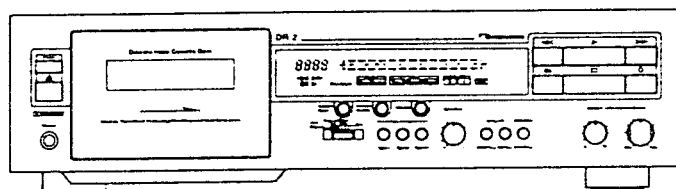




# DR-2

Discrete Head Cassette Deck



## CONTENTS

1. General .....	1
2. Test Tapes and Gauges .....	2
3. Mechanism Ass'y and Parts List .....	3
3.1. Synthesis .....	3
3.2. Chassis Ass'y (A01) .....	4
3.3. Front Chassis Ass'y (B01) .....	5
3.4. Mechanism Ass'y (B02) .....	7
4. Mounting Diagrams and Parts List .....	8
4.1. Bias Volume P.C.B. Ass'y .....	8
4.2. Input Volume P.C.B. Ass'y .....	8
4.3. Timer Switch P.C.B. Ass'y .....	8
4.4. Front P.C.B. Ass'y .....	8
4.5. Power Supply & Logic P.C.B. Ass'y .....	9
4.6. Main P.C.B. Ass'y .....	10
5. Schematic Diagrams .....	14

## 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

### 1.4. 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.

### 1.3. 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.

### 1.5. Package Ass'y and Accessory Ass'y

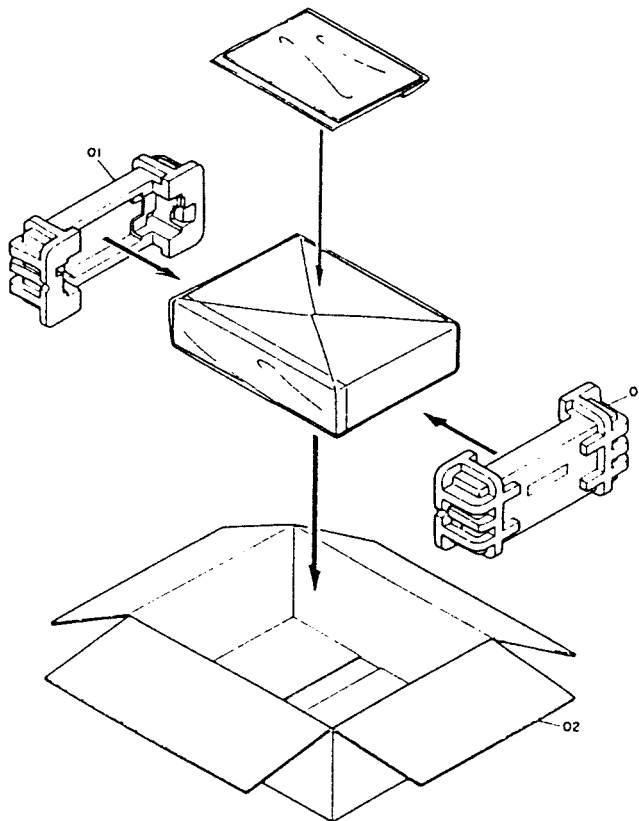


Fig. 1

Schematic Ref. No.	Part No.	Description	Qty
	-	<b>Package Ass'y</b>	
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

