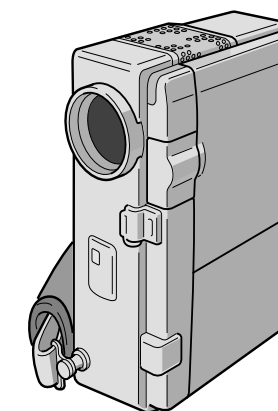


JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-DVM50UM



Mini **DV** NTSC

(AUDINAC KIT)

Regarding service information other than these sections, refer to the GR-DVM50U service manual (No. 86480). Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVM50UM)*

Camcorder

General

Power supply : DC 6.3 V --- (Using the AC Power Adapter/Charger)
DC 7.2 V --- (Using battery pack)

Power consumption
LCD monitor off, viewfinder on : Approx. 4.5 W

LCD monitor on, viewfinder off : Approx. 5.4 W

Format : DV Format (SD mode)

Signal format : NTSC Standard

Video signal recording format : Digital Component Recording

Cassette : Mini DV Cassette

Tape Speed : SP: 18.8 mm/s
LP: 12.5 mm/s

Maximum recording time
SP: 60 min.
LP: 90 min. (using M-DV60ME cassette)

Pickup : 1/4" CCD

Lens : F 1.8, f = 3.6 to 36 mm, 10:1 Power Zoom
Lens

Filter diameter : ϕ 27 mm

LCD monitor : 2.5" diagonally measured, LCD panel/TFT active matrix system

Viewfinder : Electronic viewfinder with 0.55" color LCD

Speaker : Monaural

Operating temperature : 0°C to 40°C (32°F to 104°F)

Operating humidity : 35% to 80%

Storage temperature : -20°C to 50°C (-4°F to 122°F)

Dimensions

: 48 (W) x 119 (H) x 89 (D) mm (1-15/16" x 4-11/16" x 3-9/16")
(with the LCD monitor closed and the viewfinder pushed back in)

Weight : Approx. 420 g (0.93 lbs) (without grip strap, cassette and battery)
Approx. 505 g (1.2 lbs) (incl. grip strap, cassette and battery)

Connectors

Video output : 1 Vp-p, 75 Ω unbalanced, analog output (via AV OUT connector)

Audio output : -8 dBs, 1 k Ω analog output, stereo (via AV OUT connector)

Headphone output : ϕ 3.5 mm, stereo (via AV OUT connector)

DV input/output : 4-pin, IEEE1394 compliant

AC Power Adapter/Charger AA-V50EN

Power requirement : AC 110 V to 240 V~, 50/60 Hz

Power consumption : 20 W

Output

Charge : DC 7.2 V --- , 0.63 A

VTR : DC 6.3 V --- , 1.8 A

Dimensions : 122 (W) x 39 (H) x 92 (D) mm (4-13/16" x 1-9/16" x 3-5/8")

Weight : Approx. 320 g (0.71 lbs)

Specifications shown are for SP mode unless otherwise indicated. E & O.E. Design and specifications subject to change without notice.

Docking Station

General

Dimensions : 115 mm (W) x 31 mm (H) x 55 mm (D) (4-9/16" x 1-1/4" x 2-3/16")

Weight : Approx. 90 g (0.2 lbs)

Connectors

S-Video : Y: 1Vp-p, 75 Ω , analog output
C: 0.29 Vp-p, 75 Ω , analog output

Video : 1Vp-p, 75 Ω , analog output

Audio : -8 dBs, 1 k Ω , analog output

JLIP : ϕ 3.5 mm, 4-pole, mini-head jack (compatible with RC-5325 plug)

Editing : ϕ 3.5 mm diameter, 2-pole

PC : ϕ 2.5 mm, 3-pole

External microphone input : -68 dBs, high impedance unbalanced with ϕ 3.5 mm (stereo)

E & O.E. Design and specifications subject to change without notice.

JVC

VICTOR COMPANY OF JAPAN, LIMITED
VIDEO DIVISION

S40894

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The following table indicate main different points between models GR-DVM50U and GR-DVM50UM.

