T O N E P O R T UX8

Service Manual

Line 6, Inc. Customer Service and Repair
3850-A Royal Ave. Simi Valley, CA 93063 P. 818-575-3600 F. 818-575-3961 E. service@line6.com

6 5 4 3 2 1

D C B A

*DO NOT INSTALL

REVISION RECORD			
LTR	ECO No.	APPROVED	DATE
	ECN#5799801	A.M.	mm/dd/yy

GUITAR INPUTS BRK-WY

GUITAR INPUT1

GUITAR INPUT2

MIC INPUT1

MIC INPUT2

Filter for guitar input op amp supply

Filter for input analog switches supply

For CODECs 1 & 2:
Invert Input A when only Guitar or Mic In are selected.

CODEC inputs are
2.82Vp-p Single Ended /
5.65Vp-p differential

CODEC1

CODEC2

**CODEC AGND CONNECTED TO DGND UNDER CODEC AND NOT CONNECTED TO AUDIO AGND

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PRELIMINARY DRAWINGS
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COMPANY: LINE 6

TITLE: C13-1: UX8 MAIN
ANALOG IN1

PROGRAM: PADS LOGIC 2004

REV: D4

FILENAME: .../ProjAct/PCB#/DirectoryName/FileName

DRAWN: A. MONGE DATE: 07/26/06

CHECKED: Name (F.Last) DATE: 00/00/07

SCALE: 1:1 SIZE: D PART NUMBER: 35-00-0181 SHEET: 1 OF 10

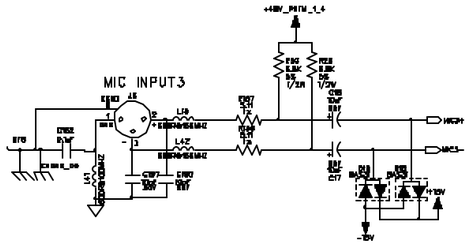
6 5 4 3 2 1

D C B A

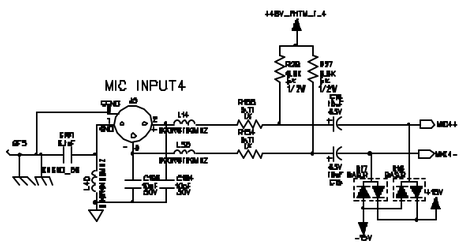
REVISION RECORD			
LTR	ECO No.	APPROVED	DATE

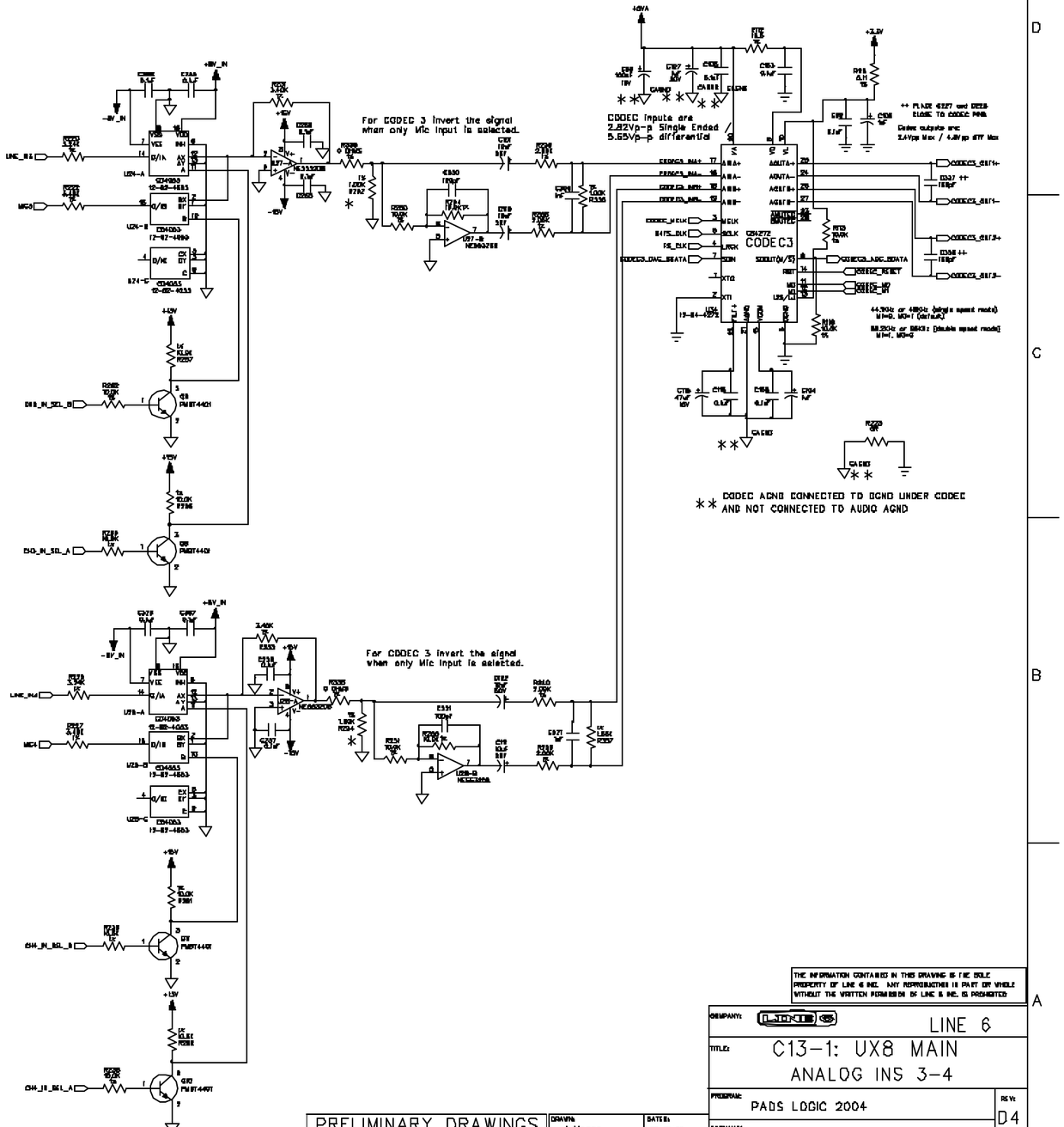
* DO NOT INSTALL

MIC INPUT3



MIC INPUT4





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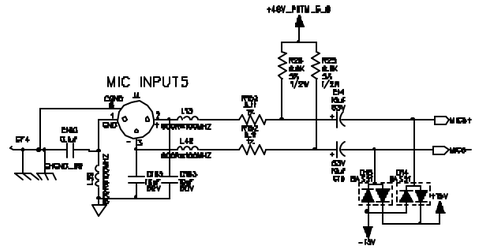
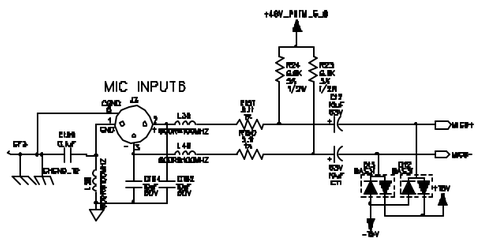
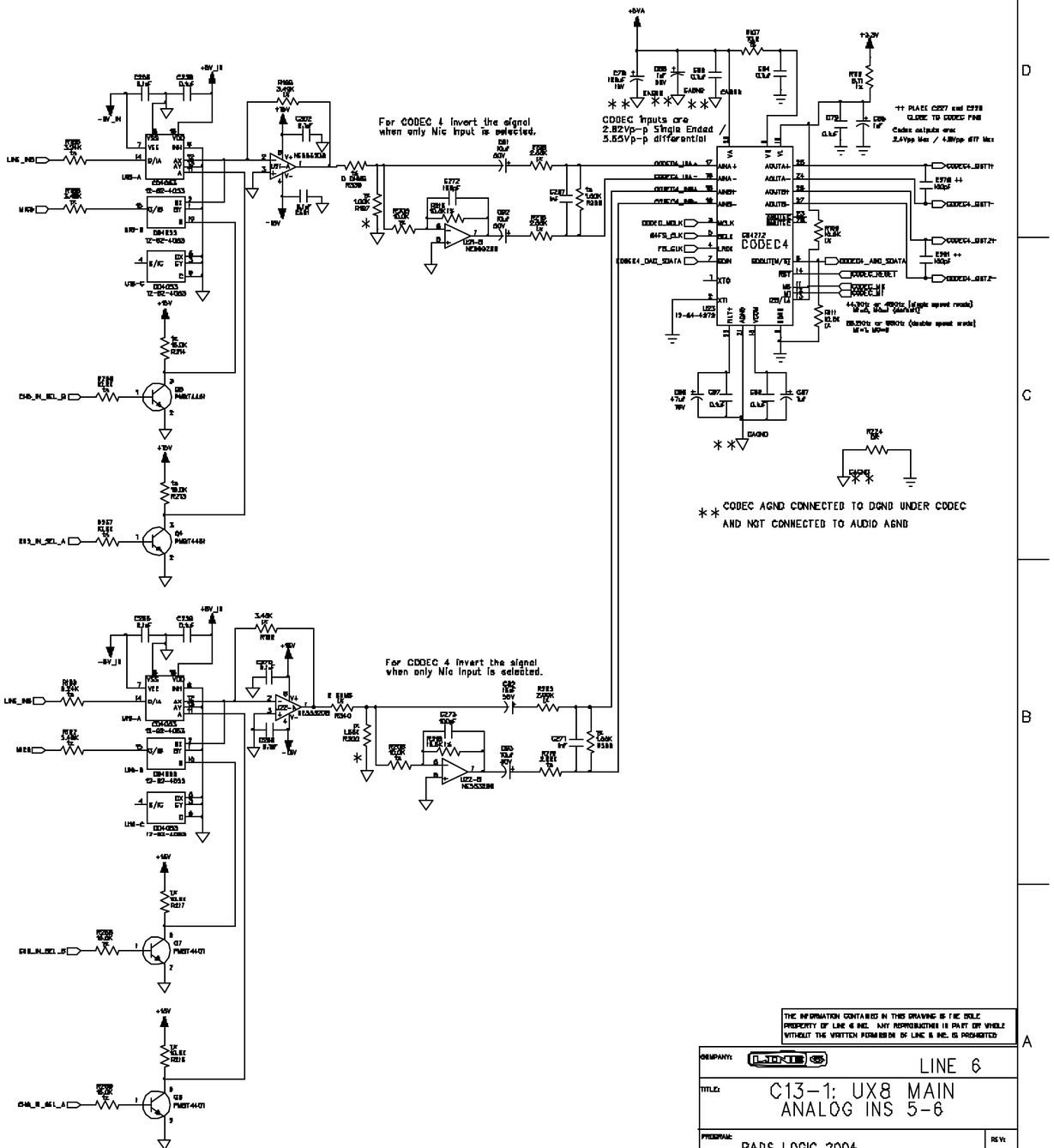
DRAWN: A_Monge	DATE: 07/28/08	COMPANY: LINE 6
CHECKED: Name (F.Last)	DATE: 00/00/07	TITLE: C13-1: UX8 MAIN ANALOG INS 3-4
		PROGRAM: PADS LOGIC 2004 — REV: D4
		FILENAME: .../Product/PCBADirectoryName/Filename
SCALE: 1:1	SIZE: D	PART NUMBER: 35-00-0181 — SHEET: 2 OF 10







REVISION RECORD			
LTR	ECO No.	APPROVED	DATE

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DRAWN: A.Monge	DATE: 07/28/08	
CHECKED: Name (F.Last)	DATE: 00/00/07	

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COMPANY: LINE 6

TITLE: C13-1: UX8 MAIN
ANALOG INS 5-6

PROGRAM: PADS LOGIC 2004

REV: D4

FILENAME: .../Product/PCBAFactoryName/Project

SCALE: 1:1 | SIZE: D | PART NUMBER: 35-00-0181 | SHEET: 3 OF 10

* DO NOT INSTALL

REVISION RECORD			
LTR	ECO No.	APPROVED	DATE

MIC INPUT7

MIC INPUT8

For CODEC 5 invert the signal when only Mic Input is selected.

CODEC inputs are 2.82Vp-p Single Ended / 5.65Vp-p differential

CODEC5

** CODEC AGND CONNECTED TO DGND UNDER CODEC AND NOT CONNECTED TO AUDIO AGND

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COMPANY:	LINE 6
TITLE:	C13-1: UX8 MAIN ANALOG INS 7-8
PROGRAM:	PADS LOGIC 2004
REV:	D4
FILENAME:	.../Product/PCB/Directory Name/Filename
DRAWN: A.Monge	DATE: 07/25/08
CHECKED: Name (F.Last)	DATE: 00/00/07
SCALE: 1:1	SIZE: D
PART NUMBER: 35-00-0181	SHEET: 4 OF 10

USB SECTION

*DO NOT INSTALL

On RESET, all CHx_N_SELy lines will be active - the NDSP must clear all but one for each codec input before deasserting CODEC_RESET

TO UI PCB

MASTER DSP

4Mbit SERIAL FLASH

EXPRESSION PEDAL

DSP EMULATOR JTAG I/F

REVISION RECORD			
LTR	ECO No.	APPROVED	DATE

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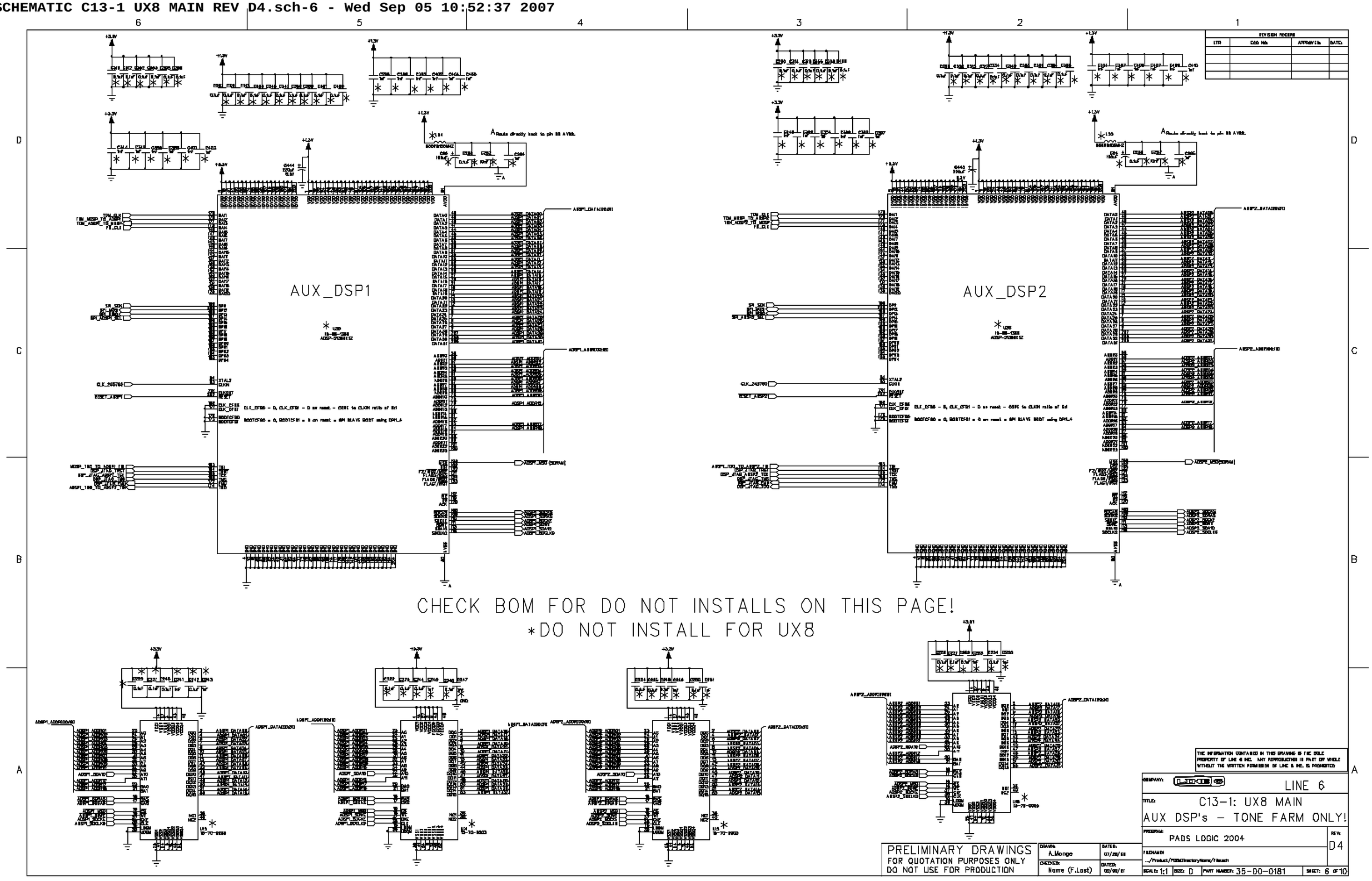
COMPANY:	LINE 6
TITLE:	C13-1: UX8 MAIN DIGITAL
PROGRAM:	PADS LOGIC 2004
REV:	D4
FILENAME:	.../Product/PCBA/FactoryName/Project/
DRAWN:	A.Monge
DATE:	07/28/08
CHECKED:	Name (F.Last)
DATE:	00/00/07
SCALE: 1:1	SIZE: D
PART NUMBER: 35-00-0181	SHEET: 5 OF 10

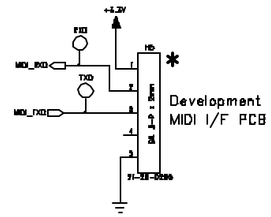
SCHEMATIC C13-1 UX8 MAIN REV D4.sch-6 - Wed Sep 05 10:52:37 2007



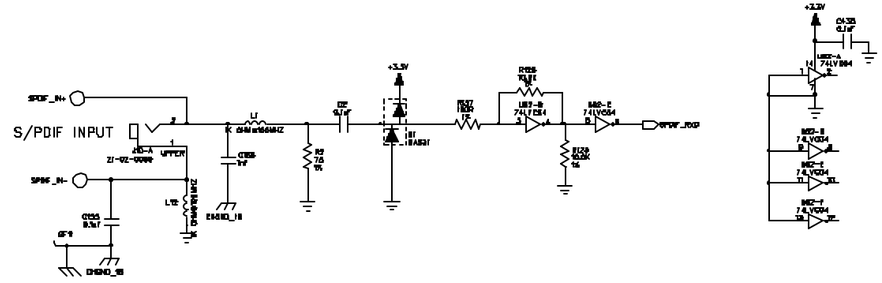
REVISION RECORD			
LTR	ECO No.	APPROVED	DATE

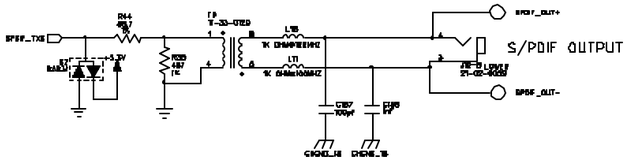
* DO NOT INSTALL

MIDI INTERFACE FOR DEVELOPMENT ONLY!



SPDIF I/O





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DRAWN: A.Monge	DATE: 07/29/08	
CHECKED: Name (F.Last)	DATE: 00/00/07	

COMPANY: LINE 6

TITLE: C13-1: UX8 MAIN
DIGITAL AUDIO I/O

PROGRAM: PADS LOGIC 2004

REV: D4

FILENAME: .../Product/PCB#/FactoryName/Project

SCALE: 1:1 | SIZE: D | PART NUMBER: 35-00-0181 | SHEET: 7 of 10

REVISION RECORD			
LTR	ECO: NO:	APPROVED:	DATE:

FROM CODEC1

TO MASTER VOL POT

MASTER VOL POT ON UI PCB

FROM CODEC3

TO HP AMP BRK-WY

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COMPANY: LINE 6

TITLE: C13-1: UX8 MAIN ANALOG OUTS 1-4

PROGRAM: PADS LOGIC 2004

REV: D4

FILENAME: ..\Product\PCBADirectoryName\Filename

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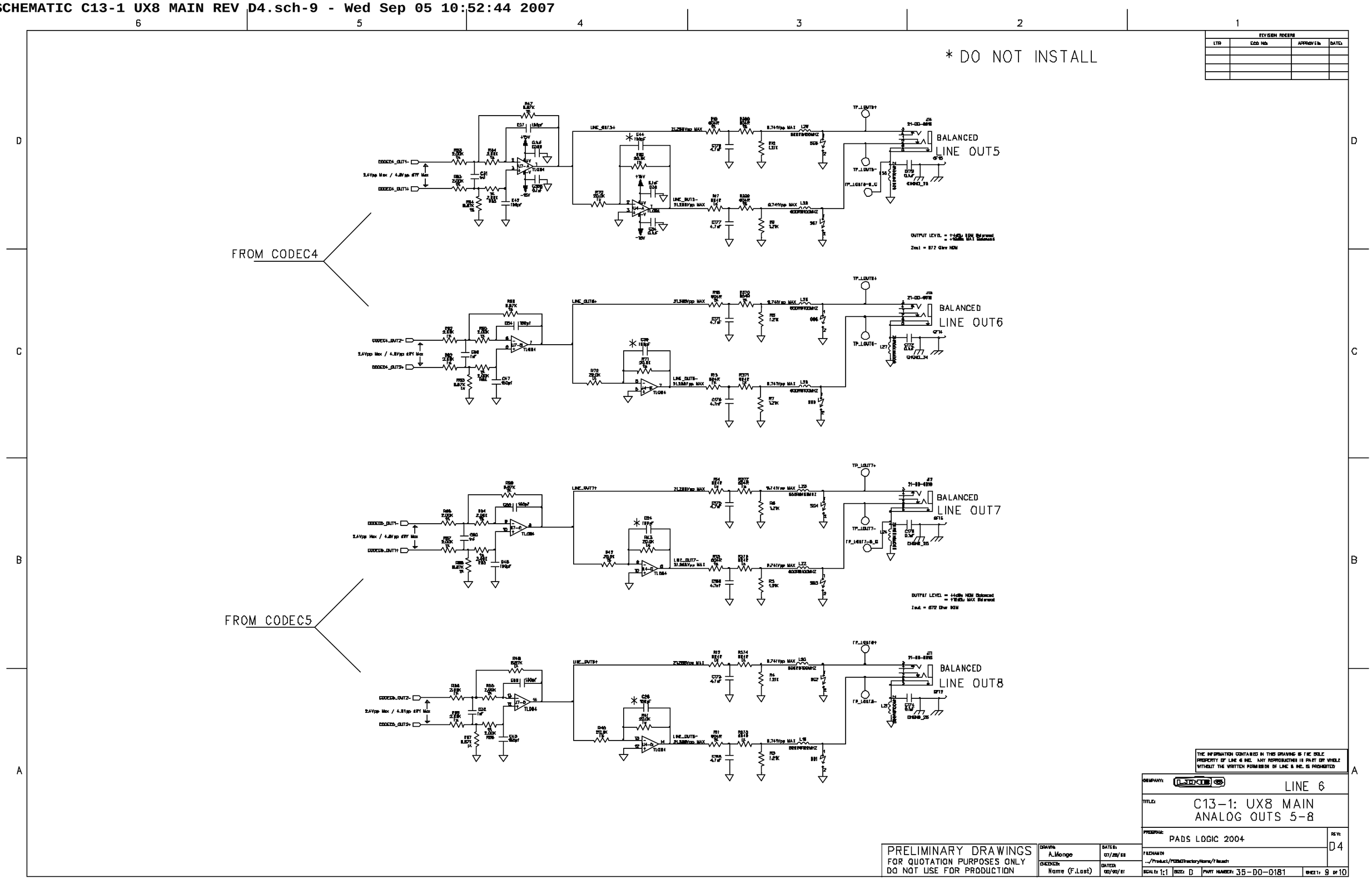
DRAWN: A.Monge DATE: 07/28/08

CHECKED: Name (F.Last) DATE: 00/00/01

SCALE: 1:1 SIZE: D PART NUMBER: 35-00-0181 SHEET: 8 OF 10


* DO NOT INSTALL
FROM CODEC4
FROM CODEC5
BALANCED
LINE OUT5
BALANCED
LINE OUT6
BALANCED
LINE OUT7
BALANCED
LINE OUT8
PRELIMINARY DRAWINGS
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A.Monge
Name (F.Last)
LINE 6
C13-1: UX8 MAIN
ANALOG OUTS 5-8
PADS LOGIC 2004
D4
SCALE: 1:1
SIZE: D
PART NUMBER: 35-D0-0181
SHEET: 9 OF 10

SCHEMATIC C13-1 UX8 MAIN REV D4.sch-10 - Wed Sep 05 10:52:45 2007

REVISION RECORD			
LTR	ECO No:	APPROVED:	DATE:

* DO NOT INSTALL

** CONNECTED TO DGND UNDER CODEC AND NOT CONNECTED TO AUDIO GND

VERIFY i LIMIT

1.3V BUCK REGULATOR

BOARD MOUNTING HOLES

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DRAWN: A.Monge	DATE: 07/20/06	
CHECKED: Name (F.Last)	DATE: 00/00/07	

COMPANY: LINE 6

TITLE: C13-1: UX8 MAIN POWER DISTRIBUTION

PROGRAM: PADS LOGIC 2004

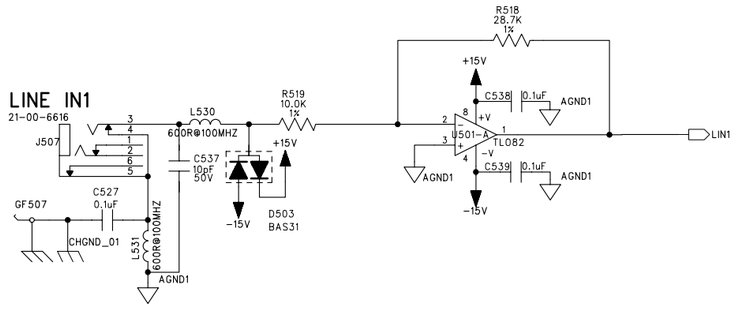
REV: D4

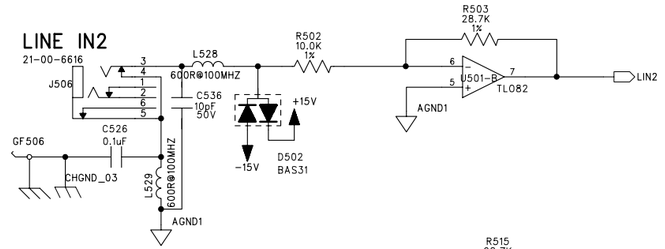
FILENAME: ..\Product\PCBADirectoryName\Filename

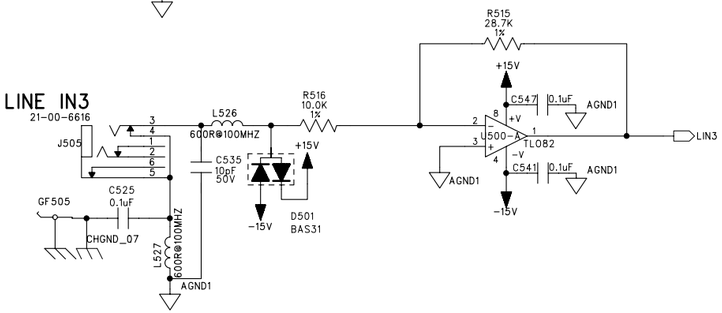
SCALE: 1:1 | SIZE: D | PART NUMBER: 35-00-0181 | SHEET: 10 OF 10

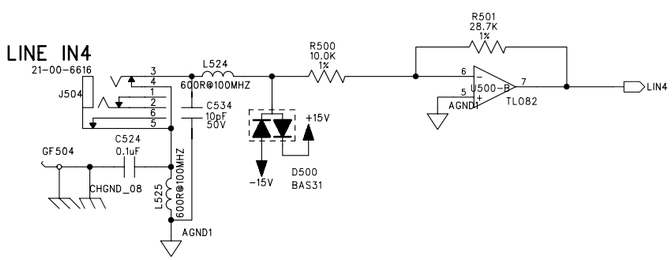
ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:
0712903	05/09/07	Change output caps to reduce tones.

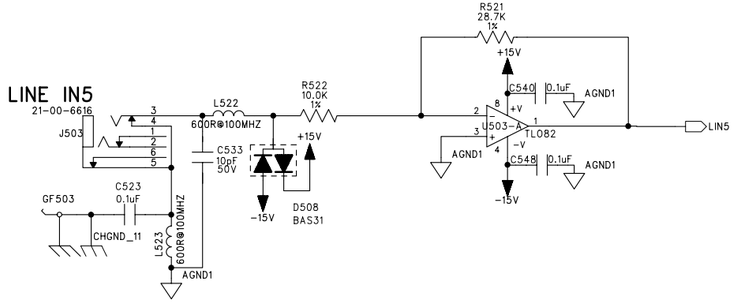
* DO NOT INSTALL

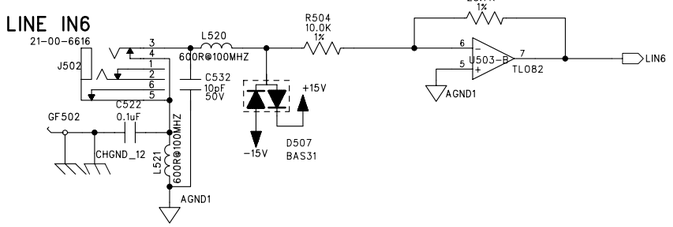


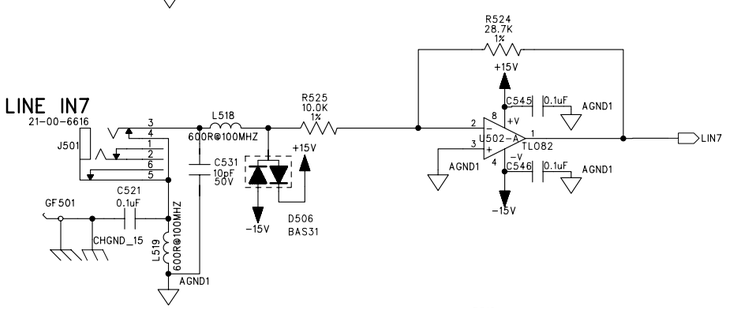


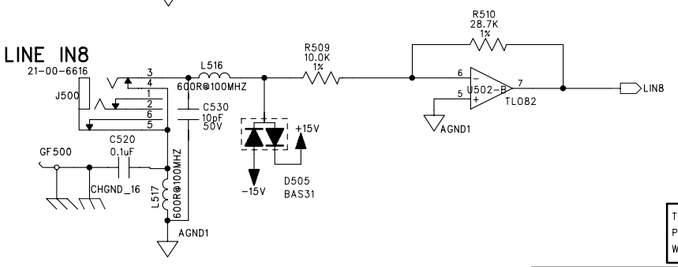


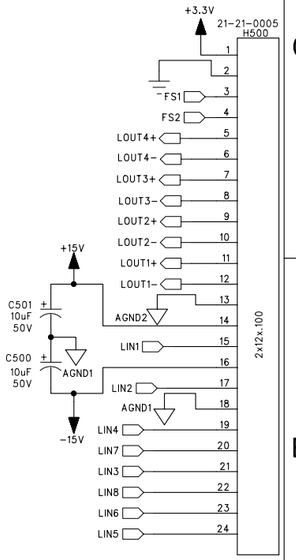












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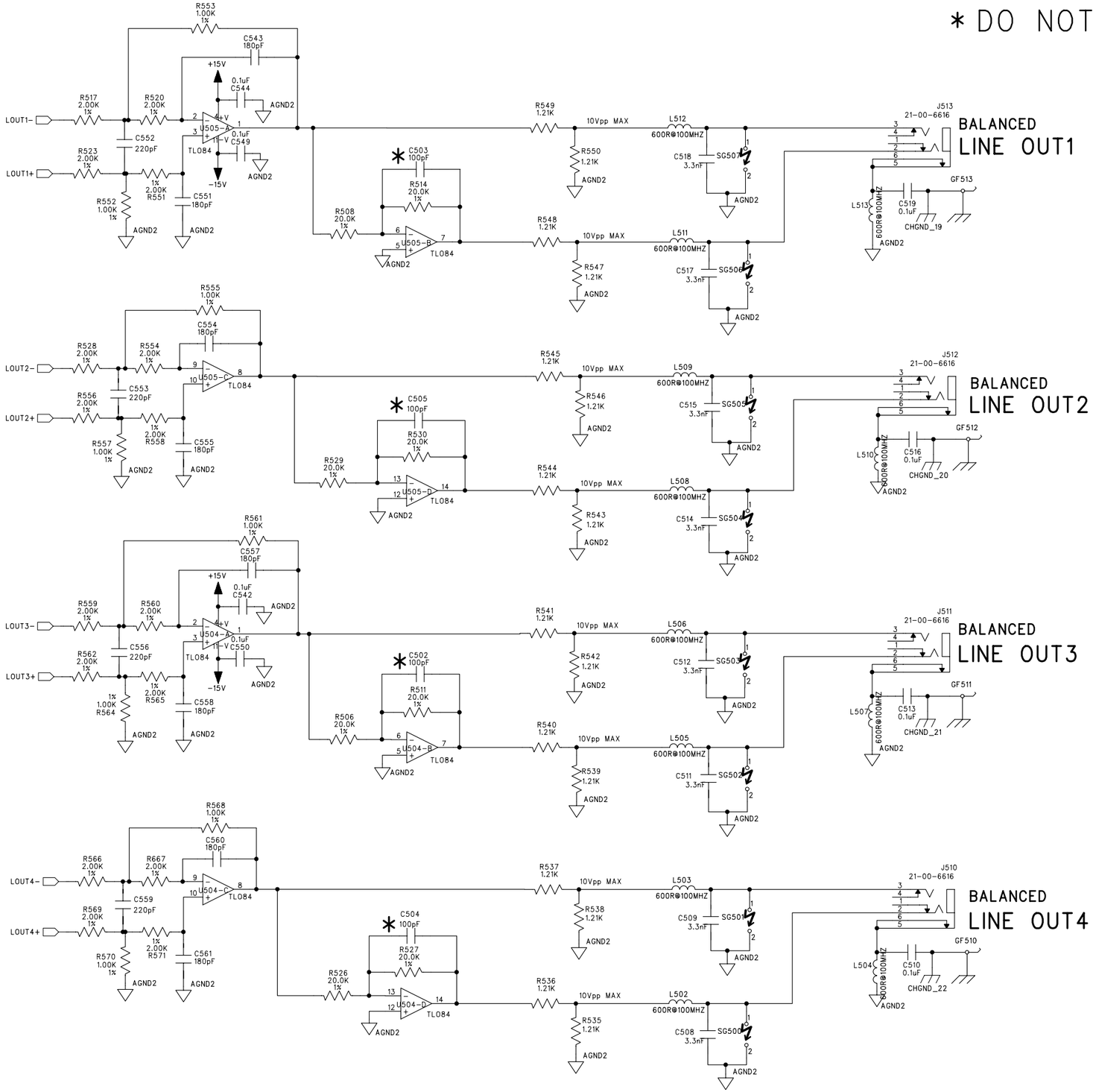
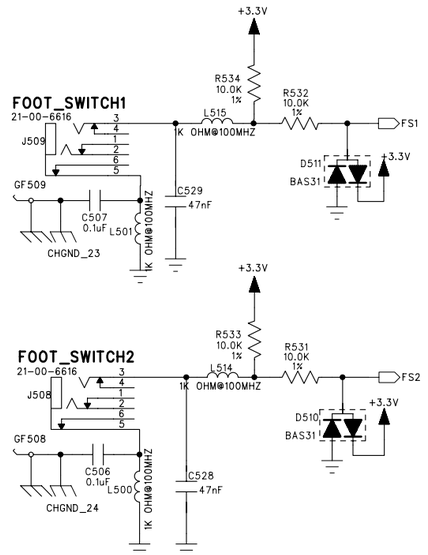
DRAWN: A. MONGE	DATED: 09/13/06	COMPANY: LINE 6	
CHECKED: Name (F.Last)	DATED: 00/00/01	TITLE: C13-1: UX8 LINE IN/OUT LINE INS	
		PROGRAM: PADS LOGIC 2004	REV: B1
		FILENAME: Product Directory/PCBs/Board Directory/File.sch	
SCALE: 1:1	SIZE: C	PART NUMBER: 35-00-0185	SHEET: 1 OF 2

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

* DO NOT INSTALL





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DRAWN:	A.Monge	DATED:	09/13/06
CHECKED:	Name (F.Last)	DATED:	00/00/01

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COMPANY: LINE 6

TITLE: C13-1: UX8 LINE IN/OUT LINE OUTS / FT SW

PROGRAM: PADS LOGIC 2004

REV: B1

FILENAME: Product Directory/PCBs/Board Directory/File.sch

SCALE: 1:1 | SIZE: C | PART NUMBER: 35-00-0185 | SHEET: 2 OF 2

*DO NOT INSTALL

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

MIC1 LO CUT – 75Hz HPF

PAD 1
SW5
TL2285EE
MIC1+
MIC1–
R142 13.3K 1%
R144 13.3K 1%
R33 1.33K 1%
R51 1.33K 1%
SH1
35-00-0193
SHIELD_WALL
AGND_CH1
C107 0.1uF
CHGND
R150 5KC
C44 4700uF 6.3V
+15V
R82 10.0 1%
R80 2.49K 1%
R81 2.49K 1%
C68 330pF
C32 330pF
0dB to +60dB NO PAD
-20dB to +40dB w/PAD
Q4 BC860
Q2 PMBT4401 4401
Q5 BC860
Q35 PMBT4401 4401
C35 330pF
C69 330pF
R110 511 1%
R120 511 1%
C51 0.1uF
C53 0.1uF
R9 1.33k 1%
R95 1.00K
D34 1N4148
U1-A
TL082
-15V
R101 1.00K
D35 1N4148
R100 1.33k 1%
C10 47nF
C5 47nF
C2 47nF
R6 49.9K 1%
R7 150K 1%
R94 20.0K 1%
U1-B
C36 47uF
TP_MIC1_HPF
R34 20.0K 1%
LOW CUT
SW6
TL2285EE
MIC1

MIC2 LO CUT – 75Hz HPF

PAD 2
SW7
TL2285EE
MIC2+
MIC2–
R35 13.3K 1%
R32 13.3K 1%
R143 1.33K 1%
R141 1.33K 1%
AGND_CH2
C108 0.1uF
CHGND
R152 5KC
C43 4700uF 6.3V
+15V
R145 10.0 1%
R83 2.49K 1%
R151 2.49K 1%
C33 330pF
C61 330pF
0dB to +60dB NO PAD
-20dB to +40dB w/PAD
Q6 BC860
Q36 PMBT4401 4401
Q7 BC860
Q3 PMBT4401 4401
C34 330pF
C37 330pF
R140 511 1%
R13 511 1%
C52 0.1uF
C54 0.1uF
R11 1.33k 1%
R10 1.00K
D14 1N4148
U2-B
TL082
-15V
R102 1.00K
D36 1N4148
R99 1.33k 1%
C20 47nF
C4 47nF
C1 47nF
R96 49.9K 1%
R97 150K 1%
R93 20.0K 1%
U2-A
C3 47uF
TP_MIC2_HPF
R36 20.0K 1%
LOW CUT
SW8
TL2285EE
MIC2

21-21-0040
H3
AGND_CH1
MIC1+
MIC1–
MIC1
AGND_CH2
MIC2+
MIC2–
MIC2
AGND_CH3
MIC3+
MIC3–
MIC3
AGND_CH4
MIC4+
MIC4–
MIC4
AGND_CH5
MIC5+
MIC5–
MIC5
AGND_CH6
MIC6+
MIC6–
MIC6
AGND_CH7
MIC7+
MIC7–
MIC7
AGND_CH8
MIC8+
MIC8–
MIC8
+15V
C101 10uF
C102 10uF
AGND
-15V
+48V
+48V_PHTM_1_4
+48V_PHTM_5_8

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DRAWN: A.Monge/ JY	DATED: 01Jan07	COMPANY: LINE 6	
CHECKED: Name (F.Last)	DATED: 00/00/01	TITLE: C13-1: UX8 USER INTERFACE MIC CHANNEL 1-2	
		PROGRAM: PADS LOGIC 2004	REV: C1
		FILENAME: Product Directory/PCBs/Board Directory/ SCHEMATIC C13-1 UX8 USER INTERFACE REV C.sch	
		SCALE: 1:1 SIZE: C PART NUMBER: 35-00-0182-1	SHEET: 1 OF 6

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

* DO NOT INSTALL

PAD 3

SW9 TL2285EE

MIC3+ / MIC3−

R38 13.3K 1% / R37 13.3K 1% / R53 1.33K 1% / R52 1.33K 1%

SH2 — 35-00-0193 SHIELD_WALL

AGND_CH3

C109 0.1uF — R153 5KC — CHGND

C47 4700uF 6.3V

+15V

C86 330pF — R72 2.49K 1% — R76 2.49K 1% — R171 10.0 1% — C85 330pF

0dB to +60dB NO PAD
−20dB to +40dB w/PAD

Q20 BC860 / Q26 PMBT4401 4401 — C87 330pF — R68 511 1% — C70 330pF

Q8 BC860 / Q14 PMBT4401 4401 — R26 511 1%

R128 1.33k 1% — R14 1.00K — D43 1N4148 *

U6-A TLO82 — C58 0.1uF — C65 0.1uF

−15V

R125 1.00K — D37 1N4148 *

R121 1.33k 1%

C21 47nF — C27 47nF — C11 47nF

R98 20.0K 1% — U6-B TLO82 — C12 47uF

R21 49.9K 1% — R111 150K 1% — TP_MIC3_HPF — R132 20.0K 1%

LOW CUT

SW10 TL2285EE — MIC3

MIC3 LO CUT – 75Hz HPF

PAD 4

SW11 TL2285EE

MIC4+ / MIC4−

R40 13.3K 1% / R39 13.3K 1% / R55 1.33K 1% / R54 1.33K 1%

SH3 — 35-00-0193 SHIELD_WALL

AGND_CH4

C110 0.1uF — R154 5KC — CHGND1

C48 4700uF 6.3V

+15V

C71 330pF — R73 2.49K 1% — R77 2.49K 1% — R172 10.0 1% — C90 330pF

0dB to +60dB NO PAD
−20dB to +40dB w/PAD

Q21 BC860 / Q27 PMBT4401 4401 — C72 330pF — R69 511 1% — C38 330pF

Q9 BC860 / Q15 PMBT4401 4401 — R27 511 1%

R133 1.33k 1% — R15 1.00K — D44 1N4148 *

U7-B TLO82 — C66 0.1uF — C59 0.1uF

−15V

R126 1.00K — D38 1N4148 *

R122 1.33k 1%

C28 47nF — C22 47nF — C13 47nF

R105 20.0K 1% — U7-A TLO82 — C14 47uF

R22 49.9K 1% — R112 150K 1% — TP_MIC4_HPF — R134 20.0K 1%

LOW CUT

SW12 TL2285EE — MIC4

MIC4 LO CUT – 75Hz HPF

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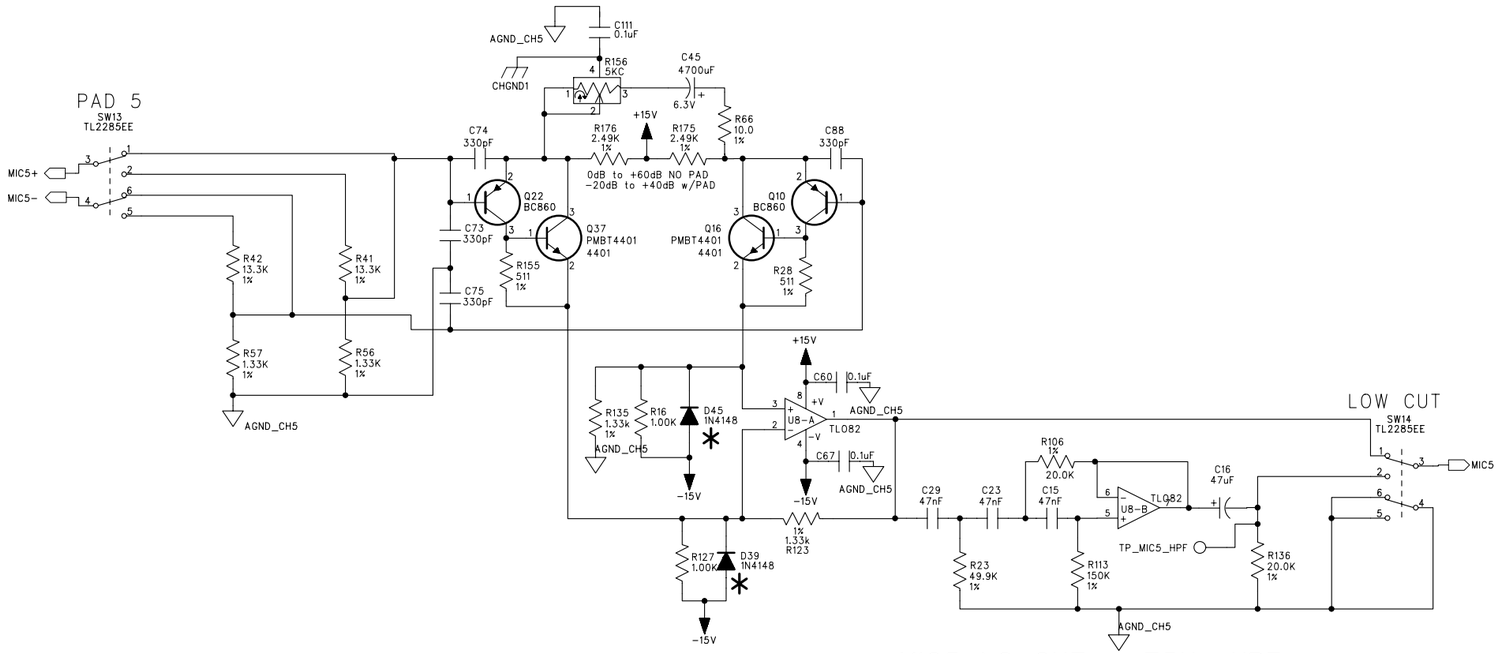
DRAWN: A.Monge/ JY	DATED: 01Jan07	COMPANY: LINE 6	
CHECKED: Name (F.Last)	DATED: 00/00/01	TITLE: C13-1: UX8 USER INTERFACE MIC CHANNEL 3-4	
		PROGRAM: PADS LOGIC 2004	REV: C1
		FILENAME: Product Directory/PCBs/Board Directory/ SCHEMATIC C13-1 UX8 USER INTERFACE REV C.sch	
		SCALE: 1:1 / SIZE: C / PART NUMBER: 35-00-0182-1	SHEET: 2 OF 6

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

*DO NOT INSTALL

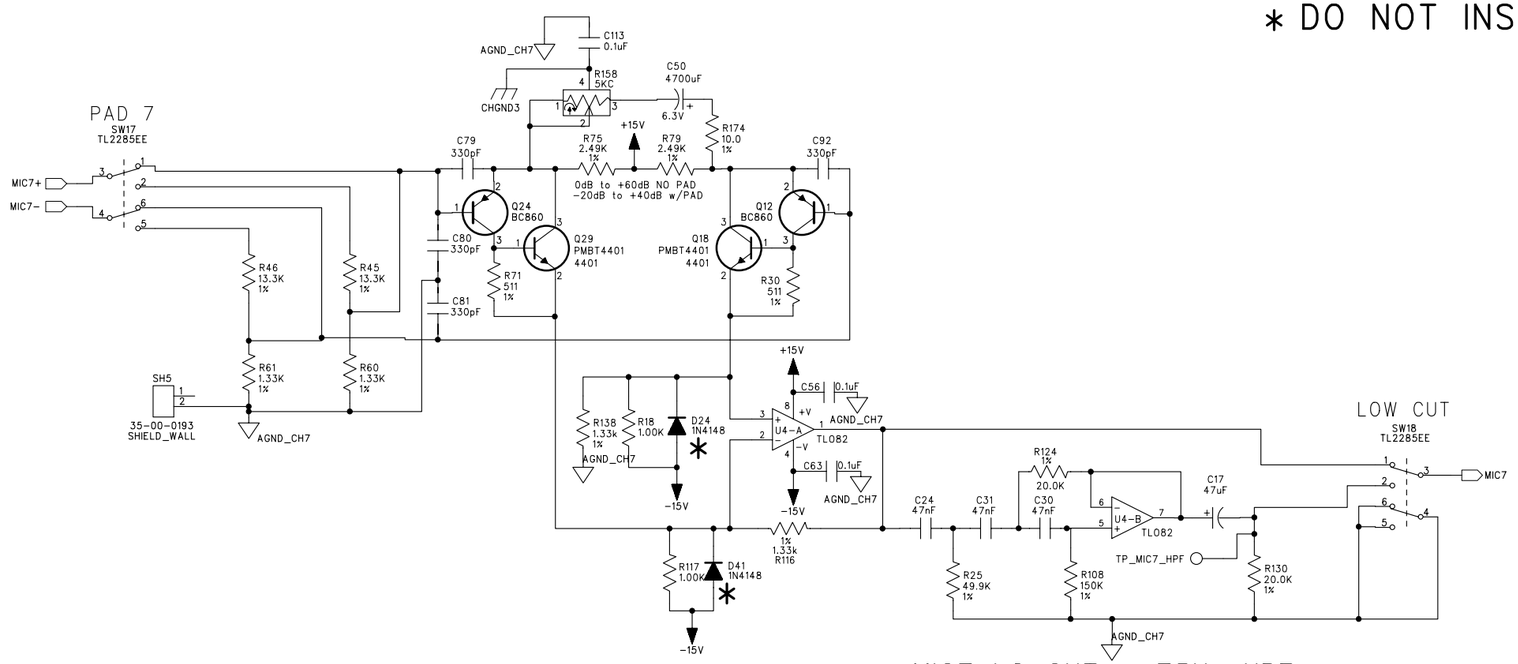


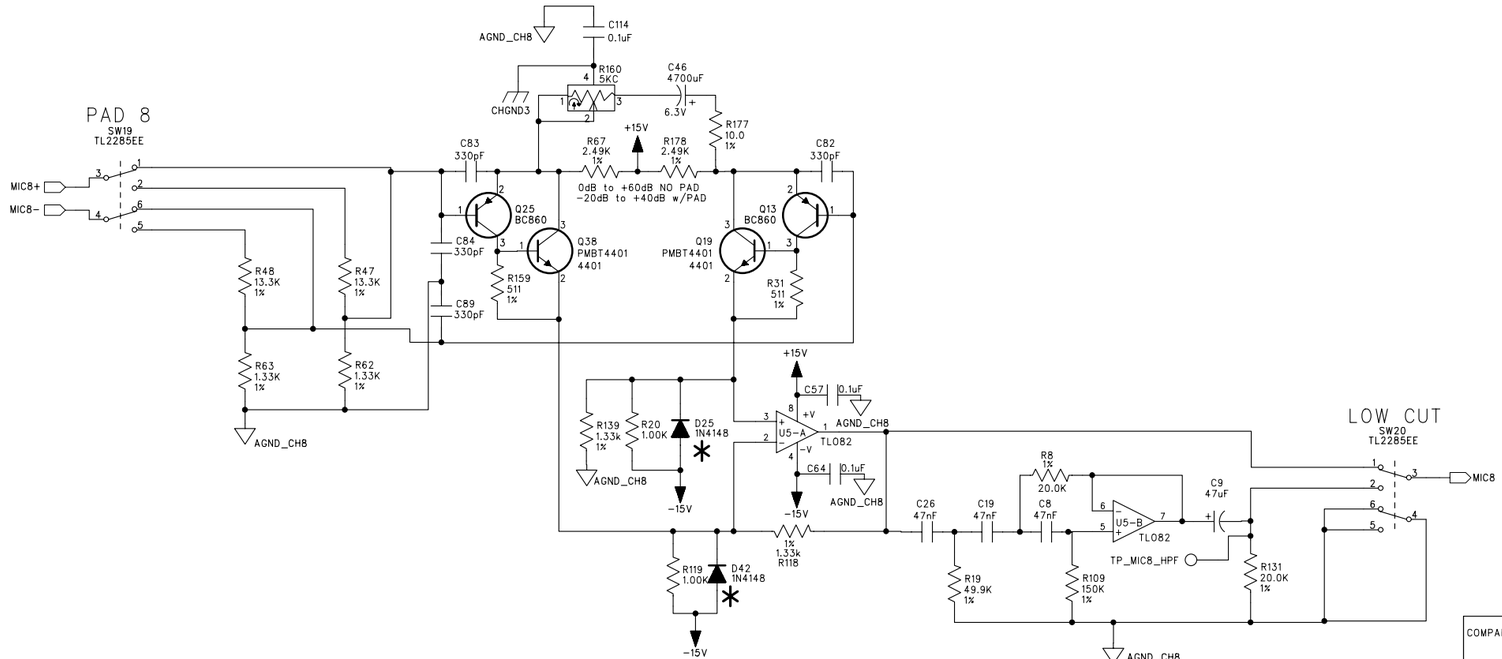
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF LINE 6 INC. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

DRAWN: A.Monge/ JY	DATED: 01Jan07	COMPANY: LINE 6	
CHECKED: Name (F.Last)	DATED: 00/00/01	TITLE: C13-1: UX8 USER INTERFACE MIC CHANNEL 5-6	
		PROGRAM: PADS LOGIC 2004	REV: C1
		FILENAME: Product Directory/PCBs/Board Directory/ SCHEMATIC C13-1 UX8 USER INTERFACE REV C.sch	
		SCALE: 1:1 | SIZE: C | PART NUMBER: 35-00-0182-1	SHEET: 3 OF 6

* DO NOT INSTALL

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





PRELIMINARY DRAWINGS
FOR QUOTATION PURPOSES ONLY
DO NOT USE FOR PRODUCTION

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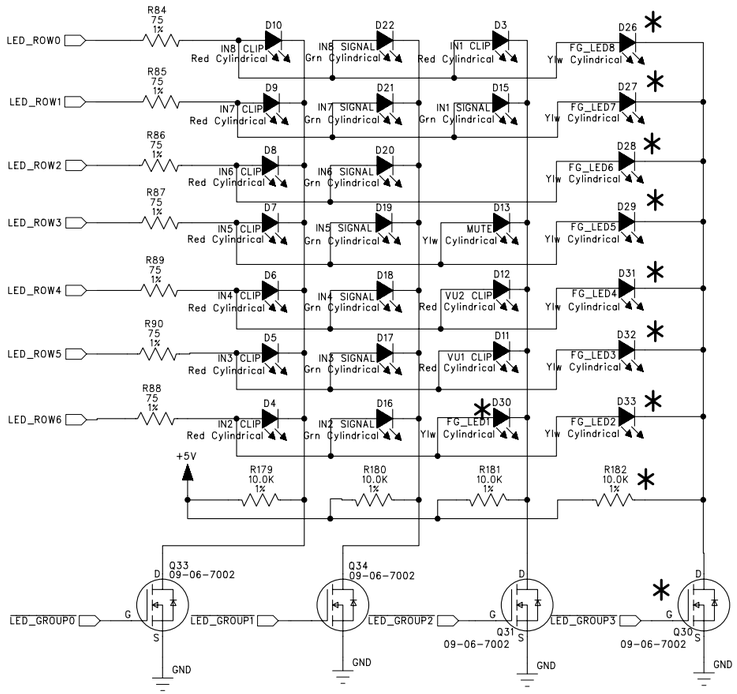
DRAWN: A.Monge/ JY	DATED: 01Jan07	COMPANY: LINE 6	
CHECKED: Name (F.Last)	DATED: 00/00/01	TITLE: C13-1: UX8 USER INTERFACE MIC CHANNEL 7-8	
		PROGRAM: PADS LOGIC 2004	REV: C1
		FILENAME: Product Directory/PCBs/Board Directory/ SCHEMATIC C13-1 UX8 USER INTERFACE REV C.sch	
SCALE: 1:1	SIZE: C	PART NUMBER: 35-00-0182-1	SHEET: 4 OF 6

LED MATRIX: 7X4

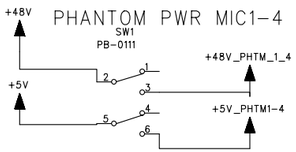


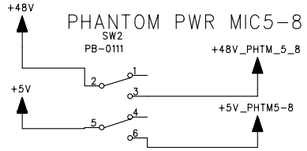
LED MATRIX: 7X4

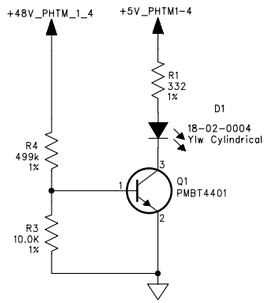
	LED_GROUP0	LED_GROUP1	LED_GROUP2	LED_GROUP3
LED_ROW0	IN8 CLIP	IN8 SIGNAL	IN1 CLIP	FG_LED8
LED_ROW1	IN7 CLIP	IN7 SIGNAL	IN1 SIGNAL	FG_LED7
LED_ROW2	IN6 CLIP	IN6 SIGNAL	--	FG_LED6
LED_ROW3	IN5 CLIP	IN5 SIGNAL	MUTE	FG_LED5
LED_ROW4	IN4 CLIP	IN4 SIGNAL	VU2 CLIP	FG_LED4
LED_ROW5	IN3 CLIP	IN3 SIGNAL	VU1 CLIP	FG_LED3
LED_ROW6	IN2 CLIP	IN2 SIGNAL	FG_LED1	FG_LED2

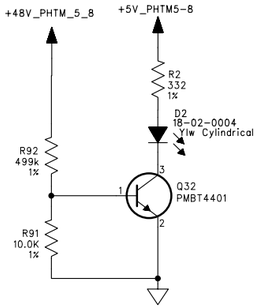
*DO NOT INSTALL

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

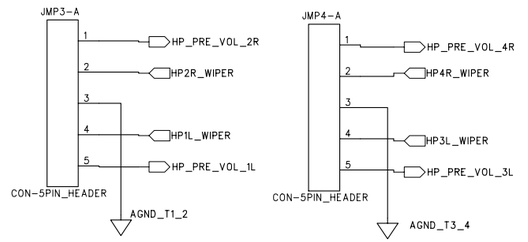


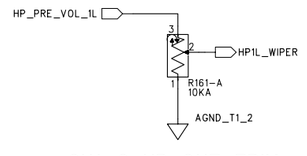




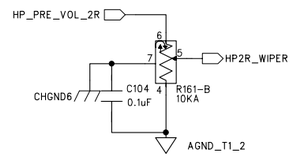


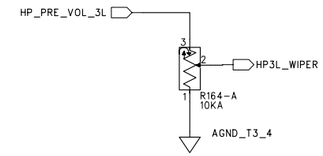
FROM HP BREAK-AWAY



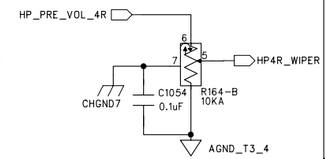


CH1-2 HP OUT TRIM

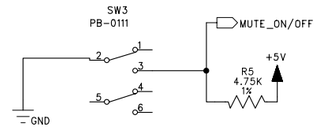




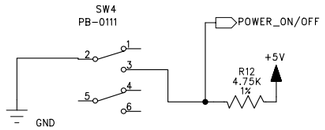
CH3-4 HP OUT TRIM



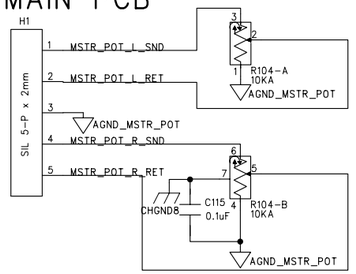
MUTE



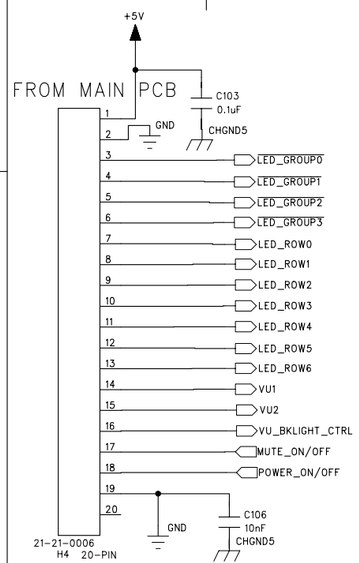
POWER

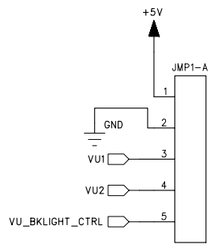


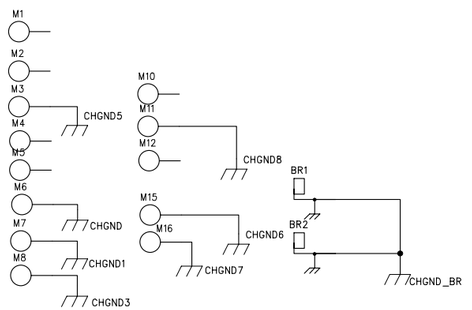
FROM MAIN PCB



FROM MAIN PCB







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DRAWN: A.Monge/JY	DATED: 01Jan07		
CHECKED: Name (F.Last)	DATED: 00/00/01		

COMPANY: LINE 6

TITLE: C13-1: UX8 USER INTERFACE
LEDS AND MASTER SWITCHES

PROGRAM: PADS LOGIC 2004

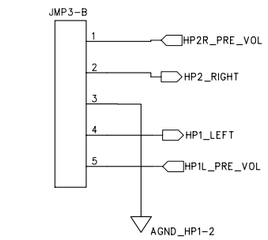
REV: C1

FILENAME: Product Directory/PCBs/Board Directory/
SCHEMATIC C13-1 UX8 USER INTERFACE REV C.sch

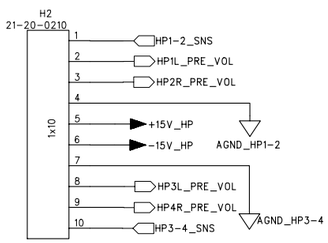
SCALE: 1:1 | SIZE: C | PART NUMBER: 35-00-0182-1 | SHEET: 5 OF 6

* DO NOT INSTALL

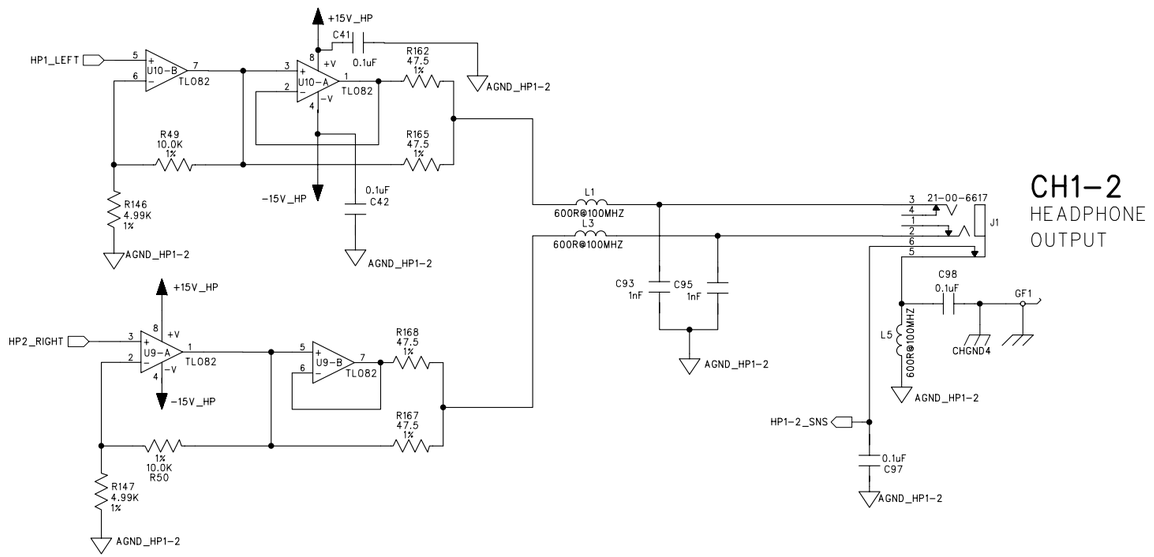
ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:



FROM MAIN

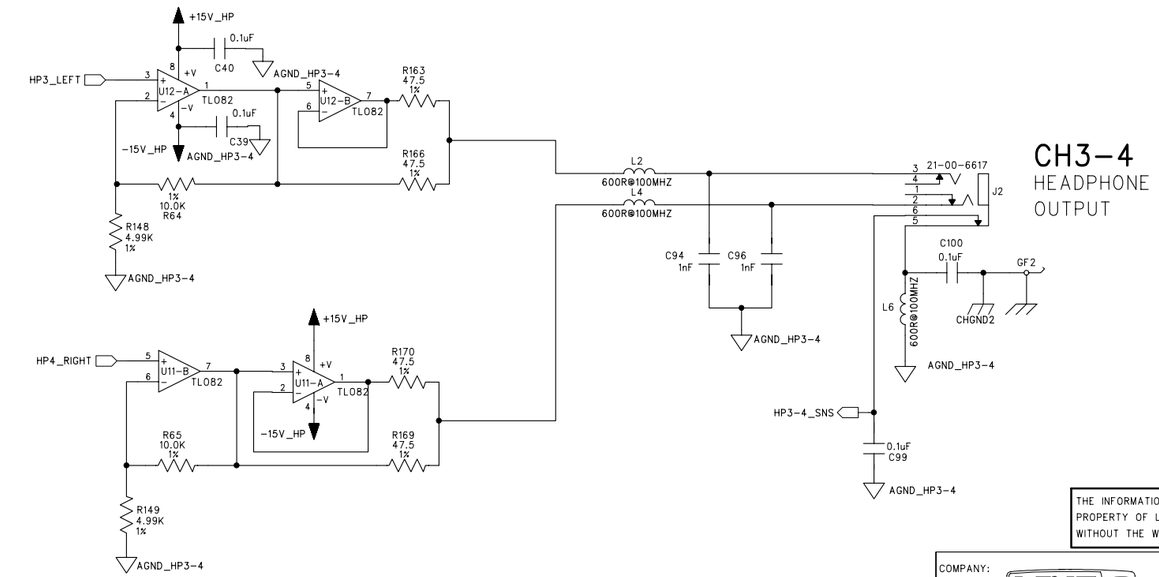


HEADPHONE AMPLIFIER CH1-2



CH1-2
HEADPHONE
OUTPUT

HEADPHONE AMPLIFIER CH3-4



CH3-4
HEADPHONE
OUTPUT

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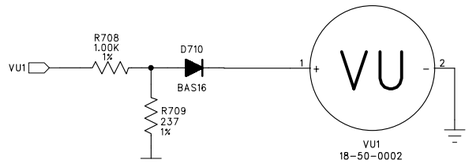
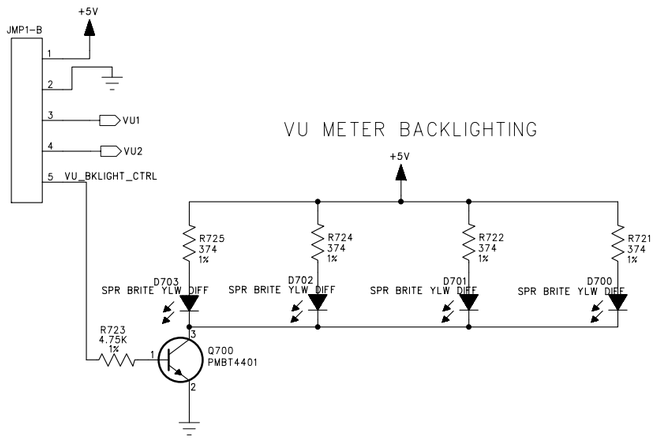
DRAWN: A.Monge/JY	DATED: 01Jan07	COMPANY: LINE 6	
CHECKED: Name (F.Last)	DATED: 00/00/01	TITLE: C13-1: UX8 USER INTERFACE HEADPHONE BREAK AWAY	
		PROGRAM: PADS LOGIC 2004	REV: C1
		FILENAME: Product Directory/PCBs/Board Directory/ SCHEMATIC C13-1 UX8 USER INTERFACE REV C.sch	
		SCALE: 1:1 SIZE: C PART NUMBER: 35-00-0182-2	SHEET: 6 OF 6

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:
0714102	05/21/07	Changed vu range res, and guitar in gain

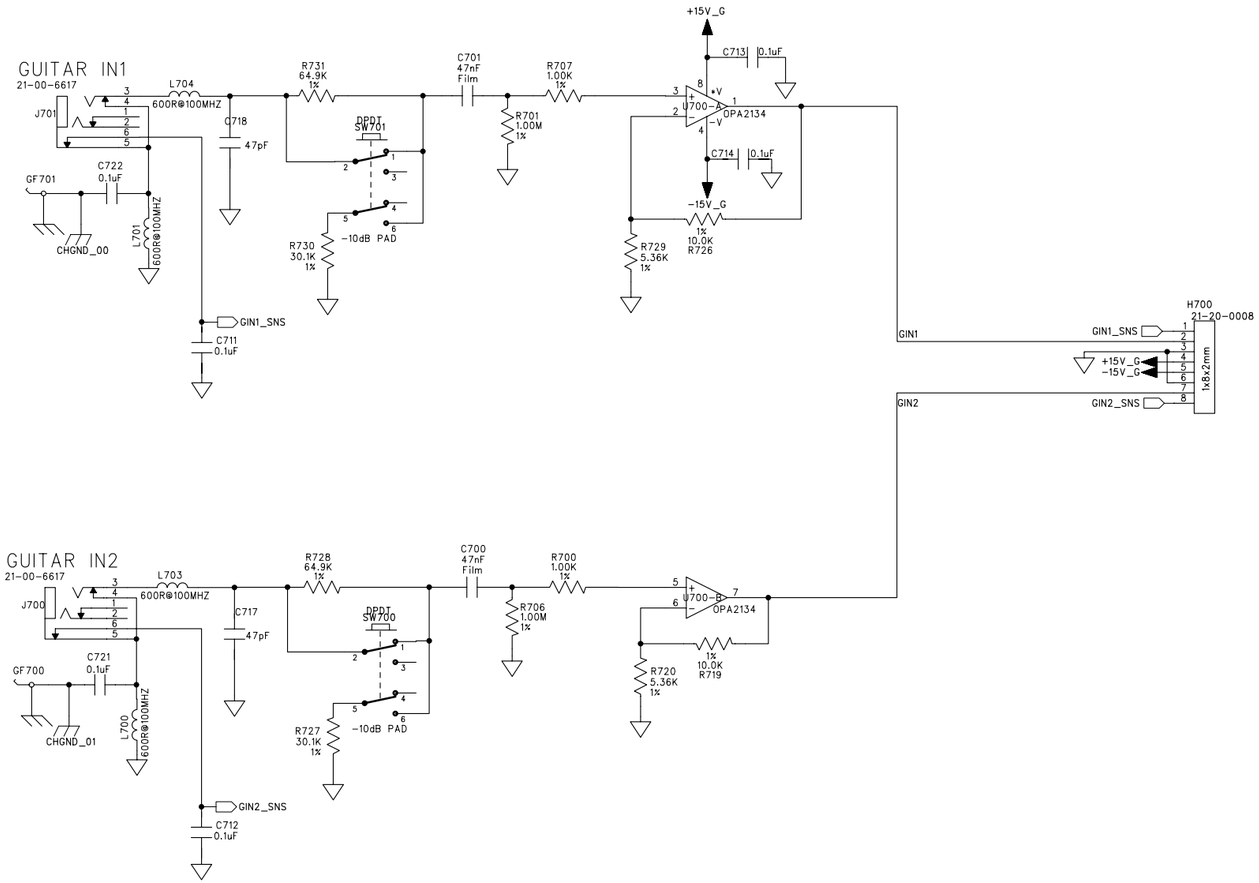
* DO NOT INSTALL

VU METER BREAK-AWAY
#35-00-0184-1

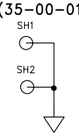




GUITAR INPUTS BREAK-AWAY
#35-00-0184-2



**SOLDER INPUT SHIELD (35-00-0192) TO THESE POINTS!



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DRAWN: A.Monge	DATED: 09/26/06	COMPANY: LINE 6	
CHECKED: Name (F.Last)	DATED: 00/00/01	TITLE: C13-1: UX8 BREAK-AWAY's VU's & Guitar Inputs	
		PROGRAM: PADS LOGIC 2004	REV: A2
		FILENAME: Product Directory/PCBs/Board Directory/File.sch	
		SCALE: 1:1 SIZE: C PART NUMBER: 35-00-0184-1	SHEET: 1 OF 1

35-00-0184-2

99-073-0205	C13-1 TONEPORT UX8 US		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
21-34-2001	CBL USB w/FERRITE 2 METER HIGH SPEED BLK	1	PACK-OUT
21-37-1160	CBL PWR UL/CSA SJT 8.2ft Blk EL-302 w/GND EL70	1	
24-20-1400	FUSE 4AMP 250VAC FAST ACTING PCB-MNT TH 3701400000	1	SOLDER ONTO (F1) OF THE MAIN PCBA "50-02-0181"
40-00-1003	CARD WARRANTY LINE 6 ACCESSORIES / SOFTWARE	1	PACK-OUT
40-03-0003	CARD INSTALL ALERT GPORT REV.E	1	
40-03-0031	CARD REGISTRATION UK	1	
40-03-2000	CARD REGISTRATION US	1	
40-03-2000-1	CARD REGISTRATION EUROPE	1	
40-06-0004	INSERT PROMO MODEL-PACKS GPORT USA/International REV.D	1	
40-10-2215	CARTON GIFT UX8 TONE PORT C13-1	1	
40-10-2216	ENDCAP FOAM SHIPPING L/R UX8 TONE PORT C13-1	2	
40-20-0022	BAG PLASTIC 2 MIL 36"x14"	1	
40-20-0070	BAG PLASTIC SHIPPING 9" x 12" 2-MIL	1	
40-25-0082	LABEL ROUND 1.75" TRANSPARENT	1	SEAL THE BOX
50-05-0006	ASSY CD GEARBOX 3.5 SINGLE CD, SLEEVE	1	PACK-OUT
59-00-0037	ASSY UNIT COMPLETE UX8 TONE PORT C13-1	1	
59-00-0037	**ASSY UNIT COMPLETE UX8 TONE PORT**		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
18-50-0002	DISPLAY VU METER ROUND 40MM CLR LENS TONEPORT UX8 C13-1	2	VU1-2
21-34-0085	CBL ASSY 5 COND 26AWG F/F x11"	1	H3 MAIN PCBA to H1 UI PCBA
21-34-0086	CBL ASSY 8 COND 26AWG F/Fx3.3"	1	H7 MAIN PCBA to H700 GUITAR INPUT PCBA
21-34-0087	CBL ASSY 10 COND 26AWG F/F x 10"	1	H4 MAIN PCBA to H2 HP PCBA
21-34-0088	CBL ASSY RIBBON 24 POS 28AWG 12x2 F/F x 3"	1	H2 MAIN PCBA to H500 LINE INPUT PCBA
21-34-0089	CBL ASSY RIBBON 20 POS 28AWG 10x2 F/F x 2.8"	1	H6 MAIN PCBA to H4 UI PCBA
21-34-0090	CBL ASSY RIBBON 40 POS 28AWG 20x2 F/F x 11"	1	H1 MAIN PCBA to H3 UI PCBA
24-21-1125	CAP SWITCH PLASTIC .35" DIA. x .42" CHROME	6	SW1-4,SW700-701
24-21-1126	CAP SWITCH PLASTIC .20" DIA. x .35" CHROME	16	SW5-20
30-00-0042	SCREW SHEET METAL 4 x 0.375 INSELF-TAP PPB	17	XLR JACK & SPDIF to REAR PANEL
30-00-0043	SCREW 6-32 x 5/16 w/LK WASH PPZ STL	1	EARTH GND CABLE TO CHASSIS
30-00-0606	SCREW 6-32 x 7/16 w/LK WASHER STL PPB	8	5-CHASSIS REAR, 2-CHASSIS SIDE,1-CHASSIS TOP
30-00-0607	SCREW 6-32 x 7/16IN w/LK WASH PPZ STL	21	7-MAIN, 13-UI, 1-BOTTOM
30-00-1033	SCREW 10-32 x 3/8IN SCH STL BLK OXIDE	4	FRONT PANEL CORNERS to CHASSIS BOTTOM
30-00-8375	SCREW SHEET METAL #8 x.375" SELF-TAP PPB	2	IEC JACK (J16) to CHASSIS REAR
30-15-0004	SPACER .13THKx.63OD NYLON	4	GUITAR INPUT PCBA (J700-701), HP PCBA (J1-2)
30-24-0030	CABLE-TIE 4.0 IN. LG BLK Panduit p/n PLT1M-CO	3	To SECURE THE VU METERS

59-00-0037	ASSY UNIT COMPLETE UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
30-27-0224	RING BORDER VU METER 1.7" DIA x .30" HT ABS UX8 (C13-1)	2	
30-45-0011	KNOB POT .77 DIA x .76 HT PLASTIC CHROME-PLATED	1	
30-45-0019	KNOB POT .55 DIA x .50 HT PLASTIC CHROME-PLATED	10	8-MIC GAIN POTS, 2-HP POTS
30-51-0269	PANEL FRONT 18.99 x 3.46 x .125 STL C13-1	1	
30-51-0270	PANEL BACK 16.77 x 3.13 x .125STL C13-1	1	
30-51-0271	TOP CHASSIS 17.05 x 6.93 x 3.20 STL C13-1	1	
30-51-0272	BOTTOM CHASSIS 16.79 x 6.82 x 3.16 STL C13-1	1	
30-60-0006	LOGO LINE 6 SML 38.35 x 7.98mmw/ADHSV BRUSHED/BLK FINISH AL	1	
40-25-0101	LABEL BAR CODE S/N 2-PNL LTX 16 1125502	1	
50-02-0181	PCBA MAIN UX8 TONE PORT C13-1	1	
50-02-0182-1	PCBA USER INTERFACE UX8 TONE PORT C13-1	1	
50-02-0182-2	PCBA HEADPHONE UX8 TONE PORT C13-1	1	
50-02-0184-1	PCBA VU METER UX8 TONE PORT C13-1	1	
50-02-0184-2	PCBA GUITAR INPUTS UX8 TONE PORT C13-1	1	
50-02-0185	PCBA LINE IN/OUT UX8 TONE PORTC13-1	1	
50-02-0181	**PCBA MAIN UX8 TONE PORT**		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-04-0000	RES 0R 5% 1206	1	R221
01-04-0100	RES 10R 5% 1206	1	R118
01-16-0682	RES CARBON FILM 6.8K 1/2W 5% TH	16	R19,R20,R21,R22,R23,R24,R25,R26,R27,R28,R29,R30,R31,R32,R33,R34
01-21-0623	RES METAL OXIDE 62K 1W 5% TH	1	R75
01-24-0000	RES 0R 1% 0805	8	L2,L52,R190,R191,R223,R224,R226,R324
01-24-1000	RES 100R 1% 0805	3	R100,R284,R362
01-24-10R0	RES 10.0R 1% 0805	6	R103,R107,R112,R123,R139,R363
01-24-1153	RES 115K 1% 0805	1	R174
01-24-1211	RES 1.21K 1/8W 1% 0805	8	R3,R4,R5,R6,R7,R8,R9,R10
01-24-1403	RES 140K 1% 0805	1	R101
01-24-1501	RES 1.50K 1% 0805	4	R279,R288,R306,R318
01-24-1650	RES 165R 1% 0805	1	R283
01-24-2001	RES 2.00K 1% 0805	52	R49,R50,R51,R52,R53,R54,R55,R56,R57,R59,R60,R62,R63,R65,R66,R68,R76,R78,R79,R81,R82,R84,R85
			R87,R88,R89,R90,R91,R92,R93,R94,R95,,R145,R162,R170,R171,R195,R198,R203,R209,R215,219,R230,
			R239,R240,R253,R258,R259,R278,R286,R305,R320
01-24-2002	RES 20.0K 1% 0805	16	R40,R41,R42,R43,R69,R70,R71,R72,R73,R74,R143,R144,R172,R173,R325,R326
01-24-22R1	RES 22.1R 1% 0805	4	R138, R308,R309,R328

