

ADAM™
Advanced Digital Audio Matrix

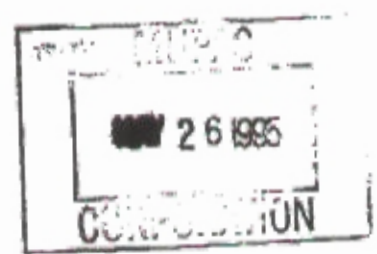
DRAWINGS MANUAL

**ADAM Chassis and
Shuttle Power Supply**

RTS™

APPLICATION		REVISIONS			
NEXT ASSY	USED ON	REV	DESCRIPTION	DATE	APVD
	TELEX	A	DWO E7792 RELEASED	11/4/94	BT
		B	ECO E7858	11/17/94	BT
		C	ECO E7972	11/22/94	BT
		D	ECO E8004	12/1/94	BT
		E	ECO E8074	1/5/95	BT
		F	ECO E8126	1-26-95	BT
		G	ECO E8168	1-27-95	BT
		H	ECO H0216	2-7-95	BT
		J	ECO E8210	2/24/95	BT
		K	ECO E8299	3-15-95	BT
		L	ECO E8417	4-26-95	BT

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES



ADAM CHASSIS

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES FRACTIONS DECIMALS ± — .X ± — ANGLES .XX ± .02 ± 0°30' .XXX ± .005	DR	AZ	DATE	10-26-94	Packaging Systems Mupac Corporation - A Carlo Gavazzi Company 10 Mupac Drive - Brackton, MA. 02401	509 SERIES ENCLOSURE				
	CHK	AZ	DATE	10-26-94						
	APVD									
	APVD									
MATL			SIZE	A	FSCM NO.	51398	DWG NO.	LM 509TSSPBPEC-100	REV	L
FINISH			APVD	B. TURNER	DATE	11/4/94	SCALE		SHEET 1 OF 7	



NOTES:

1.0 ENCLOSURE ORIENTATION:

LEFT OR RIGHT SIDE OF THE ENCLOSURE IS CONSIDERED FROM THE FRONT WHERE THE AC RECEPTACLE IS CONSIDERED THE REAR OF THE UNIT.

2.0 COOLING PATH: PRESSURIZED X EVACUATED

2.1 FAN GUARDS: ON OUTSIDE OF FANS

2.2 FAN FILTERS: N/A

2.3 LOC. WARNING LABEL (ITEM 64) ON OUTSIDE OF TOP COVER NEAR FAN MOUNTING PLATE

3.0 POWER SUPPLY LOCATION:

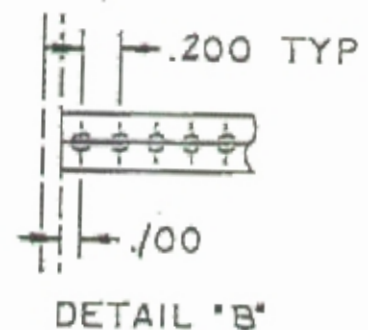
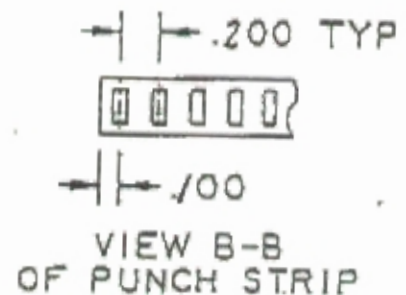
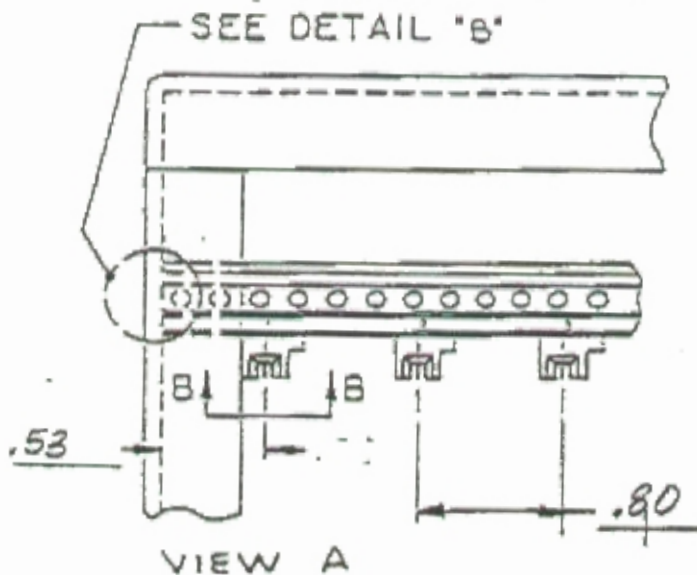
3.1 ORIENTATION: 2 SHUTTLES ABOVE RACK (ITEM 16)

3.2 RTV: N/A

4.0 SUB-RACK: * SLOTS 19 HEIGHT 4 U DEPTH 280 MM


4.1 MIXER: N/A

4.2 CARD GUIDE LOCATION: SEE VIEW A
NO CARD GUIDE IN SLOT 18



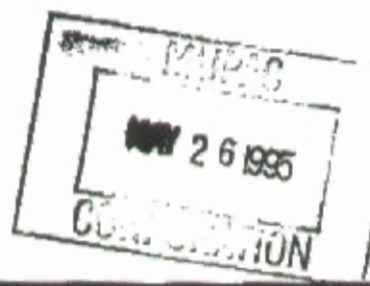
NOTE: C/G IN TRANS. TO ALIGN W/CG IN RACK!