ITEM	MODEL	GR-DVM50U	GR-DVM50UM
AC POWER ADAPTER CHARGER		AA-V50U	AA-V50EN
S CABLE,S-VIDEO CABLE		Optional	Provided
A/V RCA CABLE		Optional	Provided

The following table indicate different parts number between models GR-DVM50U and GR-DVM50UM.

PACKING AND ACCESSORY ASSEMBLY <M1> Note: As for IB (INSTRUCTION),refer to sec.5.

REF. No.	ITEM	MODEL	GR-DVM50U	GR-DVM50UM
1	PACKING CASE		LY31257-001B	–
8	CD ROM ASSY		* LY31133-005B	LY31133-005D
25	WARRANTY INF.		BT-51005-3	–
31	REGIST.CARD		BT-51020-1	–
32	MINI DV TAPE		Not used	Used
33	A/V RCA CABLE		–	YQ31953A
34	CORE FILTER		–	QQR0919-002
35	S CABLE, S-VIDEO CABLE		–	QAM0004-004
36	CORE FILTER		–	QQR0918-002

Note: Mark – is not used. Mark * reference model was also changed.

FINAL ASSEMBLY <M2> Refer to sec.5.

MAIN BOARD ASSEMBLY <01>

REF. No.	MODEL		GR-DVM50U	GR-DVM50UM
	ITEM			
PW	MAIN BOARD ASSY		* YB10245F	YB10258B-02
IC3004	IC		* TK11216BMC	TK11218BMC
Q2703,Q2704	TRANSISTOR		* 2SC4617/QR/-X	2SC5585
Q2761	TRANSISTOR		* -	DTC144EE
Q2762 to Q2764	TRANSISTOR		* -	DTA124EE
Q2765	TRANSISTOR		* -	DTC144EE
R1034	MG RESISTOR		* NASA6AJ-0R0W	-
R2112,R2113 R2408,R2409 R2420,R2426	MG RESISTOR		* NASA6AJ-0R0W	-
R2706	MG RESISTOR		* NRSA6AJ-104W	NRSA6AJ-153W
R3048	MG RESISTOR		* -	NRSA6AJ-0R0W
R3221	MG RESISTOR		* NRSA6AJ-101W	NASA6AJ-820W
R3223	CMF RESISTOR		* NRVA6AD-242W	NRVA6AD-222W
R3301	MG RESISTOR		* NASA6AJ-391W	-
R6101	CMF RESISTOR		* NRVA6AD-822W	NRVA6AD-133W
R6152,R6154	MG RESISTOR		* -	NRSA6AJ-0R0W
R7623	MG RESISTOR		* -	NRSA6AJ-0R0W
C1006	CAPACITOR		* NDCA1HJ-150W	NDCA1HJ-180W
C1013	CAPACITOR		* NDCA1HJ-100W	NDCA1HJ-130W
C2212	T CAPACITOR		* NBE41AM-106X	NBE90JM-106X
C2766	T CAPACITOR		* -	NBE90JM-106X
C3015	T CAPACITOR		* -	NBG40GM-226X
C3049	CAPACITOR		* NCFA1AZ-104W	NCB31CK-104X
C3051	MG RESISTOR		* NRSA6AJ-331W	-
C4338	CAPACITOR		* NCBA1HK-102W	-
C6105	CAPACITOR		* -	NCB21AK-225X
C6128	CAPACITOR		* NDCA1HJ-6R0W	-
L1005	COIL		* NQL184J-390X	NQL024J-330X
L3001	FERRITE BEAD		* -	NQR0305-001X
L3103	CHOKE COIL		* -	NQR0276-001X
X1002	CRYSTAL RESONATOR		* NAX0267-001X	NAX0325-001X

SUB BOARD ASSEMBLY

REF. No.	MODEL		GR-DVM50U	GR-DVM50UM
	ITEM			
PW	SUB BOARD ASSY		* YB20858A	-

Note: Mark - is not used. Mark * reference model was also changed.

