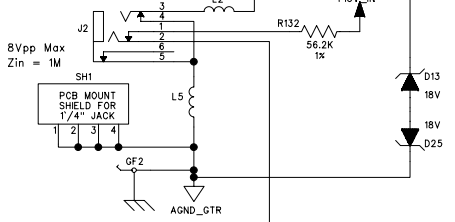
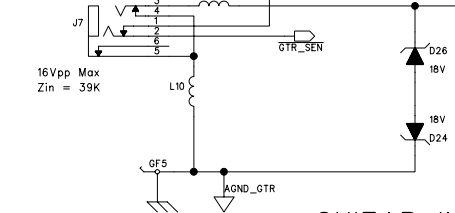


ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:
0603706	02.08.06	Changed R47 from 1k to 100R
0603901	02.13.06	Added C100: 10uF cap elec 10V 20%
0604402	02.13.06	Rev. C Release
19 May 08 Rev. D Release .. add H6 & U20		

PASSIVE

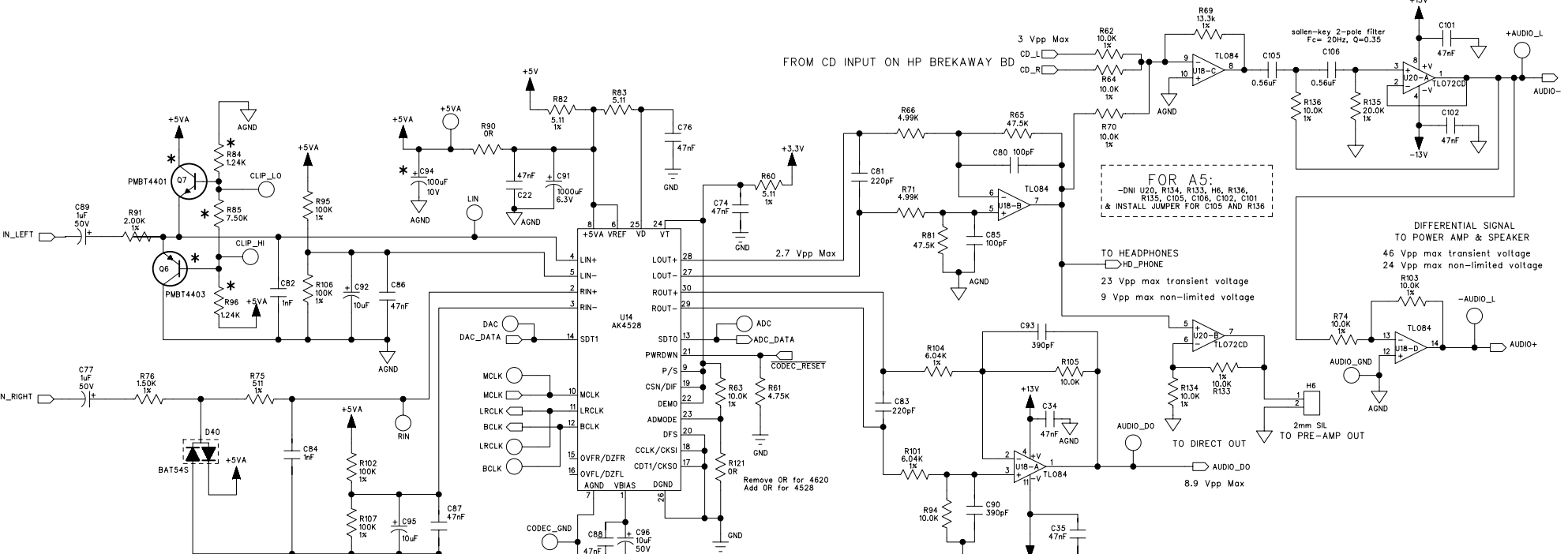


ACTIVE



GUITAR INPUT BREAKAWAY BOARD

FROM CD INPUT ON HP BREAKAWAY BD



FOR A5:
-DNI U20, R134, R133, H6, R136,
R135, C105, C106, C102, C101
& INSTALL JUMPER FOR C105 AND R136

DIFFERENTIAL SIGNAL
TO POWER AMP & SPEAKER
4.6 Vpp max transient voltage
2.4 Vpp max non-limited voltage

TO HEADPHONES
HD_PHONE
2.3 Vpp max transient voltage
9 Vpp max non-limited voltage

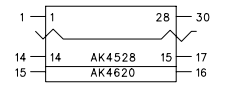
TO DIRECT OUT
AUDIO_DO
8.9 Vpp Max

COMPANY:	LINE 6		
TITLE:	A5 MAIN 112, 115, 115P GUITAR IN / CODEC		
PROGRAM:	PADS POWER LOGIC V5.0		
REV:	F		
FILENAME:	A5 Main Rev F.sch		
SCALE:	1:1	SIZE:	C
PART NUMBER:	35-00-0165		SHEET: 1 OF 5

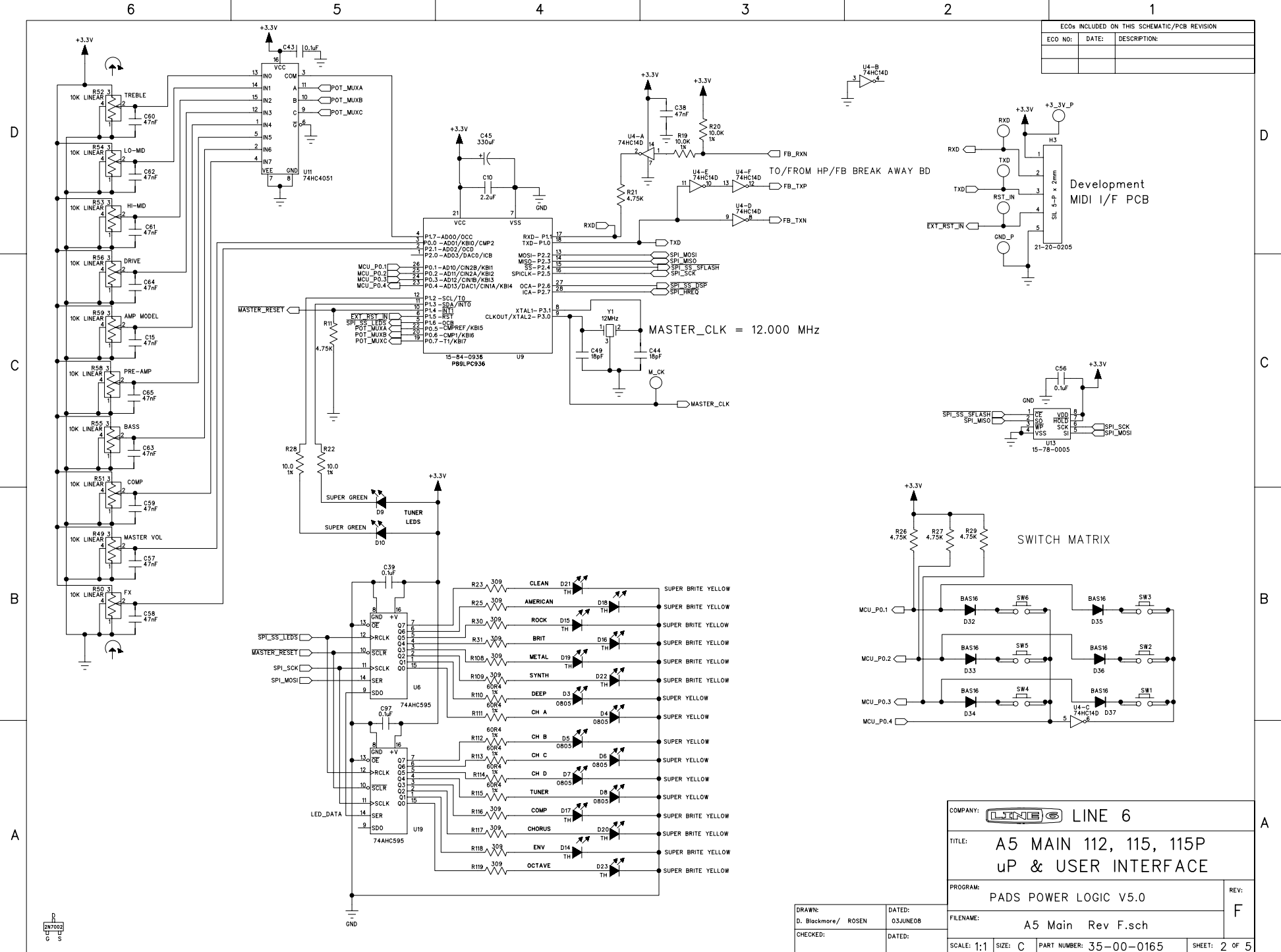
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

DRAWN: GK/D. Blackmore
DATED: 03JUNE08
CHECKED: DATED:

