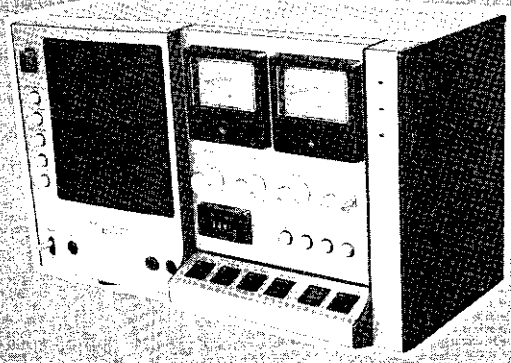
SERVICE DATA
FILE NO. 100-085

TOSHIBA

CASSETTE TAPE DECK

PC-6030



SPECIFICATIONS

Power Source:	AC 120V, 60Hz (USA/Canada) AC 220/240V, 50Hz (Europe)
Power Consumption:	35 W
Track System:	4-track 2-channel Stereo
Tape Speed:	1-7/8 ips. (4.8cm/sec)
Recording System	AC Bias
Erasing System:	AC Erasure
Input Jacks:	Microphone Jack ..... 2 Maximum Sensitivity 0.3mV(-70dB) Line input Jack ..... 2 Maximum Sensitivity 100mV(-20dB)
Output Jacks:	Stereo Headphone Jack ... 1 Load Impedance 8 ohm (1mW) Line Out Jack Standard Output 0.4V Load Impedance 50k ohm or more
DIN Connectors:	Input Impedance 10k ohm or less Load Impedance 50k ohm or more
Wow and Flutter:	0.07% WRMS (USA/Canada) 0.2% (Europe)
Signal-To-Noise Ratio:	57dB (USA/Canada) 56dB (Europe) (NAB Peak Level, A Curve in Chrominum Tape without DOLBY)
Distortion:	1.5% (at 0dB 1kHz) (USA/Canada) (Normal) 1.0% (1kHz, 0dB) (Europe) (Chrome) 1.5% (1kHz, 0dB) (Europe)
Frequency Characteristic:	20 to 17,500Hz (Chrominum tape) (USA/Canada) (Normal) 20 to 12,500Hz (Europe) (Chrome) 20 to 15,000Hz (Europe)
Fast Forwarding/ Rewinding Time:	Within 80 seconds, using C-60
Dimensions:	$15\frac{7}{8}$ (W) x $9\frac{59}{64}$ (H) x $7\frac{27}{32}$ (D) inches
Weight:	Approx. $22\frac{1}{16}$ (lbs)

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PARTS LOCATIONS

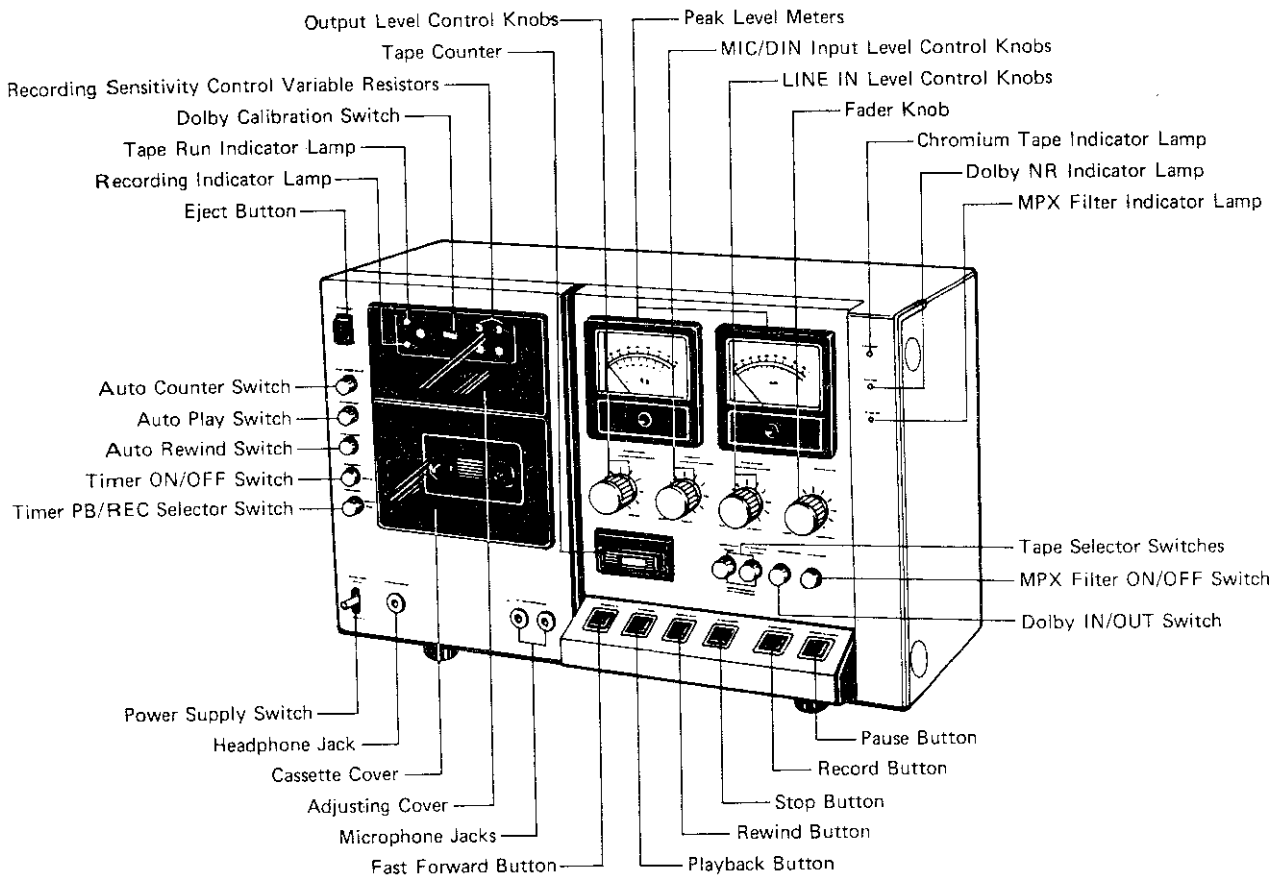


Figure 1. Front View

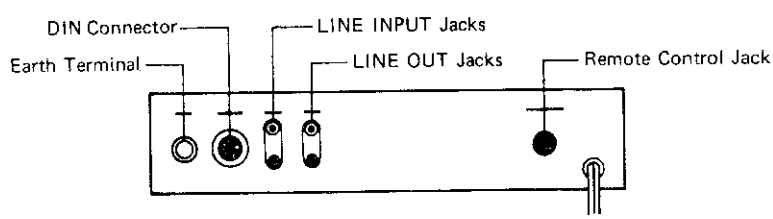


Figure 2. Back View (Jacks Plate)

DISASSEMBLY INSTRUCTIONS

BACK PANEL REMOVAL

1. Remove four screws from the both sides of the back panel. See figure 3.
2. Remove four screws from the back panel. See figure 4.

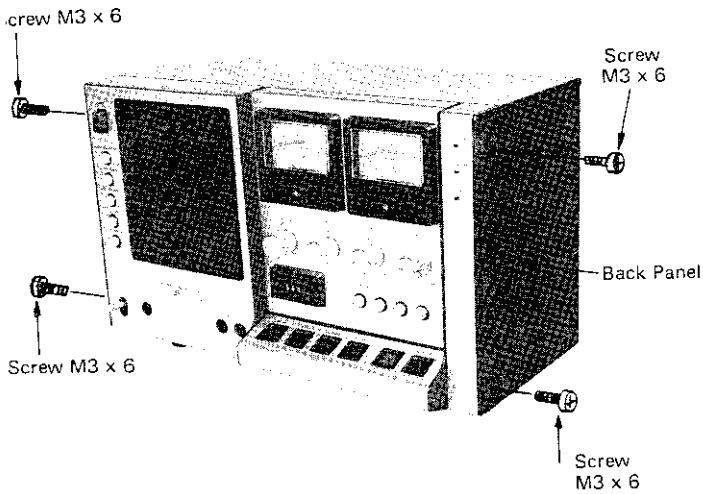


Figure 3. Location of Screws

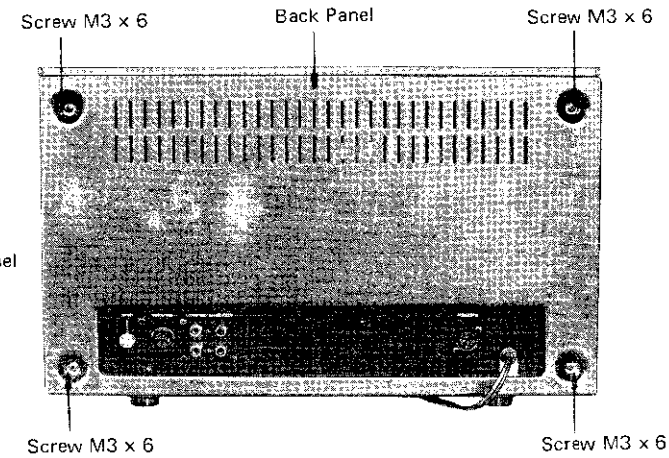


Figure 4. Location of Screws

PANEL REMOVAL

1. Loosen three screws of the top panel, and remove the top panel. See figure 5.
2. Remove the cassette cover, OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob. See figure 6.

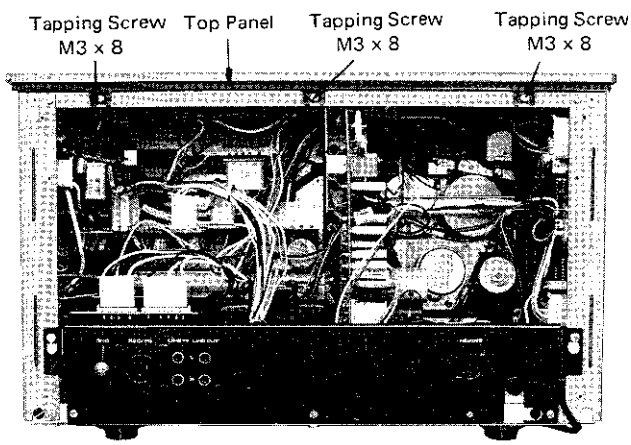


Figure 5. Location of Screws

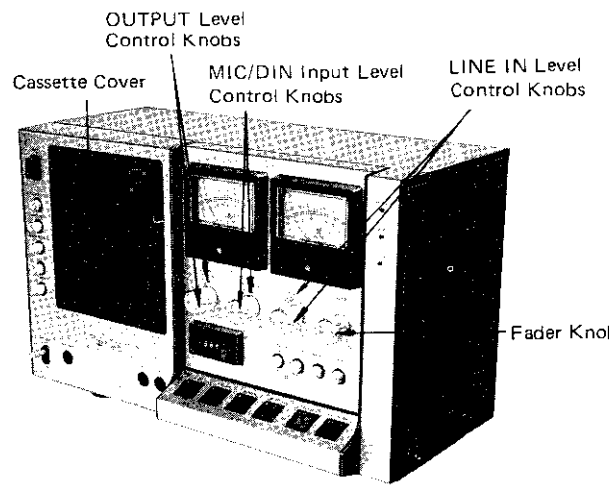


Figure 6. Location of Cover and Knobs

3. Remove six screws from the bottom cover. See figure 7.

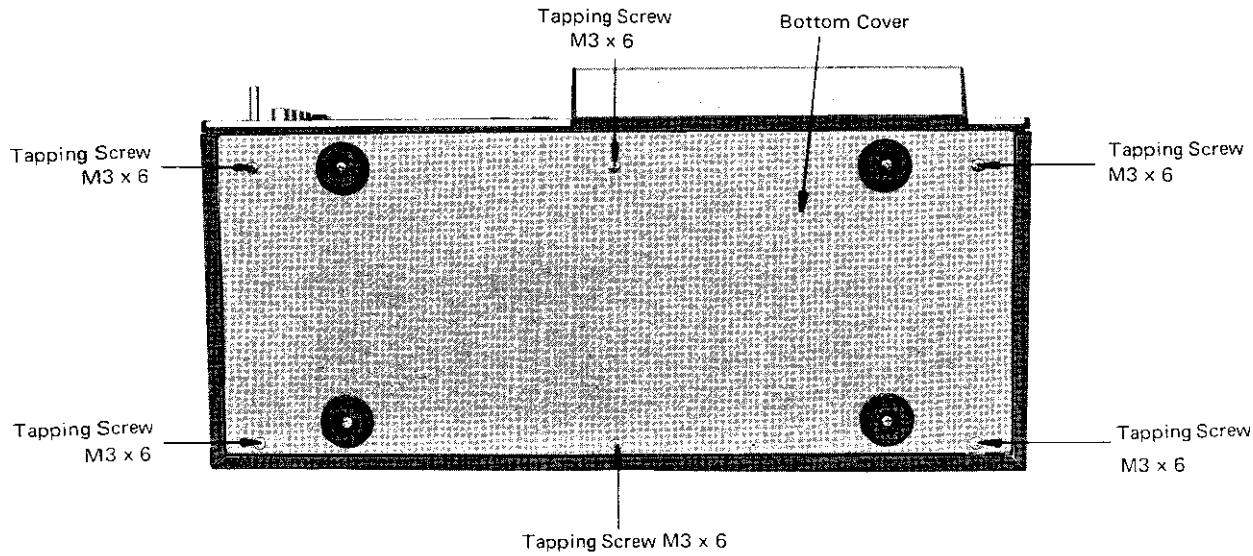


Figure 7. Location of Screws

4. Remove six tapping screws from the chassis. See figures 8 and 9.

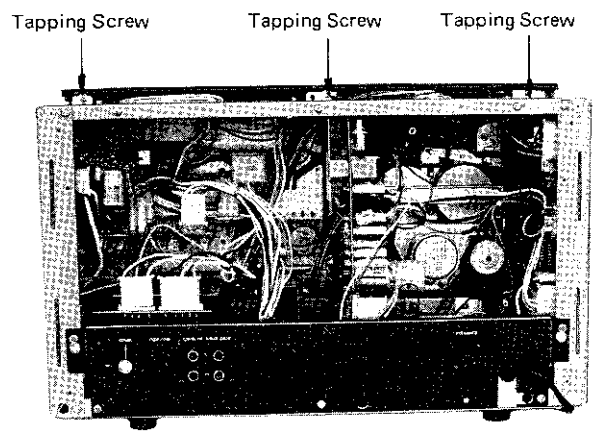


Figure 8. Location of Screws

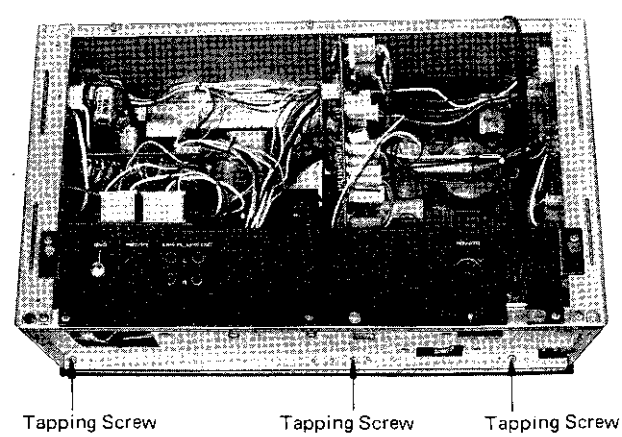


Figure 9. Location of Screws

TECHNICAL POINTS

PLL CONTROL SYSTEM DC SERVOMOTOR

The model PC-6030 is equipped with a PLL (Phase-Locked Loop) control system DC servomotor which instantly locates the fluctuation of motor revolution with a stable oscillation frequency of its specified built-in oscillator and readily regulates the motor revolution. Thus the drift and tape speed fluctuation is reduced to minimum.

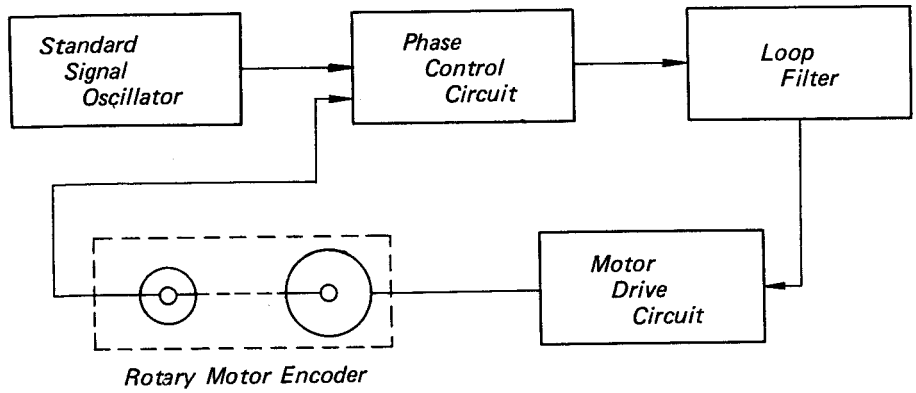


Figure 10. Block Diagram of PLL Control DC Servomotor

CLOSED LOOP DUAL CAPSTAN MECHANISM

A good tone quality depends greatly upon the stable tape movement in a definite speed. In this regard this unit employs the closed loop dual capstan mechanism to ensure the stable tape travel (See figure 11). Accordingly, wow, flutter, noise and level instability are reduced to minimum. Moreover, the tape tension between the dual capstan is definite and contact of the tape with the Record/Playback head is exceeding. So the spacing loss is minimized and the high frequency is obtained sufficiently.

