ANALOG IN

15Vpp when guitar in = 5Vpp @ 100Hz

5Vpp Max

CODEC 1

BALANCED LINE INPUT

GUITAR BUFFERED BALANCED OUTPUT (REAMP OUT)

Codec outputs are:
2.7V pp Max / 5.4V pp diff Max

BREAKAWAY PCB

This board: All resistors are 1% Tolerance

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION		
ECO NO:	DATE:	DESCRIPTION:
0313604	05.16.03	Released to MFG as rev.C
0314302	05.23.03	Released to MFG as Rev.D

COMPANY: LINE 6

TITLE: SHARCPOD/BOD-PRO MAIN
ANALOG IN

PROGRAM: PADS POWER LOGIC V5.0

DRAWN: D. MOLNAR   DATED: 5/23/2003
CHECKED: Name (F.Last)   DATED: 00/00/01

FILENAME: ...SharcPOD Pro/Electrical/Schematic/Main/Rev D/SharcPOD Pro Main Rev D.sch

SCALE: 1:1   SIZE: C   PART NUMBER: 35-00-0171   SHEET: 1 OF 11   REV: D

EFFECTS LOOP

FX LOOP LEFT/MONO

SEND

RETURN

5Vpp Max

FX LOOP RIGHT

SEND

RETURN

5Vpp Max

CODEC1_LOUT−   2.7V pp Max
CODEC1_LOUT+   2.7V pp Max
CODEC1_ROUT−   2.7V pp Max
CODEC1_ROUT+   2.7V pp Max

MASTER_POT_L_SEND
MASTER_POT_R_SEND

CODEC2_LIN+
CODEC2_RIN+

FX_SENSE
FX_LOOP_RET_SENSE

FX_LOOP_PARALLEL
FX_LOOP_OFF

FX_PAR
FX_OFF

FX LOOP CONFIG. (DSP Control Signals)	FX_ON	FX_OFF	PARALLEL
FX_LOOP_PARALLEL	LOW	HIGH	HIGH
FX_LOOP_OFF	LOW	HIGH	LOW

COMPANY: LINE 6

TITLE: SHARCPOD/BOD-PRO MAIN
FX LOOP

PROGRAM: PADS POWER LOGIC V5.0

REV: D

DRAWN: D. MOLNAR
DATED: 5/23/2003

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

FILENAME: ...SharcPOD Pro/Electrical/Schematic/Main/Rev D/SharcPOD Pro Main Rev D.sch

SCALE: 1:1   SIZE: C   PART NUMBER: 35-00-0171   SHEET: 2 OF 11

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

AUDIO OUTPUT CIRCUITRY

COMPANY: LINE 6

TITLE: SHARCPOD/BOD-PRO MAIN
AUDIO OUT

PROGRAM: PADS POWER LOGIC V5.0

REV: D

| DRAWN: D. MOLNAR | DATED: 5/23/2003 |
| CHECKED: Name (F.Last) | DATED: 00/00/01 |

FILENAME: ...SharcPOD Pro/Electrical/Schematic/Main/Rev D/SharcPOD Pro Main Rev D.sch

| SCALE: 1:1 | SIZE: C | PART NUMBER: 35-00-0171 | SHEET: 3 OF 11 |

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION

| ECO NO: | DATE: | DESCRIPTION: |

BALANCED/HEADPHONE OUT

HEADPHONE AMPLIFIER

GROUND LIFT FOR
BALANCED OUTPUTS

BALANCED
OUT LEFT

BALANCED
OUT RIGHT

TO HEADPHONE
OUTPUT PCB

Connection to Master Volume Pot on Front Panel

COMPANY:	LINE 6

TITLE:	SHARCPOD/BOD-PRO MAIN BALANCED/HEADPHONE OUT

PROGRAM: PADS POWER LOGIC V5.0

REV: D

FILENAME: ...SharcPOD Pro/Electrical/Schematic/Main/Rev D/SharcPOD Pro Main Rev D.sch

| DRAWN: D. MOLNAR | DATED: 5/23/2003 |
| CHECKED: Name (F.Last) | DATED: 00/00/01 |

| SCALE: 1:1 | SIZE: C | PART NUMBER: 35-00-0171 | SHEET: 4 OF 11 |
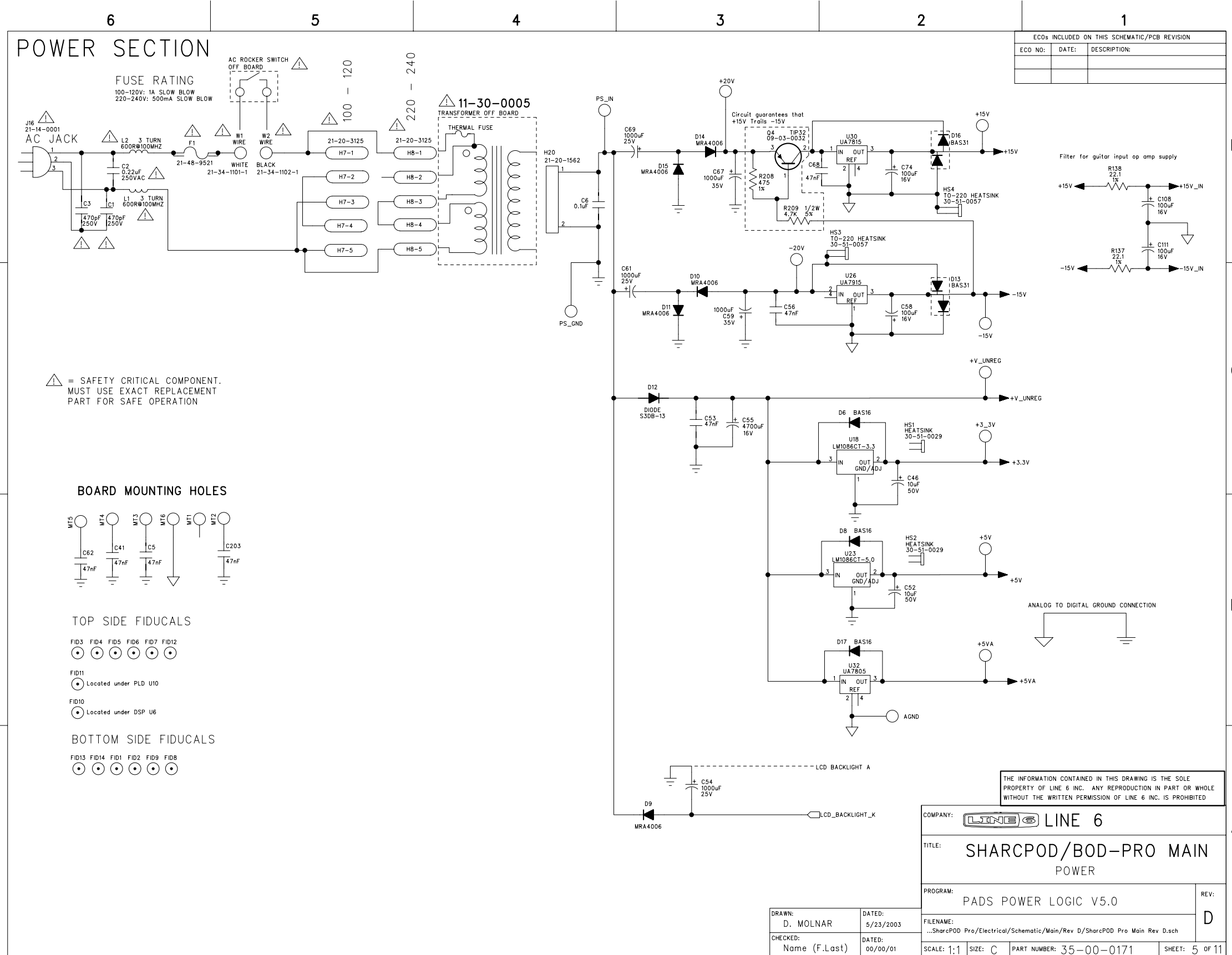
ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION
| ECO NO: | DATE: | DESCRIPTION: |

POWER SECTION

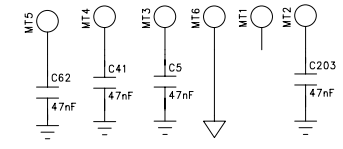FUSE RATING
100-120V: 1A SLOW BLOW
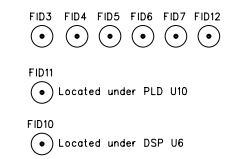220-240V: 500mA SLOW BLOW

AC ROCKER SWITCH
OFF BOARD

100 - 120

220 - 240

⚠ 11-30-0005
TRANSFORMER OFF BOARD

J16
21-14-0001
AC JACK

L2 3 TURN
600R@100MHZ

F1
21-48-9521

W1 WIRE
WHITE
21-34-1101-1

W2 WIRE
BLACK
21-34-1102-1

C2
0.22uF
250VAC

C3
470pF
250V

L1 3 TURN
600R@100MHZ

C1
470pF
250V

21-20-3125
H7-1
H7-2
H7-3
H7-4
H7-5

21-20-3125
H8-1
H8-2
H8-3
H8-4
H8-5

THERMAL FUSE

H20
21-20-1562

C6
0.1uF

PS_IN

PS_GND

+20V

C69
1000uF
25V

D14
MRA4006

D15
MRA4006

C67
1000uF
35V

R208
475
1X

R209 1/2W
4.7K 5X

Q4
09-03-0032
TIP32

C68
47nF

Circuit guarantees that
+15V Trails -15V

U30
UA7815
IN OUT
REF

C74
100uF
16V

HS4
TO-220 HEATSINK
30-51-0057

+15V

D16
BAS31

+15V

-20V

C61
1000uF
25V

D10
MRA4006

D11
MRA4006

1000uF
C59
35V

C56
47nF

U26
UA7915
IN OUT
REF

HS3
TO-220 HEATSINK
30-51-0057

C58
100uF
16V

ID13
IBAS31

-15V

-15V

Filter for guitar input op amp supply

+15V

R138
22.1
1X

C108
100uF
16V

+15V_IN

-15V

R137
22.1
1X

C111
100uF
16V

-15V_IN

⚠ = SAFETY CRITICAL COMPONENT.
MUST USE EXACT REPLACEMENT
PART FOR SAFE OPERATION
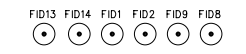
+V_UNREG

D12
DIODE
S30B-13

+V_UNREG

C53
47nF

C55
4700uF
16V

D6 BAS16

U18
LM1086CT-3.3
IN OUT
GND/ADJ

HS1
HEATSINK
30-51-0029

+3_3V

C46
10uF
50V

+3.3V

D8 BAS16

U23
LM1086CT-5.0
IN OUT
GND/ADJ

HS2
HEATSINK
30-51-0029

+5V

C52
10uF
50V

+5V

BOARD MOUNTING HOLES

MT5 MT4 MT3 MT6 MT1 MT2

C62
47nF

C41
47nF

C5
47nF

C203
47nF

TOP SIDE FIDUCALS

FID3 FID4 FID5 FID6 FID7 FID12

FID11
Located under PLD U10

FID10
Located under DSP U6

BOTTOM SIDE FIDUCALS

FID13 FID14 FID1 FID2 FID9 FID8

D17 BAS16

U32
UA7805
IN OUT
REF

+5VA

+5VA

AGND

ANALOG TO DIGITAL GROUND CONNECTION

LCD BACKLIGHT A

C54
1000uF
25V

D9
MRA4006

LCD_BACKLIGHT_K

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION

ECO NO:	DATE:	DESCRIPTION:

COMPANY: LINE 6

TITLE: SHARCPOD/BOD-PRO MAIN
POWER

PROGRAM: PADS POWER LOGIC V5.0

REV: D

DRAWN: D. MOLNAR
DATED: 5/23/2003

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

FILENAME:
...SharcPOD Pro/Electrical/Schematic/Main/Rev D/SharcPOD Pro Main Rev D.sch

SCALE: 1:1 SIZE: C PART NUMBER: 35-00-0171 SHEET: 5 OF 11

SHARCPOD PRO UI REV B.sch-1 — Schematic diagram

Title block:

COMPANY:	LINE 6
TITLE:	SHARCPOD PRO USER INTERFACE LEFT 1
PROGRAM:	PADS POWER LOGIC V5.0
DRAWN:	D. MOLNAR/DB
DATED:	1/29/2003
CHECKED:	
DATED:	
FILENAME:	/SharcPOD Product Family/SharcPOD PRO/Electrical/ /Schematic/UI/REV B/SHARCPOD PRO UI REV B.sch
SCALE: 1:1	SIZE: C
PART NUMBER:	35-00-0202
SHEET: 1 OF 3	REV: B

ECOs INCLUDED ON THIS SCHEMATIC/PCB REVISION

ECO NO:	DATE:	DESCRIPTION:
0302909	01.30.03	Released as rev.A to MFG.
0309007	03.31.03	Released as Rev.B to MFG.

SWITCHES

SW_IMAGE[0:7]

SW_IMAGE0 D24 BAS16 SW1 SAVE   SW2 EDIT
SW_IMAGE1 D22 BAS16 SW3 COMP   SW4 SOFT1
SW_IMAGE2 D21 BAS16 SW5 STOMP   SW6 SOFT2
SW_IMAGE3 D20 BAS16 SW7 MOD   SW8 SOFT3
SW_IMAGE4 D19 BAS16 SW9 DELAY   SW10 SOFT4
SW_IMAGE5 D18 BAS16 SW11 CAB   SW13 TAP
SW_IMAGE6 D15 BAS16 SW12 TUNE/SYS   INPUT_SEL   SW_GROUP1

SW_GROUP0

SHARCPOD_SWITCH_FRAME
FRAME1
30-27-0053

ENCODERS

SW_IMAGE[0:7]

SW_IMAGE2 D25 BAS16   E1 RE120 - 24 POS   "SELECT"
SW_IMAGE3 D23 BAS16

SW_IMAGE4 D17 BAS16   E2 RE120 - 24 POS   "TWEAK"
SW_IMAGE5 D16 BAS16

SW_GROUP2

All Switches are PCB carbon pads for conductive rubber
keypads except "INPUT SEL"(pg 3)

LEDS

+5V
C24 47nF

FP_DATA[0:7]

FP_DATA7 18 D7   Q7 19   R24 200 1%   "EDIT" D2
FP_DATA6 17 D6   Q6 16   R23 200 1%   "SAVE" D1
FP_DATA5 14 D5   Q5 15   R22 200 1%   "TUNE" D8
FP_DATA4 13 D4   Q4 12   R21 200 1%   "COMP" D3
FP_DATA3   8 D3   Q3 9   R17 200 1%   "STOMP" D4
FP_DATA2   7 D2   Q2 6   R18 200 1%   "MOD"   D5
FP_DATA1   4 D1   Q1 5   R19 200 1%   "DELAY" D6
FP_DATA0   3 D0   Q0 2   R20 200 1%   "CAB"   D7

20 VCC   10 GND

CLK CLR
U3 74HCT273

FP_LED_IMAGE_STRB
FP_RESET

+5V
R12 200 1%
"TAP" D9
LED8_CTRL

SW_IMAGE[0:7]

R13 4.7K   +5V
SW_IMAGE3 1
SW_IMAGE2 2
SW_IMAGE1 3
SW_IMAGE0 4
SW_IMAGE7 6
SW_IMAGE6 7
SW_IMAGE5 8
SW_IMAGE4 9
01-60-0472

FP_SWITCH_SEL

C22 47nF   +5V
20 VCC
OE1
OE2

FP_DATA[0:7]

FP_DATA0 18 Y0   A0 2   SW_IMAGE0
FP_DATA1 16 Y1   A1 3   SW_IMAGE1
FP_DATA2 15 Y2   A2 4   SW_IMAGE2
FP_DATA3 14 Y3   A3 5   SW_IMAGE3
FP_DATA4 13 Y4   A4 6   SW_IMAGE4
FP_DATA5 12 Y5   A5 7   SW_IMAGE5
FP_DATA6 12 Y6   A6 8   SW_IMAGE6
FP_DATA7 11 Y7   A7 9   SW_IMAGE7

10 GND
U2 74HCT541

SW_IMAGE[0:7]

GF1
GF2
GF3

MT1

FID1 FID2 FID3
FID4 FID5 FID6

C25 0.1uF   C20 0.1uF   C27 0.1uF   C26 0.1uF

COMPANY: LINE 6

TITLE: SHARCPOD PRO USER INTERFACE
LEFT 2

PROGRAM: PADS POWER LOGIC V5.0

REV: B

DRAWN: D. MOLNAR/DB
DATED: 1/29/2003
CHECKED:
DATED:

FILENAME: /SharcPOD Product Family/SharcPOD PRO/Electrical/
/Schematic/UI/REV B/SHARCPOD PRO UI REV B.sch

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

SCALE: 1:1   SIZE: C   PART NUMBER: 35-00-0202   SHEET: 2 OF 3

POTENTIOMETERS

"DRIVE"   "BASS"   "MIDDLE"   "TREBLE"   "PRESENCE"   "VOLUME"   "REVERB"
POT0   POT1   POT2   POT3   POT4   POT5   POT6

U1
TLC1543CDW

"AMP MODEL"

"FX SELECT"

I/O and DIG SEL

TO J3
LEFT PANEL
CON-SIP10-100
J1
RIGHT PANEL

TO J4
LEFT PANEL
CON-SIP10-100
J2
RIGHT PANEL

"CLIP"
D11 RED

"SIGNAL"
SUPER BRITE GREEN

MASTER VOLUME POT
"OUTPUT"

H1
5-PIN HEADER TO MAIN PCB

CONNECTION TO SHAFT

COMPANY: LINE 6

TITLE: SHARCPOD PRO USER INTERFACE RIGHT

PROGRAM: PADS POWER LOGIC V5.0

REV: B

DRAWN: D.MOLNAR/DB
DATED: 1/29/2003

CHECKED:
DATED:

FILENAME: /SharcPOD Product Family/SharcPOD PRO/Electrical/
/Schematic/UI/REV B/SHARCPOD PRO UI REV B.sch

SCALE: 1:1
SIZE: C
PART NUMBER: 35-00-0202
SHEET: 3 OF 3

Items: 99-050-0605

Level	Seq	Component-Item	Component-Description								Qty-Per-Parent

===
Parent Item: 99-050-0605   POD XT Pro US

1	10	21-34-2000	CBL USB 2 METER HIGH SPEED BLK	10	EA	.0	A	Y	N	1.000000
1	20	21-37-1160	CABLE PWR UL/CSA SJT 8.2ft Blk EL-302 w/GND EL70	10	EA	.0	A	Y	N	1.000000
1	30	40-00-0170	MANUAL USER PODxt SERIES	10	EA	.0	A	Y	N	1.000000
1	40	40-00-0176	CHART PRESET PODxt SERIES	10	EA	.0	A	Y	N	1.000000
1	50	40-00-0028	FOAM UNIVERSAL R/L POD/BOD PRO SERIES	10	EA	.0	A	Y	N	2.000000
1	55	40-00-0033	INSERT MANUAL PODXT-PRO	10	EA	.0	A	Y	N	1.000000
1	60	40-10-0056	CARTON GIFT PODxt PRO	10	EA	.0	A	Y	N	1.000000
1	70	40-20-0011	BAG PLASTIC 10 x 16 2 mil	10	EA	.0	A	Y	N	1.000000
1	80	40-20-0090	BAG POLYETHALENE 2mil 12 x 24IN	10	EA	.0	A	Y	N	1.000000
1	90	40-25-0020	LABEL INSPECTION QUALITY	10	EA	.0	A	Y	N	1.000000
1	100	40-25-0101	LABEL BAR CODE S/N 2-PNL LTX 16 1125502	10	EA	.0	A	Y	N	1.000000
2	10	11-30-0005	XFMR 100V-240V 50/60Hz 11.1VAC EI-66mm CHASSIS MOUNT	10	EA	.0	A	Y	N	1.000000
2	20	21-34-0007-1	CBL SIL 4-COND 26AWG 2 x 177.80mm F-F RED	10	EA	.0	A	Y	N	1.000000
2	30	21-34-0013	CBL SIL 5-COND 26AWG 2 x 50.8mm F-F	10	EA	.0	A	Y	N	1.000000
2	40	21-34-0015	CBL SIL 5-COND 26AWG 2mm x 151.0mm F-F Z-TYPE	10	EA	.0	A	Y	N	1.000000
2	50	21-34-9006	CBL SIL 6-COND 24AWG 2 x 105mm F-F Z-TYPE	10	EA	.0	A	Y	N	1.000000

```
======================================================================================================================

 2          60 21-34-9034     CBL DIL RIBBON 34-COND 28AWG  10  EA       .0   A  Y  N                      1.000000
                    1.27mm 152.40mm

 2          70 24-24-0001     SWITCH POWER ROCKER PNL-MNT   10  EA       .0   A     N                      1.000000


 2          80 30-00-0029     SCREW 6-32 x 1/2 PHIL FLH ZINC 10 EA       .0   A  Y  N                      6.000000
                    NYLOCK

 2          90 30-00-0037     SCREW 10-32 x .500 SCH CAP SCR 10 EA       .0   A  Y  N                      4.000000
                    BLK OXIDE W/THD LOCK

 2          95 30-00-0042     SCREW SHEET METAL 4 x 0.375 IN 10 EA       .0   A  Y  N                      1.000000
                    SELF-TAP PPB

 2          97 30-00-0375     SCREW 6-32 x .375 PPB         10  EA       .0   A  Y  N                      9.000000



 2         110 30-00-0607     SCREW 6-32 x 7/16IN w/LK WASH 10  EA       .0   A  Y  N                      9.000000
                    PPZ STL

 2         120 30-00-4250     SCREW SHEET METAL SELF-TAP    10  EA       .0   A  Y  N                      8.000000
                    #4 x .250IN PPB

 2         130 30-00-8375     SCREW SHEET METAL #8 x.375"   10  EA       .0   A  Y  N                      2.000000
                    SELF-TAP PPB

 2         140 30-03-0018     WASHER .440 OD x .156 ID x    10           .0   A     N                      2.000000
                    .042 THK STL

 2         150 30-06-0623     NUT HEX 6-32 w/CPTV STAR-WASHR 10 EA       .0   A  Y  N                      2.000000


 2         155 30-24-0003     CABLE-TIE 4" CLEAR           10  EA       .0   A  Y  N                      1.000000


 2         160 30-27-0017     BUTTON POWER STU MOD         10  EA       .0   A  Y  N                      1.000000
                    .32DIAx.47 H IMP ABS MATTE BLK

 2         170 30-27-0025     KNOB SM ENCDR .55Dx.57 H     10  EA       .0   A  Y  N                      2.000000
                    IMP ABS MICROTEX

 2         180 30-27-0027     KNOB LGE ENCDR .80Dx.60 H    10  EA       .0   A  Y  N                      2.000000
                    IMP ABS MICROTEX

 2         190 30-45-2000     KNOB POT PLASTIC BLACK w/WHITE 10 EA       .0   A  Y  N                      8.000000
                    INDICATOR LINE

 2         200 30-51-0134     COVER CHASSIS 16.9x6.9x3.2   10  EA       .0   A  Y  N                      1.000000
                    E-G STL BLACK

 2         210 30-51-0135     PANEL FRONT 19.0x3.5x.25 AL  10  EA       .0   A  Y  N                      1.000000
                    RED ANODIZE PODxt-PRO

 2         220 30-51-0152     CHASSIS BACK PNL 3.1x16.7x.039 10 EA      .0   A  Y  N                      1.000000
                    E-G STL BLACK GLOSS
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====================================================================================================================

2        230 30-51-0153    CHASSIS 16.8x6.8x3.1 E-G STL   10  EA        .0   A  Y   N                      1.000000


2        240 50-00-0171    PCBA MAIN PODxt-PRO            10  EA        .0   A  Y   N                      1.000000


3          5 01-00-0000    RES 0R 5% 0805                 0  EA         .0   A  Y   N                      1.000000


                           Ref: R8
3         10 01-00-0221    RES 220R 5% 0805               0  EA         .0   A  Y   N                      3.000000


                           Ref: R1-2,R204
3         15 01-16-0472    RES CARBON FILM 4.7K 1/2W 5%   0  EA         .0   A  Y   N                      1.000000
              TH

                           Ref: R209
3         20 01-24-1000    RES 100R 1% 0805               0  EA         .0   A  Y   N                      3.000000


                           Ref: R33,R35,R38
3         25 01-24-1001    RES 1.00K 1% 0805              0  EA         .0   A  Y   N                     10.000000


                           Ref: R41,R85,R97,R122,R129,R165,R185,R188,R191,R210
3         30 01-24-1002    RES 10.0K 1% 0805              0  EA         .0   A  Y   N                     19.000000


                           Ref: R5,R45-46,R58-59,R110,R117-119,R125-126,R130,R139-140,R151
                               R158,R183,R187,R201
3         35 01-24-1003    RES 100K 1% 0805               0  EA         .0   A  Y   N                      8.000000


                           Ref: R134-135,R143,R145-148,R150
3         40 01-24-1004    RES 1.00M 1% 0805              0  EA         .0   A  Y   N                      2.000000


                           Ref: R120,R127
3         45 01-24-10R0    RES 10.0R 1% 0805              0  EA         .0   A  Y   N                      5.000000


                           Ref: R34,R132-133,R194,R202
3         50 01-24-1100    RES 110R 1% 0805               0  EA         .0   A  Y   N                      1.000000


                           Ref: R12
3         55 01-24-1241    RES 1.24K 1% 0805              0  EA         .0   A  Y   N                      2.000000


                           Ref: R141,R154
3         60 01-24-1501    RES 1.50K 1% 0805              0  EA         .0   A  Y   N                      2.000000


                           Ref: R25,R149
3         65 01-24-1502    RES 15.0K 1% 0805                   Ref: R69-70,R80-81                         4.000000
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===

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3        70 01-24-15R0    RES 15R 1% 0805          0  EA       .0   A  Y  N                    2.000000


                         Ref: R83,R93
3        75 01-24-1823    RES 182K 1% 0805         0  EA       .0   A  Y  N                    2.000000


                         Ref: R72,R79
3        80 01-24-2001    RES 2.00K 1% 0805        0  EA       .0   A  Y  N                   22.000000


                         Ref: R19,R21,R106-109,R111-112,R115-116,R152-153,R160,R166,R168-
                             170,R177,R179-180,R189-190
3        85 01-24-2002    RES 20.0K 1% 0805        0  EA       .0   A  Y  N                   18.000000


                         Ref: R47-48,R51-54,R56-57,R60-61,R63-65,R68,R76,R84,R91,R94
3        90 01-24-2211    RES 2.21K 1% 0805        0  EA       .0   A  Y  N                    3.000000


                         Ref: R100,R105,R171
3        95 01-24-22R1    RES 22.1R 1% 0805        0  EA       .0   A  Y  N                   16.000000


                         Ref: R15,R18,R22-24,R26,R28,R31-32,R137-138,R196-198,R205-206
3       100 01-24-2490    RES 249R 1% 0805         0  EA       .0   A  Y  N                    2.000000


                         Ref: R211,R212
3       105 01-24-2492    RES 24.9K 1% 0805        0  EA       .0   A  Y  N                    2.000000


                         Ref: R173,R181
3       110 01-24-2741    RES 2.74K 1% 0805        0  EA       .0   A  Y  N                    2.000000


                             R131,R136
3       115 01-24-2801    RES 2.80K 1% 0805        0  EA       .0   A  Y  N                    2.000000


                         Ref: R155,R184
3       120 01-24-3011    RES 3.01K 1% 0805        0  EA       .0   A  Y  N                    3.000000


                         Ref: R7,R20,R157
3       125 01-24-3241    RES 3.24K 1% 0805        0  EA       .0   A  Y  N                    1.000000


                         Ref: R167
3       130 01-24-3321    RES 3.32K 1% 0805        0  EA       .0   A  Y  N                    1.000000


                         Ref: R172
```

