



**Pod XT Live
Bass Pod XT Live
Service Manual**



3850-A Royal Ave.
Simi Valley, CA 93063-3380
818-575-3922
818-575-3961 (Fax)

Attention:

**Before replacing the mainboard on any
POD XT family unit**

***(POD XT / POD XT Pro / POD XT Live / Bass POD XT
/ Bass POD XT Pro / Bass POD XT Live)***

See Tech Bulletin

#26!!!



Technical Bulletin 026:

Product: Pod XT FAMILY;

Pod XT/ Pod XT Pro /Pod XT Live / Bass

Pod XT/ Bass Pod XT Pro/ Bass Pod XT

Live

Application: To be implemented during all main pcba replacements of all Pod XT family units.

Objective: To ensure each unit's specific Identification is retained for online use.

Parts affected : Secure Memory IC = 15-79-0088. For Pod XT/ Bass Pod XT = U17. For Pod XT Pro/ Bass Pod XT Pro = U8. For Pod XT Live/ Bass Pod XT Live = U24.

Tools/Supplies Required: A solder iron with a small tip. Solder.

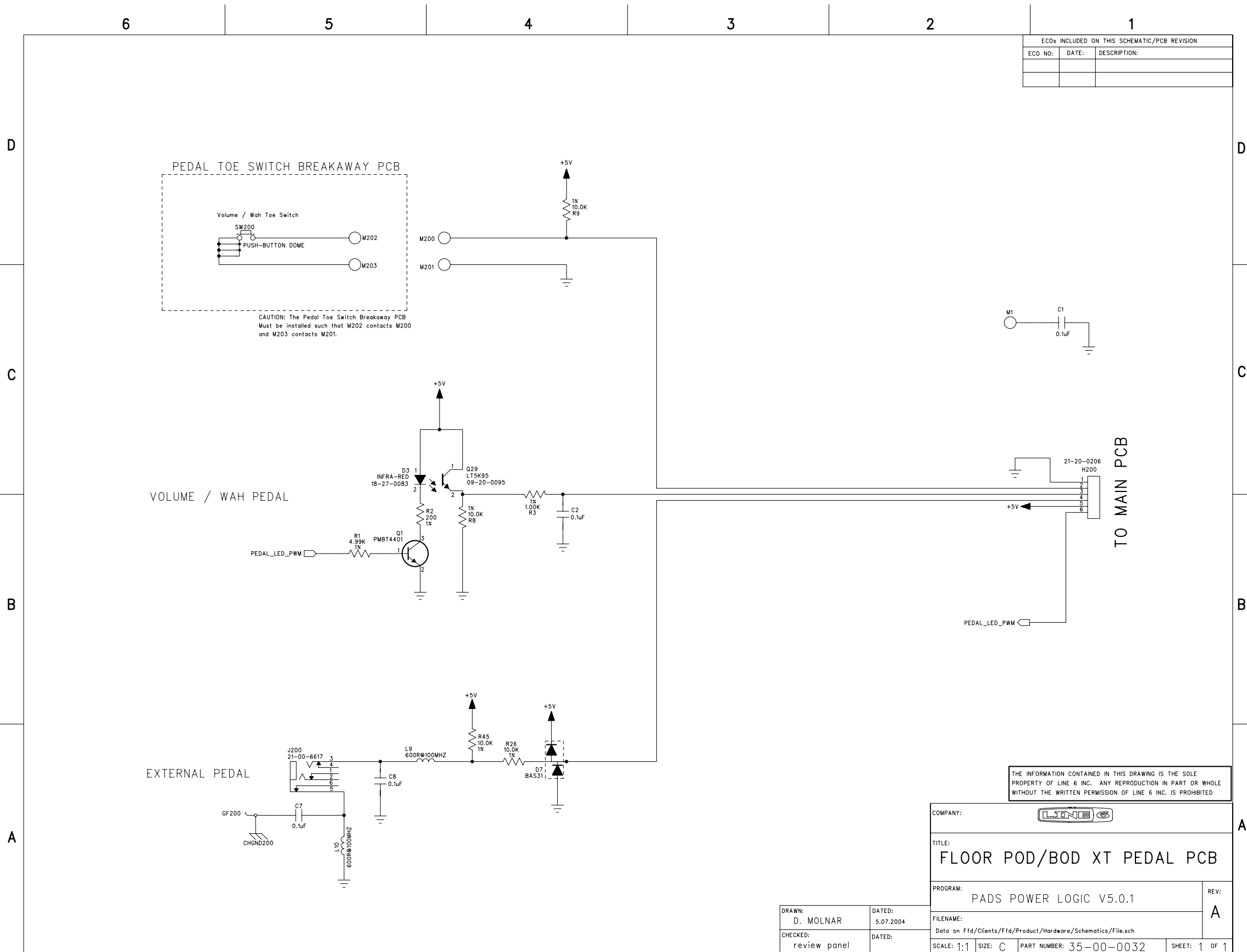
Procedure : During main board replacement, carefully remove the secure memory IC from the old main board (see above for reference designator). Install the secure memory IC just removed, onto the new main board before installing the new board into the unit.

Warranty Implications : This is a required step of a main board replacement for the Pod XT Family of units, and can be part of either a warranty or a non – warranty repair.

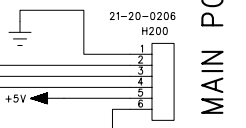
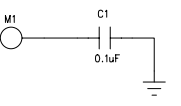
Customer Service Tel: (818) 575-3600 • Customer Service Fax: (818) 676-1585

Line 6 Inc. • 29901 Agoura Road, Agoura Hills, CA 91301 • 6033 De Soto Ave.

Woodland Hills, CA, 91367



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



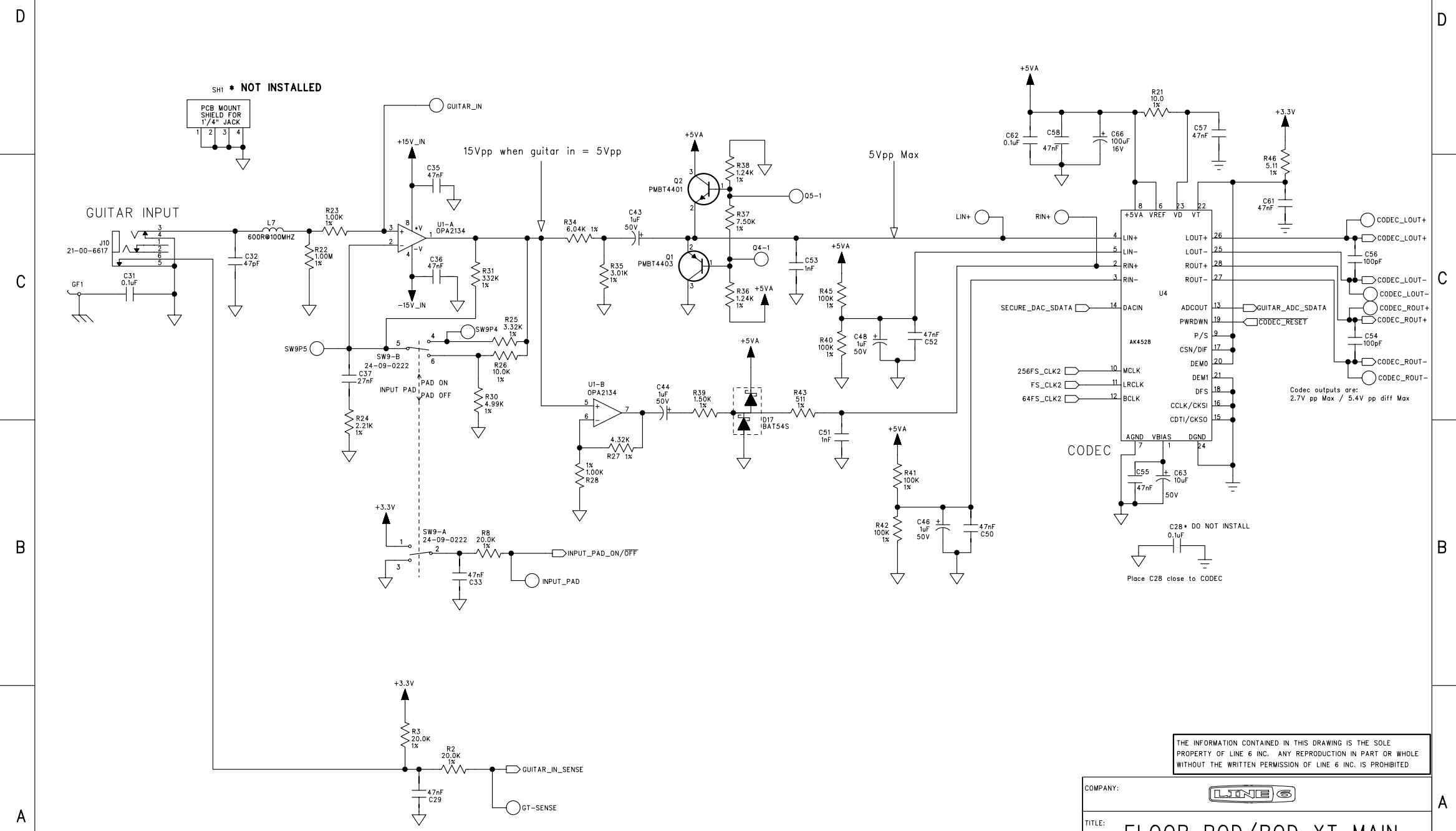
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

COMPANY:	
TITLE: FLOOR POD/BOD XT PEDAL PCB	
PROGRAM: PADS POWER LOGIC V5.0.1	REV: A
FILENAME: D:\o\Ftd\Clients\Ftd\Product\Hardware\Schematics\File.sch	
DRAWN: D. MOLNAR	DATED: 5.07.2004
CHECKED: review panel	DATED:
SCALE: 1:1	SIZE: C
PART NUMBER: 35-00-0032	SHEET: 1 OF 1

6 5 4 3 2 1

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:
0419002	7.8.04	EM burst immunity improvements - DM Released as rev.B to MFG
0428601	10.12.04	REV B1 - CHANGED R12, 13, 14, & 16 ON PAGE #2

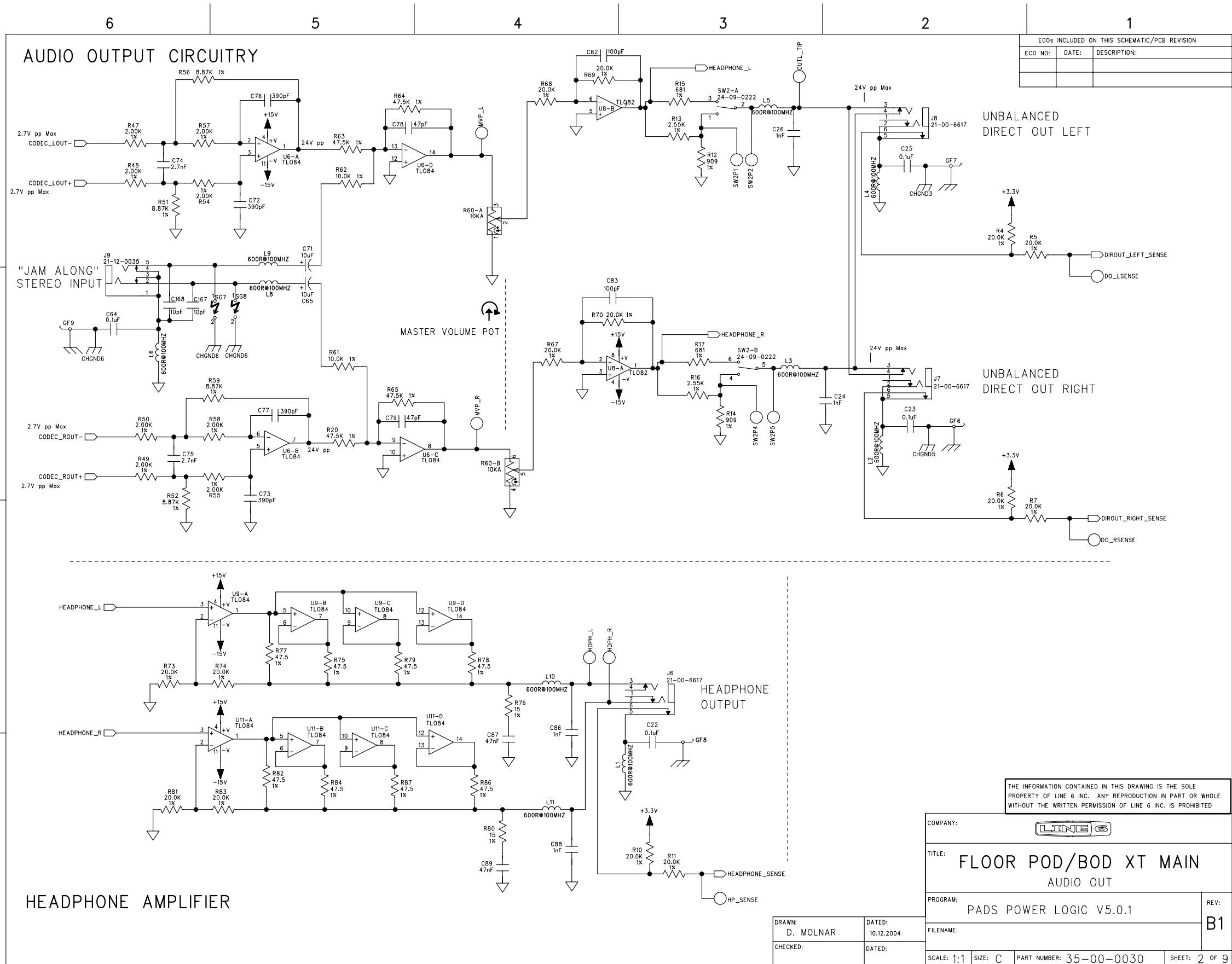
ANALOG IN



This board: All resistors are 1% Tolerance

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COMPANY:			
TITLE: FLOOR POD/BOD XT MAIN ANALOG IN			
PROGRAM: PADS POWER LOGIC V5.0.1			REV: B1
DRAWN: D. MOLNAR	DATED: 10.12.2004	FILENAME:	
CHECKED:	DATED:	SCALE: 1:1	SIZE: C
		PART NUMBER: 35-00-0030	SHEET: 1 of 9



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

UNBALANCED DIRECT OUT LEFT

UNBALANCED DIRECT OUT RIGHT

HEADPHONE OUTPUT

AUDIO OUTPUT CIRCUITRY

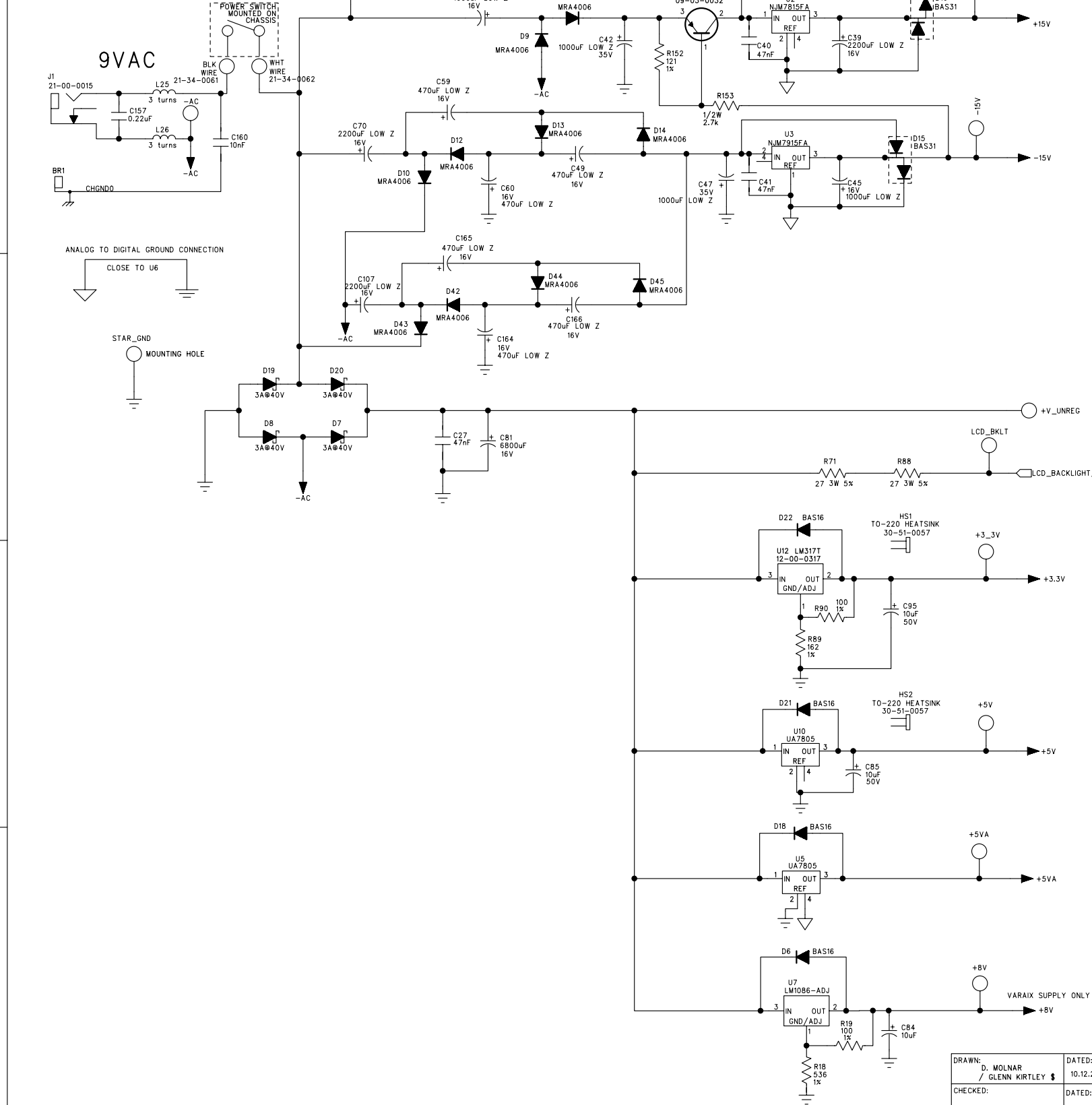
"JAM ALONG" STEREO INPUT

HEADPHONE AMPLIFIER

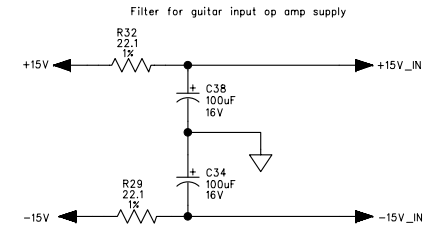
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COMPANY:		REV: B1
TITLE: FLOOR POD/BOD XT MAIN AUDIO OUT		
PROGRAM: PADS POWER LOGIC V5.0.1	FILENAME:	SCALE: 1:1 SIZE: C PART NUMBER: 35-00-0030 SHEET: 2 of 9
DRAWN: D. MOLNAR	DATED: 10.12.2004	
CHECKED:	DATED:	

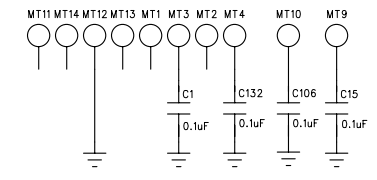
POWER SECTION



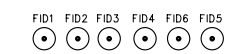
ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:
0416101	6/9/2004 REV. A1	Change C39 from 03-13-0108 1000uF/16V to 03-13-0228 2200uF/16V



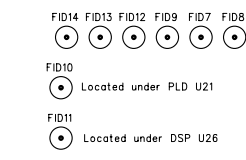
BOARD MOUNTING HOLES



TOP SIDE FIDUCIALS



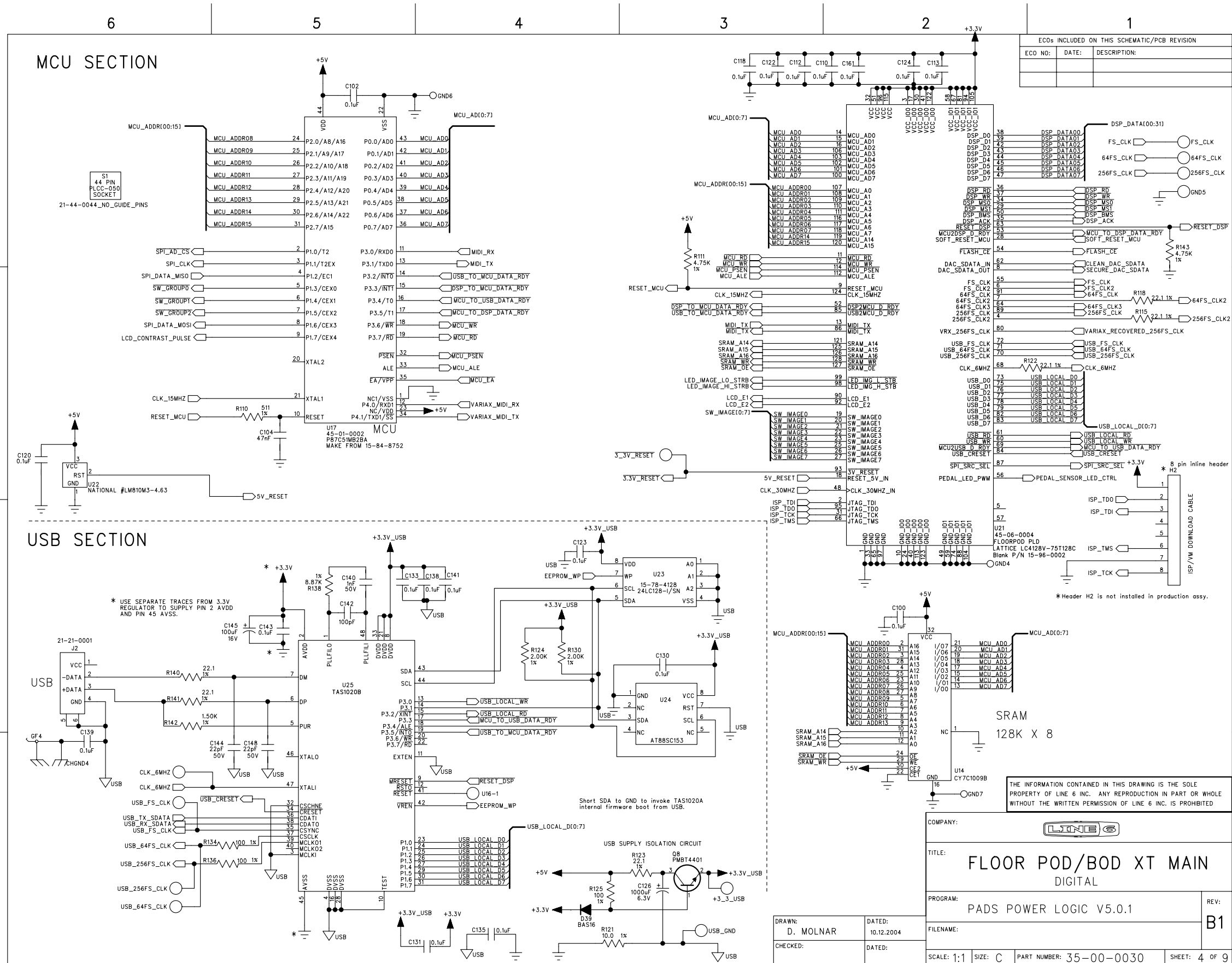
BOTTOM SIDE FIDUCIALS

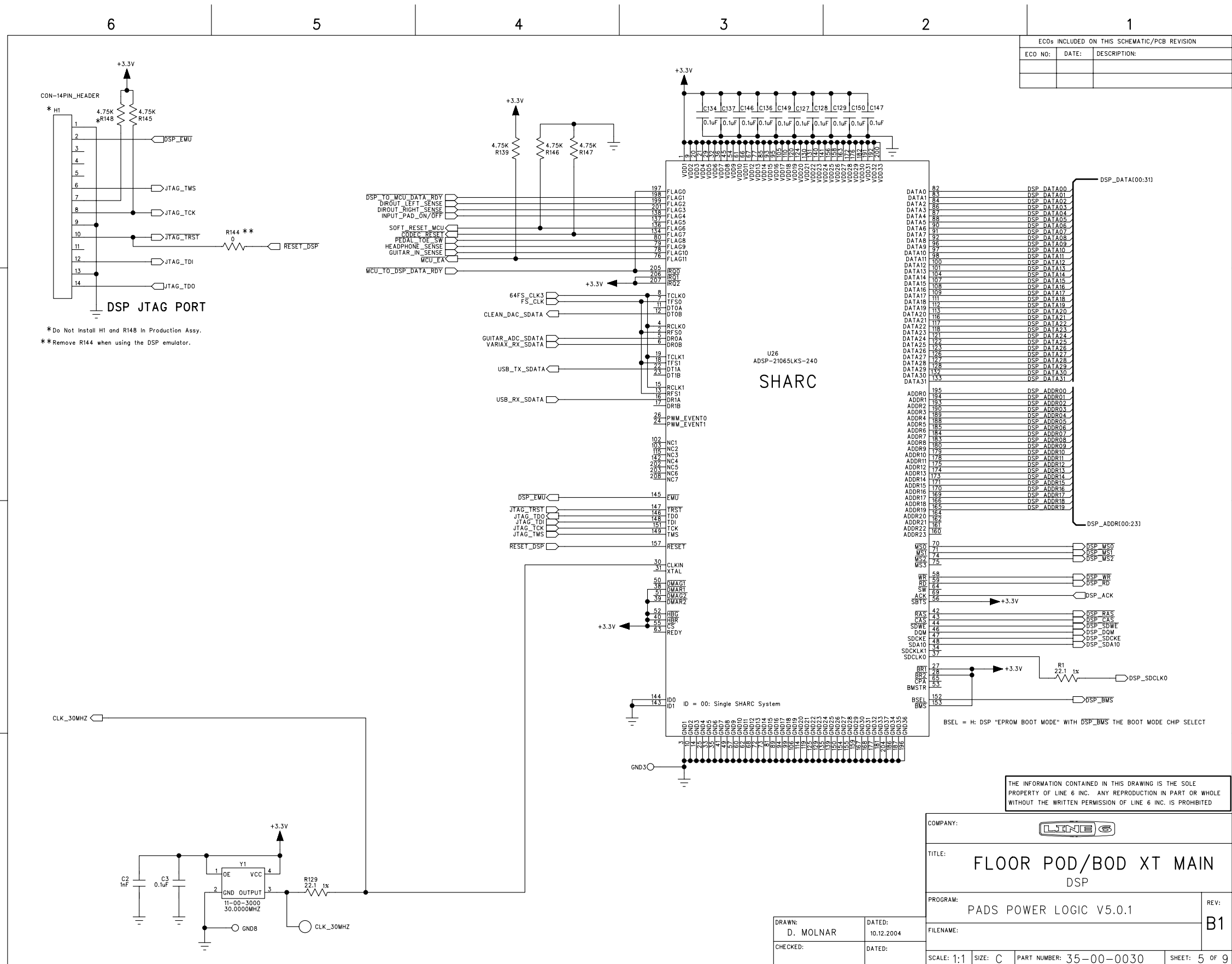


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COMPANY:	
TITLE: FLOOR POD/BOD XT MAIN POWER	
PROGRAM: PADS POWER LOGIC V5.0.1	REV: B1
FILENAME:	
SCALE: 1:1	SIZE: C
PART NUMBER: 35-00-0030	SHEET: 3 of 9

DRAWN: D. MOLNAR / GLENN KIRTLEY	DATED: 10.12.2004
CHECKED:	DATED:





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

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COMPANY: LINE 6	
TITLE: FLOOR POD/BOD XT MAIN DSP	
PROGRAM: PADS POWER LOGIC V5.0.1	REV: B1
DRAWN: D. MOLNAR	DATED: 10.12.2004
CHECKED:	DATED:
SCALE: 1:1	SIZE: C
PART NUMBER: 35-00-0030	SHEET: 5 of 9

6

5

4

3

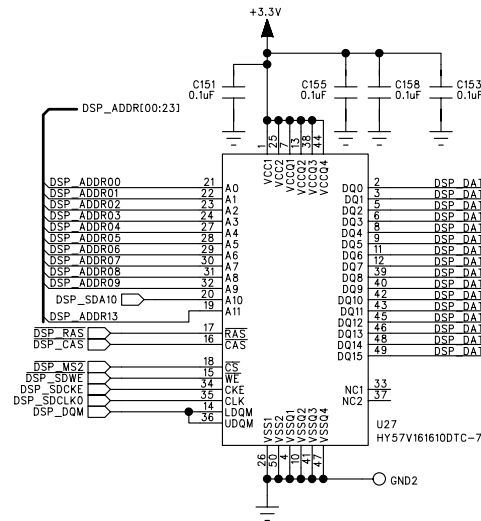
2

1

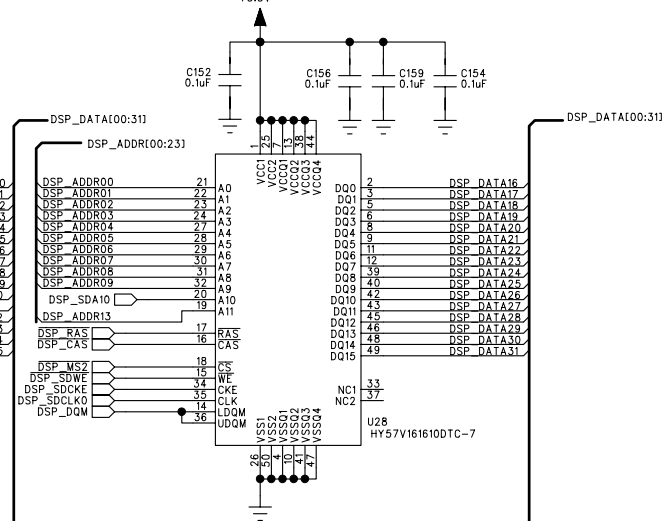
DSP MEMORY

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

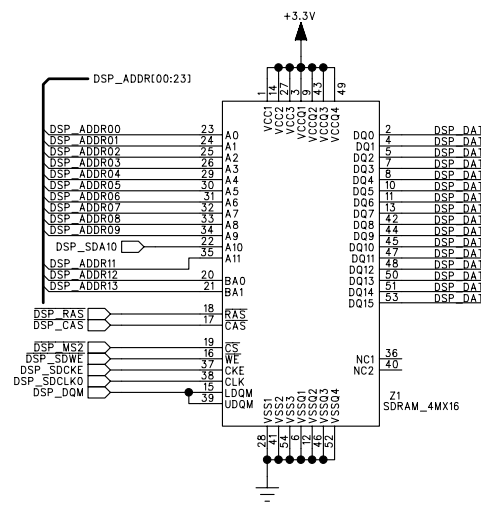
SDRAM LOWER 1M X 16



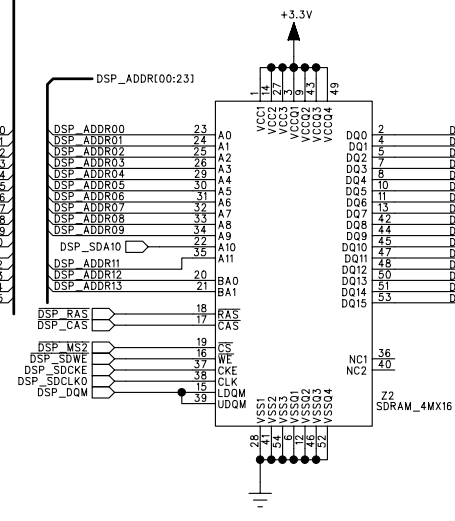
SDRAM UPPER 1M X 16



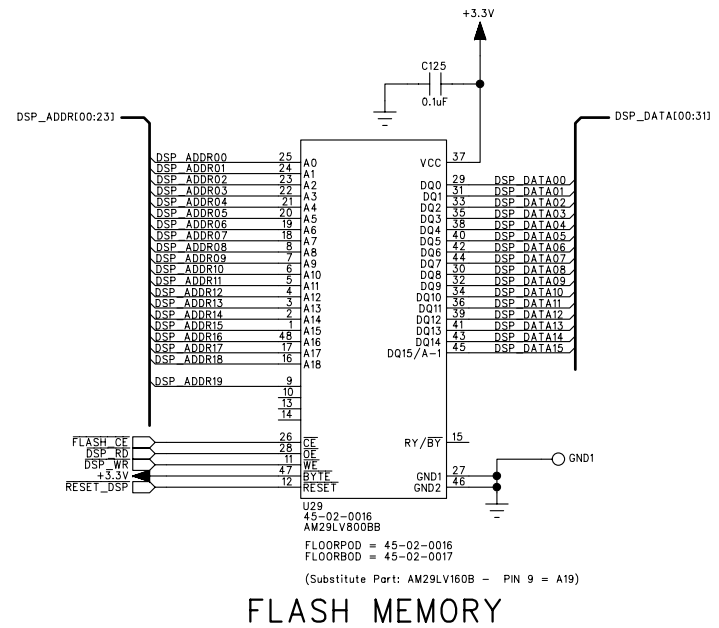
SDRAM LOWER 4M X 16



SDRAM UPPER 4M X 16

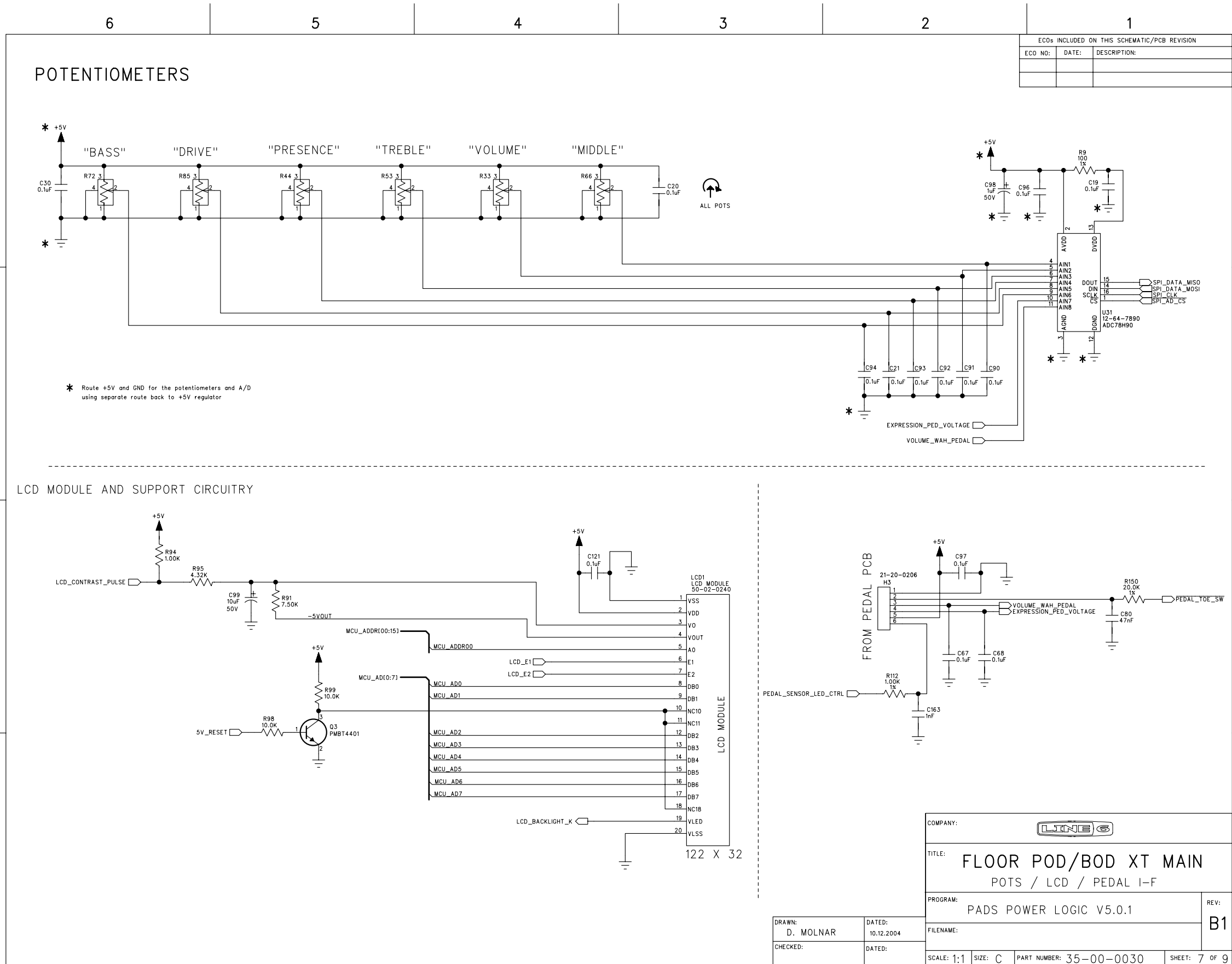


NOTE: The PCB layout is configured to install Either the 1M X 16 or the 4M X 16 parts but not both!