Pin 1 justify - 4528 & 4620 can use same footprint using uP1 above



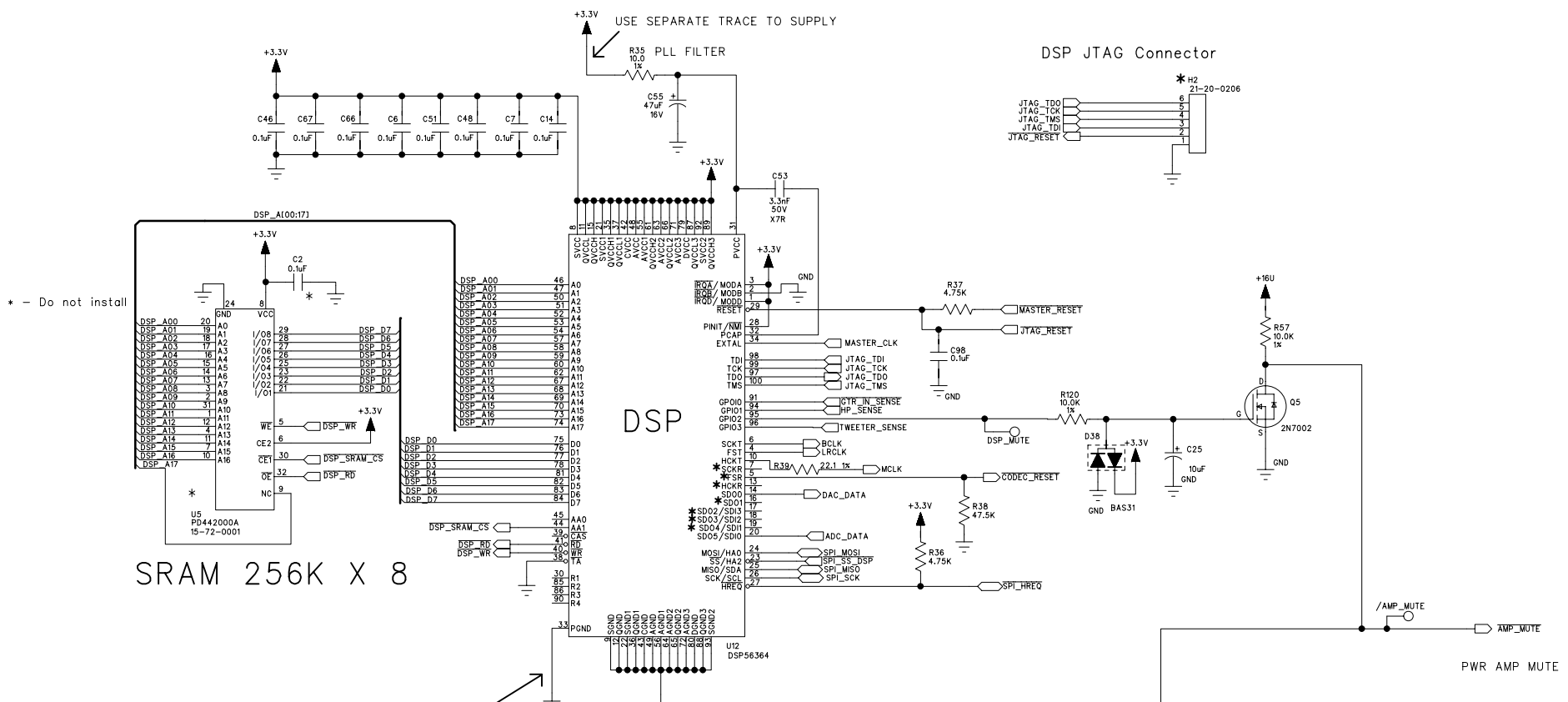
ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:



DRAWN: D. Blackmore/ ROSEN	DATED: 03JUNE08	FILENAME: A5 Main Rev F.sch	REV: F
CHECKED:	DATED:	SCALE: 1:1	SIZE: C
PART NUMBER: 35-00-0165		SHEET: 2 OF 5	

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ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:



* - Do not install

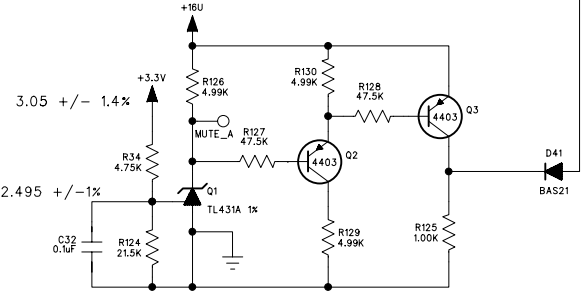
SRAM 256K X 8

USE SEPARATE TRACE TO SUPPLY

DSP

DSP JTAG Connector

DSP CORE CLOCK = 99,993,600 Hz (approx 100MHz)
 MCLK 256FS_CLK = ??M Hz
 BCLK 64FS_CLK = ??M Hz
 LRCLK FS_CLK = ??K Hz



POWER FAIL DETECT:

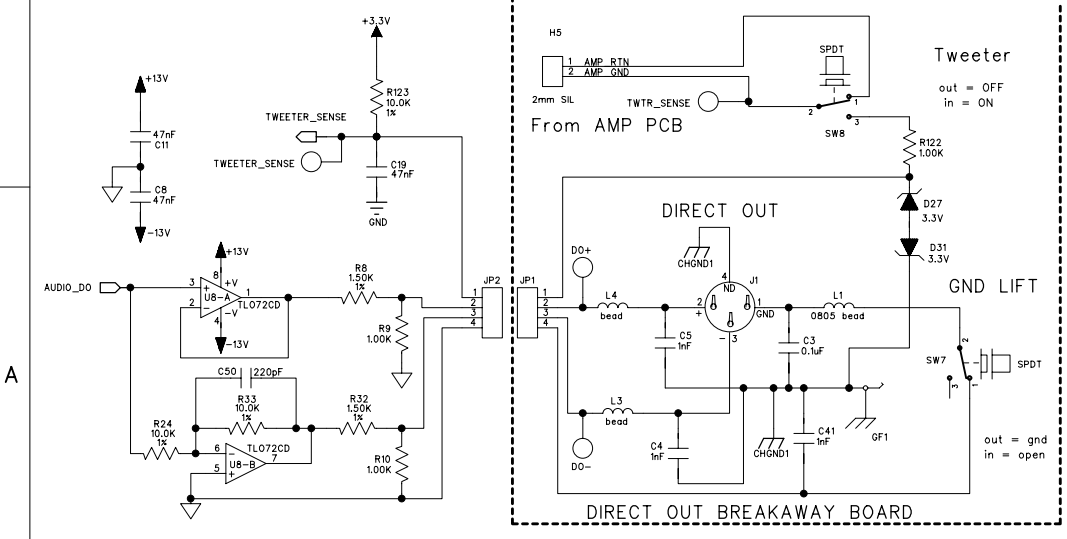
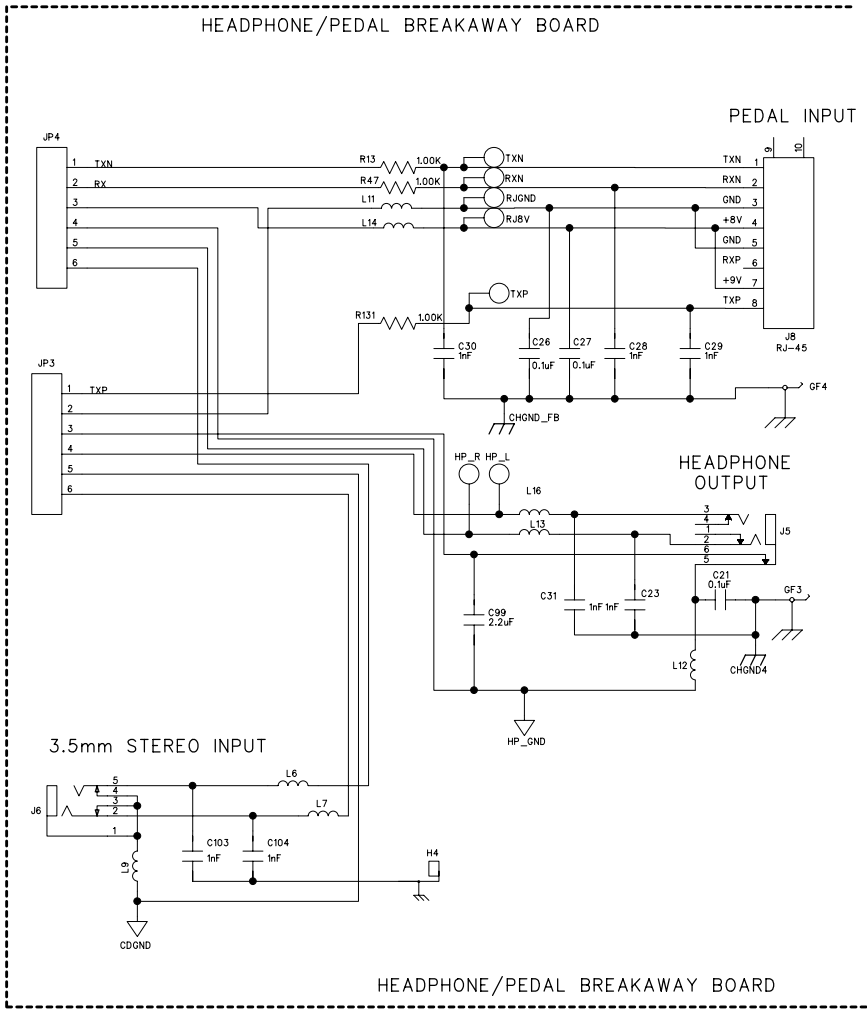
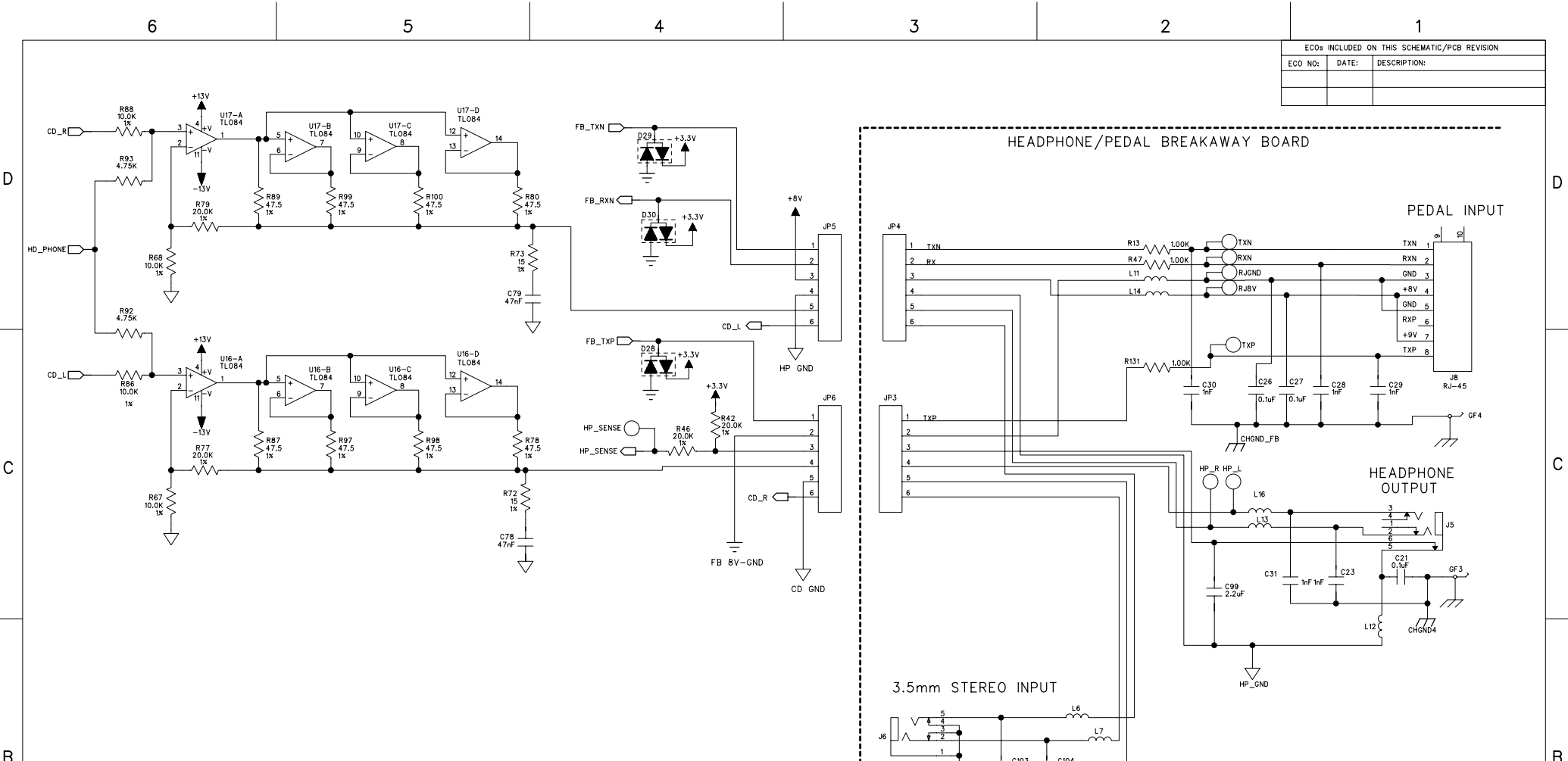
Q1 turns off at 3.3V < 3.05V +/- 1.4%
 Q2 off, Q3 off, R125 pulls MUTE low

