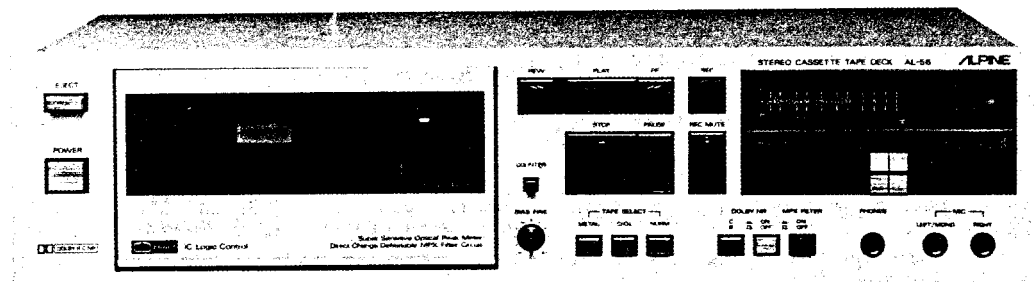


SERVICE MANUAL ALPINE

STEREO CASSETTE DECK AL55



ALPINE

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Specifications

Power Source	110/127/220/240V AC 50/60 Hz (For Multi-Voltage Model Only) 120V, AC 60 Hz (For Single-Voltage Model Only)
Power Consumption.	25W
Tape Speed	4.76 cm/sec. $\pm$ 1.5%
Wow & Flutter (JIS WRMS Playback Mode)	0.07%
FF/REW Time (C-60).	100 sec.
Frequency Response	Normal: 30 Hz $\sim$ 16 KHz, CrO ₂ : 30 Hz $\sim$ 17 KHz, Metal: 30 Hz $\sim$ 18 KHz
Rec/Play Head	Hi-B Hard Permalloy Core
Erase Head.	Double Gaps Ferrite Core
Load Impedance	Line Out: 100K ohm, Head Phone: 8 ohm
S/N Ratio (NR/OFF)	NR-B: Norm: 57 dB, Chrome/Metal: 59 dB NR-C: Norm: 63 dB, Chrome/Metal: 65 dB
Input Sensitivity	Mic: Norm/0.3mV Line: Chrome/Metal/100mV
Output Level	Line Out: 550mV $\pm$ 1 dB, Head Phone: 65mV
Stereo Separation	35 dB
Semiconductors	55 Transistors, 4 ICs, 23 Diodes, 6 Zener Diodes
Dimensions	435(W) x 106(H) x 260(D)
Weight.	4.3 kg
Distortion	3%

Parts Locations and Disassembly Instructions

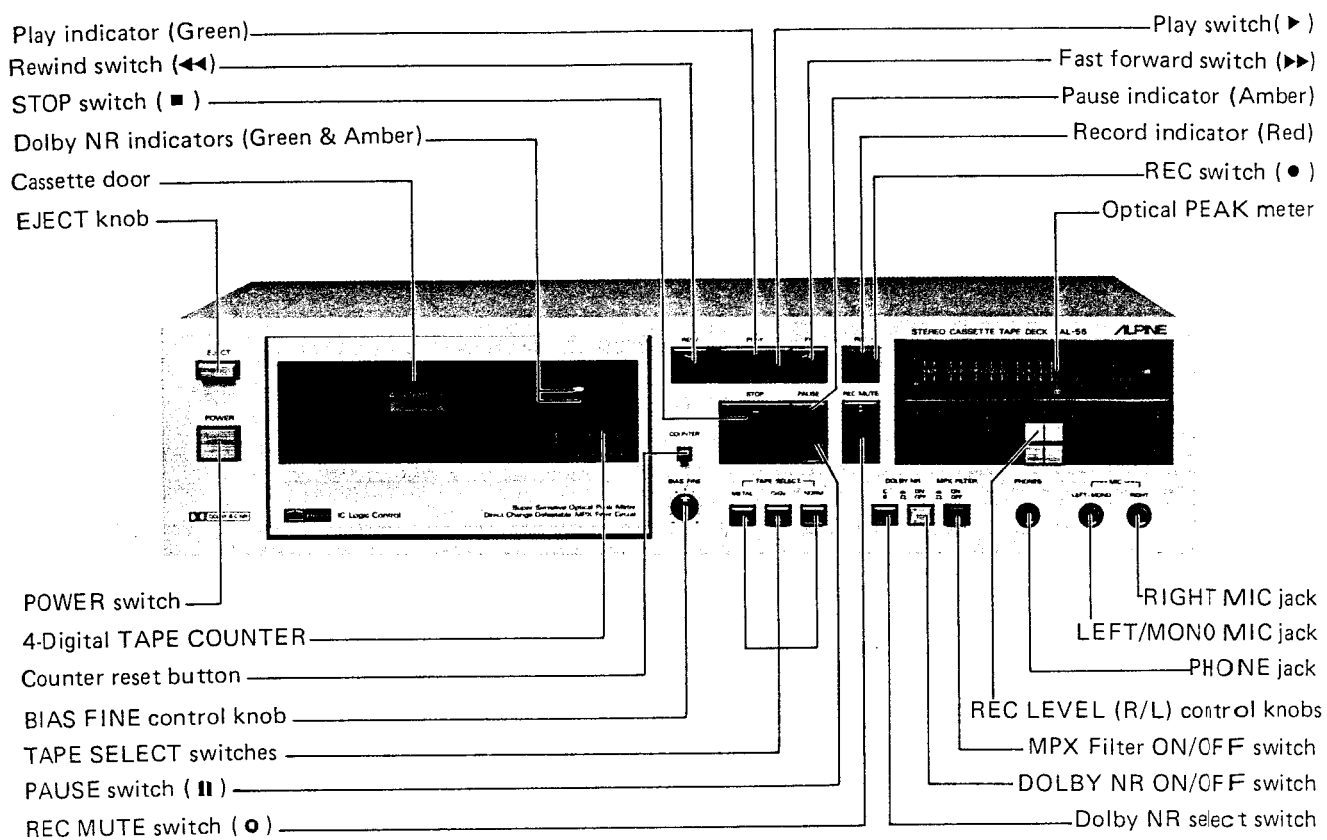


Figure 1

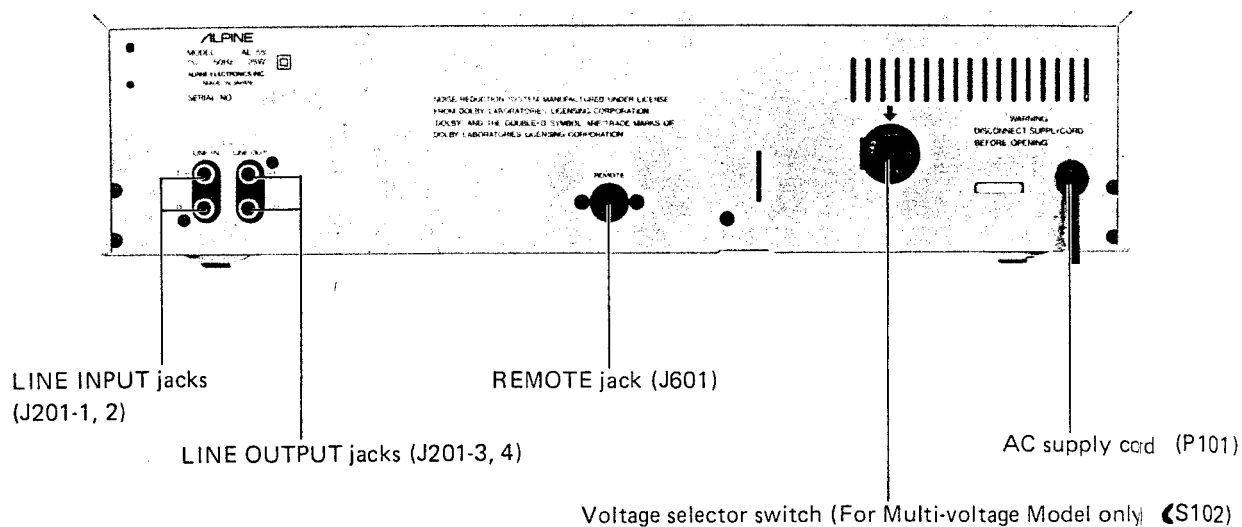


Figure 2

1. Removal of Top Cover

- (1) Remove four screws marked "○" as shown in Figures 3 and 4.
- (2) Lift up the top cover in the direction of the arrow as shown in Figure 3.

2. Removal of Front Panel

- (1) After removal of top cover, remove two connectors as shown in Figure 5.
- (2) Remove one screw marked "*" as shown in Figure 5.
- (3) Remove six screws marked "△" as shown in Figures 5 and 6.
- (4) Remove the front panel from the main chassis in the direction of the arrow as shown in Figure 3.

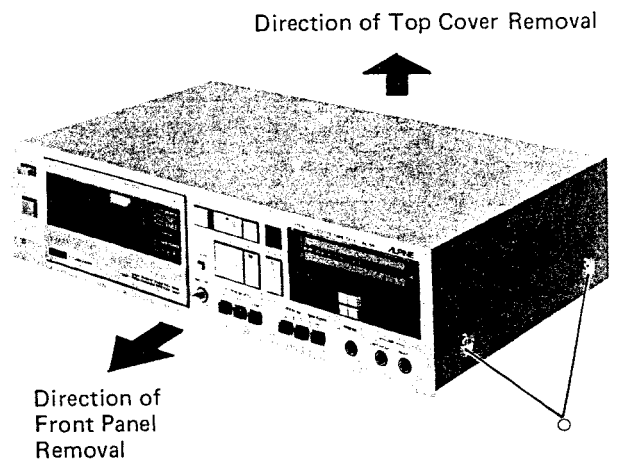


Figure 3

3. Removal of Optical Meter with Lamp P.C. Board

- (1) After removal of the top cover and front panel, remove three screws marked "●" as shown in Figure 5.
- (2) Remove the meter frame and scale meter as shown in Figure 7.
- (3) Pull out the optical meter as shown in Figure 5.
- (4) Disconnect all wires from the optical meter and Lamp P.C. Board.
- (5) Remove the optical meter with Lamp P.C. Board.

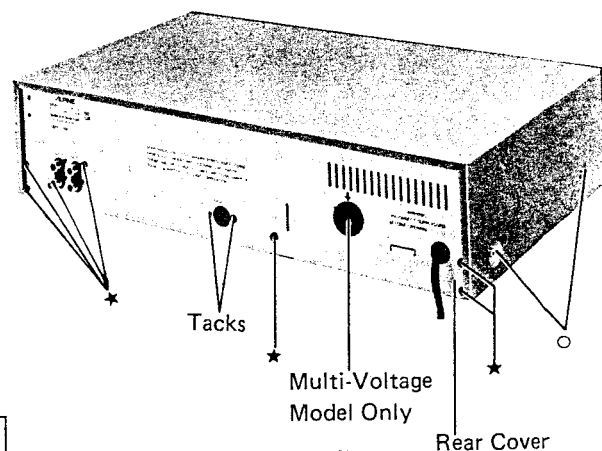


Figure 4

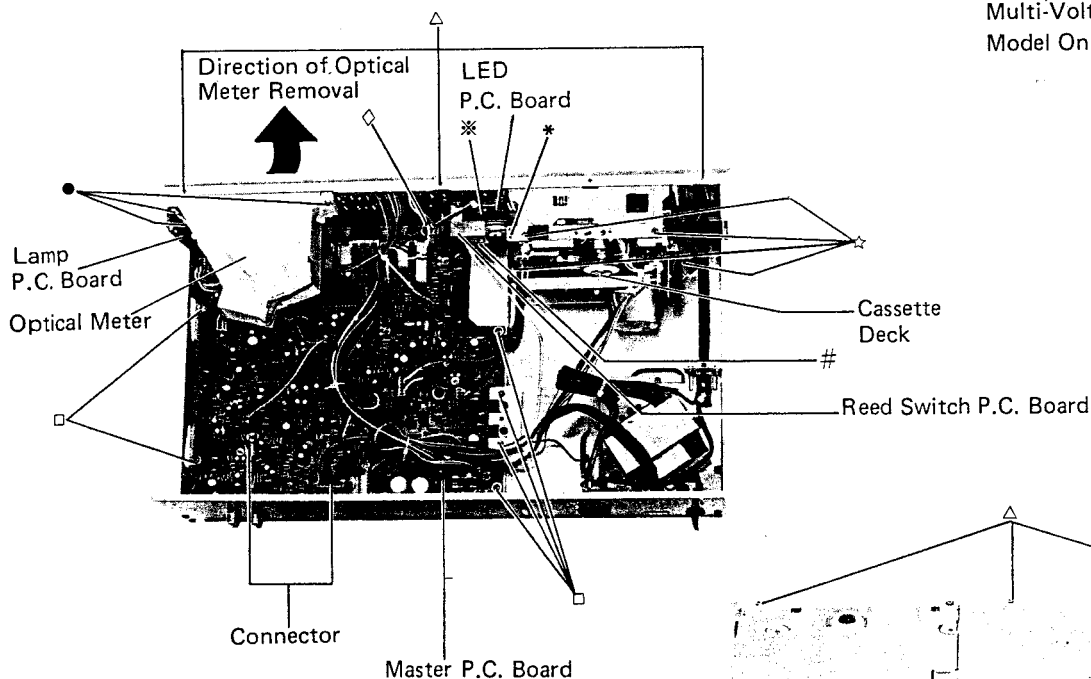


Figure 5

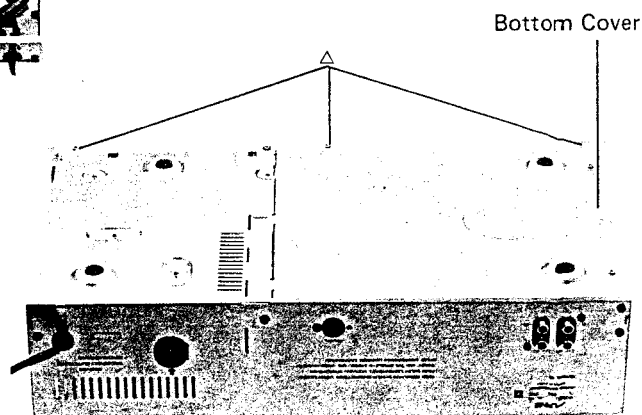


Figure 6

4. Removal of Rear Cover

- (1) After removal of the top cover, remove seven screws marked "★" as shown in Figure 4.
- (2) Remove two tacks as shown in Figure 4.
- (3) Remove the rear cover.

5. Removal of Master P.C. Board

- (1) After removal of top cover and front panel, remove six screws marked "□" from the master P.C. Board as shown in Figure 5.
- (2) Remove three jack stopper from the mic jack and phones jack as shown in Figure 7.
- (3) Remove three screws marked "◇" as shown in Figures 5 and 7.
- (4) Remove bias fine knob as shown in Figure 7.
- (5) Disconnect all wires from the master P.C. Board.
- (6) The P.C. Board can be completely removed from the chassis.