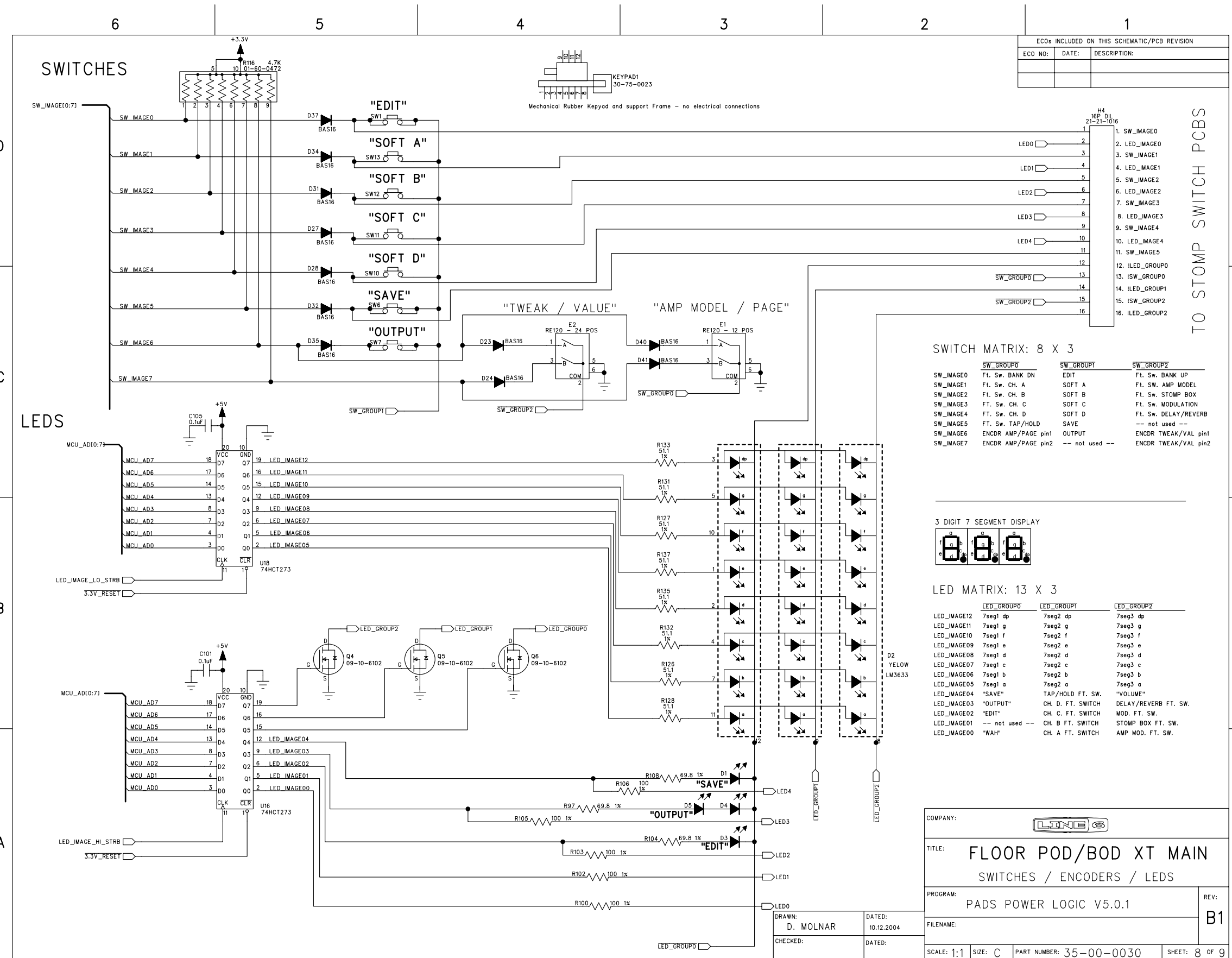


FLASH MEMORY

COMPANY:			
TITLE:			
FLOOR POD/BOD XT MAIN DSP MEMORY			
PROGRAM:			REV:
PADS POWER LOGIC V5.0.1			B1
DRAWN:	DATED:	FILENAME:	
D. MOLNAR	10.12.2004		
CHECKED:	DATED:	SCALE: 1:1	SIZE: C
		PART NUMBER: 35-00-0030	SHEET: 6 of 9



COMPANY:			
TITLE: FLOOR POD/BOD XT MAIN POTS / LCD / PEDAL I-F			
PROGRAM: PADS POWER LOGIC V5.0.1			REV: B1
DRAWN: D. MOLNAR	DATED: 10.12.2004	FILENAME:	
CHECKED:	DATED:	SCALE: 1:1	SIZE: C
PART NUMBER: 35-00-0030		SHEET: 7 of 9	



ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION

ECO NO:	DATE:	DESCRIPTION:

SWITCH MATRIX: 8 X 3

SW_IMAGE	SW_GROUP0	SW_GROUP1	SW_GROUP2
SW_IMAGE0	Ft. Sw. BANK DN	EDIT	Ft. Sw. BANK UP
SW_IMAGE1	Ft. Sw. CH. A	SOFT A	Ft. Sw. AMP MODEL
SW_IMAGE2	Ft. Sw. CH. B	SOFT B	Ft. Sw. STOMP BOX
SW_IMAGE3	Ft. Sw. CH. C	SOFT C	Ft. Sw. MODULATION
SW_IMAGE4	Ft. Sw. CH. D	SOFT D	Ft. Sw. DELAY/REVERB
SW_IMAGES	Ft. Sw. TAP/HOLD	SAVE	-- not used --
SW_IMAGE6	ENCDR AMP/PAGE pin1	OUTPUT	ENCDR TWEAK/VAL pin1
SW_IMAGE7	ENCDR AMP/PAGE pin2	-- not used --	ENCDR TWEAK/VAL pin2

3 DIGIT 7 SEGMENT DISPLAY

LED MATRIX: 13 X 3

LED_IMAGE	LED_GROUP0	LED_GROUP1	LED_GROUP2
LED_IMAGE12	7seg1 dp	7seg2 dp	7seg3 dp
LED_IMAGE11	7seg1 g	7seg2 g	7seg3 g
LED_IMAGE10	7seg1 f	7seg2 f	7seg3 f
LED_IMAGE09	7seg1 e	7seg2 e	7seg3 e
LED_IMAGE08	7seg1 d	7seg2 d	7seg3 d
LED_IMAGE07	7seg1 c	7seg2 c	7seg3 c
LED_IMAGE06	7seg1 b	7seg2 b	7seg3 b
LED_IMAGE05	7seg1 a	7seg2 a	7seg3 a
LED_IMAGE04	"SAVE"	TAP/HOLD FT. SW.	"VOLUME"
LED_IMAGE03	"OUTPUT"	CH. D. FT. SWITCH	DELAY/REVERB FT. SW.
LED_IMAGE02	"EDIT"	CH. C. FT. SWITCH	MOD. FT. SW.
LED_IMAGE01	-- not used --	CH. B FT. SWITCH	STOMP BOX FT. SW.
LED_IMAGE00	"WAH"	CH. A FT. SWITCH	AMP MOD. FT. SW.

COMPANY:

TITLE: **FLOOR POD/BOD XT MAIN**
SWITCHES / ENCODERS / LEDS

PROGRAM: PADS POWER LOGIC V5.0.1

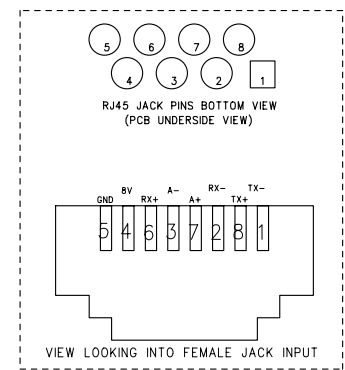
REV: **B1**

SCALE: 1:1 SIZE: C PART NUMBER: 35-00-0030 SHEET: 8 of 9

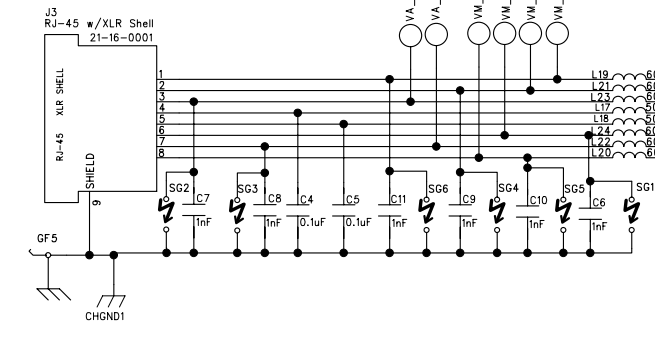
TO STOMP SWITCH PCBs

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:
0416902	06.18.04	change C7-8 from 100pF (30-50-0101) to 1nF (30-50-0102) saved as rev.A2

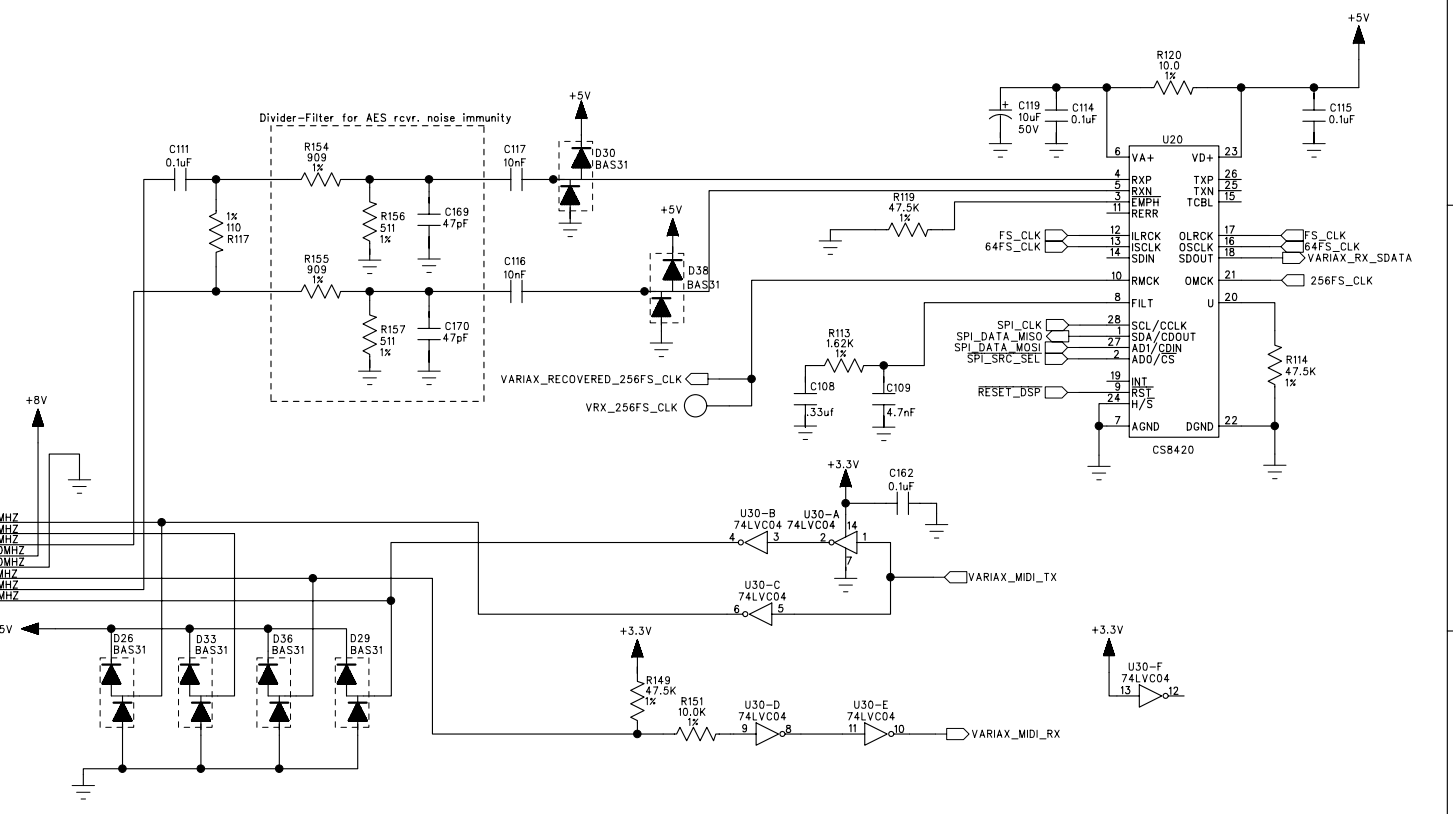
VARIAX INTERFACE



MG-1 CLASS RJ-45 I/F

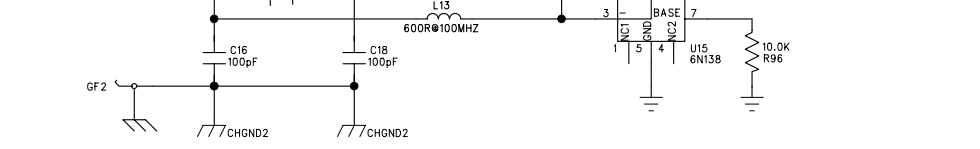


FOR VARIAX PORT MIDI LOOPBACK SHORT:
VM_TXP TO VM_RXP
VM_TXN TO VM_RXN

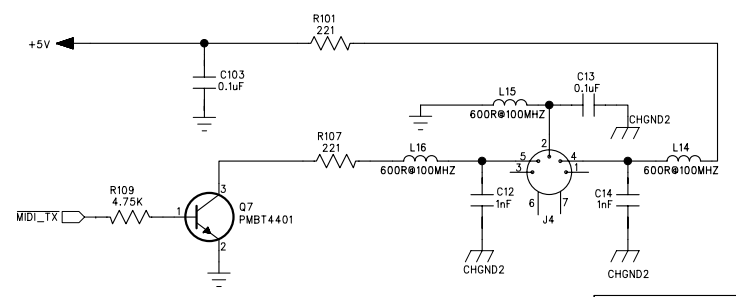


MIDI INTERFACE

MIDI IN

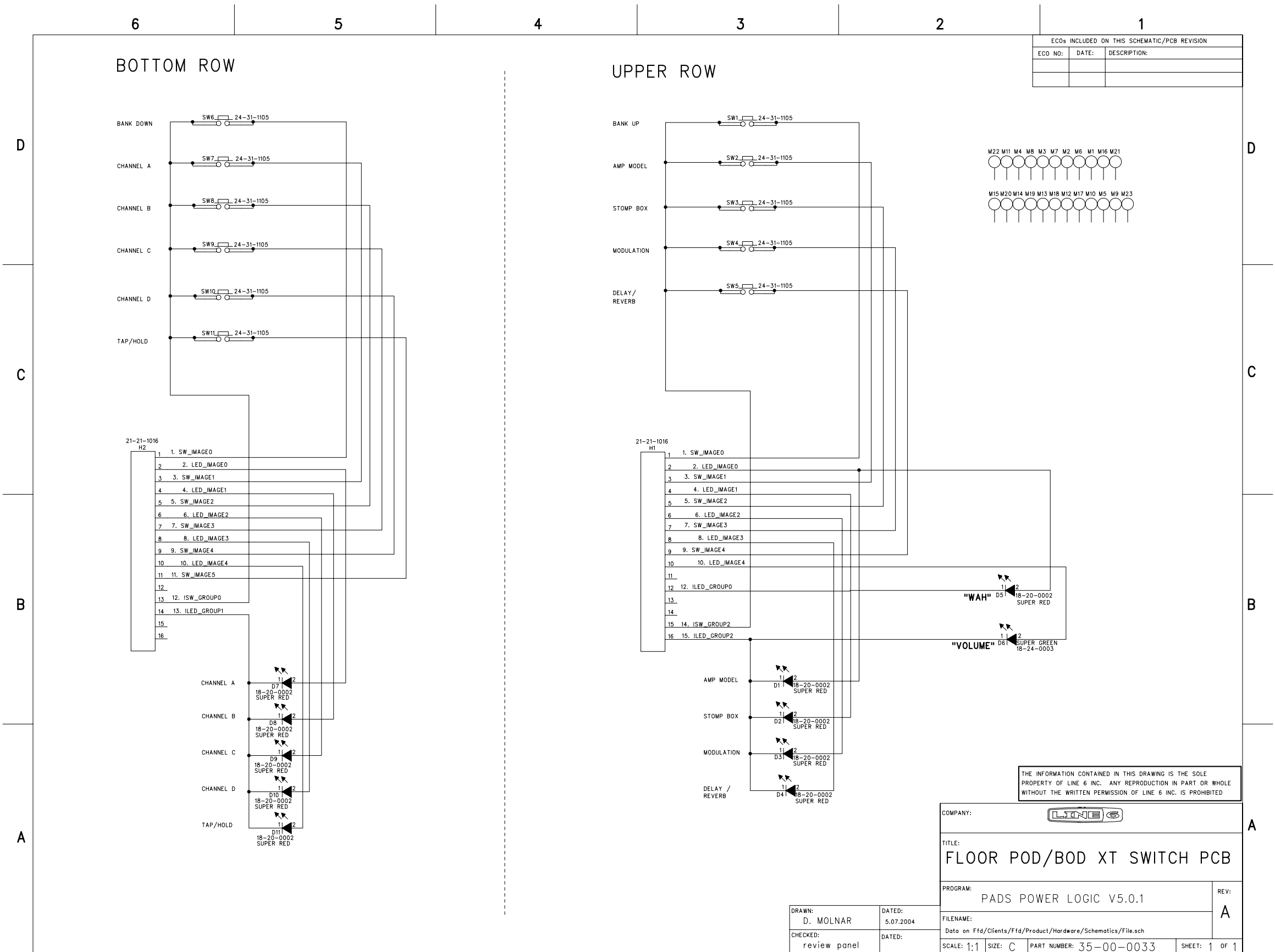


MIDI OUT

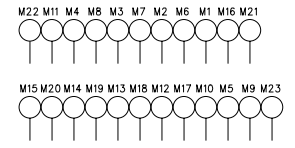


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COMPANY:	
TITLE: FLOOR POD/BOD XT MAIN VARIAX I/F / MIDI	
PROGRAM: PADS POWER LOGIC V5.0.1	REV: B1
DRAWN: D. MOLNAR	DATED: 10.12.2004
CHECKED:	DATED:
SCALE: 1:1	SIZE: C
PART NUMBER: 35-00-0030	SHEET: 9 of 9

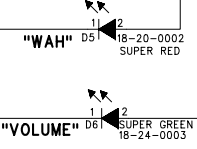


ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:



- 21-21-1016
H2
1. SW_IMAGE0
 2. LED_IMAGE0
 3. SW_IMAGE1
 4. LED_IMAGE1
 5. SW_IMAGE2
 6. LED_IMAGE2
 7. SW_IMAGE3
 8. LED_IMAGE3
 9. SW_IMAGE4
 10. LED_IMAGE4
 11. SW_IMAGE5
 - 12.
 13. ISW_GROUP0
 14. ILED_GROUP1
 - 15.
 - 16.

- 21-21-1016
H1
1. SW_IMAGE0
 2. LED_IMAGE0
 3. SW_IMAGE1
 4. LED_IMAGE1
 5. SW_IMAGE2
 6. LED_IMAGE2
 7. SW_IMAGE3
 8. LED_IMAGE3
 9. SW_IMAGE4
 10. LED_IMAGE4
 - 11.
 12. ILED_GROUP0
 - 13.
 - 14.
 15. ISW_GROUP2
 16. ILED_GROUP2



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COMPANY:	
TITLE: FLOOR POD/BOD XT SWITCH PCB	
PROGRAM: PADS POWER LOGIC V5.0.1	REV: A
DRAWN: D. MOLNAR	
DATED: 5.07.2004	
CHECKED: review panel	
DATED:	
SCALE: 1:1	SIZE: C
PART NUMBER: 35-00-0033	SHEET: 1 OF 1

99-060-0605 POD XT LIVE Complete Unit w/Accessories

Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
11-32-0000	XFMR PX2 120VAC/60Hz 9VAC/2A UL 2464 VW-1 6FT. BLK US	1	\$3.59	\$5.38	
21-34-2000	CBL USB HIGH SPEED 2 METER BLK	1	\$0.87	\$1.31	
30-75-0013	CAP RJ45 JACK PROTECTOR VINYL .692-ODx.250-H BLACK	1	\$0.03	\$0.05	
40-00-0054	MANUAL USER FLOORPOD	1	\$0.00	\$0.00	
40-06-0001-1	INSERT FX-JUNKIE FLOORPOD-XT INTERNATIONAL-VERSION REV.A	1	\$0.00	\$0.00	
50-03-0018	ASSY PACK RJ45 PROTECTION	1	\$0.00	\$0.00	
59-00-0116	ASSY UNIT COMPLETE FLOORPOD-XT	1	\$0.00	\$0.00	This is NOT available as a replacement part

59-00-0116

POD XT LIVE Complete Unit

Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
21-30-0001	CBL DIL 16-COND .100 x 5.75-IN/ 7.25-IN	1	\$0.00	\$0.00	Main PCBA to Switch PCBA
21-34-0060	CBL SIL 6-COND 24AWG 2mm x 9.75-IN F-F-JST Z-TYPE	1	\$0.00	\$0.00	Main PCBA to Pedal
24-24-0606	SWITCH POWER ROCKER 6A/250VAC 10A/120VAC PNL-MNT BLK	1	\$0.16	\$0.24	
30-00-0012	SCREW 1/4-20 x3.5IN STEEL SHCS BLK OXIDE	1	\$0.00	\$0.00	Pedal Shaft
30-00-0013	SCREW 6-32 x.25in STL PHH BLK OXIDE	4	\$0.00	\$0.00	Pedal
30-00-0042	SCREW SHEET METAL 4 x 0.375 INSELF-TAP PPB	39	\$0.01	\$0.02	
30-00-0043	SCREW 6-32 x 5/16 w/LK WASH PPZ STL	22	\$0.00	\$0.00	PCBA Mounting
30-00-0062	SCREW 10-32 x 3/8-IN w/CAPTIVEWASHER PPZ	2	\$0.00	\$0.00	Knob guard mounting
30-00-0375	SCREW 6-32 x .375 PPB	17	\$0.02	\$0.02	15 Chassis sss/ Bumpers
30-00-4250	SCREW SHEET METAL SELF-TAP #4 x .250IN PPB	6	\$0.03	\$0.04	Bezel mounting
30-03-0003	WASHER .473 x.260x .030 steel	4	\$0.00	\$0.00	Pedal Shaft Assy
30-03-0005	WASHER .500 x.260x .030 NYLON	2	\$0.00	\$0.00	Pedal Shaft Assy
30-03-0007	WASHER .500 x.260x .125 NYLON	2	\$0.00	\$0.00	Pedal Shaft Assy
30-03-0013	WASHER .50 x.170x .040 NYLON	4	\$0.00	\$0.00	
30-06-0009	NUT 1/4-20 STL W/NYLON LOCK	1	\$0.00	\$0.00	Pedal
30-06-0623	NUT HEX 6-32 w/CAPTIVE STAR-WASHER	3	\$0.02	\$0.03	Pedal PCBA / Top FT Switch PCBA
30-15-0004	SPACER .13THKx.63OD NYLON	5	\$0.08	\$0.11	
30-15-0005	SPACER .25 OD x NO.8 ID AL	2	\$0.00	\$0.00	Pedal PCBA
30-15-0006	INSULATOR .17 ODx.46 LG PLASTIC	1	\$0.00	\$0.00	
30-15-0011	SPACER .39 Dia x 2.40 Lg Steel	1	\$0.00	\$0.00	Pedal
30-15-0023	SPACER 1/4-ODx1/8-L x #6 SCREW-ID NYLON	1	\$0.00	\$0.00	Top tier FootSwitch PCBA -
30-21-0004	STRAIN RELIEF-CABLE 3/8 x 0.5(ID)-IN NYLON BLK	1	\$0.00	\$0.00	Power Cable
30-24-0003	CABLE-TIE 4" CLEAR	2	\$0.03	\$0.04	For 21-34-0060
30-27-0025	KNOB SM ENCDR .55Dx.57 H IMP ABS MICROTEx	2	\$0.19	\$0.28	
30-27-0056	LENS LED .19" DIA x.29" HT PLASTIC CLEAR SNAP-IN	2	\$0.00	\$0.00	
30-27-0101	BEZEL U/I 6.30 x 2.52 x .31-INABS BLACK FLOORPOD	1	\$0.00	\$0.00	
30-27-0105	LENS DISPLAY 3.73 x 1.13 x 0.52-IN PLASTIC CLEAR FLOORPOD	1	\$0.00	\$0.00	
30-45-0011	KNOB POT .77 DIA x .76 HT PLASTIC CHROME-PLATED	6	\$0.13	\$0.20	
30-48-5012	BUMPER RUBBER .465" O.D. BLK	14	\$0.08	\$0.11	
30-51-0046	BRACKET PEDAL .85x2.54" 16 GA STL EG FLOORPOD	1	\$0.00	\$0.00	
30-51-0078	TACTILE DOME 20mm SST NP	3	\$0.44	\$0.65	Pedal Switch
30-51-0178	FOOTSWITCH SUPPORT 2.0 x 2.0 x.55 CRS ZINC FLOORPOD-XT	2	\$0.00	\$0.00	
30-51-0179	CHASSIS BASE 10.3 x 20.1 x 2.0.040 THK STL FLOORPOD-XT	1	\$0.00	\$0.00	
30-51-0180	CHASSIS TOP 10.9 x 20.2 x 2.1 .060 THK STL FLOORPOD-XT	1	\$0.00	\$0.00	
30-51-0181	PEDAL 8.0 x 1.7 x 3.0 16AWG CRS NICKEL FLOORPODXT	1	\$0.00	\$0.00	Pedal

59-00-0116

POD XT LIVE Complete Unit

Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
30-51-0187	GUARD KNOB 6 x 1.06 x 0.38-IN ROUND STL-BAR CHROME	1	\$0.00	\$0.00	
30-51-0197	BRACKET SUPPORT PEDAL 2.30 x 1.30 x 1.314-IN EG-STL	1	\$0.00	\$0.00	
30-75-0002	FOOT RUBBER 2.87x7.70x.237 BLK	1	\$0.00	\$0.00	Pedal
30-75-0007	PEDAL STOP FOAM RUBBER 2.63x.25x.06	2	\$0.00	\$0.00	
30-75-0011	STOP PEDAL RBR .81SQ x .52 BLK	2	\$0.00	\$0.00	
40-25-0020	LABEL INSPECTION QUALITY	1	\$0.06	\$0.09	
40-25-0037	LABEL CLING-DECAL USER PRESETS FLOORPOD-XT REV.B	1	\$0.00	\$0.00	
40-25-0100	LABEL BAR CODE SERIAL NUMBER 4-PANEL LABEL	1	\$0.15	\$0.22	
40-30-0020	LABEL S/N 0.1W x 0.5L 2-ACROSSDUROPOLY 613 GLOSS SILVER	1	\$0.01	\$0.02	
50-02-0030-1	PCBA MAIN FLOORPOD-XT	1	\$0.00	\$0.00	
50-02-0032	PCBA PEDAL FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-10	ASSY E/M FOOTSWITCH "A" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-11	ASSY E/M FOOTSWITCH "B" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-12	ASSY E/M FOOTSWITCH "C" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-13	ASSY E/M FOOTSWITCH "D" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-14	ASSY E/M FOOTSWITCH "TAP" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-15	ASSY E/M FOOTSWITCH "AMP" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-16	ASSY E/M FOOTSWITCH "STOMP" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-17	ASSY E/M FOOTSWITCH "MOD" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-18	ASSY E/M FOOTSWITCH "DELAY" w/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-20	ASSY E/M FOOTSWITCH "B-DOWN" no/LED FLOORPOD-XT	1	\$0.00	\$0.00	
50-04-0099-21	ASSY E/M FOOTSWITCH "B-UP" no/LED FLOORPOD-XT	1	\$0.00	\$0.00	

50-02-0030-1

Main PCBA

Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
01-00-0000	RES 0R 5% 0805	1	\$0.00	\$0.00	R144.
01-16-0272	RES CARBON FILM 2.7K 1/2W 5% TH	1	\$0.00	\$0.00	R153
01-23-0270	RES METAL OXIDE 27R 3W 5% TH FORMED LEADS @ 20mm SPACING	2	\$0.00	\$0.00	R71, R88
01-24-1000	RES 100R 1% 0805	11	\$0.00	\$0.00	R9, R19, R90, R100, R102, R103, R105, R106, R125, R134, R136
01-24-1001	RES 1.00K 1% 0805	4	\$0.00	\$0.00	R23, R28, R94, R112
01-24-1002	RES 10.0K 1% 0805	7	\$0.00	\$0.01	R26, R61, R62, R96, R98, R99, R151
01-24-1003	RES 100K 1% 0805	4	\$0.00	\$0.00	R40, R41, R42, R45
01-24-1004	RES 1.00M 1% 0805	1	\$0.00	\$0.01	R22
01-24-10R0	RES 10.0R 1% 0805	3	\$0.00	\$0.01	R21, R120, R121
01-24-1100	RES 110R 1% 0805	1	\$0.00	\$0.00	R117
01-24-1210	RES 121R 1% 0805	1	\$0.00	\$0.00	R152
01-24-1241	RES 1.24K 1% 0805	2	\$0.00	\$0.00	R36, R38
01-24-1501	RES 1.50K 1% 0805	2	\$0.00	\$0.00	R39, R142
01-24-15R0	RES 15R 1% 0805	2	\$0.00	\$0.00	R76, R80
01-24-1620	RES 162R 1% 0805	1	\$0.00	\$0.00	R89
01-24-1621	RES 1.62K 1% 0805	1	\$0.00	\$0.00	R113
01-24-2001	RES 2.00K 1% 0805	10	\$0.00	\$0.00	R47, R48, R49, R50, R54, R55, R57, R58, R124, R130
01-24-2002	RES 20.0K 1% 0805	18	\$0.00	\$0.00	R2, R3, R4, R5, R6, R7, R8, R10, R11, R67, R68, R69, R70, R73, R74, R81, R83, R150
01-24-2210	RES 221R 1% 0805	3	\$0.00	\$0.01	R92, R101, R107
01-24-2211	RES 2.21K 1% 0805	1	\$0.00	\$0.01	R24
01-24-22R1	RES 22.1R 1% 0805	10	\$0.00	\$0.00	R1, R29, R32, R115, R116, R122, R123, R129, R140, R141
01-24-2551	RES 2.55K 1% 0805	2	\$0.00	\$0.00	R13, R16
01-24-3011	RES 3.01K 1% 0805	1	\$0.00	\$0.01	R35
01-24-3321	RES 3.32K 1% 0805	1	\$0.00	\$0.00	R25
01-24-3323	RES 332K 1% 0805	1	\$0.00	\$0.00	R31
01-24-4321	RES 4.32K 1% 0805	2	\$0.00	\$0.01	R27, R95
01-24-4750	RES 475R 1% 0805	1	\$0.00	\$0.00	R93
01-24-4751	RES 4.75K 1% 0805	7	\$0.00	\$0.01	R109, R111, R139, R143, R145, R146, R147
01-24-4752	RES 47.5K 1% 0805	7	\$0.01	\$0.01	R20, R63, R64, R114, R119, R149
01-24-47R5	RES 47.5R 1% 0805	8	\$0.01	\$0.01	R75, R77, R78, R79, R82, R84, R86, R85, R87
01-24-4991	RES 4.99K 1% 0805	1	\$0.00	\$0.00	R30