REV L

	Packaging Systems Mupac Corporation - A Carlo Gavazzi Company 10 Mupac Drive • Brockton, MA. 02401	SIZE	CODE IDENT NO.	DRAWING NO.
		A	51398	LM50975SPBPEC-10.
		SCALE	REL	SHEET 2 OF 7

APPLICATION		REVISIONS			
NEXT ASSY	USED ON	REV	DESCRIPTION	DATE	APVD
	TELEX	A	DWO E7792 RELEASED	4/03/94	BT
		B	ECO E8004	12/1/94	BT
		C	ECO E8188	2-3-95	AL
		D	ECO E8299	3-15-95	BT

**UNCONTROLLED PRINT
FOR REFERENCE ONLY**



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES FRACTIONS DECIMALS ± — .X ± — ANGLES .IX ± .02 ± 0°30' .XXX ± .005	DR	AZ	DATE	10-25-94	 Packaging Systems Mupac Corporation - A Carlo Gavazzi Company 10 Mupac Drive - Brockton, MA. 02401					
	CHK	AZ	DATE	10-25-94						
	APVD									
	APVD									
MATL			SIZE	A	FSCM NO.	51398	DWG NO.	509SZ012	REV	D
FINISH			APVD	BTURNER	DATE	4/03/94	SCALE		SHEET	1 OF 3

SHUTTLE, POWER SUPPLY

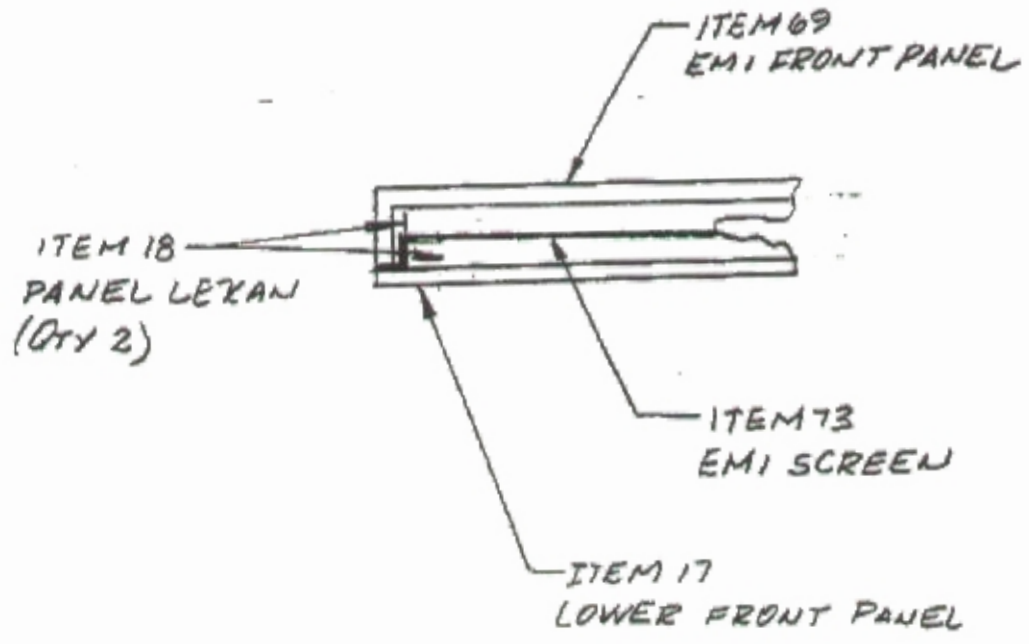
QUANTITY				ITEM NO.	PART NUMBER	DESCRIPTION
04	03	02	01			
			1	59	3563463-01	HARNESS, ALARM BED
			19	60	3352510-01	CARD GUIDE (160 MM)
			38	61	3352500-01	CARD GUIDE (220 MM)
			1	62	509H2150-01-100	BRKT, P/S TRAY SUPPORT
			1	63	509H2151-01-31	BRKT, P/S TRAY SUPPORT
			1	64	1200752-01	LABEL WARNING AC FANS
			-	65	1360037-03	FUSE 3A
			2	66	403P2010-84-31	MTG BAR (TRANS. AREA)
			2	67	3610524-08	CONN, IDC, 2 POSI.
			2	68	3610525-08	COVER, IDC, 2 POSI.
			1	69	509B2084-01-100	PANEL FRONT EMI
			-	70	1350063-01	CONTACT EMI
			-	71	1000840-01	STUD BALL
			-	72	1000318-01	RETAINER, BALL STUD
			1/2	73	9440547-01	SCREEN EMI
			1	74	509M2045-01-100	HINGE FNT PNL BTM
			1	75	1360154-01	SOCKET TERMINAL
			1	76	1360366-01	RELAY
			1	77	1360368-01	HOLDOWN CLIP
			2	78	9440090-01	LATCHES, GRIP
			2	79	9550070-18	CABLE
			-	80	1370160-01	TRANSISTOR
			-	81	1370100-03	RESISTOR
			2	82	3610524-01	CONN, IDC, 3 POSITION
			1	83	1350104-01	GASKETING EMI
			2	84	1370435-01	DIODE

