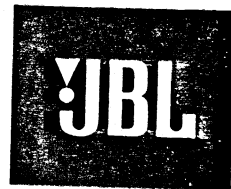


Technical Manual

JBL/UREI ES600 POWER AMPLIFIER SPECIFICATIONS

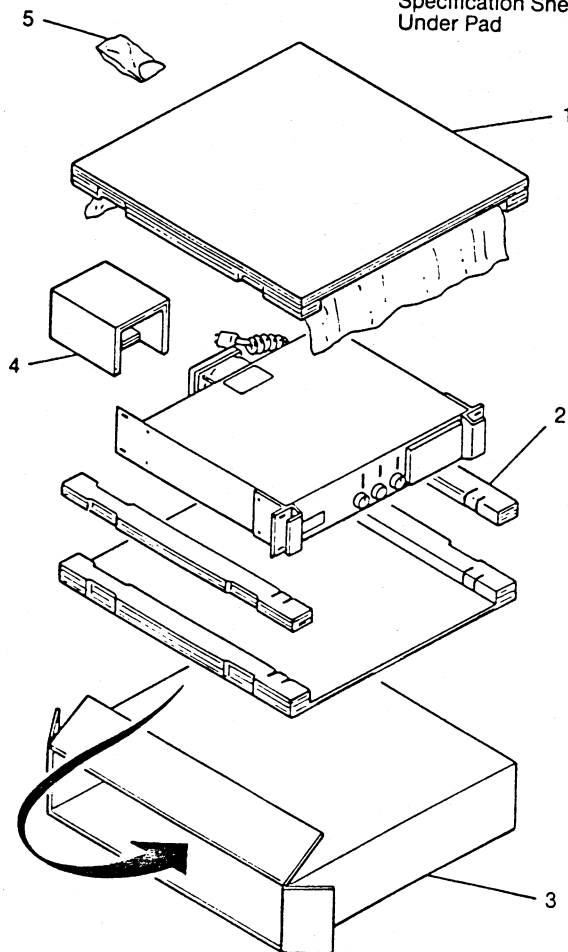


	4 Ohm/Ch	8 Ohm/Ch	8 Ohm Bridge	16 Ohm Bridge
Rated Power:	75 W	50 W	150 W	100 W
Midband Power:	85 W	60 W		
Rated Power:	is minimum continuous sine wave output per channel, with both channels driving their rated load over a power bandwidth of 20 Hz to 20 kHz. Maximum total harmonic or intermodulation distortion measured at any power level from 250 milliwatts to rated power is less than 0.1%. Maximum Transient Intermodulation Distortion is less than 0.05%.			
Midband Power:	is maximum output power per channel, with both channels driven, at onset of clipping with 1 kHz sine wave, THD 1%.			
Frequency Response:	±1 dB, 20 Hz to 20 kHz, at any level up to rated power.			
Noise:	At least 100 dB below rated output (15.7 kHz noise bandwidth, A weighted).			
Input:	Balanced bridging differential amplifier.			
Input Impedance:	Line: 40 k ohms used as balanced input; 20 k ohms used as unbalanced (single-ended) input.			
Maximum Input Level:	+20 dB (7.75 V rms).			
Input Sensitivity:	1.1 V for rated output into 8 ohm load.			
Damping Factor:	Greater than 200 at any frequency from 20 Hz to 1 kHz into 8 ohm load.			
AC Power:	Power Consumption: At idle (approx.): 60 W. At rated output (4 ohms both channels): 1200 W.			
Polarity:	Positive-going signal on pin 3 of XL or barrier strip + terminal gives positive-going signal at - output terminal.			

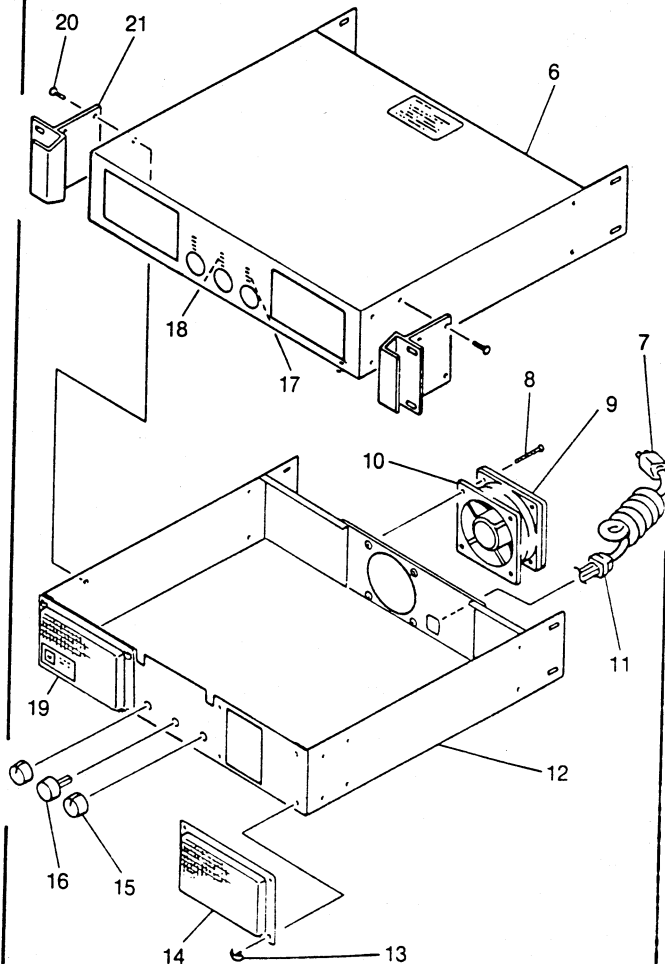
Connectors:	Input connectors are Female XL style 3 pin and barrier strip wired in parallel. Output connectors are 5-way binding posts on ¾ inch (19mm) centers.
Controls:	Channel Gain (2), Power, Stereo/Bridge Mono/Dual Mono Switch, Ground Lift Strap on Barrier Strip.
Indicators:	Power, Signal Present (2), -24 dB (2), -8 dB (2), Clip (2), Standby, Remote.
Dimensions:	19 inch Rack Mounting: 88mm (3.5 in.) high by 368mm (14.5 in.) deep to rear panel. 406mm (16 in.) depth to rear of Rear rack mounting ears.
Net Weight:	40 lbs. (18.2 kg)
Rear Panel:	Input Connectors: XLR Barrier Strip Ground Lift Jumper. Mode Switch: Stereo/Dual Mono/Bridge Mono. Output Connections: 5-Way Binding Posts In Line on ¾ in. Centers. Rear Input panel may be removed and replaced with optional input accessories. Locations to attach rack supports at rear panel. Circuit Breakers.
Front Panel:	Power Switch, 1 dB/Step Input Level Controls. Digitally controlled. Recessed Lockout switch disables Front Panel Gain Controls. Rack Handles. LED Indicators: Power; Input Signal Present; Output Level -24 dB, -6 dB, Clip; Standby; Remote
Other:	Fan cooled (air flow is back-to-front). Low inrush current design.
Warranty Information:	Refer to the Warranty Statement packed with each product.

PACKAGE

Warranty 59660
Specification Sheet
Under Pad



CABINET COMPONENTS



JBL/UREI ES600

COMPONENTS PARTS LIST

ITEM	PART NO.	QTY	DESCRIPTION
1	33-0415	2	INSRT
2	33-0425	2	INSRT DIE CUT ES/SR
3	33-0414	1	SHIPPING CARTON SR
4	33-0419	2	INSRT, REAR (FAN)-2 PCS/PACK
5	10-16525	1	RACK SCREW KIT ES
6	25-16422	1	COVER CHASSIS FAB ES600
7	36-0330	1	CORD PW 14/3 5.5' SJT
8	30-0322	4	SCR, 6-32x1-3/4 PFH
9	45-0118	1	FAN GUARD SOMM (NO SCREEN)
10	45-0116	1	FAN DC TB AXL 12V
11	36-0333	1	STRAIN RELIEF AC CRD
12	25-16664	1	CHASSIS MAIN FAB ES SER.
13	27-0567	8	CONN, TAB .187" FASTON
14	25-16488	1	GRILL, FLTR-BLK NO LOGO
15	24-16446	2	KNOB ES
16	24-16410	1	PWR BUTTON ES
17	25-16419	2	LENS, LED 4 WINDOWS
18	25-16503	1	LENS, LED 3 WINDOWS
19	25-16489	1	FLTR, BLK, W/LOGO
20	30-0325	12	SCR, 10-32x1/2 PPH BO
21	25-16477	2	RACK EAR 2 RACK SPACE
22	36-0531	8	BUTTON MTG
23	15-16416	1	SW SLIDE 3P3T PCMT
24	30-0327	2	SCR, 3x5MM PPH
25	30-0234	4	SCR, 6-32x1/4 PPH SEMS
26	16-16431	1	XFMR, TOR, 120V, 300W
27	30-0340	1	SCR, 1/4-20x3, HEXHD, MCH
28			
29	30-0230	4	SCR, 8-32x3/8 PPH
30	29-0048	1	NUT 6-32 HEX KEPS
31	13-0281	1	RECT BRDG 25A 200V
32	30-0293	1	SCR, 6-32x3/4 PPH
33	15-0472	1	CIRCUIT BREAKER 15A
34	27-0222	2	BIND, POST-BLK
35	27-0221	2	BIND, POST-RED
36	30-0234	1	SCR, 6-32x1/4 PPH SEMS
37	42-0034	1	LUG, #6 MTG

