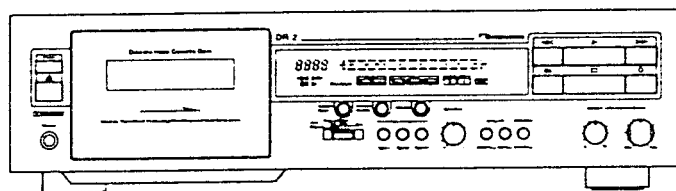


Service Manual

DR-2

Discrete Head Cassette Deck



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1. GENERAL

Reference Service Manual

The base Model of DR-2 is Cassette Deck 1.5. In this Service Manual, identical sections/items are omitted. So, please refer to the Service Manual of Cassette Deck 1.5 (0Q06153A).

1.1. Product Code

A138

1.2. Destinations


USA, CAN, EP, UK, AUS, SAU, OTR, JPN

Abbreviation

USA — U.S.A.	AUS — Australia
CAN — Canada	SAU — Saudi Arabia
EP — Europe	OTR — Other
UK — United Kingdom	JPN — Japan

1.3. Cautions/Warnings

(1) Product Safety Notice

Parts marked with the symbol  in the schematic diagram have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer. It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

(2) Leakage Current Check/Resistance Check

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

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

1.4. Voltage Selector

The voltage selector is installed on the Rear Panel of the DR-2 (OTR & SAU). The voltage selector can select either 110-127V or 220-240V at customer's disposal.

1.5. Package Ass'y and Accessory Ass'y

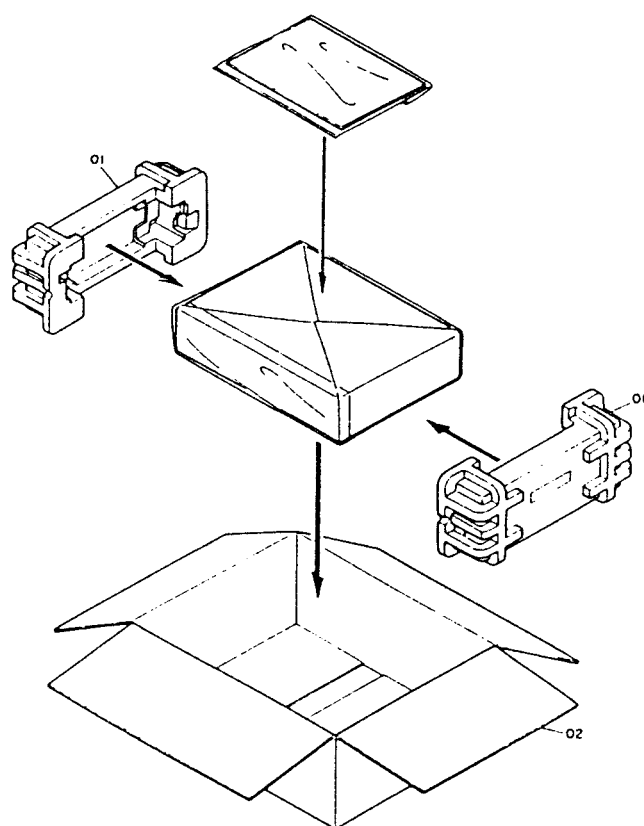


Fig. 1

Schematic Ref. No.	Part No.	Description	Qty
	-	Package Ass'y	
01	0F04728A	Packing	2
02	0F04717A	Carton Box	1
-	0F04458A	Soft Sheet	1

Schematic Ref. No.	Part No.	Description	Qty
	DA04695A	Accessory Ass'y (USA, CAN)	1
	DA04697A	Accessory Ass'y (EP)	1
	DA04696A	Accessory Ass'y (UK)	1
	DA04698A	Accessory Ass'y (AUS, SAU, OTR)	1
	DA04694A	Accessory Ass'y (JPN)	1
	0D06400B	Owner's Manual (English)	1
	0D06416A	Owner's Manual (French)	1
	0D06417A	Owner's Manual (German) (EP, UK)	1
	0D06398A	Owner's Manual (Japanese)	1
	0D06431A	Pin-Pin Cord	2

2. TEST TAPES AND GAUGES

- (1) 400 Hz Level Tape (DA09005C)
- (2) 1kHz Track Alignment Tape (DA09007C)
- (3) 10 kHz PB Frequency Response Tape (DA09003C)
- (4) 15 kHz PB Frequency Response Tape (DA09002C)
- (5) 20 kHz PB Frequency Response Tape (DA09001C)
- (6) 15 kHz Azimuth Tape (DA09004C)
- (7) 3 kHz Speed and Wow/Flutter Tape (DA09006D)
- (8) Tape Travelling Cassette (DA09071A)
- (9) Reference EXII Tape (DA09168A)
- (10) Reference SX Tape (DA09167A)
- (11) Reference ZX Tape (DA09166A)
- (12) EH Tilt Check Gauge S (DA09088A)
- (13) Stroke Check Gauge S (DA09090A)
- (14) Tape Guide Height Check Gauge S (DA09091A)
- (15) Tilt Check Gauge S (DA09039C)
- (16) Torque Gauge FWD (DA09082A)

3. MECHANISM ASS'Y AND PARTS LIST

3.1. Synthesis

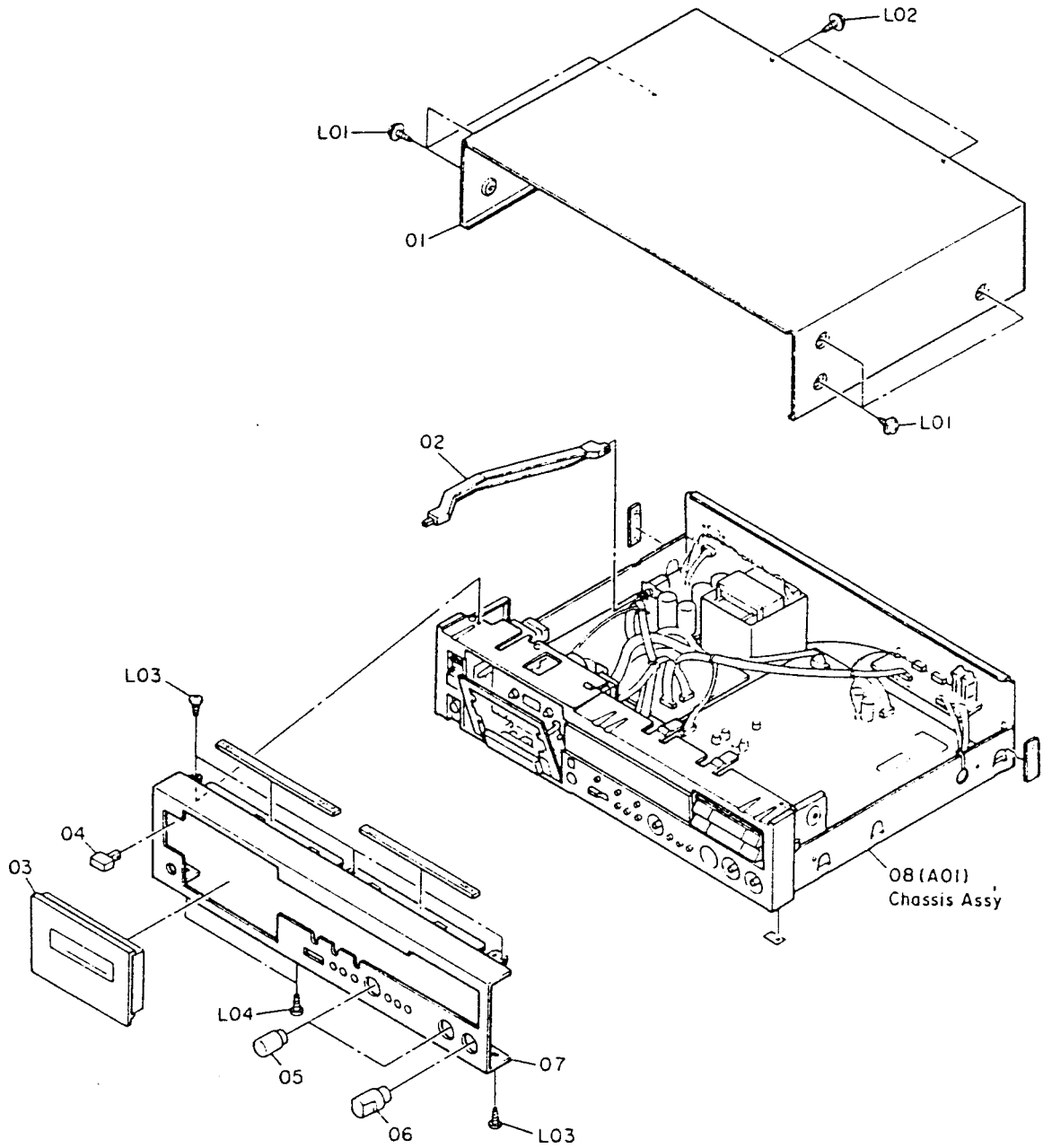


Fig. 3.1

3.1. Synthesis

Schematic Ref. No.	Part No.	Description	Qty	Schematic Ref. No.	Part No.	Description	Qty
Synthesis							
01	0H06423A	Top Cover	1	L03	0E00921A	BT3x8 + Binding (Black Chromate)	
02	0J07037C	Power Switch Joint	1	L04	0E03366A	BT3x8 + Binding Projected (Black Chromate)	
03	HA06578A	Cassette Case Cover Ass'y	1				
04	0H06418A	Power Knob	1				
05	HA06502A	Volume Knob Ass'y CDR	2				
06	HA06503A	Volume Knob Ass'y DR	1				
07	0H06456C	Front Panel	1				
08	-	Chassis Ass'y	1				
L01	0E03032A	BT4x8 + Pan Washer Faced (Black Chromate)					
L02	0E03632A	BT3x8 + Binding With Washer (Black Chromate)					