QUANTITY				ITEM NO.	PART NUMBER	DESCRIPTION
04	03	02	01			
			A/R	30	1250031-01	GROMMET, FLEX
			A/R	31	3350008-01	TIE, CABLE
			A/R	32	3350011-01	BASE CABLE TIE
			A/R	33	1000103-04	NUT, HEX 6-32
			A/R	34	1000120-04	WASHER, FLAT #6
			A/R	35	1000110-04	WASHER, SPLIT #6
			A/R	36	1000173-03	SCREW, F.H. # 6-32 x .312
			A/R	37	1000036-04	SCREW, PH # 6-32 x .375
			A/R	38	1000132-04	SCREW, S.T. #6-32 x .375
			A/R	39	1000173-07	SCREW, F.H. #6-32 x .625
			A/R	40	1000194-02	SCREW, F.H. #8-32
			A/R	41	1000172-02	SCREW #4-40
			A/R	42	1000182-01	SCREW #4-40
			A/R	43	1000189-04	SCREW #8-32
			A/R	44	1000120-05	WASHER FLAT #8
			A/R	45	1000110-05	WASHER SPLIT #8
			A/R	46	1000042-04	SCREW PH. M.2A
			1	47	1200272-01	DECAL, NAMEPLATE
			1	48	1200306-01	DECAL UL
			1	49	1050023-24-25	BOX SHIPPING
			4	50	1052826-01	FOAM SHIPPING
			2	51	50R0025-01-100	FLANGE, FIA
			2	52	10000315-04	HANDLE, EIA
			12	53	1000175-04	SCREW EM, PH, #10-32
			20	54	3350066-02	CARD GUIDE (TRANS AREA)
			4	55	3350070-04	CARD GUIDE (P/S AREA)
			2	56	9060063-01	CONN. H-15
			2	57	3750041-02	ALARM, AUDIBLE
			2	58	3700016-01	CORD, LINE

QUANTITY				ITEM NO.	PART NUMBER	DESCRIPTION
04	03	02	01			
			1	1	509E2092-01-100	COVER, BOTTOM
			1	2	509AF010-01-100	PANEL, SIDE RH
			1	3	509AF010-02-100	PANEL, SIDE LH
			1	4	509HZ145-01-31	PLATE FAN MOUNTING
			5	5	3752603-01	FAN 34 CFM (AC)
			1	6	509CF009-01-31	PANEL, REAR
			2	7	1360095-01	LINE FILTER, POWER
			2	8	1360034-01	HOLDER, FUSE
			2	9	1360037-06	FUSE 6A
			1	10	509HZ146-01-100	PLATE P/S
			-	11	509LZ109-01-31	BAFFLE UPPER/LOWER ENT
			1	12	509E2096-01-31	BRACKET H-15 MOUNTING
			1	13	509PZ117-01-31	BRACKET R/P MTG.
			1	14	509PZ118-01-31	PLATE Q/G MTG.
			1	15	9431045-01	BACKPLANE
			2	16	509SZ012-01	SHUTTLE, P/S
			1	17	509BF006-01-100	PANEL FRONT LOWER
			2	18	509BZ072-02	PANEL LEXAN
			1	19	509E2191-01-100	COVER, TOP
			3	20	4030314-84-31	BAR, FRONT MTG.
			3	21	4030036-84-31	BAR, CG ONLY
			1	22	403PE011-01-31	BAR CENTER SUPPORT
			7	23	9300052-01	BAR, NUT
			6	24	9300053-01	STRIP, PUNCH
			3	25	1360153-01	SWITCH ROCKER
			5	26	3752611-01	GUARD, FAN
			1	27	3563446-01	HARNESS, AC
			1	28	3563462-01	HARNESS, FAN
			REF.	29	1921201-01	SCHEMATIC



10.0 EMI FRONT PANEL LAYOUT



~~11.0 ITEM 70 LOG. AROUND LWR FRONT PNL & AROUND P/S SHUFFLES A/R.~~

12.0 ITEM 83 TO BE ATTACHED TO .50 FLANGE OF ITEM 4 FAN MOUNTING PLATE, REAR JUSTIFIED. TRIM AS REQUIRED.

REV L

MUPAC Packaging Systems
 Mupac Corporation - A Carlo Gavazzi Company
 10 Mupac Drive - Brockton, MA. 02401

SIZE	CODE IDENT NO.	DRAWING NO.
A	51398	LM5097SSPBPEL-100
SCALE	REL	SHEET 4 OF 7

4.3 BACKPLANE LOCATION:

9431045-01 J1 SLOTS 1-19

5.0 CABLE ROUTING:

- 5.1 AC HARNESS: FROM UPPER H-15'S TO AC ENTRY
- 5.2 DC TO THE BACKPLANE HARNESS: H-15 CONN'S FOR DC LOC. ON B/P
- 5.3 FAN HARNESS: FROM FANS TO UPPER H-15 CONN.
- 5.4 RESET HARNESS: N/A
- 5.5 DCV ~~ENABLE~~/ENABLE HARNESS: IN P/S SHUTTLE
- 5.6 LED HARNESS: IN P/S SHUTTLE
- 5.7 SPECIAL GROMMET LOCATION: STD, IN HOLE ON ITEM 12

6.0 ACCESSORIES:

- 6.1 INTERCONNECT LOCATION: N/A
- 6.2 CABLE TRAY LOCATION: N/A
- 6.3 DISK LOCATION: N/A
- 6.4 FILLER PANEL LOCATION: N/A