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

COMPANY:	LINE 6
TITLE:	A5 MAIN 112, 115, 115P DSP
PROGRAM:	PADS POWER LOGIC V4.0
REV:	F
FILENAME:	A5 Main Rev F.sch
SCALE:	1:1
SIZE:	C
PART NUMBER:	35-00-0165
SHEET:	3 OF 5

DRAWN:	D. Blackmore	DATED:	29MAY2008
CHECKED:	Name (F.Last)	DATED:	00/00/01

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:



THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

COMPANY:	LINE 6	
TITLE:	A5 MAIN 112, 115, 115P DIRECT OUT / HEADPHONE AMP	
PROGRAM:	PADS POWER LOGIC V5.0	REV: F
FILENAME:	A5 Main Rev F.sch	
SCALE: 1:1	SIZE: C	PART NUMBER: 35-00-0165
DRAWN: D. Blackmore		DATED: 29MAY2008
CHECKED:		DATED: Date
SHEET: 4 OF 5		

DRAWN:	DATED:
D. Blackmore	29MAY2008
CHECKED:	DATED:
	Date

6

5

4

3

2

1

ECO#s INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:

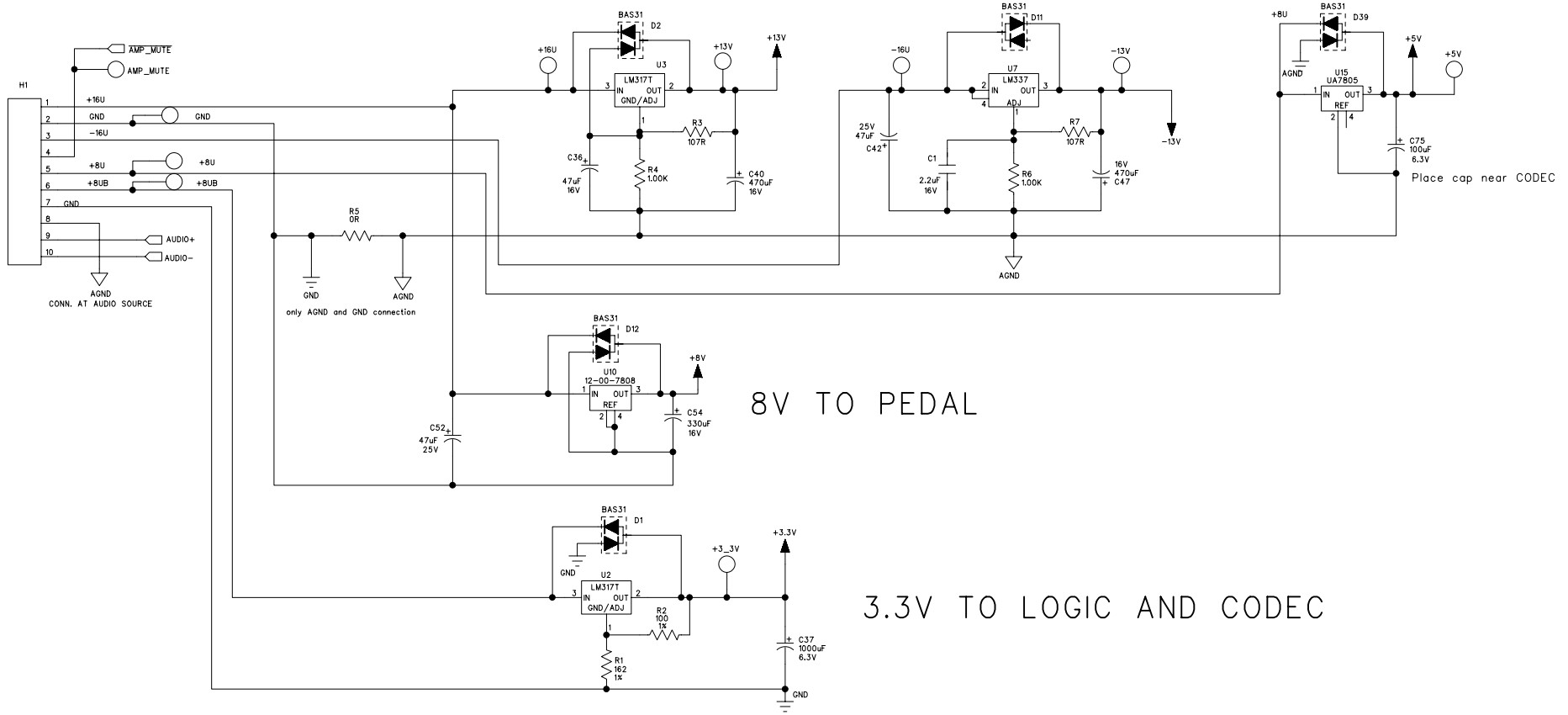
13V TO OPAMPS

-13V TO OPAMPS

5V TO CODEC

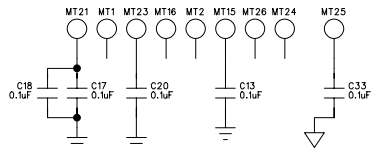
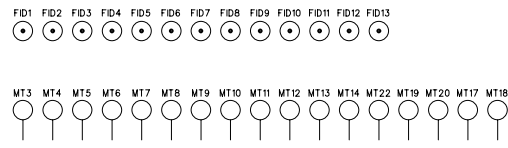
8V TO PEDAL

3.3V TO LOGIC AND CODEC



Place cap near CODEC

only AGND and GND connection

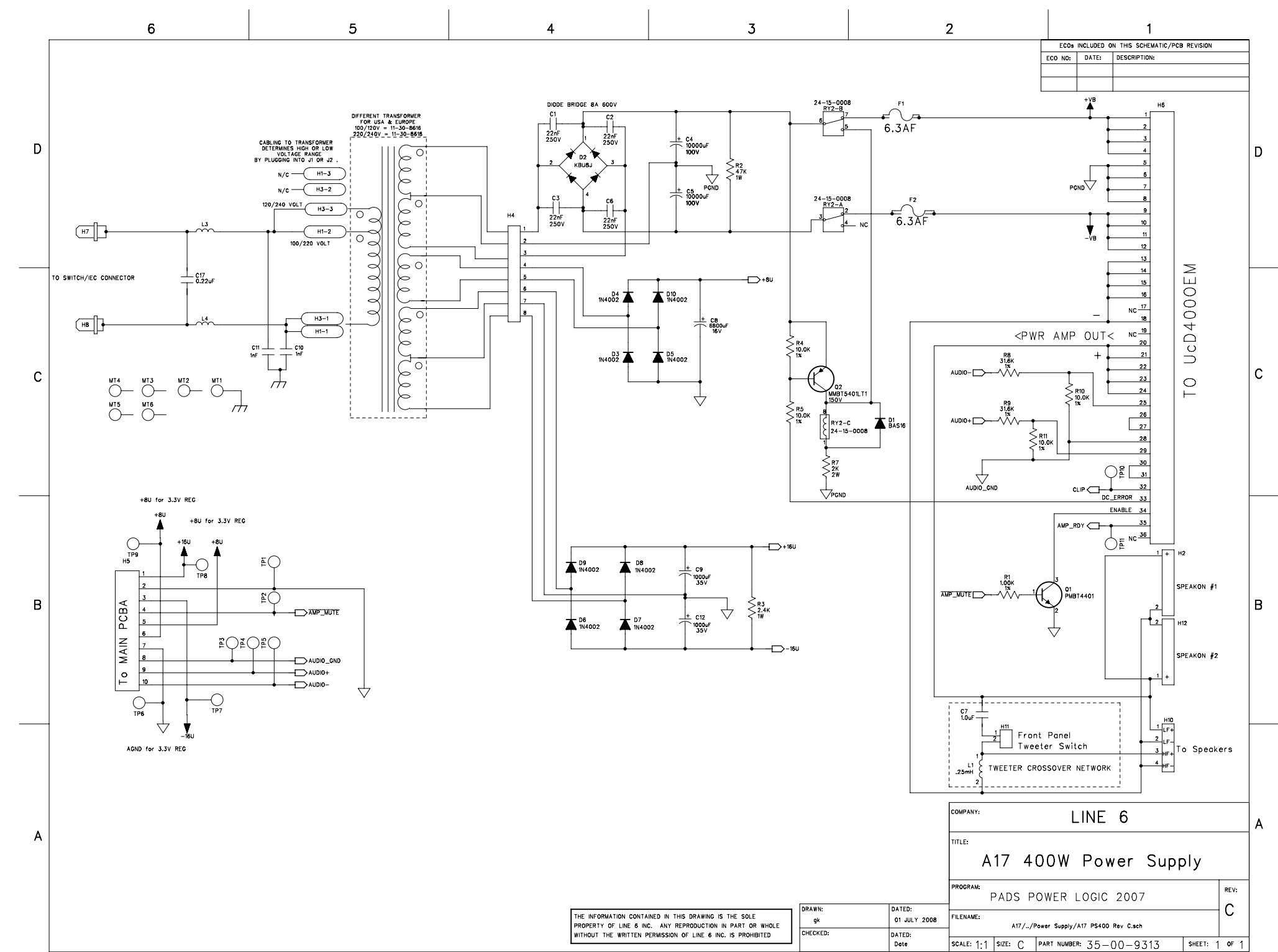


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COMPANY:	LINE 6
TITLE:	A5 MAIN 112, 115, 115P POWER SUPPLY
PROGRAM:	PADS POWER LOGIC V5.0
FILENAME:	A5 Main Rev F.sch
SCALE:	1:1
SIZE:	C
PART NUMBER:	35-00-0165
SHEET:	5 OF 5

