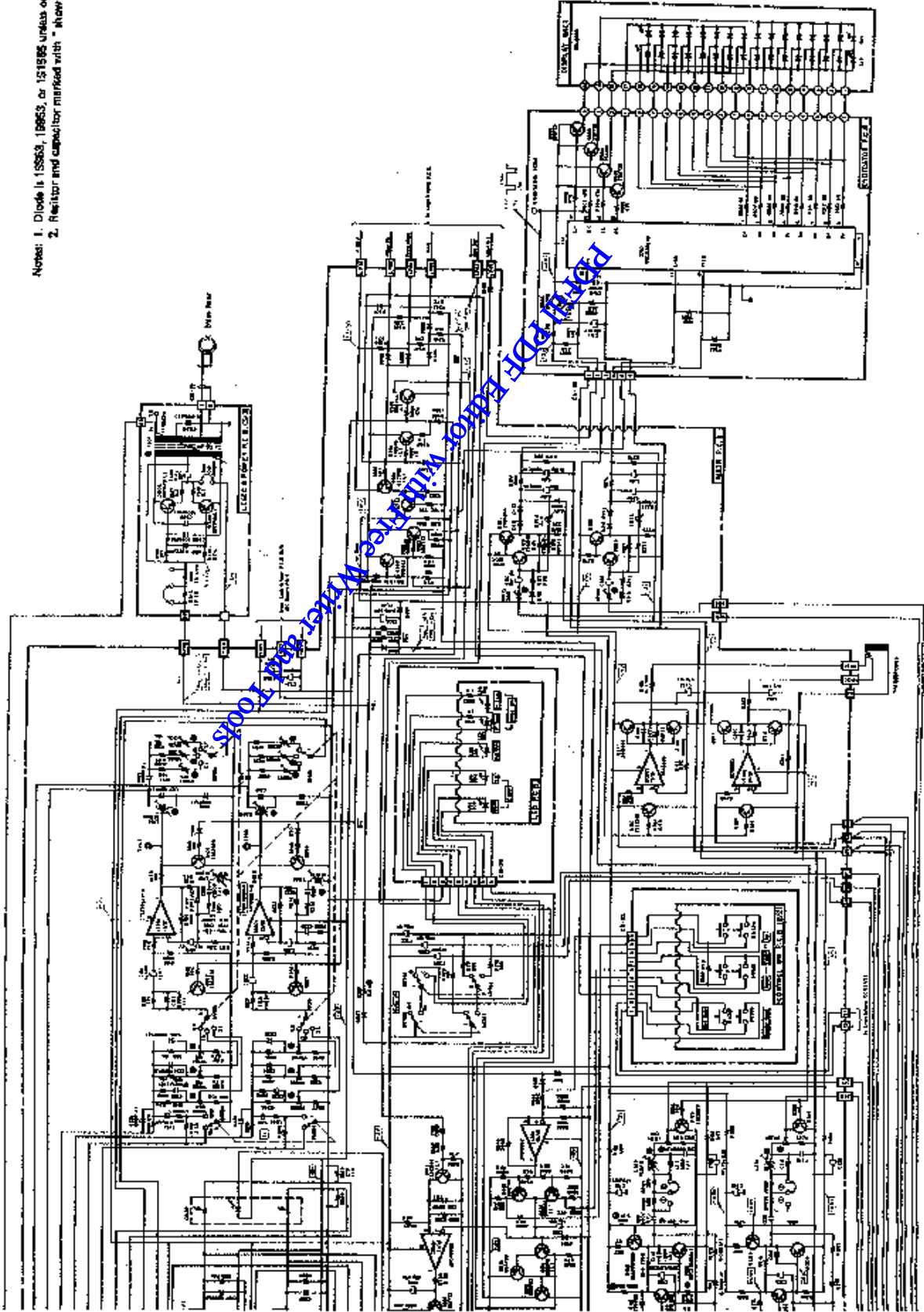