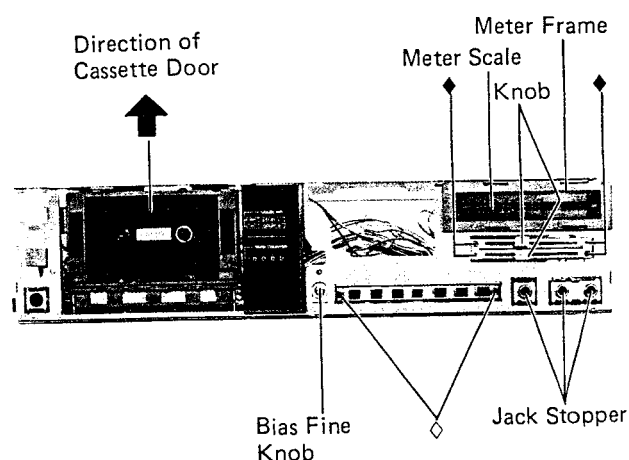


Figure 7

6. Removal of REC. VR.

- (1) Remove four screws marked "◆" as shown in Figure 7.
- (2) Remove two knobs from the REC. VR. as shown in Figure 7.
- (3) Disconnect all wires from the REC. VR.

7. Removal of Key Board P.C. Board

- (1) Remove four screws marked "▲" from the key board P.C. Board as shown in Figure 8.
- (2) Disconnect all wires from the key board P.C. Board.

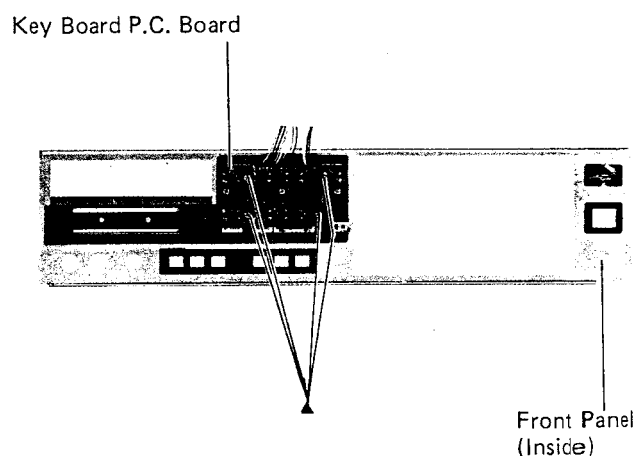


Figure 8

8. Removal of reed Switch P.C. Board

- (1) Remove one screw marked "♯" as shown in Figure 5.
- (2) Disconnect all wires from the Reed Switch P.C. Board.

9. Removal of L.E.D. P.C. Board

- (1) Remove one screw marked "※" as shown in Figure 5.
- (2) Disconnect all wires from the L.E.D. P.C. Board

10. Removal of Cassette Deck

- (1) Lift up the cassette door in the direction of the arrow as shown in Figure 7.
- (2) Remove four screws marked "☆" from the cassette deck as shown in Figure 5.
- (3) Disconnect all wires from the cassette deck.
- (4) The cassette deck can be completely removed from the chassis.

Adjustment Procedures

STEP	DESCRIPTION		MODE (SWITCH)	ADJUST POINTS	TEST POINTS	CONNECTION INSTRUCTION	REMARKS							
1	Head Azimuth Adjustment		Play Tape: Nor NR: Off	Head Azimuth Screw (Figure 10)	Line Out	Figure 9	Test Tape: MTT-114 Adjust for Maximum							
2	Tape Speed Adjustment		Play Tape: Nor NR: Off	Round hole on the rear of the motor (Figure 14)	Line Out	Figure 9	Test Tape: MTT-111 Adjust for 3000 ± 30 Hz.							
3	Playback Level Adjustment		Play Tape: Nor NR: Off	VR201 VR202	T.P.3 T.P.4	Figure 12	Test Tape: MTT-150 Test Point Output: 580 mV							
4	Input Adjustment		Record Tape: Nor NR: Off	VR203	T.P.3 T.P.4	Figure 11	Line Input: 400 Hz, 300mV Test Point Output: 580mV							
	Level Meter Adjustment		Record Tape: Nor NR: Off	VR401 VR402	Level Meter Reading	Figure 11	Line Input: 400 Hz, 300mV Adjust for 0 dB							
5	Recording Current Adjustment		Record Tape: Metal NR: Off Bias: Off (See Note)	VR501 VR502	T.P.1 T.P.2	Figure 11	Conditions at step 4. Adjust for 7.5mV. See chart below for another typical bias level. <table><tr><td>Bias</td><td>Level</td></tr><tr><td>CrO₂</td><td>6mV</td></tr><tr><td>NORM</td><td>4.8mV</td></tr></table>		Bias	Level	CrO ₂	6mV	NORM	4.8mV
Bias	Level													
CrO ₂	6mV													
NORM	4.8mV													
6	Recording Bias Adjustment	①	Record Tape: Metal NR: Off	VR505 VR506	T.P.1 T.P.2	Figure 13	Input: Non Test Point Output: 75 ~ 85mV							
		②	Record Tape: CrO ₂ NR: Off	VR503 VR504	T.P.1 T.P.2	Figure 13	Input: Non Test Point Output: 35 ~ 42mV							
		③	Record Tape: Nor NR: Off	VR508	T.P.1 T.P.2	Figure 13	Input: Non Test Point Output: 25 ~ 34mV							

Note

Bias Off: T.P.5 to ground.

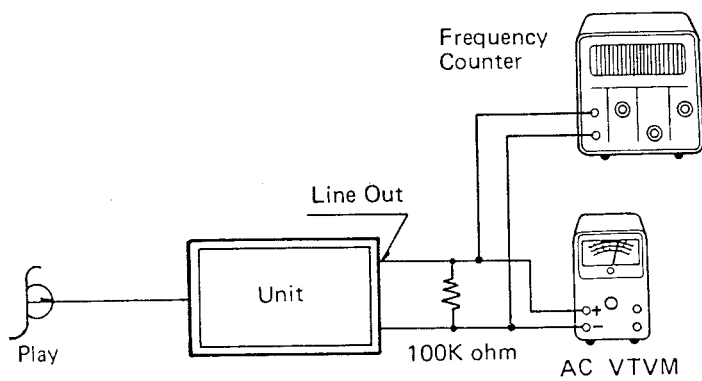


Figure 9

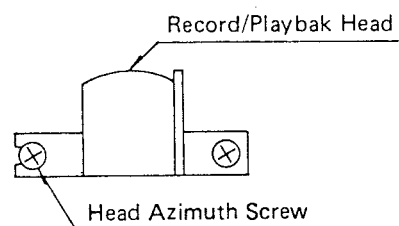


Figure 10

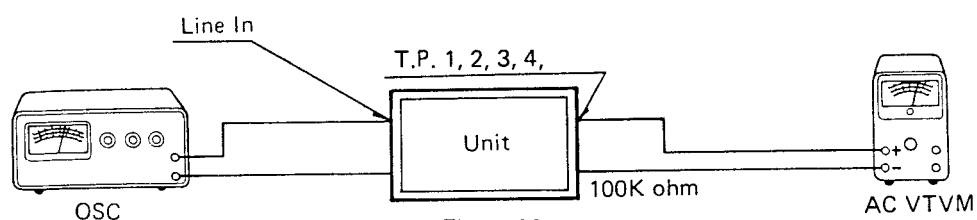


Figure 11

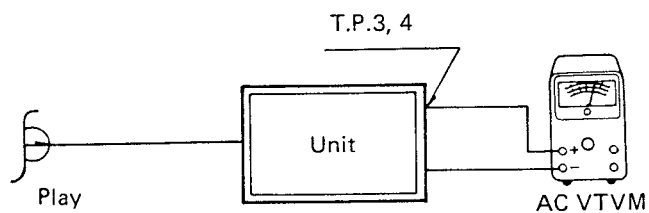


Figure 12

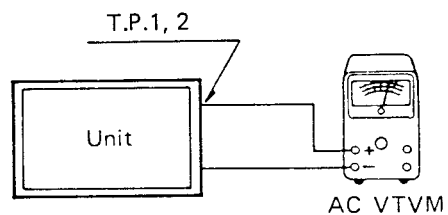


Figure 13

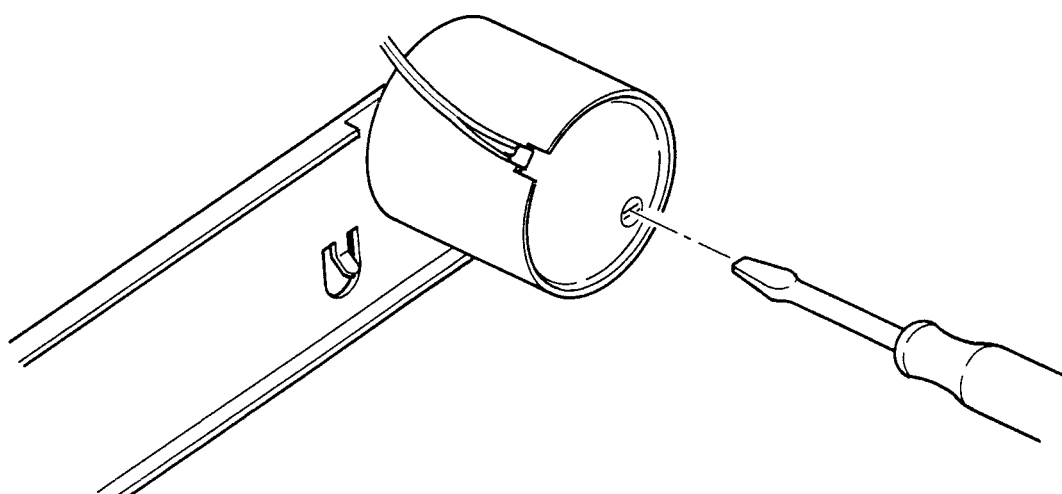
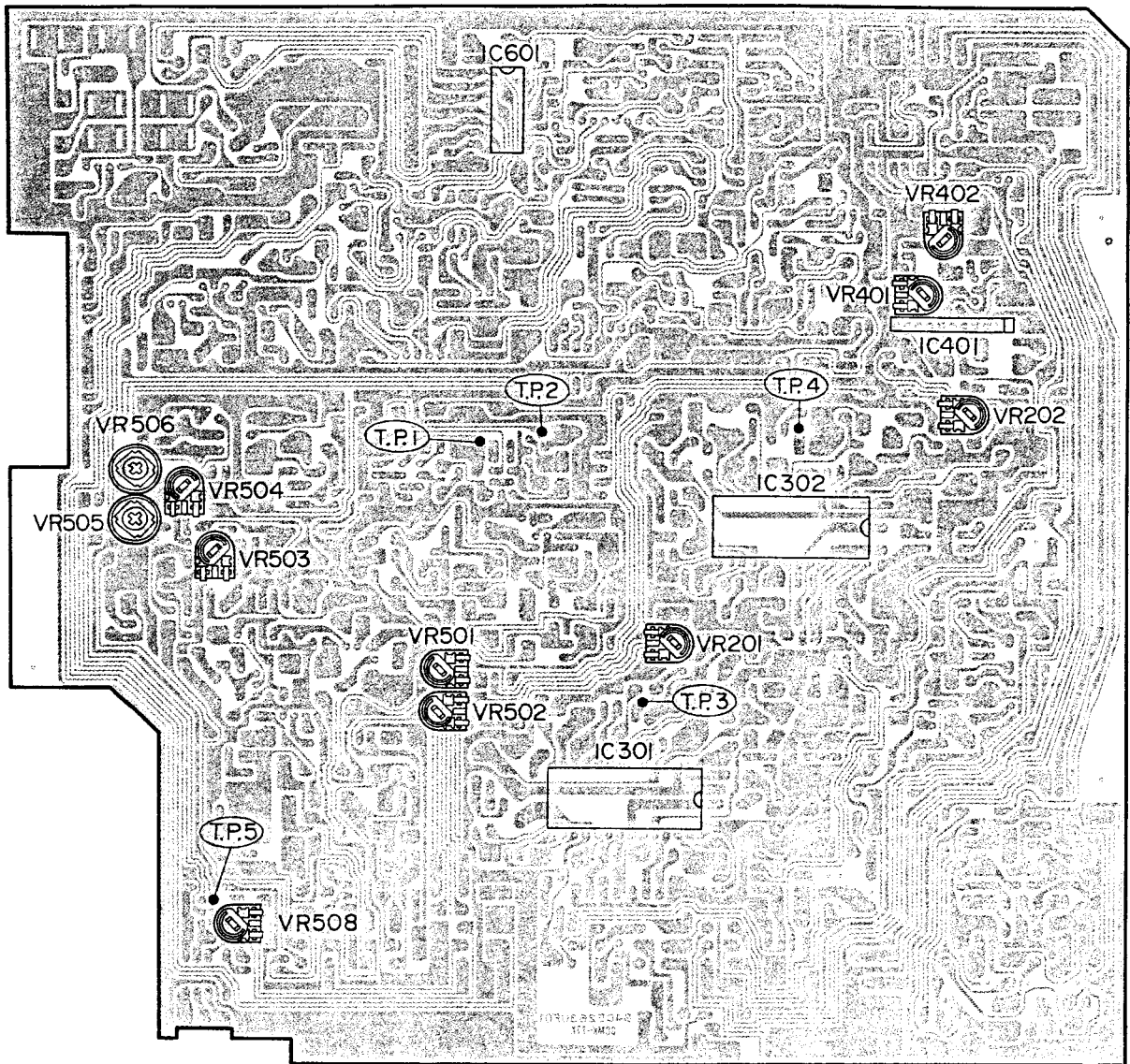


Figure 14

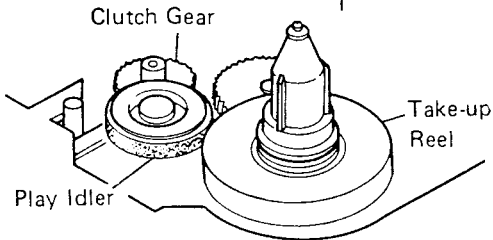
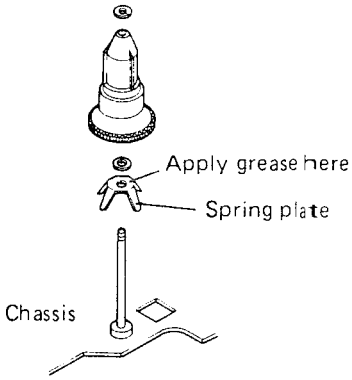
Adjustment Locations



Master Board P.C.Board

Trouble Shooting Guide

Symptom	Possible Cause	Remedies
No power.	1. Defective power switch (S101). 2. Disconnected Fuse (F101 ~ 103). (For multi-voltage model only). 3. Defective DC supply block. 4. Defective power connections.	1. Replace switch. 2. Replace fuse. 3. Check and repair DC power. 4. Check and repair wiring.
Capstan shaft does not rotate.	1. Main belt out of place or its disconnection. 2. Defective motor. 3. Burning of flywheel shaft.	1. Reinstall or replace main belt. 2. Replace motor. 3. Lubricate or replace flywheel shaft.
Head base does not go up.	1. Defective play solenoid (SD601). 2. Defective control circuit. 3. Deformation of spring plate. 4. Deformation of assist base stopper.	1. Replace play solenoid. 2. Check and repair. 3. Modify spring plate. 4. Modify the angle of bending part of assist base stopper. This diagram illustrates the mechanical components of the head base. A rectangular Solenoid is connected to a Solenoid Arm. The arm is linked to a circular Gear, which in turn is connected to a Spring Plate. Arrows indicate the direction of movement for each component. This diagram shows a cross-section of the assist base stopper. It highlights the 'Bending Part' and specifies that the angle should be '87° to 90°'. A comparison is made with a bent part that is 'More than 90°'. This diagram shows the assist base assembly. It includes a 'Bending Part' which is a curved metal piece. Below it is the 'Assist Base' which has a spring and other mechanical parts. The diagram shows how the bending part interacts with the assist base.