3.2. Chassis Ass'y (A01)

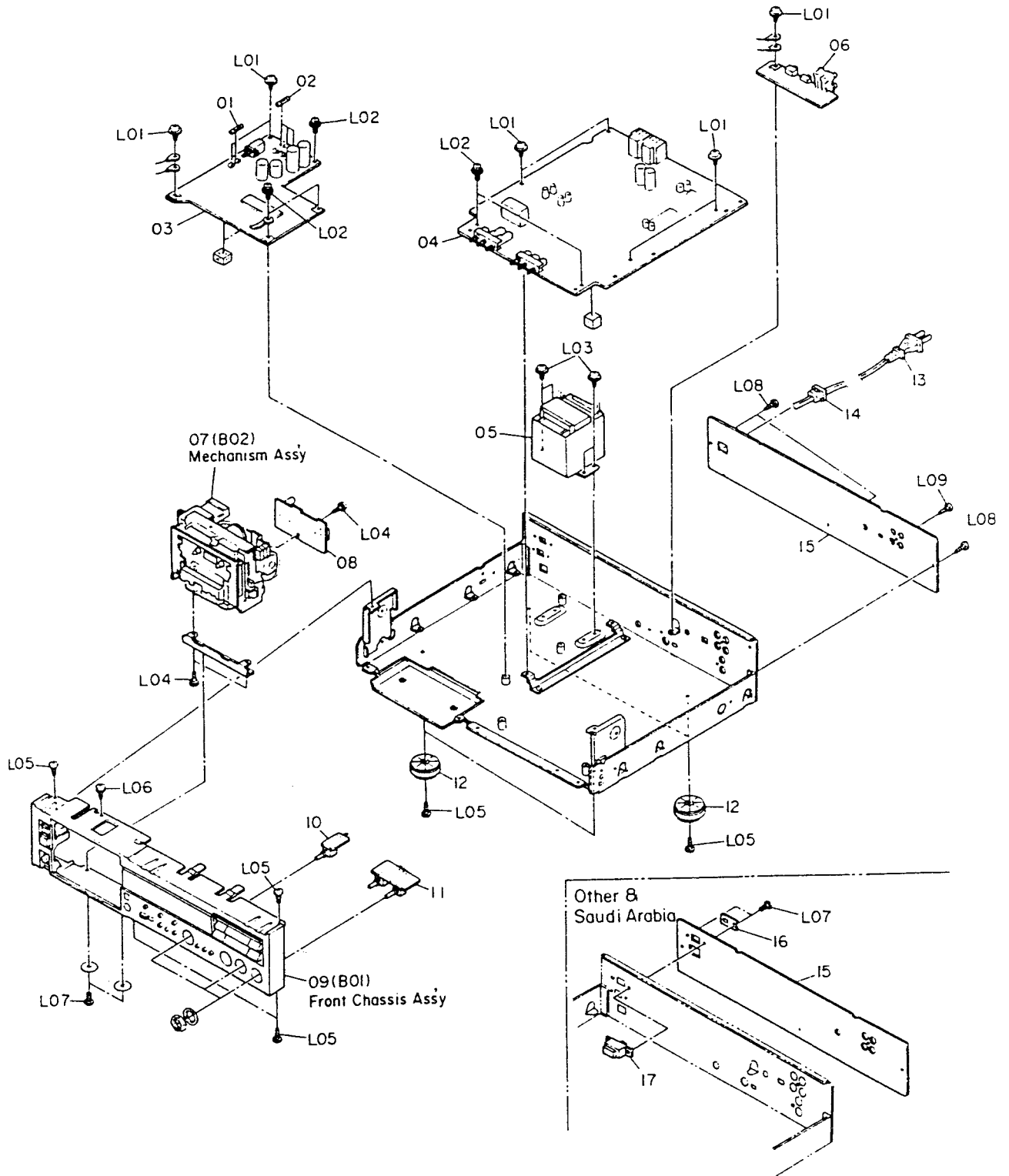


Fig. 3.2

3.3. Front Chassis Ass'y (B01)

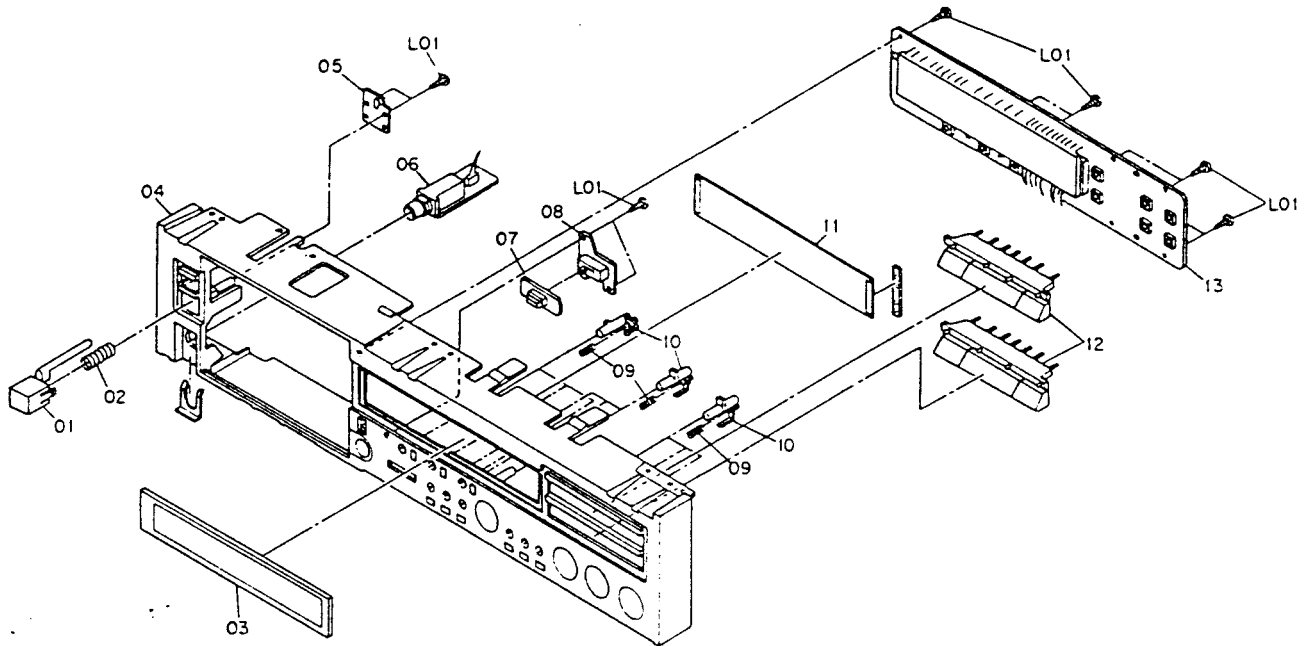


Fig. 3.3

3.2. Chassis Ass'y (A01)

Schematic Ref. No.	Part No.	Description	Q'ty
A01	-	Chassis Ass'y	1
01	0B90493A	Fuse 500mA [F404] (USA, CAN, JPN)	1
	0B08505A	Fuse F500mA [F404] (EP, UK, AUS, OTR, SAU)	1
02	0B90375A	Fuse 1.6A [F401-403] (USA, CAN, JPN)	3
	0B90382A	Fuse T1.25A [F401-403] (EP, UK, AUS, OTR, SAU)	3
03	BA08853A	Power Supply & Logic P.C.B. Ass'y (Except JPN)	1
	BA08851A	Power Supply & Logic P.C.B. Ass'y (JPN)	1
04	BA08849A	Main P.C.B. Ass'y	1
05	0B50183A	Power Transformer 120V (USA, CAN)	1
	0B50182A	Power Transformer 230V (EP)	1
	0B50179A	Power Transformer 240V (UK, AUS)	1
	0B50181A	Power Transformer 115-230V (OTR, SAU)	1
	0B50180A	Power Transformer 100V (JPN)	1
06	BA08381A	Pin Jack P.C.B. Ass'y	1
07	CA09201A	Mechanism Ass'y	1
08	BA08477A	Playback Amp. P.C.B. Ass'y	1
09	-	Front Chassis Ass'y	1
10	BA08836A	Bias Volume P.C.B. Ass'y	1
11	BA08837A	Input Volume P.C.B. Ass'y	1
12	0H06472A	Leg	4
13	0B90205A	Power Cord (USA, CAN)	1
	0B08093U	Power Cord (EP)	1
	0B08348A	Power Cord (UK)	1
	0B05241A	Power Cord (AUS)	1
	0B08533A	Power Cord (OTR, SAU)	1
	0B08219B	Power Cord (JPN)	1
14	0B90280A	Cord Bushing (USA, CAN, EP, UK, AUS)	1
	0B90283A	Cord Bushing (OTR, SAU, JAN)	1
15	0H06525A	Rear Panel (USA, CAN, EP, UK, AUS, JPN)	1
	0H06526A	Rear Panel (OTR, SAU)	1
16	0M05611A	Voltage Lock Plate (OTR, SAU)	1