MDA BOARD ASSEMBLY <02>

REF. No.	ITEM	MODEL	GR-DVM50U	GR-DVM50UM
PW1	MDA BOARD ASSY		* YB10246B1	YB10246B1-03
IC4807	IC		* TC7W66FK	-
Q4802	TRANSISTOR		* 2SC4617/RS/-X	-
Q4803	TRANSISTOR		* DTC144EE	-
Q4804	TRANSISTOR		* DTA144EE	-
R4827	MG RESISTOR		* -	NRSA6AJ-0R0W
R4829	MG RESISTOR		* NRSA6AJ-0R0W	-
R4831	MG RESISTOR		* NRSA6AJ-472W	-
R4832	MG RESISTOR		* NRSA6AJ-103W	-
R4837 R4839,R4840 R4846	MG RESISTOR		* NRSA6AJ-0R0W	-
R4849	MG RESISTOR		* -	NRSA6AJ-0R0W
C4864	T CAPACITOR		* NBE90JM-106X	-
C4865	CAPACITOR		* NCFA1AZ-104W	-
L4853	COIL		* NQL302N-100X	-

MONITOR BOARD ASSEMBLY <04>

REF. No.	ITEM	MODEL	GR-DVM50U	GR-DVM50UM
PW	MONITOR BOARD ASSY		* YB10250B	YB10250B-01

W/B BOARD ASSEMBLY <08>

REF. No.	ITEM	MODEL	GR-DVM50U	GR-DVM50UM
PW2	W/B BOARD ASSY		* YB10248A2-03	YB10248A2-04
WR1	E-SI C WIRE C-F		* WJM0077-001A	WJM0077-001B

JACK BOARD ASSEMBLY <09>

REF. No.	ITEM	MODEL	GR-DVM50U	GR-DVM50UM
PW1	JACK BOARD ASSY		* YB10248C1	YB10248C1-01

Note: Mark - is not used. Mark * reference model was also changed.