50-02-0181	PCBA MAIN UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-24-2941	RES 2.94K 1% 0805	1	R102
01-24-30R1	RES 30.1R 1% 0805	2	R108,R114
01-24-31R6	RES 31.6R 1% 0805	1	R364
01-24-3321	RES 3.32K 1% 0805	2	R36,R37
01-24-4870	RES 487R 1% 0805	1	R35
01-24-4990	RES 499R 1% 0805	4	R270,R292,R293,R321
01-24-5112	RES 51.1K 1% 0805	3	R175,R176,R177
01-24-57R6	RES 57.6R 1% 0805	1	R276
01-24-5R11	RES 5.11R 1% 0805	21	R105,R110,R115,R127,R141,R146,R147,R148,R149,R150,R151,R152,R153,R154,R155,R156,R157,R158,R159,R160,R161
01-24-6040	RES 604R 1% 0805	16	R11,R12,R13,R14,R15,R16,R17,R18,R368,R369,R370,R371,R372,R373,R374,R3
01-24-6R81	RES 6.81R 1% 0805	2	R178,R179
01-24-7502	RES 75.0K 1% 0805	4	R166,R167,R168,R169
01-24-7503	RES 750K 1% 0805	3	R201,R207,R208
01-24-75R0	RES 75R 1% 0805	1	R2
01-24-8871	RES 8.87K 1% 0805	16	R45,R46,R47,R48,R58,R61,R64,R67,R77,R80,R83,R86,R96,R97,R98,R99
01-24-88R7	RES 88.7R 1% 0805	1	R44
01-25-0000	RES 0R 1% 0603	8	R329,R332,R335-336,R339,R320,R341,R342
01-25-1001	RES 1.00K 1% 0603	13	R274,R275,R299,R352,R353,R354,R355,R356,R357,R358,R359,R360,R361
01-25-1002	RES 10.0K 1% 0603	75	R38,R39,R104,R106,R109,R111,R113,R116,R124,R125.R126,R134
			R140,R142,R163,R164,R165,R202,R204,R205,R206,R210,R211,R212,R213,R214,R216,R217,R218,
			R235,R236,R237,R238,R241,R242,R243,R244,R249,R250,R251,R252,R254,R255,R256,R257,R260,R261,R262,R263,R264,R265,R266,R267,R268,R269,R271,R2
			R277,R280,R281,R282,R285,R287,R289,R290,R291,R304,R310,R311,R312,313,
			R316,R317,R349
			(Install location J17 between pad 7 & pad 8 see ECO#071989)
01-25-1004	RES 1.00M 1% 0603	1	R350
01-25-1502	RES 15.0K 1% 0603	2	R273,R298
01-25-2002	RES 20.0K 1% 0603	8	R246,R248,R314,R315,R343,R344,R345,R346
01-25-3161	RES 3.16K 1% 0603	1	R348
01-25-3241	RES 3.24K 1% 0603	10	R119,R122,R130,R133,R182,R186,R189,R220,R225,R245
01-25-3401	RES 3.40K 1% 0603	8	R193,R196,R199,R228,R231,R233,R331,R334
01-25-3481	RES 3.48K 1% 0603	8	R117,R128,R183,R188,R192,R222,R227,R247
01-25-4751	RES 4.75K 1% 0603	3	R136,R337,R338
01-25-4752	RES 47.5K 1% 0603	3	R347,R366,R367
01-25-4993	RES 499K 1% 0603	1	R351

50-02-0181	PCBA MAIN UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-28-1001	RES 1.00K 1% 1206	8	R120,R121,R129,R131,R132,R181,R295,R297
01-28-2431	RES 2.43K 1% 1206	4	R184,R185,R187,R296
01-70-1032	THERMISTOR INRUSH 10R@4A 4/10/7.8 TH	1	TH1
03-00-1104	CAP CER 0.1uF 100V 10% TH 200/125/260/100 (100nF)	2	C50,C65
03-10-0227	CAP ELEC 220uF 6.3V 20% RADIAL 5/11/5	3	C443,C444,C445
03-10-0228	CAP ELEC 2200uF 10V 20% 105C LowZ 0.04R RADIAL 12.5/25/5	1	C95
03-10-1107	CAP ELEC 100uF 6.3V 20% RADIAL5/11/5	1	C80
03-10-6108	CAP ELEC 1000uF 6.3V 20% RADIAL 8/11.5/5	2	C154,C456
03-12-0107	CAP ELEC 100uF 16V 20% RADIAL 6.3/11/5	9	C62,C78,C98,C114,C130,C146,C147,C436,C437
03-12-0476	CAP ELEC 47uF 16V 20% RADIAL 6.3/11.2/5	6	C51,C74,C96,C115,C131,C153
03-12-1477	CAP ELEC 470uF 16V 20% RADIAL 8/12/5	7	C118,C120,C132,C133,C136,C145,C219
03-13-0107	CAP ELEC 100uF 16V 20% 105C LowZ 0.350R RADIAL 6.3/11.2/5	1	C73
03-13-0108	CAP ELEC 1000uF 16V 20% 105C LowZ 0.052R RADIAL 10/20/5	1	C117
03-14-1227	CAP ELEC 220uF 25V 20% RADIAL LowZ 0.15R RADIAL 8/15/5	2	C112,C113
03-18-0105	CAP ELEC 1uF 50V 20% RADIAL 5/11/5	15	C63,C69,C70,C85,C87,C88,C104,C106,C107,C124,C125,C127,C138,C142,
			C143
03-18-0106	CAP ELEC 10uF 50V 20% RADIAL 5/11/5	21	C66,C77,C81,C82,C86,C92,C93,C100,C101,C102,C109,C110,C111,C121,C122,
			C129,C140,C141,C148,C149
03-20-0107	CAP ELEC 10uF 63V 20% RADIAL 5/12/5	16	C7,C8,C9,C10,C11,C12,C13,C14,C15,C16,C17,C18,C19,C20,C21,C22
03-20-1227	CAP ELEC 220uF 63V 20% RADIAL 10/16/5	1	C49
03-22-0686	CAP ELEC 68uF 400V 20% SNAP-INRADIAL 22/25/10	1	C27
03-24-0223	CAP MET-POLY 22nF 250V 10% TH 10.3/4.4/7.5/7.5	1	C56
03-41-0683	CAP X-CAP 68nF 275V 20% POLY PROPYLENE 5/11/18/15	1	C3
03-50-0101	CAP NPO 100pF 50V 5% 0805	19	C167,C234,C236,C264,C272,C273,C278,C291,C325,C330,C331,C337,
			C356,C392,C393,C422,C428,C429,C430
03-50-0120	CAP NPO 12pF 50V 5% 0805	2	C191,C202
03-52-0101	CAP X7R 100pF 50V 10% 0805	1	C237
03-52-0102	CAP X7R 1nF 50V 10% 0805	1	C166
03-52-0104	CAP X7R 0.1uF 50V 10% 0805	1	C155
03-52-0472	CAP X7R 4.7nF 50V 10% 0805	8	C168,C169,C170,C171,C173,C175,C177,C178
03-52-0473	CAP X7R 47nF 50V 10% 0805	11	C61,C72,C91,C139,C151,C152,C232,C329,C335,C339,C425
03-56-0100	CAP NPO 10pF 50V 5% 0603	16	C180,C181,C182,C183,C184,C185,C186,C190,C192,C193,C194,C195,C196,C197,C198,C199
03-56-0102	CAP NPO 1nF 50V 5% 0603	20	C29,C30,C31,C32,C57,C58,C59,C60,C156,C228,C259,C267,C271,C303,C306,
			C321,C370,C389,C420,C421

50-02-0181	PCBA MAIN UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
03-56-0151	CAP NPO 150pF 50V 5% 0603	16	C35,C36,C37,C38,C40,C41,C42,C43,C45,C46,C47,C48,C52,C53,C54,C55
03-56-0221	CAP NPO 220pF 50V 5% 0603	3	C340,C440,C446
03-56-0561	CAP NPO 560pF 50v 5% 0603	2	C433,C434
03-58-0102	CAP X7R 1nF 50V 10% 0603	15	C233,C262,C275,C277,C279,C288,C292,C308,C309,C327,C332,C341,
			C343,C357,C374
03-58-0103	CAP X7R 10nF 50V 10% 0603	6	C1,C4,C203,C206,C208,C261
03-58-0104	CAP X7R 0.1uF 25V 10% 0603	137	C2,C33,C34,C64,C67,C68,C71,C75,C79,C83,C84,C89,C97,C99,C103
			C105,C108,C116,C119,C123,C126,C134,C135,C137,C144,C150,
			C157,C158,C159,C160,C161,C162,C163,C164,C165,C172,C174,C176,C179,C187,C188,C189,C200,C201,C204,C205,
			C207,C209,C210,C211,C212,C213,C214,C215,C216,C217,C218,C230,C231,C235,C238,C239,C256-258,C260,C263,
			C265,C266,268,C269.C270,C274,C276,C280,C281,C289,C293,C294,C295,C296,C301,C302,
			C304,C305,C306,C307,C318,C319,C320,C322,C323,C23324,C326,C328,C336,C338,C342,
			C362,C363,C364,C367,C368,C369,C371,C372,C373,C375,C376,C377,C378,C379,C388,C390,C391,C394,C399
			C412,C413,C415,C416,C417,C418,C419,C426,C427,C431,C432,C435,C447,C448,C449,C450,C457,C458,C459,C460,C461
03-58-0473	CAP X7R 47nF 25V 10% 0603	10	C23,C229,C411,C423,C424,C438,C439,C441,C442,C455
03-75-0102	CAP Y-CAP 1nF 250VAC 20% TH CER DISC 7D/7/7.5	3	C5,C28,C76
03-82-0106	CAP ELEC 10uF 16V 20% SM 4/5.4/5.5	2	C6,C25
04-01-0330	INDUCTOR DRUM-CORE 33uH@ 2.52MHz 640mA SM GS43	2	L4,L5
04-05-0001	FERRITE BEAD 1K@100MHz 100mA 0603 SM	30	L1,L11,L12,L18,L34,L35,L5,6L57,L58,L59,L60,L61,L62,L63,L64,L65,L66,L67,L68,L69,L70,L71,L72,L73,L74,L75,L76,L77,L78,L79
06-20-0099	DIODE GEN PUR DUAL 70V 215mA 6nS SOT-23 SM BAV99-7-F	3	D1,D2,D31
06-20-5148	DIODE SMALL-SIGNAL SOD-523 4148 SM	2	D43,D44
06-23-0054	DIODE SCHOTTKY DUAL 30V 200mA 5nS SOT-23 SM BAT54S	4	D33,D34,D37,D38
06-23-0070	DIODE SCHOTTKY DUAL 70V 70mA 5nS SOT-23 SM BAS70-04LT1G	1	D26
06-24-0420	DIODE ULTRAFAST 4A 200V 267-05 TH MUR420	1	D5
06-32-0160	DIODE ULTRAFAST 600V 1A DO-214A SM MURS160	1	D28
06-32-0540	DIODE SCHOTTKY 5A 40V SMC SM B540C	1	D30
06-32-2100	DIODE SCHOTTKY 2A 100V SMB SM B2100-13	2	D29,32
06-32-4006	DIODE RECTIFIER 800V 1A SMA SM MRA4006T3G	4	D6,D7,D24,D25
06-34-0016	DIODE SWITCHING 75V 200mA 6nS SOT-23 SM BAS16LT1G	5	D35,D36,D39,D41,D42
06-34-0021	DIODE SWITCHING 250V 200mA 50nS SOT-23 SM BAS21LT1	1	D27
06-34-0031	DIODE GEN PUR DUAL 120V 600mA 50nS SOT-23 SM BAS31	16	D8,D9,D10,D11,D12,D13,D14,D15,D16,D17,D18,D19,D20,D21,D22,D23
09-06-3307	TRANS MOSFET N-CHAN 60V SOT-23-6 SM ZXMN6A08E6	1	Q1

50-02-0181	PCBA MAIN UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
09-10-4401	TRANS NPN SMALL-SIGNAL MBT4401SOT-23 SM	21	Q2,3Q,4Q,5Q,6Q,7Q,8Q,9Q10,Q11,Q12,Q13,Q14,Q15,Q16,Q17,Q18,Q19,Q21,Q
09-10-4403	TRANS PNP SMALL-SIGNAL MBT4403SOT-23 SM	1	Q25
09-16-0879	TRANS JFET N-CH 50V .75R SC-70 SM 2SK879-Y	2	Q22,Q23
11-00-0003	CRYSTAL 24MHz 2-P LOW PROFILE METAL CAN TH AT49	1	Y1
11-01-2258	OSCILLATOR 22.5792MHz 3.3V W/3-S HCMOS OUT 4P HS-DIP8	1	Y3
11-01-2458	OSCILLATOR 24.576MHz 3.3V W/3-S HCMOS OUT 4P HS-DIP8	1	Y2
11-10-0010	INDUCTOR ROD CHOKE 10uH VERT MNT TH ICE C03-00100-06-00	3	L7,L8,L10
11-10-0100	INDUCTOR EMI/RFI CM CHOKE 10mH 0.65A TH PMCU-0100	1	L3
11-10-0146	INDUCTOR PWR CHOKE 181uH VERT MNT TH 3.7A PM2110-181K-RC	1	L9
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	37	L13,L14,L15,L16,L17,L19,L20,L21,L22,L23,L24,L25,L26,L27,L28,L29,L30,L21,L32 L33 L36 L37 L38 L39 L40 L41 L42 L43 L44 L45 L46 L47 L48 L49 L50 L51 L53
11-30-0633	XFMR HOUSE-KEEPING ICE ICA-0633	1	T1
11-33-0120	XFMR AUDIO DIGITAL X-MISSION 1:1	1	T3
12-00-0317	IC VREG ADJ 1.2-37V 1.5 AMP TO-220 LM317/NOPB TH	1	U46
12-02-0015	IC REG +15V 1.5AMP TO-220F TH NJM7815FA#	1	U56
12-02-0115	IC REG -15V 1.5AMP TO-220F TH NJM7915FA#	1	U55
12-02-7805	IC REG +5v 1.5 Amp TH	2	U45,U53
12-12-1234	IC CONTROLLER PWM POWER-INTERGRATIONS TOP234Y	1	U57
12-54-0082	IC OP AMP DUAL TL082CD SO-8 SM	1	U54
12-54-0084	IC OP AMP QUAD TL084CD SM	4	U4,U6,U7,U11
12-54-5538	IC OP-AMP DUAL LO NOISE NE5532AD8 SM SO-8	10	U20,U21,U22,U26,U27,U28,U39,U34,U35,U36,U37,U38,U39,U40,U50,U51
12-62-4053	IC SWITCH-ANALOG TRIPLE 2-CHANTSSOP-16 SM CD4053BPW	8	U17.U18,U19,U24,U25,U29,U38,U47
12-64-4272	IC CONVERTER A/D CODEC 24-BIT/192 kHz STEREO CS4272 TSSOP-28	5	U12,U23,U34,U41,U52
12-64-8832	IC ADC 2-CH 8-BIT W/MULTIPLEXER SM ADC08832	1	U2
12-70-2576	IC REG SWITCHER STEP-DOWN ADJ LM2576 TO-263 SM	1	U37
15-52-0541	IC 74LVC541A LOW VOLT OCTAL BUFFER/DRIVER SOIC-20 SM	1	U42
15-64-0273	IC 74HCT273 FLIP-FLOP D-TYPE 8-BIT SO-20 SM	5	U31,U32,U33,U43,U44
15-65-0000	IC 74LCX00 LOW VOLTAGE CMOS QUAD 2 INPUT NAND SO-14 SM	2	U9,U60
15-65-0002	IC 74LCX02 LOW VOLTAGE CMOS QUAD 2 INPUT NOR SO-14 SM	2	U10,U59
15-65-0004	IC 74LVC04 LOW VOLTAGE CMOS HEX INVERTER SO-14 SM	1	U62
15-65-0014	IC 74LCX14 LOW VOLTAGE CMOS INV HEX SCHMITT TRIGGER SM	1	U61
15-68-2375	IC PWM CONTROLLER SET-UP/ FLYBACK SW/ REG. NJU7600M DMP8	1	U8
15-68-6801	IC CONTROLLER USB 2.0 w/8052 MCU CY7C68013A-56PVX SSOP-56	1	U1
15-78-0256	IC EEPROM 256KBIT I2C 2.5V SERIAL 24LC256I SOIC8(.200) SM	1	U5
15-79-0088	IC MEMORY SECURE AT88SC153-00 -2.7 8S1 (SO-8) SM	1	U3
15-86-1369	IC DSP SHARC ADSP-21369KSZ MQFP208 SM	1	U30

50-02-0181	PCBA MAIN UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
15-92-5809	IC RESET 3.3V 5% ACTIVE-LOW SOT-23 SM LM809M3-3.08/NOPB	1	U58
21-00-6616	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH	5	J9,J11,J12,J13,J14
21-02-0059	JACK RCA DUAL STACKED RT-ANGLEGOLD CONTACTS RD/WH PCB-MNT	1	J10
21-08-0002	JACK XLR FEMALE PCB MT RT ANG TH W/NO RELEASE TAB	8	J1,J2,J3,J4,J5,J6,J7,J8
21-14-8301	JACK IEC ANGLED 10A IEC320 PANEL COMPONENTS 83011172	1	J16
21-20-0008	HDR SIL PCB-MT 8-PIN x 2mm MALE SHRD B8B-PH-K-S	1	H7
21-20-0205	HDR SIL PCB-MT 5-PIN x 2mm MALE SHRD VERT MT TH	1	H3
21-20-0210	HDR SIL PCB-MT 10-PIN x 2mm MALE SHRD VERT MT TH	1	H4
21-21-0001	JACK USB-B SHIELDED PCB-MNT BLACK WIESON 3700-4ABN4S1W	1	J15
21-21-0005	HDR DIL PCB-MT 24-PIN 2x12x .100 MALE SHRD VERT TH	1	H2
21-21-0006	HDR DIL PCB-MT 20-PIN 2x10x .100 MALE SHRD VERT TH	1	H6
21-21-0040	HDR DIL PCB-MT 40-PIN 2x20x 2.54mm MALE SHRD VERT MT TH	1	H1
21-34-1116-1	CBL EARTHING w/EYELET 16AWG 3-IN GREEN w/YELLOW STRIPE	1	Solder to J16
30-00-0118	SCREW #4-40 x 1/2 IN w/LK WASHPPZ STL	3	HS1,HS2,HS3
30-00-0119	NUT HEX #4-40 w/CAPTIVE STAR WASHER	3	(U55,U56,U57)
30-00-0607	SCREW 6-32 x 7/16IN w/LK WASH PPZ STL	2	(U45,U53)
30-12-0632	STANDOFF HEX .250 6-32 F-F 1INF-F AL	1	(U53)
30-12-2210	STANDOFF HEX .250 6-32 F-F .500 LG AL	1	(U45)
30-15-0007	INSULATOR XTAL 4.9mm C-C 11.8x5.6mm MYLAR	1	(Y1)
30-18-3030	CLIP GND PCB .30x.30x.07	15	GF1,GF2,GF3,GF4,GF5,GF6,GF7,GF8,GF9,GF10,GF11,GF12,GF13,GF14,GF15
30-51-0029	HEATSINK AL BLK ANODIZED	1	HS3 (For U57)
30-51-0319	HEAT SINK AL BLK ANDZ WAKEFIELD #287-1AB	2	HS1,HS2 (For U55-56)
30-65-0009	TAPE INSULATING 1/8W x 2 INL (NON-SPECIFIC)	1	PLACE AROND USB JACK (J15)
35-00-0181	PCB MAIN UX8 TONE PORT C13-1 REV D	1	
35-00-0193	PCB SHIELD POCKET POD P9	1	
40-25-0271	LABEL SHOCK HAZARD TONEPORT UX8 C13-1	1	
40-30-2000	LABEL ESN 38.10 x 6.35mm THERMAL XFR GLOSSY WHITE	1	
45-02-0043	IC PROGRAMMED FLASH v0.06e TONE PORT UX8 C13-1	1	

50-02-0182-1	PCBA USER INTERFACE UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-24-1001	RES 1.00K 1% 0805	16	R10,R14,R15,R16,R17,R18,R20,R95,R101,R102,R115,R117,R119,R125,R126,R1
01-24-10R0	RES 10.0R 1% 0805	8	R66,R82,R145,R171,R172,R173,R174,R177
01-24-1331	RES 1.33K 1% 0805	16	R9,R11,R99,R100,R114,R116,R118,R121,R122,R123,R128,R133,R135,
			R137,R138,R139
01-24-1503	RES 150K 1% 0805	8	R7,R97,R107,R108,R109,R111,R112,R113
01-24-2002	RES 20.0K 1% 0805	16	R8,R34,R36,R93,R94,R98,R103,R105,R106,R124,R129,R130,R131,R132,R134,R
01-24-2491	RES 2.49K 1% 0805	16	R67,R72,R73,R74,R75,R76,R77,R78,R79,R80,R81,R83,R151,R175,R176,R178
01-24-3320	RES 332R 1% 0805	2	R1,R2
01-24-4992	RES 49.9K 1% 0805	8	R16,R19,R21,R22,R23,R24,R25,R96
01-24-4993	RES 499K 1% 0805	2	R4,R92
01-24-5110	RES 511R 1% 0805	16	R13,R26,R27,R28,R29,R30,R31,R68,R69,R70,R71,R110,R120,R140,R155,R159
01-24-75R0	RES 75R 1% 0805	7	R84,R85,R86,R87,R88,R89,R90
01-25-1002	RES 10.0K 1% 0603	5	R3,R91,R179,R180,R181
01-25-1331	RES 1.33K 1% 0603	16	R33,R51,R52,R53,R54,R55,R56,R57,R58,R59,R60,R61,R62,R63,R141,R143
01-25-1332	RES 13.3K 1% 0603	16	R32,R35,R37,R38,R39,R40,R41,R42,R43,R44,R45,R46,R47,R48,R142,R144
01-25-4751	RES 4.75K 1% 0603	2	R5,R12
01-48-9107	POT SINGLE 5KC MONO LINEAR 30 mm D-SHAFT	8	R150,R152,R153,R154,R156,R157,R158,R160
01-49-0013	POT DUAL 10KA AUDIO TAPER 30mmHORZ-MNT	3	R104,R161,R164
03-10-0478	CAP ELEC 4700uF 6.3V 20% RADIAL 12.5/20/5	8	C43,C44,C45,C46,C47,C48,C49,C50
03-14-0476	CAP ELEC 47uF 25V 20% RADIAL 6.3/7/5	8	C3,C7,C9,C12,C14,C16,C17,C36
03-18-0106	CAP ELEC 10uF 50V 20% RADIAL 5/11/5	2	C101,C102
03-52-0103	CAP X7R 10nF 50V 10% 0805	1	C106
03-52-0104	CAP X7R 0.1uF 50V 10% 0805	12	C103,C104,C105,C107,C108,C109,C110,C111,C112,C113,C114,C115
03-52-0331	CAP X7R 330pF 50V 10% 0805	32	C32,C33,C34,C35,C37,C38,C61,C68,C69,C70,C71,C72,C73,C74,C75,C76,C77,C78,C79,C80,C81,C82,C83,C84,C85,C86,C87,C88,C89,C90,C91,C92
03-52-0473	CAP X7R 47nF 50V 10% 0805	24	C1,C2,C4,C5,C6,C8,C10,C11,C13,C15,C18,C19,C20,C21,C22,C23,C24,C25,C26,C27,C28,C29,C30,C31
03-58-0104	CAP X7R 0.1uF 25V 10% 0603	16	C51,C52,C53,C54,C55,C56,C57,C58,C59,C60,C62,C53,C54,C55,C56,CD7,D58,C59,C60,C61,C62,C63,C64,C65,C66,C67
09-06-7002	TRANS MOSFET N-CHAN 60V 7R5 SOT-23 SM 2N7002	3	Q31,Q33,Q34
09-10-0860	TRANS PNP EPITAXIAL SILICON BC860B SOT-23	16	Q4Q5Q6Q7Q8Q9Q10Q11Q12Q13,Q20,Q21,Q22,Q23,Q24,Q25
09-10-4401	TRANS NPN SMALL-SIGNAL MBT4401SOT-23 SM	18	Q1,Q2,Q3,Q14,Q15,Q16,Q17,Q18,Q19,Q26,Q27,Q28,Q29,Q32,Q35,Q36,Q37,Q3
12-54-0082	IC OP AMP DUAL TL082CD SO-8 SM	8	U1,U2,U3,U4,U5,U6,U7,U8
18-00-0003	LED RED CYLINDRICAL 3mm 627nm XSUR14D TH	12	D3,D4,D5,D6,D7,D8,D9,D10,D11,D12
18-02-0004	LED YELLOW CYLINDRICAL 3mm 590nm XSUY14D TH	3	D1,D2,D13
18-04-0002	LED GREEN CYLINDRICAL 3mm 565nm XSUG14D TH	8	D15,D16,D17,D18,D19,D20,D21,D22

50-02-0182-1	PCBA USER INTERFACE UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
21-18-0002	TERMINAL SCREW PCB MOUNT RT ANGLE SNAP-IN TH	2	BR1,BR2
21-20-0205	HDR SIL PCB-MT 5-PIN x 2mm MALE SHRD VERT MT TH	1	H1
21-21-0006	HDR DIL PCB-MT 20-PIN 2x10x .100 MALE SHRD VERT TH	1	H4
21-21-0040	HDR DIL PCB-MT 40-PIN 2x20x 2.54mm MALE SHRD VERT MT TH	1	H3
21-34-0084	CBL SIL 5-COND 22AWG .1" PITCHx 2.5" TIN ENDS 300V, 105C	3	JMP1A to JMP1B, JMP3A to JMP3B, JMP4A to JMP4B
24-01-0111	SWITCH LATCHING PUSH BUTTON DPDT 6-PIN PC MOUNT	4	SW1,SW2,SW3,SW4
24-01-2285	MINIATURE SWITCH LATCHING PUSHBUTTON DPDT 6-PIN PC MNT	16	SW5,SW6,SW7,SW8,SW9,SW10,SW11,SW12,SW13,SW14,SW15,SW16,SW17, SW18,SW19,SW20
30-15-0035-2	SPCR LED 4.5MM DIA x 9.5MM NYLON KANG YANG LEDH-9.5 (C13)	21	D1,D2,D3,D4,D5,D6,D7,D8,D9,D10,D11,D12,D13,,D15,D16,D17,D18,D19,D20,D2
35-00-0182-1	PCB USER INTERFACE UX8 TONE PORT C13-1 REV C	1	
35-00-0193	PCB SHIELD POCKET POD P9	1	
40-30-2000	LABEL ESN 38.10 x 6.35mm THERMAL XFR GLOSSY WHITE	1	
50-02-0182-2	**PCBA HEADPHONE UX8 TONE PORT**		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-24-47R5	RES 47.5R 1% 0805	8	R162,R163,R165,R166,R167,R168,R169,R170
01-25-1002	RES 10.0K 1% 0603	4	R49,R50,R64,R65
01-25-4991	RES 4.99K 1% 0603	4	R146,R147,R148,R149
03-50-0102	CAP NPO 1nF 50V 5% 0805	4	C93,C94,C95,C96
03-58-0104	CAP X7R 0.1uF 25V 10% 0603	8	C39,C40,C41,C42,C97,C98,C99,C100
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	6	L1-6
12-54-0082	IC OP AMP DUAL TL082CD SO-8 SM	4	U9-12
21-00-6617	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH W/CHROME HRDWARE	2	J1,J2
21-20-0210	HDR SIL PCB-MT 10-PIN x 2mm MALE SHRD VERT MT TH	1	H2
30-18-3030	CLIP GND PCB .30x.30x.07	2	GF1,GF2
35-00-0182-2	PCB HEADPHONE UX8 TONE PORT C13-1 REV C	1	
50-02-0184-1	**PCBA VU METER UX8 TONE PORT**		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-25-1001	RES 1.00K 1% 0603	2	R708,R710
01-25-2370	RES 237R 1% 0603	2	R709,R711
01-25-3740	RES 374R 1% 0603	4	R721,R722,R724,R725
01-25-4751	RES 4.75K 1% 0603	1	R723
06-34-0016	DIODE SWITCHING 75V 200mA 6nS SOT-23 SM BAS16LT1G	2	D710,D711
09-10-4401	TRANS NPN SMALL-SIGNAL MBT4401SOT-23 SM	1	Q700
18-02-0003	LED YELLOW SUPERBRITE T1(3MM) DIFF TH WP7104SYD	4	D700,D701,D702,D703
35-00-0184-1	PCB VU METER UX8 TONE PORT C13-1 REV A	1	

50-02-0184-2	PCBA GUITAR INPUTS UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-24-1002	RES 10.0K 1% 0805	2	R719,R726
01-24-1004	RES 1.00M 1% 0805	2	R701,R706
01-24-3012	RES 30.1K 1% 0805	2	R727,R730
01-24-5361	RES 5.36K 1% 0805	2	R720,R729
01-24-6492	RES 64.9K 1% 0805	2	R728,R731
01-25-1001	RES 1.00K 1% 0603	2	R700,R707
03-45-0473	CAP 47nF 16V 20% 1206 FILM	2	C700,C701
03-56-0470	CAP NPO 47pF 50V 5% 0603	2	C717,C718
03-58-0104	CAP X7R 0.1uF 25V 10% 0603	6	C711,C712,C713,C714,C721,C722
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	4	L700,L701,L703,L704
12-54-2134	IC OP-AMP DUAL OPA2134UA SM SO-8	1	U700
21-00-6617	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH W/CHROME HRDWARE	2	J700,J701
21-20-0008	HDR SIL PCB-MT 8-PIN x 2mm MALE SHRD B8B-PH-K-S	1	H700
24-01-0002	SWITCH LATCHING PUSH BUTTON DPDT 6-PIN DIL RA TH	2	SW700,SW701
30-18-3030	CLIP GND PCB .30x.30x.07	2	GF700,GF701
35-00-0184-2	PCB GUITAR INPUTS UX8 TONE PORT C13-1 REV A	1	
35-00-0192	PCB INPUT SHIELD UX8 TONE PORTC13-1 REV A	1	
50-02-0185	**PCBA LINE IN/OUT UX8 TONE PORT**		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
01-24-1002	RES 10.0K 1% 0805	12	R500,R502,R504,R509,R516,R519,R522,R525,R531,R532,R533,R534
01-24-1211	RES 1.21K 1/8W 1% 0805	16	
01-24-2872	RES 28.7K 1% 0805	8	
01-25-1001	RES 1.00K 1% 0603	8	R552,R553,R555,R557,R561,R564,R568,R570
01-25-2001	RES 2.00K 1% 0603	16	R517,R520,R523,R528,R551,R554,R556,R558,R559,R560,R562,
			R565,R566,R569,R571,R667
01-25-2002	RES 20.0K 1% 0603	8	R506,R508,R511,R514,R526,R527,R529,R530
03-18-0106	CAP ELEC 10uF 50V 20% RADIAL 5/11/5	2	C500,C501
03-50-0181	CAP NPO 180pF 50V 2% 0805	8	C543,C551,C554,C555,C557,C558,C560,C561
03-50-0221	CAP NPO 220pF 50V 5% 0805	4	C552,C553,C556,C559
03-52-0332	CAP X7R 3.3nF 50V 10% 0805	8	C508,C509,C511,C512,C514,C515,C517,C518
03-56-0100	CAP NPO 10pF 50V 5% 0603	8	C530,C531,C532,C533,C534,C535,C536,C537
03-58-0104	CAP X7R 0.1uF 25V 10% 0603	26	C506,C507,C510,C513,C516,C519,C520,C521,C522,C523,C524,C525,C526,C527,C538,C539,C540,C541,C542,C544,C545,C546,C547,C548,C549,C550

50-02-0185	PCBA LINE IN/OUT UX8 TONE PORT		
Part Number	**Description**	**Qty. Per**	**Reference Designator(s)**
03-58-0473	CAP X7R 47nF 25V 10% 0603	2	C528,C529
04-05-0001	FERRITE BEAD 1K@100MHz 100mA 0603 SM	4	L500,L501,L514,L515
06-34-0031	DIODE GEN PUR DUAL 120V 600mA 50nS SOT-23 SM BAS31	10	D500,D501,D502,D503,D505,D506,D507,D508,D510,D511
11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	28	L502,L503,L504,L505,L506,L507,L508,L509,L510,L511,L512,L513,L516,L517,L518,L519,L520,L521,L522,L523,L524,L525,L526,L527,L528,L529,L530,L531
12-54-0082	IC OP AMP DUAL TL082CD SO-8 SM	4	U500,U501,U502,U503
12-54-0084	IC OP AMP QUAD TL084CD SM	2	U504,U505
21-00-6616	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH	14	J500,J501,J502,J503,J504,J505,J506,J507,J508,J509,J510,J511,J512,J513
21-21-0005	HDR DIL PCB-MT 24-PIN 2x12x .100 MALE SHRD VERT TH	1	H500
30-18-3030	CLIP GND PCB .30x.30x.07	14	GF500,GF501,GF502,GF503,GF504,GF505,GF506,GF507,GF508,GF509,GF510,GF511,GF512,GF513
35-00-0185	PCB LINE IN/OUT UX8 TONE PORT C13-1 REV B	1	

10/23/07

Technical Bulletin 026
Product: POD XT, X3, Tone Port products containing secure memory devices.

Overview:
The identified units below have a secure memory device installed on their respective main PCBA's. This device allows for a collection and transmission of an electronic serial number which will enable the customer (end-user) to access, obtain, and purchase specific upgrades, downloads or their user account on-line.

Service Objective:
When replacing the main PCBA in any of the following product, it is necessary to remove P/N: 15-79-0088 from the "old" PCBA and transplant it to the new PCBA.

Parts Affected:
15-79-0088- IC Memory Secure AT88SC153-00 –2.7 8S1 (SO-8) SM

Affected Product/ PCBA Locations:
POD XT and Bass POD XT: **U17**
POD XT Live and Bass POD XT Live: **U24**
POD XT Pro and Bass POD XT Pro: **U8**
Floor POD Plus: **U24**
POD X3: **U4**
POD X3 Live: **U2**
Tone Port KB37: **U6**
Tone Port UX8: **U3**

Tools/ Supplies Required:
Various hand-tools for product disassembly, soldering iron, RoHS compliant solder/ flux.

Procedure:
Remove secure memory IC, P/N: 15-79-0088 from original PCBA and transplant it to the correct reference designator location on new PCBA.

Warranty Implications:
This is a required step in replacing the main board on any of the above-identified products and should be considered as warranty.

Date Codes Affected:
All.

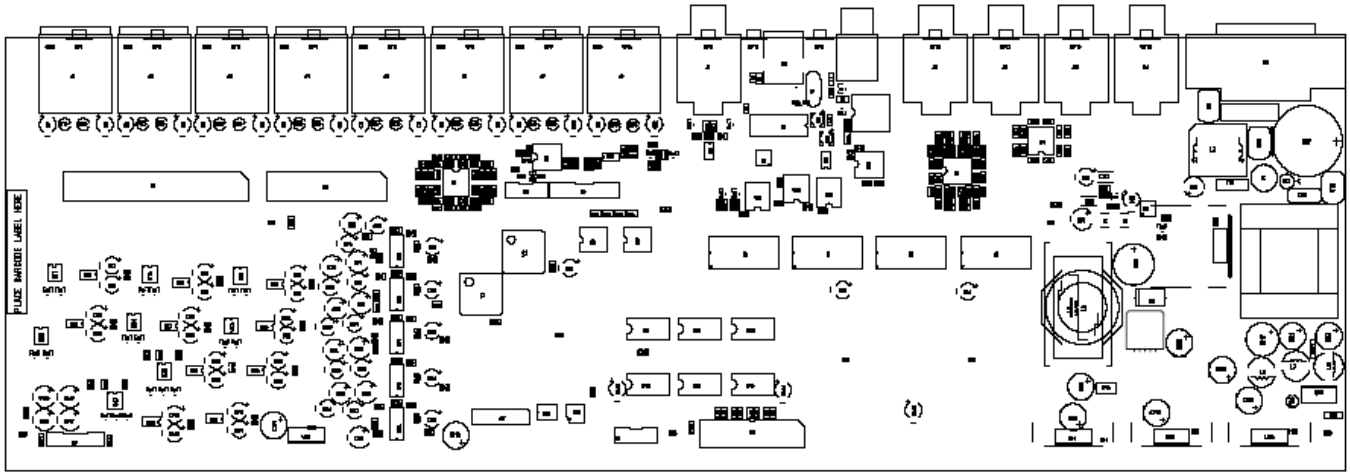
Line 6, Inc. Customer Service and Repair
3850-A Royal Ave. Simi Valley, CA 93063 P. 818-575-3600 F. 818-575-3961 E. service@line6.com

Engineering

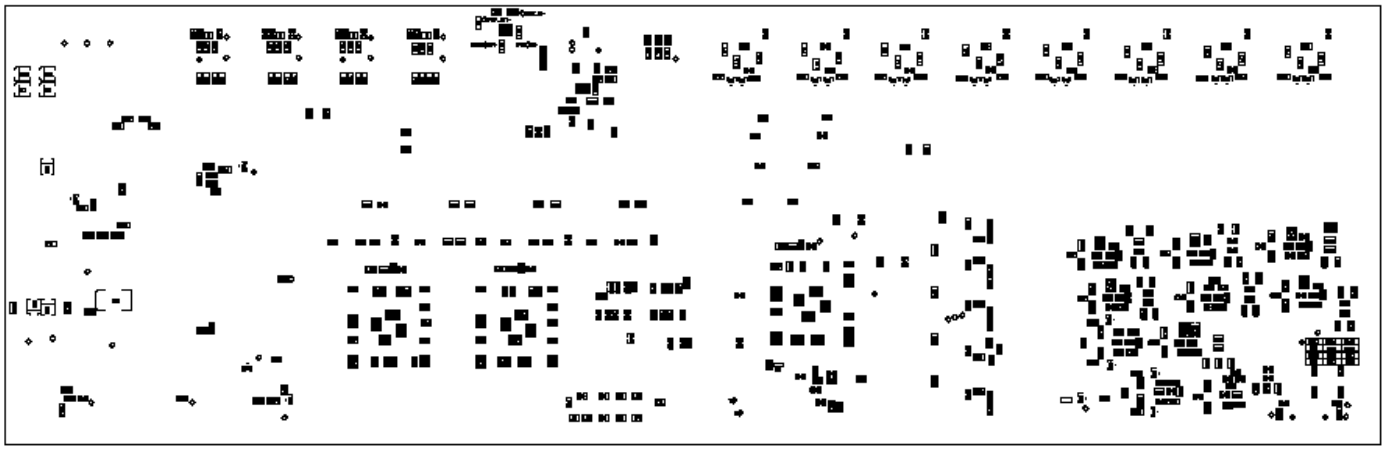
Tone Port UX8 C13-1
MAIN PCBA ASSEMBLY INSTRUCTIONS
Rev. D

PCBA MAIN UX8: 50-02-0181
(Refers to common MAIN PCB, Rev. D: 35-00-0181)

TOP



BOTTOM

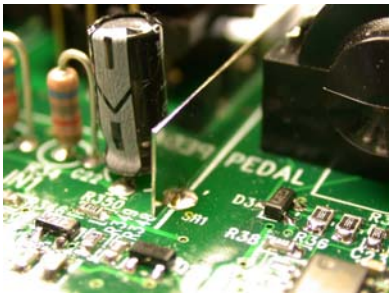


1. **<u>"NOT INSTALLED" COMPONENTS:</u>** Do not install the following components: (Please see **50-02-0181 Rev.D**, Schematic / BOM, DNI "Do Not Install list" for details).

2. **<u>HEADERS</u>:** P/N 21-21-0040 (H1), P/N 21-21-0005 (H2), P/N 21-20-0205 (H3), P/N 21-20-0210 (H4), P/N 21-21-0006 (H6) and P/N 21-20-0008 Make sure headers are mounted flush with the PCB before soldering.

3. **GROUND FINGERS:** P/N 30-18-3030 (GF1-15) Make sure all ground fingers are installed flush to PCB and soldered before jacks are installed on the **BOTTOM** side.

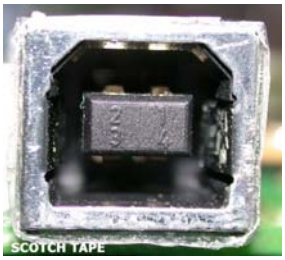
4. **EMI SHIELD:** P/N 35-00-0193 (SH1) Make sure that the shield is mounted flush from the stand off's to the PCB and perpendicular **NOT TOUCHING ANY OTHER COMPONENTS**.



5. **JACKS**: P/N 21-00-6616 (J9, J11-14) Make sure ALL jacks are mounted flush with the PCB and lined up with silkscreen outline within +/-1 degree of accuracy. **ALL jacks are INSERTED from the TOP side and MOUNTED on the BOTTOM side of the PCB.**

6. **USB JACK**: P/N 21-21-0001 (J15) Make sure USB jack is mounted flush with the PCB and lined up with silkscreen outline within +/-1 degree of accuracy. **USB jack is INSERTED from the TOP side and MOUNTED on the BOTTOM side of the PCB.** Use clear insulation tape (30-65-0009) to prevent the USB jack J15 from shorting to the chassis. Place it around the front edges of the USB jack as shown in pictures below. For cosmetic reasons please apply clear tape as accurately as possible so that the tape does not protrude too far out from the jack.

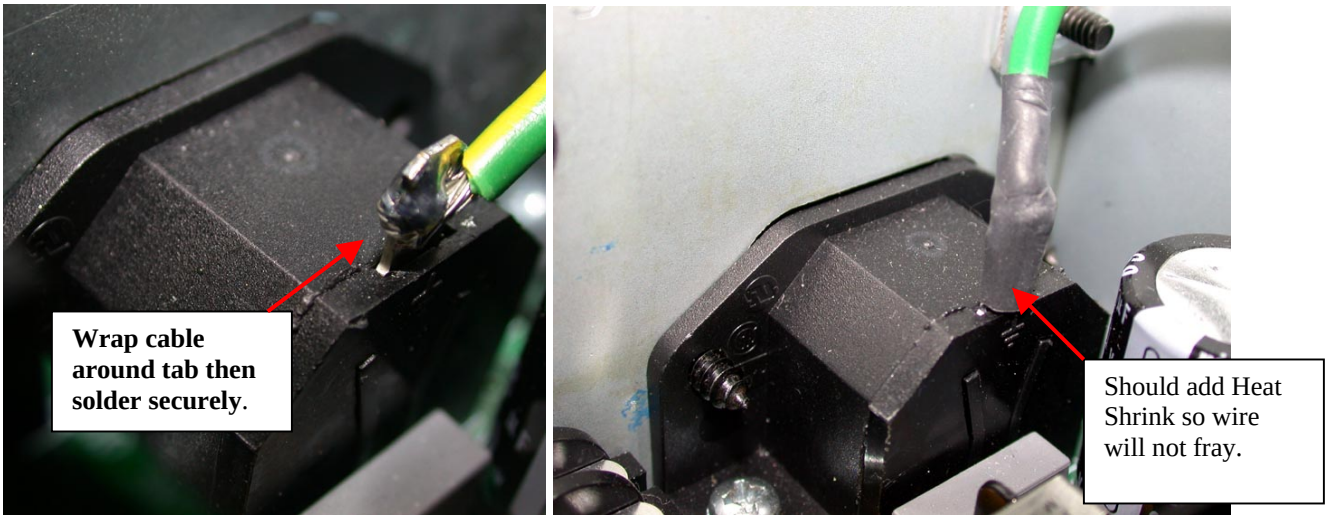
Apply tape to this section, around entire part.



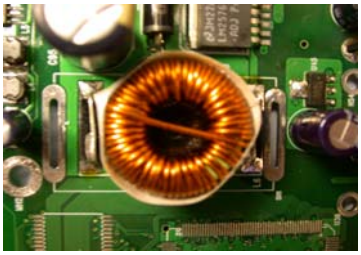
8. **XLR:** P/N 21-08-0002 (J1-8) Make sure XLR jack is mounted flush with the PCB and lined up with silkscreen outline within +/-1 degree of accuracy. **ALL jacks are INSERTED from the TOP side and MOUNTED on the BOTTOM side of the PCB.**

9. **RCA JACK (SPDIF):** P/N 21-02-0059 (J10) Make sure RCA jack is mounted flush with PCB and lined up with the silkscreen outline within +/- 1 degree of accuracy. **SPDIF jack is INSERTED from the TOP side and MOUNTED on the BOTTOM side of the PCB.**

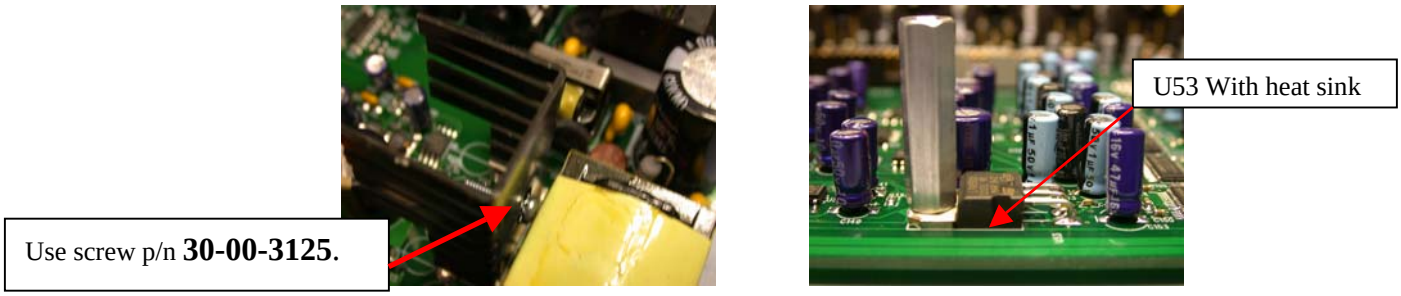
10. **AC JACK and CHASSIS GROUND:** AC Jack P/N 21-14-8301 (J16) and Earthing / Ground Cable 21-34-1116-1. Make sure the AC jack is mounted flush with the PCB and lined up with silkscreen outline within +/-1 degree of accuracy. Jack is INSERTED from the TOP side and MOUNTED on the BOTTOM side of the PCB. Since the grounding tab hole is too small for the earth ground cable wrap stranded cable around tab one time and then solder the cable to the tab **SECURELY**. Add heat shrink tubing over soldered area.



11. **INDUCTOR PWR CHOKE:** P/N 11-10-0146 (L9). Make sure choke is flush with the PCB and lined up with silkscreen outline before soldering.



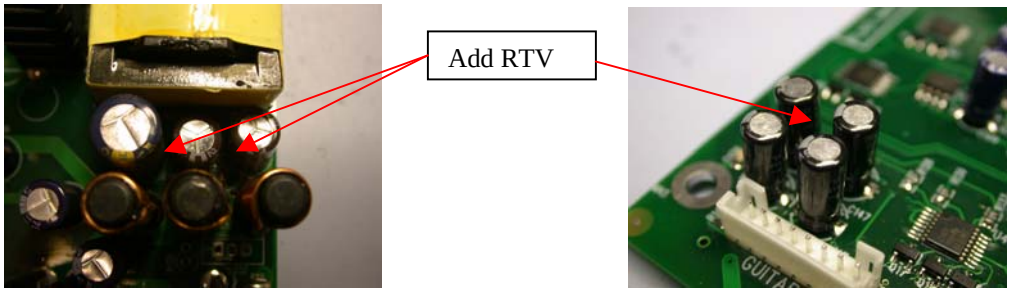
12. **HEATSINKS:** Heat sink P/N 30-51-0319 (HS1-2) for U55 and U56 are to be mounted flush to the PCB and secured flush to the regulators (U55-56) using screw P/N 30-00-3125 and nut P/N 30-00-0119. Stand off P/N 30-12-2210 shall be used as heat sink for regulator U45. Secure horizontally on PCB with screw P/N 30-00-0607. Stand off P/N 30-12-0632 shall be used as heat sink for U53. Secure horizontally on PCB with screw P/N 30-00-0607. Make sure that regulator IC's U45 and U53 are mounted to the PCB with their respective heat sinks (standoffs) before soldering. This will ensure proper alignment of the regulator, and reduce strain on the regulator leads. Heat sink P/N 30-51-0029 (HS3) for U57 is to be mounted flush to the PCB and secured flush to U57 using P/N 30-00-3125 (Screw) and P/N 30-00-0119 (Nut). Please remove lock washer from screw before securing U57 to heat sink. **NOTE: FOR BEST ACCESS TO TORQUE DOWN HS3 HARDWARE. INSTALL U57 AND HS3 BEFORE TRANSFORMER (T1).**



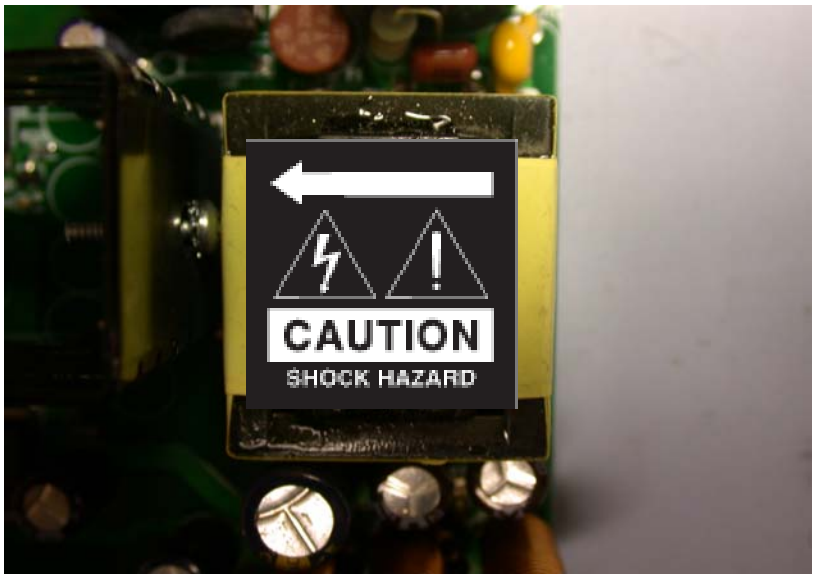
13. **RADIAL LEAD CAPACITORS:** All radial lead capacitors are to be mounted perpendicular to the PCB within +/- 1 degree of accuracy on **TOP** side of pcb. They are to be mounted as low to the PCB without sacrificing the lead to package body integrity. Clip leads to 60 thousands on the **BOTTOM** side.

14. **THRU-HOLE RESISTORS:** Mount Thru-Hole resistors as low as possible to the PCB without sacrificing the lead to package body integrity. Line up resistor with silkscreen before soldering. Thru-Hole leads must be trimmed to .100" or less after assembly.

15. **RTV:** Use approved RTV between L8, L7, L10 and C117, C112, C113, C436, C437, C146 and C147 where shown.



16. **<u>XMFR HAZARD LABEL:</u>** P/N 40-25-0271 to be placed on transformer P/N 11-30-0633 (T1) as shown.



17. **<u>ESN #</u>:** Place barcode label 40-30-2000 on the **TOP SIDE** of the PCB in the box labeled "**PLACE BARCODE LABEL HERE**" (see picture below).

Engineering

MAIN PCBA ASSEMBLY INSTRUCTION REVISION CHANGE HISTORY

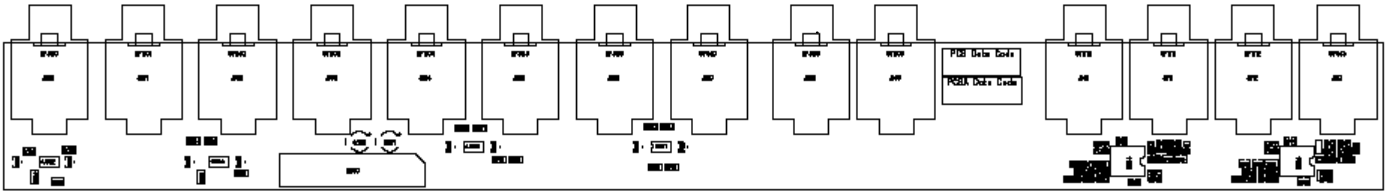
REVISION	NOTES	DATE	RELEASED BY
D	- Updated Step12, Ref ECR# 0725002.	09/07/07	Alex Monge
C	- Updated Step12, Ref ECR# 0721103.	06/22/07	Alex Monge
B	- Release to Production.	06/22/07	John Kulick
A	- Corrected RCA P/N, Ref. ECR# 0713403	05/11/07	John Kulick
A	- Release to production for pre-beta.	05/10/07	John Kulick
X1	- Initial Release.	01/3/07	Jorge Aguila

Engineering

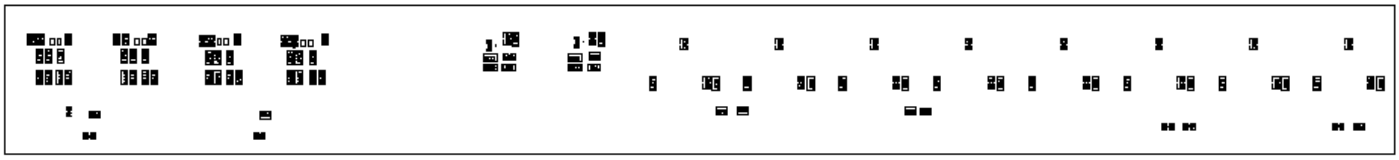
Tone Port UX8 C13-1
LINE IN/OUT PCBA ASSEMBLY INSTRUCTIONS
Rev. A

PCBA LINE IN/OUT UX8 TONE PORTC13-1: 50-02-0185
(Refers to common LINE IN/OUT PCB, Rev A: 35-00-0185)

TOP

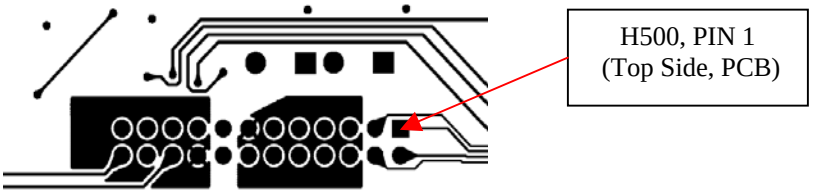


BOTTOM

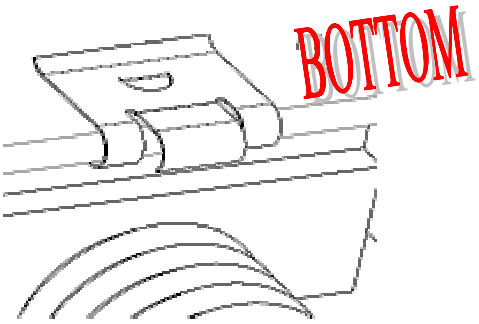


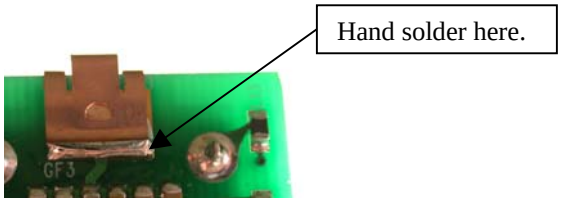
1. **<u>"NOT INSTALLED" COMPONENTS:</u>** Do not install the following components: R535, R538-539, R542-543, R546-547, R550.

2. **<u>HEADERS</u>:** P/N 21-21-0005 (H500) Make sure header is mounted flush with the PCB and confirm pin 1 orientation before soldering.



3. **GROUNDING FINGER:** The grounding fingers GF500-513 (30-18-3030) shall be mounted flush against the PCB edge, under J500-513. GF500-513 are mounted with the center clip hole on the **BOTTOM SIDE** of the HEADPHONE PCB (the jack is on the TOP SIDE) see drawing below. The "curl" of the grounding finger should curve toward the TOP SIDE. **It should then be manually soldered on the BOTTOM side.**





4. **JACKS**: P/N 21-00-6616 (J500-513) Make sure ALL jacks are mounted flush with the PCB and lined up with silkscreen outline within +/-1 degree of accuracy. **ALL jacks are mounted on the TOP SIDE of the PCB.**

LINE IN/OUT PCBA ASSEMBLY INSTRUCTION REVISION CHANGE HISTORY

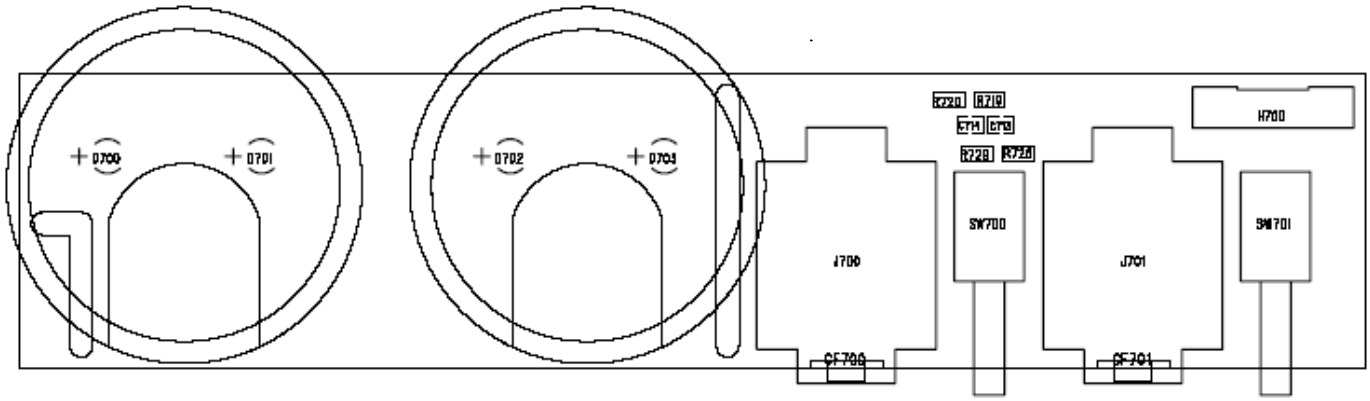
REVISION	NOTES	DATE	RELEASED BY
A	Production Release	05/11/07	John Kulick

Engineering

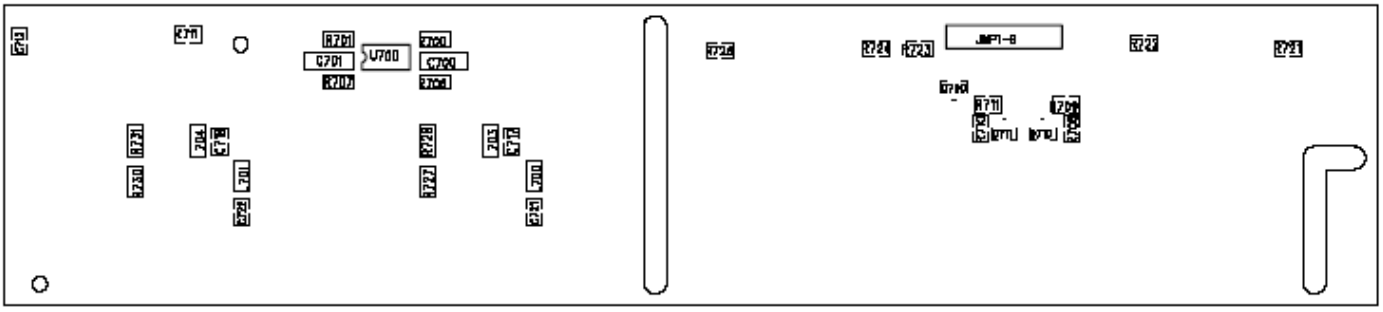
Tone Port UX8 C13-1
GUITAR IN/VU PCBA ASSEMBLY INSTRUCTIONS
Rev.A

PCBA VU METER UX8: 50-02-0184-1
(Refers to common VU METER PCB, Rev. A: 35-00-0184-1)
PCBA GUITAR INPUT UX8: 50-02-0184-2
(Refers to common GUITAR INPUT PCB, Rev. A: 35-00-0184-2)

TOP

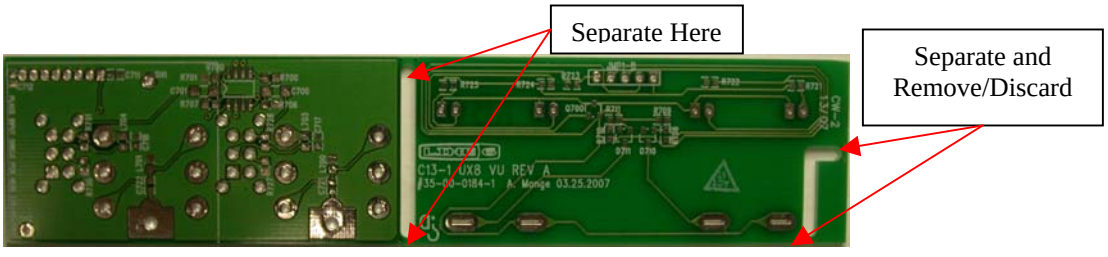


BOTTOM



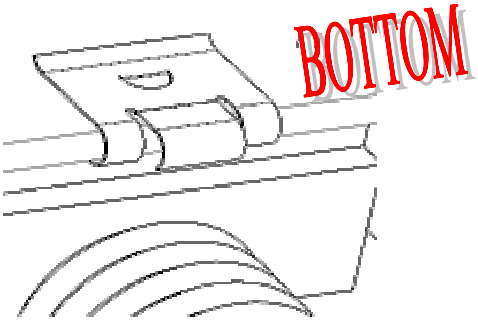
1. **VU METERS**: Do not install VU Meters (VU1-2) P/N 18-50-0002 **UNTIL FINAL ASSEMBLY. SEE FINAL ASSEMBLY INSTRUCTIONS DOCUMENT L6D000164 FOR DETAILS.**

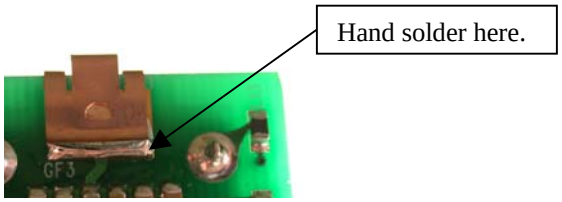
2. **BREAK AWAY: Do not separate boards until final assembly.**



3. **HEADERS:** P/N 21-20-0008 (H700) Make sure headers are mounted flush with the PCB before soldering. **Note Pin 1 orientation**.

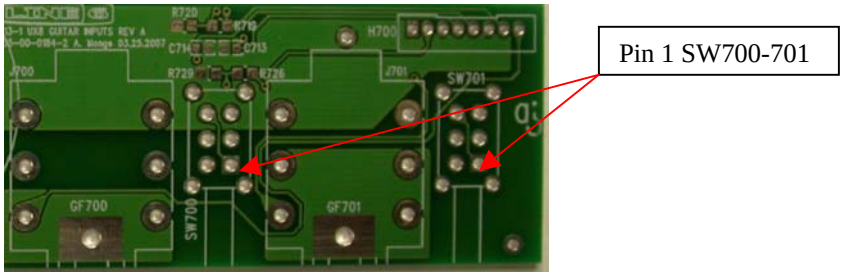
4. **GROUNDING FINGER:** The grounding fingers GF700-701 (30-18-3030) shall be mounted flush against the PCB edge, under J700-701, GF700-701 are mounted with the center clip hole on the **BOTTOM SIDE** of the GUITAR INPUT PCB (the jack is on the TOP SIDE) see drawing below. The "curl" of the grounding finger should curve toward the TOP SIDE. **It should then be manually soldered on the BOTTOM side.**





5. **JACKS**: P/N 21-00-6617 (J700-701) Make sure ALL jacks are mounted flush with the PCB and lined up with silkscreen outline within +/-1 degree of accuracy. Make sure to install grounding fingers GF700-701 before installing jacks (see note 3 above). **ALL jacks are mounted on the TOP-side of the PCB.**

6. **PUSHBUTTON SWITCHES:** P/N 24-01-0002 (SW700-701) Make sure switches are mounted flush with the PCB before soldering. **Note Pin 1 orientation**.



7. **LED:** The LEDS P/N 18-02-0003 (D700-703) are all mounted on the **TOP-side** of the PCB as flush as possible and cathodes face the RIGHT SIDE edge. **THIS IS A FRAGILE PART! SENSITIVE TO HEAT AND HUMIDITY. PLEASE HANDLE ACCORDING TO LED MANUFACTURER'S GUIDELINES.**

8. **PCB INPUT SHIELD**: P/N 35-00-0192 Install PCB Shield (SH1-2) to Guitar Input PCBA as shown below using 18-22 AWG solid hook-up wire.

GUITAR IN/VU PCBA ASSEMBLY INSTRUCTION REVISION CHANGE HISTORY

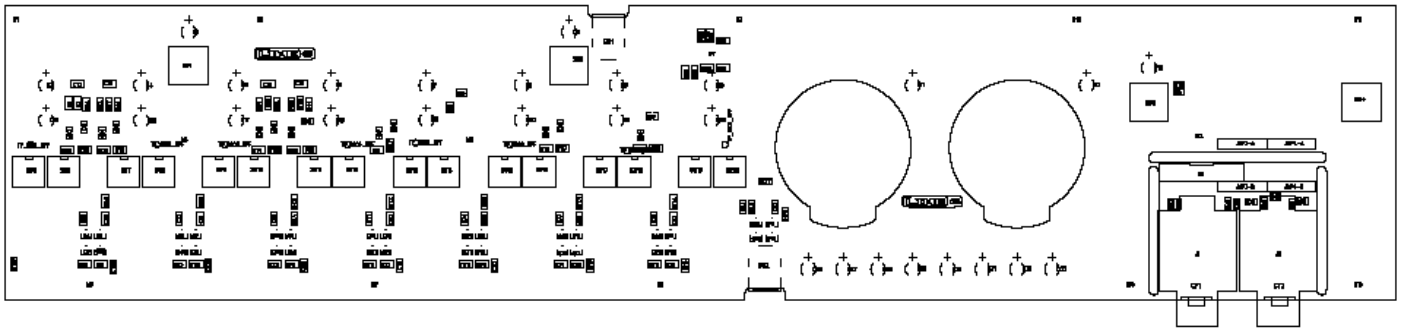
REVISION	NOTES	DATE	RELEASED BY
A	Production Release.	05/11/07	John Kulick

Engineering

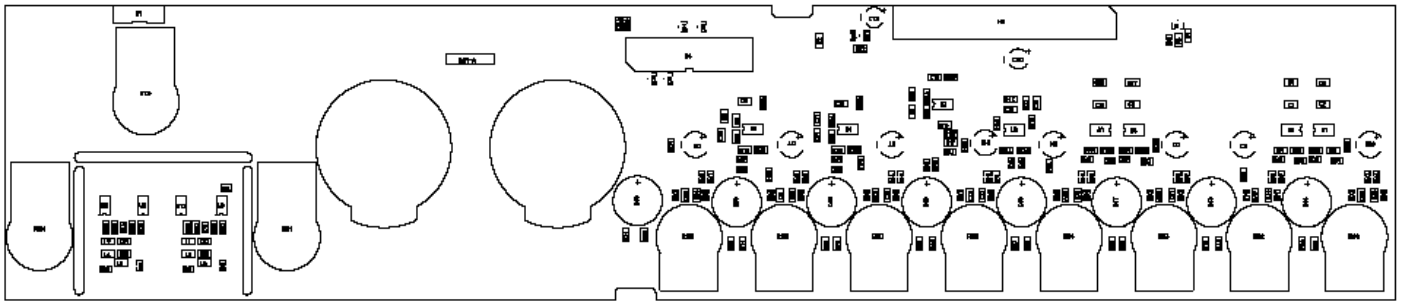
Tone Port UX8 C13-1
USER INTERFACE_HEADPHONE PCBA ASSEMBLY INSTRUCTIONS
Rev. C

PCBA USER INTERFACE UX8: 50-02-0182-1
(Refers to common USER INTERFACE PCB, Rev. C: 35-00-0182-1)
PCBA HEADPHONE UX8: 50-02-0182-2
(Refers to common HEADPHONE PCB, Rev. C: 35-00-0182-2)

TOP



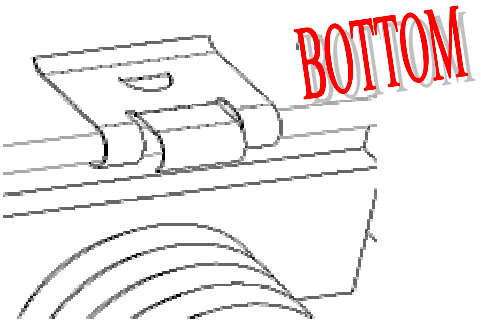
BOTTOM

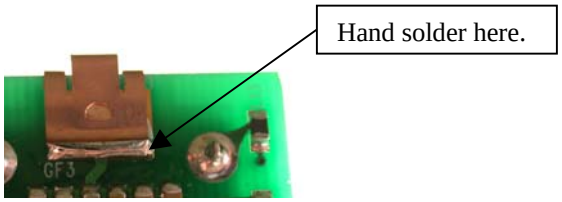


1. **<u>"NOT INSTALLED" COMPONENTS:</u>** Do not install the following components: D14, D23-45.

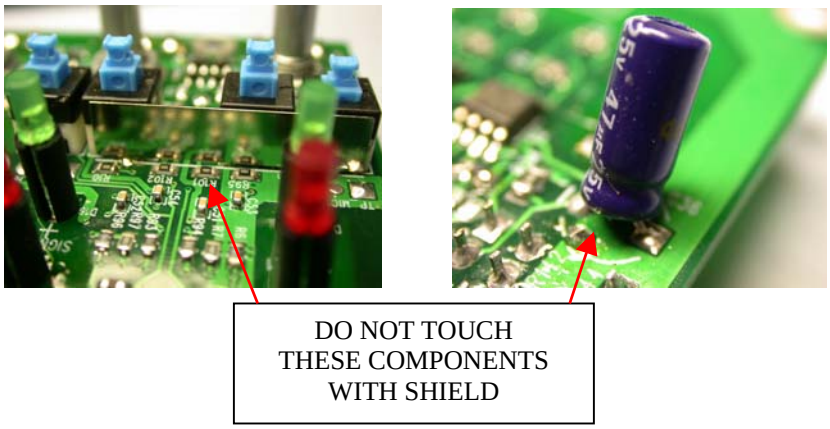
2. **<u>HEADERS</u>:** P/N 21-20-0205 (H1) P/N 21-20-0210 (H2) P/N 21-21-0040 (H3) and 21-21-0006 (H4) Make sure headers are mounted flush with the PCB before soldering. **Note Pin 1 orientation**.

3. **<u>GROUNDING FINGER:</u>** The grounding fingers GF1-2 (30-18-3030) shall be mounted flush against the PCB edge, under J1-2. GF1-2 are mounted with the center clip hole on the **BOTTOM SIDE** of the HEADPHONE PCB (the jack is on the TOP SIDE) see drawing below. The "curl" of the grounding finger should curve toward the TOP SIDE. **It should then be manually soldered on the BOTTOM side.**



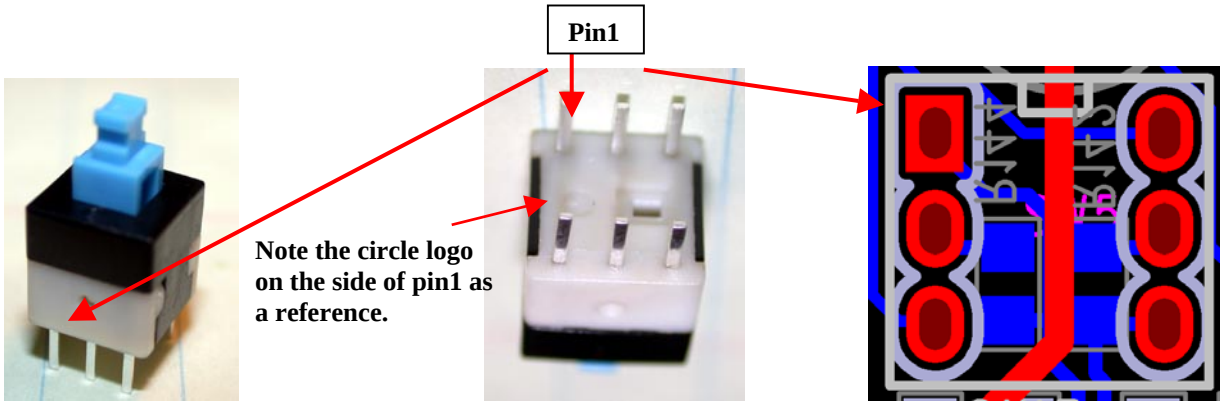


4. **<u>EMI SHIELD:</u>** P/N 35-00-0193 (SH1-SH5) Make sure that the shield is mounted flush from the stand off's to the PCB and perpendicular. **NOT TOUCHING ANY OTHER COMPONENTS**.

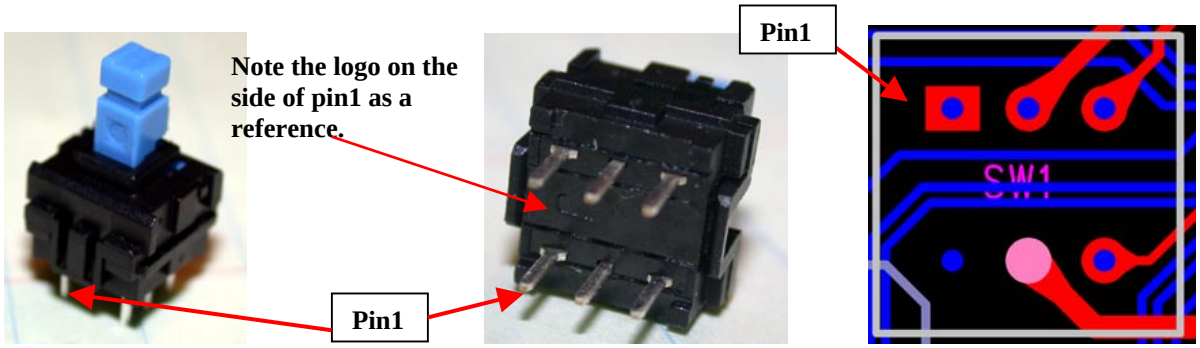


4. **<u>JACKS</u>**: P/N 21-00-6617 (J1-2) Make sure ALL jacks are mounted flush with the PCB and lined up with silkscreen outline within +/-1 degree of accuracy. Make sure to install grounding fingers GF1-2 before installing jacks (see note 3 above). **ALL jacks are mounted on the TOP-side of the PCB.**

5. **LATCHING PUSHBUTTON SWITCHES:** There are two types of latching pushbutton switches on the UX8 User Interface PCBA. They are P/N 24-01-0111 (SW1-4) see on figure2, and 24-01-2285 (SW5-20) seen on figure1 below. They are to be mounted on the **TOP**-side of the PCB with the switch mounted flush to the PCB. See diagrams below for Pin1 orientation. Make sure that the switches are aligned properly to the silkscreen outline when mounted within +/-1 degree accuracy. Proceed to cut pins after they have been soldered on the bottom side.



Pushbutton Switch 24-01-2285 (Figure1)

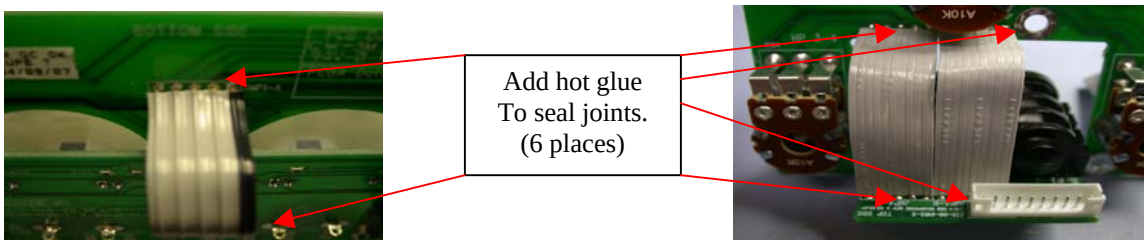


Pushbutton Switch 24-01-0111 (Figure2)

6. **POTENTIOMETERS:** P/N 01-48-9107 (R150, R152-154, R156-158, R160), P/N 01-49-0013 (R104, R161, R164). All potentiometers are mounted on the **BOTTOM** of the PCB: The pot shaft will sit perpendicular to the board when the pot is mounted flush to +/-1 degree and protrude through to the topside. Ensure soldering leads and side pins extend through the PCB before soldering. Secure with accompanied nut and washer and **torque each nut to 6-8 in-lbs**. At this point go ahead and solder Pots to PCBA.

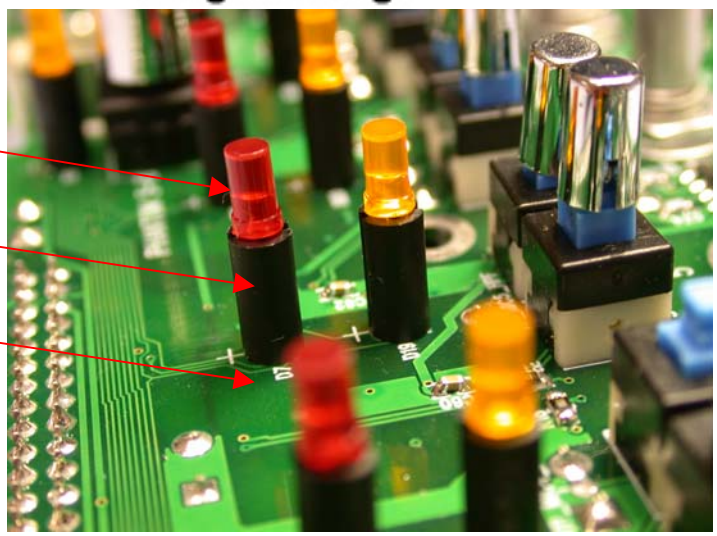
7. **DO NOT WATER WASH THE BOARD:** The potentiometers are sensitive to water washing. If wave soldering is preferred, we recommend using a no-clean flux wave soldering process, rather than a process that requires washing. The fluxing process wave must be controlled so as not to have flux migrate inside the pot through the top of the housing. Good venting is required. No-clean flux vapors can enter the switch if adequate venting is not available. The vapors will condense on the internal contacts and become an insulator when they solidify.