01-24-5110	RES 511R 1% 0805	2	\$0.00	\$0.00	R43, R110
01-24-51R1	RES 51.1R 1% 0805	8	\$0.00	\$0.00	R126, R127, R128, R131, R132, R133, R135, R137
50-02-0030-1 Main PCBA					
Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
01-24-5360	RES 536R 1% 0805	1	\$0.00	\$0.00	R18
01-24-5R11	RES 5.11R 1% 0805	1	\$0.00	\$0.00	R46
01-24-6041	RES 6.04K 1% 0805	1	\$0.00	\$0.00	R34
01-24-6810	RES 681R 1% 0805	2	\$0.00	\$0.00	R15, R17
01-24-69R8	RES 69.8R 1% 0805	3	\$0.00	\$0.00	R97, R104, R108
01-24-7501	RES 7.50K1% 0805	2	\$0.01	\$0.01	R37, R91
01-24-8871	RES 8.87K 1% 0805	5	\$0.00	\$0.01	R51, R52, R56, R59, R138
01-24-9090	RES 909R 1% 0805	2	\$0.00	\$0.00	R12, R14
01-48-0103	POT MONO 10KB LINEAR TAPER 25 mm D-SHAFT	6	\$0.10	\$0.15	R33, R44, R53, R66, R72, R85
01-48-9103	POT DUAL 10KA AUDIO TAPER HORIZ MT 25mm RND PLASTIC	1	\$0.43	\$0.64	R60
01-60-0472	RES NETWORK 4.7K BUSSED 1/8W 5% SM	1	\$0.00	\$0.00	R116
03-10-6108	CAP ELEC 1000uF 6.3V 20% RADIAL 8/11.5/5	1	\$0.00	\$0.00	C126
03-12-0107	CAP ELEC 100uF 16V 20% RADIAL 6.3/11/5	4	\$0.04	\$0.05	C34, C38, C66, C145
03-12-0108	CAP ELEC 1000uF 16V 20% RADIAL10/16/5	2	\$0.17	\$0.26	C45, C69, C39
03-12-0688	CAP ELEC 6800uF 16V 20% RADIAL18/35.5/7.5	1	\$0.68	\$1.02	C81
03-13-0228	CAP ELEC 2200uF 16V 20% 105C LowZ 0.030R RADIAL 12.5/25/5	3	\$0.00	\$0.00	C70, C107, C39 added ECO# 0416101
03-13-0477	CAP ELEC 470uF 16V 20% 105C LowZ 0.085R RADIAL 8/15/5	6	\$0.00	\$0.00	C49, C59, C60, C164, C165, C166
03-16-2108	CAP ELEC 1000uF 35V 20% 105C RADIAL 12.5/25/5	2	\$0.00	\$0.00	C42, C47
03-18-0105	CAP ELEC 1uF 50V 20% RADIAL 5/11/5	5	\$0.01	\$0.02	C43, C44, C46, C48, C98
03-18-0106	CAP ELEC 10uF 50V 20% RADIAL 5/11/5	8	\$0.02	\$0.03	C63, C65, C71, C84, C85, C95, C99, C119
03-24-0273	CAP MET-POLY 27nF 50V 5% TH 7.3/3.2/5/5	1	\$0.00	\$0.00	C37
03-36-0224	CAP ESTR 0.22uF 50V 5% TH 11/6/11.5/7.5	1	\$0.07	\$0.11	C157
03-50-0101	CAP NPO 100pF 50V 10% 0805	5	\$0.01	\$0.01	C16, C18, C54, C56, C142, C8, C9, removed ECO# 0416902
03-50-0102	CAP NPO 1nF 50V 5% 0805	16	\$0.02	\$0.04	C2, C6, C7, C8, C9, C10, C11, C12, C14, C24, C26, C51, C53, C86, C88, C140 C7, C8, added ECO# 0416902
03-50-0220	CAP NPO 22pF 50V 20% 0805	2	\$0.02	\$0.02	C144, C148
03-50-0272	CAP NPO 2.7nF 50V 5% 0805	2	\$0.02	\$0.03	C74, C75
03-50-0391	CAP NPO 390pF 50v 5% 0805	4	\$0.00	\$0.00	C72, C73, C76, C77
03-50-0470	CAP NPO 47pF 50V 10% 0805	3	\$0.11	\$0.17	C32, C78, C79
03-52-0100	CAP X7R 10pF 50V 20% 0805	2	\$0.02	\$0.02	C167, C168
03-52-0101	CAP X7R 100pF 50V 20% 0805	2	\$0.01	\$0.01	C82, C83
03-52-0102	CAP X7R 1nF 50V 20% 0805	1	\$0.01	\$0.02	C163

03-52-0103	CAP X7R 10nF 50V 20% 0805	3	\$0.01	\$0.02	C116, C117, C160
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50-02-0030-1		Main PCBA			
Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
03-52-0104	CAP X7R 0.1uF 50V 20% 0805	74	\$0.02	\$0.04	C1, C3, C4, C5, C13, C15, C17, C19, C20, C21, C22, C23, C30, C31, C62, C64, C67, C68, C90, C91, C92, C93, C94, C96, C97, C100, C101, C102, C103, C105, C106, C110, C111, C112, C113, C114, C115, C118
03-52-0334	CAP X7R 0.33uF 25V 20% 0805	1	\$0.15	\$0.23	C108
03-52-0472	CAP X7R 4.7nF 50V 20% 0805	1	\$0.02	\$0.04	C109
03-52-0473	CAP X7R 47nF 50V 20% 0805	17	\$0.02	\$0.03	C27, C29, C33, C35-36, C40-41, C50, C52, C55, C57-58, C61, C87, C80, C89, C104
04-04-0001	FERRITE BEAD 3-TURN 600R@ 100MHz MATERIAL-61 RADIAL TH	2	\$0.37	\$0.56	L25, L26
06-20-0099	DIODE GEN PUR DUAL 70V 215mA 6nS SOT-23 SM BAV99	8	\$0.02	\$0.02	D15, D16, D26, D29, D30, D33, D36, D38
06-23-0054	DIODE SCHOTTKY DUAL 30V 200mA 5nS SOT-23 SM BAT54S	1	\$0.00	\$0.00	D17
06-32-0340	DIODE SCHOTTKY 3A 40V SMB SM B340B	4	\$0.13	\$0.19	D7, D8, D19, D20
06-32-4006	DIODE RECTIFIER 800V 1A SMA SM MRA4006T3	10	\$0.06	\$0.08	D9, D10, D11, D12, D13, D14, D42, D43, D44, D45
06-34-0016	DIODE SWITCHING 75V 200mA 6nS SOT-23 SM BAS16LT1	17	\$0.01	\$0.02	D6, D18, D21, D22, D23, D24, D25, D27, D28, D31, D32, D34, D35, D37, D39, D40, D41
09-03-0032	TRANS PNP MED POWER TIP32C TH	1	\$0.22	\$0.33	Q9
09-10-4401	TRANS NPN SMALL-SIGNAL MBT4401SOT-23 SM	4	\$0.01	\$0.02	Q2, Q3, Q7, Q8
09-10-4403	TRANS PNP SMALL-SIGNAL MBT4403SOT-23 SM	1	\$0.03	\$0.05	Q1
09-10-6102	TRANS N-CHANNEL MOSFET ZXM61N02 SOT-23 SM	3	\$0.10	\$0.15	Q4, Q5, Q66
11-00-3000	CRYSTAL OSCILLATOR 30MHz 3.3V DIP4 METAL-CAN TH	1	\$0.89	\$1.34	Y1
11-10-0501	FERRITE BEAD 500R @100mHZ 2.5A 1206 SM	2	\$0.05	\$0.07	L17, L18
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	22	\$0.03	\$0.04	L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L19, L20, L21, L22, L23, L24
12-00-0317	IC VREG ADJ 1.2-37V 1.5 AMP TO-220 LM317 TH	1	\$0.15	\$0.23	U12
12-02-0015	IC REG +15V 1.5AMP TO-220F TH NJM7815FA	1	\$0.25	\$0.38	U2
12-02-0115	IC REG -15V 1.5AMP TO-220F TH NJM7915FA	1	\$0.38	\$0.57	U3
12-02-1088	IC REG ADJ TO-220 TH LM1086	1	\$0.38	\$0.57	U7
12-02-7805	IC REG +5v 1.5 Amp TH	2	\$0.09	\$0.14	U5, U10
12-54-0082	IC OP AMP DUAL TL082CD SO-8 SM	1	\$0.13	\$0.20	U8
12-54-0084	IC OP AMP QUAD TL084CD SM	3	\$0.22	\$0.33	U6, U9, U11
12-54-2134	IC OP-AMP DUAL OPA2134UA SM SO-8	1	\$1.16	\$1.74	U1
12-64-4528	IC CONVERTER 24B 48/96KHz AUDIO CODEC SM AK4528	1	\$2.30	\$3.45	U4
12-64-7890	IC ADC 12 BIT / 8 CHANNEL SM TSSOP-16 ADC78H90	1	\$1.17	\$1.76	U31

15-40-6138	IC 6N138 OPTO-ISOLATOR DIP-8 TH	1	\$0.49	\$0.73	U15
15-64-0273	IC 74HCT273 FLIP-FLOP D-TYPE 8-BIT SO-20 SM	2	\$0.10	\$0.15	U16, U18
15-65-0004	IC 74LVC04 LOW VOLTAGE CMOS HEX INVERTER SO-14 SM	1	\$0.07	\$0.11	U30
15-68-1020	IC CONTROLLER USB TAS1020BPFB SM	1	\$2.95	\$4.43	U25
50-02-0030-1 Main PCBA					
Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
15-70-1610	IC DRAM 1M X 16 SDRAM HY57V161610DTC-7 SM	2	\$4.60	\$6.90	U27, U28
15-72-1009	IC SRAM 128K X 8 CY7C1009B 15nS SOJ-32 (V32) SM	1	\$1.83	\$2.75	U14
15-78-4128	IC EEPROM 128KBIT I2C SERIAL 24LC128-I/SN SOIC8 SM	1	\$0.90	\$1.35	U23
15-79-0088	IC MEMORY SECURE AT88SC153-00 -2.7 8S1 (SO-8) SM	1	\$0.49	\$0.74	U24
15-86-1065	IC DSP SHARC ADSP-21065LKS-240 MQFP208 SM	1	\$10.00	\$15.00	U26
15-86-8420	IC DIGITAL AUDIO SAMPLE RATE CONVERTER SM Mfg# CS8420-CS	1	\$9.30	\$13.95	U20
15-92-5810	IC RESET 5V 5% ACTIVE-HI SOT-23 SM LM810	1	\$0.27	\$0.40	U22
15-96-0128	IC PLD 128 CELL/96 I/O ISPLSI5128VE-100LT128 TQFP128	1	\$3.65	\$5.48	U21
18-12-0001	LED 3-DIGIT 7-SEG YEL w/DP Ledtech LM3633-11-11BWRN TH	1	\$0.66	\$0.99	D2
18-21-0002	LED ORANGE 3mmX2mm SM Kingbrite APK3020SEC	4	\$0.14	\$0.21	D1, D3, D4, D5
21-00-0015	DNU - use 21-00-0014 - JACK BARREL PCB MT 2.5mm	1	\$0.34	\$0.50	J1
21-00-6617	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH W/CHROME HRDWARE	4	\$0.38	\$0.57	J6, J7, J8, J10
21-04-5075	JACK DIN 5-PIN FEMALE MIDI PCB-MNT RT-ANG LN 05075	2	\$0.15	\$0.23	J4, J5
21-12-0035	JACK 3.5mm STEREO 5 PIN CRIMPED LEADS NON-THREADED	1	\$0.12	\$0.18	J9
21-16-0001	JACK RJ-45 9-PIN IN XLR SHELL PCB-MNT HORIZ TH	1	\$2.15	\$3.23	J3
21-18-0002	TERMINAL SCREW PCB MOUNT RT ANGLE SNAP-IN TH	1	\$0.00	\$0.00	BR1
21-20-0206	HDR SIL PCB-MT 6-PIN x 2mm MALE SHRD VERT MT TH	1	\$0.11	\$0.17	H3
21-21-0001	JACK USB-B SHIELDED PCB-MNT BLACK WIESON 3700-4ABN4S1W	1	\$0.22	\$0.33	J2
21-21-1016	HDR DIL PCB-MT 16-PIN 2x8x.100MALE SHRD LOCKING VERT MT TH	1	\$1.55	\$2.33	H4
21-34-0061-1	CBL 1-COND 18AWG 3.O-IN FM- QUICK DISCONNECT/S-T BLK	1	\$0.00	\$0.00	
21-34-0061-2	CBL 1-COND 18AWG 3.O-IN FM- QUICK DISCONNECT/S-T WHT	1	\$0.00	\$0.00	
21-44-0044	SOCKET 44 PIN PLCC - .050 LOW PROFILE SMT	1	\$0.16	\$0.24	S1
24-09-0222	SWITCH SLIDE DPDT 4.5mm SHAFT HORIZ MT	2	\$0.11	\$0.16	SW2, SW9
24-12-0001	ENCODER 24-STEP W/25mm SHFT RE120-40-25F-24P TH	1	\$0.33	\$0.49	E2
24-12-0002	ENCODER 12-STEP W/25mm SHFT RE120-40-25F-12P TH	1	\$0.30	\$0.45	E1
30-00-0607	SCREW 6-32 x 7/16IN w/LK WASH PPZ STL	2	\$0.02	\$0.03	U5, U7
30-00-3125	SCREW 4-40 x .3125 PPB STL	2	\$0.01	\$0.02	HS1, HS2
30-03-0004	WASHER LOCK w/EXTERNAL TOOTH 2 x #4 x .017IN STL	2	\$0.01	\$0.01	HS1, HS2
30-06-0440	NUT HEX .242 4-40 STL/ZNC	2	\$0.00	\$0.00	HS1, HS2
30-12-2210	STANDOFF HEX .250 6-32 F-F .500 LG AL	2	\$0.10	\$0.15	U5, U7

30-18-3030	CLIP GND PCB .30x.30x.07	8	\$0.02	\$0.03	GF1, GF2, GF4, GF5, GF6, GF7, GF8, GF9
30-51-0057	HEAT SINK, BLACK ANODIZED AL, WAKEFIELD #287-1AB	2	\$0.30	\$0.45	HS1, HS2
30-65-0009	TAPE INSULATING 1/8W x 2 INL (NON-SPECIFIC)	1	\$0.00	\$0.00	J2
30-75-0023	KEYPAD RUBBER w/SILKSCREEN 5.91x2.48 x0.7-IN BLK FLOORPOD	1	\$0.00	\$0.00	
50-02-0030-1		Main PCBA			
Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
35-00-0030	PCB MAIN FLOORPOD-XT REV.B	1	\$0.00	\$0.00	
40-30-2000	LABEL S/N 38.10 x 6.35mm THERMAL XFR GLOSSY WHITE	1	\$0.01	\$0.01	(on PCB artwork "Place Barcode Label Here")
45-01-0002	IC PROGRAMMED MCU v1.03 c/s= 96FB SHARC/FLOORPOD/BOD-SERIES	1	\$3.95	\$5.93	U17
45-02-0016	IC PROGRAMMED FLASH v2.14 c/s=0xC0D63B8 FLOORPOD-XT	1	\$0.00	\$0.00	U29
50-02-0240		1	\$0.00	\$0.00	LCD1

50-02-0032

Pedal Switch PCBA

Part Number	Description	Qty Per Parent	Dealer Cost	MSRP	Reference Designator
01-24-1001	RES 1.00K 1% 0805	1	\$0.00	\$0.01	R3
01-24-1002	RES 10.0K 1% 0805	4	\$0.01	\$0.01	R8, R9, R26, R45
01-24-2000	RES 200R 1% 0805	1	\$0.00	\$0.00	R2
01-24-4991	RES 4.99K 1% 0805	1	\$0.00	\$0.01	R1
03-52-0104	CAP X7R 0.1uF 50V 20% 0805	4	\$0.04	\$0.05	C1, C2, C7, C8
06-20-0099	DIODE GEN PUR DUAL 70V 215mA 6nS SOT-23 SM BAV99	1	\$0.02	\$0.03	D7
09-10-4401	TRANS NPN SMALL-SIGNAL MBT4401SOT-23 SM	1	\$0.02	\$0.02	Q1
09-20-0095	PHOTOTRANSISTOR, SMD Blue Lens Ledtech LT5K95-AA-0125	1	\$0.30	\$0.45	Q29
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	2	\$0.04	\$0.06	L9, L10
18-27-0083	LED INFRA-RED, 880nm CLEAR LENS LT5K83-AA-880	1	\$0.27	\$0.41	D3
21-00-6617	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH W/CHROME HRDWARE	1	\$0.57	\$0.86	J200
21-20-0206	HDR SIL PCB-MT 6-PIN x 2mm MALE SHRD VERT MT TH	1	\$0.17	\$0.25	H200
30-18-3030	CLIP GND PCB .30x.30x.07	1	\$0.03	\$0.05	GF200
35-00-0032	PCB PEDAL FLOORPOD-XT REV.A	1	0	\$0.00	

99-060-0705 Bass Pod XT Live Complete Unit w/Accessories			
Part Number	Description	Qty. Per Parent	Reference Designator
11-32-0000	XFMR PX2 120VAC/60Hz 9VAC/2A UL 2464 VW-1 6FT. BLK US	1	
21-34-2000	CBL USB HIGH SPEED 2 METER BLK	1	
30-75-0013	CAP RJ45 JACK PROTECTOR VINYL .692-ODx.250-H BLACK	1	
40-00-0083	MANUAL USER BASS PODxt LIVE P2-1 ENGLISH	1	
40-01-0016	CARD LICENSE-AGREEMNT END-USERALL-PRODUCTS	1	
50-03-0018	ASSY PACK RJ45 PROTECTION	1	
59-00-0118	ASSY UNIT COMPLETE BASS POD-LIVE P2-1	1	Not Available As A Replacement Part

59-00-0118 Bass Pod XT Live Complete Unit...			
Part Number	Description	Qty. Per Parents	Reference Designator
21-30-0001	CBL DIL 16-COND .100 x 5.75-IN/ 7.25-IN	1	MAIN PCBA TO SWITCH PCBA
21-34-0060	CBL SIL 6-COND 24AWG 2mm x 9.75-IN F-F-JST Z-TYPE	1	MAIN PCBA TO PEDAL
24-24-0606	SWITCH POWER ROCKER 6A/250VAC 10A/120VAC PNL-MNT BLK	1	
30-00-0012	SCREW 1/4-20 x3.5IN STEEL SHCS BLK OXIDE	1	FOR PEDAL SHAFT
30-00-0042	SCREW SHEET METAL 4 x 0.375 INSELF-TAP PPB	35	2-RJ45,22-FOOTSWITCH ASSY 2-PER,11-FOOTS,2 SWITCH PCBA's 11 MOUNTING SCREWS, 5 FOR UPPER ROW & 6 FOR BOTTOM ROW
30-00-0043	SCREW 6-32 x 5/16 w/LK WASH PPZ STL	22	FOR PCBA MOUNTING
30-00-0062	SCREW 10-32 x 3/8-IN w/CAPTIVEWASHER PPZ	2	FOR KNOB GUARD MOUNTING
30-00-0375	SCREW 6-32 x .375 PPB	21	15-FOR CHASSIS ASSY/BUMPERS,6-FOR PEDAL
30-00-4250	SCREW SHEET METAL SELF-TAP #4 x .250IN PPB	6	FOR BEZEL MOUNTING
30-03-0003	WASHER .473 x.260x .030 steel	4	FOR PEDAL SHAFT ASSY
30-03-0005	WASHER .500 x.260x .030 NYLON	2	FOR PEDAL SHAFT ASSY
30-03-0007	WASHER .500 x.260x .125 NYLON	2	FOR PEDAL SHAFT ASSY
30-03-0013	WASHER .50 x.170x .034 NYLON	4	
30-06-0009	NUT 1/4-20 STL W/NYLON LOCK	1	FOR PEDAL
30-06-0623	NUT HEX 6-32 w/CAPTIVE STAR-WASHER	3	FOR PEDAL PCBA/TOP FTSWITCH PCBA
30-15-0004	SPACER .13THKx.63OD NYLON	5	FOR 1/4" JACKS
30-15-0005	SPACER .25 OD x NO.8 ID AL	2	FOR PEDAL PCBA
30-15-0011	SPACER .39 Dia x 2.40 Lg Steel	1	FOR PEDAL
30-15-0023	SPACER 1/4-ODx1/8-L x #6 SCREW-ID NYLON	1	FOR TOP TIER FOOTSWITCH PCBA
30-21-0004	STRAIN RELIEF-CABLE 3/8 x 0.5(ID)-IN NYLON BLK	1	FOR POWER CABLE
30-27-0025	KNOB SM ENCDR .55Dx.57 H IMP ABS MICROTEx	2	
30-27-0056	LENS LED .19" DIA x.29" HT PLASTIC CLEAR SNAP-IN	2	
30-27-0101	BEZEL U/I 6.30 x 2.52 x .31-INABS BLACK FLOORPOD	1	
30-27-0105	LENS DISPLAY 3.73 x 1.13 x 0.52-IN PLASTIC CLEAR FLOORPOD	1	FOR DISPLAY
30-45-0011	KNOB POT .77 DIA x .76 HT PLASTIC CHROME-PLATED	6	
30-48-5012	BUMPER RUBBER .465" O.D. BLK	14	
30-51-0046	BRACKET PEDAL .85x2.54" 16 GA STL EG FLOORPOD	1	
30-51-0078	TACTILE DOME 20mm SST NP	3	FOR PEDAL SWITCH

59-00-0118 Bass Pod XT Live Complete Unit (Continued)			
Part Number	Description	Qty. Per Parents	Reference Designator
30-51-0178	FOOTSWITCH SUPPORT 2.0 x 2.0 x.55 CRS ZINC FLOORPOD-XT	2	
30-51-0181	PEDAL 8.0 x 1.7 x 3.0 16AWG CRS NICKEL FLOORPODXT	1	FOR PEDAL
30-51-0187	GUARD KNOB 6 x 1.06 x 0.38-IN ROUND STL-BAR CHROME	1	
30-51-0197	BRACKET SUPPORT PEDAL 2.30 x 1.30 x 1.314-IN EG-STL	1	
30-51-0221	CHASSIS BASE 10.3 x 20.1 x 2.0.040 THK STL BASSPOD-LIVE P2-1	1	
30-51-0222	CHASSIS TOP 10.9 x 20.2 x 2.1 .060 THK STL BASSPOD-LIVE P2-1	1	
30-63-0017	FOAM W/ADH .55" x 0.25" x 0.06" VOLARAPOLELEFIN	4	FOR 2-PER EACH SUPPORT
30-75-0002	FOOT RUBBER 2.87x7.70x.237 BLK	1	FOR PEDAL
30-75-0007	PEDAL STOP FOAM RUBBER 2.63x.25x.06	2	FOR PEDAL
30-75-0011	STOP PEDAL RBR .81SQ x .52 BLK	2	
50-02-0030-2	PCBA MAIN BASS PODxl LIVE PROGRAMMED P2-1	1	
50-02-0032	PCBA PEDAL FLOORPOD-XT	1	
50-02-0033	PCBA SWITCH FLOORPOD-XT	1	
50-04-0099-10	ASSY E/M FOOTSWITCH "A" w/LED FLOORPOD-XT	1	
50-04-0099-11	ASSY E/M FOOTSWITCH "B" w/LED FLOORPOD-XT	1	
50-04-0099-12	ASSY E/M FOOTSWITCH "C" w/LED FLOORPOD-XT	1	
50-04-0099-13	ASSY E/M FOOTSWITCH "D" w/LED FLOORPOD-XT	1	
50-04-0099-14	ASSY E/M FOOTSWITCH "TAP" w/LED FLOORPOD-XT	1	
50-04-0099-15	ASSY E/M FOOTSWITCH "AMP" w/LED FLOORPOD-XT	1	
50-04-0099-16	ASSY E/M FOOTSWITCH "STOMP" w/LED FLOORPOD-XT	1	
50-04-0099-17	ASSY E/M FOOTSWITCH "MOD" w/LED FLOORPOD-XT	1	
50-04-0099-19	ASSY E/M FOOTSWITCH "DLY/VRB" w/LED FLOORPOD-XT	1	
50-04-0099-20	ASSY E/M FOOTSWITCH "B-DOWN" no/LED FLOORPOD-XT	1	
50-04-0099-21	ASSY E/M FOOTSWITCH "B-UP" no/LED FLOORPOD-XT	1	

50-02-0030-2 PCBA Main			
Part Number	Description	Qty Per	Reference Designator(s)
01-00-0000	RES 0R 5% 0805	1	R144
01-16-0272	RES CARBON FILM 2.7K 1/2W 5% TH	1	R153
01-23-0270	RES METAL OXIDE 27R 3W 5% TH FORMED LEADS @ 20mm SPACING	2	R71, R88
01-23-0270	RES METAL OXIDE 27R 3W 5% TH FORMED LEADS @ 20mm SPACING	2	R71, R88
01-24-1000	RES 100R 1% 0805	11	R9, R19, R90, R100, R102, R103, R105, R106, R125, R134, R136
01-24-1001	RES 1.00K 1% 0805	4	R23, R28, R94, R112
01-24-1002	RES 10.0K 1% 0805	7	R26, R61, R62, R96, R98, R99, R151
01-24-1003	RES 100K 1% 0805	4	R40, R41, R42, R45
01-24-1004	RES 1.00M 1% 0805	1	R22
01-24-10R0	RES 10.0R 1% 0805	3	R21, R120, R121
01-24-1100	RES 110R 1% 0805	1	R117
01-24-1210	RES 121R 1% 0805	1	R152

50-02-0030-2 PCBA Main (Continued)			
Part Number	Description	Qty Per	Reference Designator(s)
01-24-1241	RES 1.24K 1% 0805	2	R36, R38
01-24-1501	RES 1.50K 1% 0805	2	R39, R142
01-24-15R0	RES 15R 1% 0805	2	R76, R80
01-24-1620	RES 162R 1% 0805	1	R89
01-24-1621	RES 1.62K 1% 0805	1	R113
01-24-2001	RES 2.00K 1% 0805	10	R47, R48, R49, R50, R54, R55, R57, R58, R124, R130
01-24-2002	RES 20.0K 1% 0805	18	R2, R3, R4, R5, R6, R7, R8, R10, R11, R67, R68, R69, R70, R73, R74, R81, R83, R150
01-24-2210	RES 221R 1% 0805	3	R92, R101, R107
01-24-2211	RES 2.21K 1% 0805	1	R24
01-24-22R1	RES 22.1R 1% 0805	10	R1, R29, R32, R115, R118, R122, R123, R129, R140, R141
01-24-2551	RES 2.55K 1% 0805	2	R13, R16. ADDED PER ECO#0428601.
01-24-3011	RES 3.01K 1% 0805	1	R35
01-24-3321	RES 3.32K 1% 0805	1	R25
01-24-3323	RES 332K 1% 0805	1	R31
01-24-4321	RES 4.32K 1% 0805	2	R27, R95
01-24-4750	RES 475R 1% 0805	1	R93
01-24-4751	RES 4.75K 1% 0805	7	R109, R111, R139, R143, R145, R146, R147
01-24-4752	RES 47.5K 1% 0805	6	R20, R63, R64, R114, R119, R149
01-24-47R5	RES 47.5R 1% 0805	8	R75, R77, R78, R79, R82, R84, R86, R87
01-24-4991	RES 4.99K 1% 0805	1	R30
01-24-5110	RES 511R 1% 0805	2	R43, R110
01-24-51R1	RES 51.1R 1% 0805	8	R126, R127, R128, R131, R132, R133, R135, R137
01-24-5360	RES 536R 1% 0805	1	R18
01-24-5R11	RES 5.11R 1% 0805	1	R46
01-24-6041	RES 6.04K 1% 0805	1	R34
01-24-6810	RES 681R 1% 0805	2	R15, R17
01-24-69R8	RES 69.8R 1% 0805	3	R97, R104, R108
01-24-7501	RES 7.50K1% 0805	2	R37, R91
01-24-8871	RES 8.87K 1% 0805	5	R51, R52, R56, R59, R138
01-24-9090	RES 909R 1% 0805	2	R12, R14. ADDED PER ECO#0428601.
01-48-0103	POT MONO 10KB LINEAR TAPER 25 mm D-SHAFT	6	R33, R44, R53, R66, R72, R85
01-48-9103	POT DUAL 10KA AUDIO TAPER HORIZ MT 25mm RND PLASTIC	1	R60
01-60-0472	RES NETWORK 4.7K BUSSED 1/8W 5% SM	1	R116
03-10-6108	CAP ELEC 1000uF 6.3V 20% RADIAL 8/11.5/5	1	C126
03-12-0107	CAP ELEC 100uF 16V 20% RADIAL 6.3/11/5	4	C34, C38, C66, C145
03-12-0108	CAP ELEC 1000uF 16V 20% RADIAL10/16/5	2	C45, C69, C39, removed ECO# 0416101
03-12-0688	CAP ELEC 6800uF 16V 20% RADIAL18/35.5/7.5	1	C81
03-13-0228	CAP ELEC 2200uF 16V 20% 105C LowZ 0.030R RADIAL 12.5/25/5	3	C70, C107, C39, added ECO# 0416101
03-13-0477	CAP ELEC 470uF 16V 20% 105C LowZ 0.085R RADIAL 8/15/5	6	C49, C59, C60, C164, 165, C166

50-02-0030-2 PCBA Main (Continued)			Reference Designator(s)
Part Number	Description	Qty Per	
03-16-2108	CAP ELEC 1000uF 35V 20% 105C LowZ RADIAL 12.5/25/5	2	C42, C47
03-18-0105	CAP ELEC 1uF 50V 20% RADIAL 5/11/5	5	C43, C44, C46, C48, C98
03-18-0106	CAP ELEC 10uF 50V 20% RADIAL 5/11/5	8	C63, C65, C71, C84, C85, C95, C99, C119
03-24-0273	CAP MET-POLY 27nF 50V 5% TH 7.3/3.2/5/5	1	C37
03-36-0224	CAP ESTR 0.22uF 50V 5% TH 11/6/11.5/7.5	1	C157
03-50-0101	CAP NPO 100pF 50V 5% 0805	5	C16, C18, C54, C56, C142, C8, C9 removed ECO# 0416902
03-50-0102	CAP NPO 1nF 50V 5% 0805	16	0416902
03-50-0220	CAP NPO 22pF 50V 5% 0805	2	C144, C148
03-50-0272	CAP NPO 2.7nF 50V 5% 0805	2	C74, C75
03-50-0391	CAP NPO 390pF 50v 5% 0805	4	C72, C73, C76, C77
03-50-0470	CAP NPO 47pF 50V 5% 0805	3	C32, C78, C79
03-52-0100	CAP X7R 10pF 50V 10% 0805	2	C167, C168
03-52-0101	CAP X7R 100pF 50V 10% 0805	2	C82, C83
03-52-0102	CAP X7R 1nF 50V 10% 0805	1	C163
03-52-0103	CAP X7R 10nF 50V 10% 0805	3	C116, C117, C160
03-52-0104	CAP X7R 0.1uF 50V 10% 0805	74	C1, C3, C4, C5, C13, C15, C17, C19, C20, C21, C22, C23, C30, C31, C62, C64, C67, C68, C90, C91, C92, C93, C94, C96, C97, C100, C101, C102, C103, C105, C106, C110, C111, C112, C113, C114, C115, C118, C120, C121, C122, C123, C124, C125, C127, C128, C129, C130, C131, C132, C133, C134, C135, C136, C 137, C138, C139, C141, C143, C146, C147, C149, C150, C151, C152, C153,
03-52-0334	CAP X7R 0.33uF 25V 10% 0805	1	C108
03-52-0472	CAP X7R 4.7nF 50V 10% 0805	1	C109
03-52-0473	CAP X7R 47nF 50V 10% 0805	17	C27, C29, C33, C35, C36, C40, C41, C50, C52, C55, C57, C58, C61, C87, C80, C89, C104
04-04-0001	FERRITE BEAD 3-TURN 600R @ 100MHz MATERIAL-61 RADIAL TH	2	L25, L26
06-20-0099	DIODE GEN PUR DUAL 70V 215mA 6nS SOT-23 SM BAV99	8	D15, D16, D26, D29, D30, D33, D36, D38
06-23-0054	DIODE SCHOTTKY DUAL 30V 200mA 5nS SOT-23 SM BAT54S	1	D17
06-32-0340	DIODE SCHOTTKY 3A 40V SMB SM B340B	4	D7, D8, D19, D20
06-32-4006	DIODE RECTIFIER 800V 1A SMA SM MRA4006T3	10	D9, D10, D11, D12, D13, D14, D42, D43, D44, D45
06-34-0016	DIODE SWITCHING 75V 200mA 6nS SOT-23 SM BAS16LT1	17	D6, D18, D21, D22, D23, D24, D25, D27, D28, D31, D32, D34, D35, D37, D39, D40, D41
09-03-0032	TRANS PNP MED POWER TIP32C TH	1	Q9
09-10-4401	TRANS NPN SMALL-SIGNAL MBT4401SOT-23 SM	4	Q2, Q3, Q7, Q8
09-10-4403	TRANS PNP SMALL-SIGNAL MBT4403SOT-23 SM	1	Q1
09-10-6102	TRANS N-CHANNEL MOSFET ZXM61N02 SOT-23 SM	3	Q4, Q5, Q6
11-00-3000	CRYSTAL OSCILLATOR 30MHz 3.3V DIP4 METAL-CAN TH	1	Y1
11-10-0501	FERRITE BEAD 500R @100mHZ 2.5A 1206 SM	2	L17, L18
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	22	L1, L2, L3, L4, L5, L6, L7, L8, L9, L10, L11, L12, L13, L14, L15, L16, L19, L20, L21, L22, L23, L24
12-00-0317	IC VREG ADJ 1.2-37V 1.5 AMP TO-220 LM317 TH	1	U12
12-02-0115	IC REG -15V 1.5AMP TO-220F TH NJM7915FA	1	U3
12-02-1088	IC REG ADJ TO-220 TH LM1086	1	U7
12-02-7805	IC REG +5v 1.5 Amp TH	2	U5, U10
12-54-0082	IC OP AMP DUAL TL082CD SO-8 SM	1	U8