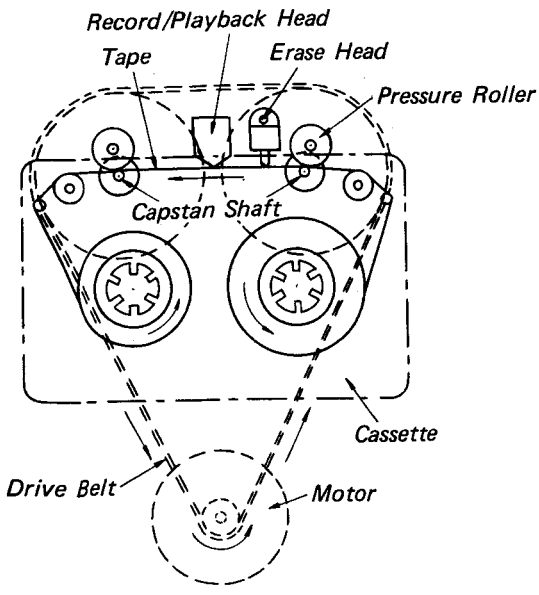


Figure 11.

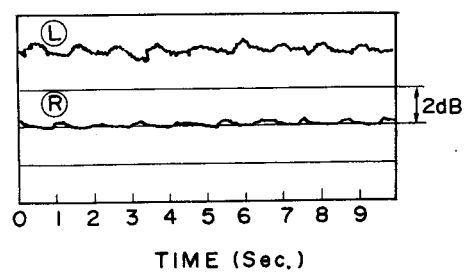


Figure 12. 10kHz Level Fluctuation (WS 250mm/sec)

HIGH RELIABILITY ELECTRONIC SWITCH CIRCUIT

The control circuit of this set has no such mechanical contact as relay, but consists of digital IC's and transistors, thereby driving the motor and plunger directly. Merits of employing the IC Logic Circuit are as follows.

1. No Time Lag

Switching is made without time lag owing to an entirely electronic device which accompanies with no such mechanical work as in switching with relay.

2. High Reliability

The employment of digital IC's and no use of mechanical members ensure the high reliability of this set. Block diagarm of control circuit is shown in figure 13 and so designed as not produce any time lag keeping the tape safety in any operation; e. g., when operating PLAY button during fast-forwarding or rewinding, or operating FF or REW button during Playing, the tape stops intermittently and starts to next stop only after complete stop.

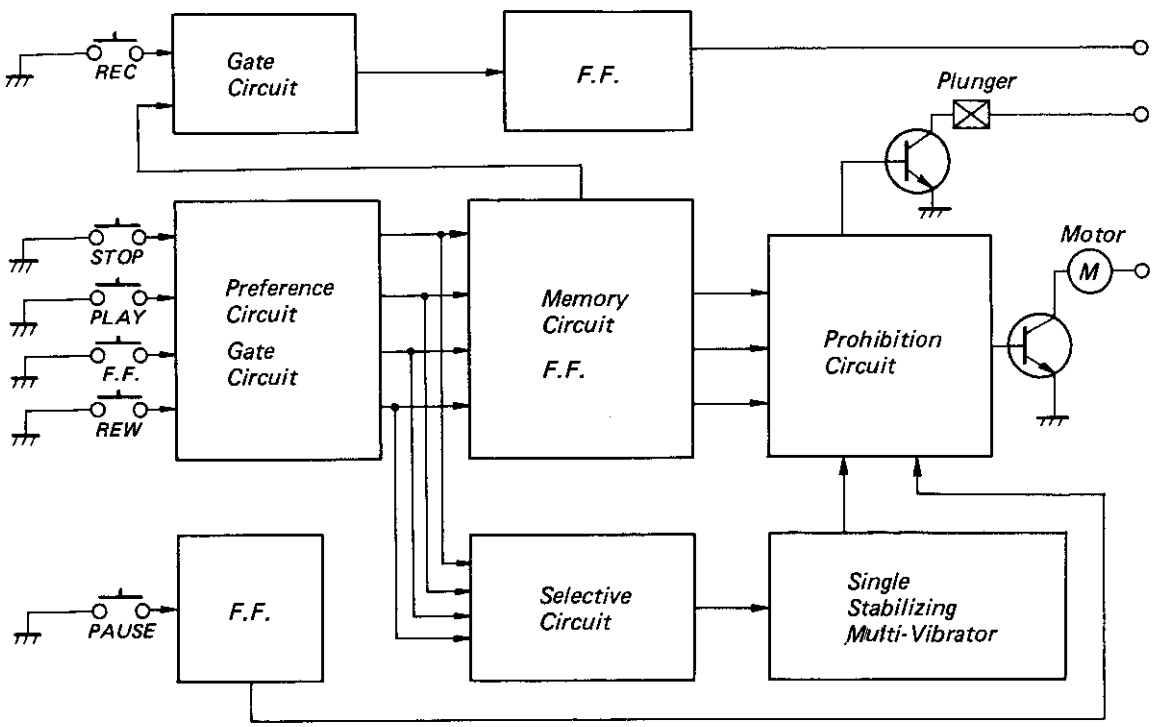


Figure 13. Block Diagram of Control Section

TRANSISTOR AND INTEGRATED CIRCUIT DIAGRAMS

2SK30A

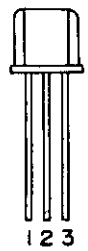
(Bottom View)

1. Source
2. Gate
3. Drain

2SK19

(Bottom View)

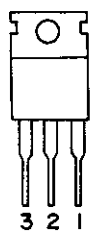
1. Drain
2. Source
3. Gate



2SC372
2SC373
2SC732
2SC735
2SA495
2SC1681

(Bottom View)

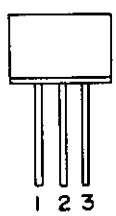
1. Emitter
2. Collector
3. Base



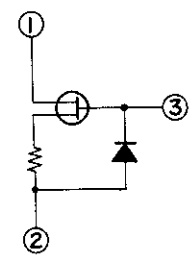
2SD234

(Bottom View)

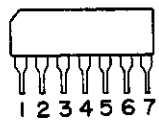
1. Emitter
2. Collector
3. Base

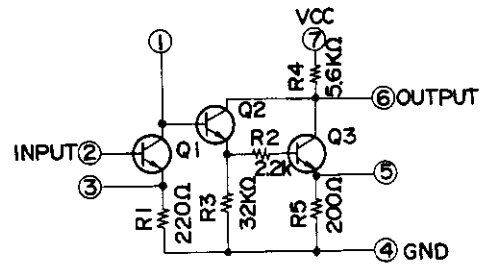


2SK53

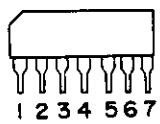


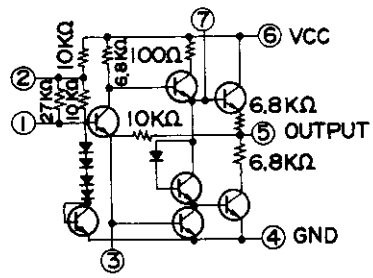
TA7122P



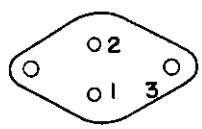


TA7066P





TA7086M

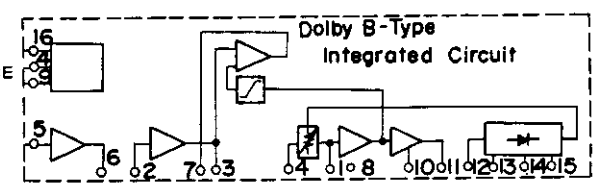


1. Input
2. Output
3. GND (Case)

NE545B

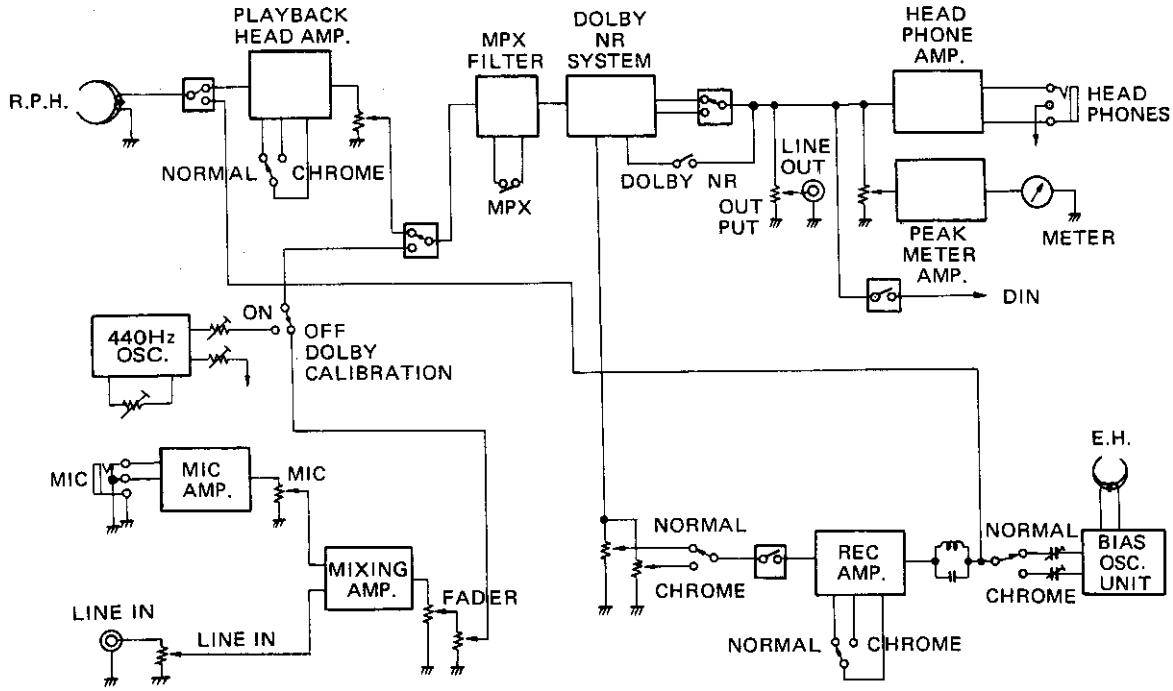
16	V +	1	INPUT
15	BYPASS	2	INPUT
14	BYPASS	3	OUTPUT
13	INPUT	4	REFERENCE
12	OUTPUT	5	INPUT
11	OUTPUT	6	OUTPUT
10	BYPASS	7	OUTPUT
9	GROUND	8	BYPASS

(Bottom View)



BLOCK DIAGRAMS

AUDIO SECTION



CONTROL SECTION

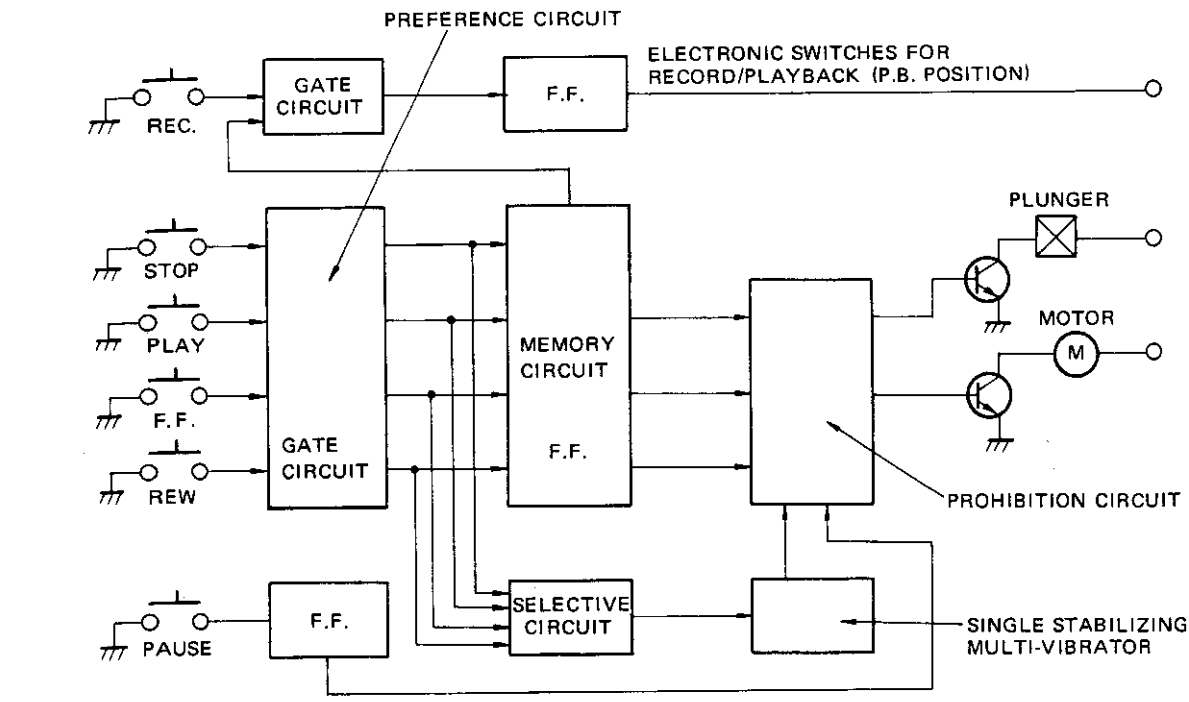


Figure 14. Block Diagram

ELECTRICAL ADJUSTMENTS

EQUIPMENTS

1. VTVM
2. Voltmeter
3. Signal Generator
4. Resistance Attenuator
5. Frequency Counter
6. Torque Meter
7. Adjusting Screwdriver
8. Test Tapes
   - MTT-144 (10kHz)
   - MTT-115 (6.3kHz/333Hz)
   - MTT-150 (400Hz)
   - MTT-505 (Blank)
   - MTT-502 (Blank)

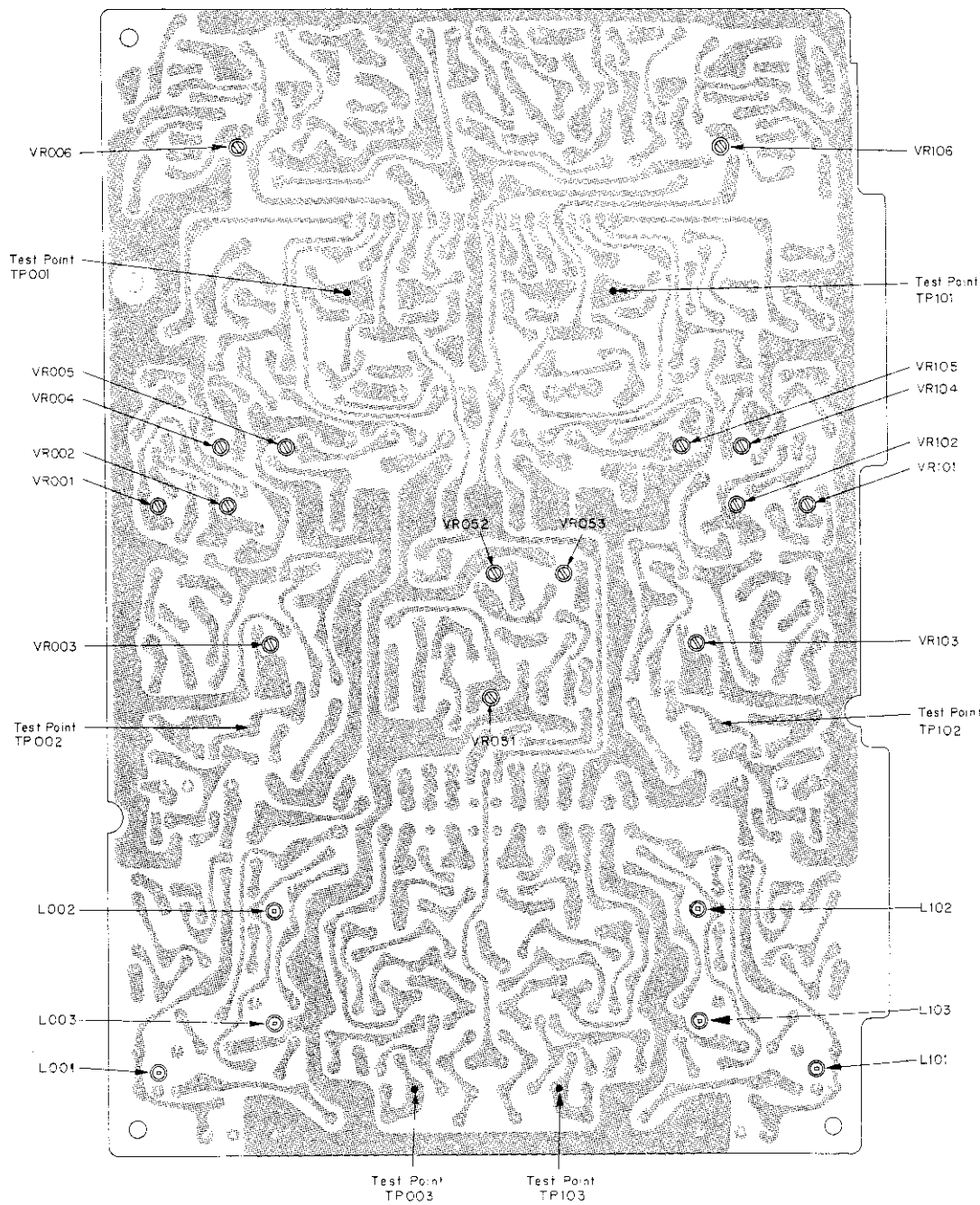


Figure 15. Location of Pre-amplifier P.C. Board

HEAD AMPLIFIER CENTER VOLTAGE ADJUSTMENT

1. Connect a Voltmeter across the Test Points (TP002, 102)
2. Push the Play Button and adjust the Semi-fixed Resistors (VR003, 103) so that the Voltmeter indicates 1.5V. See figures 15 and 16.