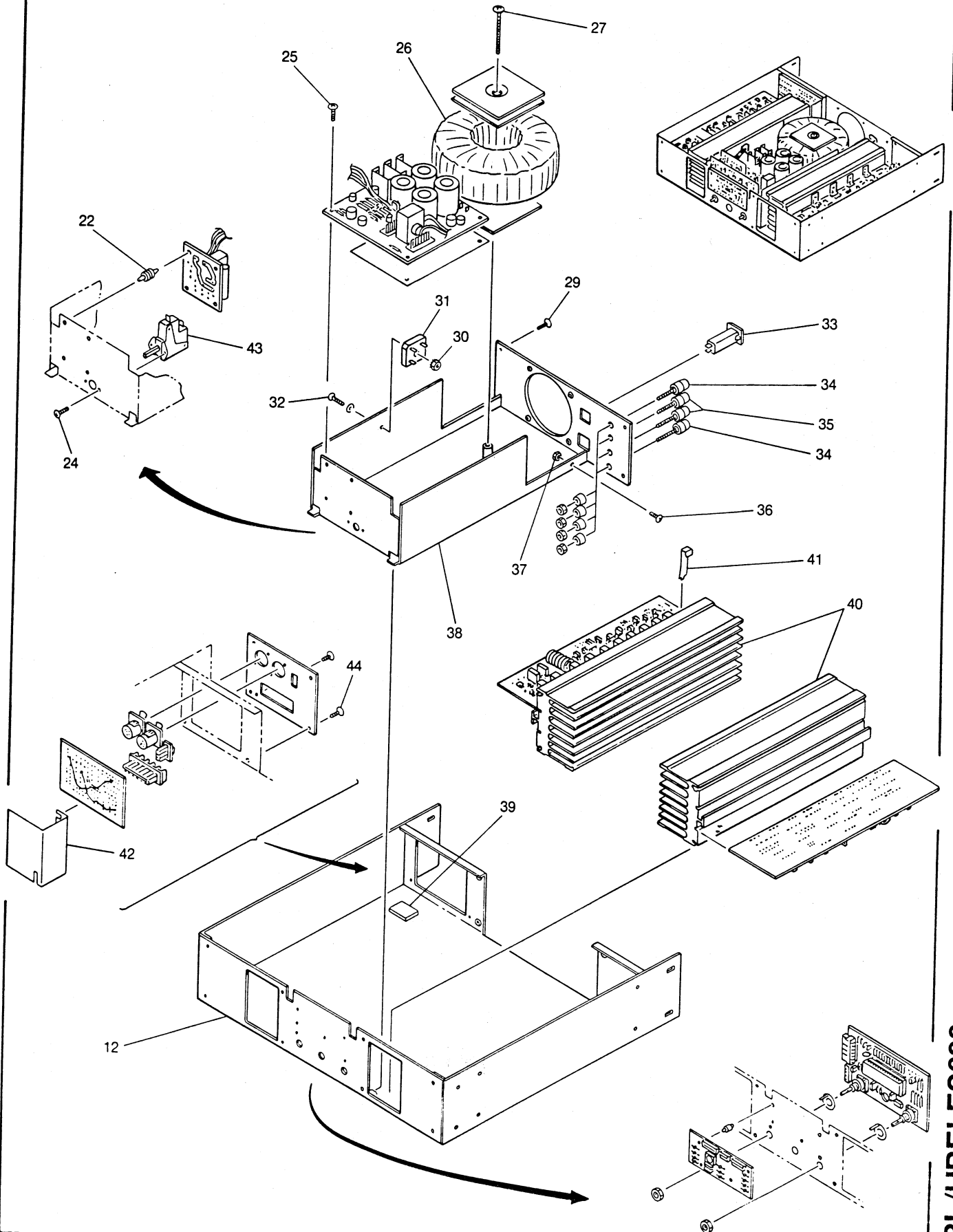
ITEM	PART NO.	QTY	DESCRIPTION
38	25-16745	1	CHASSIS PWR SUPP 6615/150
39	36-0325	1	BUMPER, RUBBER
40	25-16620	2	HEATSINK, FAB ES/SR
41	25-16413	24	CLIP, HEATSINK ES/SR
42	25-16649	1	SHIELD, ESI AIR-FLOW
43	15-1463	1	SW PW SPST 15A
44	30-0255	4	SCR, 4-40x1/4 PPH BZ
45			
46			
47			
48			
49			
50			

CIRCUIT BOARDS

51	13-0414	2	TR, PNP, SIG, 2N3906, 40V
52	13-0590	1	IC, DUAL DIG POT 10K DS1267
53	13-0276	6	IC, OP-AMP, DUAL, NE5532N
54	13-0425	2	XSTR, FET J113
55	13-0424	3	XSTR, PNP, 60V, 2N6728
56	13-0543	8	TR PNP PW 2SA1386
57	13-0542	2	XSTR, 2SC2837
58	13-0541	2	XSTR, 2SA1186
59	13-0544	8	XSTR, 2SC3519
60	13-0280	2	OPTOISOLATOR H11AI
61	16-14573	2	COIL, AIR, CORE, 2.2UH
62	13-0545	14	XSTR, 2SA1208S
63	13-0546	10	XSTR, 2SC2910S
64	13-0423	7	XSTR, NPN, 60V, 2N6716
65	13-0547	2	TR PNP PW 2SA1011E
66	13-0548	2	TR NPN PW 2SC2344E
67	189-00004-00	2	THERMISTOR ASSY
68	15-0473	1	RELAY SPST 24V
69	27-0402	1	IC SOCKET 40 PIN DIP
70	13-0601	1	IC MICROCONTROLLER/PROG'D
71	13-0449	1	EEPROM NMC9306N
72	13-0586	3	LED, RED SUB-MINI
73	13-0587	6	LED, GRN SUB-MINI

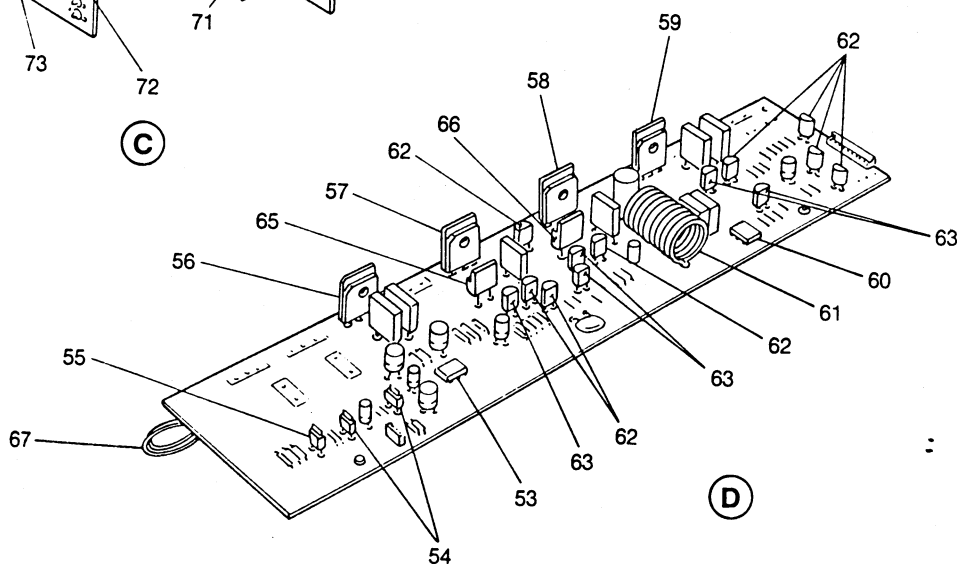
JBL/UREI ES600

COMPONENT EXPLODED VIEW



JBL/UREI ES600

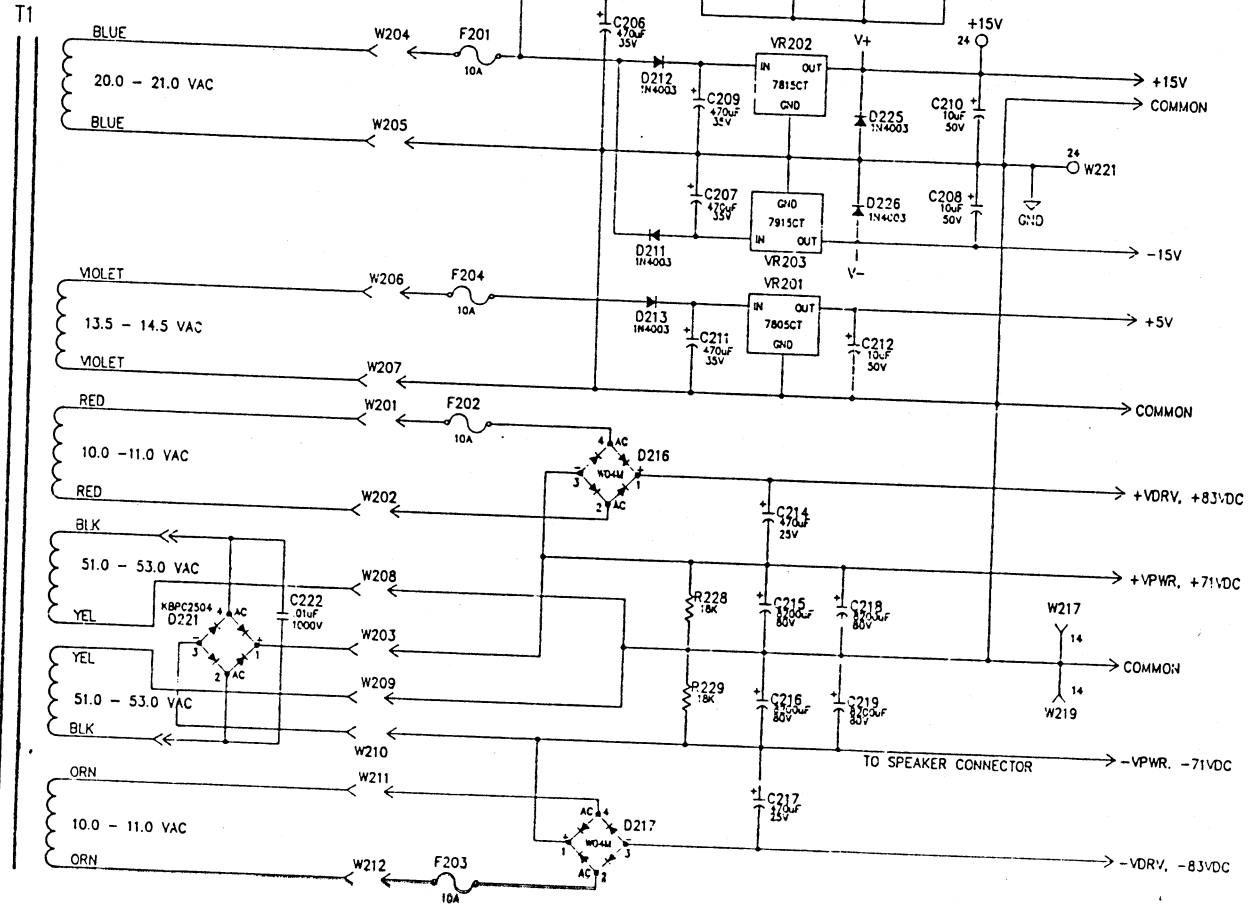
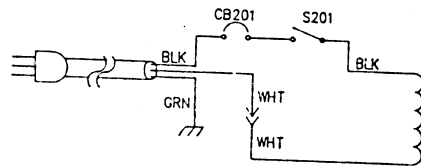
CIRCUIT BOARDS