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=====================================================================================================================
3        135 01-24-3401    RES 3.40K 1% 0805        0  EA      .0  A  Y  N                          1.000000


                          Ref: R163
3        140 01-24-3651    RES 3.65K 1% 0805        0  EA      .0  A  Y  N                          4.000000


                          Ref: R86,R98,R121,R128
3        145 01-24-40R2    RES 40.2R 1% 0805        0  EA      .0  A  Y  N                          2.000000


                          Ref: R9-10
3        150 01-24-4321    RES 4.32K 1% 0805        0  EA      .0  A  Y  N                          1.000000


                          Ref: R162
3        155 01-24-4421    RES 4.42K 1% 0805        0  EA      .0  A  Y  N                          1.000000


                          Ref: R175
3        160 01-24-4750    RES 475R 1% 0805         0  EA      .0  A  Y  N                          2.000000


                          Ref: R4,R208
3        165 01-24-4751    RES 4.75K 1% 0805        0  EA      .0  A  Y  N                          9.000000


                          Ref: R3,R14,R17,R29,R36,R73,R192,R199-200
3        170 01-24-4752    RES 47.5K 1% 0805        0  EA      .0  A  Y  N                         12.000000


                          Ref: R6,R55,R62,R71,R78,R89-90,R96,R99,R193,R195,R203
3        175 01-24-47R5    RES 47.5R 1% 0805        0  EA      .0  A  Y  N                          8.000000


                          Ref: R74-75,R77,R82,R87-88,R92,R95
3        180 01-24-5110    RES 511R 1% 0805         0  EA      .0  A  Y  N                          2.000000


                          Ref: R27,R142
3        185 01-24-5112    RES 51.1K 1% 0805        0  EA      .0  A  Y  N                          2.000000


                          Ref: R174,R182
3        190 01-24-5R11    RES 5.11R 1% 0805        0  EA      .0  A  Y  N                          2.000000


                          Ref: R123-124
3        195 01-24-6041    RES 6.04K 1% 0805        0  EA      .0  A  Y  N                          1.000000


                          Ref: R156
3        200 01-24-6190    RES 619R 1% 0805         0  EA      .0  A  Y  N                          1.000000


                          Ref: R39
3        205 01-24-6650    RES 665R 1% 0805         0  EA      .0  A  Y  N                          2.000000
                          Ref: R101,R104
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3        210 01-24-6810    RES 681R 1% 0805            0  EA      .0  A Y  N                     4.000000


                          Ref: R49-50,R66-67
3        215 01-24-7500    RES 750R 1% 0805            0  EA      .0  A Y  N                     2.000000


                          Ref: R164,R186
3        220 01-24-7501    RES 7.50K1% 0805            0  EA      .0  A Y  N                     1.000000


                          Ref: R144
3        225 01-24-75R0    RES 75R 1% 0805             0  EA      .0  A Y  N                     1.000000


                          Ref: R13
3        230 01-24-86R6    RES 86.6R 1% 0805           0  EA      .0  A Y  N                     1.000000


                          Ref: R11
3        235 01-24-8871    RES 8.87K 1% 0805           0  EA      .0  A Y  N                     9.000000


                          Ref: R30,R102-103,R113-114,R159,R161,R176,R178
3        240 03-10-0107    CAP ELEC 100uF 10V 20% RADIAL   0  EA      .0  A Y  N                 1.000000
               6.3/8/5

                          Ref: C225
3        245 03-10-6108    CAP ELEC 1000uF 6.3V 20%    0  EA      .0  A Y  N                     3.000000
               RADIAL 8/11.5/5

                          Ref: C42,C85,C87
3        250 03-12-0107    CAP ELEC 100uF 16V 20% RADIAL   0  EA      .0  A Y  N                 4.000000
               6.3/11/5

                          Ref: C58,C74,C108,C111
3        255 03-12-0338    CAP ELEC 3300uF 16V 20% RADIAL  0  EA      .0  A Y  N                 1.000000
               16/25/7.5

                          Ref: C223
3        260 03-12-0478    CAP ELEC 4700uF 16V 20%     0  EA      .0  A Y  N                     1.000000
               RADIAL 16/25/7.5

                          Ref: C55
3        265 03-14-0108    CAP ELEC 1000uF 25V 20%     0  EA      .0  A Y  N                     3.000000
               RADIAL 10/20/5

                          Ref: C54,C61,C69
3        270 03-16-0108    CAP ELEC 1000uF 35V 20% RADIAL  0  EA      .0  A Y  N                 2.000000
               12.5/20/5

                          Ref: C59,C67
3        275 03-18-0105    CAP ELEC 1uF 50V 20% RADIAL  0  EA      .0  A Y  N                    8.000000
               5/11/5

                          Ref: C80,C99,C104-106,C109-110,C113
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3        280 03-18-0106    CAP ELEC 10uF 50V 20% RADIAL    0  EA        .0   A  Y   N                    13.000000
                 5/11/5


                        Ref: C10,C34,C46,C50,C52,C63-64,C76,C95,C103,C107,C116,C120
3        285 03-24-0273    CAP MET-POLY 27nF 50V 5% TH     0  EA        .0   A     N            .0000     1.000000



                        Ref: C126
3        290 03-36-0104    CAP  ESTR 0.1uF 50V 20% TH      0  EA        .0   A  Y   N                      1.000000
                 8/5/10/5


                        Ref: C6
3        295 03-36-0224    CAP ESTER 0.22uF 50V 5% TH      0  EA        .0   A  Y   N                      2.000000
                 11/6/11.5/7.5


                        Ref: C128,C129
3        300 03-41-0224    CAP X-CAP 0.22uF 275VAC 20%     0  EA        .0   A  Y   N                      1.000000
                 POLYPROYPYLENE 18/9.5/17.5/15


                        Ref: C2
3        305 03-42-0471    CAP Y-CAP 470pF 250VAC 20% TH   0  EA        .0   A  Y   N                      2.000000
                 CER DISC  8D/7/7.5


                        Ref: C1,C3
3        310 03-50-0101    CAP NPO 100pF 50V 10% 0805      0  EA        .0   A  Y   N                     16.000000



                        Ref: C38,C49,C51,C138-141,C174,C176,C180,C183,C187,C192,C229,
                             C233-234

3        315 03-50-0102    CAP NPO 1nF 50V 5% 0805         0  EA        .0   A  Y   N                     25.000000



                        Ref: C39,C44,C90,C92,C101-102,C133,C135,C145,C147-150,C153,C157,
                             C159,C161-162,C175,C178,C181,C193,C195,C228,C230

3        320 03-50-0220    CAP NPO 22pF 50V 20% 0805       0  EA        .0   A  Y   N                      2.000000



                        Ref: C32,C37
3        325 03-50-0272    CAP NPO 2.7nF 50V 5%  0805      0  EA        .0   A  Y   N                      4.000000



                        Ref: C70,C73,C112,C125
3        330 03-50-0391    CAP NPO 390pF 50v 5% 0805       0  EA        .0   A  Y   N                      8.000000



                        Ref: C65-66,C71-72,C117,C119,C122-123
3        335 03-52-0101    CAP X7R 100pF 50V 20% 0805      0  EA        .0   A  Y   N                      2.000000



                        Ref: C137,C143
3        340 03-52-0104    CAP X7R 0.1uF 50V 20% 0805      0  EA        .0   A  Y   N                     27.000000



                        Ref: C11,C43,C75,C86,C88,C94,C132,C134,C136,C142,C144,C146,C158,
                             C164,C166-167,C173,C179,C182,C184,C194,C207,C222,C231-232,C235-236
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 3      345 03-52-0221     CAP X7R 220pF 50V 20% 0805     0  EA      .0   A  Y   N                          2.000000


                          Ref: C78,C84
 3      350 03-52-0222     CAP X7R 2.2nF 50V 20% 0805     0  EA      .0   A  Y   N                          2.000000


                          Ref: C12,C30
 3      355 03-52-0470     CAP X7R 47pF 50V 20% 0805      0  EA      .0   A  Y   N                          1.000000


                          Ref: C206
 3      360 03-52-0473     CAP X7R 47nF 50V 20% 0805      0  EA      .0   A  Y   N                         69.000000


                          Ref: C4-5,7-9,13-29,31,33,35-36,41,45,47-48,53,56-57,60,62,68,77,
                               79,81-83,89,91,93,96-98,100,114-115,118,121,124,127,130-131,

                               151-152,154-156,160,163,165,168-172, Continued on next line
 3      361 03-52-0473     CAP X7R 47nF 50V 20% 0805      0  EA      .0   A  Y   N                         18.000000


                          Ref: Continued from previous line
                               C177,C185-186,C188-191,C203,C215-221,C224,C226-227

 3      365 03-52-0474     CAP X7R 0.47uF 25V 20% 0805    0  EA      .0   A  Y   N                          2.000000



                          Ref: C204,C205
 3      370 04-04-0001     FERRITE BEAD 3-TURN 600R@      0  EA      .0   A  Y   N                          2.000000
                    100MHz MATERIAL-61 RADIAL TH


                          Ref: L1-2
 3      375 06-20-0099     DIODE GEN PUR DUAL 70V 215mA   0  EA      .0   A  Y   N                         16.000000
                    6nS SOT-23 SM BAV99


                          Ref: D2-5,D13,D16,D18-22,D24-28
 3      380 06-32-0313     DIODE RECTIFIER 200V 3A SMB    0  EA      .0   A  Y   N                          1.000000
                    SM S3DB-13


                          Ref: D12
 3      385 06-32-4006     DIODE RECTIFIER 800V 1A        0  EA      .0   A  Y   N                          5.000000
                    SMA SM MRA4006T3


                          Ref: D9-11,D14-15
 3      390 06-34-0016     DIODE SWITCHING 75V 200mA      0  EA      .0   A  Y   N                          6.000000
                    6nS SOT-23 SM BAS16LT1


                          Ref: D1,D6-8,D17,D23
 3      395 09-03-0032     TRANS PNP MED POWER TIP32C TH  0  EA      .0   A  Y   N                          1.000000



                          Ref: Q4
 3      400 09-10-4401     TRANS NPN SMALL-SIGNAL MBT4401 0  EA      .0   A  Y   N                          4.000000
                    SOT-23 SM

                          Ref: Q1-2,Q8,Q10
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3       405 09-10-4403    TRANS PNP SMALL-SIGNAL MBT4403   0  EA      .0  A  Y  N                          1.000000
                SOT-23 SM


                        Ref: Q9
3       410 11-00-3000    CRYSTAL OSCILLATOR 30MHz 3.3V    0  EA      .0  A  Y  N                          1.000000
                DIP4 TH


                        Ref: Y3
3       415 11-01-2258    OSCILLATOR 22.5792MHz 3.3V       0  EA      .0  A  Y  N                          1.000000
                W/3-S HCMOS OUT 4P HS-DIP8


                        Ref: Y2
3       420 11-01-2458    OSCILLATOR 24.576MHz 3.3V        0  EA      .0  A  Y  N                          1.000000
                W/3-S HCMOS OUT 4P HS-DIP8


                        Ref: Y1
3       425 11-10-0501    FERRITE BEAD 500R @100mHZ        0  EA      .0  A  Y  N                          2.000000
                2.5A 1206 SM


                        Ref: L21-22
3       430 11-10-2012    FERRITE BEAD 600R@100MHZ         0  EA      .0  A  Y  N                         36.000000
                300mA 0805 SM


                        Ref: L3-20,L23-36,L47-50
3       435 11-33-0120    XFMR AUDIO DIGITAL X-MISSION     0  EA      .0  A  Y  N                          3.000000
                1:1


                        Ref: T1-3
3       440 12-02-1086    IC REG +3.3V TO-220 TH           0  EA      .0  A  Y  N                          1.000000
                LM1086


                        Ref: U18
3       445 12-02-1087    IC REG +5.0V TO-220 TH           0  EA      .0  A  Y  N                          1.000000
                LM1086


                        Ref: U23
3       450 12-02-1088    IC REG ADJ TO-220 TH LM1086      0  EA      .0  A  Y  N                          1.000000



                        Ref: U43
3       455 12-02-7805    IC REG +5v 1.5 Amp TH            0  EA      .0  A  Y  N                          1.000000



                        Ref: U32
3       460 12-02-7815    IC REG +15V 1AMP TO-220 TH       0  EA      .0  A  Y  N                          1.000000



                        Ref: U30
3       465 12-02-7915    IC REG -15V 1AMP TO-220 TH       0  EA      .0  A  Y  N                          1.000000
                7915


                        Ref: U26
3       470 12-54-0072    IC OP-AMP DUAL TL072CD SM        0  EA      .0  A  Y  N                          1.000000



                        Ref: U41
3       475 12-54-0082    IC OP AMP DUAL TL082CD SO-8 SM   0  EA      .0  A  Y  N                          3.000000
                        Ref: U28-29,U37
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3      480 12-54-0084    IC OP AMP QUAD TL084CD SM    0  EA      .0   A  Y   N                        4.000000



                      Ref: U21,U25,U27,U33
3      485 12-54-5538    IC OP-AMP DUAL LO NOISE     0  EA      .0   A  Y   N                        3.000000
               NE5532AD8 SM  SO-8


                      Ref: U22,U38-39
3      490 12-62-0053    IC SWITCH-ANALOG TRIPLE 2-CHAN  0  EA   .0   A  Y   N                        1.000000
               TSSOP-16 SM 74HC4053B


                      Ref: U7
3      495 12-62-4053    IC SWITCH-ANALOG TRIPLE 2-CHAN  0  EA   .0   A  Y   N                        4.000000
               TSSOP-16 SM CD4053BPW


                      Ref: U24.U31,U36,U40
3      500 12-64-4528    IC CONVERTER 24B 48/96KHz   0  EA      .0   A  Y   N                        2.000000
               AUDIO CODEC SM AK4528


                      Ref: U34-35
3      505 15-40-6138    IC 6N138 OPTO-ISOLATOR      0  EA      .0   A  Y   N                        1.000000
               DIP-8 TH


                      Ref: U2
3      510 15-64-0245    IC 74HCT245 OCTAL BUF       0  EA      .0   A  Y   N                        1.000000
               LINE DRIVER 3-S 8 SM


                      Ref: U16
3      515 15-64-0541    IC 74HCT 541 OCTAL BUF/DRIVER  0  EA    .0   A  Y   N                        2.000000
               3-S 8 SM


                      Ref: U19-20
3      520 15-65-0002    IC 74LCX02 LOW VOLTAGE CMOS  0  EA     .0   A  Y   N                        1.000000
               QUAD 2 INPUT NOR SO-14 SM


                      Ref: U44
3      525 15-67-0179    IC RS-485 LOW PWR DIFF      0  EA      .0   A  Y   N                        1.000000
               TRANSCEIVER SN75LBC179 SO-8 SM


                      Ref: U15
3      530 15-68-1020    IC CONTROLLER USB TAS1020PFB  0  EA    .0   A  Y   N                        1.000000
               SM


                      Ref: U13



3      535 15-70-1610    IC DRAM 1M X 16 SDRAM       0  EA      .0   A  Y   N                        2.000000
               HY57V161610DTC-7 SM


                      Ref: U3-4
3      540 15-72-1009    IC SRAM 128K X 8 CY7C1009B  0  EA      .0   A  Y   N                        1.000000
               15nS SOJ-32 (V32) SM


                      Ref: U14
3      545 15-78-4128    IC EEPROM 128KBIT  I2C SERIAL  0  EA    .0   A  Y   N                        1.000000
               24LC128-I/SN  SOIC8 SM         Ref: U9
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3      550 15-79-0088    IC MEMORY SECURE AT88SC153-00   0  EA      .0  A  Y  N                              1.000000
                 -2.7 8S1 (SO-8) SM


                         Ref: U8
3      555 15-86-1065    IC DSP SHARC                    0  EA      .0  A  Y  N                              1.000000
                 ADSP-21065LKS-240  MQFP208 SM


                         Ref: U6
3      560 15-86-8420    IC DIGITAL AUDIO SAMPLE RATE    0  EA      .0  A  Y  N                              2.000000
                 CONVERTER SM  Mfg# CS8420-CS


                         Ref: U5,U12
3      565 15-92-5810    IC RESET 5V 5% ACTIVE-HI        0  EA      .0  A  Y  N                              1.000000
                 SOT-23 SM  LM810


                         Ref: U17
3      570 21-00-6616    JACK 1/4" TRS 6-PIN PCB MT      0  EA      .0  A  Y  N                              6.000000
                 HORIZ TH


                         Ref: J1-6
3      575 21-02-0059    JACK RCA DUAL STACKED RIGHT     0  EA      .0  A     N                              1.000000
                 -ANG GOLD CONTACTS PCB-MNT


                         Ref: J11
3      580 21-04-5075    JACK DIN 5-PIN FEMALE MIDI      0  EA      .0  A  Y  N                              2.000000
                 PCB-MNT RT-ANG LN 05075


                         Ref: J12-13
3      585 21-08-0001    JACK XLR FEMALE PCB MNT         0  EA      .0  A  Y  N                              1.000000
                 RT ANG TH NEUTRIK NC3FAH2


                         Ref: J9
3      590 21-08-0013    JACK XLR MALE PCB MNT RT ANG    0  EA      .0  A  Y  N                              3.000000
                 TH NEUTRIK-NC3MAH


                         Ref: J7-8,J10
3      595 21-14-0001    JACK IEC 3-PIN MALE PCB-MNT     0  EA      .0  A  Y  N                              1.000000
                 RT-ANG GND SS-7B-1


                         Ref: J16
3      600 21-16-0045    JACK RJ-45 8-PIN FEMALE         0  EA      .0  A  Y  N                              1.000000
                 PCB-MNT RT-ANG


                         Ref: J15
3      605 21-20-0204    HDR PCB MT SIL 4-PIN x 2mm      0  EA      .0  A  Y  N                              1.000000
                 MALE SHRD VERT MT TH


                         Ref: H3
3      610 21-20-0205    HDR PCB MT SIL 5-PIN x 2mm      0  EA      .0  A  Y  N                              2.000000
                 FEMALE SHRD VERT MT TH


                         Ref: H1,H9
3      615 21-20-0206    HDR PCB MT SIL 6-PIN x 2mm      0  EA      .0  A  Y  N                              1.000000
                 FEMALE SHRD VERT MT TH


                         Ref: H2
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3      620 21-20-1033   HDR PCB MT DIL 34-PIN 2x17x2mm   0  EA      .0   A  Y   N                           1.000000
               MALE SHRD VERT MT TH


                       Ref: H6
3      625 21-20-1562   HDR PCB MT SIL 2-PIN X .156 MA   0          .0   A     N             .0000          1.000000



                       Ref: H20
3      630 21-20-3125   HDR PCB MT SIL 5-PIN X .312      0  EA      .0   A     N             .0000          2.000000



                       Ref: H7-8
3      635 21-21-0001   JACK USB-B SHIELDED PCB-MNT      0  EA      .0   A  Y   N                           1.000000
               BLACK WIESON 3700-4ABN4S1W

                       Ref: J14
3      640 21-34-1101-1 CBL 18AWG 216mm S-T/TAB-FSTN     0          .0   A     N             .0000          1.000000



                       Ref: W1
3      645 21-34-1102-1 CBL 18AWG 216mm S-T/TAB-FSTN     0          .0   A     N             .0000          1.000000



                       Ref: W2
3      650 21-34-1806   CBL S-T/EYE 1-COND 126mm STRND   0  EA      .0   A  Y   N                           1.000000
               18AWG GRN/YL EARTHING


                       Ref: AC RECEPTACLE GND TAB TO CHASSIS
3      655 21-44-0044   SOCKET 44 PIN PLCC - .050 LOW    0  EA      .0   A  Y   N                           1.000000
               PROFILE SMT

                       Ref: S1
3      660 21-48-9521   CLIP FUSE HOLDER                 0  EA      .0   A  Y   N                           2.000000



                       Ref: F1
3      665 24-09-0129   SWITCH SLIDE DPDT 4mm            0          .0   A     N             .0000          1.000000



                       Ref: SW1
3      670 24-18-1250   FUSE 1 Amp 250V Slow Blow        0  EA      .0   A  Y   N                           1.000000
               Littlefuse# H218 001 or equiv.