DRAWN:	ROSEN	DATED:	29MAY2008
CHECKED:		DATED:	

REV: F

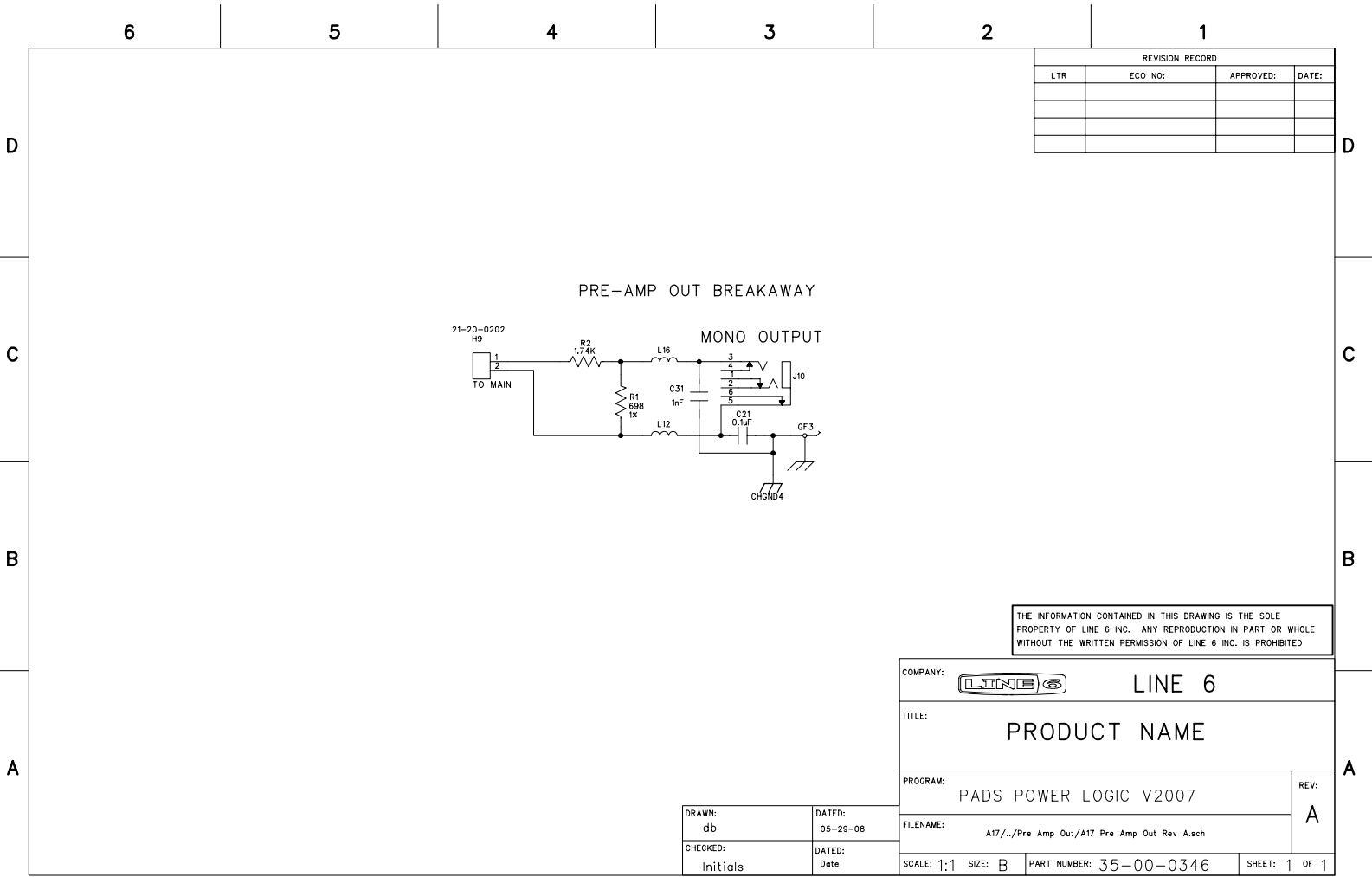


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DRAWN: sk
 CHECKED: Date


DATED: 01 JULY 2008

REV: C



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

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COMPANY:  LINE 6	
TITLE: PRODUCT NAME	
PROGRAM: PADS POWER LOGIC V2007	REV: A
FILENAME: A17/./Pre Amp Out/A17 Pre Amp Out Rev A.sch	
SCALE: 1:1 SIZE: B PART NUMBER: 35-00-0346	SHEET: 1 OF 1

DRAWN: db	DATED: 05-29-08
CHECKED: Initials	DATED: Date

99-025-0215 - A17-2 LOWDOWN HD400 US

Level	Item	Part Number	Qty	UOM	Refdes	Find	Rev	Description
1	1	21-37-1160	1					CBL PWR UL/CSA SJT 8.2FT BLK E L-302 w/GND EL70
1	2	30-75-0011	4			A		STOP PEDAL RUBBER .81SQ x .52 BLACK
1	3	40-00-0300	1			F		MANUAL USER UNIVERSAL LOW DOWN A5-1/2/3
1	4	40-00-1000	1			H		CARD WARRANTY LINE 6
1	5	40-00-2003	4					ENDCAP CARDBOARD LOWDOWN A17-2, A17-3
1	6	40-01-0016	1			C		CARD LICENSE-AGREEMNT END-USER ALL-PRODUCTS
1	7	40-03-0031	1			B		CARD REGISTRATION UK
1	8	40-03-2000	1			F		CARD REGISTRATION US
1	9	40-03-2000-1	1			A		CARD REGISTRATION EUROPE
1	10	40-10-0269	1			A		CARTON GIFT LOWDOWN HD400 A17-2
1	11	40-20-0011	1			A		BAG PLASTIC 10 x 16 2 mil
1	12	40-20-0022	1			A		BAG PLASTIC 2 MIL 36"x14"
1	13	40-25-0024	1			B		STICKER ART SEAL EULA
1	14	40-25-0101	2					LABEL BAR CODE S/N 2-PNL LTX 16 1125502
1	15	40-25-0168	1			A		LABEL ETL SUGA 2"X 1" INTERTEK CHINA
1	16	59-00-1606-1	1			A		ASSY UNIT COMPLETE HD400 LOWDOWN (A17-2) US
2	1	11-30-8616	1					TRANSFORMER 100/120V 50/60Hz L D400W A17-1 & A17-2
2	2	24-19-8251	1					FUSE 8.0A 250V 5MMx20MM SLOW BLOW
2	3	40-25-0020	1			A		LABEL INSPECTION QUALITY
2	4	40-25-9004	1			B		STICKER SPEAKER-GRILL PROMO LOWDOWN HD400 A17-2
2	5	50-04-0701	1			A		ASSY E/M CHASSIS 400HD A17-2
3	1	21-14-0002	1					JACK IEC w/FUSE MALE 3 PIN PAN EL MOUNT SNAP IN VERT
3	2	21-19-0002	2					CON WIRE/CBL MISC NEUTRIK SPEAKON NL4MP-2
3	3	21-29-0012-5	1			D		WIRE18AWG DBL INSUL STRAND 12 "x.187/1x.205 Q-CONN FEM WH
3	4	21-29-0012-6	1			D		WIRE18AWG DBL INSUL STRAND 12 "x.187/1x.205 Q-CONN FEM BL
3	5	21-29-0013-1	1			B		WIRE18AWG DBL INSUL STRANDED 2" FEMALE CON ON BOTH SIDES BL
3	6	21-30-0056	1					CBL RIBBON DIL 36 PIN 8.0"
3	7	21-34-0076-5	1			H		CBL SIL 2 COND 26AWG 2MM x 22" JST PHR-2 BLUE
3	8	21-34-0087	1			G		CBL ASSY 10 COND 26AWG F/F X 1 0" WHITE
3	9	21-34-1116	1			C		CBL EARTHING w/EYELET 16AWG 5" GREEN w/YELLOW STRIPE
3	10	21-36-0277	2					CBL 2 COND 18AWG TWISTED .205 SPADE-FM x 2 RED/BL - 6"
3	11	24-21-1124	1					CAP SWITCH PLASTIC .20" DIA x .35" BLK
3	12	24-24-0607	1					SWITCH POWER ROCKER 6A/250V 10 A/120V w/O OFF CAP PRINT
3	13	30-00-0042	6					SCREW SHEET METAL 4 x 0.375 IN SELF-TAP PPB
3	14	30-00-0043	16			A		SCREW 6-32 X 5/16 LG WITH LOCK WASHER PHIL PAN ZINC-PLATED STEEL
3	15	30-00-0097	2					SCREW 8-32 x 7/16" PHH PNH STL BLK OXIDE
3	16	30-00-0176	4					SCREW M3 x 22.5mm PAN HD PH BLACK STL
3	17	30-00-0375	13					SCREW 6-32 x .375 PPB
3	18	30-00-0404	1					SCREW 4-40 x .250 LG PHILLIPS PNH STL ZINC

