

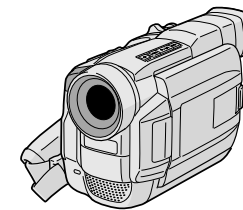


JVC

SERVICE MANUAL

DIGITAL VIDEO CAMERA

GR-DVL300UM



Mini DV NTSC

(AUDINAC KIT)

Regarding service information other than these sections, refer to the GR-DVL300U service manual (No. 86551). Also, be sure to note important safety precautions provided in the service manual.

SPECIFICATIONS *(The specifications shown pertain specifically to the model GR-DVL300UM)*

Camcorder	
For General	
Power supply	: DC 6.3 V $\overline{\text{---}}$ (Using AC Power Adapter/Charger) DC 7.2 V $\overline{\text{---}}$ (Using battery pack)
Power consumption	
LCD monitor off, viewfinder on	: Approx. 4.3 W
LCD monitor on, viewfinder off	: Approx. 5.3 W
Video light	: Approx. 3.5 W
Dimensions (W x H x D)	: 80 mm x 96 mm x 159 mm (with the LCD monitor closed and the viewfinder pushed down)
Weight	: Approx. 570 g (1.3 lbs)
Operating temperature	: 0°C to 40°C
Operating humidity	: 35% to 80%
Storage temperature	: -20°C to 50°C
Pickup	: 1/4" CCD
Lens	: F 1.8, f = 3.6 mm to 36 mm, 10:1 power zoom lens
Filter diameter	: ϕ 37 mm
LCD monitor	: 2.5" diagonally measured, LCD panel/TFT active matrix system
Viewfinder	: Electronic viewfinder with 0.24" black/white LCD
Speaker	: Monaural
For Digital Video Camera	
Format	: DV format (SD mode)
Signal format	: NTSC standard
Recording/Playback format	: Video: Digital component recording Audio: PCM digital recording, 32 kHz 4-channel (12-bit), 48 kHz 2-channel (16-bit)
Cassette	: Mini DV cassette
Tape speed	: SP: 18.8 mm/s LP: 12.5 mm/s
Maximum recording time (using 80 min. cassette)	: SP: 80 min. LP: 120 min.
For Connectors	
S	: Y : 1 V (p-p), 75 Ω , analog output C : 0.29 V (p-p), 75 Ω , analog output
AV	
Video output	: 1 V (p-p), 75 Ω , analog
Audio output	: 300 mV (rms), 1 k Ω , analog, stereo
DV	
Input/output	: 4-pin, IEEE 1394 compliant
PC (DIGITAL PHOTO)	
Digital still output	: ϕ 2.5 mm, 3-pole
JLIP/EDIT	: ϕ 3.5 mm, 4-pole
AC Power Adapter/Charger AA-V40EN	
Power requirement	: AC 110 V to 220 V \sim , 60 Hz
Power consumption	: 23 W
Output	
Charge	: DC 7.2 V $\overline{\text{---}}$, 1.2 A
VTR	: DC 6.3 V $\overline{\text{---}}$, 1.8 A
Dimensions (W x H x D)	: 68 mm x 38 mm x 110 mm
Weight	: Approx. 250 g

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

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VICTOR COMPANY OF JAPAN, LIMITED
VIDEO DIVISION

S40894

Printed in Japan

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No. 86584
August 2000

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The following table indicate main different points between models GR-DVL300U and GR-DVL300UM.

ITEM \ MODEL	GR-DVL300U	GR-DVL300UM
AC POWER ADAPTER CHARGER	AA-V40U	AA-V40EN
S CABLE, S-VIDEO CABLE	Optional	Provided

The following table indicate different parts number between models GR-DVL300U and GR-DVL300UM.