ITEM	PART NO.	QTY	DESCRIPTION
83	13-0194	2	IC, E, REG. 15V, 7815, T0-220
84	13-0284	1	REG. E, POS. 5V, T0-220
85	14-0782	4	CAP. EL. 8200UF, 20%, 80V
86	13-0614	1	IC UNDER E SENS'G CIR
87	13-0369	2	RES. NTWK, SIP, 22K, 10P

TRANSFORMER (T1) P/H	LINE VOLTAGE	LINE FREQUENCY	PRIMARY WIRING NUMBER/COLOR
16-16431	120VAC	60Hz	1/WHT, 2/BLK
16-16432	100VAC	50/60Hz	1/WHT, 2/BLK
16-16433	230VAC	50/60Hz	1/WHT, 2/BLK
16-16434	240VAC	50/60Hz	1/WHT, 15/BRN

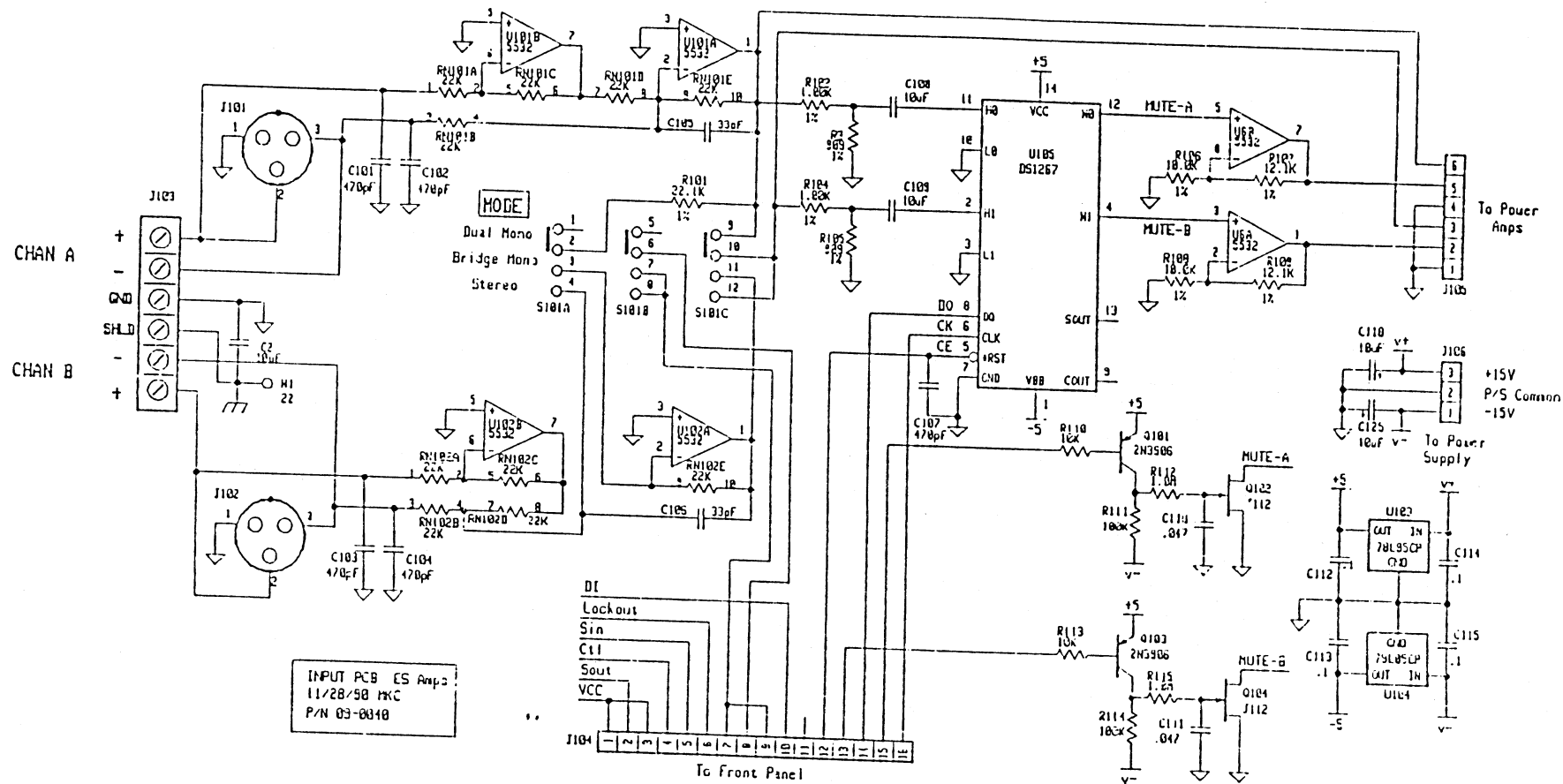
NOTE : 120VAC 60Hz WIRING SHOWN



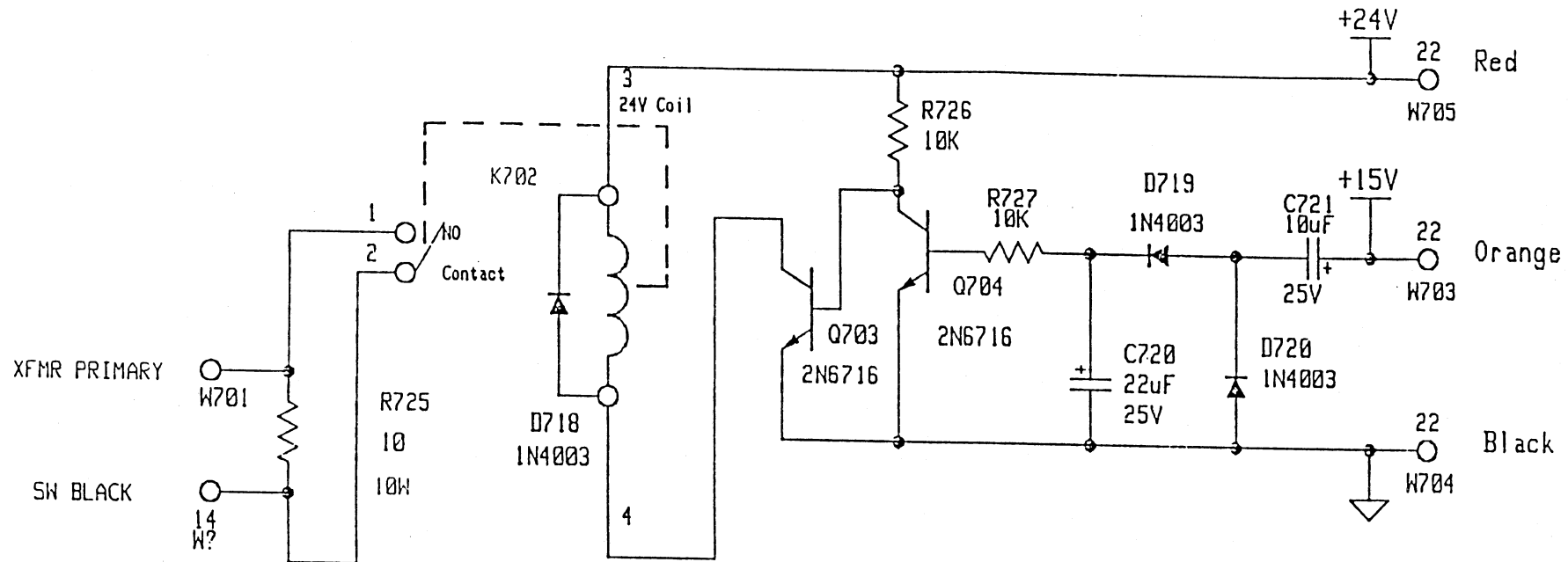
SEE SCHEMATIC 05-17032 FOR COMPLETE POWER SUPPLY ASSY

JBL/UREI ES600

JBL/UREI ES150, ES300, ES600



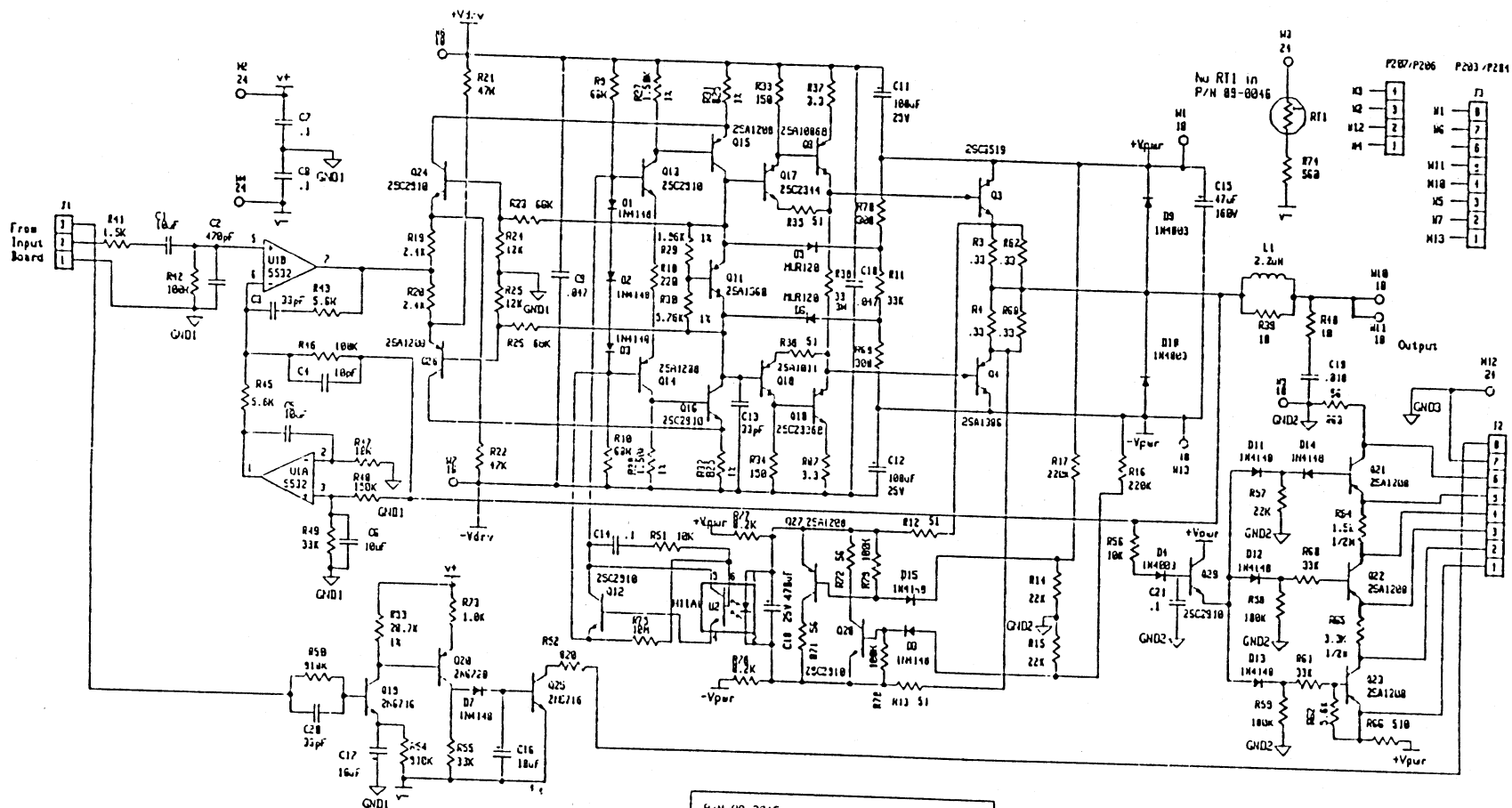
SCHEMATIC, INRUSH, LMT, ES-A (05-17029)