Schematic Ref. No.	Part No.	Description	Q'ty
17	0B07092U	Voltage Selector (OTR, SAU)	1
L01	0E03157A	BT3x8 + Binding With Washer	
L02	0E00607A	M3x8 + Pan (3A)	
L03	0E03592A	BT4x6 + Binding Washer Faced (Black Chromate)	
L04	0E03435A	M2.6x6 + Binding With Toothed Lock	
L05	0E00921A	BT3x8 + Binding (Black Chromate)	
L06	0E03212A	BT2.6x6 + Binding Toothed Lock	
L07	0E00985A	M3x6 + Binding (Black Chromate)	
L08	0E00860A	BT3x6 + Binding (Black Chromate)	
L09	0E03749A	PT3x8 + Binding (Black Chromate)	

3.3. Front Chassis Ass'y (B01)

Schematic Ref. No.	Part No.	Description	Q'ty
B01	-	Front Chassis Ass'y	1
01	0H06432B	Eject Knob	1
02	0J07048B	Eject Knob Spring	1
03	HA06566D	Display Lens Ass'y	1
04	0H06430B	Front Chassis	1
05	0J07077A	Eject Holder	1
06	BA07986A	Headphone P.C.B. Ass'y	1
07	0H06436B	Slide Knob	1
08	BA08841A	Timer Switch P.C.B. Ass'y	1
09	0J06253A	Push Knob Spring	9
10	0H06447B	Push Knob	9
11	HA06569C	Filter DR Ass'y	1
12	0H06426B	Control Knob 3CD	2
13	BA08855A	Front P.C.B. Ass'y	1
L01	0E00868A	BT3x8 + Binding	

3.4. Mechanism Ass'y (B02)

Schematic Ref. No.	Part No.	Description	Qty	Schematic Ref. No.	Part No.	Description	Qty
B02	CA09201A	Mechanism Ass'y	1	74	0C82698A	Take-up Flywheel	1
01	0C85309A	Eject Arm	1	75	0C82702A	Capstan Belt	1
02	0C85310A	Eject Arm Spring	1	76	0C82718A	Thrust Plate	2
03	CA80006A	Pneumatic Damper Ass'y	1	77	0C82726A	Floating Rubber	3
04	0C82720A	Eject Lever Spring	1	78	CA81988A	Capstan Motor Ass'y	1
05	0C85414A	Eject Lever	1	79	0C85320A	Flywheel Holder	1
06	0C85301A	Cassette Case Holder L	1	80	0C81417A	Cam Gear B	1
07	0C80019B	Eject Spring	1	81	0C81418A	Control Motor Holder	1
08	0C80620A	Back Tension Arm Pulley	1	82	0C81416A	Thrust Spring B	1
09	0C80621A	Back Tension Arm Belt	1	83	0C80027A	Mode Switch	3
10	0C80617A	Back Tension Arm Spring	1	84	0C81415A	Warm Thrust Bush	1
11	0C80618A	Back Tension Arm Collar	1	85	CA81646A	Control Motor Ass'y 30	1
12	0C80619A	Back Tension Arm	1	86	0C86111A	Mechanism GND Ass'y	1
13	0C85425A	Lock Lever Spring	1	87	CA81673A	5P Connector Ass'y	1
14	0C85426A	Lock Lever Collar	1	88	CA81672A	9P Connector Ass'y	1
15	0C85427A	Lock Lever	1	L01	0E00698A	E-Ring 2.5mm	
16	CA80726A	Supply Reel Hub Ass'y	1	L02	0E00181A	E-Ring 3mm	
17	0C80612A	Spring Holder	2	L03	0E00222A	E-Ring 2mm	
18	0C80614A	Supply Reel Hub Spring	1	L04	0E00866A	M2.6x4 + Binding	
19	0C81421A	Supply Pressure Roller Arm Adjustment Nut	1	L05	0E00912A	Washer FT25	
20	CA80366A	Supply Pressure Roller Arm Ass'y	1	L06	0E03052A	CS Stopper 2.4mm	
21	0C81420A	Supply Pressure Roller Arm Spring	1	L07	0E03042A	FT2.5x5 + Pan	
22	0C81422A	Supply Pressure Roller Arm Track Spring	1	L08	0E03667A	ST2.5x8 + Pan	
23	0H04415C	Head Mount Cover	1	L09	0E03202A	M2.6x3 + Binding (Black Chromate)	
24	CA80200B	Cassette Case Ass'y	1	L10	0E03437A	FT2.5x3.5 + Pan (Black Chromate)	
25	CA81949A	Cover Plate Ass'y	1	L11	0E03654A	M2x4 + Pan (3A)	
26	0C08762A	Head Height Adjustment Gear	2	L12	0E03509A	Washer 1.3x3.4x0.5	
27	0C08761A	Head Height Adjustment Screw	4	L13	0E03232A	M1.7x7 + Pan	
28	0C08763A	Azimuth Alignment Screw	1	L14	0E03222A	Washer 1.8x3.8x0.3	
29	CA08637A	Head Mount Base Sub Ass'y	1	L15	0E03655A	M2x5 + Pan (2A)	
30	CA08659C	R-3L Record Head Ass'y	1	L16	0E03234A	M2x3 + Pan	
31	0C08776A	Head Plate Spring L	1	L17	0E03228A	FT3x4 + Pan	
32	CA81676A	RH 4P Connector Ass'y	1	L18	0E03236A	M2x5 + Pan (2A)	
33	0C80605A	Wire Clamper	1	L19	0E03231A	M2x30 + Pan	
34	0C80610A	Cassette Case Spring	1	L20	0E03041A	FT2.5x4 + Pan	
35	0C80010D	Cassette Case Holder R	1	L21	0E03233A	Washer 2.6x8x1	
36	0C80012A	Sensor Switch	1	L22	0E03230A	ST2.6x12 + Pan	
37	CA08658C	P2H-3L Playback Head Ass'y	1	L23	0E03045A	M2.6x3 + Binding	
38	0C08775A	Head Plate Spring R	1	L24	0E03226A	Washer 2.1x4.5x0.1	
39	CA81675A	PH 4P Connector Ass'y	1	L25	0C82725A	M2.6x9 Washer Faced	
40	CA81674A	EH 2P Connector Ass'y	1	L26	0E00691A	M2x3 + Pan	
41	GA02201A	E-4F Erase Head	1	L27	0E03044A	FT2.5x20 + Pan	
42	0C08768A	E.H. Hold Plate	1	L28	0E03653A	Washer 1.6x4x0.25	
43	0C08889A	E.H. Hold Plate Tapering Spring	2	L29	0E03508A	Washer 1.7x6x0.25	
44	0C08886A	E.H. Hold Plate Spring	1	L30	0E03035A	M2x3.2 + Truss	
45	0C82710A	Head Base Hold Plate	1	L31	0E03235A	Washer 2x5x0.25	
46	0C80004A	Steel Ball 3mm	1	L32	0E03225A	Washer 1.8x3.8x0.5	
47	0C08771A	Tape Guide Plate	1	L33	0E03194A	Washer 2.1mm	
48	CA80365A	Head Base Ass'y	1	L34	0C85423A	S. Thrust Spring Washer	
49	0C80007A	Steel Ball 2mm	3	L35	0E03049A	Washer 1.8x3.2x0.5	
50	CA80725A	Take-up Reel Hub Ass'y	1	L36	0C08774A	Plate Washer L	
51	0C80613A	Take-up Reel Hub Spring	1	L37	0C08773A	Plate Washer R	
52	CA80368A	Take-up Pressure Roller Arm Ass'y	1	L38	0E03227A	Washer 2.7x5x0.5	
53	0C81423A	Take-up Pressure Roller Arm Spring	1	L39	0E03237A	Nut Hex. M2.6	
54	0C85429A	Switch Hold Plate	1	L40	0E00694A	Nut M2	
55	0C80623A	Switch Plate	2	L41	0C82716A	Capstan Washer S	
56	0C80624A	Switch Collar A	2	L42	0C82717A	Capstan Washer T	
57	0C80626A	Leaf Switch	1				
58	0C80625A	Switch Collar B	2				
59	0C80017B	Record Protector Lever	1				
60	0C80022B	Cassette Hold Spring	1				
61	CA80736A	Mechanism Chassis Ass'y	1				
62	CA80011B	Shut-off P.C.B. Ass'y	1				
63	CA80204A	Brake Ass'y	1				
64	0C80628A	Brake Spring B	1				
65	0C80630A	Brake Arm Collar	1				
66	0C80629A	Brake Arm	1				
67	0C82724A	Reel Motor Holder	1				
68	CA81699A	Reel Motor Ass'y	1				
69	0C83380A	Idle Gear	1				
70	0C82701A	Supply Capstan Flange	1				
71	0C82700A	Take-up Capstan Flange	1				
72	0C80428A	Hold Spring	2				
73	0C82699A	Supply Flywheel	1				