8. **JUMPERS:** There are three 5-pin ribbon cable-jumpers to be used P/N 21-34-0084. One shall be soldered at location JMP1-A on the BOTTOM side, the second shall be soldered between JMP3-A (35-00-0182-1) to JMP3-B (35-00-0182-2) on the TOP side, and the third JMP4-A (35-00-0182-1) to JMP4-B (35-00-0182-2) shall also be soldered on the TOP side. Make sure that the jumpers are flush on both sides of the PCB before soldering. Note Pin1 orientation before soldering. Add hot glue at joint after solder. **NOTE: THIS IS A FRAGILE PART! SENSITIVE TO HEAT, PLEASE HANDLE WITH CARE.**



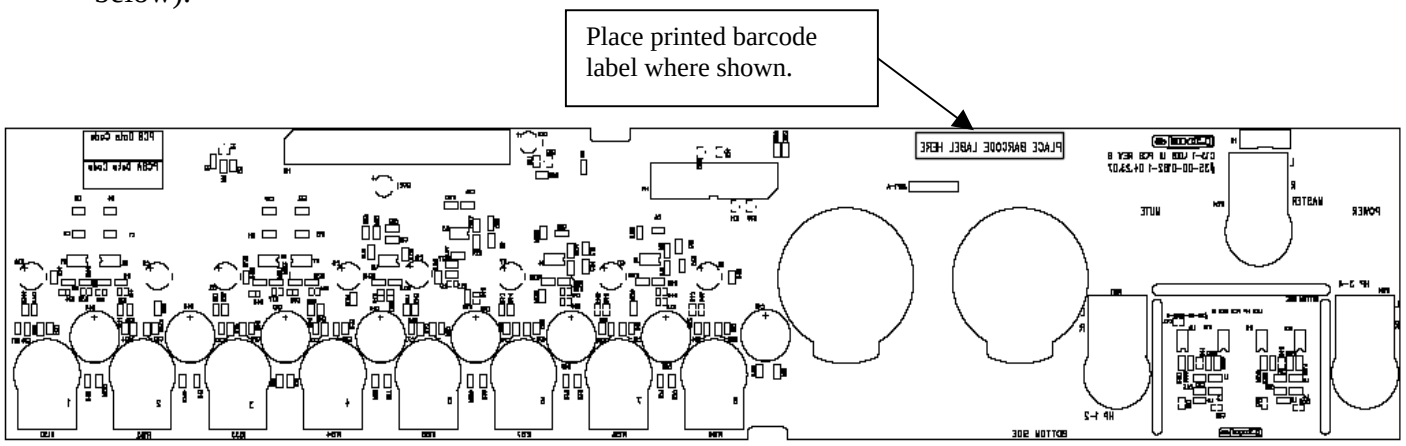
9. **RADIAL LEAD CAPACITORS:** All radial lead capacitors (C3, C7, C9, C12, C14, C16-17, C36, C43-50, C101-102) are to be mounted perpendicular to the PCB within +/- 1 degree of accuracy on **BOTTOM** side of the PCB. They are to be mounted as low to the PCB as possible without sacrificing the lead to package body integrity. Clip leads to 60 thousands on the **TOP**-side.

10. **LED:** The LED's P/N 18-00-0003 Red (D3-12), P/N 18-02-0004 Yellow (D1-2, D13), and P/N 18-04-0002 Green are thru-hole parts and are all mounted on the **TOP-side** of the PCB with the LED Spacer P/N 30-15-0035-2 flush between the LED and PCB with the cathode lead facing the BOTTOM edge. **THIS IS A FRAGILE PART! SENSITIVE TO HEAT AND HUMIDITY. PLEASE HANDLE ACCORDING TO LED MANUFACTURER'S GUIDELINES.**



11. **MOUNTING BRACKETS:** P/N 21-18-0002 (BR1-2) are mounted on the TOP SIDE of the PCB. They must be mounted flush with the PCB.

12. **ESN #:** Place barcode label P/N 40-25-2000 on the **BOTTOM SIDE** of the PCB (see picture below).



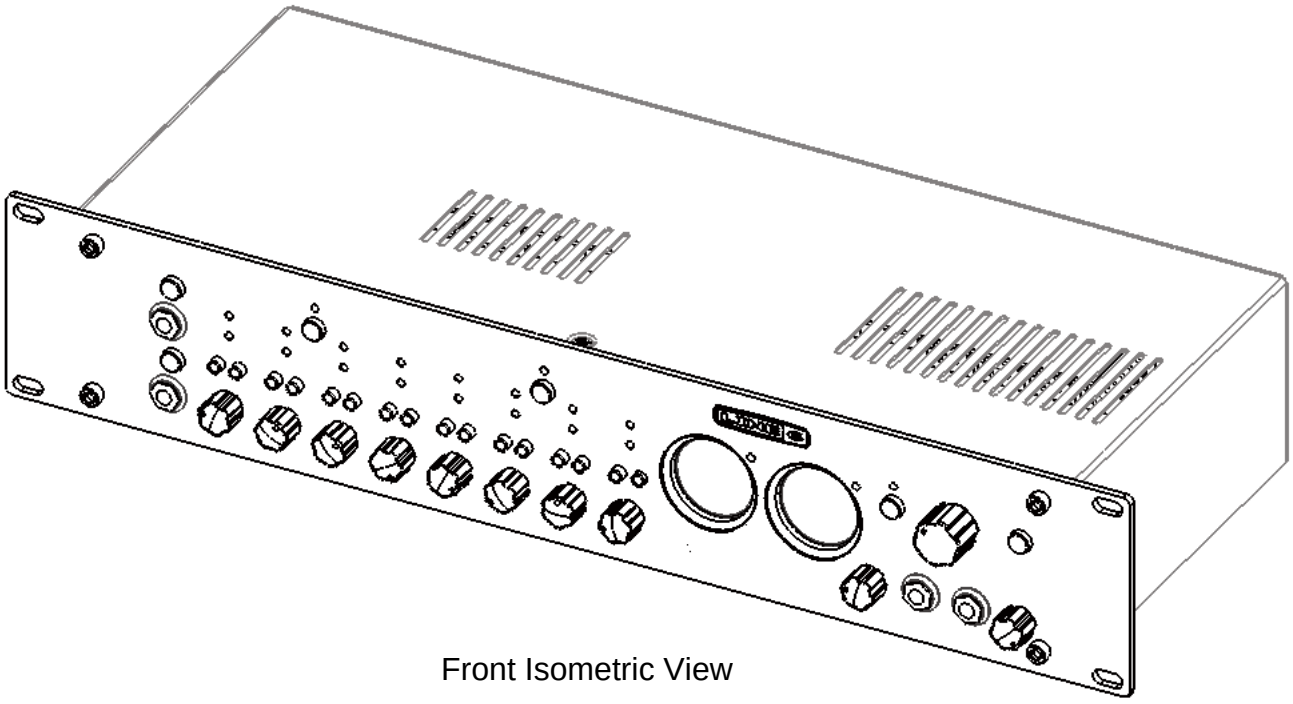
Engineering

USER INTERFACE PCBA ASSEMBLY INSTRUCTION REVISION CHANGE HISTORY

REVISION	NOTES	DATE	RELEASED BY
C	- Updated Step6, Ref ECR# 0725002.	09/07/07	Alex Monge
B	- Release to Production.	06/21/07	John Kulick
A	- For PCB Rev B.	05/10/07	John Kulick
X1	- Initial Release.	01/10/07	Alex Monge

ASSY INSTRUCTIONS UX8 (C13-1)

Rev D
L6D000164



Front Isometric View

Special Notes

The instructions describe the electro-mechanical assembly of a complete UX8 assembly (P/N 59-00-0037).

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.

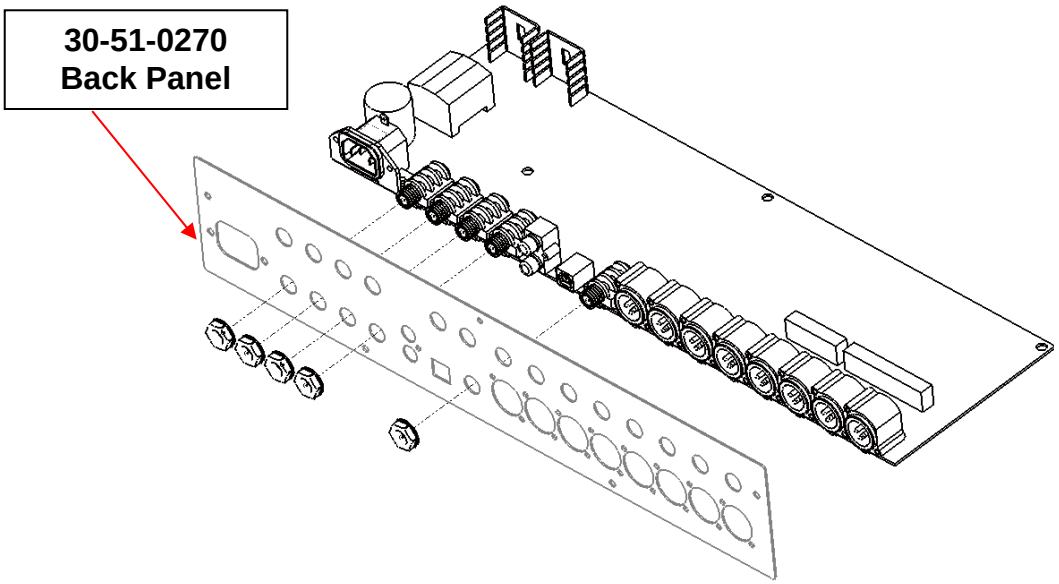
- Unless otherwise noted, all dimensions are in inches.
- Part identifying notes are in this format: Description (Part Number)
- Drawings are not to scale.
- Torque value tolerance +/- .5 in.-lbs. Do not over tighten any components.

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.

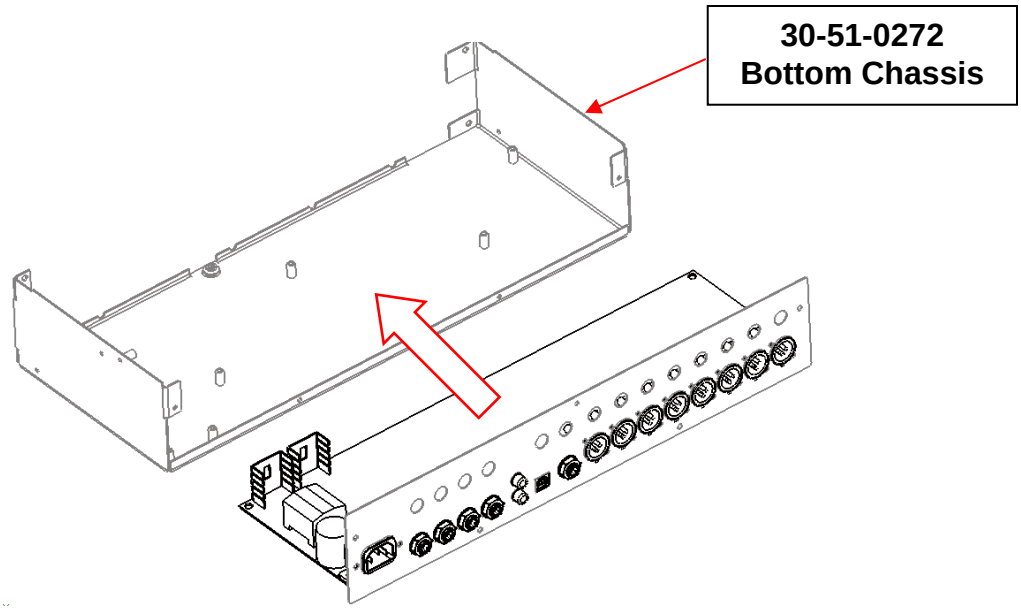
Revision Comment Sheet

Revision	Changes
A	Initial Release – see ECO 0708702.
B	ECO 0714101 Step 19a – was Step 19 (no other change). Step 19b – added this step to install 30-24-0030 Cable Ties (qty 3).
C	ECO 0721103 Step 4 – updated screw part number 30-00-0043 (qty1). Step 19b – added note about keeping cable away from VU meter PCB.
D	ECO 0725601 Step 3 – revised screw P/N to 30-00-0043. (was P/N 30-00-0607).

STEP 1:
Insert Main PCBA (P/N 50-02-0181) through the unpainted side of the Back Panel (P/N 30-51-0270) as shown below. Secure the ¼" jacks to the Back Panel using five (5) plastic hex nuts, 5 PL. **(Note – the plastic hex nut has no part number. It is included with the 21-00-6616 ¼" jack)**. Torque each nut to 4-5 in-lbs.



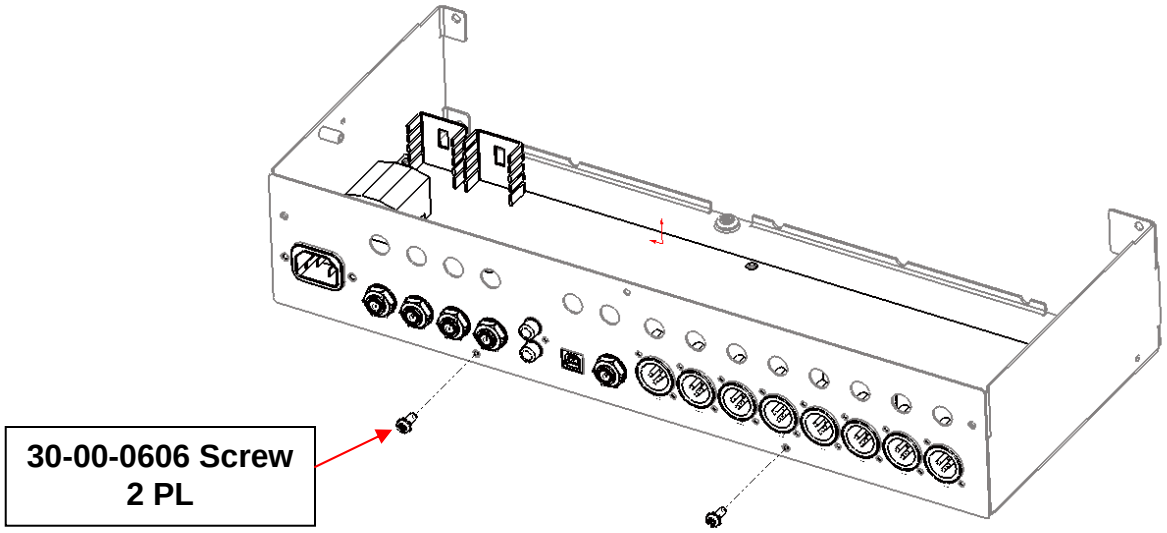
STEP 2:
Insert sub-assembly from Step 1 into 30-51-0272 Bottom Chassis as shown below.
CAUTION – do not damage any surface mount components on the bottom of the Main PCBA during installation!!!



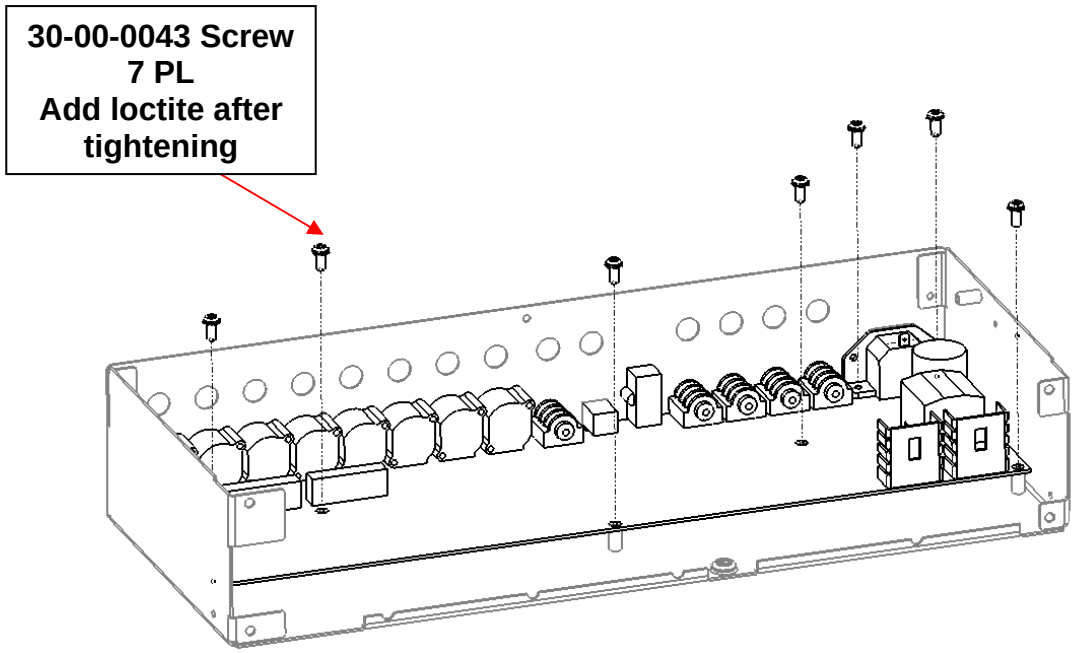
STEP 3:
Secure the sub-assembly from Step 1 to the 30-51-0272 Bottom Chassis as shown below.

3a – Install 30-00-0606 screws, 2 PL as shown. Loosely tighten.
3b – Install 30-00-0043 screws, 7 PL as shown. Loosely tighten.

Torque all screws to 6-8 in-lbs. Add loctite to base of each 30-00-0043 screw.



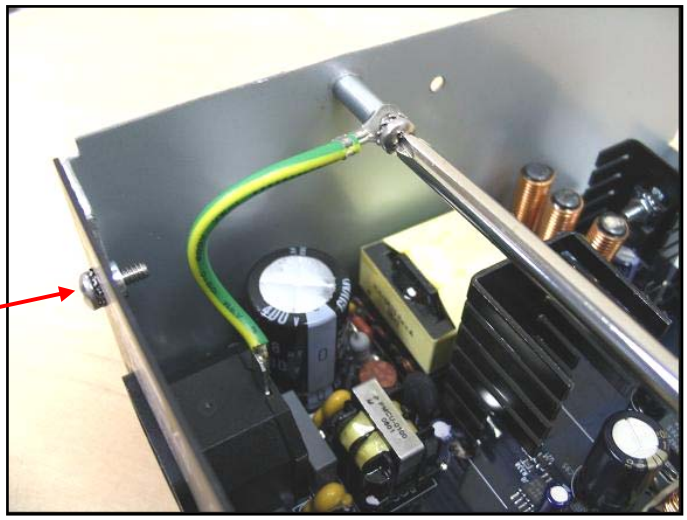
Step 3a – Install Back Panel Screws



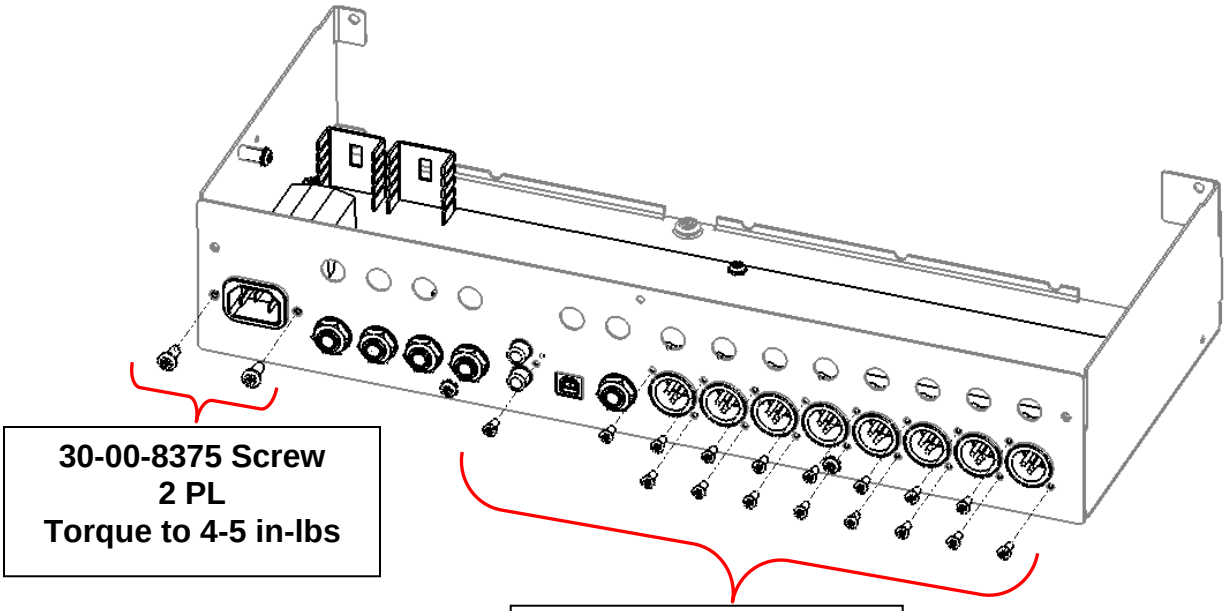
Step 3b – Install Main PCBA Screws

STEP 4:
Secure the 21-34-1116-1 Ground Cable to the standoff on the sidewall of the bottom chassis as shown using one (1) 30-00-0043 screw. Torque to 6-8 in-lbs. Add loctite to base of screw head after tightening.

Note – this screw shall not be installed yet



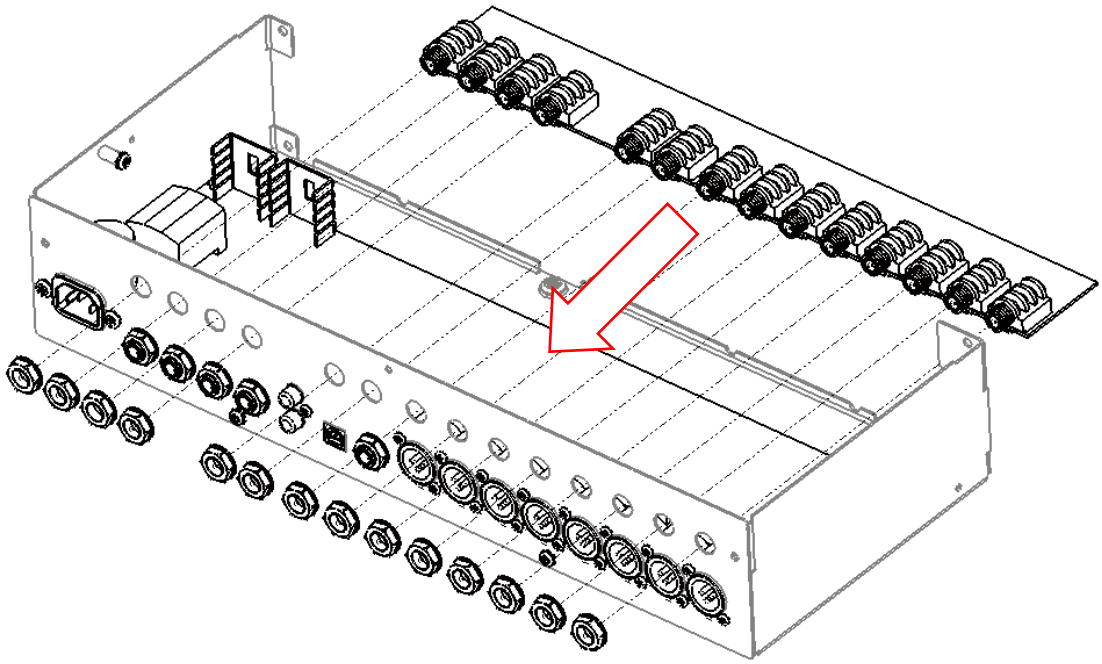
STEP 5:
Install the 30-00-8375 and 30-00-0042 screws to back panel as shown below.



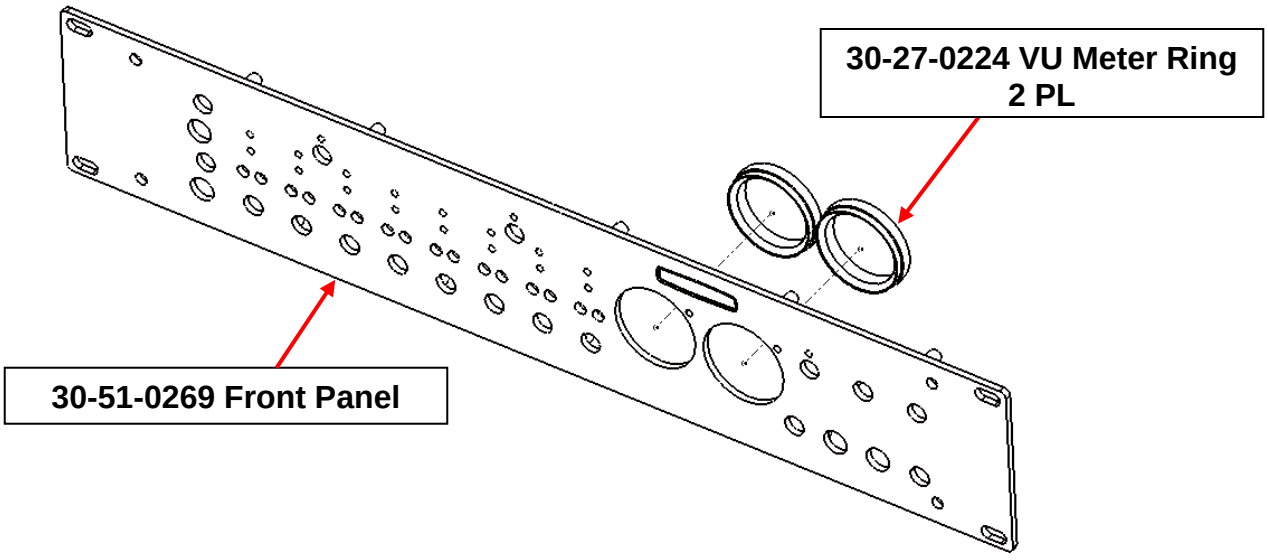
30-00-8375 Screw
2 PL
Torque to 4-5 in-lbs

30-00-0042 Screw
17 PL
Torque to 4-5 in-lbs

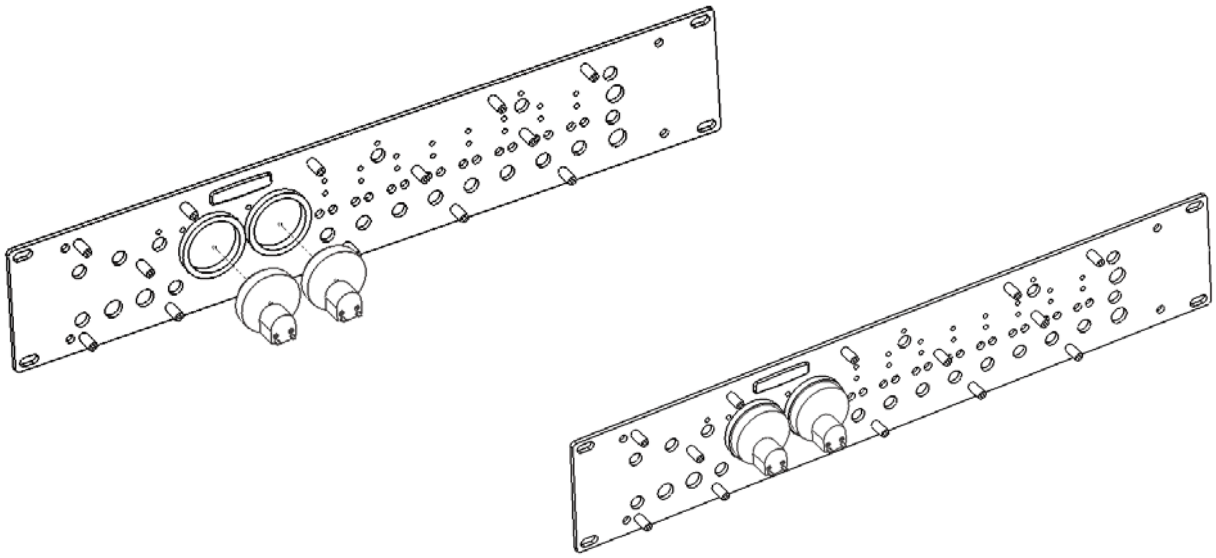
STEP 6:
Install the 50-02-0185 Line In/Out PCBA. Insert PCBA through back panel holes and secure with plastic hex nuts (included with ¼" jack), 14 PL. Torque each hex nut to 4-5 in-lbs.



STEP 7:
Install the VU Meter Rings (P/N 30-27-0224) to the Front Panel (P/N 30-51-0269). Rings should press-fit in from the non-painted side of the front panel.



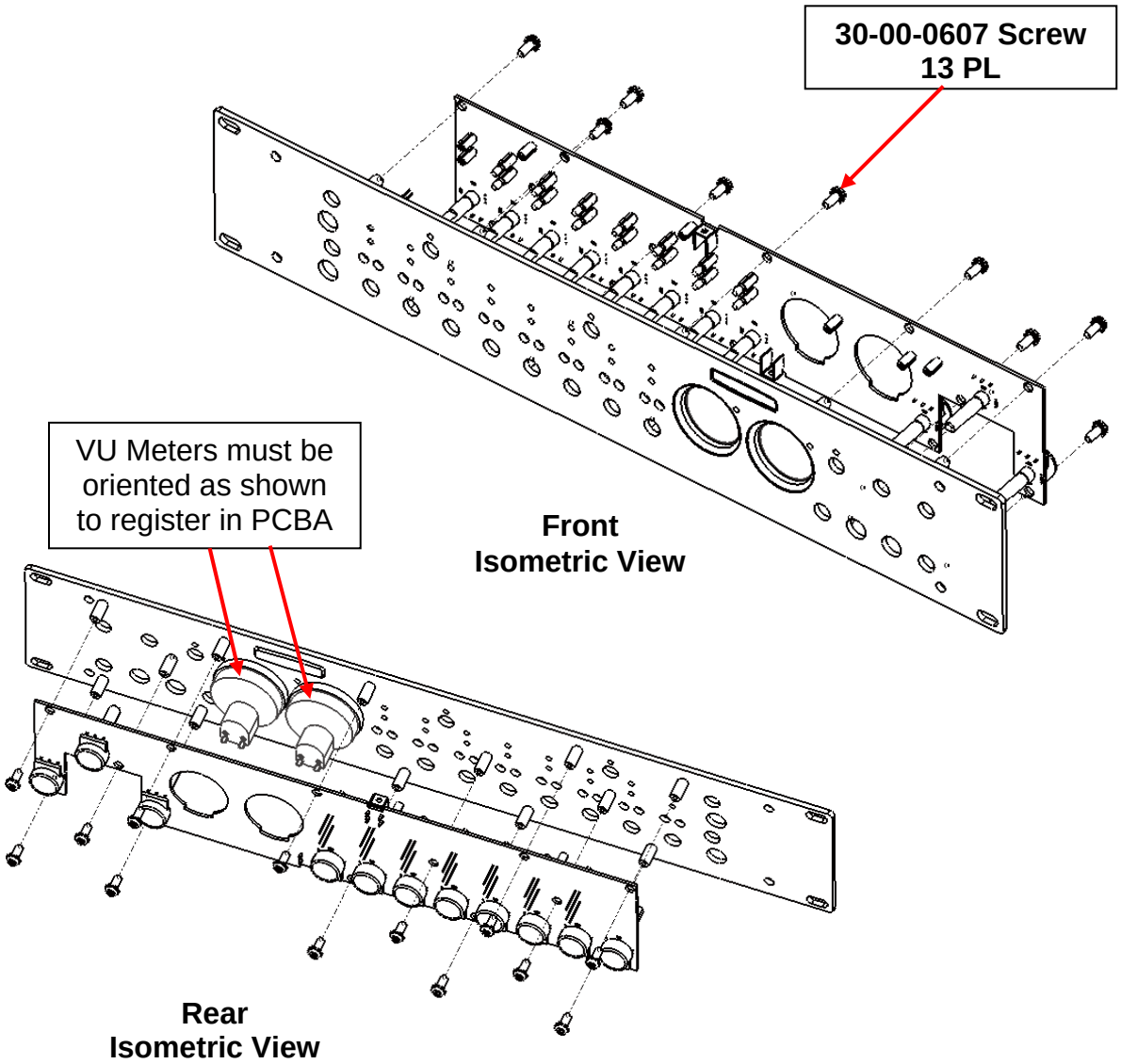
STEP 8:
Insert VU Meters into 30-27-0224 VU Meter Rings as shown. Hold in-place and proceed to Step 9.



STEP 9:
Break off the Headphone PCBA (not shown) and install the U/I PCBA (P/N 50-02-0182-1) to the Front Panel as shown below. Note that VU Meters will need to be oriented/clocked correctly to register through the U/I PCBA.
CAUTION – Do not damage LEDs when inserting through front panel clearance holes!!

Secure PCBA with 30-00-0607 screws, 13 PL. Torque each screw to 6-8 in-lbs. Apply a drop of loctite to the base of each screw head after tightening.

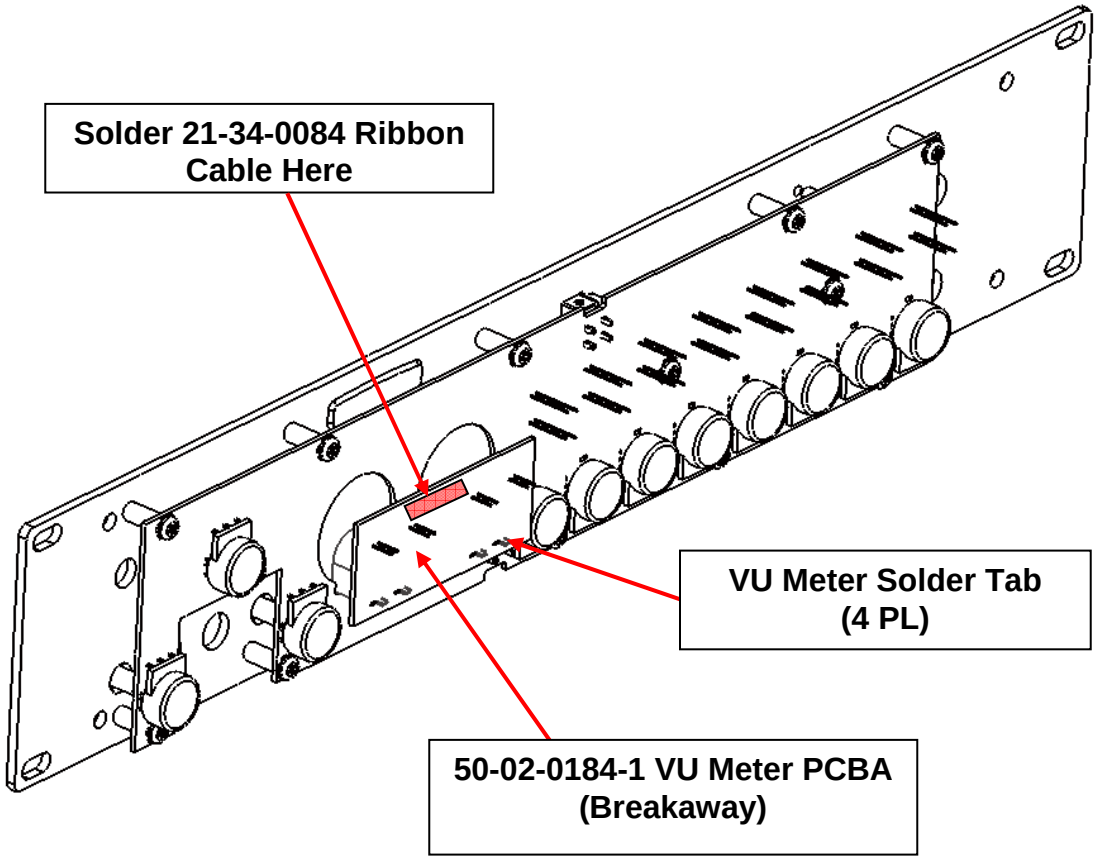
The VU Meters will be "sandwiched" between the Front Panel and the U/I PCBA after the U/I PCBA has been installed.



STEP 10:
Insert the 50-02-0184-1 VU Meter PCBA around leads on VU meters. Solder the VU Meter leads to secure the VU Meter PCB to the U/I PCBA.

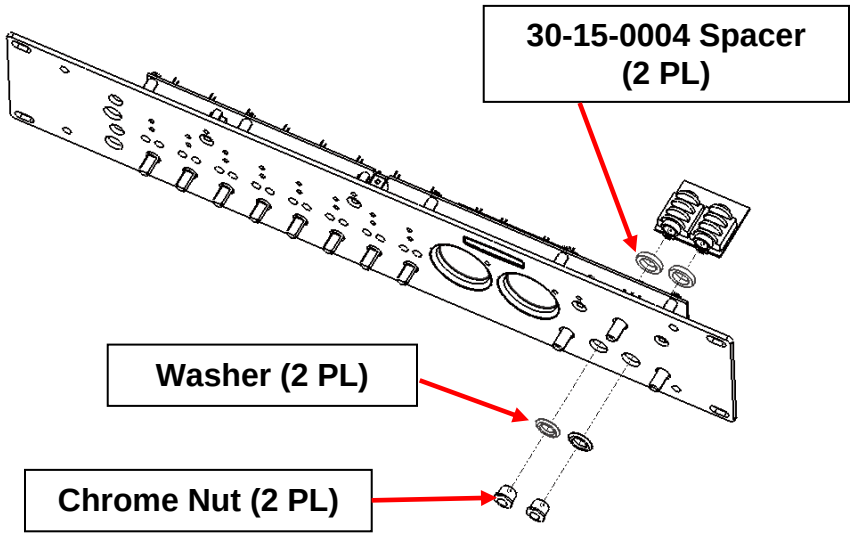
Solder the loose end of the 21-34-0084 Cable to the 50-02-0184-1 VU Meter PCBA.

(Note – the 21-34-0084 ribbon cable attaching the VU Meter PCB to the U/I PCBA is not shown)



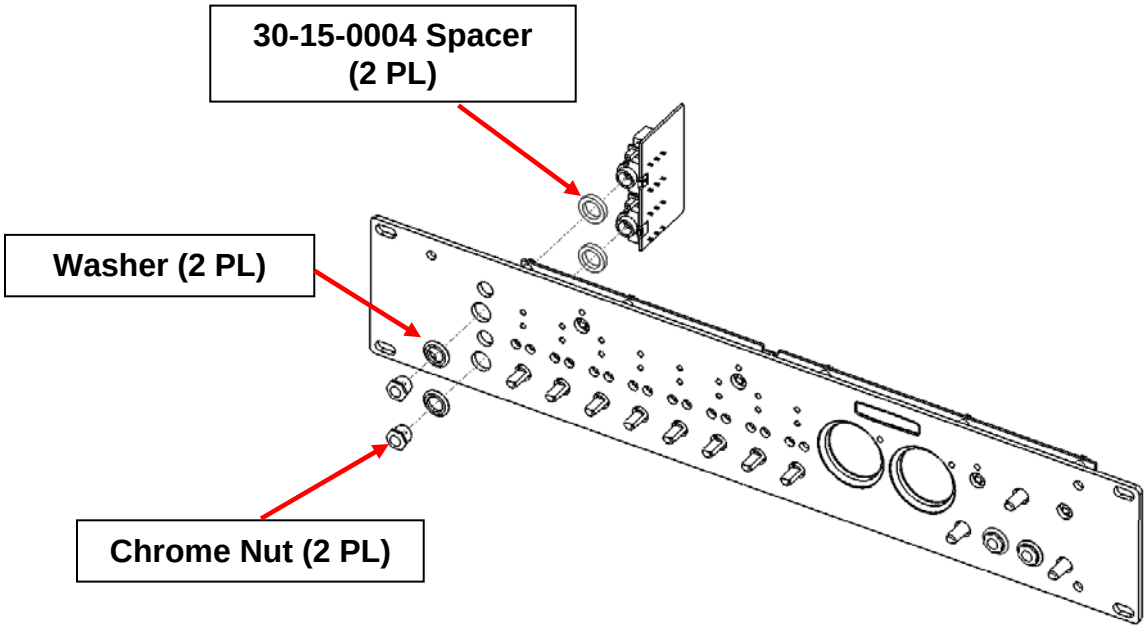
STEP 11:
Install the Headphone Breakaway PCBA (P/N 50-02-0182-2) to the front panel using two (2) chrome nuts and washers from the front and two (2) 30-15-0004 spacers as shown below. Torque each chrome nut to 4-5 in-lbs.

(Note that the chrome nut and washer have no part number. They are included with the 21-00-6617 ¼" jack).



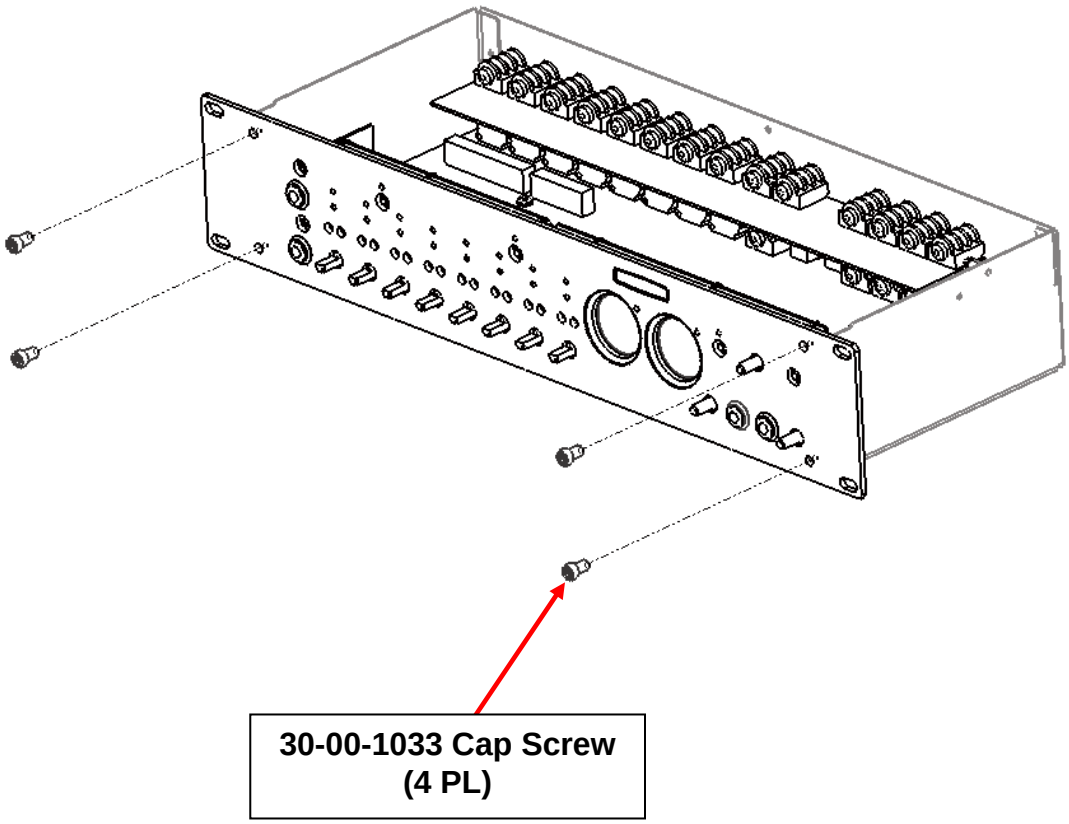
STEP 12:
Install the Guitar Input PCBA (P/N 50-02-0184-2) to the front panel using two (2) chrome nuts and washers from the front and two (2) 30-15-0004 spacers as shown below. Torque each chrome nut to 4-5 in-lbs.

(Note that the chrome nut and washer have no part number. They are included with the 21-00-6617 ¼" jack).

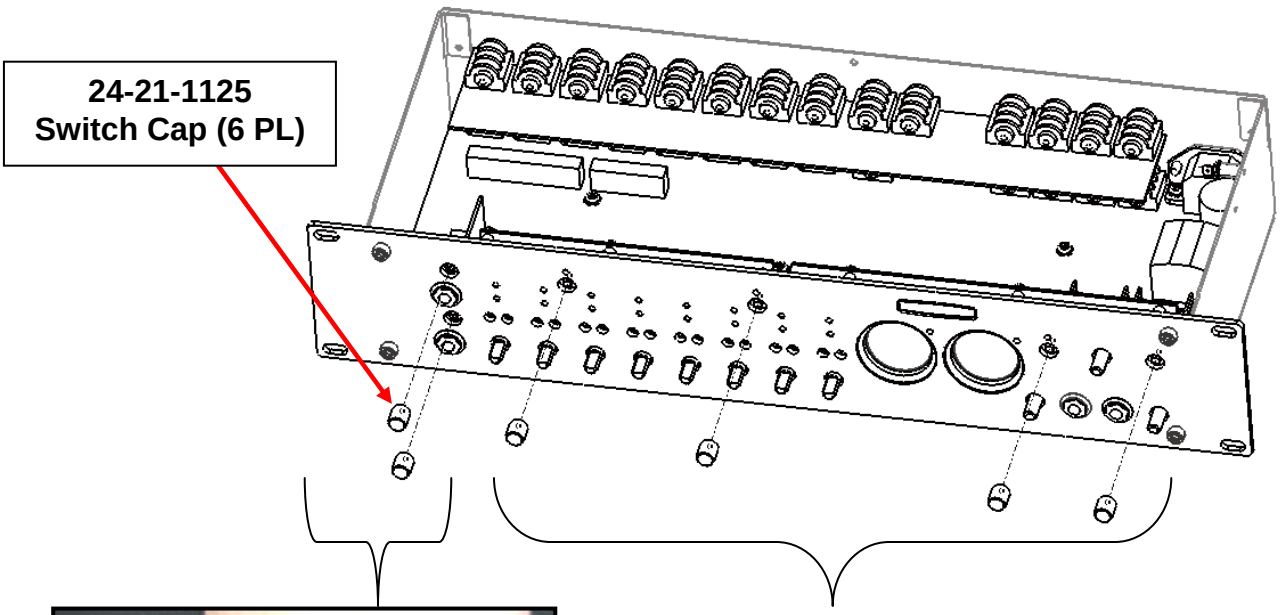


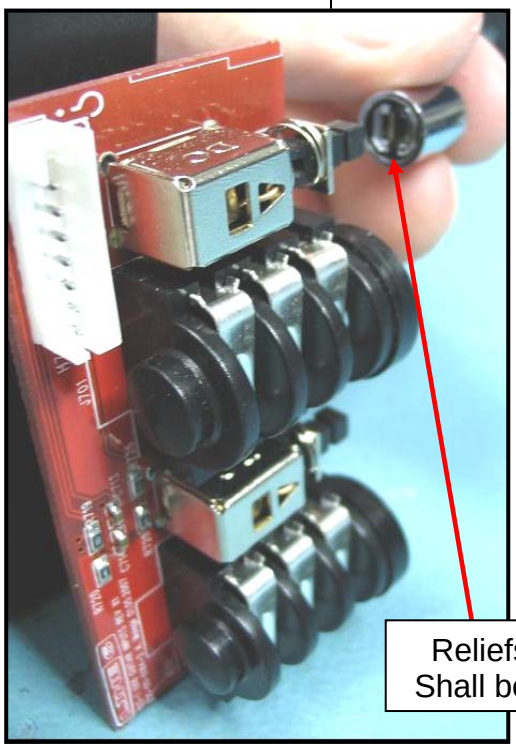
STEP 13:
Insert the Front Panel sub-assembly into the Bottom Chassis as shown.

Secure each corner with a #10-32 Socket Head Cap Screw (P/N 30-00-1033). Torque each screw to 8-10 in-lbs.

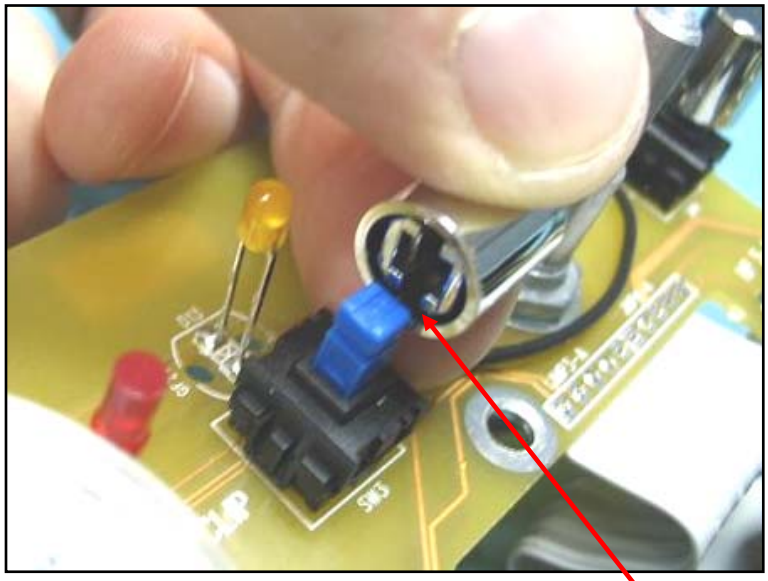


STEP 14:
Install Push Button Switch Caps (P/N 24-21-1125) to switches (6 PL), as shown below. Press firmly on each cap until it has completely bottomed out on the switch.
Note – the clocking/orientation of the cap is important! For proper fit, the reliefs should be oriented as shown below.



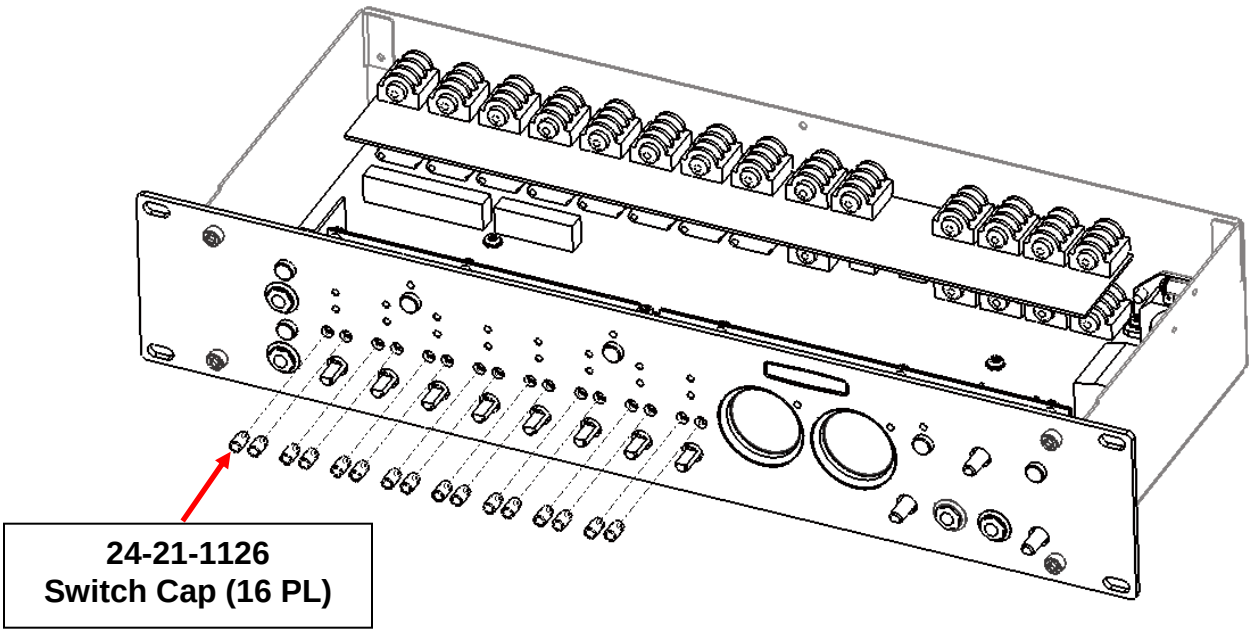


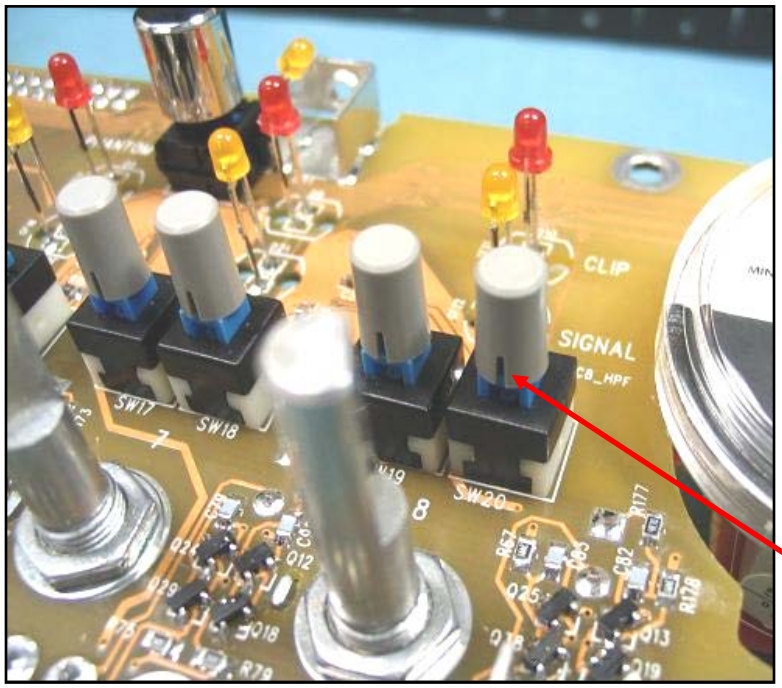
Orientation for Guitar Input PCBA (2 PL)



Orientation for U/I PCBA (4 PL)

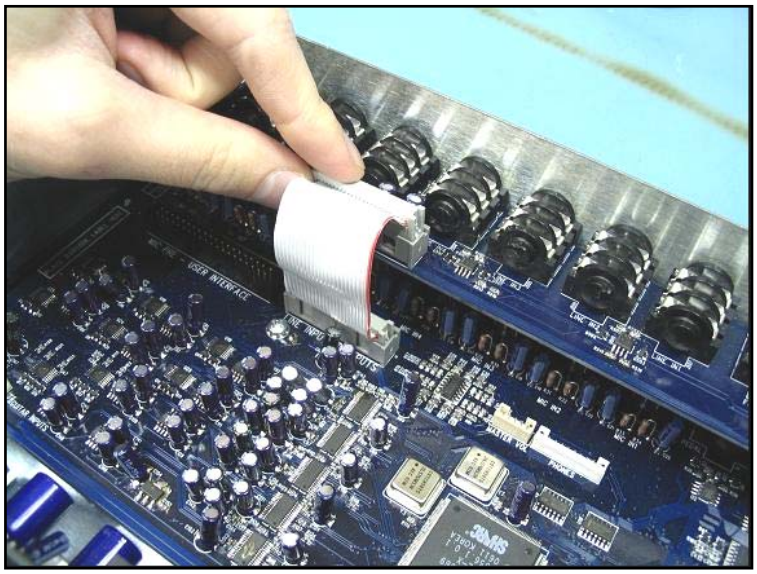
STEP 15:
Install Push Button Switch Caps (P/N 24-21-1126) to switches (16 PL), as shown below. Press firmly on each cap until it has completely bottomed out on the switch. **Note – the clocking/orientation of the cap is important! For proper fit, the slits should be oriented vertically, as shown below.**





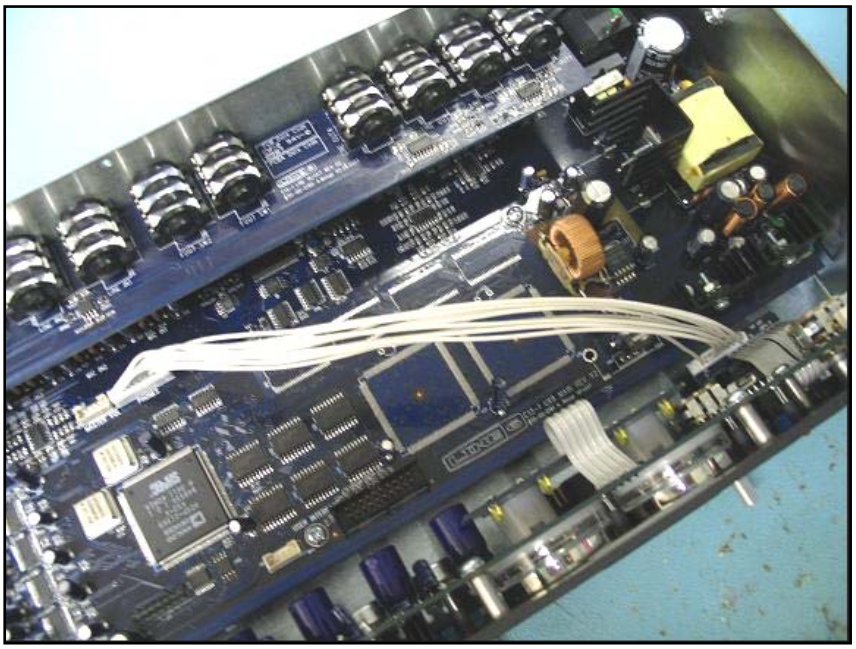
Cap Orientation

STEP 16:
Install the 21-34-0088 Cable Assy (24-Pin) from the Main PCBA to the Line In/Out PCBA as shown below.

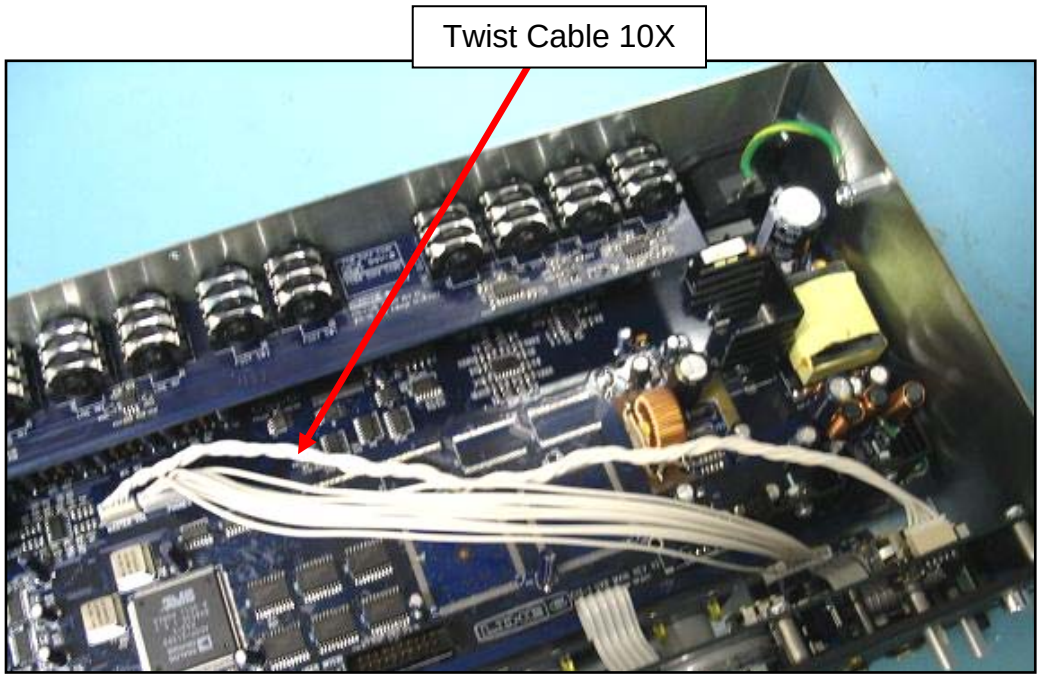


STEP 17:
Install the 21-34-0086 Cable Assy (8-Pin) from the Main PCBA to the Guitar Input PCBA as shown below.

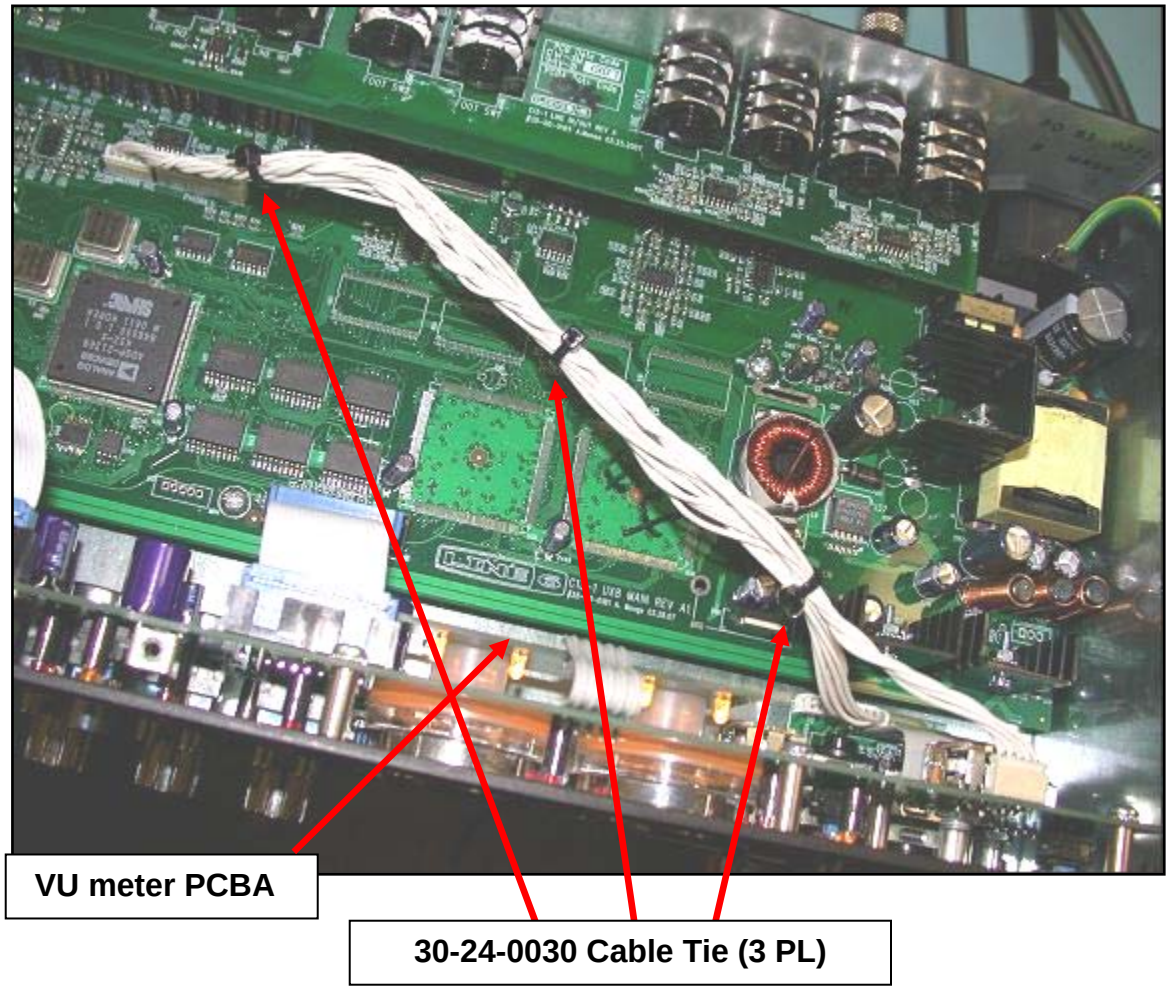
STEP 18:
Install the 21-34-0087 Cable Assy (10-Pin) from the Main PCBA to the Headphone PCBA as shown below.



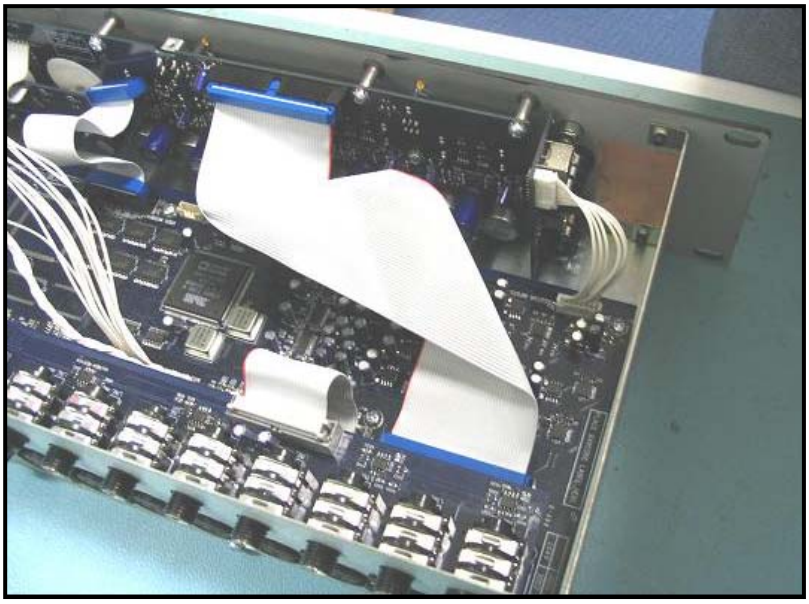
STEP 19a:
Install the 21-34-0085 Cable Assy (5-Pin) from the Main PCBA to the U/I PCBA as shown below. Twist cable 10 times before installing.



STEP 19b:
Secure the 21-34-0085 Cable Assy (5-Pin) to the 21-34-0087 (10-Pin) with three (3) cable ties (P/N 30-24-0030) and keep cable away from VU meter PCB as shown below.

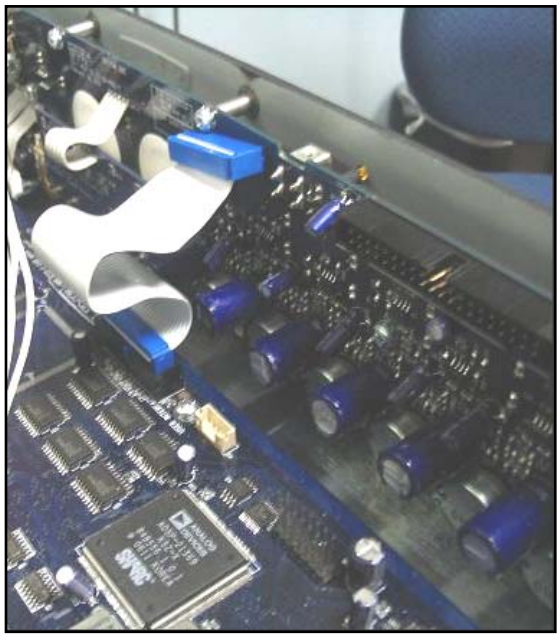


STEP 20:
Install the 21-34-0090 Cable Assy (40-Pin) from the Main PCBA to the U/I PCBA as shown below. Make folds in cable approximately as shown.

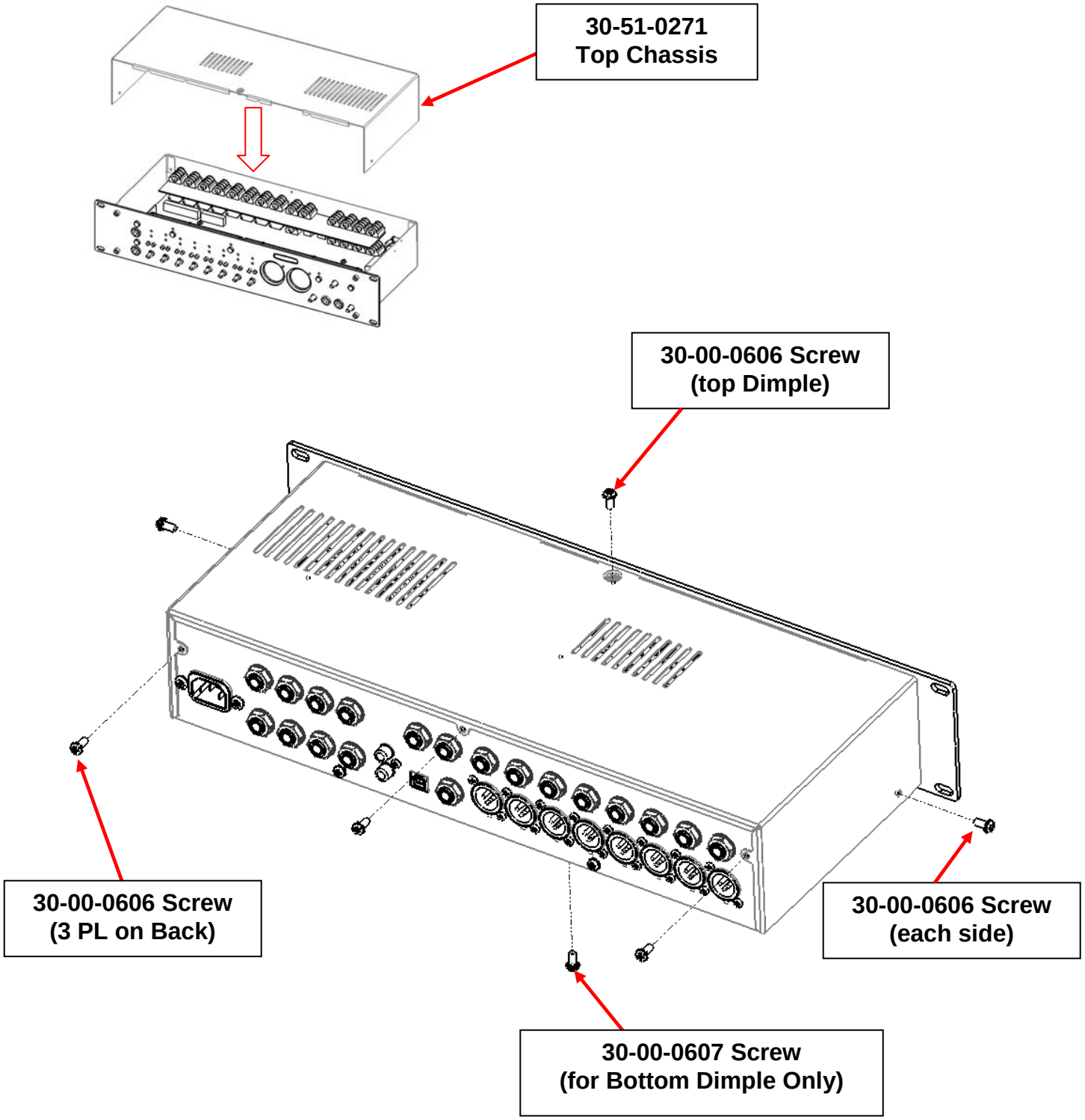


STEP 21:
Install the 21-34-0089 Cable Assy (20-Pin) from the Main PCBA to the U/I PCBA as shown below.

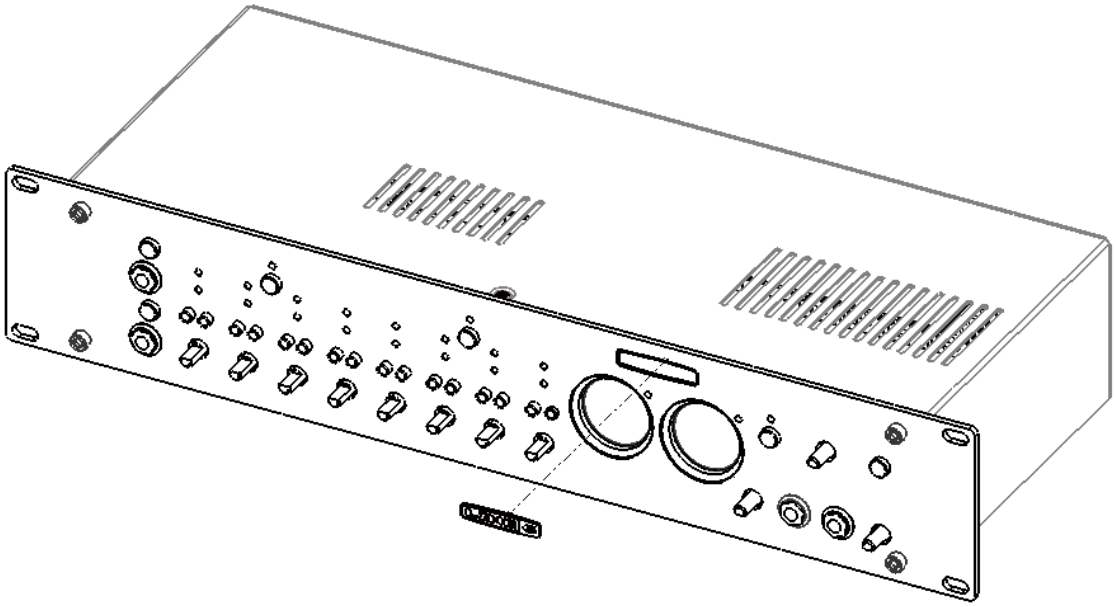
Note – this picture shows incorrect cable length and is missing header on U/I PCBA. This picture is for position reference only.



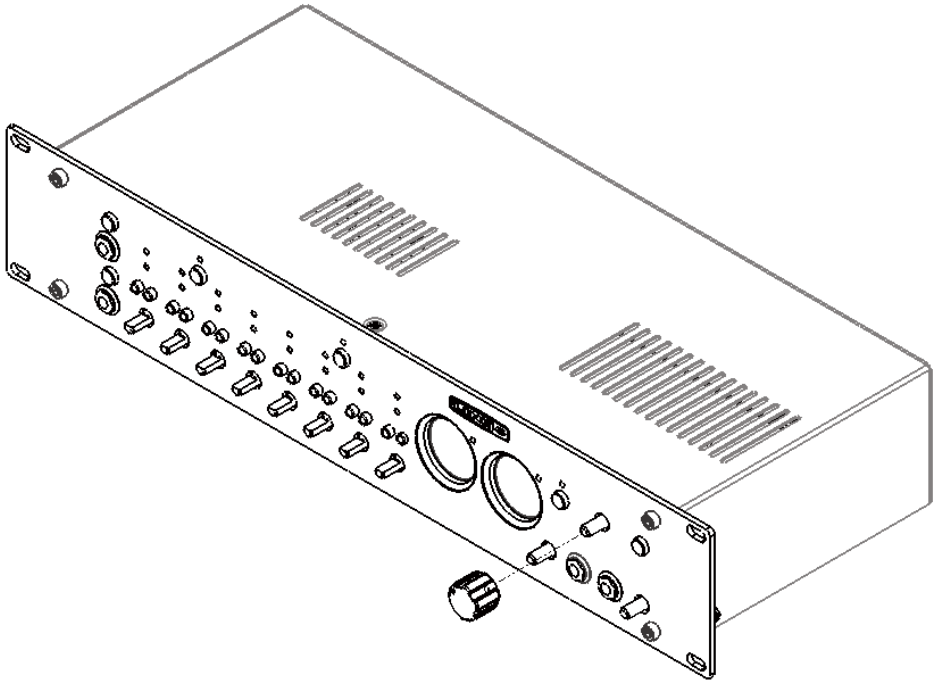
STEP 22:
Insert the Top Chassis (P/N 30-51-0271) over the Bottom Chassis (P/N 30-51-0272). Secure with the screws indicated below. Torque each screw to 6-8 in-lbs.



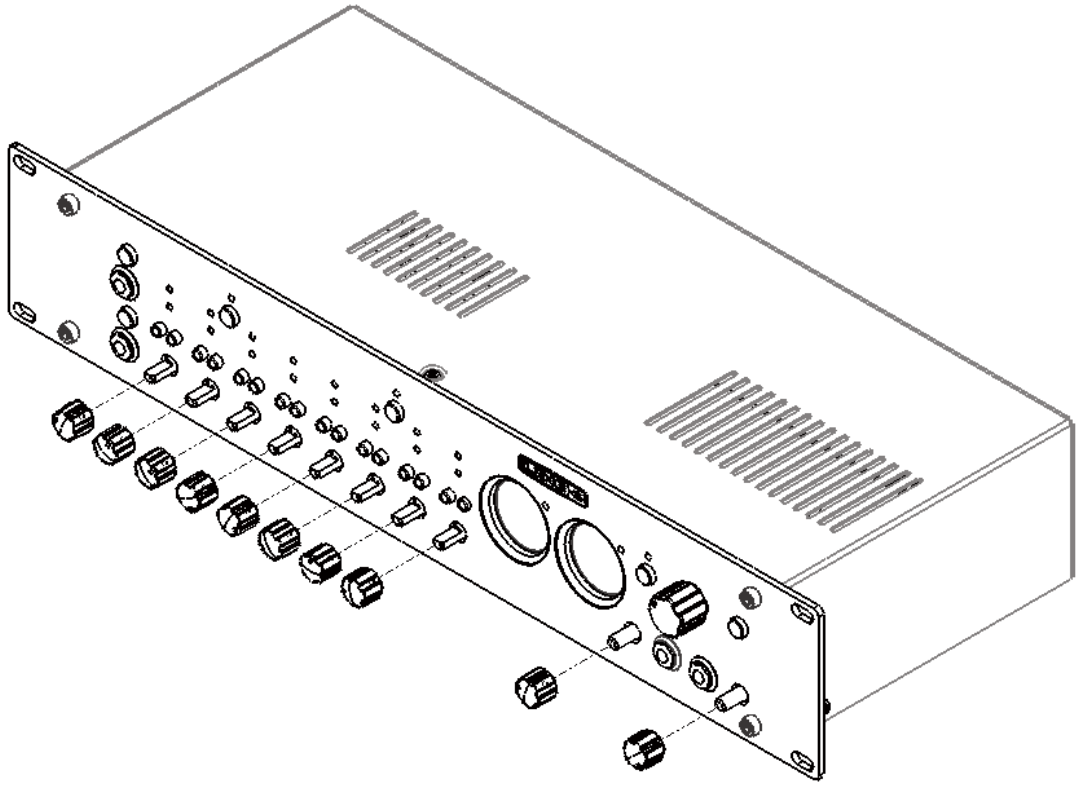
STEP 23:
Install one (1) Line 6 Logo (P/N 30-60-0006) as shown. Logo shall be centered within emboss on Front Panel.



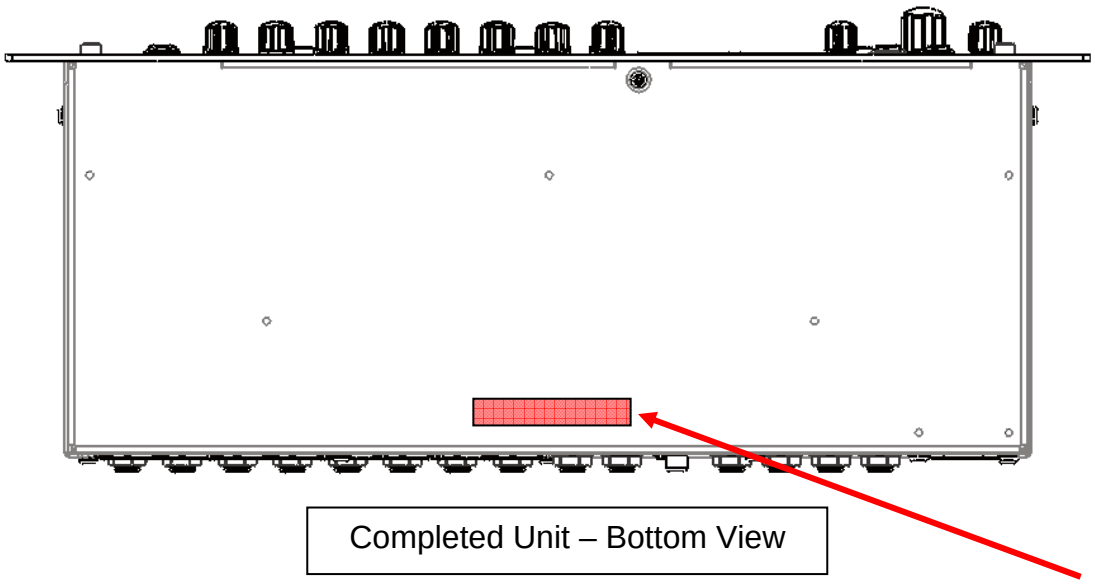
STEP 24:
Install one (1) Knob (P/N 30-45-0011) as shown.