                       Ref: F1
3      675 30-00-0607   SCREW 6-32 x 7/16IN w/LK WASH    0  EA      .0   A  Y   N                           3.000000
               PPZ STL

                       Ref: HS1-2,U32
3      680 30-00-3125   SCREW 4-40 x .3125 PPB STL       0  EA      .0   A  Y   N                           3.000000



                       Ref: HS3-5
3      685 30-03-0004   WASHER LOCK w/EXTERNAL TOOTH     0  EA      .0   A  Y   N                           3.000000
               2 x #4 x .017IN STL

                       Ref: HS3-5
3      690 30-06-0440   NUT HEX .242 4-40 STL/ZNC        0  EA      .0   A  Y   N                           3.000000
                       Ref: HS3-5
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  3         695 30-06-0623    NUT HEX 6-32 w/CPTV STAR-WASHR   0  EA       .0   A  Y  N                          2.000000



                             Ref: HS1-2
  3         700 30-12-2210    STANDOFF HEX .250 6-32 F-F       0  EA       .0   A  Y  N                          1.000000
                  .500 LG AL


                             Ref: U32
  3         705 30-18-3030    CLIP GND PCB .30x.30x.07         0  EA       .0   A  Y  N                         11.000000



                             Ref: GF1-6,GF10,GF12,GF14-15,GF78
  3         710 30-51-0029    HEATSINK AL BLK ANODIZED         0  EA       .0   A  Y  N                          2.000000



                             Ref: HS1-2
  3         715 30-51-0057    HEAT SINK, BLACK ANODIZED AL,    0  EA       .0   A  Y  N                          3.000000
                  WAKEFIELD #287-1AB


                             Ref: HS3-5
  3         720 30-65-0009    TAPE INSULATING 1/8W x 2 INL     0            .0   A     N                         1.000000
                  (NON-SPECIFIC)


                             Ref: PLACE AROUND USB JACK FOR INSULATION
  3         730 40-30-2000    LABEL S/N 38.10 x 6.35mm         0  EA       .0   A  Y  N                          1.000000
                  THERMAL XFR GLOSSY WHITE


                             Ref: PLACE ON PCB IN BARCODE LABEL BOX
  3         735 45-01-0002    IC PROGRAMMED MCU v1.01          0  EA       .0   A  Y  N                          1.000000
                  c/s=E161 PODxt/BODxt Pro SERIES


                             Ref: U11
  4          10 15-84-8752    IC MCU 87C51MB OTP w/2K byte    10  EA       .0   A  Y  N                          1.000000
                  SRAM and 64K ROM   PLCC44


  4          10 15-78-0001    IC FLASH 8Meg 1Mx8/512Kx16       0  EA       .0   A  Y  N                          1.000000
                  TSOP-48 SM  AM29LV800B


  4          10 15-96-0128    IC PLD 128 CELL/96 I/O           0  EA       .0   A  Y  N                          1.000000
                  ISPLSI5128VE-100LT128 TQFP128


  2         250 50-00-0202    PCBA USER INTERFACE             10  EA       .0   A  Y  N                          1.000000
                  PODxt-PRO


  3          10 01-23-0270    RES METAL OXIDE 27R 3W 5% TH     0            .0   A     N          .0000          2.000000



                             Ref: R26-27
  3          20 01-24-1001    RES 1.00K 1% 0805                0  EA       .0   A  Y  N                          1.000000



                             Ref: R14
  3          30 01-24-10R0    RES 10.0R 1% 0805                0  EA       .0   A  Y  N                          1.000000



                             Ref: R9
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3	40 01-24-2000	RES 200R 1% 0805	0	EA	.0	A		N	11.000000

Ref: R10-12,R17-24

3	50 01-24-4321	RES 4.32K 1% 0805	0	EA	.0	A	Y	N	1.000000

Ref: R15

3	60 01-24-7501	RES 7.50K1% 0805	0	EA	.0	A	Y	N	1.000000

Ref: R16

3	70 01-48-0103	POT MONO 10KB LINEAR TAPER	0	EA	.0	A	Y	N	7.000000
		25 mm D-SHAFT							

Ref: R1,R3-8

3	80 01-48-5103	POT STEREO 10KA AUDIO TAPER	0	EA	.0	A	Y	N	1.000000
		25mm							

Ref: R2

3	90 01-60-0472	RES NETWORK 4.7K BUSSED	0	EA	.0	A	Y	N	1.000000
		1/8W 5% SM							

Ref: R13

3	100 03-10-0106	CAP ELEC 10uF 10V 20% RADIAL	0	EA	.0	A	Y	N	2.000000
		4/5/5							

Ref: C13,C19

3	110 03-18-0105	CAP ELEC 1uF 50V 20% RADIAL	0	EA	.0	A	Y	N	1.000000
		5/11/5							

Ref: C14

3	120 03-18-0106	CAP ELEC 10uF 50V 20% RADIAL	0	EA	.0	A	Y	N	1.000000
		5/11/5							

Ref: C18

3	130 03-52-0104	CAP X7R 0.1uF 50V 20% 0805	0	EA	.0	A	Y	N	8.000000

Ref: C1,C4,C20,C25-28,C30

3	140 03-52-0473	CAP X7R 47nF 50V 20% 0805	0	EA	.0	A	Y	N	16.000000

Ref: C2-3,C5-12,C16-17,C21-24

3	150 06-34-0016	DIODE SWITCHING 75V 200mA	0	EA	.0	A	Y	N	14.000000
		6nS SOT-23 SM BAS16LT1							

Ref: D12-25

3	160 12-64-1543	IC ADC 10 BIT 11 CHANNEL SM	0	EA	.0	A	Y	N	1.000000
		TLC1543CDW							

Ref: U1

3	170 15-64-0273	IC 74HCT273 FLIP-FLOP D-TYPE	0	EA	.0	A	Y	N	2.000000
		8-BIT SO-20 SM							

Ref: U3-4

3	180 15-64-0541	IC 74HCT 541 OCTAL BUF/DRIVER	0	EA	.0	A	Y	N	1.000000
		3-S 8 SM Ref: U2							

```
=====================================================================================================================

3        190 18-02-0002     LED RED HI INTENSITY        0  EA      .0  A  Y  N                              1.000000
                 L34LSRD


                         Ref: D11
3        200 18-04-0001     LED GREEN SUPERBRIGHT TH    0  EA      .0  A  Y  N                              1.000000
                 KINGBRIGH L934SGD-LSX


                         Ref: D10
3        210 18-21-0002     LED ORANGE  3mmX2mm SM      0  EA      .0  A  Y  N                              9.000000
                 Kingbrite APK3020SEC


                         Ref: D1-9
3        220 21-18-0002     TERMINAL SCREW PCB MOUNT    0  EA      .0  A  Y  N                              2.000000
                 RT ANGLE SNAP-IN TH


                         Ref: BR1-2
3        230 21-20-0205     HDR PCB MT SIL 5-PIN x 2mm  0  EA      .0  A  Y  N                              1.000000
                 FEMALE SHRD VERT MT TH


                         Ref: H1
3        240 21-20-1033     HDR PCB MT DIL 34-PIN 2x17x2mm  0  EA  .0  A  Y  N                              1.000000
                 MALE SHRD VERT MT TH


                         Ref: H2
3        250 21-30-0012     CBL SIL 10-PIN 2.54 x 40mm  0  EA      .0  A  Y  N              .0000           2.000000



                         Ref: J2-4,J1-3
3        260 24-12-0001     ENCODER 24-STEP W/25mm SHFT 0  EA      .0  A     N                              2.000000
                 RE120-40-25F-24P TH


                         Ref: E1-2
3        270 24-12-0002     ENCODER 12-STEP W/25mm SHFT 0  EA      .0  A     N                              2.000000
                 RE120-40-25F-12P TH


                         Ref: E3-4
3        280 24-31-1102     SWITCH TACT 6mm SQ 4-PIN TH 0  EA      .0  A  Y  N                              1.000000
                 W/ SQ 2.8mm ACTUATOR


                         Ref: SW14
3        290 30-15-0015     SPACER LED .160 OD x .200 LG  0            .0  A     N          .0000           2.000000



                         Ref: D10-11
3        300 30-18-3030     CLIP GND PCB .30x.30x.07    0  EA      .0  A  Y  N                              4.000000



                         Ref: GF1-3,GF5
3        310 30-27-0053     ISOLATION FRAME 5.38x2.83   0  EA      .0  A  Y  N                              1.000000
                 HIGH IMPACT ABS BLK


3        320 30-27-0055     BEZEL USER PANEL POLYCARBONATE  0  EA   .0  A  Y  N                             1.000000
                 (PLASTIC)


3        330 30-75-0009     KEYPAD RUBBER w/SILKSCREEN   0  EA      .0  A  Y  N                             1.000000
                 5.30x2.47 PODxt SERIES
```

```
===================================================================================================================

  3      350 50-00-0133    PCBA DISPLAY LCD GRAPHIC W/20P  0 EA      .0   A Y  N                        1.000000
                  MALE HDR 6 O'CLOCK XMISSIVE

                          Ref: LCD1
  4       10 18-30-0005    DISPLAY LCD MODULE 122X32      10 EA      .0   A    N                        1.000000
                  GRAPHIC 6-O'CLOCK XMISSVE YLW

  4       20 21-20-0020    HDR SIL 20-PIN PCB-MNT         10 EA      .0   A    N                        1.000000
                  1x20x.100 MALE VERT MT TH

  2      260 50-00-0214    PCBA HEADPHONE                 10 EA      .0   A Y  N                        1.000000
                  PODxt/BODxt-PRO

  3       10 03-50-0102    CAP NPO 1nF 50V 5% 0805         0 EA      .0   A Y  N                        2.000000


                          Ref: C213-214
  3       20 03-52-0104    CAP X7R 0.1uF 50V 20% 0805      0 EA      .0   A Y  N                        1.000000


                          Ref: C212
  3       30 11-10-2012    FERRITE BEAD 600R@100MHZ        0 EA      .0   A Y  N                        3.000000
                  300mA 0805 SM

                          Ref: L44-46
  3       40 21-00-6617    JACK 1/4" TRS 6-PIN PCB MT      0 EA      .0   A Y  N                        1.000000
                  HORIZ TH  W/CHROME HRDWARE

                          Ref: J200
  3       50 21-20-0204    HDR PCB MT SIL 4-PIN x 2mm      0 EA      .0   A Y  N                        1.000000
                  MALE SHRD VERT MT TH

                          Ref: H200
  3       60 30-18-3030    CLIP GND PCB .30x.30x.07        0 EA      .0   A Y  N                        1.000000


                          Ref: GF200
  2      270 50-00-0215    PCBA GUITAR IN                 10 EA      .0   A Y  N                        1.000000
                  PODxt/BODxt-PRO

  3       10 01-24-1001    RES 1.00K 1% 0805               0 EA      .0   A Y  N                        2.000000


                          Ref: R42,R44
  3       20 01-24-1004    RES 1.00M 1% 0805               0 EA      .0   A Y  N                        1.000000


                          Ref: R43
  3       30 01-24-2001    RES 2.00K 1% 0805               0 EA      .0   A Y  N                        1.000000


                          Ref: R207
  3       40 03-50-0470    CAP NPO 47pF 50V 10% 0805       0 EA      .0   A Y  N                        1.000000


                          Ref: C209
  3       50 03-52-0104    CAP X7R 0.1uF 50V 20% 0805    Ref: C208                                     1.000000
```

==

3	60	03-52-0473	CAP X7R 47nF 50V 20% 0805	0	EA	.0	A	Y	N		2.000000

Ref: C210-211

3	70	11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	0	EA	.0	A	Y	N		1.000000

Ref: L43

3	80	12-54-0134	IC OP AMP - OPA134UA SM SO-8	0	EA	.0	A	Y	N		1.000000

Ref: U42

3	90	21-00-6617	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH W/CHROME HRDWARE	0	EA	.0	A	Y	N		1.000000

Ref: J300

3	100	21-20-0205	HDR PCB MT SIL 5-PIN x 2mm FEMALE SHRD VERT MT TH	0	EA	.0	A	Y	N		1.000000

Ref: H300

3	110	24-09-0129	SWITCH SLIDE DPDT 4mm	0		.0	A		N	.0000	1.000000

Ref: SW300

3	120	30-18-3030	CLIP GND PCB .30x.30x.07	0	EA	.0	A	Y	N		1.000000

Ref: GF300

3	130	30-51-0146	SHIELD PCB MT FOR 1/4 JACK	0	EA	.0	A	Y	N	.0000	1.000000

Ref: SH1

2	280	50-00-0216	PCBA GUITAR BAL BUFF OUT/ LINE IN PODxt/BODxt-PRO	10	EA	.0	A	Y	N		1.000000

3	10	03-50-0101	CAP NPO 100pF 50V 10% 0805	0	EA	.0	A	Y	N		2.000000

Ref: C199-200

3	20	03-50-0102	CAP NPO 1nF 50V 5% 0805	0	EA	.0	A	Y	N		2.000000

Ref: C196-197

3	30	03-52-0104	CAP X7R 0.1uF 50V 20% 0805	0	EA	.0	A	Y	N		2.000000

Ref: C198,C201

3	40	11-10-2012	FERRITE BEAD 600R@100MHZ 300mA 0805 SM	0	EA	.0	A	Y	N		6.000000

Ref: L37-42

3	50	21-00-6616	JACK 1/4" TRS 6-PIN PCB MT HORIZ TH	0	EA	.0	A	Y	N		2.000000

Ref: J100-101

```
==================================================================================================================
  3         60 21-20-0206     HDR PCB MT SIL 6-PIN x 2mm     0  EA        .0   A  Y   N                    1.000000
                      FEMALE SHRD VERT MT TH


                            Ref: H100
  3         70 30-18-3030     CLIP GND PCB .30x.30x.07       0  EA        .0   A  Y   N                    2.000000


                            Ref: GF100-101
```
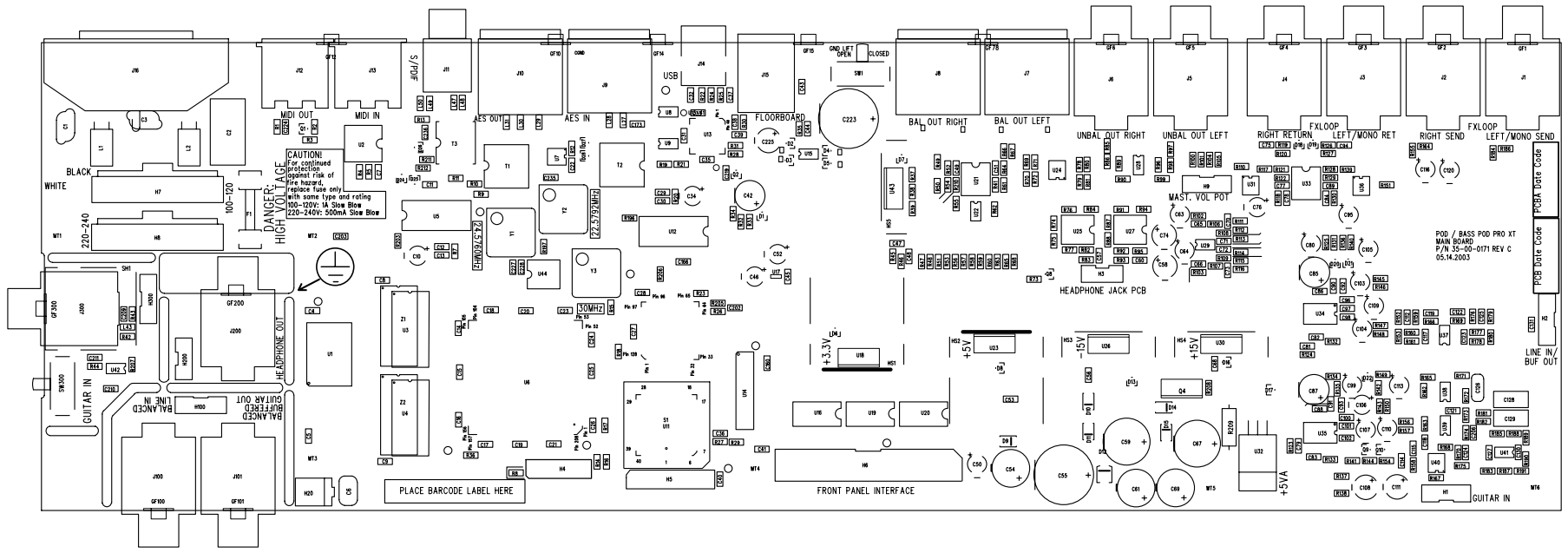
ASSEMBLY TOP

DATE CODE REQUIREMENTS

1) Silkscreen date code for bare PCB fabrication in area marked on drawing.

2) Place date code stamp or sticker for finished PCBA in area marked on drawing.

COMPANY: LINE 6

PROGRAM: PADS POWER PCB V5.0

FILE: SharcPOD Product Family\SharcPOD PRO\Electrical\
\PCB\MAIN\REV D\SHARCPOD PRO MAIN REV D.pcb

| SCALE: 1:1 | REV: D | DATE: MAY 23, 2003 |

TITLE: SharcPOD PRO MAIN PCB

PART # 35-00-0171

POD / BASS POD PRO XT
MAIN BOARD
P/N 35-00-0171 REV C
05.14.2003

HEADPHONE JACK PCB

CAUTION!
For continued protection against risk of fire hazard, replace fuse only with same type and rating
100-120V: 1A Slow Blow
220-240V: 500mA Slow Blow

DANGER: HIGH VOLTAGE

PLACE BARCODE LABEL HERE

FRONT PANEL INTERFACE

MAST. VOL POT

FLOORBOARD

MIDI OUT   MIDI IN

AES OUT   AES IN

USB

BAL OUT RIGHT   BAL OUT LEFT

UNBAL OUT RIGHT   UNBAL OUT LEFT

RIGHT RETURN   LEFT/MONO RET

RIGHT SEND   LEFT/MONO SEND

FXLOOP

GND LEFT OPEN   CLOSED

BLACK
WHITE

100-120   220-240

GUITAR IN

BALANCED LINE IN   BALANCED LINE OUT

BUFFERED GUITAR OUT

HEADPHONE OUT

GUITAR IN

LINE IN/ BUF OUT

+3.3V   +5V   -15V   +15V   +5VA

PCB Date Code

PCBA Date Code

SILKSCREEN TOP

DATE CODE REQUIREMENTS

1) Silkscreen date code for bare PCB fabrication
   in area marked on drawing.

2) Place date code stamp or sticker for
   finished PCBA in area marked on drawing.

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

COMPANY: LINE 6

PROGRAM: PADS POWER PCB V5.0

FILE: SharcPOD Product Family\SharcPOD PRO\Electrical\
\PCB\MAIN\REV D\SHARCPOD PRO MAIN REV D.pcb

| SCALE: 1:1 | REV: D | DATE: MAY 23, 2003 |

TITLE: SharcPOD PRO MAIN PCB

PART # 35-00-0171

COMPANY: LINE 6

PROGRAM: PADS POWER PCB 4.0

FILE: SharcPOD Product Family\SharcPOD PRO\Electrical\
\PCB\MAIN\REV D\SHARCPOD PRO MAIN REV D.pcb

SCALE: 1:1	REV: D	DATE: MAY 23 2003

TITLE: SharcPOD PRO MAIN PCB

POD / BASS POD PRO XT
MAIN BOARD
P/N 35-00-0171 REV C
05.14.2003

PN 35-00-0214
PN 35-00-0215
PN 35-00-0216

POD PRO XT
USER INTERFACE BD
P/N 35-00-0202 REV B
03.28.2003

MT1

SAVE

COMP

STOMP

MOD

DELAY

CAB

TUNER/SYSTEM

SW3
D3

SW1
D1

SW5
D4

SW7
D5

SW9
D6

SW11
D7

SW12
D8

SELECT

E1

LCD1

E2

TWEAK

SW2
D2

SW4

SW6

SW8

SW10

SW13
D9

TAP

EDIT

GF3

TOP SIDE

GF2

GF1

GF5

AMP MODEL

E3

CLIP

+
( )ₘ
+
( )ₒᵥₑ

SIGNAL

DRIVE

BASS

MID

TREBLE

PRESENCE

REVERB

VOLUME

HEADPHONE

E4

EFFECTS

OUTPUT LEVEL

TOP SIDE

GUITAR IN

POD PRO XT
USER INTERFACE BD
P/N 35-00-0202 REV B
03.28.2003

MT6

SW14
I/O and DIG
SELECT

LINE 6

PROGRAM: PADS POWER PCB 5.0

FILE: \SharcPOD Product Family\SharcPOD PRO\
\Electrical\PCB\Main\REV B\SHARCPOD PRO REV B.pcb

SCALE: 1:1 | REV: B | DATE: MARCH 28, 2003

TITLE:
SharcPOD PRO UI PCB
PART # 35-00-0202

PLACE PCBA DATE CODE HERE

PCB Date Code

PCBA Date Code

DATE CODE REQUIREMENTS

1) Silkscreen date code for bare PCB
   fabrication in area marked on drawing.

2) Place date code stamp or sticker for
   finished PCBA in area marked on drawing.
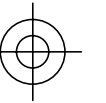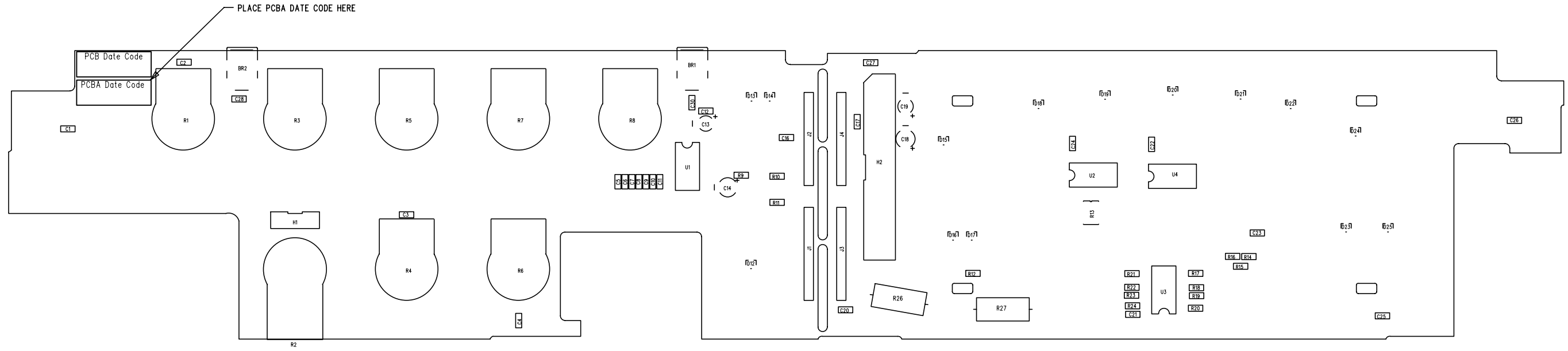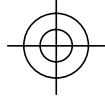
ASSEMBLY BOTTOM

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE
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WITHOUT THE WRITTEN PERMISSION OF LINE 6 INC. IS PROHIBITED

LINE 6

PROGRAM: PADS POWER PCB 5.0

FILE:
/SharcPOD Product Family/SharcPOD PRO/
/Electrical/PCB/Main/REV B/SHARCPOD PRO REV B.pcb

SCALE: 1:1 | REV: B | DATE: MARCH 28, 2003

TITLE:
SharcPOD PRO UI PCB
PART # 35-00-0202

Engineering

CONFIDENTIAL

POD-xt-Pro & Bass-POD-xt-Pro Theory of Operation A.M., D.H.M., M.D. June 11, 2003
- The POD-xt-Pro and Bass-POD-xt-Pro share the same electronic hardware.
- The POD-xt-Pro engineering project codename is SHARCPOD PRO.
- The POD-xt-Pro electronics is distributed across 5 PCBs: the "SHARCPOD PRO MAIN",
the "SHARCPOD PRO USER INTERFACE", and three smaller PCBs: the GUITAR INPUT,
BALANCED LINE IN & OUT, and HEADPHONE OUTPUT which are breakaway sections
of the MAIN PCB.
- In this document, the * sign next to a control signal name indicates an active low signal.