3	19	30-00-0500	4					SCREW 10-32 x .500 LG SOCKET HEAD BLK OXIDE STL
3	20	30-00-9813	2					SCREW 4-40 x 0.250" FLAT-HD STEEL BLACK-OXIDE
3	21	30-03-0004	4					WASHER LOCK w/EXTERNAL TOOTH 2 x #4 x .017IN STL
3	22	30-03-0035	4					WASHER #10 SPLIT LK WASH ZINC
3	23	30-03-0336	4					WASHER M3 x 8MM OD X 1MM THCK STEEL BLK
3	24	30-03-0400	4					WASHER #4 SPLIT LOCKWASHER ZINC
3	25	30-06-0832	4					NUT .335 HEX 8-32 STL ZINC W/ TOOTH WASHER
3	26	30-15-0004	4	J2,J5,J7,J10		A		SPACER .13 THICK x .63OD NYLON
3	27	30-15-0005	4					SPACER .25 OD x NO.8 ID ALUMINUM
3	28	30-24-0003	7					CABLE TIE 4" CLEAR
3	29	30-45-0011	10			D		KNOB POT .77 DIA x .76 HT PLASTIC CHROME PLATED
3	30	30-51-0341	1			D		CHASSIS 400W A17-2
4	10	41-00-0185	1			B		ARTWORK SILKSCREEN CHASSIS FRONT LD400 A17-2
3	31	30-51-0343	1			C		CHASSIS COVER A17-2, -3
3	32	30-51-0344-1	1			C		PANEL FRONT 400W A17-2
4	1	41-00-0185	1			B		ARTWORK SILKSCREEN CHASSIS FRONT LD400 A17-2
3	33	30-51-0346	1			C		PANEL BACK 400W A17-2
4	1	41-00-0184	1			D		ARTWORK SILKSCREEN CHASSIS REAR LD400 A17-2
3	34	30-51-0383	2			A		BRACKET FRONT PANEL .9" X .6" X .060" THICK STEEL A17
3	35	30-51-6015	1			A		HEAT SINK 3.3"X6.75"X.12" ALUMINUM
3	36	30-57-9582	2					HANDLE 110X38 STEEL CHROME A17-2, -3
3	37	30-60-0005	1			A		LOGO LINE 6 MED 139.70x28.63MM BRUSHED/BLACK FINISH ALUMINUM
3	38	30-75-0027	1			C		KEYPAD RUBBER 8.3" x 1.9" x 0.73" A5-1/2/3
3	39	30-75-0028	1			C		COVER LED RUBBER 2.8 x 1.3 x 0.46" A5-1/2/3
3	40	30-75-0029	1			C		COVER LED RUBBER 1.3 x 1.1 x 0.46" A5-1/2/3
3	41	50-02-0345	1			A		PCBA MAIN LOW DOWN HD400/HD750 A17-2 A17-3
4	1	01-24-0000	3	R5,R90,R121				RES 0R 1% 0805
4	2	01-24-1000	1	R2				RES 100R 1% 0805
4	3	01-24-1001	5	R4,R6,R9-R10,R125				RES 1.00K 1% 0805
				R68,R70,R74,R86,R88,R94,R103,R105,R120,R123,R133-				
4	4	01-24-1002	22	R134,R136				RES 10.0K 1% 0805
4	5	01-24-1003	4	R95,R102,R106-R107				RES 100K 1% 0805
4	6	01-24-1070	2	R3,R7				RES 107R 1% 0805
4	7	01-24-10R0	3	R22,R28,R35				RES 10.0R 1% 0805
4	8	01-24-1332	1	R69				RES 13.3K 1% 0805
4	9	01-24-1501	3	R8,R32,R76				RES 1.50K 1% 0805
4	10	01-24-15R0	2	R72-R73				RES 15R 1% 0805
4	11	01-24-1620	1	R1				RES 162R 1% 0805
4	12	01-24-2001	1	R91				RES 2.00K 1% 0805
4	13	01-24-2002	7	R40-R42,R46,R77,R79,R135				RES 20.0K 1% 0805
4	14	01-24-2152	1	R124				RES 21.5K 1% 0805
4	15	01-24-22R1	1	R39				RES 22.1R 1% 0805

4	16	01-24-3090	10	R23,R25,R30-R31,R108-R109,R116-R119	RES 309R 1% 0805
4	17	01-24-4751	11	R11,R21,R26-R27,R29,R34,R36-R37,R61,R92-R93	RES 4.75K 1% 0805
4	18	01-24-4752	5	R38,R65,R81,R127-R128	RES 47.5K 1% 0805
4	19	01-24-47R5	8	R78,R80,R87,R89,R97-R100	RES 47.5R 1% 0805
4	20	01-24-4991	5	R66,R71,R126,R129-R130	RES 4.99K 1% 0805
4	21	01-24-5110	1	R75	RES 511R 1% 0805
4	22	01-24-5R11	3	R60,R82-R83	RES 5.11R 1% 0805
4	23	01-24-6041	2	R101,R104	RES 6.04K 1% 0805
4	24	01-24-60R4	6	R110-R115	RES 60.4R 1% 0805
4	25	01-48-0103	10	R49-R56,R58-R59	A POT MONO 10KB LINEAR TAPER 25MM D-SHAFT
4	26	03-10-1107	1	C75	CAP ELEC 100uF 6.3V 20% RADIAL 5/11/5
4	27	03-10-6108	2	C37,C91	CAP ELEC 1000uF 6.3V 20% RADIAL 8/11.5/5
4	28	03-12-0337	2	C45,C54	CAP ELEC 330uF 16V 20% RADIAL 8/11.5/5
4	29	03-12-0476	2	C36,C55	CAP ELEC 47uF 16V 20% RADIAL 6.3/11.2/5
4	30	03-12-1477	2	C40,C47	CAP ELEC 470uF 16V 20% RADIAL 8/12/5
4	31	03-14-0476	2	C42,C52	CAP ELEC 47uF 25V 20% RADIAL 6.3/7/5
4	32	03-18-0105	2	C77,C89	CAP ELEC 1uF 50V 20% RADIAL 5/11/5
4	33	03-18-0106	3	C92,C95-C96	CAP ELEC 10uF 50V 20% RADIAL 5/11/5
4	34	03-24-0564	2	C105-C106	A CAP MET POLY 0.56uF 100VDC 5% TH 4.5/7.5/7/5
4	35	03-46-0225	2	C1,C10	CAP X7R 2.2uF 16V 10% 1206
4	36	03-50-0101	2	C80,C85	CAP NPO 100pF 50V 5% 0805
4	37	03-50-0221	3	C50,C81,C83	CAP NPO 220pF 50V 5% 0805
4	38	03-50-0391	2	C90,C93	CAP NPO 390pF 50V 5% 0805
4	39	03-52-0102	2	C82,C84	CAP X7R 1nF 50V 10% 0805
4	40	03-52-0104	19	C6-C7,C13-C14,C17-C18,C20,C32-C33,C39,C43,C46,C48,C51,C56,C66-C67,C97-C98	CAP X7R 0.1uF 50V 10% 0805
4	41	03-52-0332	1	C53	CAP X7R 3.3nF 50V 10% 0805
4	42	03-52-0473	27	C8,C11,C15,C19,C22,C34-C35,C38,C57-C65,C68,C74,C76,C78-C79,C86-C88,C101-C102	CAP X7R 47nF 50V 10% 0805
4	43	03-56-0180	2	C44,C49	CAP NPO 18pF 50V 5% 0603
4	44	06-23-0054	1	D40	DIODE SCHOTTKY DUAL 30V 200mA 5nS SOT-23 SM
4	45	06-34-0016	6	D32-D37	DIODE SWITCHING 75V 200mA 6nS SOT-23 SM
4	46	06-34-0021	1	D41	DIODE SWITCHING 250V 200mA 50nS SOT-23 SM
4	47	06-34-0031	9	D1-D2,D11-D12,D28-D30,D38-D39	DIODE GEN PUR DUAL 120V 600mA 50nS SOT-23 SM
4	48	09-06-7002	1	Q5	TRANS MOSFET N-CHAN 60V 7R5 SOT-23 SM
4	49	09-10-4403	2	Q2-Q3	TRANS PNP SMALL SIGNAL SOT-23 SM
4	50	11-00-1201	1	Y1	CRYSTAL 12MHz SHORT CAN HC49 T H
4	51	12-00-0317	2	U2-U3	A IC VREG ADJ 1.2V-37V 1.5 AMP TO-220 LM317 TH
4	52	12-00-0337	1	U7	IC VREG ADJ 1.5V-37V 1.5 AMP TO-220 LM337 TH
4	53	12-00-0431	1	Q1	IC REG ADJ PREC SHUNT 2.495V 1 % TO-226/TO-92 TH
4	54	12-00-7808	1	U10	IC REG +8V 1A TO-220 TH
4	55	12-02-7805	1	U15	IC REG +5V 1.5 AMP TH

4	56	12-54-0072	2	U8,U20		IC OP AMP DUAL TL072 SM
4	57	12-54-0084	3	U16-U18		IC OP AMP QUAD TL084CD SM
4	58	12-64-4528	1	U14	A	IC CONVERTER 24BIT 96KHz AUDIO CODEC AK4528 SM
4	59	15-62-0014	1	U4		IC 74HC14 HEX SCHMITT TRIGGER INVERTERS SO-14 SM
4	60	15-62-2595	2	U6,U19		IC 74AHC595 SHIFT REGISTER W/3 STATE OUTPUT 8 BIT SO-16 SM
4	61	15-62-4051	1	U11		IC 74HC4051 CMOS LOGIC ANALOG MUX/DMUX SOIC SM
4	62	15-78-0005	1	U13	A	IC FLASH 512Kb SPI SERIAL SOIC -8 SM
4	63	18-02-0001	10	D14-D23		LED YELLOW SUPER BRIGHT T-1 3M M TH
4	64	18-22-0003	6	D3-D8		LED YELLOW SUPER BRIGHT 2MM x 1.25MM SM
4	65	18-24-0003	2	D9-D10		LED GREEN SUPER PURE GREEN 2MM x 1.25MM 562nm 0805 SM
4	66	21-18-0002	1	H4		TERMINAL SCREW PCB MOUNT RIGHT ANGLE SNAP-IN 6-32 THREAD
4	67	21-20-0202	1	H6		HDR SIL PCB-MT 2 PIN x 2MM MAL E SHRD VERT MT TH
4	68	21-20-0204	1	JP1-JP2		HDR SIL PCB-MT 4 PIN x 2MM MAL E SHRD VERT MT TH
4	69	21-20-0205	1	H3		HDR SIL PCB-MT 5 PIN x 2MM MAL E SHRD VERT MT TH
4	70	21-20-0206	1	H2		HDR SIL PCB-MT 6 PIN x 2MM MAL E SHRD VERT MT TH
4	71	21-20-0210	1	H1		HDR SIL PCB-MT 10 PIN x 2MM MA LE SHRD VERT MNT TH
4	72	21-30-0015-3	1	JP7 TO JP8	D	CBL RIBBON SIL 6 COND 26AWG 2.54MM 2.5" W/SPLIT ENDS S/T
4	73	21-30-0015-6	2	JP3 TO JP6,JP4 TO JP5	D	CBL RIBBON SIL 6 COND 26AWG 2.54MM 11.5" W/SPLIT ENDS S/T
4	74	21-30-0016-4	1	JP1 TO JP2	D	CBL RIBBON SIL 4 COND 26AWG 2M M 11.0" w/SPLIT ENDS S/T
4	75	30-00-0043	4	U2-U3,U7,U10	A	SCREW 6-32 X 5/16 LG WITH LOCK WASHER PHIL PAN ZINC-PLATED STEEL
4	76	30-12-0632	1	U10		STANDOFF HEX .250 6-32 F-F 1IN F-F AL
4	77	30-12-2210	3	U2-U3,U7		STANDOFF HEX .250 6-32 F-F .500 LG AL
4	78	30-15-0007	1	Y1		INSULATOR XTAL 4.9MM C-C 11.8 x 5.6MM MYLAR
4	79	35-00-0165	1		F	PCB MAIN LOW DOWN REV.F A5 A17
4	80	45-01-0023	1	U9	V1.01	IC PROGRAMMED MCU v1.01 LOW DOWN A5 A17
5	10	15-84-0936	1			IC MCU 16KB FLASH P89LPC936 TS SOP-28 SM
4	81	45-02-0052	1	U12	V1.00	IC PROGRAMMED FLASH V1.00 LOWDOWN HD400/750 A17-2/A17-3
5	1	15-86-0364	1	(U12)		IC DSP 24 BIT TQFP-100 SM
3	42	50-02-0345-1	1			PCBA GUITAR INPUT LOW DOWN A17-2 A17-3
4	10	01-24-1001	2	R14,R18		RES 1.00K 1% 0805
4	20	01-24-1002	1	R15		RES 10.0K 1% 0805
4	30	01-24-1004	1	R12		RES 1.00M 1% 0805
4	40	01-24-1052	1	R43		RES 10.5K 1% 0805
4	50	01-24-1502	1	R17		RES 15.0K 1% 0805
4	60	01-24-1692	2	R44-R45		RES 16.9K 1% 0805
4	70	01-24-2942	1			RES 29.4K 1% 0805
4	80	01-24-4222	1	R48		RES 42.2K 1% 0805
4	90	01-24-5622	1	R132		RES 56.2K 1% 0805
4	100	03-10-1106	1	C100		CAP ELEC 10uF 10V 20% RADIAL 3/5/5
4	110	03-18-0105	1	C73		CAP ELEC 1uF 50V 20% RADIAL 5/11/5
4	120	03-18-0106	2	C70,C72		CAP ELEC 10uF 50V 20% RADIAL 5/11/5
4	130	03-27-0682	1	C69		CAP POLYESTER 6.8nF 50V 5% TH 7/3/6/5