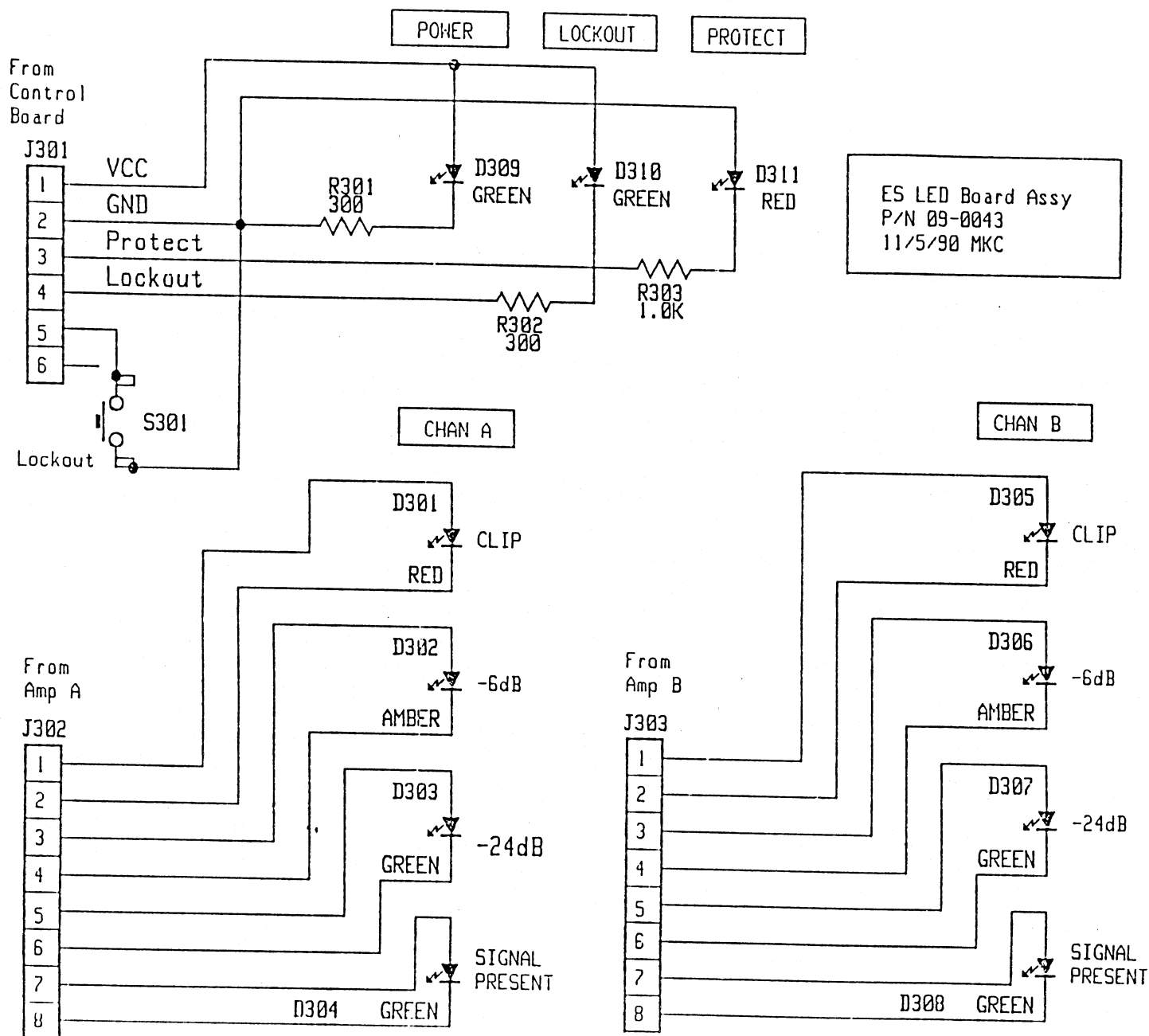
JBL/UREI ES150, ES300, ES600

ES Series Inrush Limiter Asy
P/N 03-0041
11/5/90 MKC
Design File: inrush

JBL/UREI ES150, ES300, ES600

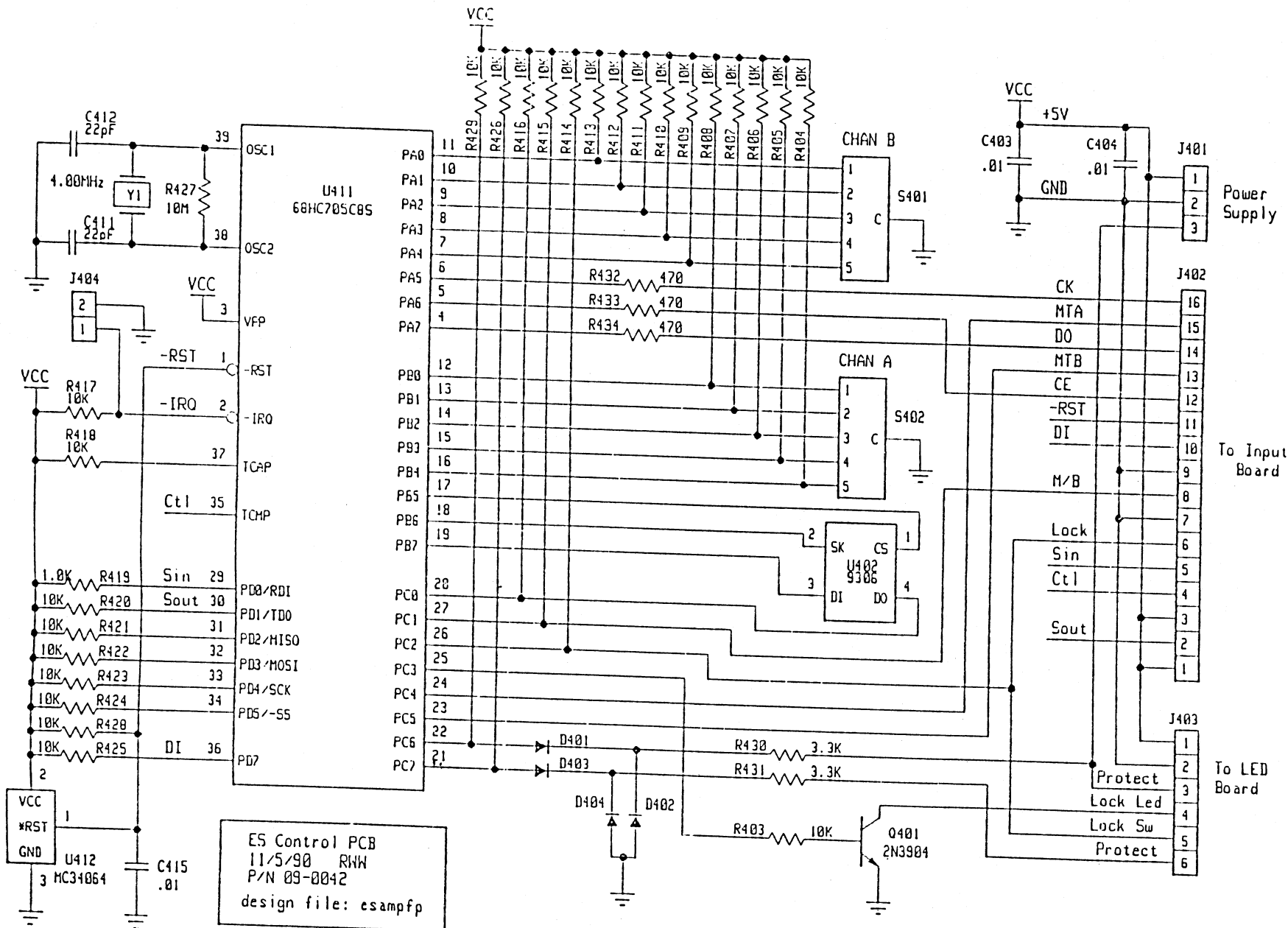


JBL/UREI ES150, ES300, ES600



JBL/UREI ES150, ES300, ES600

SCHEMATIC, M'PROCSSR, ES-A (05-17021)



The schematic diagram illustrates the internal wiring of a car stereo unit. It features several key sections:

- TO AMP "A" and "B":** Connections for speaker outputs, including color-coded wires (VIOLET, BLACK, YELLOW, BLUE) and a THERMISTOR.
- TO INPUT BOARD:** Connections for VIOLET, BLACK, and YELLOW wires.
- TO LED BOARD:** Connections for ORANGE, BLACK, and WHITE wires.
- TO AMP "A" and "B" (Detailed):** Connections for ORANGE, YELLOW, BROWN, BLACK, VIOLET, and BLUE wires, including amplifier output and common connections.
- TO SPEAKER CONNECTOR:** Connections for "A" CH (W13, W14) and "B" CH (W15, W16).
- Power and Grounding:** Connections for +15V, +24V, and various ground points (W201, W202, W203, W204, W205, W206, W207, W208, W209, W210, W211, W212, W213, W214, W215, W216, W217, W218, W219, W220, W221, W222, W223, W224, W225, W226, W227, W228, W229, W230, W231, W232, W233, W234, W235, W236, W237, W238, W239, W240).
- Electronic Components:** Resistors (R201-R227), capacitors (C201-C220), diodes (D201-D209), and integrated circuits (U201A, U201B, U201C).