Symptom	Possible Cause	Remedies
Cassette tape does not run. (No taking up operation).	1. Sub belt out of place or its disconnection. 2. Slippage of play idler. 3. Defective take-up reel. 	1. Reinstall or replace sub belt. 2. Clean play idler. 3. Replace take-up reel.
FF/REW does not function.	1. Defective FF (SD603)/REW (SD602) solenoids. 2. Defective control circuit.	1. Replace them. 2. Check and repair.
Excessive wow/flutter.	1. Defective flywheel assembly. 2. Defective motor. 3. Defective drive belt. 4. Defective pinch roller assembly. 5. Slippage between tape and pinch roller. 6. Swing of center clutch. 7. Swing of back tension.	1. Replace flywheel assembly. 2. Replace motor. 3. Replace drive belt. 4. Replace pinch roller assembly. 5. Clean pinch roller. 6. Replace center clutch. 7. Modify back tension spring and apply grease on the spring plate. 
Playback does not function.	1. Dirty recording/playback head. 2. Defective recording/playback head. 3. Disconnected wire between recording/playback head and playback amplifier. 4. Defective playback level adjustment volumes (VR201, 202) or their slippage. 5. Defective playback amplifier.	1. Clean head. 2. Replace head. 3. Check wiring and repair. 4. Readjust or replace volumes. 5. Repair or replace.

Symptom	Possible Cause	Remedies
	6. Defective Dolby circuit. 7. Defective muting circuit. 8. Defective contact of line-out jack or its defect.	6. Repair or replace. 7. Repair or replace. 8. Repair or replace.
Erasing does not function. (No signal input)	1. Defective rec. inh. switch (S602). 2. Removal of safety tabs of cassette tape. 3. Dirty erase head. 4. Defective erase head. 5. Wire disconnection to erase head. 6. Defective bias OSC. 7. Defective bias OSC trans.	1. Replace switch. 2. Fix tabs. 3. Clean head. 4. Replace head. 5. Check wiring and repair. 6. Check and repair. 7. Replace trans.
Recording does not function.	1. Defective contact of line-in jack or its defect. 2. Defective contact of mic jack or its defect and defect of mic amplifier. 3. Defective rec volume (VR203). 4. Defective Dolby circuit. 5. Slippage of rec. current adjusting volumes (VR501, 502) or their defect. 6. Defective rec. amplifier. 7. Slippage of rec. bias adjusting volumes (VR503 ~ 508) or their defect. 8. Disconnected wire between recording/playback head and record amplifier. 9. Dirty recording/playback head. 10. Defective recording/playback head.	1. Repair or replace. 2. Repair or replace. 3. Replace volume. 4. Repair or replace. 5. Readjust or replace. 6. Repair or replace. 7. Repair or replace. 8. Check wiring and repair. 9. Clean head. 10. Replace head.
Distorted Sound.	1. Distortion of input signal. 2. Level-over of input signal. 3. Bias is too small or not flowing. 4. Misposition of rec. bias adjusting volume (VR503 ~ 508). 5. Large distortion of bias waveforms. 6. Magnetization of recording/playback head. 7. Dirty recording/playback head.	1. Check input signal. 2. Lower input level. 3. Adjust to suitable bias. 4. Adjust to suitable bias. 5. Check bias OSC. 6. Demagnetize with head eraser. 7. Clean head.

Replacement of Mechanical Parts

Removal of Cassette Deck

Prior to Replacement Procedures, remove the cassette deck assembly according to "Removal of Cassette Deck" on page 5.

Replacement of Head

- (1) Remove two screws marked "★" from the cassette door bracket of the cassette deck as shown in Figure 15 and the cassette door can be removed.
- (2) Remove two screws marked "○" and wires from both sides of the R/P head "A" as shown in Figure 16, and it can be removed, with head P.C. Board. Remove the head from the P.C. Board with a soldering iron.
- Remove two screws marked "●" and wires from both sides of the erase head "B" as shown in Figure 16, and it can be removed.
- (3) After finishing assembling, adjust head azimuth, height and tilt angle.
- Apply screw-lock after adjustment.

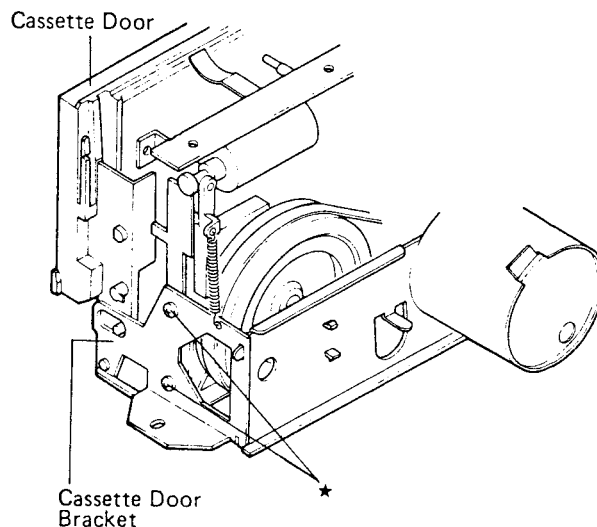


Figure 15

Replacement of Belt and Flywheel

- (1) Remove a screw marked "□" and the motor bracket, and two belts can be removed as shown in Figure 17.
- (2) Remove one washer marked "△" as shown in Figure 19 and the flywheel can be removed.
- (3) After replacing the belt and flywheel, clean them with absolute alcohol.
- (4) After finishing assembling, confirm tape speed and wow/flutter with test tape (MTT-111).

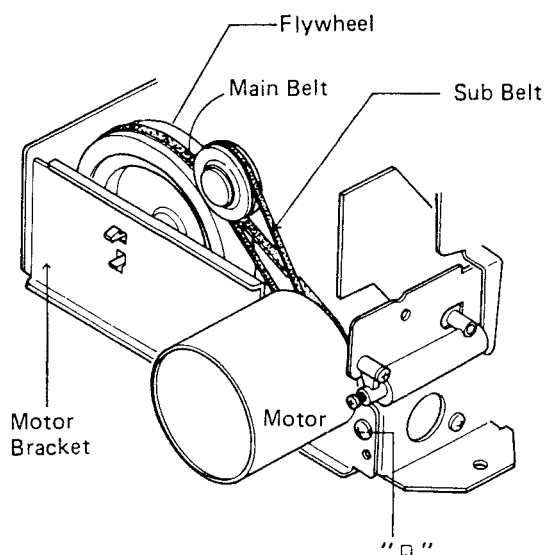


Figure 17

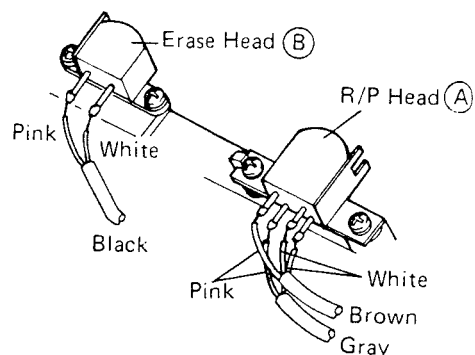
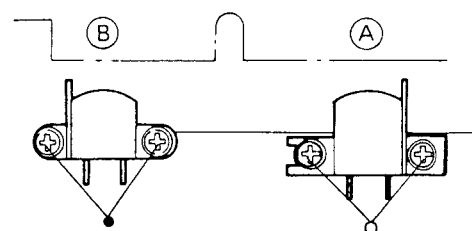


Figure 16

Replacement of Motor

- (1) Remove a screw marked "□" as shown in Figure 17 and two screws marked "*" and two wires (white, white/red) from motor side as shown in Figure 18, and the motor can be removed.
- (2) After finishing assembling, confirm tape speed and wow/flutter with test tape (MTT-111).

Replacement of Pinch Roller

- (1) Remove a washer marked "▲" to take off pinch roller assembly from the cassette deck as shown in Figure 19.
- (2) After replacing the pinch roller, clean it with absolute alcohol.
- (3) After finishing assembling, confirm tape speed and wow/flutter with test tape (MTT-111).

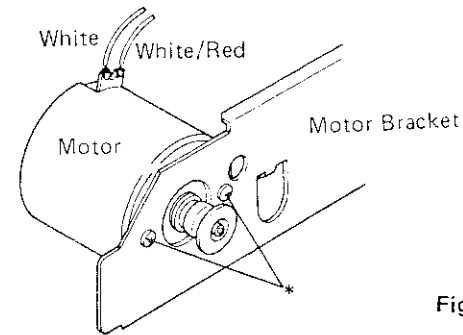


Figure 18

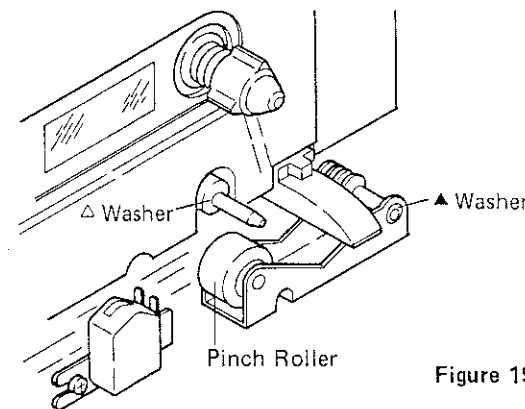
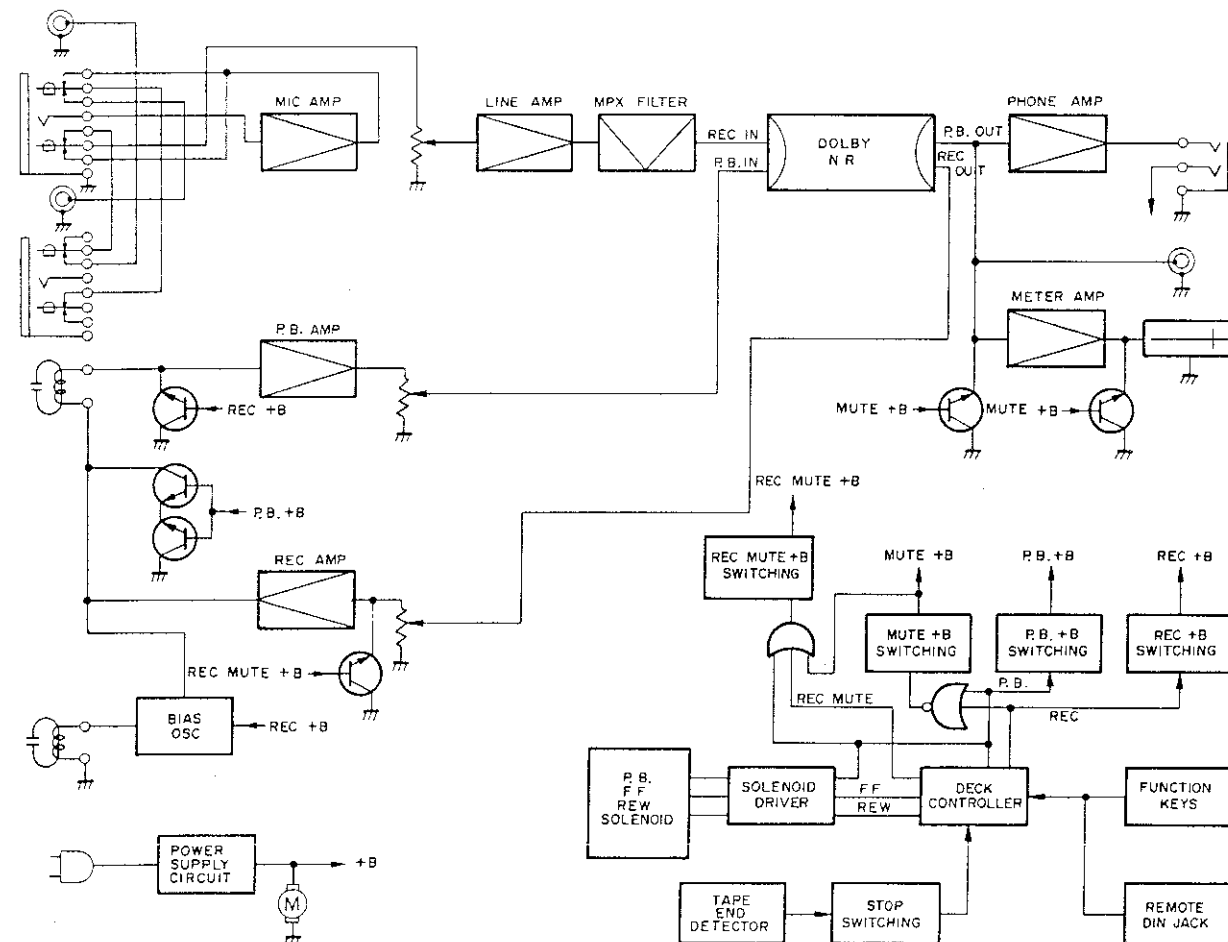