50-02-0030-2 PCBA Main (Continued)			Reference Designator(s)
Part Number	Description	Qty Per	
12-54-0084	IC OP AMP QUAD TL084CD SM	3	U6, U9, U11
12-54-2134	IC OP-AMP DUAL OPA2134UA SM SO-8	1	U1
12-64-4528	IC CONVERTER 24B 48/96KHz AUDIO CODEC SM AK4528	1	U4
12-64-7890	IC ADC 12 BIT / 8 CHANNEL SM TSSOP-16 ADC78H90	1	U31
15-40-6138	IC 6N138 OPTO-ISOLATOR DIP-8 TH	1	U15
15-64-0273	IC 74HCT273 FLIP-FLOP D-TYPE 8-BIT SO-20 SM	2	U16, U18
15-65-0004	IC 74LVC04 LOW VOLTAGE CMOS HEX INVERTER SO-14 SM	1	U30
15-68-1020	IC CONTROLLER USB TAS1020BPF8 SM	1	U25
15-70-1610	IC DRAM 1M X 16 SDRAM HY57V161610DTC-7 SM	2	U27, U28
15-72-1009	IC SRAM 128K X 8 CY7C1009B 15nS SOJ-32 (V32) SM	1	U14
15-78-4128	IC EEPROM 128KBIT I2C SERIAL 24LC128-I/SN SOIC8 SM	1	U23
15-79-0088	IC MEMORY SECURE AT88SC153-00 -2.7 8S1 (SO-8) SM	1	U24
15-86-1065	IC DSP SHARC ADSP-21065LKS-240 MQFP208 SM	1	U26
15-86-8420	IC DIGITAL AUDIO SAMPLE RATE CONVERTER SM Mfg# CS8420-CS	1	U20
15-92-5810	IC RESET 5V 5% ACTIVE-HI SOT-23 SM LM810	1	U22
15-96-0128	IC PLD 128 CELL/96 I/O ISPLSI5128VE-100LT128 TQFP128	1	U21
18-12-0001	LED 3-DIGIT 7-SEG YEL w/DP Ledtech LM3633-11-11BWRN TH	1	D2
18-21-0002	LED ORANGE 3mmX2mm SM Kingbrite APK3020SEC	4	D1, D3, D4, D5
21-00-0015	DNU - use 21-00-0014 - JACK BARREL PCB MT 2.5mm	1	J1
21-00-6617	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH W/CHROME HRDWARE	4	J6, J7, J8, J10
21-04-5075	JACK DIN 5-PIN FEMALE MIDI PCB-MNT RT-ANG LN 05075	2	J4, J5
21-12-0035	JACK 3.5mm STEREO 5 PIN CRIMPED LEADS NON-THREADED	1	J9
21-16-0001	JACK RJ-45 9-PIN IN XLR SHELL PCB-MNT HORIZ TH	1	J3
21-18-0002	TERMINAL SCREW PCB MOUNT RT ANGLE SNAP-IN TH	1	BR1
21-20-0206	HDR SIL PCB-MT 6-PIN x 2mm MALE SHRD VERT MT TH	1	H3
21-21-0001	JACK USB-B SHIELDED PCB-MNT BLACK WIESON 3700-4ABN4S1W	1	J2
21-21-1016	HDR DIL PCB-MT 16-PIN 2x8x.100MALE SHRD LOCKING VERT MT TH	1	H4
21-34-0061-1	CBL 1-COND 18AWG 3.0-IN FM- QUICK DISCONNECT/S-T BLK	1	
21-34-0061-2	CBL 1-COND 18AWG 3.0-IN FM- QUICK DISCONNECT/S-T WHT	1	
21-44-0044	SOCKET 44 PIN PLCC - .050 LOW PROFILE SMT	1	S1
24-09-0222	SWITCH SLIDE DPDT 4.5mm SHAFT HORIZ MT	2	SW2, SW9
24-12-0001	ENCODER 24-STEP W/25mm SHFT RE120-40-25F-24P TH	1	E2
24-12-0002	ENCODER 12-STEP W/25mm SHFT RE120-40-25F-12P TH	1	E1
30-00-0607	SCREW 6-32 x 7/16IN w/LK WASH PPZ STL	2	U5, U7
30-00-3125	SCREW 4-40 x .3125 PPB STL	2	HS1, HS2
30-03-0004	WASHER LOCK w/EXTERNAL TOOTH 2 x #4 x .017IN STL	2	HS1, HS2
30-06-0440	NUT HEX .242 4-40 STL/ZNC	2	HS1, HS2
30-12-2210	STANDOFF HEX .250 6-32 F-F .500 LG AL	2	U5, U7
30-18-3030	CLIP GND PCB .30x.30x.07	8	GF1, GF2, GF4, GF5, GF6, GF7, GF8, GF9

50-02-0030-2 PCBA Main (Continued)			
Part Number	Description	Qty Per	Reference Designator(s)
30-51-0057	HEAT SINK, BLACK ANODIZED AL, WAKEFIELD #287-1AB	2	HS1, HS2
30-65-0009	TAPE INSULATING 1/8W x 2 INL (NON-SPECIFIC)	1	J2
30-75-0023	KEYPAD RUBBER w/SILKSCREEN 5.91x2.48 x0.7-IN BLK FLOORPOD	1	
35-00-0030	PCB MAIN FLOORPOD-XT REV.B	1	
40-30-2000	LABEL S/N 38.10 x 6.35mm THERMAL XFR GLOSSY WHITE	1	(on PCB artwork "Place Barcode Label Here")
45-00-0006	EEPROM Programmed USB v1.12 Bass Podxt live P2-1	1	U23
45-01-0002	IC PROGRAMMED MCU v1.03 c/s= 96FB SHARC-ALL/FLOORPOD/P2-1	1	U17
45-02-0017	IC PROGRAMMED FLASH v1.04 c/s=0x047 ACCB9 Bass Podxt Live P2-1	1	U29
50-02-0240	PCBA DISPLAY LCD GRAPHIC W/20PMALE HDR 6-O'CLOCK XMIS POS	1	LCD1

50-02-0032 PCBA Pedal Bass Pod XT Live			
Part Number	Description	Qty Per	Reference Designator(s)
01-24-1001	RES 1.00K 1% 0805	1	R3
01-24-1002	RES 10.0K 1% 0805	4	R8, R9, R26, R45
01-24-2000	RES 200R 1% 0805	1	R2
01-24-4991	RES 4.99K 1% 0805	1	R1
03-52-0104	CAP X7R 0.1uF 50V 10% 0805	4	C1, C2, C7, C8
06-20-0099	DIODE GEN PUR DUAL 70V 215mA 6nS SOT-23 SM BAV99	1	D7
09-10-4401	TRANS NPN SMALL-SIGNAL MBT4401SOT-23 SM	1	Q1
09-20-0095	PHOTOTRANSISTOR BLUE LENS LEDTECH LT5K95-AA-0125 SMD	1	Q29
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	2	L9, L10
18-27-0083	LED INFRA-RED 880nm CLEAR LENS LT5K83-AA-880	1	D3
21-00-6617	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH W/CHROME HRDWARE	1	J200
21-20-0206	HDR SIL PCB-MT 6-PIN x 2mm MALE SHRD VERT MT TH	1	H200
30-18-3030	CLIP GND PCB .30x.30x.07	1	GF200
35-00-0032	PCB PEDAL FLOORPOD-XT REV.A	1	Not Available As A Replacement Part

50-02-0033 PCBA Main Switch Bass Pod XT Live			
Part Number	Description	Qty Per	Reference Designator(s)
18-20-0002	LED RED SUPER SML-LX0805SRC-TR 0805 SM	10	D1, D2, D3, D4, D5, D7, D8, D9, D10, D11
18-24-0003	LED GREEN SUPER SML-LX0805SGC-TR 0805 SM	1	D6
21-21-1016	HDR DIL PCB-MT 16-PIN 2x8x.100MALE SHRD LOCKING VERT MT TH	2	H1, H2
24-31-1105	SWITCH TACT 6mm SQ 4-PIN TH	11	SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, SW9, SW10, SW11
35-00-0033	PCB SWITCH FLOORPOD-XT REV.A	1	Not Available As A Replacement Part



**Pod XT Live
Bass Pod XT Live
Technical
Training
Manual**



SECTION 1

THEORY OF OPERATION



Engineering

CONFIDENTIAL

POD XT LIVE: Theory of Operation

D.H.M. (with M.D., G.K. and A.M.) AUGUST 2004

Background:

- The POD XT LIVE and BASS POD XT LIVE (not yet released) share the same electronic hardware.
- The POD XT LIVE Line 6 Engineering project codename is FloorPOD XT.
- The POD XT LIVE electronics is distributed across 3 PCBs: the “FLOOR POD/BOD XT MAIN (rev B)”, the “FLOOR POD/BOD XT PEDAL (rev A)”, and the “FLOOR POD/BOD XT SWITCH (rev A)” PCBs (breaks apart into two pieces).
- In this document, the * sign next to a control signal name indicates an active low signal.

Audio system (see pages 1-2 of the MAIN schematic):

All of the analog audio system is contained in the MAIN PCB. Refer to the Audio System diagram below for a block diagram of the system.

Guitar Input:

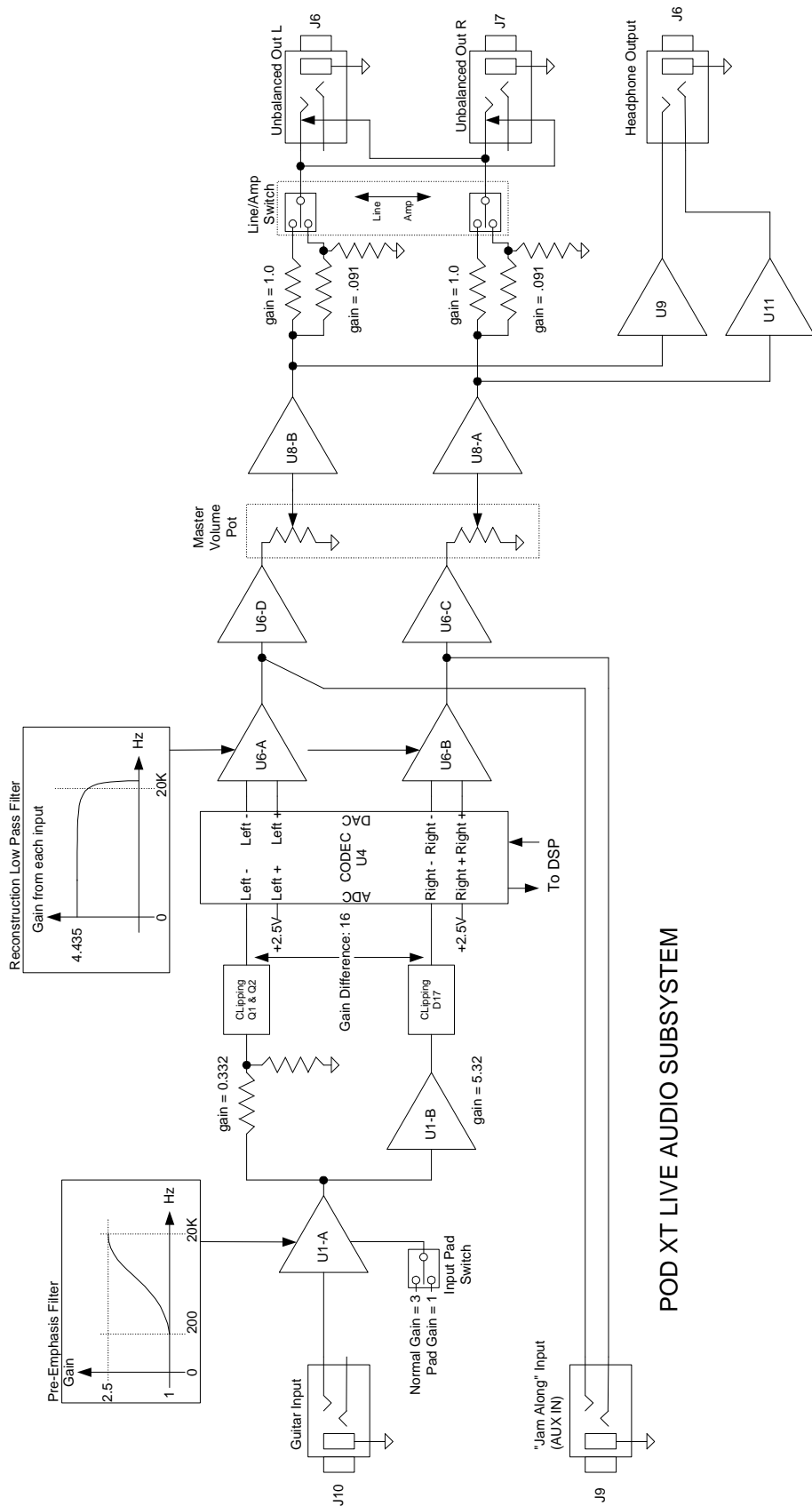
The guitar input (J10) is buffered and amplified by U1A by either a gain of 3 when the front panel input level is set to NORMAL, or by a gain of 1 when the switch is set to PAD (= Low Gain). At the same time, U1-A adds high frequency pre-emphasis gain starting at about 200Hz. U1-A output is spliced into two branches:

- On the upper branch, R34 and R35 attenuate the signal for a +/-2.5 VPP range (@ 5Vpp, 100Hz at guitar input). C43 allows this signal to be DC biased at +2.5V by the ADC input. Q1 and Q1 clip the signal to a maximum range of 0/5V. The signal drives the left channel of the ADC section of CODEC U4.
- In the lower branch, U1B adds a gain of 5.32 to the signal. C44 allows this signal to be DC biased at +2.5V by the ADC input. The double diode D17 limits the maximum signal swing to a -0.6V /+5.6V range before entering the right channel ADC section of CODEC U4. Note that the signal on this branch will clip for guitar input level above 0.310 Vpp.

The net result is two signals with a gain difference of 16, each feeding one of the two ADC inputs. Once these signals are converted and moved into the DSP, the DSP code will monitor the amplitude of the signals and use one of the two versions most appropriate for the current input level. The DSP will also apply a de-emphasis filter complementary to the filter function implemented by U1A. This scheme allows for significantly improving the signal noise and low-level distortion performance of the ADC.

Audio Outputs:

The DAC portion of CODEC U4 sends a stereo pair of differential signals to two low pass reconstruction filters composed of U6A for the left channel and U6B for the right channel. Each filter has a cutoff frequency F_c of 20KHz. The two filters then each feed an analog summation node/buffer (U6-D&C) where the output audio is mixed with the “Jam Along Input” audio from the AUX IN jack (J9). These two buffers feed the master volume potentiometer. (Note: This way, the “Jam Along Input” AUX IN level is controlled by the master volume pot just as the main system audio). The master volume pot feeds the output buffer stage (U8B for LEFT and U8A for RIGHT). The output of each output buffer stage is passed through a resistor network and switch that controls the output level for “LINE” level or “AMP” level. For the “LINE” level the output buffer merely feeds a 681 ohm resistor (R15 for LEFT and R17 for RIGHT). For the “AMP” level, the output buffer feeds a resistor divider (R12&R13 for LEFT and R14&R16 for right) which cuts the level by a gain of .091. The output buffers U8A and U8B also feed the headphone amplifier (U9 for left and U11 for right).



POD XT LIVE AUDIO SUBSYSTEM

POD XT LIVE Audio Characteristics:

1) Audio Inputs Max Level:

- Guitar Input max Level in normal mode:
From DC to 200 Hz = 5.0 Vpp, at 1KHz = 4.0 Vpp, at 2KHz = 3.0 Vpp, at 10KHz = 2.0 Vpp, at 20 KHz = 2.0 Vpp
- Guitar Input max Level in pad mode:
From DC to 200 Hz = 15.0 Vpp, at 1KHz = 12.0 Vpp, at 2KHz = 9.0 Vpp, at 10KHz = 6.0 Vpp, at 20 KHz = 6.0 Vpp
- Jam Along Input (Aux IN): 5.3Vpp

2) Inputs / Outputs nominal impedance:

- Guitar in nominal input impedance: 1Meg Ohm (for both input PAD ON and PAD OFF)
- Output ¼” jack Unbalanced nominal output impedance: Stereo = 681 Ohm
- Jam Along Input (Aux IN): 10K Ohm

3) Output signal levels:

- Test condition A: Test mode, Guitar input = 1.0Vpp= -9.03dBV, 200Hz
- ¼”Jack Unbalanced Out Left and Right Level for test condition A: 3.8 Vpp =2.56dBV
 - Headphone out Level (either side) for test condition A (no load) = 7.7 Vpp = +8.7 dBV

Power supply (page 3 of MAIN schematic):

Refer to the SUPPLY SYSTEM FLOWCHART diagram below.

The POD XT LIVE uses the same external step-down transformer as the POD XT and BASS POD XT. This transformer supplies 9 VAC to the POD XT LIVE. The 9 VAC is split into three branches:

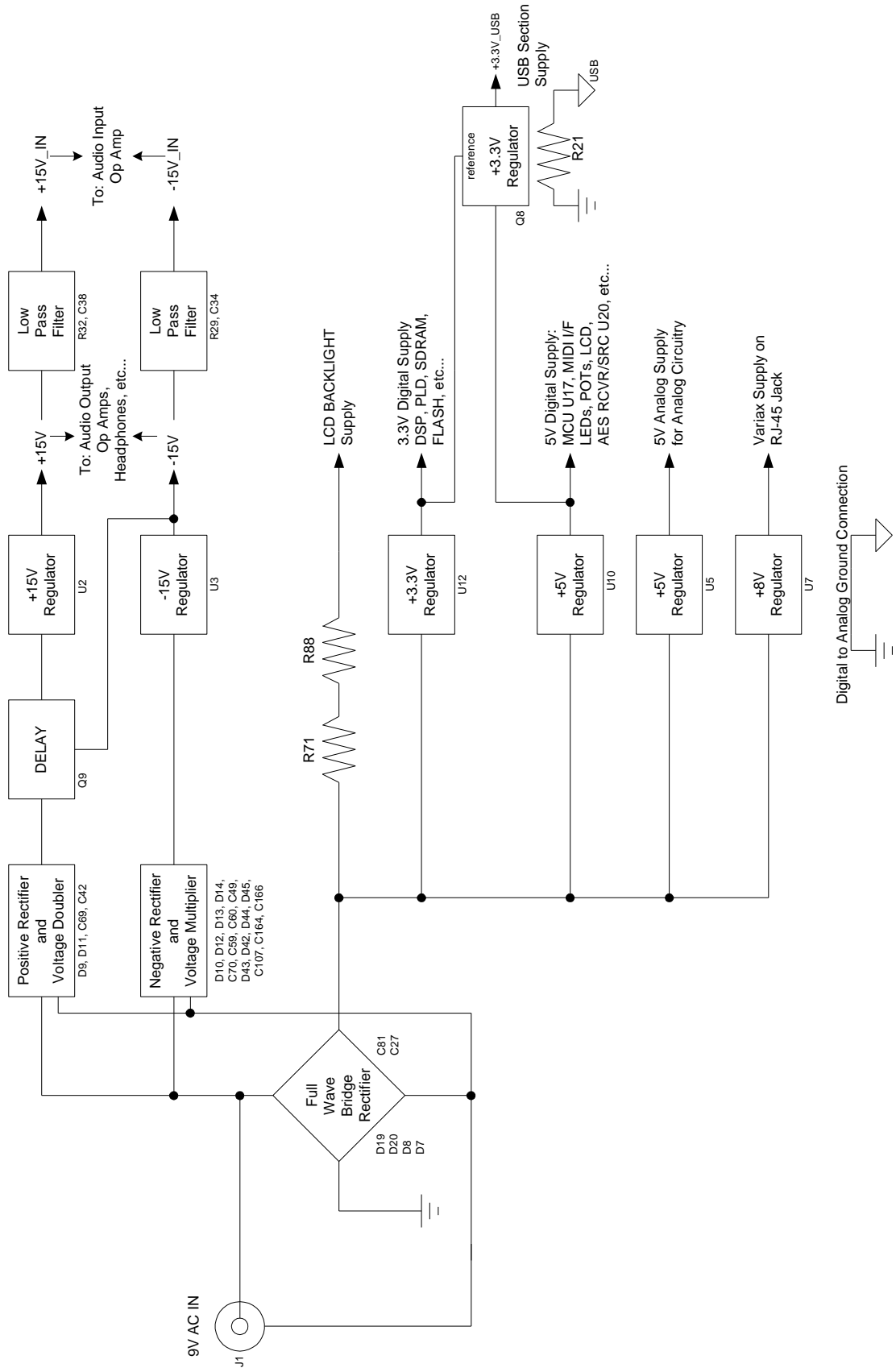
- On the +15V branch, the 9VAC is rectified and voltage doubled to approximately +20VDC with respect to ground by C69, D9, D11, and C42. The transistor Q9 with R152 and R153 acts as a delay such that the +15V supply rail will not come up until the -15V supply rail is stable. This delay helps reduce the audio thump that may otherwise occur when the unit is turned ON. Voltage regulator U2 takes +20VDC and produces the +15V rail.
- The -15V branch is a bit more complicated
Since the +AC net is positively offset with respect to ground due to the full-wave rectifier, a simple voltage “doubler” is not adequate to get the approximate +9V to a value less than -15VDC. Therefore, the voltage is simply doubled, (C70, D10, C59, D12 and C60) giving around -10V, and then it is doubled again to produce around -20V by D13, C49, D14 and C47. In order to help insure symmetrical current draw from the external transformer and at the same time provide adequate current output of the -15V rail, a second voltage “quadrupler” is used in parallel and out-of-phase with the other “quadrupler” just described. This second multiplier consists of components C107, D43, D42, C165, C164, D44, C166, and D45. Its output is also around -20VDC, but it draws current during the negative going AC peak.

- The third branch of the 9VAC feeds a full wave bridge rectifier (D7, D8, D19, and D20). The output of this rectifier is smoothed to around +10VDC mostly by C81. This +10VDC output is labeled +V_UNREG on the schematic.
 - The +V_UNREG is current limited by two 27 ohm 3W resistors and sent to supply the backlight for the LCD module. Since the LCD backlight supply is not regulated the LCD backlight intensity may vary slightly with the AC main voltage.
 - The +V_UNREG is regulated by adjustable regulator U12 down to +3.3V (digital supply).
 - The +V_UNREG is regulated down to +5V by U10 for the +5V digital supply.
 - The +V_UNREG is regulated down to +5V by U5 for the +5V analog supply for the Codec and immediate circuitry.
 - The +V_UNREG is regulated down to +8V by the adjustable regulator U7 for the Variax supply that is sent out the RJ-45 jack on the rear panel. Note that care has been taken to assure that shorting the contacts of the RJ-45 jack (and thus short circuiting the +8V Variax supply) does not damage the POD XT LIVE in any capacity.

The +15V and -15V rails are further filtered by the R32/C38 and R29/C34 networks to generate the +15V_IN and -15V_IN which are used to supply a very clean power supply for the input op amp U1 for the guitar input.

Without special care, a 1KHz audio tone may appear on the audio signals when the USB connection is used and a ground loop is present between the host PC and the audio system. To avoid this problem, the USB section has its own 3.3V supply (+3.3V_USB) made of Q8 and its associated circuitry, and an insulation resistance (R121) between the digital ground and the USB ground (see page 4 of the Main PCB). With this circuit, the 3.3V_USB current is derived from the +5V supply and the +3.3V is only used as a voltage reference.

POD XT LIVE POWER SUPPLY BLOCK DIAGRAM



Input / Output System and Control:

The following Input and Output (I/O) signals control the POD XT LIVE operation and system mode.

GUITAR_IN_SENSE (MAIN PCB):

The status of the Guitar Input Jack is read from the GUITAR_IN_SENSE line by I/O pin 78 of the DSP U26. It is high when a jack is plugged in the guitar input and low otherwise. When this signal is read low (= no jack plugged in), and the Variax input is unplugged, the DSP mutes the audio signal path in order to keep the noise on the audio outputs at a minimum

DIROUT LEFT_SENSE and DIROUT RIGHT_SENSE (MAIN PCB):

The status of the Direct Output Jacks is read from the DIROUT LEFT_SENSE and DIROUT RIGHT_SENSE lines by I/O pin 199 and 201 of the DSP U26. Each line is high when the corresponding jack is plugged in, and low otherwise. Currently the state of these lines has no effect on the operation of the unit.

HEADPHONE_SENSE (HEADPHONE OUTPUT PCB):

The status of the Headphone output Jack is read from the HEADPHONE_SENSE line by I/O pin 79 of the DSP U26. It is high when a jack is plugged in the headphone output and low otherwise. Whenever headphones are plugged in, the DSP is set to “STUDIO DIRECT” mode.

User Interface Potentiometers and Pedals (MAIN PCB):

The POD XT Live has six user interface potentiometers, a variable position pedal, and an external expression pedal input. The pots and pedals provide a voltage from 0 to 5Vdc. These voltages are digitized by the 12-bit resolution ADC (U31). This ADC sends the results over a digital serial stream to the MCU (U17) on the SPI_DATA_MISO line clocked and gated by the SPI_CLK and SPI_AD_CS* lines.

User Interface LEDs / Seven Segment Display (MAIN PCB, SWITCH PCB):

All of the user interface LEDs and seven segment display are grouped in a 3 X 13 multiplexed matrix under control of the MCU (U17). The LED_IMAGE0...LED_IMAGE12 lines drive the matrix rows (via drivers U16 and U18). The LED_GROUP0*...LED_GROUP1* lines drive the matrix columns using FET transistors Q4, Q5, and Q6 to sink the column current. Under software control, only one LED group line is active at a time. For each LED group a different LED image is presented in the LED_IMAGExx lines. This matrix multiplexing happens so fast that the eye perceives all of the LEDs on at the same time. The LED matrix chart is presented on the MAIN schematic page 8. Most of the LEDs including the LED seven segment display are on page 8 of the MAIN schematic. Some of the LEDs go off board to the two halves of the SWITCH PCB via a ribbon cable that connects to H4 of the MAIN PCB.

User Interface Switches and encoders (MAIN PCB, SWITCH PCB):

All of the user interface's switches and two encoders are read using an 8 by 3 multiplexing matrix. The 8 switch matrix rows are read by the MCU (U17) using the lines SW_IMAGE0...SW_IMAGE7 via the PLD (U21). The MCU selects which group of 8 switches (or encoder) to read using the SW_GROUP0*...SW_GROUP2* lines. The two encoders are each different – E1 has 12 steps and E2 has 24 steps.

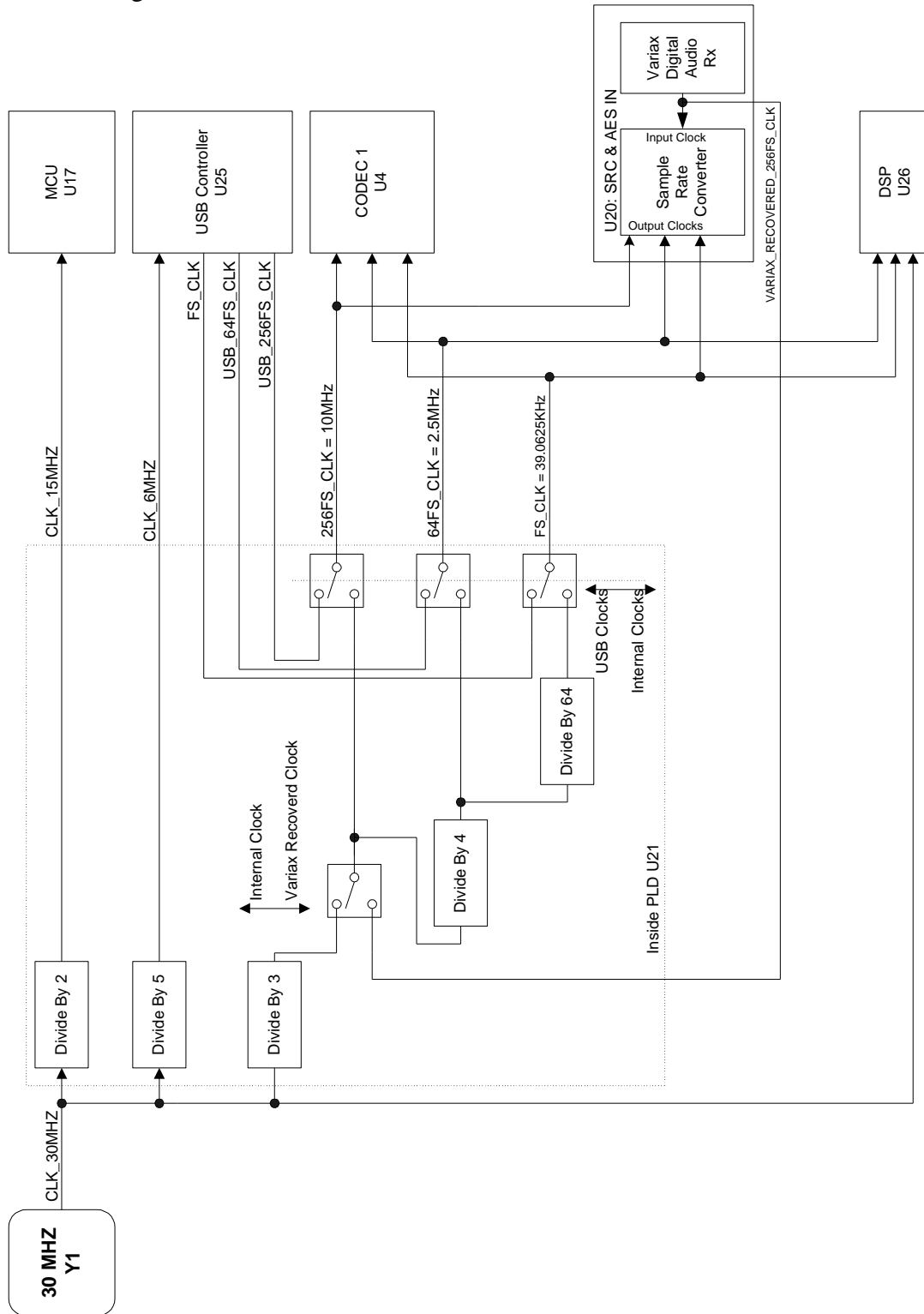
User Interface LCD (MAIN PCB):

The LCD module is written to and read from through the MCU's main bus MCU_AD[0:7]. The MCU firmware can adjust the contrast of the LCD by varying the duty cycle of a 1KHz pulse generated on the LCD_CONTRAST_PULSE line. This pulse is filtered and summed with a minus 5V supply available at pin 4 of the LCD module. This results in an adjustable negative to positive DC voltage at the contrast control input of the LCD (pin3).

The backlight LED array is supplied on pin 20 of the LCD module. Two 27 ohm resistors in series (R71 and R88) set the backlight brightness.