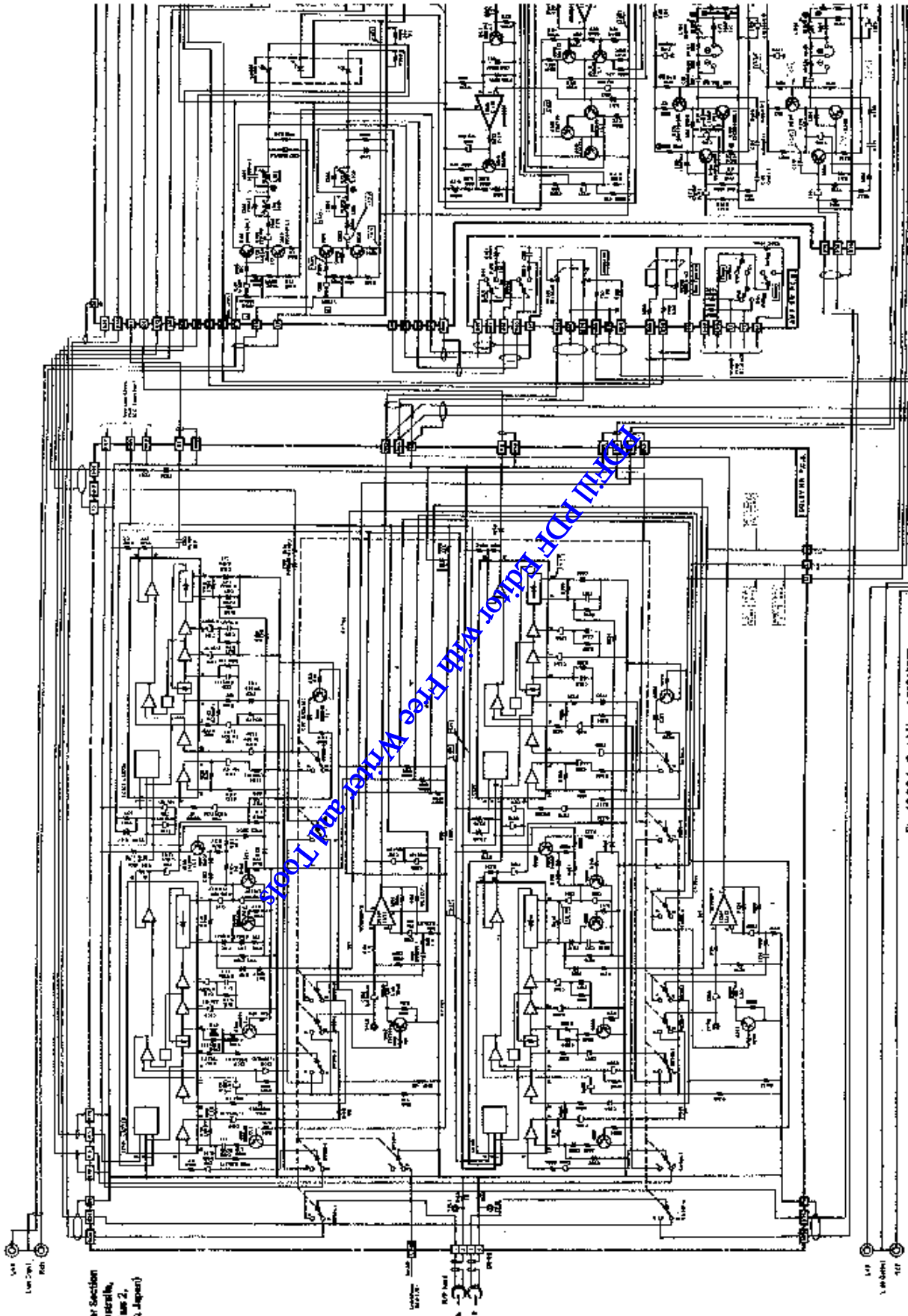