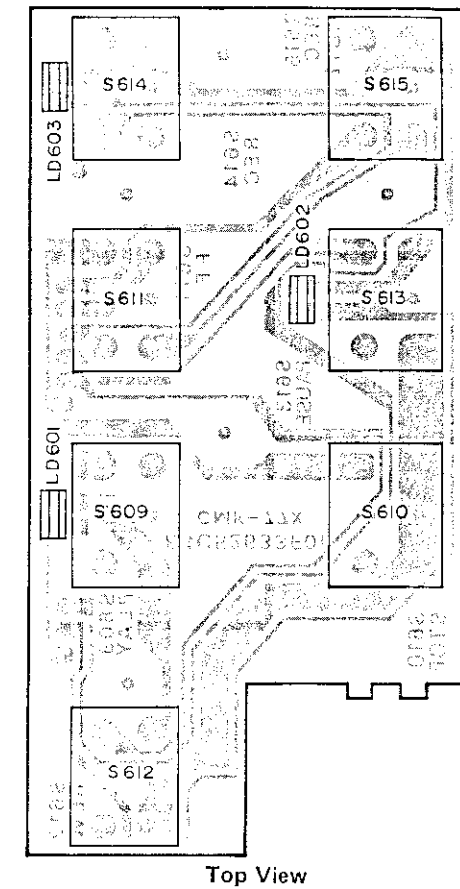
Figure 19

Block Diagram

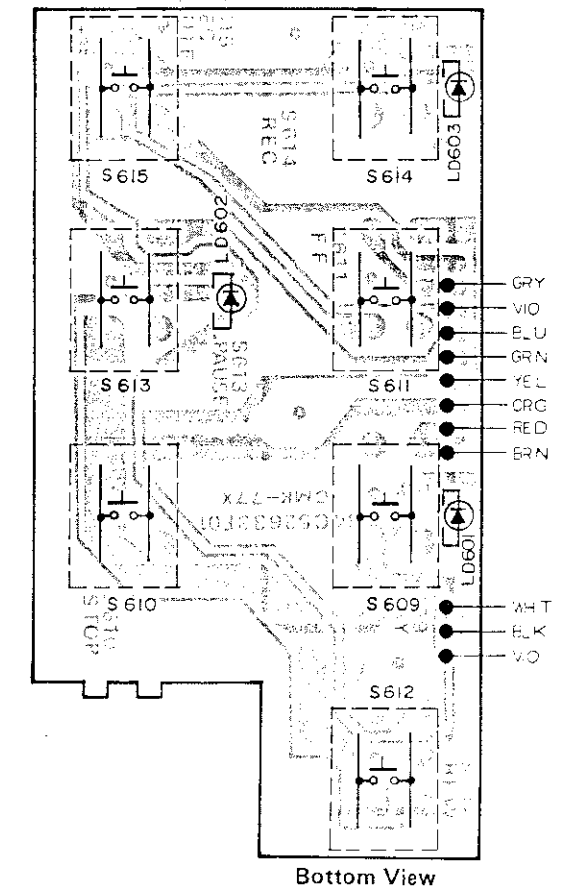


Parts Layout on P.C. Boards

Keyboard Switch P.C.Board

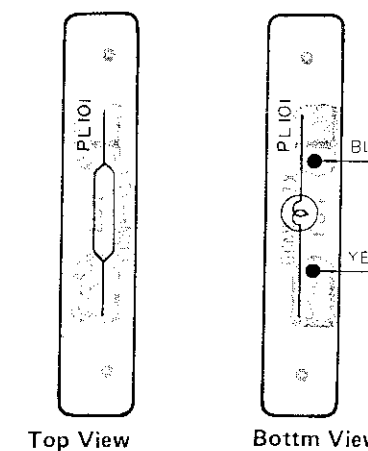


Top View



Bottom View

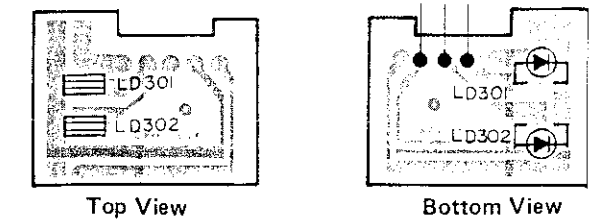
Lamp P.C.Board



Top View

Bottom View

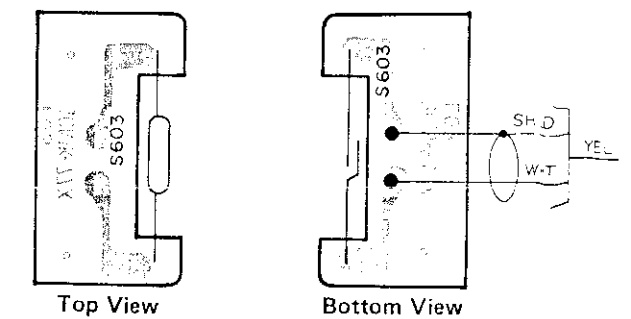
LED P.C.Board



Top View

Bottom View

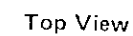
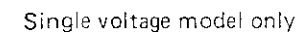
Reed Switch P.C.Board



Top View

Bottom View

Multi-voltage model only



IC301,302

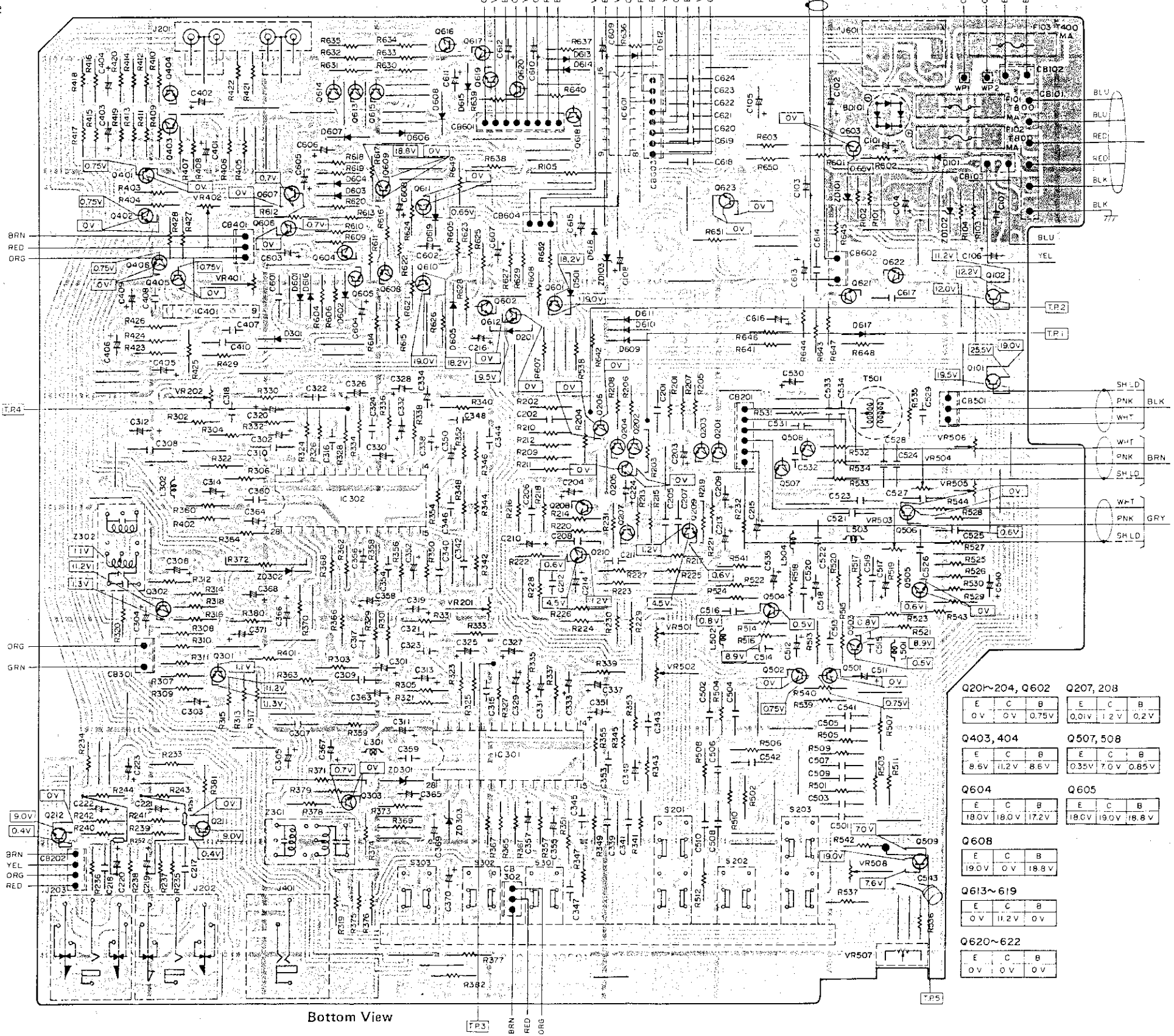
1	7.4V
2	7.7V
3	0V
4	6.0V
5	7.5V
6	6.9V
7	7.9V
8	3.9V
9	7.7V
10	0V
11	0.75V
12	0.35V
13	0V
14	7.0V
15	7.1V
16	7.7V
17	7.7V
18	7.6V
19	7.8V
20	0.9V
21	0.5V
22	7.9V
23	7.9V
24	7.9V
25	7.9V
26	0V
27	9.9V
28	15.0V

IC 401

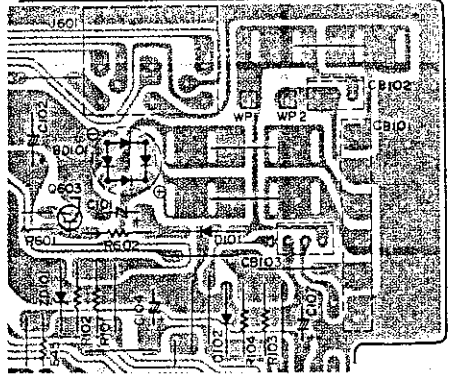
1	8.2V
2	0V
3	0V
4	8.0V
5	0V
6	8.0V
7	0V
8	0V
9	16.0V

IC601

1	5.5V
2	5.5V
3	5.5V
4	5.5V
5	5.5V
6	5.5V
7	5.5V
8	0V
9	0V
10	0V
11	0V
12	0V
13	0V
14	0V
15	0V
16	5.7V



Bottom View



Q201~204, Q602			Q207, 208		
E	C	B	E	C	B
0V	0V	0.75V	0.01V	1.2V	0.2V

Q403, 404			Q507, 508		
E	C	B	E	C	B
8.5V	11.2V	8.6V	0.35V	7.0V	0.85V

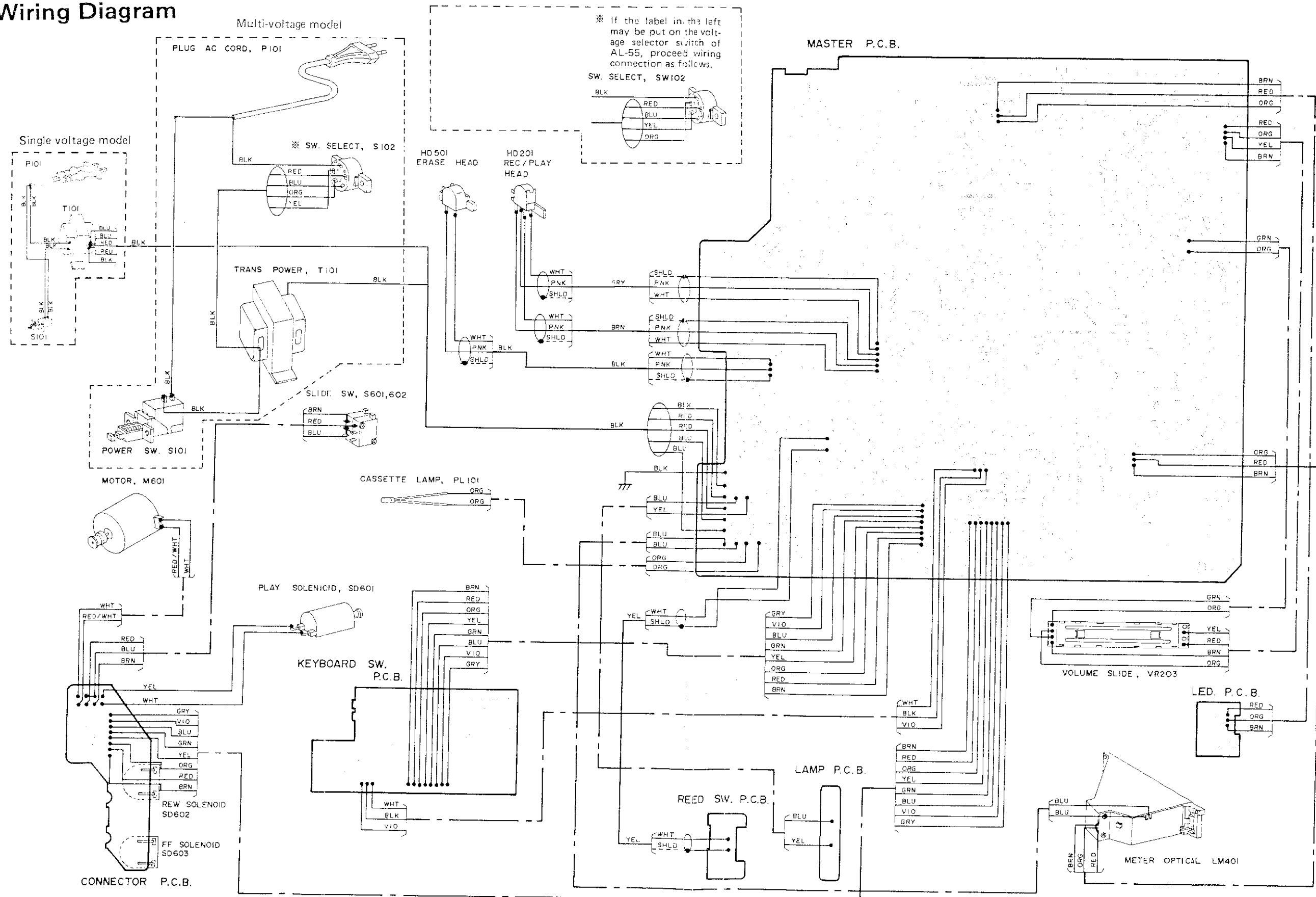
Q604			Q605		
E	C	B	E	C	B
18.0V	18.0V	17.2V	18.0V	19.0V	18.8V

Q608		
E	C	B
19.0V	0V	18.8V

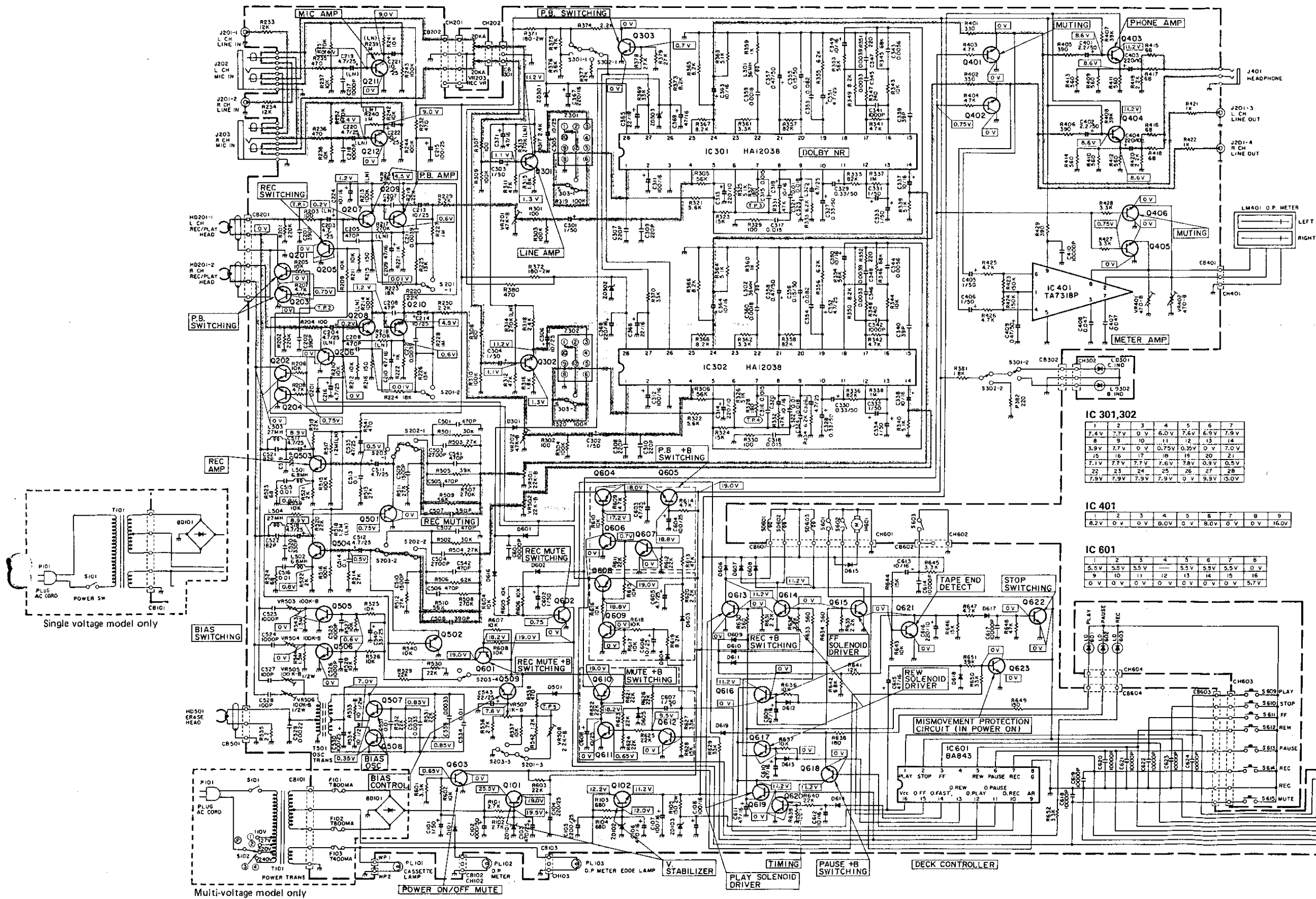
Q613~619		
E	C	B
0V	11.2V	0V

Q620~622		
E	C	B
0V	0V	0V

Wiring Diagram



Schematic Diagram



Notes:

- (1) All resistance values are in ohms. $K = 1,000$
 $M = 1,000,000$
- (2) All capacitance values are in microfarads.
 $P = 1/1,000,000$
- (3) Switches
 - S101 (Power ON/OFF): ON position
 - S102 (Power Voltage Select): 220V position
 - S201 (Tape Select, Norm): ON position
 - S202 (Tape Select, CrO₂): OFF position
 - S203 (Tape Select, Metal): OFF position
 - S301 (Dolby NR B/C): C position
 - S302 (Dolby NR ON/OFF): ON position
 - S303 (MPX Filter): ON position
 - S601 (Pack-In Detect): Pack-OUT position
 - S602 (Rec. Inh): Rec Inh
 - S603 (I Read)
 - S609 to 615 (Function)
- (4) Semiconductors

Q101, 102, 509	2SD880Y/2SD880GR
Q211, 212	2SC2263U
Q207 to 210, 301, 302, Q503, 504	2SC900E/2SC132BL/ 2SC1842E/2SC1843E
Q201 to 204, 505, 506	2SC1890/2SC1980
Q507, 508	2SC1318
Q403, 404, Q613 to 615	2SC1318R/2SC509Y 2SC1318S
Q604	2SA921/2SB788
Q601, 608, 610	2SA733
Q205, 206, 303, 405, Q406, 602, 603, 605, Q606, 607, 609, 611, Q612, 616 to 623	2SC1815Y/2SC945/ 2SD636
Q401, 402, 501, 502	2SC2878
8D101	WL02
D101, 606 to 608, 615	GP10D
D601	1S581
D201, 301, 501, D602 to 605, D609 to 614, D616 to 619	MA150
ZD101	HZ20-2
ZD102	HZ12B-3
ZD103, 303	HZ6B-2
ZD301, 302	HZ12C-3, HZ12C-2
LD301	AY4632K (AM)
LD302	PC4632K (GR)
LD601	BG4524K (GR)
LD602	PY4524K (AM)
LD603	PR4524K (RE)

- (5) Others
Z301, 302: MPX Filter
SD601: PLAY Solenoid
SD602: REW Solenoid
SD603: FF Solenoid

Electrical Parts List

Resistors (All resistors are carbon film, 1/4W, ±5% unless otherwise noted.)
 uF = microfarads, pF = picofarads

Symbol No.	Part No.	Description
Master P.C. Board Assembly		
IC's		
IC301	51T52160F01	HA12038-01
IC302	51T52160F01	HA12038-01
IC401	51T41803U01	TA7318AP-2
IC601	51S47110F01	BA843
Transistors		
Q101	48T42620F02	2SD880-Y
or	48T42620F03	2SD880-GR
Q102	48T42620F02	2SD880-Y
or	48T42620F03	2SD880-GR
Q201	48S41196U03	2SC1980-T
or	48S43394P01	2SC1890-E.F
Q202	41S41196U03	2SC1980-T
or	48S43394P01	2SC1890-E.F
Q203	48S41196U03	2SC1980-T
or	48S43394P01	2SC1890-E.F
Q204	48S41196U03	2SC1980-T
or	48S43394P01	2SC1890-E.F
Q205	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q206	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q207	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E
Q208	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E
Q209	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E

Symbol No.	Part No.	Description
Q210	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E
Q211	48T41195U04	2SC2263-U
Q212	48T41195U04	2SC2263-U
Q301	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E
Q302	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E
Q303	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q401	48T51878F01	2SC2878-A.B
Q402	48T51878F01	2SC2878-A.B
Q403	48S40832F04	2SC1318NC-S
or	48S40832F03	2SC1318NC-R
or	48S43239G02	2SC509-Y
Q404	48S40832F04	2SC1318NC-S
or	48S40832F03	2SC1318NC-R
or	48S43239G02	2SC509-Y
Q405	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q406	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q501	48T51878F01	2SC2878-A.B
Q502	48T51878F01	2SC2878-A.B
Q503	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E
Q504	48S40246G01	2SC732-BL
or	48S40149P01	2SC900-E
or	48S47708F04	2SC1842-E
or	48S47706F04	2SC1843-E

Symbol No.	Part No.	Description
Q505	48S41196U03	2SC1980-T
or	48S43394P01	2SC1890-E.F
Q506	48S41196U03	2SC1980-T
or	48S43394P01	2SC1890-E.F
Q507	48S40832F03	2SC1318NC-R
Q508	48S40832F03	2SC1318NC-R
Q509	48T42620F02	2SD880-Y
or	48T42620F03	2SD880-GR
Q601	48T40081T03	2SA733-P
Q602	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q603	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q604	48T44763F01	2SB788-S
or	48T44763F02	2SB788-T
or	48T42941U01	2SA921-S
or	48T42941U02	2SA921-T
Q605	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q606	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q607	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q608	48T40081T03	2SA733-P
Q609	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q610	48T40081T03	2SA733-P
Q611	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q612	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q613	48S40832F04	2SC1318NC-S
or	48S40832F03	2SC1318NC-R
or	48S43239G02	2SC509-Y
Q614	48S40832F04	2SC1318NC-S
or	48S40832F03	2SC1318NC-R
or	48S43239G02	2SC509-Y

Symbol No.	Part No.	Description
Q615	48S40832F04	2SC1318NC-S
or	48S40832F03	2SC1318NC-R
or	48S43239G02	2SC509-Y
Q616	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q617	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q618	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q619	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q620	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q621	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q622	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Q623	48S43525F02	2SC1815-Y
or	48S44578J01	2SC945L-P
or	48S40627U01	2SD636-Q
Diodes		
D101	48T55186F01	GP10D
D201	48T51582F01	MA-150
or	48T51881F01	DS442-BT
D301	48T51582F01	MA-150
or	48T51881F01	DS442-BT
D501	48T51582F01	MA-150
or	48T51881F01	DS442-BT
D601	48T53429F01	1SS81
D602	48T51582F01	MA-150
or	48T51881F01	DS442-BT
D603	48T51582F01	MA-150
or	48T51881F01	DS442-BT
D604	48T51582F01	MA-150
or	48T51881F01	DS442-BT
D605	48T51582F01	MA-150
or	48T51881F01	DS442-BT

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
D606	48T55186F01	GP10D	Capacitors		
D607	48T55186F01	GP10D	C101	23S40657F28	Electrolytic 1 μ F/50V
D608	48T55186F01	GP10D	C102	23S41198U67	Electrolytic 1000 μ F/50V
D609	48T51582F01	MA-150	C103	23S41198U57	Electrolytic 470 μ F/25V
or	48T51881F01	DS442-BT	C104	23S41198U42	Electrolytic 220 μ F/25V
D610	48T51582F01	MA-150	C105	23S41198U72	Electrolytic 2200 μ F/25V
or	48T51881F01	DS442-BT	C106	23S41198U56	Electrolytic 470 μ F/16V
D611	48T51582F01	MA-150	C107	23S40657F14	Electrolytic 100 μ F/16V
or	48T51881F01	DS442-BT	C108	23S40657F14	Electrolytic 100 μ F/16V
D612	48T51582F01	MA-150	C201	8S44505P44	Ceramic 390 pF
or	48T51881F01	DS442-BT	C202	8S44505P44	Ceramic 390 pF
D613	48T51582F01	MA-150	C203	23T42478F09	Electrolytic 4.7 μ F/25V
or	48T51881F01	DS442-BT	C204	23T42478F09	Electrolytic 4.7 μ F/25V
D614	48T51582F01	MA-150	C205	8S44505P45	Ceramic 470 pF
or	48T51881F01	DS442-BT	C206	8S44505P45	Ceramic 470 pF
D615	48T55186F01	GP10D	C207	8S44505P29	Ceramic 47 pF
D616	48T51582F01	MA-150	C208	8S44505P29	Ceramic 47 pF
or	48T51881F01	DS442-BT	C209	23S40657F13	Electrolytic 47 μ F/16V
D617	48T51582F01	MA-150	C210	23S40657F13	Electrolytic 47 μ F/16V
or	48T51881F01	DS442-BT	C211	8S40656F08	Mylar 0.0039 μ F
D618	48T51582F01	MA-150	C212	8S40656F08	Mylar 0.0039 μ F
or	48T51881F01	DS442-BT	C213	23S40657F17	Electrolytic 10 μ F/25V
D619	48T51582F01	MA-150	C214	23S40657F17	Electrolytic 10 μ F/25V
or	48T51881F01	DS442-BT	C215	23S40657F21	Electrolytic 100 μ F/25V
ZD101	48T52739F86	Zener HZ20-2	C216	23S40657F16	Electrolytic 4.7 μ F/25V
ZD102	48T52739F75	Zener HZ12B-3	C217	8S44505P49	Ceramic 1000 pF
ZD103	48T52739F38	Zener HZ6B-2	C218	8S44505P49	Ceramic 1000 pF
ZD301	48T52740F08	Zener HZ12C-2	C219	23T42478F09	Electrolytic 4.7 μ F/25V
or	48T52740F09	Zener HZ12C-3	C220	23T42478F09	Electrolytic 4.7 μ F/25V
ZD302	48T52740F08	Zener HZ12C-2	C221	23S40657F17	Electrolytic 10 μ F/25V
or	48T52740F09	Zener HZ12C-3	C222	23S40657F17	Electrolytic 10 μ F/25V
ZD303	48T52739F38	Zener HZ6B-2	C224	23S40657F10	Electrolytic 10 μ F/16V
BD101	48T50629F01	Bridge WL-02	C301	23S40657F28	Electrolytic 1 μ F/50V
Fuses & Filter			C302	23S40657F28	Electrolytic 1 μ F/50V
• F101	65T42077U15	Fuse, 800 mA	C303	23S40657F28	Electrolytic 1 μ F/50V
• F102	65T42077U15	Fuse, 800 mA	C304	23S40657F28	Electrolytic 1 μ F/50V
• F103	65T42077U12	Fuse, 400 mA	C305	23S40657F17	Electrolytic 10 μ F/25V
Z301	51T42537U01	Filter, MPX LP-V20	C306	23S40657F17	Electrolytic 10 μ F/25V
Z302	51T42537U01	Filter, MPX LP-V20	C307	8S44505P41	Ceramic 220 pF
			C308	8S44505P41	Ceramic 220 pF

•: For multi-voltage model only

Symbol No.	Part No.	Description
C309	8S44505P41	Ceramic 220 pF
C310	8S44505P41	Ceramic 220 pF
C311	23S40657F14	Electrolytic 100 μ F/16V
C312	23S40657F14	Electrolytic 100 μ F/16V
C313	23S40657F09	Electrolytic 220 μ F/10V
C314	23S40657F09	Electrolytic 220 μ F/10V
C315	8S40656F15	Mylar 0.015 μ F
C316	8S40656F15	Mylar 0.015 μ F
C317	8S40656F15	Mylar 0.015 μ F
C318	8S40656F15	Mylar 0.015 μ F
C319	23S40657F10	Electrolytic 10 μ F/16V
C320	23S40657F10	Electrolytic 10 μ F/16V
C321	8S40656F13	Mylar 0.01 μ F
C322	8S40656F13	Mylar 0.01 μ F
C323	8S40656F16	Mylar 0.018 μ F
C324	8S40656F16	Mylar 0.018 μ F
C325	23S40657F16	Electrolytic 4.7 μ F/25V
C326	23S40657F16	Electrolytic 4.7 μ F/25V
C327	23T42478F21	Electrolytic 0.33 μ F/50V
C328	23T42478F21	Electrolytic 0.33 μ F/50V
C329	23T42478F21	Electrolytic 0.33 μ F/50V
C330	23T42478F21	Electrolytic 0.33 μ F/50V
C331	23S40657F28	Electrolytic 1 μ F/50V
C332	23S40657F28	Electrolytic 1 μ F/50V
C333	23S40657F28	Electrolytic 1 μ F/50V
C334	23S40657F28	Electrolytic 1 μ F/50V
C337	23S40657F10	Electrolytic 10 μ F/16V
C338	23S40657F10	Electrolytic 10 μ F/16V
C339	8S44505P27	Ceramic 39 pF
C340	8S44505P27	Ceramic 39 pF
C341	8S44505P49	Ceramic 1000 pF
C342	8S44505P49	Ceramic 1000 pF
C343	8S40656F10	Mylar 0.0056 μ F
C344	8S40656F10	Mylar 0.0056 μ F
C345	8S40656F07	Mylar 0.0033 μ F
C346	8S40656F07	Mylar 0.0033 μ F
C347	8S40656F08	Mylar 0.0039 μ F
C348	8S40656F08	Mylar 0.0039 μ F
C349	23S40657F10	Electrolytic 10 μ F/16V
C350	23S40657F10	Electrolytic 10 μ F/16V
C351	23S40657F16	Electrolytic 4.7 μ F/25V
C352	23S40657F16	Electrolytic 4.7 μ F/25V
C353	8S40656F24	Mylar 0.082 μ F
C354	8S40656F24	Mylar 0.082 μ F
C355	23T42478F19	Electrolytic 0.15 μ F/50V