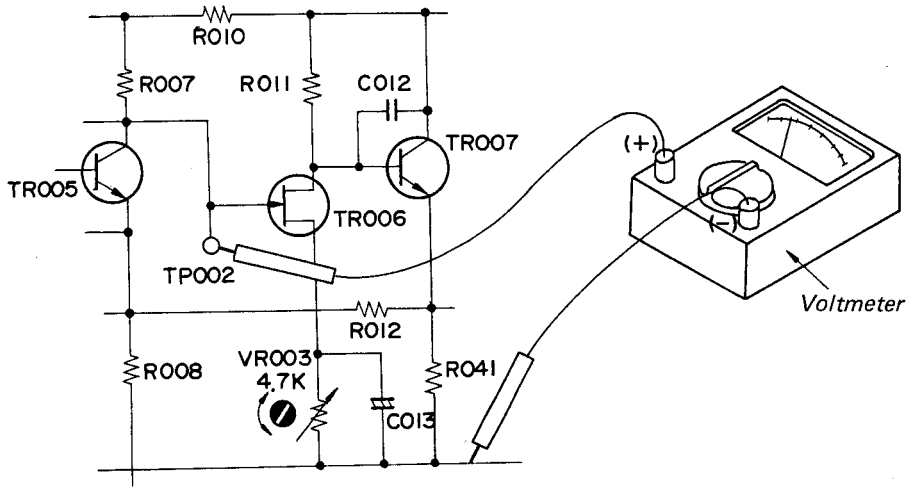


Figure 16.

RECORD/PLAYBACK HEAD ADJUSTMENT

1. Connect a VTVM across the LINE OUT Jacks.
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Set Test Tape (No. MTT-114, 10kHz, -10dB), Push Play Button, and adjust the Adjusting Screws so that the VTVM indicates maximum position.

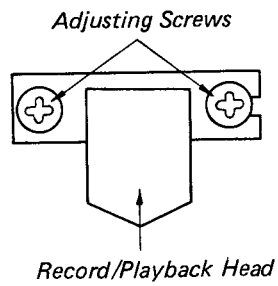


Figure 17.

PLAYBACK LEVEL ADJUSTMENT

1. Connect a VTVM across the Test Points (TP001, 101).
2. Set the Tape Selector Switches to Normal positions and Dolby Switch to Out position.
3. Set the OUTPUT Level Control Knobs, MIC/DIN INPUT Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
4. Set Test Tape (No. MTT-150 DOLBY B-TYPE TONE, 200nWb/m), and push the Play Button, and adjust the Semi-fixed Resistors (VR004, 104) so that the VTVM indicates 580mV. See figures 15 and 18.

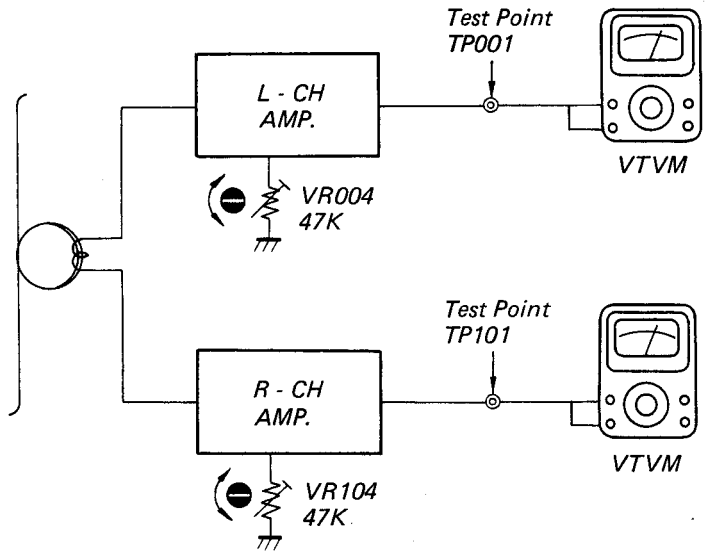


Figure 18.

LEVEL METER ADJUSTMENT

1. Set the Tape Selector Switches to Normal positions and Dolby Switch to Out position.
2. Set the OUTPUT Level Control Knobs, MIC/DIN INPUT Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Set Test Tape (No. MTT-150 DOLBY B-TYPE TONE, 200nWb/m), push the Play Button, and adjust the Semi-fixed Resistors (VR006, 106) so that the Level Meter indicates Dolby mark (+3dB±0.1dB). See figures 15 and 19.

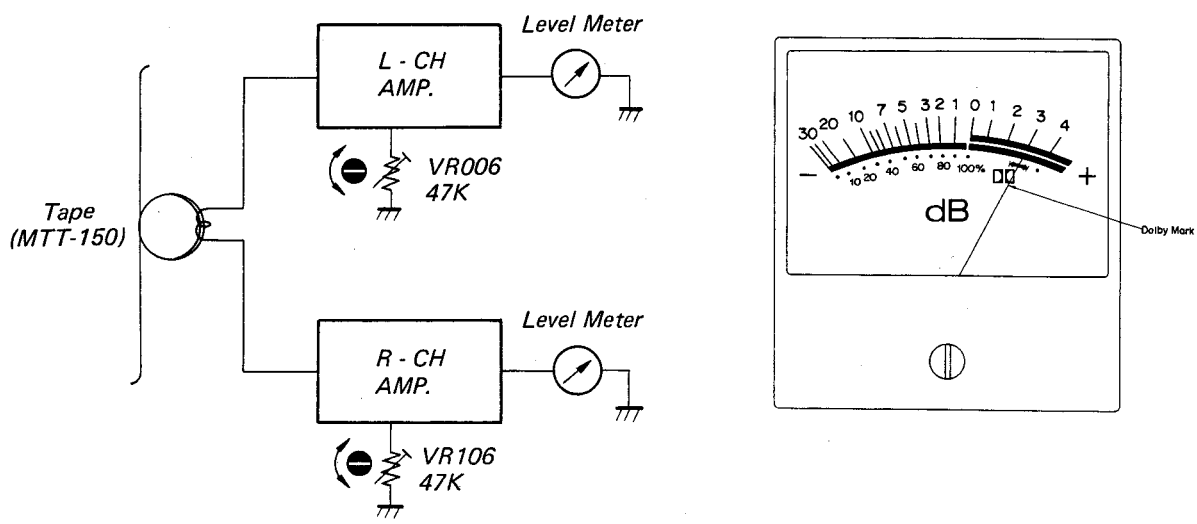


Figure 19.

PLAYBACK EQUALIZER ADJUSTMENT

1. Connect a VTVM across the LINE OUT Jacks.
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Turn the Tape Selector Switch ON (CHROME) and playback the Test Tape (No. MTT-115, 6.3kHz/333Hz), then adjust the Semi-fixed Resistors (VR001, 101) so that the output level at 6.3kHz is –4.5dB for reference output level at 333Hz. See figures 15 and 20.
4. Turn the Tape Selector Switch OFF (NORMAL) and adjust the Semi-fixed Resistors (VR002, 102) so that the output level at 6.3kHz is ±0dB for reference output level at 333Hz.

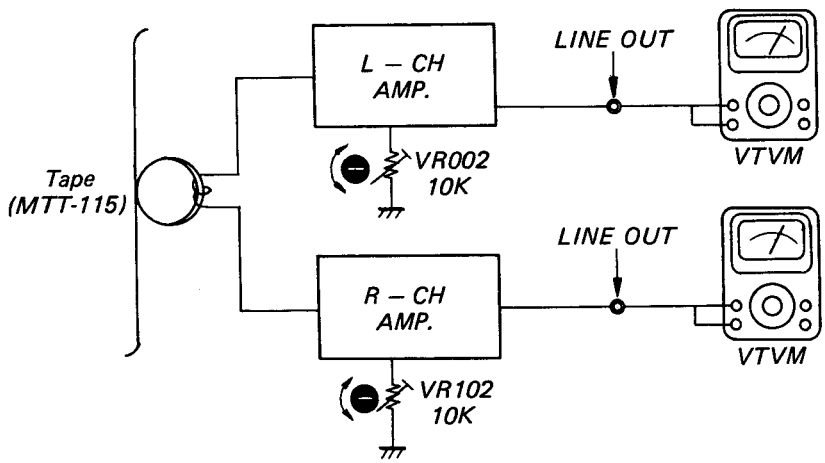


Figure 20.

440Hz OSCILLATION LEVEL ADJUSTMENT

1. Connect the Frequency Counter to LINE OUT Jacks.
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Turn the Dolby Calibration Switch ON, and push the Record and Play Buttons and adjust the Semi-fixed Resistor (VR051) so that the frequency on Frequency Counter which is connected to LINE OUT Jacks is 440Hz ± 10Hz.
4. Adjust the Semi-fixed Resistors (VR052, 053) so that the Level Meter indicates the Dolby Mark (about +3dB) in the above state (440Hz LINE OUT frequency).

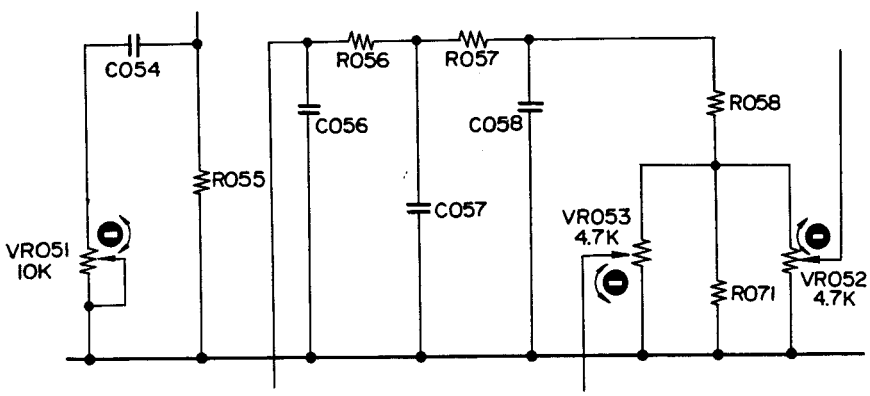


Figure 21.

LINE IN LEVEL ADJUSTMENT

1. Apply a signal of 1kHz, -20dB through the LINE IN Jacks.
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Push the Record and Play Buttons, and adjust the Semi-fixed Resistors (VR005, 105) so that the Level Meter indicates 0dB.

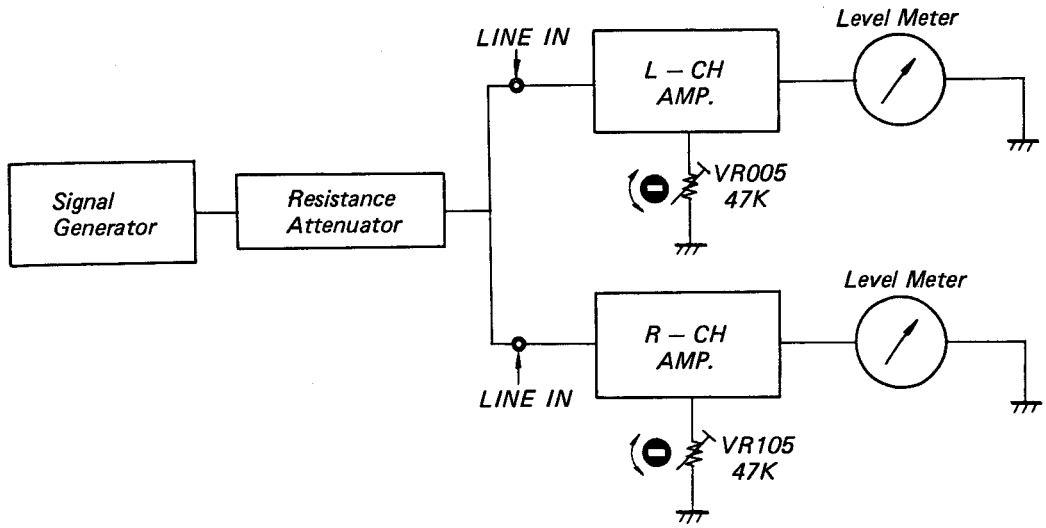


Figure 22.

BIAS LEAKAGE ADJUSTMENT

1. Connect a VTVM across the Test Points (TP003, 103).
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Push the Record and Play Buttons, and adjust the Bias Trap Coils (L001, 101) so that the VTVM indicates minimum position.

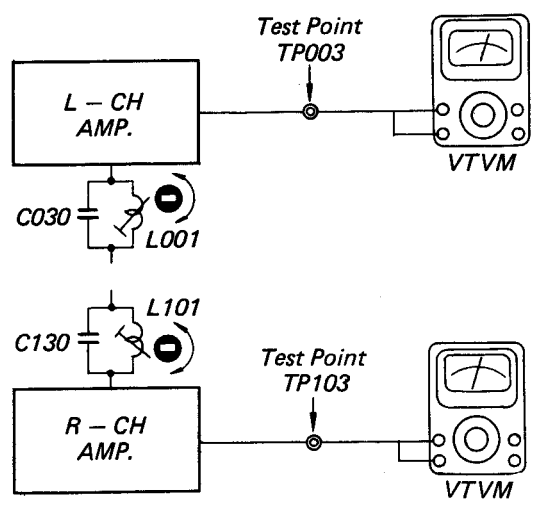


Figure 23.

RECORD EQUALIZER ADJUSTMENT

1. Disconnect the miniconnector No.23 on the Control PC Board, and connect only the blue lead wire. See figure 24.
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Connect a VTVM across the Test Points (TP003, 103).
4. A signal of 1kHz, -20dB is applied through the LINE IN Jacks.
5. Turn the Tape Selector Switch ON and push the Record and Play Buttons, and adjust the Equalizer Coils (L003, 103) so that the VTVM which is connected to Test Points indicates +9dB at 15kHz for reference frequency 1kHz.
6. Turn the Tape Selector Switch OFF and adjust the Equalizer Coils (L002, 102) so that the VTVM which is connected to Test Point indicates +12dB at 15kHz for reference frequency 1kHz.
7. Replace miniconnector No. 23.

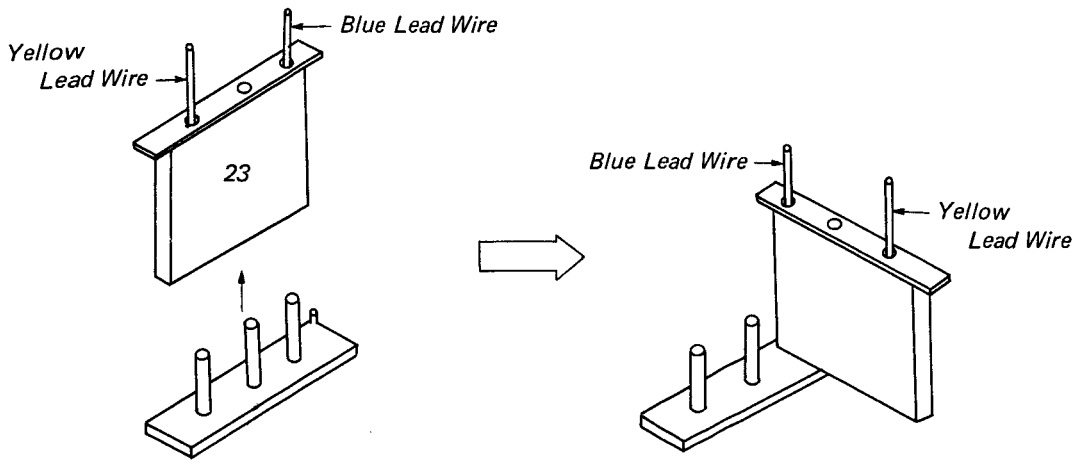


Figure 24.