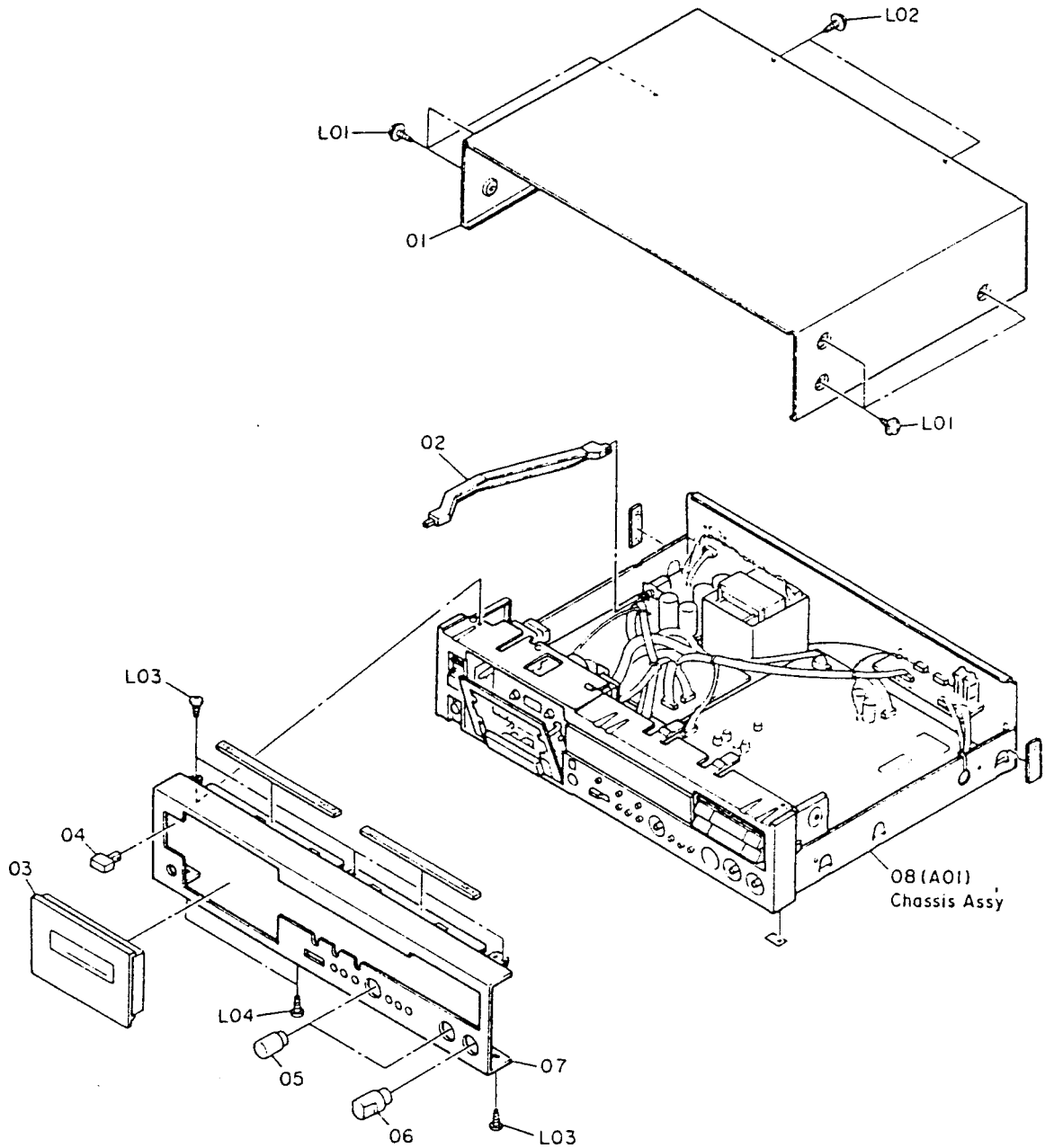


Fig. 3.1

#### 3.1. Synthesis

Schematic Ref. No.	Part No.	Description	Qty	Schematic Ref. No.	Part No.	Description	Qty
<b>Synthesis</b>							
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)