7.0 LABELS:

- 7.1 PRODUCT LABEL TO BE LOCATED IN THE LOWER RIGHT-HAND SIDE OF THE RH SIDE PANEL, AS VIEWED FROM THE REAR.
- 7.2 PRODUCT LABEL TO FILLED OUT AS SHOWN BELOW:

P/N	5097SSPBPEC-100
S/N	
WIRED FOR	115 VAC
FUSES	6A

- 8.0 THE FOLLOWING ITEMS ARE TO BE SHIPPED SEPARATELY WITH THE ENCLOSURE: 58, 70

~~9.0 REMOVE 115VOLT RELAY (K1) PRIOR TO 230VAC TESTING~~

REV L



Packaging Systems
Mupac Corporation - A Carlo Gavazzi Company
10 Mupac Drive - Brockton, MA. 02401

SIZE
A

CODE IDENT NO.
51398

DRAWING NO.
LM5097SSPBPEC-100 ...

SCALE

REL

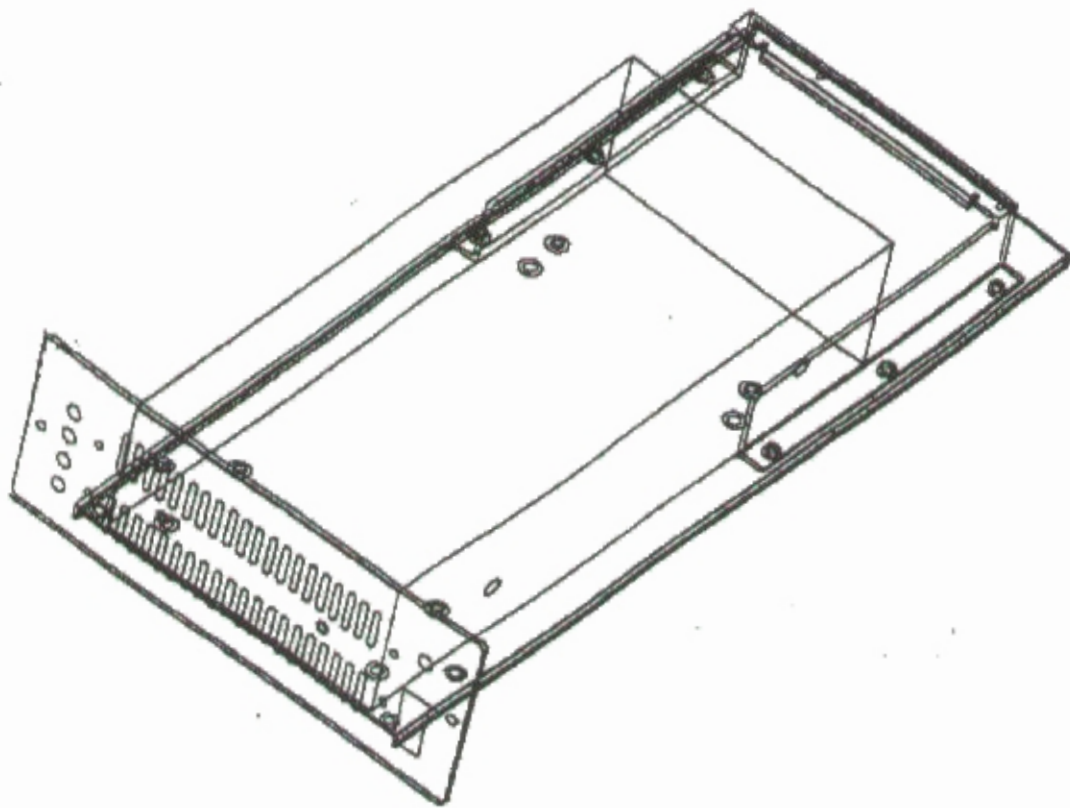
SHEET 3 OF 7

NOTES:

1. FILL OUT LABEL AS SHOWN BELOW & LOC ON ITEM 18 ON UNDERSIDE ON H-15 END.

CUT LABEL
HERE

P/N	509SZ012-01
S/N	



REV. D

MUPAC CORPORATION
A Carlo Gavazzi Group Company



SIZE	CODE IDENT. NO.	DRAWING NO.
A	51398	509SZ012
SCALE	REL.	SHEET 2 OF 3

QUANTITY				ITEM NO.	PART NUMBER	DESCRIPTION
04	03	02	01			
			1	1	509B3073-01-100	PANEL, FRONT
			1	2	509HZ147-01-31	PLATE P/S MOUNTING
			1	3	509HZ148-01-31	BRACKET, SHUTTLE ENT.
			1	4	509HZ148-02-31	BRACKET, SHUTTLE ENT.
			1	5	509HZ149-01-31	BRACKET H-15 MNTG
			1	6	3563445-01	AC, HARNESS
			1	7	3563444-01	DC, HARNESS
			REF	8	1921200-01	SCHEMATIC
			-	9	3503287-01	SUPPLY, POWER (500W)
			2	10	9060149-01	CONN. H-15
			1	11	4030309-01-32	HANDLE PS
			A/R	12	1000194-02	SCREW F.H. 8-32
			A/R	13	1000036-04	SCREW F.H. 6-32
			A/R	14	1000104-02	NUT M2.5
			A/R	15	1000402-04	SCREW FH M2.5
			A/R	16	1000103-04	NUT 6-32
			A/R	17	1000120-04	WASHER FLAT #6
			1	18	1200272-01	LABEL
			1	19	1370409-05	LED 2V GREEN
			2	20	1370410-05	LED 5V GREEN
			2	21	1370420-05	LED 15V GREEN
			1	22	1360153-01	SWITCH ROCKER
			1	23	3503291-01	SUPPLY, POWER (500W)
			1	24	3610219-06	HOUSING 16 POS
			14	25	1310364-04	CONTACT SOCKET
			2	26	1310364-02	CONTACT SOCKET
			1	27	3610102-03	HOUSING 3 POS.
			3	28	1310016-01	CONTACT SOCKET