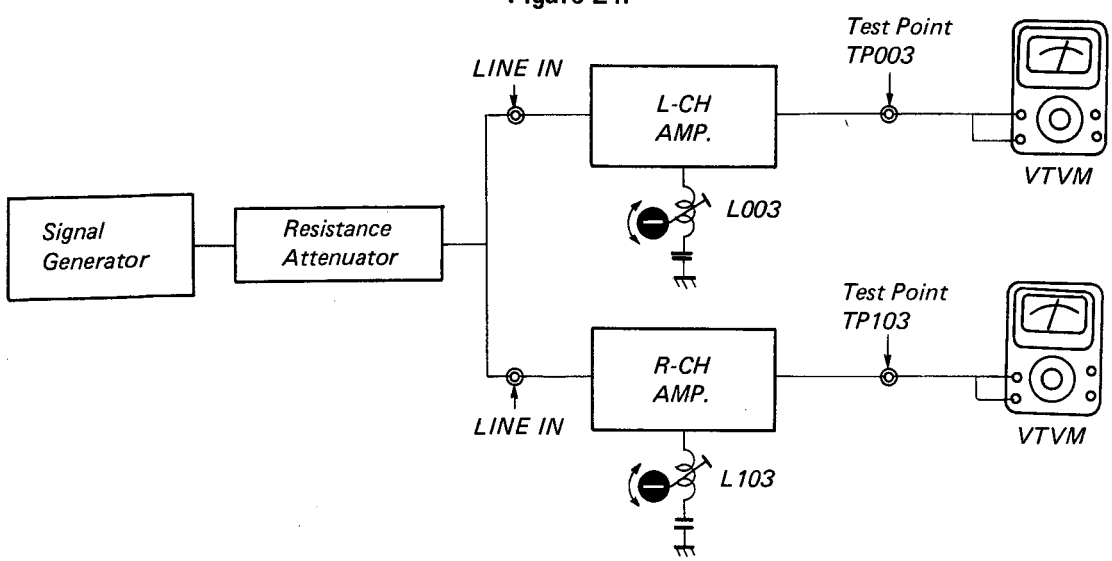


Figure 25.

BIAS CURRENT ADJUSTMENT

1. Connect a VTVM across the LINE OUT Jacks.
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Apply a signal of 1kHz/10kHz, -40dB through the LINE IN Jacks, and set the Test Tape (No. MTT-505) in position.
4. Turn the Tape Selector Switch ON and set the Tape Recorder to recording mode.
5. Playback the Test Tape and adjust the Trimmer Capacitors (CT601, 604) so that the VTVM which is connected to LINE OUT Jacks indicates ± 0dB at 10kHz for reference frequency 1kHz.
6. Remove the Test Tape (MTT-505) and set the Test Tape (No. MTT-502) in position.
7. Apply a signal of 1kHz/12.5kHz, -40dB through the LINE IN Jacks.
8. Turn the Tape Selector Switch OFF and set the Tape Recorder to recording mode.
9. Playback the Test Tape and adjust the Trimmer Capacitors (CT602, 603) so that the VTVM which is connected to LINE OUT Jacks indicates ± 0dB at 12.5kHz for reference frequency 1kHz.

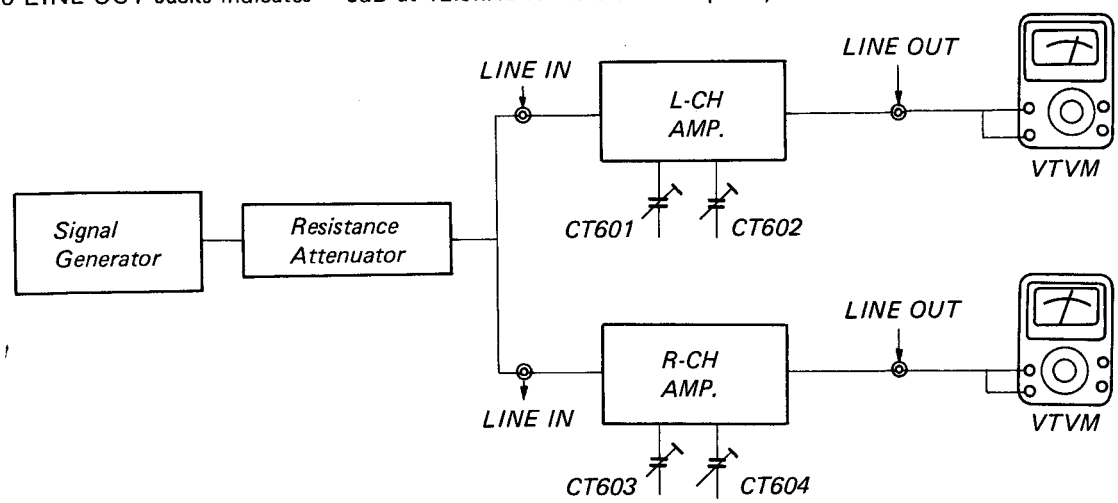


Figure 26.

RECORD/PLAYBACK LEVEL ADJUSTMENT

1. Turn the Dolby Calibration Switch (S401) on.
2. Set the OUTPUT Level Control Knobs, MIC/DIN Input Level Control Knobs, LINE IN Level Control Knobs and Fader Knob to maximum positions.
3. Set the Test Tape (No. MTT-505(Blank Tape)) in position.
4. Turn the Tape Selector Switch ON and set the Tape Recorder to recording mode (Make sure the Level Meter indicates +3dB in recording mode).
5. Playback the Test Tape and adjust the Semi-fixed Resistors (VR401, 402) so that the Level Meter indicates +3dB.
6. Remove the Test Tape (MTT-505) and set the Test Tape (No. MTT-502(Blank Tape)) in position. Turn the Tape Selector Switch OFF and set the Tape Recorder to recording mode.
7. Playback the Test Tape and adjust the Semi-fixed Resistors (VR451, 452) so that the Level Meter indicates +3dB.

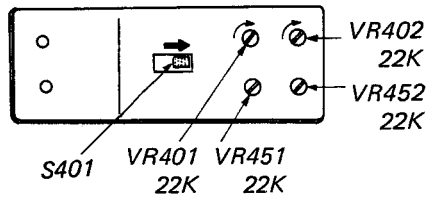


Figure 27.

TAPE SPEED ADJUSTMENT (CAPSTAN MOTOR)

1. Connect the Frequency Counter across the LINE OUT Jacks.
2. Playback the final part of the Test Tape (No. MTT-111, 3000Hz).
3. Adjust the Semi-fixed Resistor so that the Frequency Counter indicates 3000 ±6Hz.

REEL MOTOR ADJUSTMENT

1. REWIND TENSION ADJUSTMENT (See Figure 28.)
   Connect the Voltmeter to the connector of the reel motor, insert a cassette tape (C-60) and set the Tape Recorder in rewind mode, then adjust the Semi-fixed Resistor (VR502) so that the voltage indicated on the Voltmeter is 8.3 ± 0.2V.
2. REWIND TORQUE ADJUSTMENT (See figure 28.)
   Set a torquemeter on Hub Plate (Rewind side) and set the Tape Recorder in rewind mode, then adjust the Semi-fixed Resistor (VR501) so that the value indicated on the torquemeter is 120 to 150gcm.

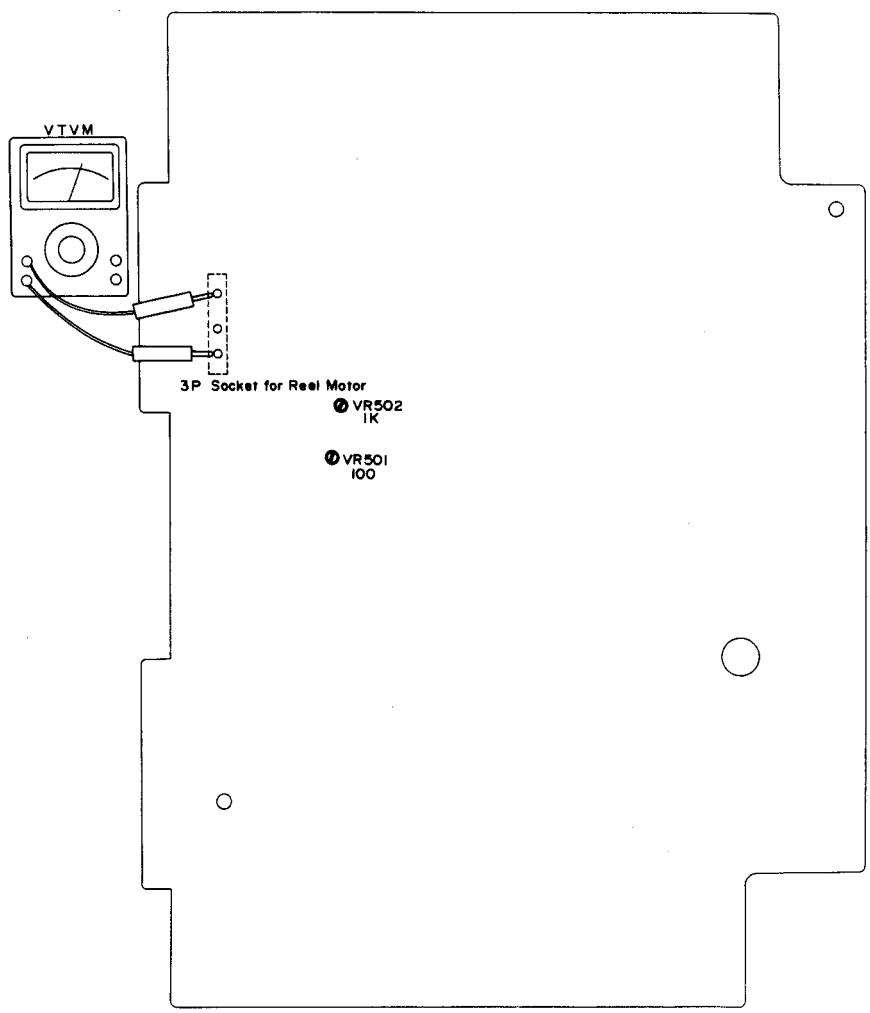


Figure 28.