Audio system (see page 1, 2, 3, 4 and 11 of Main of schematic):
Refer to the AUDIO SYSTEM FLOWCHART and ANALOG SWITCHING
CONFIGURATION diagrams below.
Guitar Input:
The guitar input is buffered and amplified on the GUITAR INPUT PCB by U42 by either a
gain of 3, when the front panel input level is set to NORMAL, or by a gain of 1 when the
switch is set to PAD (= Low Gain). After reaching the MAIN PCB U40 (CD4053) allows
for selecting either the Guitar Input signal or the Line input signal. U38-A adds high
frequency pre-emphasis gain starting at about 200Hz. U38-A output is spliced into two
branches:

- On the upper branch, R156 and R157 attenuate the signal for a +/-2.5 VPP range (@
  5Vpp, 100Hz at guitar input). C110 allows this signal to be DC biased at +2.5V by the
  ADC input. Q9 and Q10 clip the signal to a maximum range of 0/5V. The signal drives
  the left channel of the ADC section of CODEC U35.

- In the lower branch, U38-B adds a gain of 5.32 to the signal. C113 allows this signal to
  be DC biased at +2.5V by the ADC input. The double diode D22 limit the maximum
  signal swing to a -0.6V /+5.6V range before entering the right channel ADC section of
  CODEC U35. Note that the signal on this branch will clip for guitar input level above
  0.310 Vpp.

The net result is two signals with a gain difference of 16, each feeding one of the two ADC
inputs. Once these signals are converted and moved into the DSP, the DSP code will monitor
the amplitude of the signals and use the one of the two versions most appropriate for the
current input level. The DSP will also apply a de-emphasis filter complementary to the filter
function implemented by U38-A. This scheme allows for significantly improving the signal
noise and low-level distortion performance of the ADC.

Before feeding the ADC, the guitar input is also directly sent to the back panel 1/4" TRS
Guitar Buffered Balanced Output. When the front panel guitar input sensitivity switch is set to
normal, the gain between the guitar input jack and the balanced Buffered output is four. The

gain of the Balanced Line Input ¼" TRS jack is set so that directly connecting the Balanced Line Output to the Balanced Line Input with a **stereo** ¼" cable will result in unity gain.

FX Loop and Audio Outputs:
After the guitar input ADC signal has been processed by the DSP, it is feed to the stereo DAC section of CODEC U35. The left and right differential outputs of the DAC are amplified by a gain of 4.4 (from the differential DAC output to U37 output) and Low Pass filtered (FC = 20KHz) by U37-A and U37-B. These signals are send to the FX LOOP Send ¼" jacks, and to an analog switch made of U38 (CD4053) and U31. Under software control this switch allows for either selecting the DAC outputs (C position on the flow chart diagram below), the FX LOOP Returns (A position), or a 50% mix of the two (B position).

After buffering by U33 and level adjustment by the front panel Master Volume potentiometer, the left and right outputs are buffered by U28, attenuated by a gain of 0.215 and sent to the ¼" unbalanced outputs. Note that, because of the wiring of the output jack switches, if only one jack is plugged in either the LEFT or RIGHT output, the left and right audio signals are summed together on this jack. This set-up improves the signal/noise performance by three dB when the unit is used in mono. Because of this set-up, if it is desired, i.e. for service purpose, to listen to only the left or right channel, a dummy jack must be plugged into the other channel.

Alternatively when the output mode analog switch selector made of the U24 (CD4053) is set to Studio mode, the left and right signal are also sent to the balanced XLR outputs, and the Headphone amplifier. Note that when a jack is sensed in the headphone ¼" jack, the software always set the LIVE/STUDIO* control to Studio so that the front panel volume is always active on the headphones.

The DSP feeds the DAC of CODEC U34 with an alternate version of the processed guitar input, which includes AIR and cabinet simulation. This signal is routed to the XLR outputs only when the output mode is set to Live mode. Note that the front panel Master Volume control does not affect this signal path.

When the FX loop is in use, the unbalanced ¼" jack outputs are a combination of the processed guitar signal present at the DAC U35 output and the external effect present in the FX loop. If the live version of this signal generated by the DAC of U34 was just the processed guitar signal with the AIR processing added in the DSP, it would not reflect the presence of the external effect. To avoid this omission, the ADC of U34 digitizes the external effect signal. The processed guitar signal is added to this signal in the DSP and further processed by the AIR and cabinet simulation processing. This digital signal is then sent to the DAC of U34. When no external effect is used, as detected by the absence of a jack plugged in either of the FX return ¼" jacks, the ADC of U34 is not used and the input of the DAC of U34 comes directly from the DSP (processed guitar plus AIR and cabinet simulation). This set up avoid adding the additional noise of the ADC U34 when the FX Loop is not used.

POD-xt-PRO / BASS-POD-xt-PRO AUDIO SYSTEM FLOWCHART Oct / 10 / 02 updated May / 29 / 03

Note on the Direct Output implementation:
When no jack is detected in the FX loop return, the Direct output DAC will take its input directly from the DSP,
thus avoiding the extra noise and delay of the Direct output ADC.
When a jack is present in the FX loop return, the direct output ADC will bring back the FX loop return into the DSP
where it will be mixed in the DSP with the direct part of the signal.
In order to time align the return and direct signals, a time delay equal to the DAC and ADC conversion time, may need
to be added to the direct signal.
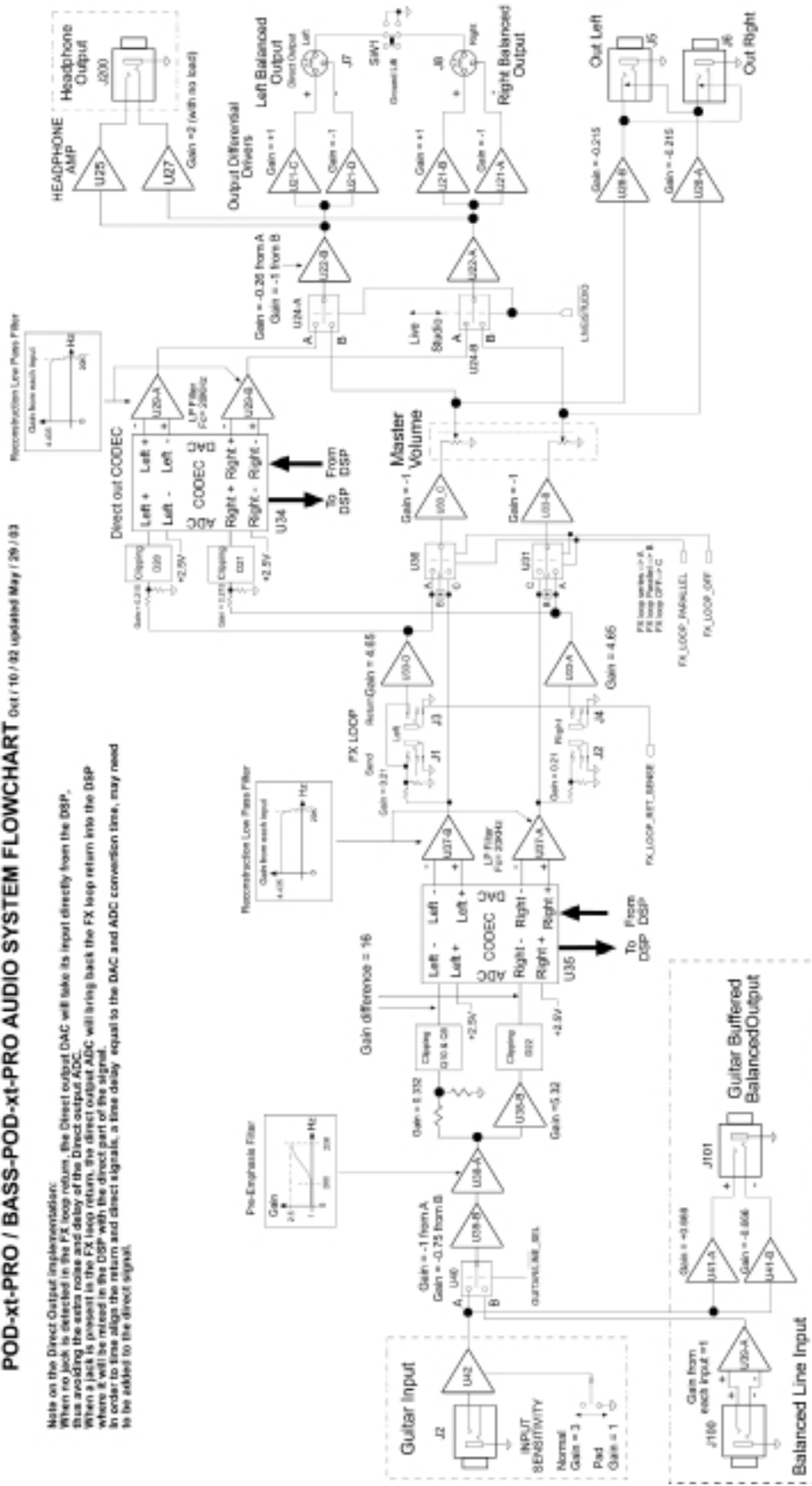
GUITAR INPUT ANALOG SWITCH CONFIGURATIONS (U40)

CASE A = GUITAR IN SELECTED

CASE B = LINE IN SELECTED
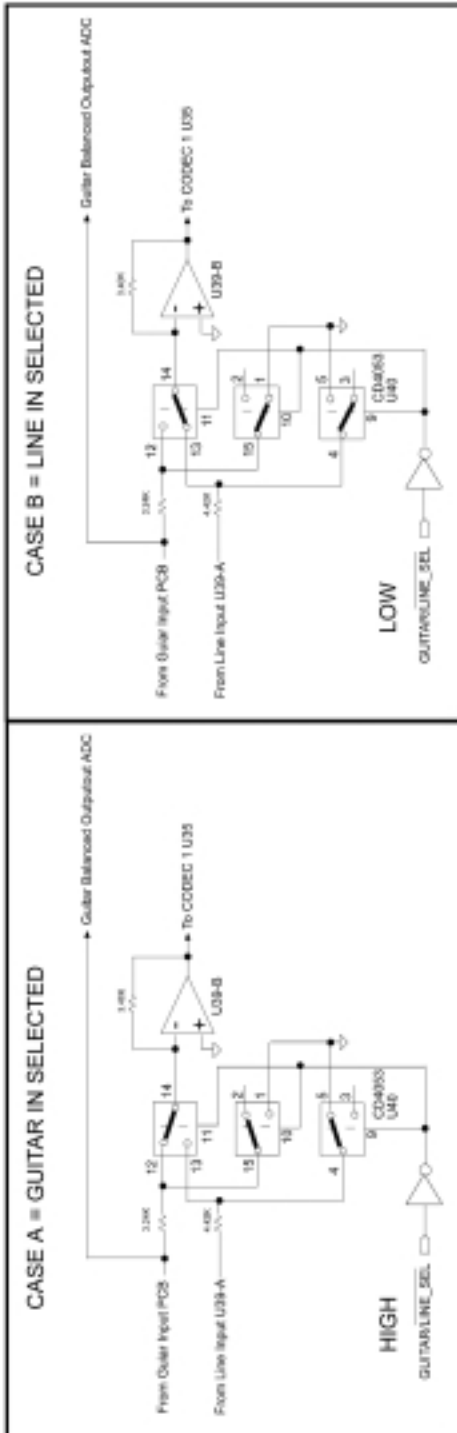
FX LOOP ANALOG SWITCH CONFIGURATIONS (U31 and U36)

FX LOOP ON SERIE

FX LOOP ON PARALLEL

FX LOOP OFF
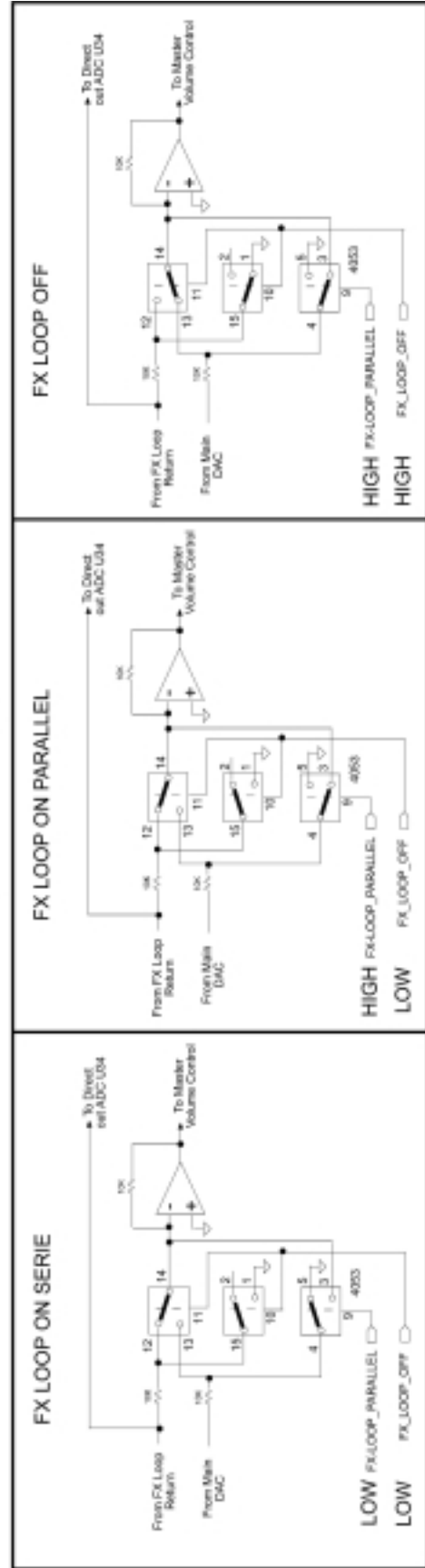
POD-xt-Pro and Bass-POD-xt-Pro AUDIO CHARACTERISTICS:

1) Audio Inputs Max Level:
   - Guitar Input max Level in normal mode:
     From DC to 200 Hz = 5.0 Vpp, at 1KHz = 4.0 Vpp, at 2KHz = 3.0 Vpp, at 10KHz = 2.0 Vpp, at 20 KHz = 2.0 Vpp
   - Guitar Input max Level in pad mode:
     From DC to 200 Hz =15.0 Vpp, at 1KHz = 12.0 Vpp, at 2KHz = 9.0 Vpp, at 10KHz = 6.0 Vpp, at 20 KHz = 6.0 Vpp
   - Line Input max. Differential Level:
     From DC to 200 Hz =20.0 Vpp, at 1KHz = 16.0 Vpp, at 2KHz = 12 Vpp, at 10KHz = 8 Vpp
   - FX Return Input max. Level: 5.0 Vpp

2) Inputs / Outputs nominal impedance:
   - Guitar in nominal input impedance: 1Meg Ohm:
   - Line Input Balanced nominal input impedance: 51K Ohm:
   - Guitar Buffered Balanced Output nominal output impedance: 660 Ohm:
   - Output ¼" jack Unbalanced nominal output impedance: Stereo = 780 Ohm, Mono = 390 Ohm
   - Output XLR Balanced nominal output impedance: 680 Ohm:
   - FX Send Output ¼" jack nominal output impedance: Right = 600 Ohm, Left/Mono = 300 Ohm
   - FX Return Input ¼" jack nominal input impedance: Right = 1M Ohm, Left/Mono = 500K Ohm

3) Output signal levels:
   Test condition A: Test mode, Guitar input = 1.0Vpp= -9dBV, 100Hz
   - Guitar Buffered Balanced Output Level for test condition A: 4.0 Vpp differential = +3.01 dBV
   - FX Send Left and Right Output Level for test condition A: 0.92 Vpp = -9.75 dBV
   - ¼"Jack Unbalanced Out Left and Right Level for test condition A: 0.92 Vpp = -9.75 dBV
   - XLR Balanced Out Left and Right Level for test condition A in studio mode: 8.5 Vpp differential = +9.56 dBV
   - XLR Balanced Out Left and Right Level for test condition A in live mode: 2.24 Vpp differential = -2.02 dBV
   - Headphone out Level for test condition A (no load) = 7.7 Vpp = +8.7 dBV

4) DIG IO:
AES/EBU Output level: Loaded with 110 Ohm (no cable): 4.0 Vpp   rise/fall time:22 nSec
SPDIF Output level: Loaded with 75 Ohm (no cable and no load on the AES/EBU output):
                                                    650 mVpp   rise/fall time:34 nSec

Inputs: (this is the Vpp level measured across the input connector)
AES/EBU minimum input level for reliable lock: 0.22 V pp
SPDIF minimum input level for reliable lock: 0.22 V pp

Power supply (mostly contained on page 5 of schematic):

Refer to the SUPPLY SYSTEM FLOWCHART diagram below.

.
From the IEC AC connector input, the AC main is filtered for high frequency removal by C1, C2, C3 and L1, L2, and current limited for safety by the fuse F1. **! Note that for continuous safety protection, all components connected to the AC main voltage must be replaced only with Line 6 approved parts.** The AC main is stepped down to a 9 VAC level by the transformer. There is only one transformer version to cover all international AC standards. For the 100 to 120 VAC range, the two primary windings are wired in parallel, and for the 220 to 240 VAC range they are setup in series. The appropriate primary winding connection is selected by plugging the primary connector either in header H7 for 100/120 operations, or H8 for 220/240 operations.

The transformer contains a thermal fuse, which will open the primary winding if the transformer core gets too hot. This fuse is not reset-able, and if it goes off the transformer will need to be replaced. This should not happen under any normal conditions, and the cause of the over heating should be investigated before replacing the transformer.

The 9 VAC is spliced in four branches:
- On the +15V branch, the 9VAC is rectified and voltage doubled to about + 25V by C69, D15, D14, and C67. It is then regulated down to +15V by U30. The circuit made of R208, R209 and Q4, guaranties that the +15V output will not rise before the –15V output. This is helpful to significantly limit the audio thump that may otherwise occur on the audio output op-amp when the unit is turned ON.
- On the -15V branch, the 9VAC is rectified and voltage doubled to about - 25V by C61, D11, D10, and C59. It is then regulated down to -15V by U26.
- On the +V_UNREG branch, the 9VAC is rectified to about +11V by D12 and C55. This voltage is used to supply an optional foot controller through the RJ45 connector. Before it reaches the RJ45, the +V_UNREG goes through a 9V regulator U43 (page 9). This regulator not only limits the voltage sent to the RJ45 accessory, but will also limit the current if a short circuit occurs across the supply pin of the RJ45. It is normal to observe some AC ripple on pin 4 of the RJ45. This will not affect the operation of the RJ45 accessory since this voltage will be further regulated in the accessory.
  - The +V_UNREG voltage is regulated down to +3.3V through U18. This voltage will supply most of the digital circuitry.
  - The +V_UNREG voltage is regulated down to +5V through U23, and +5VA through U32. The +5V will supply most of the digital peripheral circuitry, while the +5VA will supply the CODECs and associated circuitry.
- The negative phase of the 9 VAC is rectified and filtered by D9 and C54. The resulting negative voltage feeds the LCD backlight through the current limiting resistors R26 and R27 located on the front panel PCB. Since this voltage is not regulated, the LCD backlight intensity will slightly vary in function of the main AC voltage.

The +15V and the –15V are further filtered by the R138/C108 and R137/C111 networks to generate the +15V_IN and –15V_IN which are used to supply U42 on the Guitar Input PCB, and U38 in the ADC input circuit.

Without special care, a 1KHz audio tone may appears on the audio signals when the USB connection is used and a ground loop is present between the host PC and the audio system. To avoid this problem, the USB section has its own 3.3V supply (+3.3V_USB) made of Q2 and its associated circuitry, and an insulation resistance (R34) between the digital ground and the USB ground (see page 6 of the Main PCB). With this circuit, the 3.3V_USB current is derived from the +5V supply and the +3.3V is only used as a voltage reference

POD-xt-PRO / BASS-POD-xt-PRO SUPPLY SYSTEM FLOWCHART June / 6 / 03
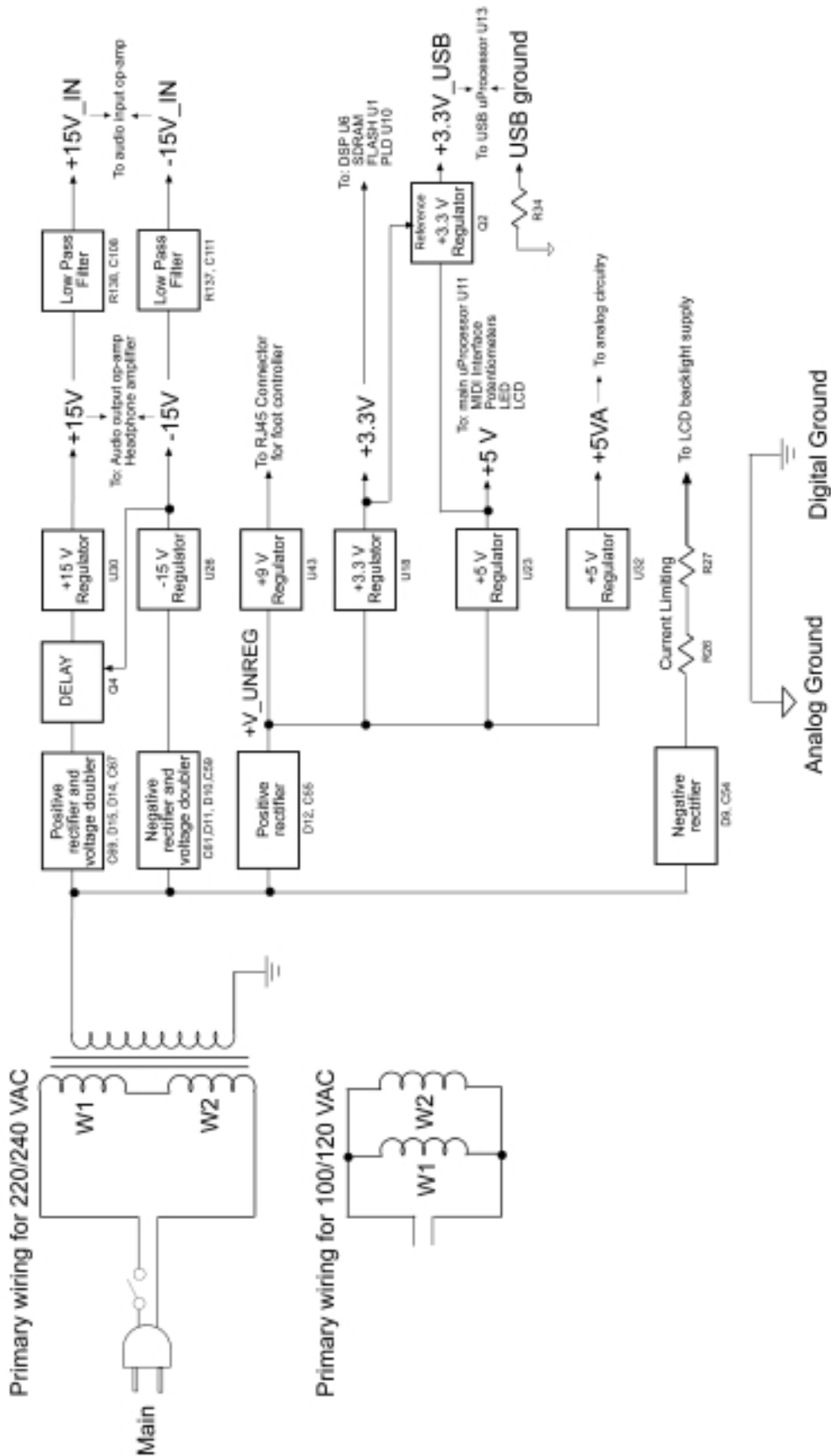
Input / Output system:
The following Input and Output (I/O) signals control the POD-xt-Pro operations

GUITAR_IN_SENSE (GUITAR INPUT PCB):
The status of the Guitar Input Jack is read from the GUITAR_IN_SENSE line by I/O pin 78 of the DSP U6. It is high when a jack is plugged in the guitar input and low otherwise.
When this signal is read low (= no jack plugged in), and the input routing is set to be Guitar IN, the DSP mutes the audio signal path in order to keep the noise on the audio outputs at a minimum

LINE_IN_SENSE (MAIN PCB):
The status of the Balanced Line Input Jack is read from the LINE_IN_SENSE line by I/O pin 138 of the DSP U6. It is high when a jack is plugged in the line input and low otherwise.
When this signal is read low (= no jack plugged in), and the input routing is set to be Line IN, the DSP will mutes the audio signal path in order to keep the noise on the audio outputs at a minimum

FX_LOOP_RET_SENSE (MAIN PCB):
The status of the FX Return Jacks is read from the FX_LOOP_RET_SENSE line by I/O pin 80 of the DSP U6. It is high when a jack is plugged into either one of the left or right FX return and low otherwise.
See the description of the "FX Loop and Audio Outputs" above understand how the sensing of these jacks affect the DSP audio processing.