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

REF NO.	ITEM \ MODEL	GR-DVL300U	GR-DVL300UM
1	PACKING CASE	LY31631-005A	–
3	POLY BAG	* LY30023-015A	LY30023-008A
9	Q.CARD(JCA)	YU10350	–
10	WARRANTY INF.	BT-51005-4	–
11	REGIST. CARD	BT-51020-2	–
△ 29	AC POWER ADAPTER CHARGER	LY20591-001B	LY20591-011A
30	S CABLE, S-VIDEO CABLE	–	QAM0004-003
31	CORE FILTER	–	QQR0491-002
32	MINI DV TAPE	Not used	Used

FINAL ASSEMBLY <M2>

REF NO.	ITEM \ MODEL	GR-DVL300U	GR-DVL300UM
△ 101	LOWER CASE ASSY	* LY20560-001B	LY20560-001C
104	CASS.COVER ASSY	* LY31609-001A	LY31609-001C
104C	BKT (E.KNOB)	* LY42173-001A	LY42173-001B
111	UPPER CASE (2.5) ASSY	* LY20557-001A	LY20557-001E
111A	SHEET (EARTH)	* LY31599-001A	–
111C	SPACER, X2	* LY40664-002A	LY40664-001A
131	SPECIAL SCREW	* LY30018-084A	LY30018-079A
139	SCREW	* LY30018-096A	QYSPSPT1725R
141	SCREW	* LY30018-084A	QYSPSGT1760R
143	SPECIAL SCREW	* LY30018-059A	LY30018-084A
150	HOLDER (MECHA) ASSY	* LY31618-001A	LY31618-001C
150B	SPECIAL SCREW, X4	* LY30018-056A	LY30018-0B4A
214	SHEET	* –	LY42583-001A

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

ELECTRONIC VIEWFINDER ASSEMBLY <M4>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
351	VF CASE(UPPER)ASSY		* LY31600-001A	LY31600-001C
356	HINGE(VF)ASSY		* LY31602-001B	LY31602-001C
362	HOLDER(B/W LCD)		* LY20481-001A	LY20481-002A

MONITOR ASSEMBLY <M5>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
△ 500	MONITOR ASSY		* LYH20135-003A	LYH20135-003C
△ 501	MONITOR COVER ASSY		* LY20569-001A	LY20569-001B

MAIN BOARD ASSEMBLY <01>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
PW	MAIN BOARD ASSY		* YB10277E-01	YB10277E-02
R4207	MG RESISTOR		* NASA6AJ-473W	NRSA6AJ-243W
R4301	MG RESISTOR		* NASA6AJ-100W	—
R4354 R4355	MG RESISTOR		* NASA6AJ-0R0W	NASA6AJ-272W
R5509 R5510 R5511	MG RESISTOR		* NASA6AJ-100W	NASA6AJ-470W
RA4304 RA4305 RA4306	NETWORK RESISTOR		* NRZ0034-100W	—
OT2	SPACER (A)		* LY30029-055A	LY30029-055B

MONITOR BOARD ASSEMBLY <02>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
PW1	MONITOR BOARD ASSY		* YB10280E1-01	YB10280E1-02
IC7101	IC		* PCVVQ110BFB	XCVVQ110CFB
R7109	CMF RESISTOR		* —	NRVA63D-393X
R7110	CMF RESISTOR		* —	NRVA63D-183X
R7114	MG RESISTOR		* NRSA63J-223X	NRSA63J-153X
R7119	MG RESISTOR		* —	NRSA63J-333X
R7121	MG RESISTOR		* NRSA63J-473X	—
VR7101	TRIM RESISTOR, GAIN		* NVP0016-223X	—
VR7103	TRIM RESISTOR, GAMMA		* —	NVP0016-223X
C7118	T CAPACITOR		* NBP41CM-106X	—

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

CCD BOARD ASSEMBLY <04>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
OT1 OT2	SPACER-A		* LY30016-0U4B	-
L1	FERRITE CORE		* QQR0895-013	-

JUNCTION BOARD ASSEMBLY <05>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
PW2	JUNCTION BOARD ASSY		* YB10278A2-01	YB10278A2-02

JACK BOARD ASSEMBLY <06>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
PW1	JACK BOARD ASSY		* YB10278A1-01	YB10278A1-02