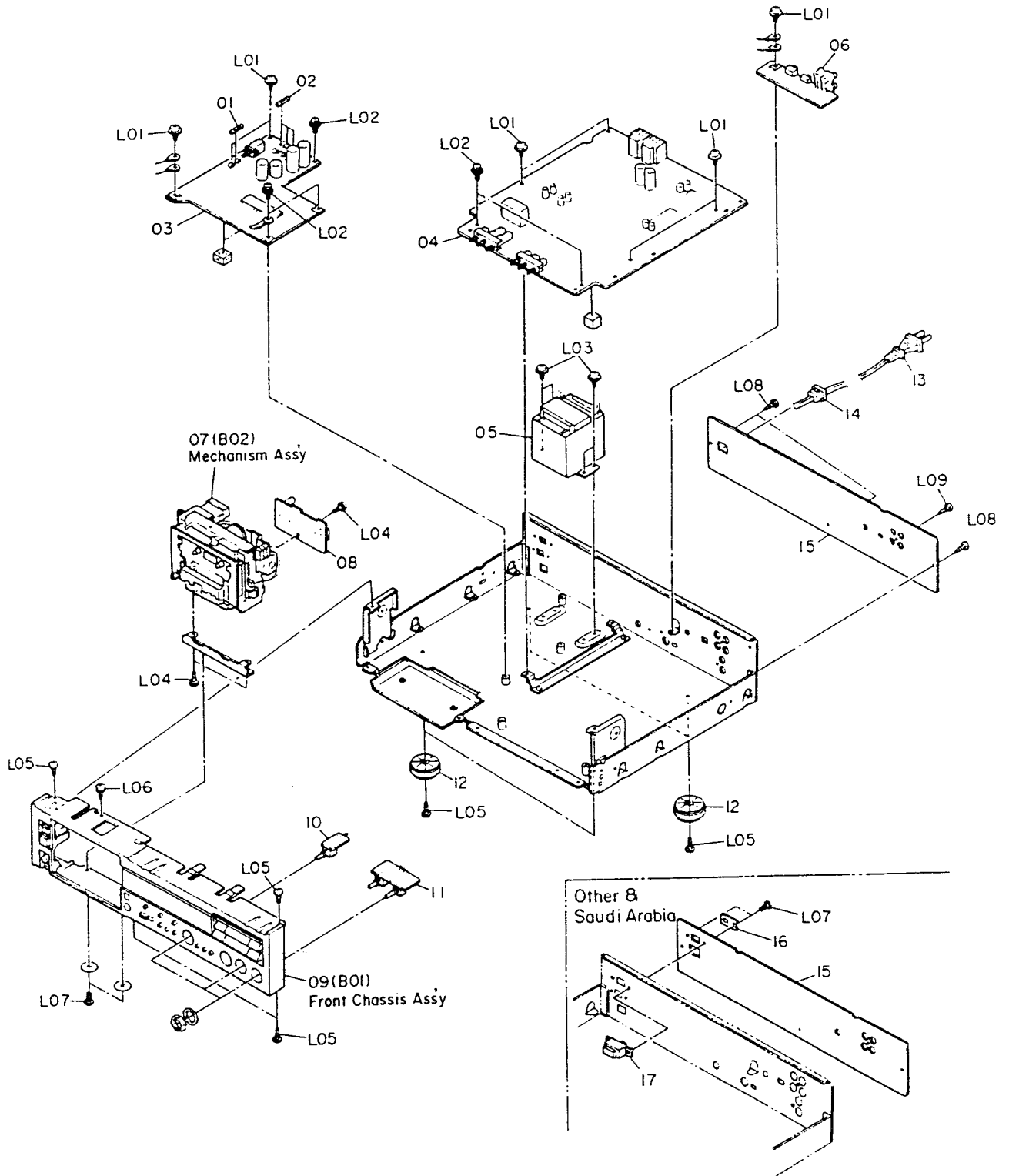


Fig. 3.2

3.3. Front Chassis Ass'y (B01)

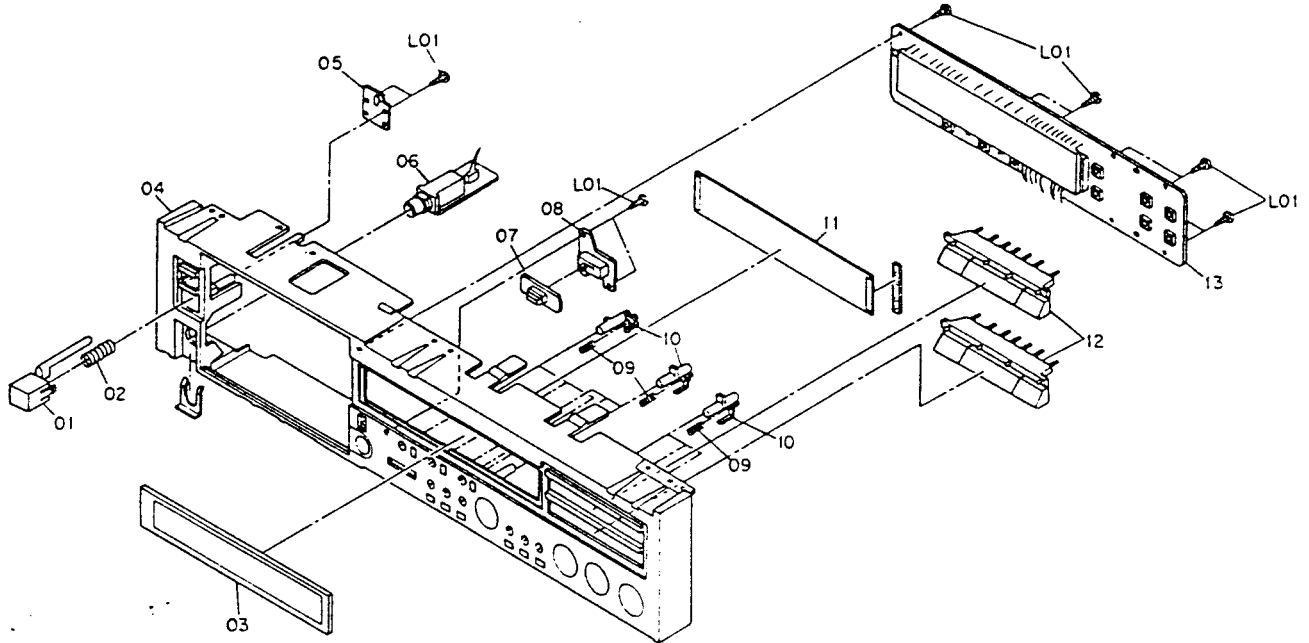


Fig. 3.3

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

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	1