Clock system (Pages 4,5, and 9 of the MAIN PCB):

The drawing below details the clock distribution structure of the POD XT LIVE:

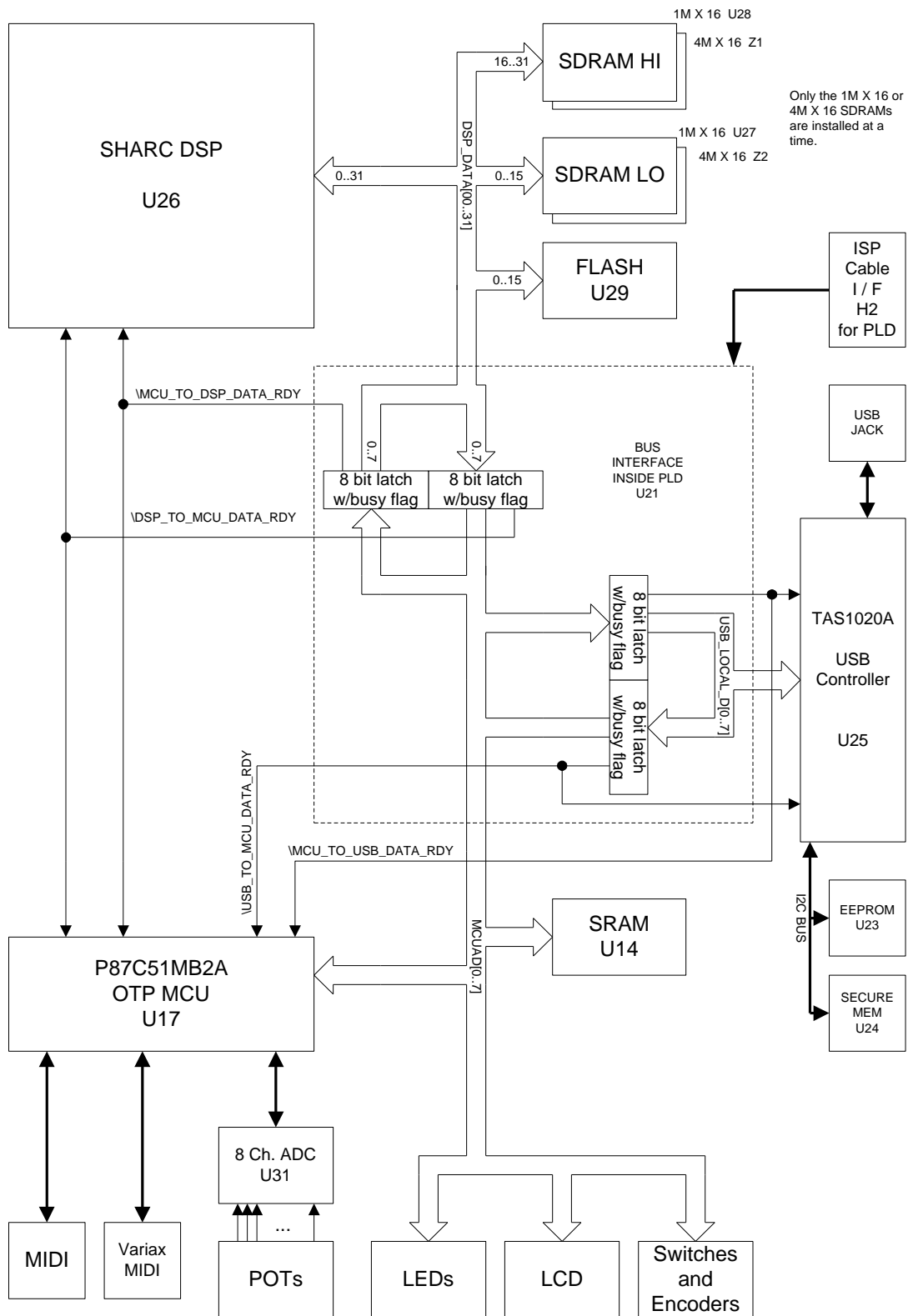


The 30 MHz Oscillator Y1 (via the PLD) generates the bulk of the on board system clocks. PLD U21 derives several clocks from Y1 including: CLK_15MHz for the MCU U17,

CLK_6MHZ for the USB controller U25, and the three internal digital audio clocks. The three internal digital audio clocks are 256FS_CLK (10MHz), 64FS_CLK (2.5 MHz digital audio bit clock), and FS_CLK (39.0625 KHz sample rate). These internal digital audio clocks are used by the DSP, the CODECs, and the Internal side of the Sample Rate Converter IC for the Variax receiver. When the USB controller is active and connected to a PC with an audio application, the three clocks 256FS_CLK, 64FS_CLK, and FS_CLK are generated by the USB controller (see above diagram). When the Variax is plugged in the VARIAX_RECOVERED_256FS_CLK is used in place of the internal clock. When both the Variax and USB are active, the recovered Variax clock is NOT used and instead the Variax digital audio signal is passed through a sample rate converter and synchronized to the USB clocks.

Bus system:

The drawing below details the interconnecting busses between the subsystems of the POD XT LIVE:



The Micro-controller (MCU U17) is the master host controller for the POD XT LIVE. Its data bus (MCU_AD[0..7]) interfaces locally to 128K X 8 of SRAM (U14). All of the user interface components: LCD, LEDs, the Switches, and Encoders are connected to this bus either directly to this bus (LCD), through drivers (LEDs), or via a bus buffer (switches) in the PLD (U21) (pages 7 and 8 of main schematic). This bus is also bridged to both the DSP and USB subsystems via bidirectional latches inside the PLD U21. All address decoding for the MCU is performed inside the PLD. (Note: The above diagram does not show the address bus and control lines).

The MCU U17 is a One Time Programmable microcontroller (OTP). It contains the BOOT CODE ROM for the POD-XT PRO system as well as some internal SRAM. **VERY IMPORTANT** - This chip must be programmed like an EPROM before it can be used in the POD XT LIVE system.

The interface between the MCU and DSP is located inside the PLD U21. If the MCU wishes to send a byte to the DSP, it writes a byte to the MCU-to-DSP latch inside the PLD. Writing this byte causes a busy flag to become asserted (MCU_TO_DSP_DATA_RDY*). When this flag is asserted, the DSP receives an interrupt, which tells the DSP to read the byte from the MCU-to-DSP latch. The MCU_TO_DSP_DATA_RDY* flag is deasserted when the DSP reads the MCU-to-DSP latch. The MCU polls the MCU_TO_DSP_DATA_RDY* line and cannot write another byte until this line is deasserted. This same process works for the DSP_TO_MCU_DATA_RDY* for sending bytes from the DSP to the MCU.

The DSP local bus (DSP_DATA[00..31]) is a 32 bit bus that interfaces 32 bit wide SDRAM in 2 1MX16 chips U27 and U28 (note that you can substitute 4MX16 chips in the overlapping IC locations Z1 and Z2 but this is not currently used) and the FLASH memory U1 to the DSP. This bus is bridged to the MCU bus via the bidirectional latch inside the PLD U21 described in the paragraph above.

The interface between the MCU and USB subsystem is also located inside the PLD U21. This interface bridge is identical to the interface between the MCU and DSP subsystem. The USB local bus (USB_LOCAL_D[0..7]) is only used to bridge the USB subsystem to the MCU bus via the bidirectional latch inside the PLD. All peripherals in the USB subsystem are interfaced via an I²C (Inter IC) bus. The I²C bus is a 2 wire bus used for local low speed serial communication between all I²C compatible chips on a pc board. The I²C bus connects the EEPROM U23 and Secure Memory U24 to the TAS1020A USB controller U25.

Boot Up Sequence:

The POD XT LIVE has quite a sophisticated boot up sequence, which is outlined below:

1. On power up, the reset IC U22 generates an active HIGH reset. This is the master reset for the entire POD XT LIVE system.
2. When this “master reset” line is deasserted, the MCU polls the MCU_EA* during the falling edge of its reset. This line will be HIGH causing the MCU to execute code from its internal OTP ROM.
3. The MCU will deassert the RESET_DSP* line (via the PLD) thus taking both the DSP and USB controller out of reset (see next section below for USB reset process).
4. The MCU will then send the DSP’s boot code to the DSP via the MCU to DSP bridge inside the PLD. This DSP boot code is stored in the MCU’s OTP ROM during power down.
5. Once the DSP has received all of its boot code from the MCU, it loads its runtime code from the FLASH memory located on its data bus and begins execution.
6. The DSP will then send the MCU’s runtime code to the MCU where the MCU will store it in the volatile SRAM U14.
7. Once all of the MCU runtime code is received by the MCU, the DSP will RESET the MCU. The DSP drives MCU_EA* to the LOW state, then asserts SOFT_RESET_MCU to reset the MCU. After the reset period, the DSP deasserts SOFT_RESET_MCU and drives MCU_EA* HIGH again. The MCU will now begin to run its runtime code from the external SRAM U14. The MCU uses the state of the MCU_EA* line during the falling edge of its reset line to determine if it will run its OTP ROM boot code or execute code externally from the SRAM. This time it runs code externally because the DSP held the MCU_EA* low during the falling edge of its reset.

The USB subsystem is reset by the active low signal RESET_DSP*. This signal is a product of the master reset IC so the USB subsystem is reset only during a board power up.

1. When reset is removed from the USB controller U25, its special internal firmware checks the EEPROM U23 to see if it contains the USB controller runtime code. If the EEPROM is blank then the USB controller attempts to load its code via USB jack. If the USB controller is able to load code from the USB jack it loads this code into the EEPROM (This is how the POD XT LIVE tester loads code for the USB into the board.)
2. Once there is valid code in the EEPROM and it is loaded into the USB controller, the USB controller will begin executing this code.
3. Upon executing its runtime code, the USB controller checks the secure memory U8 to see if it is sealed. If it is sealed then USB encryption is enabled. (The secure memory is “Sealed” during the production test process. The “sealing” process ensures appropriate serial numbers are written to the USB encryption subsystem)

Troubleshooting:

This section outlines some common problems that may be encountered when troubleshooting a POD XT LIVE.

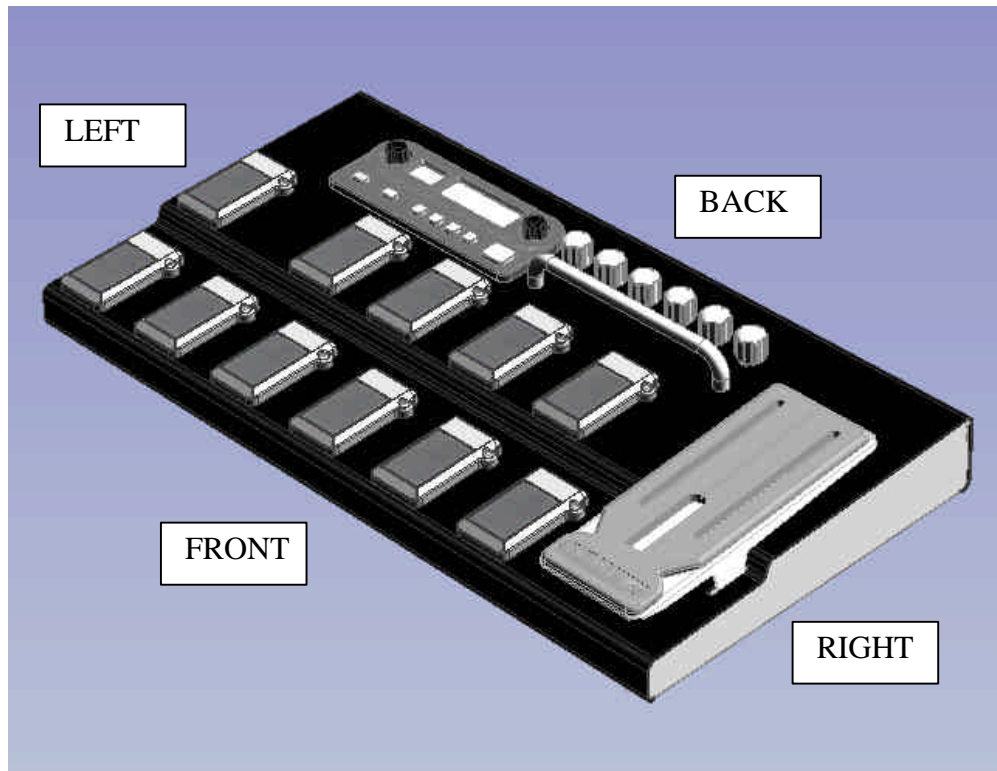
1. Since the USB jack is located next to the RJ-45 jack it was noticed that one can very easily plug the USB cable into the RJ-45 jack. Now, of course, this will not work but the shield of the USB plug will short all 8 lines of the RJ-45 jack. Special care was taken when designing the circuitry of the RJ-45 jack such that shorting the power and ground will not damage the board. The added circuitry should provide adequate protection. If a board is damaged by inserting the USB plug into the RJ-45 jack please notify engineering.
2. The FLASH memory on the POD XT LIVE is updated every seven seconds with any setting changes (eg. MIDI channel, LCD contrast, knob change, etc...). This means that if the POD XT LIVE is powered down in less than seven seconds after a setting is changed then the item will not be stored correctly in the FLASH memory. When the POD XT LIVE is powered back on, its previous setting will be restored.
3. The board powers up and the LCD backlight turns on but the LCD is blank or garbled – if the rest of the system seems to be functioning correctly (TAP tempo light flashes, buttons work, audio passes, etc.) then the LCD reset circuitry may be at fault (Q3) or the LCD module itself may be defective.
4. If the LCD's backlight does not turn on but the rest of the system work properly - check that the 27R resistors on LCD_BACKLIGHT_K are the correct value or are not open circuit. The LCD module's backlight itself may be defective – in this case the only fix is to replace the LCD module.
5. The board powers up but the LCD reports “ERROR CODE 2” or “ERROR CODE 1”. This means that the FLASH memory is empty or invalid. “ERROR CODE 1” means that the MCU runtime code that is stored in the DSP's FLASH is invalid. “ERROR CODE 2” means that the DSP runtime code that is stored in FLASH is invalid. See previous section on POWER UP SEQUENCE for more information. If either of these messages are displayed, then try reprogramming the FLASH memory. If it fails again, then check for faulty soldering on the DSP's bus or MCU bus (see section on BUS SUBSYSTEM for more information). Note also that a faulty device on either of these busses may be at fault.
6. The board is powered up but the LCD is blank and the rest of the system is frozen. First, make sure that the MCU is installed. Second, try another MCU. Third, check for faulty soldering on the MCU bus (especially the MCU socket S1). Fourth, make sure the PLD is programmed properly. This can only be verified with the PLD programming cable and accompanying PC software. One other way to verify that the PLD is ok is to check for all of the clocks that the PLD drives (the clocks can be found on an number of test points throughout the board). Fifth, check the master oscillator Y3 to see if it is generating the 30MHz clock. Sixth, check for faulty components on the MCU bus side. Finally, check that a proper reset is generated by the reset IC U22.
7. The board powers up, the LCD is displaying the correct items, the buttons, knobs, and LEDs work, but there is NO AUDIO. First check that the pedal is in the toe down position and that there is no external expression pedal plugged in. Second, check that the Variax input is unplugged because this will override the guitar input. Third, check

that the signal GUITAR_IN_SENSE is HIGH (HIGH means that a jack is plugged into the POD XT LIVE's guitar input.). If this signal is not HIGH then the guitar in jack J10 or the support circuitry for the sense line is faulty. If the system thinks that a plug is not plugged into the guitar jack it will automatically mute the audio. Fourth, check the audio input circuitry and make sure audio makes it through the input op-amp U1 all the way to the CODEC (U4) inputs. Third, make sure that the codec has the appropriate clocks driving it (See section CLOCK SYSTEM above). Fifth, check the audio path from the output of the codec to the unbalanced direct outs and the headphone circuitry. Sixth, the audio is correct all the way to the codec and the clocks are correct then it is possible that the DSP or an item on its bus is malfunctioning. At this point check for faulty soldering on the DSP or other items on its bus.

8. The buttons and encoders work but the pots do not. First power down and then power up in test mode (Press the SOFT D button under the LCD on power up). If the pots fail in test mode check the ADC U31 and the clocks and/or signals going between this ADC and the MCU.
9. The board seems to be working properly but the LED's do not work. First power down and then power up in test mode (Press the SOFT D button under the LCD on power up). If the LEDs fail in test mode check the U16 and U18 latches as well as FETs Q4, Q5, and Q6. If the LEDs under the UI keypad buttons work but the stomp switch LEDs do not then check the ribbon cable between the MAIN PCB and the SWITCH PCB halves and also check the SWITCH PCB halves themselves.
10. The board seems to be working but the buttons and encoders do not work. First power down and then power up in test mode (Press the SOFT D button under the LCD on power up). If the buttons and encoders do not work in test mode check anything in the SW_IMAGE[0:7] bus and MCU_AD[0:7] bus, resistor pack R116, and any of the switch matrix diodes (see MAIN schematic page 8).
11. The board is running but the USB does not work. Check for faulty soldering on the USB controller U25 as well as the EEPROM U23 and secure memory U24 and pull-up resistors R124 and R130. Check the special USB supply isolation circuit (See schematic page 4). Finally check for faulty components in the USB subsystem.
12. The board is running but the VARIAX interface does not work: Check the AES Receiver/SRC U20 and check the Variax MIDI transceiver U30.
13. The board is running but the MIDI interface does not work. Check the MIDI I/O section for faulty soldering (See schematic page 9). Check for faulty soldering on the MCU U17, the PLD U21, etc.
14. The unit works ok except for the pedal:
 - ?? First: Make sure that the pedal is calibrated properly – you can do this by powering up with the “BANK UP” stomp switch held. This puts the unit into a special pedal calibration test mode. The LCD will display several fields of numbers. Press the “AMP ON/OFF” stomp switch to reset the calibration. Move the pedal to the heel position. Move the pedal to the toe position and depress the pedal's toe switch. Move the pedal back to the heel position. When in the heel position now the “7 MAPPED xxx” number on the LCD should read 0. Move the pedal back to the toe down position (you do not have to depress the toe switch). With the pedal now in the toe down position the “7 MAPPED xxx” number should read 127. You should

also see this number sweep from 0 to 127 as the pedal is moved from heel down to toe down.

- ?? Second: If the pedal fails to calibrate properly you should check the metal lance that moves above the IR sensor. The long part of the lance should be at a 90 degree angle to the plane of the pedal. If the long part of the lance is not at a 90 degree angle to the plane of the pedal you may try adjusting it accordingly.
- ?? Third: After trying all of the above - there may be a problem with the IR emitter or IR phototransistor on the PEDAL PCB. Also, the interconnecting cable between the MAIN PCB and PEDAL PCB may be defective.



Forward and Notes

The information in this booklet applies the Floorpod XT (also known as: PODxt LIVE). It is suggested that the steps for assembly follow the order presented in these instructions.

These instructions deal with the assembling the major sub-assemblies, the final product, and quality/inspection considerations. See also the Related Electrical assembly documentation, for major considerations in assembling the electrical components of the PCBs (through the soldering process and preparation of the board for addition of custom components).

A note on the text: the illustrations in this book are for reference only. In some cases, color and geometry of illustrations may not accurately reflect the color or exact geometry of actual parts.

- ?? Unless otherwise noted, all dimensions are in inches.
- ?? Part identifying notes are in this format: Description (Part Number)
- ?? Drawings are not to scale.
- ?? Torque value tolerance +/- .5 in.-lbs. Do not over tighten any components.
- ?? For clarity, not all component details are shown. This is especially true with respect to cable assemblies. They are often omitted from views to provide a clearer picture of the material discussed. Do not be confused by the absence (or unexpected presence) of any component in the illustrations in this book.



Revision Comment Sheet

Revision	Changes
A	N/A
B	<p>Miscellaneous typographical errors corrected</p> <p>Step 3. Added 1 each pedal support bracket and 2 each nylon washers Added exploded assembly view to Figure 1 Fastener torque values changed</p> <p>Step 4. Fastener torque values changed</p> <p>Step 5. Fastener torque values changed</p> <p>Step 6. Fastener torque values changed Added 2 each steel washers Figure 1 revised</p> <p>Step 8. Instructions Updated with correct part numbers.</p> <p>Step 9. Fastener torque values changed</p> <p>Step 10. Added Lens inspection note</p> <p>Step 11. Fastener torque values changed</p> <p>Step 15. Fastener torque values changed</p> <p>Step 17. Part quantity changed Fastener torque values changed</p> <p>Step 19. UPC/Serial Number label part number corrected.</p>

STEP 1. PEDAL SUB-ASSEMBLY

P/N required:

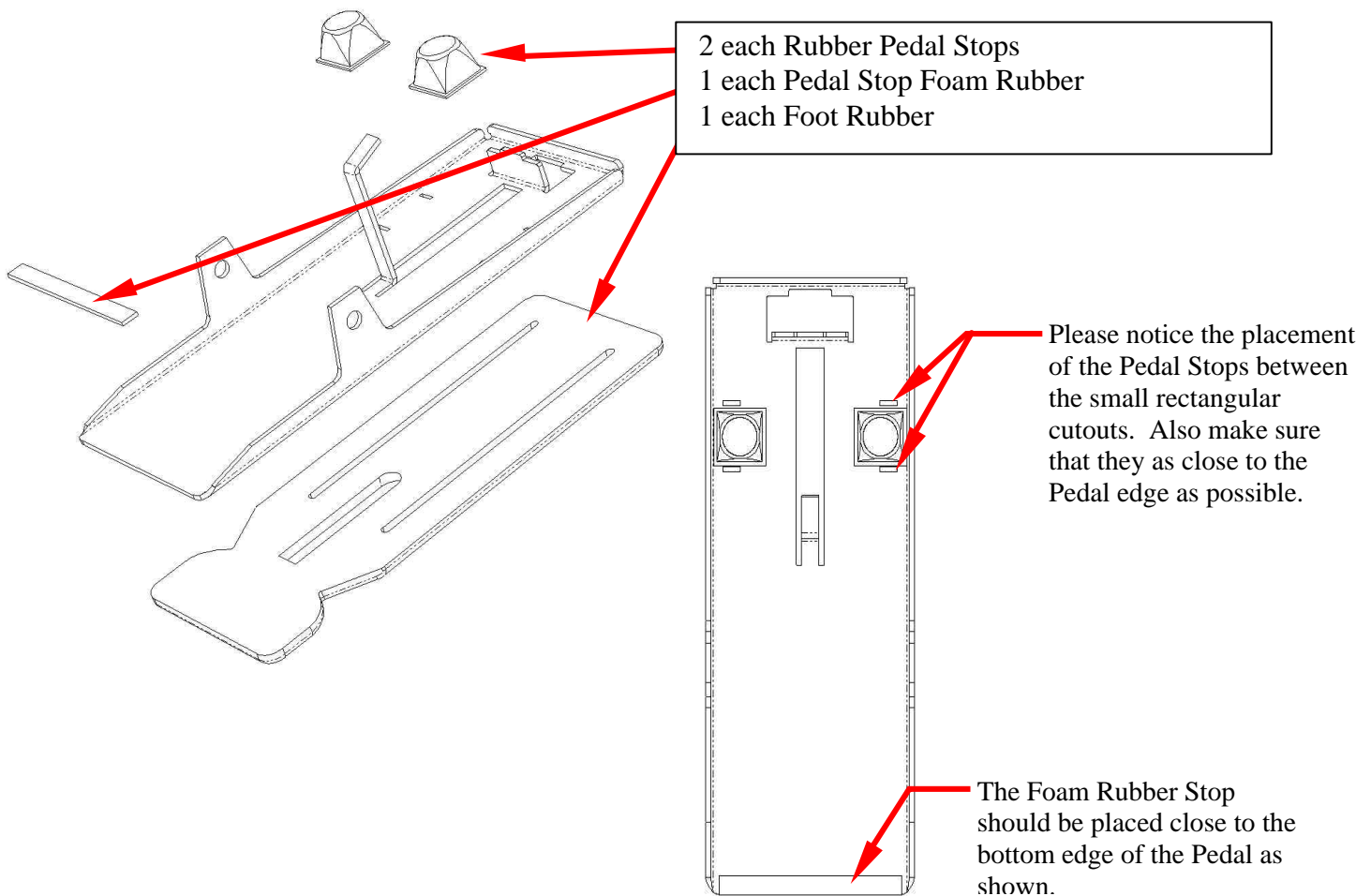
- 1 each **30-75-0002** Foot Rubber
- 1 each **30-51-0181** Pedal
- 2 each **30-75-0011** Rubber Pedal stop
- 1 each **30-75-0007** Pedal Stop Foam Rubber

1.1 Install Foot Rubber onto the Pedal

1.1.1. Install FOOT RUBBER to the PEDAL top surface. Press firmly. The Pedal shall be clean and dry. DO NOT BEND THE LANCE.

Pedal Sub-Assembly

To complete the Pedal sub-assembly the following must be attached to the Pedal. Each rubber part has pressure sensitive adhesive on the side to be attached to the Pedal.



STEP 2. PEDAL PCBA and PEDAL SWITCH PCBA

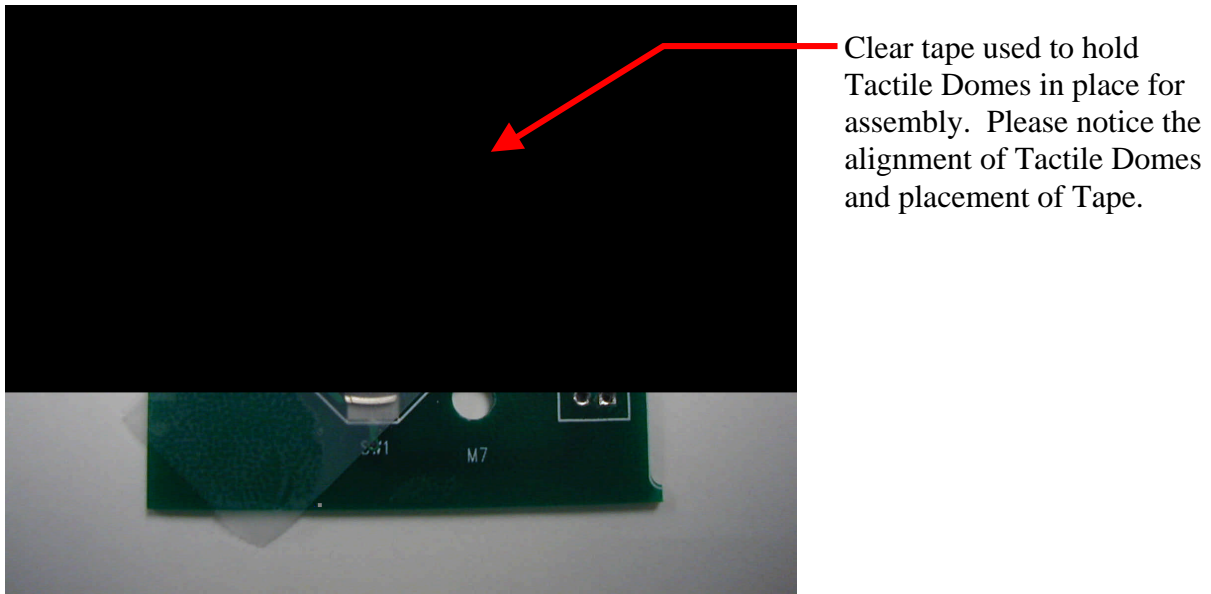
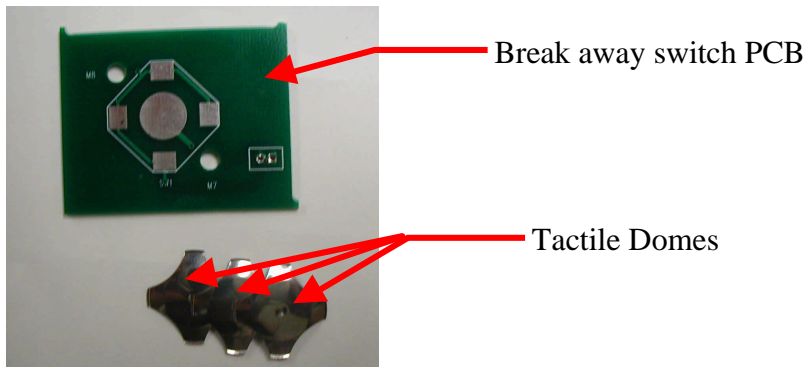
P/N required:

1 each **35-00-0032** Switch PCB (break away part)

3 each **30-51-0078** Tactile Domes

1 each **Scotch Transparent Tape 144** or equivalent

2.1. To complete this sub-assembly place three (3) Tactile Domes aligned on top of each other (make sure there are exactly 3 Tactile Domes used, they are thin and easily miss-counted) and tape them to the Pedal Switch PCB so that the feet of the bottom Tactile Dome rest on the conductive pads.



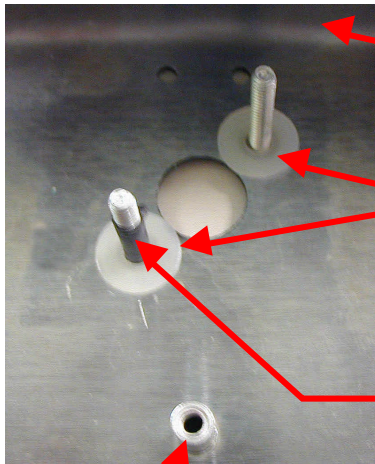
2.2. Pedal Switch PCB to Chassis Assembly

P/N required:

2 each **30-03-0013** Nylon Washers .5 x .170 x .04 thick

2 each **30-15-0005** Round Aluminum Spacers 1/4 OD X .166 ID X .460

1 each **30-15-0006** Insulator Plastic .17 OD X .156 ID X .460 LNG



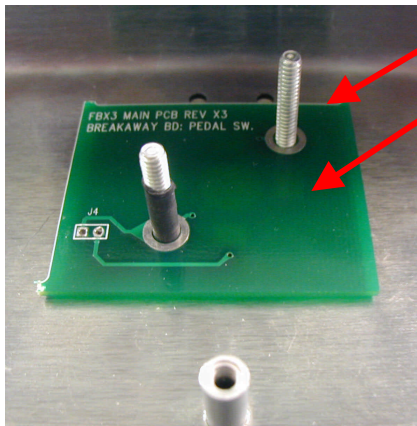
Back surface of the Chassis

Nylon Washers
30-03-0013

Round Plastic Insulator

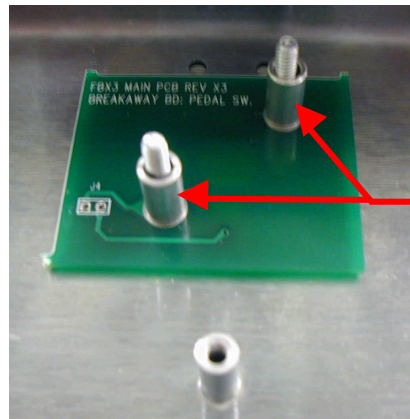
PEM for
Pedal PCBA

IMPORTANT: Note the location of the insulator. The pedal activation will not work if the insulator is not on the correct stud.



PCB breakaway tabs point to BACK of the chassis

Pedal Switch PCB sub-assembly



Round Aluminum Spacers



STEP 3. PEDAL PCBA to CHASSIS Assembly

P/N required:

- 1 each **50-02-0032** Pedal PCBA
- 2 each **30-03-0013** Nylon Washer
- 1 each **30-51-0197** Pedal Support Bracket
- 1 each **30-00-0043** 6-32 x 5/16 Screw with captive star washer
- 2 each **30-06-0623** 6-32 Hex nuts with captive star washer
- 1 each **30-15-0004** Spacer .13 x.63 OD Nylon Black

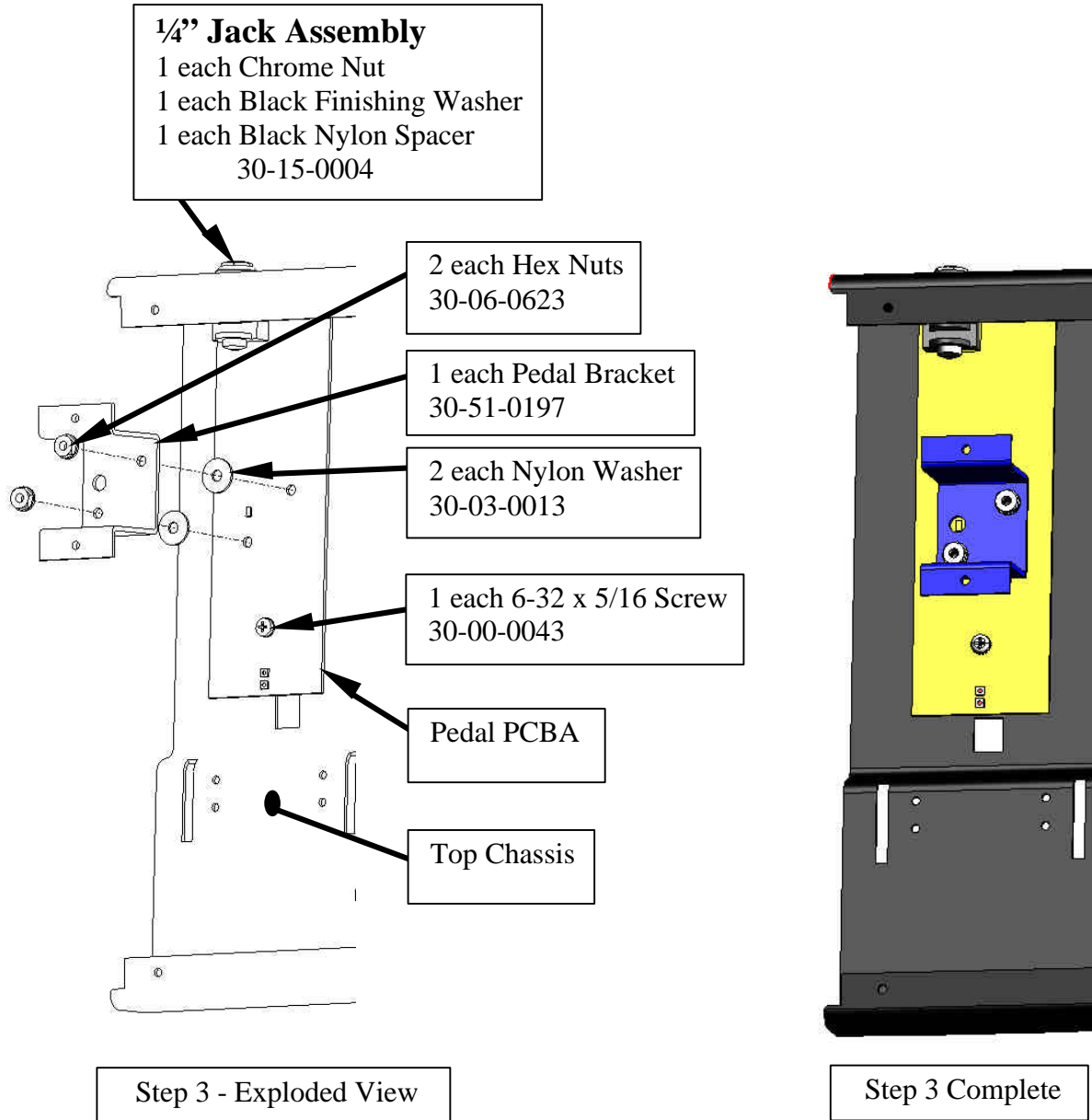
3.1. Install Pedal PCBA

- 3.1.1. Position the PCBA onto the 2 threaded studs
- 3.1.2. Install 2 each Nylon Washers on to the threaded studs.
- 3.1.3. Install the Pedal Support Bracket onto the threaded studs. **Note: the Bracket has a FRONT side that must be positioned toward the Chassis Front.**
- 3.1.4. Install 2 each 6-32 nuts onto the threaded studs. **Only finger tight.**
- 3.1.5. Install 1 each 6-32 x 5/16 PPH machine screw to secure the PCBA to the standoff. **Only finger tight.**
- 3.1.6. Install Black Nylon Spacer, Black Finishing Washer and Chrome Nut onto 1/4" jack on the BACK of the chassis. **See figure 1 on next sheet.**

FASTENER TORQUE VALUE = 5-6 in/lbs

- 3.1.7. Torque screw (30-00-0043) & 2 nuts (30-06-0623).