APPLICATION		REVISIONS			
NEXT ASSY.	USED ON	REV	DESCRIPTION	DATE	APVD
		A	DWO E7792 RELEASED	11/3/94	BT

1.) QUALITY REQUIREMENTS

A) QUALITY CONTROL RESERVES THE RIGHT TO VERIFY/TEST ANY OF THE REQUIREMENTS IN PARAGRAPH 3, AS WELL AS ALL REFERENCED WORKMANSHIP STANDARDS.

2) PRESERVATION OF PACKING

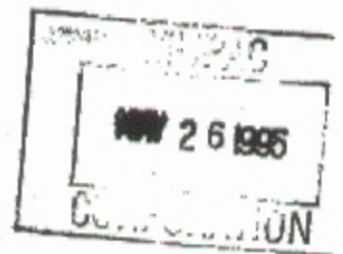
A) ALL COMPONENTS SHALL BE SHIPPED IN CONFORMANCE WITH RECOGNIZED COMMERCIAL STANDARDS TO ENSURE SAFE TRANSPORTATION.

3) APPROVED MANUFACTURER:


- CONVERSION EQUIP. CORP.
330 WEST TAFT AVE
ORANGE CA 92665
P/N: OSD-0170-01

**UNCONTROLLED PRINT
FOR REFERENCE ONLY**

- OUTPUTS: +5V @ 3A
 +15V @ 8A
 -15V @ 3A
 +2.1V @ 3A
- CURRENT SHARE, +5V & +2.1V
- SENSE +5V, & +2.1V



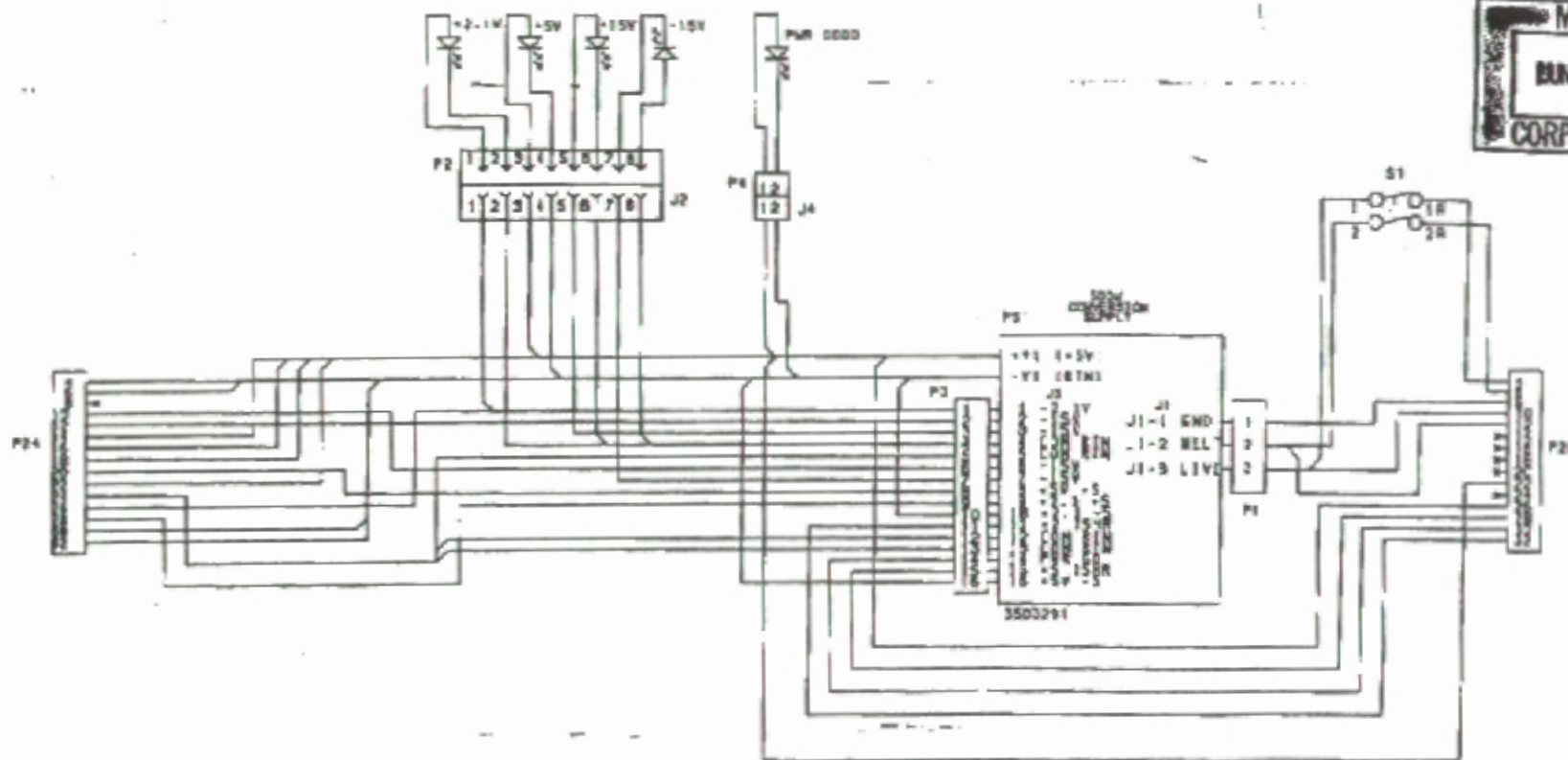
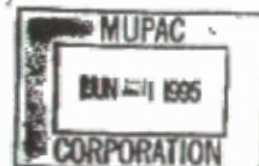
SOURCE CONTROL DWG.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES FRACTIONS DECIMALS ± .X ± - ANGLES .XX ± .02 ± 0°30' .XXX ± .005	DR	AZ	DATE	 Packaging Systems Mupac Corporation - A Carlo Gavazzi Company 10 Mupac Drive - Brockton, MA. 02401			
	CHK	AZ	11-1-94	SUPPLY, POWER (500W)			
	APVD						
	MATL	APVD			SIZE	FSCM NO.	DWG NO.
FINISH	APVD	B Turner	11/3/94	A	51398	3503291	A
				SCALE			SHEET 1 OF 1