REAR BOARD ASSEMBLY <07>

REF NO.	ITEM	MODEL	GR-DVL300U	GR-DVL300UM
PW3	REAR BOARD ASSY		* YB10278A3-01	YB10278C3-02
R551 R552	MG RESISTOR		* NRSA63J-0R0X	NRSA63J-331X

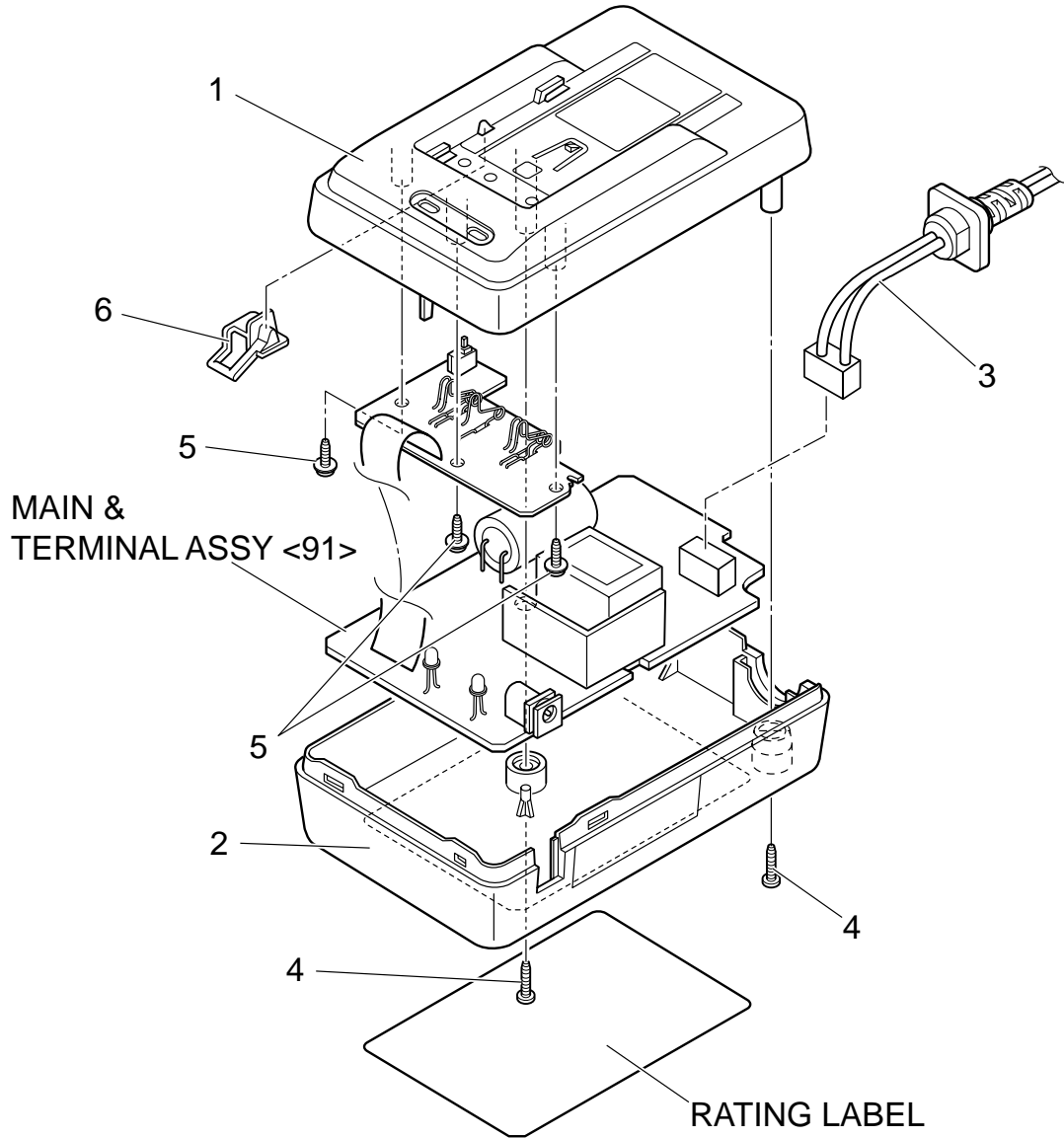
Note: Mark - is not used. Mark * reference model was also changed.