FASTENER TORQUE VALUE = 10-12 in/lbs



Step 3 – Figure 1

STEP 4. KNOB GUARD INSTALLATION

P/N required:

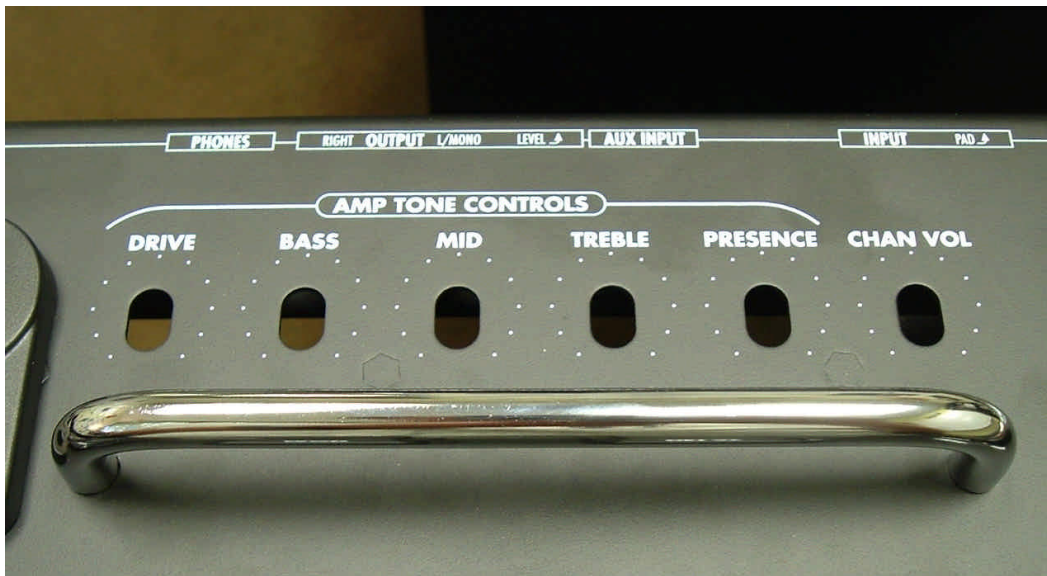
1 each **30-51-0187** Knob Guard

2 each **30-00-0062** Screw 10-32 X 3/8" with star washer

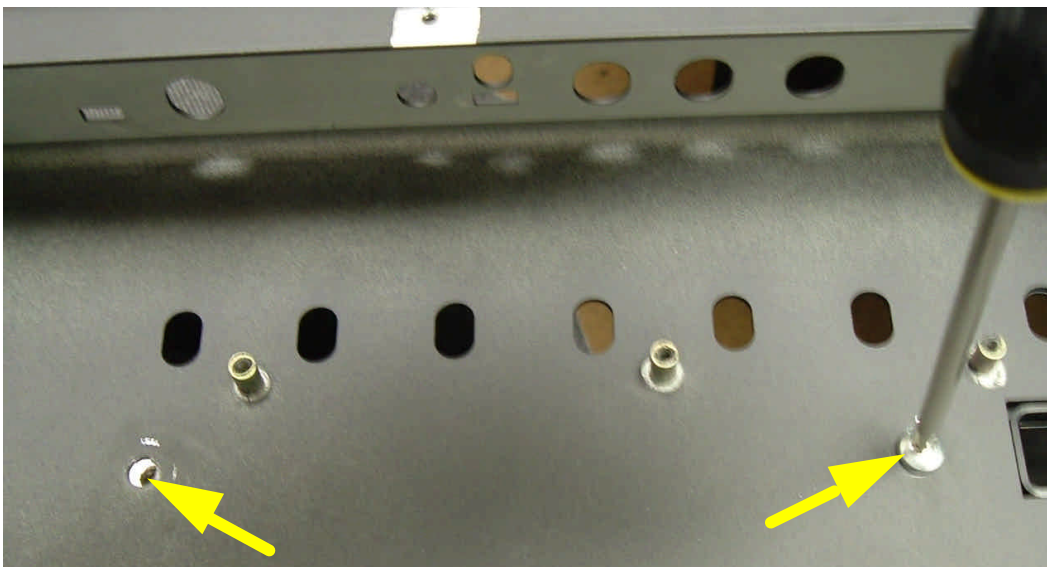
4.1 Install the KNOB GUARD.

4.1.1. Use 2 each 10-32 x 3/8 PPH machine screws, secure the KNOB GUARD to the CHASSIS TOP.

FASTENER TORQUE VALUE = 16-20 in-lbs.



TOP VIEW



BOTTOM VIEW

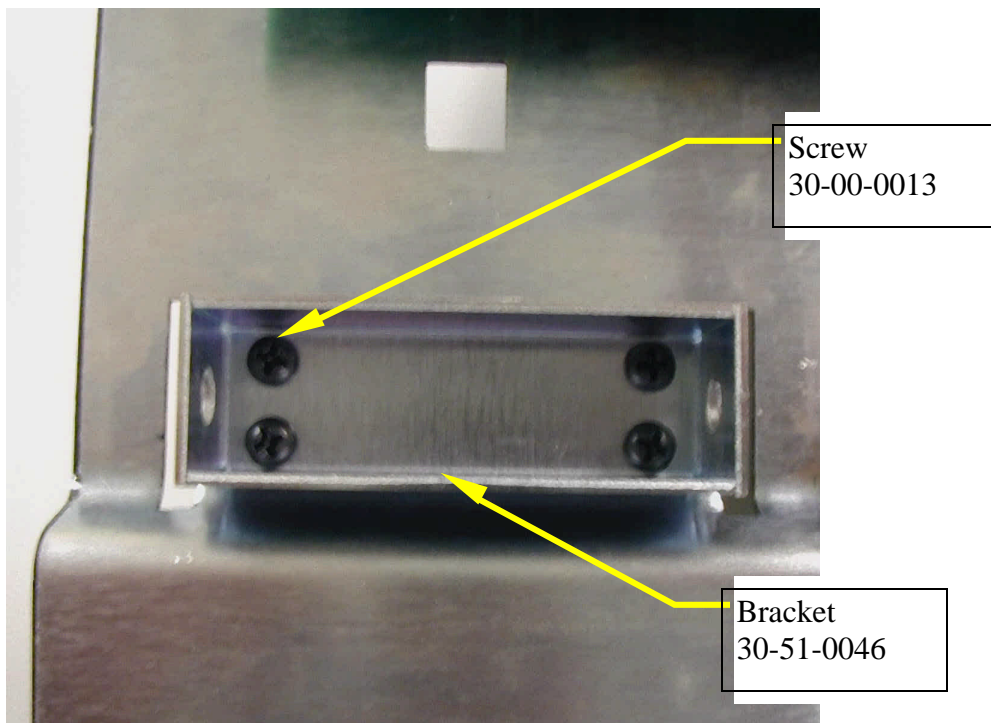
STEP 5. PEDAL BRACKET to CHASSIS ASSEMBLY

P/N required:

- 1 each **30-51-0180** Chassis Top
- 1 each **30-51-0046** Pedal Bracket
- 4 each **30-00-0013** 6-32 x.250 PPH Screws

The Pedal Bracket are attached to the under side of the Chassis using the four 6-32 x.250 PPH screws.

FASTENER TORQUE VALUE = 10-12 in-lbs

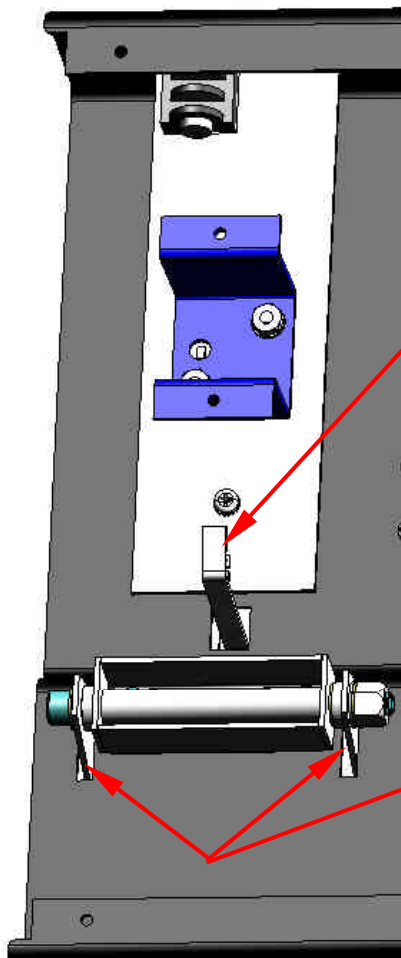


STEP 6. PEDAL ASSEMBLY

The Pedal is attached to the Chassis by using the following parts:

P/N required:

- 4 each **30-03-0003** STEEL WASHERS ¼ ID ½ OD .030 Thick
- 2 each **30-03-0007** NYLON SPACERS ¼ ID ½ OD .125 Thick
- 2 each **30-03-0005** NYLON SPACERS ¼ ID ½ OD .030 Thick
- 1 each **30-06-0009** 1/4-20 LOCKNUT w/ Nylon Insert
- 1 each **30-00-0012** Socket Head Cap Screws 1/4-20 UNC x 3-1/2
- 1 each **30-15-0011** SPACER 0.39 DIA X 2.40 LG.
- 1 each **30-51-0181** PEDAL



1) Pedal lance is carefully guided through chassis. **NOTE:** Take special care not to bend the lance.

2) Pedal mounting lugs are inserted through these slots.

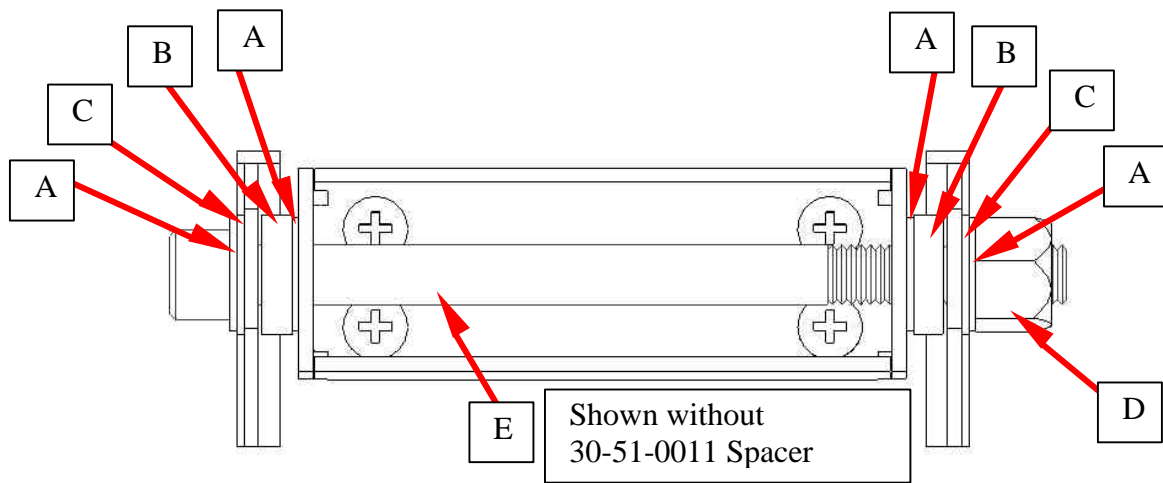
3) Assemble screw, spacer, washer parts, and nut in the correct order, as shown in **FIGURE 1** on next sheet.

STEP 6 PEDAL ASSEMBLY

The Pedal is attached to the Chassis by using the following parts:

Item (SEE FIGURE 1 BELOW)

- A 30-03-0003 Steel Washer ¼ ID ½ OD .030 Thick
- B 30-03-0007 Nylon Spacer ¼ ID ½ OD .125 Thick
- C 30-03-0005 Nylon Spacer ¼ ID ½ OD .030 Thick
- D 30-06-0009 1/4-20 Locknut w/ Nylon Insert
- E 30-00-0012 Socket Head Cap Screw 1/4-20 UNC x 3-1/2



FASTENER TORQUE VALUE = 19 in-lbs.

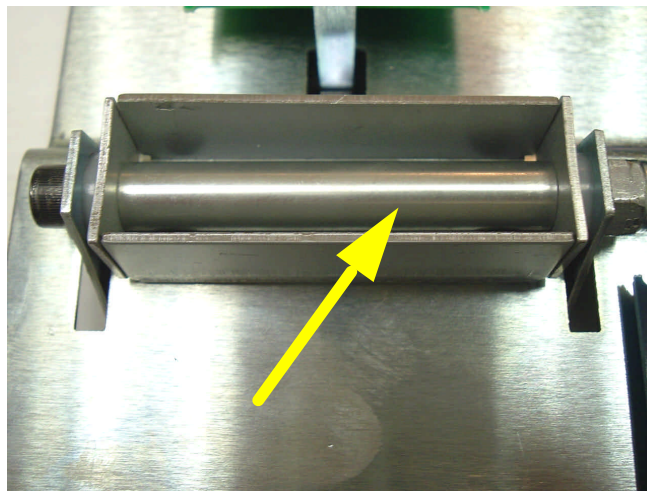


Figure 1, 30-15-0011 Spacer is shown assembled above.

STEP 7. BEZEL INSTALLATION

P/N required:

1 each **30-27-0101** BEZEL

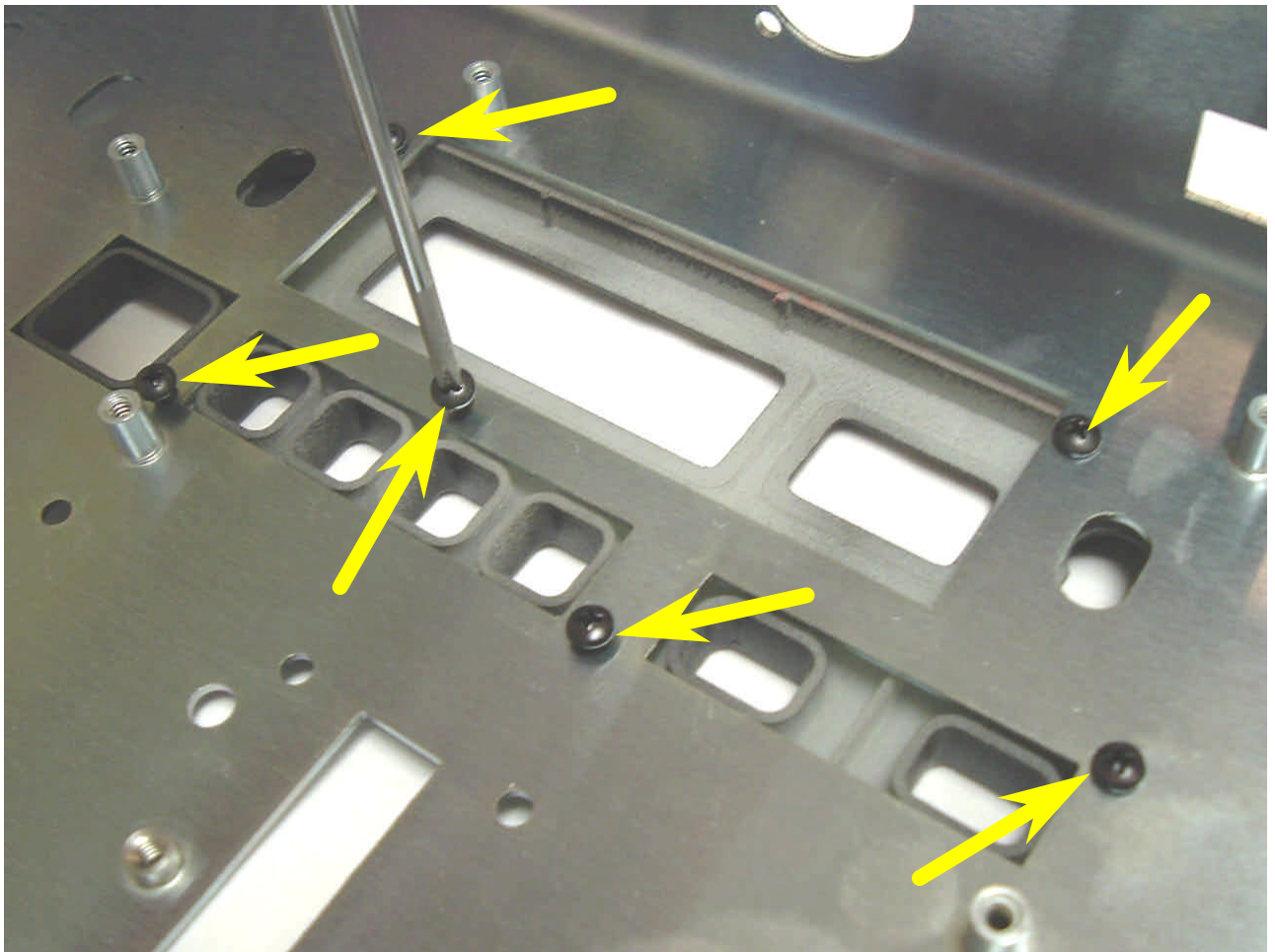
6 each **30-00-4250** #4 x .25 PPH Black sheet metal screw

7.1. Install BEZEL.

7.1.1. Place the BEZEL on the TOP CHASSIS. The bosses on the BEZEL will align with the TOP CHASSIS holes.

7.1.2. Use 6 each #4 x .25 PPH screws to secure the BEZEL.

**FASTENER TORQUE VALUE = 3-4 in-lbs.
Until fully seated against sheet metal.**



STEP 8. FOOTSWITCH INSTALLATION

P/N required:

1 each **50-04-0099-10,11,12,13,14,15,16,17,18** Footswitch Assembly with Light pipe

1 each **50-04-0099-20,21** Footswitch Assembly without Light pipe

22 each **30-00-0042** #4 x .375 PPH Black sheet metal screw

8.1. Install Plastic footswitch assemblies into the Top Chassis in the positions shown below.

8.1.1. 11 each:

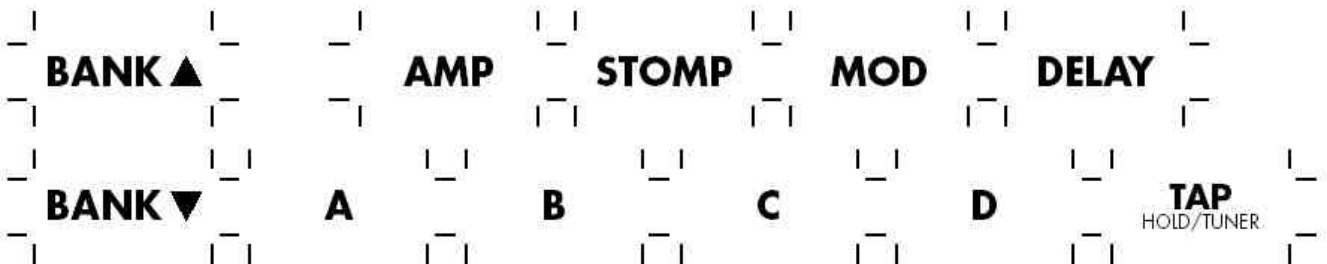
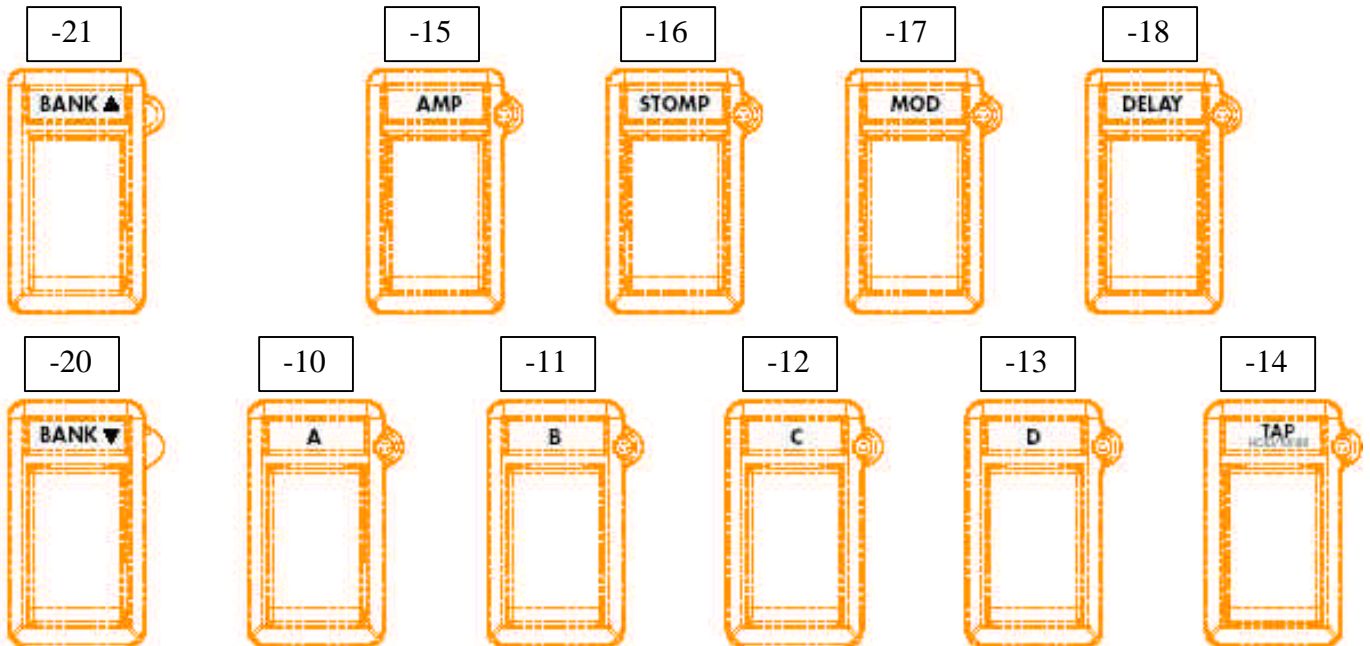
2 without Light pipes (BANK UP & BANK DOWN),

9 with Light pipes (AMP, STOMP, MOD, DELAY, A,B,C, D, TAP).

Notes:

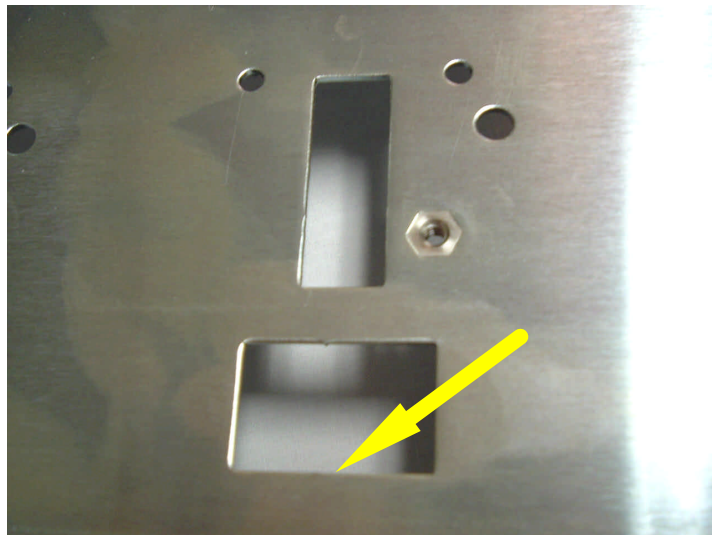
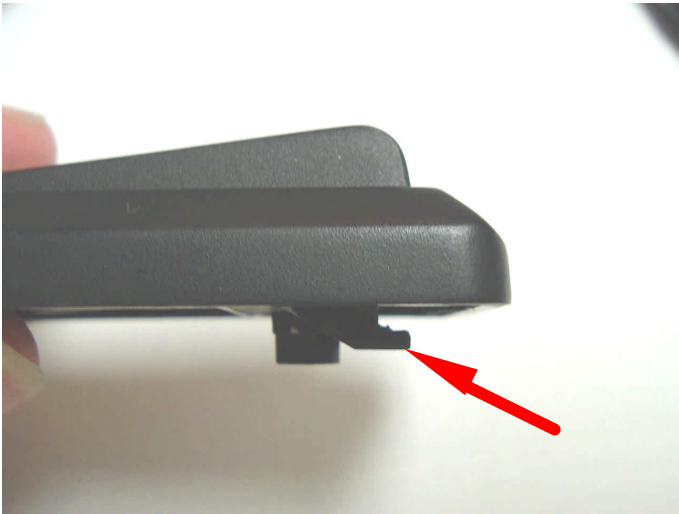
1. Refer to drawing 30-27-0099 for the 50-04-0099 Assembly Reference View.

2. Top Chassis silkscreen shows correct position of Footswitch Assemblies.

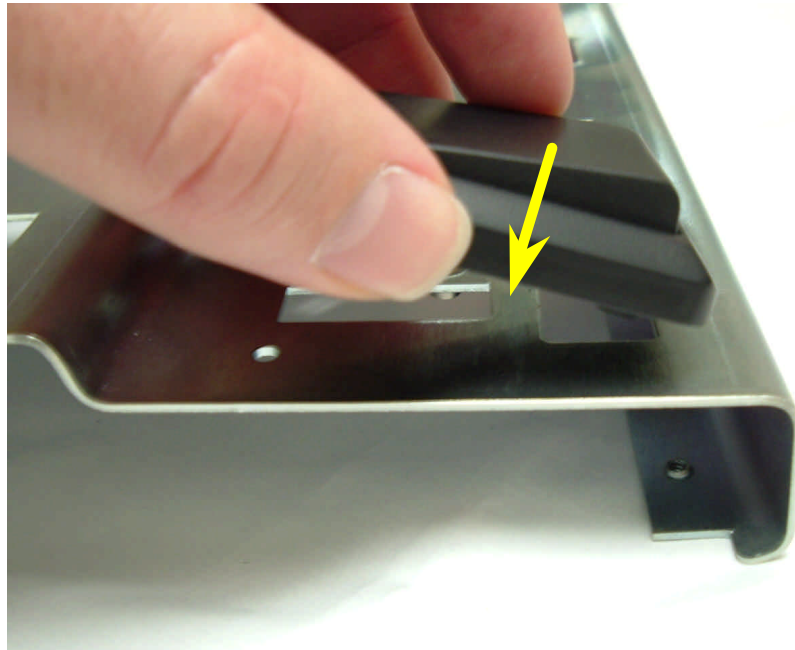




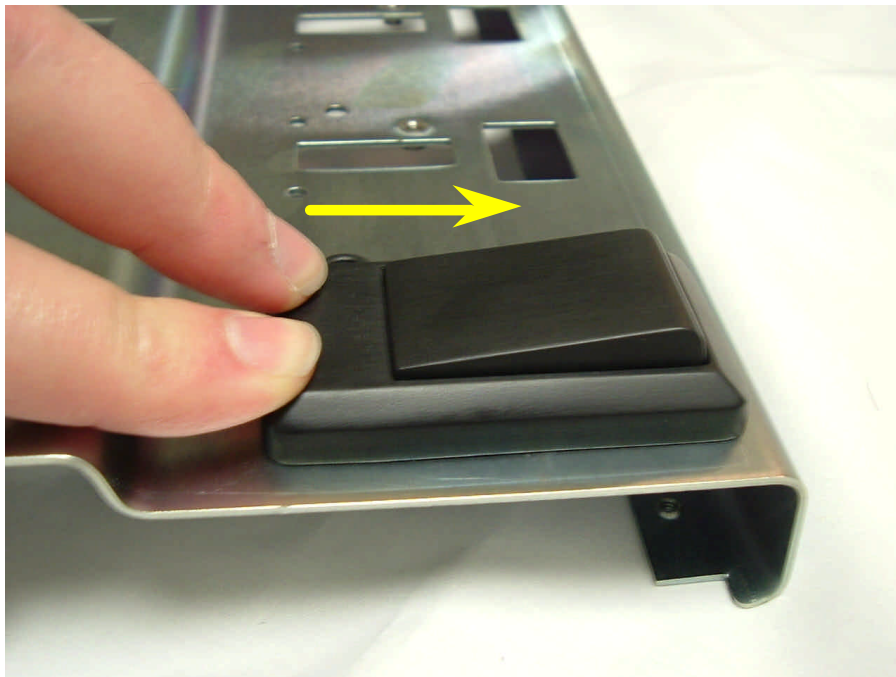
**Bottom feature of Footswitch locks into
front edge of TOP CHASSIS hole**



Top Chassis footswitch



Insert the Footswitch assembly into the Chassis hole

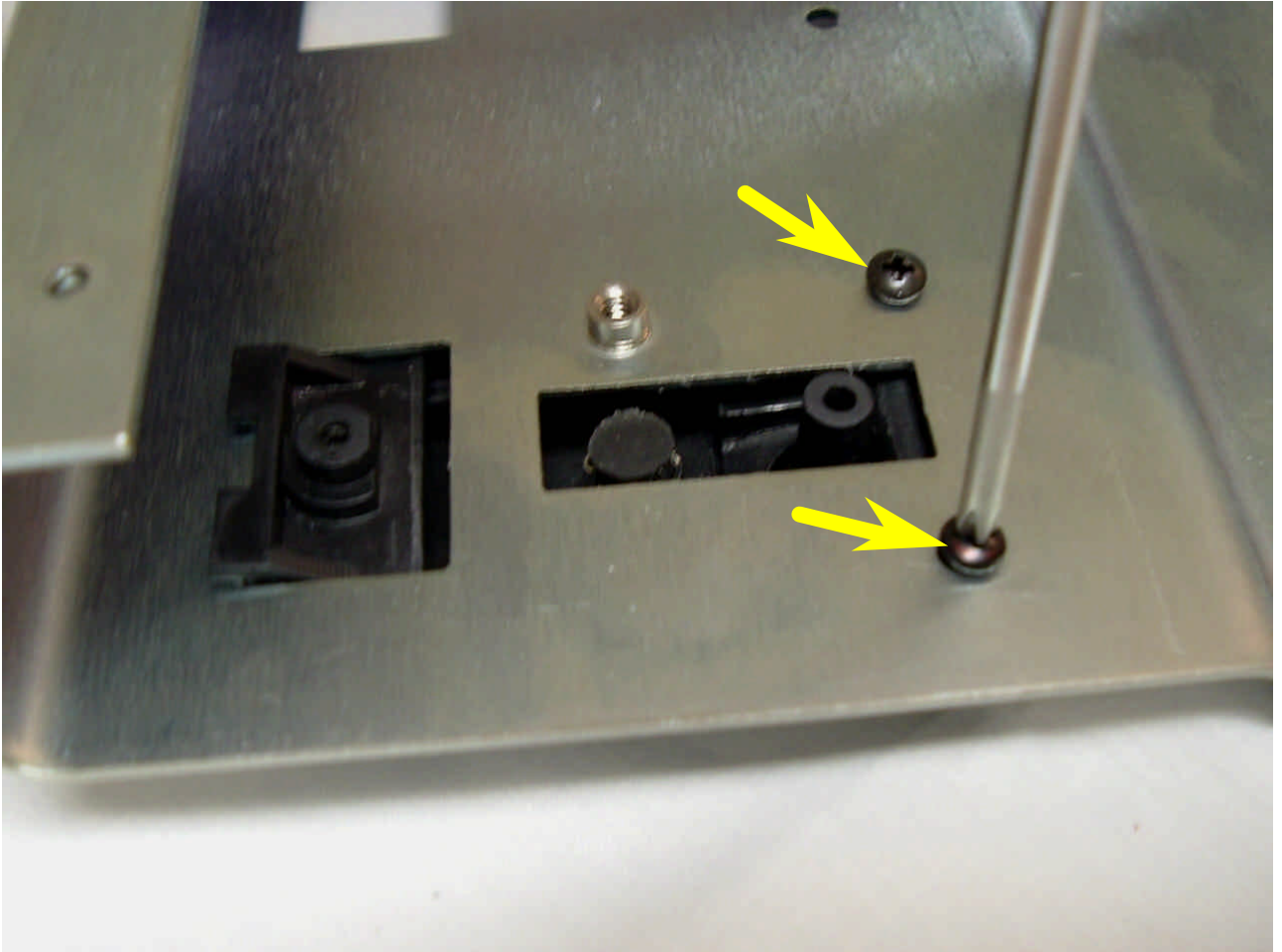


Push forward to fully seat against the sheet metal edge
Footswitch Assemblies with Light Pipes will align with the Light Pipe hole.