PROPRIETARY NOTICE: THE INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED, EXCEPT WHERE SHOWN
OTHERWISE, AND IS IN THE PUBLIC DOMAIN. IT IS THE POLICY
OF MUPAC CORPORATION TO MAKE THIS INFORMATION AVAILABLE
TO THE PUBLIC.

REV	DESCRIPTION	DATE	APPD.
A	END EXPOS RELEASED	12/28/85	JR
B	ECC HOUSE	1/2/86	GR



NOTES:

1. REF SPEC 8001 AND 4104.
2. SEE APPLICABLE WORKMANSHIP STANDARDS.

**UNCONTROLLED PRINT
FOR REFERENCE ONLY**

DFTS.	REV. 11-30-84	DATE	11-30-84	BY	JR
ECC	REV. 11-30-84	DATE	11-30-84	BY	JR
R/ENG.					
L/ENG.					
APPD.	REV. 11-30-84	DATE	11-30-84	BY	JR
APPROVAL BOX		REV. 11-30-84	DATE	11-30-84	BY
February 7, 1985		51398	1921200	9	
SCALE		SHEET 1 OF 1			



0170 Series 500Watt Power Supply

AC INPUT: 90-132/180-264VAC. Automatic line selection. Internally fused for 10A. Holds regulation to 85VAC or 170VAC.

DC OUTPUTS: +5VDC @ 50A
+15VDC @ 8A
-15VDC @ 8A
+2.1VDC @ 3A

ADJUSTABILITY: All outputs user adjustable $\pm 5\%$ minimum.

LINE & LOAD REGULATION: $\pm 1\%$ over DC input range and 0 to 100% load change. Multiple output units require a minimum load of 10% on the +5V output when drawing full load on the auxiliary outputs.

RIPPLE AND NOISE: Less than 1% peak to peak or 100mV, whichever is greater on all outputs.

REMOTE SENSE: Compensates for 500mV total line drop. Main (+5V) and (2.1V) outputs are provided remote sense. Open sense lead protected is standard.

TEMPERATURE COEFFICIENT: 0.02% per $^{\circ}\text{C}$.

STABILITY: 0.1% over 8 hours after 30 minutes warm up.

RELIABILITY: Over 100,000 hours MTBF, when calculated in accordance with MIL-HDBK-217.

CONDUCTED RFI: Meet FCC Part 15, Subpart J, Class A and German VFG243.

INRUSH: Cold start AC current is less than 80A at 115VAC, 20A at 230VAC. Limited by Thermistor.

HOLDUP TIME: 16ms minimum after removal of power, at nominal line, full load.

TRANSIENT RESPONSE: Output voltages returns to within 1% in less than 500 μsec for a 50% load change. Peak transient does not exceed 5%.

CURRENT SHARING: Current sharing on +5V and 2.1V outputs to keep all shared currents approximately equal.

OVERLOAD PROTECTION: All outputs are protected against overload and short circuit. Automatic recovery upon removal of fault.

OVERVOLTAGE PROTECTION: Protects load against power supply induced overvoltage. Trip point is factory set so that output voltages can not exceed 130% of the rated output voltages.

THERMAL PROTECTION: Shuts down power supply if overheated. Automatic recovery.

TEMPERATURE RANGE: 0 to 50°C full ratings. Derate linearly to half power at 70°C .

EFFICIENCY: 75-80% typical.

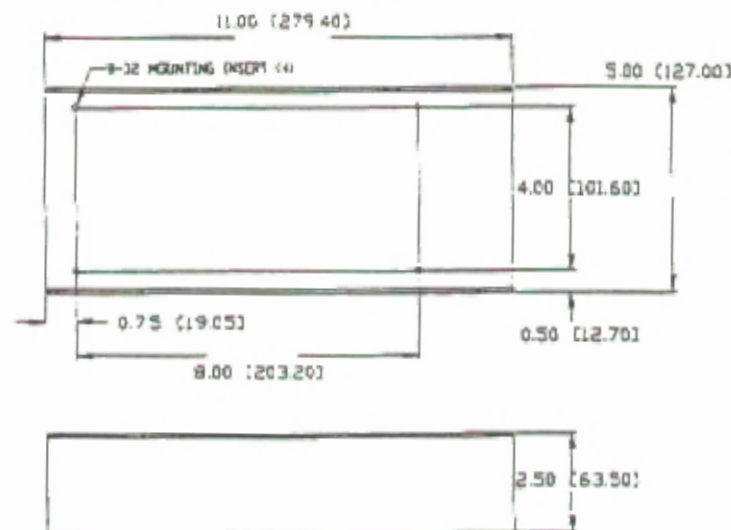
COOLING: 30CFM required to achieve full ratings. Built-in fan is standard.