ELECTRICAL PARTS LOCATIONS

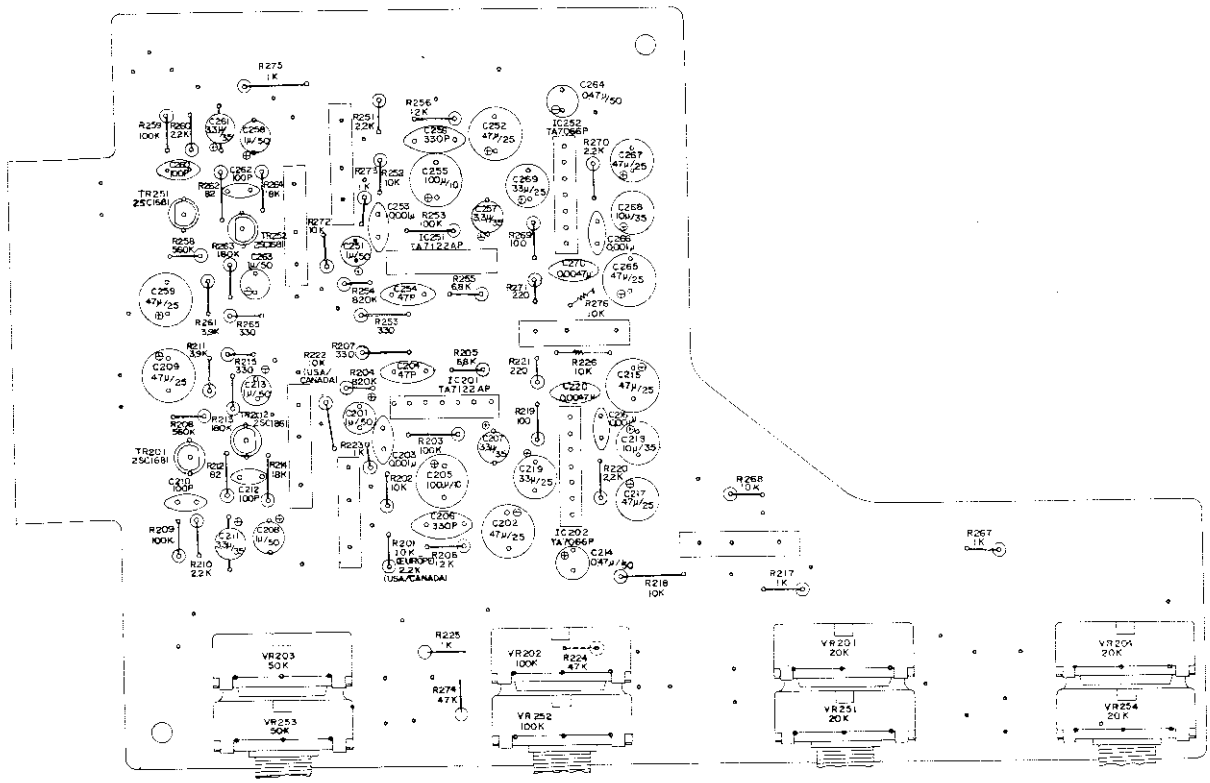


Figure 29. Top View of Volume P.C. Board, PC-002

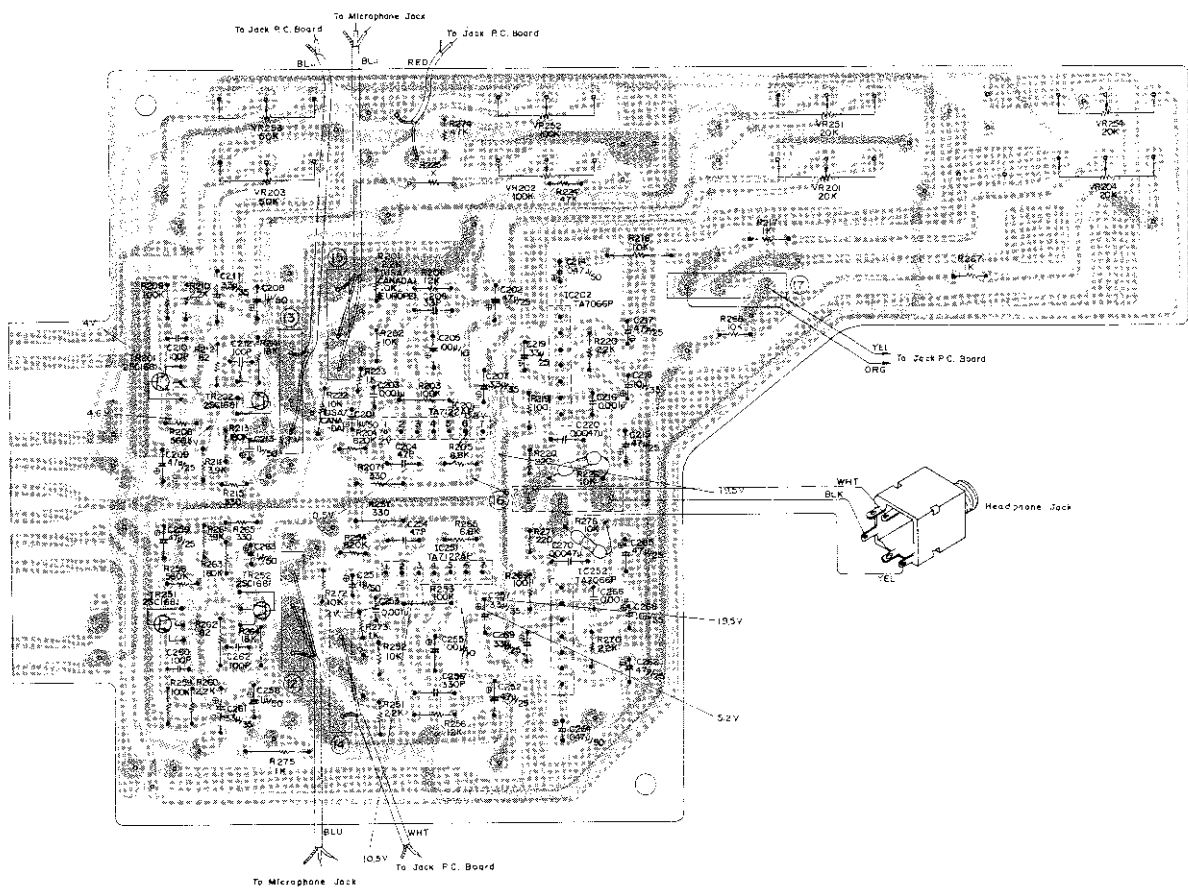


Figure 30. Bottom View of Volume P.C. Board, PC-002

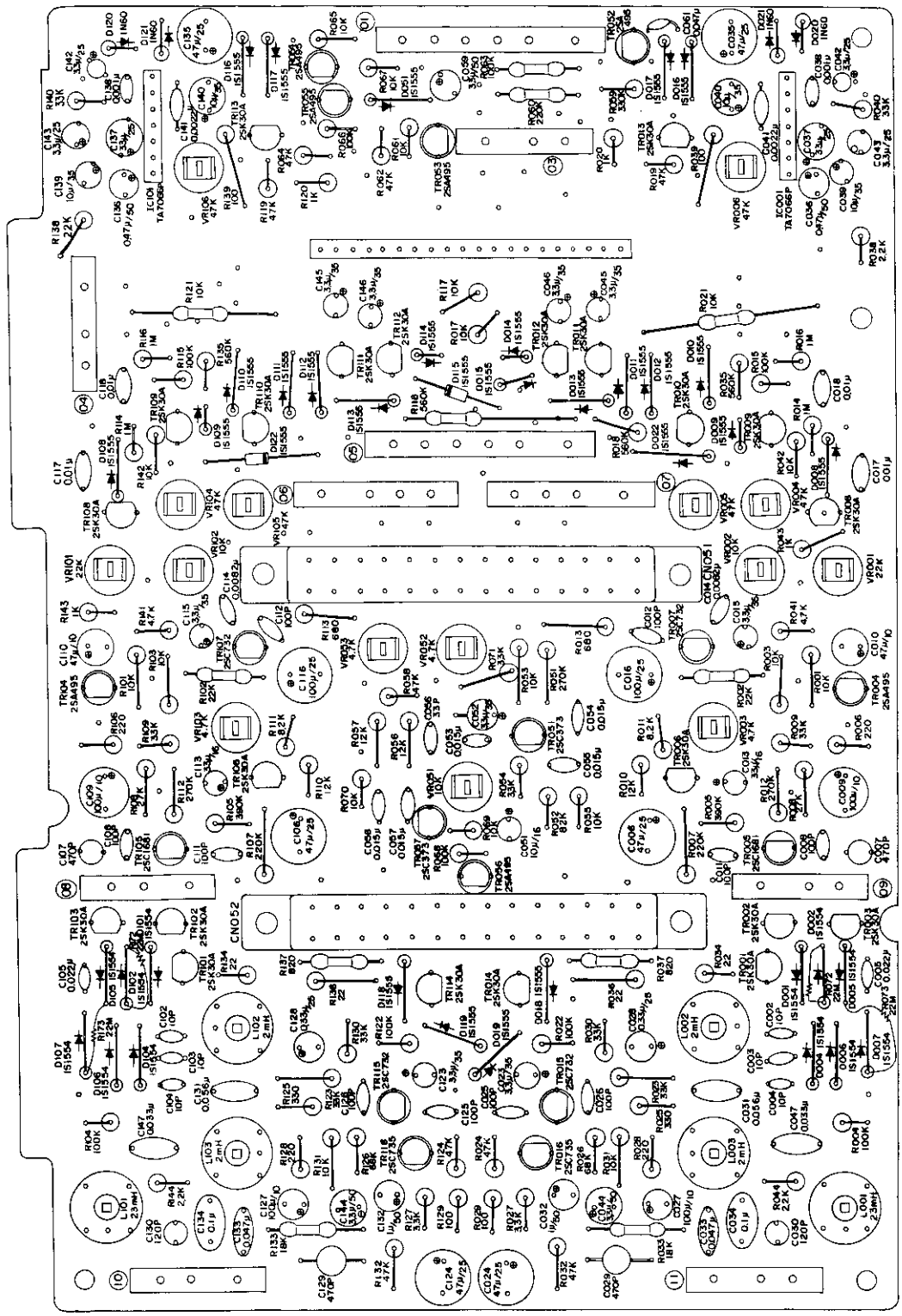


Figure 31. Top View of Pre-amplifier P.C. Board, PC-001

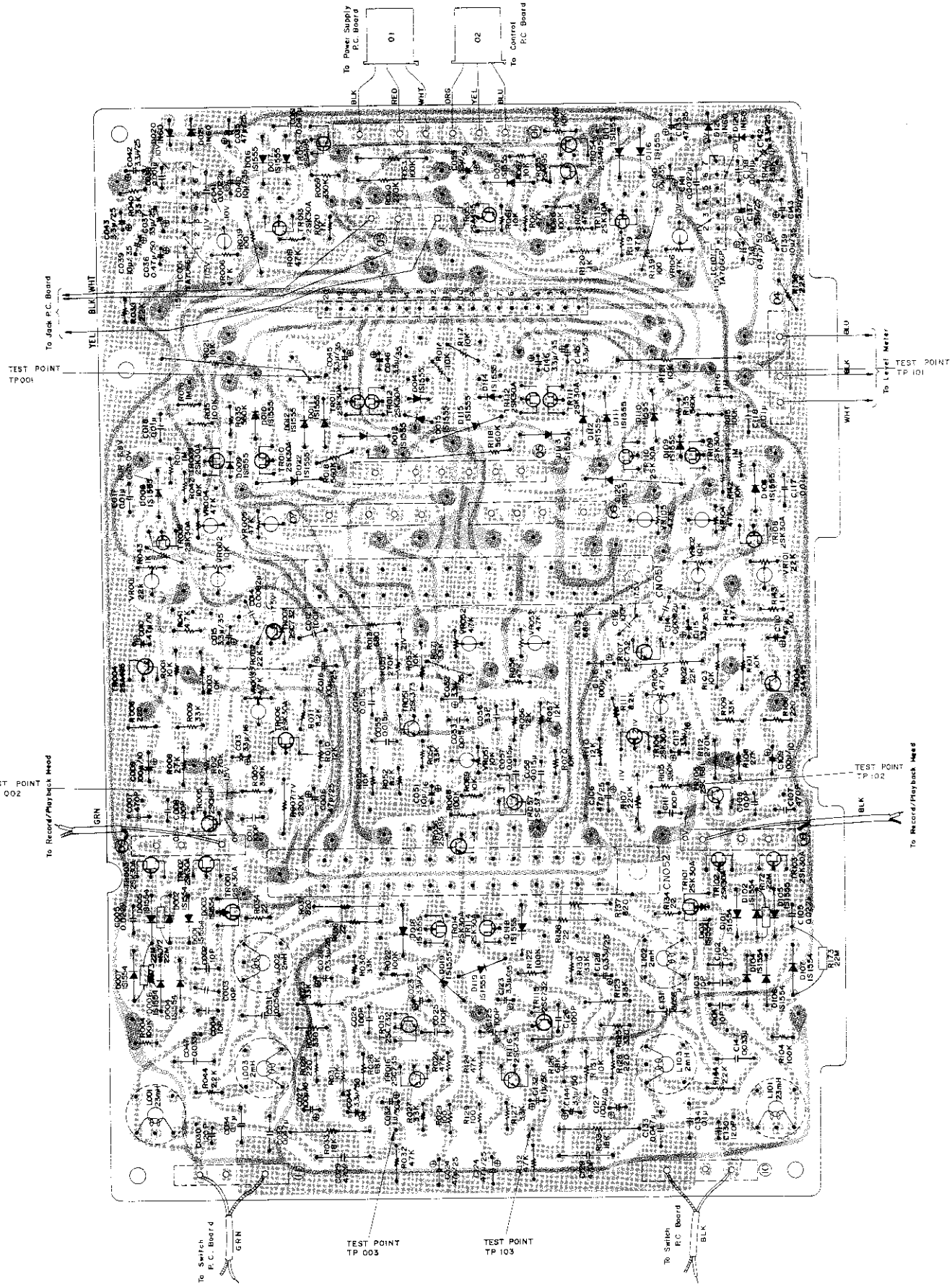


Figure 32. Bottom View of Pre-amplifier P.C. Board, PC-001

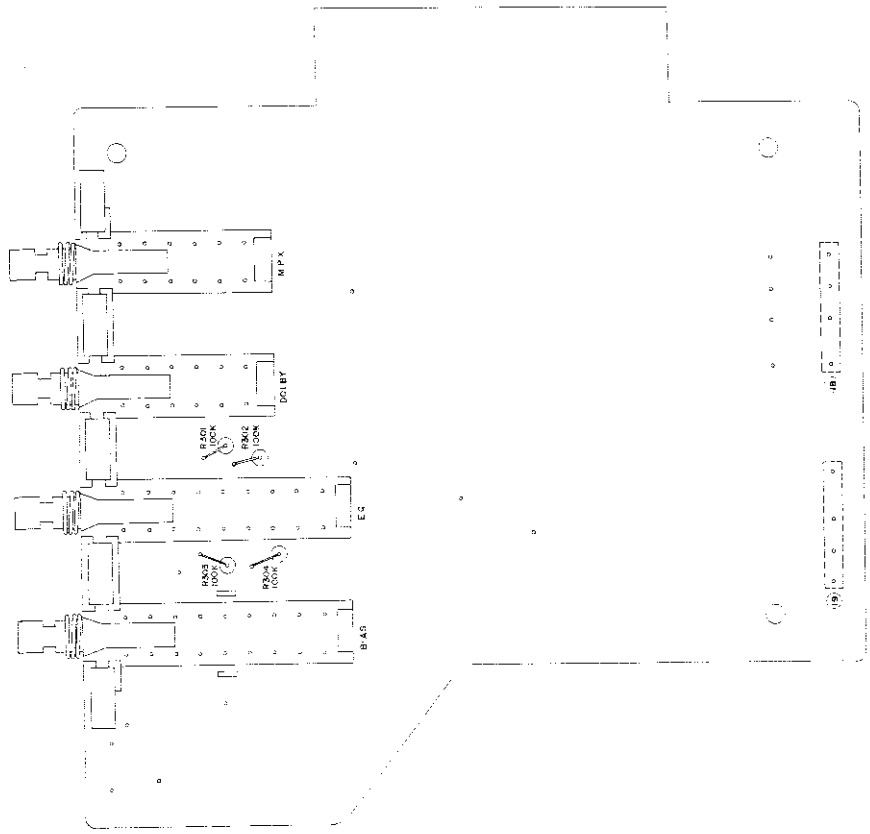


Figure 33. Top View of Switch P.C. Board, PC-003

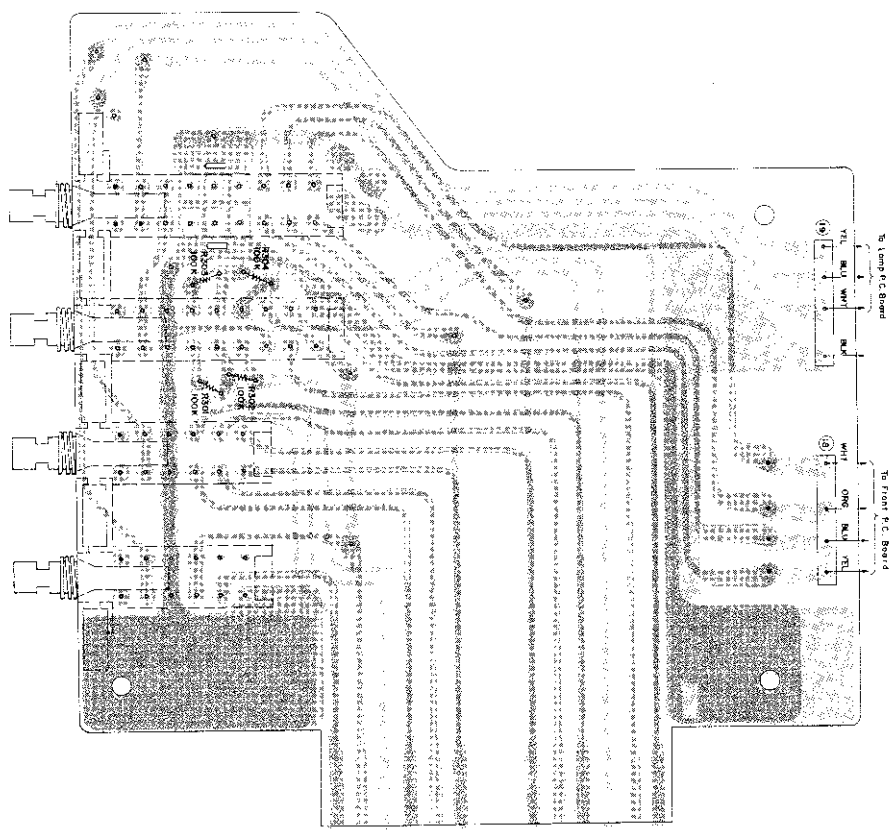


Figure 34. Bottom View of Switch P.C. Board, PC-003

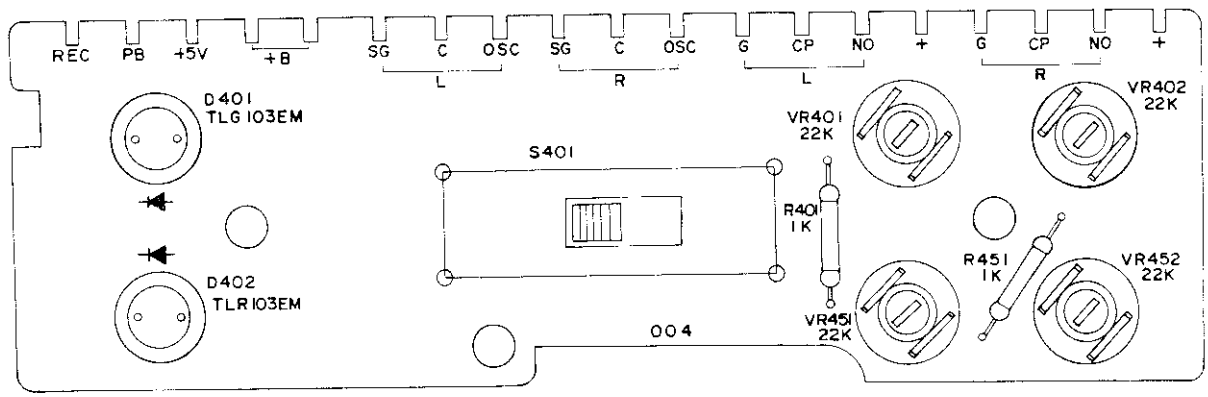


Figure 35. Top View of Front P.C. Board, PC-004

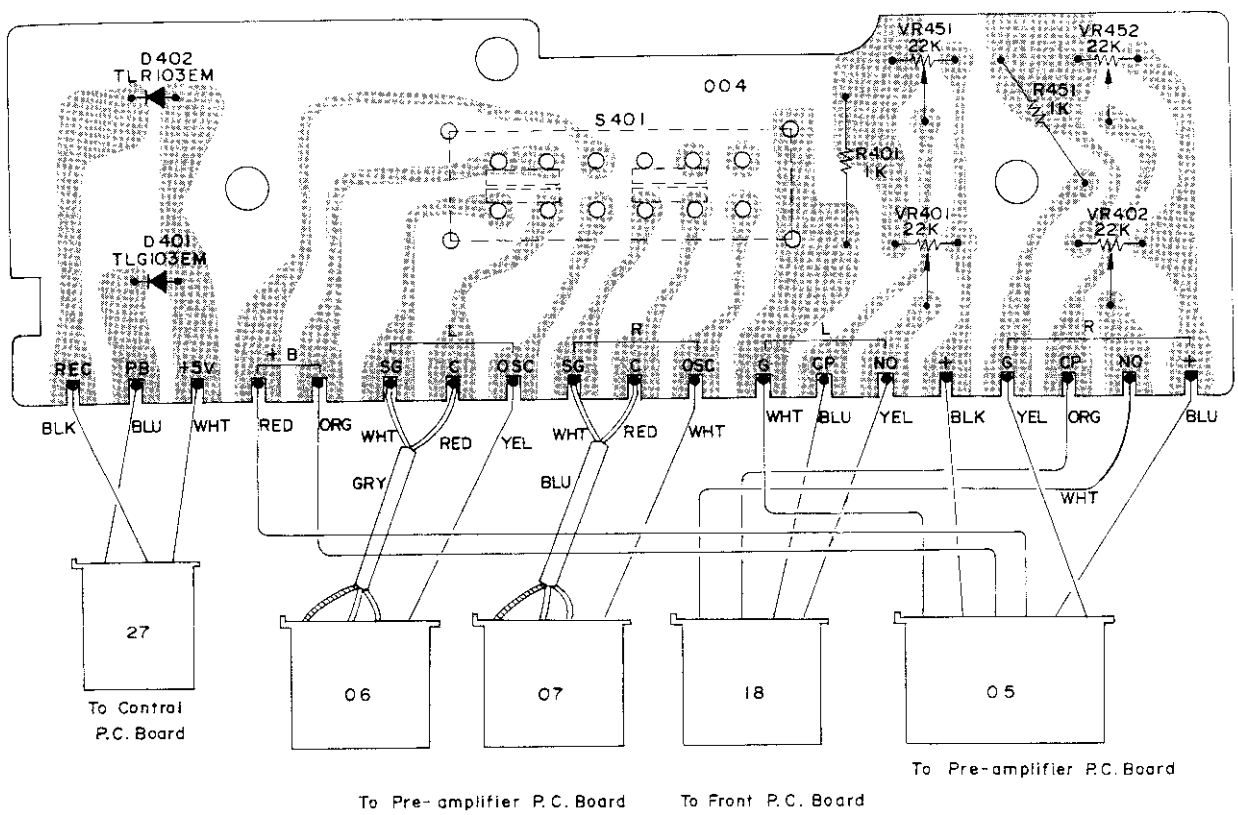


Figure 36. Bottom View of Front P.C. Board, PC-004

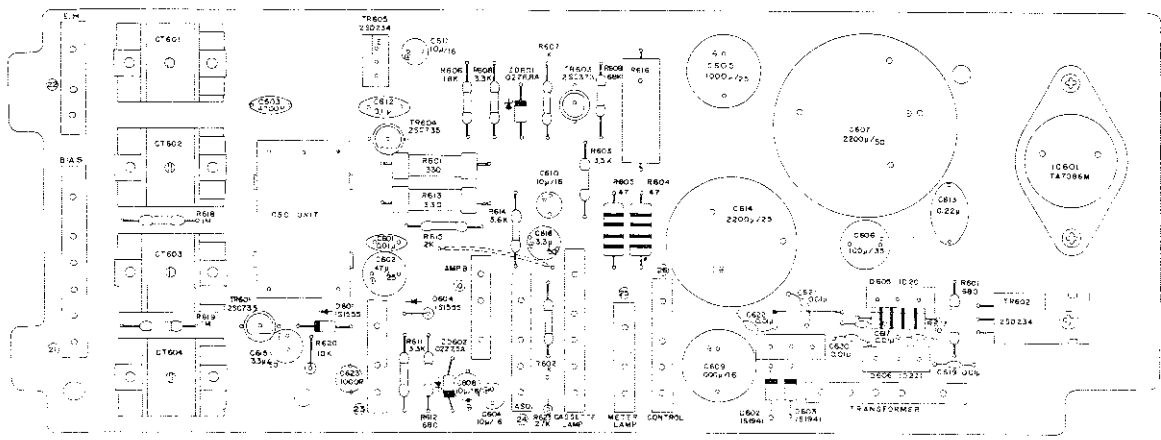


Figure 37. Top View of Power Supply P.C. Board, PC-006

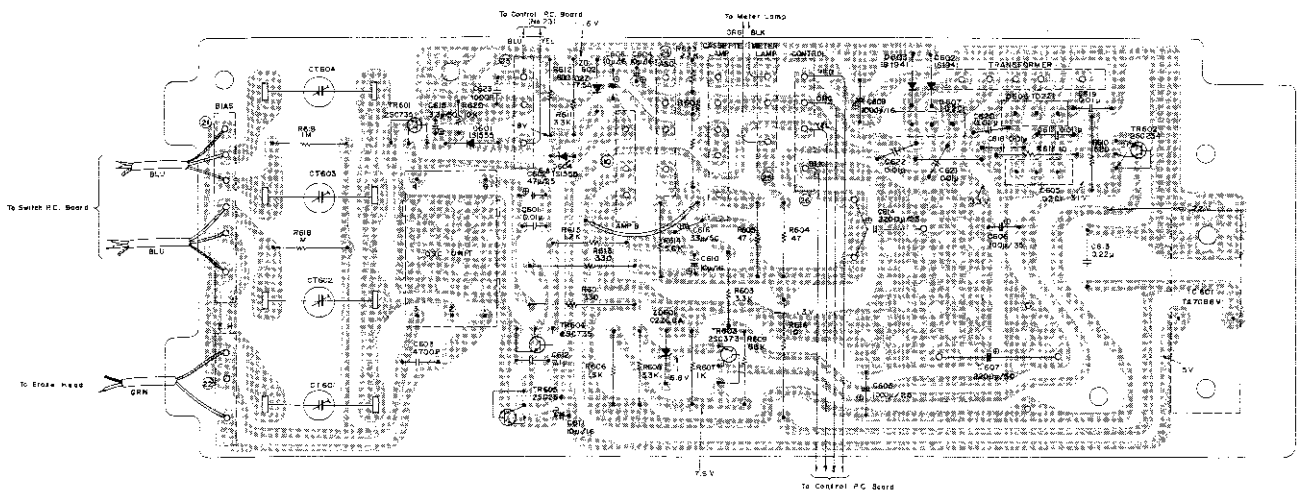


Figure 38. Bottom View of Power Supply P.C. Board, PC-006

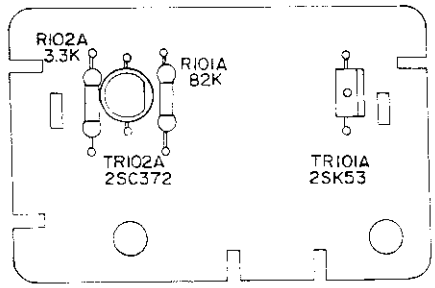


Figure 39. Top View of ASO P.C. Board, PC-008

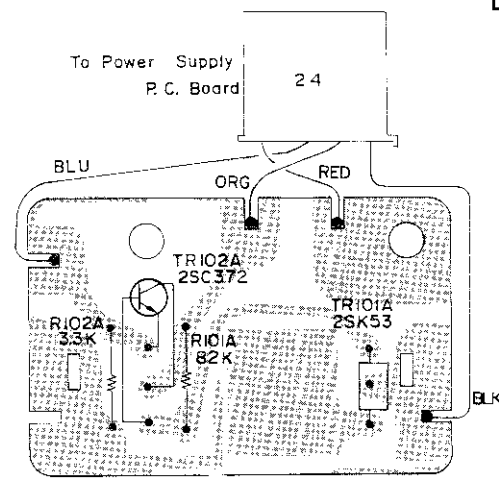


Figure 40. Bottom View of ASO P.C. Board, PC-008

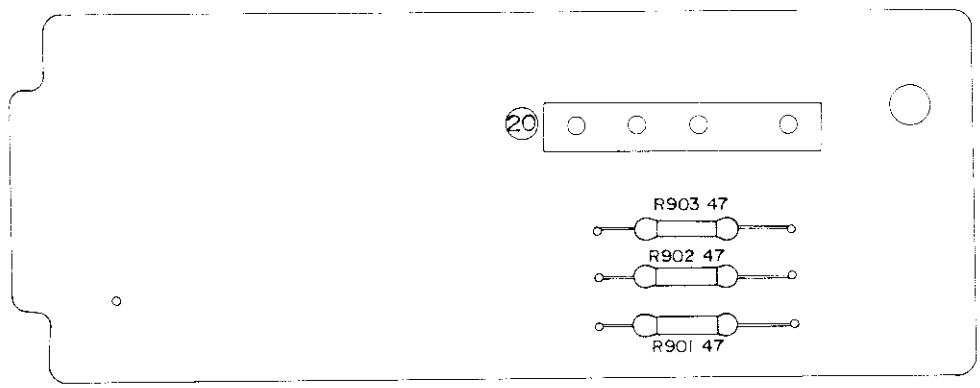


Figure 41. Top View of Lamp P.C. Board, PC-010

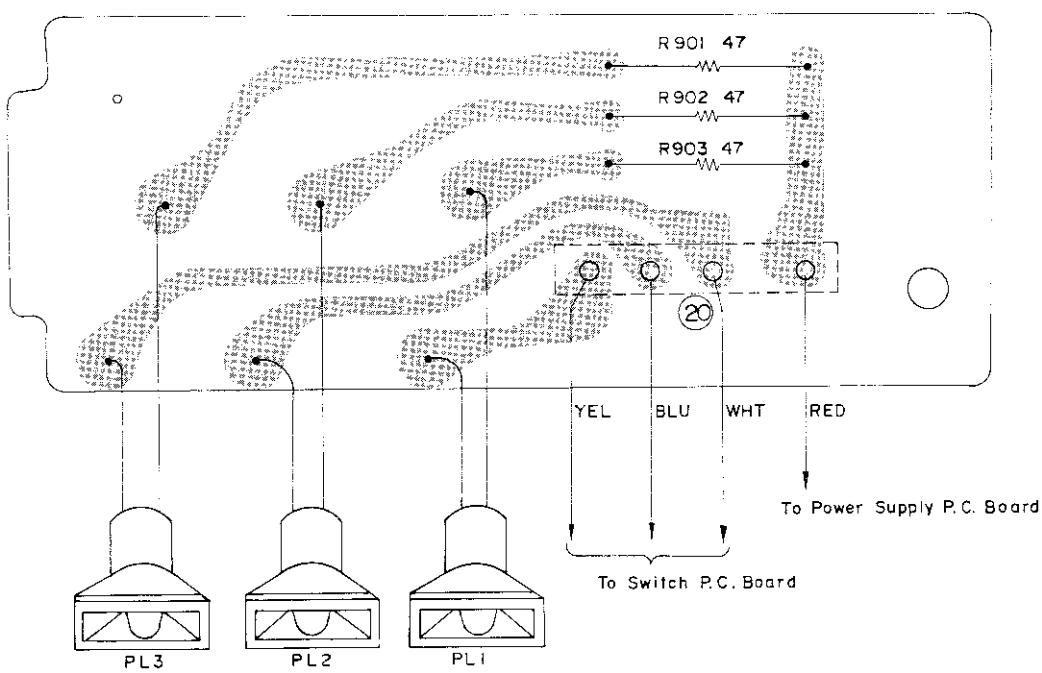