STEP 25:
Install ten (10) Knobs (P/N 30-45-0019) as shown.

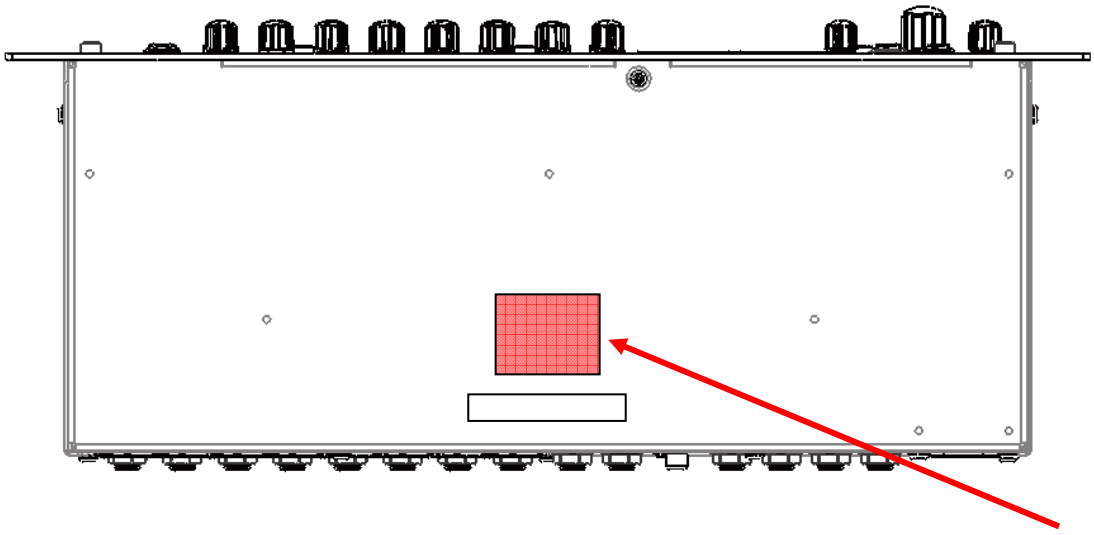


STEP 26:
Apply bar code serial number label (P/N 40-25-0101) to bottom of chassis. Position approximately as shown below. Note that the remaining part of the S/N label will be applied to the outside of the shipping box.



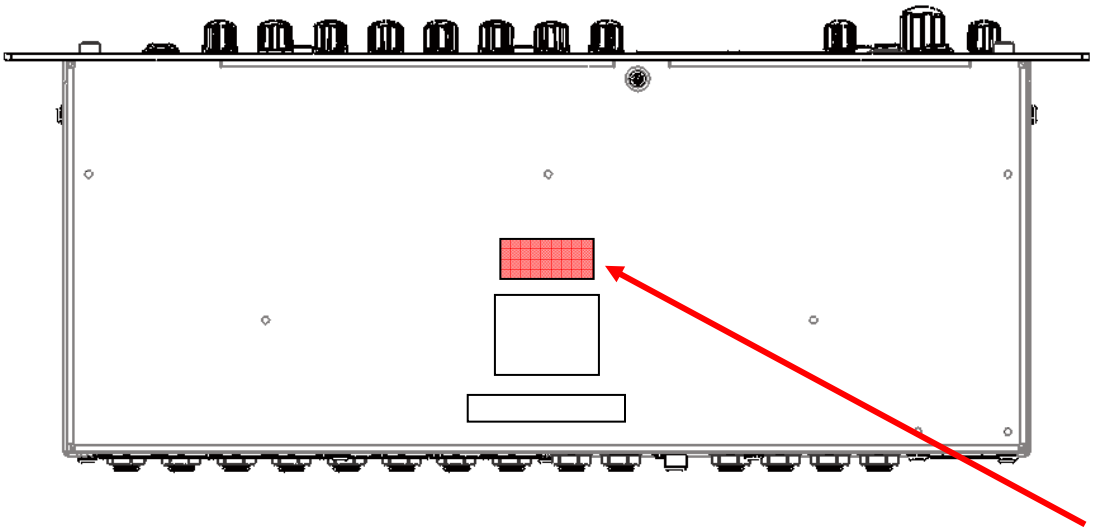
Completed Unit – Bottom View

STEP 27:
Apply inspection label (P/N 40-25-0020) to bottom of chassis. Position approximately as shown below.



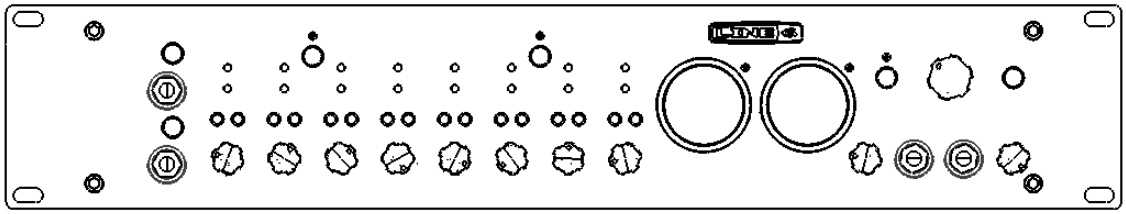
Completed Unit – Bottom View

STEP 28:
Apply ETL label (P/N 40-25-0030) to bottom of chassis. Position approximately as shown below.
Note: Line 6 must complete all safety certification testing before ETL label can be applied. Do not apply ETL label until an ECO has been issued to add the ETL label.

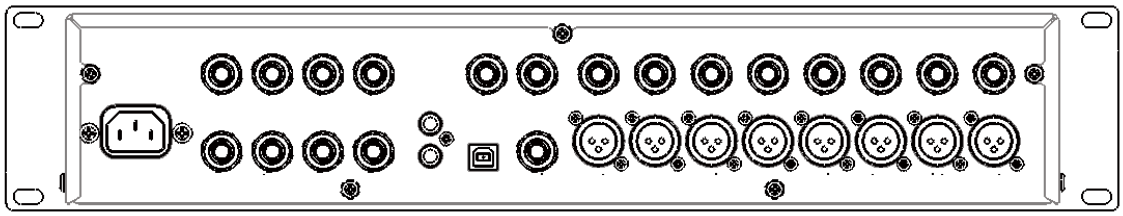


Completed Unit – Bottom View

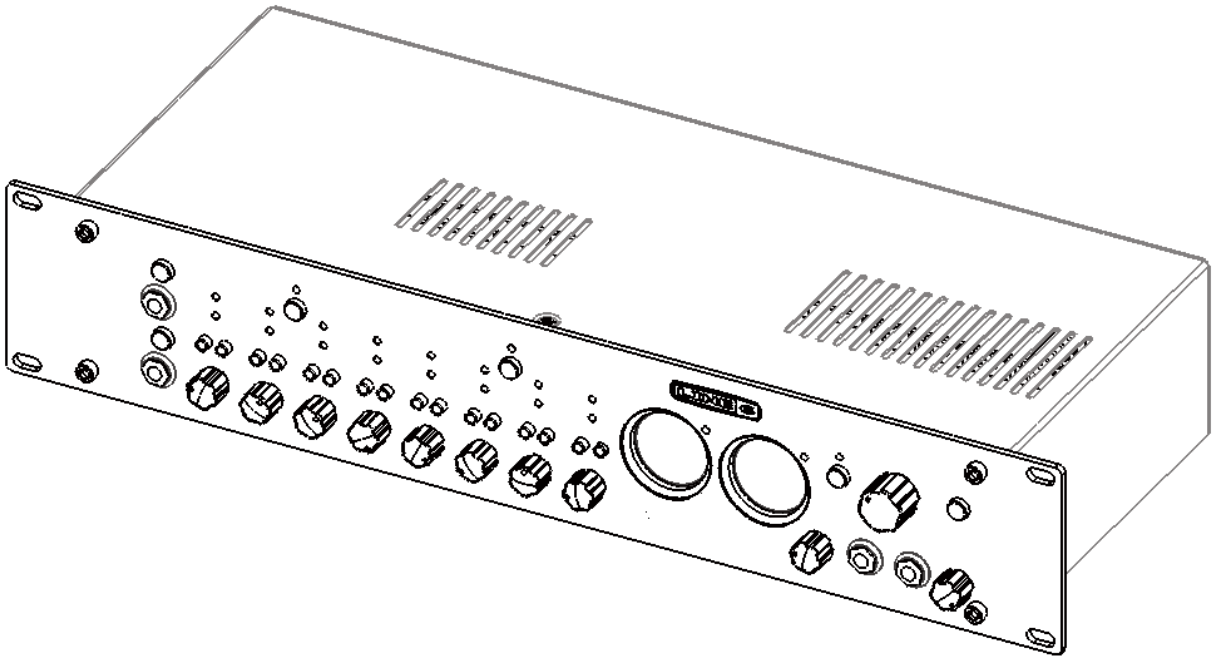
COMPLETED UNIT: REFERENCE VIEWS



Completed Unit – Front View



Completed Unit – Back View



Completed Unit – Front Isometric View

TonePort UX8®

Quick Start Guide

Démarrage Rapide

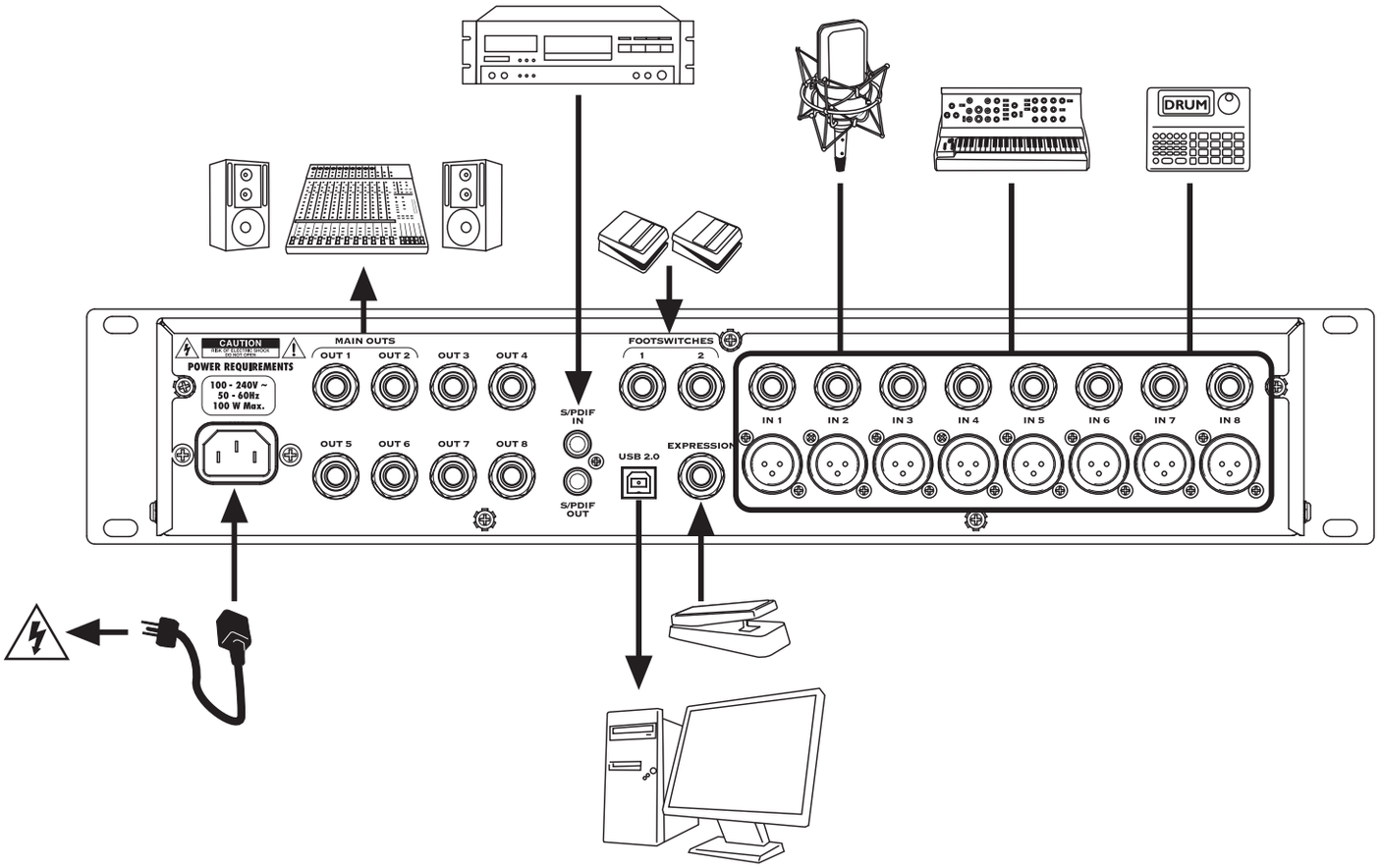
Blitzstart

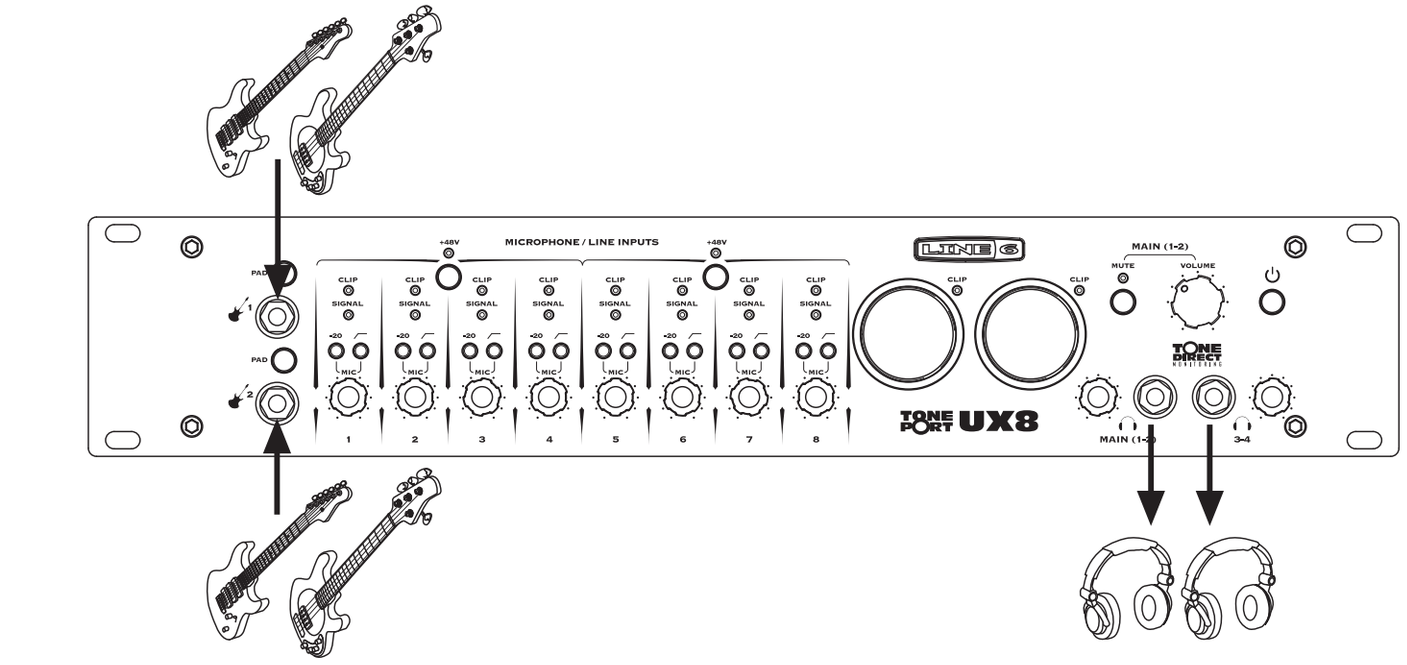
Ingebruikname

Inicio Rápido

40-00-0138 Electrophonic Limited Edition available @ www.line6.com/manuals Rev A

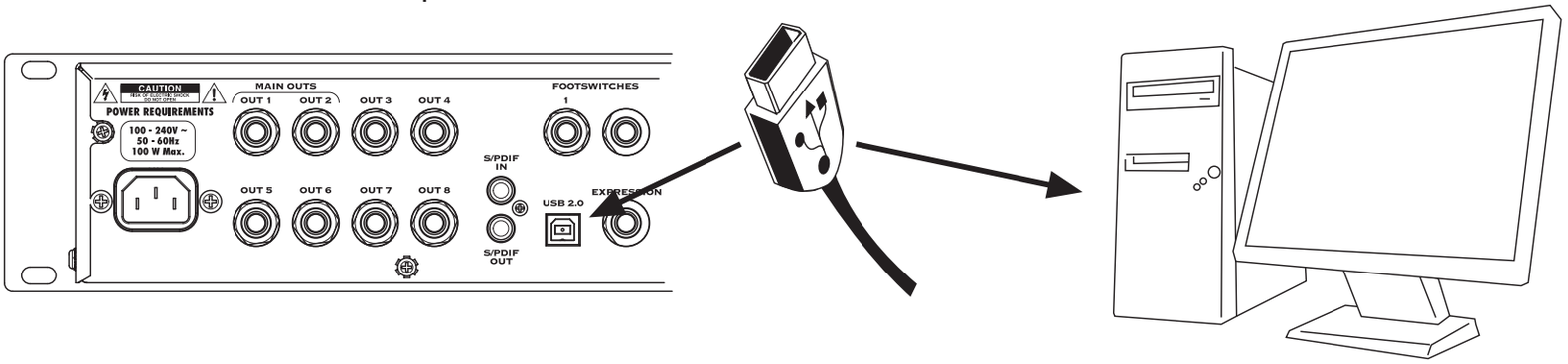
Hook Up


DRUM
CAUTION
POWER REQUIREMENTS
100 - 240V ~
50 - 60Hz
100 W Max.
MAIN OUTS
OUT 1
OUT 2
OUT 3
OUT 4
OUT 5
OUT 6
OUT 7
OUT 8
S/PDIF IN
S/PDIF OUT
USB 2.0
FOOTSWITCHES
1
2
EXPRESSION
IN 1
IN 2
IN 3
IN 4
IN 5
IN 6
IN 7
IN 8

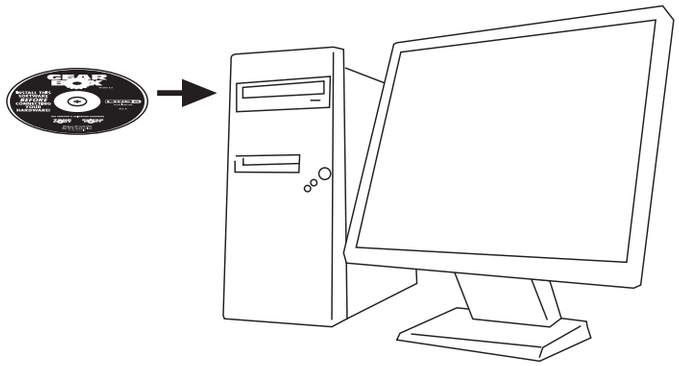

MICROPHONE / LINE INPUTS
+48V
+48V
PAD
PAD
CLIP
SIGNAL
-20
MIC
1
2
3
4
5
6
7
8
LINE 6
CLIP
CLIP
MAIN (1-2)
MUTE
VOLUME
TONE DIRECT MONITORING
TONE PORT UX8
MAIN (1-2)
3-4

Install Software

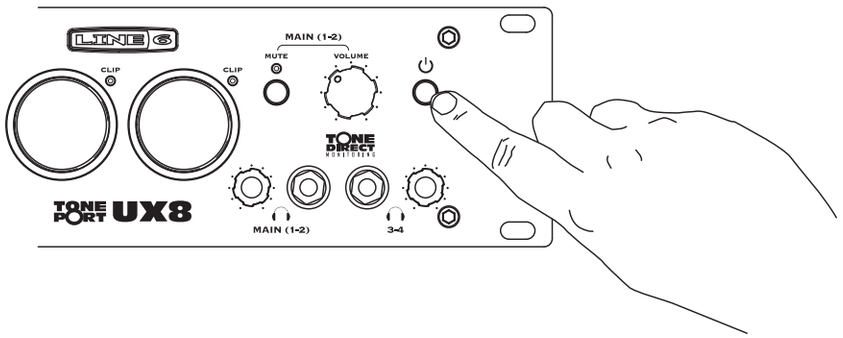
1. Connect USB cable. Do not power on the TonePort UX8.



2. Insert GearBox Install disc, launch install application, and follow the instructions.



3. Power up your TonePort UX8 when instructed by the installer.



Activate the GearBox Plug-In

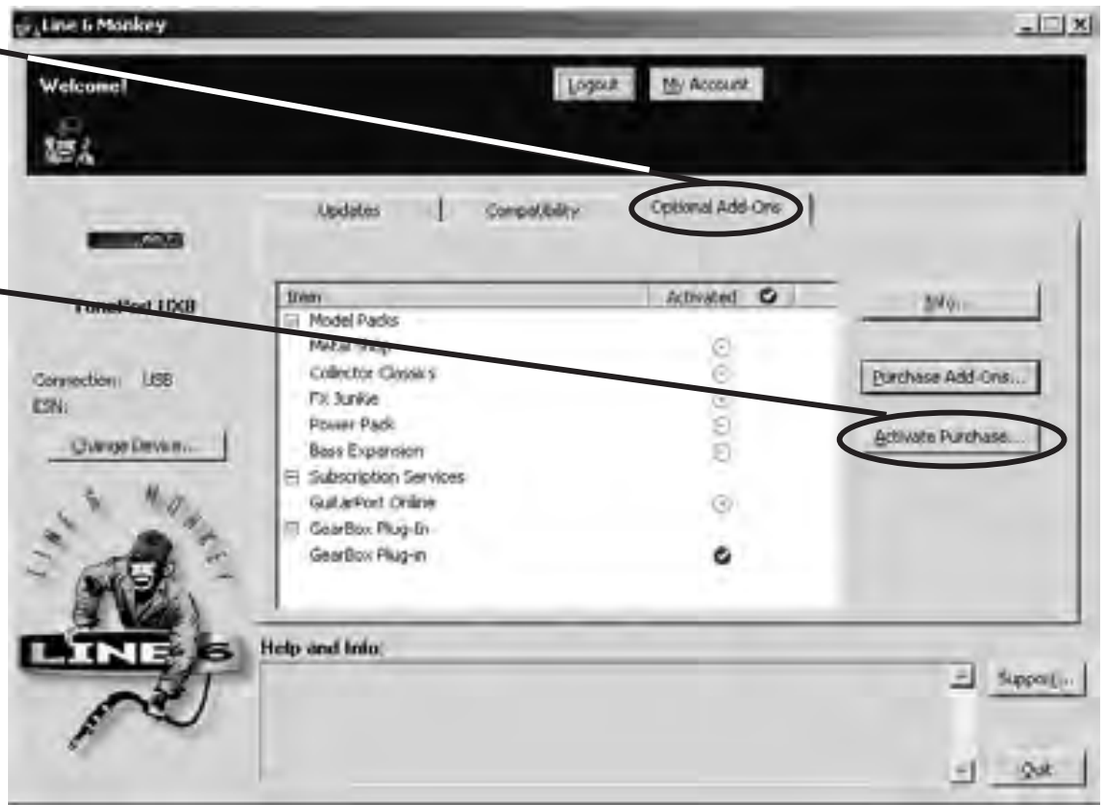
1. The GearBox Plug-In is an add-on that comes free with the TonePort UX8. To activate it, launch Line 6 Monkey (installed with the GearBox installer), click the 'Optional Add-Ons' tab, then click the 'Activate' button (Monkey should instruct you to do this when running it for the first time). If you do not have a user account you will need to create one now by selecting ‘New User’.

Mac: Applications/Line 6/Monkey

Win: Start → All Programs → Line 6 → Tools → Monkey

2. Click the ‘Optional Add-Ons’ tab.

3. Click ‘Activate Purchase...’ to download your add-on capabilities and follow instructions.



NOTE: At any time you can check for possible updates to your TonePort UX8 by clicking the ‘Updates’ tab - Monkey makes it easy!

Using the GearBox Standalone Application

The GearBox standalone application lets you play and record your instruments with processed tone and incredibly low latencies thanks to Line 6's ToneDirect™ Monitoring.

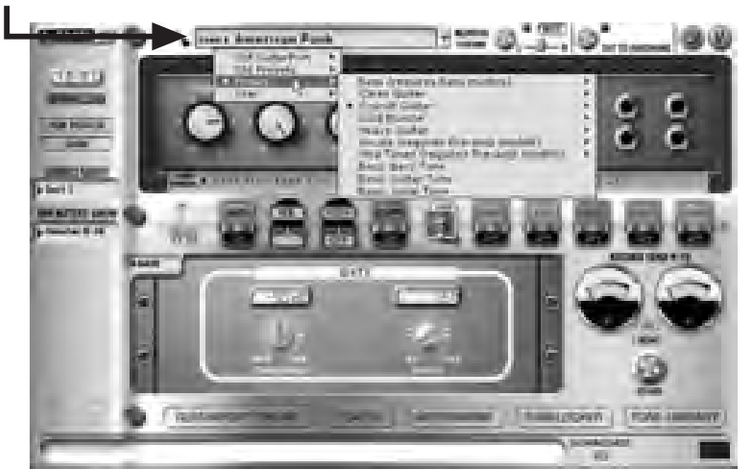
1. Launch Gearbox.

Mac: Applications/Line 6/GearBox

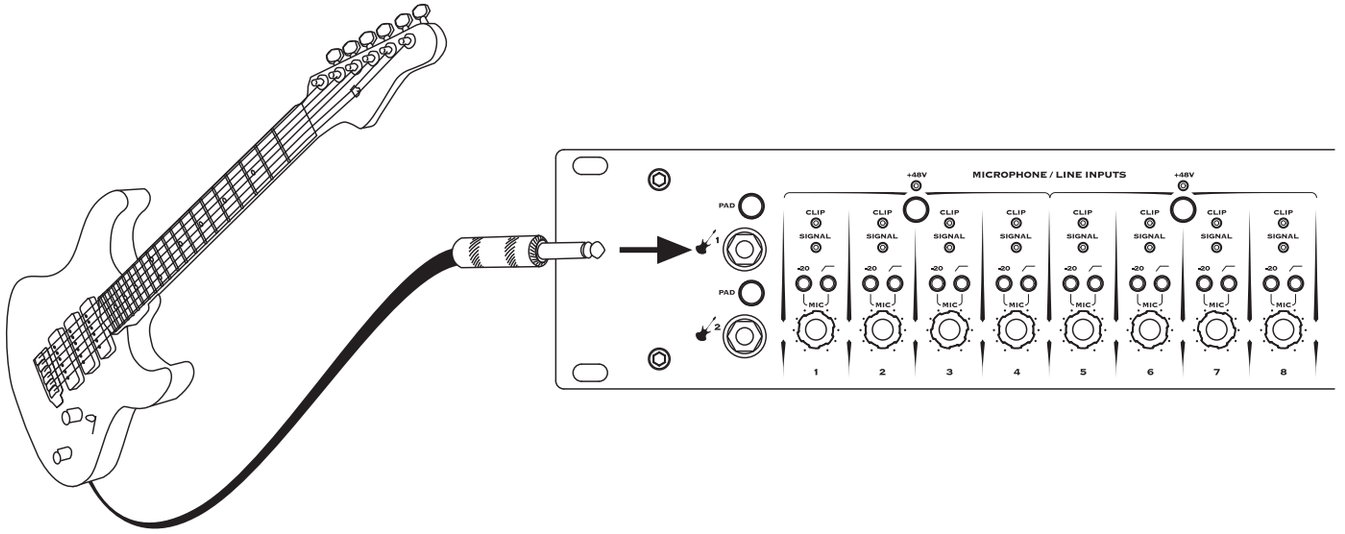
Win: Start → All Programs → Line 6 → GearBox → GearBox

2. Select input source 'Inst 1'

3. Select a Tone Preset.



4. Plug guitar into TonePort UX8's Instrument 1 Input jack and enjoy!



Using GearBox Sends With Your Recording Software

GearBox provides 2 stereo sends to your recording software, which are labeled 9-10 and 11-12 in GearBox, as well as in your recording software.

Send 9-10 is the fully processed GearBox signal.

Send 11-12 can be set to Pre or Post within GearBox, enabling you to record a partially processed or unprocessed signal.

Using The GearBox Plug-In

The GearBox Plug-In provides the same models and presets as the GearBox standalone application.

Try the “Pre-Amp” Models on tracks for recording vocals, drums or acoustic instruments.

If GearBox Plug-In is not yet activated, see “Activate the GearBox Plug-In” in this guide.

TIP: You can use the GearBox standalone application for ToneDirect™ Monitoring when recording guitar or bass tracks, but record only the unprocessed instrument input. Afterwards, you can use the GearBox Plug-In to adjust your tone to accommodate your mix as it evolves.

See the GearBox help for more info!

Register and Get Free Stuff

Included with TonePort UX8 is a handy, postage-paid card for you to send back to us to register your purchase. It is very important you either fill that registration card out right now and send it to us in the mail, or register online at **www.line6.com/register**. How come? Well, for one thing, it gets you all set up for warranty service should you have a warranty issue with your TonePort UX8.

Line 6, the Line 6 logo, GearBox and TonePort UX8 are trademarks of Line 6, Inc.
TonePort UX8 Quickstart Guide © 2007 Line 6, Inc.

v3.5 User Guide

Getting Started With Your Hardware

GX

UX1

UX2

KB37

DI

UX8

Guitar Port

PODxt

PODxt Live

PODxt Pro

GearBox Basics

Stand-alone Application

Plug-In

Online Help

Recording & More

Step by Step Recording Setups, Installation, Troubleshooting and more

Store

Model Packs & Plug-In

Support

Online Support Pages

Top Issues

- Important! Connect speakers or headphones to Line 6 hardware, not directly to computer. Click on the "Getting Started" links above for more details.
- USB Required: Line 6 hardware must be connected via USB to use GearBox Plug-In
- Hear computer's soundcard and GearBox sound through the same speakers
- Hooking up to a guitar amplifier
- Setting up ToneDirect™ Monitoring with GearBox Plug-In

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START HERE

Activation

Some features of GearBox require "activation" using Line 6 Monkey and your Internet connection. Activation turns these features on in your GearBox-compatible hardware, so they can operate in the GearBox stand-alone application and Plug-in. "Monkey, you say?" – get the skinny on Line 6 Monkey here.

Detailed information on activating **GearBox Plug-In** can be found here.

Model Packs that you purchase from www.line6.com/store also need to be activated. You'll find instructions on just how to do that here.

You may also **transfer your activations** to another computer with or without Internet access. The next section describes the process in detail.

Transferring Activations

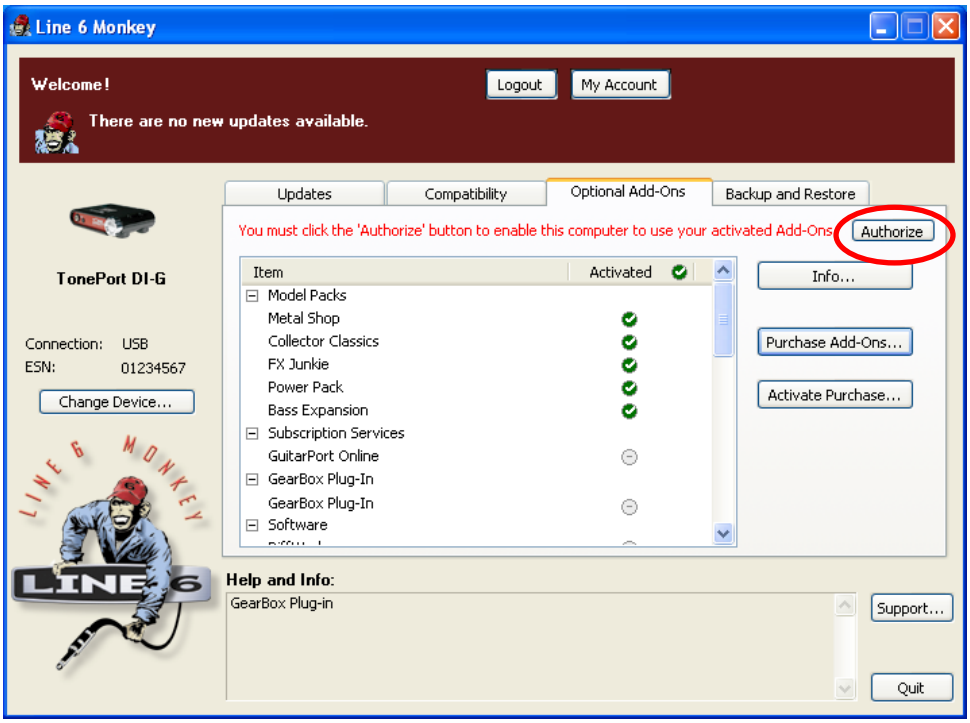
So you just upgraded your computer to the latest and greatest (this week anyway…) model, and want to move GearBox to your new system? In this section, we'll explain how to make the transfer process as easy as A-B-C, whether the new computer can connect to the internet or not.

The destination computer has an Internet connection

This is the easiest scenario: Download and install the GearBox application (always available at line6.com/software). This will also install the necessary drivers for your hardware and the Line 6 Monkey application.

GearBox Plug-in doesn't work!!! Where are my Model Packs??? Relax –Your Add-Ons (Model Packs, Plug-in, etc…) are tied-in to your hardware's ESN, but also need to be authorized with each new computer you'll be using GearBox on. In other words, they work but just haven't been enabled on the new computer yet.

Launch Line 6 Monkey. The Monkey utility will connect to the server and scan your hardware for any activated Add-ons, and if it finds any, will display the following message:



Just click **Authorize**, and Monkey will enable the use of your activated Add-On(s) on the new computer system.

The destination computer lacks an Internet connection

So you just got the call from Mr. Big Time Producer for a session at so-and-so's studio, and you want to bring all this great Line 6 tone along for tracking – but their computer does not connect to the internet. You can still move your GearBox activation to their recording environment by following these steps:

Prerequisite: This may seem obvious but we'll mention it anyway: Your hardware and all GearBox Software and Add-ons must already be activated and authorized on your own computer (meaning, an Internet connection is required and has been used for the **initial** activation of your GearBox assets).

On your computer:

- Locate and copy all **.aet** files to removable media (CD, Flash drive, etc…). In Windows® environments, these files can be found in the **C:\Document_and_Settings\(username)\Application Data\Line 6\GuitarPort** folder; on Mac®, look in **/Users/(username)/Library/Application Support/Line 6/GuitarPort**.
- Copy the GearBox installer to removable media, since the destination computer will not be able to download it.

On the destination computer:

- Install the GearBox software.
- Copy the **.aet** files from your removable storage into the correct folder (described above). **You may have to create this folder manually** if it isn't present.

You're done! You should now be able to launch the GearBox application with all Add-Ons enabled. Just remember that for Plug-in operation, your Line 6 hardware must always be connected via USB (even if you're using a 3rd-party interface).

About Line 6 Hardware & Software

Before You Get Started

OK, you've got your guitar, a computer and a head full of songs and cool licks, so how do you get this all going? You're just a few steps away from turning your computer into a serious Tone, jamming and recording machine. First, here is some valuable information to ensure you have all the latest and greatest updates….

System Requirements and Installation

If you need to check the system requirements or some assistance with installing GearBox on your Windows or Mac computer, please refer to the separate documents located on the GearBox Online Help page of the Line 6 website.

Updating & Registering with Line 6 Monkey

Line 6 Monkey is the intelligent updater utility that is automatically installed with your GearBox application. You are prompted to run Line 6 Monkey at the end of your GearBox installation, but it's a great idea to do this often so you can be sure you have all the latest updates for all your Line 6 software and hardware products. Registering your Line 6 hardware is also very important because it ensures that you're dialed in for warranty service and makes it possible for us to contact you if new software versions or other cool enhancements are offered - cutting edge technology and such! So don't put this off any longer. Connect your Line 6 hardware to your computer and follow these steps to launch Line 6 Monkey...

- On Mac®, go to Applications - Line 6.
- On Windows®, go to Start - Programs - Line 6 - Tools.

Login account

You'll need to Login so that Line 6 Monkey can communicate with the online Line 6 Server and provide you with exactly what you need. It's just a few clicks, and it's free!

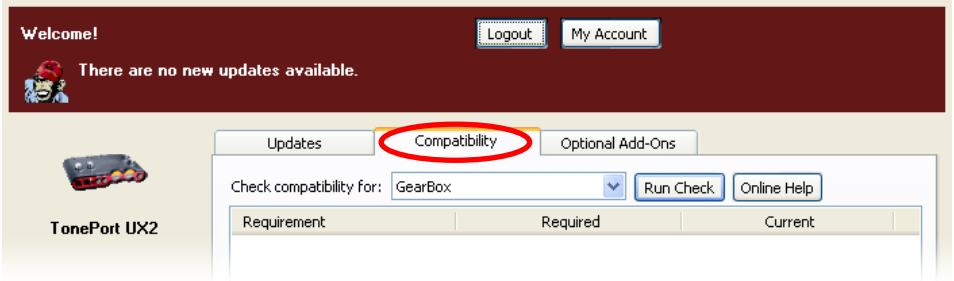
- If you have a Line 6 account, then type in your User Name and Password at the top of the Monkey dialog.
- If you have not yet created an account, click the New User button and you'll be walked right through the steps.

Register your hardware

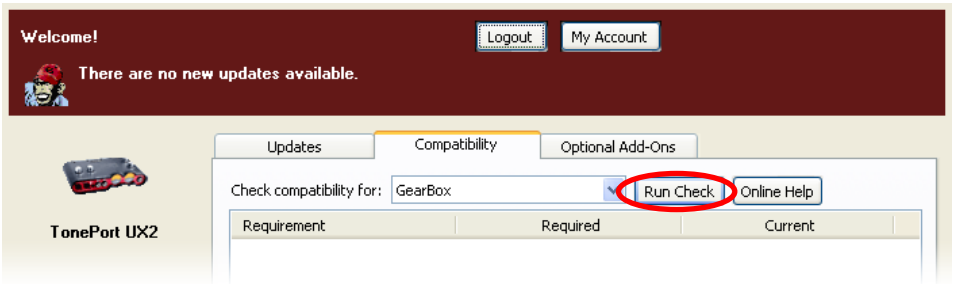
If you have not already done so, you'll be prompted to Register your connected Line 6 hardware. It's a painless process really, so click that Register Now button and fill in the blanks on the Web page. This page will list all your registered Line 6 gear in one place.

Compatibility Check

To check your Mac® or Windows® computer system to see if it meets the requirements to run GearBox, launch Line 6 Monkey and go to the **Compatibility** tab:



Just click the **Run Check** button and Monkey will check your system and list a report of all items in the window, letting you know if they pass the minimum requirements needed for GearBox.



For a complete list of GearBox system requirements, please see the GearBox 2 Release Notes document on the GearBox Online Help page of the Line 6 website.

Using Your Line 6 Hardware

The GearBox 3 software is designed to work with your Line 6 TonePort GX, DI, UX1, UX2, UX8, KB37, GuitarPort, PODxt, PODxt Live or PODxt Pro hardware. Your Line 6 device, since it connects to your computer via USB and utilizes the high-performance Line 6 Audio & MIDI drivers, it is easily configured to work as your computer's sound card. This means that you can access all your Tones coming out of GearBox directly from most any audio recording application, all at the highest quality! But you are of course not just limited to using your Line 6 hardware to record into your computer – the outputs provided on the back of your device additionally allow you to feed your GearBox signal to external tape machines, DAT recorders, PA systems, or whatever else will accept an analog line level signal. Additionally, TonePort UX2, UX8 and PODxt Pro devices include a digital S/PDIF output to allow you to make these connections digitally!

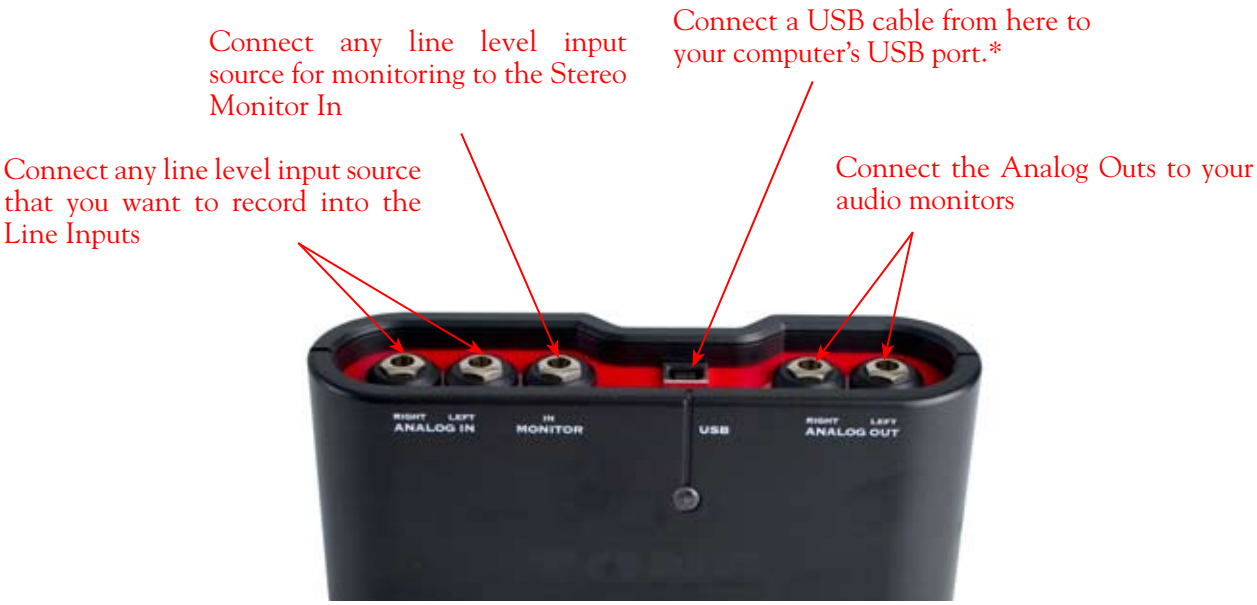
There are some differences in the setup and functionality between the supported Line 6 devices, so be sure to look for the instructions in the following sections for your specific device. Primarily, TonePort and GuitarPort devices function quite similarly since all the Digital Signal Processing (DSP) is performed on your computer when using these units. PODxt devices do all their DSP magic inside the PODxt itself. Using the GearBox software is pretty similar for all these devices once you have everything setup. So here we go…

TonePort UX1

Mic - To input a signal from a microphone, connect it here using an XLR cable. This inputs the microphone signal into GearBox where you can choose your tone, and then route the processed signal both to your audio software and out the TonePort outputs.

Guitar/Bass - To input your electric guitar or bass, plug it in here using a standard 1/4-inch TS instrument cable. This inputs the instrument's signal into GearBox where you can then choose your tone and route the processed signal both to your audio software and out the TonePort outputs.

Phones - If you want to listen to the audio from TonePort using stereo headphones, then plug them into this 1/4-inch stereo jack. This headphone jack outputs the same signal fed to the Analog Outs on the rear panel of TonePort; the audio from your audio software on the computer, as well as anything plugged into any TonePort input.



*Note – be sure to always power off or mute your speakers or monitoring setup before connecting and disconnecting the USB cable between TonePort and your computer, as well as before booting up or shutting down your computer if TonePort is already connected. The best practice is to always power on your speakers last, and power them off first when connected to other audio gear to avoid a "pop".

Line Inputs - To record the signal from a line level source, such as a keyboard, your stereo receiver, the line out from a mixing console, etc., connect them to these Left and Right ins using 1/4-inch TS audio cables.

Monitor In - If you want to hear the signal from a line level source along with all the other audio coming from your computer, but do not want this audio recorded, then plug the source in here. Note that this is a stereo jack, so you should use a stereo 1/4-inch TRS audio cable for this connection.

USB - This of course is where you connect the supplied USB cable to TonePort, with the other end going to your computer's USB port. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide TonePort with the full USB bandwidth. TonePort also gets its power from this USB connection, so it should not be plugged into a non-powered USB hub, or operated on the same USB controller channel with un-powered devices. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

Analog Outs - These Left and Right unbalanced jacks output all the audio from TonePort; the audio from your audio software on the computer, and anything plugged into any TonePort input. These are what you want to connect to your powered speakers or monitoring system for a recording setup. Use 1/4-inch TS cables to connect directly to powered speakers, mixer or power amp setup. Note that you can also use the headphone jack on the front of TonePort if you want to use headphones for monitoring.

TonePort UX2

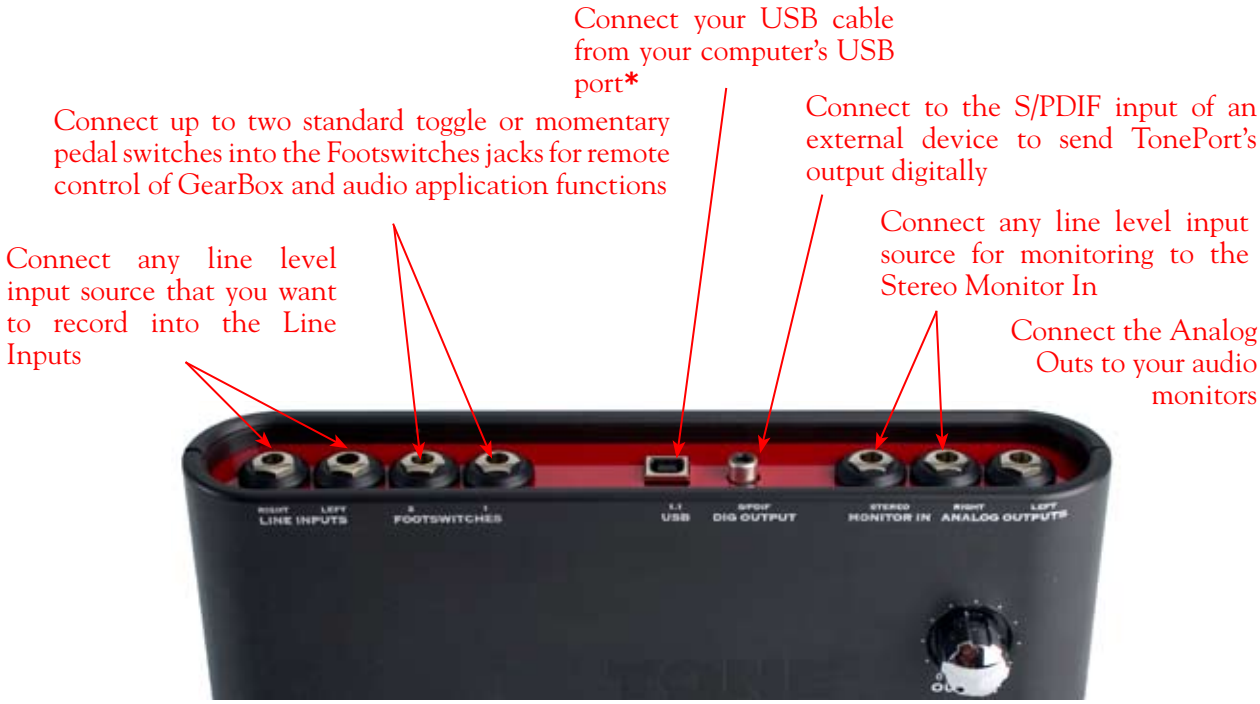
Microphone Inputs - You can receive input from one or two mics at the same time using these ins. There is also a +48V Phantom Power switch that you should toggle to "on" if your mic requires phantom power (most condenser type mics do, but check the documentation for your mic if you are not sure). Connect each mic using an XLR cable. This inputs each microphone signal independently into GearBox where you can choose your tone, and then route the processed signal both to your audio software and out the TonePort outputs.

Guitar/Bass Inputs -To input your electric guitar or bass, plug it into one of these inputs. Either of these routes the instrument's signal into GearBox where you can choose your tone and route the processed signal both to your audio software and out the TonePort outputs.

Norm – this input is for a standard instrument level output. Plug your guitar/bass into here using a standard 1/4-inch TS instrument cable.

Pad - this input is designed for high output level basses and guitars, especially those with active pickups. Plug your high output instrument into here using a standard 1/4-inch TS instrument cable.

Headphone - If you want to listen to the audio from TonePort using stereo headphones, then plug them into this 1/4-inch stereo jack. This Headphone jack outputs the same signal fed to the Analog Outs on the rear panel of TonePort; the audio from your audio software on the computer, as well as anything plugged into any TonePort input.



*Note – be sure to always power off or mute your speakers or monitoring setup before connecting and disconnecting the USB cable between TonePort and your computer, as well as before booting up or shutting down your computer if TonePort is already connected. The best practice is to always power on your speakers last, and power them off first when connected to other audio gear to avoid a "pop".

Line Inputs - if you want to record the signal from a line level source, such as a keyboard, your stereo receiver, the line out from a mixing console, etc., connect them to these Left and Right ins using 1/4-inch TS audio cables.

Footswitches - if you want to use one or two on/off toggle or momentary footswitches to remotely control functions in the GearBox software, you can plug the 1/4-inch footswitch plugs into these 1 and 2 jacks. To configure each Footswitch, go to the GearBox Preferences. For TonePort UX1, UX2, and KB37, you can also use these footswitches to trigger recording and playback commands within the included Ableton Live Lite software!

USB - This of course is where you connect the supplied USB cable to TonePort, with the other end going to your computer's USB port. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide TonePort with the full USB bandwidth. TonePort also gets its power from this USB connection, so it should not be plugged into a non-powered USB hub, or operated on the same USB controller channel with un-powered devices. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

S/PDIF Digital Out - To send the output of TonePort to an external device digitally, connect a 75-Ohm coaxial cable into this RCA jack and then into the S/PDIF digital input on the external device. This is the best choice for connecting to digital recording devices, such as a DAT recorder. This S/PDIF output sends the same audio as is sent to TonePort's Analog Outs* (with the exception that any audio coming into the TonePort's Monitor In jack is not routed to the S/PDIF output). The digital signal is always sent at 24-bit resolution.

Monitor In - If you want to hear the signal from a line level source mixed with all the other audio coming from your computer, but do not want this audio recorded, then plug the source in here. Note that this is a stereo jack, so you should use a stereo 1/4-inch TRS audio cable for this connection.

Analog Outs - These Left and Right balanced jacks output all the audio from TonePort; the audio from your audio software on the computer, and anything plugged into any TonePort input. So, these are what you want to connect to your monitoring system when using TonePort as your computer's sound card. Use either 1/4-inch TS or TRS cables to connect directly to your powered speakers, mixer or power amp setup. Note that you can also use the headphone jack on the front of TonePort if you want to use headphones for monitoring.

TonePort UX8

The TonePort UX8 is a multichannel recording interface designed for professional use, offering plenty of headroom, a wide dynamic range and an exceedingly low noise floor. Designed with high quality electrical components and a rugged exterior, the UX8 is built to provide many years of reliability.

Included with the UX8 is the GearBox Plug-In, providing all your tracks with same POD quality tone trusted by scores of platinum-selling musicians and recording engineers. In addition, the GearBox standalone application provides a virtual front end for professional tone processing.

Rear Panel Features

Balanced Outputs

TonePort UX8 provides 8 balanced analog outputs (4 stereo pairs). For the cleanest audio signal, use 1/4-inch TRS cables to connect directly to your powered speakers, mixer or power amp setup.

Note that you can use each output pair to provide different monitor mixes for musicians during a tracking session. You can set the input mix levels for each output pair using the Line 6 Audio-MIDI Devices application.

S/PDIF Digital Audio

To send or receive S/PDIF, connect a 75-Ohm coaxial cable to the UX8's RCA jack and the external S/PDIF device. This is the best choice for connecting to digital recording devices, such as a DAT recorder. This S/PDIF output sends the same audio as Main Outs 1-2. The digital signal is always sent at 24 bit.

To sync to an external S/PDIF device, set the UX8 to sync to S/PDIF in the Line 6 Audio-MIDI Devices application.

Footswitch and Expression Pedal Jacks

You can use up to 2 on/off toggle or momentary footswitches, and 1 expression pedal to remotely control functions in the GearBox software, such as stomp effects or wah level. You can also configure footswitches and the expression pedal to send MIDI commands, which can be useful for controlling your recording software's transport.

To configure footswitch and expression assignments, go to the Line 6 Audio-MIDI Devices application, MIDI tab.

USB 2.0

This of course is where you connect the supplied USB cable to TonePort, with the other end going to one of your computer's USB ports. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide TonePort with the full USB bandwidth. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

Line Level and XLR Inputs

8 unbalanced line level inputs are available for recording line level sources, such as a keyboard, stereo receiver, the line out from a mixing console, etc. Connect to line level inputs using 1/4-inch TS audio cables.

8 XLR preamp inputs are provided for balanced and mic input sources. +48 V Phantom Power switches are located on the front panel for mics requiring phantom power (most condenser type mics do, but check the documentation for your mic if you are not sure). Connect to these inputs using XLR cables.

Front Panel Features

Guitar/Bass Inputs

High-Z instrument inputs for guitar and bass are conveniently located on the front panel, providing convenient access for fast instrument switching.

-20 dB pad switches provide attenuation for hot levels, typically for instruments with onboard preamps or active pickups.

The TonePort UX8's instrument inputs work directly with the GearBox standalone application to provide ToneDirect™ Monitoring, which provides a fully processed signal with ultra-low latency, critical for tracking with the desired sound.

Note that the processed signal from GearBox will show up in your recording application as additional sends to analog inputs 1 – 8. You can simultaneously record the direct, unprocessed signal (i.e. Input 1-2) for later processing using the included GearBox Plug-In.

For more information on using the GearBox standalone application, see GearBox (Full Program). For more information on using the GearBox Plug-In, see GearBox Plug-in.

Microphone Input Controls

Rear panel XLR input levels are controlled by a row of trim knobs on the front panel. Use these inputs for microphones or balanced input signals with a gain range of 0 dB to 45 dB.

Each XLR input has a -20 dB pad switch, which can be used to provide more headroom for high output microphones. A 75 Hz cutoff switch is also provided, useful for eliminating low frequency rumble from microphone sources.

Two +48 V phantom power switches are provided for powered mics, such as condenser mics. Phantom power is distributed via two XLR input banks, permitting the option to run dynamic mics in a non-powered bank.

Signal and Clip LEDs

Signal and Clip LEDs exist for each input. The signal LED lights up when signal activity is present, glowing brighter as the signal level increases. When the input level reaches the 0 dBfs, the clip LED lights up momentarily.

VU Meter and Clip Display

The TonePort UX8 provides a stereo pair of large VU meters on the front panel.

By default, these meters display Inputs 1-2 levels. Using the Inputs & Recording Tab of the Line 6 Audio-MIDI Devices application, you can assign the hardware meters to display input and output levels of any stereo pair or GearBox send. The clip LEDs light up when the signal reaches 0 dBfs.

Main Output Level Controls

Main Outputs 1-2 are controlled by a main volume knob and main mute button. The volume knob is an analog level control and does not affect any level being sent to your computer. When Mute is engaged, as solid amber LED illuminates, blinking about once every 2 seconds.

Note that these controls operate on main outputs 1-2 only (headphone and S/PDIF levels are not affected). Outputs 3 – 8 are software controlled.

Headphone Output Controls

Headphone outputs 1-2 and 3-4 provide duplicate stereo outputs or Main Outs 1-2 and 3-4 respectively, providing discrete control over output levels sent over the headphone jacks. Note that headphone output levels are controlled independently of the Main volume control.

Power Button

When the power button is engaged, the TonePort UX8's main LEDs will illuminate. TonePort UX8 is not USB powered and receives no power from the computer.

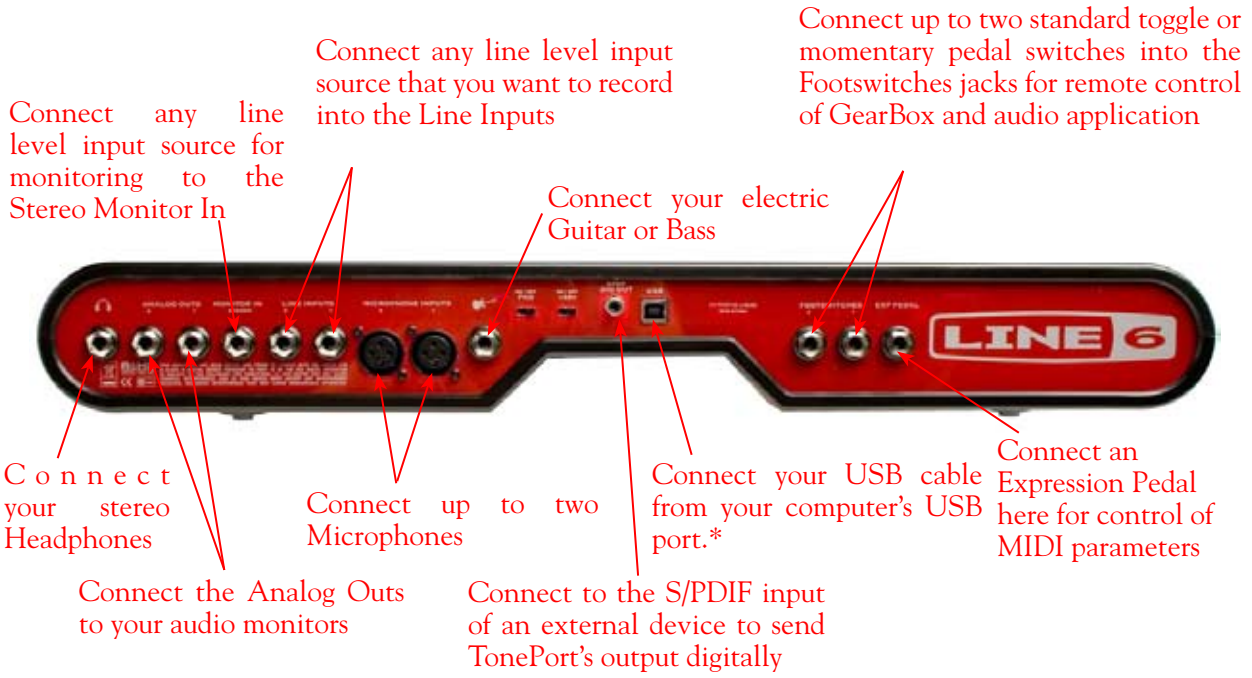
*Note – be sure to always power off or mute your speakers or monitoring setup before connecting and disconnecting the USB cable between TonePort and your computer, powering on/off your TonePort, as well as before booting up or shutting down your computer if TonePort is already connected. The best practice is to always power on your speakers last, and power them off first when connected to other audio gear to avoid a "pop".

LED status indicators

The Main Mute and Main Clip LEDs provide secondary functions in their ability to indicate the connection status of USB and S/PDIF, as follows:

- No USB connection - The main clip LEDs alternate steadily between left and right, about once every second. The USB cable may be unplugged or the UX8 driver may not be installed on your computer.
- No S/PDIF clock sync - The Mute LED blinks 3 times rapidly about once every second when the clock mode set to S/PDIF, and no external clock is present.

TonePort KB37



Microphone Inputs - You can receive input from one or two mics at the same time using these ins. There is also a +48V Phantom Power switch that you should toggle to "on" if your mic requires phantom power (most condenser type mics do, but check the documentation for your mic if you are not sure). Connect each mic using an XLR cable. This inputs each microphone signal independently into GearBox where you can choose your tone, and then route the processed signal both to your audio software and out the TonePort outputs.

Guitar/Bass Input -To connect your electric guitar or bass, plug it into this input. This connection routes the instrument's signal into GearBox where you can choose your tone and route the processed signal both to your audio software and out the TonePort outputs. This input also features a Pad switch; engage this switch when using a guitar/bass with high-output or active pickups, to avoid overdriving the input.

Headphones - If you want to listen to the audio from TonePort using stereo headphones, then plug them into this 1/4-inch stereo jack. This Headphone jack outputs the same signal fed to the Analog Outs on the rear panel of TonePort; the audio from your audio software on the computer, as well as anything plugged into any TonePort input.

*Note – be sure to always power off or mute your speakers or monitoring setup before connecting and disconnecting the USB cable between TonePort and your computer, as well as before booting up or shutting down your computer if TonePort is already connected. The best practice is to always power on your speakers last, and power them off first when connected to other audio gear to avoid a "pop".

Line Inputs - if you want to record the signal from a line level source, such as a keyboard, your stereo receiver, the line out from a mixing console, etc., connect them to these Left and Right ins using 1/4-inch TS audio cables.

Footswitches - if you want to use one or two on/off toggle or momentary footswitches to remotely control functions in the GearBox software, you can plug the 1/4-inch footswitch plugs into these 1 and 2 jacks. To configure each Footswitch, go to the GearBox Preferences. You can also use these footswitches to trigger recording and playback commands within the included Ableton Live Lite 5 software!

Expression Pedal - Connect a 1/4-inch TS expression pedal to control Volume, Wah or any other MIDI CC parameter in GearBox or your recording application. To configure the expression pedal, go to the GearBox preferences .

USB - This of course is where you connect the supplied USB cable to TonePort, with the other end going to your computer's USB port. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide TonePort with the full USB bandwidth. TonePort also gets its power from this USB connection, so it should not be plugged into a non-powered USB hub, or operated on the same USB controller channel with un-powered devices. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

S/PDIF Digital Out - To send the output of TonePort to an external device digitally, connect a 75-Ohm coaxial cable into this RCA jack and then into the S/PDIF digital input on the external device. This is the best choice for connecting to digital recording devices, such as a DAT recorder. This S/PDIF output sends the same audio as is sent to TonePort's Analog Outs* (with the exception that any audio coming into the TonePort's Monitor In jack is not routed to the S/PDIF output). The digital signal is always sent at 24-bit resolution.

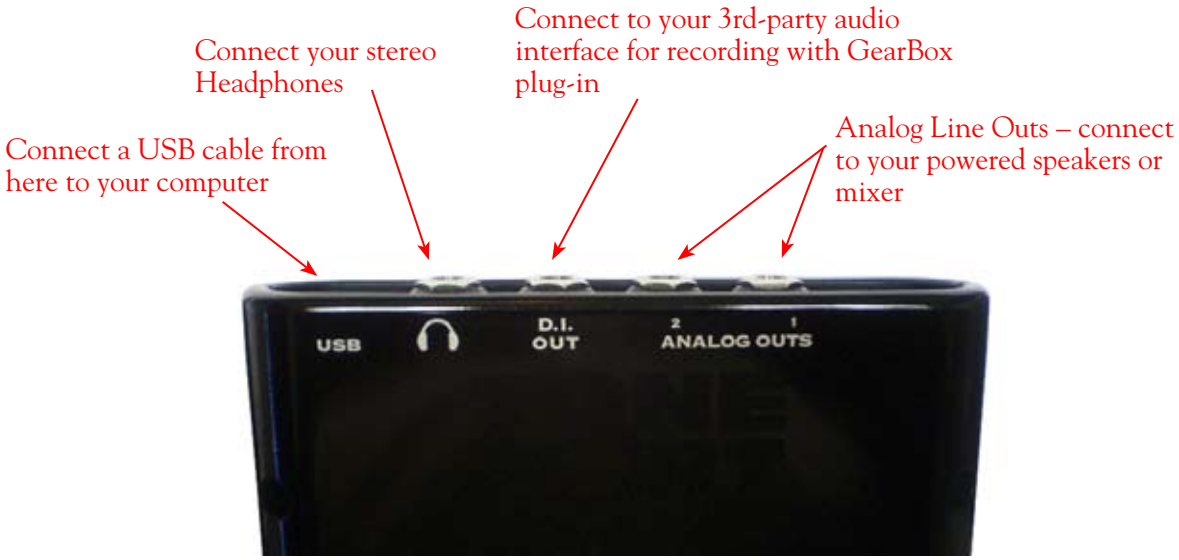
*Note that when using TonePort KB37 with GearBox, the GuitarPort Player playback audio is never routed to this S/PDIF output. This is necessary to comply with artist copyright requirements that Line 6 follows for the GuitarPort Online Tracks and artist content.

Monitor In - If you want to hear the signal from a line level source mixed with all the other audio coming from your computer, but do not want this audio recorded, then plug the source in here. Note that this is a stereo jack, so you should use a stereo 1/4-inch TRS audio cable for this connection.

Analog Outs - These Left and Right balanced jacks output all the audio from TonePort; the audio from your audio software on the computer, and anything plugged into any TonePort input. So, these are what you want to connect to your monitoring system when using TonePort as your computer's sound card. Use either 1/4-inch TS or TRS cables to connect directly to your powered speakers, mixer or power amp setup. Note that you can also use the headphone jack on the front of TonePort if you want to use headphones for monitoring.

TonePort DI

Guitar/Bass - To input your electric guitar or bass, plug it in here using a standard 1/4-inch TS instrument cable. This input also features a Pad switch; engage this switch when using a guitar/bass with high-output or active pickups, to avoid overdriving the input.



USB - This of course is where you connect the supplied USB cable to TonePort, with the other end going to your computer's USB port. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide TonePort with the full USB bandwidth. TonePort also gets its power from this USB connection, so it should not be plugged into a non-powered USB hub, or operated on the same USB controller channel with un-powered devices. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

Phones - If you want to listen to the audio from TonePort using stereo headphones, then plug them into this 1/4-inch stereo jack. This headphone jack outputs the same signal fed to the Analog Outs on the rear panel of TonePort; the audio from your audio software on the computer, as well as anything plugged into any TonePort input.

D.I Out - This connection lets you record an unprocessed signal to your track, to which you can apply the GearBox plug-in. If you use a 3rd-party audio interface, connect the D.I. to one of its inputs, and route that input to the track you're recording into.

Analog Outputs - When using TonePort DI as an audio interface for your recording application, these outputs carry the Master stereo mix from your recording project. If you 're using a 3rd-party Audio Interface, these outputs supply the ToneDirect™ magic to your interface or mixer, when using the GearBox application alongside the plug-in. See the ToneDirect™ Monitoring section for more details.

TonePort GX

Guitar/Bass - To input your electric guitar or bass, plug it in here using a standard 1/4-inch TS instrument cable.

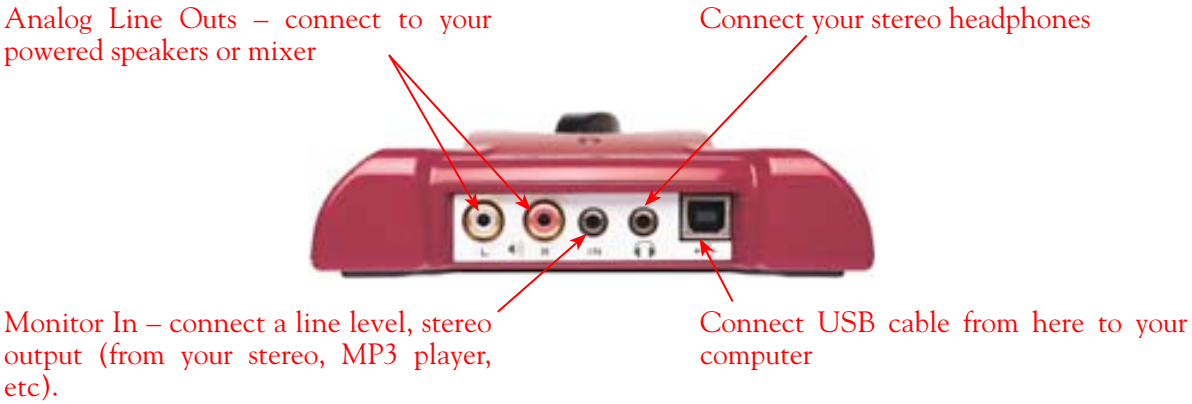
USB - This of course is where you connect the supplied USB cable to TonePort GX, with the other end going to your computer's USB port. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide TonePort GX with the full USB bandwidth. TonePort GX also gets its power from this USB connection, so it should not be plugged into a non-powered USB hub, or operated on the same USB controller channel with un-powered devices. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

Line Out/Phones - When connecting TonePort GX as an audio interface for your recording application, this output carries the Master stereo mix from your recording project. If you 're using a 3rd-party Audio Interface, these outputs supply the ToneDirect™ magic to your interface or mixer, when using the GearBox application alongside the plug-in. See the ToneDirect™ Monitoring section for more details.

If you want to listen to the audio directly from TonePort GX using stereo headphones, you can also plug them into this 1/8-inch stereo jack. This line out/headphone jack outputs the same signal fed to the Analog Outs on the rear panel of TonePort; the audio from your audio software on the computer, as well as anything plugged into any TonePort input.

GuitarPort

Instrument input - your electric guitar or bass, plug it into this input using a standard 1/4-inch TS instrument cable. This inputs the signal into GearBox where you can choose your Tone and route the processed signal both to your audio software and out the GuitarPort outputs.



Analog Line Outs - These Left and Right RCA jacks output all audio signals; the audio from your audio software on the computer, and anything plugged into any the Instrument or Monitor inputs. So, these are what you want to connect to your monitoring system when using GuitarPort as your computer's sound card. Use sheilded RCA to RCA tipped cables to connect directly to your powered speakers, mixer or power amp setup. Note that you can also use the headphone jack on GuitarPort if you want to use headphones for monitoring.

Headphones - If you want to listen to the audio using stereo headphones, then plug them into this 1/8-inch stereo jack. This Headphone jack outputs the same signal fed to the Analog Line Outs; the audio from your audio software on the computer, as well as anything plugged into the Instrument or Line inputs.

Monitor In - If you want to hear the signal from a line level source mixed with all the other audio coming from your computer, but do not want this audio recorded, then plug the source in here. Note that this is a stereo jack, so you should use a stereo 1/8-inch tipped stereo audio cable for this connection. You'll hear any audio coming into this jack via the Analog Line Outs and Phones, but it won't go to GuitarPort's Record Send 1-2.

USB - This is where you connect the supplied USB cable to GuitarPort, with the other end going to your computer's USB port. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide GuitarPort with the full USB bandwidth. GuitarPort also gets its power from this USB connection, so it should not be plugged into a non-powered USB hub, or operated on the same USB controller channel with un-powered devices. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

PODxt

Phones - Connect your stereo Headphones

Instrument Input - Connect your guitar or bass

Instrument input – Connect your electric guitar or bass here using a standard 1/4-inch TS instrument cable. PODxt itself contains the processing power that turns your naked input signal into that roaring guitar Tone, which is then fed out the Analog Line Outs, as well as fed to the Record Send 1-2 digitally to your computer across the USB connection. When you are connected via USB to your computer, you can also launch GearBox and use it to alternatively load Tones stored on your hard disc, edit them on your screen, and make adjustments for output and Record Send levels.

Phones - If you want to listen to the audio using stereo headphones, then plug them into this 1/4-inch stereo jack. This Headphone jack outputs the same signal fed to the Analog Line Outs; the audio from your audio software on the computer, as well as anything plugged into the Instrument input.

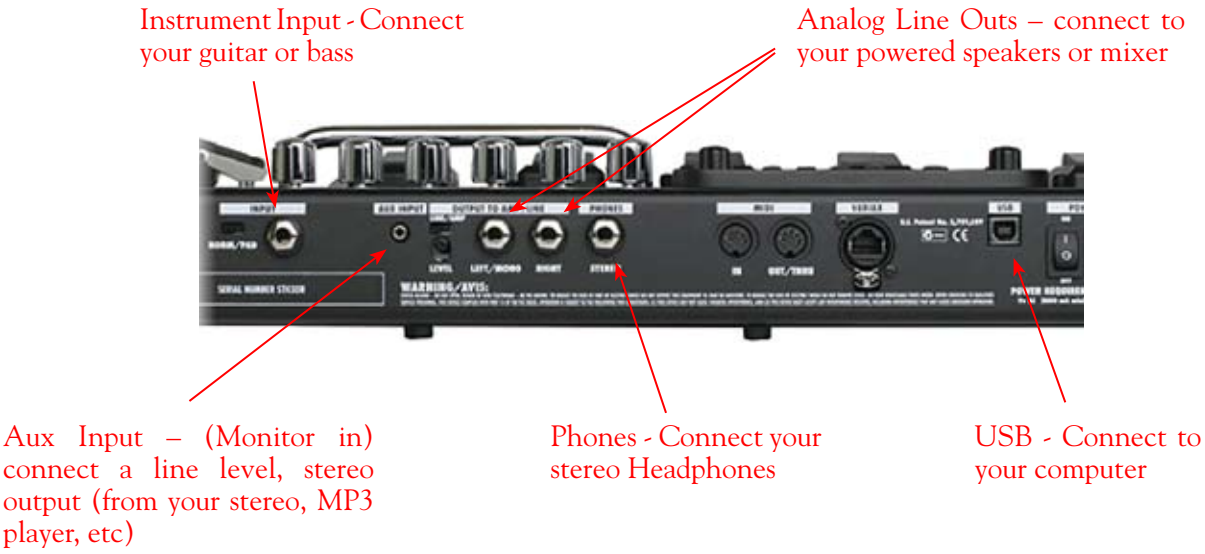
Analog Line Outs – connect to your powered speakers or mixer

USB - Connect to your computer

Analog Line Outs - These Left and Right ¼-inch jacks output all audio signals; the audio from your audio software on the computer, and anything plugged into any the Instrument input. So, these are what you want to connect to your monitoring system when using PODxt as your computer's sound card. Use shielded ¼-inch tipped cables to connect directly to your powered speakers, mixer or power amp setup. Note that you can also use the Phones jack on PODxt if you want to use headphones for monitoring.

USB - This is where you connect the supplied USB cable to PODxt, with the other end going to your computer's USB port. Of course your PODxt is capable of processing your guitar Tone all by itself, but you'll need to connect the USB cable to your computer to use it with GearBox, and to use PODxt as your sound card device. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide PODxt with the full USB bandwidth. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

PODxt Live



Instrument input – Connect your electric guitar or bass here using a standard 1/4-inch TS instrument cable. PODxt Live itself contains the processing power that turns your naked input signal into that roaring guitar Tone, which is then fed out the Analog Line Outs, as well as fed to the Record Send 1-2 digitally to your computer across the USB connection. When you are connected via USB to your computer, you can also launch GearBox and use it to alternatively load Tones stored on your hard disc, edit them on your screen, and make adjustments for output and Record Send levels.

Analog Line Outs - These Left and Right ¼-inch jacks output all audio signals; the audio from your audio software on the computer, and anything plugged into any the Instrument and Aux inputs. So, these are what you want to connect to your monitoring system when using PODxt Live as your computer's sound card. Use shielded ¼-inch tipped cables to connect directly to your powered speakers, mixer or power amp setup. Note that you can also use the Phones jack on PODxt Live if you want to use headphones for monitoring.

Aux In (Monitor In) - If you want to hear the signal from a line level source mixed with all the other audio coming from your computer, but do not want this audio recorded, then plug the source in here. Note that this is a stereo jack, so you should use a stereo 1/8-inch tipped stereo audio cable for this connection. You'll hear any audio coming into this jack via the Analog Line Outs and Phones, but it won't go to PODxt Live's Record Send 1-2.

Phones - If you want to listen to the audio using stereo headphones, then plug them into this 1/4-inch stereo jack. This Headphone jack outputs the same signal fed to the Analog Line Outs; the audio from your audio software on the computer, as well as anything plugged into the Instrument and Aux inputs.

USB - This is where you connect the supplied USB cable to PODxt Live, with the other end going to your computer's USB port. Of course your PODxt Live is capable of processing your guitar Tone all by itself, but you'll need to connect the USB cable to your computer to use it with GearBox, and to use PODxt Live as your sound card device. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide PODxt Live with the full USB bandwidth. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

PODxt PRO

Phones - Connect your stereo Headphones

Instrument Input - Connect your guitar or bass

Instrument input – Connect your electric guitar or bass here using a standard 1/4-inch TS instrument cable. PODxt Pro itself contains the processing power that turns your naked input signal into that roaring guitar Tone, which is then fed out the Analog and Digital Outs, as well as fed to the Record Send 1-2 digitally to your computer across the USB connection. When you are connected via USB to your computer, you can also launch GearBox and use it to alternatively load Tones stored on your hard disc, edit them on your screen, and make adjustments for output and Record Send levels.

Phones - If you want to listen to the audio using stereo headphones, then plug them into this 1/4-inch stereo jack. This Headphone jack outputs the same signal fed to the Analog Line Outs; the audio from your audio software on the computer, as well as anything plugged into the Instrument input.

Connect any Line-Level source you want to record to the Line Input

Unprocessed Instrument Out- When using GearBox Plug-in, connect to 3rd-party audio recording interface

USB - Connect to your computer

Analog Line Outs, Use either Unbalanced (¼ -inch) jacks or Balanced (XLR) jacks to connect to your powered speakers or mixer

Digital Input and Output – use the AES/EBU or S/PDIF type connections to connect to other digital gear that uses one of these formats

Line Input - if you want to record the signal from a line level source, such as a keyboard, your receiver, the line out from a mixing console, etc…, connect it to this input using a 1/4-inch TS audio cable.

Unprocessed Guitar Out - This connection allows you to send an unprocessed signal to your recording application, while monitoring the fully processed signal thru the main Outputs. Very handy if you're using a 3rd party recording interface with your recording application and the GearBox plug-in. For more info, go to the ToneDirect™ Monitoring section of this Guide.

Note: Your PODxt Pro can also send an unprocessed signal thru its USB connector, as explained here.

Unbalanced and Balanced Analog Line Outs - The Left and Right Unbalanced ¼-inch jacks and the Balanced XLR jacks output all audio signals; the audio from your audio software on the computer, and anything plugged into any the Instrument inputs (and effects loop, if you are using it). So, these are what you want to connect to your monitoring system when using PODxt Live as your computer's sound card. Use shielded ¼-inch tipped or XLR tipped cables to connect directly to your powered speakers, mixer or power amp setup. Note that you can also use the Phones jack on PODxt Pro if you want to use headphones for monitoring.

USB - This is where you connect the supplied USB cable to PODxt Pro, with the other end going to your computer's USB port. Of course your PODxt Pro is capable of processing your guitar Tone all by itself, but you'll need to connect the USB cable to your computer to use it with GearBox, and to use PODxt Pro as your sound card device. Note that you should always connect to a separate USB controller channel from other USB audio or MIDI interfaces to provide PODxt Pro with the full USB bandwidth. It is also recommended to connect directly into a USB port on your computer and not into a USB hub.

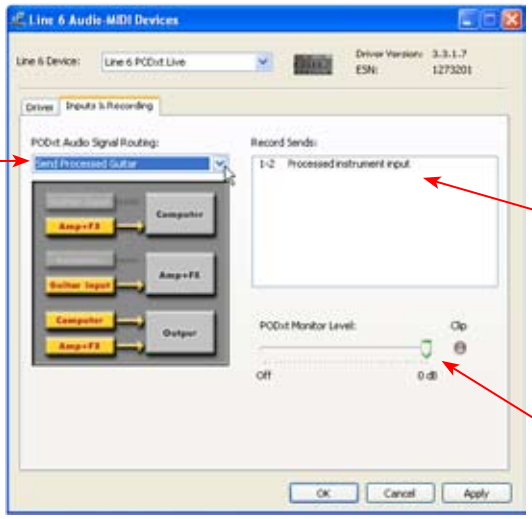
AES/EBU and S/PDIF Digital connections - To connect to another digital audio device with your PODxt Pro, use the pair of these digital jacks that matches the format of your other device (AES/EBU or S/PDIF). Connecting digitally is the best choice for routing to external digital recording devices, such as a DAT recorder. These digital outputs send the same audio as is sent to PODxt Pro's Analog Outs.* The digital signal is always sent at 24-bit resolution. All settings for configuring the PODxt Pro's digital in/out options are found on the PODxt Pro device itself by pressing the "I/O Dig Select" button on the front panel (these digital I/O options are not accessible in GearBox). For more information on using these digital connections, please see your PODxt Pro Pilot's Handbook.