3.4. Mechanism Ass'y (B02)

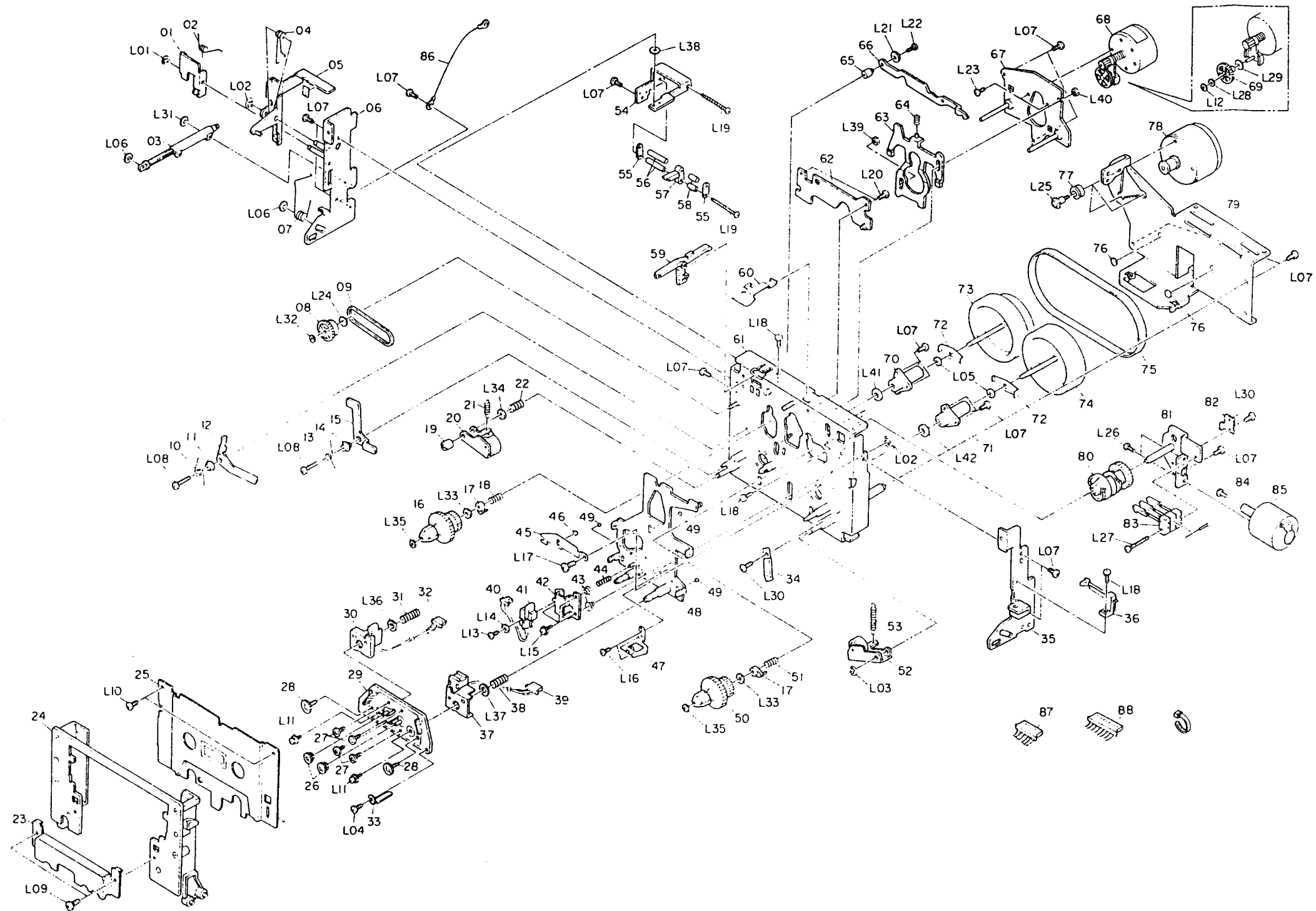


Fig. 3.4

4. MOUNTING DIAGRAMS AND PARTS LIST

4.1. Bias Volume P.C.B. Ass'y

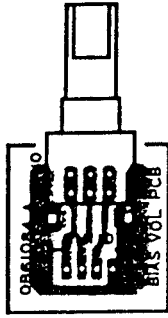


Fig. 4.1

4.2. Input Volume P.C.B. Ass'y

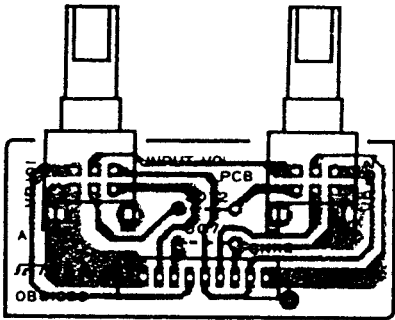


Fig. 4.2

4.3. Timer Switch P.C.B. Ass'y

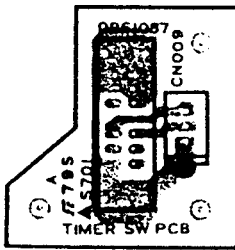


Fig. 4.3

4.4. Front P.C.B. Ass'y

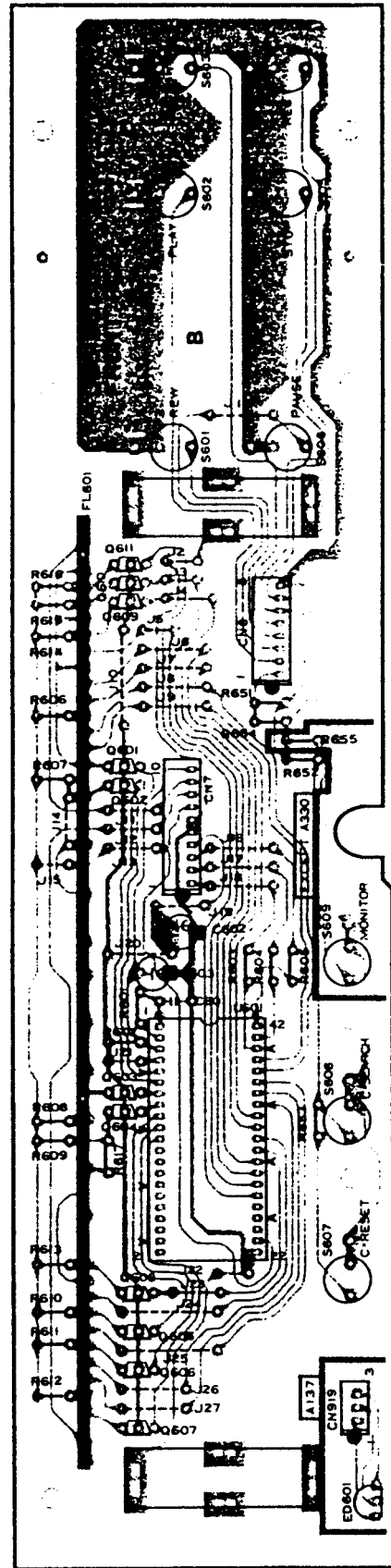


Fig. 4.4

4.5. Power Supply & Logic P.C.B. Ass'y

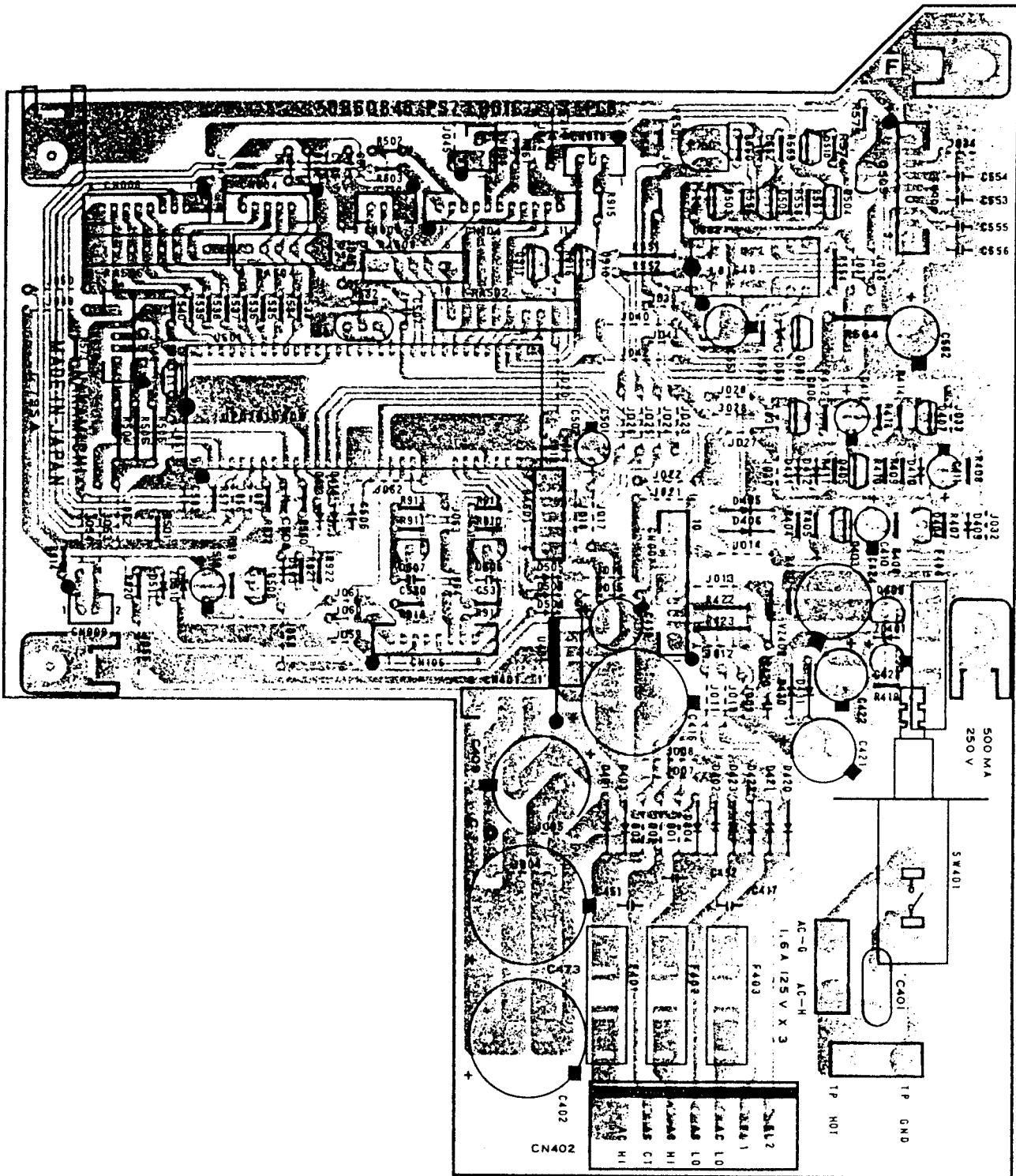


Fig. 4.5

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

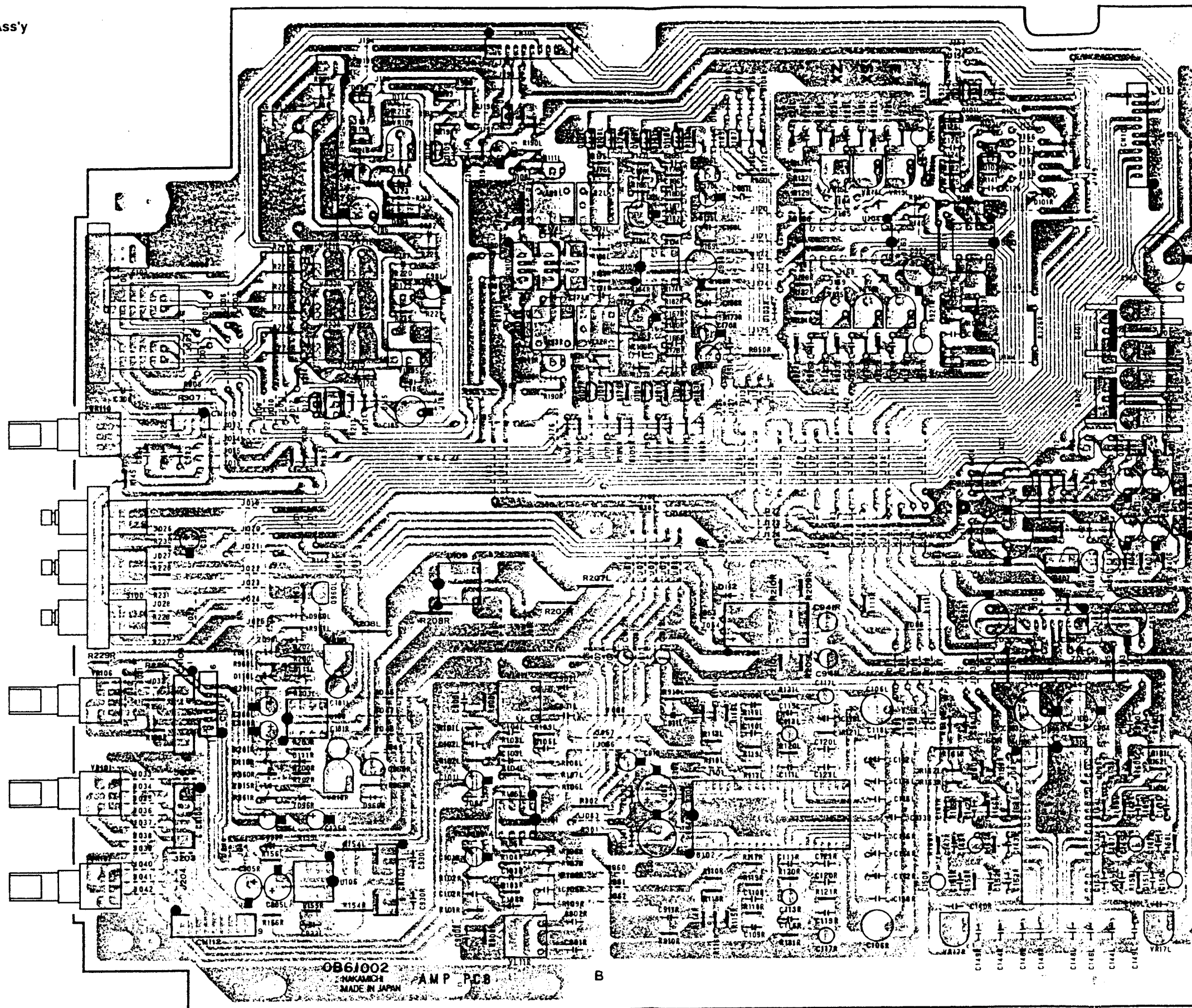


Fig. 4.6

Schematic Ref. No.	Part No.	Description
Q508	0B10029A	TR 2SA933S (S)
ZD510	0B12695A	ZD 10V MA4100(N)
D501,502	0B06398A	SiD 1SS176
D511	0B06398A	SiD 1SS176
X501	0B92045A	Crystal 4.0MHZ
RA501	0B21101A	R Network 10Kx3
RA502	0B21102A	R Network 10Kx6
RA503	0B21101A	R Network 10Kx3
RA504	0B21101A	R Network 10Kx3
RA506	0B21102A	R Network 10Kx6
R501	0B09689A	RK 3.3K 1/6W J