Figure 42. Bottom View of Lamp P.C. Board, PC-010

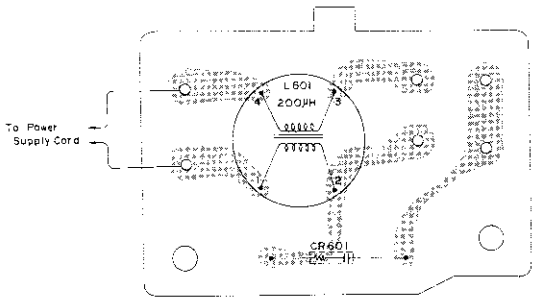


Figure 43. Bottom View of AC P.C. Board, PC-011 (USA/Canada)

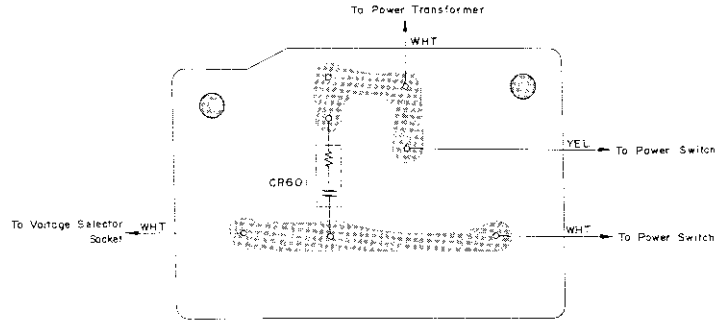


Figure 44. Bottom View of AC P.C. Board, PC-011 (Europe)

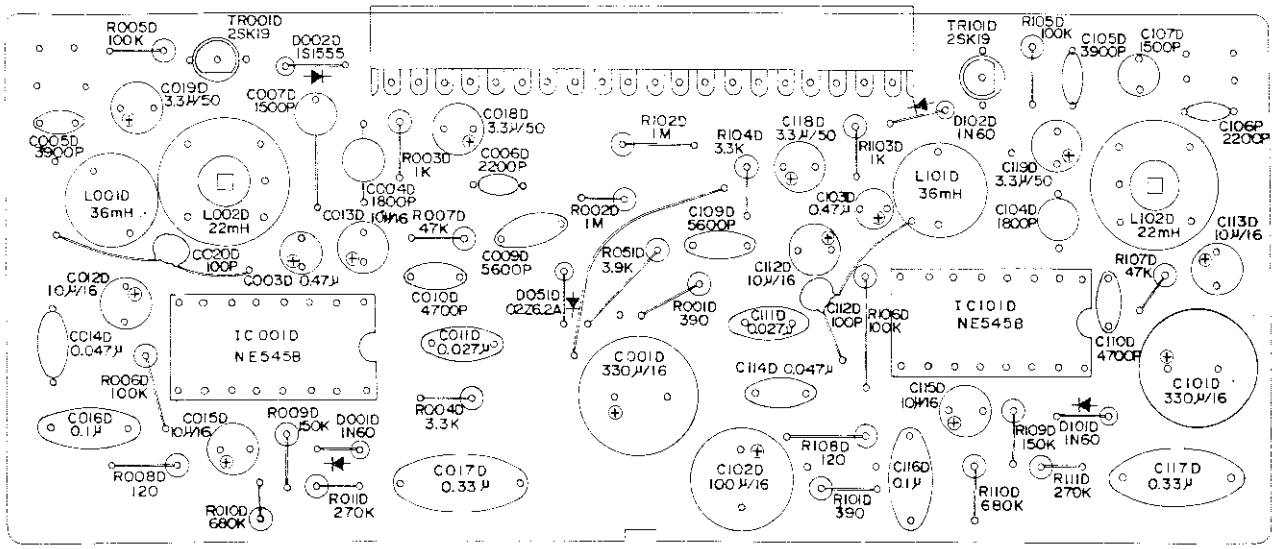


Figure 45. Top View of Dolby P.C. Board, PC-012

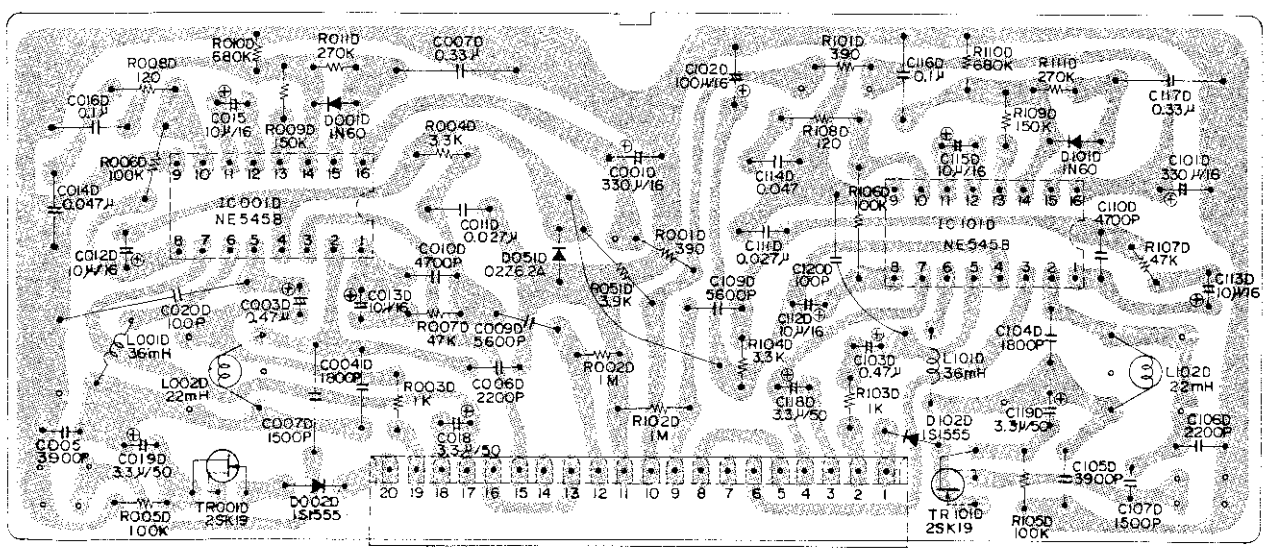
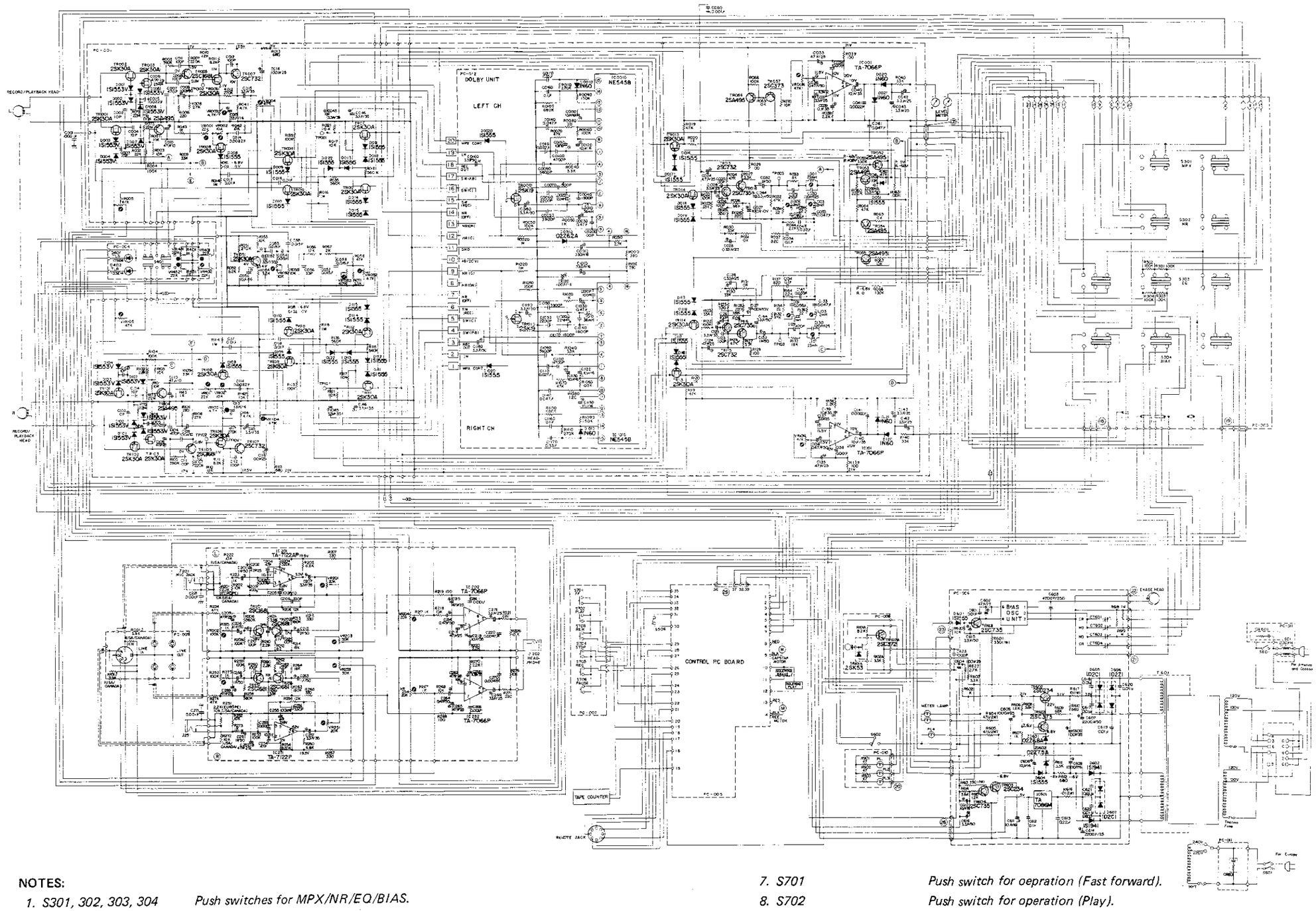


Figure 46. Bottom View of Dolby P.C. Board, PC-012



NOTES:

1. S301, 302, 303, 304 — Push switches for MPX/NR/EQ/BIAS.
2. S401 — Slide switch for Dolby calibration.
3. S501, 502, 503, 504, 505 — Push switches for AUTO COUNTER/AUTO PLAY/AUTO REWIND/TIMER.
4. S506 — Micro switch for recording prevention.
5. S601 — Lever switch for power.
6. S602 — Micro switch for cassette tape.
7. S701 — Push switch for oepration (Fast forward).
8. S702 — Push switch for operation (Play).
9. S703 — Push switch for operation (Rewind).
10. S704 — Push switch for operation (Stop).
11. S705 — Push switch for operation (Record).
12. S706 — Push switch for operation (Pause).
13. Resistance values are indicated in ohms unless otherwise noted (K=1,000, M=1,000K).
14. Capacitance values are indicated in microfarads unless otherwise specified (P=micro-microfarads).