Symbol No.	Part No.	Description
C356	23T42478F19	Electrolytic 0.15 μ F/50V
C357	23S40657F27	Electrolytic 0.47 μ F/50V
C358	23S40657F27	Electrolytic 0.47 μ F/50V
C359	8S40656F04	Mylar 0.0018 μ F
C360	8S40656F04	Mylar 0.0018 μ F
C363	23S40657F10	Electrolytic 10 μ F/16V
C364	23S40657F10	Electrolytic 10 μ F/16V
C365	23S40657F11	Electrolytic 22 μ F/16V
C366	23S40657F11	Electrolytic 22 μ F/16V
C367	23S40657F52	Electrolytic 220 μ F/16V
C368	23S40657F52	Electrolytic 220 μ F/16V
C369	23S40657F13	Electrolytic 47 μ F/16V
C371	23S40657F13	Electrolytic 47 μ F/16V
C401	23S40657F29	Electrolytic 2.2 μ F/50V
C402	23S40657F29	Electrolytic 2.2 μ F/50V
C403	23S40657F09	Electrolytic 220 μ F/10V
C404	23S40657F09	Electrolytic 220 μ F/10V
C405	23S40657F28	Electrolytic 1 μ F/50V
C406	23S40657F28	Electrolytic 1 μ F/50V
C407	8S40656F21	Mylar 0.047 μ F
C408	8S40656F21	Mylar 0.047 μ F
C409	23S40657F27	Electrolytic 0.47 μ F/50V
C410	8S44505P61	Ceramic 10000 pF
C501	8S44505P45	Ceramic 470 pF
C502	8S44505P45	Ceramic 470 pF
C503	8S44505P54	Ceramic 2700 pF
C504	8S44505P54	Ceramic 2700 pF
C505	8S44505P45	Ceramic 470 pF
C506	8S44505P45	Ceramic 470 pF
C507	8S44505P44	Ceramic 390 pF
C508	8S44505P44	Ceramic 390 pF
C509	8S44505P51	Ceramic 1500 pF
C510	8S44505P51	Ceramic 1500 pF
C511	23S40657F16	Electrolytic 4.7 μ F/25V
C512	23S40657F16	Electrolytic 4.7 μ F/25V
C513	8S40656F25	Mylar 0.1 μ F
C514	8S40656F25	Mylar 0.1 μ F
C515	8S44505F13	Mylar 0.01 μ F
C516	8S44505F13	Mylar 0.01 μ F
C517	23S40657F16	Electrolytic 4.7 μ F/25V
C518	23S40657F16	Electrolytic 4.7 μ F/25V
C519	8S44505P43	Ceramic 330 pF
C520	8S44505P43	Ceramic 330 pF
C521	8S44505P35	Ceramic 82 pF

Symbol No.	Part No.	Description
C522	8S44505P35	Ceramic 82 pF
C523	8S44505P49	Ceramic 1000 pF
C524	8S44505P49	Ceramic 1000 pF
C525	8S44505P49	Ceramic 1000 pF
C526	8S44505P49	Ceramic 1000 PF
C527	8S44505P37	Ceramic 100 pF
C528	8S44505P37	Ceramic 100 pF
C529	8T52448F21	Polypropylene 0.0022 μ F
C530	23S40657F21	Electrolytic 100 μ F/25V
C531	8S40656F13	Mylar 0.01 μ F
C532	8S40656F07	Mylar 0.0033 μ F
C533	8S40656F07	Mylar 0.0033 μ F
C534	8S40656F13	Mylar 0.01 μ F
C535	23S40657F20	Electrolytic 47 μ F/25V
C540	23S40657F19	Electrolytic 33 μ F/25V
C541	8S44505P45	Ceramic 470 pF
C542	8S44505P45	Ceramic 470 pF
C543	23S40657F18	Electrolytic 22 μ F/25V
C601	8S44505P61	Ceramic 10000 pF
C602	23S40657F28	Electrolytic 1 μ F/50V
C603	23S40657F16	Electrolytic 4.7 μ F/25V
C604	23S40657F21	Electrolytic 100 μ F/25V
C605	23S40657F16	Electrolytic 4.7 μ F/25V
C606	23S40657F17	Electrolytic 10 μ F/25V
C607	23S40657F28	Electrolytic 1 μ F/50V
C608	23S40657F17	Electrolytic 10 μ F/25V
C609	23S40657F13	Electrolytic 47 μ F/16V
C610	23S40657F13	Electrolytic 47 μ F/16V
C611	23S40657F13	Electrolytic 47 μ F/16V
C612	23S40657F10	Electrolytic 10 μ F/16V
C613	23S40657F10	Electrolytic 10 μ F/16V
C614	8S44505P61	Ceramic 10000 pF
C615	23S40657F13	Electrolytic 47 μ F/16V
C616	23S40657F09	Electrolytic 220 μ F/10V
C617	8S44505P61	Ceramic 10000 pF
C618	8S44505P61	Ceramic 10000 pF
C619	8S44505P61	Ceramic 10000 pF
C620	8S44505P61	Ceramic 10000 pF
C621	8S44505P61	Ceramic 10000 pF
C622	8S44505P61	Ceramic 10000 pF
C623	8S40656F25	Mylar 0.1 μ F
C624	8S44505P61	Ceramic 10000 pF

Symbol No.	Part No.	Description
Resistors		
R101	6S44593P75	2.7K ohm
R102	6S44593P75	2.7K ohm
R103	6S44593P61	680 ohm
R104	6S44593P61	680 ohm
R105	6T51108F19	Metal Film 150 ohm 2W
R201	6S44594P22	220K ohm
R202	6S44594P22	220K ohm
R203	6S44593P41	100 ohm
R204	6S44593P41	100 ohm
R205	6S44593P89	10K ohm
R206	6S44593P89	10K ohm
R207	6S44593P81	4.7K ohm
R208	6S44593P81	4.7K ohm
R209	6S44593P89	10K ohm
R210	6S44593P89	10K ohm
R211	6S44593P89	10K ohm
R212	6S44593P89	10K ohm
R213	6S40106T14	100K ohm
R214	6S40106T14	100K ohm
R215	6S44593P45	150 ohm
R216	6S44593P45	150 ohm
R217	6S40106T24	270K ohm
R218	6S40106T24	270K ohm
R219	6S44593P97	22K ohm
R220	6S44593P97	22K ohm
R221	6S44593P65	1K ohm
R222	6S44593P65	1K ohm
R223	6S44593P95	18K ohm
R224	6S44593P95	18K ohm
R225	6S44593P92	13K ohm
R226	6S44593P92	13K ohm
R227	6S44594P38	1M ohm
R228	6S44594P38	1M ohm
R229	6S44593P73	2.2K ohm
R230	6S44593P73	2.2K ohm
R231	6S44593P99	27K ohm
R232	6S44593P57	470 ohm
R233	6S44593P91	12K ohm
R234	6S44593P91	12K ohm
R235	6S44593P57	470 ohm
R236	6S44593P57	470 ohm
R237	6S44593P89	10K ohm
R238	6S44593P89	10K ohm
R239	6S44594P38	1M ohm
R240	6S44594P38	1M ohm

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R241	6S44593P89	10K ohm	R331	6S44594P06	47K ohm
R242	6S44593P89	10K ohm	R332	6S44594P06	47K ohm
R243	6S40106T14	100K ohm	R333	6S44593P84	6.2K ohm
R244	6S40106T14	100K ohm	R334	6S44593P84	6.2K ohm
R251	6S41801P64	470K ohm	R335	6S44594P12	82K ohm
R252	6S41801P64	470K ohm			
R301	6S44593P41	100 ohm	R336	6S44594P12	82K ohm
R302	6S44593P41	100 ohm	R337	6S44594P38	1M ohm
R303	6S44594P14	100K ohm	R338	6S44594P38	1M ohm
R304	6S44594P14	100K ohm	R339	6S44593P82	5.1K ohm
R305	6S44594P08	56K ohm	R340	6S44593P82	5.1K ohm
R306	6S44594P08	56K ohm			
R307	6S44593P41	100 ohm	R341	6S44593P81	4.7K ohm
R308	6S44593P41	100 ohm	R342	6S44593P81	4.7K ohm
R309	6S44594P14	100K ohm	R343	6S44593P89	10K ohm
R310	6S44594P14	100K ohm	R344	6S44593P89	10K ohm
R311	6S44594P06	47K ohm	R345	6S44594P10	68K ohm
R312	6S44594P06	47K ohm			
R313	6S40106T24	270K ohm	R346	6S44594P10	68K ohm
R314	6S40106T24	270K ohm	R347	6S44593P50	240 ohm
R315	6S44593P71	1.8K ohm	R348	6S44593P50	240 ohm
R316	6S44593P71	1.8K ohm	R349	6S44593P87	8.2K ohm
R317	6S44593P74	2.4K ohm	R350	6S44593P87	8.2K ohm
R318	6S44593P74	2.4K ohm			
R319	6S44594P14	100K ohm	R351	6S44593P49	220 ohm
R320	6S44594P14	100K ohm	R352	6S44593P49	220 ohm
R321	6S44593P83	5.6K ohm	R353	6S44594P08	56K ohm
R322	6S44593P83	5.6K ohm	R354	6S44594P08	56K ohm
R323	6S44593P93	15K ohm	R355	6S44593P84	6.2K ohm
R324	6S44593P93	15K ohm			
R325	6S44593P82	5.1K ohm	R356	6S44593P84	6.2K ohm
R326	6S44593P82	5.1K ohm	R357	6S44594P12	82K ohm
R327	6S44593P47	180 ohm	R358	6S44594P12	82K ohm
R328	6S44593P47	180 ohm	R359	6S44593P65	1K ohm
R329	6S44593P41	100 ohm	R360	6S44593P65	1K ohm
R330	6S44593P41	100 ohm			
R321	6S44593P83	5.6K ohm	R361	6S44593P77	3.3K ohm
R322	6S44593P83	5.6K ohm	R362	6S44593P77	3.3K ohm
R323	6S44593P93	15K ohm	R363	6S44593P82	5.1K ohm
R324	6S44593P93	15K ohm	R364	6S44593P82	5.1K ohm
R325	6S44593P82	5.1K ohm	R365	6S44593P87	8.2K ohm
R326	6S44593P82	5.1K ohm			
R327	6S44593P47	180 ohm	R366	6S44593P87	8.2K ohm
R328	6S44593P47	180 ohm	R367	6S44593P87	8.2K ohm
R329	6S44593P41	100 ohm	R368	6S44593P87	8.2K ohm
R330	6S44593P41	100 ohm	R369	6S44594P02	33K ohm
			R370	6S44594P02	33K ohm
			R371	6T51108F21	Metal Film 180 ohm 2/W
			R372	6T51108F21	Metal Film 180 ohm 2/W
			R373	6S44593P87	8.2K ohm
			R374	6S44593P73	2.2K ohm
			R375	6S44593P81	4.7K ohm

Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
R376	6S44593P83	5.6K ohm	R511	6S44593P99	27K ohm
R377	6S44594P06	47K ohm	R512	6S44593P99	27K ohm
R378	6S44593P99	27K ohm	R513	6S44593P99	27K ohm
R379	6S44593P99	27K ohm	R514	6S44593P99	27K ohm
R380	6S44593P57	470 ohm	R515	6S44594P14	100K ohm
R381	6S44593P71	1.8K ohm	R516	6S44594P14	100K ohm
R382	6S44593P49	220 ohm	R517	6S40106T40	1.2M ohm
R401	6S44593P53	330 ohm	R518	6S40106T40	1.2M ohm
R402	6S44593P53	330 ohm	R519	6S44593P97	22K ohm
R403	6S44593P81	4.7K ohm	R520	6S44593P97	22K ohm
R404	6S44593P81	4.7K ohm	R521	6S44593P72	2K ohm
R405	6S44593P55	390 ohm	R522	6S44593P72	2K ohm
R406	6S44593P55	390 ohm	R523	6S44593P41	100 ohm
R407	6S44594P04	39K ohm	R524	6S44593P41	100 ohm
R408	6S44594P04	39K ohm	R525	6S44593P89	10K ohm
R409	6S44593P59	560 ohm	R526	6S44593P89	10K ohm
R410	6S44593P59	560 ohm	R527	6S44593P89	10K ohm
R411	6S44593P59	560 ohm	R528	6S44593P89	10K ohm
R412	6S44593P59	560 ohm	R529	6S44593P97	22K ohm
R413	6S44593P59	560 ohm	R530	6S44593P97	22K ohm
R414	6S44593P59	560 ohm	R531	6S44593P97	22K ohm
R415	6S44593P37	68 ohm	R532	6S44593P97	22K ohm
R416	6S44593P37	68 ohm	R533	6T55175F17	10 ohm 1/2W
R417	6S44593P37	68 ohm	R534	6T55175F17	10 ohm 1/2W
R418	6S44593P37	68 ohm	R535	6S44593P01	2.2 ohm
R419	6S44593P73	2.2K ohm	R536	6S44593P75	2.7K ohm
R420	6S44593P73	2.2K ohm	R537	6S44593P89	10K ohm
R421	6S44593P65	1K ohm	R538	6S44593P57	470 ohm
R422	6S44593P65	1K ohm	R539	6S44593P89	10K ohm
R423	6S44594P18	150K ohm	R540	6S44593P89	10K ohm
R424	6S44594P18	150K ohm	R541	6S44593P57	470 ohm
R425	6S44593P81	4.7K ohm	R542	6S44593P67	1.2K ohm
R426	6S44593P81	4.7K ohm	R543	6S41801P74	1.5M ohm
R427	6S44593P77	3.3K ohm	R544	6S41801P74	1.5M ohm
R428	6S44593P77	3.3K ohm	R601	6S44593P77	3.3K ohm
R429	6S44593P55	390 ohm	R602	6S44593P89	10K ohm
R501	6S44594P01	30K ohm	R603	6S44593P97	22K ohm
R502	6S44594P01	30K ohm	R604	6S44593P89	10K ohm
R503	6S44593P99	27K ohm	R605	6S44593P89	10K ohm
R504	6S44593P99	27K ohm	R606	6S44593P89	10K ohm
R505	6S44594P04	39K ohm	R607	6S44593P89	10K ohm
R506	6S44594P04	39K ohm	R608	6S44593P89	10K ohm
R507	6S44594P24	270K ohm	R609	6S44593P81	4.7K ohm
R508	6S44594P24	270K ohm	R610	6S44593P89	10K ohm
R509	6S44594P08	56K ohm	R611	6S44593P97	22K ohm
R510	6S44594P08	56K ohm			

Symbol No.	Part No.	Description
R612	6S44593P97	22K ohm
R613	6S44594P06	47K ohm
R614	6S44593P81	4.7K ohm
R615	6S44593P89	10K ohm
R616	6S44593P89	10K ohm
R617	6S44593P89	10K ohm
R618	6S44593P89	10K ohm
R619	6S44593P87	8.2K ohm
R620	6S44593P73	2.2K ohm
R621	6S44593P97	22K ohm
R622	6S44593P97	22K ohm
R623	6S44593P97	22K ohm
R624	6S44593P97	22K ohm
R625	6S44593P97	22K ohm
R626	6S44593P97	22K ohm
R627	6S44594P02	33K ohm
R628	6S44593P93	15K ohm
R629	6S44594P02	33K ohm
R630	6S44593P59	560 ohm
R631	6S44593P73	2.2K ohm
R632	6S44593P73	2.2K ohm
R633	6S44593P59	560 ohm
R634	6S44593P59	560 ohm
R635	6S44593P73	2.2K ohm
R636	6S44593P89	10K ohm
R637	6S44593P89	10K ohm
R638	6S44593P47	180 ohm
R639	6S44594P14	100K ohm
R640	6S44593P97	22K ohm
R641	6S44593P91	12K ohm
R642	6S44593P85	6.8K ohm
R643	6S44593P89	10K ohm
R644	6S44593P93	15K ohm
R645	6S44593P77	3.3K ohm
R646	6S44593P93	15K ohm
R647	6S44593P81	4.7K ohm
R648	6S44594P06	47K ohm
R649	6S44593P45	150 ohm
R650	6S44594P02	33K ohm
R651	6S44594P04	39K ohm
R652	6S44593P77	3.3K ohm