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
005	X 10-16867	1.0000			EA				10-26-90	
	ES600 PACKING MAT. KIT	1					100			
010	10-16913	1.0000			EA				11-06-90	
	KIT,FINAL,AMP,ES-A,115V	1					100			
015	14-0051	1.0000			EA				10-29-90	
	CAP,CD,.01UF,M,1KV						100			
020	15-0472	1.0000			EA				10-29-90	
	CIRCUIT BREAKER 15A	C					100			
025	24-16410	1.0000			EA				10-29-90	
	PWR BUTTON ES	A					100			
030	24-16446	2.0000			EA				10-29-90	
	KNOB ES	A					100			
035	25-14284	1.0000			EA				10-29-90	
	LABEL WARNING						100			
040	25-15341	1.0000			PR				10-29-90	
	LABEL,SER.NO.-UNIVERSAL						100			
J	25-16413	24.0000			EA				10-29-90	
	CLIP,HEATSINK ES/SR	B					100			
050	25-16418	1.0000			EA				10-29-90	
	PLATE LOGO ES AMP	B					100			
055	25-16419	2.0000			EA				10-29-90	
	LENS,LED 4 WINDOWS	A					100			
060	25-16422	1.0000			EA				10-29-90	
	COVER CHASSIS FAB ES600	A					100			
065	25-16475	2.0000			EA				10-29-90	
	RING,ENCODER	B					100			
070	25-16477	2.0000			EA				10-29-90	
	RACK EAR 2 RACK SPACE	C					100			
075	25-16488	1.0000			EA				10-29-90	
	GRILL,FLTR-BLK NO LOGO 2	A					100			
080	25-16489	1.0000			EA				10-29-90	
	GRILL,FLTR-BLK W/LOGO 2 R	A					100			
085	25-16491	1.0000			EA				10-29-90	
	PLATE,OPTION CARD/ES	C					100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
090	25-16503 LENS,LED 3 WINDOW	1.0000	A		EA		100		10-29-90	
095	25-16555 INSUL,TRANSISTOR	2.0000	A		EA		100		10-29-90	
100	25-16620 HEATSINK,FAB ES/SR	2.0000	25-16408 B		EA		100		10-29-90	
105	25-16646 INSUL,ES/SR PS	1.0000	A		EA		100		10-29-90	
110	25-16648 BAFFLE AIR FLOW	1.0000	C		EA		100		10-29-90	
115	25-16649 SHIELD,ESI AIR-FLOW	1.0000	B		EA		100		10-29-90	
120	25-16664 CHASSIS MAIN FAB ES SER.	1.0000	A		EA		100		10-29-90	
125	25-16746 CHASSIS PWR 6630/600	1.0000	B		EA		100		10-29-90	
130	27-0221 BIND. POST,RED	2.0000			EA		100		10-29-90	
135	27-0222 BIND. POST-BLK.	2.0000			EA		100		10-29-90	
140	27-0522 CABLE RIBBN 16POS .050*SP	2.5800	C		FT		100		10-29-90	
145	28-0107 WSHR,#10 FLAT FIBRE	4.0000	A		EA		100		10-29-90	
150	30-0321 SCR,10-32X3/4 PBH BO	4.0000	B		EA		100		10-29-90	
155	30-0322 SCR,6-32X1-3/4 PFH	4.0000	30-0098 C		EA		100		10-29-90	
160	30-0325 SCR,10-32X1/2 PPH BO	12.0000	A		EA		100		10-29-90	
165	32-0025 TUBING 3/16 SHRINK	0.3330	1		FT		100		10-29-90	
170	36-0325 BUMPER,RUBBER	1.0000			EA		100		10-29-90	

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
175	36-0330	1.0000			EA				10-29-90	
	CORD PW 14/3 5.5' SJT	A					100			
180	36-0333	1.0000			EA				10-29-90	
	STRAIN RELIEF AC CRD HEYC						100			
185	36-0518	2.0000			EA				10-29-90	
	POST SUPPORT 1/2"	A					100			
190	36-0529	4.0000			EA				10-29-90	
	POST SUPPORT 1/8" HT	A					100			
195	36-0530	4.0000			EA				10-29-90	
	POST SUPPORT 1/4" HT	A					100			
200	36-0531	8.0000			EA				10-29-90	
	BUTTON MT6	A					100			
205	36-0533	2.0000			EA				10-29-90	
	CLAMP FLAT CABLE	A					100			
210	45-0116	1.0000			EA				10-29-90	
	FAN DC TB AXL 12V	D					100			
215	97-16600	1.0000			EA				10-29-90	
	LABEL CAUTION ES/SR	A					100			
220	13-0291	1.0000		CR221	EA				10-29-90	
	XSTR,2SC3858						100			
225	45-0118	1.0000		HL	EA				10-29-90	
	FAN GUARD 80MM(NO SCREEN)	A					100			
230	15-0463	1.0000		SW1	EA				10-29-90	
	SW PW SPST 15A	C					100			
235	16-16431	1.0000		T1	EA				10-29-90	
	XFMR TRD 120V 300W	B					100			
240	30-0334	1.0000		T1)MT6	EA				10-29-90	
	SCR,10-32X3 PPH ZINC	A					100			
245	P 09-0040	1.0000			EA				10-26-90	
	ASSY,INPUT,ES-A						100			
010	13-0276	3.0000		U101,102,106	EA					
	IC,NE5532AF						100			
020	13-0383	1.0000		U103	EA					
	REG E +5V K T0-92 78L05CP	A					100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
030	13-0373 REG E -5V 10% T0-92	1.0000 A		U104	EA		100			
040	13-0414 TR,PNP,SIG,2N3906,40V	2.0000 A		Q101,103	EA		100			
050	13-0425 XSTR,FET	2.0000		Q102,104	EA		100			
060	13-0590 IC,DUAL DIG POT 10K DS126	1.0000 A		U105	EA		100			
070	13-0369 RES,NET. 22K 10P	2.0000 F		RN101,102	EA		100			
080	185-01002-00 RES,10K 1/6W 5% CF	2.0000		R110,113	EA		100			
090	185-01004-00 RES,1 MEG 5% 1/6W CF	2.0000		R112,115	EA		100			
100	186-02212-00 RES,MF 22.1K 1% 1/8W	1.0000 A		R101	EA		100			
	186-01212-00 RES,MF 12.1K 1% 1/8W	2.0000 A		R107,109	EA		100			
120	185-01003-00 RES,CF 100K 1/6W 5%	2.0000		R111,114	EA		100			
130	186-01002-00 RES,MF 10K 1% 1/8W	2.0000 A		R106,108	EA		100			
140	186-09090-00 RES,MF 909 OHM 1% 1/8W UF	2.0000 A		R103,105	EA		100			
150	186-01001-00 RES,MF 1K 1% 1/8W	2.0000 A		R102,104	EA		100			
160	14-0600 CAP,EL,10UF,M,50V,RD	2.0000		C118,125	EA		100			
170	14-0633 CAP,CD,33PF,K,500V	2.0000 A		C105,106	EA		100			
180	14-0636 CAP,CD,470PF,K,500V	5.0000		C101-104,107	EA		100			
190	14-0581 CAP,SF,.047UF,50V	2.0000		C110,111	EA		100			

BOM Number : ES600A - PWR,AMP 120V

Item#	Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.	UM	Yield%				
200	14-0622 CAP,PE,,1UF,J,63V,BX	4.0000		C112-115	EA		100			
210	14-0560 CAP,ELNP,10UF,50V	3.0000	B	C102,108,109	EA		100			
220	27-0524 CONN,16 PIN FLAT CBL	1.0000		J104	EA		100			
230	27-0550 HEADER 6 POS .098" SP	1.0000	A	J105	EA		100			
240	27-0548 HEADER 3 POS .098" SP	1.0000	A	J106	EA		100			
250	27-0344 TER BLK 6 POS 3/8" SP	1.0000	A	J103	EA		100			
260	27-0342 CONN,FEMALE PC XLR	2.0000		J101,102	EA		100			
270	15-16416 SW SLIDE 3P3T PCMT	1.0000	A	S101	EA		100			
280	32-0425 WR 186A 16X30 UL1569 BRN	0.2080	A		FT		100			
290	42-0033 LUG SOLDER #4	1.0000			EA		100			
300	P 12-16802 PCB,INPUT,ES-A	1.0000	1		EA		100			
	P 12-16529 PCB,FAB PANEL ES AMPS	0.1000	D		EA		100		10-28-90	
310	36-0402 NYLON SPACER	2.0000			EA		100			
320	P 09-0041 INRSH,LNTR,ES-A	1.0000			EA		100		10-26-90	
330	13-0005 DIODE,1N4003	3.0000		D718-720	EA		100			
340	181-01002-00 RES,10K 5% 1/4WF	2.0000		R726,727	EA		100			
350	187-00052-00 RES,PW 10 OHM 10W10%	1.0000		R725	EA		100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	.Quantity.	...Alt-Part#...	.....Reference Designator.....	.UM.	Alt.	.ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	.Oper#.	UM	Yield%				
040	15-0473 RELAY SPST 24V	1.0000		K702	EA	100				
050	13-0423 TR,NPN,2N6716	2.0000	13-0148 FOR H/S Q703,704		EA	100				
060	14-0600 CAP,EL,10UF,M,50V,RD	1.0000		C721	EA	100				
070	14-0601 CAP,EL,22UF,M,50V,RD	1.0000	A	C720	EA	100				
080	27-0218 TERM. QUICK DISC.	1.0000		W701	EA	100				
090	32-0261 WIRE,14GA,41X30UL1015 BLK	0.2910	A	TO PWR SW	FT	100				
100	36-0406 FASTON 16-14GA FEM .250	1.0000			EA	100				
110	36-0502 TER AMP-IN 18-14GA AMP 77	1.0000			EA	100				
0	36-0539 TER AMP-IN 26/22GA	3.0000	A	W703-705	EA	100				
130	P 12-16804 PCB,FAB,INRUSH	1.0000	A		EA	100				
	P 12-16529 PCB,FAB PANEL ES AMPS	0.0250	D		EA	100		10-28-90		
255	P 09-0042 MICROPROCESSOR,ES-A	1.0000			EA	100		10-26-90		
010	13-0601 IC MICROCONTROLLER/PROG'D	1.0000	13-0562	U411	EA	100				
020	13-0413 TR,NPN,SIG,2N3904,40V	1.0000	A	Q401	EA	100				
030	13-0449 EEPROM	1.0000		U402	EA	100				
040	13-0614 IC UNDER E SENS'G CIR MC3	1.0000	A	U412	EA	100				
050	13-0554 RESONATOR CER 4.0MHZ	1.0000	A	Y401	EA	100				