Figure 47. Schematic Diagram

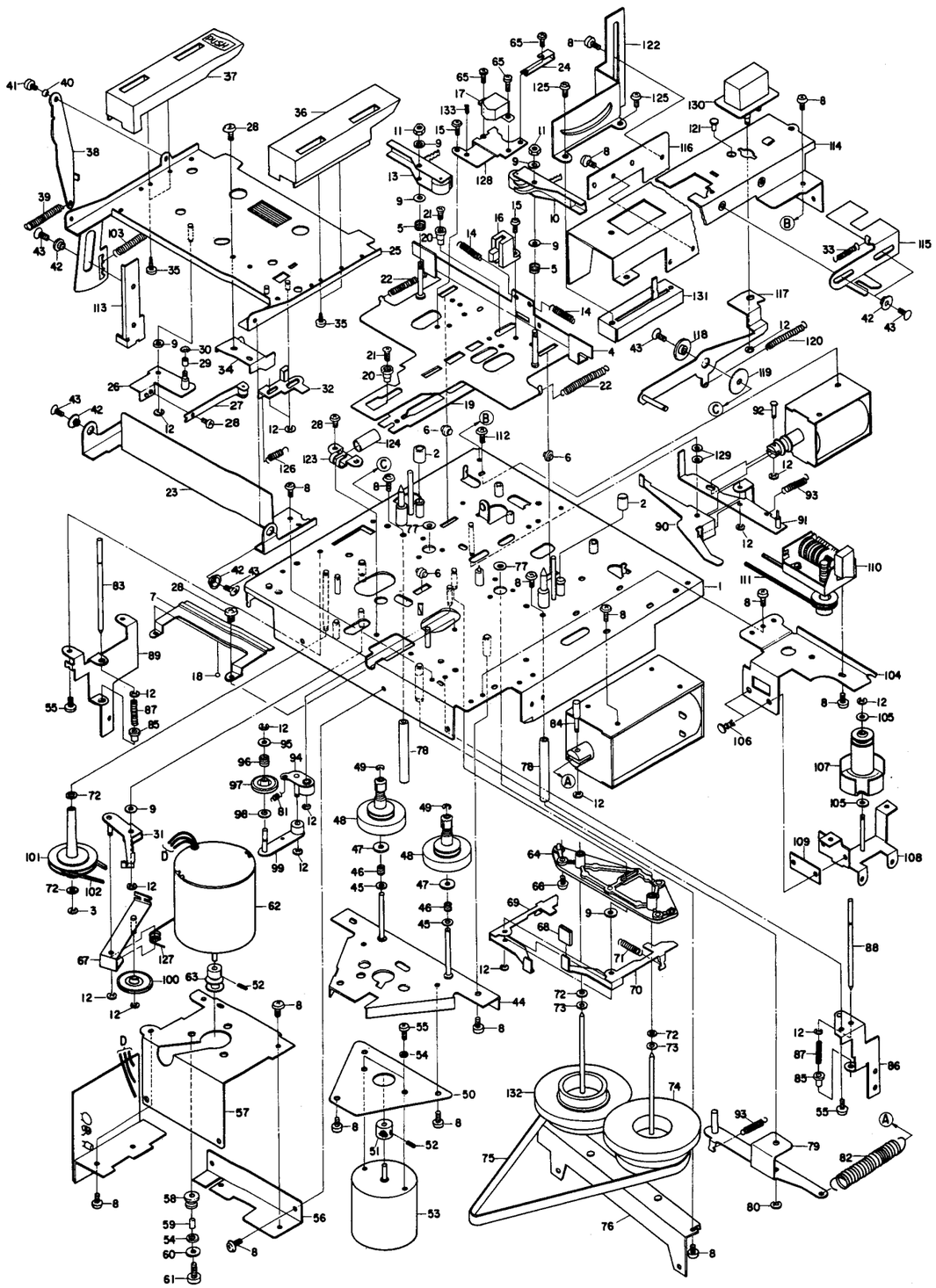


Figure 48. Exploded View (Mechanism)

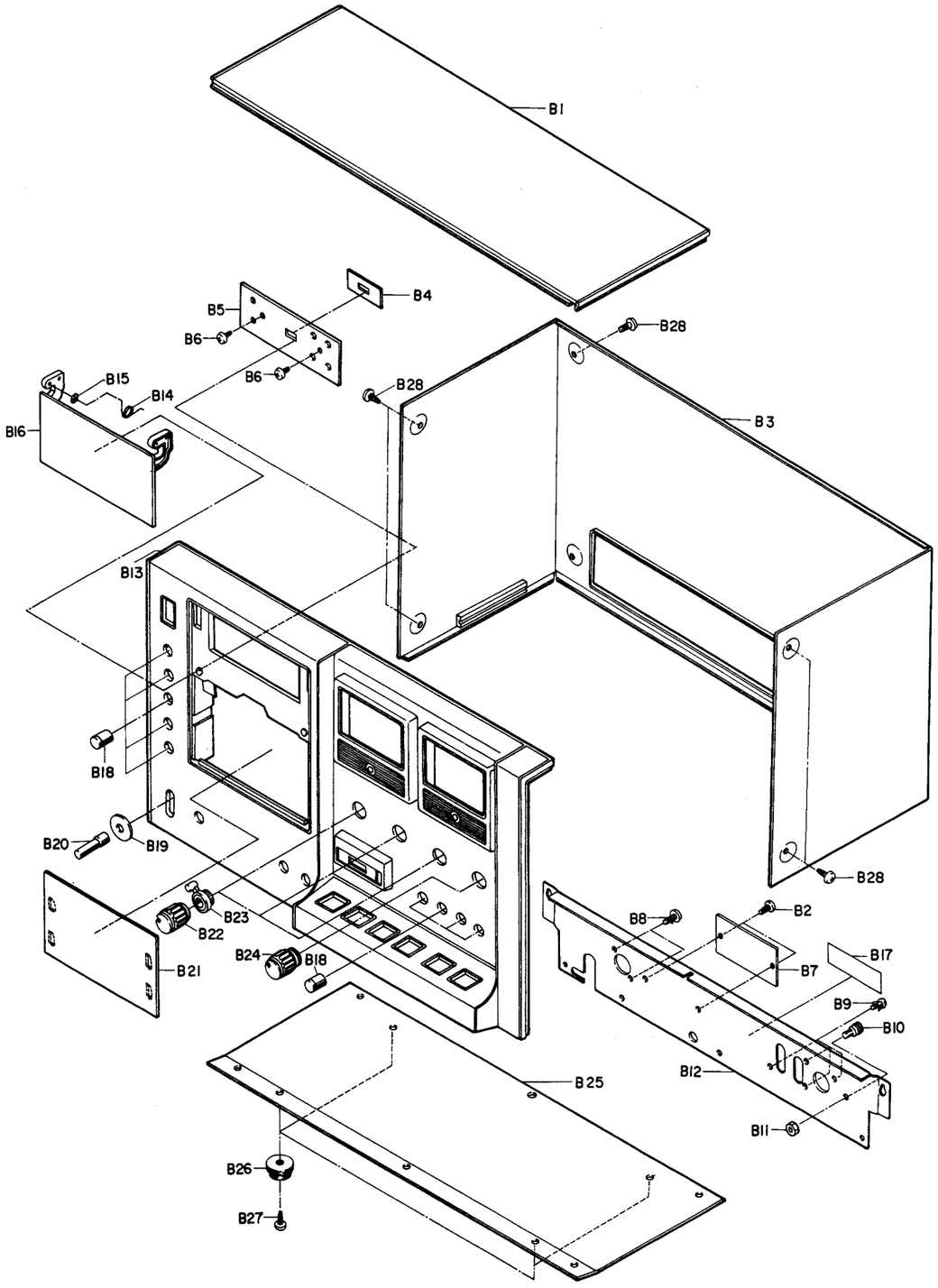


Figure 49. Exploded View (Cabinet)

PARTS LIST

Symbol No.	Part No.	Description
TRANSISTORS, IC'S AND DIODES		
TR001, 101		Transistor, 2SK30A-0-R/O
TR002, 102		Transistor, 2SK30A-0-R/O
TR003, 103		Transistor, 2SK30A-GR
TR004, 104		Transistor, 2SA495-Y-O/Y
TR005, 105		Transistor, 2SC1681-BL
TR006, 106		Transistor, 2SK30A-GR
TR007, 107		Transistor, 2SC732-GR
TR008, 108		Transistor, 2SK30A-Y
TR009, 109		Transistor, 2SK30A-Y
TR010, 110		Transistor, 2SK30A-Y
TR011, 111		Transistor, 2SK30A-GR
TR012, 112		Transistor, 2SK30A-GR
TR013, 113		Transistor, 2SK30A-GR
TR014, 114		Transistor, 2SK30A-GR
TR015, 115		Transistor, 2SC732-GR
TR016, 116		Transistor, 2SC735-GR
TR051		Transistor, 2SC373
TR052		Transistor, 2SA495-Y-O/Y
TR053		Transistor, 2SA495-Y-O/Y
TR054		Transistor, 2SA495-Y-O/Y
TR055		Transistor, 2SA495-Y-O/Y
TR056		Transistor, 2SA495-Y-O/Y
TR057		Transistor, 2SC373
TR001D, 101D		Transistor, 2SK19-BL
TR201, 251		Transistor, 2SC1681-BL
TR202, 252		Transistor, 2SC1681-BL
TR101A		Transistor, 2SK-53-BL-1
TR102A		Transistor, 2SC372
TR601		Transistor, 2SC735
TR602		Transistor, 2SD234-Y-O/Y
TR603		Transistor, 2SC373
TR604		Transistor, 2SC735
TR605		Transistor, 2SD234-Y-O/Y
IC001, 101		Integrated Circuit, TA7066P-JA
IC001D, 101D	22114299	Integrated Circuit, NE545B
IC201, 251		Integrated Circuit, TA7122P-A/C
IC202, 252		Integrated Circuit, TA7066P
IC601		Integrated Circuit, TA7086M
D001, 101		Diode, 1S1553V
D002, 102		Diode, 1S1553V
D003, 103		Diode, 1S1553V
D004, 104		Diode, 1S1553V
D005, 105		Diode, 1S1553V
D006, 106		Diode, 1S1553V
D007, 107		Diode, 1S1553V
D008, 108		Diode, 1S1555
D009, 109		Diode, 1S1555
D010, 110		Diode, 1S1555
D011, 111		Diode, 1S1555
D012, 112		Diode, 1S1555
D013, 113		Diode, 1S1555
D014, 114		Diode, 1S1555
D015, 115		Diode, 1S1555
D016, 116		Diode, 1S1555
D017, 117		Diode, 1S1555
D018, 118		Diode, 1S1555
D019, 119		Diode, 1S1555
D020, 120		Diode, 1N60
D021, 121		Diode, 1N60
D022, 122		Diode, 1S1555
D051		Diode, 1S1555
D001D, 101D		Diode, 1N60
D002D, 102D		Diode, 1S1555
D051D		Diode, 02Z6.2A
D401		Diode, TLG103EM
D402		Diode, TLR103EM
D601		Diode, 1S1555
D602		Diode, 1S1941
D603		Diode, 1S1941
D604		Diode, 1S1555
D605		Diode, 1D2C1
D606		Diode, 1D2Z1
D607		Diode, 1D2C1
ZD601		Diode, 02Z6.8A
ZD602		Diode, 02Z7.5A
ELECTRICAL PARTS		
T601	22213890	Transformer, Power (USA/Canada)
	22223039	Transformer, Power (Europe)
L001, 101	22232143	Coil, Trap (23mH)
L002, 102	22232107	Coil, Trap (2mH)
L003, 103	22232107	Coil, Trap (2mH)
L001D, 101D	22232163	Coil, Trap (36mH)

Symbol No.	Part No.	Description
L002D, 102D	22232164	Coil, Trap (22mH)
L601	22137015	Noise Filter (USA/Canada)
	22163445	Jack (DIN-US4P)
J201, 203, 251	22163463	Jack, MIC/Headphones
	22167456	Socket, 8P
PL1, 2, 3, 4	22113240	Lamp
	22751100	Holder, Lamp
	22147152	Solenoid, Play
	22147154	Solenoid, Brake
	22167145	Socket, Voltage Selection (USA/Canada)
CR601	22134107	Spark Killer
	22104230	Level Meter
	22132521	Oscillator Unit
	22176123	Power Supply Cord (USA/Canada)
	22176286	Power Supply Cord (Europe)
S301, 302, 303, 304	22146684	Push Switch, MPX/NR/EQ/BIAS
S401	22146685	Slide Switch, Calibration, Dolby
S506, 602	22146696	Micro Switch
S601	22146688	Lever Switch, Power (USA/Canada)
	22146944	Lever Switch, Power (Europe)
S701, 702, 703, 704, 706	22146687	Push Switch, Operation
S705	22146705	Push Switch, Record

CAPACITORS

G=±2%, J=±5%, K=±10%, M=±20%, Z=-20+80%, P=-0+100%

C001	22343102	Ceramic, 0.001mfd, 50WV, M
C002, 102	22340087	Ceramic, 10PF, 500WV, K
C003, 103	22340087	Ceramic, 10PF, 500WV, K
C004, 104	22340087	Ceramic, 10PF, 500WV, K
C005, 105	22370161	Mylar, 0.022mfd, 100WV, K
C006, 106	22446470	Electrolytic, 47mfd, 25WV
C007, 107	22382471	Polystylene, 470PF, 50WV, K
C008, 108	22362101	Ceramic, 100PF, 50WV, K
C009, 109	22443101	Electrolytic, 100mfd, 10WV
C010, 110	22443470	Electrolytic, 47mfd, 10WV
C011, 111	22362101	Ceramic, 100PF, 50WV, K
C012, 112	22362101	Ceramic, 100PF, 50WV, K
C013, 113	22445330	Electrolytic, 33mfd, 16WV
C014, 114	22372822	Mylar, 0.0082mfd, 50WV, K
C015, 115	22440103	Electrolytic, 3.3mfd, 35WV
C016, 116	22446101	Electrolytic, 100mfd, 25WV
C017, 117	22372103	Mylar, 0.01mfd, 50WV, K
C018, 118	22372103	Mylar, 0.01mfd, 50WV, K