DIROUT LEFT_SENSE and DIROUT RIGHT_SENSE (MAIN PCB):
The status of the Direct Output Jacks is read from the DIROUT LEFT_SENSE and DIROUT RIGHT_SENSE lines by I/O pin 199 and 201 of the DSP U6. Each line is high when the corresponding jack is plugged in, and low otherwise. Currently the state of these lines has no effect on the operation of the unit.

HEADPHONE_SENSE (HEADPHONE OUTPUT PCB):
The status of the Headphone output Jack is read from the HEADPHONE_SENSE line by I/O pin 79 of the DSP U6. It is high when a jack is plugged in the headphone output and low otherwise. Whenever headphones are plugged in, the DSP turns the AIR processing ON and the output LIVE/STUDIO analog switch is set to Studio mode.

User Interface potentiometers (USER INTERFACE PCB):
The seven U.I. potentiometers provide a voltage from 0 to 5V. These voltages are digitized by the 10-bit resolution ADC U1 located on the front panel PCB. The resulting serial stream is read by the Main microprocessor U11 on the AD_MISO line clocked and gated by the AD_CLK and AD_CS* lines.

User Interface LEDs (USER INTERFACE PCB):
The control lines for eight of the 11 user interface LEDs are latched in U3. The TAP LED, CLIP, and SIGNAL LEDs are latched by U4. The state of latch U3 and U4 are cleared upon

power on by the reset line FP_RESET. This guaranties that all LEDs will remain OFF until the firmware starts to run.

User Interface Switches and encoders (USER INTERFACE PCB):
All of the user interface's 14 switches and four encoders are read in an 8 by 3 multiplexing matrix. One side of the matrix is driven by the buffer U2 (line SW_IMAGE0 through SW_IMAGE7), and the other by the latch U4 (line SW_GROUP0* through SW_GROUP2*). Note that the AMP MODEL and FX SELECT encoders have 12 detents while the SELECT and TWEAK encoders have 24.

User Interface LCD (USER INTERFACE PCB):
The LCD module is written to and read from through the parallel bus FP_DATA[0:7] driven from the MAIN PCB by the buffer U16.
The firmware can adjust the contrast of the LCD by varying the duty cycle of a 1KHz pulse generated on the LCD_CONTRAST_PULSE line. This pulse is filtered and summed with a minus 5V supply available at pin 4 of the LCD module. This results in an adjustable negative to positive DC voltage at the contrast control input of the LCD (pin3).
The backlight LED array is supplied on pin 20 from a negative supply. The voltage at pin 20 should be about minus 4V.

CODEC_RESET* (MAIN PCB – U6 pin 134):
The DSP U6 generates this control line on pin 34. It is set low to reset the CODEC from the time of power on until the DSP starts running valid code.

GUITAR/LINE*_SEL (MAIN PCB – U10 pin 5):
This control line generated by pin 5 of the PLD U10 selects the Guitar input when high and the back panel Line input when low.

FX_LOOP_OFF and FX_LOOP_PARALLEL (MAIN PCB – U10 pin 8 and 10):
The FX_LOOP_OFF control line is generated by pin 8 of the PLD U10
The FX_LOOP_PARALLEL control line is generated by pin 10 of the PLD U10
These two control lines set the status of the FX loop audio routing as follows:

FX_LOOP_OFF	FX_LOOP_PARALLEL	Resulting FX loop routing
Low	low	FX loop in series
Low	high	FX loop in parallel
High	low	Unused
High	high	FX loop OFF

LIVE_STUDIO* (MAIN PCB – U10 pin 3):
This control line generated by pin 3 of the PLD U10 selects the live audio output mode input when high and the studio audio output mode when low.

DIGOUT_CLK_SRC (MAIN PCB – U10 pin 4):
This control line is generated by pin 4 the PLD U10. It selects the AES and S/PDIF output clock source. L = internal clocks (for 44.1, 48, 88.2, or 96 KHz operation) and H = clock recovered from AES or S/PFIF Input.

OSC_225792_ENA and OSC_245760_ENA (MAIN PCB – U10 pins 93 and 92):
These two lines generated by pin 92 and 93 the PLD U10 are used to select which internal S/PDIF and AES output sample rate are selected. L = disabled and H = enabled. Only one of these is enabled at any given time. Both of these lines may be L when DIG_OUT_CLK_SRC = H where the clock is recovered from the AES or S/PDIF IN.

The 30 MHz Oscillator Y3 (via the PLD) generates the bulk of the on board system clocks.
PLD U10 derives several clocks from Y3 including: CLK_15MHZ for the MCU U11,

Clock system (Pages 6,7, and 10 of the MAIN PCB):
The drawing below details the clock distribution structure of the SHARC-POD-PRO:

30 MHZ Y3

CLK_30MHZ

Divide By 2 — CLK_15MHZ — MCU U11

Divide By 5 — CLK_6MHZ

FS_CLK
USB_64FS_CLK
USB_256FS_CLK — USB Controller U13

Divide By 3

256FS_CLK = 10MHz — CODEC 1 U35

Divide By 4

64FS_CLK = 2.5MHz — CODEC 2 U34

Divide By 64

FS_CLK = 39.0625KHz

USB Clocks
Internal Clocks

Inside PLD U10

U12: SRC & AES/SPDIF IN
Output Clocks / Input Clock
Sample Rate Converter
Digital Audio Rx

DIG_IN_256FS_CLK

OSC_245760_ENA
24.5760 MHZ Y1

U44
DIG_OUT_256FS_CLK

AES/SPDIF Recovered Clock
Internal Clocks
DIGOUT_CLK_SRC

OSC_225792_ENA
22.5792 MHZ Y2

U5: SRC & AES/SPDIF OUT
Input Clocks / Output Clock
Sample Rate Converter
Digital Audio Tx

DSP U6

CLK_6MHZ for the USB controller U13, and the three internal digital audio clocks. The three internal digital audio clocks are 256FS_CLK (10MHz), 64FS_CLK (2.5 MHz digital audio bit clock), and FS_CLK (39.0625 KHz sample rate). These internal digital audio clocks are used by the DSP, the CODECs, and the Internal side of the two Sample Rate Converter ICs. When the USB controller is active and connected to a PC with an audio application, the three clocks 256FS_CLK, 64FS_CLK, and FS_CLK are generated by the USB controller (see above diagram). The AES and S/PDIF digital audio out get their timebase from one of three sources: either one of two on board standard sample rate oscillators (Y1 and Y2) or the recovered clock from the AES or S/PDIF Input from U12. The output clock is used by the output side of the sample rate converter in U5. The two oscillators generate the following internal output side sample rates:

Oscillator Freq   Sample Rate

Y2: 22.5792MHz   44.1 KHz
Y2: 22.5792MHz   88.2 KHz
Y1: 24.5760MHz   48 KHz
Y1: 24.5760MHz   96 KHz

Selection of 44.1/88.2 or 48/96 is done inside the digital out IC U5 via software control from the MCU.

Bus system:

The drawing below details the interconnecting busses between the subsystems of the POD-XT:
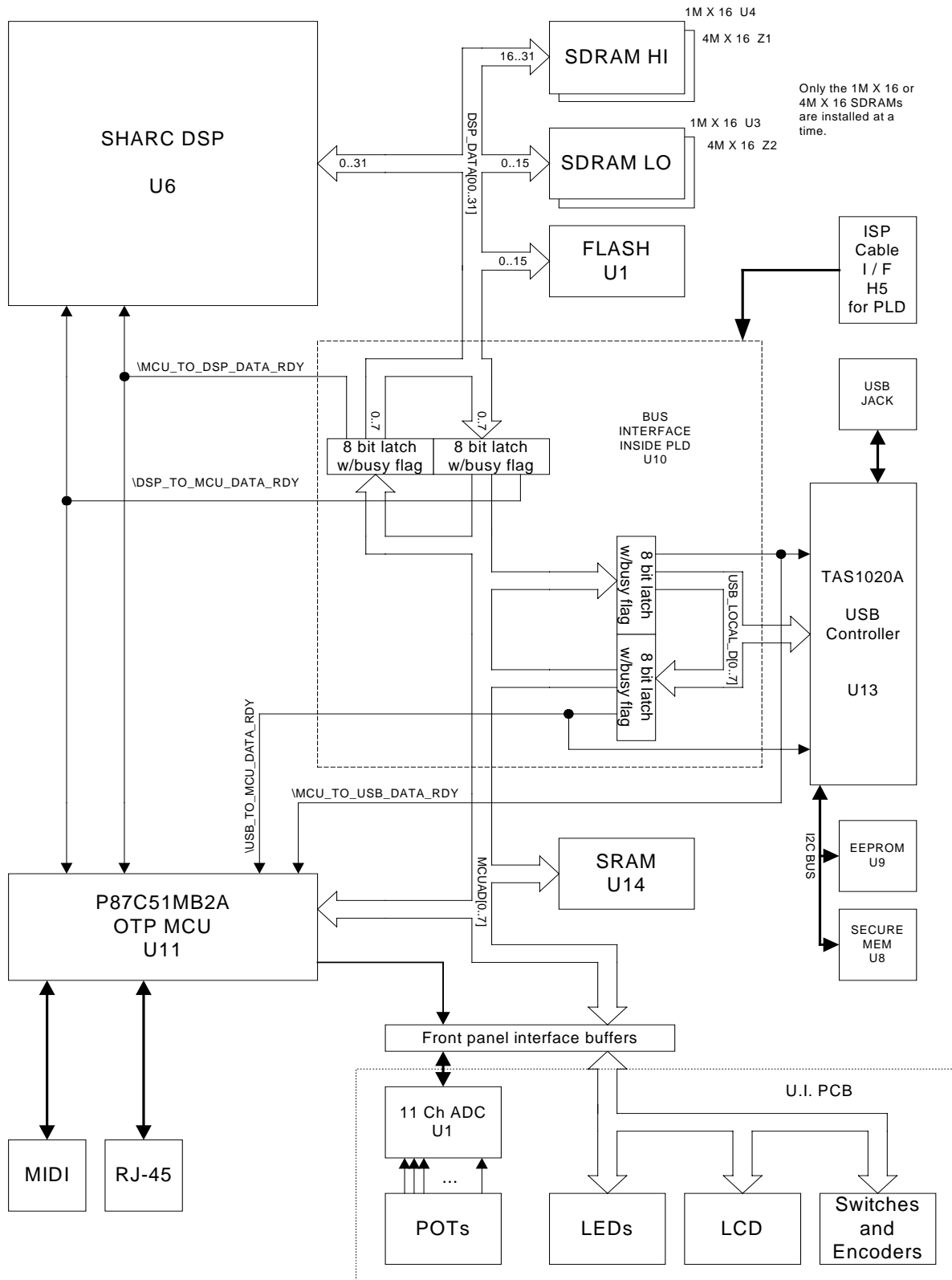
The Micro-controller (MCU U11) is the master host controller for the POD-XT PRO. Its data bus (MCU_AD[0..7]) interfaces locally to 128K X 8 of SRAM U14. All of the user interface components: LCD, LEDs, the Switches, and Encoders are connected to this bus via a bus buffer (page 9 of main schematic). This bus is also bridged to both the DSP and USB subsystems via bidirectional latches inside the PLD U10. All address decoding for the MCU is performed inside the PLD. (Note: The above diagram does not show the address bus and control lines).

The MCU U11 is a One Time Programmable microcontroller (OTP). It contains the BOOT CODE ROM for the POD-XT PRO system as well as some internal SRAM. VERY IMPORTANT - This chip must be programmed like and EPROM before it can be used in the POD-XT PRO system.

The interface between the MCU and DSP is located inside the PLD U10. If the MCU wishes to send a byte to the DSP, it writes a byte to the MCU-to-DSP latch inside the PLD. Writing this byte causes a busy flag to become asserted (MCU_TO_DSP_DATA_RDY*). When this flag is asserted, the DSP receives an interrupt, which tells the DSP to read the byte from the MCU-to-DSP latch. The MCU_TO_DSP_DATA_RDY* flag is deasserted when the DSP reads the MCU-to-DSP latch. The MCU polls the MCU_TO_DSP_DATA_RDY* line and cannot write another byte until this line is deasserted. This same process works for the DSP_TO_MCU_DATA_RDY* for sending bytes from the DSP to the MCU.

The DSP local bus (DSP_DATA[00..31] is a 32 bit bus that interfaces 32 bit wide SDRAM in 2 1MX16 chips U3 and U4 (note that you can substitute 4MX16 chips in the overlapping IC locations Z1 and Z2 but this is not currently used) and the FLASH memory U1 to the DSP. This bus is bridged to the MCU bus via the bidirectional latch inside the PLD U10 described in the paragraph above.

The interface between the MCU and USB subsystem is also located inside the PLD U10. This interface bridge is identical to the interface between the MCU and DSP subsystem. The USB local bus (USB_LOCAL_D[0..7]) is only used to bridge the USB subsystem to the MCU bus via the bidirectional latch inside the PLD. All peripherals in the USB subsystem are interfaced via an I^2C (Inter IC) bus. The I^2C bus is a 2 wire bus used for local low speed serial communication between all I^2C chips compatible chips on a pc board. The I^2C bus connects the EEPROM U9 and Secure Memory U8 to the TAS1020A USB controller U13.

Boot Up Sequence:

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

1. On power up, the reset IC U17 generates an active HIGH reset. This is the master reset for the entire POD-XT-PRO system.
2. When this "master reset" line is deasserted, the MCU polls the MCU_EA* during the falling edge of its reset. This line will be HIGH causing the MCU to execute code from its internal OTP ROM.
3. The MCU will deassert the RESET_DSP* line (via the PLD) thus taking both the DSP and USB controller out of reset (see next section below for USB reset process).
4. The MCU will then send the DSP's boot code to the DSP via the MCU to DSP bridge inside the PLD. This DSP boot code is stored in the MCU's OTP ROM during power down.
5. Once the DSP has received all of its boot code from the MCU, it loads its runtime code from the FLASH memory located on its data bus and begins execution.
6. The DSP will then send the MCU's runtime code to the MCU where the MCU will store it in the volatile SRAM U14.
7. Once all of the MCU runtime code is received by the MCU, the DSP will RESET the MCU. The DSP drives MCU_EA* to the LOW state, then asserts SOFT_RESET_MCU to reset the MCU. After the reset period, the DSP deasserts SOFT_RESET_MCU and drives MCU_EA* HIGH again. The MCU will now begin to run its runtime code from the external SRAM U22. The MCU uses the state of the MCU_EA* line during the falling edge of its reset line to determine if it will run its OTP ROM boot code or execute code externally from the SRAM. This time it runs code externally because the DSP held the MCU_EA* low during the falling edge of its reset.

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

1. When reset is removed from the USB controller U13, its special internal firmware checks the EEPROM U9 to see if it contains the USB controller runtime code. If the EEPROM is blank then the USB controller attempts to load its code via USB jack. If the USB controller is able to load code from the USB jack it loads this code into the EEPROM (This is how the POD-XT-PRO tester loads code for the USB into the board.)
2. Once there is valid code in the EEPROM and it is loaded into the USB controller, the USB controller will begin executing this code.
3. Upon executing its runtime code, the USB controller checks the secure memory U8 to see if it is sealed. If it is sealed then USB encryption is enabled. (The secure memory is "Sealed" during the production test process. The "sealing" process ensures appropriate serial numbers are written to the USB encryption subsystem)

Troubleshooting:

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

1. Since the USB jack is located next to the RJ-45 jack it was noticed that one can very easily plug the USB cable into the RJ-45 jack. Now, of course, this will not work but the shield of the USB plug will short all 8 lines of the RJ-45 jack. Special care was taken when designing the circuitry of the RJ-45 jack such that shorting the power and ground will not damage the board. The added circuitry should provide adequate protection. If a board is damaged by inserting the USB plug into the RJ-45 jack please notify engineering.

2. The FLASH memory on the POD-XT-PRO is updated every seven seconds with any setting changes (eg. MIDI channel, LCD contrast, knob change, etc…). This means that if the POD-XT-PRO is powered down in less then seven seconds after a setting is changed then the item will not be stored correctly in the FLASH memory. When the POD-XT-PRO is powered back on its previous setting will be restored.

3. The board powers up and the LCD backlight turns on but the LCD is blank or garbled – if the rest of the system seems to be functioning correctly (TAP tempo light flashes, buttons work, audio passes, etc.) then the LCD reset circuitry may be at fault (U19 octal\buffer driver) is malfunctioning. This may also be due to faulty soldering on any device on the MCU_ADDR[00:15] bus.

4. If the LCD's backlight does not turn on - check that the 27R resistors on LCD_BACKLIGHT_K are the correct value or are not open and check the voltage from the MAIN PCB or finally check the circuitry supplying the BACKLIGHT on the MAIN PCB (D9 and C54).

5. The board powers up but the LCD reports "ERROR CODE 2" or "ERROR CODE 1". This means that the FLASH memory is empty or invalid. "ERROR CODE 1" means that the MCU runtime code that is stored in the DSP's FLASH is invalid. "ERROR CODE 2" means that the DSP runtime code that is stored in FLASH is invalid. See previous section on POWER UP SEQUENCE for more information. If either of these messages are displayed, then try reprogramming the FLASH memory. If it fails again, then check for faulty soldering on the DSP's bus or MCU bus (see section on BUS SUBSYSTEM for more information). Note also that a faulty device on either of these busses may be at fault.

6. The board is powered up but the LCD is blank and the rest of the system is frozen. First, make sure that the MCU is installed. Second, try another MCU. Third, check for faulty soldering on the MCU bus (especially the MCU socket S1). Fourth, make sure the PLD is programmed properly. This can only be verified with the PLD programming cable and accompanying PC software. One other way to verify that the PLD is ok is to check for all of the clocks that the PLD drives (the clocks can be found on an number of test points throughout the board). Fifth, check the master oscillator Y3 to see if it is generating the 30MHz clock. Finally, check for faulty components on the MCU bus side.

7. The board powers up, the LCD is displaying the correct items, the buttons and knobs work, but there is NO AUDIO. First, check that the input selected in the POD XT PROs user interface is set to the audio input source (GUITAR IN, LINE IN, AES IN, or

S/PDIF IN). Second, check the audio input circuitry and make sure audio makes it through the input op-amp U42 (on the guitar input PCB) all the way to the CODEC1 (U35) inputs. Third, make sure that the codec has the appropriate clocks driving it (See section CLOCK SYSTEM above). Fourth, check the audio path from the output of the codec to the direct outs and the headphone circuitry. Fifth, check that the signal GUITAR_IN_SENSE is HIGH (HIGH means that a jack is plugged into the POD-XT's guitar input.). If this signal is not HIGH then the guitar in jack J2 or the support circuitry for the sense line is faulty. If the system thinks that a plug is not plugged into the guitar jack it will automatically mute the audio. Sixth, the audio is correct all the way to the codec and the clocks are correct then it is possible that the DSP or an item on its bus is malfunctioning. At this point check for faulty soldering on the DSP or other items on its bus.

8. The buttons and encoders work but the POT's do not. First power down and then power up in test mode (Press the channel D button on power up). If the pots fail in test mode check the ADC U1 on the User Interface PCB and the clocks and\or signals going to the ADC from MAIN PCB.

9. The board seems to be working properly but the LED's do not work. First power down and then power up in test mode (Press the channel D button on power up). If the LEDs fail in test mode check U3 for all LED's except the TAP TEMPO LED or the FP_DATA[0:7] lines coming from the octal buss transceiver U16. For the TAP TEMPO LED check U4 or the FP_DATA[7] line that comes from the octal buss transceiver U16. Finally, check the MCU U11 and socket.

10. The board seems to be working but the buttons and encoders do not work. First power down and then power up in test mode (Press the channel D button on power up). If the buttons and encoders do not work in test mode check anything in the SW_IMAGE[0:6] bus and FP_DATA[0:7] bus, resistor pack R13, and any of the switch matrix diodes (see schematic).

11. The board is running but the USB does not work.   Check for faulty soldering on the USB controller U13 as well as the EEPROM U9 and secure memory U8 and pull-up resistors R1 and R2. Check the special USB supply isolation circuit (See schematic page 4). Finally check for faulty components in the USB subsystem.

12. The board is running but the RJ-45 interface to floorboard (FBX, FBV, FBC, etc.) does not work. Check for faulty soldering on the MCU U11, Interface IC U15, etc… Also, check the RJ-45 supply isolation circuit that supplies 8V to pin 4 of the RJ45 jack (see schematic page 9).

13. The board is running but the MIDI interface does not work. Check the MIDI IO section for faulty soldering (See schematic page 9). Check for faulty soldering on the MCU U11, etc.

14. The board is running except the SPDIF or AES\EBU out or in – check the DIG I\O circuitry (pg.10 on the MAIN PCB schematic) check that signals are coming into and out from the digital audio samples rate converters, U12 for SPDIF and AES IN and U5 for SPDIF and AES OUT. Make sure both of these chips are getting the appropriate clocks. Finally, check the PLD U10 and DSP U6.

LINE 6

ENGINEERING

POD XT PRO Self Test Instructions

Document Revision: A

The POD XT PRO has a built in self test utility. The following procedure outlines the test setup, process, and analysis:

1. SETUP: Attach and IEC power cable to the POD XT PRO. Plug this into a 120V 60Hz AC outlet. Connect a MIDI cable between MIDI IN and MIDI OUT. Plug a special RJ-45 loopback cable into the RJ-45 jack.

2. Press and hold down the D button (right most button below LCD) and turn the power switch ON.

3. ALL LED's should turn on and the LCD will display the results of the automated SDRAM, SRAM, MIDI, and RJ-45 test (PASS/FAIL).
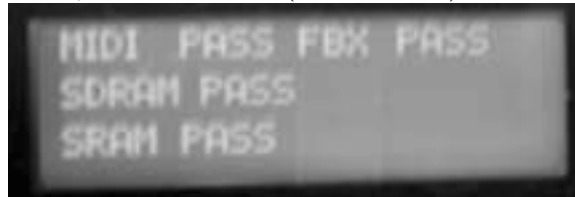
4. The LED's will light in sequence starting from the bottom left going clockwise.
5. Next the LCD test runs. ALL PIXELS turn on then off. Then a line sweeps horizontally and then vertically across the display. When it is finished it will display "LCD Test Complete." See pictures below for reference.

Vertical line	Horizontal line	LCD Test Complete
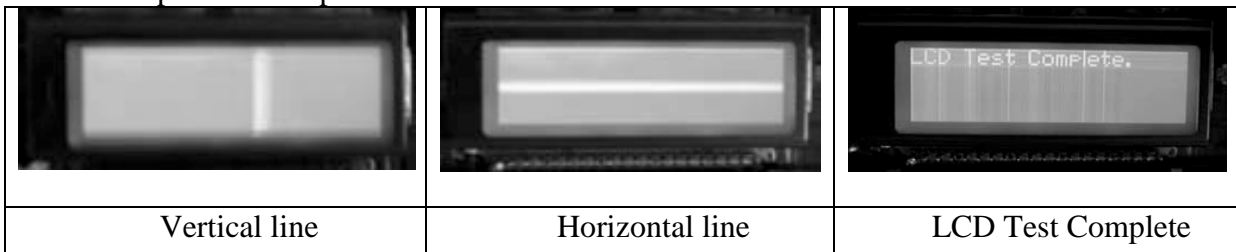
6. Any button, potentiometer, or encoder can be activated and its movement will show up on the display. Perform the following operations:
    a. First test the encoders. The encoders will display 0-16. Turn the lower right encoder clockwise from 0-16 and then counterclockwise and leave it at 10 to achieve good contrast to perform the rest of the tests. Test the rest of the encoders by first turning them to the left and then to the right (counter-clockwise then clockwise). When all encoders have turned correctly the display should read "ENC PASS."

    b. The buttons can be activated by pressing them. Press each button and the name of the button will be displayed when pressed. Check that the name displayed matches the button being pressed. When all the buttons have been pressed the display will read "KEYS PASS."
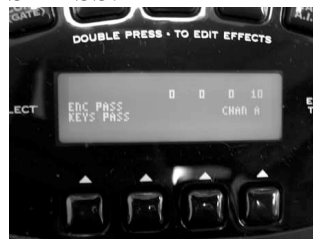
    c. All the pots except the "Output Level" pot (R116) will display 0-127. Turn all the pots from 0-127. When all the pots have been turned from minimum to maximum positions, the display will read " POTS PASS."