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.	UM	Yield%				
060	27-0402	1.0000		XU401	EA					
	IC SOCKET 40 PIN DIP	C				100				
070	15-16414	2.0000		S401,402	EA					
	SM RTRY ENCODER 5BIT	A				100				
080	27-0555	1.0000		J401	EA					
	HEADER 3 POS .098" SP	A				100				
090	27-0619	1.0000		J403	EA					
	HDR,90-DEG,6POS,2.5MM,SP	A				100				
100	27-0525	1.0000		J402	EA					
	CONN,16 PIN DUAL ML					100				
110	13-0564	4.0000	13-0135HM13-419	D401-404	EA					
	DIODE,1N4148MOD	A				100				
120	185-01002-00	25.0000		R403-418,420-426,428,429	EA					
	RES,10K 1/6W 5% CF					100				
130	185-01001-00	1.0000		R419	EA					
	RES,1K 1/6W 5% CF					100				
140	185-01005-00	1.0000		R427	EA					
	RES,10MEG,5%,1/6WF	A				100				
150	185-03301-00	2.0000		R430,431	EA					
	RES,3.3K 1/6W 5%					100				
160	185-04700-00	3.0000		R432-434	EA					
	RES,470-OHM,5%,1/6WF	A				100				
170	14-0767	2.0000	USE-0179 FOR HS	C401,402	EA					
	CAP,CD,22PF,J,1KV					100				
180	14-0750	2.0000		C403,404	EA					
	CAP,.1UF/100V 10% BM					100				
190	14-0781	1.0000		C415	EA					
	CAP,.01/50V SF					100				
200	P 12-16801	1.0000			EA					
	PCB,MICROPROCESSOR,ES-A	1				100				
	P 12-16529	0.1000			EA				10-28-90	
	PCB,FAB PANEL ES AMPS	D				100				
260	P 09-0043	1.0000			EA				10-26-90	
	ASSY,DISPLAY,ES-A					100				

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
010	13-0586 LED,RED SUB-MINI	3.0000 A		D301,311,305	EA		100			
020	13-0587 LED,GRN SUB-MINI	6.0000 A		D303,304,307-310	EA		100			
030	13-0588 LED,AMBER SUB-MINI	2.0000 A		D302,306	EA		100			
040	181-03000-00 RES,300 OHM 5% 1/4W	2.0000		R301,302	EA		100			
050	181-01001-00 RES,1K 5% 1/4WF	1.0000		R303	EA		100			
060	27-0557 HEADER 8 POS .098" SP	2.0000 A		J302,303	EA		100			
070	27-0619 HDR,90-DEG,6POS,2.5MM,SP	1.0000 A		J301	EA		100			
080	15-0479 SW KEY LO-PRO .47"x.47"	1.0000 B		S301	EA		100			
	P 12-16803 PCB,DISPLAY,ES-A	1.0000 1			EA		100			
	P 12-16529 PCB,FAB PANEL ES AMPS	0.0250 D			EA		100		10-28-90	
265	P 09-0050 ASSY,PWR,SPLY,ES-A	1.0000			EA		100		10-26-90	
010	13-0005 DIODE,1N4003	11.0000		D207-215,225,226	EA		100			
020	13-0564 DIODE,1N4148MOD	6.0000 A	13-0135HM13-419	D201-206	EA		100			
030	13-0140 DIOD,ZR,	1.0000		D209	EA		100			
040	181-01003-00 RES,100K 5% 1/4WF	1.0000		R214	EA		100			
050	181-01002-00 RES,10K 5% 1/4WF	2.0000		R219,223	EA		100			
060	181-02200-00 RES,220 OHM 5% 1/4WF	1.0000		R220	EA		100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.	UM	Yield%				
070	181-01503-00 RES,150K 5% 1/4WF	1.0000		R211	EA	100				
080	181-08202-00 RES,82K 5% 1/4WF	2.0000		R210,213	EA	100				
090	181-02201-00 RES,2.2K 5% 1/4WF	1.0000		R204	EA	100				
100	181-03901-00 RES,3.9K 1/4W 5% CF	1.0000		R221	EA	100				
110	181-04701-00 RES,4.7K 5% 1/4WF	1.0000		R215	EA	100				
120	181-06201-00 RES,6.2K 1/4W 5% C.F	2.0000		R208,209	EA	100				
130	181-02202-00 RES,22K 5% 1/4WF	3.0000		R201,202,222	EA	100				
140	181-04302-00 RES,43K 5% 1/4W C.F.	3.0000		R207,216,217	EA	100				
150	181-04703-00 RES,470K 5% 1/4WF	1.0000		R212	EA	100				
160	181-03304-00 RES,3.3M 1/4W 5%	1.0000		R203	EA	100				
170	181-01005-00 RES,10 MEG 5% 1/4WC	1.0000		R218	EA	100				
180	181-09100-00 RES,910 OHM 5% 1/4 WCF	1.0000	1	R227	EA	100				
190	181-06203-00 RES,620K 5% 1/4W	1.0000		R226	EA	100				
200	181-02003-00 RES,200K 5% 1/4W	1.0000		R225	EA	100				
210	181-15600-00 RES,56 OHM CF 5%1/4W	1.0000		R205	EA	100				
220	181-00000-00 RES,ZERO OHM 1/4W	2.0000		JW201,202	EA	100				
230	185-00000-00 RES,ZERO OHM 1/6W	1.0000		R206	EA	100				

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
240	187-01802-00 RES,18K 1W 5% MO	2.0000	A	R228,229	EA		100			
250	187-00053-00 RES,3.3 OHM J 3W RD	1.0000		R224	EA		100			
260	13-0390 RECTIFIER,BRIDGE	2.0000		D216,217	EA		100			
270	13-0423 TR,NPN,2N6716	1.0000	13-0148 FOR H/S Q202		EA		100			
280	13-0424 XSTR,2N6728	1.0000	13-0149 FOR H/S Q201		EA		100			
290	13-0276 IC,NE5532AF	1.0000		IC201	EA		100			
300	13-0194 IC,MOT7815CKC	2.0000		VR202,204	EA		100			
310	13-0195 IC,MOT7915CKC	1.0000		VR203	EA		100			
	14-0822 CAP,EL,220UF,M,35V	3.0000	B	C201,202,213	EA		100			
330	14-0726 CAP,EL,470UF,M,25V,RD	2.0000	C	C214,217	EA		100			
340	14-0600 CAP,EL,10UF,M,50V,RD	5.0000		C203,204,208,210 C212	EA		100			
350	14-0798 CAP,EL,470MF,M,35V	4.0000	A	C206,207,209,211	EA		100			
360	14-0782 CAP,EL 8200 UF M 80V	4.0000	B	C215,216,218,219	EA		100			
370	14-0601 CAP,EL,22UF,M,50V,RD	1.0000	A	C205	EA		100			
380	14-0755 CAP,CD,56PF,K,100V	1.0000		C220	EA		100			
390	36-0446 HEATSINK,	3.0000		XVR201-203	EA		100			
400	15-0389 RELAY DPDT 24V	1.0000		K201	EA		100			

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	.Quantity.	...Alt-Part#...	.....Reference Designator.....	.UM.	Alt.	.ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	.Oper#.		UM	Yield%			
410	36-0403 CERAMIC BASE MAGNET	2.0000		YK201	EA		100			
420	27-0565 HEADER 4 POS .098" SP	2.0000	A	J206,207	EA		100			
430	27-0548 HEADER 3 POS .098" SP	3.0000	A	J201,202,205	EA		100			
440	27-0531 HDR 10 POS .156" .045" SQ	2.0000	A	J203,204	EA		100			
450	27-0218 TERM. QUICK DISC.	10.0000			EA		100			
460	32-0261 WIRE,14GA,41X30UL1015 BLK	1.2910	A	W217-SP	FT		100			
470	32-0261 WIRE,14GA,41X30UL1015 BLK	1.2910	A	W219-SP	FT		100			
480	32-0262 WIRE,14GA,41X30UL1015 RED	1.2700	A	W216-SP	FT		100			
490	32-0266 WIRE,14GA,41X30UL1015 BRN	1.2700	A	W214-SP	FT		100			
500	32-0417 WIRE,14GA,41X30UL1015 DRG	0.4370	A	W203-RECT(+)	FT		100			
510	32-0416 WIRE,14GA,41X30UL1015 BLU	0.4370	A	W210-RECT(-)	FT		100			
520	36-0406 FASTON 16-14GA FEM .250	2.0000			EA		100			
530	36-0502 TER AMP-IN 18-14GA AMP 77	6.0000			EA		100			
540	36-0459 FASTON .187 FEM 14-16 AWG	4.0000	A		EA		100			
550	13-0284 REG POS E 5V TD-220	1.0000	A	VR201	EA		100			
560	32-0442 WR 24GA 7X32 UL1569 RED	0.5000	A	W205-W705	FT		100			
570	32-0443 WR 24GA 7X32 UL1569 DRG	0.5000	A	+15-W703	FT		100			