Fig. 19.2.1.2. Servo No. A31301001 - A31310052 (U.S.A. & Canada)

Notes: 1. Diode is 1S583, 1B653, or 1S1985 unless otherwise specified.
2. Resistor and capacitor marked with " " show typical value.

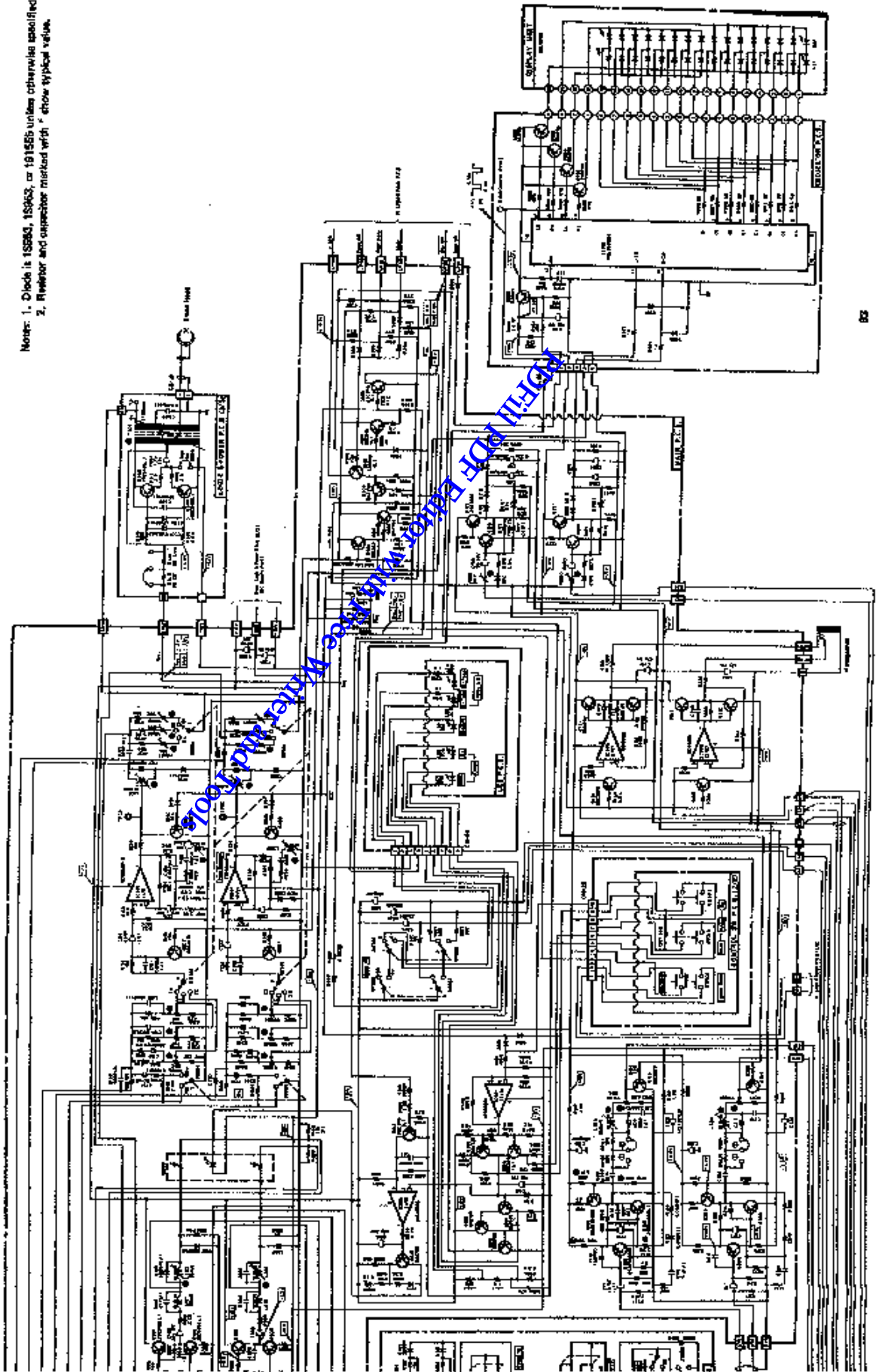




13.2.2. Amplifier Section
(UK, Australia,
220V Class 2,
Others & Japan)

Fig. 13.2.1 Series No: AS13-1003 -
(UK, Australia, 220V Class 2, Others & Japan)

Notes: 1. Diode is 1S964, 1S963, or 191555 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.