R502,503	0B09701A	RK 10K 1/6W J
R504,505	0B09701A	RK 10K 1/6W J
R506	0B09701A	RK 10K 1/6W J
R532,533	0B09677A	RK 1K 1/6W J
R534,535	0B09677A	RK 1K 1/6W J
R536,537	0B09677A	RK 1K 1/6W J
R538,539	0B09677A	RK 1K 1/6W J
R540	0B09677A	RK 1K 1/6W J
R550	0B09701A	RK 10K 1/6W J
R571	0B09677A	RK 1K 1/6W J
R572,573	0B09701A	RK 10K 1/6W J
R910,911	0B09709A	RK 22K 1/6W J
R912,913	0B09725A	RK 100K 1/6W J
R914	0B09701A	RK 10K 1/6W J
R917,918	0B09725A	RK 100K 1/6W J
R919	0B09721A	RK 68K 1/6W J
R920	0B09669A	RK 470 1/6W J
R921	0B09725A	RK 100K 1/6W J
R922	0B09701A	RK 10K 1/6W J
C501	0B40077A	CE 47 16V
C502	0B41298A	CML 0.1 50V J
C503	0B41302A	CML 0.22 50V J
C504,505	0B41286A	CML 0.01 50V J
C506,507	0B41274A	CML 1000P 50V J
C508	0B41944A	CC 1000P 50V K
C510	0B40756A	CE 1 50V (LN)
C530,531	0B41290A	CML 0.022 50V J
CN004	0B81462A	5P T-Post
CN007	0B84302A	10P T-Post
CN008	0B84296A	8P T-Post
CN009	0B84281A	3P T-Post
CN104	0B84305A	11P T-Post
CN105	0B81465A	8P T-Post
CN516	0B84286A	5P T-Post

- Miscellaneous -

0B60846F Power Supply & Logic P.C.B.