PODxt - Audio Signal Routing & Re-Amping

Re-Amping is the fancy schmancy name for recording a dry, unaltered instrument signal to be processed later during mixing - this gives you the greatest flexibility to make later tone tweaks, since you don't have to commit a particular sound to the track(s). This is of course the way that plug-ins work, so it's something that all plug-ins, including GearBox Plug-in, provide. If you don't have plug-ins but do have PODxt, there's another kind of re-amping available.

PODxt, PODxt Pro* and PODxt Live provide an additional set of driver options for recording where the signal fed to Record Send 1-2 can be set to "processed" or "unprocessed" independently from what you are hearing as your monitor signal from the PODxt device. Access the PODxt Audio Signal Routing options by clicking the Advanced button in the Line 6 Audio-MIDI Devices control panel...

Select the signal to be routed to the Record Sends here.



The text in the Record Sends panel describes the signal now being carried on he Record Sends

This slider sets the level of the re-amped signal sent to PODxt for monitoring

In the PODxt Signal Routing selector you can choose one of four routing modes for the signals that run inside PODxt, and to Record Send 1-2:

- **Send Processed Guitar** - This is the normal mode of operation: PODxt-processed sound is sent to your computer via Record Send 1-2 so it can be recorded in your audio software. PODxt gets its input from the guitar plugged into its INPUT jack, and you can listen to PODxt-processed guitar sound as well as sound coming from your computer via PODxt's LEFT OUTPUT, RIGHT OUTPUT and PHONES jacks.
- **Send Clean Guitar** - This mode sends unprocessed guitar to your to Record Send 1-2, while you listen to PODxt-processed guitar and software playback coming out of your PODxt. You can use this to record an unprocessed guitar signal in your audio software for later re-amping, while hearing your PODxt-processed guitar signal without latency being added by your recording program. You can then choose USB Signal Routing modes 3 and 4 when you're ready to playback that track and re-amp it through your PODxt. You may also want to record a copy of your PODxt-processed sound from the analog outputs of your PODxt when you are making your digital recording of the clean guitar, so you have the processed version for reference when re-amping. This track is also handy for punch-ins, since you can listen to it during punch-ins to hear the processed version of the part of the previously recorded track that you want to keep.
- **Send Clean Guitar Re-Amp Playback** - This mode sends un-processed guitar to your recording software, feeds the signal from your computer into PODxt's processing, and lets you hear the PODxt-processed computer sound at PODxt's outputs. You can use this to run an unprocessed guitar track that you recorded using USB Signal Routing mode 2 into your PODxt for re-amping,

allowing you to listen to or record the PODxt-processed result via PODxt's analog outputs. You can also use this mode during initial recording, so that unprocessed guitar can be recorded to a track, and the output of that track can be sent by the recording program to PODxt at the same time. This lets you punch-in on the track while you're recording, and hear PODxt processing of the already recorded part of the track as well as the new portion that you're recording during the punch-in. Your recording software will add some latency to the guitar signal that it is monitoring back through to PODxt. You can generally get the lowest latency by reducing your buffer size in the recording software, but lower buffer settings will utilize more of your computer's processing, so you may not be able to run as many tracks or effects in your recording software when you do this. See your recording software's instructions for details.

- **Send Re-Amp Playback** - This mode is designed to receive unprocessed guitar from your recording program, and send processed guitar back to the recording program for recording. You can use this to run an unprocessed guitar track that you recorded using USB Signal Routing mode 2 into your PODxt for re-amping, so you can digitally record the PODxt-processed signal back to another track in the recording program.

Note – it is not a supported practice to "hot swap" your Line 6 device (unplug the USB cable and plug it into a different USB device) while it is in use by GearBox or any other audio software. In fact, this just isn't a good idea to do with any USB audio devices, since it can result in a loud pop, loss of sync and possibly crash or corrupt your current audio software project.

Routing audio from your Line 6 hardware to an external device

In addition to the ability to route digital audio directly within your computer, you may instead want to route your GearBox or PODxt signal into another sound card on the same or separate computer. Better yet, with all the great tones you can now create for your mics & instruments with GearBox, there is no need to limit them to the inside of a computer! You may also want to send the signal to external hardware such as an analog or tape Multitrack unit, a DAT or video tape recorder, or even to an amplifier or P.A. system for live performance. To follow are instructions for these different types of setups.

Connecting analog outputs to an external device

You can route your GearBox Tone to just about any type of external device simply by connecting the Analog Outs from the back of your GuitarPort, TonePort or PODxt directly into the external device's line level inputs. This allows you to amplify or record your GearBox signal using any external device that accepts analog line level inputs.

Connect your TonePort, GuitarPort or PODxt Analog Outs to the analog inputs on any external audio device

Routing analog outputs to another sound card

If you want to use GearBox and your Line 6 device in a computer recording setup where a sound card already exists, then you might find it useful to connect your Analog Outs into the analog inputs of the existing sound card. More information can be found in the Sound Card and Sound Issues section of this guide.

Connecting the Digital Output from TonePort UX2, UX8, KB37 or PODxt Pro to an external digital device

TonePort UX2, UX8, KB37 and PODxt Pro also include digital outputs, which allow you to connect to digital devices such as a DAT recorder, Minidisk, another sound card, or most any device that offers a S/PDIF (or AES/EBU for PODxt Pro) format digital input. Please refer to your hardware's User Guide for more information.

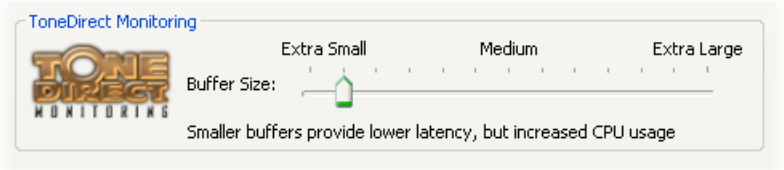
ToneDirect™ Monitoring

A unique feature of your Line 6 hardware is ToneDirect™ Monitoring, which is a separate audio path that allows you to monitor the incoming signal with the lowest possible latency, for uncompromised feel and responsiveness when recording or jamming.

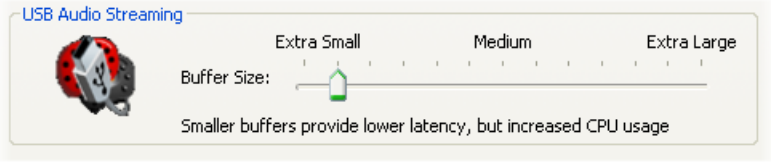
Plus, this lets you to set the audio buffer size in your recording application at a large value for efficient use of your computer, yet still enjoy extreme low latency monitoring while recording. On Windows systems, the ToneDirect™ audio path has its own buffer adjustment while on Mac, no adjustments are needed.

ToneDirect™ Monitoring buffer size slider (Windows®)

TonePort & GuitarPort devices The Line 6 ToneDirect™ Monitoring audio path has its own buffer to allow you to keep your ASIO Buffer Size at a high value, for more solid performance and more efficient performance of your ASIO software. The initial default is one tick to the right of "Extra Small" as shown. Raise this slider if you are getting any dropouts in your monitor signal.



PODxt devices utilize a USB audio buffer (rather than ToneDirect™ Monitoring) which provides an independent, direct monitor signal with its own buffer adjustment. When a PODxt/Live/Pro is selected as the Line 6 device in this dialog, the ToneDirect™ Monitoring section of the dialog is replaced by a PODxt-specific "USB Audio Streaming" buffer slider:



ToneDirect™ and your Line 6 Hardware as the preferred Audio Interface/Sound Card

If you choose your Line 6 hardware as the preferred sound card for your audio setup, you get the benefits of ToneDirect™ monitoring automatically when running the GearBox application for tone control. This is standard operation when GearBox is acting as a tone front end for recording or jamming.

PODxt/Live/Pro users: All Tone processing is performed internally on the PODxt device, saving CPU resources and providing even better feel and responsiveness for recording!

ToneDirect™ Monitoring while recording with GearBox Plug-in

ToneDirect™ is a feature of the GearBox full application, not the GearBox Plug-in, so in order for you to enjoy the feel and responsiveness provided by ToneDirect™, you'll need to run the GearBox application alongside the GearBox Plug-in. Keep in mind that these 2 applications run independently of each other, so any tone settings you make in the GearBox application will have to be matched in the Plug-in to provide the same results. You can achieve this by making your settings in the GearBox application, saving the tone to your tones folder, and then recalling that tone later when applying the GearBox Plug-in.

Using a 3rd-party Audio Interface with TonePort DI

If you use the GearBox Plug-in with a TonePort DI or a PODxt PRO, you'll be able to monitor your signal with ToneDirect by following these steps (illustrated on the graphic at the beginning of this Guide):

- Connect the signal source to the input of your Line 6 Hardware.
- Connect the unprocessed dry output of the TonePort DI / PODxt PRO to your Audio Interface. This will be the source you're running the plug-in on.
- Disable Input Monitoring in your recording application, for the track you're recording into.
- Connect the processed Analog Outs to your Audio Interface, or alternatively, to a mixer (if you don't want to connect them to the recording interface, or if your interface does not support input monitoring)
- Launch the GearBox application and monitor the recorded signal thru the Analog Outputs of your Line 6 Hardware, to get the benefits of ToneDirect™ monitoring

Using a 3rd-party Audio Interface with other Line 6 Hardware

If you have a non-Line 6 audio interface you'd like to use for computer recording/playback, you'll need to purchase a guitar/signal splitter, which will afford you the unprocessed dry output needed to feed your Audio Interface.

- Connect your recording source to the splitter input.
- Connect Output A from the splitter to your audio interface. This will be the source to run the GearBox plug-in on.
- Choose this channel as the track input in your recording application, and disable input monitoring for that track.

- Connect Output B from the splitter to your Line 6 Hardware, the outputs of which will be connected to your audio interface, or a mixer (if you don't want to connect to your audio interface, or if your interface does not support input monitoring).
- Launch the GearBox application, and monitor the GearBox processed signal thru your hardware's Line Outputs. These outputs supply the ToneDirect™ Monitoring magic.

Mac® Users: There's yet another option for you!

The Mac Core Audio driver features the ability to combine the inputs from 2 separate audio interfaces into one aggregate device (for more info on this, please refer to the Recording Setup Guide available in the Online Help page). Perform the following steps:

- Combine your Audio Interface and your Line 6 hardware into one aggregate device.
- Connect the recording source to your Line 6 hardware
- Make sure that your hardware is sending an unprocessed signal thru USB. Choose this signal as the input for the track you're recording into. This track will receive the GearBox plug-in.
- Disable Input Monitoring for the track you're recording into.
- Launch the GearBox application, and monitor the GearBox processed signal thru your hardware's Line Outputs. These outputs supply the ToneDirect™ Monitoring magic.

Using Line 6 Hardware as your Audio Interface

In order to enjoy the benefits of ToneDirect™ Monitoring, perform the following steps:

- Connect the recording source to your Line 6 hardware
- Launch the GearBox application, and monitor the GearBox processed signal thru your hardware's Line Outputs. These outputs supply the ToneDirect™ Monitoring magic.
- Route the unprocessed signal to your recording application. Choose this signal as the input for the track you're recording into. This track will receive the GearBox plug-in.
- Disable Input Monitoring for the track you're recording into.

Sound Cards & Sound Issues

One of the many unique features of your Line 6 Hardware is its ability to function as a computer sound card. You can choose to make your hardware the preferred sound card for your computer, or alternatively keep your current sound card the default device for playing system sounds, etc…, and connect your hardware to it so you can hear GearBox tone thru your computer's sound card.

Choosing your Line 6 Hardware as the Preferred Audio Device

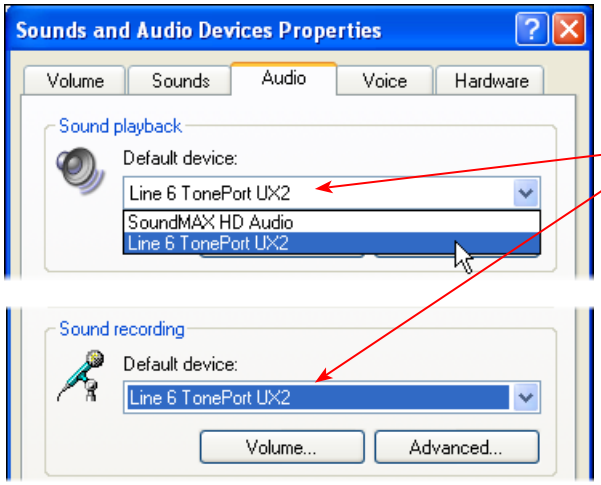
Setting up your Line 6 Hardware as the preferred Audio device means that all system sounds, as well as the audio output of your mp3 player and other audio applications will be routed thru your hardware.

Windows®

Go to your computer's Control Panel, and select Sounds and Audio Devices.

Click on the Audio Tab

All your sound devices appear here

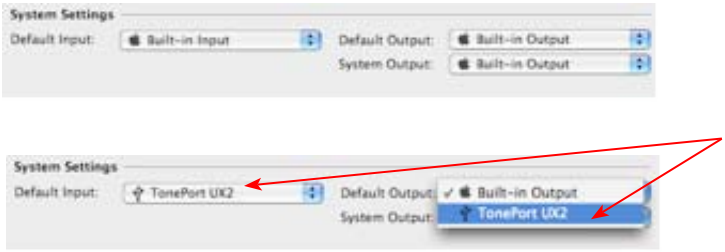


Select your Line 6 Hardware as the default audio device for **Playback and Recording**

Click **Apply** when done

Mac®

Go to your computer's System Preferences, and click on Line 6 Audio-MIDI Devices



Click on the **Audio Devices** Tab
All your sound devices appear in the drop down menus

Select your Line 6 Hardware as the default audio device for **Input and Output**

Close the window when done.

Connecting Line 6 Hardware to your Preferred Audio Device

If you want to use GearBox and your Line 6 device in a computer recording setup where a sound card already exists, then you might find it useful to connect your Analog Outs into the analog inputs of the existing sound card. This allows you to use the existing sound card with your recording application to also receive additional discrete inputs directly from other sources at the same time, if this is the preferred setup. When your Line 6 device is connected to another sound card this way, then you will want to be sure your recording software is set to use the other sound card as its input device for recording. In this configuration, since your Line 6 device is not in use by an audio application as a sound card, its Analog Out signal is what is being recorded, and therefore, levels are controlled by the GearBox Monitor level and hardware Output knob.

GuitarPort users

Connect a 1/8-inch stereo cord to the Headphone Out, or use the Stereo RCA Line outputs with an adapter.

Connect the other end to the Line Input of your sound card.

TonePort users

Connect the mono 1/4-inch Analog Line Outputs.
Or, connect a 1/4-inch stereo cord to the Headphone Out

Use an adapter if needed to connect to the Line Input of your sound card.

POD xt/Live/Pro users

Connect the mono 1/4-inch Analog Line Outputs .
Or, connect a 1/4-inch stereo cord to the Headphone Out

Use an adapter if needed to connect to the Line Input of your sound card.

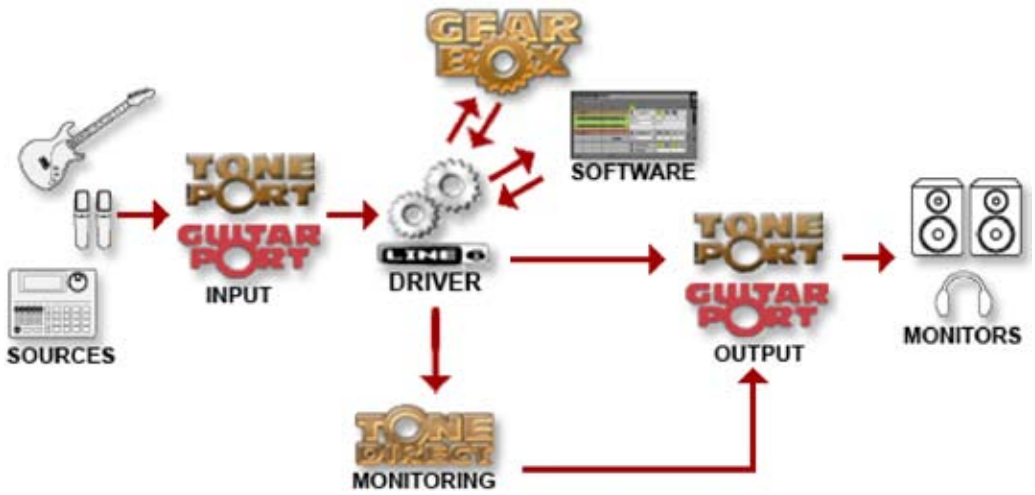
Line 6 Driver Panel & Recording

So, just how does all that huge amount of Tone get routed around between your Line 6 gear, computer and recording software you ask? All this is performed by the audio driver - a software component installed with GearBox that allows the audio to be routed to the right place. This section provides an overview of the different driver types and where you can tweak a few settings to work best with your particular computer setup.

For more instructions about setting up GearBox and your Line 6 hardware for recording with specific audio recording programs, please check out the *Recording Setup Guide* documentation found on the GearBox Online Help page.

Audio Routing

TonePort and GuitarPort - As shown in the following basic diagram, sources that are input into the Line 6 hardware are handled by the audio driver, which manages applying the GearBox Tone processing to your signal, feeding the processed audio out the Record Sends to your audio software, gathering playback audio from your audio software and then routing the audio back to the Line 6 hardware's outputs and to your monitoring system. The driver also grabs the GearBox processed signal before routing it to the Record Sends and hands this off to Tone Direct Monitoring immediately, to provide a low latency monitor signal, which is then routed to the Line 6 hardware and mixed with the rest of your audio and fed to your monitoring system.



PODxt - As shown in the following basic diagram, sources that are input into PODxt are fully processed right on the PODxt hardware and the GearBox software acts as a computer Graphical User Interface for the processing running on PODxt. The PODxt processed audio is then handled by the audio driver, which manages feeding the audio out the Record Send to your audio software, gathering playback audio from the audio software, and then routing the mixed audio back to the PODxt's outputs and to your monitoring system. PODxt also grabs its processed signal before routing it to the Record Sends its internal Monitoring system immediately, to provide a low latency monitor signal, and then mixes it with the rest of your audio to your monitoring system.

The Line 6 Audio-MIDI Device Control Panel

Since your Line 6 device includes our high-performance audio driver, it can act as a USB sound card for just about any audio software that might be installed on your computer. This is the place where you can access the audio driver settings for your connected device to see and configure things such as the current Sample Rate, Bit Depth, Buffer settings, Record Sends, etc. One thing to note here is that this dialog offers controls specifically for your Line 6 hardware. The GearBox software is independent of these settings, however, you'll see information regarding your Record Sends here which may change depending on whether GearBox is currently running or not. For TonePort and GuitarPort devices, you can think of the GearBox software like a giant rack of gear – if it is not running and configured to use your TonePort/GuitarPort hardware, your guitar signal will still be heard, but will be "naked", without all those lovely amp & effects sounds. For PODxt devices, since your Tone is always running on the PODxt itself, you'll hear whatever your PODxt's Tone and audio routing settings are set to deliver, and GearBox can be running or not to control which Tones you want to hear. There, aren't you feeling smarter already?

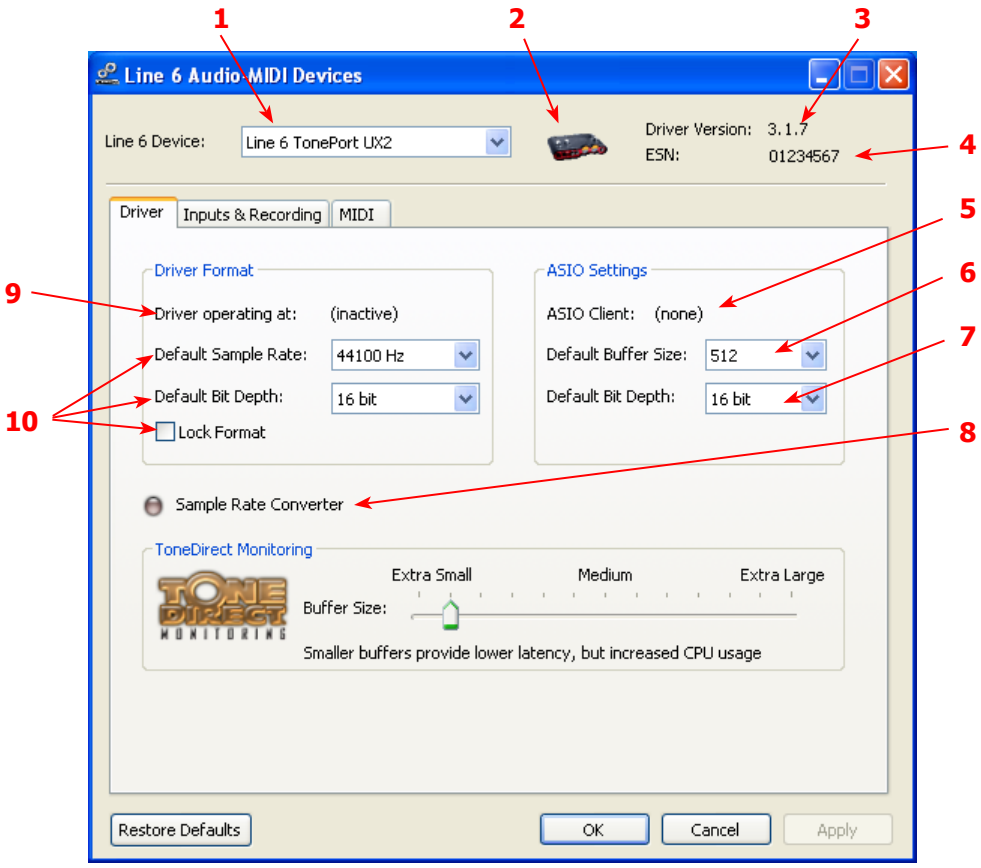
The options in the Line 6 Audio-MIDI Device dialog are slightly different if you are on a Windows® versus a Mac® system, and also slightly different depending on which Line 6 hardware you are using. Just check out the descriptions that match your setup in the following sections…

Windows®

You can launch the Line 6 Audio-MIDI Devices dialog from within the Windows® Control Panel (*Start button* > *Settings* > *Control Panel*), or from the GearBox *Help* > *Hardware & Driver Settings*.

TonePort & GuitarPort - This example shows TonePort UX2 as the selected device, with the GearBox software running. You'll see some differences with a PODxt device selected, which are noted in the following diagram - click on a number to go to its description. If you have the ***TonePort UX8,*** you'll have even more options, so be sure to also read up on the UX8 specifics...

Driver Tab



1 – Line 6 Device selector: Allows selection of any supported Line 6 USB audio device that is connected. Note that if you have more than one supported device connected, each will be selectable in this list, regardless if it is in use by the GearBox application or not. If your device is not connected and powered on, it will not appear in this list.

2 – Selected Device Icon: An icon for the selected Line 6 Device appears here.

3 – Driver version: Displays the current device's installed driver version number.

4 – ESN: Displays the current device's unique Electronic Serial Number.

5 – ASIO Client indicator: If you are running audio software that is using this Line 6 device as its ASIO sound card, the name of the software will appear here. If not in use by an ASIO software, "none" is displayed here as shown.

6 – Buffer Size: The ASIO buffer size in use. Note this field is only active when in use by an ASIO application. As your audio software documentation will likely tell you, the ASIO Buffer Size will affect the "responsiveness" and "latency" of the audio. The lower the setting, the faster the response, but with the trade-off of higher processor usage and the risk of audio dropouts. Raise the value if you are getting inconsistent playback or recording in the audio software. Basically, 512 is generally a good average setting.*

*Note that TonePort and GuitarPort devices also offer ToneDirect™ Monitoring, which is a separate audio path with its own Buffer setting. This allows you to keep the above ASIO Buffer Size at a "safer", higher value, yet still benefit from low latency monitoring of your input signal while recording. Similarly, PODxt devices offer a USB audio buffer which provides an independent, direct monitor signal with its own buffer adjustment as well. More info on ToneDirect monitoring can be found in this section.

7 – Bit Depth: The ASIO bit depth in use. Note this field is only active when in use by an ASIO application. It is best to use the highest bit rate your ASIO software will support to ensure high quality audio.

8 – Sample Rate Converter Active indicator:

TonePorts support 44.1 and 48 kHz sample rates natively. Some TonePorts also support 88 and 96 kHz sample rates by way of an internal sample rate converter. This indicator lights up to show you when this converter is active, which can be any time your ASIO software is requesting a different sample rate than what your device "natively" supports. TonePort UX8 supports 44.1, 48, 88.2 and 96 kHz sample rates natively, meaning that these sample rates are not converted.

9 – Driver Operation indicator:

TonePort & GuitarPort devices - Displays what sample and bit rate the current device is operating at (or with no text if not in use).

PODxt devices do not utilize this feature and therefore no text will appear here when a PODxt is the selected device.

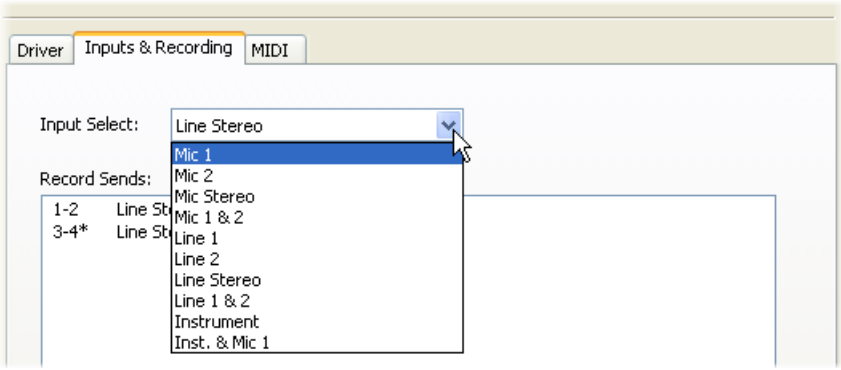
10 – Lock Driver Format: When checked, this forces the Line 6 audio driver to operate at the Sample and Bit rate settings entered in the two fields below (as opposed to following the sample rate requested by a host audio application).

Note – This checkbox will remain grayed-out while the current Line 6 device is in use by the GearBox application and/or any 3rd party audio application. To access the Force Driver Format feature, you will need to exit GearBox as well as any audio software that might be using the currently selected Line 6 device as its audio device. This checkbox will then be selectable.

Inputs & Recording Tab

Input Source Select: This is a mirrored control for the Source Select within the GearBox application where it allows the user to select which physical input is used on the device. Note that this control is ONLY selectable when the GearBox software is not in use by the current device. When GearBox is in use, it remains grayed out, but displays the current Source that is selected within GearBox.

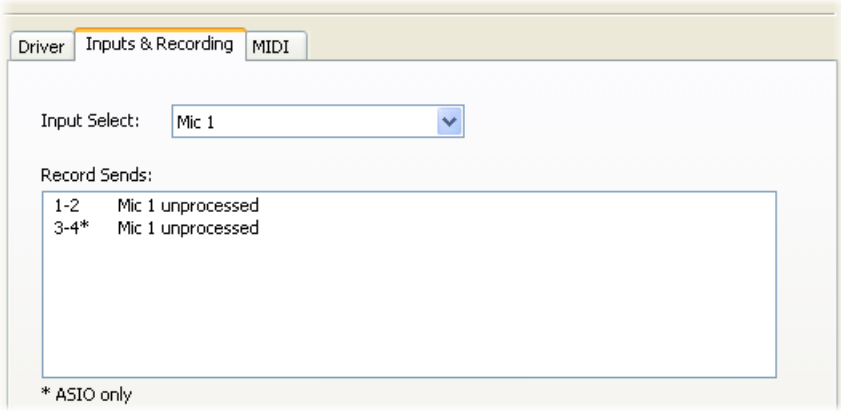
When Gearbox is not in use by the selected Line 6 device, this Input Source Select, like the Source Select in the GearBox application, offers a list of input options.



GuitarPort and PODxt devices are always "fixed" to only route their "instrument" 1 /4 input signal into GearBox. When a GuitarPort or PODxt is the selected device, this Input Source Select list offers only "Instrument" as the source.

TonePort UX8 has a larger set of options - see the next section for its Inputs & Recording tab.

Device Sends Info box: One line for each GearBox Record Send appears here along with a description for exactly what signal each Send is carrying.



TonePort devices will show two Sends (Record 1-2 and Record 3-4)

- Single Tone Source (Mono/Stereo): When the GearBox application is not running, Record 1-2 and 3-4 both carry the unprocessed signal. When running GearBox, Record 1-2 will carry the fully GearBox-processed signal. For Record 3-4, you can choose between a signal with no post-effects, and a fully unprocessed signal.
- Dual-Tone Source: If you've selected one of the dual input configurations from the input menu, Record 3-4 will always carry the signal from the second audio source. When GearBox is running, these sends will carry the Tone 2 signal of a Dual-Tone configuration. See the TonePort Dual-Tone Operation section for more about this.

Note: TonePort DI and GX can only run in Single-Tone configuration.

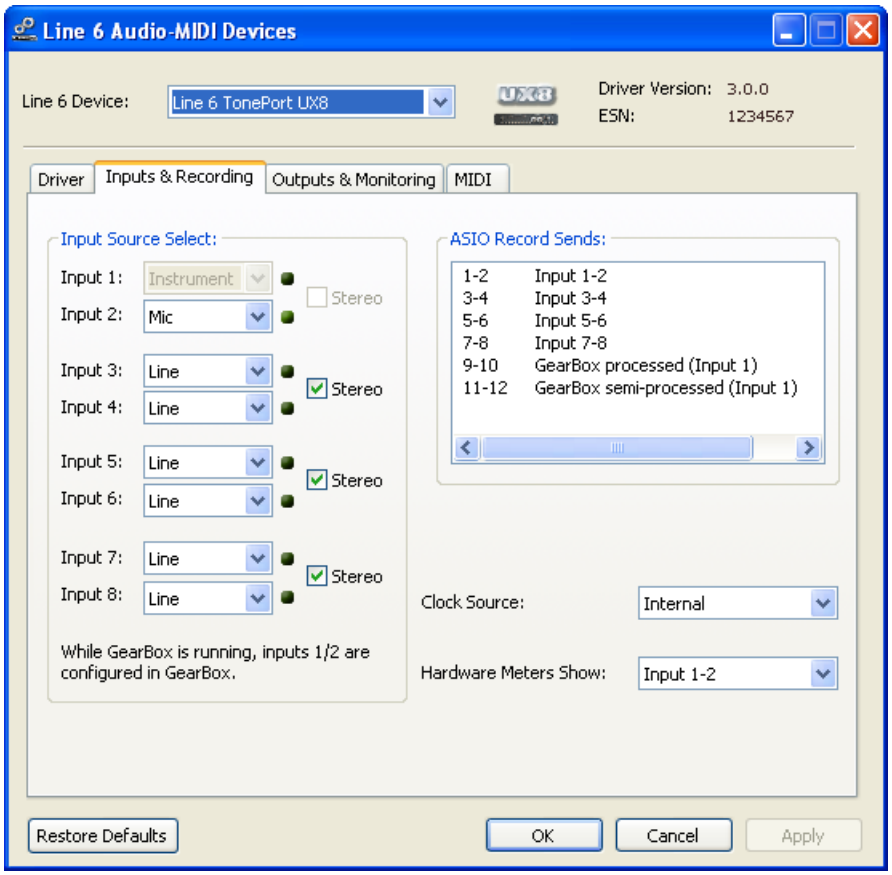
GuitarPort will show two Sends (Record 1-2 and Record 3-4). When the GearBox application is not running, Record 1-2 and 3-4 both carry the unprocessed signal from GuitarPort's input. When running GearBox, Record 1-2 will carry the fully GearBox –processed signal, and for Record 3-4 you'll have a choice between routing a signal with no post-effects, or a fully unprocessed signal.

*If using TonePort or GuitarPort with an audio recording software that is configured to access TonePort via its WDM or DirectSound drivers, then only one Send will be available in the recording software (Send 1-2). You must access TonePort via its ASIO driver on Windows to utilize the additional Send 3-4.

PODxt will show only one Record Send (Record 1-2). The type of signal that is routed to the Record

Send 1-2 is determined by the PODxt Signal Routing option within the Audio Signal Routing dialog (accessed by the **Advanced** button within the **Line 6 Audio-MIDI Devices dialog**). Note that this Audio Signal Routing determines this signal routing regardless if GearBox is running or not for PODxt devices. (See the PODxt Audio Signal Routing section for more about this dialog).

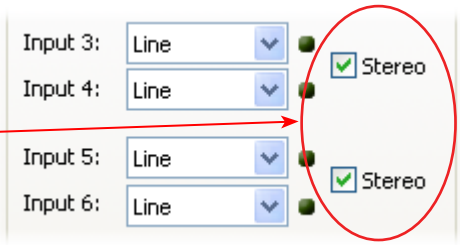
Inputs & Recording Tab (TonePort UX8 only)



The Inputs & Recording tab lets you select specific inputs for recording. Input source options are as follows:

Input 1: Instrument 1 or XLR 1 or Line 1 or S/PDIF (L)
Input 2: Instrument 2 or XLR 2 or Line 2 or S/PDIF (R)
Input 3: XLR 3 or Line 3
Input 4: XLR 4 or Line 4
Input 5: XLR 5 or Line 5
Input 6: XLR 6 or Line 6
Input 7: XLR 7 or Line 7
Input 8: XLR 8 or Line 8

You can also link inputs into stereo pairs. This affects hardware monitoring controls in the Outputs & Monitoring tab (see below).

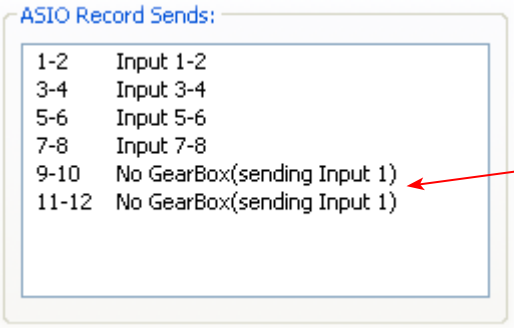


Using Inputs 1 & 2 with the GearBox standalone application

The GearBox standalone application works with the TonePort UX8 driver to provide ultra-low latency via ToneDirect™ monitoring for Inputs 1 & 2 of the UX8, which includes two high-Z Instrument inputs, two XLR inputs, two Line level inputs and stereo S/PDIF input. GearBox's ToneDirect Monitoring is ideally suited for recording guitar and bass with amp and effects processing, providing the instantaneous feel necessary for competent performance while tracking.

ASIO Record Sends

This box displays the ASIO names of the UX8's input sources as they appear in recording applications utilizing the UX8's audio drivers.

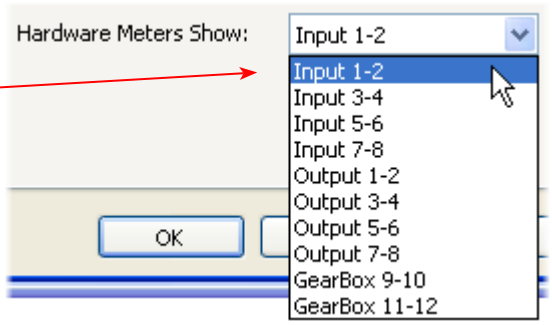


Sends 9-10 and 11-12 represent processed and semi-processed signals respectively, from the GearBox standalone application. If GearBox is not running, Sends 9-10 and 11-12 carry the signal from Input 1.

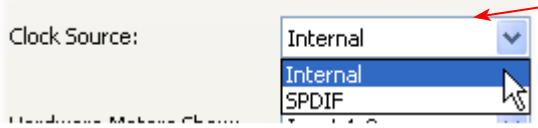
See GearBox Standalone Application for details on using the GearBox sends with the TonePort UX8.

Hardware Meters Show

Use this menu to select the input and output levels you want the UX8's hardware meters to display.



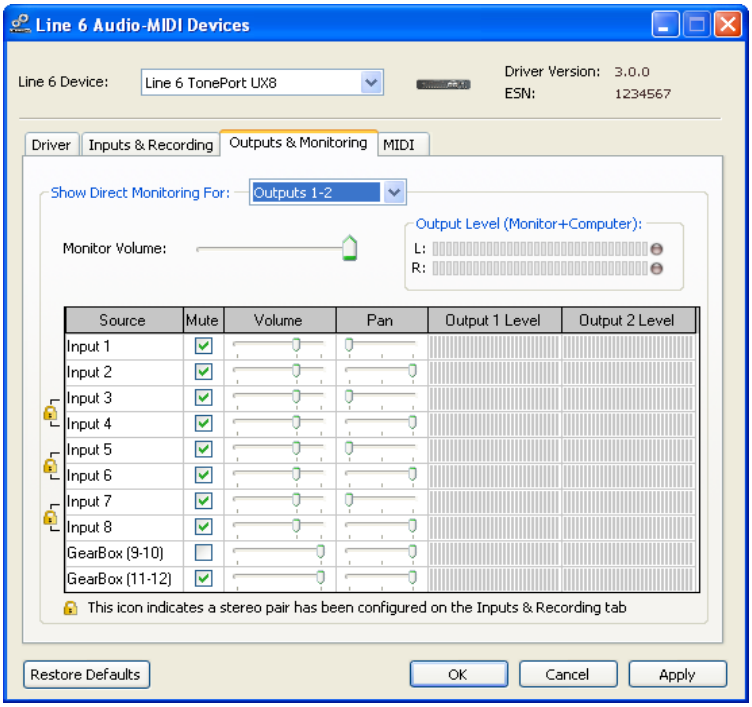
Clock Source



Set your preferred TonePort UX8 clock source with this menu. Select SPDIF to sync the UX8 to S/PDIF clock source from another device's digital output.

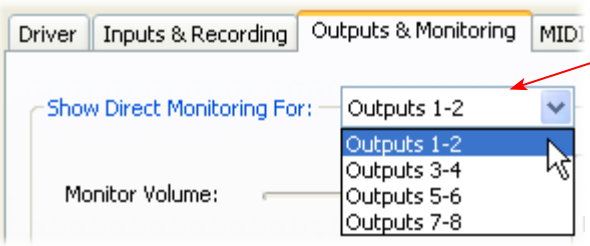
Outputs & Monitoring Tab (TonePort UX8 Only)

Important: Note that the Outputs & Monitoring tab provides control over monitoring levels, specifically, what you hear coming out of the UX8. These controls do not affect Output or Send levels, the audio that streams into your recording software. In other words, volume and pan levels here are purely analog, intended for monitoring live input levels (from instruments, mics, etc) and computer output levels, in order to facilitate the recording process.



The Outputs & Monitoring tab provides control over hardware monitoring settings, including input source volume, pan and mute states. You can specify different mix settings for each pair of UX8 outputs if you like.

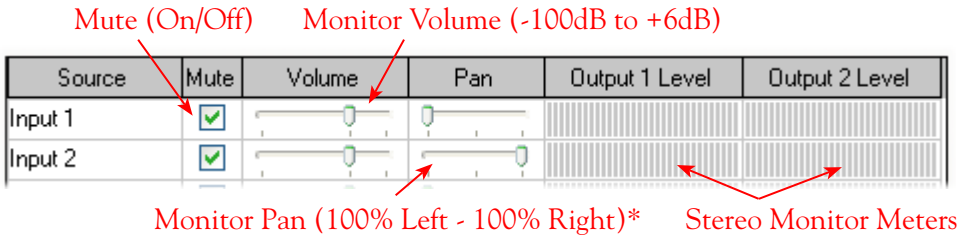
By default, the only sounds that come out of the UX8 are the computer's output and GearBox 9-10 signal (fully processed), all through Main Outs 1-2. You can directly monitor other UX8 inputs by unmuting the corresponding input source in this tab. The UX8 provides monitoring through the hardware with zero latency, which is ideal for tracking with multiple sources simultaneously.



Use the drop-down menu at the top to select the output pair for which you want to mix. Each output pair can have different mix settings.

Mix Controls

Inputs 1 - 8 offer the following controls:

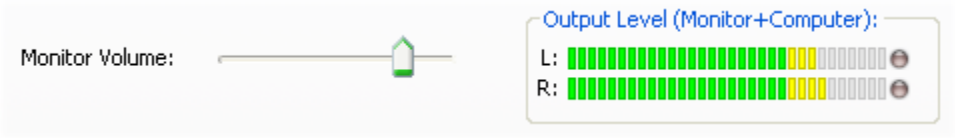


* -3dB panning law is applied to the pan control to maintain a constant monitoring level across the panorama.

Mix Controls for Inputs 9 - 12:

GearBox monitoring controls behave identically to Inputs 1- 8, with the exception of the Volume Level. GearBox Sends provide a max monitoring level of 0 dB, whereas the other inputs max at +6 dB, in order to match the 0 dB maximum monitoring level provided by the GearBox standalone application.

Main Monitor Volume



This slider controls the overall monitoring volume for the current output pair. What you hear is displayed in the adjacent level meter and includes the combination of input sources and computer-generated signals, such as those assigned to the current output from within your recording software. Note that computer-generated signals are unaffected by the volume slider. The level meter's clip LED graphics light up when the signal reaches 0 dB.

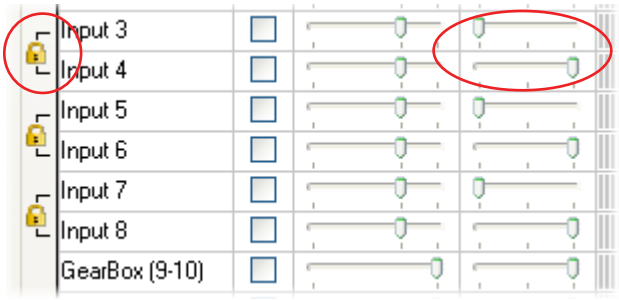
Main Mix vs. Talent Mix

The UX8's two front panel headphone outputs mirror Outs 1-2 and 3-4 respectively. You can use the monitor controls, for example, to create a "main mix (1-2)" that captures the overall image of the recording project, while a separate "talent mix (3-4)" can be provided for the musician who is currently adding a new part, and may need a click track and an ample level of themselves above the rest of the mix. Additional output pairs 5-6 and 7-8 are available for headphone mixers or sending to a mixer, other monitors, etc.

Stereo Pairs

When the "Stereo" checkbox is active in the Inputs & Recording tab for a pair of Inputs, the representative Inputs in the Ouputs and Monitoring tab will display them as "locked" as a stereo pair.

The lock icon represents two sources linked as a stereo pair.



The Pan sliders for a "locked" stereo pair are automatically set to 100% Left and Right.

Using tool tips

You can obtain precise value readings for output levels, volume sliders and pan sliders. Do this by hovering the mouse cursor over the meter or slider you wish to read.

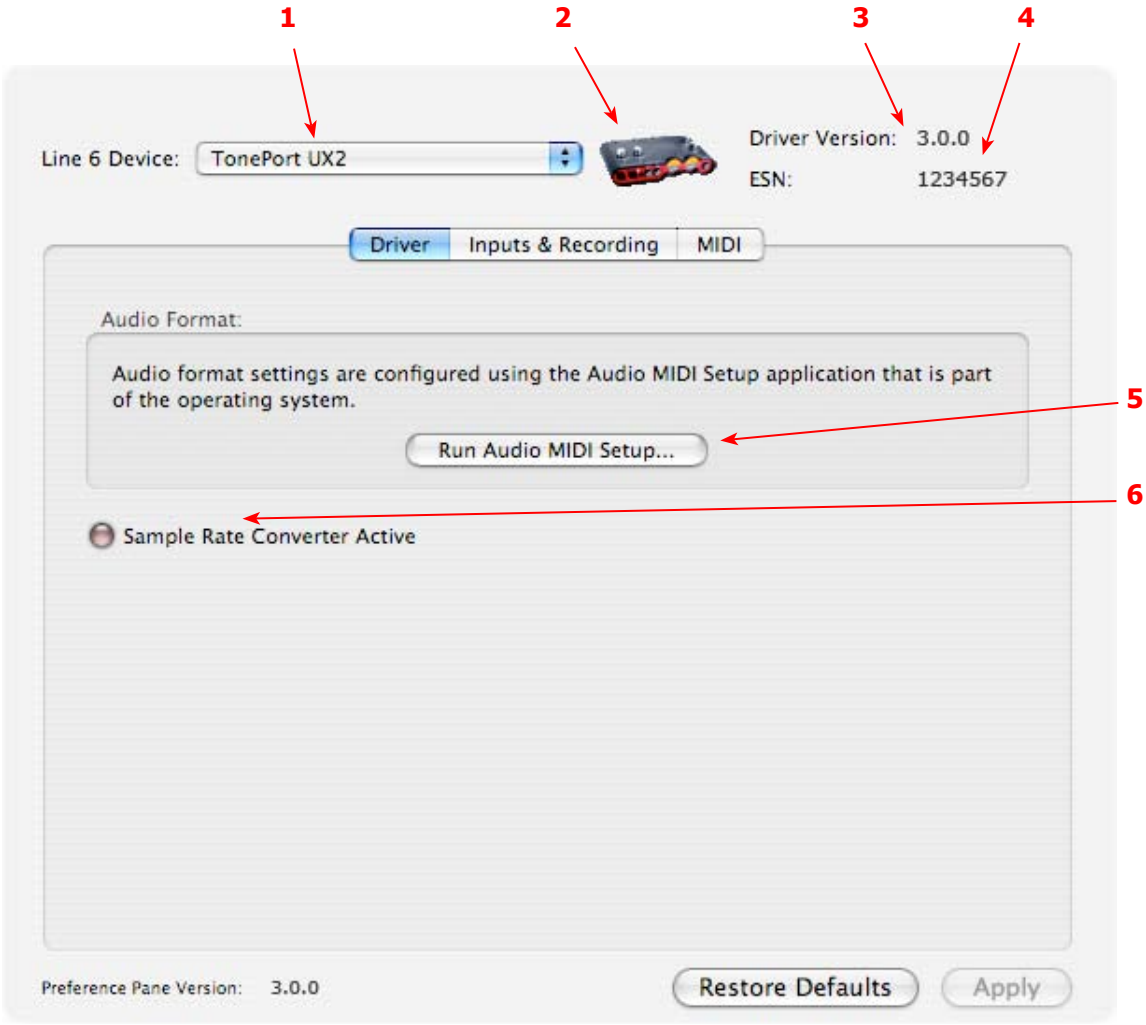
Mac®

Line 6 Audio-MIDI Settings - Driver Tab

You can launch the Line 6 Audio-MIDI Devices dialog from within the Mac® System Preferences, or from the GearBox *Preferences* > *Hardware* tab. On Mac® systems, all Line 6 hardware utilizes the Mac® OS X® Core Audio driver format, which means that most of your Line 6 device settings will be in the OS X® Audio-MIDI Setup dialog. You can get to this dialog from within the Line 6 Audio-MIDI Devices dialog (or, from the Finder by going to *Applications* > *Utilities* > *Audio-MIDI Setup*).

TonePort & GuitarPort – The following example shows TonePort UX2 as the selected device, with the GearBox software running. If you have the TonePort UX8, you'll have even more options, so be sure to also read up on the UX8 specifics...

PODxt - You'll see some differences with a PODxt device selected – which are noted in the following descriptions…



1 – Line 6 Device selector: Allows selection of any supported Line 6 USB audio device that is connected. Note that if you have more than one supported device connected, each will be selectable in this list, regardless if it is in use by the GearBox application or not. If your device is not connected and powered on, it will not appear in this list.

2 – Selected Device Icon: An icon for the selected Line 6 Device appears here.

3 – Driver version: Displays the current device's installed driver version number.

4 - ESN: Displays the current device's unique Electronic Serial Number.

5 – Run Audio-MIDI Setup button: On Mac® systems, Core Audio sound card driver settings are configured in the OS X® Audio-MIDI Settings utility. This button launches this dialog for you (see following OS X Audio-MIDI Settings Dialog section).

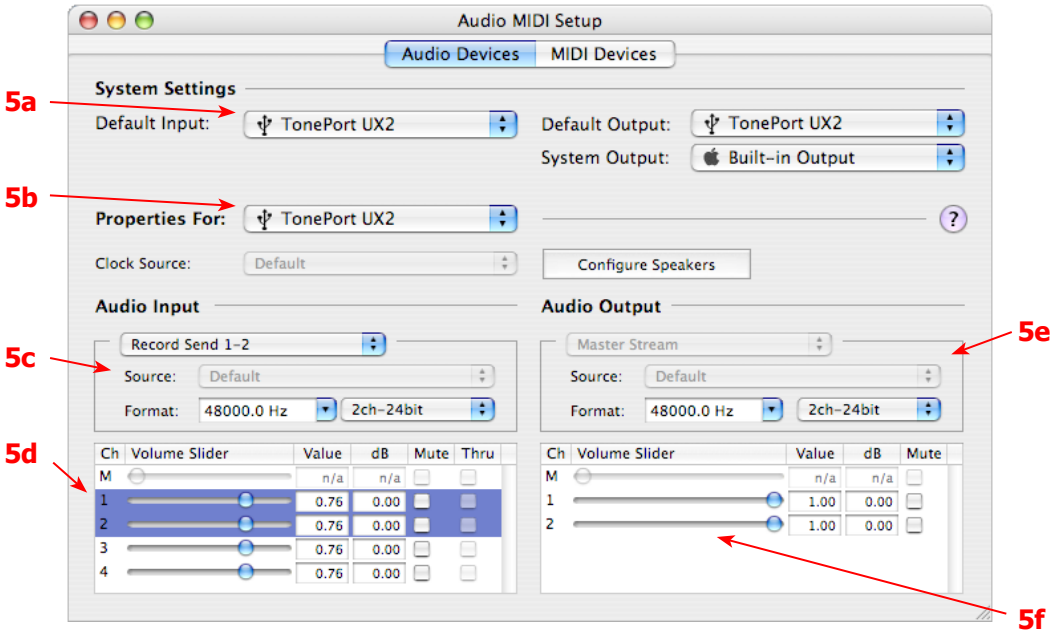
6 – Sample Rate Converter Active indicator: TonePorts support 44.1 and 48 kHz sample rates natively. Some TonePorts also support 88 and 96 kHz sample rates by way of an internal sample rate converter. This indicator lights up to show you when this converter is active, which can be any time your audio software is requesting a different sample rate you're your device "natively" supports or is "fixed" at. Also see the Force Driver Format checkbox option. TonePort UX8 supports 44.1, 48, 88.2 and 96 kHz sample rates natively, meaning that these sample rates are not converted. See the description for the

Mac Audio-MIDI Setup dialog for more about Sample Rates.

Note that TonePort **ToneDirect™ Monitoring**, which is a separate audio path than what the Mac® Core Audio system routes to your audio software. ToneDirect Monitoring allows your Gearbox processed monitor signal to function with very low latency. There are no adjustments necessary for these monitoring systems. More information on ToneDirect can be found in the next section.

Mac OS X® Audio-MIDI Settings Dialog

Note: For TonePort UX8, please see the following UX8 Audio-MIDI Settings section



5a – System Settings:

- The **Default Input** and **Default Output** options allow you to choose the sound card you want your audio applications to use by default. If you want this to be your Line 6 device, select it here.
- The **System Output** option allows you to choose which sound card the Mac System Settings are played through. You may *NOT* want to choose this to be your Line 6 device, since it can be rather annoying to hear those dings, beeps or frogs croaking at blaring volumes in your headphones or monitors when working in your audio application! Even better, you can turn these system settings off completely in the *System Preferences* > *Sounds* dialog.

5b – Properties For: Choose your Line 6 device here to allow the Audio Input and Audio Output options display its settings.

5c – Audio Input:

- In the top selector, you will be able to choose your Record Send for your Line 6 device to configure its Format options below. ***TonePort devices*** will offer Record Send 1-2 and Record Send 3-4 here.

TonePort UX8 will show several Sends and more options - please see next section. ***GuitarPort and PODxt devices*** will show their Record Send 1-2 here as the only option.

- The **Format** selectors show you the Sample Rate* and Bit Depth that the Line 6 device will is operating at for recording. The Bit Depth for all Line 6 devices is fixed at 24 bit.

*It is recommended that you do not use the Sample Rate selector in the Mac Audio-MIDI Setup dialog to set your sample rate when your recording software is running. Typically, your recording software will offer a Sample Rate option within its own "Preferences" or "Audio Setup" settings. It is best to configure the Sample Rate within the recording software, and you will see the device's sample rate switch automatically to match it.

5d – Volume sliders (audio input):

Sliders 1 and 2 will adjust the level of the Record Send selected above*.

*It is recommended that you use ONLY the GearBox Record Send knob instead of using these sliders here to set your Record Send Levels for Line 6 devices. Adjusting the sliders in this AMS dialog may result in unexpected levels if adjusted also in GearBox.

5e – Audio Output:

- The **Format** selectors show you the Sample Rate* and Bit Depth that the Line 6 device will is operating at for playback. The Bit Depth for all Line 6 devices is fixed at 24 bit.

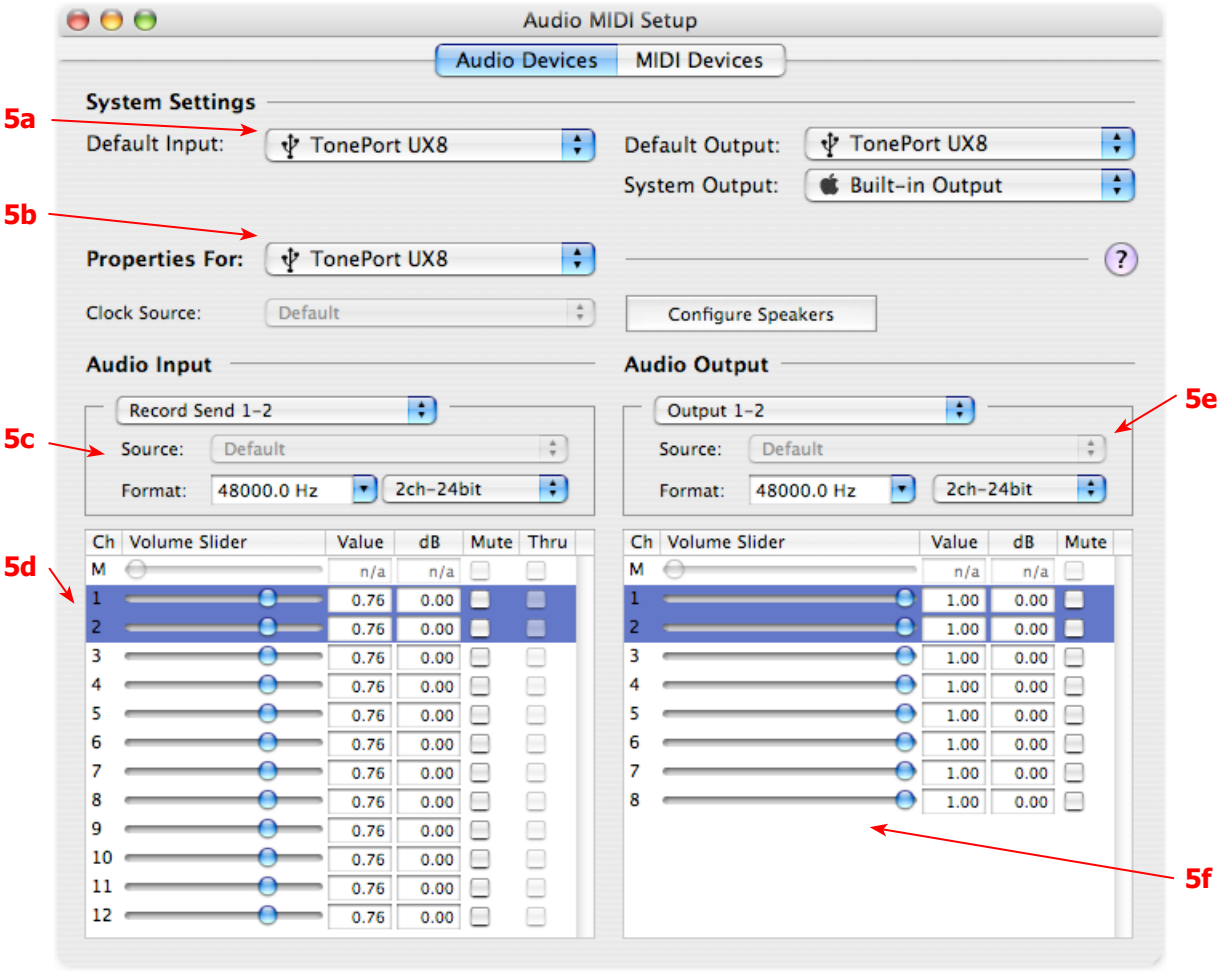
*It is recommended that you do not use the Sample Rate selector in the Mac Audio-MIDI Setup dialog to set your sample rate when your recording software is running. Typically, your recording software will offer a Sample Rate option within its own "Preferences" or "Audio Setup" settings. It is best to configure the Sample Rate within the recording software, and you will see the device's sample rate switch automatically to match it.

5f – Volume sliders (audio output):

Sliders 1 and 2 will adjust the playback level coming from your Line 6 device*.

*It is recommended that you use the GearBox Out To Monitor controls (or the knobs on your Line 6 hardware) instead of using these sliders here since you may otherwise end up with two controls affecting your playback volume, which can get rather confusing.

Mac OS X® Audio-MIDI Settings Dialog (TonePort UX8 Only)



5a – System Settings:

- The **Default Input** and **Default Output** options allow you to choose the sound card you want your audio applications to use by default. If you want this to be your Line 6 device, select your UX8 here.
- The **System Output** option allows you to choose which sound card the Mac System Settings are played through. You may *NOT* want to choose this to be your Line 6 device, since it can be rather annoying to hear those dings, beeps or frogs croaking at blaring volumes in your headphones or monitors when working in your audio application! Even better, you can turn these system settings off completely in the *System Preferences* > *Sounds* dialog.

5b – Properties For: Choose your TonePort UX8 here to allow the Audio Input and Audio Output options display its settings.

5c – Audio Input:

- In the top selector, you will be able to choose your Record Send for the TonePort UX8 to configure its Format options below.
- The **Format** selectors show you the Sample Rate* and Bit Depth that the Line 6 device will is operating at for recording. The Bit Depth is fixed at 24 bit.

*It is recommended that you do not use the Sample Rate selector in the Mac Audio-MIDI Setup dialog to set your sample rate when your recording software is running. Typically, your recording software will offer a Sample Rate option within its own "Preferences" or "Audio Setup" settings. It is best to configure the Sample Rate within the recording software, and you will see the device's sample rate switch automatically to match it.

5d – Volume sliders (audio input):

These sliders 1 - 12 will adjust the level of the Record Send selected above*.

*It is recommended that you use ONLY the GearBox Record Send knob instead of using these sliders here to set your Record Send Levels for Line 6 devices. Adjusting the sliders in this AMS dialog may result in unexpected levels if adjusted also in GearBox.

5e – Audio Output:

- The **Format** selectors show you the Sample Rate* and Bit Depth that the TonePort UX8 is operating at for playback. The Bit Depth for all Line 6 devices is fixed at 24 bit.

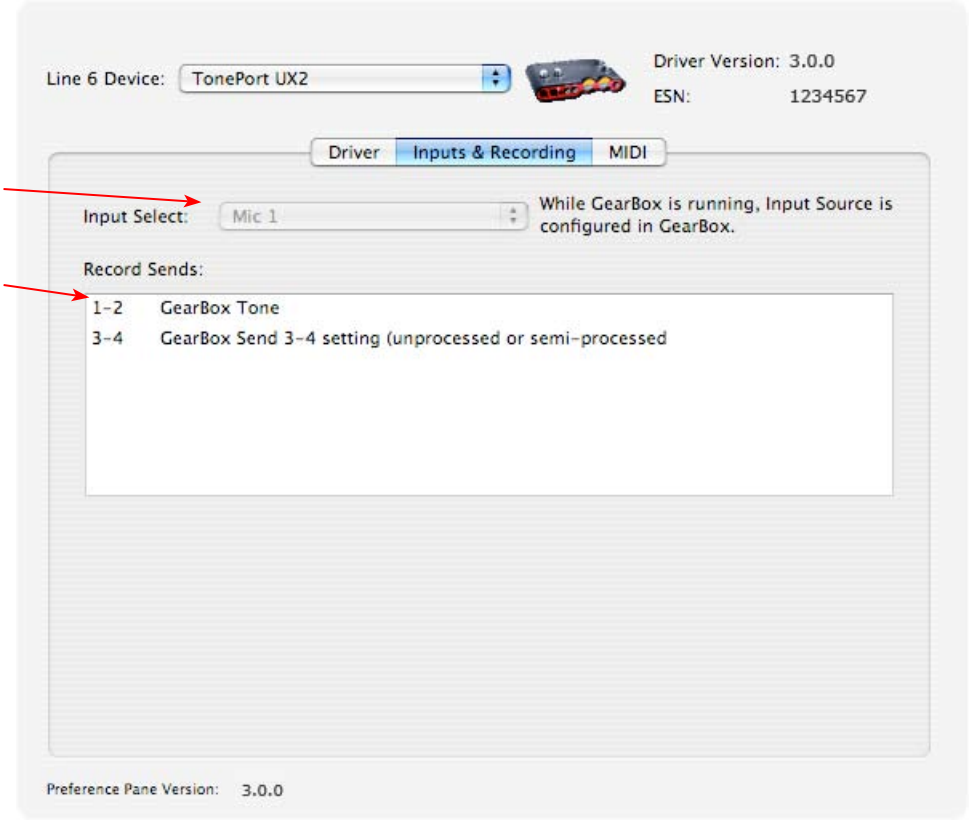
*It is recommended that you do not use the Sample Rate selector in the Mac Audio-MIDI Setup dialog to set your sample rate when your recording software is running. Typically, your recording software will offer a Sample Rate option within its own "Preferences" or "Audio Setup" settings. It is best to configure the Sample Rate within the recording software, and you will see the device's sample rate switch automatically to match it.

5f – Volume sliders (audio output):

Sliders 1 - 8 will adjust the playback level coming from your Line 6 device*.

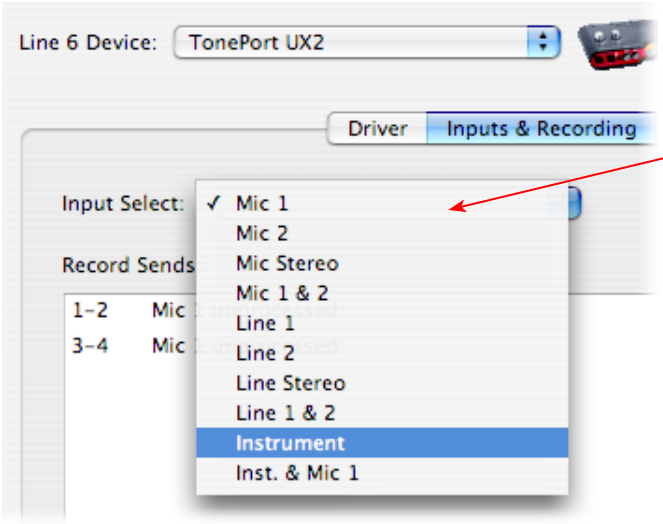
*It is recommended that you use the GearBox Out To Monitor controls (or the knobs on your Line 6 hardware) instead of using these sliders here since you may otherwise end up with two controls affecting your playback volume, which can get rather confusing.

Line 6 Audio MIDI Settings Dialog - Inputs & Recording Tab



1 – Input Source Select: This is a mirrored control for the Source Select within the GearBox application where it allows you to select which physical input is used on the device. Note that this control is ONLY selectable when the GearBox software is not in use by the current device. When GearBox is in use, this selector remains grayed out, but displays the current Source that is selected within GearBox.

When GearBox is not launched, this Input Source Select, like the Source Select in the GearBox application, offers a list of input options. The options will differ depending on the Line 6 device. TonePort UX1/UX2 display the following:

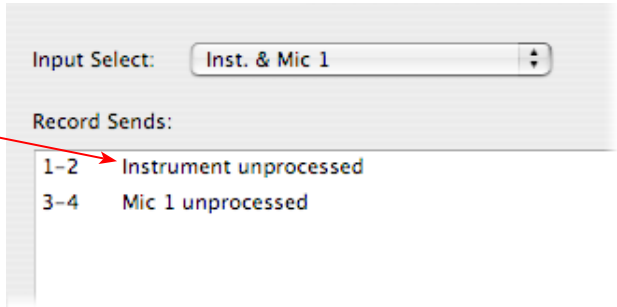


When GearBox is not in use, the Input Source Select menu is available. As shown here, TonePort devices offer several input Sources to choose from. The selected Source is what gets routed to the Device Sends.

GuitarPort and PODxt devices are always "fixed" to only route their "instrument" 1 /4 input signal into GearBox. When a GuitarPort or PODxt is the selected device, this Input Source Select list offers only "Instrument" as the source.

2 – Device Sends info box: One line for each GearBox Record Send appears here along with a description for exactly what signal each Send is carrying (see the description above for item #7).

The Device Sends Description then shows the input Source, and informs you if that signal is "processed" or not. Since GearBox is not running, the signal is unprocessed.



TonePort UX1/UX2 will show two Sends (Record 1-2 and Record 3-4)

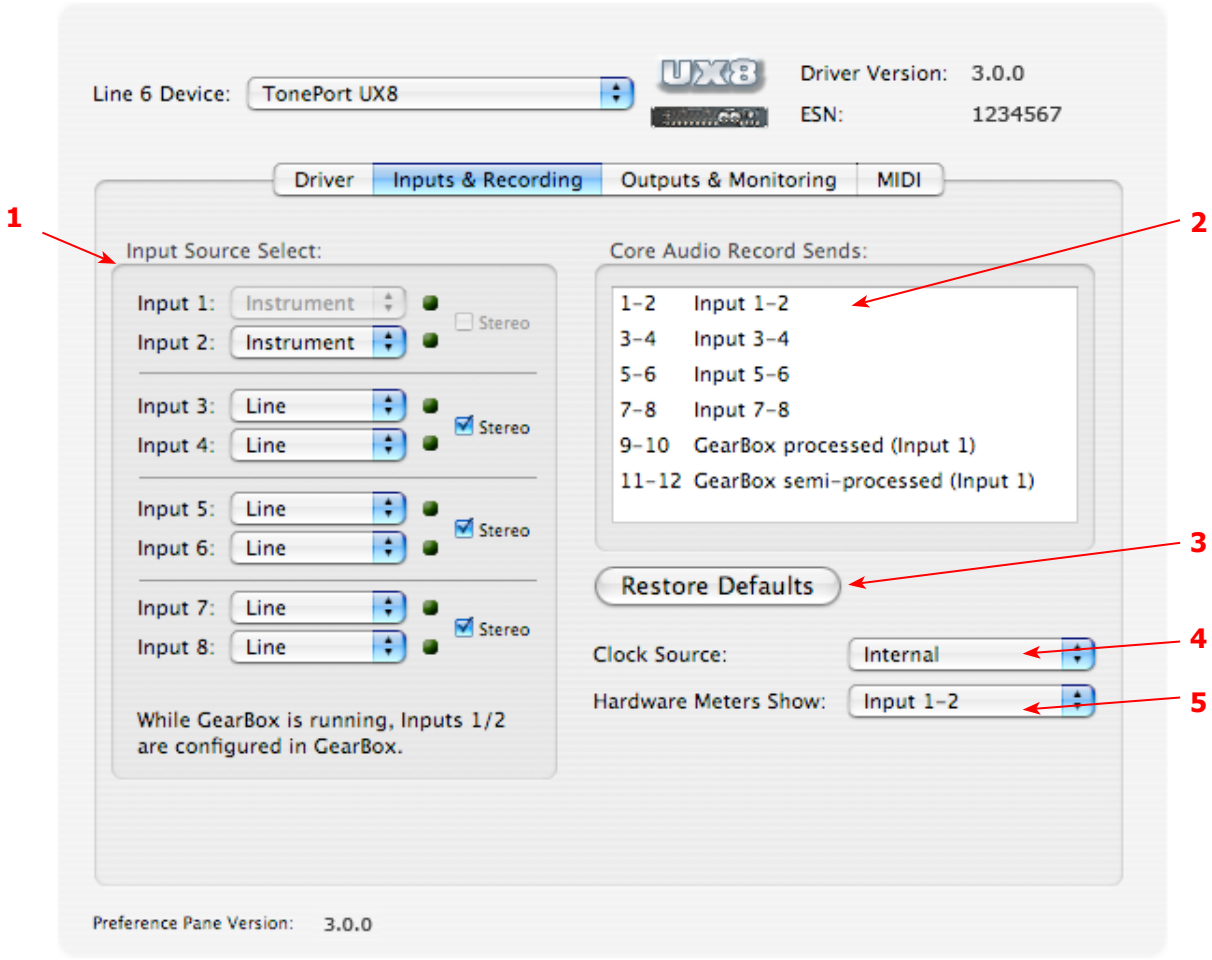
- Single Tone Source (Mono/Stereo): When the GearBox application is not running, Record 1-2 and 3-4 both carry the unprocessed signal. When running GearBox, Record 1-2 will carry the fully GearBox-processed signal. For Record 3-4, you can choose between a signal with no post-effects, and a fully unprocessed signal.
- Dual-Tone Source: If you've selected one of the dual input configurations from the input menu, Record 3-4 will always carry the signal from the second audio source. When GearBox is running, these sends will carry the Tone 2 signal of a Dual-Tone configuration. See the TonePort Dual-Tone Operation section for more about this.

Note: TonePort DI and GX can only run in Single-Tone configuration.

GuitarPort will show two Sends (Record 1-2 and Record 3-4). When the GearBox application is not running, Record 1-2 and 3-4 both carry the unprocessed signal from GuitarPort's input. When running GearBox, Record 1-2 will carry the fully GearBox –processed signal, and for Record 3-4 you'll have a choice between routing a signal with no post-effects, or a fully unprocessed signal.

PODxt will show only one Record Send (Record 1-2). The type of signal that is routed to the Record Send 1-2 is determined by the PODxt Signal Routing option within the Audio Signal Routing dialog (accessed by the Advanced button within the Line 6 Audio-MIDI Devices dialog). Note that this Audio Signal Routing determines this signal routing regardless if GearBox is running or not for PODxt devices. (See the PODxt Audio Signal Routing section for more about this dialog).

Line 6 Audio MIDI Settings Dialog - Inputs & Recording Tab (TonePort UX8 Only)

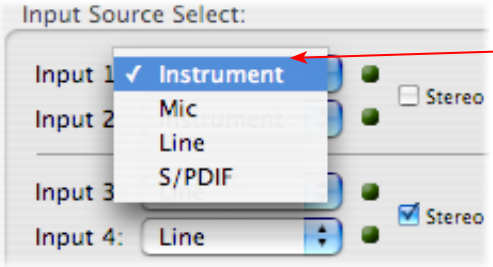


1 – Input Source Select: TonePort UX8 offers 8 individual input sources, each with its own selector where you can choose which physical input is to be used for each. Input source options are as follows:

Input 1: Instrument 1 or XLR 1 or Line 1 or S/PDIF (L)
Input 2: Instrument 2 or XLR 2 or Line 2 or S/PDIF (R)
Input 3: XLR 3 or Line 3
Input 4: XLR 4 or Line 4
Input 5: XLR 5 or Line 5
Input 6: XLR 6 or Line 6
Input 7: XLR 7 or Line 7
Input 8: XLR 8 or Line 8

Using Inputs 1 & 2 with the GearBox standalone application

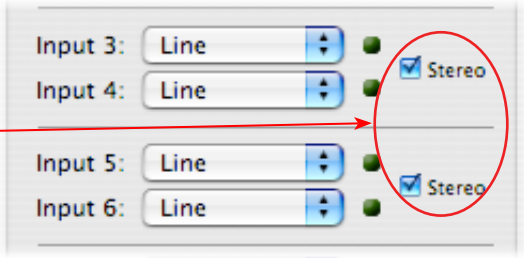
The GearBox standalone application works with the TonePort UX8 driver to provide ultra-low latency via ToneDirect™ monitoring for Inputs 1 & 2 of the UX8, which includes two high-Z Instrument inputs, two XLR inputs, two Line level inputs and stereo S/PDIF input. GearBox's ToneDirect Monitoring is ideally suited for recording guitar and bass with amp and effects processing, providing the instantaneous feel necessary for competent performance while tracking.



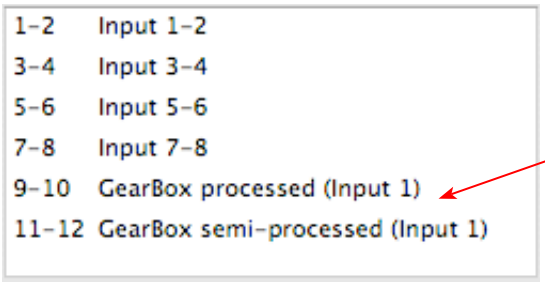
When GearBox is not in use, the Input 1 & input 2 selectors are available. As shown here, TonePort UX8 offers several input Sources to choose from. The selected Source is what gets routed to the Device Send.

Stereo Paired Inputs

You can also link inputs into stereo pairs. This affects hardware monitoring controls in the Outputs & Monitoring tab (see below).



2 – Device Sends info box: One line for each GearBox Record Send appears here along with a description for exactly what signal each Send is carrying.

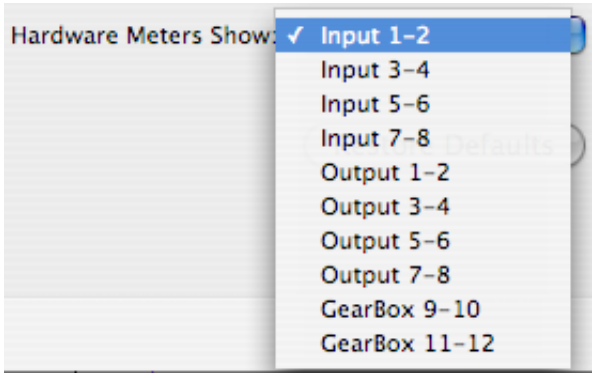


The Device Sends Description shows the input Source, and informs you if that signal is "processed" or not. In this example, Gearbox is running and is set to process the Input 1 Source, therefore, you can record the processed signal by choosing "Send 9-10" in your recording application.

3 - Restore Defaults - click this button to restore all this tabs settings to their original default values.

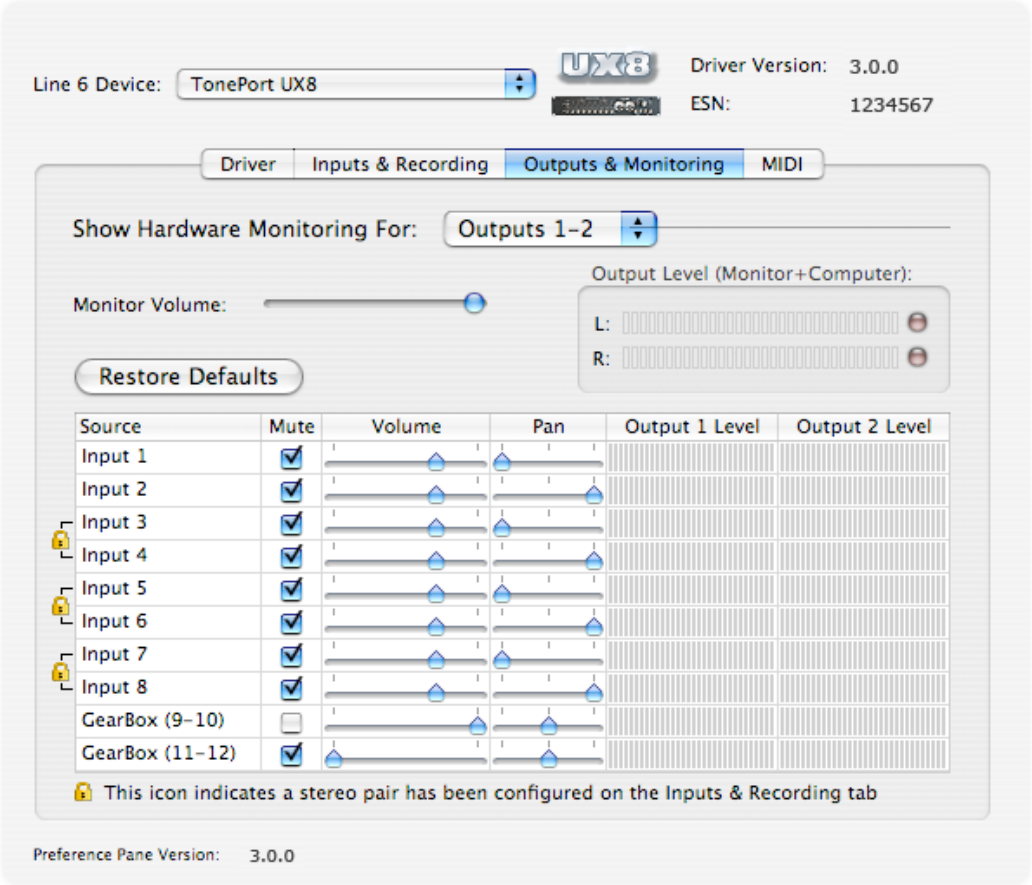
4 - **Clock Source -** Set your preferred TonePort UX8 clock source with this menu. Select S/PDIF to sync the UX8 to an external S/PDIF clock source from another device's digital output. If you are not connecting anything into UX8's digital S/PDIF input, then keep this set to Internal to use the UX8's own clock.

5 - Hardware Meters Show - This selector allows you to choose what the VU meters on the front of the UX8 are measuring. Note that these hardware meters function even if the GearBox software is not currently running.



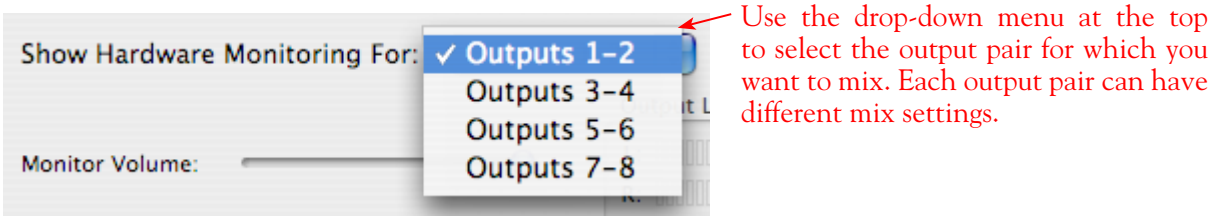
Outputs & Monitoring Tab (TonePort UX8 Only)

Important: Note that the Outputs & Monitoring tab provides control over monitoring levels, specifically, what you hear coming out of the UX8. These controls do not affect Send levels, the audio that streams into your recording software. In other words, volume and pan levels here are purely analog, intended for monitoring live input levels (from instruments, mics, etc) and computer output levels, in order to facilitate the recording process.