Symbol No.	Part No.	Description
Plate, Jacks & Inductors		
J201	9T50231F02	Plate, Phone 4P
J202	9T55174F02	Jack, Microphone (6.5)
J203	9T55174F02	Jack, Microphone (6.5)
J401	9T55174F12	Jack, Headphone (6.5)
J601	9T50261F01	Jack, DIN 8P (REMOTE)
L301	24T47741F01	Inductor 36 mH
L302	24T47741F01	Inductor 36 mH
L501	24S41449F02	Inductor, Radial 6800 μ H
L502	24S41449F02	Inductor, Radial 6800 μ H
L503	24T44499P01	Inductor 27 mH
L504	24T44499P01	Inductor 27 mH
Transformer, Variable Resistors & Switches		
T501	25T52944F01	Trans, O.S.C.
VR201	18T52946F17	Variable 47K ohm
VR202	18T52946F17	Variable 47K ohm
VR401	18T52946F05	Variable 470 ohm
VR402	18T52946F05	Variable 470 ohm
VR501	18T52946F15	Variable 22K ohm
VR502	18T52946F15	Variable 22K ohm
VR503	18T52946F19	Variable 100K ohm
VR504	18T52946F19	Variable 100K ohm
VR505	18B44064J07	Variable 100K ohm 1/2W
VR506	18B44064J07	Variable 100K ohm 1/2W
VR508	18T52946F09	Variable 2.2K ohm
S201	40T52632F01	Switch, (TAPE SELECT) (DOLBY NR)
S202		
S203		
S301		
S302		
S303		
Miscellaneous Parts		
HD201	F029-090	Assembly, Recording/- Playback Head
HD501	F030-052	Assembly, Erase Head
LD301	48T45250F01	LED AY4632K (YEL)
LD302	48T45249F01	LED PG4632KX (GRN)
LD601	48T51833F03	LED BG4524K (GRN)

Symbol No.	Part No.	Description
LD602	48T51833F01	LED PY4524K (YEL)
LD603	48T51833F02	LED PR4524K (RED)
LM401	72T52634F01	Meter, Optical (Included. PL102)
M601	F064-074	Assembly, Motor
●P101	28T43812P02	Plug, AC Cord
■P101	28T40916U01	Plug, AC Cord
PL101	65C42544U04	Lamp, Pilot 14V — 50 mA
PL103	65T50260F01	Lamp, Pilot
SD601	F024-036	Solenoid, Play
SD602	PBC16062	Solenoid, REW
SD603	PBC16062	Solenoid, F.F.
●S101	40T45561F02	Switch, Power
■S101	40T47454F01	Switch, Power
●S102	40T40705T01	Switch, Voltage Select
S601	FE173-11	Switch, Slide (PACK INDET)
S602	FE173-11	Switch, Slide (REC INH)
S603	40T47104F01	Switch, Function (REED)
S609	40T44505F01	Switch, Function (PLAY)
S610	40T44505F01	Switch, Function (STOP)
S611	40T44505F01	Switch Function (F.F.)
S612	40T44505F01	Switch, Function (REW)
S613	40T44505F01	Switch, Function (PAUSE)
S614	40T44505F01	Switch Function (REC)
S615	40T44505F01	Switch Function (REC, MUTE)
●T101	25T52676F01	Trans, Power
■T101	25T53364F01	Trans, Power
VR203	18T52629F01	Volume, Slide S60B2PA 20K ohm (REC LEVEL)
VR507	18T52943F01	Volume, Rotary (BIAS)

Symbol No.	Part No.	Description

●: For multi-voltage model only.

■: For single-voltage model only.

Cabinet Assembly Parts List

Symbol No.	Index	Part No.	Description
1	2-A	1V56300F02	Assembly, Door
2		75A42565P15	Cushion, Rubber
4	3-A	36A45460F03	Knob, Power
5	3-A	1V53900F32	Assembly, Counter Escutcheon
6	4-A	1V53900F39	Assembly, Front Panel
7	5-A	36A47129F03	Knob, Bias
8	5-A	36A52480F03	Knob, Push
9	3-A	※	Panel, LED
10		3S40012G41	Screw, Pan. (M3 x 8)
11		3S40012G26	Screw, Flat (M3 x 6)
12		75B44632G04	Pad, Cushion
13		3S40036U15	Screw, W/Washer (M4 x 8)
14	1-B	15D52460F01	Cover, Top
15	2-B	42A56014F01	Belt, Counter
16		3C40014G04	Screw, W/Washer (M3 x 6)
17	3-B	3C40014G12	Screw, W/Washer (M2.6 x 4)
18	4-B	※	Chassis, Front
19	2-B	42A52623F02	Belt, Counter
20	2-B	49A52624F01	Pulley, Counter
21		3C40014G09	Screw, W/Washer (M3 x 5)
22	2-B	※	Bracket, Counter
23	2-B	72T52627F01	Counter, Tape
24		3S40012G03	Screw, Round (M3 x 6)
25	2-B	※	Bracket, Bias Volume
26	4-B	36A52481F01	Knob, Counter
27	4-B	41A41324F03	Spring, Push
28	5-B	36A52479F01	Knob, Rec Level Volume
29	4-C	36A52473F01	Knob, F.F.
30	4-C	36A52472F01	Knob, Play
31	4-C	36A52474F01	Knob, Rew
32	4-C	36A52476F01	Knob, Stop
33	2-C	※	Panel, Reed Switch
34	2-C	4A41345P02	Washer, Lock (M1.7)
35		3S40036U03	Screw, Pan. (M3 x 6)
36	4-C	36A52475F01	Knob, Rec
37	4-C	36A52478F01	Knob, Rec Mute
38	5-C	36A52477F01	Knob, Pause
39	5-C	43A52485F01	Spacer, Knob
40	2-D	43A41728U09	Bush, Lamp
41	3-D	43A51937F01	Spacer, Eject
42	3-D	1V53600F22	Assembly, Dust Cover
43	3-D	81T53004F01	Deck, Cassette (FL87E01A)
44	4-D	※	Panel, Key Board
45	4-E	※	Chassis, Bottom

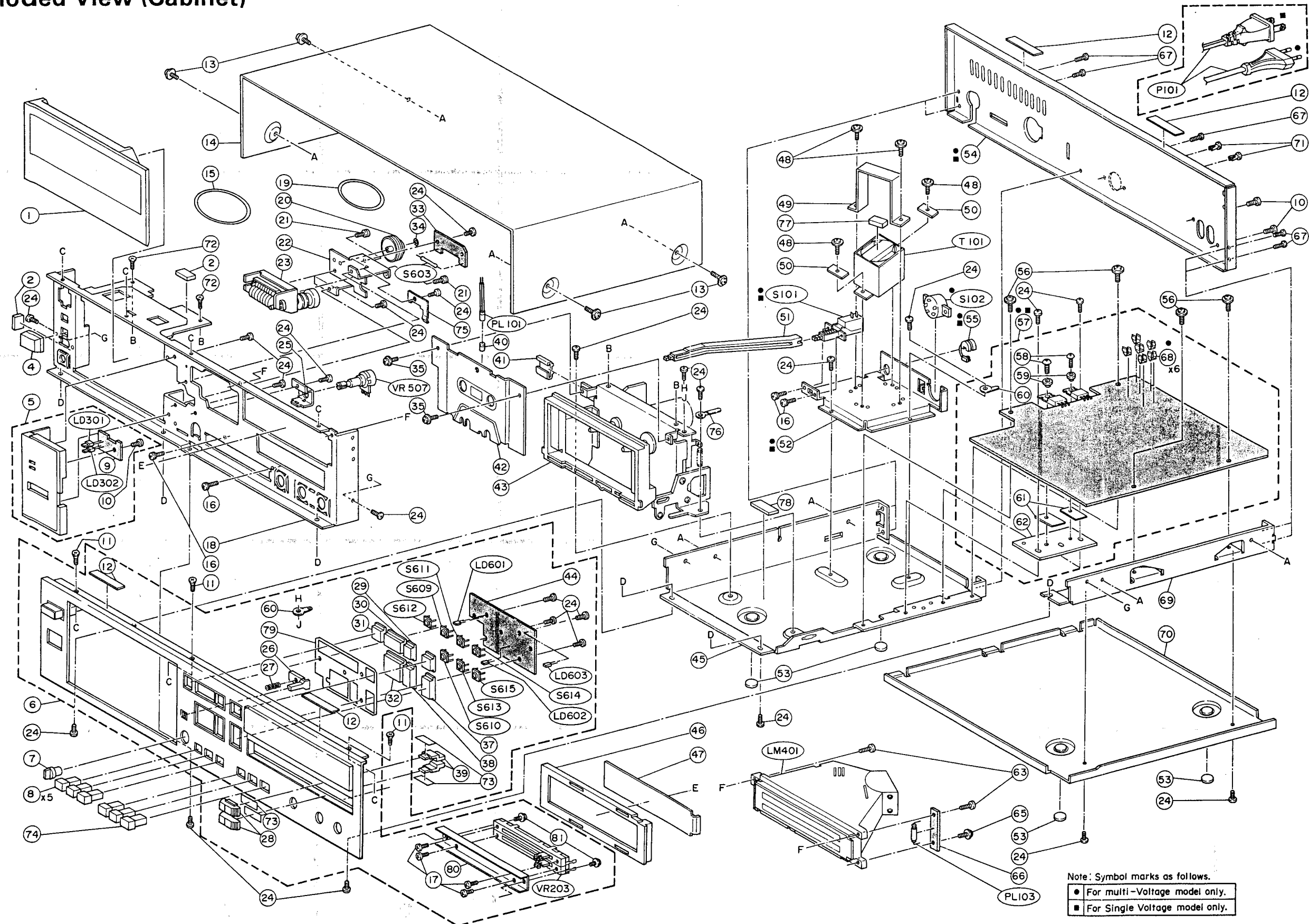
Symbol No.	Index	Part No.	Description
46	5-E	7B52483F01	Frame, Meter
47	5-E	34A52482F01	Scale, Meter
48		3S40036U07	Screw, Pan. (M4 x 12)
49	2-E	※	Support, Trans (U)
50		7A40871F01	Support, Trans Washer
51	2-E	45B50395F01	Lever, Power Switch
● 52	3-E	※	Bracket, Trans
■ 52		7B45445F02	Bracket, Trans
53		75A44348F01	Pad, Felt
● 54	1-F	15C52461F01	Cover, Rear
■ 54		15C52461F02	Cover, Rear
● 55	2-F	43B41625J02	Support, Cord
■ 55		43B41625J01	Support, Cord
56		3C42723U01	Screw, Cup (M3 x 6)
● 57	2-F	1V53900F34	Assembly, Master Board
■ 57		1V56900F06	Assembly, Master Board
58	2-G	3A43146G01	Screw, Truss (M2 x 8)
59	3-F	43A43182P01	Spacer, Transistor
60		29A41814G01	Lug
61	3-F	14A40472G02	Insulator, Transistor
62	3-F	※	Bracket, Heat Sink
63	5-G	3S44205G08	Screw, Pan (M3 x 12)
65	5-G	3S40018G01	Screw, Pan (M3 x 6)
66	5-G	84D52630F04	Panel, Lamp
67		3S44205G40	Screw, Bind (M3 x 4)
● 68	2-G	9T45548F01	Holder, Fuse
69	4-G	※	Chassis, Side
70	4-G	※	Cover, Bottom
71	1-H	5B41635J02	Rivet, Push
72		3S44205G16	Screw, Flat (M3 x 6)
73		75B44632G17	Pad, Cushion
74	5-A	36A52480F02	Knob, Push
75	2-C	41A56247F01	Spring, Knob
76	3-E	29C41045P02	Lug, Wrap Around
77	2-E	75A42565P16	Cushion, Rubber
78	4-E	75A42565P14	Cushion
79		26A56263F01	Shield, Static
80		7A52465F01	Bkt., Slide VR
81		3S40018G02	Screw, Pan (M3 x 8)

※ Parts without part number are not supplied.

●: For multi-voltage model only.

■: For single-voltage model only.

Exploded View (Cabinet)

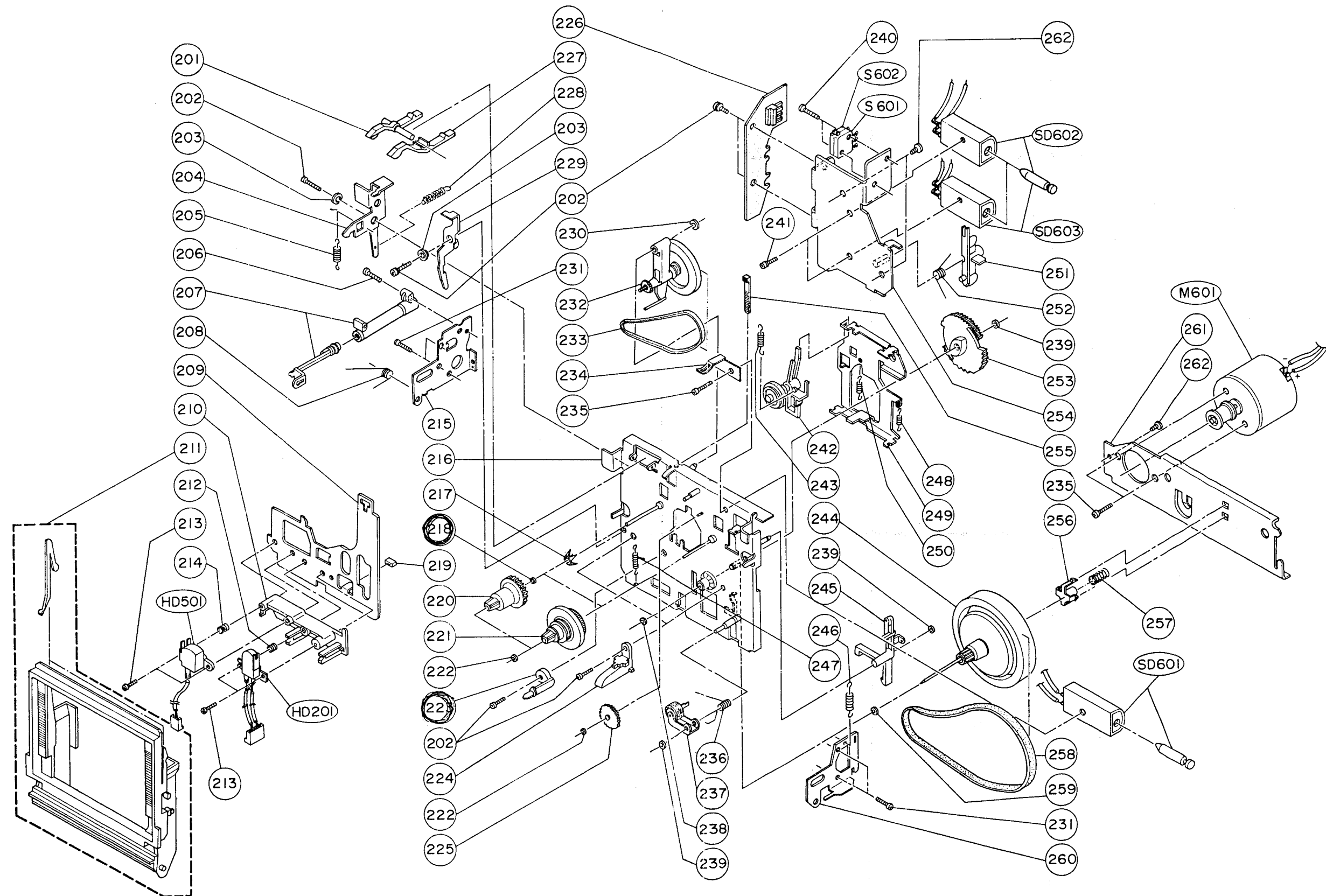


Note: Symbol marks as follows.
● For multi-Voltage model only.
■ For Single Voltage model only.