SECTION 6 AC POWER ADAPTER CHARGER (AA-V40EN)

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>

\triangle 1	PTY20591-013	UPPER CASE ASSY
\triangle 2	PTY20483-023	LOWER CASE
\triangle 3	PTY20483-035	POWER CORD
4	YQ10531-011	SCREW,x2
5	PTY20545-055	SCREW,x3
6	PTY20591-053	SWITCH COVER

6.2 SCHEMATIC DIAGRAM

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

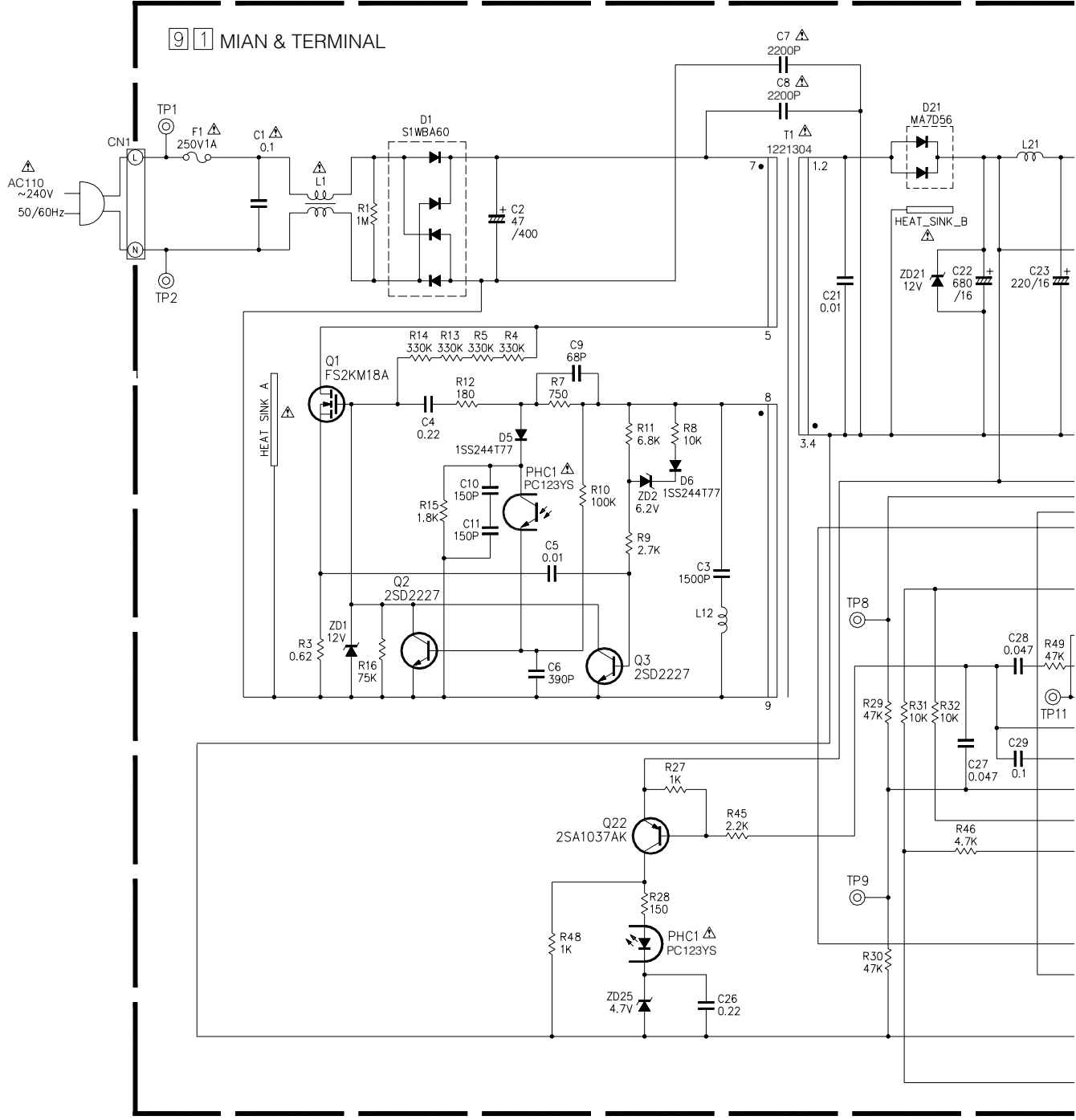
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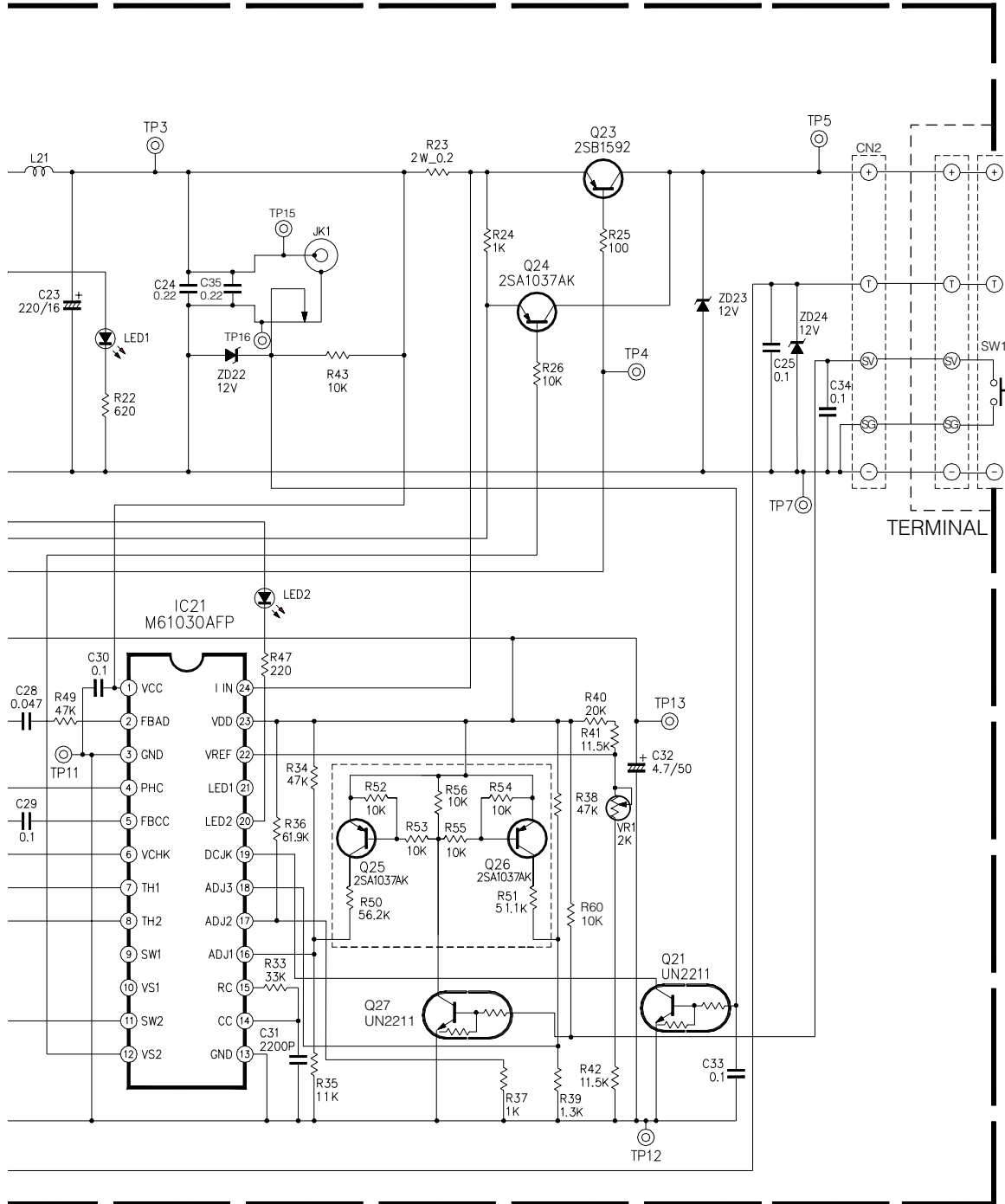