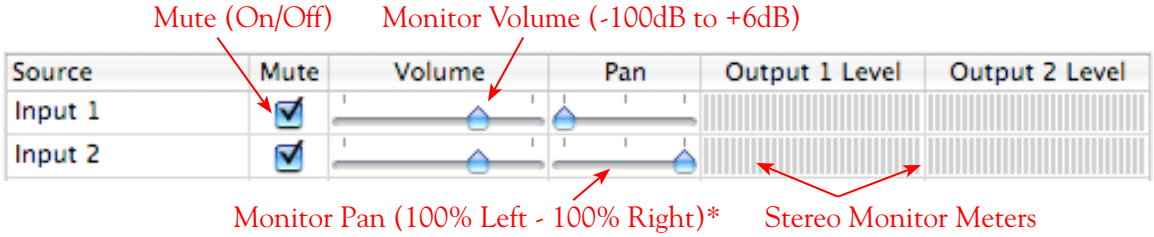
The Outputs & Monitoring tab provides control over hardware monitoring settings, including input source volume, pan and mute states. You can specify different mix settings for each pair of UX8 outputs if you like.

By default, the only sounds that come out of the UX8 are the computer's output and GearBox 9-10 signal (fully processed), all through Main Outs 1-2. You can directly monitor other UX8 inputs by unmuting the corresponding input source in this tab. The UX8 provides monitoring through the hardware with zero latency, which is ideal for tracking with multiple sources simultaneously.



Mix Controls

Inputs 1 - 8 offer the following controls:



* -3dB panning law is applied to the pan control to maintain a constant monitoring level across the panorama.

Mix Controls for Inputs 9 - 12:

GearBox monitoring controls behave identically to Inputs 1- 8, with the exception of the Volume Level. GearBox Sends provide a max monitoring level of 0 dB, whereas the other inputs max at +6 dB, in order to match the 0 dB maximum monitoring level provided by the GearBox standalone application.

Main Monitor Volume

This slider controls the overall monitoring volume for the current output pair. What you hear is displayed in the adjacent level meter and includes the combination of input sources and computer-generated signals, such as those assigned to the current output from within your recording software. Note that computer-generated signals are unaffected by the volume slider. The level meter's clip LED graphics light up when the signal reaches 0 dB.

Main Mix vs. Talent Mix

The UX8's two front panel headphone outputs mirror Outs 1-2 and 3-4 respectively. You can use the monitor controls, for example, to create a "main mix (1-2)" that captures the overall image of the recording project, while a separate "talent mix (3-4)" can be provided for the musician who is currently adding a new part, and may need a click track and an ample level of themselves above the rest of the mix. Additional output pairs 5-6 and 7-8 are available for headphone mixers or sending to a mixer, other monitors, etc.

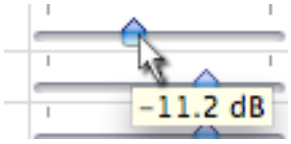
Stereo Pairs

When the "Stereo" checkbox is active in the Inputs & Recording tab for a pair of Inputs, the representative Inputs in the Ouputs and Monitoring tab will display them as "locked" as a stereo pair.

The lock icon represents two sources linked as a stereo pair.

The Pan sliders for a "locked" stereo pair are automatically set to 100% Left and Right.

Using tool tips



You can obtain precise value readings for output levels, volume sliders and pan sliders. Do this by hovering the mouse cursor over the meter or slider you wish to read.

Important Things to Know When Recording

This section will give you some great pointers for using your Line 6 Hardware for recording, to help you get your brain wrapped around all that complex computer stuff your geeky friends talk about at parties. We've got even more info, including setup tips for specific audio programs and system tweaking tips in our GearBox *Recording Setup Guide* – its available free on the line6.com GearBox Online Help page!

Sample Rate and Bit Depth

When you set a sample rate and bit depth (also sometimes called "word length") in your recording software, your Line 6 software will automatically match these settings. If you want to check to make sure that everything is going as it should, just perform these steps:

- Configure your recording program's sample rate settings, and then confirm that your Line 6 hardware is running at the correct settings in the Line 6 Audio-MIDI Devices dialog (Windows) or in the Audio-MIDI Setup dialog (on Mac). It is best to always change the sample rate settings in your audio software.
- Typically, you can choose the 44,100 sample rate in your audio software for most projects. But if you have special requirements for your session, then you can alternatively choose 48,000, 88,200 or 96,000 Hz in your audio software and your Line 6 device will support any of these rates.
- For the Bit depth, it is typically best choose the 32-bit option in your Windows audio software and in the Line 6 Audio-MIDI Devices dialog IF your Windows audio software supports this rate. If not, then 24-bit is the next best choice. On Mac, choose 24-bit in your recording software. Avoid using 16 bit unless you have to since it can lower the audio quality.

GuitarPort Tracks Can't Be Recorded

Attention GuitarPort Online members… Your guitar and/or other input signals (except for Monitor In) from your Line 6 device are **the only signals** routed to the Record Sends and made available to recording software. Tracks played via the GearBox program's internal Player will not be routed to the Recorded Send, cannot be recorded to other programs, and won't be routed to the S/PDIF digital outputs for Line 6 devices that include those outputs. This restriction on Player audio routing is required in order for Line 6 to protect the copyrights of the musicians and other copyright owners that have licensed music for use in GuitarPort Online.

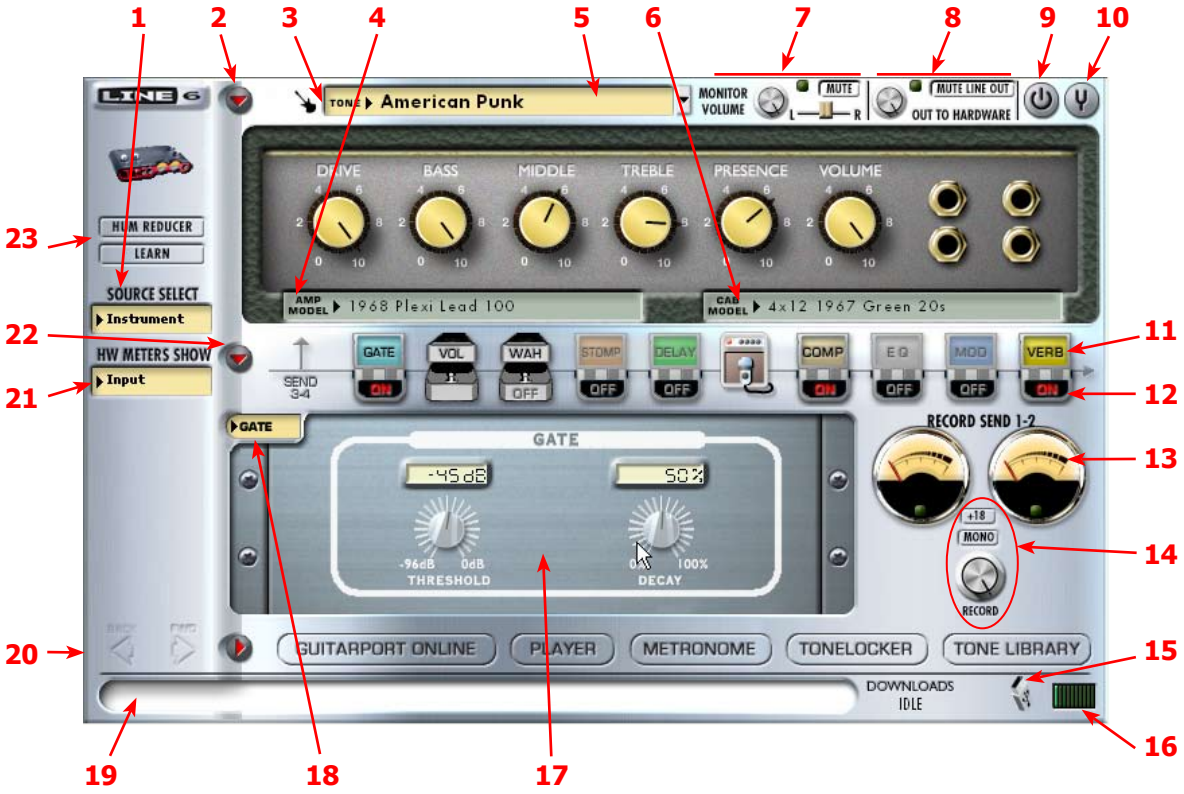
GearBox Stand-alone Application

Overview

The GearBox software is your new Tone Control Central. It gives you visual control, makes it easy to create, edit and save your Tones, includes plenty of great presets, and connects you directly to our exclusive online Tone Library of thousands of professionally programmed Tones. GearBox can run alongside your favorite recording software, letting you easily control every detail of your sound right from your computer during recording. And our additional GearBox Online Help documentation includes step-by-step instruction for using GearBox with some of the most popular Windows® and Mac® recording software, to help make your computer recording experience a great one. GearBox even connects you to GuitarPort Online, our exclusive online world for guitarists who want to play along with the latest and greatest tracks, lessons and licks, covering the greatest guitarists of all time. Check it out when you're looking to pick up a few new tricks, or just want to have a great time playing some tunes.

The GearBox software is free for every owner of our TonePort, GuitarPort and PODxt recording and modeling interfaces. Combine that with Line 6 Monkey, our world class driver software technology, options like GuitarPort Online and Model Packs, plus access to the online Tone Library, and it all adds up to be the world's most advanced tone system for guitarists. We call the whole shooting match The GearBox Platform. To follow is a tour of the GearBox interface - note that the GearBox interface includes different options depending on if you are using TonePort, GuitarPort or PODxt hardware. Click on a number to go to its description…

GearBox Controls and Operation



The above screen shows GearBox running with a TonePort device in use. There are some differences when connected to a GuitarPort or PODxt device - look for the mentions of device-specific controls and behaviors in the descriptions below. Some of the unique GuitarPort and PODxt controls and behaviors are also called out in following sections. All descriptions that follow are the same for Windows® or Mac®, unless otherwise noted.

1 – Source Select menu:

TonePort UX1, UX2, UX8, KB37 – Here is where you choose which physical input(s) you want to use for the GearBox Tone path. Note that TonePort devices also offer a Dual-Tone Source option. See the next Dual-Tone section for more about this.

TonePort DI, GX, GuitarPort, PODxt – No Source Selct is shown since these units offer only one input.

2 - Show/Hide button: Clicking this button collapses or expands the viewable height of the Amp and Effects controls. It's useful to collapse these controls if you want to maximize the size of only the lower Browser window.

3 - Tone Menu: Click here to choose from all saved Tones – when you create and save your own masterpiece Tones, they'll appear here too.

4 - Amp Model menu: Choose from all available Amp Models available for your connected device. Remember, you can add more models with optional Model Packs from the Line 6 store!

5 - Cab Model menu: Choose from a huge assortment of speaker cabinets. We've pre-chosen cabs to match up with your selected amp, but you can choose the Cab here independently - a different cab can make a huge difference on the sound, so try a few different ones!

6 - Tone Options menu: Click this button to do an "A/B" Compare of your settings vs. preset settings, view or edit the Tone Info, Save the Tone, or Save As to do a copy of the current Tone.

7 - Monitor controls:

- **Monitor Volume –** the level of whatever input signal you are feeding into GearBox (e.g. - your guitar) – this is independent of the level routed to your Record Send 1-2 as well as the "playback" level of audio software that is routing its output to your Line 6 device.
- **Monitor/Clip light –** will light up green to indicate your signal, and gets yellow and then red as the level increases. Red means your signal is too hot (in which case you should turn down your input source and/or Monitor vol.)
- **Mute button –** Mutes the monitor signal only.

Note – GearBox will not display this Mute button when PODxt is the source device.

- **Pan slider –** Pans your source input left or right. This affects the signal that is routed to BOTH your Record Send 1-2 and the Monitor path. Double click on the slider to set it to dead center.

For TonePort devices – When using a single Tone Source, these control the Record Send 1-2 Monitor signal path. Send 3-4 has its own set of Monitor controls (accessible in the effects panel when you click the Send 3-4 icon). If you are in a Dual-Tone Source mode, these controls will affect the current, visible Tone only.

For TonePort UX8 only – Note that GearBox's record sends are labeled "9-10" and "11-12".

8 - Out To Hardware controls:

TonePort & GuitarPort –

- **Volume knob –** controls the level of audio routed out the analog Line Outs (and headphone out) of your device. This will affect both your Monitor signal AND the playback signal coming into your Line 6 device from your audio software. It does NOT affect the level of your signal going to the Record Send 1-2.
- **Output Indicator/Clip light –** will light up green to indicate your signal, and gets yellow and then red as the level increases. Red means your signal is too hot and you should reduce all individual levels and/or the Volume knob.
- **Mute Line Out button –** Mutes all signals routed to the Line Outs only (and not your headphone out), but does not affect the signal routed to the Record Sends. This is very useful when recording with a Mic since it stops your mic signal from coming out your speakers (to avoid feedback) but still lets your hear it and everything else through your headphones.

Note – GearBox will not display this set of Out To Hardware controls when PODxt is the source device.

For TonePort/GuitarPort devices – These controls affect the Monitor and playback signal paths for both Record Sends 1-2 and 3-4, or both Tones when using a Dual-Tone Source.

For TonePort UX8 only – Note that GearBox's record sends are labeled "9-10" and "11-12".

9 - Bypass button:

TonePort – will bypass all amp and effects processing for the currently displayed Tone. Just your "naked", unprocessed signal will be heard as well as routed to your Record Sends when bypassed.

GuitarPort – will bypass all amp and effects processing. Just your "naked", unprocessed signal will be heard as well as routed to your Record Sends when bypassed.

PODxt – will bypass only the amp

10 - Tuner button: Toggles the display of the Guitar Tuner.

11&12 - Effects Show/Hide and On/Off toggles:

- Clicking on the top portion of each of the little "stomp box" icons in this row will toggle the lower Effects Panel to display that effect's controls. You can do this independently of switching the effect itself On/Off. Note that you can use your left or right mouse button to do this.
- Clicking the bottom portion of the stomp box will toggle the effect On and Off.

13 - GearBox Record Send and VU Meters:

TonePort & GuitarPort – These show the signal level of the GearBox-processed audio that is sent to your recording software. For UX8, this send is labeled Send 9-10. For other TonePorts, it's labeled Send 1-2. This send represents the fully-processed GearBox audio signal. To record exactly what you hear, select this send as your audio input, within your recording application. If the little clip indicator at the bottom of each meter lights red, turn down the RECORD knob and/or turn off the +18 button, because you are clipping your audio, which can cause harsh, bad sound for your recording.

These indicators will light up red when the signal is clipping.

Note – Gearbox will not display VU Meters when a PODxt is the source device.

14 - Record Send 1-2 controls:

- **Record knob –** controls the level of your GearBox processed Tone that is routed to Record Send 1-2. this will ultimately control the record level into your audio software for any track receiving this Send 1-2 signal.
- **+18 button –** Boosts the level of the Record Send – useful if your GearBox signal is a weak one and you need more level to get a good record level.
- **Mono button –** sums the GearBox stereo Tone to a Mono signal for Record Send 1-2 (the same mono signal is fed to both Send 1 and 2 channels). Useful if you want to record from Send 1 or 2 and ensure it is not one side of a stereo signal.

Note – Gearbox will not display the Mono button when a PODxt is the source device.

15 - USB device connection indicator:

TonePort & GuitarPort – This little USB plug icon appears flashing if GearBox does not find a supported Line 6 USB device connected to the computer.

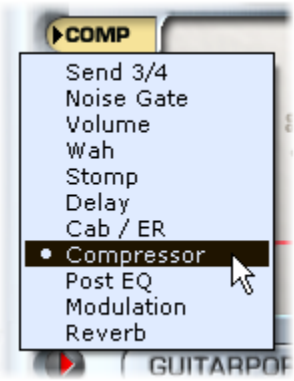
PODxt – When GearBox is set to use a PODxt source device, a little red PODxt icon is displayed.

If the PODxt device is disconnected or powered off, the icon appears with a question mark.

16 - CPU meter: Shows how much of your computer's processing power is currently being utilized. If it reaches the red then you may experience audible dropouts and therefore need to reduce other processes running, or bypass some GearBox effects.

17 - Effects Control display: This panel displays the controls for the selected effect (see # 11 & 12 and #18 for how to choose to show an effect's controls). For TonePort this can also show the Record Send 3-4 controls.

18 - Effect menu: Offers selection for which effect's controls are shown in the Effects Control display area.

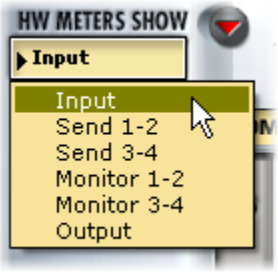


19 - Info Bar: Text appears in this bar relating to what your mouse cursor is currently hovering over. This is a very handy source of tips while using GearBox – remember to look here for info while clicking around!

20 - Browser controls: All button in this row control things that appear in the Browser panel below. We'll go into more detail on the browser section separately, which includes the GuitarPort Online functionality, Player, Tone Locker, and more!

21 - Hardware Meters Show menu:

TonePort UX2/KB37 only – allows selection for what signal the VU meters on the TonePort UX2 device will measure.

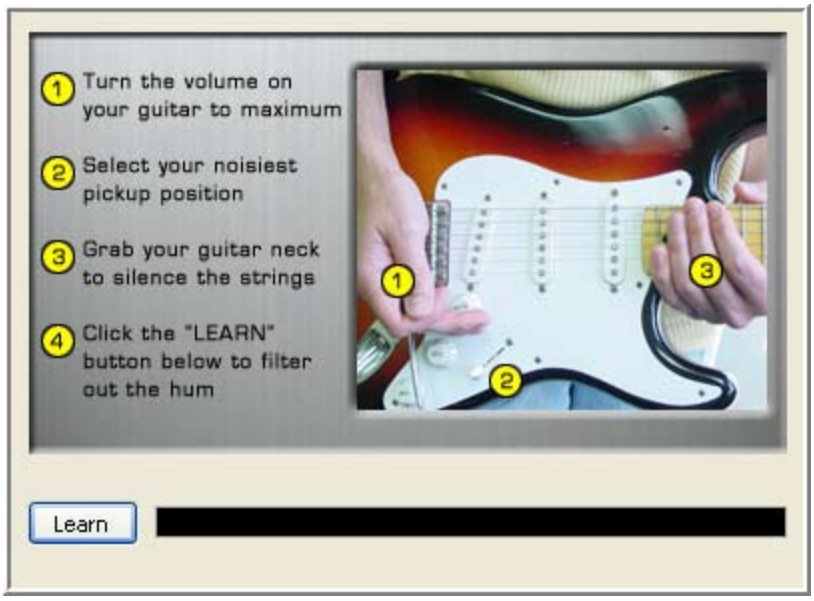


22 - Show/Hide Effects display button: Click this button to collapse or expand the area which shows the Effects Control display and Record Send 1-2 controls.

For TonePort UX8 only – Note that UX8 hardware meters are configured in the Line 6 Audio-MIDI Devices application, Inputs & Recording tab.

23 - Hum Reducer feature:

TonePort & GuitarPort – Use this feature to eliminate that annoying hum that guitars sometime have, especially when in front of computer monitors. Click the Hum Reducer button to walk through the use of this feature:



Note 1 – GearBox will not display the Hum Reducer options when a PODxt is the source device.

Note 2 – The Hum Reducer is for Instrument Input 1 only. Hum Reducer is not available for Mic, Line or Digital input.

GearBox with TonePort and GuitarPort

Using GearBox with a TonePort or GuitarPort device gives you access to multiple Record Sends, and with a TonePort UX1/UX2/UX8/KB37, you get Dual-Tone operation, bringing out the most out of GearBox!

Note: TonePort DI, GX and GuitarPort can only run in Single-Tone configuration.

Pre/Post Record Send

GearBox displays an additional Record Send for TonePort and GuitarPort devices, which provides several useful signal routing functions. When you have a single input Source chosen in the Source Select menu, you'll see the Send 3-4 icon (labeled Send 11-12 for UX8) in the row of the Effects icons.

Click on this Send icon to show its controls in the panel below.

Select PRE to route an unprocessed signal to Send 3-4. Select POST to route a semi-processed signal to Send 3-4 (see below).

Record Send 3-4 has its own dedicated set of controls and meters that are equivalent in function to the Send 1-2 controls of the same name (see the GearBox Controls and Operations section). When using an audio recording software configured to use the ASIO TonePort driver (on Windows®) or Core Audio driver (on Mac®), it is possible to select the GearBox Send 1-2 or Send 3-4 independently for your track inputs for recording.

Please note that the pre/post setting of Record Send 3-4 is not saved within the Tone Preset.

Note – if your audio application is configured to use the TonePort WDM driver (on Windows®), you will only be able to access Send 1-2 in the recording software, and it will carry both GearBox Send 1-2 and 3-4 signal paths, pre-mixed into Send 1-2.

Monitoring a GearBox-processed tone while recording "Dry"

With GearBox Send 3-4, you can send a dry, unprocessed signal to your favorite recording application, while monitoring a fully GearBox-processed tone thru your hardware's outputs. The Send's Pre/Post switch gives you a couple of options:

- In the **PRE** position, Send 3-4 taps into the audio path before any processing is applied to the input source, routing a totally dry signal thru the USB port. This of course is useful when using plug-ins, including the GearBox Plug-in, since you can record a pass with a no-compromise, great feeling tone, without committing any tone shaping to the track (see the ToneDirect™ Monitoring section for more info).
- In the **POST** position, Send 3-4 taps into the audio path right after the EQ, and before any post-FX are applied. With this setting, you can apply some amp or mic preamp modeling to your signal before routing it to Send 3-4.

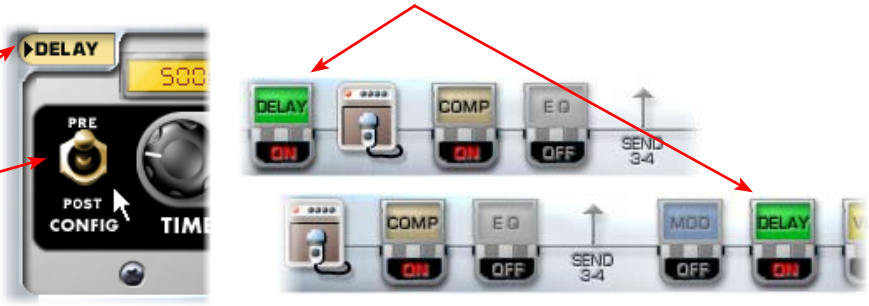
In the POST scenario, you can designate the Modulation, Delay and Reverb FX to be either before or after Send 3-4 to determine if that effect is processed on the Send 3-4 signal or not. For example, if you move set a Delay and a Reverb effect both to "Post", then they are only processed on the signal sent to Send 1-2, and Send 3-4 is tapping the signal just before these effects. This makes it possible to monitor Send 1-2 and hear these effects, but then choose Send 3-4 in your audio application and actually record the signal without them.

For TonePort UX8 only – Note that GearBox's pre/post record send is labeled "11-12".

The selected effect's icon moves to the left or right of the Send 3-4 icon depending on the effect's Pre/Post setting

Click on an effect to display its control display in the Effects panel

Use the Pre/Post toggle switch



Dual-Tone operation (TonePort UX1/UX2/UX8/KB37)

These TonePort devices are unique in that they give you not one, but two independent Tone paths! This feature allows you to process two completely independent Tones for two separate inputs at the same time, such as your guitar plus a microphone, and allows your recording software to record each in its own separate track.

The "Dual-Tone" inputs are the ones in the Source Select menu that have the "&" symbol in the names (e.g. Inst. & Mic 1).

When choosing one of the Dual-Tone input Sources, this displays two distinct Tones within GearBox, allowing you to tweak each source with its own independent Tone settings. When in this Dual-Tone mode, GearBox automatically routes Tone 1 to Record Send 1-2, and Tone 2 to Record Send 3-4, which allows your recording software to record each into separate tracks.

For TonePort UX8 only – Tone 1 and Tone 2 route to Record Send 9-10 and Record Send 11-12 respectively.

In Dual -Tone mode, the Tone 1 & Tone 2 toggle buttons appear at the top left to allow you to show the Amp and FX configuration for the respective Tone path. Note that these other controls across the top of the dialog automatically adjust the currently displayed Tone's settings. For example, here the "Inst. & Mic1" Source is selected, and the "Instrument" Source's Tone path is selected. Several controls at the top now affect only the Instrument Tone. To adjust the Mic 1 Tone settings, you switch the Tone 1, 2 toggle button, and then adjust the controls independently.

Tone 1, 2 toggle buttons

Monitor controls affect the currently displayed Source's Tone

Selects a Tone preset for current Source's Tone

Out To Hardware controls affect BOTH Tones

Note that the Send meters and control automatically change when toggling between Tone 1 and Tone 2 Sources as well.

The Send 1-2 controls are shown for Tone 1, and Send 3-4 controls are shown for Tone 2

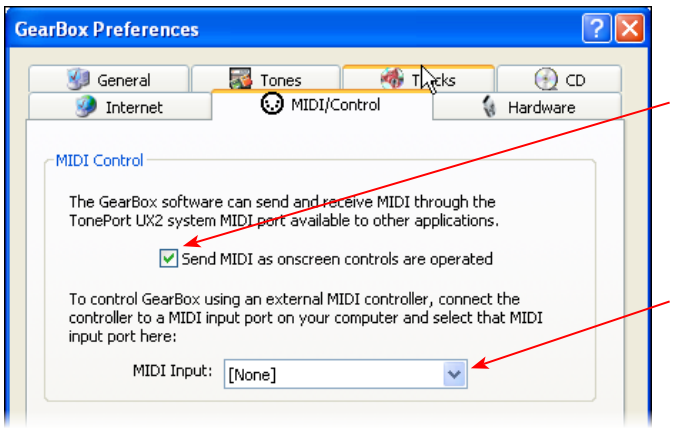
Operating GearBox in Dual-Tone mode can require some major processing power from your computer (not surprisingly, twice as much as a single Tone!). Each effect that is powered "on" will use some processing power – effects that are "off" do not use processing power.

Note that the Hum Reducer is for Instrument Input 1 only. Hum Reducer is not available for Mic, Line or Digital input.

MIDI Control

When using GearBox with TonePort and GuitarPort devices, GearBox offers options for remote control of its parameters. You can connect a 3rd party MIDI controller device to a MIDI port on your computer and set GearBox to receive MIDI Continuous Controller (CC) data from it.

GearBox is also capable of sending out MIDI CC data for the adjustment of the onscreen GearBox knobs and switches.



To send out MIDI CC data from the adjustment of GearBox onscreen knobs & switches, check this box.

To control GearBox features (such as Wah or Volume) from a 3rd party hardware MIDI controller device or software, choose the MIDI Port that your controller unit is connected to. GearBox will then receive MIDI CC data on MIDI Channel 1.

TonePort UX2/UX8/KB37 Controllers

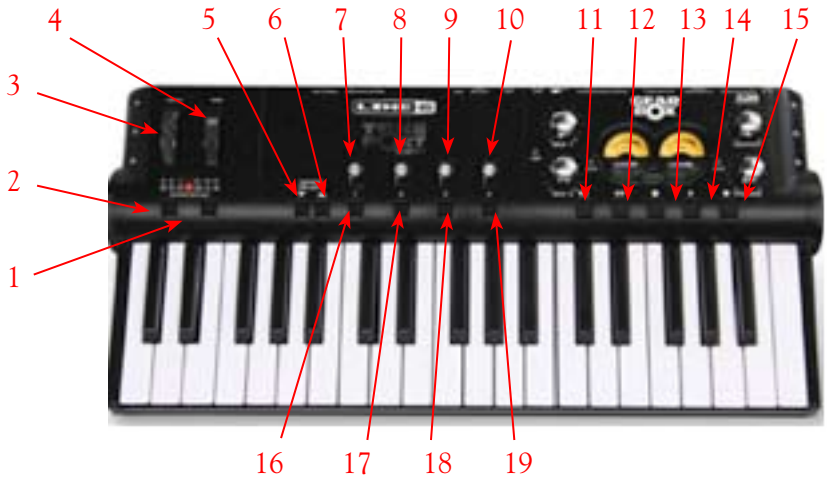
TonePort UX2, UX8 and KB37 include footswitch jacks on the hardware to provide remote control of GearBox parameters, such as Wah and Stomp On/Off. You can assign these controls to any available GearBox parameter or MIDI function from the MIDI tab of the Line 6 Audio-MIDI Devices application.

TonePort devices have the following jacks:

UX2	2 footswitch jacks
UX8	2 footswitch jacks 1 Expression pedal jack
KB37	2 footswitch jacks 1 Expression pedal jack

KB37 Controllers

Additionally, the TonePort KB37 features a number of knobs, wheels and buttons which can be configured to control more GearBox and 3rd-party application functions. KB37 ships with a default set of functions assigned to its controllers, which you can of course re-configure in the Line 6 Audio-MIDI Devices control panel.

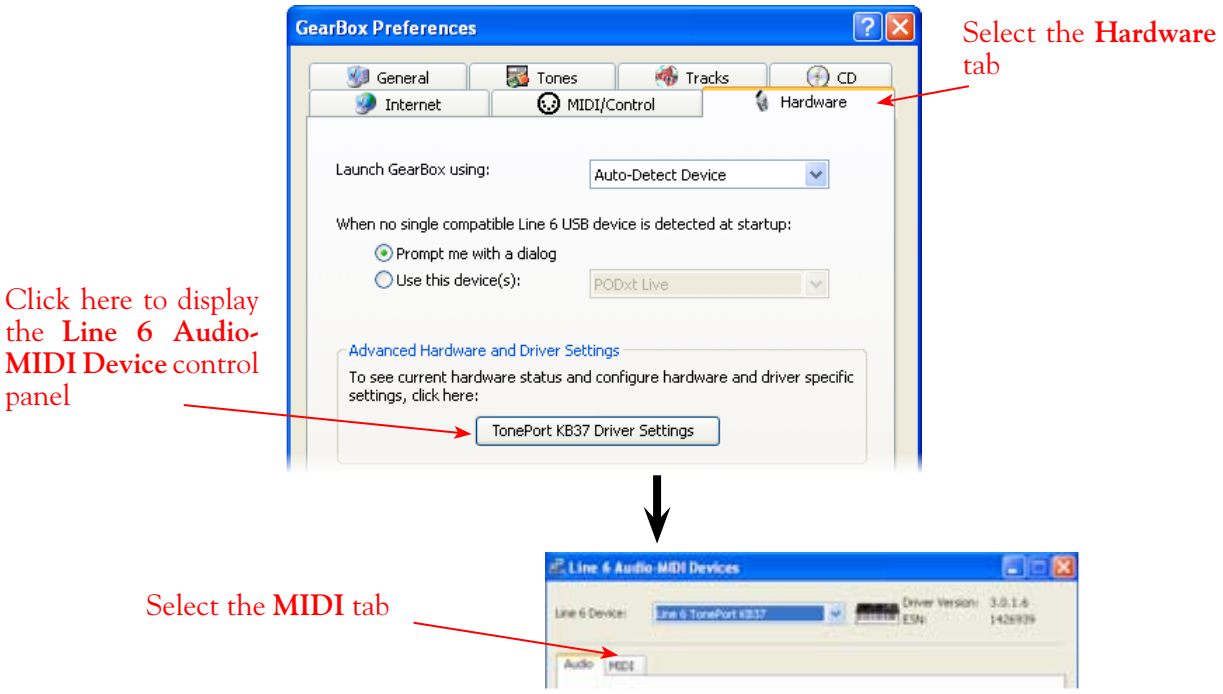


KB37 default messages for non-GearBox applications

Controller	Default MIDI/Control Message
1 - Octave up	None (internally shifts note numbers +1 octave; Not Re-assignable)
2 - Octave down	None (internally shifts note numbers -1 octave; Not Re-assignable)
3 - Pitch Wheel	Pitch Wheel (Not Re-Assignable)
4 - Mod Wheel	CC 1 (Modulation Wheel)
5 - Program increment	+1
6 - Program decrement	- 1
7 - Knob 1	CC 73 (Attack Time)
8 - Knob 2	CC 75 (Decay Time)

Controller	Default MIDI/Control Message
9 - Knob 3	CC 72 (Release Time)
10 - Knob 4	CC 91 (Effects | Depth)
11 - Rewind	MMC Rewind
12 - Forward	MMC Fast Forward
13 - Stop	MMC Pause
14 - Play	MMC Play/Stop
15 - Record	MMC Record/Punch
16 - Button 1	CC 65 (Portamento)
17 - Button 2	CC 127 (Poly On)
18 - Button 3	CC 126 (Mono On)
19 - Button 4	CC 123 (All Notes Off)
Expresion Pedal	CC 11 (Expression)
Footswitch 1 (Sustain)	CC 64 (Sustain)
Footswitch 2	MMC Record Punch

To re-map the functions of any of these controllers, go to **Edit>Preferences** and follow these steps:

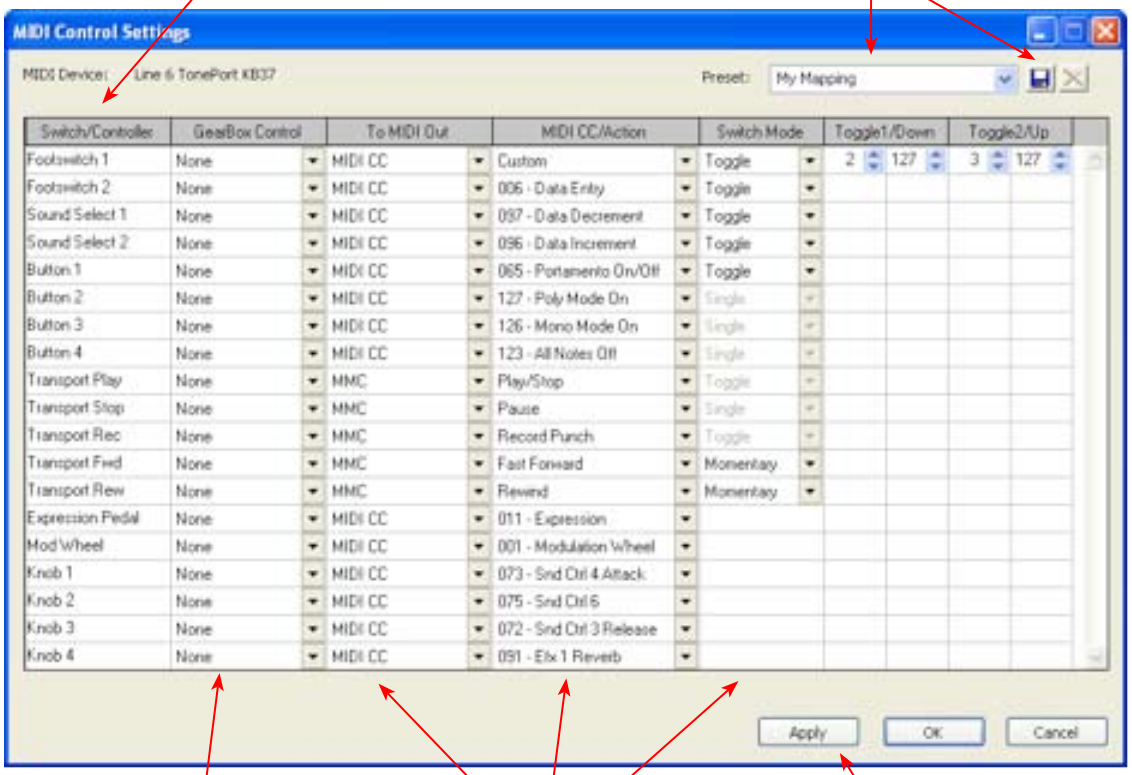


Click here to recall any Preset or Default Mapings

...Or click here to create a Custom MIDI Mapping

This column populates with all re-assignable controllers for your device (TonePort KB37 shown here)

Name and Save your Custom Mapping as a Preset



Choose which GearBox function (if any) to assign to controllers

Choose the **Type** of Control, which **CC/Action** it will perform, and the **Switch Mode** for your controllers

Click **Apply**, then **OK** when done

Note - For a complete list of GearBox MIDI - parameter assignments, and more help on Footswitch/Controller setup, please check out the GearBox Online Help.

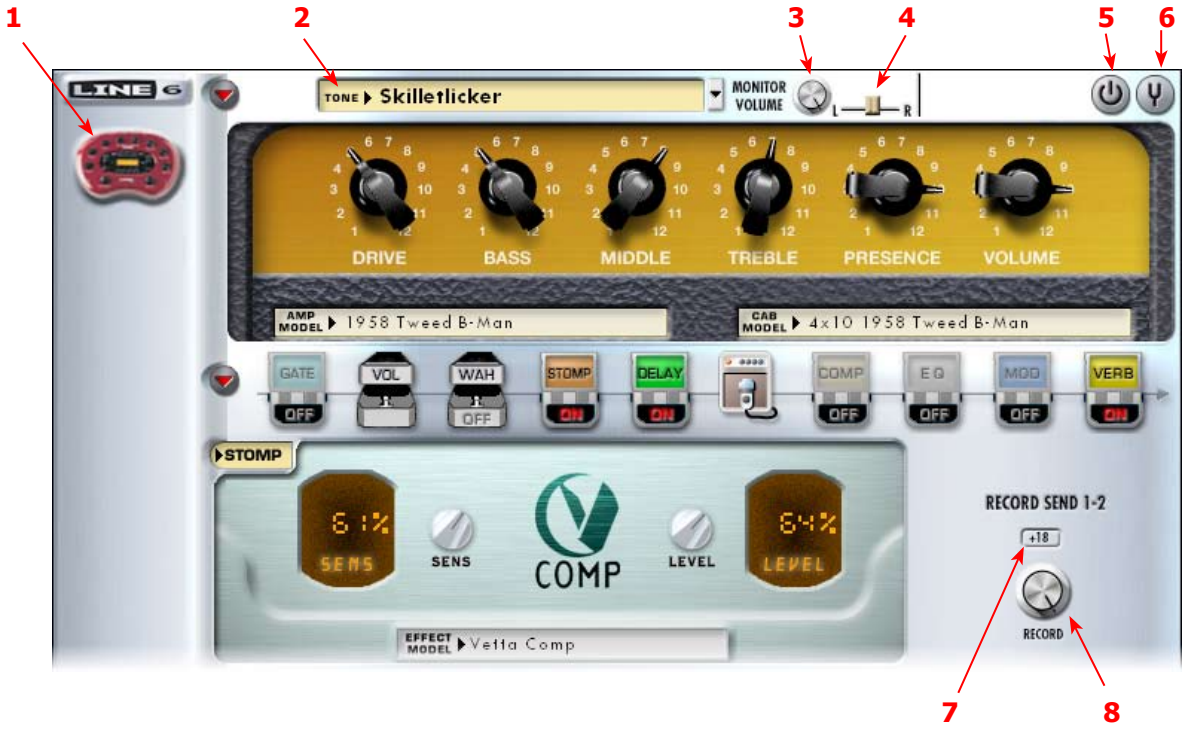
GearBox with PODxt

One difference between PODxt and TonePort or GuitarPort devices is that PODxt's have their own onboard DSP processing and Memory. You can think of GearBox as a computer "user interface" for what is running on your PODxt device. Because of this hardware architecture, you'll see a few differences here for GearBox controls with PODxt as compared to TonePort or GuitarPort. It also means that the processing horsepower used to apply all those juicy amp, cab and effects models to your Tone don't need to run on your computer's processor, which should give you a bit more reserve processing power for other things, like recording software and more complex sessions.

When using PODxt, PODxt Pro or PODxt Live hardware with GearBox, the GearBox interface offers a fixed set of Tone options. The Instrument input is "fixed" as the GearBox input source, and the input signal is routed to the Record Send 1-2. Please refer back to the GearBox Controls and Operation section for description of the common interface features. To follow are some details on the items specific to using GearBox with PODxt devices.

GearBox Controls and Operation

The GearBox interface offers controls for a single Tone path when PODxt is in use. Click on a number to go to its description…



1 - Source Device indicator: A PODxt, PODxt Live or PODxt Pro* icon appears here to indicate which type of device is now in use by GearBox as the Source device.

2 - Tone menu: Select from your set of GearBox Tones folder to load one on your PODxt. Note that you can also select a preset directly on your PODxt hardware and all its settings will appear in GearBox. You can also use the Tone Locker in the GearBox Browser panel to access items stored in your PODxt Memory.

3 - Monitor Volume knob: Adjusts the monitoring level of your Tone - this is independent of the level routed to your Record Send 1-2 as well as the "playback" level of audio software that is routing its output back to your PODxt.

4 - Pan slider: Pans your source input left or right. This affects the signal that is routed to BOTH your Record Send 1-2 and the Monitor path. Double click on the slider to set it to dead center.

5 - Amp bypass: Bypasses the current Amp model so that you'll hear your guitar with no amp processing (yawn), but you'll still hear any effects that are powered on. Note that this bypassed signal is also what is routed to Record Send 1-2.

Note: The Amp Bypass control is an exclusive feature of PODxt devices. Any PODxt tone saved with the amp bypassed will load in a TonePort or GuitarPort device with the amp active.

6 - Tuner button: Toggles the display of the Guitar Tuner.

7, 8 - Record Send 1-2 controls:

- **Record knob** - controls the level of your PODxt Tone that is routed to Record Send 1-2. This will ultimately control the record level into your audio software for any track receiving this Send 1-2 signal.

Note that for PODxt devices, there is also further control of what type of signal is routed to Record Send 1-2 within the Audio Signal Routing dialog. Get to this from the Line 6 Audio-MIDI Devices control panel – read more about it in this section**.**

- **+18 button** - Boosts the level of the Record Send – useful if your signal is a weak one and you need more level to get a good record level.

PODxt MIDI control

For PODxt, PODxt Pro and PODxt Live - MIDI control options are found on the device itself - you can connect MIDI cables directly to your PODxt and then dial up the MIDI settings on the PODxt's display panel. Please refer to your PODxt Pilot's Handbook for all the details on MIDI control.

Using PODxt's MIDI control features, you can remotely control most parameters on your PODxt device and hear them in real time. Likewise, PODxt can transmit MIDI CC data back out its MIDI Out when you adjust its knobs and switches. This interaction all takes place between PODxt and your MIDI device, without GearBox needing to be involved at all. When your PODxt is also connected to your computer and you are using it with GearBox, you will see the respective onscreen GearBox controls also automatically adjust when you are controlling PODxt remotely. Again, just think of Gearbox as a computer "user interface" for what is running on your PODxt hardware.

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Basic Operation

How to turn GearBox's software knobs

- Click your mouse anywhere on the knob (Windows® users, you'll be using your left mouse button for this).
- While continuing to hold the mouse button, drag the mouse up and down.
- Do not drag your mouse in a circular turning motion.

Also, check out the details on fine-tuning knob and other settings…

You can double-click many knobs such as Pan, Record, Monitor, Amp Model knobs and the Out To Hardware volume knob to re-set them to their default settings.

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How to fine-tune GearBox's knobs and Model or Tone menus

You can fine-tune the setting of most of GearBox's on-screen knobs as well as the Model and Tone menus.

For knobs:

- Click the left button of your mouse anywhere on the knob or other control.
- Use your keyboard's left/right arrows to jump big steps. The up/down arrows fine-tune.
- Or, use your number keypad's / and * for big jumps and + and - to fine-tune.

For Model and Tone menus:

- Your keyboard's up/down arrows select items in the menu once you've clicked on the menu to select it.

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How to show an effect's controls without turning on an effect

To see an effect's controls without turning it on, click on the top portion of the effect's "stomp box" icon. (Click directly on the On/Off portion of the icon to toggle the effect On/Off). Windows® users can also right-click anywhere on the icon to show its controls. Mac® users can control-click.

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How to show/hide all Tone controls

Click the Collapse/Expand arrow button to the left of the Tone menu at the top left of the GearBox program's window to show/hide the Amp and Effects controls in one click. Note that this is independent of the Browser window, allowing you to keep the Browser window's contents visible and toggle your Tone controls to be shown or hidden as you need them. There are also separate show/hide arrows for the Effects section and the Browser.

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How to show/hide the Browser

The bottom portion of the GearBox window, where the GuitarPort Online content and other items are shown, is called the **Browser**. Click the arrow button at the top left side of it, to the left of the Back/Fwd arrow buttons, to show/hide the Browser. There are also separate show/hide arrows for showing/hiding the Amp and Effects controls together individually, or you can click the top-most arrow button to show/hide the Amp and Effects in one motion.

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How to show/hide the Effect control panel

It can be handy to hide the Effects' details when you don't need to fine-tune them and want more space available to view items in the Browser. Click the arrow button at the left side of the Effects area to show/hide the Effects control panel.

There are also separate show/hide arrows for showing/hiding the Amp and Effects controls together individually, or you can click the top-most arrow button to show/hide the Amp and Effects in one motion.

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How to resize the GearBox program window

The width of the GearBox window cannot be changed. However, when the Browser is expanded. The height of the main Gearbox windows can be increased to allow the Browser to take as much vertical space as you have available on your computer's display.

On Windows® - When the main GearBox window is not maximized (and when the Browser is expanded), you can click and hold the top or bottom edge of the main GearBox window and drag to make it taller or shorter. You can also click the maximizing icon (at the top right edge of the program window's title bar) to maximize its vertical size.

On Mac® – When the Browser is expanded, you can click on the bottom right corner of the main GearBox windows and drag to resize it vertically.

The Show/Hide "arrow" buttons work in conjunction with the show/hide arrows for the Effects, Browser and Track sections display to allow you to show/hide portions of the GuitarPort controls and maximize the space available for the Browser to display information.

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Use the Tuner

Click the button at the top right of the GearBox interface to display the Tuners tuner. You can then play an open single string on your guitar (or bass guitar), and the display on the right side of the tuner will show you which note that string is currently tuned to. The large meter in the tuner shows you whether the string is sharp or flat relative to that note. When the needle is pointing anywhere on the left side of the meter, your string is flat and needs to be tuned up. When the needle is pointing anywhere on the right side of the meter, your string is sharp and needs to be tuned down. The Mute/Bypass switch lets you choose whether your guitar will be muted while tuning, or if you will hear it with amp/cab/effect processing bypassed.

The Tuner's Reference control tells the Tuner what to tune to. 440Hz is the standard reference value for A and is generally used for tuning reference. Unless you have a particular need to adjust the Tuner's reference, you probably want to stick with the standard 440Hz setting for this control.

The standard tuning for guitar is, from the largest string to the smallest, E-A-D-G-B-E. Other tunings are also sometimes used. For instance, "Drop-D" tuning is accomplished by tuning the biggest string down to D instead of E. The table below provides a number of alternate tunings for you to try. Tunings are listed on the left. Columns labeled String 6 (the fattest string) to String 1 (the thinnest string) tell you the pitch to which you need to tune that string:

Tuning	String 6	String 5	String 4	String 3	String 2	String 1
Standard	E	A	D	G	B	E
Down 1 Half Step	E♭	A♭	D♭	G♭	B♭	E♭
Down 2 Half Steps	D	G	C	F	A	D
Down 3 Half Steps	D♭	G♭	B	E	A♭	D♭
Down 4 Half Steps	C	F	B♭	E♭	G	C
Down 5 Half Steps	B♭	E♭	A♭	D♭	F	B♭
Drop D	D	A	D	G	B	E
Drop D♭	D♭	A♭	D♭	G♭	B♭	E♭
Drop A	A	E	A	D	G♭	B
Drop B	B	G♭	B	E	A♭	D♭
Drop C	C	G	C	F	A	D
Open E	E	B	E	A♭	B	E
Open E7	E	B	D	A♭	B	E
Open G	D	G	D	G	B	D
Open D	D	A	D	G♭	A	D
Open A	E	A	D♭	E	A	E

Tuning	String 6	String 5	String 4	String 3	String 2	String 1
DADGAD	D	A	D	G	A	D

Note: All half-steps use flats to match the chromatic tuner.

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Metronome Tips

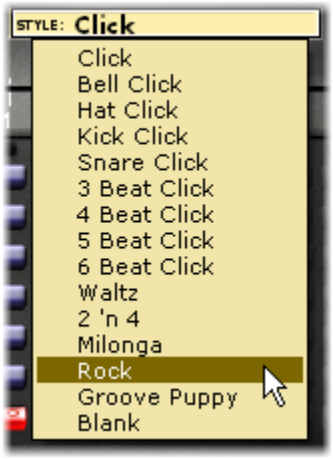
The Metronome provides a simple "beat sequencer" you can use to practice your timing. To use the metronome, press the Metronome button above the Browser. The metronome will then be displayed within the Browser panel.

Metronome Controls

- **Speed** - The metronome's tempo is controlled by the Speed knob and text box on the left and is measured in beats-per-minute. For fine tuning, click the text box and drag it or just double click on the text box and manually enter the speed you want.
- **Volume** - The metronome's monitor volume is controlled by the Volume knob. The metronome will not be sent to the digital out of GuitarPort. So you can Record Digitally without recording the metronome. So turn it up!
- **Start/Stop** - The Start/Stop switch will turn metronome play on and off.

Presets

Presets allow you to instantly play along with a variety of patterns.



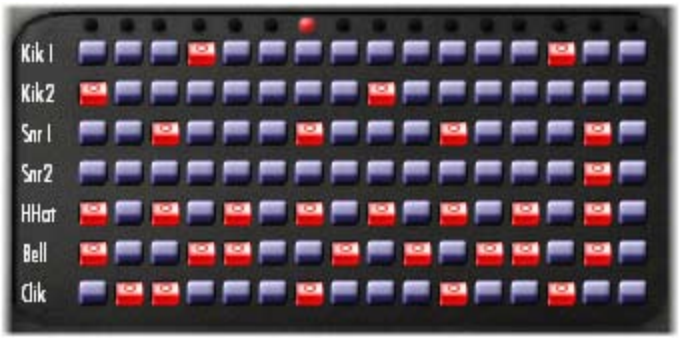
- **Style** - GearBox comes with several preset drum sequences available - just click on the "STYLE" menu and select the one you want. If you can't find what you need, you can build it with the "beat sequencer".

- **Saving** - The last modified sequence will be automatically saved as "Custom", but you may want to click the "Save" button and give your percussive creation a name. This also keeps you from overwriting it later by modifying another sequence. If you get bored of one of your creations, just load it up from the "STYLE" menu and press the "Delete" button. You can not overwrite or delete the original presets.

Building a Beat

If you don't find a pattern you like, you can customize your own.

- **Beat Slider** - The Beat Slider indicates how many beats are played before the loop repeats itself. Every tick mark is one half-beat. Two half-beats make one beat, so the numbers below the tick marks indicate the total number of whole beats played per loop. You can have a maximum of 8 beats or 16 half-beats or a minimum of 1 half-beat to every loop.



Now comes the fun part - making the drum sequence. Each row in the matrix beneath the beat slider is a separate percussion sample and each column is a beat. To sound a drum sample on a particular beat, just click the button where the percussion row meats the beat you want. Enabled beats appear red with a small circle while disabled beats are blue. You can make modifications to the sequence while running the metronome - just click the Start switch to get it going. The light will sit over the currently playing beat.

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Change and Save Tones

How to initialize a Tone

Select Basic Guitar, Bass, or Vocal Tone from the Tone menu at the top left of the GearBox program's window to call up a Tone we've included as a basic starting place for use when you're creating your own Tones (hence the name "Basic Tone").

All the effects have basic sounds programmed so they're ready to go if you turn them on. This Tone is, of course, completely customizable by you, so you can turn it into whatever you want.

Saving the Basic Tone - Once you've made alterations to this basic Tone, you can then choose **Save Tone** from GearBox's File menu if you'd like to have your changes replace the Basic Tone. Or...

Save As - Choose **Save Tone As** from GearBox's File menu if you'd like to leave the Basic Tone as it was, and save the new setting you've created as a new Tone. You'll then be given a dialog to name the Tone, and provide additional information to categorize the Tone if you like.

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How to save a Tone

You can create, edit and save your own Tones any time you like. A Tone includes your Guitar or Bass Amp & Cab, Preamp, and Effect Model selections and their settings. The yellow Tone menu at the top left of the GearBox program's window shows which Tone is currently selected and will also give you access to the new Tones you save.

If the Tone name is shown in italics in the Tone menu as shown above, it has been altered versus the saved version of the Tone. If the Tone name is shown without italics, the Tone has NOT been altered versus the saved version of the Tone. Once you've altered a Tone, if you want to keep that altered version you'll need to decide whether you want to Save your Tone or Save As, as described below.

Save Tone – If you select Save Tone from GearBox's drop down menu, your current settings will replace the Tone whose name was shown in italics in the Tone Menu. The old version of the Tone will be erased and replaced by this new Tone, which will now be available from the Tone menu whenever you want it.

Save Tone As – If you select Save Tone As from GearBox's drop down menu, your current settings will be stored as a brand new Tone. The Tone whose name was shown in italics in the Tone Menu will not be affected. The new Tone you create will be added to the Tone menu so you can call it up again in the future whenever you want it. To Save As:

- From GearBox's drop down menu, select Save Tone As. You'll be able to name your Tone and save descriptive information.
- Click the Browse button at the top of the Save Tone As dialog box if you want to choose a different location to save this Tone, or you want to create a new folder for storing Tones in. Tones must be stored within GearBox's Tones folder in order for them to be accessible from the GearBox Tone menu.
- Click on the Save button to finish saving your new Tone.

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How to change the factory Preset Tones

If you want to tweak one of the factory Preset Tones, all you have to do is:

- Select a Tone from the Preset Folder in the Tones menu.
- Make the changes you want.
- From the File menu, select Save to update the Preset Tone with your changes.
- To save your new Tone without replacing the Preset Tone, choose Save As instead.

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How to set the De-Esser

> The Female and Male De-esser Stomp effects are available in GearBox only when used with TonePort devices.

A de-esser is an audio tool designed to reduce sibilance (Sss and Shh sounds) from vocals. It does this by "listening" for audio energy focused at a selected FREQUENCY (the frequency where the objectionable part of the Sss and Shh sounds are occurring). When it hears high level audio at and around this frequency, it quickly ducks the volume by the AMOUNT you choose, effectively reducing the volume of Sss and Ssh sounds that get recorded.

To use the De-Esser appropriately, try first recording a test vocal track without it. If you hear more Sss and Shh sounds that you would like, try adding a band of EQ to that recorded track in your recording program. Set that EQ to provide a bandpass with a narrow width or Q, and set it to cut quite a bit, maybe something like -20dB. Now set the frequency for that band of EQ to one of the frequency points available from GearBox's De-Esser, and playback the recorded track, switching back and forth between enabling and bypassing the EQ to hear the results. Try different frequencies until you find the one that seems to have the most effect on the Sss and Shh sounds, then disable that EQ. Use that frequency setting in GearBox's De-Esser, set the AMOUNT knob to a medium setting, and record another test track. If all has gone well, you should hear that your Sss and Ssh sounds are being reduced, and you can then further adjust the AMOUNT knob as needed.

See the Model Gallery for specifics of the Female De-Esser and Male De-Esser Models.

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How to use the Wah and Volume effects

GearBox's Wah and Volume effects can be controlled via MIDI using a hardware controller or messages from MIDI software. See the GearBox Online Help page of the Line 6 web site to learn more about setting up MIDI control. The Wah effects can also be used without a MIDI controller for a "parked wah" sound: just turn the Wah effect on, and set its Position knob to get the sound you like.

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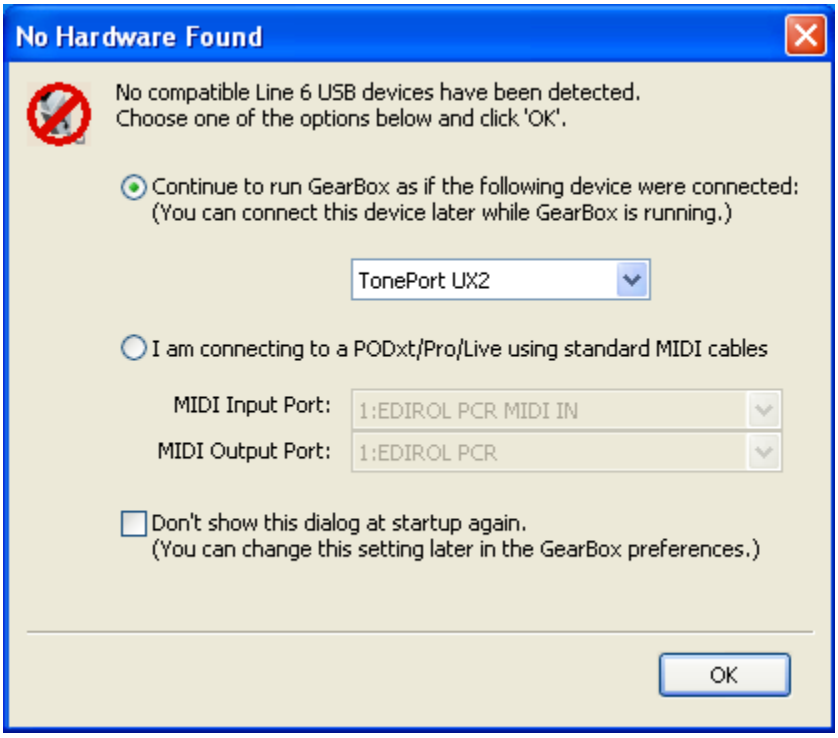
Hardware setup

How to select hardware for GearBox to use

GearBox software can be used with TonePort GX, DI, UX1, UX2, UX8, KB37, GuitarPort, PODxt, PODxt Live, or PODxt Pro* hardware. When you start GearBox, it automatically looks for the Line 6 device connected to your computer. If GearBox cannot detect your Line 6 device at startup, it will show a 'No Hardware Found' message, and ask you to choose what Line 6 device to configure for.



You can also select use GearBox's Preferences to set how it will configure itself for your Line 6 hardware. Choose Preferences from GearBox's Edit menu (Windows®) or GearBox menu (Mac®) and select the Hardware tab:

If your Line 6 hardware is connected to your computer and it's not available from the "Launch GearBox using:" menu there, there is a USB connection error. It is specifically recommended to always connect your Line 6 device directly to your computer's USB port, and not into a USB hub. USB hubs can

sometimes cause communication errors with USB audio devices.

* **Note** – On Windows® systems, it is **not** recommended that you connect both a PODxt and PODxt Pro unit to the computer at the same time. These two specific Line 6 devices utilize a common device driver, and only one can be initialized at a time.

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How to select your Preferred Audio Device

See the Sound Cards and Sound Issues section of this guide to learn how to set your Line 6 device or some other soundcard as your Preferred Audio Device in Windows® or Mac®.

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How to connect your Hardware to a guitar amp

We get this one a lot – Many Line 6 users want to know how to physically connect their hardware to a guitar amp, because they think it will sound better that way. In fact, the opposite is true: Because the audio signal we provide for direct monitoring features a virtual amp emulation that's optimized for full-range systems, the results you'll get when using a guitar amp will be less than ideal, due to the limited range of guitar speakers.

If a guitar amp is your only monitoring solution, following are a few pointers to help you get the most out this connection:

If your amp has an effect loop, plugging into the effect return is the preferred connection, for 2 reasons:

- You are bypassing the preamp's tone stack, which tends to color the signal in an undesirable fashion.
- Your Line 6 Hardware generally puts out a line-level signal, which is generally too hot for the guitar input of your amp.

If your amp has no effect loop, then plug into the front input, following these steps:

- Place all your tone controls at the 12 O'clock position.
- Turn your amp's Drive or Volume setting all the way to zero. If your amp has a Master Volume, place that control at 12 O'clock or below.
- Plug in your hardware, and slowly bring up the Drive until you hear a satisfactory level of volume, being careful not to overdrive the input.

You can also try disabling cabinet modeling, by selecting **No Cab** in GearBox's Cabinet menu, to further enhance your tonal experience.

PODxt (PODxt PRO, PODxt Live) Users: Your device features an output setup menu that optimizes the output for different monitoring systems, including the front end or the loop of a guitar amp. Please refer to your PODxt Manual for more information.

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Stay Up To Date

How to check the versions of GearBox, Line 6 hardware driver & firmware, and get updates

To easily see what version of GearBox software you are using, just go the Help menu and choose About GearBox. This also lists the credits for the creation of this software.

To check for any available updates for GearBox or your Line 6 Gear…with your Line 6 hardware USB cable connected, and with your computer's Internet connection active, launch **Line 6 Monkey** from GearBox's Help menu. Don't forget to check out all those additional items available for you in the **Optional Add-Ons** tab of Line 6 Monkey!

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How to register your Line 6 Hardware purchase

It's important to register your Line 6 hardware so that you can obtain customer support and stay informed about the latest new products and Add-Ons. Visit the Line 6 web site Support section and select the Register Gear option there.

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How to purchase Model Packs

Model Packs are additional sets of amp, cab and/or effects that you can purchase to expand your Tone possibilities for your Line 6 device! You can purchase, install and authorize Model Packs using Line6 Monkey online – you don't even need to get out of your chair! With your Line 6 device connected, just launch **Line 6 Monkey** and go to the **Optional Add-Ons** tab and see what's available for your Line 6 hardware. Follow the steps to easily purchase and download Add-Ons and start using them in minutes.

You can launch the Line 6 Monkey program from the GearBox Help menu by choosing **Update & Configure with Line 6 Monkey**.

Alternatively, you can launch Line 6 Monkey directly by going to:

- Windows® - Start Menu / Programs / Line 6 / Tools / Line 6 Monkey
- Mac® - Finder / Applications / Line 6 / Line 6 Monkey

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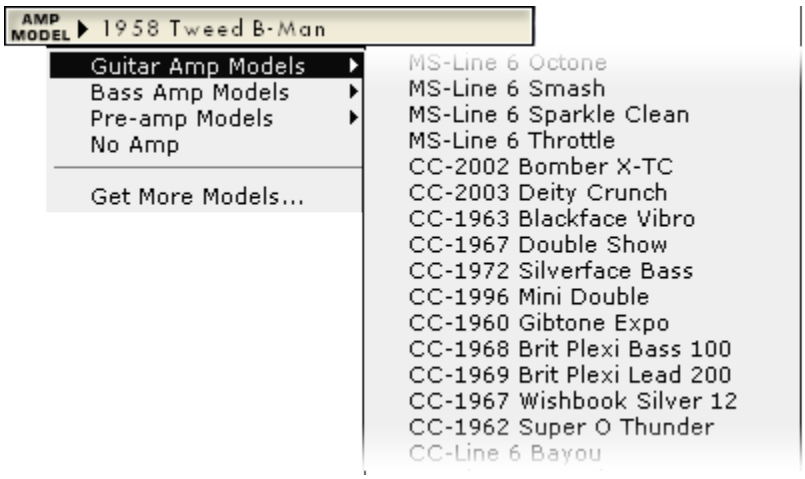
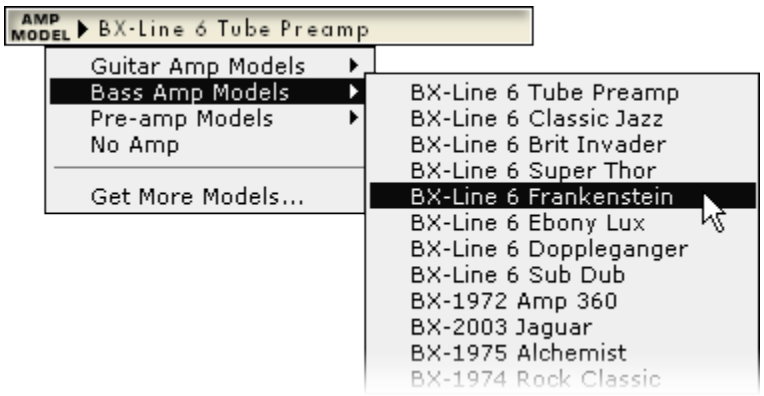
How to use your Model Packs with GearBox

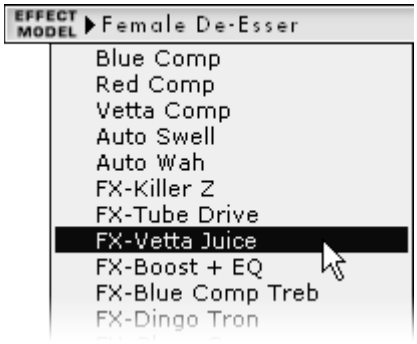
Once you've purchased and authorized your Model Packs, simply restart GearBox with your Line 6 hardware connected and you'll see the new models available within the GearBox.

The **Metal Shop**, **Classic Collection** & **Bass Expansion** pack models will appear under the AMP MODEL drop down menu with either an **MS**, **CC** or **BX** prefix added to the start of their names.





The **FX Junkie** pack models will be spread out among Stomps, Mods, and Delays and will be preceded by an **FX**.



The **Power Pack** is included as a standard feature set on PODxt family devices, and is an optional upgrade on TonePort/GuitarPort. Power Pack models will not have any special prefix, but they will appear under AMP MODEL, Stomps, Mods, Delays, and Verbs.

For more info on Model Packs, please check out the Model Pack Handbooks.

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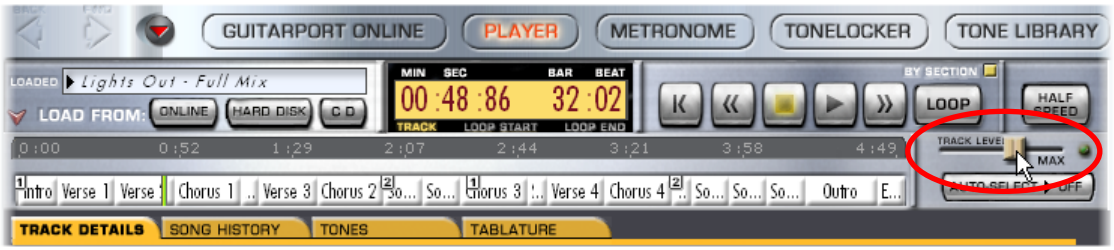
GuitarPort Online & Player Operation

How to adjust the volume balance between your guitar and the Track

Use the **Track Level** slider under the Player button above the Browser to set the level for the current Track playback…



…and use the **Volume** knob on the amp panel to set the level of your guitar signal

More tips…

- Guitar still too quiet versus your Track? Try Guitar too quiet in the Troubleshooting section.
- For Track Level problems, see Track Level issues Troubleshooting.
- Getting distortion or clipping as you try to make these adjustments? See Noise and Distortion troubleshooting.

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How to connect to the Internet

You need an Internet connection to use the GuitarPort Online features of GearBox. If you do not already have an Internet connection, you will need to contact an ISP (Internet Service Provider) and purchase an Internet access plan from them. We recommend a "broadband" connection such as DSL, ISDN or cable modem for use with GuitarPort Online. LAN (Local Area Network) connections such as many businesses have also should work well with GuitarPort Online (you can tell the boss you're doing "research"!). You can also use a "dial-up" connection, but these are generally slower and downloading Tracks from GuitarPort Online will take some time over a dial-up connection.

Note – you will need to enable Cookies in your Internet Browser software to successfully connect to GuitarPort Online.

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How to disable Download Accelerators

Please see the troubleshooting topic for Download Errors – Download Accelerators.

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How to find FAQs

For the latest Frequently Asked Questions and up-to-the-minute support information, please visit the GearBox Online Help page of the Line 6 website. You can also go to the Line6.com web site directly, navigate to the FAQTRAQ system within the Support section and search for information on all Line 6 products!

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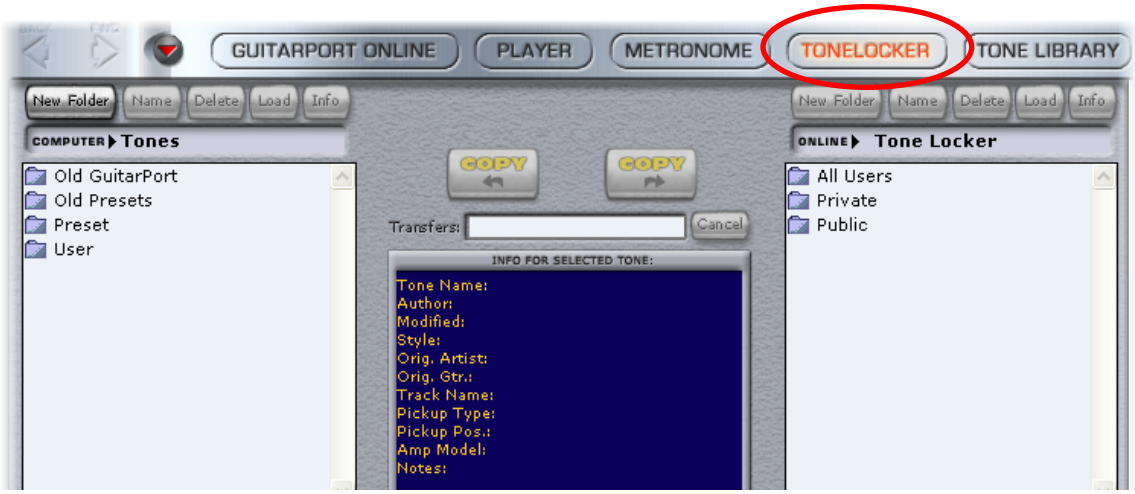
How to find GearBox Tone and GuitarPort Online Track files on your hard disk

GearBox stores Tones and GuitarPort Online Tracks as files on your hard disk. By default, the GearBox installer creates a GearBox folder and stores all your Tone files in this location:

Windows® - My Documents\Line 6\Tones\GearBox

Mac® – Documents/Line 6/Tones/GearBox

Tones must be stored in this GearBox folder to appear in the Tone menu at the top left of the GearBox window, and to appear in the Tone Locker. You can organize your Tones without leaving GearBox by using the Tone Locker, which is available from the Tone Locker button above the Browser.



Additionally, by default the GearBox installer creates a Tracks folder and stores your GuitarPort Online Tracks within it at this location:

Windows® - My Documents\Line 6\Tracks

Mac® – Documents/Line 6/Tracks

Alternatively, Tracks can be stored anywhere on your hard disk, and can be opened from The GearBox

File menu - Open command, or via the LOAD FROM HARD DISK button available from the Player button above the Browser.

To get to the default Tones and Tracks folders and access the Tone and Track files outside of the GearBox program:

Windows®

- Double-click the My Computer icon on your desktop.
- Double-click Drive C:, then Program Files, then Line6.
- Double-click the Tones or Tracks folder.

Mac®

- Open the Finder and select Documents.
- Select Line 6 and then look in the Tones or Tracks folders.

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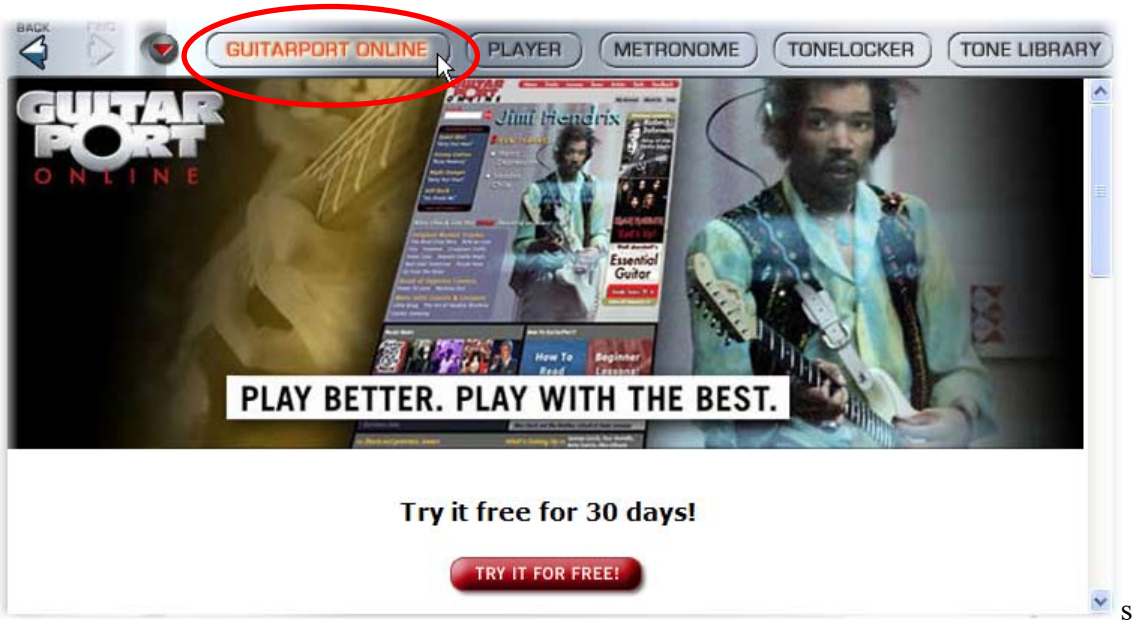
How to join GuitarPort Online

If you're not already a member of GuitarPort Online, click the GuitarPort Online button above the Browser with your Internet connection active and the Browser will show you how to become a member or take a tour to see what GuitarPort Online is all about.



s

If you want to be a better player, and learn more licks, technique and songs, this is the place you need to be!

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How to load an MP3, WAV or AIFF file

Click the LOAD FROM HARD DISK button under the Player button above the Browser to load an MP3, WAV or AIFF file from your hard disk to use as a GuitarPort Track.

The recently used Tracks are also available in the GearBox *File* > *Track* > *Recent Tracks* menu

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How to load a Track from an Audio CD

Note – you do not need to be a GuitarPort Online to use the Player to load CD Tracks or audio files from your hard drive and play along with them!

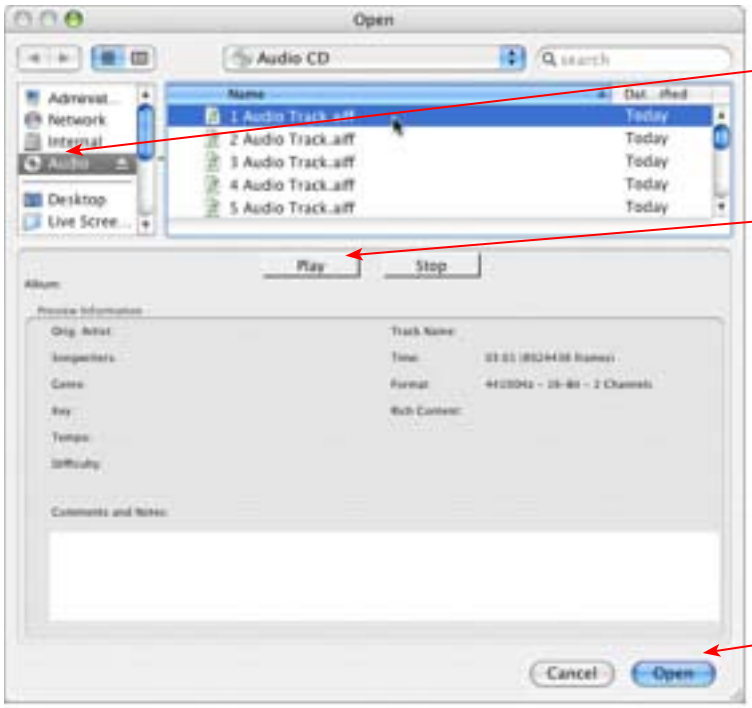
GuitarPort can load audio from a standard Audio CD. The steps are slightly different depending if you are on Mac® or Windows®:

Mac®:

- Click on the Player button above the Browser.

- Insert an Audio CD (you can disable auto-launch of CD player programs).
- Click LOAD FROM: CD, select the Track you want, and click the Open button.

- This launches the Open window, where you can choose your CD drive to access its contents.



Choose your CD drive here to view its contents

Select a track and click Play to preview the track before loading it

Click Open to load the selected track into the Player

- Once you click Save, the CD track is automatically loaded in the Player and played directly from your CD drive. You can play just like with any other GPO Track or Hard Disk file using the transport.

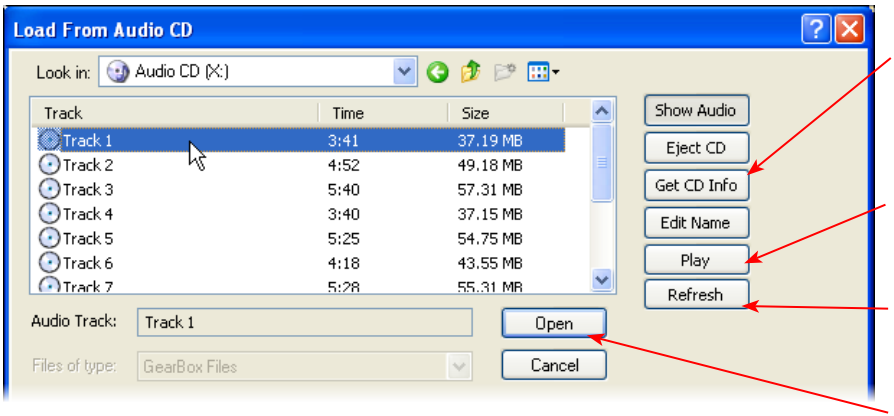
TIP – You can launch the Mac® iTunes® program if you want to have it connect to the Internet and retrieve the CD Artist name and Track info for the CD. Once iTunes® does this, you can close it and the Open dialog will then show all the actual CD Track names since they will be stored in memory from iTunes®.

Windows®:

- Click on the Player button above the Browser.

- Insert an Audio CD (you can disable auto-launch of CD player programs).
- Click LOAD FROM: CD, select the Track you want, and click the Open button.

- You should now see the contents of your audio CD in the window.



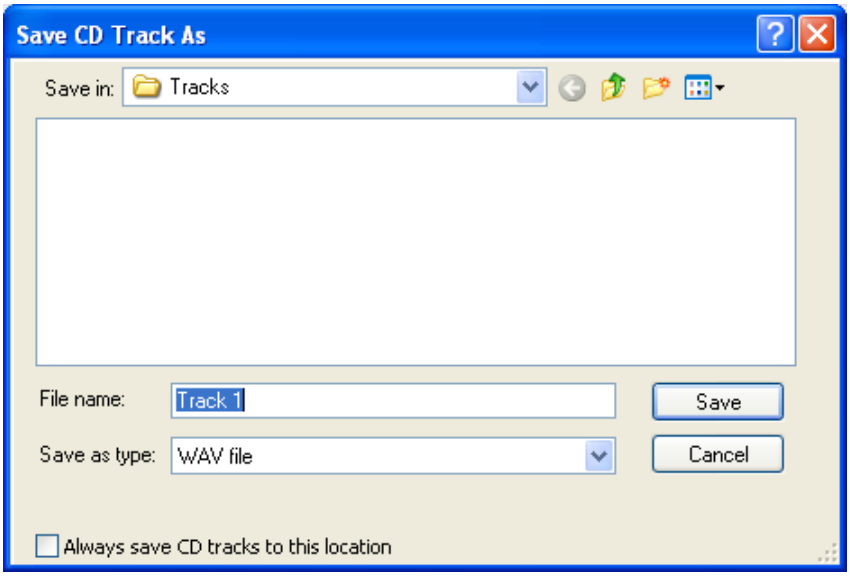
If you want the dialog to retrieve the actual name of the CD, Artist and Track names, click the Get CD Info button.

Select a track and click Play to preview the track before loading it.

Click Refresh if you have a CD inserted but its tracks do not appear in the list.

Click Open to load the selected track.

- Once you click Open, you are prompted where to Save a copy of this Track – this "rips" the CD track to your hard drive as a WAV file. The default Save directory is your \My Documents\Line 6\Tracks folder.