7. You are now completed the POD XT PRO Self Test. Note any failures and issue an appropriate report for the unit under test as necessary.

Mechanical Assembly Instructions: Pod XT PRO
Rev A   2/17/03

Forward and Notes

The information in this booklet applies to the POD XT Pro mechanical assembly only.

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

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

- Unless otherwise noted, all dimensions are in inches.
- Part identifying notes are in this format: Description (Part Number)
- Drawings are not to scale.

Table of contents:

MAIN PCB/BACK PANEL SUB ASSEMBLY

GENERAL MECHANICALS FOR MAIN PANEL SUB ASSY:			
ITEM	LINE 6 P/N	QUANTITY	DESCRIPTION
1	50-00-0171	1	PCBA MAIN
2	50-00-0216	1	PCBA BAL INPUT/OUTPUT
3	30-51-0152	1	CHASSIS BACK PANEL
4	30-00-8375	2	SCREW SH METAL #8X.375 SLF TP BL OX
5	30-00-4250	9	SCREW SH METAL #4X.25 SLF TP BL OX
6	--	8	HEX NUT, 1/4 JACK PLASTIC (INCL W/JACK)

a) Insert and affix main pcba to the back panel

The main pcba (50-00-0171) is inserted into the unpainted side of the back panel (30-51-0152) and secured using the fasteners specified in figure (a2) below.
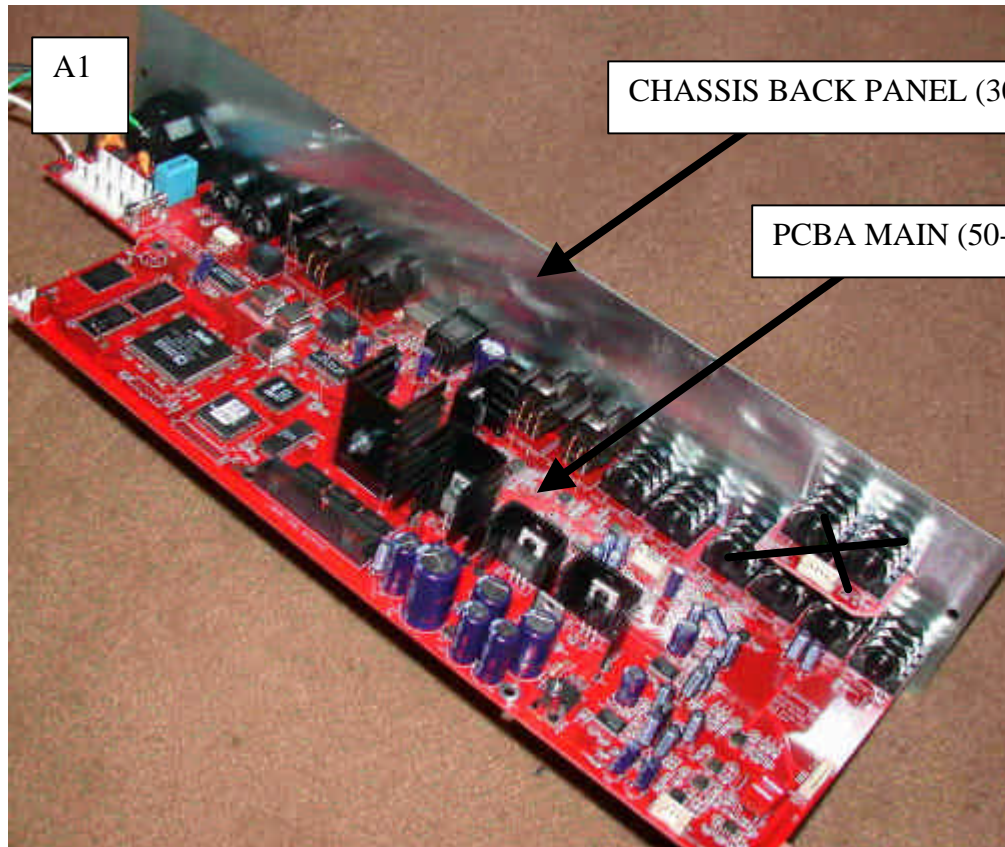
A1

CHASSIS BACK PANEL (30-51-0152)

PCBA MAIN (50-00-0171)
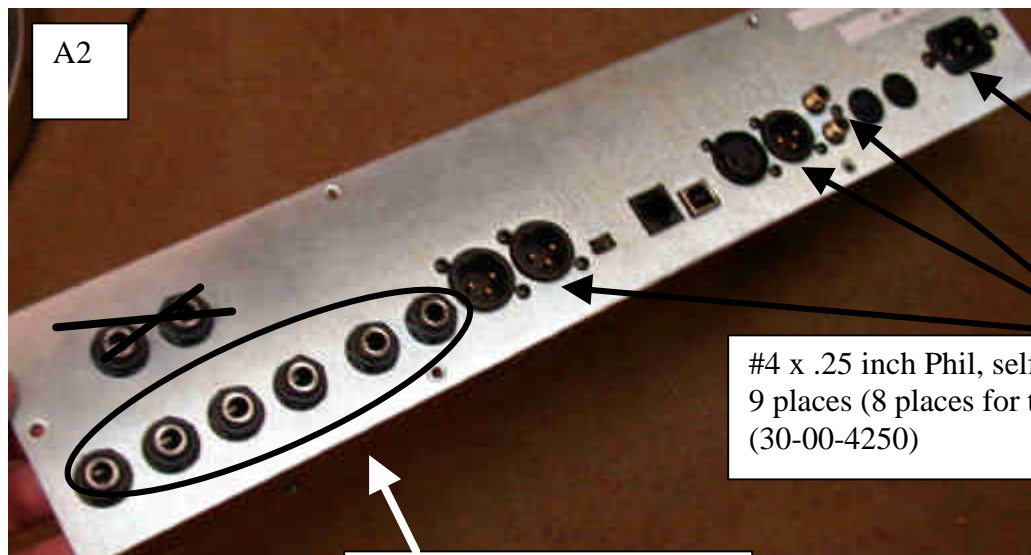
A2

#8 Phil, self-tapping black oxide
2 places (for AC recept.)
(30-00-8375)

#4 x .25 inch Phil, self-tapping black oxide
9 places (8 places for the XLR's, and 1 for S/PDIF)
(30-00-4250)

Plastic jack nuts, 6 places
(included with PCBA)

b) Insert and affix balanced input/output pcba to the back panel

Insert balanced output PCB (50-00-0216) into back panel to the position indicated below. Secure with 2 hex nuts supplied with the PCB.

Chassis back panel

PCBA Main
(50-00-0171)

PCBA 50-00-0216

Secure panel with supplied
hex nuts
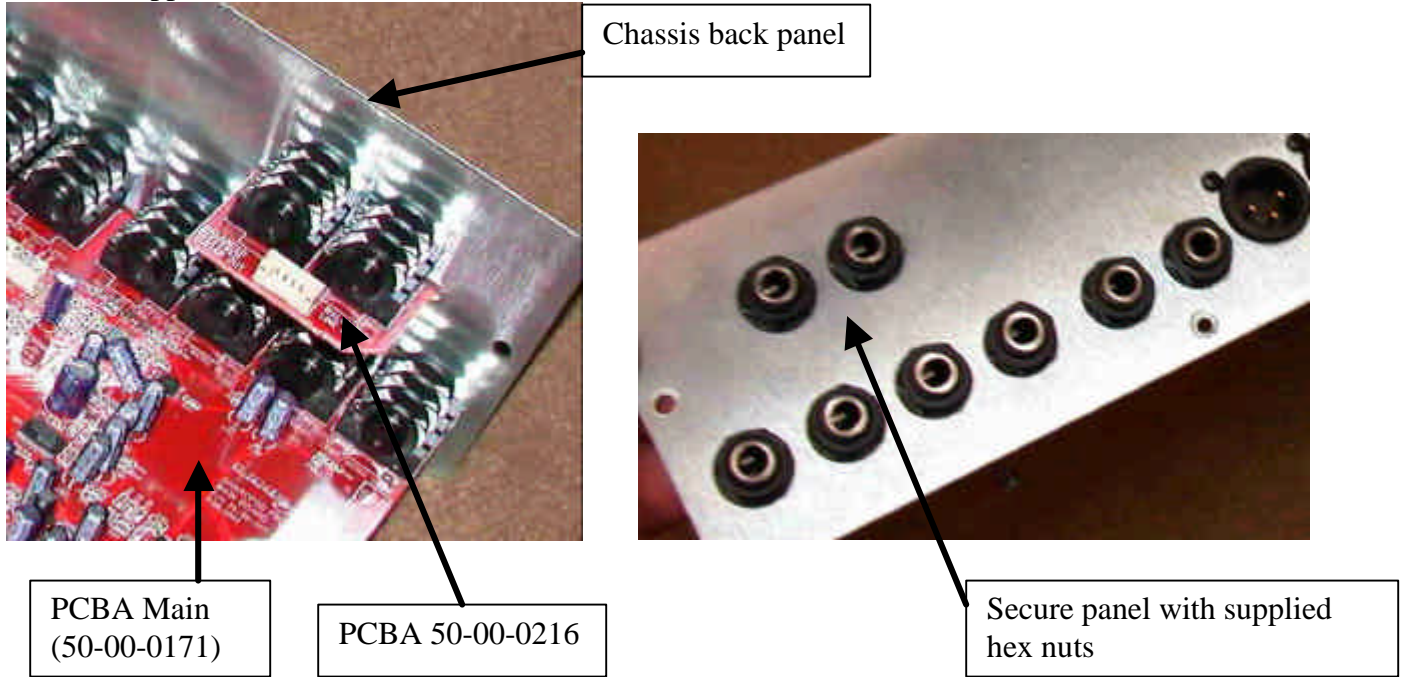
C) Connect cable.

Connect the 6-pin cable (21-34-9006) between H100 on PCBA Balanced out and H2 on the PCBA Main as shown below.

Cable 21-34-9006

PCBA Main
(50-00-0171)

PCBA 50-00-0216
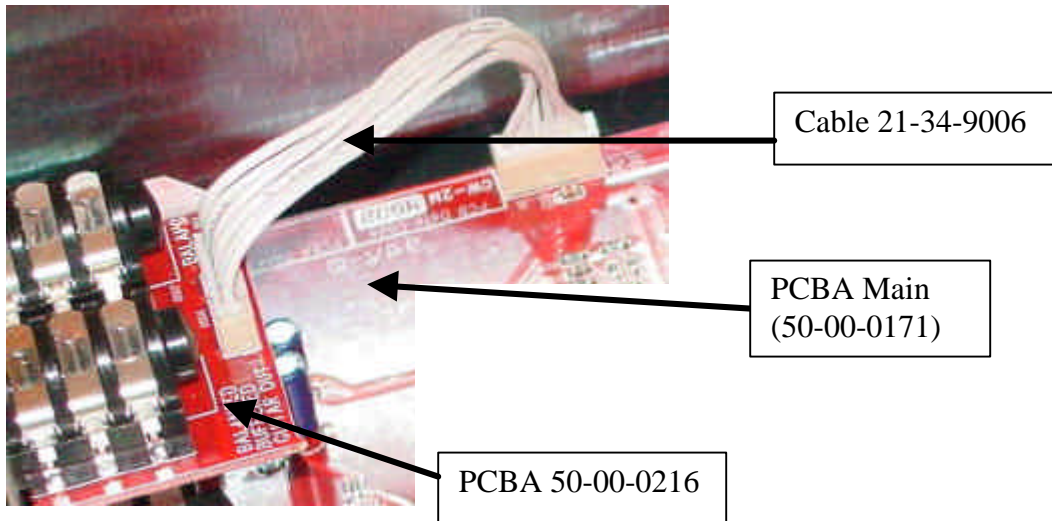
COMPLETE THE CHASSIS ASSEMBLY

TOP VIEW

FRONT VIEW

REAR VIEW
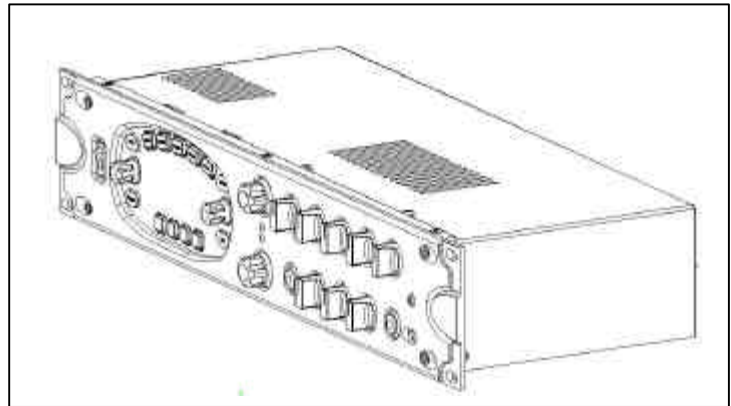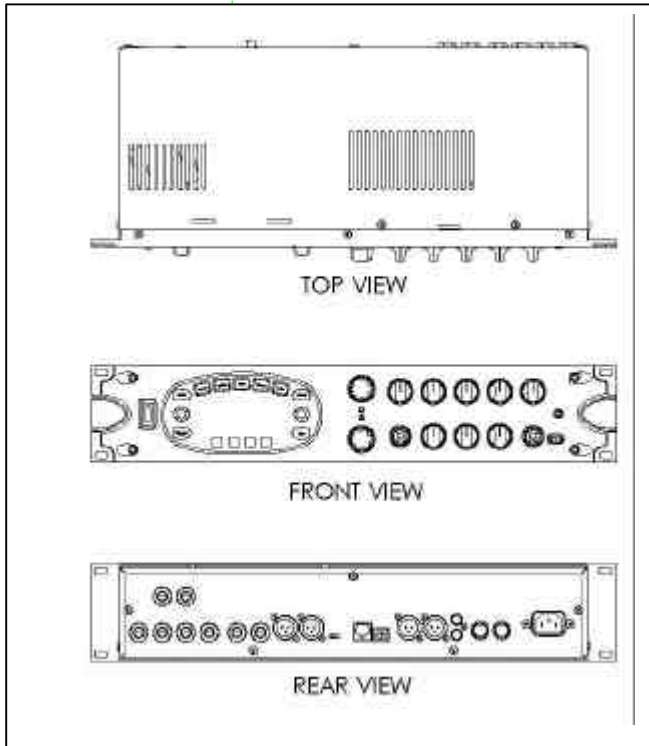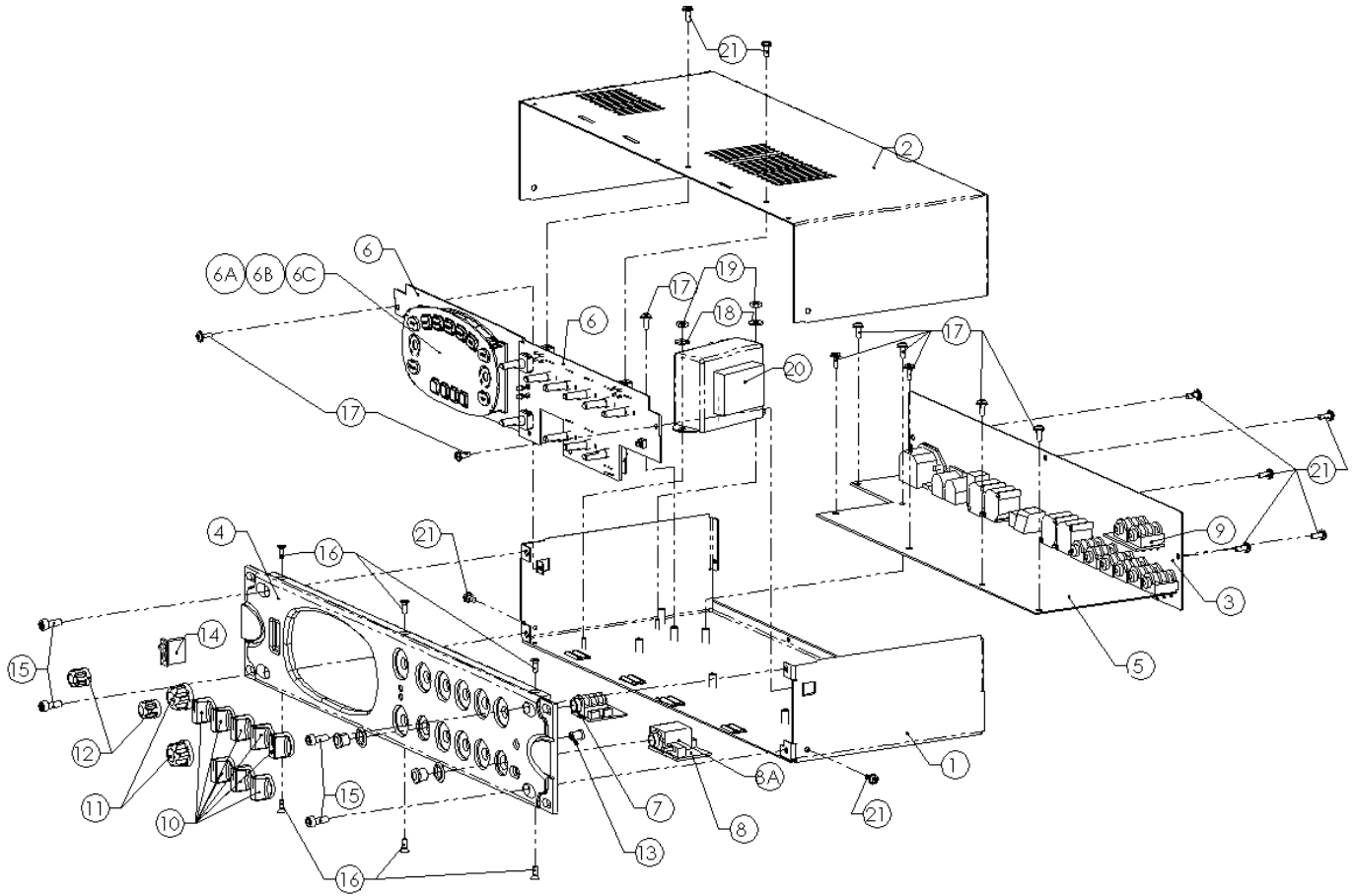
GENERAL MECHANICALS AND CUSTOM PARTS ON EXPLODED VIEW:

ITEM NUMBER	LINE 6 P/N	QUANTITY	DESCRIPTION
1	30-56-0153	1	CHASSIS
2	30-51-0134	1	CHASSIS COVER
3	30-51-0152	1	CHASSIS BACK PANEL
4	30-51-0135	1	FRONT PANEL
5	50-00-0171	1	PCBA MAIN
6	50-00-0202	1	PCBA USER INTERFACE
6A	30-75-0009	1	KEYPAD
6B	30-27-0053	1	ISOLATION FRAME
6C	30-27-0055	1	BEZEL
7	50-00-0214	1	PCBA HEADPHONE
8	50-00-0215	1	PCBA GUITAR
8A	30-51-0146	1	SHIELD, GUITAR JACK
9	50-00-0216	1	PCBA GUITAR BALANCED INPUT/OUTPUT
10	30-45-2000	8	KNOBS, POTENTIOMETER
11	30-27-0027	2	KNOBS, ENCODER, LARGE
12	30-27-0025	2	KNOBS, ENCODER, SMALL
13	30-27-0017	1	INPUT SELECT BUTTON
14	24-24-0001	1	ROCKER SWITCH
15	30-00-0037	4	SCREW 10-32 X 1/5 SHCS BL OX WITH THREADLO
16	30-00-0029	6	SCREW 6-32 X 1/2 PHIL FLH ZINC WITH THREADLC
17	30-00-0607	9	SCREW 6-32 X 7/16 W/LK WASHER STL PPB
18	30-03-0018	2	WASHER, .440 OD X .156 ID X .O42 THK STL
19	30-06-0623	2	HEX NUT, 6-32 W/CAPTV STAR WASHER
20	11-30-0005	1	TRANSFORMER

CABLING PARTS (PARTS NOT SHOWN ON EXPLODED VIEW):

LINE 6 P/N	QUANTITY	DESCRIPTION	
21-34-1101-1	1	CBL18AWG FSTN F-FLAG .25 MM WHITE	PRE SOLDERED ONTO MAIN
21-34-1102-1	1	CBL18AWG FSTN F-FLAG .25 MM BLACK	PRE SOLDERED ONTO MAIN
21-34-1806	1	CBL EYE 1-COND 18 AWG GREEN	PRE SOLDERED ONTO MAIN (GROUNDING)
21-30-0012	2	CBL SIL 10-PIN 26 AWG	PRE SOLDERED TO FRONT PANEL (J2-J4, J1-J3)
21-34-0007-1	1	CBL SIL 4-COND 26 AWG	H200 (HEADPHONE) TO H3 (MAIN)
21-34-0013	1	CBL SIL 5-COND 26 AWG 50.8 MM	H300 (GUITAR IN) TO H9 (MAIN)
21-34-9006	1	CBL SIL 5-COND 26 AWG 105 MM	H100 (BAL OUT) TO H2 (MAIN)
21-34-9034	1	CBL DIL RIBBON 34-COND	H2 (FRONT) TO H6 (MAIN)

a) Install transformer into chassis

The transformer (11-30-0005) mounts onto 2 6-32 pem studs in the chassis (30-51-0153) and is secured using a flat washer (30-03-0018) and 6-32 hex nut w/captive lockstar washer (30-06-0623). Note the correct orientation of the transformer when installing into the unit.
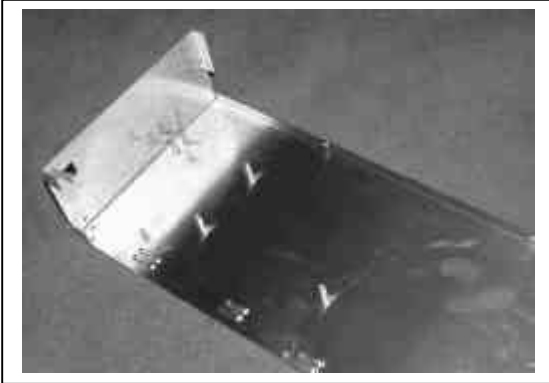
Note when correctly installed the 5 cable bundle face the chassis wall.
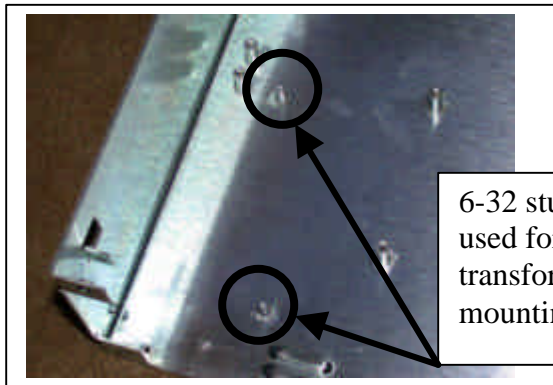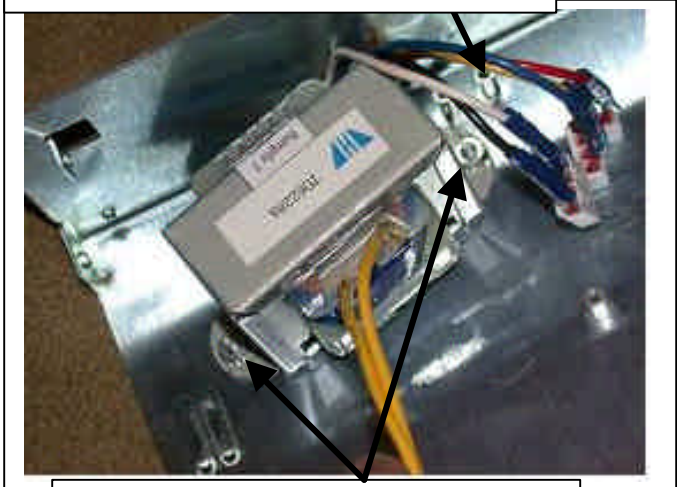
6-32 studs used for transformer mounting

Fasten transformer with custom washer (30-03-0018) and hexnut with lockstar washer (30-06-0623).
2 places

b) Install Main PCB/Back panel sub assembly into chassis

Slide the leading edge of the PCB board into the chassis clearing the cutouts in the chassis (see below left).