Symbol No.	Part No.	Description
C023, 123	22440103	Electrolytic, 3.3mfd, 35WV
C024, 124	22446470	Electrolytic, 47mfd, 25WV
C025, 125	22362101	Ceramic, 100PF, 50WV, K
C026, 126	22362101	Ceramic, 100PF, 50WV, K
C027, 127	22443101	Electrolytic, 100mfd, 10WV
C028, 128	22440042	Electrolytic, 0.33mfd, 25WV
C029, 129	22382471	Polystylene, 470PF, 50WV, K
C030, 130	22380022	Polystylene, 120PF, 125WV, K
C031, 131	22372563	Mylar, 0.056mfd, 50WV, K
C032, 132	22440060	Electrolytic, 1mfd, 50WV
C033, 133	22372473	Mylar, 0.047mfd, 50WV, K
C034, 134	22372104	Mylar, 0.1mfd, 50WV, K
C035, 135	22446470	Electrolytic, 47mfd, 25WV
C036, 136	22440051	Electrolytic, 0.47mfd, 50WV
C037, 137	22446330	Electrolytic, 33mfd, 25WV
C038, 138	22372102	Mylar, 0.001mfd, 50WV, K
C039, 139	22447100	Electrolytic, 10mfd, 35WV
C040, 140	22447100	Electrolytic, 10mfd, 35WV
C041, 141	22372222	Mylar, 0.0022mfd, 50WV, K
C042, 142	22440099	Electrolytic, 3.3mfd, 25WV
C043, 143	22440099	Electrolytic, 3.3mfd, 25WV
C044, 144	22448339	Electrolytic, 3.3mfd, 50WV
C045, 145	22440103	Electrolytic, 3.3mfd, 35WV
C046, 146	22440103	Electrolytic, 3.3mfd, 35WV
C047, 147	22372333	Mylar, 0.033mfd, 50WV, K
C051	22445100	Electrolytic, 10mfd, 16WV
C052	22448339	Electrolytic, 3.3mfd, 35WV
C053	22372153	Mylar, 0.015mfd, 50WV, K
C054	22372153	Mylar, 0.015mfd, 50WV, K
C055	22372153	Mylar, 0.015mfd, 50WV, K
C056	22362330	Ceramic, 33PF, 50WV, K
C057	22372153	Mylar, 0.015mfd, 50WV, K
C058	22372153	Mylar, 0.015mfd, 50WV, K
C059	22448339	Electrolytic, 3.3mfd, 50WV
C060	22343102	Ceramic, 0.001mfd, 50WV, M
C061	22372473	Myalr, 0.047mfd, 50WV, K
C001D,101D	22445331	Electrolytic, 330mfd, 16WV
C002D	22445101	Electrolytic, 100mfd, 16WV
C003D,103D	22401472	Electrolytic, 0.47mfd, 35WV
C004D,104D	22382182	Polystylene, 1800PF, 50WV, K
C005D,105D	22372392	Mylar, 3900PF, 50WV, K
C006D,106D	22371222	Mylar, 2200PF, 50WV, J
C007D,107D	22382152	Polystylene, 1500PF, 50WV
C009D,109D	22370149	Polypropylene, 5600PF, 100WV, G
C010D,110D	22370150	Polypropylene, 4700PF, 100WV, G
C011D,111D	22370148	Polypropylene, 0.027mfd, 100WV, G
C012D,112D	22445100	Electrolytic, 10mfd, 16WV
C013D,113D	22445100	Electrolytic, 10mfd, 16WV
C014D,114D	22371473	Mylar, 0.047mfd, 50WV, J

Symbol No.	Part No.	Description
C015D,115D	22445100	Electrolytic, 10mfd, 16WV
C016D,116D	22372104	Mylar, 0.1mfd, 50WV, K
C017D,117D	22372334	Mylar, 0.33mfd, 50WV, K
C018D,118D	22448339	Electrolytic, 3.3mfd, 50WV
C019D,119D	22448339	Electrolytic, 3.3mfd, 50WV
C020D,120D	22362101	Ceramic, 100PF, 50WV, K
C201, 251	22448109	Electrolytic, 1mfd, 50WV
C202, 252	22446470	Electrolytic, 47mfd, 25WV
C203, 253	22343102	Ceramic, 0.001mfd, 50WV, M
C204, 254	22362470	Ceramic, 47PF, 50WV, K
C205, 255	22443101	Electrolytic, 100mfd, 10WV
C206, 256	22362331	Ceramic, 330PF, 50WV, K
C207, 257	22440103	Electrolytic, 3.3mfd, 35WV
C208, 258	22448109	Electrolytic, 1mfd, 50WV
C209, 259	22446470	Electrolytic, 47mfd, 25WV
C210, 260	22362101	Ceramic, 100PF, 50WV, K
C211, 261	22440103	Electrolytic, 3.3mfd, 35WV
C212, 262	22362101	Ceramic, 100PF, 50WV, K
C213, 263	22448109	Electrolytic, 1mfd, 50WV
C214, 264	22440051	Electrolytic, 0.47mfd, 50WV
C215, 265	22446470	Electrolytic, 47mfd, 25WV
C216, 266	22343102	Ceramic, 0.001mfd, 50WV, M
C217, 267	22446470	Electrolytic, 47mfd, 25WV
C218, 268	22447100	Electrolytic, 10mfd, 35WV
C219, 269	22446330	Electrolytic, 33mfd, 25WV
C220, 270	22373472	Mylar, 0.0047mfd, 50WV, M
C221, 271	22343102	Ceramic, 0.001mfd, 50WV, M
C601	22373103	Mylar, 0.01mfd, 50WV, M
C602	22446470	Electrolytic, 47mfd, 25WV
C603	22380021	Polystylene, 4700PF, 250WV, K
C604	22446101	Electrolytic, 100mfd, 25WV
C605	22446102	Electrolytic, 1000mfd, 25WV
C606	22447101	Electrolytic, 100mfd, 35WV
C607	22430028	Electrolytic, 2200mfd, 50WV
C608	22445100	Electrolytic, 10mfd, 16WV
C609	22446102	Electrolytic, 1000mfd, 25WV
C610	22445100	Electrolytic, 10mfd, 16WV
C611	22445100	Electrolytic, 10mfd, 16WV
C612	22373104	Mylar, 0.1mfd, 50WV
C613	22373224	Mylar, 0.22mfd, 50WV
C614	22430021	Electrolytic, 2200mfd, 25WV
C615	22448339	Electrolytic, 3.3mfd, 50WV
C616	22448339	Electrolytic, 3.3mfd, 50WV
C617, 618, 619, 620, 621, 622	22340030	Ceramic, 0.01mfd, 500WV, P
C623	22343102	Ceramic, 1000PF, 50WV, M
CT601, 602 603, 604	22309111	Trimmer, 30 to 210PF

Symbol No.	Part No.	Description
RESISTORS **All resistors are 1/8W, 10%, carbon film resistor unless otherwise noted.**		
R001, 101	22554103	10K ohm
R002, 102	22544223	22K ohm
R003, 103	22554103	10K ohm
R004, 104	22554104	100K ohm
R005, 105	22542394	390K ohm, 1/4W
R006, 106	22554221	220 ohm
R007, 107	22542224	220K ohm, 1/4W
R008, 108	22542273	27K ohm, 1/4W
R009, 109	22554333	33K ohm
R010, 110	22554123	12K ohm
R011, 111	22554822	8.2K ohm
R012, 112	22542274	270K ohm, 1/4W
R013, 113	22554681	680 ohm
R014, 114	22554105	1 Mohm
R015, 115	22554104	100K ohm
R016, 116	22554105	1 Mohm
R017, 117	22554103	10K ohm
R018, 118	22554564	560K ohm
R019, 119	22554473	47K ohm
R020, 120	22544102	1K ohm
R021, 121	22544103	10K ohm
R022, 122	22554104	100K ohm
R023, 123	22554333	33K ohm
R024, 124	22554473	47K ohm
R025, 125	22554331	330 ohm
R026, 126	22554683	68K ohm
R027, 127	22554332	3.3K ohm
R028, 128	22554221	220 ohm
R029, 129	22554101	100 ohm
R030, 130	22554333	33K ohm
R031, 131	22554103	10K ohm
R032, 132	22554473	47K ohm
R033, 133	22544183	18K ohm
R034, 134	22554220	22 ohm
R035, 135	22554564	560K ohm
R036, 136	22554220	22 ohm
R037, 137	22544821	820 ohm
R038, 138	22554222	2.2K ohm
R039, 139	22554101	100 ohm
R040, 140	22554333	33K ohm
R041, 141	22554472	4.7K ohm
R042, 142	22554103	10K ohm
R043, 143	22554102	1K ohm
R044, 144	22554222	2.2K ohm
R051	22554274	270K ohm
R052	22554823	82K ohm
R053	22554103	10K ohm
R054	22554332	3.3K ohm
R055	22554103	10K ohm
R056	22554123	12K ohm

Symbol No.	Part No.	Description
R057	22554123	12K ohm
R058	22554473	47K ohm
R059	22554334	330K ohm
R060	22544224	220K ohm
R061	22554103	10K ohm
R062	22554473	47K ohm
R063	22544104	100K ohm
R064	22554472	47K ohm
R065	22554103	10K ohm
R066	22554104	100K ohm
R067	22554103	10K ohm
R068	22554104	100K ohm
R069	22554103	10K ohm
R070	22554103	10K ohm
R071	22554332	3.3K ohm
R072, 172	22500070	22 Mohm
R073, 173	22500070	22 Mohm
R001D,101D	22554391	390 ohm
R002D,102D	22554105	1 Mohm
R003D,103D	22554102	1K ohm
R004D,104D	22540011	3.3K ohm
R005D,105D	22554104	100K ohm
R006D,106D	22554104	100K ohm
R007D,107D	22553473	47K ohm
R008D,108D	22554121	120 ohm
R009D,109D	22553154	150K ohm
R010D,110D	22553684	680K ohm
R011D,111D	22554274	270K ohm
R051D	22554272	2.7K ohm
R001J,101J	22554392	3.9K ohm (USA/Canada)
R201, 251	22554222	2.2K ohm
R202, 252	22554103	10K ohm
R203, 253	22554104	100K ohm
R204, 254	22554824	820K ohm
R205, 255	22554682	6.8K ohm
R206, 256	22554123	12K ohm
R207, 257	22554331	330 ohm
R208, 258	22554564	560K ohm
R209, 259	22554104	100K ohm
R210, 260	22554222	2.2K ohm
R211, 261	22554392	3.9K ohm
R212, 262	22554820	82 ohm
R213, 263	22554184	180K ohm
R214, 264	22554183	18K ohm
R215, 265	22554331	330 ohm
R217, 267	22554102	1K ohm
R218, 268	22554103	10K ohm
R219, 269	22554101	100 ohm
R220, 270	22554222	2.2K ohm
R221, 271	22554221	220 ohm

Symbol No.	Part No.	Description
R222, 272	22554103	10K ohm
R223, 273	22554102	1K ohm
R224, 274	22554473	47K ohm
R225, 275	22554102	1K ohm
R226, 276	22554103	10K ohm
R301	22554104	100K ohm
R302	22554104	100K ohm
R303	22554104	100K ohm
R304	22554104	100K ohm
R401, 451	22544102	1K ohm
R601	22572331	330 ohm, 1W, Metal Oxide Film
R602	22544102	1K ohm
R603	22544332	3.3K ohm
R604	22563470	47 ohm, 1/2W, Composition
R605	22563470	47 ohm, 1/2W, Composition
R606	22544182	1.8K ohm
R607	22544102	1K ohm
R608	22544332	3.3K ohm
R609	22544683	68K ohm
R610	22544681	680 ohm
R611	22544332	3.3K ohm
R612	22544681	680 ohm
R613	22572331	330 ohm, 1W, Metal Oxide Film
R614	22544562	5.6K ohm
R615	22544122	1.2K ohm
R616	22563100	10 ohm, 2W, Composition
R617	22570111	10 ohm, 1W, Metal Oxide Film
R618	22544105	1 Mohm
R619	22544105	1 Mohm
R620	22554103	10K ohm
R623	22554272	2.7K ohm
R101A	22544823	82K ohm
R102A	22544332	3.3K ohm
R901	22544470	47 ohm
R902	22544470	47 ohm
R903	22544470	47 ohm
VR001, 101	22658281	22K ohm, Semi-Fixed
VR002, 102	22658257	10K ohm, Semi-Fixed
VR003, 103	22658256	4.7K ohm, Semi-Fixed
VR004, 104	22658293	47K ohm, Semi-Fixed
VR005, 105	22658293	47K ohm, Semi-Fixed
VR006, 106	22658293	47K ohm, Semi-Fixed
VR051	22658257	10K ohm, Semi-Fixed
VR052	22658256	4.7K ohm, Semi-Fixed
VR053	22658256	4.7K ohm, Semi-Fixed
VR201, 251	22655407	20K ohm, Variable
VR202, 252	22655406	100K ohm, Variable

Symbol No.	Part No.	Description
VR203, 253	22651416	50K ohm, Variable
VR204, 254	22655407	20K ohm, Variable
VR401, 451	22658280	22K ohm, Semi-Fixed
VR402, 452	22658280	22K ohm, Semi-Fixed
MECHANICAL PARTS		
3	74050015	E Washer, 1.5ø
5	25772328	Spring, Pressure Roller
6	25753249	Roller, Head Slider
7	25774390	Spring, Slider
9	25764400	Nylon Washer
10	25717288	Pressure Roller Ass'y, Left
12	74050020	E Washer, 2ø
13	25717287	Pressure Roller Ass'y, Right
14	25771688	Spring, Pressure Roller
15	70432005	Screw (BID), M2 x 5mm
16	22218141	Erase Head
17	22217238	Record/Playback Head
18	25757120	Ball
20	25727229	Guide, Slider
21	70442608	Screw (FLT), M2.6 x 8mm
22	25771619	Spring, Head Slider
24	25774410	Spring, Head
28	70432604	Screw (BID), M2.6 x 4mm
32	25741374	Slider, Prevention Slider, Record
33	25771611	Spring, Button Slider
35	71232608	Tapping Screw (BID), M2.6 x 8mm
36	25711297	Cassette Guide, Right
37	25711296	Cassette Guide, Left
39	25771613	Spring, Stopper
40	25726425	Spacer
41	22871079	Screw (BID), M2.6 x 3mm
42	25724275	Bush
43	70442606	Screw (FLT), M2.6 x 6mm
45	25764246	Nylon Washer, Hub Plate
46	25772254	Spring, Hub Plate
47	25764476	Teflon Washer, Hub Plate
48	25712277	Hub Plate Ass'y
49	25735159	E Washer, Hub Plate
51	25751441	Pulley, Motor
52	22701344	Screw, Motor Pulley
53	22125636	Motor, Hub Plate
54	25735202	Washer
55	70432604	Screw (BID), M2.6 x 4mm
58	25761238	Cushion, Rubber
59	25726283	Spacer
60	74001026	Washer
61	70432608	Screw (BID), M2.6 x 8mm
62	22125635	Motor, Capstan
63	25751480	Pulley, Motor
64	25717314	Holder, Capstan
66	70432606	Screw (BID), M2.6 x 6mm
68	25761288	Belt, Brake
71	25771518	Spring, Brake Plate
72	25764398	Nylon Washer
73	25761291	Spacer
74	25717305	Flywheel Ass'y, Tape-up
75	25755305	Belt, Drive
77	25764396	Washer
81	25771544	Spring, Idler Plate
84	25724463	Pin, Plunger
87	25772351	Spring, Micro Switch
92	25724461	Pin, Plunger
93	25771439	Spring, Play Lever
95	25764252	Nylon Washer
96	25772329	Spring, FF Idler
97	25713372	Idler Ass'y, Fast Forward
98	25762356	Belt, Fast Forward
100	25713281	Idler Ass'y, Fast Forward
101	25713371	Pulley Ass'y, Take-up
102	25755278	Belt, Take-up
103	25771660	Spring, Cassette-up Plate
105	25764399	Teflon Washer
106	22705020	Rivet
107	25713379	Pulley Ass'y, ASO
110	25873150	Tape Counter
111	25755261	Belt, Tape Counter
118	25726405	Bush
119	25734326	Bush
120	25771633	Spring, Cassette-up Lever
121	25764388	Spacer
124	25761287	Tube, Lamp
125	70432605	Screw (BID), M2.6 x 5mm
126	25771687	Spring, Prevention Lever, Record
127	25773238	Spring, Play Idler
128	25753298	Collar, Head
129	25764365	Washer, Cassette Lock Lever
130	25716263	Button Ass'y, Cassette-up
131	22657126	Variable Resistor, Slide
132	25717306	Flywheel Ass'y, Supply
133	22701440	Screw, Head
CABINET PARTS		
B1	25819354	Top Panel Ass'y
B3	25812538	Back Panel Ass'y
B4	25833172	Spacer
B5	25827251	Name Plate, Calibration
B6	70432604	Screw (BID), M2.6 x 4mm
B7	25827292	Model No. Plate (USA/Canada)
	25827293	Model No. Plate (Europe)
B8	70432606	Screw (BID), M2.6 x 6mm
B9	22705020	Rivet
B10	22162258	Terminal, Earth

Symbol No.	Part No.	Description
B12	25736210	Plate, Jack (USA/Canada)
	25736403	Plate, Jack (Europe)
B13 to B16	25819365	Panel Ass'y (USA/Canada)
	23819373	Panel Ass'y (Europe)
B14	25773218	Spring, Head Cover
B15	22703165	Spacer
B16	25822382	Cover, Head
B17	22950291	Label, Dolby
B18	22826108	Knob
B19	25833277	Sheet, Power Switch
B20	22845193	Knob, Power (USA/Canada)
	25836407	Knob, Power (Europe)
B21	25822383	Cover, Cassette
B22	22826105	Knob, OUTPUT/MIC/LINE IN
B23	22826126	Knob, OUTPUT/MIC/LINE IN
B24	22826102	Knob, FADER
B25	25822380	Bottom Cover
B26	22828031	Foot, Rubber
ACCESSORIES		
	22170109	Patch Cord, TSC-2
	22954139	Owner's Manual (USA/Canada)
	22954140	Owner's Manual (Europe)
	22990093	Cushion
	22990150	Cleaner, Head
	22999160	Cloth