8.1.2. Use 2 each #4 x 3/8" PPH screw (30-00-0042) to secure each FOOTSWITCH assembly.

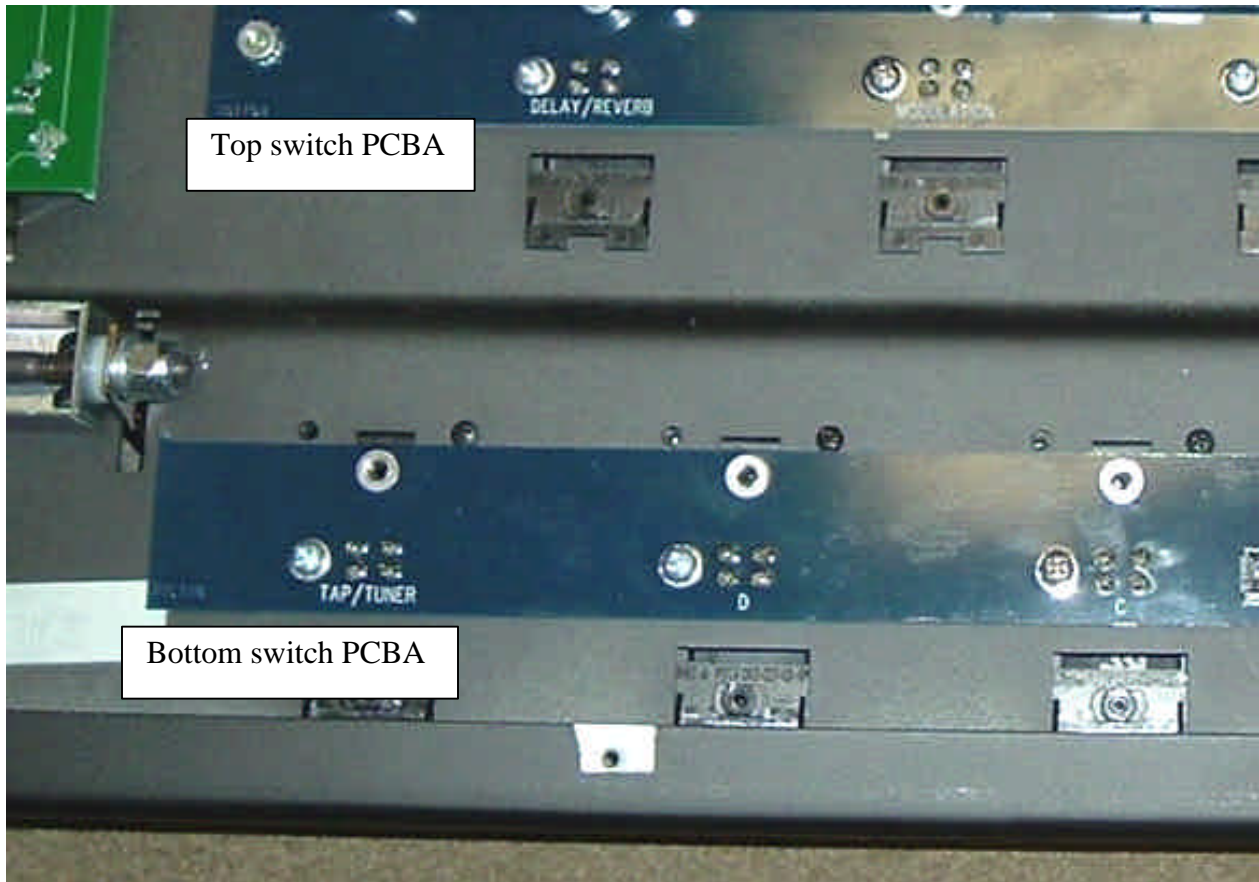
**FASTENER TORQUE VALUE = 3-4 in-lbs.
Until fully seated against sheet metal.**



STEP 9. FOOTSWITCH PCBA INSTALLATION

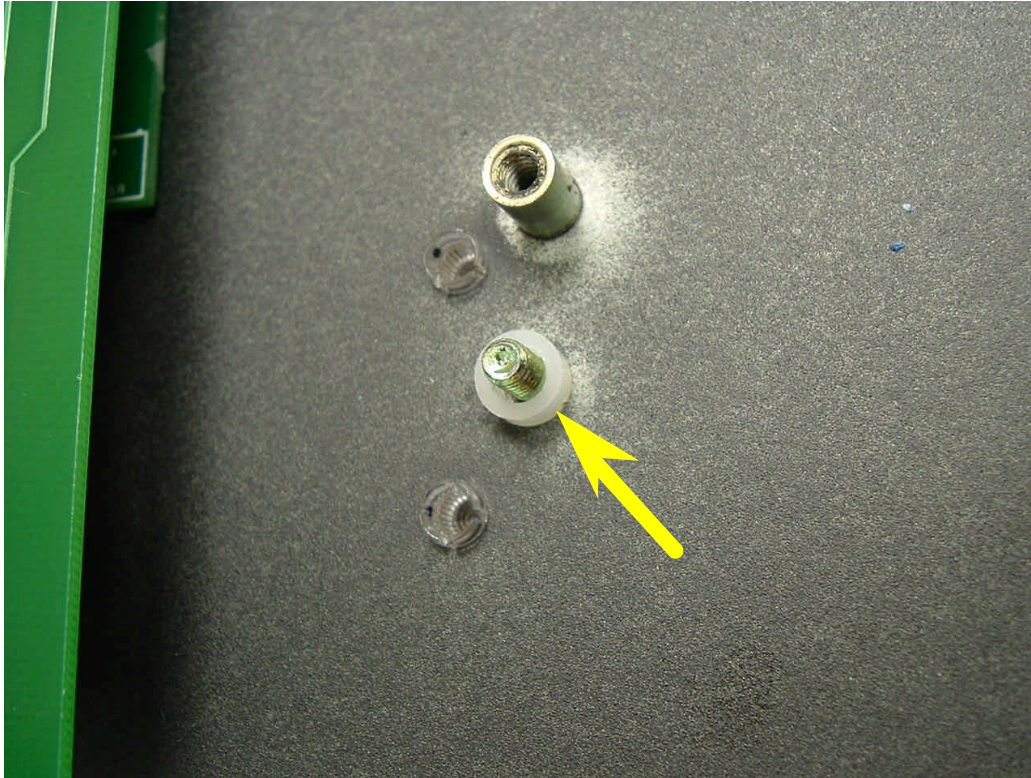
P/N required:

- 1 each **50-02-0033** Switch PCBA (upper row and bottom row)
- 11 each **30-00-0042** #4 x 3/8 PPH Black sheet metal screw
- 11 each **30-00-0043** 6-32 x 5/16 PPH machine screw with lock washer
- 1 each **30-15-0023** #6 x .25 x .125 Nylon Spacer
- 1 each **30-06-0623** Nut hex 6-32 w/captive star washer.



9.1 Install Top Footswitch PCBA

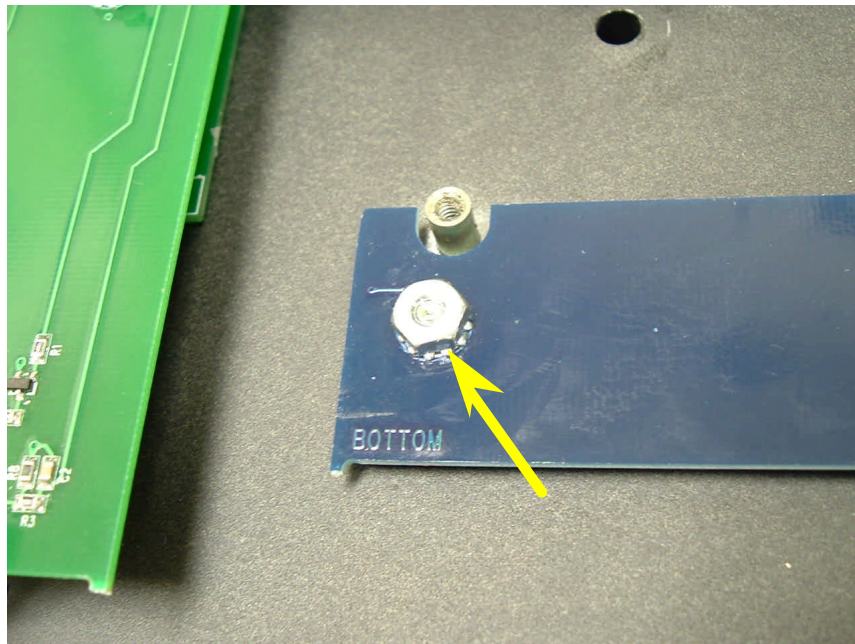
9.1.1. Install 1 each Nylon Spacer on the 6-32 threaded stud located near the pedal PCBA.



9.1.2. Place the PCBA over the stud and spacer and align with the standoffs located near each FOOTSWITCH.



9.1.3. Install 1 each 6-32 nut (30-06-0623) on the threaded stud.
LEAVE THIS NUT LOOSE.



9.1.4. Install 5 each 6-32 x 5/16 PPH machine screws (30-00-0043).

9.1.5. Install 5 each #4 x .375 (30-00-0042) into the FOOTSWITCH bosses.

P/N 30-00-0042 SCREW TORQUE VALUE = 5-6 in-lbs.

P/N 30-00-0043 SCREW TORQUE VALUE = 10-12 in-lbs.

P/N 30-06-0623 NUT TORQUE VALUE = 10-12 in-lbs.

9.2 Install Lower Footswitch PCBA

9.2.1 Place lower PCBA in position over the footswitch hole locations, and chassis PCBA standoffs.



9.2.2 Install 6 each 6-32 x 5/16 PPH machine screws (30-00-0043).

Do not fully tighten.

9.2.3 Install 6 each #4 x .375 (30-00-0042) into the FOOTSWITCH bosses.

P/N 30-00-0042 SCREW TORQUE VALUE = 5-6 in-lbs.

P/N 30-00-0043 SCREW TORQUE VALUE = 10-12 in-lbs.

STEP 10. LENS PLACEMENT

P/N required:

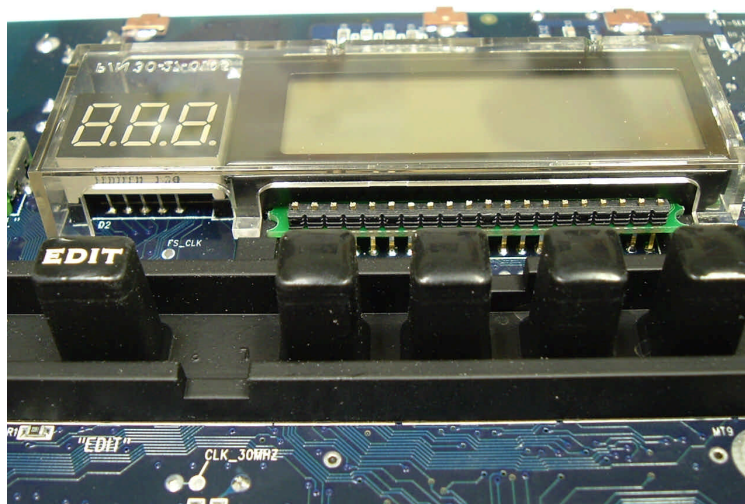
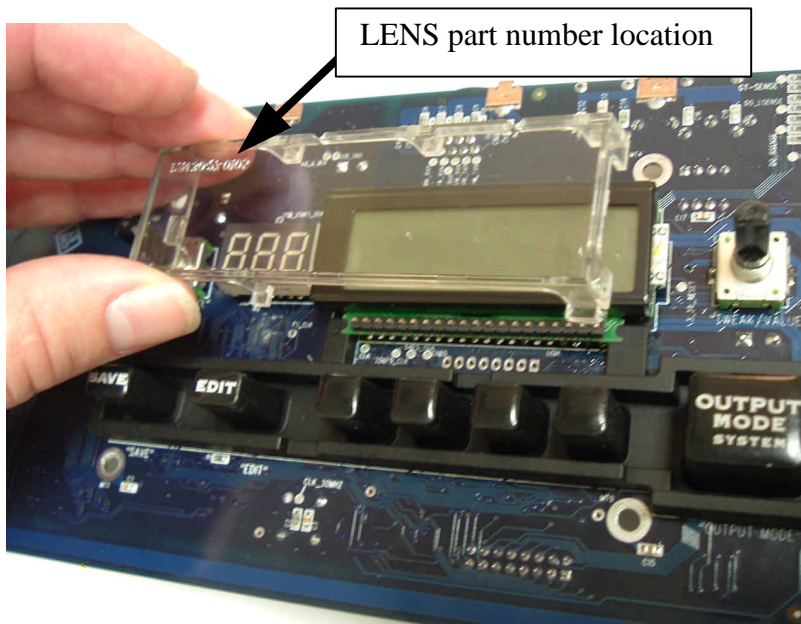
1 each **30-27-0105** LENS

10.1. **Inspect** the LENS for scratches and dust. Use clean, no oil, compressed air OR lint-free cloth to remove dust as necessary. LENS that is scratched in the view area (see part drawing) **MUST BE REPLACED**.

10.1.1. Place LENS over the LED and LCD displays on the MAIN PCBA as shown.

10.1.2. LENS sits on surfaces of the rubber KEYPAD.

The LENS is secured from the top by contacting the BEZEL when the MAIN PCBA is installed.



STEP 11. MAIN PCBA INSTALLATION

P/N required:

1 each **50-02-0030** MAIN PCBA

4 each **30-15-0004** Black Nylon Spacers

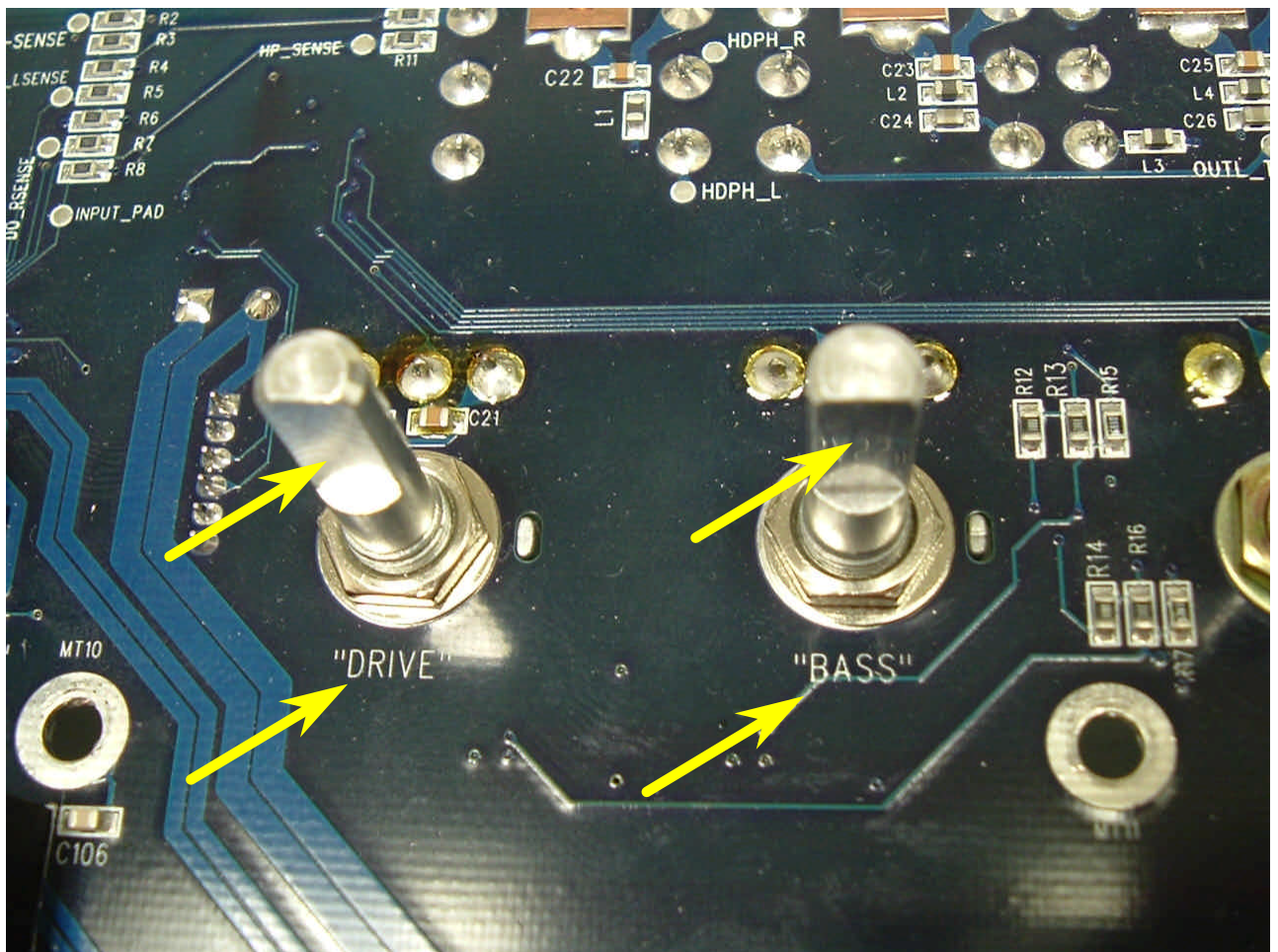
2 each **30-00-0042** SCREW SHEET METAL 4 x 0.375 IN SELF-TAP PPB

2 each **30-00-0375** SCREW 6-32 x .375 PPB

10 each **30-00-0043** SCREW 6-32 x 5/16 w/LK WASH PPZ STL

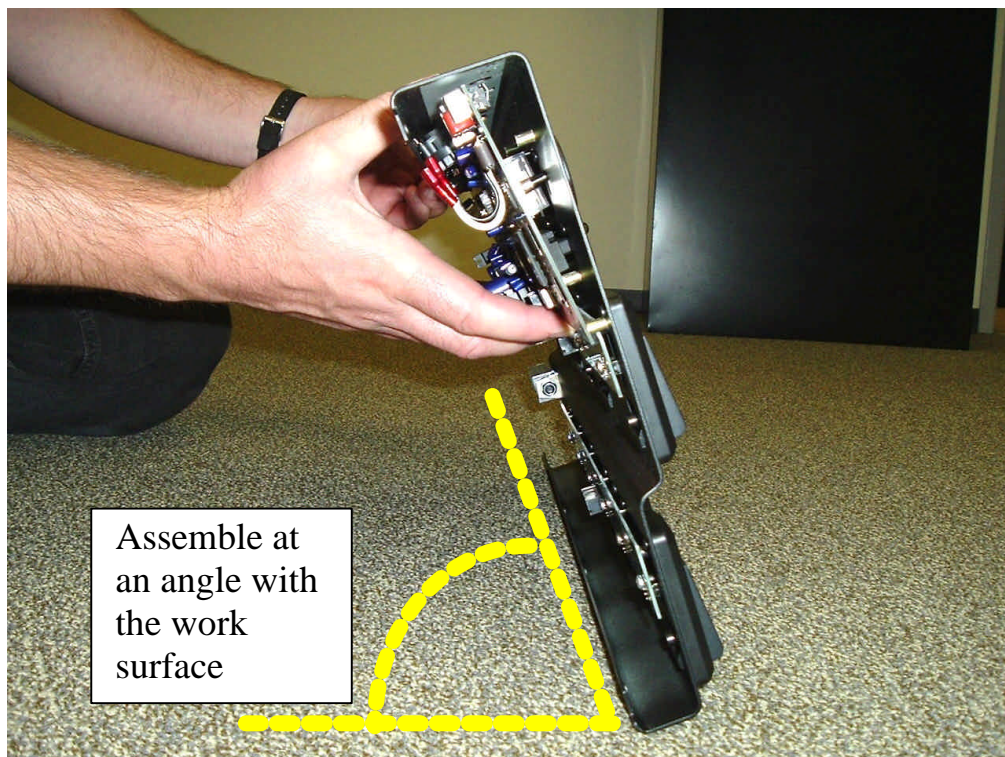
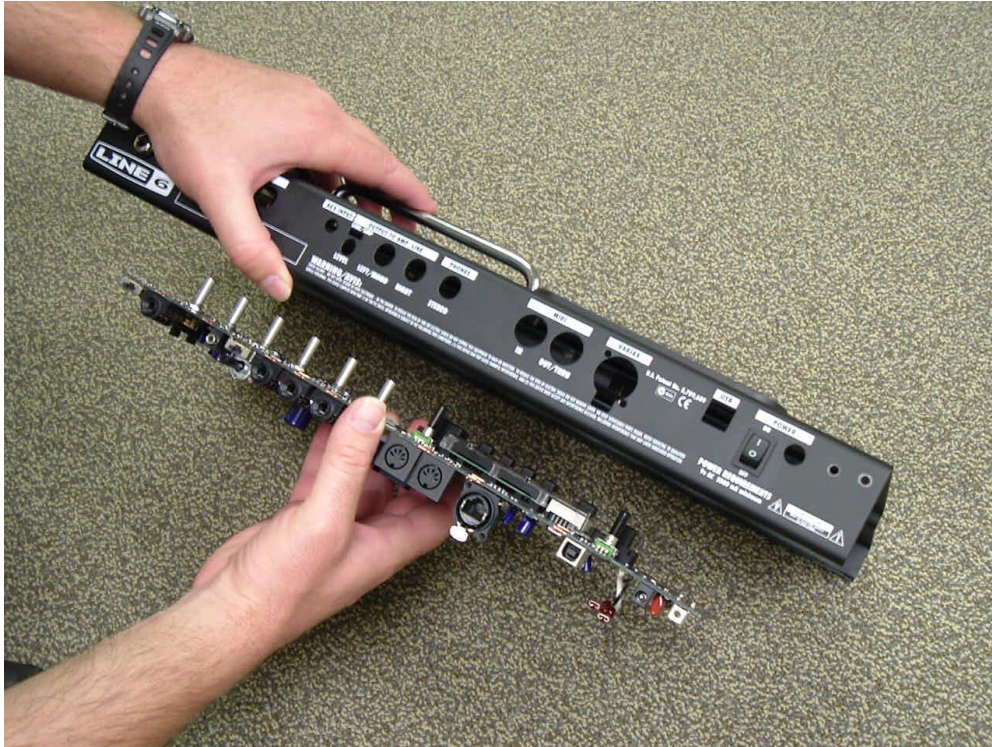
11.1. Install MAIN PCBA.

11.1.1. Align all Potentiometer and Encoder shafts as shown. Shaft FLAT is positioned toward PCBA silkscreen text.

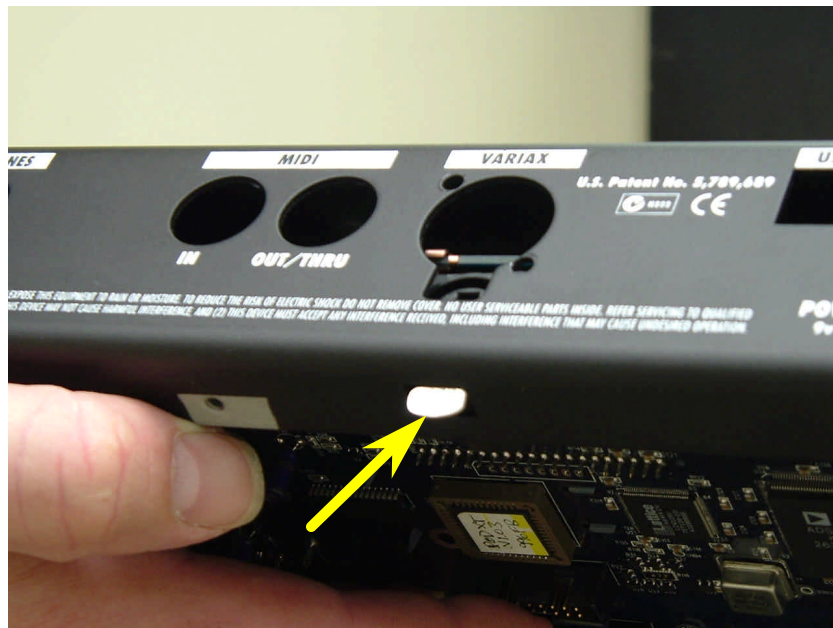
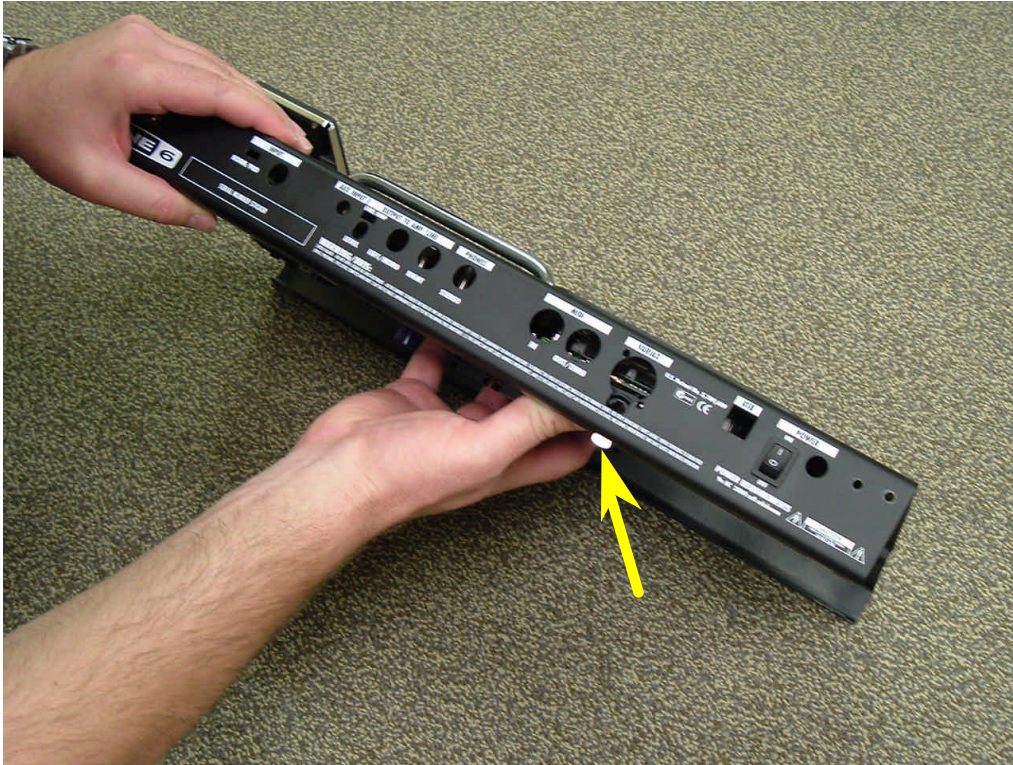




11.1.2. Hold the TOP CHASSIS at an angle as shown below. The DISPLAY LENS and KEYPAD will stay in position if the PCBA is held in an angled position.

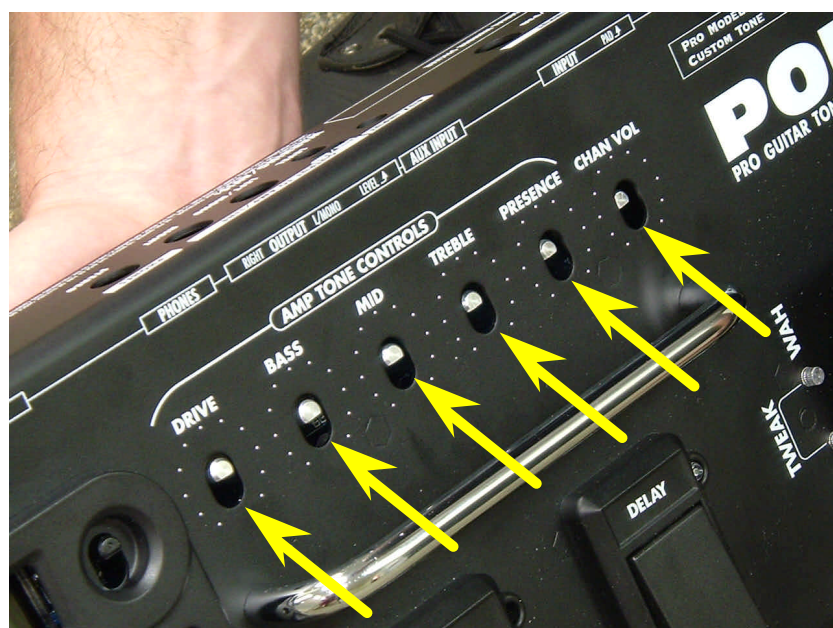


11.1.3. Position the PCBA inside the TOP CHASSIS. The RJ45 locking tab shall insert into the square hole in the bottom of the TOP CHASSIS.





11.1.4. With the PCBA angled correctly, the potentiometer shafts and KEYPAD buttons will align with the TOP CHASSIS and BEZEL holes as shown below.



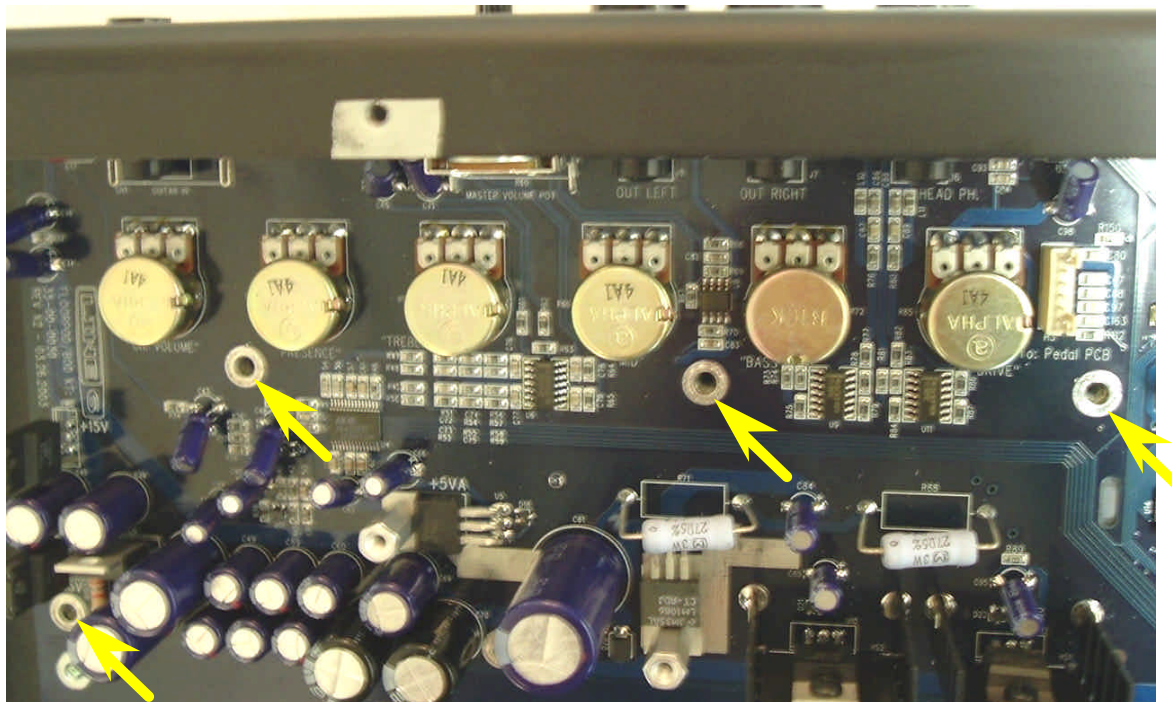
11.1.5. With the PCBA positioned FLAT against the standoffs, install 4 each Black Nylon Spacers , Black Finishing Washers and Chrome Nuts onto the ¼” JACKS.

JACK NUT TORQUE VALUE = 5-6 in-lbs.



11.1.6. Secure the MAIN PCBA with 10 each 6-32 x 5/16 PH machine screws

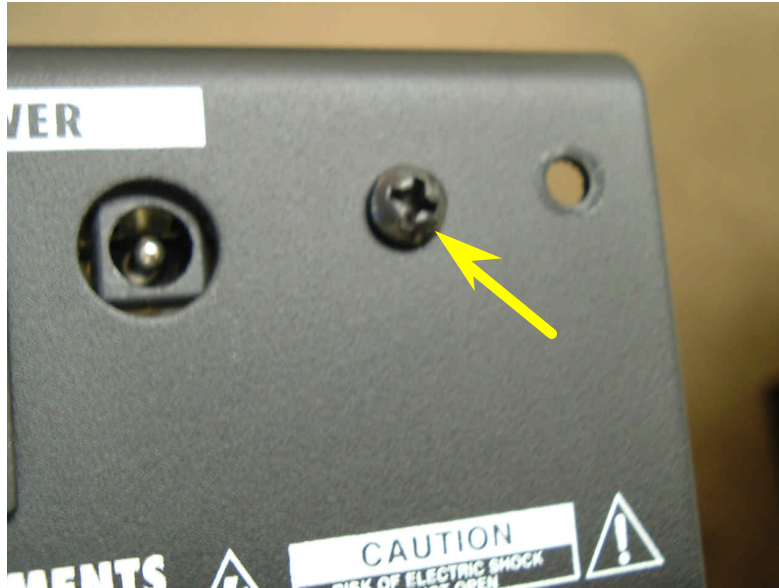
FASTENER TORQUE VALUE = 10-12 in-lbs.



Not all of the screw holes are shown.

11.1.7. Install 1 each 6-32 x 3/8 black PPH machine screw (30-00-0375), from the back of the chassis, into the MAIN PCBA bracket near the POWER JACK.

FASTENER TORQUE VALUE = 10-12 in-lbs.



11.1.8. Secure RJ45 JACK with 2 each #4 x 3/8 screws.

FASTENER TORQUE VALUE = 4-5 in-lbs



11.1.9. Torque the 10 Main PCBA screws (30-00-0043).

FASTENER TORQUE VALUE = 10-12 in-lbs.