Install Main from back face of chassis (white arrow)

Clearance cutouts in the chassis for clearance of main PCB installation
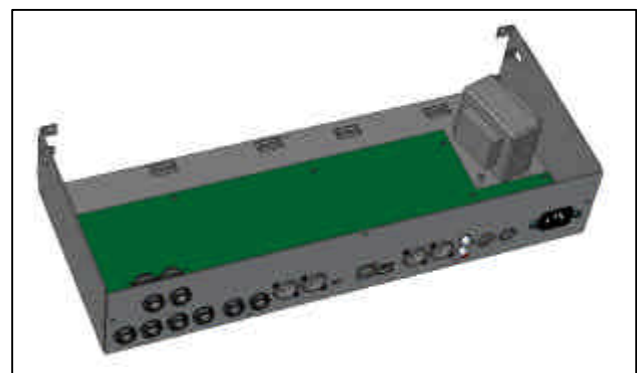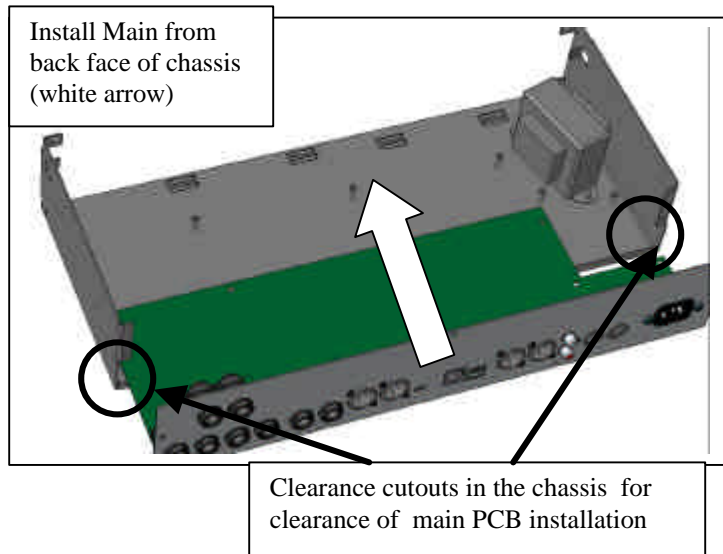
Secure the back panel to the chassis following the procedure listed below:

1- Loosely secure back panel with 2 6-32 black oxide pan hd phil w/ captive lockstar washer. (30-00-0606).
Note 2 locations only.
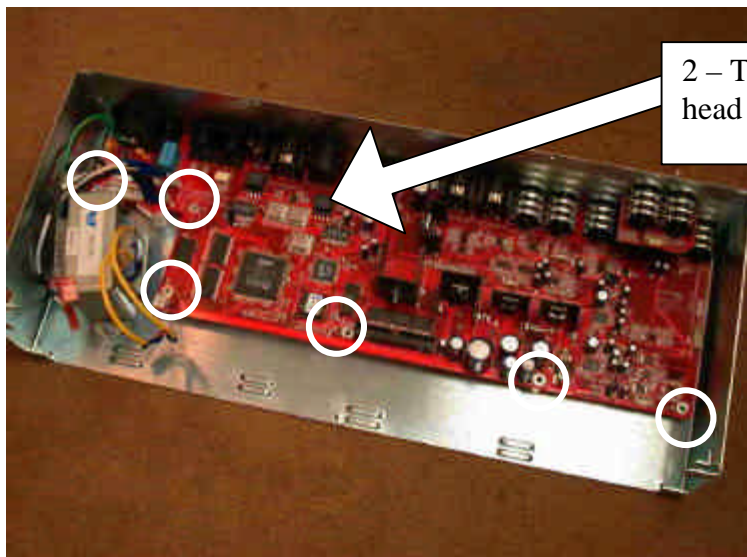
2 – Then loosely secure PCB with 6 6-32 pan head phil w/ captive lockstar (30-00-0607).

3 – Then tighten 2 loosely secured back panel screws
4 – Then tighten 6 6-32 screws on the PCBA standoff's

Connect the primary, secondary and grounding wires front the transformer as shown below:

Connect primary to 100-120V header
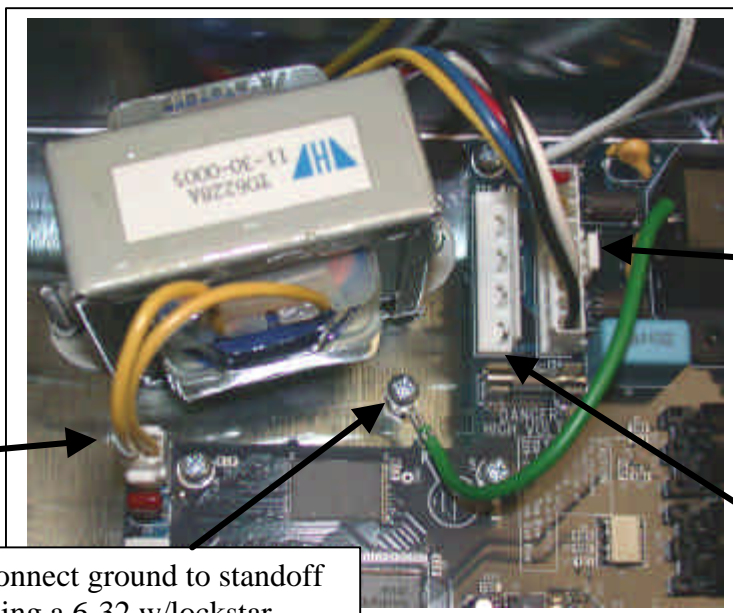
Connect secondary to H20

Header used only for the 220-240V version

Connect ground to standoff using a 6-32 w/lockstar screw (30-00-0607)

c) *Install Userinterface PCBA into chassis*

(Before proceeding, confirm that all steps have been completed from the PCB assembly document associated with the front panel (see most current rev). This includes but not limited to:
 - Presoldering 21-30-0012 onto the back side of the front panel between locations j2-j4 and j1-j3 (2 cables total.
 - Installation of the LCD, keypad, isolation frame and bezel (6a, 6b, 6c in exploded view).)
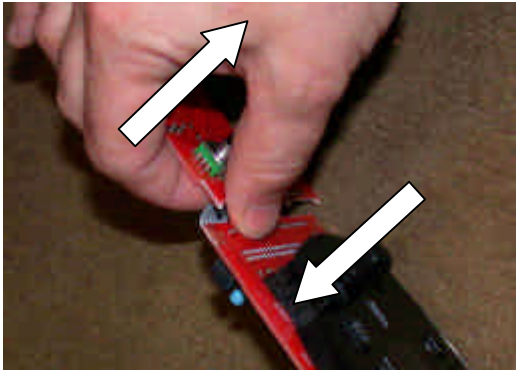
Before installing front panel, snap apart left and right portion at the routing lines. Using your thumb and forefinger, offset the front surface of the panel with the keypad back ¼ inch from the pot/encoder panel.

Install user interface PCBA into chassis:
1 - position the sides of the PCBA to sit on the front surface of the edge tabs as indicated in the detail views.
2 - position the bottom edge of the PCBA to sit between the ribs formed into the chassis bottom (see next page).
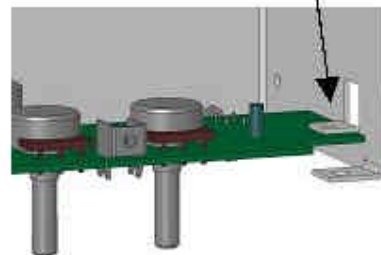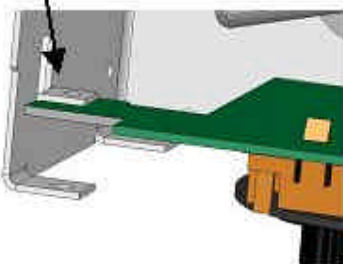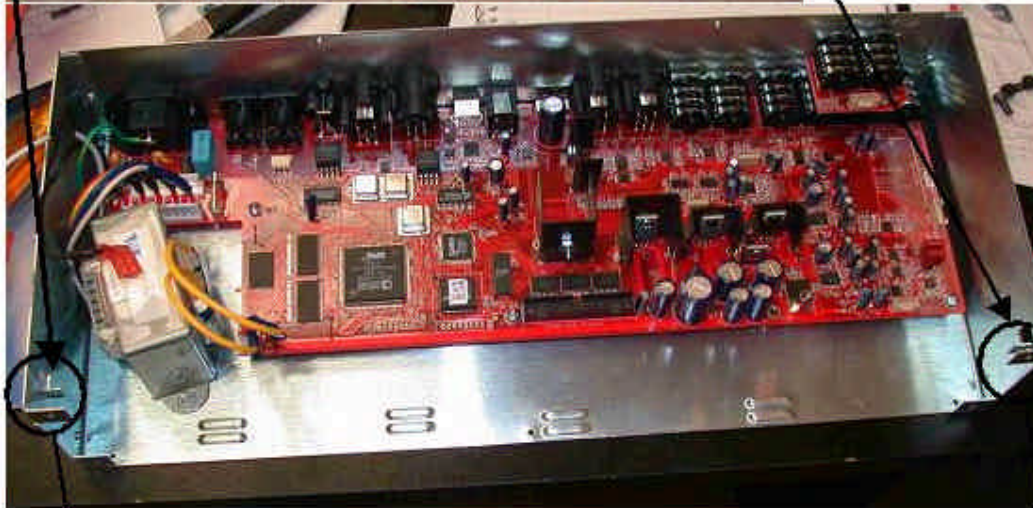
When placing User interface PCBA into chassis, ensure bottom edge of both boards are nested between dimples on bottom surface of the chassis.

Position bottom edge of user interface PCBA to sit between edges as shown here (4 places).
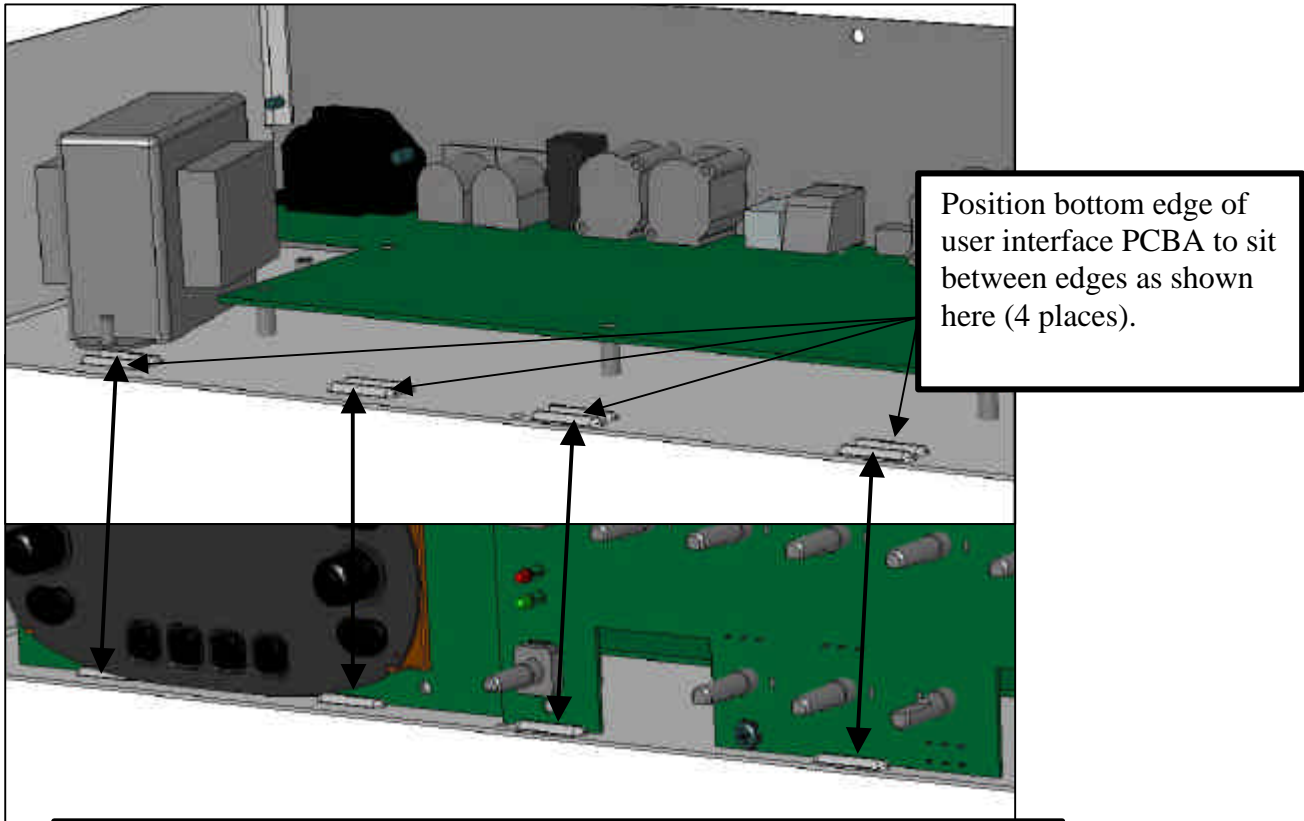
When bottom edges of both PCBA's are sitting between ribs, fasten edge of boards to edge tabs using 6-32 lockstar screws (30-00-0607) (2 places)
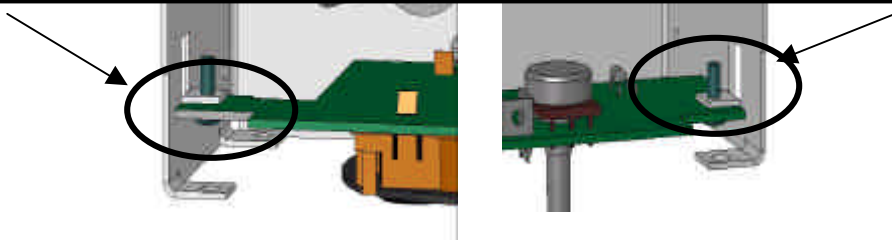
d) Install the front panel

Immediately before installing the extruded front panel onto the chassis, place the plastic button (30-27-0017) onto the input select tack switch as shown below.
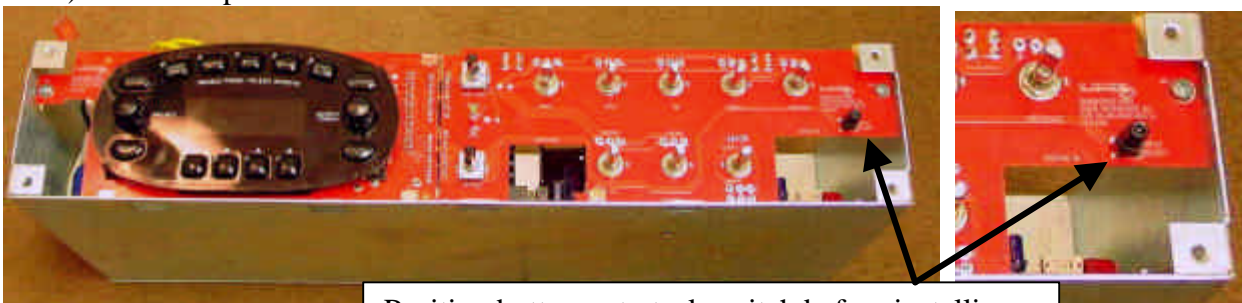
Position button onto tack switch before installing extruded panel

Position front panel (30-51-0135) onto chassis as shown in the figure below. Ensure LED's and plastic button index with the clearance holes. Before securing face to chassis, ensure the rear surface of extrusion is sitting flush with front edge of chassis (see below right) and that bottom edge of PCB still sits within the dimples on the botton surface of the chassis. Secure with the fasteners indicated below.

Ensure that the chassis front edge sits against the back surface of the front panel upon installation

10-32 Socket head cap screw w/threadlock
(2 per side, 4 places total)
(p/n 30-00-0037)
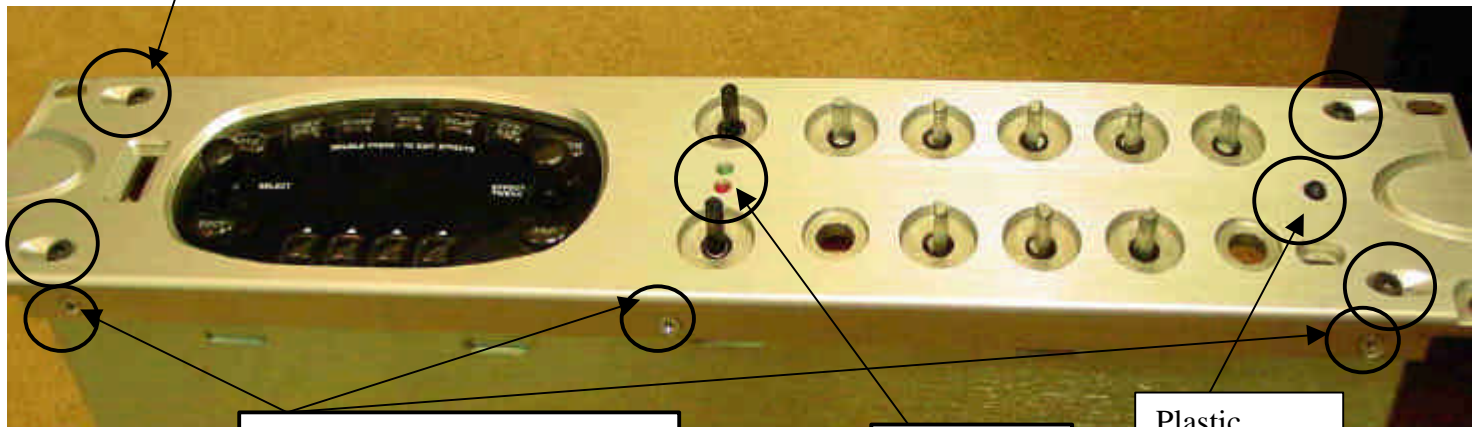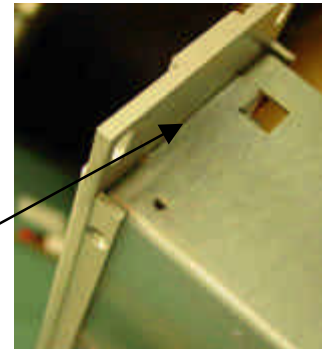
6-32 flat head w/threadlock
(3 places)
(p/n 30-00-0029)

LED

Plastic button

To complete the extruded front panel installations:
1- First loosely secure panel using 3 – 6-32 flat head Phillips screws
(30-00-0029) installed along the bottom edge of the panel.

2 - Then partially install 4 – 10-32 socket head cap screws (SHCS, 30-00-0500) into the front of the panel.

3 - Ensure that PCBA still sits between ribs on bottom edge of chassis.

4 - Finally tighten the 3- 6-32 flat head screws followed by final tightening of the 4- 10-32 SHCS.

e) Install the power switch

Install the power switch (24-24-0001) and connect cables
(21-34-1101-1, 21-34-1102-1) presoldered on the main
pcb to the leads on the backside of the switch.
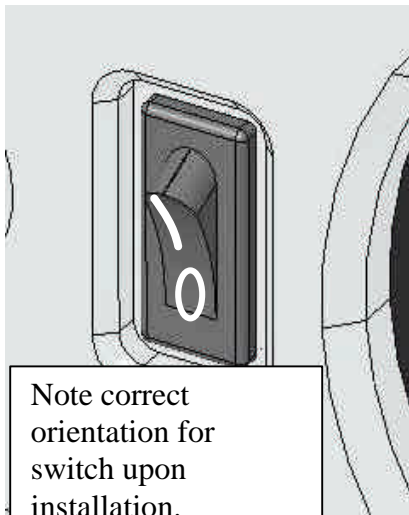
Note correct
orientation for
switch upon
installation.
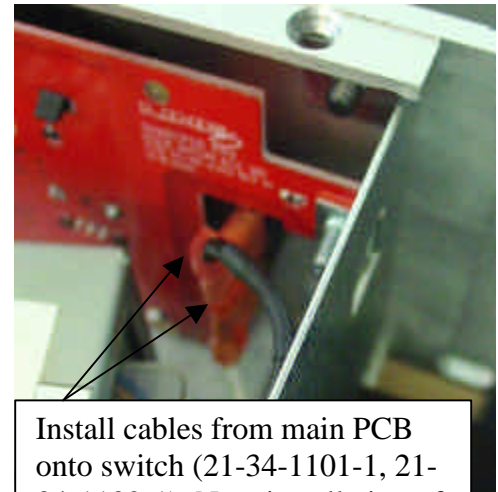
Install cables from main PCB
onto switch (21-34-1101-1, 21-
34-1102-1). Note installation of
the black cable (21-34-1102-1)
to the top tab.

f) Install Headphone PCBA (30-00-0214) and headphone cable (21-34-0007-1).

Attach headphone cable (21-34-0007-1) to the headphone PCBA
(32-00-0214).

Install headphone PCBA to the front
panel as shown below. Secure to the front
panel using the supplied chrome nut and
black plastic washer

Attach cable to H1 position on the main
PCBA

g) Install Guitar input PCBA (35-00-0215) and cable (21-34-0013)
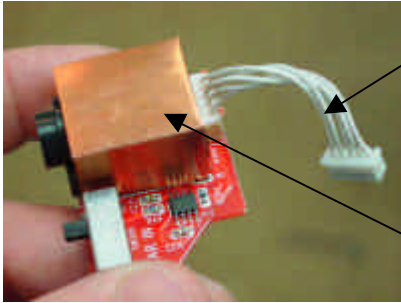
1 - Install cable 21-34-0013 at H300 on the input PCBA.

(Ensure that Jack shield (30-51-0146) has been presoldered onto the PCBA as described in the PCB assembly manual)

2- Input PCBA mounts though round hole for the jack and the elongated hole for the slider switch. Secure with supplied chrome nut and black plastic washer.

3- Connect input cable to H1 on the main PCBA

h) Complete the cable installation and zip tie

Install cables as shown in the adjacent view:

1- Cable 21-34-0015 (between H1 on front panel and H9 on the Main PCBA)

2- Cable 21-34-9034 (34 pin ribbon between user interface panel and main PCB) (NOTE: To facilitate installation a recommended folding pattern is detailed on the next page)
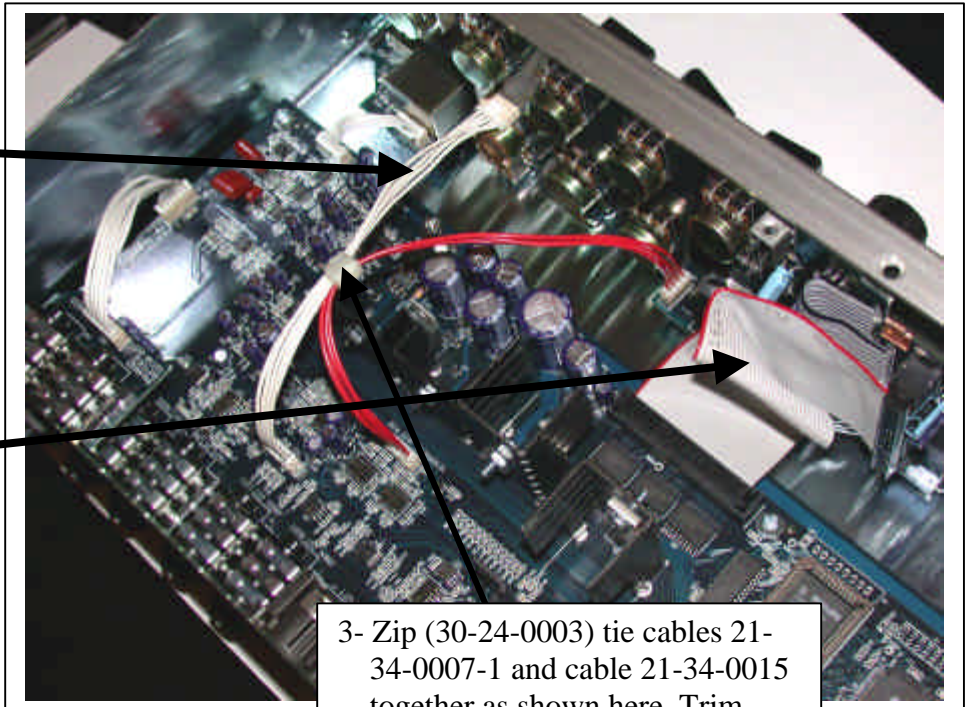
3- Zip (30-24-0003) tie cables 21-34-0007-1 and cable 21-34-0015 together as shown here. Trim excess.