OUTPUT ISOLATION: Isolated from chassis ground 50V.

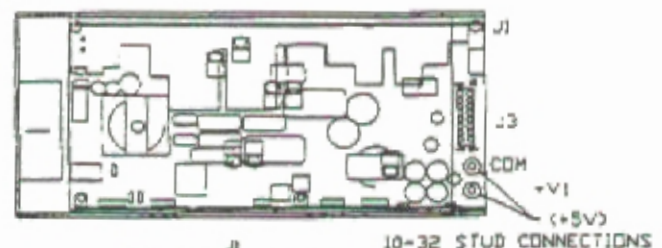
DC POWER GOOD: Provides a TTL "1" when all outputs are above 90% of the rated output voltages.

SAFETY AGENCIES: Most model are approved for UL1950, CSA 22.2 No. 234, IEC950.

All dimension are in inches [mm]



0170-01 (Weight 4.55 lbs)



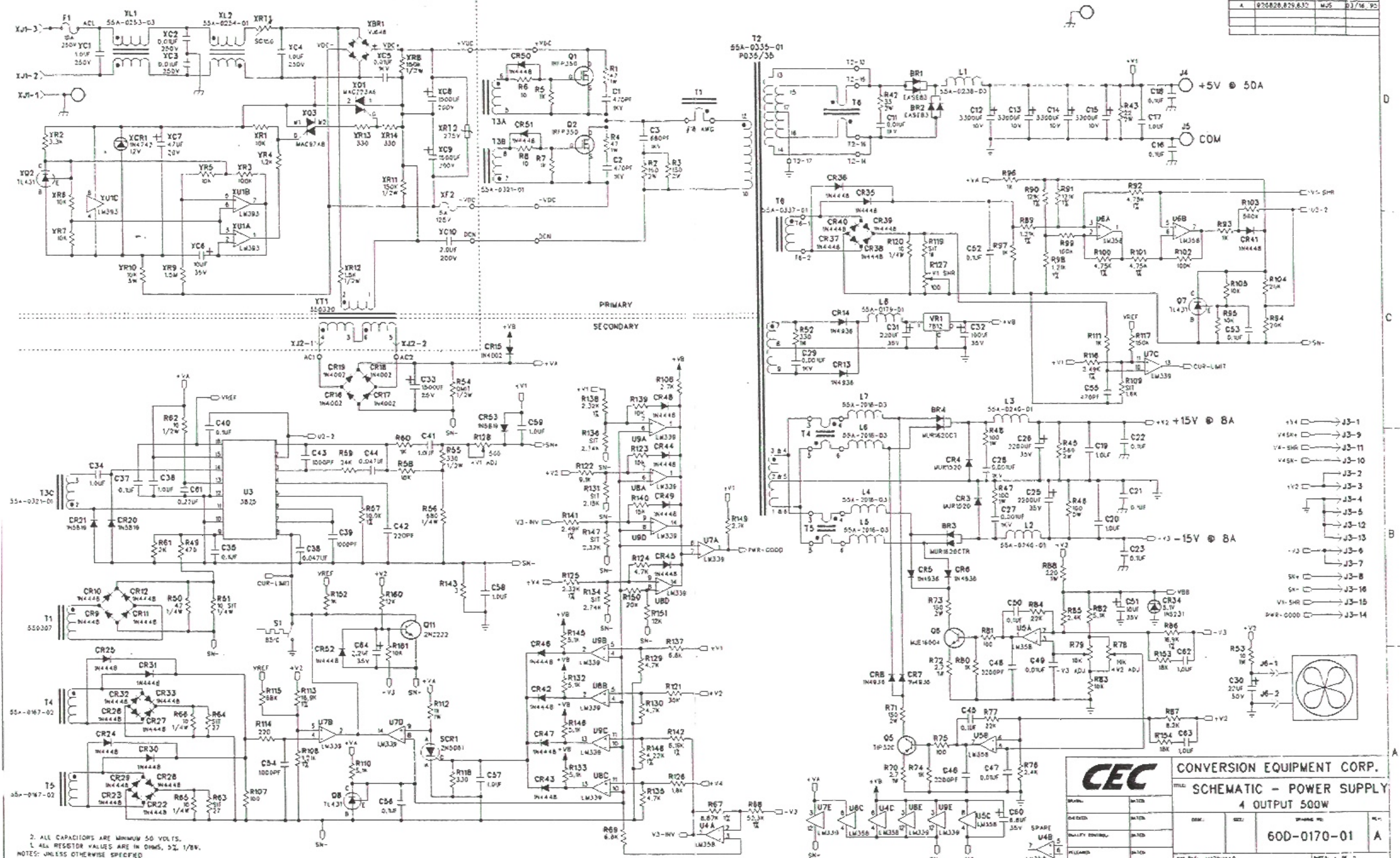
J1
NOTES WITH HOLEX 19-09-1039
WITH SOCKETS F 02-09-1118