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

Schematic Ref. No.	Part No.	Description
BA08849A Main P.C.B. Ass'y		
- Input Amp. -		
U101	0B06146A	IC NJM4558DD
VL11L,R	0B51373A	L-C Block (MPX)
R101L,R	0B09749A	RK 1M 1/6W J
R102L,R	0B09717A	RK 47K 1/6W J
R103L,R	0B09717A	RK 47K 1/6W J
R104L,R	0B09709A	RK 22K 1/6W J
R105L,R	0B09677A	RK 1K 1/6W J
R106L,R	0B09677A	RK 1K 1/6W J
R107L,R	0B25236A	RM 2.67K 1/4W F
R108L,R	0B25236A	RM 2.67K 1/4W F
R109L,R	0B25267A	RM 5.62K 1/4W F
R900L,R	0B09725A	RK 100K 1/6W J
C101L,R	0B40778A	CE 10 25V
C102L,R	0B41976A	CC 33P 50V J
C103L,R	0B41978A	CC 68P 50V J
C104L,R	0B41976A	CC 33P 50V J
C105L,R	0B01802A	CML 2200P 50V J
C900L,R	0B09989A	CC 120P 50V J
C901L,R	0B09189A	CML 2700P 50V J
C902L,R	0B01804A	CML 3900P 50V J
CN112	0B84084A	9P T-Post
- Encoder -		
U102	0B11363A	IC CX20188
ZD301,302	0B12695A	ZD 10V MA4100(N)
R110L,R	0B25267A	RM 5.62K 1/4W F
R113L,R	0B25195A	RM 1K 1/4W F
R114L,R	0B25304A	RM 13.7K 1/4W F
R115L,R	0B25251A	RM 3.83K 1/4W F
R116L,R	0B25244A	RM 3.24K 1/4W F
R117L,R	0B09749A	RK 1M 1/6W J
R118L,R	0B25171A	RM 562 1/4W F
R119L,R	0B25324A	RM 22.1K 1/4W F
R120L,R	0B09698A	RK 7.5K 1/6W J
R121L,R	0B09673A	RK 680 1/6W J
R131L,R	0B09700A	RK 9.1K 1/6W J
R301,302	0B09508A	RF 56 1/4W J
R303	0B25398A	RM 130K 1/4W F
R910L,R	0B25099A	RM 100 1/4W F
C106L,R	0B40474A	CE 47 16V (BP)
C109L,R	0B41133A	CPP 2200P 100V G
C110L,R	0B41133A	CPP 2200P 100V G
C111L,R	0B41139A	CPP 3900P 100V G
C112L,R	0B41306A	CML 0.47 50V J
C113L,R	0B40817A	CE 1 50V (BP)
C114L,R	0B41300A	CML 0.15 50V J
C115L,R	0B41288A	CML 0.015 50V J
C116L,R	0B41302A	CML 0.22 50V J
C117L,R	0B40817A	CE 1 50V (BP)
C118L,R	0B41296A	CML 0.068 50V J
C119L,R	0B41295A	CML 0.056 50V J
C120L,R	0B41143A	CPP 5600P 100V G
C121L,R	0B05681A	CML 0.01 50V J
C301,302	0B40608A	CE 470 16V
C910	0B40778A	CE 10 25V
C911L,R	0B09989A	CC 120P 50V J
C913L,R	0B09989A	CC 120P 50V J
- Rec. Amp. -		
U107	0B06387A	IC NJM2043DD
Q105	0B10053A	TR DTA144ES
Q106L,R	0B06299A	TR 2SC2878
Q107L,R	0B10033A	TR 2SC1740S (S)
Q108L,R	0B10033A	TR 2SC1740S (S)
Q109L,R	0B10033A	TR 2SC1740S (S)
Q110L,R	0B10033A	TR 2SC1740S (S)
Q111L,R	0B06299A	TR 2SC2878

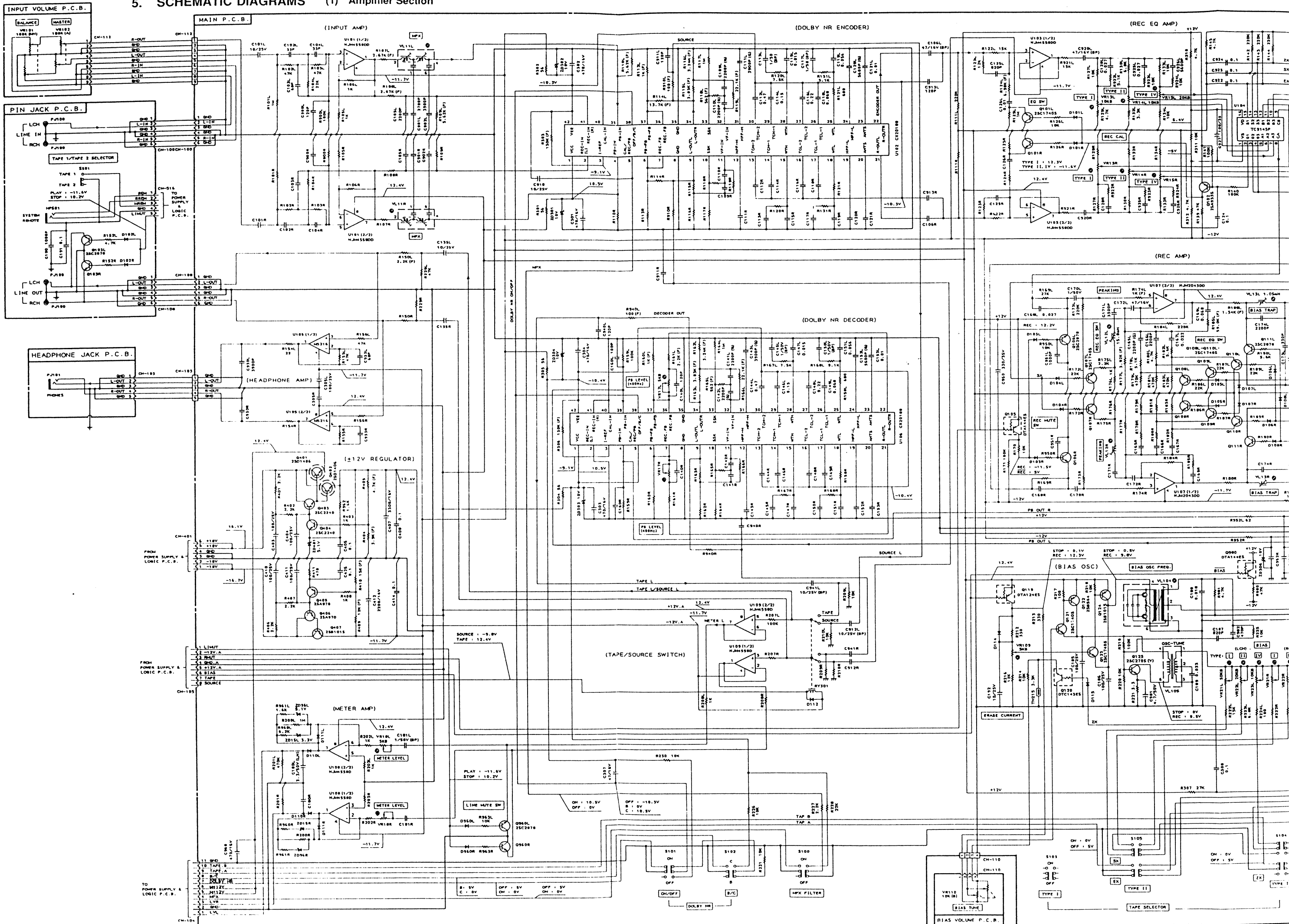
Schematic Ref. No.	Part No.	Description
Q112	0B10029A	TR 2SA933S (S)
D103L,R	0B06398A	SiD 1SS176
D104L,R	0B06398A	SiD 1SS176
D105L,R	0B06398A	SiD 1SS176
D106L,R	0B06398A	SiD 1SS176
D107L,R	0B06398A	SiD 1SS176
D108L,R	0B06398A	SiD 1SS176
D109	0B06398A	SiD 1SS176
VL12L,R	0B51374A	Coil 15.8mH
VL13L,R	0B51370A	Trap Coil 1.05mH
R169L,R	0B09711A	RK 27K 1/6W J
R170	0B09701A	RK 10K 1/6W J
R171	0B09725A	RK 100K 1/6W J
R172L,R	0B09709A	RK 22K 1/6W J
R173L,R	0B09733A	RK 220K 1/6W J
R174L,R	0B25195A	RM 1K 1/4W F
R175L,R	0B09685A	RK 2.2K 1/6W J
R176L,R	0B09677A	RK 1K 1/6W J
R177L,R	0B25252A	RM 3.92K 1/4W F
R178L,R	0B09694A	RK 5.1K 1/6W J
R179L,R	0B09741A	RK 470K 1/6W J
R180L,R	0B09693A	RK 4.7K 1/6W J
R181L,R	0B09741A	RK 470K 1/6W J
R182L,R	0B09695A	RK 5.6K 1/6W J
R183L,R	0B09741A	RK 470K 1/6W J
R184L,R	0B09733A	RK 220K 1/6W J
R185L,R	0B25365A	RM 59.0K 1/4W F
R186L,R	0B09709A	RK 22K 1/6W J
R187L,R	0B09709A	RK 22K 1/6W J
R188L,R	0B22644A	RM 1.54K 1/4W F
R189L,R	0B09709A	RK 22K 1/6W J
R190L,R	0B09695A	RK 5.6K 1/6W J
R191	0B09717A	RK 47K 1/6W J
R192	0B09701A	RK 10K 1/6W J
R193	0B09721A	RK 68K 1/6W J
R194	0B09701A	RK 10K 1/6W J
R195L,R	0B09629A	RK 10 1/6W J
R950L,R	0B09701A	RK 10K 1/6W J
C165L,R	0B41133A	CPP 2200P 100V G
C166L,R	0B41278A	CML 2200P 50V J
C167L,R	0B05582A	CML 0.022 50V J
C168L,R	0B09045A	CML 0.027 50V J
C169L,R	0B05682A	CML 0.068 50V J
C170L,R	0B40557A	CE 1 50V
C171L,R	0B01914A	CML 3300P 50V J
C172L,R	0B40559A	CE 47 16V
C173L,R	0B09322A	CPP 330P 100V J
C174L,R	0B09834A	CPP 2200P 100V J
C175	0B40778A	CE 10 25V
C310	0B05550A	CML 1000P 50V J
C950	0B40798A	CE 330 35V
C951L,R	0B05550A	CML 1000P 50V J
CN101	0B81461A	4P T-Post