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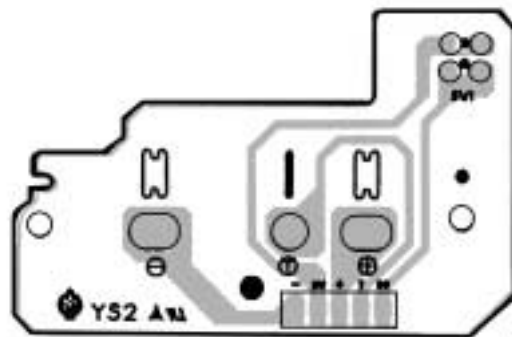
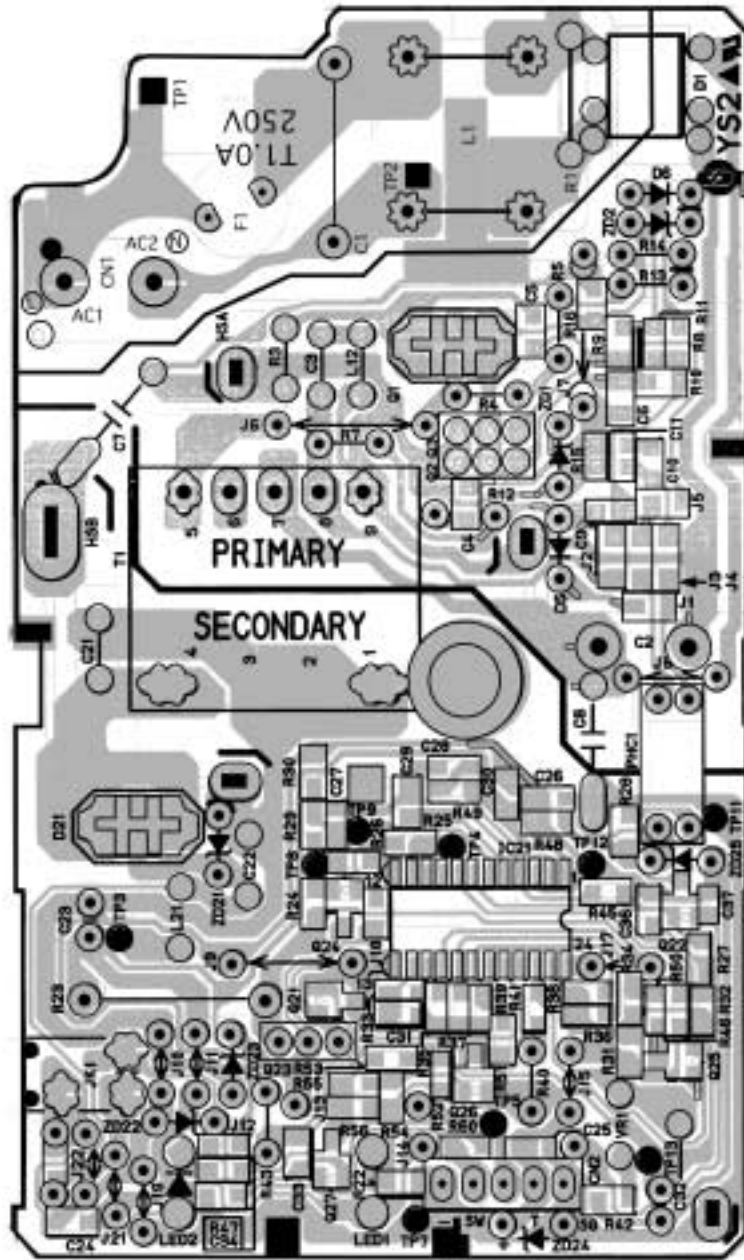
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Safety precautions