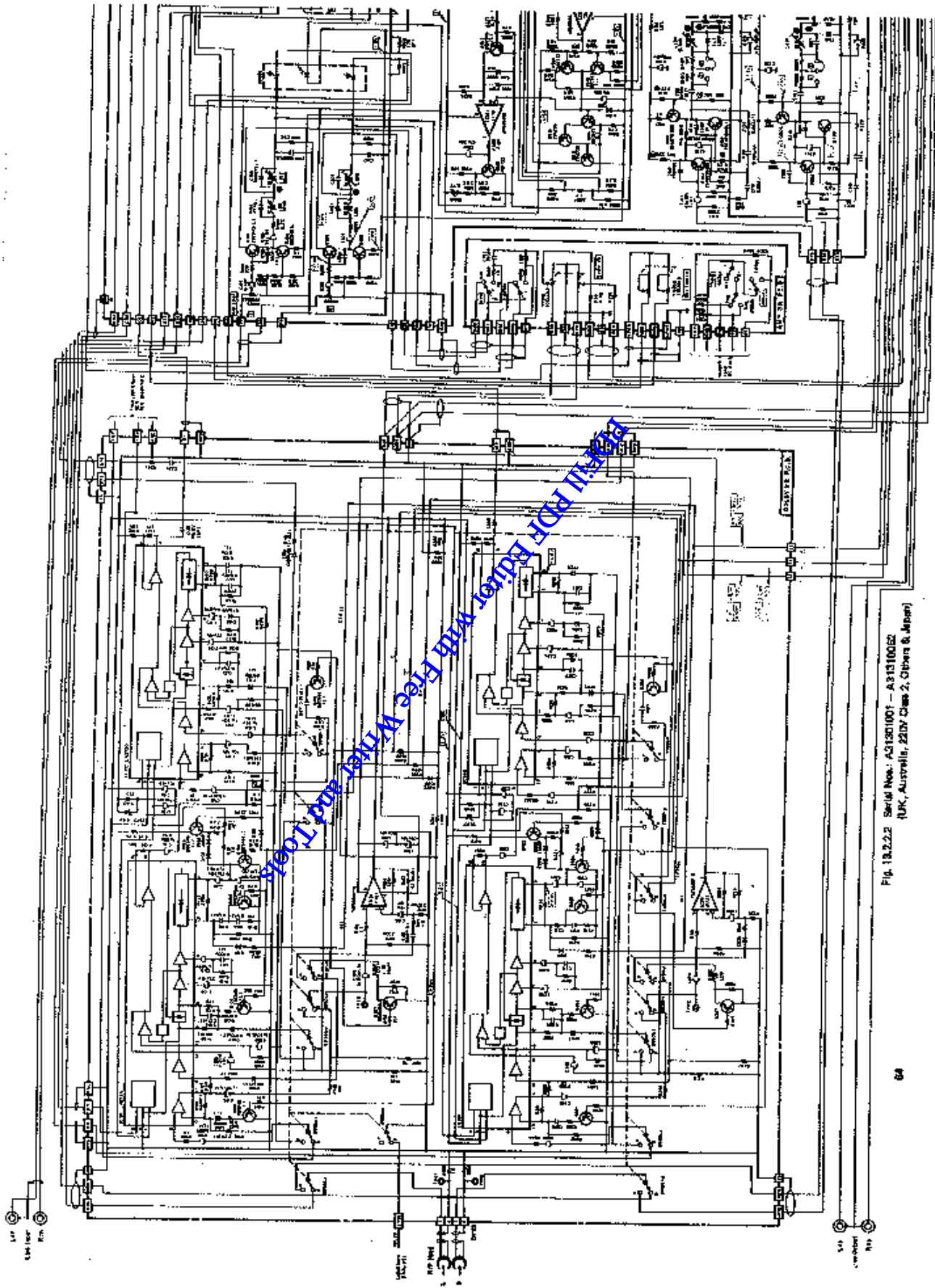