4	140	03-45-0473	1	C9	CAP FILM 47nF 16V 20% 1206
4	150	03-52-0470	2	C12,C24	CAP X7R 47pF 50V 10% 0805
4	160	03-52-0473	2	C16,C71	CAP X7R 47nF 50V 10% 0805
4	170	06-28-8418	4	D13,D24-D26	DIODE ZENER 18V 5% 350mW SOT-2 3 SM
4	180	11-10-0601	6	17-21,L15	FERRITE BEAD 600R @100MHz 1206 SM
4	190	11-10-2012	4	10,L2,L5,L8	FERRITE BEAD 600R @ 100MHz 300 mA 0805 SM
4	200	12-54-0084	1	U1	IC OP AMP QUAD TL084CD SM
4	210	21-00-6617	2	J2,J7	JACK 1/4" TRS PCB MOUNT 6 PIN HORIZONTAL W/CHROME HRDWARE TH
4	220	30-18-3030	2	GF2,GF5	CLIP GROUND PCB .30 x .30 x .0 7
4	230	30-51-0146	1	SH1	A SHIELD PCB MT FOR 1/4 JACK 1.00 Hx1.25Wx.013THK BERYL COP
4	240	35-00-0165-1	1		PCB GUITAR INPUT LOW DOWN REV E A5 A17
3	43	50-02-0345-2	1		PCBA DIRECT OUT LOW DOWN A17-2 A17-3
4	10	03-52-0102	3	C4-C5,C41	CAP X7R 1nF 50V 10% 0805
4	20	03-52-0104	1	C3	CAP X7R 0.1uF 50V 10% 0805
4	30	06-28-0330	2	D27,D31	DIODE ZENER 3.3V 5% 500mW SOD- 123 SM
4	40	11-10-2012	3	L1,L3-L4	FERRITE BEAD 600R @ 100MHz 300 mA 0805 SM
4	50	21-08-0013	1	J1	JACK XLR MALE PCB MOUNT RIGHT ANGLE TH
4	60	24-01-0003	1	SW7	SWITCH LATCHING PUSH BUTTON SP DT 3 PIN SIL HORIZONTAL TH
4	70	30-18-3030	1	GF1	CLIP GROUND PCB .30 x .30 x .0 7
4	80	35-00-0165-2	1		PCB DIRECT OUT LOW DOWN REV E A5 A17
3	44	50-02-0345-3	1		PCBA HEADPHONE/PEDAL LOW DOWN A17-2 A17-3
4	10	01-24-1001	3	R13,R47,R131	RES 1.00K 1% 0805
4	20	03-46-0225	1	C99	CAP X7R 2.2uF 16V 10% 1206
4	30	03-52-0102	7	C23,C28-C31,C103-C104	CAP X7R 1nF 50V 10% 0805
4	40	03-52-0104	3	C21,C26-C27	CAP X7R 0.1uF 50V 10% 0805
4	50	11-10-2012	8	L6-L7,L9,L11-L14,L16	FERRITE BEAD 600R @ 100MHz 300 mA 0805 SM
4	60	21-00-6617	1	J5	JACK 1/4" TRS PCB MOUNT 6 PIN HORIZONTAL W/CHROME HRDWARE TH
4	70	21-12-0035	1	J6	JACK 3.5MM STEREO 5 PIN CRIMPE D LEADS NON-THREADED
4	80	21-16-0045	1	J8	JACK RJ-45 MOD 8/8 RT/A FEMALE PCB 50AU
4	90	30-18-3030	2	GF3-GF4	CLIP GROUND PCB .30 x .30 x .0 7
4	100	35-00-0165-3	1		PCB HP/CD/PEDAL LOW DOWN REV E A5 A17
3	45	50-02-0346	1		A PCBA PRE-AMP OUT LOW DOWN A17
4	10	01-24-1741	1	R2	RES 1.74K 1% 0805
4	20	01-24-6980	1	R1	RES 698R 1% 0805
4	30	03-52-0102	1	C31	CAP X7R 1nF 50V 10% 0805
4	40	03-52-0104	1	C21	CAP X7R 0.1uF 50V 10% 0805
4	50	11-10-2012	2	L12,L16	FERRITE BEAD 600R @ 100MHz 300 mA 0805 SM
4	60	21-00-6617	1	J5	JACK 1/4" TRS PCB MOUNT 6 PIN HORIZONTAL W/CHROME HRDWARE TH
4	70	21-20-0202	1	H9	HDR SIL PCB-MT 2 PIN x 2MM MAL E SHRD VERT MT TH
4	80	30-18-3030	1	GF3	CLIP GROUND PCB .30 x .30 x .0 7
4	90	35-00-0346	1		A PCB PRE-AMP OUT REV.A LOW DOWN A17
3	46	50-02-9313	1		A PCBA 400W POWER SUPPLY A17-2

4	10 01-17-0242	1	R3		RES CARBON FILM 2.4K 1W 5% TH
4	20 01-17-0473	1	R2		RES CARBON FILM 47K 1W 5% TH
4	30 01-22-0202	1	R7		RES METAL OXIDE 2K 2W 5% TH
4	40 01-24-1001	1	R1		RES 1.00K 1% 0805
4	50 01-24-1002	2	R4-R5		RES 10.0K 1% 0805
4	60 01-24-3162	2	R8-R9		RES 31.6K 1% 0805
4	70 01-24-5361	2	R10-R11		RES 5.36K 1% 0805
4	80 03-12-0688	1	C8		CAP ELEC 6800uF 16V 20% RADIAL
4	90 03-16-0108	2	C9,C12		CAP ELEC 1000uF 35V 20% RADIAL
4	100 03-22-0109	2	C4-C5		CAP ELEC 10000uF 100V 20% 85C RADIAL 35/80/10 SNAP IN
4	110 03-24-0223	4	C1-C3,C6		CAP MET POLY 22nF 250V 10% TH 10.3/4.4/7.5/7.5
4	120 03-41-0224	1	C17		CAP X-CAP 0.22uF 275VAC 20% POLYPROPYLENE 18/9.5/17.5/15
4	130 03-75-0102	2	C10-C11		CAP Y-CAP 1nF 250VAC 20% TH CER DISC 7D/7/7.5
4	140 06-04-4002	8	D3-D10		DIODE SMALL-SIGNAL 100V 30A DO-41 AXIAL TH 1N4002
4	150 06-16-0008	1	D2		DIODE BRIDGE RECTIFIER 600V 8A 4 PIN SIL TH
4	160 06-34-0016	1	D1		DIODE SWITCHING 75V 200mA 6nS SOT-23 SM
4	170 09-10-4401	1	Q1		TRANS NPN SMALL SIGNAL SOT-23 SM
4	180 09-10-5101	1	Q2		TRANS SS PNP 150V HV SOT-23
4	190 11-10-2020	2	L3-L4		CHOKE WIDE BAND 1-5 TURNS
4	200 21-18-0250	2	H7-H8		CONN TAB FAST TIN PCB .250" x .032" MALE TH
4	210 21-20-0210	1	H5		HDR SIL PCB-MT 10 PIN x 2MM MA LE SHRD VERT MNT TH
4	220 21-20-1036	1	H6		HDR DIL PCB-MT 36 PIN 2 x 18 x .100 MALE SHRD VERT MT TH
4	230 21-20-1562	2	H2,H12	A	HDR SIL PCB-MT 2 PIN x .156 MA LE VERT MNT FRIC LOCK
4	240 21-20-1568	1	H4		HDR SIL PCB-MT 8 PIN x .156 MA LE VERT MNT FRIC LOCK
4	250 21-20-3123	2	H1,H3		HDR SIL PCB-MT 3 PIN x 7.92MM MALE VERT MNT FRIC LOCK
4	260 21-48-9521	4	F1-F2		HOLDER FUSE CLIP
4	270 24-15-0008	1	RY2		RELAY DPDT 8A TH
4	280 24-19-6325	2			FUSE 6.3A 250V 5MM x 20MM DOM F
4	290 35-00-9313	1		C	PCB 400W POWER SUPPLY REV.C A17-1, 2
3	47 50-02-9315	1		A	POWER AMPLIFIER MODULE 400W HYPEX A17-2



Engineering

LOW DOWN A17-1, A17-2
POWER SUPPLY PCBA ASSEMBLY NOTES

Rev. B

<u>Revision:</u>	<u>Notes:</u>	<u>Date:</u>	<u>Released By:</u>
A	Initial Release for Beta Build	06/30/08	Josh Forbes
B	Updated Instructions for Rev C. Board	09/03/08	Josh Forbes

!!!!!!CAUTION!!!!!!