## 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)

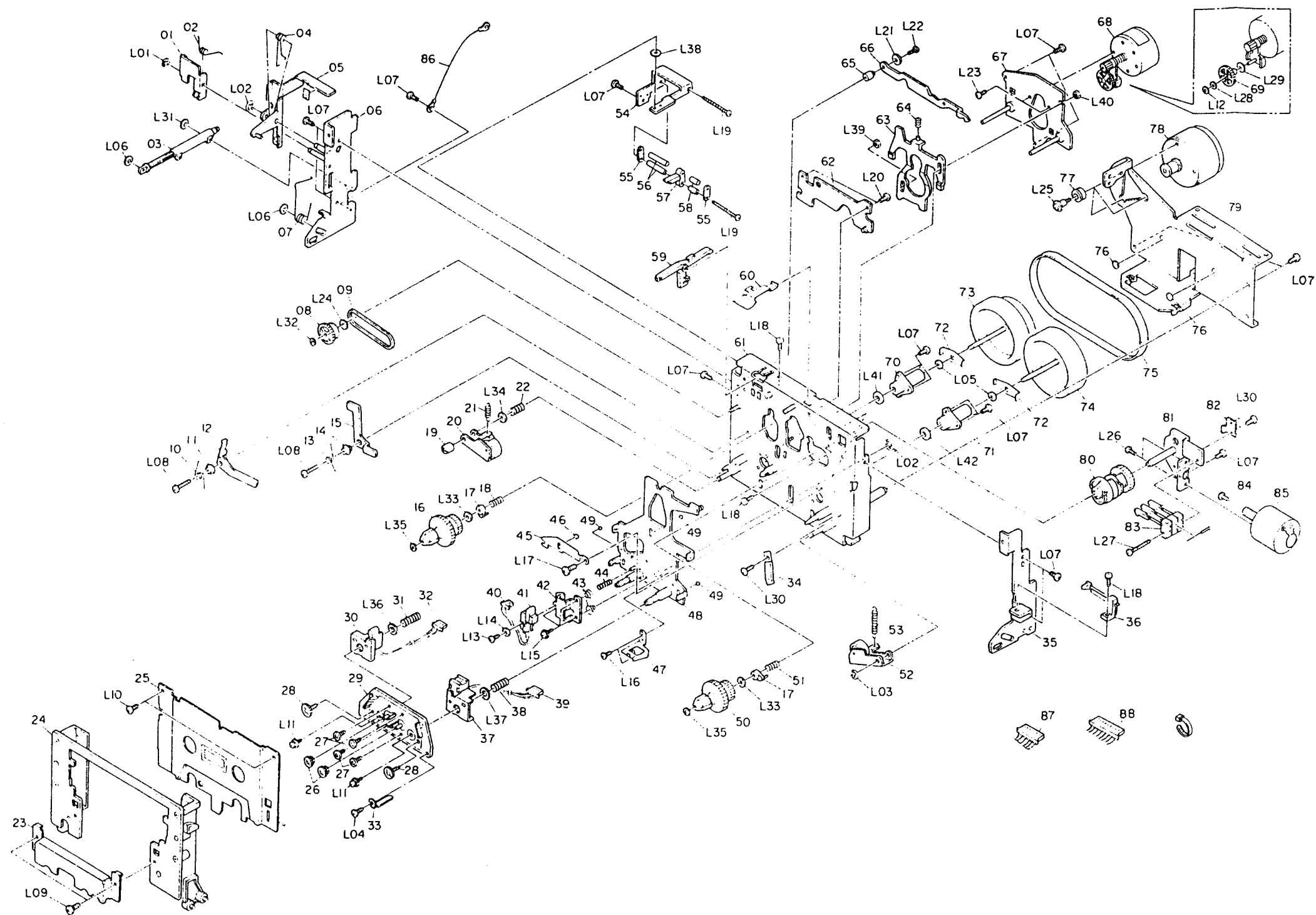


Fig. 3.4



### 4. MOUNTING DIAGRAMS AND PARTS LIST

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

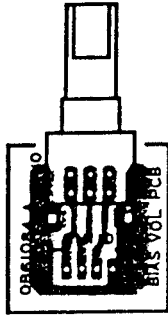


Fig. 4.1