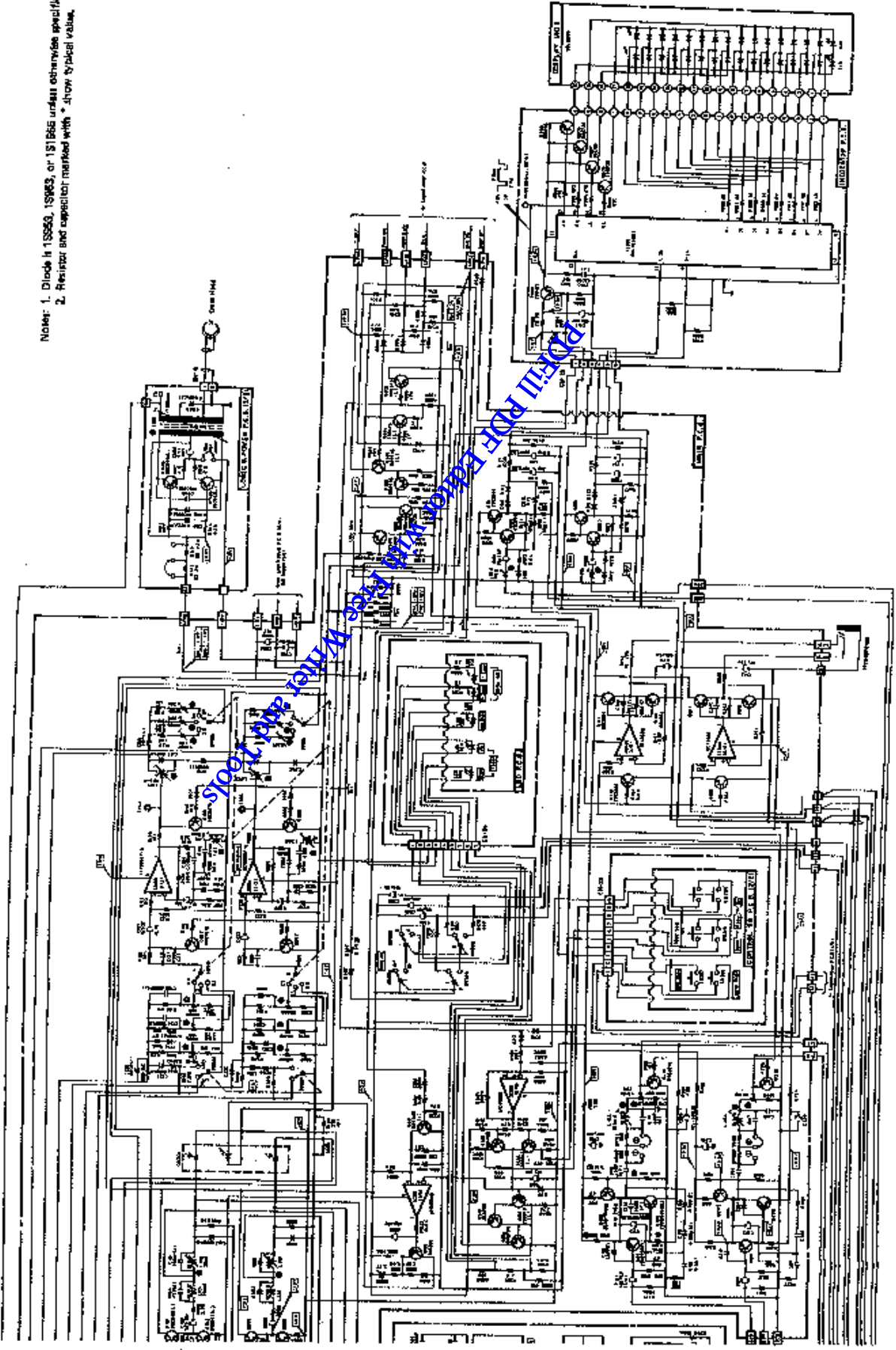