**ELECTROSTATICALLY-SENSITIVE PARTS!
WEAR ESD PROTECTIVE CLOTHING!
ASSEMBLE IN AN ESD CONTROLLED
ENVIRONMENT!**

ASSEMBLIES:

PCBA 400W POWER SUPPLY A17-2:

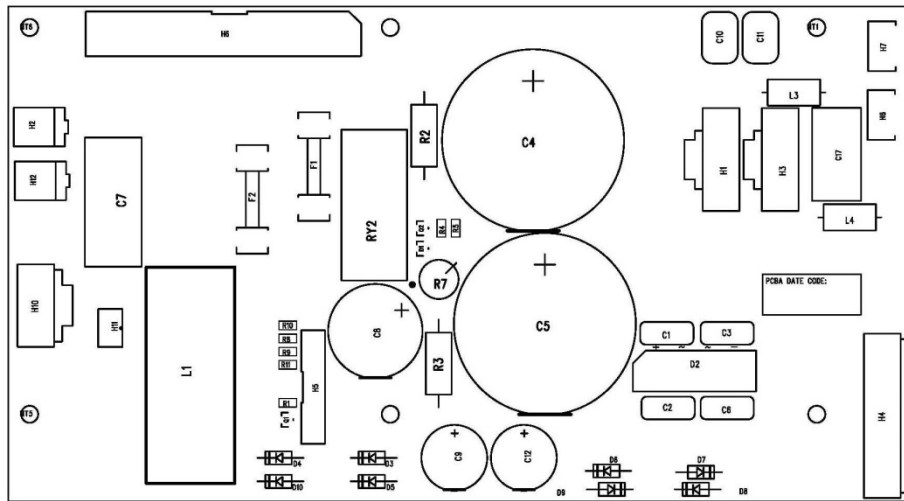
50-02-9313

PCBA 400W POWER SUPPLY A17-1:

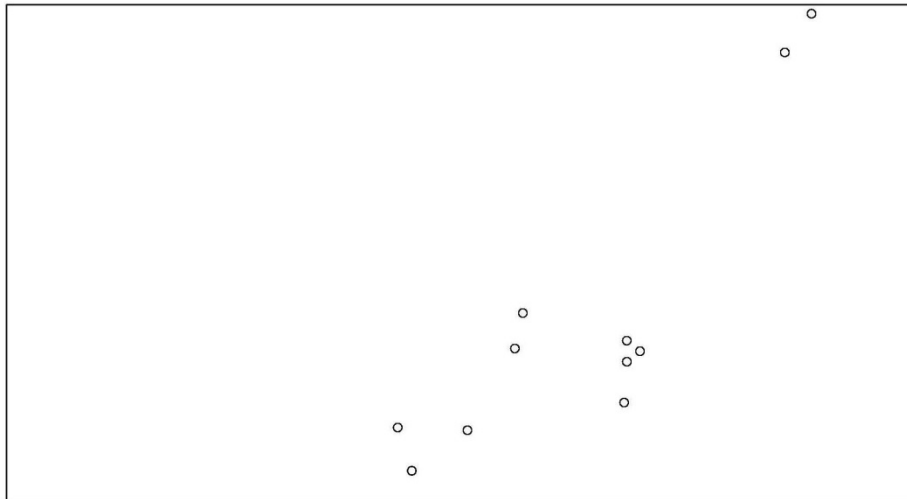
50-02-9313-1

(Refers To PCB, Rev. C 35-00-9313)

COMPONENT SIDE



SOLDER SIDE



1. **“DO NOT INSTALL” COMPONENTS: (FOR A17-1 ONLY)**

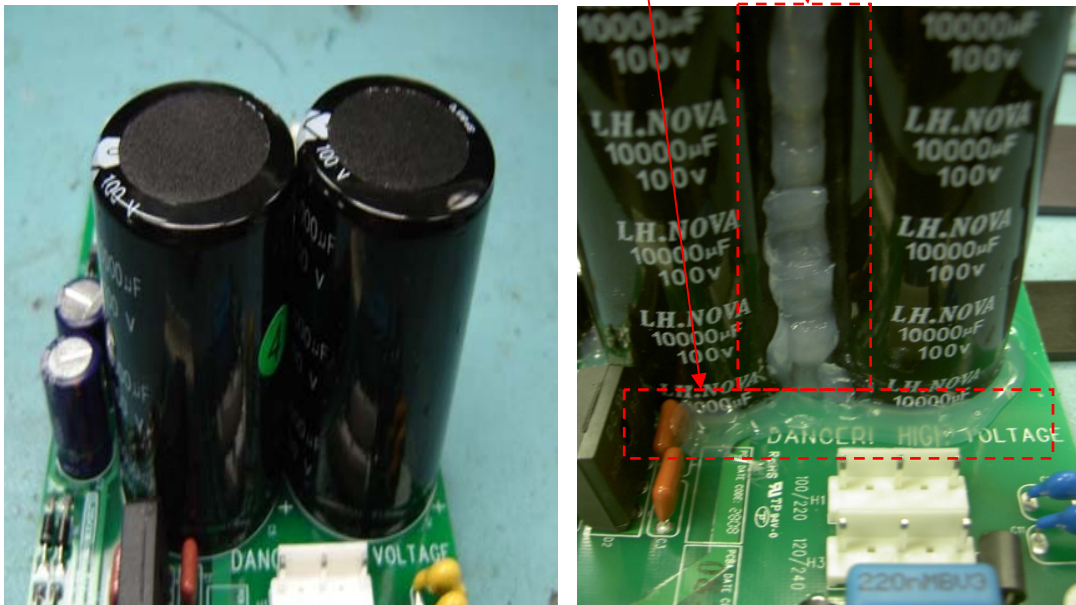
H12

2. **“DO NOT INSTALL” COMPONENTS: (FOR A17-2 ONLY)**

C7, H10, H11, L1

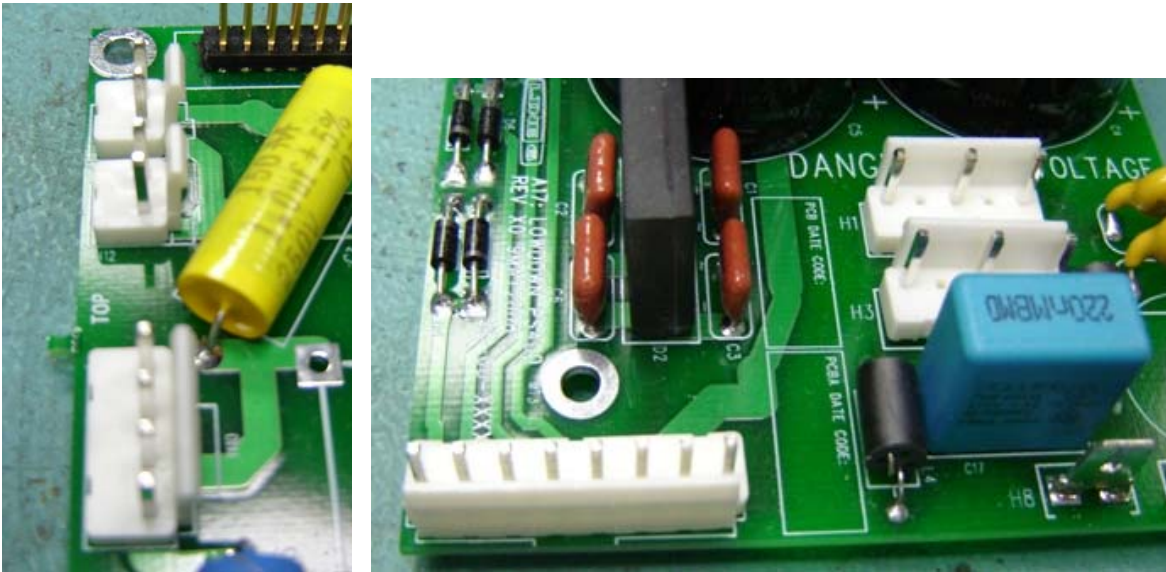
3. **CAPACITORS C4 AND C5:**

C4 and C5 are 100V 10,000uF (P/N: 03-22-0109) capacitors. Mount on the **TOP** side such that their bases are flush with the PCB. Clip leads to 60 thousandths on the **BOTTOM** side. Use RTV to glue these capacitors securely to the PCB and to each other.



4. MOLEX HEADERS:

Install all Molex style headers on the **TOP side of the PCB** such that their bases are flush with the board and lined up with the silkscreen outline within +/-1 degree of accuracy. Headers H2 and H12 are 2-pin headers (P/N: 21-20-1562), H1 and H3 are 3-pin headers (P/N: 21-20-3123), H4 is an 8-pin header (P/N: 21-20-1568), H10 is a 4-pin header (P/N: 21-20-1564).