- Once you click Save, the CD track is automatically loaded in the Player and you can play this track just like any other GPO Track or Hard Disk file using the transport.

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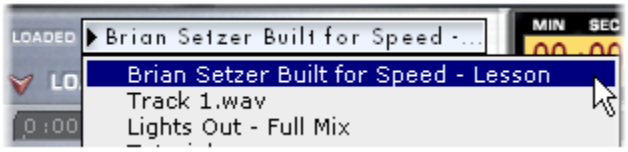
How to load a Track file from GuitarPort Online

Note – you must be a GuitarPort Online member to gain access to GuitarPort Online tracks. For membership details, please visit www.guitarport.com

Click the LOAD FROM: **Online** button in the Player to load a Track from GuitarPort Online.

The recently used Tracks are also available from the Track Loaded menu:



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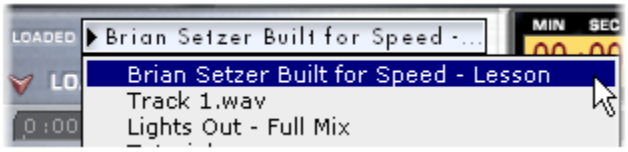
How to load a Track file from your hard disk

Click the LOAD FROM: **Hard Disk** button in the Player to load a GuitarPort Track file that you have saved to your hard disk.

The recently used Tracks are also available from the Track Loaded menu:



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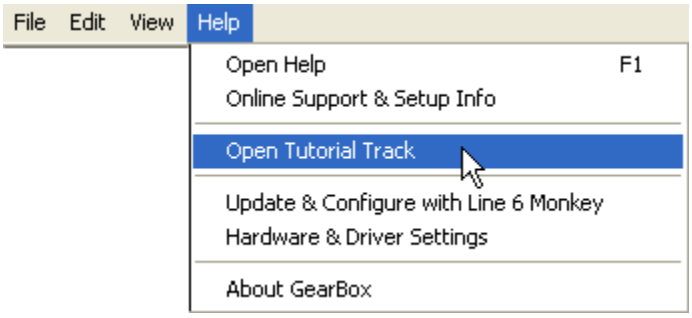
How to load GuitarPort's Tutorial Track

GuitarPort includes a Tutorial Track to introduce you to its basic features and operation. You can load it from the Help menu at the top edge of the GearBox program's window, by selecting **Open Tutorial Track**.



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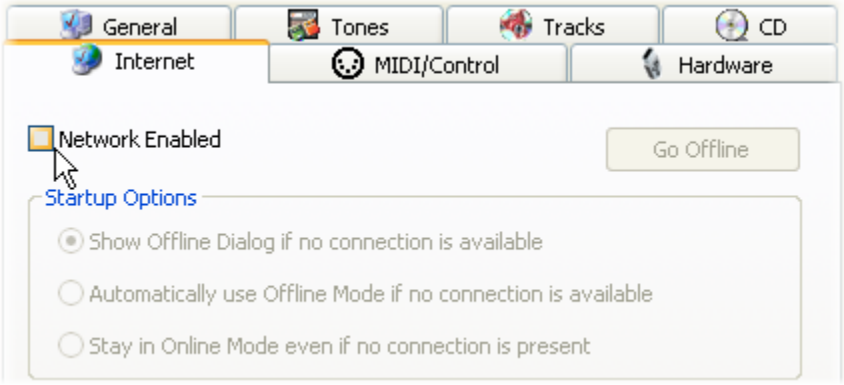
How to prevent GuitarPort Online from trying to connect to the Internet

By default, GearBox is configured so that GuitarPort Online will attempt to automatically connect to the Internet as needed to access the online features. You can disable the auto- connect behavior via the GearBox Preferences:

- Select Preferences from the GearBox menu (Mac ®) or Edit menu (Windows ®) and click the Internet tab.
- Click the Help question mark at the top of the dialog box and click an item for details.
- **Uncheck** the **Network Enabled** box and then click OK to exit the Preferences.



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How to set the Loop start and end points

When the Loop is on for the Track loaded in the Player button above the Browser, you'll be able to see and set the Loop's start and end points in the Track Sections Display:

- Click the Loop button to light it red if it's not lit already.
- The looped portion of the Track is shown in orange.
- Light the BY SECTIONS button if you want the loop points to "snap" to the sections.
- Click, hold and drag the orange arrow at either end of the loop to set the start/end.
- There are also Hot Keys for setting Loop start, end and on/off.
- You can also double-click a section to set the loop start and end points to loop that section.
- You can hold the SHIFT key and double-click a section extend the loop to include that section.
- If you choose Save Track from the GearBox File menu and save the Track to your hard disk, the Loop points will be saved with the track.

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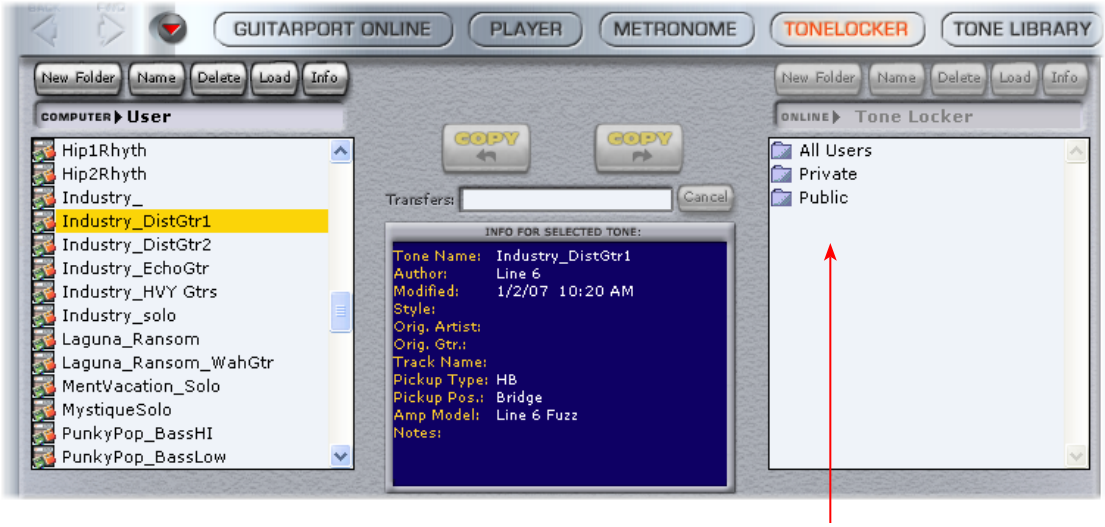
How to share your Tones with other GuitarPort users

If you are a GuitarPort Online subscriber, you can put Tones you want to share in the **Public** folder of your Tone Locker. From there, any other GuitarPort Online member can access them and experience your Tone-creation genius! Tone is your Private folder will not be visible to other GuitarPort Online members.



GuitarPort Online members have access to the Online Tone Locker, which appears in this right pane of the Tone Locker

You can also, of course, share Tones that are stored on your local hard disk by emailing them as individual file attachments to your friends who also have GearBox.

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How to show/hide all Tone controls

Click the Collapse/Expand arrow button to the left of the Tone menu at the top left of the GearBox program's window to show/hide the Amp and Effects controls in one click.

Note that this is independent of the Browser window, allowing you to keep GuitarPort Online visible and toggle your Tone controls to be shown or hidden as you need them. There are also separate show/hide arrows for the Effects and the Browser sections as well.

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How to show/hide the browser

The bottom portion of the GearBox window, where the GuitarPort Online content and other items are shown, is called the Browser. Click the arrow button at the top left to show/hide the Browser.

There are also separate show/hide arrows for showing/hiding the Amp and Effects controls together individually, or you can click the top-most arrow button to show/hide the Amp and Effects in one motion.

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How to show/hide the effect control panel

It can be handy to hide the effect details when you don't need to fine-tune the effects, and you want to have more space available to view items in the Browser. Click the arrow button at the left side of the effects area to show/hide the Effects control panel.

There are also separate show/hide arrows for showing/hiding the Amp and Effects controls together individually, or you can click the top-most arrow button to show/hide the Amp and Effects in one motion.

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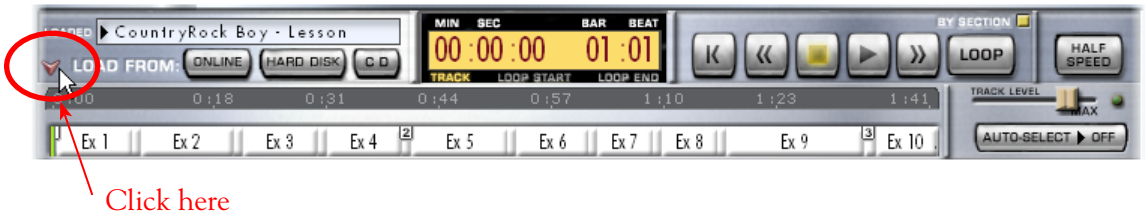
How to show/hide the Track sections display



When you've selected the Player button above the Browser, you'll see a display like the one above. You can click the arrow button to the left of the GuitarPort Online tab button to show/hide the bottom portion of this display. Separate show/hide arrows control the display of tone controls together, Effects and the Browser.

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GearBox Plug-In

Welcome to the wonderful world of GearBox Plug-in, where legendary studio-standard tone and classic vintage effects are all available to you within your favorite recording application, in a flexible native software plug-in format!

A Quickie Plug-in Primer

There are many types of plug-ins in the world of software. Plug-ins are relatively small applications that can only run when loaded inside a compatible host application. Plug-ins operate within the host application to extend the capabilities of the host. In the world of music software, audio plug-ins find frequent use inside audio/MIDI host applications, commonly referred to as DAWs (Digital Audio Workstations). Audio plug-ins provide signal processing for your audio tracks or live audio input.

A helpful analogy for plug-ins is to think of them as effects pedals. Effects pedals change the tone of your bass or guitar before the signal reaches your amplifier. As with pedals, rack effects units, or any other conventional piece of outboard gear, plug-ins provide graphical controls for whatever parameters they might expose. For example, a distortion plug-in will most likely have similar controls to a typical distortion pedal (such as drive, gain and tone). Visually, plug-ins often resemble the physical gear they emulate.

When working with DAWs, using plug-ins provides numerous benefits over using outboard effects like pedals or rack processors. Here are a few of the primary benefits:

- Plug-ins are "non-destructive" to your audio track – this means that you can add or remove effects and tweak their settings as often as you like without actually affecting the original audio recording. Recording with outboard gear means that the signal going to tape will be "wet" (with effects and amp tone) and cannot be changed without recording another pass.
- Plug-ins sound the same way twice. Because you can store plug-in settings as presets, precise settings can be loaded reliably with tweaking. Every time you go back to work on a specific song, you can rest assured that your tones will be identical to the last session.
- Plug-ins are automatable. Host applications provide easy ways to create and manipulate automation, giving you surgical precision of your tone without having to "ride the faders" of external gear during a record pass.
- Plug-ins don't break, corrode, take up space on your floor or get stolen

MIDI Remote Control and Plug-in automation

Most audio plug-ins are automatable, meaning their parameters can be manipulated in real-time by some method. The two most prevalent methods are MIDI automation and plug-in automation. Both methods provide unique benefits.

MIDI automation means using MIDI messages, either from an external controller like a KB37, or from the host application, to modify parameter settings on the target plug-in. Most host applications, such as Cubase or SONAR, provide robust MIDI sequencing capabilities, allowing you to literally draw MIDI controller changes (MIDI automation), which then get sent to track plug-ins or externally, to outboard gear. The latter example is the most common use of MIDI before the rise in popularity of plug-ins.

Today the most common use of MIDI with plug-ins is simply to control them from a tactile control surface or, in the case of software instruments, from a MIDI keyboard. This is called MIDI remote

control, because the MIDI control messages are coming from an external (remote) source. To successfully use MIDI remote control, you must know what parameters respond to a given MIDI CC function. Manufacturers typically supply this information with their product.

Plug-in automation means controlling plug-in parameters from with the host application. Conceptually this is similar to MIDI automation, in that you create automation within the track of the host application. The automation sends parameter change values to the plug-in. But there are a couple distinct advantages:

- Plug-in automation is sample accurate (far more accurate than MIDI). This high resolution allows you to create smooth curves and fades, without any stair-stepping effect, ideal for critical, professional applications.
- Plug-in automation parameters carry the actual names of the parameters, where as MIDI requires mapping generic MIDI control functions to various plug-in parameters.

Plug-in Formats

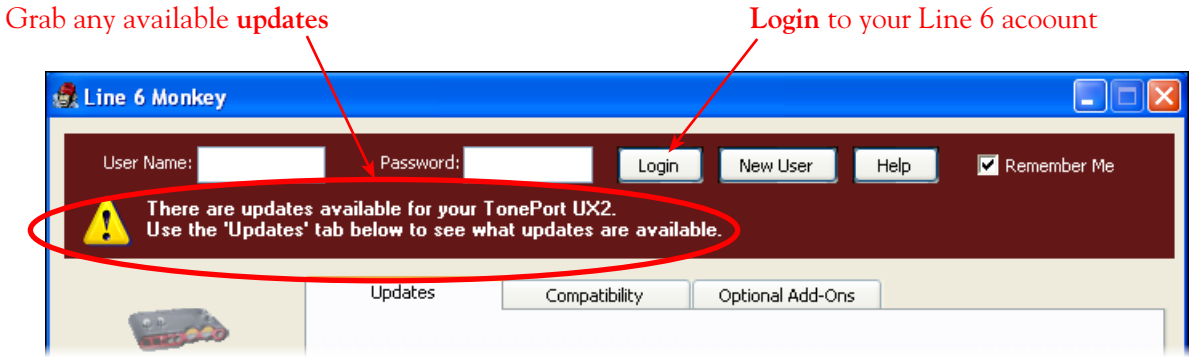
There are quite a few available plug-in formats in the digital audio recording world. The GearBox Plug-in uses the **VST**® (Virtual Studio Technology) format for Windows® recording environments, and the **AU**® (AudioUnits) format on the Mac® platform, and **RTAS**® (Real Time Audio Suite) for both Mac and Windows, for compatibility with the vast majority of audio recording software on the market.

Activating the GearBox Plug-in

So how do I get the GearBox plug-in, you ask? The upgrade process is easy – make sure your Line 6 Hardware is connected to your computer (with an internet connection), and follow these steps:

Launch Line 6 Monkey

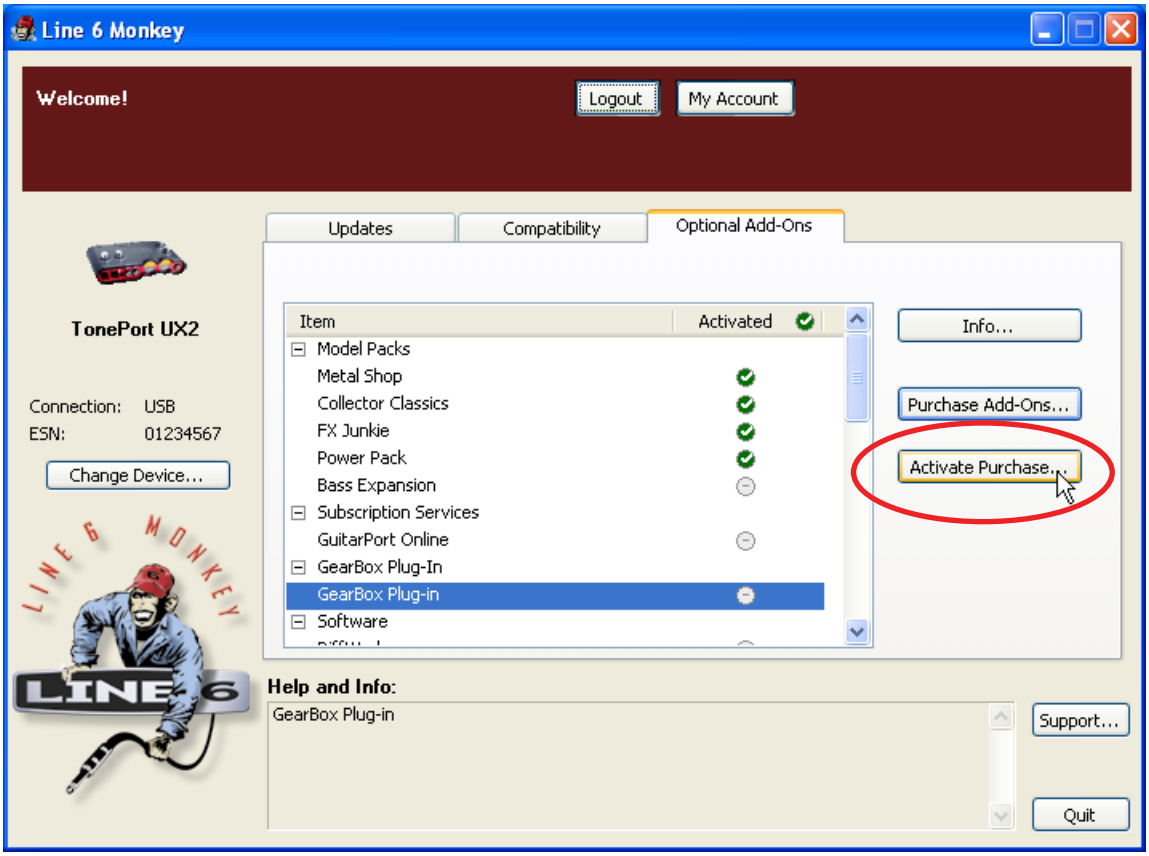
You'll need to log into your Line 6 account, and make sure that your hardware is fully up-to-date. If this all new to you, get help here.



TonePort DI Silver/Gold bundle customers: The GearBox Plug-in is included in your purchase, and needs only to be enabled on your computer. This way, please…

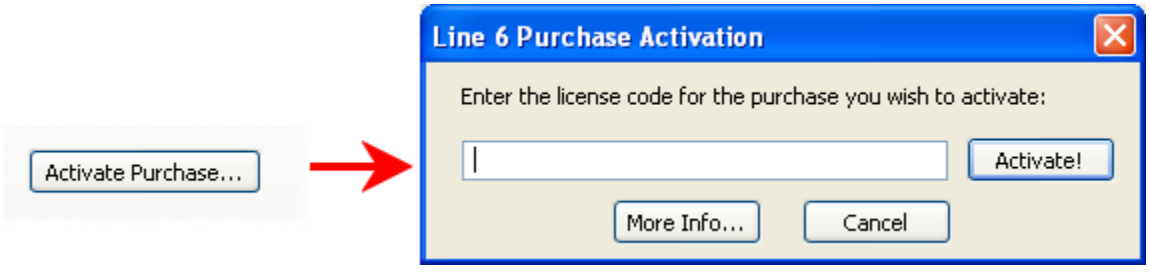
Purchasing the GearBox Plug-in

Click on the **Optional Add-Ons** tab, select **GearBox Plug-in**, then click on **Purchase Add-Ons**. You will be taken to the **Line 6 Store**, where you can purchase a license for the plug-in. Follow the instructions on the resulting page to receive your **activation key**.



Activating the Plug-in

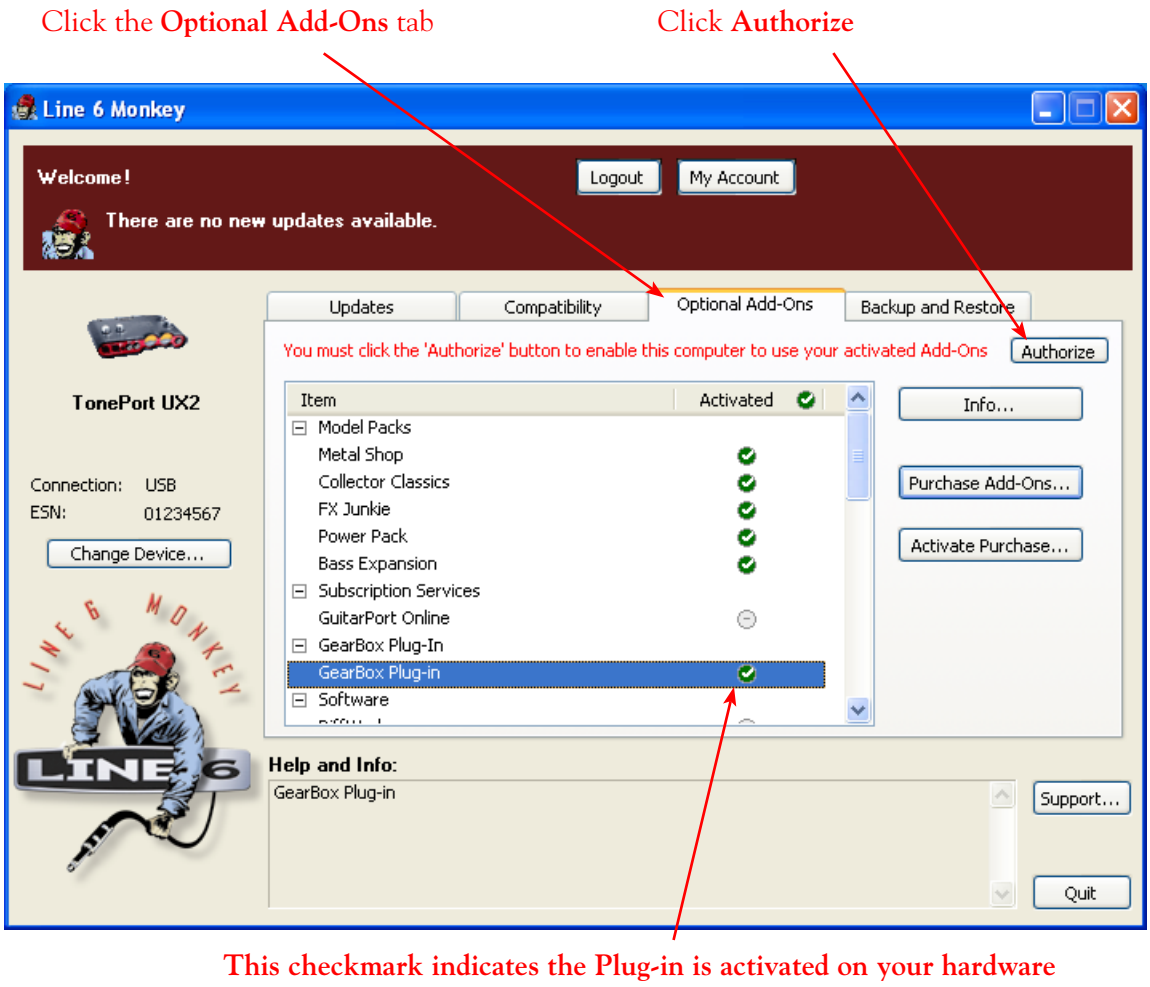
In Line 6 Monkey, click on **Activate Purchase**. A window will pop up, that will prompt you to enter the activation key you just received.



Line 6 Monkey will connect to the server to validate the license, and program your hardware. That's it, you're done! You are now ready to use the GearBox Plug-in with your favorite recording application.

TonePort DI Customers

Your hardware comes with the GearBox Plug-in activated from the factory, so the Line 6 Monkey application will display an extra button for you, as shown:



When clicking the **Authorize** button, Line 6 Monkey will connect to the server and enable your computer to use the activated add-ons. Tada! You are now ready to use the GearBox Plug-in with your favorite recording software!

GearBox Plug-in Controls and Operation

The GearBox Plug-in Graphical User Interface or GUI (you guessed it, it's pronounced "gooey") is remarkably similar to that of the GearBox application, so we invite you to refer to the GearBox Standalone Application section for a description of all the controls and functions. In this section, we'll point out the differences between the Plug-in and its full-version brother.

You can create Tones within the Plug-in, which you can save for later recall, or you can use any of the GearBox application Tones. GearBox Plug-in Tones are totally compatible with its full-version counterparts, and all Tones are stored in one convenient folder on your hard drive (the default location is **My Documents/Line 6/Tones/GearBox** on Windows®, and **Documents/Line 6/Tones/GearBox** on Mac®).

Where can I find the GearBox Plug-in on my computer?

Your favorite recording application must locate the GearBox Plug-in in order to use it. Some applications scan your hard drive for all available plug-ins while others need you to point them to the correct folder.

On **Windows®** computers, you can define where the GearBox Plug-in is installed during the GearBox installation process. If you didn't specify a location, then the **VST** plug-in is installed by default in the **C:\Program Files\Line6\VstPlugIns\Line 6** folder. **RTAS®** is installed to **C:\PROGRAM FILES\Common Files\Digidesign\DAE\Plug-Ins\Line 6**

On **Mac®**, the **AudioUnits®** specification requires that the GearBox Plug-in be installed in **Library > Audio > Plug-Ins > Components**. **RTAS** is installed to **Library > Application Support > Digidesign > Plug-Ins > Line 6**

For detailed help on using the GearBox Plug-in with today's most popular audio recording software applications, please visit the GearBox Online Help page.

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You probably know by now that we're relentless tone fanatics here at Line 6. Once we've set our sights on creating a software emulation of a particular piece of gear, we go to great lengths to be sure that we've gotten our hands on the very best example of an amp, preamp, effect or speaker cabinet that we can find to study. We will (and have) scoured the globe in search of just the right specimen — that one, very particular piece of "holy grail" gear that has the magic. In fact, we pride ourselves on hand selecting each and every one of the amps, effect, preamps and speaker cabinets that we studied to create the software models in GearBox and all of Line 6's other products. The result is an extensive line up of Models, some completely original to Line 6, some based on well loved classics.

To follow is the list of amp, cab and FX models that are included as "**Factory-Standard***" models for TonePort. Many Models in this list are also included as standard with GuitarPort hardware. For the breakdown of the Factory-Standard Models for each Line 6 device, please see the Model List section in this document. For descriptions of the Factory-Standard Models included in PODxt, PODxt Pro and PODxt Live devices, please refer to your PODxt Pilot's Handbook, and more info is also available in the Model Pack Handbooks.

*** Factory-Standard Models** are those that are included as permanently installed models on a Line 6 device. These models cannot be transferred to other Line 6 devices. However, it is possible to transfer the License Key that you are granted for any Add-On Model Packs that you purchase separately between any supporting Line 6 device that you own by using Line 6 Monkey. Please visit the Line 6 Online Support pages for more about Transferring License Keys.

Guitar Amp & Cab Models

Line 6 Chemical X

Just like those secret ingredients that detergent companies used to crow about (Now! Contains Ingredient X-27!), the Line 6 Sound Design guys wouldn't tell us anything about what the inspiration for this one was or who it might have belonged to (no matter what type of bribery we attempted). Suffice to say that it's a very punchy hi-gain sound that also cleans up quite nicely when you roll your volume back.

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Line 6 Insane

Our goal here was to provide you with as much input gain distortion as possible short of complete meltdown. You get ridiculous, rich tube drive to shame the distortion of pretty much any amp on the planet while still retaining tonal definition and character. As a result, you get way lots of bottom end and cabinet character with tons of wide-ranging tone shaping. Crank up the Drive control and take no prisoners!

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Line 6 Piezacoustic 2

This one is designed to work with the piezo output of solid body electrics that have one of those newfangled bridges with the 'acoustic' pickup built in. Since you don't have to worry about the body shaking itself to pieces with feedback on that type of guitar, we've cooked up this model with more low-mids and low frequencies.

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Line 6 Spinal Puppet

You know how, when you're playing head-bangin' music, you look out into the audience and see all those heads bobbing up and down? Those are Spinal Puppets. Need we say more?

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Line 6 Treadplate

Looking for tight, high gain tone? The kind of sound that powers classic Metallica or Dream Theater tracks? Then you've come to the right place, my friend. This model lets you dial in plenty of distortion perfect for chunk-chunk-chunking, and also ready to power some mosh pit punking. Its tone controls have plenty of range to let you scoop out your mids, or beef up the bottom for just the tone you need.

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1953 Small Tweed

Modeled after* a 1953 "wide panel" Fender® Tweed Deluxe Reverb®, the 1953 Small Tweed Amp Model will snarl with the best of them. The original amp had only a single tone control, essentially a treble roll off. We set up the Treble knob to give you this treble roll off when using this Amp Model, which left us with the Bass and Middle knobs just sitting there, so we set up the Bass and Middle as post-Amp Model controls, which essentially lets you EQ up your tone as you would do on a mixing console after recording your amp. Set the Bass and Middle knobs at halfway to put them in 'neutral', turn the Presence to 0, and try the Treble knob somewhere above halfway for a classic Tweed sound.

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1958 Tweed B-Man

The 1959 Tweed B-Man Model is based on* the classic '58 Fender® Bassman® 4x10 combo, the amp that started it all — instant rock and roll tone. Originally a bass guitar amp, the Bassman® became a Blues staple for 6-string guitarists. It has the fat bottom end you'd expect from a bass amp, but also has the Fender® twang on the top. Incidentally, when Jim Marshall built his first amps with Ken Bran they were heavily influenced by the early Bassman®.

One of the interesting things about the Bassman® is just how interactive the Middle and Treble controls are. The Middle control isn't a bandpass, as in most tone control setups. Instead, it's almost like a second treble control. The two are additive, so if you're running your Middle knob higher than halfway up with this model, you'll find that the Treble control might give you more bright than you really want. On the other hand, when you turn the Middle knob down, you'll probably want to boost the Treble.

The Bassman®, like many of the amps modeled for GearBox, didn't have a master volume. So to get

the kind of tone that the Bassman® can deliver at higher gain settings, you had to crank it up loud enough to do some serious damage to anyone who might be standing close by. Now you can get that kind of tone at a bedroom or studio level — or even through your headphones! Try a Drive setting of about 4 or 5 — it's guaranteed to dredge up the best R & B licks you know.

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1964 Blackface 'Lux

The Holy Grail for many blues, country, and "roots" players has been a blackface Fender® Deluxe Reverb®. After listening to quite a few candidates back when we were seeking the ultimate Deluxe Reverb® for our 1964 Blackface 'Lux model to be based on*, we stumbled upon an extremely cool '64 Deluxe Reverb®. We still haven't found one better.

Most players love a Deluxe Reverb® when it's turned up to about 7 for a nice gritty sound that cleans up when you back off your guitar's volume knob just a little. Notice how the tone control response changes as this Amp Model's Drive is changed: clean settings are crisp and present, while more driven settings will mellow the high end. This is typical of what you get from a Deluxe Reverb® and is nicely captured here. The Deluxe Reverb® itself has only Bass and Treble controls, leaving us, once again, with the prospect of a couple knobs with nothing to say for themselves. But fear not; in this case, we've set up the model's Middle knob so you can add some post-Amp Model Midrange contouring for a little more flexibility, while Presence adds, well, Presence. Once again, set the Middle knob to its "neutral" 12 o'clock position and the Presence knob to 0 for the classic Deluxe sound. Tweaked up right, this tone will cut through and sing. We jacked into Input 1 of the Vibrato Channel to get this model cooked up.

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1967 Class A-30 Top Boost

The 1967 Class A-30 Top Boost model is based on* a Vox® AC 30. Music was changing in the early '60s and guitarists were asking for more brilliance & twang. So the Jennings Company, makers of Vox® amps, decided to add Treble and Bass controls (and an extra 12AX7 gain stage, incidentally) in addition to the Treble Cut knob it already had (which in actuality was a sliding bandpass filter that always seemed like it was working backwards); this additional circuit became known as Top Boost.

The AC 30 with Top Boost was the amp made famous by many British invasion bands. Much of the unique character of the Vox® sound can be attributed to the fact that Class A amps overdrive in a very different way than Class AB. Brian May of Queen, Mike Campbell of Tom Petty's Heartbreakers, and The Edge of U2 have all used classic AC 30s to make their music. Although usually played fairly clean, a cranked AC 30 has a great saturated lead tone, a la Brian May on the early Queen albums.

On this Amp Model, the Middle control acts like the original Cut knob on the AC 30. We plugged into the Hi gain input of the AC 30's Brilliant channel when creating it. We also turned the tone controls around, since original Top Boost amps had the bass and treble turned all the way down when the knob was all the way up. Go figure.

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1968 Plexi Lead 100

The 1968 Plexi Lead 100 is modeled after* the infamous '68 Marshall® 'Plexi' Super Lead — coveted by tone connoisseurs the world over. We literally scoured the world for this particular amp, finally finding a great example of a Super Lead languishing (we like to think fate preserved it for us) in Holland. By the time this amp was built (ca. 1968), Marshall® had completely changed the circuitry away from the Fender® 6L6 power tube heritage and moved to an EL34 tube. Another major tone difference was due to the necessary output & power supply transformer changes. All this mucking about added up to create a tone forever linked with Rock Guitar. Amps of this era didn't have any sort of master volume control, so to get the sound you'd have to crank your Super Lead to max — just the thing to help you really make friends with the neighbors. Hendrix used Marshall®s of this era; a decade later Van Halen's first two records owed their "brown sound" to a 100-watt Plexi (Our Super Lead, in fact, has the 'lay down' transformer that was unique to '68 models, the same as Hendrix and Van Halen's Marshalls®.). To get a crunch sound out of a Plexi, you would likely crank the input volume and tone controls (to 10!). You'll find that, in keeping with our "make-it-sound-a-whole-lot-like-the-original" concept, this model is set up to do pretty darned near the same thing.

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1968 Plexi Jump Lead

Guitar playing is all about experimentation, isn't it? That, and finding all the possible ways to get more distortion out of whatever gear you have at hand. One of the fun things you can do with a Plexi is take a short guitar cable and jumper channel I and channel II (as they're frequently numbered) together for a little

extra saturation. Some guys loved this sound so much that they pulled the chassis and permanently wired a jumper into the amp. Being the obsessive/compulsive tone freaks we are, we just had to give you the 1968 Plexi Jump Lead model to give you a sound based on* of this setup.

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1987 Jazz Clean

The 1987 Jazz Clean Amp Model is modeled after* the classic Roland® JC-120.

This transistor amp was known for a strident clean sound and built-in stereo chorus. When using the JC-120 model, try cranking up the Treble for a shimmering clean sound that'll cut through just about any mix. It's also perfect for that 80's "new wave" sound (after all, it was Andy Summers' favorite amp with The Police).

You should also try setting all the tone controls at 12 o'clock for a darker jazz tone. It'll give you an essentially flat response, providing a balanced tone across the fret board for jazz chord melodies or single-line phrasing.

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1990 Brit J-800

The 1990 Brit J-800 Amp Model is based on* a Marshall® JCM 800.

Turn to this Amp Model to conjure up tones of the coveted JCM 800, one of Marshall's most universally acclaimed modern amps. This updated version of the Plexi continued Marshall's heritage with added gain and edge for a new generation of rock guitarists. One of the biggest differences here is that the tone controls are located after the preamp tubes.

Incidentally, some versions of JCM 800's get their distortion by clipping a diode. The amp we modeled uses a tube for distortion.

The JCM 800 is, of course, the metal sound Marshall made famous. And although not many people play Marshalls clean, it is a great tone, so you should also be sure to check out this model with a low Drive setting. Of course, you can always pump up the drive and rage...

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1993 Solo 100 Head

The 1993 Solo 100 Head Amp Model is based on* a Soldano SLO-100 head.

Mike Soldano first came to fame as the guy who could do all the really cool mods to your Marshall®. It wasn't long before he started building his own 'hot-rod' amps — sporting chromed transformers and chassis, no less. Mike's amps are also famous for their bullet-proof construction and military spec wiring and components.

While primarily known for its high gain personality, the SLO-100 has a great clean tone as well. Eric Clapton put Soldano on the map when he played "Saturday Night Live" with his Soldano SLO-100.

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2001 Treadplate Dual

The 2001 Treadplate Dual Amp Model is based on* a 2001 3 Channel Mesa/Boogie® Dual Rectifier® Solo Head. The Dual Rectifier® was part of Boogie's more modern, high gain approach for that "big hair" sound. In contrast to the earlier Boogies, the Dual Rectifier's tone controls have more influence at high gain settings, so you can scoop the mids and increase the bottom end.

We used Channel 3 on the Modern setting for this one with the rear switches set to Bold and Tube Rectifier®, respectively.

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Brit Gain 18

Based on the Marshall® 1974X "authentic re-issue" of the famous 1974 18W Combo from the late '60's. (brief editorial aside: Marshall® has had a long tradition of coming up with model numbers that can easily be taken for years. The Model 1974 combo was manufacturer from 1965 to 1968, the Model 1961 and 1962 combos were first made in 1965. Is it any wonder we look confused sometimes?). The 1974 has a basic preamp, (gain and tone controls) and a cathode biased twin EL84 power amp. It is a great recording amplifier, with a wonderfully com-pressed and harmonically rich tone.

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Citrus D-30

In 1968, in a little music store on Old Compton St. in London, Clifford Cooper was having trouble getting amplifier manufacturers to take him seriously as a dealer, as they thought he was too young, and his shop too small. So he did what seemed only logical to an enthusiastic young man with a background in electrical engineering – he designed and built his own amplifiers. Since he had come into a large quantity of bright orange vinyl that was what he used to cover his cabinets. It wasn't long before high-profile musicians like Fleetwood Mac, Stevie Wonder, and Frank Zappa were beating a path to his door. This model is based on an Orange® AD30TC head, a 30 watt, Class A number with a great personality that gracefully marries vintage British mid-gain breakup with modern shimmer and presence. Back off the drive and you'll get chimey boutique tones, dig in with the drive up and the AD30 purrs pure Brit Rock tone.

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Tube Instrument Preamp

Before we created the dedicated Preamp Models featured in GearBox, we developed this simple tube preamp model for the Amp Model slot of our PODxt® and GuitarPort®. This model was created to give PODxt and GuitarPort users a solution for plugging the output from an acoustic guitar's piezo pickup or a bass into GuitarPort or PODxt hardware. It can also deliver some tasty tones with a standard electric guitar. With the tone controls at 12 o'clock, the EQ is "flat."

Adventurous recordists will find that it can even be used to add some tube warmth or distorted grind to just about anything — warming up keyboards, crunching up drums, and fuzzing up vocals the way producers and engineers often do in the studio with vintage tube gear. When you do this stuff, you want to use the Drive control like a mix knob on a reverb to control how much processing you want to hear.

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Guitar Cab Models

While we're not going to bore you with complete descriptions of each cabinet that's modeled in GearBox ("...and with the change from 12 ply Finnish Spruce to 13 ply Baltic Birch in October of 1973, the resonant frequency of this cabinet dropped to 113.7Hz"), here's a list of all the speaker cabinets that were modeled for GearBox:

1 x 6	1960 Super O (based on Supro S6616)
1 x 8	1960 Tiny Tweed (based on Fender® Tweed Champ®)
1x10	1959 Gibtone (based on Gibson® combo)
1x10	1960 G-Brand (based on Gretsch® 6156)
1x12	1953 Small Tweed (based on Fender® Tweed Wide Panel Deluxe Reverb®)
1x12	1964 Blackface 'Lux (based on Fender® Deluxe Reverb®)
1x12	1960 Class A-15 (based on Vox® AC-15)
2 x 2	2001 Mini T (based on Fender® Mini Twin)
2x12	2001 Line 6
2x12	1965 Blackface (based on Fender® Blackface Twin Reverb®)
2x12	1996 Match Chief (based on Matchless Chieftain)
2x12	1987 Jazz Clean (based on Roland® Jazz Chorus 120)
2x12	1967 Class A-30 (based on Vox® AC-30 Top Boost)
4x10	2001 Line 6
4x10	1959 Tweed B-Man (based on Fender® Bassman® cab)
4x12	2001 Line 6
4x12	1967 Green 20s (based on Marshall® "Basket Weave" cab with Celestion® Greenbacks)
4x12	1968 Green 25s (based on Marshall® cab with Celestion® Greenbacks)
4x12	1978 Brit Celest T-75s (based on Marshall® cab with stock Celestion® T-75's)
4x12	1996 Brit Celest V-30s (based on Marshall® cab with Celestion® Vintage 30's)
4x12	2001 Treadplate (based on Mesa/Boogie® Dual Rectifier® cab)
1x15	1962 Thunder (based on Supro® '62 Thunderbolt)
2x12	1967 Wishbook (based on Silvertone '67 Twin Twelve)

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Bass Amp & Cab Models

Rock Classic

For 30 years now, we've heard the tone and felt the power of the mighty Ampeg® SVT® that GearBox's Rock Classic model is based on*. This workhorse has appeared on innumerable recordings and arena stages worldwide – there is no equal to the original SVT® and its 300 watts of pure tube magic. First introduced in July 1969, the SVT® set the tone, punch and arena-rattling standard for all future big gun bass rigs. Its users have included everyone from The Rolling Stones to Van Halen, and pretty much every "rock" bass player in between. For GearBox's Rock Classic Model, we selected a 1974 Ampeg® SVT®, and we've also given you a 70's SVT 8x10 speaker cabinet to pair it with. The sonic combination of this head and cab is beyond big, but you had to pray that your bandmates would help you move it! Thanks to GearBox, you can now get big classic rock bass tone without frequent visits to the chiropractor.

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Flip Top

The Flip Top model is based on* a 60's Ampeg® B-15 Portaflex® — one of the most popular studio bass amps of all time. It's tuned and front-ported, has a closed back, is 25 watts with a single 15-inch speaker, and set a new standard for cabinet and speaker efficiency, tone and convenience in bass amplification. If we had to sum up the amp's sound up in one sentence, we would simply say: Listen to James Jamerson's bass playing on the Motown®/Tamala records of the 1960's — The Supremes, The Four Tops, The Temptations, Marvin Gaye, Stevie Wonder, and many more. Jamerson played bass on more Motown hits than anyone else, and his choice for amplification was the Ampeg® B-15. We think you'll agree that the sound of his P Bass® through that amp on those records is as fresh and exciting today as it was 35 years ago. And if he's not enough to convince you, how about "Duck" Dunn! Don't get us started....

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Adam and Eve

After David Eden made cabs for SWR® for 3 or 4 years, he went into the business of making his own bass amp and cabinet line. Jim Demeter designed the electronics of the first Eden amps, and they were quickly adopted by a veritable who's who of modern bass society. GearBox's Adam and Eve model is based on* the WT-300, one of Eden's latter offerings which produces a clean, clear and rich tone.

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Silverface Bass

The Silverface Bass is modeled after* a 1967 Fender® Bassman®. By '68, when the Beatles went in to record The White Album, they had pretty much done away with their Vox® amps in favor of the new "silverface" Fender® line. John and George each played through a Twin Reverb®, and Paul through the 2x15 "tall cab" Bassman®. This amp remained his favorite through the end of the Beatles' recording career, and can be seen in the Revolution video (the cab is laying on its side), and all over the Let It Be movie — including the infamous "rooftop" concert which closes the film. Paul went on to use the amp for his first solo recordings, and live during the early Wings period. We've paired this Bassman® head with a 2x15 closed back cab loaded with JBL®s. The sound of this cab also reminds us of the theme music from Barney Miller, and all of those days practicing with the high-school jazz ensemble. Try playing a little of the Peter Gunn Theme....

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Eighties

What would any collection of bass amps be without a Gallien-Krueger 800RB? This model is based on the solid state amp that helped define what new bass amps sounded like for the better part of that decade. Geddy Lee had one. Will Lee used one on "Late Night With David Letterman". And bands like Def Leppard powered through a decade of pop metal with the 800RB. The GK 800RB produces a very scooped sound, and doesn't really distort. Try pairing this amp with another legend of the Eighties, the Hartke 410 cabinet. This rig is known for producing what we call the "mid 80's metal bass" tone. It's the perfect choice when you're ready for a little Pyromania....

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Bass Cab Models

1 x 15	Flip Top Based on a 1960's Ampeg® B-15
2 x 15	DoubleShow Based on a Fender® Dual Showman® D130F
4 x 10	Adam Eve Based on an Eden 410 cab
4 x 10	Silvercone Based on a Hartke 410 cab
8 x 10	Classic Based on an Ampeg® SVT® Cab

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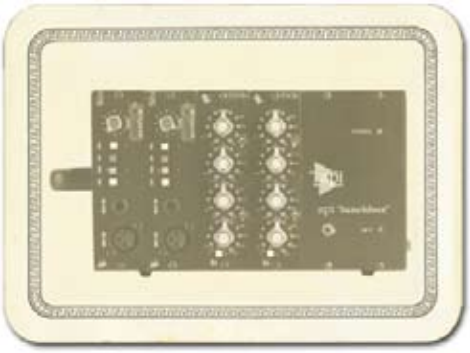
Preamp Models

American Classic

This model is based on* an API 512 Mic Pre and API 550b EQ housed in an API Lunchbox 500 6-B. In 1967 API introduced the 512 as the first modular mic pre. Along for the ride also came the 550 EQ and together the modular components were housed in a 4 position rack complete with a handle — the lunchbox. This combination is responsible for many legendary recordings of the 60's and 70's. The resulting American Classic model also incorporates tonal elements of the analog tape machines of the day, by Revox, Studer, and MCI. Hence, our model is designed to give your inputs the "sonic love" of the entire analog recording process from the API mic pre, through the EQ, to the sound of recording to tape.



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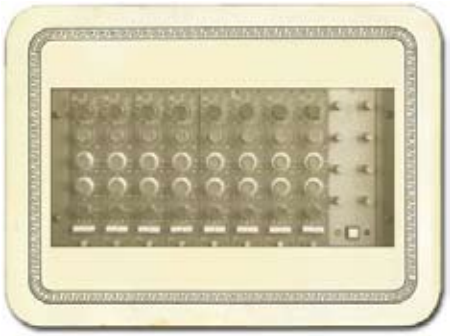
Vintage U.K.



GearBox's Vintage UK model is based on* the truly classic Neve 1073 pre-amp. Designed by Rupert Neve in the early 1970's, as a discrete transistor mic/line amp with 3-band EQ and high-pass filter, the 1073 was used in a variety of Neve consoles. NOT known for being the flattest or cleanest kid on the block, the Neve 1073 became the "Gold Standard" of pre amps regardless. It's credits are endless and likely numerous songs playing on the radio right now, as you read this, were recorded with a Neve 1073. Like the American Classic, this model's sound is based not just on our analysis of the 1073, but also incorporates the kind of "sonic love" you'd have gotten when recording through a 1073 to legendary Revox, Studer, and MCI analog tape machines.

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Lo-Fi

Looking for something aggressive, trashy, or just plain interesting? Try the Lo-Fi tip. It gives you tones that are very band passed (meaning there's little low end or extreme high end), with lots of distortion available from the driver knob. You'll find it's just the thing when you want your vocals to sound like they came through a telephone, megaphone or toy microphone.

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Vintage

Incorporating elements of analog tape machines of the day, this composite model is true to form, lacking the crystal clear 8k and above which wouldn't arrive for years.

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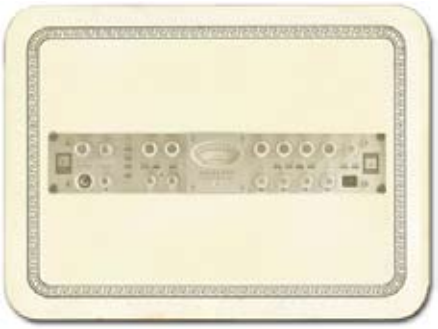
Modern



This model is based on* an Avalon® VT-737, which is an excellent example of a modern tube preamp design incorporating an all-discrete, Class A transistor circuit in the built-in 4-band equalizer. This is a good choice for clean, bright, non-compressed sound, with soft transients.

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Console

Here's our model inspired by solid state console mic pre designs, delivering flat frequency response that is very clean and without the additional personality that the other Preamp Models provide. This is a great choice when you want to capture quality audio without adding color, as you might want to do when recording line level instruments like keyboards.

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Effects

Delay

Delay Effects create echoes by repeating a delayed version of the signal that feeds them. The FEEDBACK knob on Delay control panels determine how many repeats you'll hear. TIME determines how late the echo will be versus the input signal, and allows Tap Tempo. A short delay time and low feedback setting will give you a classic "slap back" delay. Longer delay times give you a distinctly separate echo, and higher feedback settings increase the number of echoes. There's always a MIX control, and each of the Models has a few other controls as well....

Analog Delay w/Modulation

The Analog Delay w/ Modulation model is based on* the Electro-Harmonix® Deluxe Memory Man which is a pedal that uses the "bucket brigade" electronics of other analog echoes, and adds a chorus circuit to boot. This adjustable chorus is applied to the echoes only, leaving the direct sound unaffected. The Memory Man, with its warm, distorted tone and swimming echoes, became an important tool for many guitarists, and was an essential part of the guitar sounds for the first U2 album. Part of the Deluxe in Deluxe Memory Man was the increased delay time of 500 milliseconds. Analog w/ Mod emulates that classic Memory Man tone with the added advantage of 2 seconds of delay time. The mod speed and depth controls set up the chorus on the delays.

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Tube Echo

The classic 1963 Maestro EP-1 was the first of a series of "Echoplex" designs distributed by the company, and made by Harris-Teller in Chicago. As touted in a Maestro advertisement, the Echoplex's "...special effects range all the way from a controlled high speed reverberation to a full, throbbing echo"! The main feature of the Echoplex design is a special cartridge of looped 1/4-inch audio tape that wraps past separate record and playback heads. The position of the playback head can be moved to adjust the delay time from 60 to 650 milliseconds. Tube Echo is based on* the classic Echoplex tone with the extra advantage of up to 2 seconds of delay time. DRIVE lets you dial up some tube warmth like the original and FLUTTER (short for wow and flutter) adds that unique sound of a slipping, dirty tape capstan!

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Digital Delay

This model is a straight up digital delay with Bass and Treble tone controls. Nothing fancy here, just basic echo-cho-cho-cho. After all, it's good to cleanse the palate every once in a while.

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Mod

Mod Effects are things that swoosh, pulse and warble — from phase shifters to flangers to choruses. Why are they called Mod (Modulation) effects? Well, if we consult a dictionary, we discover that 'modulate,' in the electronic world means to "alter the amplitude or frequency of (a wave) by (using) a wave of a lower frequency to carry a signal" (definition courtesy of The Oxford Encyclopedic English Dictionary, Third Edition, thank you very much). That modulating wave is what causes all that swooshing, pulsing, and warbling. The SPEED of the Mod effects controls how quickly (or slowly) the modulating waveform sweeps, and generally allows Tap Tempo. DEPTH controls overall amplitude of the modulating wave, which usually determines just how intense the effect will be. There's always a MIX control, and sometimes there are also other controls, as we're about to describe....

Sine Chorus

Here's your basic digital chorus, which gives you the classic swimmy/watery sound of chorus, plus BASS and TREBLE controls for bass-ing and trebl-ing. :-)

Subtle settings of the chorus can also be used to give a fatter sound. Extreme settings can totally change the character of your sound.

Line 6 Flanger

Flanger is most famously known as the "jet-plane" whoosh effect of several classic 70s recordings. It can also be used to give a "swooshy" or "swept" sound to guitar and other sources, or just to create a "bigger" sound. Eddie Van Halen, for instance, used flanger effects as an important part of his signature sound on many classic Van Halen recordings, including "Ain't Talkin' 'Bout Love" and much of the Van Halen I album. For details on each of the Flanger controls, move your mouse over the control and look in the Info Bar at the bottom of the GearBox window. The Line 6 Flanger really shines when you set CONFIG to POST, letting the stereo sweep offset serve up luscious harmonic shimmer.

Phaser

GearBox's Phaser is based on* the MXR® Phase 90 — the guitar stomp box phaser that changed the world. The Phase 90 is relatively subtle compared to other phasers, and when you use it, it becomes part of the overall guitar tone rather than trying to grab the spotlight all to itself. Its lush, organic, and groovy swirl can be heard all over the first two Van Halen albums, as well as Jimmy Page's work on Physical Graffiti. The Phase 90 is a four stage phaser; its single knob controlled only speed. GearBox's Phaser gives you additional flexibility with MIX and FEEDBACK controls to adjust the intensity of the effect.

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U-Vibe

The U-Vibe model is based on* the now-legendary Uni-Vibe, which was put on the map in 1969 by Jimi Hendrix. Essentially a four-stage phase shifter, the Uni-Vibe is best known for its watery texture and sultry tones. One listen to "Machine Gun" and you'll know what we mean. You can recreate the effect of the original Uni-Vibe's vibrato switch by turning the MIX control to 100% wet. (That's what the switch did on the original.) The DEPTH control acts like the Uni-Vibe's "Intensity" knob.

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Opto Tremolo

The Opto Tremolo model is based on* the optical tremolo circuit that was used in the blackface Fender® amps, like the '64 Deluxe Reverb® and '65 Twin Reverb®. Basically a light bulb and a photo-resistor, when the light got brighter, the tremolo got louder. It's a very smooth, even tremolo, and the obvious choice for use with the amp models that are based on Fender® originals.

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Rotary Drum + Horn

Fine furniture and cool tones — the Leslie® 145 that the Rotary Drum + Horn model is based on* gave you both at once! That tube-driven behemoth (you definitely don't want to try picking one up on your own) features a belt-drive rotating high frequency horn along with a downward-facing 15-inch speaker that had a segmented drum spinning under it to disperse the sound. It was originally designed to be used with electric organs like the Hammond B3, but once guitarists (and even vocalists!) heard it, they just had to get in on the rotate-o-rama. Our model gives you all that whirligig glory, without giving you a herniated disc. Slow/Fast switch acts like the one that came on the Leslie 145's preamp, ramping between the two speeds. This effect also gives you TONE and MIX settings. For the truly authentic kind of spin that a Leslie delivers, you'll want to set the MIX knob to max, since a Leslie had no 'dry' path.

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Stomp

Stomp Effects give you a choice of Models of classic distortions stompboxes, a stomp box-style compressor, and a couple of De-Esser effects designed for taming Sss and Shh sounds that are common when recording vocals.

Facial Fuzz

Sometime in late 1966, an infamous circular stomp box hit the London music scene. Designed and built by Arbiter Music, the Fuzz Face would soon begin its famous association with guitar legend Jimi Hendrix. Like all stompboxes from the early era, the Fuzz Face would see many design changes, as well as re-issues. Our model is based on* the germanium diode-powered treasure pictured here: an original, very early "gray with black screening" Arbiter Fuzz Face. Call the Facial Fuzz model up, and treat yourself to our faithful re-creation of the original's fuzz and glory. Crank up the drive, and you'll be seeing Purple Haze right before your eyes!

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Fuzz Pi

Not to be outdone by the Brits, the colonies came up with their own twist on the fuzz rage. Mike Mathews and his band of merry men at Electro-Harmonix® had been cooking up all sorts of nifty effects when their attention turned to the distortion/fuzz pedal. Their most popular offering was the Electro-Harmonix® Big Muff Pi, which GearBox's Fuzz Pi model is based on*. The Pi was known more for its sweet sustain than for its buzz.

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Screamer

From Stevie Ray Vaughan to Michael Landau, the simple Ibanez® Tube Screamer® is the overdrive heard 'round the world. This medium-gain pedal was introduced in the early '80s, and in many blues circles, you're not allowed to solo without one. Over the years, Ibanez® issued several variations of the venerable Tube Screamer®, but none have reached the fabled status of the TS-808® that this model is based on*.

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Classic Distortion

Born and bred in the late '70s, the ProCo Rat was the beginning of a new generation of distortion boxes. With a sound that was angrier and more aggressive than a fuzz, the Rat put teeth into a new breed of metal that was beginning to crawl to the surface of the music scene. The TONE knob on GearBox's Classic Distortion Model based on* the Rat model functions like the original's "filter" control, giving you brighter tone at lower settings, and darker tone at higher settings. Once bitten, you'll know why we call this one "tone with teeth!"

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Vetta Comp

This effect is taken from the Vetta II, Line 6's flagship guitar amplifier. A Line 6 original, Vetta Comp has a fixed ratio (2.35:1, in case you're asking) with the threshold (that would be your SENS knob) adjustable from -9dB to -56dB and up to 12dB of gain available at the LEVEL knob. In other words, turn the SENS knob 'til you like the way your signal's compressed, then set the volume with LEVEL.

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Verb (Reverb)

Verb Effects simulate the reverberation of sound in a physical space, where the source sound combines with countless, tightly spaced echoes. GearBox's collection of reverb models emulate physical environments (rooms and halls), plate reverbs (which traditionally feature a big steel plate with some sort of speaker driving it plus multiple pickups to pick up the vibrations of the plate) and spring reverbs (the kind guitar players know best). Choose a Spring Reverb when you want the kind of classic sound created by spring reverb tanks built into guitar amps, or used for studio processing on classic recordings. This is the place to come, for instance, when you're looking for that signature Surf Music sound of splattering reverb. Choose a Room Reverb when you want a polished, modern studio sound. It simulates the sound of ambience in a room, and can be set to subtly enhance the size and polish of your tone, or make it sound like you're playing in a large, resonant chamber.

Standard Spring

One of the many things that people have loved about the blackface Fender® Twin Reverb® over the years has been its rich, dense reverb sound. The three-spring tank offered a more complex sound than the Fender® earlier spring reverbs, and of course that's what the GearBox Standard Spring model is based on*. Go find yourself a bevy of bikini-clad beauties, wax up your board, and dig in.

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products that were studied during Line 6's sound model development.

Brite Room

Here's the sound of a live, bright room to add life to any track.

Medium Hall

A medium sized hall with heavy reflections - this one is meant to be heard.

Cavernous

Now that's big! Fire this verb up and get set for a long night of dandelion dreams...

Slap Plate

This reverb dishes up the vibe of early rock and roll recordings, like Sam Phillips' great work at Sun Studios. Thank you very much.

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Wah

The GearBox Wah effects simulate classic wah pedals, and can be used to provide a "parked wah" sound, or can be controlled via MIDI for wah pedal effects.

Vetta Wah

This is the original PODxt/Vetta Wah Model, which is a bit of a play on an old classic. We've made it a nice balanced wah, designed to sound great in most any style of playing.

Weeper

Modeled after* an Arbiter® Cry Baby, this is yet another variation on the original Vox® wah design. The biggest variation between many of these wah pedals is the inductor and the tolerances of the capacitors and resistors that make up the filter circuit. Just like vintage guitar amps, two of them made on the same day, by the same person, from the same parts bin might sound totally different. As always, we went for the best examples we could find.

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Bass Effects

Bass Overdrive

This model was inspired by our look at the Tech 21 Bass Sans Amp, plus a few extra liberties taken by the Line 6 sound design team. The Sans Amp is famous for delivering a very quiet and crisp signal under all circumstances, while also serving up a very distinct distortion. Is pleasingly metallic quality makes it a favorite with the Post-Metal crowd and Industrial bands, and producers in all genres of music have come to favor the Bass Sans Amp for crunching up loops. The Bass Overdrive covers the

same sort of territory, with a bit of a uniquely Line 6 bent. Choose this distortion for your bass or any other signal and it will immediately become a very close and furry friend. Note for non-bass players: this stomp box absolutely rocks on signals other than bass. No, really, try it.

Bronze Master

The Maestro® Bass Brassmaster is considered by many to be the Holy Grail of bass distortion units, and ultra-rare bird designed in the early '70's for Maestro® by synth genius Tom Oberheim. It showed up on Chris Squire's gear list in a mid-70's Yes tour program. In fact, the Brassmaster was the first distortion unit we can think of designed primarily with the bassist in mind, and man, did Mr. Oberheim get it right! The original has a fairly elaborate set of controls, include two separate volumes and toggles for accentuating different harmonic voicings. We weren't able to make an exact duplicate of some of that complexity when creating the Bronze Master for GearBox, but you'll find that this model does give you a luscious palette of super-sweet bass fuzz in the style of the Brassmaster, with righteous distortion that doesn't take away that all-important low end. For guitar players, think of it as somewhere between an Octave Fuzz and a synth. You can get positively freaky with this one.

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Sub Octaves

All bassists know that in just about every musical situation, lower can be better! But we couldn't just let bass players have all the fun, so we've included an Octave device in your PODxt that's inspired by the very popular Boss OC-2. Your Sub Octave gets you down into booty-shaking territory mighty quick. Use it to create additional voices below what you're playing. Remember, lower can be better, especially when it makes the booty shake!

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Other Effects

Comp (Compressor)

The Comp (Compressor) effect in GearBox is modeled after* the classic, studio-standard LA-2A® tube compressor. It's just the thing when you want to smooth out your levels the way that you would typically do in a recording studio. The THRESHOLD knob determines how aggressive the compressor will be in smoothing things out. Turning the knob farther to the left give you more aggressive compression. The GAIN knob lets you increase level once you've smoothed things out. But be careful: if you add too much gain here, you may see that you start clipping, and need to back off again on the gain.

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EQ

GearBox's 4 Band Semi-Parametric EQ lets you emphasize and de-emphasize selected ranges of audio frequencies, from bass to midrange to treble. The knobs on the left of the EQ's control panel let you choose the frequency that each of the 4 bands of the EQ will focus on, and set the amount of gain that will be added to or subtracted from that frequency band.

The top knob pair is for the highest frequency range (the treble), providing a high shelf which boosts all the audio at and above the frequency point you select. As you make changes to this and the other EQ bands, the resulting EQ curve is shown in the EQ control panel's display area. The second knob pair down controls a bandpass filter for the for the high-mids, boosting frequencies at and around the frequency that you select. The third knob pair down is for the low mids, and the bottom knob pair, for the bass, controls a low which boosts all the audio at and below the frequency you select. Press the RESET button to "zero" out all the gains, and set each band to a default frequency point, which is generally a good starting point when you want to make EQ adjustments. As you make EQ adjustments, it's a good idea to frequently check what the Tone sounds like with the EQ turned off, to make sure that you're really making improvements when adding EQ!

Gate

GearBox's Gate is designed to reduce the noise that your guitar or other source makes when you are not playing. You can think of it as a gate that opens to let your guitar or other sound through when you play, and closes when you stop playing to shut out the noise you would otherwise hear after you stop playing. (For guitars and basses, the Hum Reducer is available to tame noise in another way.)

The Gate works by detecting the input level coming into GearBox. When the input level is below the level set for the gate's THRESHOLD knob, the gate will close at the speed set by the Gate's DECAY knob, and cut off the signal from your input. When the input level is above the threshold, the gate will open to let your input signal through. Turning the Threshold knob clockwise increases the aggressiveness of the gate in its effort to cut off sound. The idea is to set the threshold low enough so that it doesn't cut off the signal as you are playing or a note is sustaining, but high enough so that the background noise from your guitar or other source doesn't keep the gate open. When you're using a Stomp effect, Amp Model or Preamp Model that adds a lot of distortion to your Tone, you'll need to adjust the Gate to work well with that, and you'll probably have to tweak the Gate if you change Models, change drive settings, or use different guitar(s), pickup configurations, or other changes to your input source, and the volume of audio that it's providing.

You can turn the Gate on/off by clicking its icon, and the setting of the Gate is saved as part of a Tone.

Vol (Volume)

GearBox's Vol (Volume) allows a MIDI controller to operate a volume pedal effect in GearBox to control the volume of your processed sound. The CONFIGURE switch on the Volume control panel lets you decide whether the volume pedal will run before the amp/cab/mic or Preamp processing ("Pre"), or after ("Post").

Female De-Esser

The Female De-esser should be your first choice when taming the Sss and Shh sounds of female vocalists, although as with all things musical, you may find many uses for it and may find that for some male vocalists it works better than the Male De-Esser. For general information on De-Essers, see the Set the De-Esser topic in the How To section. Technically-savvy users will want to know that this de-esser performs its gain reduction only on the selected frequency band, unlike the more typical insert-style De-Essing of the Male De-Esser.

Male De-Esser

The Male De-esser should be your first choice for controlling the Sss and Shh sounds of male vocalists, although as with all things musical, you may find many uses for it and may find that for some female vocalists it works better than the Female De-Esser. For general information on De-Essers, see the Set the De-Esser topic in the How To section. Technically-savvy users will want to know that this is a standard insert-style de-esser, performing gain reduction on the full bandwidth audio signal.

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Model List

To follow is a list of all Amp, Cab and Effects models that are included as "Factory-Standard*" models for each Line 6 device supported by GearBox, as well as included within each optional Model Pack. These models will appear within the GearBox Amp Model, Cab Model and Effect Model menus when the respective device is the one in use by GearBox, and if the optional Model Packs are authorized for this Line 6 device.

Note that all PODxt devices already include the models from the Power Pack as Factory-Standard, and that PODxt Live additionally comes with the FX Junkie Pack included as Factory-Standard.

***Factory-Standard Models** are those that are included as permanently installed models on a Line 6 device. These models cannot be transferred to other Line 6 devices. However, it is possible to transfer the License Key that you are granted for any Add-On Model Packs that you purchase separately between any supporting Line 6 device that you own by using Line 6 Monkey. Please visit the Line 6 Online Support pages for more about Transferring License Keys.

Please refer to the Model Gallery section for descriptions of the GuitarPort and TonePort Models. Additional descriptions for PODxt can be found in the PODxt Pilot's Handbook and in the Model Pack Handbooks. Please visit the Line 6 Online Store for information about Add-On Model Packs – or just launch Line 6 Monkey with your Line 6 device connected and look in the Optional Add-Ons tab to see what's in store for you!

Model Name	GuitarPort-TonePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
Guitar Amps							
Line 6 21st Century Clean		■	■				
Line 6 Sparkle					■		
Line 6 Twang					■		
Line 6 Bayou					■		
Line 6 JTS-45		■	■				
Line 6 Class A		■	■				
Line 6 Mood		■	■				
Line 6 Spinal Puppet	■	■					
Line 6 Throttle				■			
Line 6 Chemical X	■	■					

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
Line 6 Purge					■		
Line 6 Insane	■	■					
Line 6 Octone				■			
Line 6 Piezacoustic 2	■	■					
2001 Zen Master		■					
1953 Small Tweed	■	■					
1958 Tweed B-Man	■	■					
1960 Tiny Tweed		■					
1964 Blackface 'Lux	■	■					
1965 Double Verb		■	■				
1996 Mini Double					■		
1960 Gibtone Expo					■		
1960 Two-Tone		■	■				
1973 Hiway 100		■	■				
1965 Plexi 45		■	■				
1968 Plexi Lead 100	■	■					
1968 Brit Plexi Bass 100					■		
1968 Plexi Jump Lead	■	■					
1968 Plexi Variac'd		■	■				
1969 Brit Plexi Lead 200					■		
1990 Brit J-800	■	■					
1996 Brit JM Pre		■	■				
1996 Match Chief		■	■				
1993 Match D-30		■	■				
2001 Treadplate Dual	■	■					
2001 Cali Diamond Plate				■			
1985 Cali Crunch		■					
1987 Jazz Clean	■	■					
1967 Wishbook Silver 12					■		
1993 Solo 100 Head	■	■					
1960s Super O		■	■				
1962 Super O Thunder					■		
1960 Class A-15		■	■				
1967 Class A-30 Top Boost	■	■					

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
Tube Instrument Preamp	■	■					
2002 Bomber Uber				■			
2002 Bomber X-TC					■		
2002 Angel P-Ball				■			
Line 6 Variax Acoustic		■	■				
Line 6 Super Clean					■		
Line 6 Super Sparkle					■		
Line 6 Sparkle Clean				■			
Line 6 Crunch					■		
Line 6 Smash				■			
Line 6 Fuzz				■			
Line 6 Chunk Chunk				■			
Line 6 Big Bottom				■			
Line 6 Treadplate	■	■	■				
Line 6 Lunatic		■	■				
Line 6 Agro		■	■				
2003 Connor 50				■			
2003 Deity Crunch					■		
2003 Deity Lead				■			
2003 Deity's Son				■			
1963 Blackface Vibro					■		
1967 Double Show					■		
1972 Silverface Bass					■		
1987 Brit Gain Silver J				■			
1992 Brit Gain J-900 Clean				■			
1992 Brit Gain J-900 Dist				■			
2003 Brit Gain J-2000				■			
2002 Mississippi Criminal				■			
Citrus D-30	■	■					
L6 Modern Hi Gain		■	■				
L6 Boutique #1		■	■				
Class A-30 Fawn		■	■				
Brit Gain 18	■	■					
Brit J-2000 #2		■	■				

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
Bass Amps							
Line 6 Tube Preamp							■
Line 6 Classic Jazz							■
Line 6 Brit Invader							■
Line 6 Super Thor							■
Line 6 Frankenstein							■
Line 6 Ebony Lux							■
Line 6 Doppleganger							■
Line 6 Sub Dub							■
1972 Amp 360							■
2003 Jaguar							■
1975 Alchemist							■
1974 Rock Classic	■						■
1968 Flip Top	■						■
1998 Adam and Eve	■						■
1958 Tweed B-Man							■
1967 Silverface Bass	■						■
1964 Double Show							■
1989 Eighties	■						■
1973 Hiway 100							■
1971 Hiway 200							■
1969 British Major							■
1968 Brit Bass							■
2003 California							■
1998 Jazz Tone							■
1978 Stadium							■
2002 Studio Tone							■
1967 Motor City							■
1965 Brit Class A100							■
Pre-Amps							
American Classic	■						
Brit Classic	■						
Lo-Fi	■						

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
Vintage	■						
Modern	■						
Console	■						
Guitar Cabs							
1x6 1960s Super O	■	■					
1x8 1960 Tiny Tweed	■	■					
1x10 1959 Gibtone	■	■					
1x10 1960 G-Brand	■	■					
1x12 2001 Line 6	■	■					
1x12 1953 Small Tweed	■	■					
1x12 1964 Blackface 'Lux	■	■					
1x12 1960 Class A-15	■	■					
2x2 2001 Mini T	■	■					
2x12 2001 Line 6	■	■					
2x12 1965 Blackface	■	■					
2x12 1996 Match Chief	■	■					
2x12 1987 Jazz Clean	■	■					
2x12 1967 Class A-30	■	■					
4x10 2001 Line 6	■	■					
4x10 1958 Tweed B-Man	■	■					
4x12 2001 Line 6	■	■					
4x12 1967 Green 20s	■	■					
4x12 1968 Green 25s	■	■					
4x12 1978 Brit Celest T-75s	■	■					
4x12 1996 Brit Celest V-30s	■	■					
4x12 2001 Treadplate	■	■					
1x15 1962 Thunder	■	■					
2x12 1967 Wishbook	■	■					
Bass Cabs							
1x12 Boutique							■
1x12 Motor City							■
1x15 Flip Top	■						■

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
1x15 Jazz Tone							■
1x18 Session							■
1x18 Amp 360							■
1x18 California							■
1x18+12 Stadium							■
2x10 Modern UK							■
2x15 Doubleshow	■						■
2x15 California							■
2x15 Class A							■
4x10 Line 6							■
4x10 Tweed							■
4x10 Adam and Eve	■						■
4x10 Silvercone	■						■
4x10 Session							■
4x12 Hiway							■
4x12 Green 2019s							■
4x12 Green 2519s							■
4x15 Big Boy							■
8x10 Classic	■						■
Dynamic FX							
Volume Pedal	■	■					
Noise Gate	■	■					
Compressor	■	■					
A.I.R.	■	■					
Blue Comp		■	■				
Blue Comp Treble Boost						■	
Red Comp		■	■				
Vetta Comp	■	■					
Vetta Juice						■	
Auto Swell		■	■				
Female De-Esser	■						
Male De-Esser	■						

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
Delay FX							
Delay							
Analog Delay		■	■				
Analog Delay w/Modulation	■	■					
Tube Echo	■	■					
Multi-Head Delay		■	■				
Sweep Echo		■	■				
Digital Delay	■	■					
Stereo Delay		■	■				
Ping Pong Delay		■	■				
Reverse Delay		■	■				
Tape Echo		■				■	
Echo Platter						■	
Low Rez						■	
Phaze Eko						■	
Bubble Echo						■	
Modulation FX							
Sine Chorus	■	■					
Analog Chorus		■	■				
Line 6 Flanger	■	■					
Jet Flanger		■	■				
Phaser	■	■					
U-Vibe	■	■					
Opto Tremolo	■	■					
Bias Tremolo		■	■				
Rotary Drum + Horn	■	■					
Rotary Drum		■	■				
Auto Pan		■	■				
Lumpy Phase						■	
Stereo Square Chorus						■	
Expo Flange						■	
Random Chorus						■	
Analog Square Chorus						■	

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
POD Purple X						■	
Random S & H						■	
Tape Eater						■	
Hi Talk						■	
Sweeper						■	
Warble-Matic						■	
Stereo Expo Chorus						■	
Stereo Square Flange						■	
Reverb FX							
'Lux Spring		■	■				
Standard Spring	■	■					
King Spring		■	■				
Small Room		■	■				
Tiled Room		■	■				
Brite Room	■	■					
Dark Hall		■	■				
Medium Hall	■	■					
Large Hall		■	■				
Rich Chamber		■	■				
Chamber		■	■				
Cavernous	■	■					
Slap Plate	■	■					
Vintage Plate		■	■				
Large Plate		■	■				
Distortion FX							
Facial Fuzz	■	■					
Tube Drive						■	
Fuzz Pi	■	■					
Screamer	■	■					
Octave Fuzz		■					
Classic Distortion	■	■					
Killer Z						■	

Model Name	GuitarPort-TonnePort Standard	PodXT Standard	Power Pack	Metal Shop Pack	Collector Classis Pack	FX Junkie Pack	Bass Expan. Pack
Boost + EQ						■	
Bass Overdrive	■	■					
Bronze Master	■	■					
Wah FX							
Vetta Wah	■	■					
Fassel		■	■				
Weeper	■	■					
Chrome		■	■				
Chrome Custom		■	■				
Throaty		■	■				
Conductor		■	■				
Colorful		■	■				
Filter FX							
4 Band SemiParametric EQ	■	■					
Auto Wah		■	■				
Synth Lead					■		
Synth String					■		
Synth Analog					■		
Synth FX					■		
Buzz Wave					■		
Rez Synth					■		
Saturn 5 Ring Mod					■		
Double Bass					■		
Synth Harmony					■		
Dingo Tron					■		
Clean Sweep					■		
Seismik Synth					■		
Sub Octaves	■	■					
Bender		■	■				

TROUBLESHOOTING

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Audio Glitches

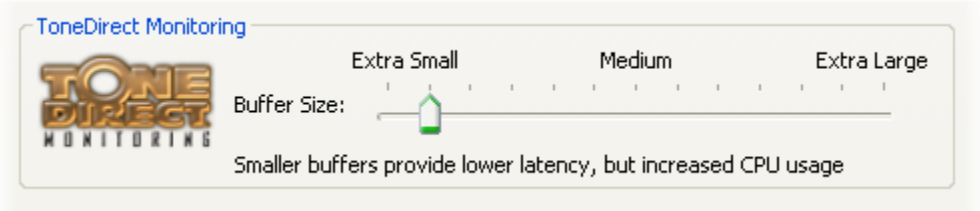
Audible pops and clicks and other audio glitches may occur when another program or device is trying to stream audio or video, or your computer cannot provide enough system resources (RAM memory, or hard disk or computer processor speed) for GearBox. There can be many different causes for this type of problem, since there are so many possible computer models, parts, and configurations. First, be sure to check the instructions in the GearBox Recording Setup Guide and Windows XP Optimizations documents that you can find on the GearBox Online Help page of the Line 6 website. There's detail there on how to properly setup Line 6 devices and GearBox with a variety of recording software, plus information on fine-tuning the setup of Windows computers for audio recording and processing. The following tips may also help with resolve audio issues…

On Windows® systems -

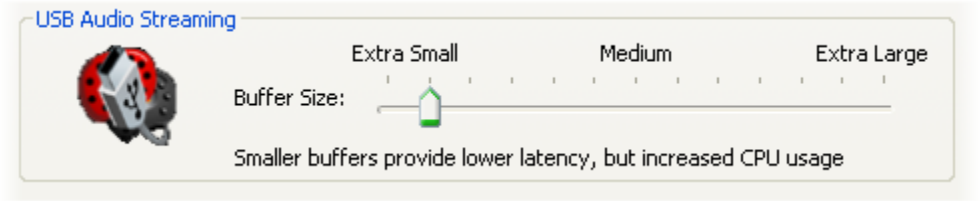
If you are experiencing audio dropouts or glitches, then you can try adjusting the ToneDirect™ Monitoring buffer slider (for TonePort or GuitarPort devices) or by adjusting the USB Audio Streaming slider (for PODxt devices). You can access this control by going to the Line 6 Audio-MIDI Devices dialog:

Start button > Settings > Control Panel > Line 6 Audio-MIDI devices.

For TonePort or GuitarPort devices, adjust the slider one tick to the right at a time, until the monitoring signal is free from audio dropouts:



For PODxt devices, adjust the slider one tick to the right at a time, until the monitoring signal is free from audio dropouts:

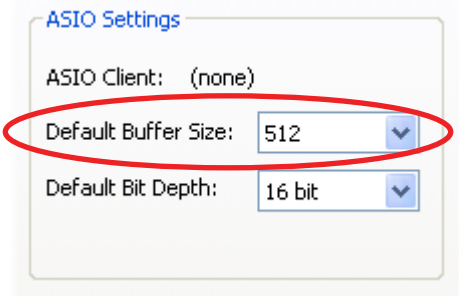


On Mac® or Windows® systems –

If you are recording into your audio software and the recording have dropouts or pops and clicks, then you can try adjusting a Recording Buffer, if one is offered.

On Windows® systems, the Line 6 Audio-MIDI settings dialog offer an ASIO Buffer size adjustment, and this is what you should use. (Note that this is only available when you are using GearBox and your Line 6 hardware's ASIO driver with your audio software). You can access the Line 6 ASIO Buffer size setting by going to the Line 6 Audio-MIDI Devices dialog:

Start button > *Settings* > *Control Panel* > *Line 6 Audio-MIDI device*



Note that some Windows® audio programs also offer access to an ASIO Buffer size control within their own preferences or audio options, but is recommended that you always make ASIO buffer settings adjustments in the Line 6 Audio-MIDI devices dialog only.

On Mac® systems, Line 6 devices utilize the Mac® Core Audio driver system and all these audio driver settings are all handled by the Mac® Operating System's Audio-MIDI Setup dialog. This dialog does not offer buffer settings for the Core Audio driver. However, some recording applications do offer their audio buffer settings – please check the documentation for your Mac recording software to see if any such options are available.

Audio glitches can be caused by your computer just being too busy processing other tasks from other software or hardware. When doing anything with GearBox or audio software on your Windows® or Mac® computer, it is always a good idea to shut down all other programs that you do not need. It is especially important during audio recording on your computer that you are not performing other tasks on your computer such as copying files, typing a letter or burning a CD!

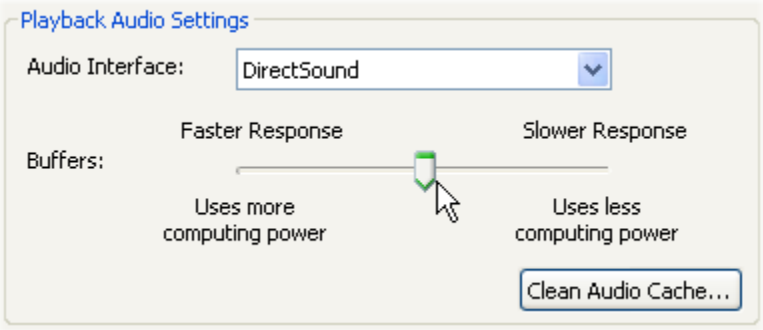
Note that it is specifically recommended that you connect your Line 6 device's USB directly to a USB port on your computer, and not into a USB hub. Some USB hubs can cause communication errors with USB audio devices .

Other computer peripherals can sometimes cause conflicts with your Line 6 hardware, or might be fighting for use of the same computer resources. You can try disconnecting any USB devices you do not need while using your Line 6 device if you encounter any such USB device conflicts.