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



6.3 CIRCUIT BOARD



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	PTY20591-503	MAIN & TERMINAL BOARD ASSY	R40	PTY20450-200	MG RESISTOR 20.0kΩ 1/4W
△ HS1	PTY20483-071	HEAT SINK A	R41	NRSA02F-1152X	MG RESISTOR 11.5kΩ 1/10W
△ HS2	PTY20591-072	HEAT SINK B	R42	NRSA02F-1152X	MG RESISTOR 11.5kΩ 1/10W
OT1	PTY10067-551	SCREW	R43	QRE141J-103Y	MF RESISTOR 10kΩ 1/4W
IC21	M61030AFP	CHARGE COTROL IC 24pin SOP	R45	NRSA02J-222X	MG RESISTOR 2.2kΩ 1/10W
Q1	FS2KM18A	MOS FET	R46	NRSA02J-472X	MG RESISTOR 4.7kΩ 1/10W
Q2	2SD2227	TRANSISTER	R47	NRSA02J-221X	MG RESISTOR 220Ω 1/10W
Q3	2SD2227	TRANSISTER	R48	NRSA02J-102X	MG RESISTOR 1kΩ 1/10W
Q21	UN2211TX	DIG.TRANSISTER	R49	NRSA02J-473X	MG RESISTOR 47kΩ 1/10W
Q22	2SA1037AK/QR/-X	CHIP TRANSISTER	R50	NRSA02F-5622X	MG RESISTOR 56.2kΩ 1/10W
Q23	2SB1592	TRANSISTER	R51	NRSA02F-5112X	MG RESISTOR 51.1kΩ 1/10W
Q24	2SA1037AK/QR/-X	TRANSISTER	R52	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W
Q25	2SA1037AK/QR/-X	TRANSISTER	R53	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W
Q26	2SA1037AK/QR/-X	TRANSISTER	R54	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W
Q27	UN2211TX	DIG TRANSISTOR	R55	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W
D1	S1WBA60	B.DIODE 600V 1A	R56	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W
D5	1SS244T77	DIODE 200V 6A	R60	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W
D6	1SS244T77	DIODE 200V 6A	△ C1	PTY20292-303	CAPACITOR 0.068μF 275V
D21	MA7D56	DIODE 60V 10A	C2	YQ10626-402	E CAPACITOR 47μF 400V
ZD1	MTZJ12C-T2	ZENER DIODE 12V	C3	PTY10067-651	CAPACITOR 1500pF 250V
ZD2	MTZJ6.2B-T2	ZENER DIODE 6.2V 500mW	C4	NCB21CK-224X	CAPACITOR 0.22μF 16V
ZD21	MTZJ12C-T2	ZENER DIODE 12V	C5	PTY10067-653	CAPACITOR 0.01μF 50V
ZD22	MTZJ12C-T2	ZENER DIODE 12V	C6	NCB21HK-391X	CAPACITOR 390pF 50V
ZD23	MTZJ12C-T2	ZENER DIODE 12V	△ C7	PTY20538-611	CAPACITOR 2200pF 250V
ZD24	MTZJ12C-T2	ZENER DIODE 12V	△ C8	PTY20538-611	CAPACITOR 2200pF 250V
ZD25	MA4047NM	ZENER DIODE 4.7V 500mW	C9	NDC21HJ-680X	CAPACITOR 68pF 50V
LED1	YQ10531-540	LED RED POWER	C10	NDC21HJ-151X	CAPACITOR 150pF 50V
LED2	YQ10531-542	LED GREEN CHARGE	C11	NDC21HJ-151X	CAPACITOR 150pF 50V