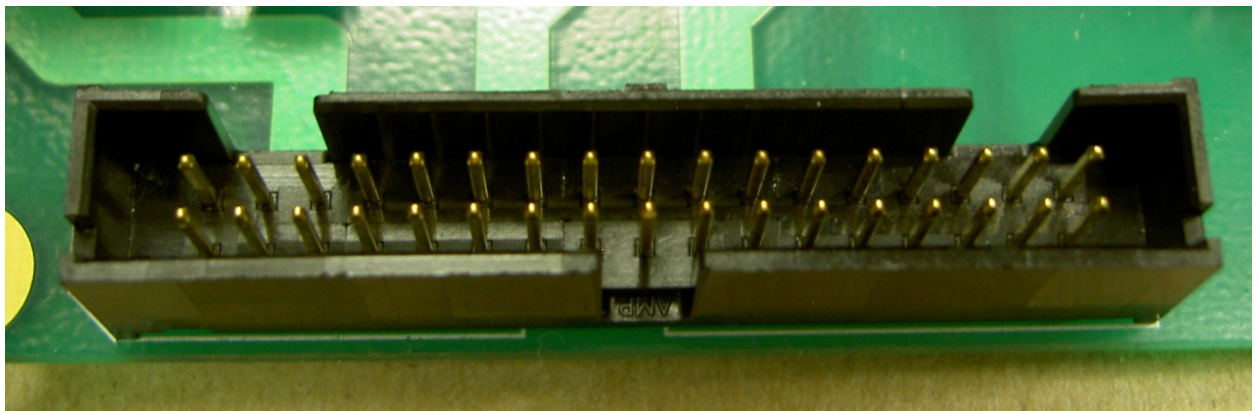
Note:

For A17-1, Do Not Install: H12

For A17-2, Do Not Install: H10 or H11

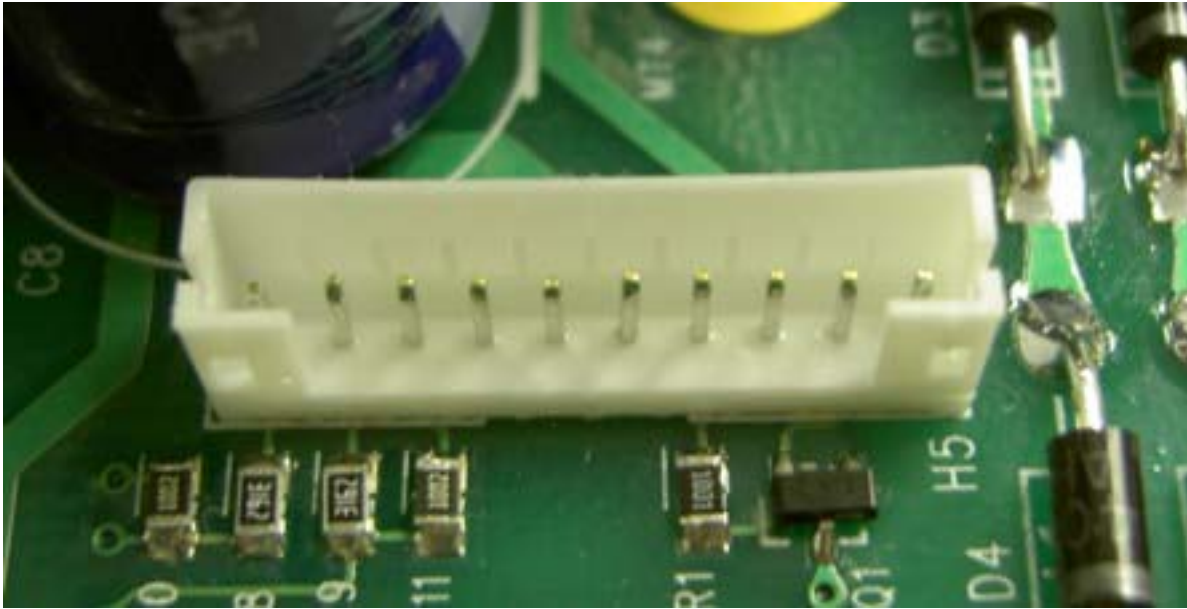
5. RIBBON CABLE HEADER:

Install header H6 (P/N: 21-20-1036) on the **TOP side of the PCB** such that its base is flush with the board and lined up with the silkscreen outline within +/-1 degree of accuracy.



6. **10-PIN IN LINE HEADER:**

Install H5 (P/N: 21-20-0210) on the **TOP side of the PCB** such that its base is flush with the board and lined up with the silkscreen outline within +/-1 degree of accuracy.



7. **UPRIGHT RESISTOR:**

Install R7 (P/N: 01-22-0202) such that it stands upright (see picture). Make sure that the body of the resistor lies within the circular outline on the PCB. Solder and clip leads to 60 thousandths on the **BOTTOM** side.



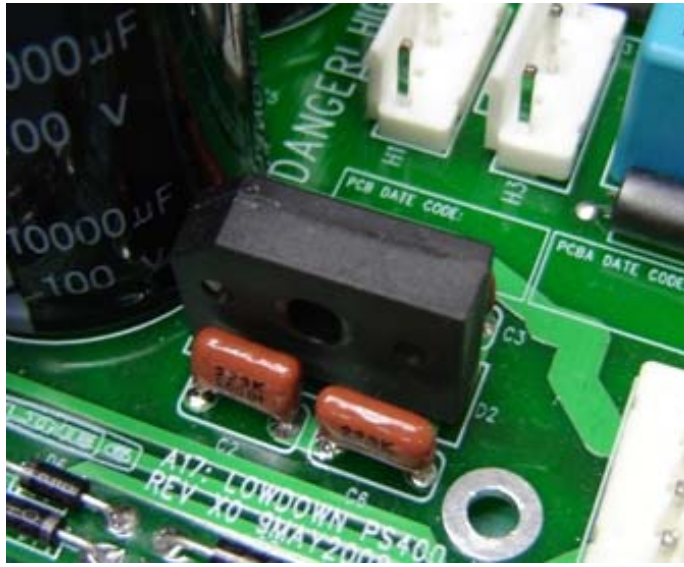
8. FERRITES:

Install ferrites L3 and L4 (P/N: 11-10-2020) flush with the TOP of the PCB. Solder and clip leads to 60 thousandths on the **BOTTOM** side.



9. BRIDGE RECTIFIER:

Install Bridge Rectifier D2 (P/N: 06-16-0008) on the **TOP** side of the PCB such that the notched side of the component corresponds with the notched edge of the silkscreen. The component is to be flush with the PCB and aligned with the silkscreen to within +/-1%. Solder and clip leads to 60 thousandths on the **BOTTOM** side.



10. **RELAY:**

Install relay RY2 (P/N: 24-15-0008) such that it is flush with the PCB and aligned with the silkscreen outline to +/- 1% of accuracy.



11. **FUSE HOLDERS:**

Install fuse clips F1 and F2 (P/N: 21-48-9521, Quantity: 4) on the **TOP** side of the PCB as shown below. Make sure that the base of the clips are flush with the PCB.



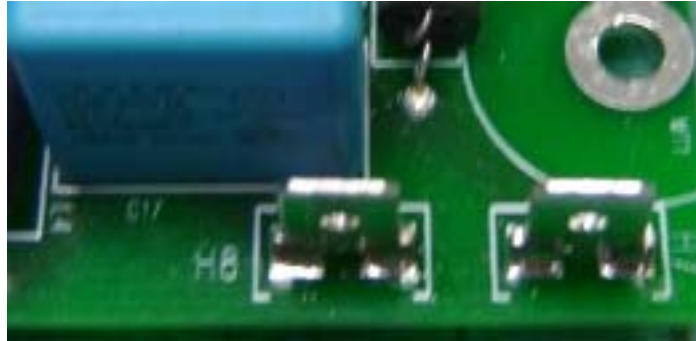
12. **FUSES:**

Install fuses F1 and F2 (P/N: 24-19-6325) into the fuse clips as shown below.



13. **AC VOLTAGE IN CONNECTOR TABS:**

Connector Tabs H7 and H8 (P/N: 21-18-0250) are to be installed on the **TOP** side of the PCB such that they stand perpendicular to the PCB.

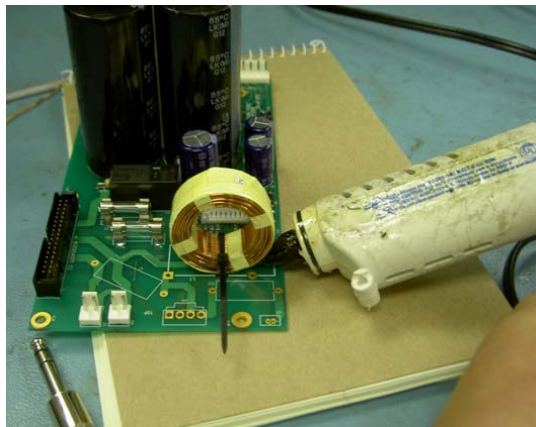
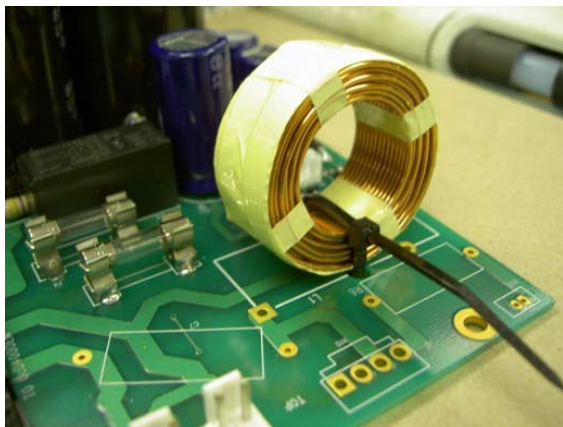


14. LOW DOWN 400 PRO A17-1 PASSIVE CROSSOVER

THE FOLLOWING INSTRUCTIONS APPLY ONLY TO A17-1!!

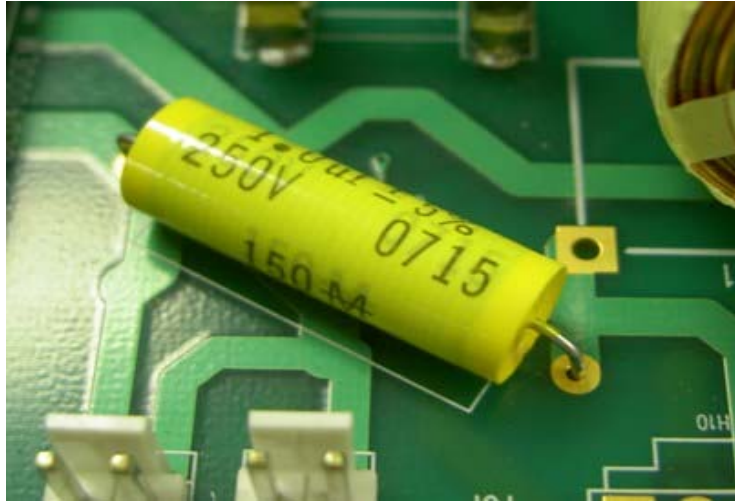
14A) INDUCTOR L1

Install inductor L1 (P/N: 04-00-0332) on the **TOP** side of the PCBA. Solder the leads to the PCBA such that the inductor is flush with the PCBA and stands upright. Clip leads to 60 thousandths on the **BOTTOM** side. With the inductor soldered in place, secure it to the PCB using a cable tie (as shown below) and clip off the excess cable tie. Now, apply RTV to the base of the inductor to fix it to the PCB (as shown below).



14B) CAPACITOR C7

Install capacitor C7 (P/N: 03-24-3105) flush with the **TOP SIDE** of the PCB such that the body of the cap lies within the outline of the silkscreen decal. Solder and clip leads to 60 thousandths on the **BOTTOM** side.



- END OF PCB SPECIAL ASSEMBLY NOTES -