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

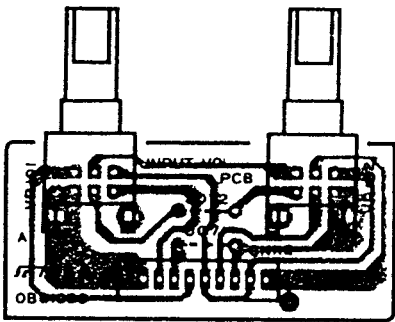


Fig. 4.2

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

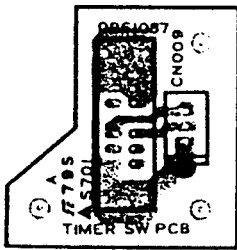


Fig. 4.3

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

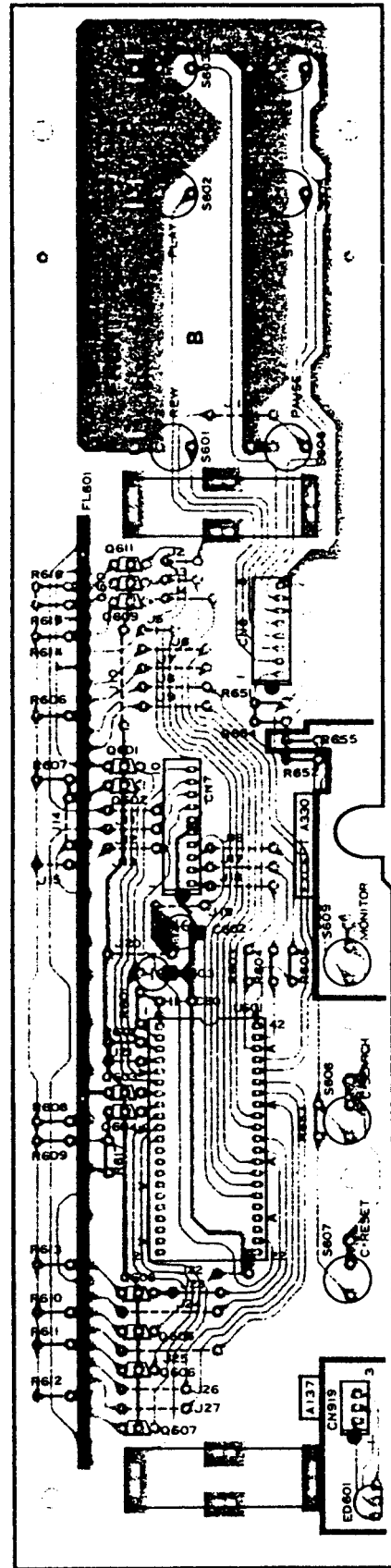


Fig. 4.4

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

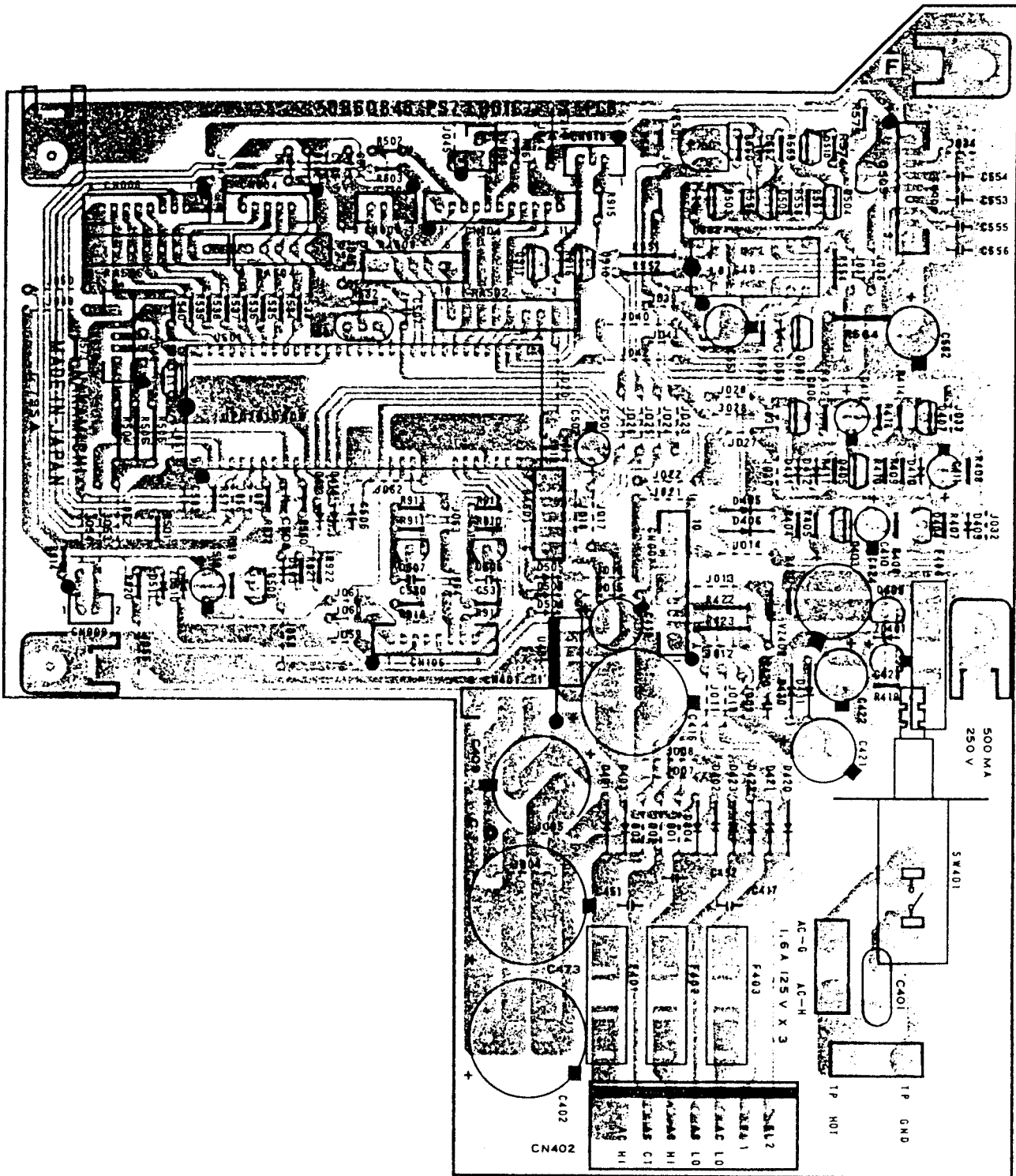


Fig. 4.5

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