R1	QRN141J-105	RESISTOR 1MΩ 1/4W	C21	PTY10067-657	CAPACITOR 0.01μF 250V
R3	PTY10067-601	MF RESISTOR 0.62Ω 1W	C22	PTY20292-321	E CAPACITOR 680μF 16V
R4	QRE141J-334Y	RESISTOR 330kΩ 1/4W	C23	QETL1CM-227	E CAPACITOR 220μF 16V
R5	QRE141J-334Y	RESISTOR 330kΩ 1/4W	C24	NCB21CK-224X	CAPACITOR 0.22μF 16V
R7	QRE141J-751Y	RESISTOR 750Ω 1/4W	C25	NCF21EZ-104X	CAPACITOR 0.1μF 25V
R8	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W	C26	NCB21CK-224X	CAPACITOR 0.22μF 16V
R9	NRSA02J-272X	MG RESISTOR 2.7kΩ 1/10W	C27	NCB21EK-473X	CAPACITOR 0.047μF 25V
R10	NRSA02J-104X	MG RESISTOR 100kΩ 1/10W	C28	NCB21HK-473X	CAPACITOR 0.047μF 50V
R11	NRSA02J-682X	MG RESISTOR 6.8kΩ 1/10W	C29	NCB21EK-104X	CAPACITOR 0.1μF 25V
R12	QRE141J-181Y	RESISTOR 180Ω 1/4W	C30	NCF21EZ-104X	CAPACITOR 0.1μF 25V
R13	QRE141J-334Y	RESISTOR 330kΩ 1/4W	C31	NCB21HK-222X	CAPACITOR 0.0022μF 50V
R14	QRE141J-334Y	RESISTOR 330kΩ 1/4W	C32	QEHA1HM-475	E CAPACITOR 4.7μF 50V
R15	NRSA02J-182X	MG RESISTOR 1.8kΩ 1/10W	C33	NCF21EZ-104X	CAPACITOR 0.1μF 25V
R16	NRSA02J-753X	MG RESISTOR 75kΩ 1/10W	C34	NCF21EZ-104X	CAPACITOR 0.1μF 25V
R22	NRSA02J-621X	MG RESISTOR 620Ω 1/10W	C35	QFLA1HJ-224	F CAPACITOR 0.22μF 50V
R23	PTY20539-605	MF RESISTOR 0.20Ω 2W	△ T1	PTY20538-801	SW TRANS
R24	NRSA02J-102X	MG RESISTOR 1kΩ 1/10W	VR1	PTY20483-101	VOLUME 2kΩ
R25	NRSA02J-101X	MG RESISTOR 100Ω 1/10W	△ F1	PTY20450-041	FUSE 1A 250V
R26	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W	JK1	YQ21032-301	DC JACK
R27	NRSA02J-102X	MG RESISTOR 1kΩ 1/10W	△ L1	PTY20450-401	LINE FILTER
R28	NRSA02J-151X	MG RESISTOR 150Ω 1/10W	L12	PTY10067-702	BEAD INDUCTOR
R29	PTY20539-601	MG RESISTOR 47.0kΩ 1/10W	L21	PTY10067-703	COIL
R30	PTY20539-601	MG RESISTOR 47.0kΩ 1/10W	△ PHC-1	PC123YS	PHOTO COUPLER
R31	NRSA02F-103X	MG RESISTOR 10.0kΩ 1/10W	SW1	PTY20545-662	SWITCH
R32	NRSA02J-103X	MG RESISTOR 10kΩ 1/10W	WR1	PTY20591-052	FLAT CABLE (5P)
R33	NRSA02J-333X	MG RESISTOR 33kΩ 1/10W	TB1	PTY20545-051	TERMINAL,x5
R34	PTY20539-601	MG RESISTOR 47.0kΩ 1/10W	CN1	PTY20483-001	CONNECTOR
R35	PTY20539-602	MG RESISTOR 11.0kΩ 1/10W			
R36	NRSA02F-6192X	MG RESISTOR 61.9kΩ 1/10W			
R37	PTY20539-603	MG RESISTOR 1.0kΩ 1/10W			
R38	PTY20539-601	MG RESISTOR 47.0kΩ 1/10W			
R39	PTY20539-604	MG RESISTOR 1.3kΩ 1/10W			