Fig. 13.2.2.2 Sencil No.: A31301001 - A3131002
 (UK, Australia, 220V Class 2, China & Japan)

- Notes: 1. Diode 1N563, 1N563, or 1N565 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 Transformer: T1
 Power Switch P.C.B. Assy
 Power Switch: SW1
 Spark Killer
- (b) Logic & Power P.C.B. Assy
 Fuses: F401, 402, 403
 Power Transformer: CM01, 404, 408, 410, 414, 607
 608, 610, 611, 621
 Diode Bridges: D406, 408
 Full Wave Type Rectifiers: R613, 614, 617, 618, 641
 659

- (c) Main P.C.B. Assy
 Power Transformer: Q111, 112, 211, 212, 604
 Full Wave Type Rectifier: R163, 263
- (d) Standoff P.C.B. Assy
 Full Wave Type Rectifier: R608
- (e) Indicator P.C.B. Assy
 Power Transformer: Q206
 Full Wave Type Rectifier: R620

(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 Diagram

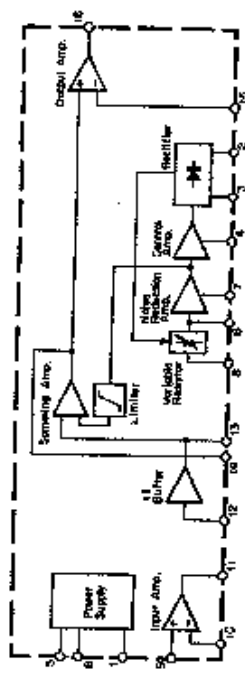


Fig. 13.3 Dolby NR IC μ A7200PC, LA2730

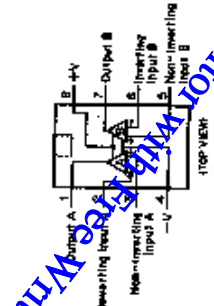


Fig. 13.4 Operational Amp. IC RC4588Z (C4588C), TA785889-9

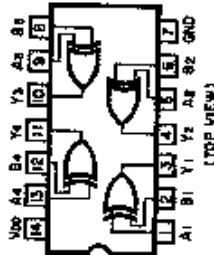


Fig. 13.5 Exclusive OR Gate C-MOS IC μ PD40308C

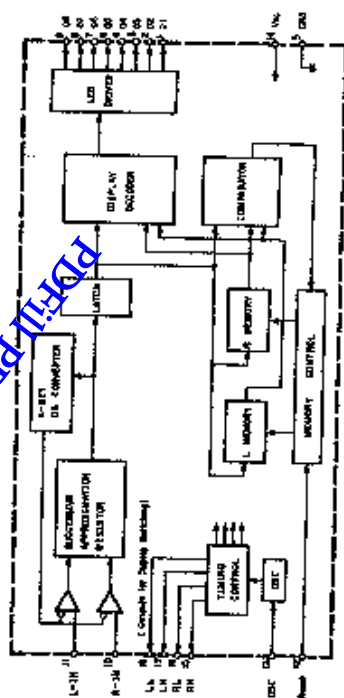
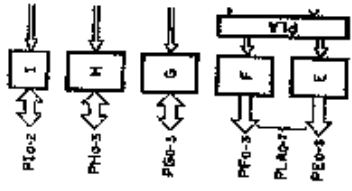


Fig. 13.6 Level Meter Control IC M6L63508RS



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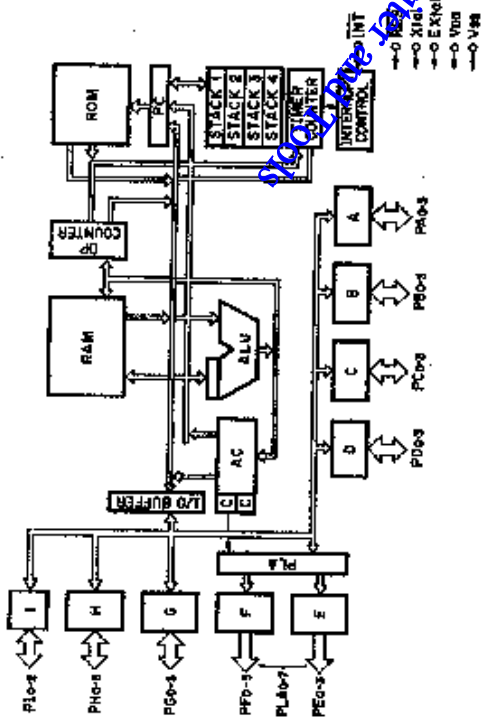


Fig. 13.7 4-bit Micro-processor LM6402A-052/048

Nakamichi LX-3

LX-3

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) $\pm 0.6\%$
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, EX II Tape)
Signal to Noise Ratio	Dolby C-Type NR on <70 μ s, ZX Tape> Better than 68 dB (400 Hz, 3% THD, 1HF A-Wtd rms) Dolby B-Type NR on <70 μ s, ZX Tape> Better than 62 dB (400 Hz, 3% THD, 1HF A-Wtd rms)
Total Harmonic Distortion	Less than 1.2% (400 Hz, 0 dB, ZX, EX II Tape) Less than 1.2% (400 Hz, 0 dB, SX Tape)
Erase	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 136 (H) x 307 (D) millimeters 17-3/4 (W) x 5-5/16 (H) x 12-1/16 (D) inches
Approximate Weight	8.6 kg 18 lb. 12 oz.

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