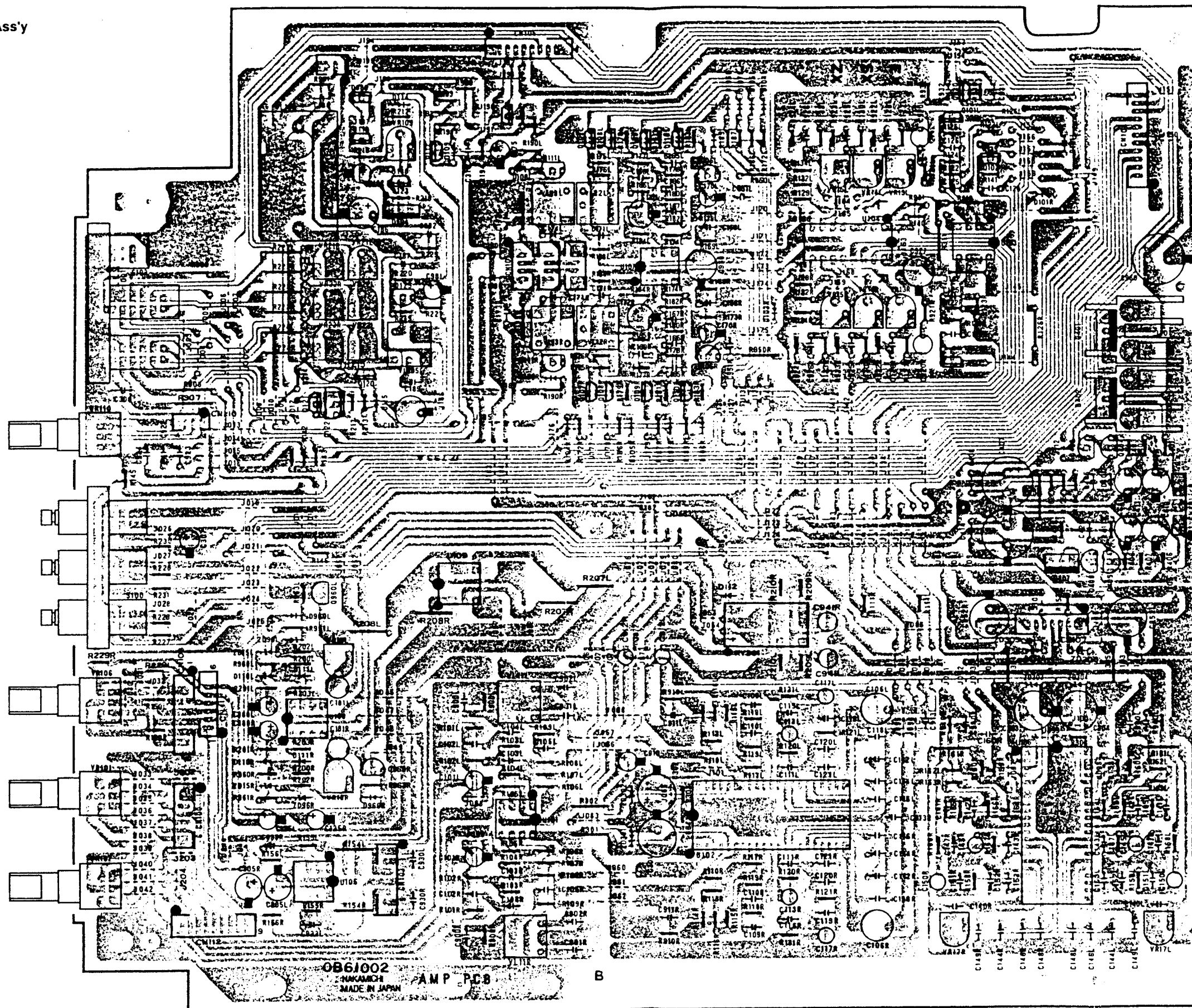


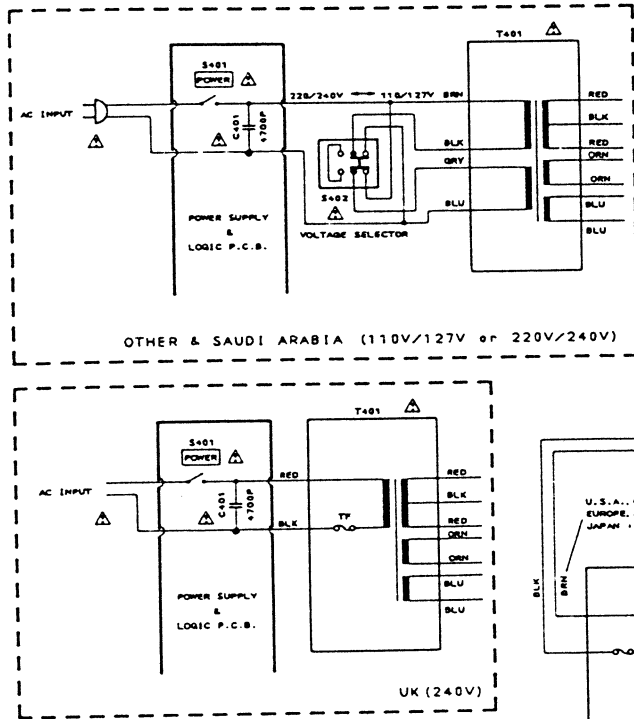
Fig. 4.6




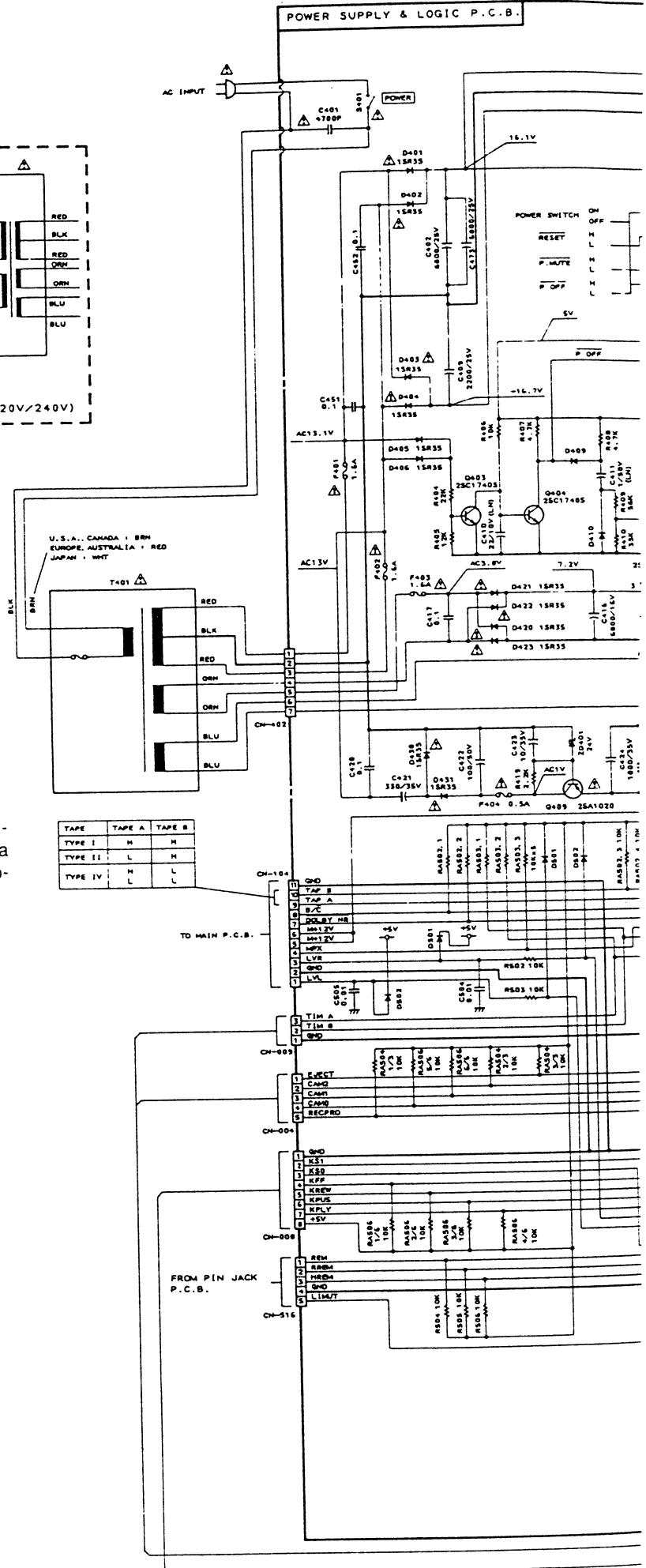




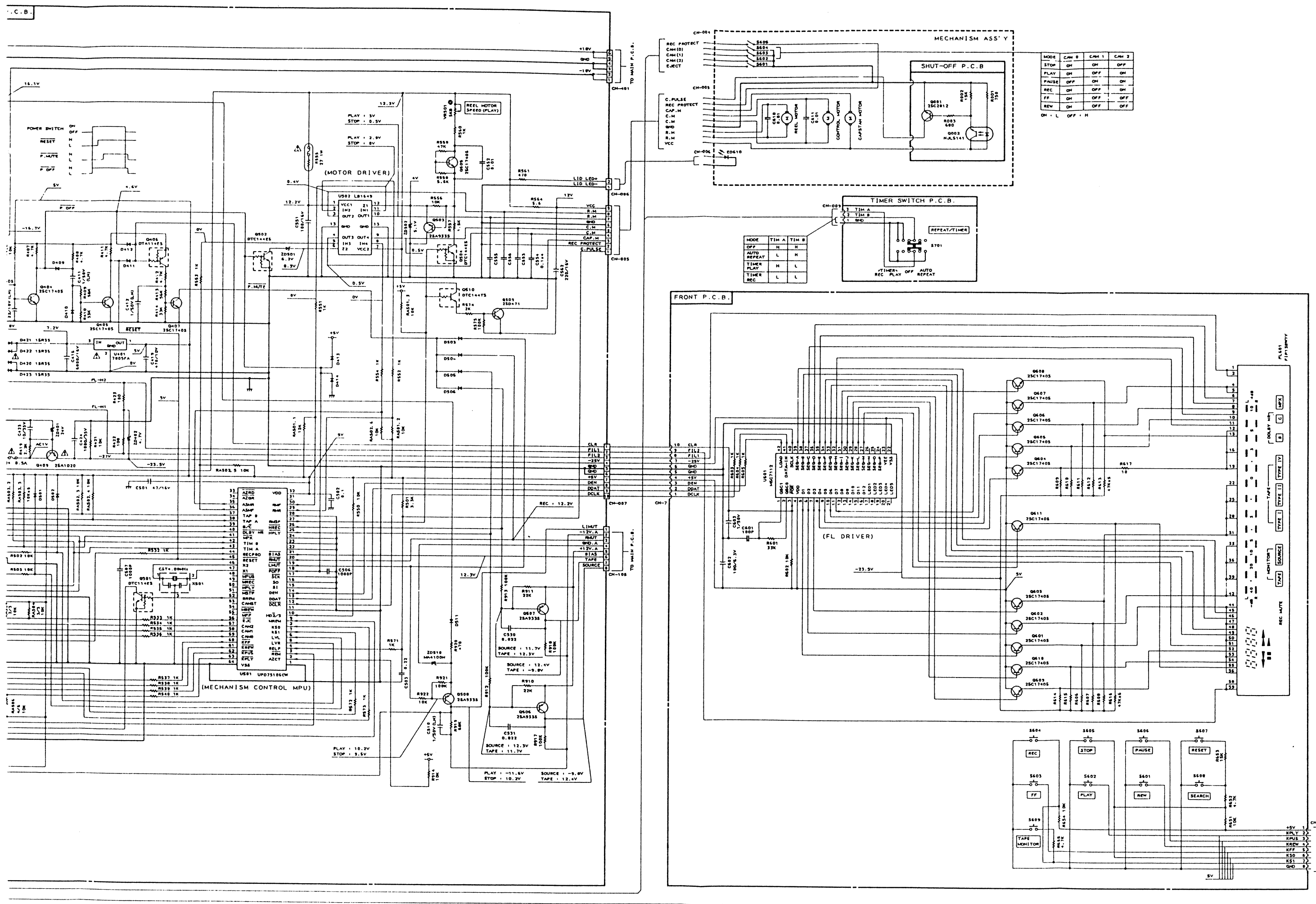
(2) Mechanism Control Section



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.