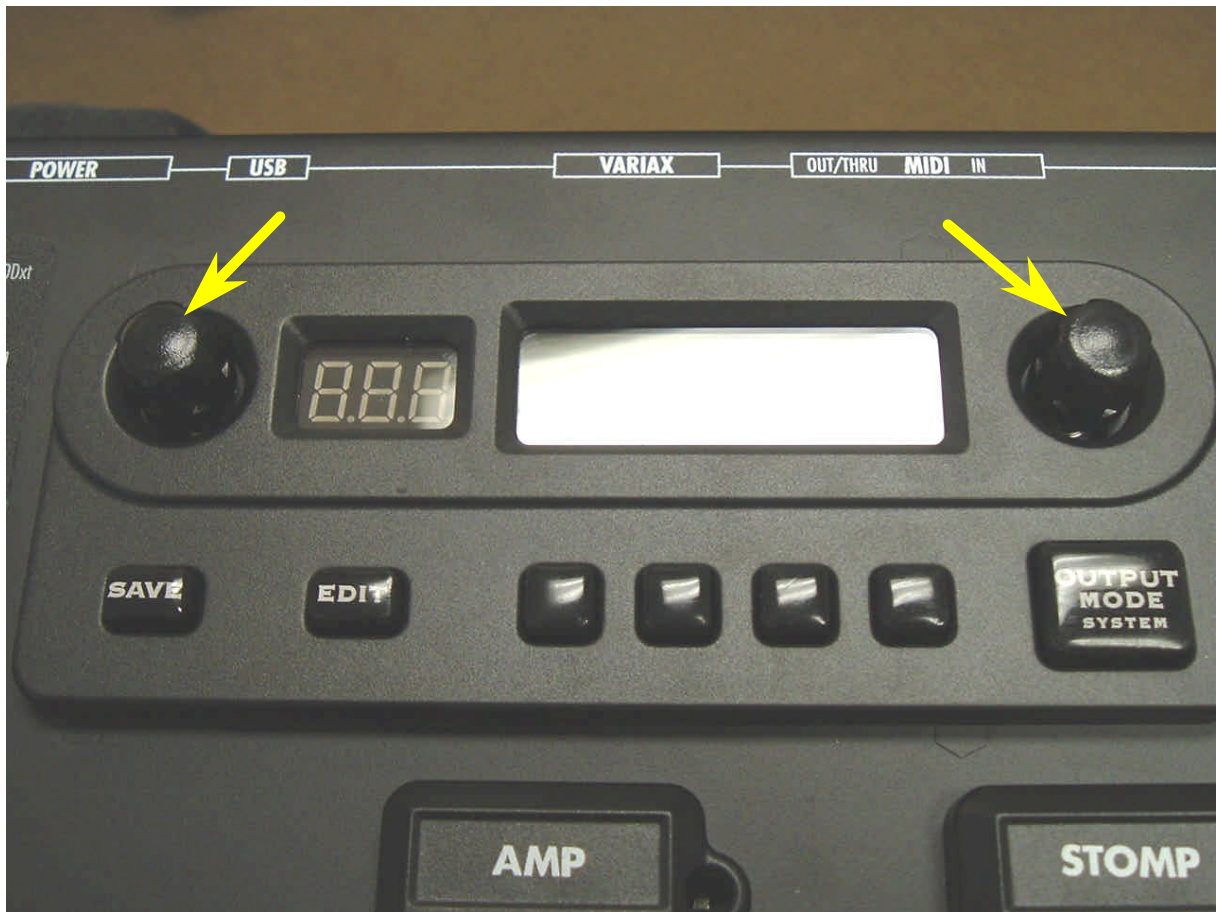
STEP 12. Install KNOBS.

P/N required:

2 each **30-27-0025** Small knob

6 each **30-45-0011** Chrome Knob

12.1. Install 2 each small knob (30-27-0025) on the encoders located in the BEZEL.
Make sure to align the flat portion on the shaft, with the flat inner bore of the knob.



12.2. Install 6 each Chrome Knobs on the potentiometers. Make sure to align the flat portion on the shaft, with the flat inner bore of the knob.
When fully seated, the knobs will be approximately .10 inches away from the top surface of the CHASSIS TOP.



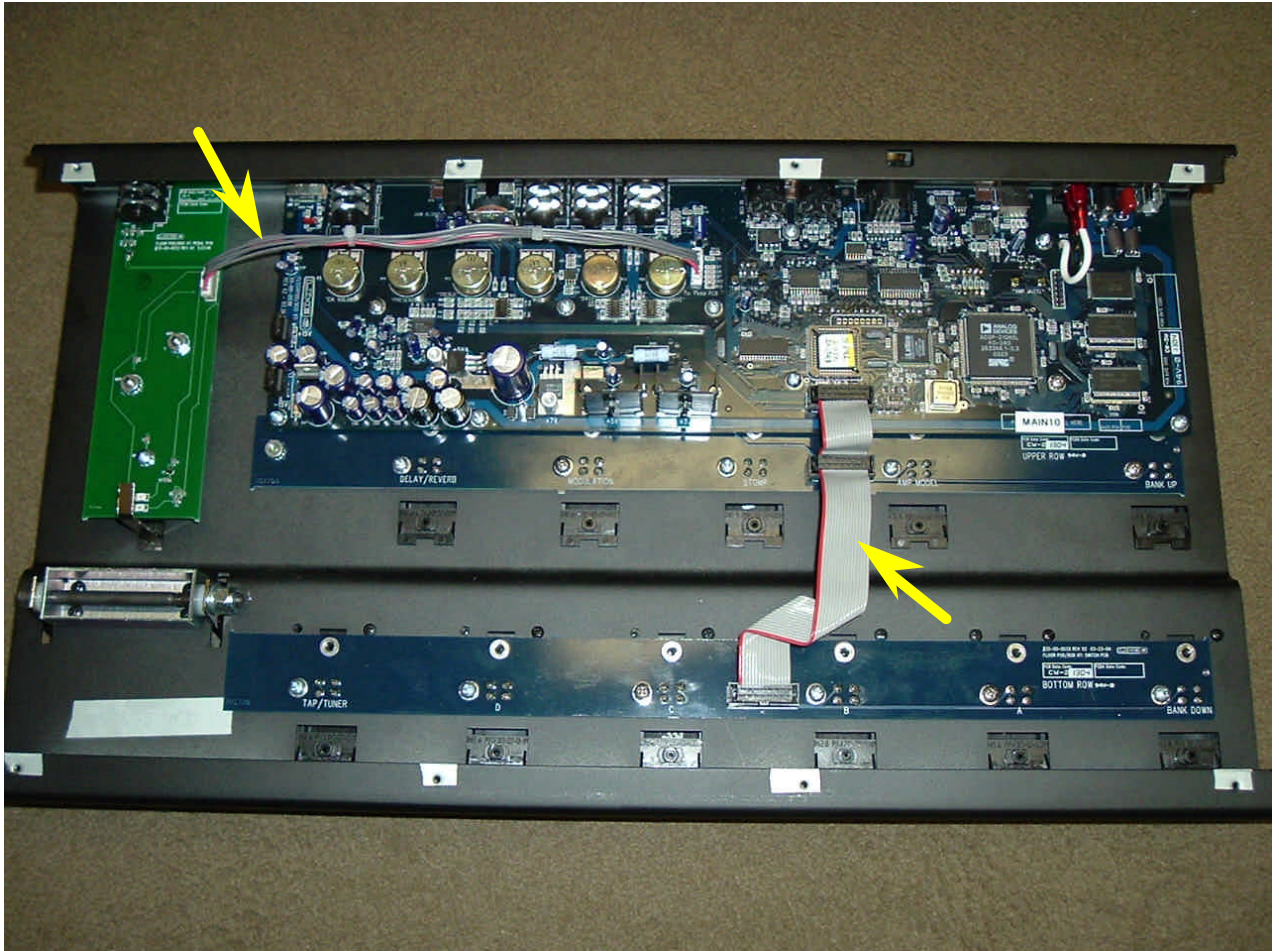
STEP 13. INSTALL CABLES

P/N required:

1 each **21-34-0060** PEDAL PCBA to MAIN PCBA cable

1 each **21-30-0001** MAIN PCBA to FOOTSWITCH PCBA cable

13.1. Install the CABLES.

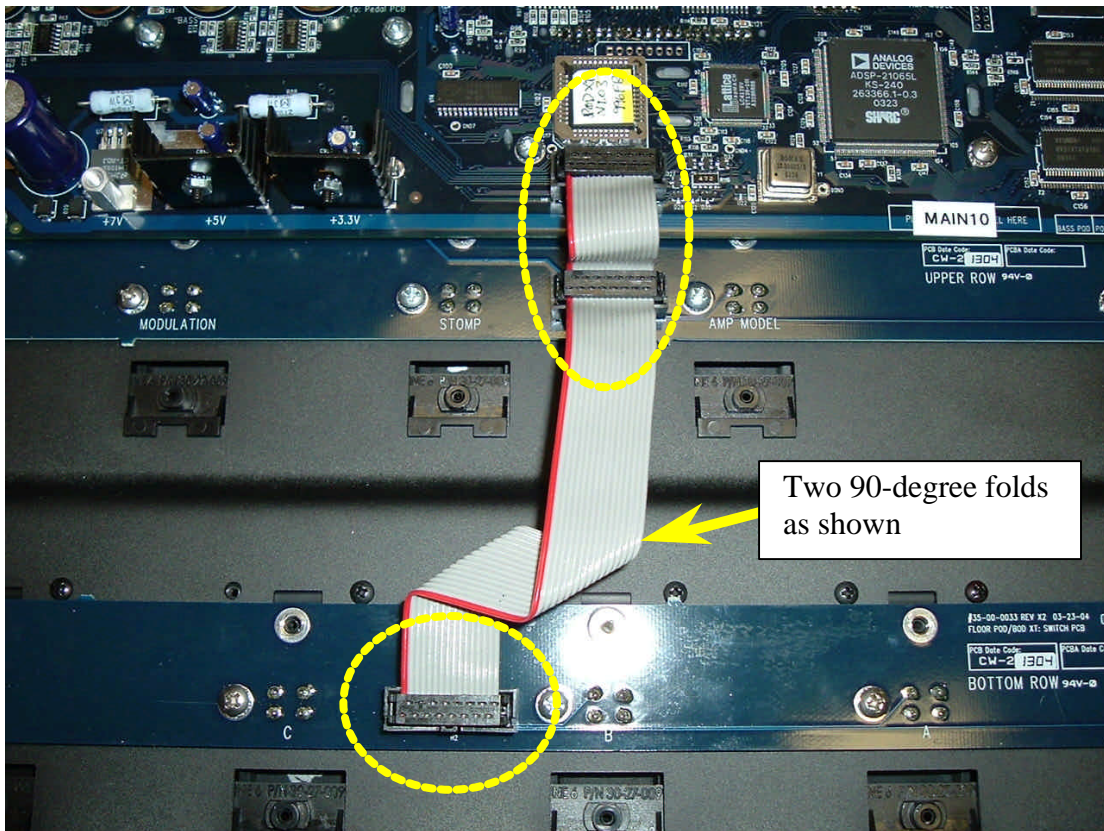


13.1.1. Install the PEDAL PCBA to MAIN PCBA cable.

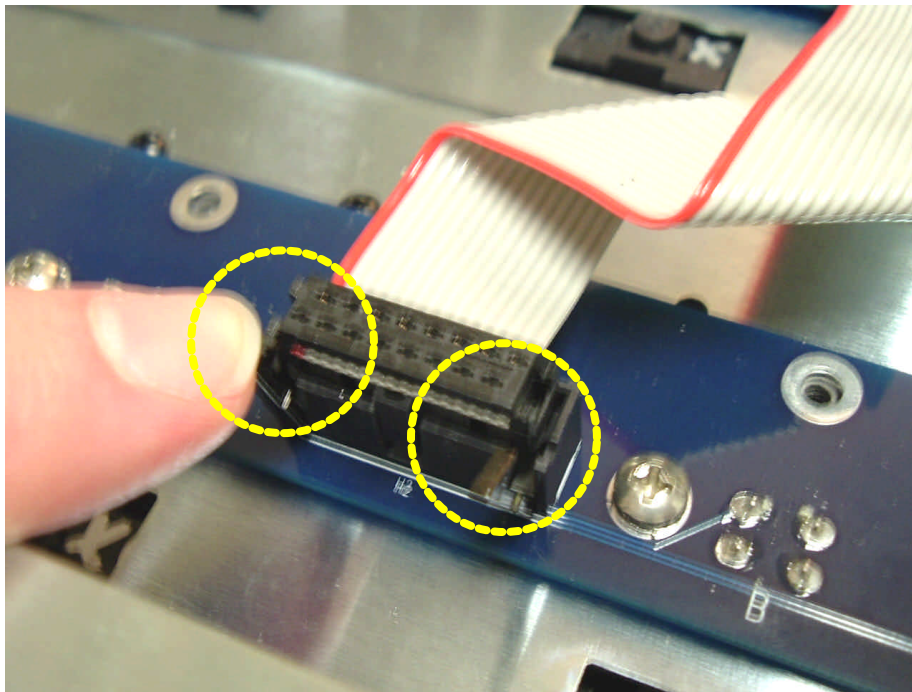
NOTE: This cable has 2 cable ties (30-24-0003) installed on it.



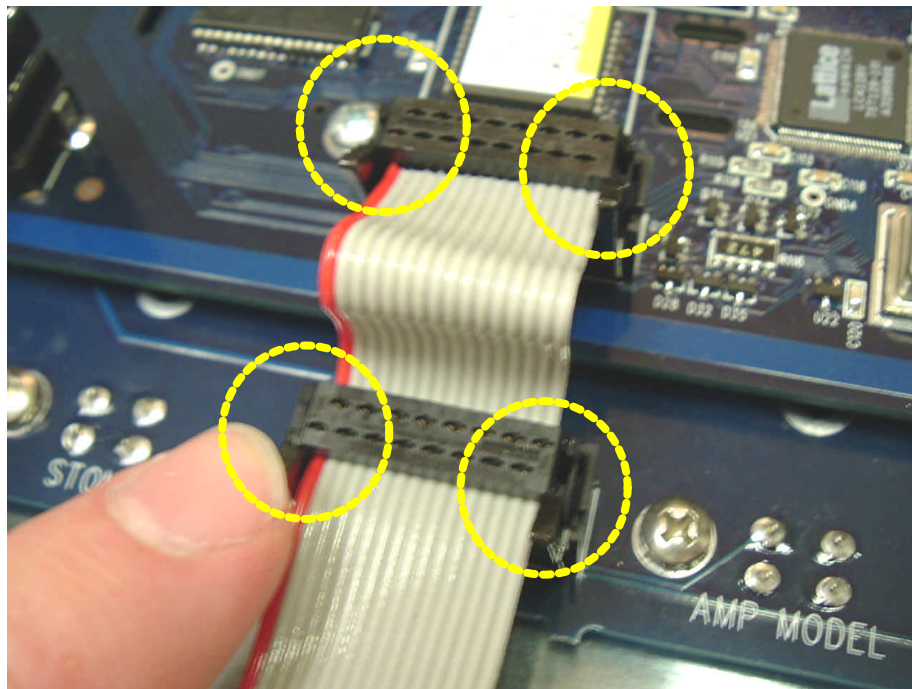
13.1.2. Install the MAIN PCBA to FOOTSWITCH PCBA cable.
Fold cable as shown.



13.1.2.1 Fully seat connectors into the headers. **LOCK** the cable headers as shown.



BOTTOM ROW PCBA HEADER



TOP ROW and MAIN PCBA HEADERS

STEP 14. INSTALL POWER SWITCH

P/N required:

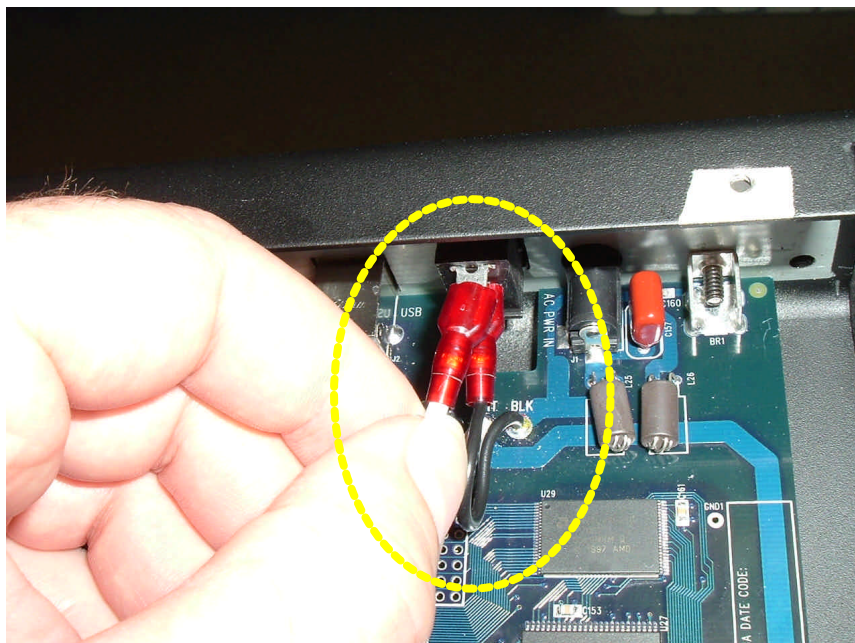
1 each **24-24-0606** Switch Power Rocker 6A/250VAC 10A/120VAC PNL-MNT BLK

14.1 Install the POWER SWITCH.

14.1.1. Firmly press the POWER SWITCH into the TOP CHASSIS rear panel hole. Note the correct orientation as shown (0 is positioned toward the bottom).



14.1.2. Connect the power cables that are attached to the MAIN PCBA.
BLACK – lower tab, WHITE – upper tab.



STEP 15. INSTALL FOOTSWITCH SUPPORTS

P/N required:

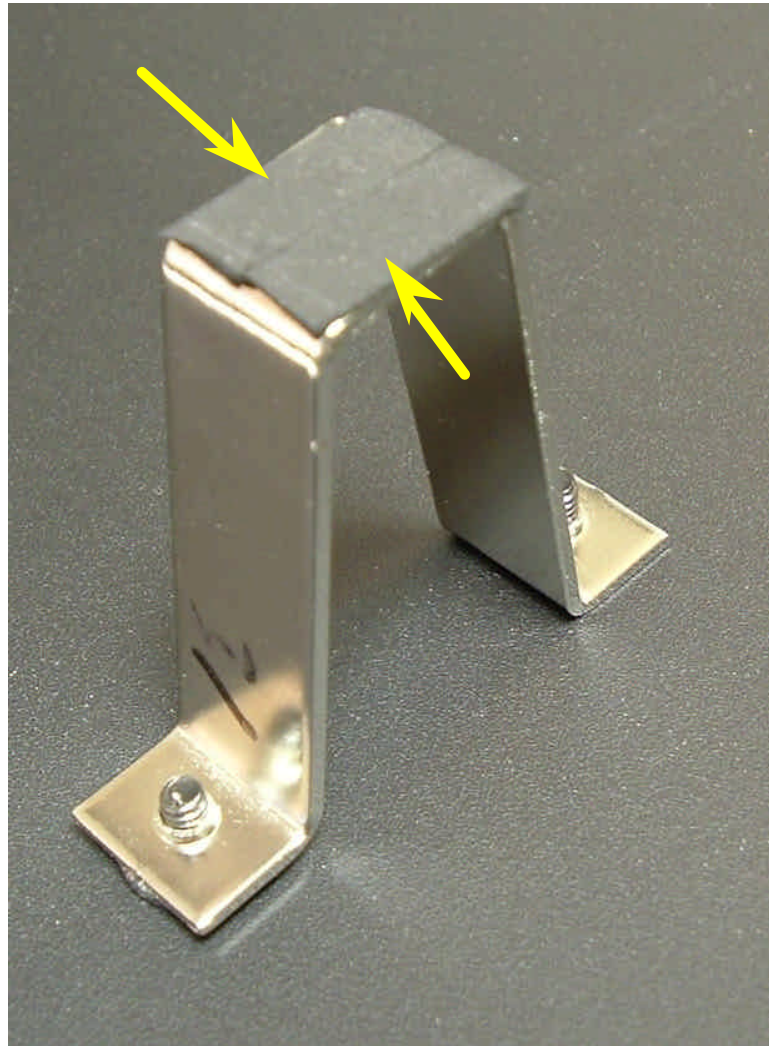
2 each **30-51-0178** Footswitch support

4 each **30-63-0017** FOAM W/ADH. 0.55" x 0.25" x 0.06" VOLARAPOLELEFIN

4 each **30-48-5012** #6 Bumpers with steel washers inside

4 each **30-00-0375** #6-32 x .375 PPH Black screw

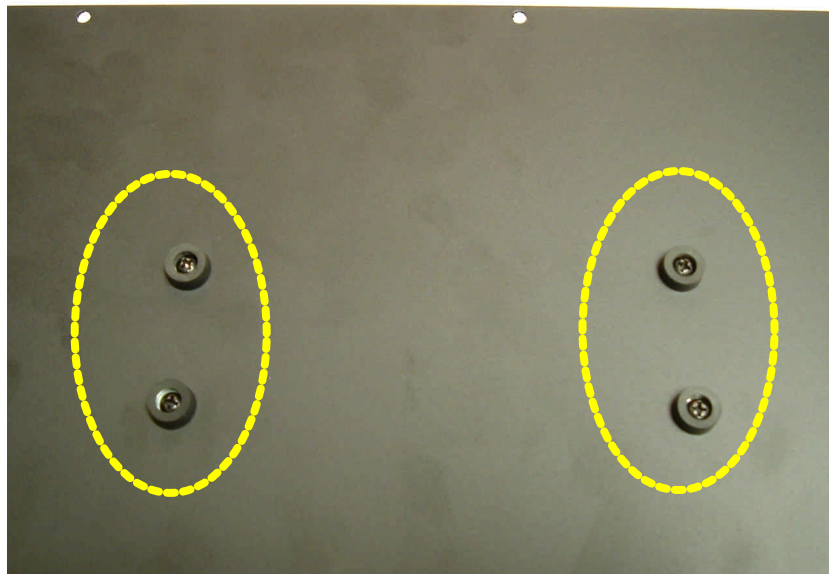
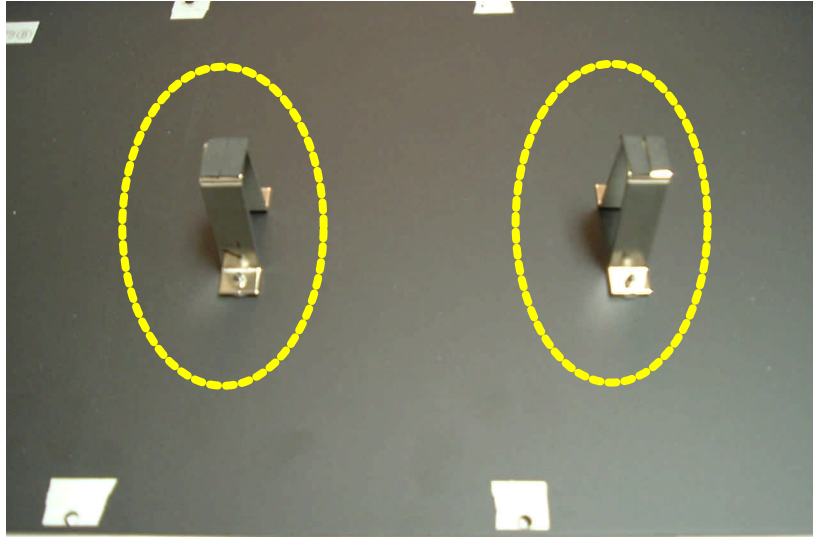
15.1. Install 2 parts FOAM on the top of each Footswitch support as shown below.



15.2. Install the 2 FOOTSWITCH SUPPORTS to the BOTTOM CHASSIS as shown below, using 4 screws and 4 Rubber Feet.

Note: FOOTSWITCH SUPPORTS have a 'FRONT' label on one vertical surface. This surface shall be placed toward the FRONT EDGE of the BOTTOM chassis.

FASTENER TORQUE VALUE = 2-3 in/lbs.



STEP 16. INSTALL LED LENS

P/N required:

2 each **30-27-0056** LED LENS.

16.1. Install the LED LENS.

16.1.1. Align the LENS with the hole near the pedal. Press firmly until the LENS is seated against the CHASSIS TOP.



STEP 17. CHASSIS BASE ASSEMBLY

P/N required:

10 each **30-48-5012** #6 Bumpers with steel washers inside

10 each **30-00-0375** #6-32 x .375 PPH Black screw

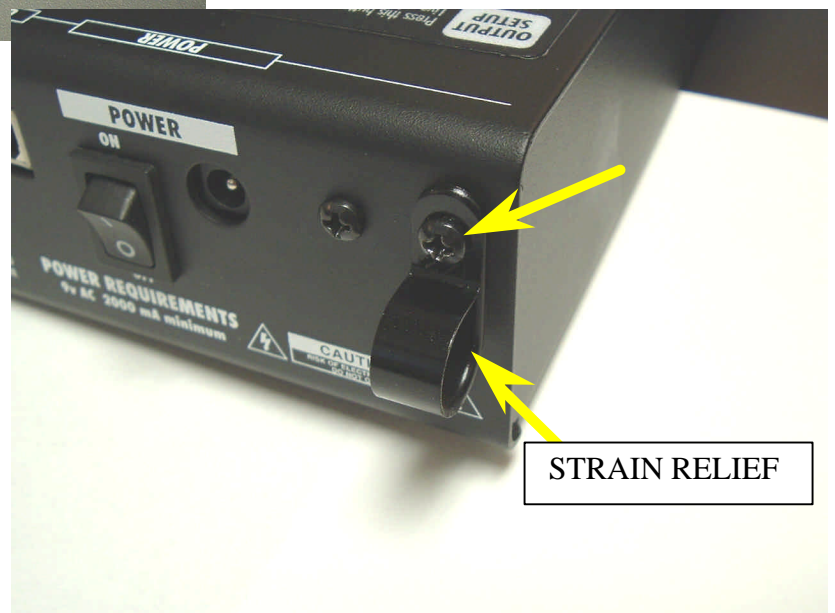
1 each **30-21-0004** Strain Relief-Cable 3/8 x 0.5(ID)-in. Nylon Black

17.1. Install the CHASSIS BASE

17.1.1. Install 1 each Black Strain Relief (30-21-0004) near the POWER SWITCH with 1 each screw (30-00-0375) as shown below. Position the Strain Relief vertically.

17.1.2. Install 1 each screw (30-00-0375) near 'PEDAL 2' Jack as shown below.

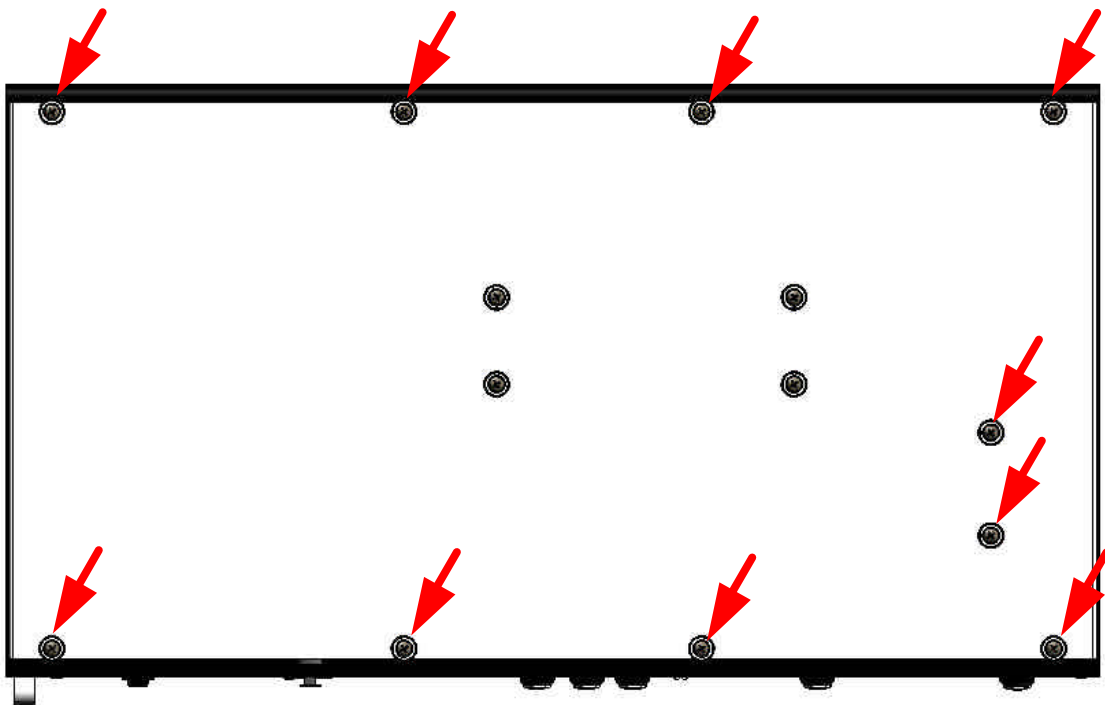
FASTENER TORQUE VALUE = 10-12 in-lbs.



17.1.3. Install Screws & Rubber Bumpers to BOTTOM CHASSIS.

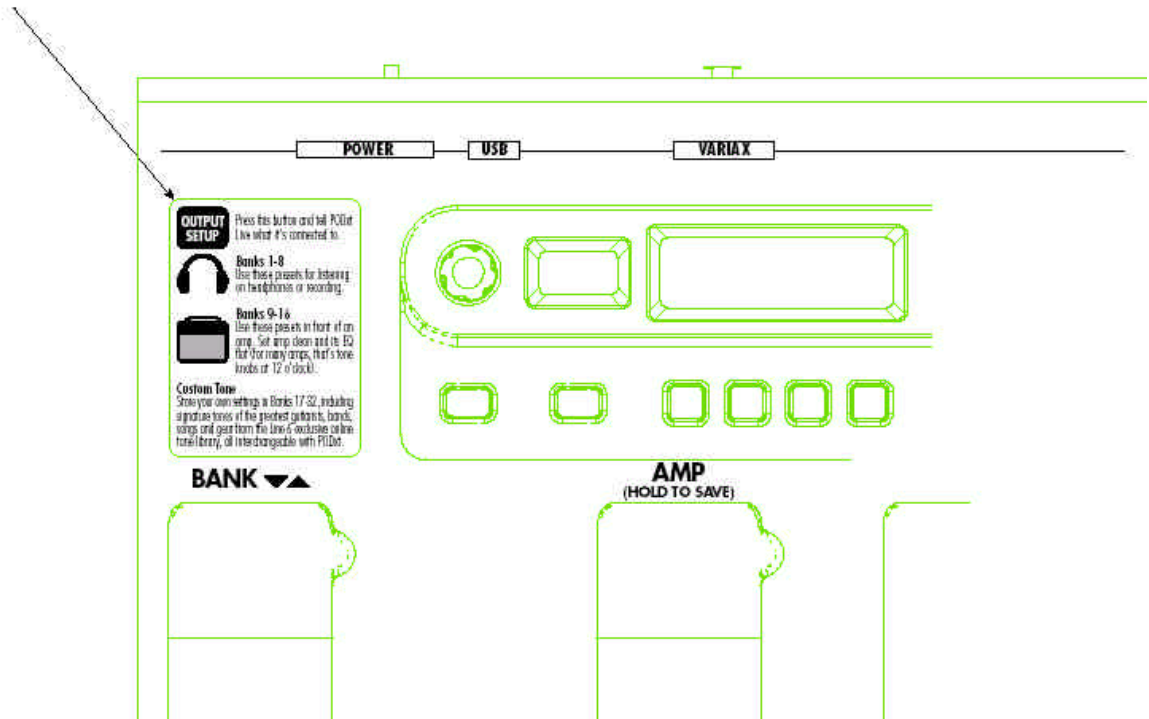
Rubber Bumper shall be FULLY seated against the Chassis surface.

FASTENER TORQUE VALUE = 2-3 in/lbs.



Step 18. Install User instruction label (40-25-0037) as shown below.

Cling decal location on FloorPODxt shown

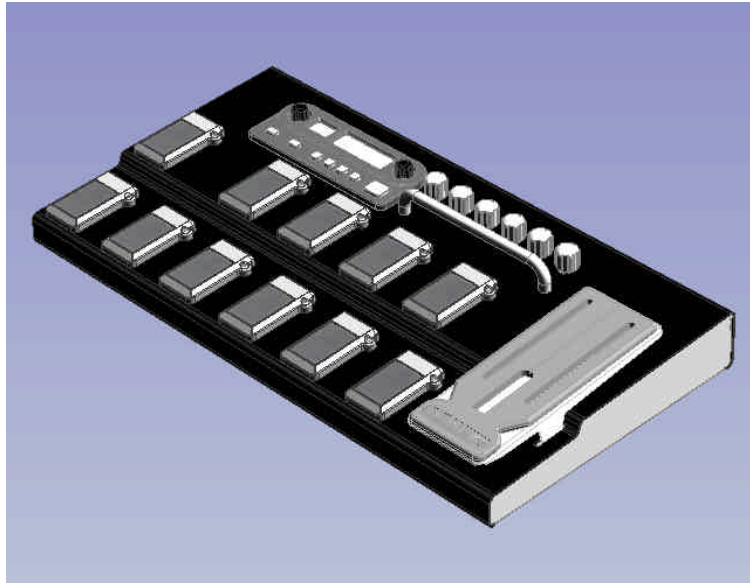


Step 19. Install UPC/Serial number label (40-25-0100) to the unit, in the specified position below. (Rear panel artwork is marked)



BACK SURFACE VIEW

Test and Inspect the Completed Unit.



To help ensure maximum quality of all products, it is the responsibility of the assembler to complete a post assembly inspection before sending the unit on to electrical testing and final inspection. This should help achieve one goal: no unit shall ever be returned from test and inspection for rework because of a mechanical defect that could have been corrected at the assembly stage. Remember that things that have already been inspected during assembly may have been inadvertently damaged during the assembly process. With this in mind, fully inspect the unit for mechanical defects. Things to look for include:

- ?? Cosmetic damage to any visible surface of the unit. This includes but is not limited to: defects to the silk-screening – both front and back panel, dents, dings or scratches in all outer surfaces, smooth even surface color of the front panel, even paint coverage and texture to the top cover, scratched or fingerprinted lenses, scratches or fingerprints on buttons, damage to button text or keycaps, and/or visible process marks on knobs and other plastic parts.
- ?? Proper complete assembly of all parts. This includes but is not limited to: Presence of all parts, flush full insertion of all screws. Even consistent spacing of knobs, proper centering of lenses in cutouts, etc.
- ?? Proper mechanical function of all components. This includes re-testing of the foot pedals for smooth consistent feel, testing all buttons for proper feel.
- ?? Add stickers for inspection (on the bottom chassis) and serial number (step 18).

If there is any question about the quality of a unit, consult a supervisor for guidance. If the unit passes assembly inspection, the unit is complete and ready to proceed to electrical testing, final inspection, pack and ship.

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