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	.Quantity.	...Alt-Part#...	.....Reference Designator.....	.UM.	Alt.	.ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	.Oper#.		UM	Yield%			
580	32-0440 WR 246A 7X32 UL1569 BLK	0.5380 A		W204-W704		FT	100			
590	36-0539 TER AMP-IN 26/226A	3.0000 A				EA	100			
600	P 12-16805 PCB,PWR,SPLY,SR-A	1.0000 1				EA	100			
	P 12-16529 PCB,FAB PANEL ES AMPS	0.2500 D				EA	100		10-28-90	
610	15-0492 FUSE,PICO-II,10A,125V	2.0000 A		F1,2		EA	100			
270	P 09-0051 AMP,PWR,B,ES-A	1.0000 1				EA	100		10-26-90	
010	13-0005 DIODE,1N4003	3.0000		D4,9,10		EA	100			
020	13-0564 DIODE,1N4148MOD	7.0000 A		13-0135HM13-419 D7,8,11-15		EA	100		11-05-90	
	13-0541 XSTR,2SA1186	1.0000		Q9		EA	100			
040	13-0542 XSTR,2SC2837	1.0000		Q10		EA	100			
050	13-0543 TR PNP PW 2SA1386	4.0000 B		Q2,4,6,8		EA	100			
060	13-0544 XSTR,2SC3519	4.0000		Q1,3,5,7		EA	100			
070	13-0680 TR,PNP,PW,-150V,2SA1360	1.0000 A		Q11		EA	100			
080	13-0547 TR PNP PW 2SA1011E	1.0000 B		Q18		EA	100			
090	13-0548 TR NPN PW 2SC2344E	1.0000 B		Q17		EA	100			
100	13-0545 XSTR,2SA1208S	7.0000		Q14,15,21,22, Q23,26,27		EA	100			
110	13-0546 XSTR,2SC2910S	6.0000		Q12,13,16, Q24,28,29		EA	100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	.Quantity.	...Alt-Part#...	.....Reference Designator.....	.UM.	Alt.	.ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	.Oper#.	UM	Yield%				
120	13-0423 TR,NPN,2N6716	2.0000	13-0148	FOR H/S Q19,25	EA		100			
130	13-0424 XSTR,2N6728	1.0000	13-0149	FOR H/S Q20	EA		100			
140	13-0276 IC,NE5532AF	1.0000		U1	EA		100			
150	13-0280 OPTOISOLATOR HITAI	1.0000		U2	EA		100			
160	13-0549 DIODE,MUR120	2.0000		D5,6	EA		100			
170	181-01003-00 RES,100K 5% 1/4WF	6.0000		R42,46,58,59,78,79	EA		100		11-05-90	
180	181-01002-00 RES,10K 5% 1/4WF	2.0000		R44,51	EA		100			
190	181-01500-00 RES,150 OHM 5% 1/4WF	2.0000		R33,34	EA		100			
	181-01800-00 RES,180 OHM 1/4W 5%	1.0000		R63	EA		100			
210	181-03302-00 RES,33K 5% 1/4WF	6.0000		R14,15,49,55,60,61	EA		100			
220	181-01202-00 RES,12K 1/4W 5%	2.0000		R24,25	EA		100			
230	181-01501-00 RES,1.5K 5% 1/4WF	3.0000		R27,28,41	EA		100			
240	181-02200-00 RES,220 OHM 5% 1/4WF	1.0000		R18	EA		100			
250	181-02401-00 RES,2.4K 5% 1/4WF	2.0000		R19,20	EA		100			
260	181-01503-00 RES,150K 5% 1/4WF	1.0000		R48	EA		100			
270	181-05601-00 RES,5.6K 5% 1/4W C,F	2.0000		R43,62	EA		100			
280	181-04702-00 RES,47K 5% 1/4WF	2.0000		R21,22	EA		100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.			Yield%			
290	181-15600-00 RES,56 OHM CF 5% 1/4W	4.0000		R12,13,35,36	EA		100			
300	181-06802-00 RES,68K 5% 1/4WF	2.0000		R9,10	EA		100			
310	181-08200-00 RES,820 OHM 5% 1/4WF	3.0000		R31,32,52	EA		100			
320	181-08202-00 RES,82K 5% 1/4WF	2.0000		R23,26	EA		100			
330	181-15100-00 RES,CF 51 OHM 5% 1/4W	2.0000	1	R71,72	EA		100			
340	181-02203-00 RES,220K 5% 1/4WF	2.0000		R16,17	EA		100			
350	181-03000-00 RES,300 OHM 5% 1/4W	2.0000		R69,70	EA		100			
360	181-05100-00 RES,510 OHM 5% 1/4WF	1.0000		R66	EA		100			
	181-01802-00 RES,18K 5% 1/4WF	1.0000		R47	EA		100			
380	181-01001-00 RES,1K 5% 1/4WF	1.0000		R73	EA		100			
390	181-09103-00 RES,910K 5% 1/4W	2.0000	1	R50,54	EA		100			
400	181-05600-00 RES,560 OHM 5% 1/4WF	1.0000		R74	EA		100			
410	181-03901-00 RES,3.9K 1/4W 5% CF	1.0000		R45	EA		100			
420	181-02202-00 RES,22K 5% 1/4WF	1.0000		R59	EA		100			
430	182-04301-00 RES,4.3K 5% 1/2WF	1.0000		R65	EA		100			
440	182-02701-00 RES,2.7K 5% 1/2WF	1.0000		R64	EA		100			
450	184-02872-00 RES,28.7K 1% RN60D	1.0000		R53	EA		100			

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	.Quantity.	...Alt-Part#...	.....Reference Designator.....	.UM.	Alt.	.ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	.Oper#.		UM	Yield%			
460	186-05761-00 RES,5.76K,MF,1%,1/8W	1.0000	A	R30	EA		100			
470	186-01961-00 RES,1.96K,MF,1%,1/8W	1.0000	A	R29	EA		100			
480	185-00000-00 RES,ZERO OHM 1/6W	2.0000		MODEL,CHANNEL	EA		100			
490	187-00053-00 RES,3.3 OHM J 3W RD	2.0000		R37,87	EA		100			
500	187-00054-00 RES,10 OHM J 3W RD	2.0000		R39,40	EA		100			
510	187-00051-00 RES,.33 OHM 5 W	8.0000		R1-8	EA		100			
520	187-00056-00 RES,MO 33K J 3W	1.0000	A	R11	EA		100			
530	187-00057-00 RES,WM 33 J 3W AX	1.0000	B	R38	EA		100			
	187-01502-01 RES,MO,15K,5%,1W	2.0000	A	R76,77	EA		100			
550	189-00004-00 THERMISTOR ASSY	1.0000	D	RT1	EA		100			
560	14-0632 CAP,CD,10PF,K,500V	1.0000		C4	EA		100			
570	14-0633 CAP,CD,33PF,K,500V	3.0000	A	C3,13,20	EA		100			
580	14-0636 CAP,CD,470PF,K,500V	1.0000		C2	EA		100			
590	14-0639 CAP,CD,.1,M,50V	4.0000		C7,8,14,21	EA		100			
600	14-0603 CAP,EL,100UF,M,25V,RD	2.0000	A	C11,12	EA		100			
610	14-0600 CAP,EL,10UF,M,50V,RD	2.0000		C16,17	EA		100			
620	14-0791 CAP,SF,.018MF,J,100V	1.0000	A	C19	EA		100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
630	14-0792	2.0000		C9,10	EA		100			
	CAP,MP .047MF K 250V	A								
640	14-0560	3.0000		C1,5,6	EA		100			
	CAP,ELNP,10UF,50V	B								
650	14-0726	1.0000		C18	EA		100			
	CAP,EL,470UF,M,25V,RD	C								
660	14-0793	1.0000		C15	EA		100			
	CAP,EL,47MF,160V,RD	A								
670	X 16-14573	1.0000		L1	EA		100			
	COIL 2.2MH-62XX/ES/SR	\$								
680	27-0548	1.0000		J1	EA		100			
	HEADER 3 POS .098" SP	A								
690	27-0551	1.0000		J2	EA		100			
	HEADER 8 POS .098" SP	A								
700	32-0447	1.9160		W4-P206/1	FT		100			
	WR 246A 7X32 UL1569 VIO	A								
J	32-0440	1.3750		W12-P206/2	FT		100			
	WR 246A 7X32 UL1569 BLK	A								
720	32-0444	1.9160		W2-P206/3	FT		100			
	WR 246A 7X32 UL1569 YEL	A								
730	32-0446	1.3750		W3-P206/4	FT		100			
	WR 246A 7X32 UL1569 BLU	A								
740	32-0426	1.9160		W9-P204/1	FT		100			
	WR 186A 16X30 UL1569 BLU	A								
750	32-0426	1.9160		W13-P204/2	FT		100			
	WR 186A 16X30 UL1569 BLU	A								
760	32-0427	1.6660		W7-P204/3	FT		100			
	WR 186A 16X30 UL1569 VIO	A								
770	32-0420	1.4160		W5-P204/4	FT		100			
	WR 186A 16X30 UL1569 BLK	A								
780	32-0421	1.4580		W10-P204/5	FT		100			
	WR 186A 16X30 UL1569 BRN	A								
790	32-0421	1.4580		W11-P204/6	FT		100			
	WR 186A 16X30 UL1569 BRN	A								

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECD No.	ECD Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.	UM	Yield%				
800	32-0424 WR 186A 16X30 UL1569 YEL A	1.5410		W6-P204/8	FT	100				
810	32-0423 WR 186A 16X30 UL1569 ORG A	1.2500		W1-P204/9	FT	100				
820	32-0423 WR 186A 16X30 UL1569 ORG A	1.2500		W8-P204-10	FT	100				
830	27-0564 CONN,ID SKT 4 POS .098"SP A	1.0000		P206	EA	100				
840	27-0533 CONN,RCPT E 10 POS .156" A	1.0000		P204	EA	100				
850	36-0502 TER AMP-IN 18-146A AMP 77	9.0000			EA	100				
860	36-0539 TER AMP-IN 26/226A A	4.0000			EA	100				
870	P 12-16806 PCB,PWR,AMP,SR-A 1	1.0000			EA	100				
	P 12-16529 PCB,FAB PANEL ES AMPS D	0.2500			EA	100			10-18-90	
880	181-01005-00 RES,10 MEG 5% 1/4WC	1.0000		R75	EA	100			11-05-90	
890	13-0135 DIODE,1N914B,V10	3.0000	13-0564HM13-419 D1,2,3		EA	100			11-05-90	
275	P 09-0052 AMP,PWR,A,ES-A 1	1.0000			EA	100				
010	13-0005 DIODE,1N4003	3.0000		D4,9,10	EA	100				
020	13-0564 DIODE,1N4148MOD A	7.0000	13-0135HM13-419 D7,8,11-15		EA	100			11-05-90	
030	13-0541 XSTR,2SA1186	1.0000		Q9	EA	100				
040	13-0542 XSTR,2SC2837	1.0000		Q10	EA	100				
050	13-0543 TR PNP PW 2SA1386 B	4.0000		Q2,4,6,8	EA	100				