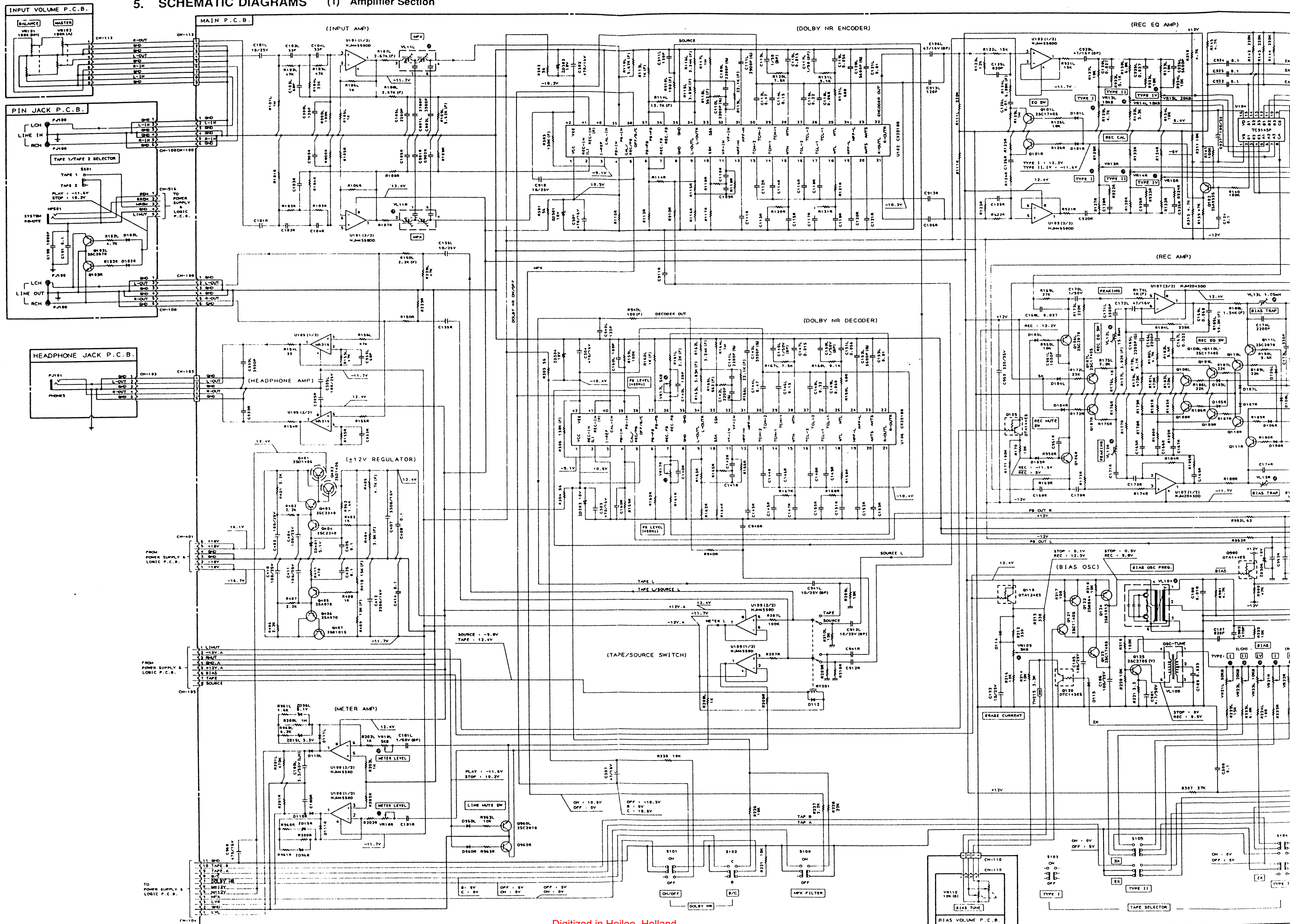


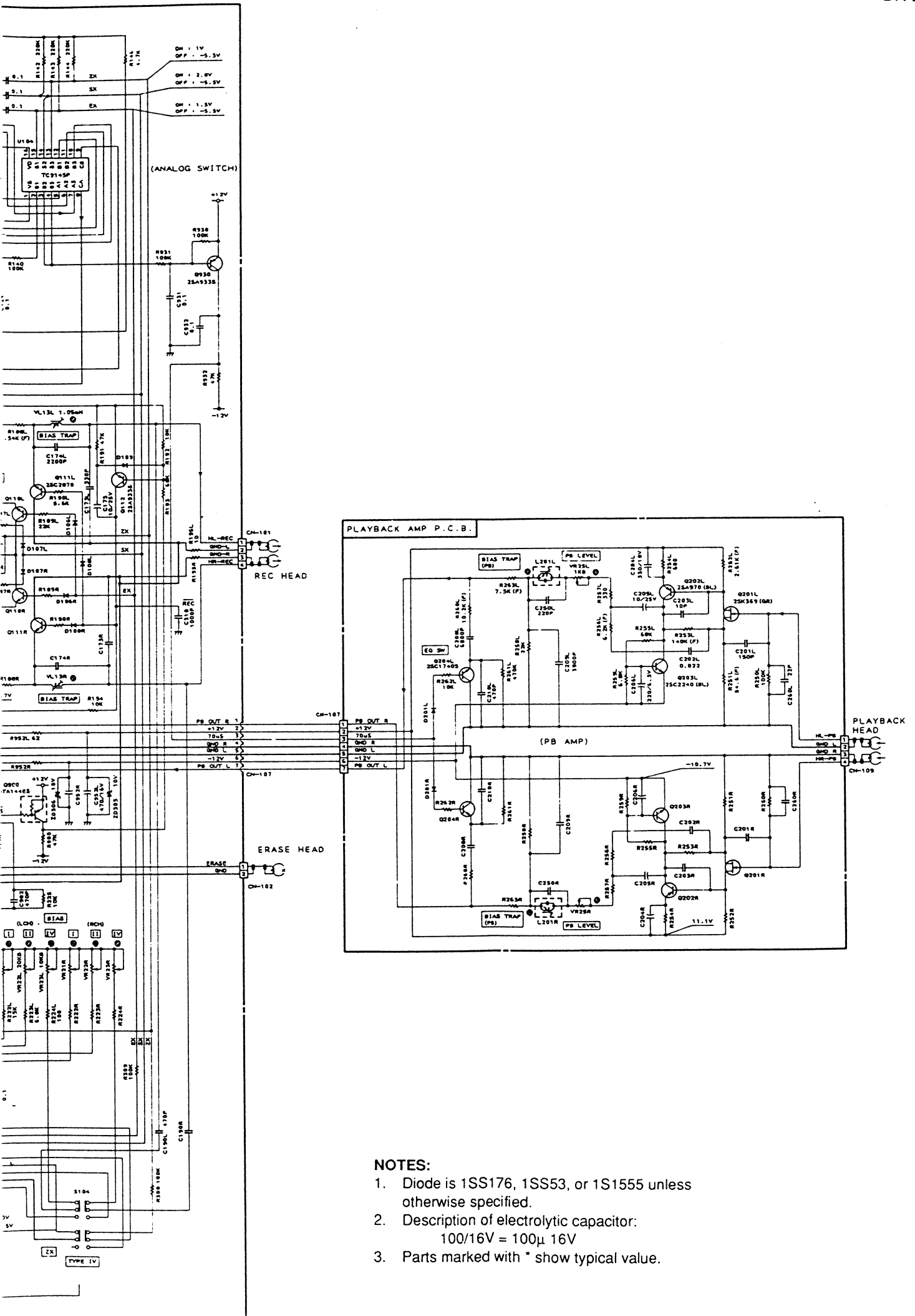
TAPE	TAPE A	TAPE B
TYPE I	M	H
TYPE II	L	H
TYPE IV	M	L





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.