Also note that some USB speakers occasionally create clicks and pops themselves. Listen to your speakers separate from GearBox for a while if you suspect this might be the problem.

If you are getting audio glitches in the playback of Tracks in the GearBox Player - You may be able to reduce or eliminate audio glitches by making an adjustment to the GearBox Preferences:

Go to the *Edit* menu (Windows®) or GearBox menu (Mac®) and choose *Preferences*, then go to the *Tracks* tab:



Try adjusting the Buffer slider to the right to reduce the demands puts on your computer to play Tracks.

Hard disk access speed - One common cause of clicks and pops in your recording and playback audio is caused from your computer not being able to write/read the audio data from your hard disk fast enough. Most audio recording software will recommend that you use a hard disk that is rated at 7200 RPM disk speed (or faster). It is also not advisable that you use an external hard disk that is connected via USB 1.0 – instead it should be USB 2.0 or Firewire to ensure fast data transfer for audio work.

On Windows®, you should also check to be sure that your internal IDE controller (which controls your hard disk and CD/DVD drives in your computer) is configured for PIO mode rather than DMA operation. GearBox, and most other audio applications, will work much better if you change your IDE controller for those drives to use DMA. To configure your drives to use DMA mode under Windows® XP®:

- Click on the Start button, and select Settings > Control Panel.
- Double-Click the System icon.
- Select the Hardware tab, and press the Device Manager button.
- Select the IDE ATA/ATAPI Controllers tree and open it.
- Check each IDE channel to make sure the Transfer Mode is set to **DMA if available**.
- You must reboot your machine if you make changes to these settings.

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Auto-connect options don't work

GearBox can be set to automatically connect to the Internet when needed to access GuitarPort Online. To configure your Auto-connect options, go to the Gearbox Edit menu (Windows ®) or GearBox menu (Mac ®), select **Preferences**, and select the **Internet** tab. To learn more about any item in the Preferences dialog, click the **?** button at the top right corner of the Preferences dialog, then click on the item you want to know more about.

AOL users having trouble with the auto-connect features should be sure to upgrade to the latest AOL software.

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Why can't I hear the effects?

Each effect – Gate, Wah, Comp, EQ, Stomp, Mod, Delay and Verb – can be turned on and off independently of the others, by clicking on the lower portion of its stomp box icon. You'll see the OFF or ON status shown on this icon. To see the settings for the effect, click on the top portion of the icon and the controls will appear in the Effect edit panel below.

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Why can't I record a Track from GuitarPort to other programs

GearBox sends your processed guitar signal to other programs for recording. The track you are playing in the GuitarPort Player will NOT be sent to other programs, and cannot be recorded into those other programs. This restriction on re-recording GuitarPort Tracks is required in order for Line 6 to protect the copyrights of the musicians and other copyright owners that have licensed music for use on GuitarPort Online.

Note that the audio from the Player playback will also not be routed out the S/PDIF outs of TonePort UX2 and PODxt Pro* units.

* Note – On Windows® systems, it is not recommended that you connect both a PODxt and PODxt Pro unit to the computer at the same time. These two specific Line 6 devices utilize a common device driver and only one can be initialized at a time.

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Why can't I play the GuitarPort Track I just downloaded?

If you download a track from GuitarPort Online, and get an error when trying to load the track, there are a few problems that might have happened:

- Your computer's date may be set incorrectly. Please verify that not only the time, but also the day and year are valid. It doesn't need to match the NIST atomic clock to the millisecond, but your computer shouldn't be partying like it was 1999 either.
- Your GuitarPort subscription may have expired. You must be subscribed to play the subscription-only tracks from GuitarPort Online. Check your account information on GuitarPort Online.
- You may not have connected to GuitarPort Online within the last 30 days. In this case, just reconnect to GuitarPort Online, then try opening the track again.
- You may have a different Line 6 hardware device connected than the one it was downloaded with. Tracks are tied to the device that downloaded them, so if you have both a GuitarPort and a PODxt, then you'll need to use the track you downloaded while using a PODxt on the PODxt. You'll need to download the track again with the GuitarPort device to use it on GuitarPort. Same rules apply if you have a TonePort.
- The file may have been corrupted during download. Download accelerators will cause file corruption with GuitarPort Online Track downloads. Make sure to disable them.

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Disabling auto-launching of Windows Media Player, iTunes or other CD player programs while using GearBox

Windows Media Player, WinAmp, iTunes and other CD player programs can be set so that, each time you insert a CD into your computer, they auto-launch and start playing the first CD track. When GearBox is the foreground application on your computer, it will attempt to prevent these programs from automatically launching and playing a CD that you insert, since you're probably putting the CD in so you can load a track from it into the GearBox Player.

If the GearBox automatic efforts to prevent the auto-launch of the CD application don't work with your system, you can also:

- (On Windows®) Hold down the SHIFT key while inserting the Audio CD into your computer if you want to avoid auto-launching of your CD player program for this one time only.
- (On Mac® or Windows®) If you want to permanently disable auto-launching of your CD player program, go to that program and adjust its Preferences to disable auto-launching.

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Download Errors – Download Accelerators

When you use GuitarPort Online to get Tracks, Tones and other data, GearBox downloads files from the GuitarPort Online servers to your computer. The Transfer Manager displays completed, in progress, and unsuccessful transfers. If you are having trouble with downloads, please make sure you do not have a Download Accelerator installed, because these are generally incompatible with GuitarPort Online. Real Download and Download Accelerator are two examples of download accelerators that are not compatible with GearBox/GuitarPort Online.

Download accelerators generally allow you to disable them for particular applications. Since Gearbox uses Internet Explorer (on Windows®) to download from the Internet, you need to disable the download accelerator for Internet Explorer in order to allow GuitarPort Online to work.

If you want to be able to use the download accelerator when you're not running GearBox or accessing GuitarPort Online, you can. You'll need to disable the download accelerator for Internet Explorer before launching GearBox, and then you can re-enable it once you are finished using GearBox.

NetZero HighSpeed Internet access includes a download accelerator that you'll need to disable for GearBox. You'll need to turn off the high-speed mode by right-clicking on its status bar icon and selecting Turn HiSpeed Off.

See the troubleshooting information on Incomplete Downloads if you have disabled your Download Accelerator and are still having problems.

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The Line 6 device Audio Driver cannot be found by your computer when connecting your Line 6 device, or on startup

When this happens, it means that one of the Line 6 device driver files may be missing or corrupted. Download the latest GearBox installer from the Internet, or pop the GearBox Installation CD into your computer and re-run the installer. Any missing or corrupt files will be re-installed, leaving any Tones and Tracks that you've saved in place. Alternatively, you can also launch Line 6 Monkey and look in the Updates tab. Just select the Driver item and you can choose to install (or re-install) just the driver here.

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Guitar volume is too quiet at max setting

If you're not getting as much volume as you want from the guitar Tone you've chosen, you may need to adjust your hardware's volume knob, your Guitar Volume, Amp Volume, Track Volume, or Master Volume:

Hardware's Volume - The Volume or Output knob on your Line 6 hardware determines the overall volume of everything you hear coming out of it. Be sure it is turned to maximum to get the loudest possible output. If turning it to maximum causes new problems with distortion, click here for assistance.

Guitar Volume - Make sure that the Volume knob on your guitar is turned up. If you are using a stomp box between your guitar and your Line 6 device, be sure its output level is turned up as well. The only thing to be careful of here is that you shouldn't turn up so loud that you are now clipping your Line 6 hardware - the word CLIP will be shown on the GearBox Amp panel when this happens (and the word CLIP with be shown on a PODxt display as well).

Amp Volume - Turn the Volume knob on the Amp Model that you're using as high as you can go without clipping. You may want to save the Tone with this setting so you get this volume again when you want it. Different Amp Models and settings of the amp knobs will result in different perceived ranges for the Volume knob. This is because of the very different amount of energy that the Tone includes at various frequency ranges, and how the different distortion characters of the different amps are perceived as volume by our ears and brains. Turning the mids way down with a heavily overdriven sound to get a classic metal Tone, for instance, can result in a perceived lack of volume because all the midrange portion of your guitar signal has been removed.

Track Volume - If you've already got the volume knobs maxed out on your Line 6 hardware, your guitar and the Gearbox amp model, you can move the Track Level slider in the TRACKS area to the left to reduce the level of a Track that you are playing along with so that your guitar will sound louder versus the Track. You can then save the Track to your hard disk, and this level adjustment will be remembered.

Out to Hardware Volume - (This feature is not available when PODxt is being used with Gearbox). Normally, you'll want to set the GearBox Out To Hardware Volume knob at the top of the window to the maxed-out position, so you'll get the maximum output level from the software.

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Trouble accessing GuitarPort Online

You Line 6 TonePort, GuitarPort or PODxt hardware must be connected via USB to your computer to use the GuitarPort features, including access to GuitarPort Online. If this is not happening, make sure the Driver is properly installed or check USB Errors.

You of course also need to have a live Internet connection, so be sure your Internet or network connection is plugged in and active before looking for more complex solutions!

Note that if you own more than one of these Line 6 devices, that your GuitarPort Online membership is only authenticated on the one device that you originally used to sign up. You must use this Line 6 device to gain access to the GuitarPort Online membership content.

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Why do I still hear hum when my Hum Reducer is on?

(This feature is not available when PODxt hardware is used with GearBox.) The Hum Reducer will not completely eliminate hum from your guitar and the electrical interference it receives from your computer's display and other emission sources, but it is usually able to reduce it considerably. If you're not getting the hum reduction you expect, remember that you need to press the Learn button to set up the Hum Reducer before using it. It's important to position yourself and your guitar in your normal playing position in relationship to your computer display, etc. while the Hum Reducer is learning the pattern of the noise that it will reduce. When you change positions relative to the monitor, change guitars or pickups, or add other possible sources of interference (turning on a nearby television, say), the character of the interference that your guitar is receiving and transmitting as hum will change, and you should press the Learn button again to have the Hum Reducer relearn this new hum pattern.

You can also try the Gate to eliminate the noise.

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Incomplete Downloads

The Transfer Manager gives details on in progress, completed and unsuccessful transfers of data between your computer and GuitarPort Online. If a download is interrupted or incomplete, it will be listed in the Transfer Manager as "Aborted". You'll need to start this download again from the beginning; there is no way to continue a partial download.

Download Accelerators are incompatible with GearBox/GuitarPort Online, and must be disabled to successfully use GuitarPort Online. If you have frequent problems with incomplete downloads, there is probably an issue with your Internet connection or the way it is setup, and you may need to contact your Internet Service Provider for assistance. If you are using a dial-up modem connection over regular phone lines and you have Call Waiting, be sure you have Call Waiting turned off when using your Internet Connection so that the Call Waiting signal doesn't interrupt your download. On some phone systems, you can dial *70 before a call to disable Call Waiting for that one call.

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Light is off on GuitarPort or TonePort hardware

If the light on your GuitarPort or TonePort UX1 hardware does not light up, or if your TonePort UX2 front panel meters do not light up, it means that the is not receiving power from the USB connection. See USB Errors.

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Multiple computers: using GearBox and GuitarPort Online on more than one computer

You can use GearBox and the GuitarPort Online features with more than one computer if you like. You will, of course, need to install the GearBox software on each computer. Once you've done that, just connect your Line 6 hardware to the computer you'd like to use, start the GearBox program and you'll be able to use both the standard features of GearBox and GuitarPort Online. You won't be able to access any GearBox features without your Line 6 hardware connected.

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TonePort/GuitarPort hardware does not power up

The light on top of the GuitarPort and TonePort UX1 hardware comes on to show that it is receiving power, and should be green when the driver is correctly initialized and ready to go. TonePort UX2's front VU meters will light up when the unit receives power. These units' lights should come on whenever connected via USB to your computer or hub. If it does not, see the discussion of USB Errors.

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No sound

There are a number of things that could be wrong here. Let's start with the simple stuff, and work our way through the possibilities for the Line 6 hardware:

- **TonePort/GuitarPort hardware output volume –** Be sure the knob on the your TonePort or GuitarPort device is turned up, that it is connected properly to your headphones, speakers or audio system, that the power is on for your speakers or audio system, and that their volume(s) are turned up. Try playing something else through the speakers, audio system or headphones to make sure they're working. Try switching audio cables too since they sometimes can be the problem. If you are using TonePort, be sure the GearBox Source Select menu is correctly set to the input(s) you are plugged into.
- **Can't get any input level from a microphone when plugging into TonePort's Mic input? –** Be sure you are using a good XLR type mic cable, and if you are plugging the cable directly from the mic into the TonePort XLR Mic In jack (no need to first go into a mixer or preamp – GearBox will provide the preamp for you). Check that the Mic Level knob on your TonePort is turned up. Make sure the GearBox Source Select menu at the top left of the software is correctly set to your Mic 1 (or Mic 2) input that you are plugged into.
- **Is the GearBox software running? –** Seems like a silly question, but of you have other software windows open, you might have closed GearBox and not noticed it! For TonePort and GuitarPort devices, you will not hear any processed signal unless GearBox is running and not Muted or bypassed.
- **Is there a USB problem with your hardware? –** The light on top of the GuitarPort or TonePort UX1 normally lights green when connected and properly recognized by the computer. If the light is not lit or is lit red, see USB Errors. If the light is green, try disconnecting and reconnecting the USB cable from the Line 6 hardware to "reboot" it to see if that fixes the problem. Also, try connecting into a different USB slot on your computer if one is available. The same is true of the TonePort UX2 front panel VU meters – they should light up when the correctly connected and powered by the computer.
- **Is the guitar input working with your TonePort/GuitarPort hardware? –** The light on the GuitarPort hardware also acts as an input level indicator, flashing orange when medium volume sound is being received at the guitar connector, and red when the maximum level is reached. If the light doesn't go orange as you play your guitar loudly, you may have the volume turned down on your guitar (been there, done that), a bad guitar cable, the cable not plugged in all the way to the TonePort/GuitarPort hardware (been there and done that, too!), or a broken guitar. Try plugging the guitar into an amp or other device to see if it's working OK with them.
- **Are the meters moving in the GearBox software? –** The round VU meters at the right of the GearBox program's window show the level of audio that is being output by the software. If they're moving but you don't hear sound, be sure you've checked the hardware output volume. If they're not moving as you play guitar, play back a Track or play audio through GearBox, no sound is happening in the software. You could have the BYPASS button, MUTE or MUTE LINE OUT button activated (at the top of the GearBox window), the Monitor Volume knob turned

all the way down, the Amp Model's volume turned all the way down, or the Track Level slider all the way to the left. If you can hear the Track, but not the guitar, it's also possible that you've got the Gate on with too aggressive a setting. Try turning the Gate off by clicking its icon.

- **Are some of the TonePort UX8's inputs muted? –** In the 'Outputs & Monitoring' tab of the Line 6 Audio-MIDI Devices application, you can mute/unmute UX8 inputs as well as GearBox sends. If you want to hear the GearBox-processed audio from either Send 9-10 or Send 11-12, make sure that these inputs are not muted. If you are recording a dry signal into your recording software, but want to hear the processed signal, simply mute Inputs 1-2, unmute GearBox Send 9-10 and select the Input 1-2 as your audio source within your recording software.

  Note that all settings in the 'Outputs & Monitoring' panel affect only the UX8 hardware monitoring levels. These settings do not affect signals that are sent to the recording software.

- **Is the TonePort UX8 plugged into an AC outlet? Is the power switch on? –** Unlike other TonePorts, the UX8 does not receive power from the USB bus. Make sure the unit is plugged in and switched on.

- **No system sounds or sound from other programs while using TonePort/GuitarPort hardware –** Do these programs allow you to see and choose your Line 6 device or audio driver in their preferences? If not, then the Line 6 driver may not be installed correctly. You can run Line 6 Monkey with your Line 6 device connected and choose "Drivers" in the Updates tab to make sure you have the latest version. Or, just try re-installing the driver using Monkey, following the installer steps it provides.

- **Not getting sound while using PODxt with Gearbox software? -** Start by confirming that your PODxt is working OK on its own. Power up your PODxt, connect your guitar to PODxt's INPUT jack, and turn up the guitar's volume. The best thing to do at this point is connect headphones to PODxt's PHONES jack, turn up PODxt's OUTPUT knob and confirm that you're hearing sound. (Using headphones to listen avoids the possibility of problems with some other setup that you might be trying to listen through.) If you can't hear anything at this point, you may have dead headphones or a bad guitar cable; try other ones if you've got them. Also, make sure PODxt's TUNER button is not lit, because PODxt defaults to muting its output while you're tuning.

  - If you hear sound through headphones connected to your PODxt, but don't hear sound through an amp and speakers or other audio system that you've connected to PODxt, thoroughly check the connections of your audio setup, and make sure that all the necessary volumes are turned up. Try connecting something else through the speakers, audio system or headphones to make sure they're working.

  - If you can hear PODxt's guitar processing, but can't hear Tracks or other audio played back by the GearBox Player, check to make sure you have the Track Level slider up (at the top of the Browser window when the Player is in view), and make sure you aren't having a USB problem.

- **If your Line 6 Hardware is not configured as your Sound Card:** You must connect a cable from the Output of your Line 6 device to the input of your sound card.

  - **GuitarPort Users:** Connect an 1/8-inch stereo cord from the Monior Out to the Line input of your sound card (very likely another 1/8-inch stereo connector).

  - **PODxt users:** Connect the ¼-inch line outs, or the Headphone Output to your sound card.

  - **TonePort Users:** Connect either the ¼-inch Analog Outs or the Headphone Out to your sound card

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Causes of excess noise or unwanted distortion and clipping

Noise and distortion? That's what electric guitar is all about, right!? But if you're hearing the bad kind of noise or distortion from GearBox, there are several possible sources and solutions, including the hardware output knob, the onscreen Monitor Volume knob and Out To Hardware knob, Track playback clipping, soundcard noise, guitar noise, and speaker or audio system noise. Let's run through each of these, and how it might be a part of your problem:

- **Output knob set too high –** It's possible that your speakers, headphones or other audio system can't handle the maximum output level from the TonePort or GuitarPort hardware or PODxt that you are using. Try turning the knob on the hardware down and see if this eliminates the distortion.
- **Different sources of Clipping –** "Clipping" is audio distortion that happens when you have some thing(s) turned up higher than a system is designed for, and the loudest parts of your signal get clipped off as a result. Check your system's clipping indicators.
    - The GearBox Monitor Volume and Out To Hardware controls at the top of the window have a little clip indicator light next to each. These are green when receiving a proper level signal, and red if clipping. Back off the knob level if you see red here.
    - The GearBox amp panel also shows the word CLIP that lights up red to show when the amp is clipping. The Track Level Slider within the Player will light up red when clipping.
    - When PODxt is used, the word CLIP is shown on the PODxt's own screen.
    - If you see clipping displayed with either setup while you're playing back the Track and playing guitar, but the clipping stops when you stop playing guitar and leave the Track still playing, it probably means that the combination of the Track volume and guitar volume are too much, even though neither one may clip on its own. In this case, TonePort and GuitarPort hardware users should turn down the Out to Hardware Volume and PODxt hardware users should turn down PODxt's OUTPUT knob. Or you can pull back on the Track Level slider and the Amp Model's Volume knob a bit to get things out of the clipping range.
- **Guitar Noise –** It's easy to find out if your guitar or guitar cable is the source of your noise problem. Just disconnect your guitar cable from your Line 6 hardware and see if the noise goes away. If it does, try using a different guitar cable to see if the cable is the problem. If changing the cable doesn't take care of it, you may just have a guitar with noisy pickups, or your guitar may be picking up electrical noise from your computer's display or other sources. You can generally reduce these noises with the GearBox Gate and Hum Reducer features.
- **Speaker or other Audio System Noise when using TonePort or GuitarPort hardware –** It's also possible that the noise is occurring AFTER TonePort/GuitarPort, in your speakers, headphones, or other system that you are connecting your device to for listening. If you're using headphones, try another pair that you own or can borrow from a friend to see if the headphones are the problem. If you're listening via multimedia speakers or other equipment, try listening with headphones instead to see whether the noise is coming from TonePort/GuitarPort or your speakers or audio system. You may have the volume turned too high on the speakers or audio system, causing distortion there. Also, try unplugging the cable that connects your Line 6 device to your speakers or audio system, and see if the noise goes away. If it does, the noise is probably coming from the Line 6 device or something feeding into it; if the noise doesn't go away, it means that the speakers or other audio system components are probably the noise makers. You should also try a different cable to connect your device's output to your system, to make sure the cable isn't the problem.
- **Noise complaints from your family and neighbors –** Sorry, you're on your own there.

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I still hear noise when the Gate is on

The GearBox Gate will not completely eliminate noise but it will reduce it considerably. Please see the information on the Gate to learn how to gate works and how its light can help you adjust the Gate for best performance as you change Amp Models, pickups or guitars.

TonePort and GuitarPort hardware users can also try the Hum Reducer to eliminate the noise. Hum Reducer is not available with PODxt.

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Track Level Issues

The Player's Track Level slider is available at the top right of the Browser window when the Player is selected.

It sets the playback level for any Track that you load into the GearBox Player. The light to the right of the slider glows green to show the current level of the Track as the Track is playing, and flashes red if the Track "clips" because it is turned up too loud. When this happens you may hear distortion in the Track playback, especially as the louder parts of the Track play, and you should move the slider to the left to reduce the volume of the Track playback and avoid this clipping distortion.

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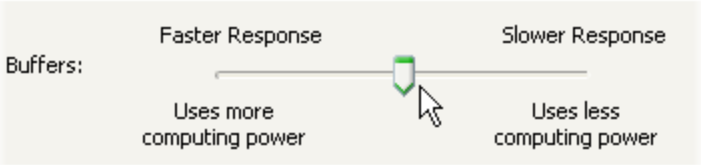
Track playback when using the Player is frequently interrupted

Interrupted Track playback may be caused when another USB device is trying to stream audio or video, or your computer cannot provide enough system resources (RAM memory or computer processor speed) for GearBox. You may be able to reduce or eliminate these problems by making an adjustment to your GearBox Preferences > tracks tab:

In the lower part of the Tracks tab, move the Playback Buffer slider to the right to reduce the load that's put on your computer when playing back Tracks.



Click the Help question mark at the top of the Preferences dialog box and click an item for more details.

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USB Errors

If you are having USB communication problems, the first thing to do is check your cables to make sure they haven't gotten disconnected accidentally. If you have a spare USB cable, try it instead to make sure the cable isn't the problem.

TonePort UX8 does not reconnect after Windows goes into standby

When Windows goes into standby mode or hibernation, the UX8 may not come back online. Toggle the power switch to reconnect the unit to the driver.

USB connection indicators

- This icon shown solid at the bottom right corner of the Gearbox program's window shows you the status of the USB connection to your Line 6 device. For **TonePort** and **GuitarPort** devices, this icon appears as a little USB plug tip . If the TonePort or GuitarPort USB connection is not successfully detected, this icon will be flashing to indicate this problem.
- For **PODxt, PODxt Live or PODxt Pro*** devices this icon appears as a little PODxt icon . If the PODxt USB connection is not successfully detected (or if the PODxt is powered off), the icon appears with a question mark .

USB Connectivity

- It is specifically recommended that you always connect your Line 6 device directly to your computer's "built-in" USB port and not into a USB hub. USB hubs are known to sometimes cause communication errors with USB audio devices. USB audio devices require a fast, uninterrupted flow of audio data to and from the computer.
- On Windows® systems, it is not recommended that you connect both a PODxt and PODxt Pro unit to the computer at the same time. These two specific Line 6 devices utilize a common device driver and only one can be initialized at a time.
- USB connection to PODxt is required in order to use the audio features of GearBox, access GuitarPort Online, etc. So make sure PODxt is connected to your computer via USB and powered on if you want to use these features. If you don't care about these features of the GearBox software and only want to edit the sounds on your PODxt, you can instead connect MIDI cables between PODxt and your computer's properly configured MIDI interface hardware, and select your MIDI interface's connections in the GearBox software's MIDI Preferences.
- If you believe that your MIDI or USB connections are OK, you may want to try re-installing the Line6 device's Driver or GearBox software, which will not affect any Tones or Tracks that you've stored. The easiest way to do this is to run Line 6 Monkey with your Line 6 device connected and go to the Updates tab. Here you will see if you have the latest driver and GearBox software versions installed. You can download and install any available updates here by selecting them in the Monkey Updates tab, or choose to re-install the same versions to make sure all is configured correctly. Just follow the steps as prompted.

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Warranty, Customer Service and Repair Information

Before contacting the Line 6 Customer Service team, please take the time to investigate this Help system to see if it can answer your questions. Don't forget the searchable FAQTRAQ system which is often the fastest and easiest way to get answers. There are also several documents posted on the GearBox Online Help section of the Line 6 website – please visit the site for the most up to date information on your Line 6 gear and warranty and service information.

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Windows XP Optimization

You will find information on optimizing your Windows XP operating system for GearBox at the GearBox Online Help section of the Line 6 website.

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What is A.I.R.?

A.I.R. is the Line 6 exclusive **Acoustically Integrated Recording** technology that accurately simulates the sound of a microphone and recording space. Click on the A.I.R. icon when the effects panel is shown, and you will be able to adjust A.I.R. for the current Tone. Point your mouse at items in the effect panel and look at the Info Bar for more information on those items. Settings made to A.I.R. are saved and loaded with Tones.

Note that the order of the "stomp box" icons in the row show you the signal flow order of the Effects, starting from the Gate effect, and flowing to the right through the effect icons. Effects to the left of the A.I.R. icon are running "Pre" (before the amp, cab and mic models) and effects shown to the right of the A.I.R. icon are running "Post" (after the amp, cab and mic models).

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What are the Amp, Cab and Effect Models?

Line 6 pioneered the use of modeling technology for guitarists with the world's first modeling guitar amp. Since then, all Line 6's products have included Models developed through extensive, meticulous studies of guitar equipment heralded for its classic tone qualities.

To create a Model, we first locate an absolute mint version of a particular piece of equipment, with that special sound quality that makes it a truly remarkable guitar sound machine. We lock ourselves away in the Line 6 labs and sound studios to study this piece of classic equipment in exhaustive detail. We play guitars through it, listen to it, measure, write software, and then play and listen some more as we carefully craft a software Model that captures the signature qualities of the equipment being studied.

The resulting Model is designed to emulate the controls and sound qualities of the original equipment studied, including the beloved quirks and unruly qualities that made the original equipment classic in the first place. Each model is painstakingly perfected until it becomes an organic, living thing with guitar tone pumping through its veins. And when they're finally ready, we unleash these software Models in revolutionary new products like GearBox.

Of course, as we're studying all that classic equipment, we're bound to come up with an idea or two for something that classic equipment can't do. When we do, you end up with something like the Line 6 Insane Amp Model—with as much paint-peeling high gain as a distortion box, but the well defined, love-to-play-it quality of a truly world class guitar amplifier.

The particular Models that power GearBox were each originally developed for Line 6's revolutionary PODxt, which has now transformed the way that guitar is recorded in the world's greatest studios, for countless platinum recordings. Each one represents a particular amplifier, cabinet or type of effect that has become a standard in the guitar world. Together, they deliver a range of sound that allows you and GearBox to achieve the signature sounds of countless classic recordings.

Check out the Model Gallery section to see exactly what gear Line 6 used to capture these classic Amp, Cab and Effects models!

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What are the Amp Panel and Amp Model and Cab Model controls?

The **Amp Panel** includes the following controls:

- **Amp Model –** Click the Amp Model menu, and drag down while holding your mouse button to select one of the Gearbox Amp Models.
- **Cab Model –** Click the Cab Model menu, and drag down while holding your mouse button to select one of the Gearbox Cab Models.
- **Drive –** All of the Gearbox Amp Models include a Drive knob. Turn this up for more "dirt", and turn it down to clean up your sound. The particular drive character and range for each Amp Model is different, emulating the drive character of the original amplifier that was modeled for GuitarPort.
- **Volume –** All of the Gearbox Amp Models include a Volume knob. Turn this up to make your guitar louder, and turn it down to make your guitar quieter.
- **"Original" Knobs –** Each Amp Model will have a different set of tone knobs that emulate the controls of the original amplifier that was modeled for GearBox. These are shown as three-dimensional knobs in the main part of the amp panel, like Drive, Tone and Volume on the Small Tweed panel above.
- **"Bonus" Knobs –** Some Amp Models also have additional tone controls that weren't on the original amp that was studied to create the model. These knobs are shown on a "display" at the right side of the Amp Panel, like Bass, Treble and Presence on the Small Tweed panel above.

Point your mouse at any of these controls and look in the Info Bar at the bottom of the GuitarPort window to see a description of the control and its use, then give it a spin and try it out!

The selection of Amp, Cab and Effect Models, as well as the setting of all the amp and effect controls are saved when you save a Tone. Selecting a Tone from the Tone menu at the top left of the GearBox window will set all these controls to match the settings that were saved for that Tone.

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What is ASIO®?

ASIO® is a protocol for computer audio that allows audio software to communicate with audio hardware. It is a feature available on many recording programs, which use ASIO® to communicate with a soundcard or other audio device. Line 6 TonePort, GuitarPort and PODxt devices come with ASIO® drivers for Windows® - these drivers are installed when you run the GearBox application installer, or can be downloaded individually from the Line 6 Support - Software Downloads page.

ASIO® was designed with the assumption that a single soundcard would provide input and output to the computer. When you choose to use ASIO® with TonePort, GuitarPort or PODxt hardware, it will

act as that single soundcard. Your guitar (or whatever you are plugging into your Line 6 hardware's input) will feed into your computer through your Line 6 hardware, and your recording program will play back through this hardware's outputs, not through other soundcards outputs on your computer.

ASIO® also provides better performance on Windows® systems since it allows the input signal that is fed into the soundcard travel through the computer, your audio software, and back out the soundcard outputs in a very short amount of time. This is what is referred to as "low latency" operation. Please see your Windows® recording program's instructions for details on ASIO® operation.

Note - Line 6 hardware utilizes ASIO® drivers for Windows® systems only. For Mac® computers, Line 6 hardware uses the Core Audio driver, which also offers low latency operation, and is the driver format compatible with most popular Mac® audio software.

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What is the Auto-Select (Tones) Button?

This button is available in the Player interface, within the Browser when the Player button is active. It can be used with Tracks available from GuitarPort Online to automatically load up a recommended Tone custom-made to match the Track. It is also used (for selected Tracks) to enable automatic Tone Changes for that Track. If a Track does not have any Tones embedded in it for auto-selection, the Auto-Select Button will be grayed out.

The Auto-Select Button includes three options:

- **Off –** Disables automatic Tone selection for this track.
- **Single Coil –** Selects a Tone optimized for single coil pickups, or OK for all pickups.
- **Humbucker –** Selects a Tone optimized for humbucker pickups, or OK for all pickups.

If you really like a particular Tone that you've found embedded in a Track, and you want to have this Tone available to use without the Track as well, all you have to do is load the Tone from the Track, and then Save it from the GearBox File menu.

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What is the Browser?

A **Browser** is a program that understands HTML, JavaScript, image files, sound files and other data, and can display them to you to provide an interactive visual and sound experience. Internet Explorer®, for example is the browser made by Microsoft, included on Windows® XP® computers to browse the

Internet. Likewise, Mac computers come with the Safari® browser program.

An enhanced browser is built into the bottom portion of the GearBox window. It is used to display text, images and sound from GuitarPort Online, and also displays the Player, Metronome, Tone Locker and Tone Library.

Click the buttons along the top of the Browser to access the different features:

- **GuitarPort Online -** Connect to a world of guitar online...
- **Player -** GuitarPort's advanced jam tools.
- **Metronome -** Configure a custom beat to play along to.
- **Tone Locker -** Organize your Tones.
- **Tone Library -** Download hundreds of custom and Artist created Tones for free!

There are three controls at the top left of the Browser:

- **BACK –** Steps back through the items that the browser has displayed.
- **FWD –** After clicking the BACK button, you can click the FWD button to step forward again through the items that the browser has displayed. The button will replaced by an outline if you have not used the BACK button yet, or you have forwarded to the last item displayed by the Browser.
- **Show/Hide Browser –** The arrow button at the left shows/hides the Browser.

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What is the Bypass button?

The Bypass button will bypass ALL the GearBox processing of your input signal. The monitor signal you hear will then be rather "naked", as well as the signal routed to your Record Sends. Engaging the Bypass button reduces the CPU load of your computer as well since it turns off all signal processing tasks. You'll see the GearBox interface "gray out" to indicate this when the Bypass button is engaged:

Note, for PODxt, the Bypass button functions as an Amp Bypass only, where only the amplifier processing is bypassed, and any effects that are active are still applied to the input signal by your PODxt.

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What is Chorus?

Chorus is one kind of Mod (modulation) Effect. It is generally used to give a "lush" or "swimmy" sound to guitar. Andy Summers of the Police, for instance, made chorus an important part of his signature sound. For details on each of the Chorus controls, move your mouse over the control and look in the Info Bar at the bottom of the GearBox window.

Some effects are modeled after classic gear described in the Model Gallery.

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What is Comp (Compressor)?

Comp, which is an abbreviation for Compressor, is one of the Gearbox Effects. Compressors even out signals by reducing the volume of the loudest sounds to better match the volume of quieter sounds. You can use subtle compression to make your guitar playing sound more even, or drastic compression for dramatically increased sustain and a very consistent level. For details on each of the Compressor controls, move your mouse over the control and look in the Info Bar at the bottom of the GuitarPort window.

The GearBox Stomp effect also includes the Vetta Comp compressor that runs "pre" (before) the amp processing, which can give a different kind of sound than the dedicated Comp effect which always runs "post" (after) the amp processing.

Some effects are modeled after classic gear described in the Model Gallery.

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What is Core Audio?

Core Audio is a Mac® protocol for computer audio that allows audio software to communicate with audio hardware. Most all popular Mac® audio recording programs now utilize Core Audio to communicate with a soundcard or other audio device. Line 6 TonePort, GuitarPort and PODxt devices come with Core Audio drivers - these drivers are installed when you run the GearBox application installer, or can be downloaded individually from the Line 6 Support - Software Downloads page.

Core Audio also provides excellent performance on Mac® systems since it allows the input signal that is fed into the soundcard travel through the computer, your audio software, and back out the soundcard outputs in a very short amount of time. This is what is referred to as "low latency" operation. Please see your Mac® recording program's instructions for details on Core Audio operation.

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What is the CPU Usage Meter?

The CPU Usage Meter at the bottom right corner of the GearBox window shows how much of your computer's CPU horsepower is being used to power GearBox. If you see the meter close to fully lit (as the meter shown above is), GearBox is putting a heavy load on your computer. When you bypass GearBox's tone processing engine by pressing the second button to the right of the Tone menu, you'll see the CPU Usage Meter's level drop.

Windows® users can reduce the load GearBox and TonePort put on their CPU by selecting Hardware & Settings from GearBox's Help menu and increasing the setting used by ToneDirect™ monitoring. Click Driver & Recording to the left, and select the Windows® Driver topic for more info about Windows® TonePort driver settings.

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What is Delay?

Delay is one of the types of GearBox Effects, and you'll find several types of Delays in Gearbox. Delay adds a delayed echo of your guitar. A short delay time and low feedback setting will give you a classic "slapback" delay. Longer delay times give you a distinctly separate echo, and higher feedback settings increase the number of echoes. For details on each of the Delay controls, move your mouse over the control and look in the Info Bar at the bottom of the GuitarPort window.

Some Delay effects are modeled after classic gear described in the Model Gallery.

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What is the Device Manager in Windows®?

To learn about the Windows® Device Manager and see how it can be used to view and adjust the settings for your computer's hardware, please see the *Windows XP Optimizations* document on the GearBox Online Help section of the Line 6 web site.

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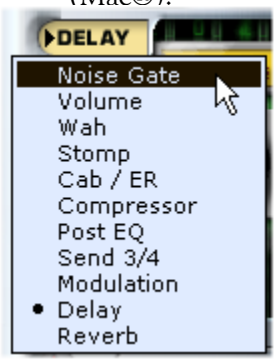
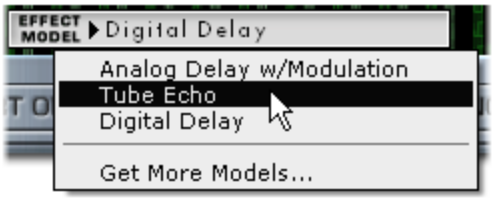
What are the Effects?

GearBox includes nine simultaneous Effects - A.I.R., Comp, Delay, Gate, Mod, Stomp, Verb, Vol (Volume Pedal) and Wah. When you load a Tone from GearBox's Tone Menu, the Effects will be set to the settings saved for that Tone. Saving a Tone will save all the effect settings with the Tone.

- Clicking the arrow to the left of the Gate icon shows and hides the Effects control panel.
- Click directly on the ON/OFF portion of the Gate, Wah, Stomp, Delay, Mod, Comp, EQ, and Verb icons to toggles the effect On or Off. The Volume, Amp/Mic/ER and Send 3-4 icons do not turn on/off. (Send 3-4 is available only for TonePort devices).
- Clicking the top portion of an effect icon to will also cause its controls to be displayed in the Effects control panel – this is independent of toggling the effect On/Off.
- You can also select a particular effect for display in the Control Panel by selecting it from the menu just below the Gate icon, or by right-clicking the effect (Windows®) or control-clicking (Mac®).



- As you move your mouse over any effect control, you'll get a description and tips on using the control in the Info Bar at the bottom of the GearBox window.
- Click switches in the Control Panel or turn any knobs to adjust the selected effect. Or double-click numerical values to type in values.
- Some effects include a Model menu for selecting which Model you'd like to use for the effect.



- The order of the effects icons shows you GearBox's signal flow, from left to right.
- The Vol, Mod, Delay and Reverb effects include a Pre/Post switch so they can run Pre (before the amp/cab/mic or Preamp processing) or Post (after the amp/cab/mic or Preamp). As you click the pre/post switches of these effects, you'll see all the icons re-ordered to show the new signal flow.
- Many of the effects are modeled after classic gear described in the Model Gallery.

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What is EQ (Equalizer)?

EQ, which is an abbreviation for Equalizer or equalization, is one of the GearBox Effects. Equalizers add or remove any range of audio frequencies from bass to treble. The EQ is configured as a "post" effect – that is, it comes after both the Compressor and the Amp in your signal chain. For details on each of the Equalizer controls, move your mouse over the control and look in the Info Bar at the bottom of the GearBox window.

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What is a Flanger?

Flanger is one of the GearBox Mod Effects. Flanger is most famously known as the "jet-plane" whoosh effect of several classic 70s recordings. It can also be used to give a "swooshy" or "swept" sound to guitar, or just to create a "bigger" sound. Eddie Van Halen, for instance, used flanger effects as an important part of his signature sound on many classic Van Halen recordings. For details on each of the Flanger controls, move your mouse over the control and look in the Info Bar at the bottom of the GearBox window.

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What is Gate?

The **Gate** effect included in GearBox is designed to reduce the noise that your guitar makes when you are not playing. You can think of it as a gate that opens to let your guitar sound through when you play, and closes when you stop playing to shut out the noise you would otherwise hear after you stop playing.

The Gate works by detecting the input level to GearBox from your guitar. When the input level is below the level set for the gate's Threshold knob, the gate will close at the speed set by the Gate's Decay knob, and cut off the signal from your guitar. When the input level is above the threshold, the gate will open to let your guitar signal through. Turning the Threshold knob clockwise increases the aggressiveness of the gate in its effort to cut off sound. The idea is to set the threshold low enough so that it doesn't cut off the signal as you are playing or a note is sustaining, but high enough so that the background noise from your guitar doesn't keep the gate open. You'll need to select the Gate setting that works best with the Amp Model you've chosen as well as the guitar(s) and pickups you happen to be using with GearBox. (The Hum Reducer eliminates noise in another way.)

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What is GuitarPort Online?

GuitarPort Online is the membership service accessible from within the GearBox software which offers guitar lessons, artist biographies, guitar news, transcriptions to popular songs and licks and more! If you are not already a member of GuitarPort Online, click the GuitarPort Online button above the Browser to take a tour of GuitarPort Online.

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What is the (Player) Half Speed Button?

The **Half Speed** button is available in the Player interface, which is displayed in the Browser when you select the Player button. When the Half Speed button is lit red, the Player will play back the currently loaded Track at half speed without changing pitch. This can be very handy when you are trying to learn a guitar part. Slow the track to half speed for careful study, then switch back to normal speed once you're ready to put what you've learned into action.

To use the Half Speed Button:

- Click the button to light it red.
- Use the Track controls, including the Loop, as normal.
- Click the Half Speed button again to return to normal playback speed.

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What are Hot Keys (keyboard shortcut assignments)?

What Hot Keys are available in GearBox? You can type on your computer's keyboard to activate various GearBox functions:

Hot Key Assignments		
Command - Action	**Windows®**	**Mac®**
Main Menu Commands		
File-Tone-Open	Ctrl + O	⌘ O
File-Tone-Save	Ctrl + S	⌘ S
File-Tone-Save As	Ctrl + Shift + S	⇧⌘ S
File-Tone-Info	Ctrl + I	⌘ I
File-Tone-Recent	Ctrl + [0 - 9]	⌘ [0 - 9]
Edit-Cut	Ctrl + X	⌘ X
Edit-Copy	Ctrl + C	⌘ C
Edit-Paste	Ctrl + V	⌘ V
Edit-Delete	Del	Del
View-Show/Hide Browser	Ctrl + B	⌘ B
View-Browser-Back	Alt + Left Arrow	⌘ [
View-Browser-Forward	Alt + Right Arrow	⌘]
View-Browser-Refresh	Ctrl + R	⌘ R
View-Browser-Stop	Ctrl + Z	⌘ .
View-Browser-Home	Ctrl + H	⇧⌘ H
View-Transfers	Ctrl + T	⌘ T
Help-Open Help	F1	⌘ ?
File-Tone-Open (B)	Ctrl + Alt + O	⌧ ⌘ O
File-Tone-Save (B)	Ctrl + Alt + S	⌧ ⌘ S
File-Tone-Save As (B)	Ctrl + Alt + Shift + S	⌧⇧⌘ S
File-Tone-Info (B)	Ctrl + Alt + I	⌧ ⌘ I
File-Tone-Recent (B)	Ctrl + Alt + [0 - 9]	⌧ ⌘ [0 - 9]
Player - Transport		
Toggle Half Speed	F3	F3
Toggle Looping	F4	F4
Play Start/Stop	F5, Spacebar	F5, Spacebar
RTZ	F6	F6
Rewind	F7	F7
Fast Forward	F8	F8
Previous Section	F9	⌘ F9
Next Section	F10	⌘ F10

Hot Key Assignments		
Command - Action	**Windows®**	**Mac®**
Set Loop Start	F11	⌘ F11
Set Loop End	F12	⌘ F12
Browser		
Scroll Down	Down Arrow, Spacebar	Down Arrow, Spacebar
Scroll Up	Up Arrow, Shift + Spacebar	Up Arrow, ⇧ Spacebar
Scroll Left	Left Arrow	Left Arrow
Scroll Right	Right Arrow	Right Arrow
Popup Menus		
Next Item	Down Arrow	Down Arrow
Previous Item	Up Arrow	Up Arrow
Knobs		
Single Step Up	Up Arrow	Up Arrow
Single Step Down	Down Arrow	Down Arrow
Large Step Up	Right Arrow	Right Arrow
Large Step Down	Left Arrow	Left Arrow

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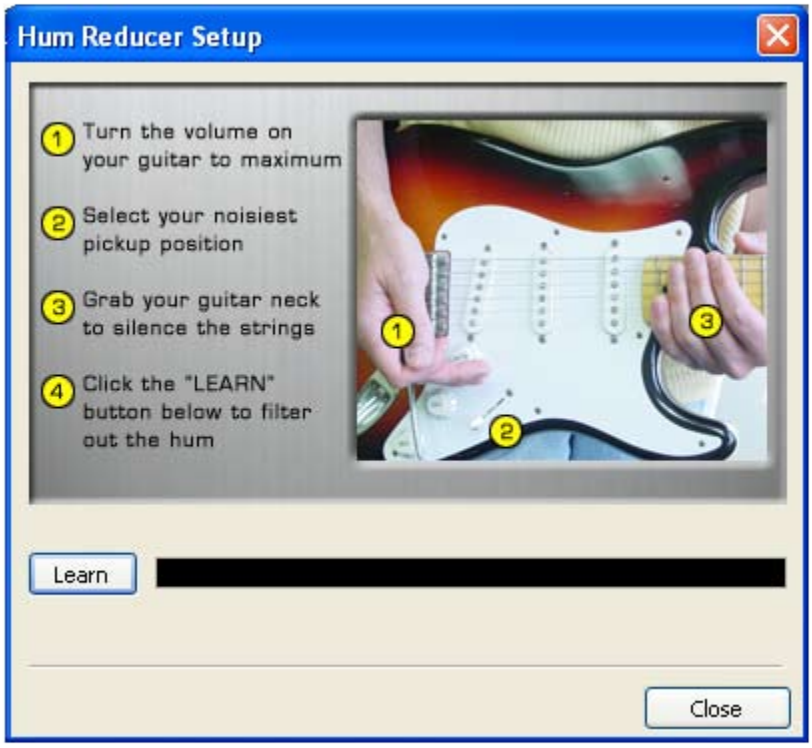
What is the Hum Reducer?



The **Hum Reducer** reduces the noise that your guitar (or bass guitar) puts out*, including noise that is caused by electrical interference from your computer display and other sources that are picked up by your guitar's pickups. The Hum Reducer will not completely eliminate hum, but it is usually able to reduce it considerably. To use the Hum Reducer:

- Click the Hum Reducer button to light it up red, then
- Click the Learn button, then
- Follow the other directions on-screen in the Hum Reducer window.

It's important to position yourself and your guitar in your normal playing position in relationship to your computer display, etc. when the Hum Reducer is learning the pattern of the noise that it will reduce. When you change positions relative to the monitor, change guitars or pickups, or add other possible sources of interference (turning on a nearby television, say), the character of the interference that your guitar is receiving and transmitting will change, and you should press the Learn button again to have the Hum Reducer relearn this new hum pattern.

*__Note__ – the Hum Reducer is only available when using GearBox with TonePort or GuitarPort hardware. It does not appear in GearBox when using PODxt as the connected device.

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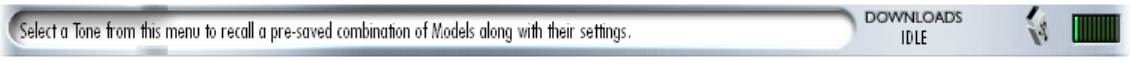
What is the Info Bar?



The **Info Bar** is the area at the very bottom of the GearBox window. Point your mouse (you don't have to click the mouse button) at something in the GearBox program and look at the Info Bar to see

a description of the thing you're pointing at as well as brief instructions on how to use it. For some controls, the current setting of the control is shown (in parentheses) at the end of the Info Bar text.

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What is the Loaded (Track) Menu?

The **Loaded** Track Menu within the Player interface, which is displayed in the Browser when you select the Player button, shows the name of the currently loaded Track. Click your mouse button on the menu and drag down to select from up to 10 of the Tracks that you loaded before the current one.

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What is the Loop Button?

When the **Loop** Button is on for the Track loaded within the Player interface, which is displayed in the Browser when you select the Player button, the Track will repeatedly play from the Loop's start to end.

The loop is shown and set in the Track Sections Display.

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What is MIDI?

MIDI (Musical Instrument Digital Interface) is a communications standard supported by a variety of music equipment and software. All the tone controls of the GearBox software (and PODxt hardware) are associated with one of the 127 MIDI CC (continuous controller) messages.

MIDI Pedals and Controllers

PODxt includes MIDI connectors that allow you to connect a MIDI controller (for instance, a controller pedal) directly to it to select channel memories, operate wah and volume, or control other Tone parameters, all of which can also be done using a Line 6 FBV family foot controller. More information on those is available at www.line6.com/podxt, and in your PODxt Pilot's Handbook.

A MIDI pedal or other MIDI controller can also be used with TonePort or GuitarPort hardware to operate the GearBox Wah and Volume, as well as any other Tone parameter. Connect the MIDI pedal or other MIDI controller hardware to a MIDI input jack on your computer's hardware MIDI interface, then select that MIDI input port in the MIDI tab of the GearBox application Preferences > MIDI tab. Remember that you will also have to configure the MIDI hardware to send the right MIDI controller messages, which are listed below. For example, the Wah's Position knob is associated with MIDI CC #4. When CC #4 messages are received by the GearBox software, the Wah's Position knob moves accordingly, and you'll hear your guitar Tone change just the way it would if a wah pedal was being used. Please see the MIDI Continuous Controller Reference document for more details on MIDI connectivity and how to map MIDI hardware to specific GearBox parameters.

MIDI Channel

When TonePort or GuitarPort hardware is used, the GearBox software always sends MIDI messages on Channel 1 and responds to messages on any channel. PODxt users, please see your PODxt Pilot's Handbook to learn how to set your PODxt's MIDI Channel to match your other MIDI hardware and software.

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What is Mod?

Mod, an abbreviation for Modulation, is one of GearBox's Effects. The Modulation effect can use one several different Models, all described in the Model Gallery.

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What are Model Packs?

Model Packs are expansion sets you can purchase for your TonePort, GuitarPort and PODxt.

- The **Metal Shop** pack contains 18 bone crushing high gain amp models.
- The **Classic Collection** pack contains 18 vintage amp models.
- The **FX Junkie** contains 17 sinister stomps, 13 mind bending mods, and 5 dreamy delays. (The PODxt Live unit already includes all models in the FX Junkie).
- The **Power Pack** expands a TonePort's or GuitarPort's amp, stomp, mod, delay, and verb collection to that of a PODxt. (PODxt's already include all models in the Power Pack).
- The **Bass Expansion** Model pack delivers 28 bass amp and 22 bass cab models all paired with the perfect mic selections.

Just connect your Line 6 device to your computer and launch Line 6 Monkey – the Optional Add-Ons tab will show you which Model Packs and other goodies are just a few clicks away (well, a few clicks and a credit card number anyway). For more info, please check out the Model Pack Handbooks.

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What are the numbers shown in some tracks?

The small numbers shown at the bottom of some Tracks are the **Tone Changes** included in some Tracks available from GuitarPort Online. Please see the What are Tone Changes? section that follows.

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What is a Preferred Audio Device?

Windows® calls the device it uses to play system sounds the Preferred Audio Device. You can choose to make your Line 6 device your preferred audio device, and then Windows® will route all sounds that your computer makes through GearBox and to the Line 6 hardware via the USB cable.

Your Line 6 USB audio device is one of the best-sounding USB bus-powered devices in the world, so if you do use it as your preferred audio device, you'll get no-compromise sound quality. However, on some systems you will lose some sound capabilities if your Line 6 device is the preferred audio device:

- If your soundcard provides surround sound via multiple speakers, this would also be a feature that you would lose by making your Line 6 hardware your preferred audio device.
- Some sound cards also have synthesizer chips onboard that feed audio directly out of the card without the computer "seeing" it, so these sounds might also not be available to you if you were using your Line 6 device as the preferred audio device. If your soundcard has one of these, you could get around this by connecting the audio output from your computer to the Monitor In jack on the back of your Line 6 device.
- Some computers have the audio output of their internal CD drive connected to the internal sound card via a direct analog connection, so the audio from the CD drive is never "seen" by the computer as the CD plays. If your computer is set up this way, making your Line 6 device your preferred audio device would mean you could not use the computer's CD to play audio CDs via WinAmp or other programs. However, you do sometimes get an alternative to enable digital playback of the CD. This can be accessed on some Windows® systems by right clicking on the "My Computer" icon on your desktop and choosing Properties. You will then see a tab named Device Manager. Select your CD here and navigate to an option to enable digital audio playback of the CD (if this option is provided), and you will now be able to playback audio from your computer's CD drive in any program, and hear it coming out of your Line 6 device. If your CD doesn't support digital playback, you could also get around this by connecting the audio output from your computer to the Monitor In (or Aux In) jack of your Line 6 device.

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What is Re-Amping

Re-amping is the process by which you can record a completely dry unprocessed signal to your digital recorder/computer, while monitoring an amp/fx processed tone. This process allows you to record a dry track so that you can adjust the tone and effects on playback, in a non-destructive manner. The PODxt family of products features digital re-amping thru the USB output, and this process is covered in detail in this section.

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What is a Record Send?

A Record Send is a signal routing mechanism utilized in audio hardware and software mixing systems which allow specific input signal to be mixed together or processed and then made available as to recording inputs. GearBox provides stereo Record Sends that are accessible within the GearBox software, as well as from the Line 6 Control Console dialog. These Record Sends are able to carry your whatever signal(s) you input into your Line 6 device and route them to the Audio Driver so that they are available in digital form for your audio recording software. Your recording software can then choose the GearBox Sends as mono or stereo inputs for recording into tracks.

The number of Record Sends available in GearBox depends upon the Line 6 device in use – GuitarPort and PODxt devices have one stereo Record Send, and TonePort devices have two stereo Record Sends that show up as inputs in your recording software.

Additional information is provided in the *Recording Setup Guide* on the GearBox Online Help section of the Line 6 web site.

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What is the Reference control in the Tuner?

This control is available within the Tuner interface. It tells the Tuner what to tune to. 440Hz is the standard reference value for A, and is generally used for tuning reference. All the Tracks available from GuitarPort Online use the standard 440Hz reference. So, unless you have a particular need to adjust the Tuner's reference (and tune your guitar to match something other than GuitarPort Tracks), you probably want to stick with the standard 440Hz setting for this control.

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What is a Rotary Drum + Horn?

A **Rotary Drum + Horn** (or rotary speaker) is one of those things that makes you go, "Gee whiz!" when you first hear about it: a speaker is mounted on a rotating motor, and spun around as sound plays through it. A switch allows you to select slow or fast speed for the rotation, and one cool thing about a rotary is the gradual change in sound that you hear as the speaker speeds up or slows down to the new speed. The rotary drum + horn speaker enclosure was originally developed for organ players, but guitar

players soon put it to use as well. Effects manufacturers also quickly started making foot pedals that emulated this effect too (check out the GearBox U-Vibe in the Mod Effects menu for a model of one of these popular effects). Stevie Ray Vaughn and The Beatles were both heavy users of rotary speaker effects for guitar. For details on each of the Rotary Speaker controls, move your mouse over the control and look in the Info Bar at the bottom of the GearBox window.

Many of the effects are modeled after classic gear described in the Model Gallery.

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What are Sends?

Sends are signal routing mechanisms utilized in audio hardware and software mixing systems which allow specific input signal to be mixed together or processed and then made available as to recording inputs. GearBox provides stereo Sends that are accessible within the GearBox software, as well as from the Line 6 Control Console dialog. These Sends are able to carry your whatever signal(s) you input into your Line 6 device and route them to the Audio Driver so that they are available in digital form for your audio recording software. Your recording software can then choose the GearBox Sends as mono or stereo inputs for recording into tracks.

The number of Sends available in GearBox depends upon the Line 6 device in use – GuitarPort and PODxt devices have one stereo Send, and TonePort devices have two stereo Sends that show up as inputs in your recording software.

Additional information is provided in the *Recording Setup Guide* on the GearBox Online Help section of the Line 6 web site.

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What is a Soundcard?

A **soundcard** is the piece of hardware in (or attached to) your computer that plays back and receives sound into the computer for recording or other uses. Line 6 TonePort, GuitarPort and PODxt devices all operates as USB soundcards, since they utilize high performance audio drivers and can be accessed by most any audio software on your Mac or Windows computer for quality audio recording and playback. Additional information is provided in the *Recording Setup Guide* on the GearBox Online Help section of the Line 6 web site.

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What is Stomp?

Stomp is one of the types of GearBox Effects. A selection of stomp box distortion, fuzz and compressor effects are available from its Effect Model menu. For details on each of the Stomp controls, move your mouse over the control and look in the Info Bar at the bottom of the GearBox window.

Many of the effects are modeled after classic gear described in the Model Gallery.

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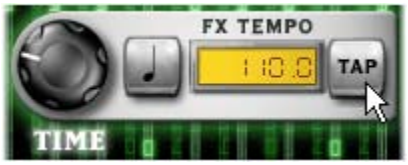
What is Tap Tempo?



All GearBox's Delay and Mod Effects (except for Rotary Drum + Horn) allow you to set their time/speed two ways. One way is to turn their speed or time knob. The other way is to choose a tempo.

You choose a tempo one of two ways. You can type into the TEMPO field shown for these effects. Or you can select a note value from the button to the left of their FX TEMPO display, then click a few times on the TAP button to set tempo to match the tempo of the music you're working on.

The most common use of tap tempo is to set the note value to a quarter note (as shown above), tap along with the song you're recording, and enjoy GearBox's Delay and/or Mod Effect as it pulses in quarter note time to match your song. You can also choose other notes values — U2's guitarist, The Edge, is fond of using dotted-eighth note delays.

GearBox uses one tempo for both the Mod and Delay effects, so when you set it with one, it will also be used by the other. Choose (OFF) from the button to the left of the tempo display if you'd like Delay or Mod to ignore the tempo. Mod and Delay can have different note values, so for instance your delays could be dotted-eighth notes while your tremolo pulses along in quarter note time.

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What is a Tone?

A **Tone** is a saved setting for all controls that affect the processed sound applied to TonePort inputs.

Tones stored on your computer are accessed from the Tones menu at the top left of the GearBox window. Some Basic Tones and a folder of Preset Tones are available in this menu. The menu also has a User folder ready to store any new Tones that you save.

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What are Tone Changes (on GuitarPort Online Tracks)?

The small numbers shown at the bottom of some Tracks are the **Tone Changes** included in some Tracks available from GuitarPort Online. When Tone Changes are available, the Auto-Select button lets you choose to use them, or turn this feature off.

Only selected GuitarPort Online tracks include Tone Changes. You'll most likely see these included in Tracks where the guitarist used significantly different equipment or settings to achieve a variety of sounds on the recording. When these Tracks are created, Line 6 creates multiple Tones that deliver the required range of sounds. These Tones are then embedded into the Track along with Tone Changes that trigger the right Tone to load at the right time. Wherever a Tone Change occurs, a boxed number is shown in the Track Sections Display. There are three Tone Changes in the example below: Tone

Change 1 at the beginning of the Track, number 2 at the beginning of the Solo, and number 1 again later in the Solo:

Replacing Tones in Tracks

You can also choose a different Tone for a Tone Change to trigger. Stop the Track somewhere just after the Tone you want to change. Edit the Tone as you wish or choose a completely different Tone from the Tone menu. Then, from the File menu, choose *Save* > *Tone* > *Replace Track Tone with Current Tone*. The Tone you're using has now been saved to the numbered tone change just before the green playback indicator in the Track. In the example above, the playback indicator is at the start of Chorus 1, so Tone Change number 1 would be the Tone that would get replaced, because that's the first Tone Change before this point in the Track. This Tone will now be used for every Tone Change number 1 in the Track. In the example above, you'll get this Tone at the beginning of the Track, and then again for the latter part of the Solo toward the end.

You can not add additional Tone Changes into a Track, move the Tone Changes, or change the number assigned to each Tone Change.

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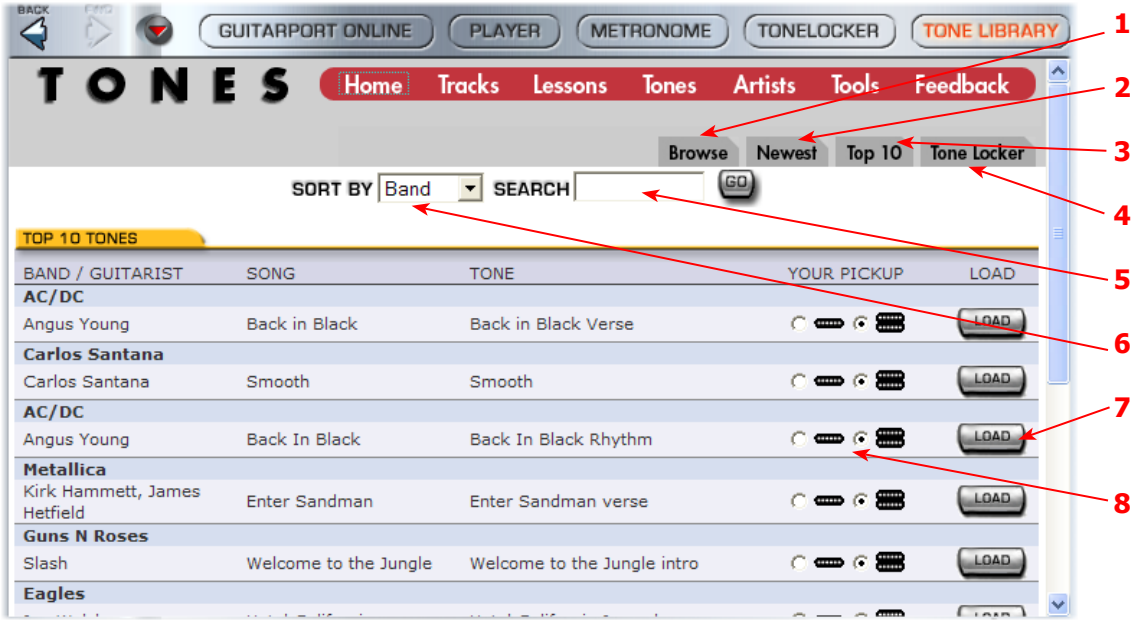
What is the Tone Library?

The **Tone Library** is your resource for Line 6 created Tones – and its free! This library holds a collection of Tones matching the sounds of the greatest guitarists, bands and gear of all time. Originally created for the Line 6 GuitarPort Online Tracks and Lessons, these Tones are made available for you to download by clicking on the Tone Library button above the Browser window. Even better, new Tones are added to this library all the time. Note that you do not need to be a GuitarPort Online member to have access to this library – you need only an Internet connection. Just Browse or Search for a Tone, then click the Load button at the right to load the Tone directly into GearBox. Click on a number to go to its description…



1 -GuitarPort Online membership sign up: Click the Join Now button to take you to the online sign-up page for the GPO membership.

2 -Browse button: Click this tab button to see all available Tones in the Library. Use the Search to find specific Tones.

3 -Newest button: Click here to show you the most recently added Tones.

4 -Top 10 button: Click here to show the current 10 most popular loaded Tones.

5 -Tone Locker button: Click here to load the GearBox Tone Locker in the Browser, where you can manage your Tones.

6 -Search option: Type in the name of any Guitarist, Band, Song title or Tone title in this field and press go to find any Tones that match.

7 -Sort By selector: Choose **Band** or **Guitarist**, then press the **GO** button to sort the library's list by either.

8 -Load button: Press the Load button to the right of the desired Tone to have it load into GearBox. You'll then see the Tone's name appear in the main Tone menu at the top of GearBox:

Note that the Tone name appears in italics since it is not a saved Tone yet. If you want to keep this Tone, be sure to do *File* > *Tone* > *Save* to permanently save this Tone into your GearBox Tones folder.

9 -Pick-up type indicator: You'll see that either the "single coil" or "humbucker" type pickup is selected for each Tone. This is an indicator saved within the Tone by its creator to let you know what type of pickup it was intended for use with. You can of course use it with any pickup setting on your guitar, but it the Tone will sound most faithful to what it is trying to match if you use the same pickup type as indicated.

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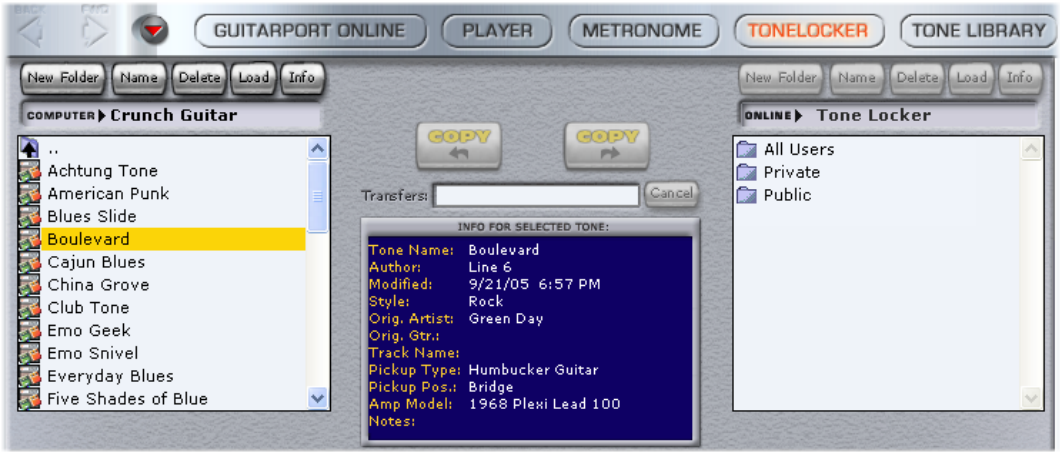
What is the Tone Locker?

GearBox's Tone Locker lets you access and organize your Tones. Click the **Tone Locker** button above the Browser to access the Tone Locker:



- The list on the left shows Tones stored on your computer. This list shows the contents of the folder that is set as the **Tones Root Folder** in your GearBox Preferences – Tones tab window.
- The list on the right shows the **Online Tone Locker** for GuitarPort Online members.
- To load a Tone into GearBox so you can hear it, double-click the Tone in one of the lists, or click a Tone in either list to highlight it, and then click the Load button above its list, or type the ENTER key on your computer's keyboard to load it.
- Point with your mouse at something in the Tone Locker and look at the Info Bar at the bottom of the GearBox window for information on it.

PODxt users also have a **Right List Shows** menu at the top of the Tone Locker to select whether the right list will show their **Online Locker** or **PODxt Memory**. (More on this in the following Memory List sub-section).

Computer List

When you first install GearBox, the following items are displayed in the **Computer** list on the left side of the Tone Locker:

- The **Preset** folder containing a selection of factory-programmed Tones.
- The **User** folder containing Tones you save from the File menu.
- If you had a previous version of GearBox installed, you might also see an **Old Presets** folder – this contains all the Tones from your previous version, and you can still use them in your new GearBox version.
- A set of **Basic Tones** for Guitar, Bass and Vocals is supplied as a starting point for creating your own Tones. These are within the Preset folder:

Online List

If you're a member of GuitarPort Online, there are three main folders in the **Online** list on the right (PODxt users, select "Online Locker" from the **Right List Shows** menu at the top of Tone Locker to see these):

- The **Public** folder, for Tones you want visible to all members of GuitarPort Online.
- The **All Users** folder. Inside this folder, you'll find the Public folders of all GuitarPort Online users. Hear what other GuitarPort Online users have created for you to share!
- The **Private** folder. Tones in this folder are only visible to you. Copy Tones here if you want to keep them private, while being able to access them from another Internet-connected computer that you use with GuitarPort.

As shown in the image above, the buttons above the **Online** list will be grayed out if you are not currently looking at the contents of the **Private** or **Public** folders, because you cannot add, delete or alter files at any other location.

Memory List (PODxt)

PODxt users, select "**PODxt Memory**" from the **Right List Shows** menu at the top of the Tone Locker to see your PODxt's memory displayed as three "folders" for **Tones** (Channel Memories), **Amp Setups** and **FX Setups**:

- Double-click the **Amp Setups** folder to see the 32 Amp Setups plus any additional amp model packs stored in your PODxt.
- Double-click the **FX Setups** folder to see PODxt's 64 FX Setups.
- Double-click the **Tones** folder to see the 128 Channel Memories of your PODxt.
- Click the **Refresh** button at the top of the list to update the memory display.
- **Amp Setups** and **FX Setups** can be loaded just like **Tones**, by double-clicking their names, or clicking the **Load** button at the top of the list when they are highlighted.
- **Amp Setups** can not be renamed (because there is always one Amp Setup for each Amp Model, named to match that model).

The **Name** and **Load** buttons above the Memory list will be grayed out until you have opened the **Amp Setups**, **FX Setups** or **Tones** folder and selected one or more of the memory locations within it.

Navigating Folders

You can double-click a folder in the Tone Locker to open it. The folder selectors at the top of the **Computer**, **Online** and **Memory** lists let you move from the folder you are in to the enclosing folder(s).

F5 or Right-click to Refresh lists

You can press the F5 key on your computer keyboard or click the right mouse button (on Windows®) while pointing to a Tone Locker list to have the list updated to show the current folder contents. You'll find this handy, for instance, if you're viewing a friend's Public Tones via the **All Users** folder, and they've just added a new Tone while you're there. In that case, right-click and refresh the folder display and you'll see the Tone that's just been added. The PODxt Memory list has a Refresh button at the top of the list, which will update the list to show the current memory of your PODxt.

Delete Tones

Click a Delete button to delete one or more Tones or Folders (items in **PODxt Memory** list cannot be deleted):

- Highlight a Tone by clicking its name in the left or right Tone Locker list.
- Click the **Delete** button to delete the highlighted Tone(s).
- You can SHIFT-click multiple Tones to select several at once to be deleted.
- The **Delete** button will be dimmed if no Tones are currently selected.

Copy >

GuitarPort Online members can use the **Copy** > button to copy one or more Tones or folders from their local **Computer** list to the **Online** list:

- Open your **Private** or **Public** folder on the right so that the name of the folder is shown in the folder selector at the top of the **Online** list, and the folder's contents are shown in the list below.
- Highlight a Tone or folder by clicking its name in the **Computer** panel list on the left.
- You can SHIFT-click multiple Local Tones or folders to select several at once to be copied.
- The button will be dimmed if no **Local Tones** or folders are currently selected, or the **Public** or **Private** folder is not open in the **Online** panel on the right.
- Click the button to make a copy of the highlighted Tone(s) or folder(s) in the Online folder.

Copy <

GuitarPort Online members can use the **< Copy** button to copy one or more Tones or folders from the Online list to their local **Computer** list:

- Open your **Private** or **Public** folder on the right so that the name of the folder is shown in the folder selector at the top of the **Online** list, and the folder's contents are shown in the list

below.

- In the **Computer** list, open the folder that you'd like the Tone(s) or folder(s) copied to.
- Highlight a Tone or folder in the **Online** folder by clicking its name.
- You can SHIFT-click multiple Online Tones or folders to select several at once to be copied.
- The button will be dimmed if no Online Tones or folders are currently selected.
- Click the button to make a copy of the highlighted Tone(s) or folder(s) in the Local folder.

< Selected

When PODxt users select "PODxt Memory" from the Right List Shows menu at the top of Tone Locker to see your PODxt's memory, the button can be used to copy items from PODxt memory to computer files:

- Double-click the **Tones**, **Amp Setups** or **Effect Setups** folder to show the memory items in it, and select one.
- Click the button to make a computer file containing the memory data.
- The file icons are — Tone: Amp Setup: FX Setup:
- You can SHIFT-click multiple items in a PODxt folder, then click the button to make files from them all at once.
- Or, select a folder and click the button to make individual files on your computer from its entire contents.
- The button will be dimmed if no PODxt Tone, Amp Setup, Effect Setup or folder has been selected in the list.

> Selected

When PODxt users select "**PODxt Memory**" from the Right List Shows menu at the top of the Tone Locker to see your PODxt's memory, the button can be used to send data from the Computer list to your PODxt memory:

- Select a **Tone**, Amp **Setup** or **FX Setup** file in the left **Computer** list.
- Click the button to transfer that Tone or Setup to your PODxt.
- A dialog box will ask you to confirm that you want to replace a Tone or Setup in your PODxt with the computer data you've chosen. If you highlight a PODxt memory location in the Memory list on the right before pressing the button, the dialog will ask if you want to put the data at the PODxt location you've highlighted.
- You can SHIFT-click multiple items in a **Computer** folder, then click the button to send them all to your PODxt.
- The button will be dimmed if no PODxt **Tone**, **Amp Setup**, **Effect Setup** file has been selected in the left Tone Locker list.

< Bundle and > Bundle

When PODxt users select "**PODxt Memory**" from the Right List Shows menu at the top of Tone Locker to see your PODxt's memory, the **< Bundle** and **> Bundle** buttons can be used to backup and restore the complete memory of PODxt to your computer:

- Click the button to backup your complete PODxt memory as a Bundle file.
- The Bundle file icon is:
- Select a Bundle file in the left Tone Locker list, then click the button to replace your PODxt's memory with the data in the Bundle file.
- A dialog box will ask you to confirm that you want to replace your PODxt memory with the computer data you've chosen.
- The button will be dimmed if no Bundle file is selects in the left Tone Locker list.

GearBox stores Tones on your hard disk. Note that Tones and Tone folders must be stored in the GearBox Tones folder in order to be available from GearBox's Tones menu. To see where this folder resides on your computer, look in the GearBox Preferences – Tracks tab and see the "Tones Root Folder" setting.

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What is the Track Level?

The **Track Level** slider is available in the Player interface, which is displayed in the Browser when selecting the Player button above the Browser. This slider sets the playback level for any Track that you load into the Player, and its setting is saved with a Track if you save the Track to your hard disk. The light to the right of the slider glows green to show the current level of the Track as the Track is playing, and flashes red if the Track "clips" because it is turned up too loud. Note that this independently adjusts the playback level of your Track, and you can adjust your guitar level separately using the GearBox Amp Volume knob. If you are having trouble with clipping or other issues, see the Troubleshooting information for Track Level Issues.

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What is the Track Sections Display?

When you've selected the Player button above the Browser, you'll see a **Track Sections Display** – it's the bottom portion of the image shown above. You can click the arrow graphic to the left of the LOAD FROM menu to show/hide the Track Sections Display. You may want to hide the Track Sections Display (and use the tone controls show/hide arrow) when you want to have more room in the Browser to see tablature, a lead sheet, or other Track contents.

Tracks imported from Audio CD or MP3, WAV and AIFF files will show a single section for the entire Track. Tracks provided by Line 6 will show multiple sections. Clicking the (Fast Forward) and (Rewind) buttons will jump you to the next/previous section boundary in the Track (if you click and hold the buttons, the play point will move smoothly forward or backward instead of jumping by sections). When Loop is on, the loop start and stop points will be shown and set here also.

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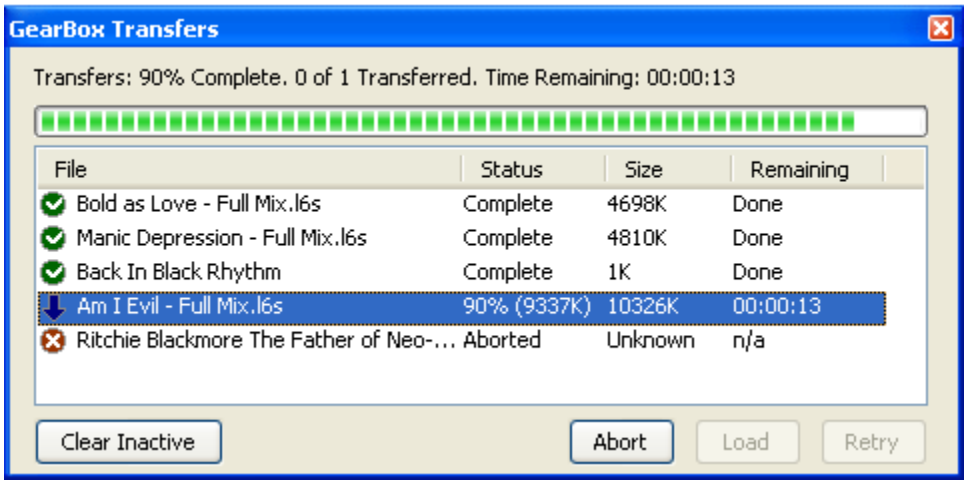
What is the Transfer Manager?

The **Transfer Manager** shows the status of in progress, completed, and aborted transfers of data between your computer and GuitarPort Online.

Download progress activity shows at the bottom right of the GearBox program's window. Click there to open the Transfer Manager window which shows details of transfers, like this:



In the example display above, the **Transfer Manager** shows that downloading of the "12 Bar Jam - No Lead" track was aborted, "67-70 Groove - Drums Only" will be downloaded and automatically loaded once the items currently downloading have been completed, "Back In Black Solo" was downloaded successfully and "12-8 Blues - No Lead" is currently being downloaded, won't be automatically loaded, and is 405K of 4716K—which works out to be 9%—complete. The Retry button can be clicked to retry a download on the currently selected item. In this case, that would be "12 Bar Jam - No Lead".

Once you have downloaded a Tone, Track, or other item, you can often reload it into GearBox simply by selecting it in the Transfer Manager and pressing Load. This can be especially useful for some online lessons if you wish to use Half Speed on sound bytes, or if you did not have items auto-load after downloading. Automatic saving and loading may be configured by selecting the GearBox Preferences, then choosing the General tab.

Selecting a transfer and pressing the **Abort** button will abort the transfer. It may take a few seconds to finish aborting, as it tries to politely disconnect from the server. You can clear all inactive transfers - transfers that are not currently downloading - by pressing **Clear Inactive**.

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What is Tremolo?

Tremolo is one kind of effect that can be run by GearBox's **Mod** (Modulation) Effect. Tremolo produces a pulsing sound. It works by turning the volume of your input down and back up again repeatedly, at the speed set for the tremolo. For details on each of the Tremolo controls, move your mouse over the control and look in the Info Bar at the bottom of the GearBox window.

Many of the effects are modeled after classic gear described in the Model Gallery.

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What is a USB hub?

A USB hub is a hardware device that can be connected to a computer's "built-in" USB port to expand the number of USB connections to the computer. **However, please note that it is specifically recommended that you always connect your Line 6 device directly into your computer's built-in USB port and not into a USB hub.** USB hubs are known to sometimes cause communication errors for audio devices, which require a nice fast, uninterrupted flow of audio data.

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What is Verb (Reverb)?

Verb, an abbreviation for Reverb, is one of the GearBox Effects. The Effect Model menu in the Reverb control panel lets you choose from a number of different models, including Spring Reverb as well as Room, Hall and Plate Reverb types:

- Choose the **Spring Reverb** when you want the kind of classic sound created by spring reverb tanks built into guitar amps, or used for studio processing on classic recordings. This is the place to come, for instance, when you're looking for that signature Surf Music sound of splattering reverb.
- Choose a **Room or Hall Reverb** when you want a polished, modern studio sound. These simulate the sound of your amped guitar echoing in a small or large room, and can be set to

subtly enhance the size and polish of your tone, or make it sound like you're playing in a large, resonant chamber.

- Choose a **Plate Reverb** for a more reflective reverberation, reminiscent of some of the famous old recordings. Plate reverb can be excellent for vocals or drums too.

Many of the effects are modeled after classic gear described in the Model Gallery.

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What is Vol?

Vol (Volume) is one of GearBox's Effects, and can be accessed remotely via an external MIDI controller device to provide you with a Volume pedal for your Gearbox "rig". Note that the position of the Vol can be set "Pre" or "Post" in the signal chain.

The Vol and other effects are described in detail in the Model Gallery.

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What is Wah?

Wah is one of GearBox's Effects, and there are two different Wah models to choose – the Vetta Wah, and the Weeper. Both are designed after classic wah pedals, and can be used to provide a "parked wah" sound, or can be controlled via MIDI for wah pedal effects.

Many of the effects are modeled after classic gear described in the Model Gallery.

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What is the "! Warning" Triangle?

This warning icon will show at the bottom right of the GearBox application window if some aspect of your computer's setup appears to be incompatible with GearBox, or your hard disk space runs low.

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Online Help & Support

For all your unanswered questions, help is available around the clock at

http://www.line6.com/support/knowledgebase/toneporthelp/