AL-55

AL-55

Exploded View (Cassette Deck)

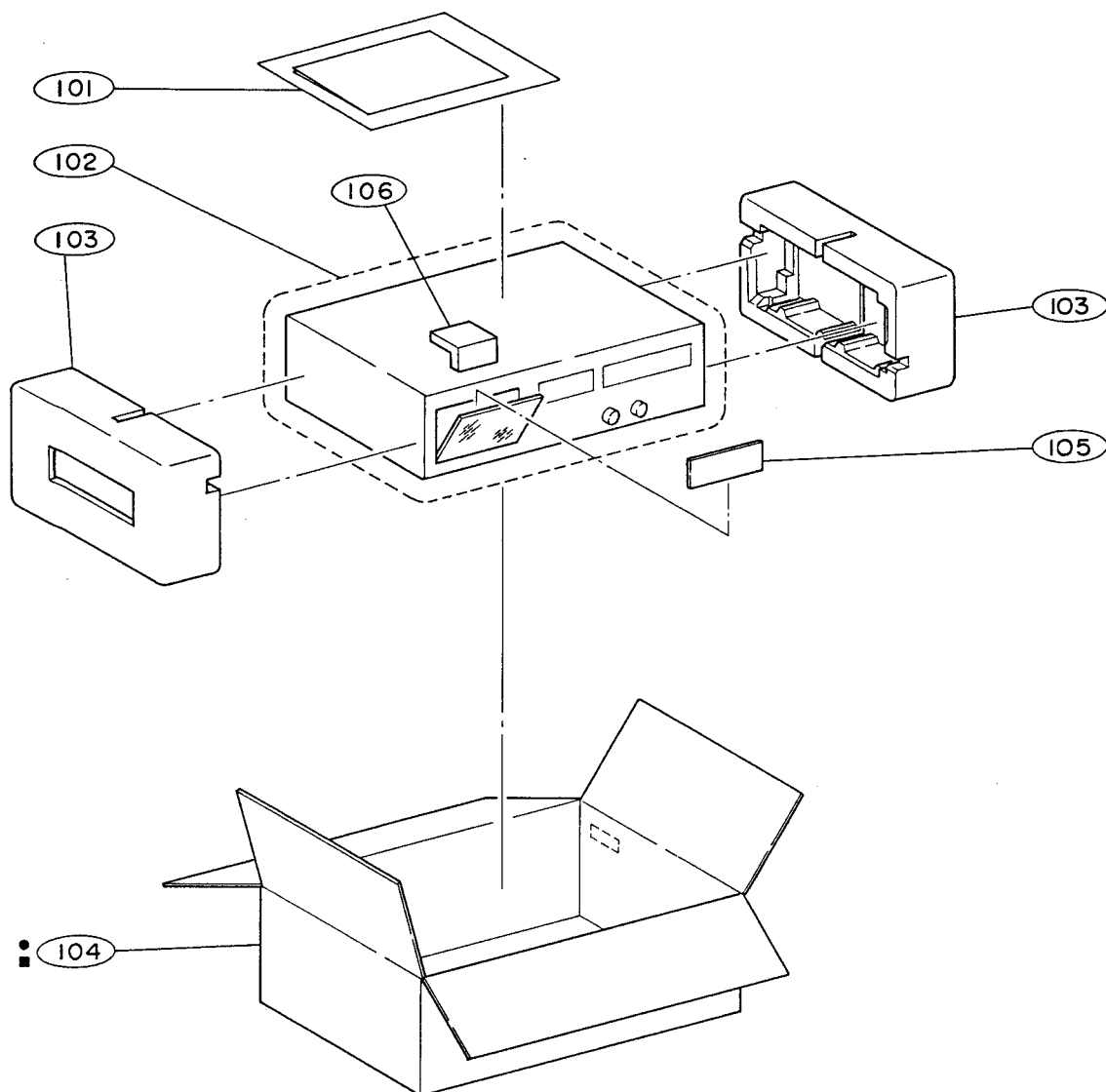


Cassette Deck Assembly Parts List

Symbol No.	Index	Part No.	Description	Symbol No.	Index	Part No.	Description
201	1-B	FD17T-12	Arm, Record	241	2-E	FG143-17	Screw, Machine (M2.6 x 3)
202		KG194-12	Screw, Tap Tite (M3 x 6)	242	3-E	FP469-12	Assembly, Idler
203		FM296-11	Spacer	243	3-E	FK575-11	Spring, Play Idler
204	2-B	FC11H-12	Arm, Lock Eject	244	3-E	FP467-11	Assembly, Flywheel
205	2-B	FK573-11	Spring, Arm Lock	245	4-E	FR359-12	Arm, Play Solenoid
206	2-B	UG11D-11	Screw, Tap Tite	246	4-E	FK576-12	Spring, Play Solenoid Arm
207	2-B	FP472-11	Assembly, Dumper	247	4-E	FK578-13	Spring, Head Base Push
208	2-B	FK-568-11	Spring, Door	248	3-F	FK574-12	Spring, Assist Base
209	3-B	※	Base, Head	249	3-F	※	Base, Assist
210	3-B	FM283-13	Spacer, Head	250	4-F	FK577-12	Spring, Head Base
211	3-B	F027-064	Frame, Door	251	2-G	FR355-12	Arm, FF Solenoid
212	3-B	FK572-11	Spring, Azimuth	252	2-G	FK570-12	Spring, Solenoid Bracket
213		FG137-15	Screw, F-Lock (M2)	253	3-G	FN153-11	Gear, Play
214	4-B	FK572-12	Spring, Azimuth	254	3-G	※	Assembly, Solenoid Bracket
215	3-C	※	Bracket, Dumper	255	3-G	FH126-11	Band, Connector
216	3-C	※	Assembly, Chassis	256	3-G	FM281-11	Spacer, Flywheel
217	3-C	FK579-11	Spring, Back Tension	257	4-G	FK11F-16	Thrust, Spring
218	3-C	FJ111-19	Slider, Polyester (M2)	258	5-G	FP462-11	Belt, Main
219	4-C	FP464-11	Pad, Cushion	259	5-G	FJ111-12	Slider, Polyester (M2.1 x 0.5)
220	4-C	FR12P-11	Assembly, Supply Reel	260	5-G	※	Bracket, Door
221	4-C	FR12N-11	Assembly, Take-up Reel	261	2-G	※	Bracket, Motor
222		FJ123-14	Washer, Lock (M1.7)	262		KG194-46	Screw, Tap, Tite (M3 x 4)
223	4-C	FR358-12	Reference, Guide				
224	5-C	FR360-12	Guide, Cassette				
225	5-C	FN154-13	Gear, Idler				
226	1-D	F217-011	Assembly, Connector Panel				
227	1-D	FR356-14	Arm, Switch				
228	1-D	FK11C-11	Brake Arm Spring				
229	2-D	FR352-11	Lever, Safety				
230	2-D	FJ123-19	Washer, Lock (M3.5)				
231		KG189-11	Screw, Machine (M3 x 5)				
232	2-D	FP470-11	Assembly, Clutch				
233	2-D	FP463-11	Belt, Sub				
234	3-D	FK551-13	Spring, Cassette				
235		FG114-15	Screw, Washer				
236	5-E	FK569-13	Spring, Pinch Roller				
237	5-E	F014-053	Assembly, Pinch Roller				
238	5-E	FJ141-12	Shield, Oil				
239		FJ123-21	Washer, Lock (M2.6)				
240	1-F	FG143-26	Screw, Machine (M2.6)				

※ Parts without part number are not supplied.

Packing Method View



Packing Assembly Parts List

Symbol No.	Part No.	Description
101	1V53900F44	Assembly, Pamphlet
101-1	28T44352F01	Plug, Output Cord
101-2	※	Sack, Polyethylene
101-3	68P52551F15	Manual, Owner's (AL-55)
102	56B40230G23	Sack, Polyethylene
103	56C44350F01	Tray, Packing
● 104	56C50570F28	Carton, Packing
■ 104	56C50570F29	Carton, Packing
105	15A41885U01	Cover, Door
106	56A56430F01	Tray, Packing (DOOR)

Symbol No.	Part No.	Description

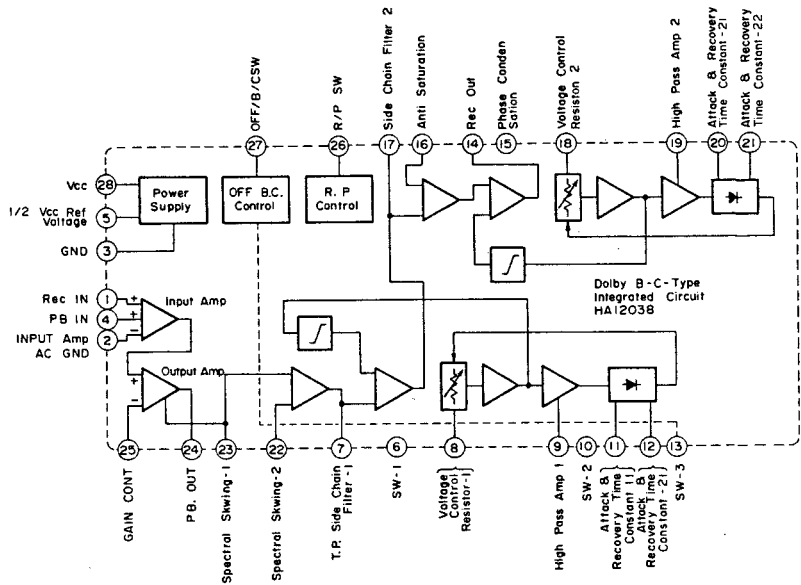
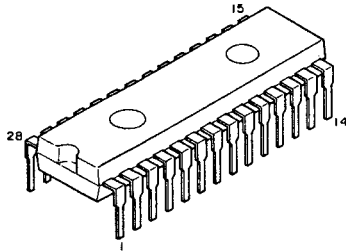
※ Parts without part number are not supplied.

● For multi-voltage model only

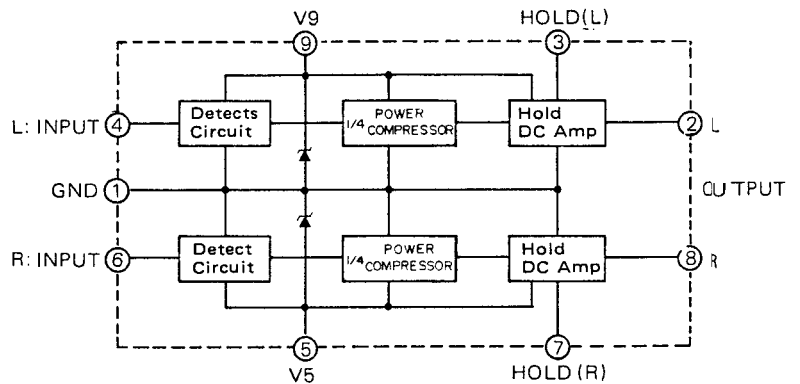
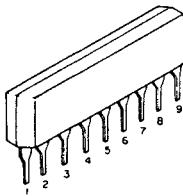
■ For single-voltage model only

Semi-Conductor Lead Identifications

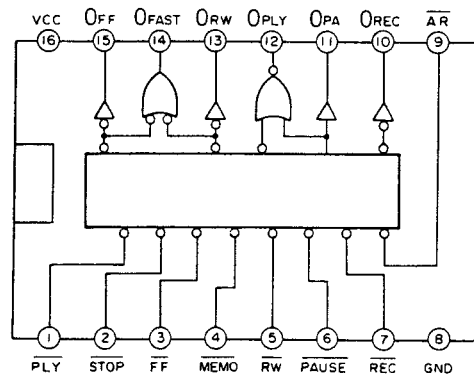
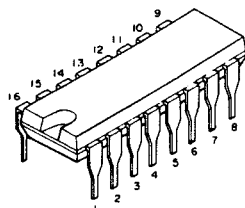
HA12038-01: IC301, 302

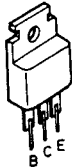
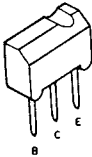
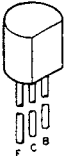


TA7318AP-2: IC401



BA843: IC601



2SD880: Q101, 102, 508, 509 	2SC1980: Q201, 202, 203, 204, 505, 506 2SC1890: Q201, 202, 203, 204, 505, 506 2SC1815: Q205, 206, 303, 405, 406, 602, 603, 605, 606, 607, Q609, 611, 612, 616, 617, 618, 619, 620, 621, 622, Q623 2SC945: Q205, 206, 303, 405, 406, 602, 603, 605, 606, 607, Q609, 611, 612, 616, 617, 618, 619, 620, 621, 622, Q623 2SC732: Q207, 208, 209, 210, 301, 302, 503, 504 2SC900: Q207, 208, 209, 210, 301, 302, 503, 504 2SC1842: Q207, 208, 209, 210, 301, 302, 503, 504 2SC1843: Q207, 208, 209, 210, 301, 302, 503, 504 2SC2263: Q211, 212 2SC2878: Q401, 402, 501, 502 2SC1318: Q403, 404, 507, 508, 613, 614, 615 2SC509: Q403, 404, 613, 614, 615 2SA733: Q601, 608, 610 2SA921: Q604
2SD636: Q205, 206, 303, 405, 406, 602, 603, 605, 606, 607, Q609, 611, 612, 616, 617, 618, 619, 620, 621, 622, Q623 2SB788: Q604 	

ALPINE ELECTRONICS INC.

Tokyo Office: 1-7 Yukigaya Otsuka-cho
Ota-ku Tokyo, Japan
Phone 03-727-5311 Telex 246-6076

Iwaki Office: Oyasaku Yoshima-cho
Iwaki-shi Fukushima, Japan
Phone 0246-36-4111 Telex 8927-61

ALPINE ELECTRONICS GmbH

Münsterstr. 330 D-4000 Düsseldorf
F.R. Germany
Tel. 0211-626806 Telex 8588 296 ALPI D

ALPINE ELECTRONICS OF CANADA INC.

101 Amber Street units 18-21 Markham,
Ontario L3R 3B2
Canada Phone 416-475-7280 Telex 06986789