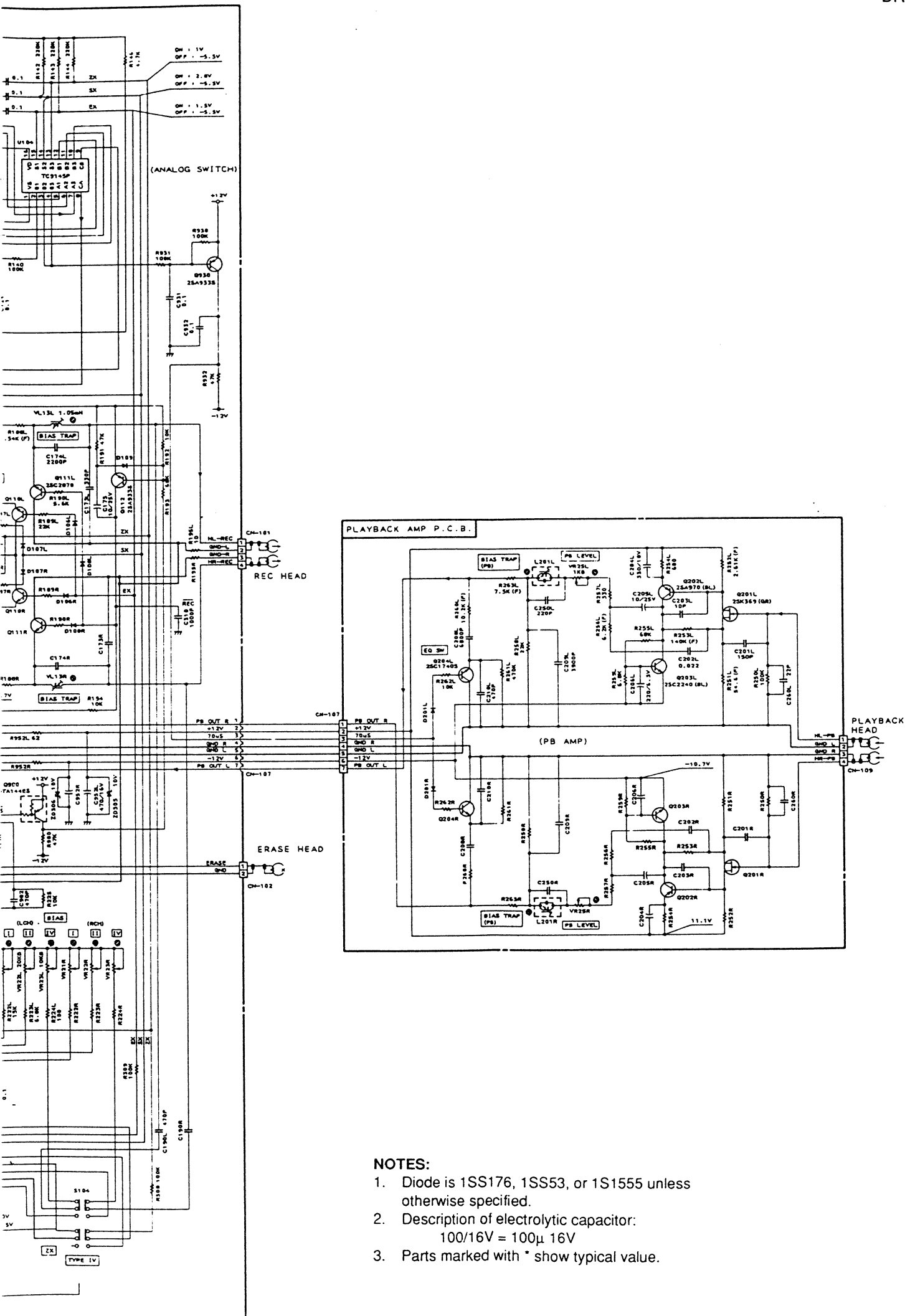
- Rec. Eq. Amp. -

U103	0B06146A	IC NJM4558DD
U104	0B11027A	IC TC9145P
Q101L,R	0B10033A	TR 2SC1740S (S)
Q102	0B10029A	TR 2SA933S (S)
Q930	0B10029A	TR 2SA933S (S)
D101L,R	0B06398A	SiD 1SS176
VR13L,R	0B32193A	Semra VR 10K
VR14L,R	0B32193A	Semra VR 10K
VR15L,R	0B32194A	Semra VR 20K
R111L,R	0B09733A	RK 220K 1/6W J
R122L,R	0B09705A	RK 15K 1/6W J
R123L,R	0B09703A	RK 12K 1/6W J
R124L,R	0B25276A	RM 6.98K 1/4W F
R125L,R	0B09749A	RK 1M 1/6W J
R126L,R	0B09701A	RK 10K 1/6W J
R127L,R	0B09701A	RK 10K 1/6W J
R129L,R	0B09693A	RK 4.7K 1/6W J
R130L,R	0B09697A	RK 6.8K 1/6W J
R132L,R	0B09689A	RK 3.3K 1/6W J