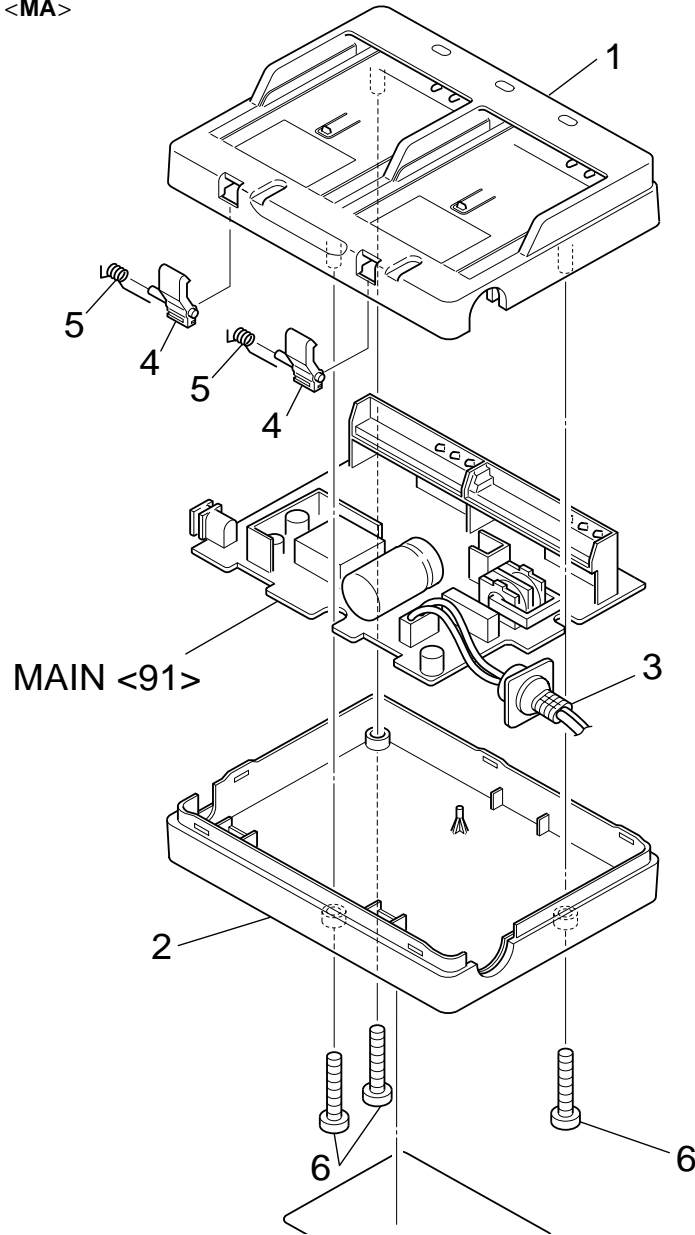
SECTION 6

AC POWER ADAPTER CHARGER (AA-V50EN)

SAFETY PRECAUTION

Parts identified by the \triangle symbol are critical for safety. Replace only with specified part numbers.