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.		UM	Yield%			
060	13-0544 XSTR,2SC3519	4.0000		Q1,3,5,7	EA		100			
070	13-0680 TR,PNP,PW,-150V,2SA1360	1.0000	A	Q11	EA		100			
080	13-0547 TR PNP PW 2SA1011E	1.0000	B	Q18	EA		100			
090	13-0548 TR NPN PW 2SC2344E	1.0000	B	Q17	EA		100			
100	13-0545 XSTR,2SA120BS	7.0000		Q14,15,21,22, Q23,26,27	EA		100			
110	13-0546 XSTR,2SC2910S	6.0000		Q12,13,16, Q24,28,29	EA		100			
120	13-0423 TR,NPN,2N6716	2.0000	13-0148 FOR H/S	Q19,25	EA		100			
130	13-0424 XSTR,2N6728	1.0000	13-0149 FOR H/S	Q20	EA		100			
0	13-0276 IC,NE5532AF	1.0000		U1	EA		100			
150	13-0280 OPTOISOLATOR HT1AI	1.0000	B	U2	EA		100			
160	13-0549 DIODE,MUR120	2.0000		D5,6	EA		100			
170	181-01003-00 RES,100K 5% 1/4WF	6.0000		R42,46,58,59,78,79	EA		100		11-05-90	
180	181-01002-00 RES,10K 5% 1/4WF	2.0000		R44,51	EA		100			
190	181-01500-00 RES,150 OHM 5% 1/4WF	2.0000		R33,34	EA		100			
200	181-01800-00 RES,180 OHM 1/4W 5%	1.0000		R63	EA		100			
210	181-03302-00 RES,33K 5% 1/4WF	6.0000		R14,15,49,55,60,61	EA		100			
220	181-01202-00 RES,12K 1/4W 5%	2.0000		R24,25	EA		100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.	UM	Yield%				
230	181-01501-00 RES,1.5K 5% 1/4WF	3.0000		R27,28,41	EA	100				
240	181-02200-00 RES,220 OHM 5% 1/4WF	1.0000		R18	EA	100				
250	181-02401-00 RES,2.4K 5% 1/4WF	2.0000		R19,20	EA	100				
260	181-01503-00 RES,150K 5% 1/4WF	1.0000		R48	EA	100				
270	181-05601-00 RES,5.6K 5% 1/4W C.F	2.0000		R43,62	EA	100				
280	181-04702-00 RES,47K 5% 1/4WF	2.0000		R21,22	EA	100				
290	181-15600-00 RES,56 OHM CF 5%1/4W	4.0000		R12,13,35,36	EA	100				
300	181-06802-00 RES,68K 5% 1/4WF	2.0000		R9,10	EA	100				
310	181-08200-00 RES,820 OHM 5% 1/4WF	3.0000		R31,32,52	EA	100				
320	181-08202-00 RES,82K 5% 1/4WF	2.0000		R23,26	EA	100				
330	181-15100-00 RES,CF 51 OHM 5% 1/4W	2.0000	1	R71,72	EA	100				
340	181-02203-00 RES,220K 5% 1/4WF	2.0000		R16,17	EA	100				
350	181-03000-00 RES,300 OHM 5% 1/4W	2.0000		R69,70	EA	100				
360	181-05100-00 RES,510 OHM 5% 1/4WF	1.0000		R66	EA	100				
370	181-01802-00 RES,18K 5% 1/4WF	1.0000		R47	EA	100				
380	181-01001-00 RES,1K 5% 1/4WF	1.0000		R73	EA	100				
390	181-09103-00 RES,910K 5% 1/4W	2.0000	1	R50,54	EA	100				

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	.Quantity.	...Alt-Part#...	.....Reference Designator.....	.UM.	Alt.	.ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	.Oper#.		UM	Yield%			
400	181-05600-00 RES,560 OHM 5% 1/4WF	1.0000		R74	EA		100			
410	181-03901-00 RES,3.9K 1/4W 5% CF	1.0000		R45	EA		100			
420	181-02202-00 RES,22K 5% 1/4WF	1.0000		R59	EA		100			
430	182-04301-00 RES,4.3K 5% 1/2WF	1.0000		R65	EA		100			
440	182-02701-00 RES,2.7K 5% 1/2WF	1.0000		R64	EA		100			
450	184-02872-00 RES,28.7K 1% RN60D	1.0000		R53	EA		100			
460	186-05761-00 RES,5.76K,MF,1%,1/8W	1.0000	A	R30	EA		100			
470	186-01961-00 RES,1.96K,MF,1%,1/8W	1.0000	A	R29	EA		100			
	185-00000-00 RES,ZERO OHM 1/6W	2.0000		MODEL,CHANNEL	EA		100			
490	187-00053-00 RES,3.3 OHM J 3W RD	2.0000		R37,87	EA		100			
500	187-00054-00 RES,10 OHM J 3W RD	2.0000		R39,40	EA		100			
510	187-00051-00 RES,.33 OHM 5 W	8.0000		R1-8	EA		100			
520	187-00056-00 RES,MO 33K J 3W	1.0000	A	R11	EA		100			
530	187-00057-00 RES,WW 33 J 3W AX	1.0000	B	R58	EA		100			
540	187-01502-01 RES,MO,15K,5%,1W	2.0000	A	R76,77	EA		100			
550	189-00004-00 THERMISTOR ASSY	1.0000	D	RT1	EA		100			
560	14-0632 CAP,CD,10PF,K,500V	1.0000		C4	EA		100			

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.	UM	Yield%				
570	14-0633 CAP,CD,33PF,K,500V	3.0000	A	C3,13,20	EA	100				
580	14-0636 CAP,CD,470PF,K,500V	1.0000		C2	EA	100				
590	14-0639 CAP,CD,.1,M,50V	4.0000		C7,8,14,21	EA	100				
600	14-0603 CAP,EL,100UF,M,25V,RD	2.0000	A	C11,12	EA	100				
610	14-0600 CAP,EL,10UF,M,50V,RD	2.0000		C16,17	EA	100				
620	14-0791 CAP,SF,.018MF,J,100V	1.0000	A	C19	EA	100				
630	14-0792 CAP,MP .047MF K 250V	2.0000	A	C9,10	EA	100				
640	14-0560 CAP,ELNP,10UF,50V	3.0000	B	C1,5,6	EA	100				
	14-0726 CAP,EL,470UF,M,25V,RD	1.0000	C	C18	EA	100				
660	14-0793 CAP,EL,47MF,160V,RD	1.0000	A	C15	EA	100				
670	X 16-14573 COIL 2.2MH-62XX/ES/SR	1.0000	\$	L1	EA	100				
680	27-0548 HEADER 3 POS .098" SP	1.0000	A	J1	EA	100				
690	27-0551 HEADER 8 POS .098" SP	1.0000	A	J2	EA	100				
700	32-0447 WR 24GA 7X32 UL1569 VIO	1.6250	A	W4-P207/1	FT	100				
710	32-0440 WR 24GA 7X32 UL1569 BLK	1.2500	A	W12-P207/2	FT	100				
720	32-0444 WR 24GA 7X32 UL1569 YEL	1.6250	A	W2-P207/3	FT	100				
730	32-0446 WR 24GA 7X32 UL1569 BLU	1.2500	A	W3-P207/4	FT	100				

Procedure: PDC-R-07

Phantoms Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	X Part Number....	Quantity.	Alt-Part#...	Reference Designator.....	UM.	Alt.	ECO No.	ECO Date	StartUse	End Use.
	Description.....	Rev	Inv	Oper#.	UM	Yield%				
740	32-0426	1.8750		W9-P203/1	FT					
	WR 186A 16X30 UL1569 BLU A					100				
750	32-0426	1.8750		W13-P203/2	FT					
	WR 186A 16X30 UL1569 BLU A					100				
760	32-0427	1.7080		W7-P203/3	FT					
	WR 186A 16X30 UL1569 VIO A					100				
770	32-0420	1.5000		W5-P203/4	FT					
	WR 186A 16X30 UL1569 BLK A					100				
780	32-0421	1.4580		W10-P203/5	FT					
	WR 186A 16X30 UL1569 BRN A					100				
790	32-0421	1.4580		W11-P203/6	FT					
	WR 186A 16X30 UL1569 BRN A					100				
800	32-0424	1.6250		W6-P203/8	FT					
	WR 186A 16X30 UL1569 YEL A					100				
810	32-0423	1.4580		W1-P203/9	FT					
	WR 186A 16X30 UL1569 ORG A					100				
	32-0423	1.4580		W8-P203/10	FT					
	WR 186A 16X30 UL1569 ORG A					100				
830	27-0564	1.0000		P207	EA					
	CONN,ID SKT 4 POS .098"SP A					100				
840	27-0533	1.0000		P203	EA					
	CONN,RCPT E 10 POS .156" A					100				
850	36-0502	9.0000			EA					
	TER AMP-IN 18-146A AMP 77					100				
860	36-0539	4.0000			EA					
	TER AMP-IN 26/226A A					100				
870	P 12-16806	1.0000			EA					
	PCB,PWR,AMP,SR-A	1				100				
	P 12-16529	0.2500			EA				10-18-90	
	PCB,FAB PANEL ES AMPS D					100				
880	181-01005-00	1.0000		R75	EA				11-05-90	
	RES,10 MEG 5% 1/4WC					100				
890	13-0135	3.0000	13-0564HM13-419 D1,2,3		EA				11-05-90	
	DIODE,1N914B,VIO					100				

13 NOV 1990

Single level Bill of Material

CURRENT STATUS

Page 23

Procedure: PDC-R-07

Phantom Exploded

Revision: 1

BOM Number : ES600A - PWR,AMP 120V

Item#	Y	Part Number....	.Quantity.	...Alt-Part#...	.....Reference Designator.....	.UM.	Alt.	.ECO No.	ECO Date	StartUse	End Use.
Description.....			Rev	Inv	.Oper#.	UM	Yield%				
280	P	TBD	1.0000		CABLE SET	EA				10-26-90	
		TO BE DETERMINED	1					100			