J1 = AC1 OMALED
J2 = AC2
J3 = AC3

J2
NOTES WITH HOLEX 39-01-0160
WITH SOCKETS F 39-00-0060

1 = +5V POS. SENSE	11 = +5V NEG. SENSE
2 = +5V	12 = +5V SENSE
3 = +5V	13 = POWER SENSE
4 = COMMON RETURN	14 = COMMON RETURN
5 = COMMON RETURN	15 = COMMON RETURN
6 = +15V	16 = +15V SENSE
7 = +15V	17 = +15V NEG. SENSE
8 = +15V	18 = +15V POS. SENSE
9 = +2.1V	19 = +2.1V POS. SENSE
10 = +2.1V	20 = +2.1V POS. SENSE

REV	DATE	APPROVED	BY
1	02/08/20, 02/03/20	MJS	DJ/16, 95



2. ALL CAPACITORS ARE MINIMUM 50 VOLTS.
 1. ALL RESISTOR VALUES ARE IN OHMS, Ω, 1/8W.
 NOTES: UNLESS OTHERWISE SPECIFIED

- +V4 → J3-1
- +V5R → J3-9
- +V4-SHR → J3-11
- +V4N → J3-10
- +V2 → J3-2
- +V3 → J3-3
- +V3-4 → J3-4
- +V3-5 → J3-5
- +V3-12 → J3-12
- +V3 → J3-6
- J3-7 → J3-7
- SN → J3-8
- SN → J3-10
- V4-SHR → J3-15
- PWR-GOOD → J3-14

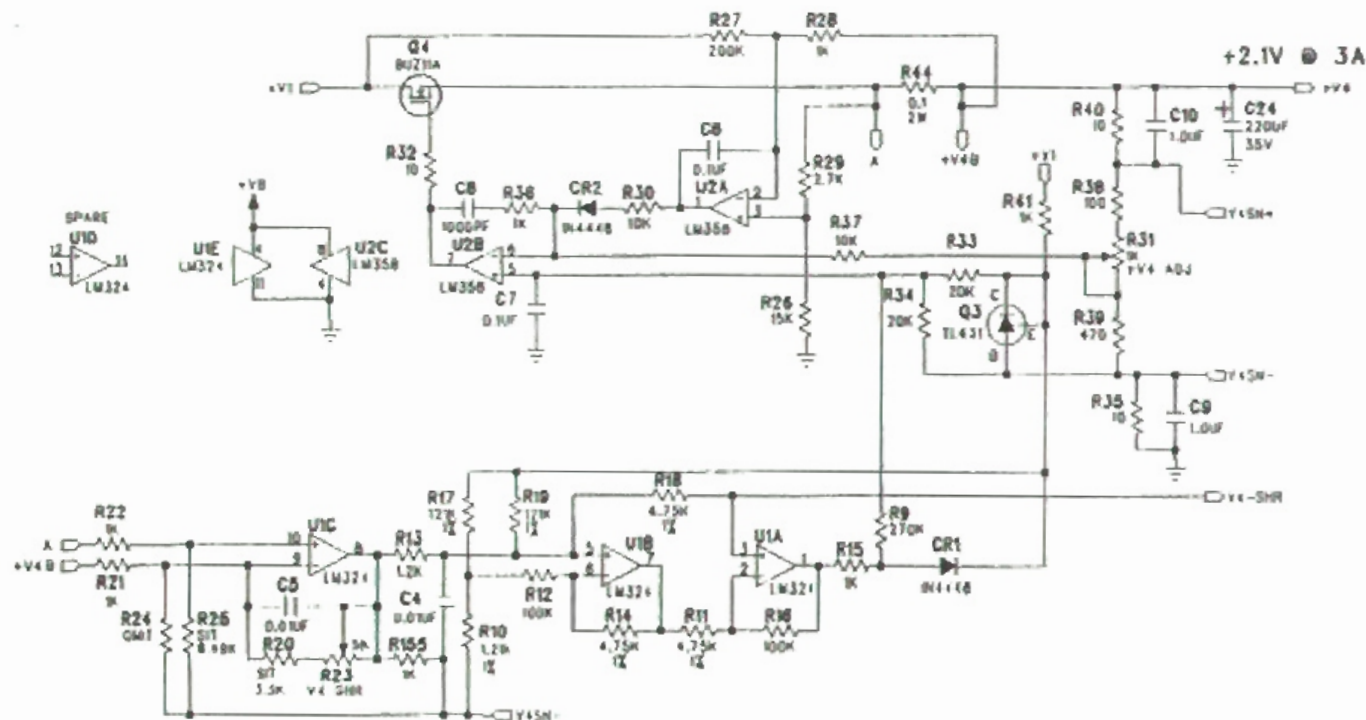
CEC CONVERSION EQUIPMENT CORP.

TITLE: SCHEMATIC - POWER SUPPLY
4 OUTPUT 500W

DESIGNED	DRAWN	CHK.	APP. NO.	REV.
QUALITY CONTROL	TESTED			
RELEASED	DATE			

60D-0170-01 A

CEN. FILE: 617001A2 SHEET 1 OF 2



CONVERSION EQUIPMENT CORP.

SCHEMATIC - POWER SUPPLY
4 OUTPUT 500W

CEC 600-0170-01 A