6.1 CABINET ASSEMBLY <MA>

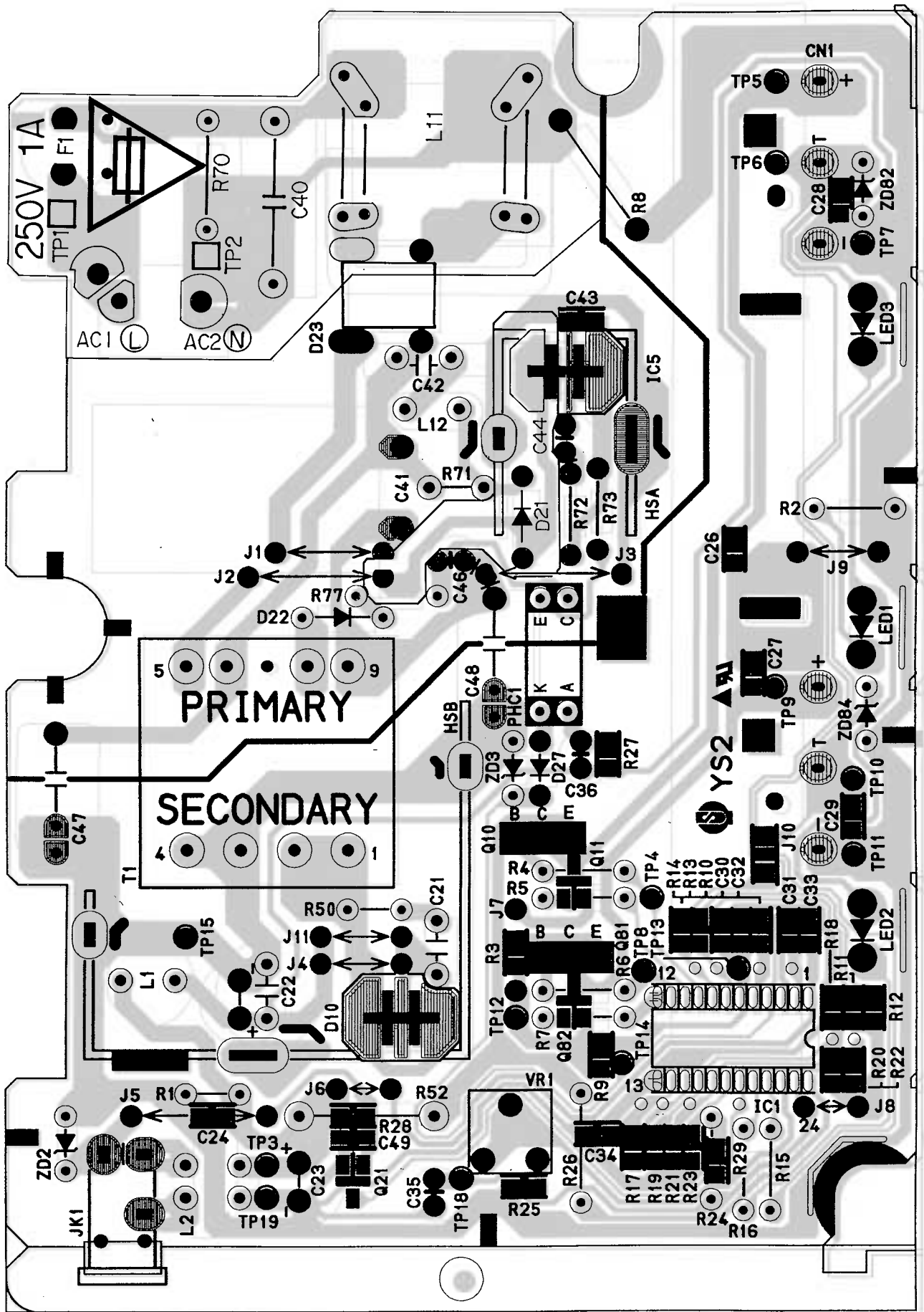


\triangle REF No. PART No. PART NAME, DESCRIPTION

CABINET ASSEMBLY <MA>

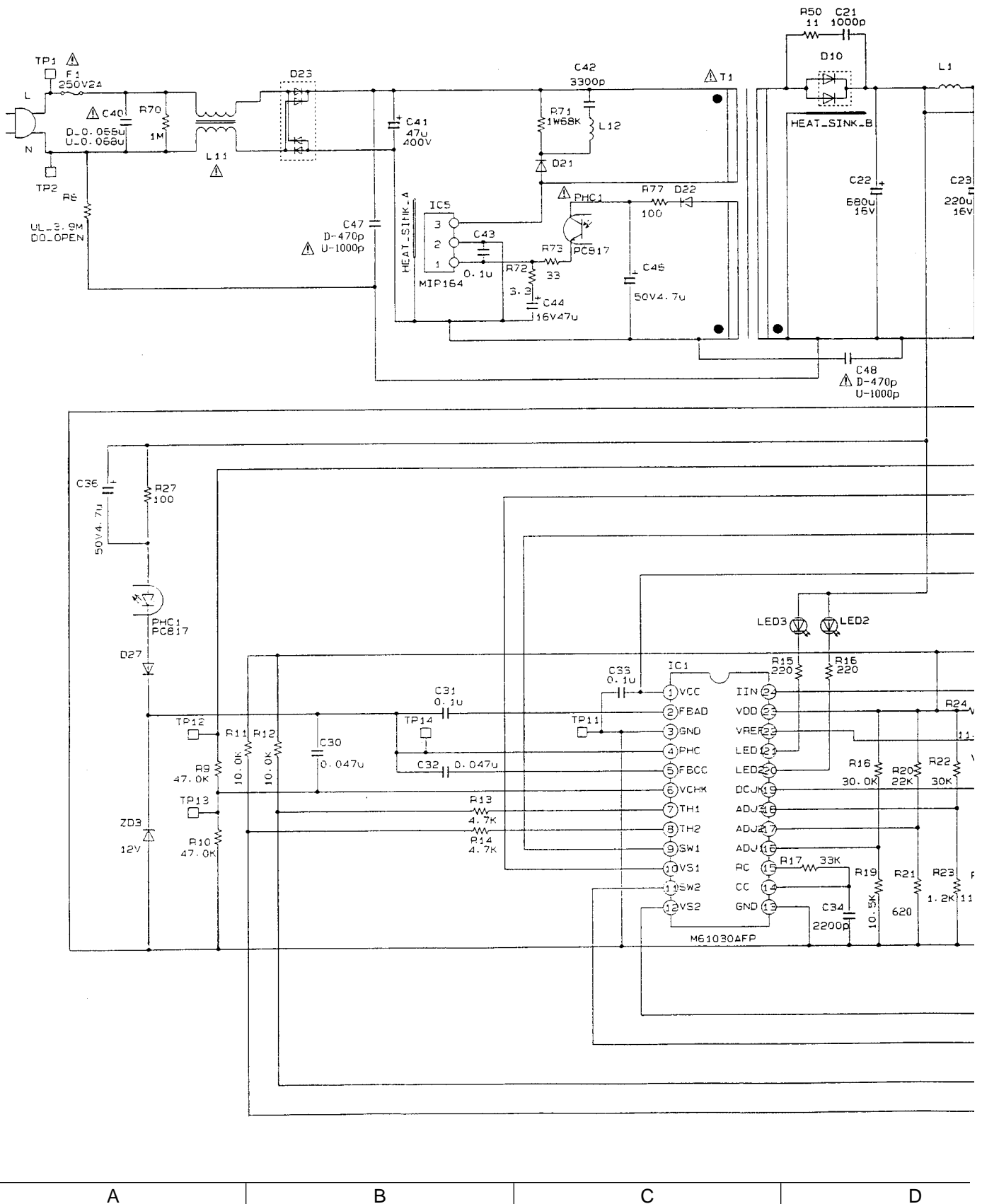
1	PTY20450-012	UPPER CASE ASSY
2	PTY20450-017	LOWER CASE ASSY
\triangle 3	PTY20483-035	AC POWER CORD
4	PTY20450-050	LOCK LEVER,X2
5	PTY20450-051	LOCK SPRING,X2
6	PTY20292-165	SCREW,X3