Schematic			Schematic			Schematic		
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
R133L,R	0B09701A	RK 10K 1/6W J	C930L,R	0B01804A	CML 3900P 50V J	C189	0B41261A	CPP 0.033 100V J
R134L,R	0B09701A	RK 10K 1/6W J	C933L,R	0B41978A	CC 68P 50V J	C192	0B40778A	CE 10 25V
R139	0B09717A	RK 47K 1/6W J	CN103	0B81637A	5P T-Post	C952L,R	0B40608A	CE 470 16V
R140,141	0B09725A	RK 100K 1/6W J	- Power Supply -			C981	0B40115A	CE 4.7 50V
R142,143	0B09733A	RK 220K 1/6W J	Q401,402	0B06452A	TR 2SD1406	C982	0B09270A	CPP 470P 100V J
R144	0B09733A	RK 220K 1/6W J	Q403,404	0B06142A	TR 2SC2240	CN102	0B81459A	2P T-Post
R145,146	0B09693A	RK 4.7K 1/6W J	Q405,406	0B10050A	TR 2SA970	- Bias Adj. -		
R310	0B09693A	RK 4.7K 1/6W J	Q407	0B06451A	TR 2SB1015	VR21L,R	0B32195A	Semi VR 50K
R311	0B09701A	RK 10K 1/6W J	ZD401	0B12705A	ZD 5.1V	VR22L,R	0B32194A	Semi VR 20K
R312	0B09693A	RK 4.7K 1/6W J	MA4051N-M			VR23L,R	0B32193A	Semi VR 10K
R921L,R	0B09705A	RK 15K 1/6W J	R401,402	0B09685A	RK 2.2K 1/6W J	R222L,R	0B09705A	RK 15K 1/6W J
R923L,R	0B09701A	RK 10K 1/6W J	R403	0B09677A	RK 1K 1/6W J	R223L,R	0B09697A	RK 6.8K 1/6W J
R924L,R	0B09701A	RK 10K 1/6W J	R404	0B25667A	RM 3.9K 1/4W F	R224L,R	0B09653A	RK 100 1/6W J
R930,931	0B09725A	RK 100K 1/6W J	R405	0B25669A	RM 4.7K 1/4W F	- Meter Amp. -		
R932	0B09717A	RK 47K 1/6W J	R406,407	0B09685A	RK 2.2K 1/6W J	U108	0B06124A	IC NJM4558D
C124	0B41971A	CC 0.1 50V Z	R408	0B09677A	RK 1K 1/6W J	Q960L,R	0B06299A	TR 2SC2878
C125L,R	0B09993A	CML 820P 50V J	R409	0B22570A	RM 12K 1/4W F	ZD15L,R	0B12714A	ZD 3.3V
C126L,R	0B05681A	CML 0.01 50V J	R410	0B25308A	RM 15K 1/4W F	RD3.3ESB1		
C128L,R	0B09045A	CML 0.027 50V J	R411	0B09669A	RK 470 1/6W J	ZD96L,R	0B12289A	ZD 5.1V MTZ5.1C
C920L,R	0B40474A	CE 4.7 16V (BP)	R962	0B09682A	RK 1.6K 1/6W J	D110L,R	0B06398A	SiD 1SS176
C922,923	0B41971A	CC 0.1 50V Z	C403,404	0B40800A	CE 100 25V	D111L,R	0B06398A	SiD 1SS176
C924	0B41971A	CC 0.1 50V Z	C405	0B41971A	CC 0.1 50V Z	D960L,R	0B06398A	SiD 1SS176
C925L,R	0B09045A	CML 0.027 50V J	C407	0B40705A	CE 3300 16V	VR18L,R	0B32192A	Semi VR 5K
C926L,R	0B05659A	CML 5600P 50V J	C408	0B41971A	CC 0.1 50V Z	R200L,R	0B09749A	RK 1M 1/6W J
C927	0B40799A	CE 100 35V	C410,411	0B40800A	CE 100 25V	R201L,R	0B09741A	RK 470K 1/6W J
C931,932	0B41971A	CC 0.1 50V Z	C412	0B40361A	CE 2200 16V	R202L,R	0B09677A	RK 1K 1/6W J
- Decoder -			C414	0B41971A	CC 0.1 50V Z	R203L,R	0B09677A	RK 1K 1/6W J
U106	0B11363A	IC CX20188	C425	0B41971A	CC 0.1 50V Z	R960L,R	0B09696A	RK 6.2K 1/6W J
ZD303,304	0B12695A	ZD 10V MA4100(N)	0B90448A Heat Sink (2)			R961L,R	0B09682A	RK 1.6K 1/6W J
VR17L,R	0B32192A	Semi VR 5K	- Tape/Source Switch -			R963L,R	0B09701A	RK 10K 1/6W J
R158L,R	0B09673A	RK 680 1/6W J	U109	0B06124A	IC NJM4558D	C180L,R	0B40257A	CE 3.3 50V (LN)
R159L,R	0B09725A	RK 100K 1/6W J	D112	0B06398A	SiD 1SS176	C181L,R	0B40817A	CE 1 50V (BP)
R160L,R	0B25195A	RM 1K 1/4W F	R207L,R	0B09725A	RK 100K 1/6W J	C960	0B40608A	CE 470 16V
R161L,R	0B09420A	RM 2.2K 1/4W F	R208L,R	0B09677A	RK 1K 1/6W J	- Push Switch -		
R162L,R	0B25244A	RM 3.24K 1/4W F	R209L,R	0B09701A	RK 10K 1/6W J	R226	0B09701A	RK 10K 1/6W J
R163L,R	0B25251A	RM 3.83K 1/4W F	R210L,R	0B09701A	RK 10K 1/6W J	R227	0B09685A	RK 2.2K 1/6W J
R164L,R	0B09749A	RK 1M 1/6W J	C912L,R	0B40610A	CE 10 25V (BP)	R228	0B09709A	RK 22K 1/6W J
R165L,R	0B25171A	RM 562 1/4W F	C941L,R	0B40610A	CE 10 25V (BP)	R230,231	0B09701A	RK 10K 1/6W J
R166L,R	0B25324A	RM 22.1K 1/4W F	RL301	0B90279A	DS Relay	R307	0B09711A	RK 27K 1/6W J
R167L,R	0B09698A	RK 7.5K 1/6W J	- Bias Osc. -			R308,309	0B09725A	RK 100K 1/6W J
R168L,R	0B09700A	RK 9.1K 1/6W J	Q119	0B10055A	TR DTA124ES	C190L,R	0B09270A	CPP 470P 100V J
R304,305	0B09508A	RF 56 1/4W J	Q120	0B10070A	TR DTC143ES	C307	0B40559A	CE 47 16V
R306	0B25398A	RM 130K 1/4W F	Q121	0B10033A	TR 2SC1740S (S)	C308	0B41971A	CC 0.1 50V Z
R940L,R	0B25099A	RM 100 1/4W F	Q122	0B06069A	TR 2SB564	S100	0B70177A	Push Switch
C140L,R	0B09989A	CC 120P 50V J	Q123	0B10033A	TR 2SC1740S (S)	MPX-DOLBY		
C141L,R	0B41133A	CPP 2200P 100V G	Q124	0B06451A	TR 2SB1015	S103	0B70176A	Push Switch TAPE
C142L,R	0B41133A	CPP 2200P 100V G	Q125	0B10222A	TR 2SC2705 (Y)	- Miscellaneous -		
C143L,R	0B41139A	CPP 3900P 100V G	Q980	0B10053A	TR DTA144ES	0B61002B	Main P.C.B.	
C144L,R	0B41306A	CML 0.47 50V J	ZD305,306	0B12695A	ZD 10V	0B83926A	6P H-Connector	
C145L,R	0B40817A	CE 1 50V (BP)	D114,115	0B06398A	SiD 1SS176	Ass'y 330		
C146L,R	0B41300A	CML 0.15 50V J	VL104	0B51047A	Bias Osc.	CN104	0B83932A 11P H-Connector	
C147L,R	0B41288A	CML 0.015 50V J	VL105	0B51372A	Osc. Tune	Ass'y 250		
C148L,R	0B41302A	CML 0.22 50V J	TH215	0B19006A	Thermistor 3.3K	CN105	0B83931B 8P H-Connector	
C149L,R	0B41296A	CML 0.068 50V J	VR109	0B32192A	Semi VR 5K	Ass'y 150		
C150L,R	0B40817A	CE 1 50V (BP)	R212,213	0B09665A	RK 330 1/6W J	CN107	0B83928A 7P H-Connector	
C151L,R	0B41295A	CML 0.056 50V J	R214	0B09701A	RK 10K 1/6W J	Ass'y 410		
C152L,R	0B41143A	CPP 5600P 100V G	R216	0B09703A	RK 12K 1/6W J	CN108	0B83925A 6P H-Connector	
C153L,R	0B05681A	CML 0.01 50V J	R217	0B09653A	RK 100 1/6W J	Ass'y 360		
C160L,R	0B41201A	CPP 100P 100V J	R218	0B09701A	RK 10K 1/6W J	CN401	0B83930B 6P H-Connector	
C303,304	0B40608A	CE 470 16V	R219	0B09725A	RK 100K 1/6W J	Ass'y 270		
C940L,R	0B09989A	CC 120P 50V J	R220	0B09701A	RK 10K 1/6W J			
- Headphone Amp. -			R221	0B09617A	RK 3.3 1/6W J			
U105	0B11365A	IC M5216	R225	0B09701A	RK 10K 1/6W J			
R150L,R	0B25661A	RM 2.2K 1/4W F	R952L,R	0B09648A	RK 62 1/6W J			
R154L,R	0B09049A	RF 22 1/4W J	R980	0B09717A	RK 47K 1/6W J			
R155L,R	0B09717A	RK 47K 1/6W J	R981	0B09693A	RK 4.7K 1/6W J			
R156L,R	0B09717A	RK 47K 1/6W J	C185,186	0B40800A	CE 100 25V			
R229L,R	0B09717A	RK 47K1/6W J	C187	0B09993A	CML 820P 50V J			
C135L,R	0B40778A	CE 10 25V	C188	0B41255A	CPP 0.018 100V J			
C305L,R	0B40800A	CE 100 25V						

5. SCHEMATIC DIAGRAMS (1) Amplifier Section





NOTES:

1. Diode is 1SS176, 1SS53, or 1S1555 unless otherwise specified.
2. Description of electrolytic capacitor:
100/16V = 100μ 16V
3. Parts marked with * show typical value.