6.2 CIRCUIT BOARD



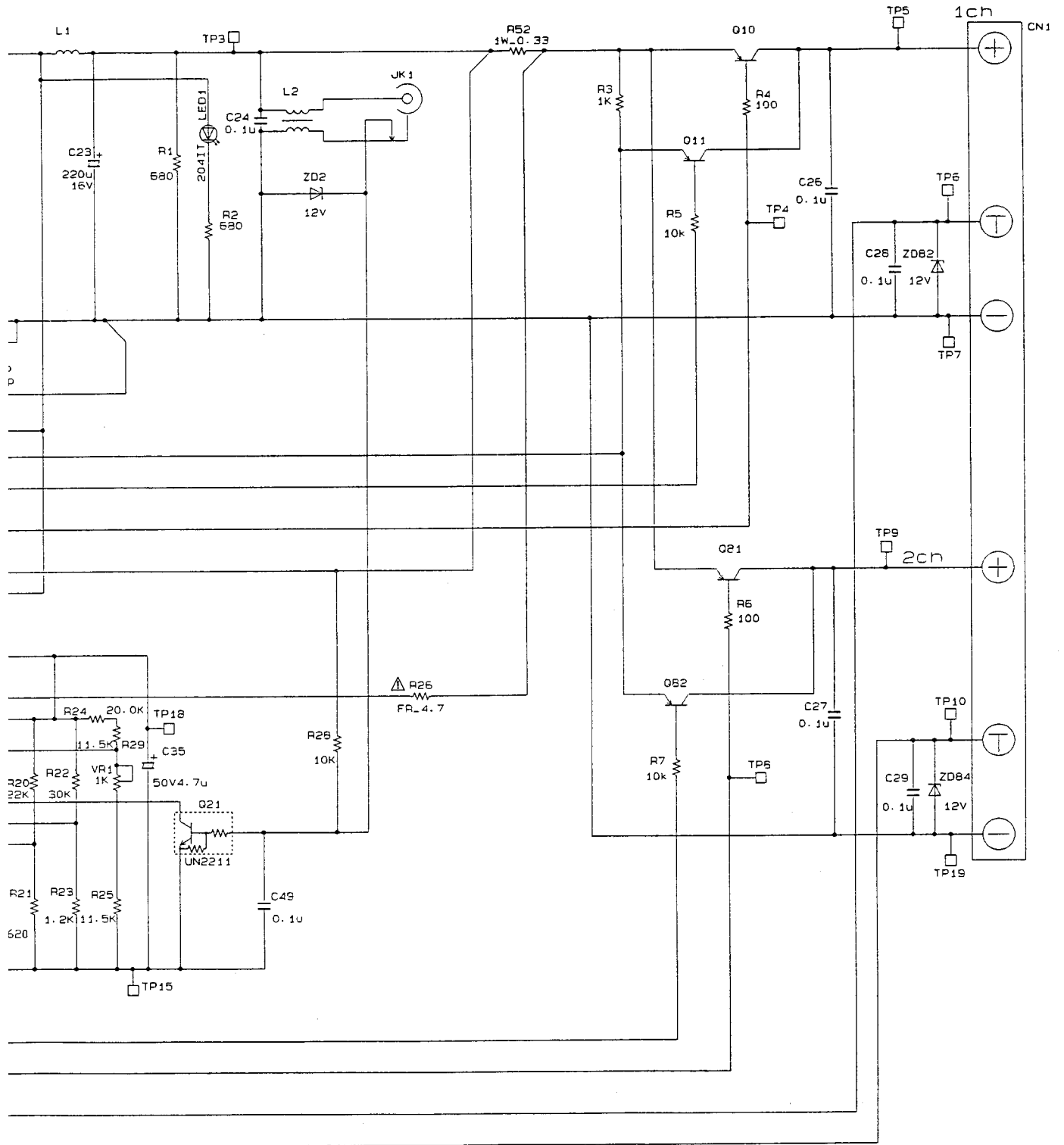
6.3 SCHEMATIC DIAGRAM

NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



Safety precautions

The components identified by the symbol \triangle are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.



6.4 ELECTRICAL PARTS LIST

#△REF No.	PART No.	PART NAME, DESCRIPTION	#△REF No.	PART No.	PART NAME, DESCRIPTION

MAIN & TERMINAL BOARD ASSY <91>					
△ PW1	PTY20450-003	MAIN BOARD ASSY	R72	QRZ0125-3R3	RESISTOR 3.3Ω 1/4W
IC1	M61030AFP	IC	R73	PTY20450-202	RESISTOR 33Ω 1/4W
IC5	MIP1640002DN	IC	R77	QRZ0125-101	RESISTOR 100Ω 1/4W
Q10	2SB1240TV2	TRANSISTOR	J10	PTY20450-204	RESISTOR 0Ω 1/8W
Q11	2SA812MT1B	TRANSISTOR	C21	YQ10626-408	CAPACITOR 1000pF 500V
Q21	UN2211TX	DIG. TRA.	C22	PTY20450-300	E CAPACITOR 470μF 16V
Q81	2SB1240TV2	TRANSISTOR	C23	QETL1CM-227	E CAPACITOR 220μF 16V
Q82	2SA812MT1B	TRANSISTOR	C24	PTY10067-511	CAPACITOR 0.1μF 25V
Q82	2SA1037AKT146	TRANSISTOR	C26	PTY10067-511	CAPACITOR 0.1μF 25V
D10	F10P10Q	S.B DIODE 100V 10A	C27	PTY10067-511	CAPACITOR 0.1μF 25V
D21	AU02A	DIODE 600V 0.8A	C28	PTY10067-511	CAPACITOR 0.1μF 25V
D22	AU02A	DIODE 600V 0.8A	C29	PTY10067-511	CAPACITOR 0.1μF 25V
D23	D1106	B. DIODE 600V 1A	C30	PTY20290-302	CAPACITOR 0.0471μF 25V
D27	1SS133	DIODE 80V 130mA	C31	PTY20290-304	CAPACITOR 0.1μF 25V
ZD2	BZX55C12	DIODE	C32	PTY20290-302	CAPACITOR 0.0471μF 25V
ZD3	BZX55C12	DIODE	C33	PTY10067-511	CAPACITOR 0.1μF 25V
ZD82	BZX55C12	DIODE	C34	PTY20450-301	CAPACITOR 0.0022μF 50V
ZD84	BZX55C12	DIODE	C35	QEHA1HM-475	E CAPACITOR 4.7μF 50V
LED1	YQ10531-540	LED RED POWER	C36	QEHA1HM-475	E CAPACITOR 4.7μF 50V
LED2	YQ10531-542	LED GREEN CHARGE/FINISH	△ C40	PTY20292-303	CAPACITOR 0.068μF 275V
LED3	YQ10531-542	LED GREEN CHARGE/FINISH	C41	YQ10626-402	E CAPACITOR 47μF 400V
R1	QRZ0125-681	RESISTOR 680Ω 1/4W	C42	YQ10626-403	CAPACITOR 3300pF 500V
R2	QRZ0125-681	RESISTOR 680Ω 1/4W	C43	PTY10067-511	CAPACITOR 0.1μF 25V
R3	PTY20290-202	RESISTER 1kΩ 1/10W	C44	PTY20292-310	E CAPACITOR 47μF 16V
R4	QRZ0125-101	RESISTOR 100Ω 1/4W	C46	QEHA1HM-475	E CAPACITOR 4.7μF 50V
R5	QRZ0125-103	RESISTOR 100Ω 1/4W	△ C47	PTY20292-368	CAPACITOR 1000pF
R6	QRZ0125-101	RESISTOR 100Ω 1/4W	△ C48	PTY20292-368	CAPACITOR 1000pF
R7	QRZ0125-103	RESISTOR 100Ω 1/4W	C49	PTY10067-511	CAPACITOR 0.1μF 25V
R9	PTY20290-212	RESISTOR 47.0kΩ 1/10W	L1	PTY20292-503	COIL
R10	PTY20290-212	RESISTOR 47.0kΩ 1/10W	L2	PTY20450-400	COIL
R11	PTY20292-227	RESISTOR 10.0kΩ 1/10W	△ L11	PTY20450-401	FILTER
R12	PTY20292-227	RESISTOR 10.0kΩ 1/10W	L12	PTY20292-501	INDUCTOR
R13	PTY20292-225	RESISTOR 4.7kΩ 1/10W	△ PHC1	PS25611M	PHOTO COUPLER
R14	PTY20292-225	RESISTOR 4.7kΩ 1/10W	△ T1	PTY20450-450	TRANS
R15	QRZ0125-221	RESISTOR 220Ω 1/4W	JK1	YQ21032-301	DC JACK
R16	QRZ0125-221	RESISTOR 220Ω 1/4W	VR1	PTY20450-451	VOLUME
R17	PTY20290-211	RESISTOR 33kΩ 1/10W	HS1	PTY20450-070	HEAT SINK A
R18	PTY20292-279	RESISTOR 30.0kΩ 1/10W	HS2	PTY20450-071	HEAT SINK B
R19	PTY20450-203	RESISTOR 10.5kΩ 1/10W	OT1	PTY20450-060	SCREW
R20	PTY20290-209	RESISTOR 22kΩ 1/10W	OT2	PTY20450-061	SCREW
R21	PTY20292-253	RESISTOR 620Ω 1/10W	△ F1	PTY20450-041	FUSE 1A 250V
R22	PTY20290-210	RESISTOR 30kΩ 1/10W			
R23	PTY20290-203	RESISTOR 1.2kΩ 1/10W			
R24	PTY20450-200	RESISTOR 20.0kΩ 1/4W			
R25	PTY20290-207	RESISTOR 11.5kΩ 1/10W			
△ R26	PTY20292-269	FUSE RESISTOR 4.7Ω			
R27	PTY10067-606	RESISTOR 100Ω 1/10W			
R28	PTY10067-604	RESISTOR 10kΩ 1/10W			
R29	PTY20290-207	RESISTOR 11.5kΩ 1/10W			
R50	PTY20450-201	RESISTOR 11Ω 1/4W			
R52	PTY20292-266	RESISTOR 0.33Ω 1W			
R70	QRN141J-105	RESISTOR 1MΩ 1/4W			
R71	PTY20292-202	RESISTOR 68kΩ 1W			