1

Pin 1

2
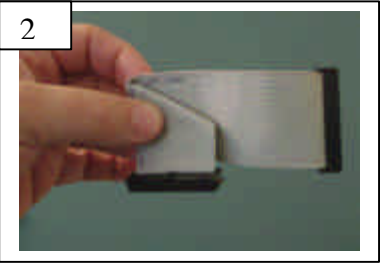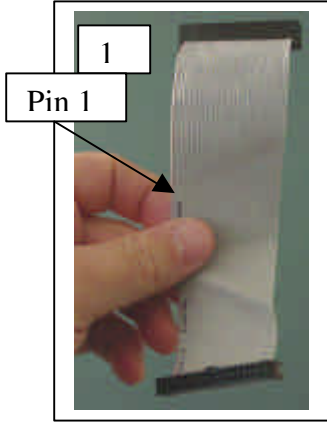
Install cable as indicated in fig 3-4
(note pin 1 orientation)

4

Before installation fold
ribbon calbe (21-34-9034)
as indicated in fig 1-2. Note
pin 1 position

3

Pin 1
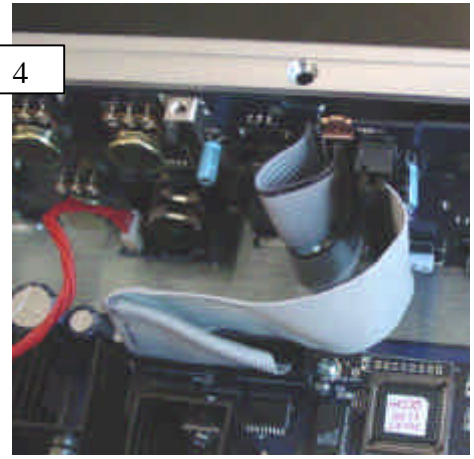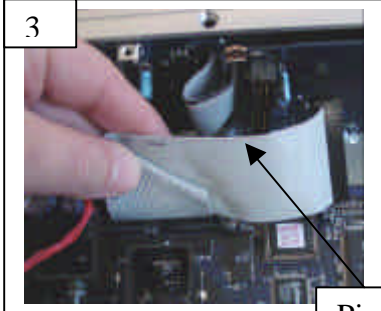
i) Install and secure the cover and confirm function of input select button

Tip chassis cover (30-51-0134), slide under the top flange of the front panel and secure to the chassis as
indicated below:

1- Cover will fit under flange of front panel and
slide over terminal brackets (see figure). Cover
fits best when tipped up as shown, then slid
under flange.

Flange.

Terminal brackets
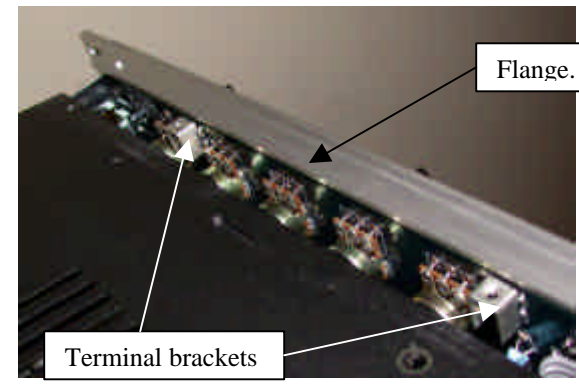
2- Slide cover under the
flange while supporting the
pot/encoder shafts since the
user interface PCB can shift
forward during this process
(see right).

Support front panel
PCB as shown

3- When fully installed the front edge of the cover meets the back surface of the extrusion (see right). Ensure that the clearance holes in the extrusion and cover match (see below).
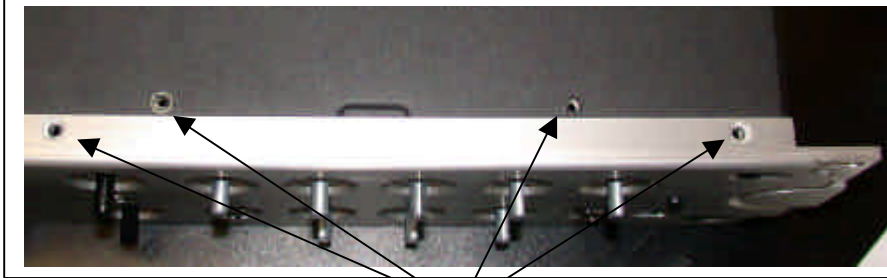
Note concentricity of clearance holes with tapped holes
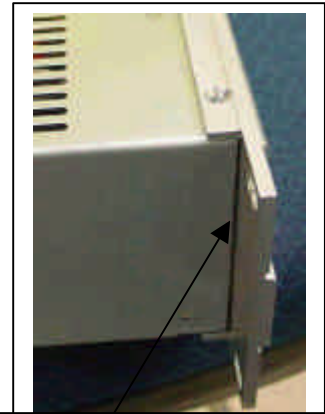
Edge of cover meets and is parallel to the front extrusion

4- BEFORE FINIAL INSTALLATION OF COVER MOUNTING SCREWS, TEST INPUT SELECT BUTTON AND ENSURE THE SWITCH IS WORKING. IF THE SNAP FROM THE TACK SWITCH IS NOT FELT, TIP UP THE BACK OF THE COVER AND APPLY GENTLE PRESSURE TO THE POT SHAFTS TO SHIFT BACK THE FRONT PCB FROM THE FRONT PANEL TO GIVE SUFFICIENT CLEARANCE FOR THE TACK SWITCH TO WORK. CONFIRM PROPER FUNCTION FOR THE TACK SWITCH AND PROCEED.

When proper function for the tack switch is confirmed, install and tighten 2 6-32x 7/16 black oxide pan head screws (30-00-0606, w/captive lockstar washer) to the indicated locations. Then install the third 6-32 black oxide screw along the top edge after installation of the side screws

First install and tighten 2 6-32 screw to these locations

AT THIS POINT RE-TEST THE TACK SWITCH FOR PROPER FUNCTION, THEN PROCEED

Complete installation of screws into cover as described in the view below.

1- Install and tighten 2 6-32 black oxide lockstar phil screws (30-00-0606) to the chassis cover to secure the terminal brackets

2- Install and tighten 3 6-32 flat head screws (30-00-0029) into top edge of front panel.
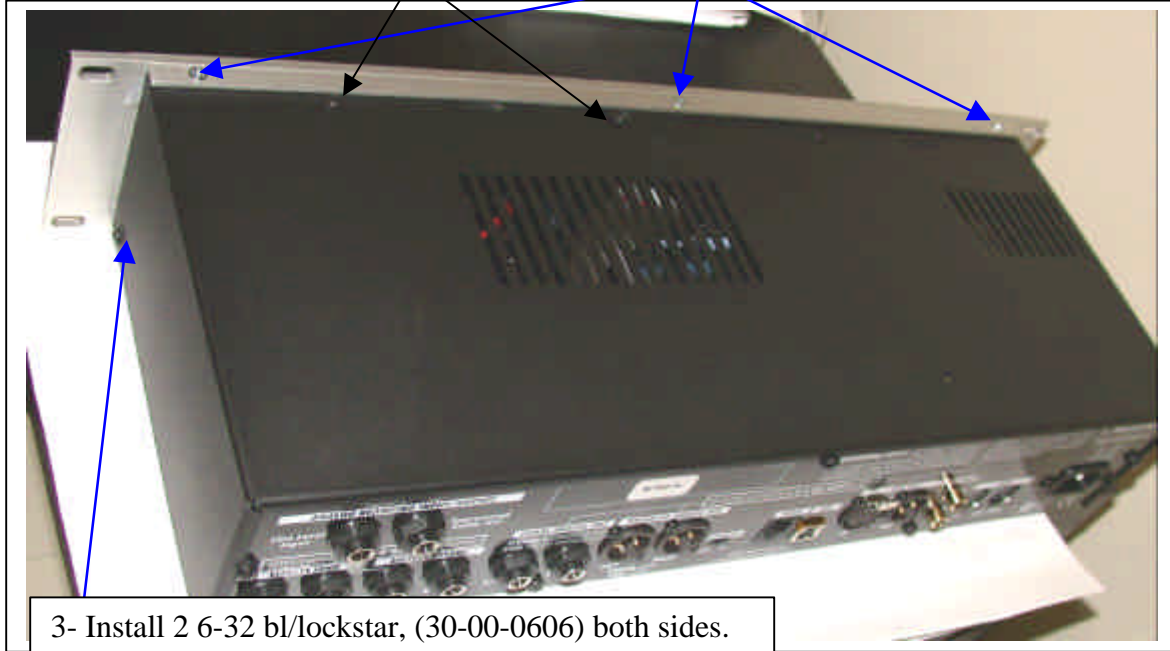
3- Install 2 6-32 bl/lockstar, (30-00-0606) both sides.

j) Install Knobs

Install the knobs as described below. Note detail view below for necessary modification to knob 30-27-0027 previous to installation.
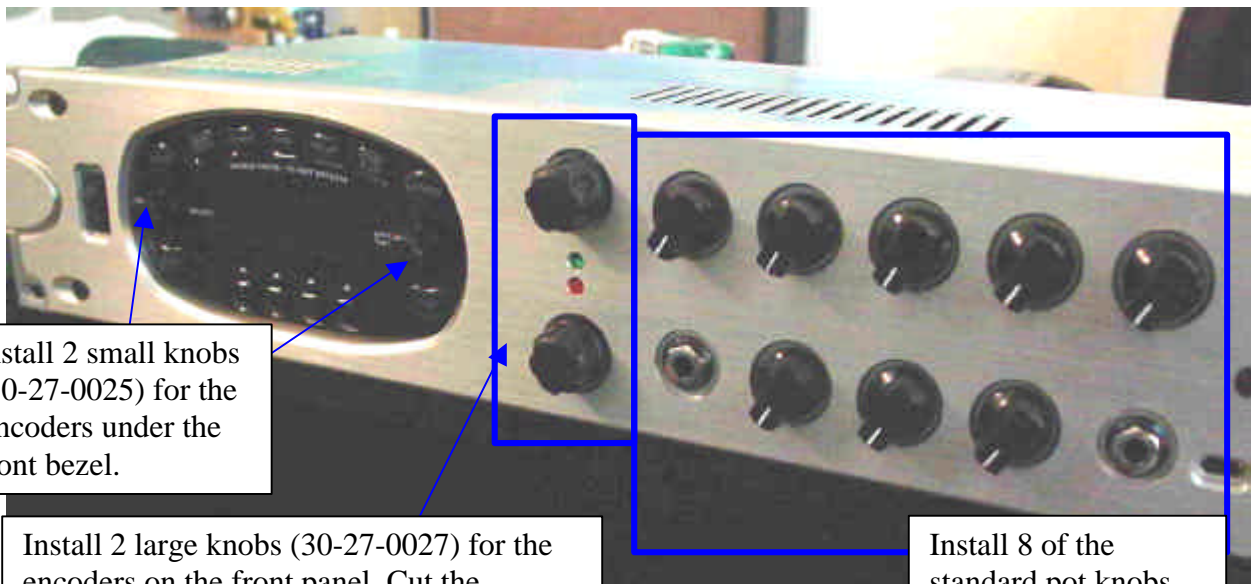
Install 2 small knobs (30-27-0025) for the Encoders under the front bezel.

Install 2 large knobs (30-27-0027) for the encoders on the front panel. Cut the indicated tab on backside of knobs before installation as noted on figure on the next page.

Install 8 of the standard pot knobs (30-45-2000) for the front panel pots

Details on trimming the tab on the large knob for the encoders
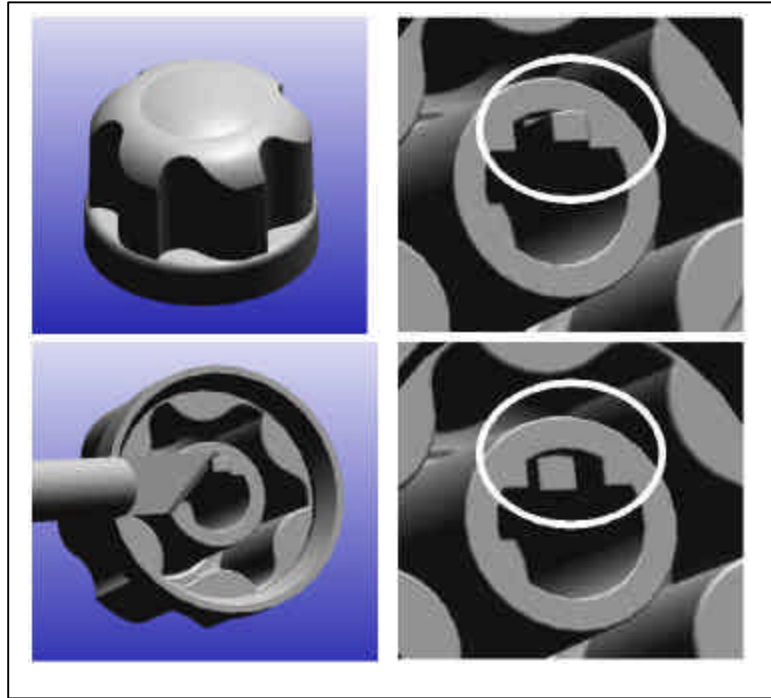
Test and Inspect the Completed Unit

To help ensure maximum quality of all products, it is the responsibility of the assembler to complete a post assembly inspection prior to sending the unit on to electrical testing and final inspection. Things to look for include:

- Cosmetic damage to any visible surface of the unit;
    - o defects to the silk-screening – both front and back panel, dents, dings or scratches.
    - o Fingerprints on buttons, damage to button text or keycaps, and/or visible process marks on knobs and other plastic parts.
    - o Even consistent spacing of knobs, proper centering of lenses and leds.
    - o Re-testing all knobs for smooth consistent feel,
    - o Testing of select button, keypad, and slide switches (1 on front/1 on back) and power switch for proper function and feel.
- Add stickers for inspection, serial number and AC voltage.

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

COMPONENT SETTINGS FOR FINAL PACKAGING

Just prior to final packaging set the knobs and switched to:
Front Panel:
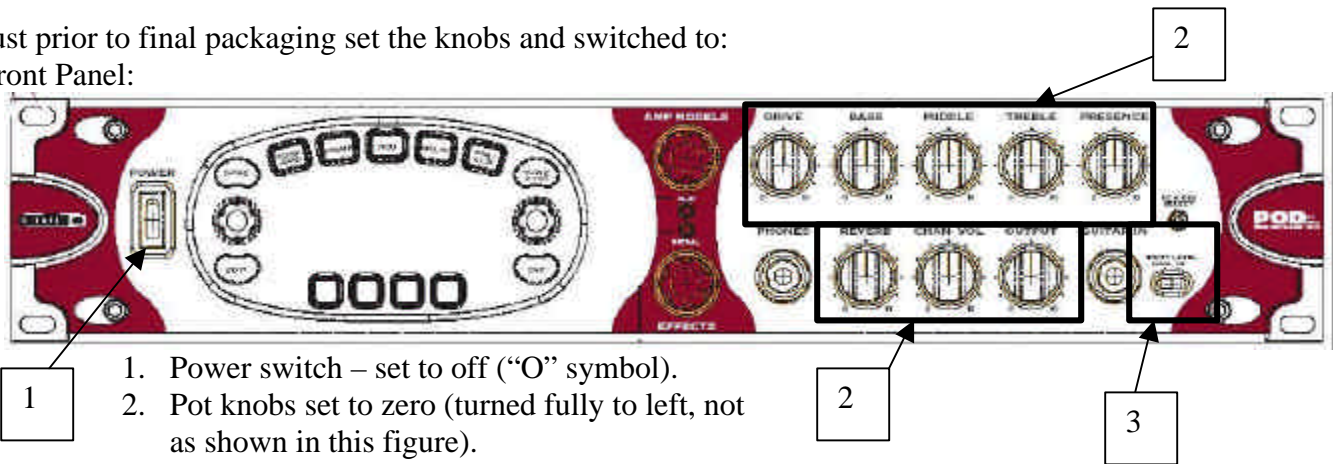
1. Power switch – set to off ("O" symbol).
2. Pot knobs set to zero (turned fully to left, not as shown in this figure).
3. Input select set to normal

For the rear panel:
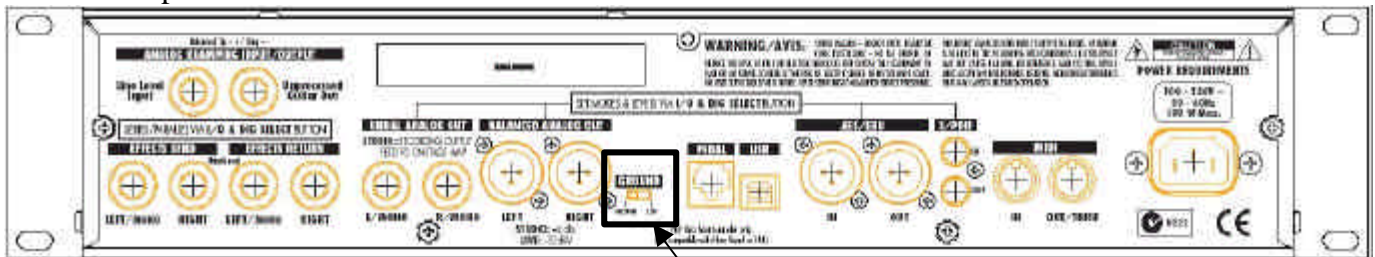
1. Ground/lift switch set to "ground"

END OF DOCUMENT.

POD XT
ULTIMATE TONE FOR GUITAR

POD PRO XT
ULTIMATE TONE FOR GUITAR

Pilot's Handbook

An in-depth exploration of the revolutionary technologies and pulsing tonal pleasures that lurk within PODxt and PODxt Pro.

The serial number can be found on the underside of your POD_{XT}, or back panel of your POD_{XT} Pro. It's the number that begins with "(21)". Please note it here for future reference:

SERIAL NO: _____

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION: To reduce the risk of fire or electric shock, do not remove screws. No user-serviceable parts inside. Refer servicing to qualified service personnel.

CAUTION: This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The lightning symbol within a triangle means "electrical caution!" It indicates the presence of information about operating voltage and potential risks of electrical shock.

The exclamation point within a triangle means "caution!" Please read the information next to all caution signs.

YOU SHOULD READ THESE IMPORTANT SAFETY INSTRUCTIONS
KEEP THESE INSTRUCTIONS IN A SAFE PLACE

Before using your POD_{XT}, carefully read the applicable items of these operating instructions and safety suggestions:

1. Obey all warnings on the POD_{XT} and in this Pilot's Handbook.

2. Do not place near heat sources, such as radiators, heat registers, or appliances which produce heat.

3. Guard against objects or liquids entering the enclosure.

4a. POD_{XT}: Connect only to AC power outlets rated 100-120V or 230V 47-63Hz (depending on the voltage range of the included power supply).

4b. POD_{XT} Pro: Connect only to AC power outlets rated 100-120V or 220-240V 47-63Hz (depending on the voltage range of the unit).

5. Do not step on power cords. Do not place items on top of power cords so that they are pinched or leaned on. Pay particular attention to the cord at the plug end and the point where it connects to the POD_{XT}.

6. Unplug your POD_{XT} when not in use for extended periods of time.

7. Do not perform service operations beyond those described in the POD_{XT} Pilot's Handbook. In the following circumstances, repairs should be performed only by qualified service personnel:

    • liquid is spilled into the unit

    • an object falls into the unit

    • the unit does not operate normally or changes in performance in a significant way

    • the unit is dropped or the enclosure is damaged

8. Prolonged listening at high volume levels may cause irreparable hearing loss and/or damage. Always be sure to practice "safe listening."

Please Note:

    continued on next page

QUICK START GUIDE

or:

"MANUAL? I DON'T NEED NO STINKING *MANUAL!*"

PODXT Pro owners, if you're going to use anything beyond the standard guitar input and analog outputs, we can't cover all your options on this brief page. See Chapter 2 to learn about controls, and then get deep with the inputs and outputs in the **PODxt Pro — Configurations & Connections** *section that starts on page* **3•8**.

1. Turn the **OUTPUT LEVEL** control all the way down to zero.

2. Connect the **LEFT** and **RIGHT OUTPUTS** to your recorder or mixer's inputs, or plug the left output into your guitar amp's input. Or connect headphones to the **PHONES** jack on your PODXT for silent jamming.

3. Connect the included power pack or power cable to your PODXT, and plug the other end into a power jack.

4. Connect your guitar to PODXT's **INPUT** (PODXT's Pro **GUITAR IN**).

5. Flip the **POWER** switch to fire up.

6. PODXT comes ready to rock for direct connection to your recording setup. **If you're connecting to a guitar amp, it's essential to let your PODXT know so it gives you the best tone.** Do this by pressing **TUNE/ SYSTEM**, then turning the **SELECT** knob one step clockwise. Press the button below **DEST** (Destination) and then turn the **EFFECT TWEAK** knob to tell your PODxt what type of amp you're connecting to. PODxt will automatically override this setting when you plug in headphones, so you don't have to do anything to get great headphone sound.

7. Select an Amp Model using the **AMP MODEL** knob. Set the **CHAN VOL** to max and the **DRIVE**, **BASS**, **MID**, **TREBLE** and **PRESENCE** to your heart's desire. **OUTPUT** sets the, uh, output level.

8. Turn the **EFFECTS** knob to load an **Effects Setup**, then twist the **REVERB** and **EFFECT TWEAK** knobs so you're happy with the sound. Tap the **TAP** tempo button to set the speed of the selected effect.

9. Browse pre-programmed tones using the **SELECT** knob or by pressing any of the four buttons below the display. You can press any one of those buttons twice for a "**Manual** Override" that gives you where-the-knobs-are-is-how-it-sounds operation.

10. Now before you run off, please give the page a quick flip and....

1 • 2

Register now!

Included in this manual is a handy, postage-paid card for you to send back to us to register your purchase. It's **very important** that you fill that registration card out **right now** and drop it in the mail or jump on the Internet and register at the Line 6 Support Center — www.line6.com. Registering insures that you're dialed in for warranty service (warranty info is at the end of this manual) and insures we can contact you if new software versions or other cool enhancements are offered — cutting edge technology and such.

Get on-line and get good free stuff!

Here at Line 6, our mission is to help you be more creative by bringing you powerful new technologies. As part of that mission, we focus great effort on making the Internet a valuable resource for every one of our customers. The Line 6 web site is one of the most effective ways for us to deliver you what you need to make you and your PODXT ever more powerful.

Connect to **www.line6.com** and check out ToneTransfer—an extensive, free online tone library, tone editor, and file librarian all in one. Download our GuitarPort software and USB driver software free for your PODXT. Learn tips & tricks, trade advice, generally hang out and get POD-a-licious in our online forums. Use FAQTRAQ to contact our product support experts and get answers to your technical questions. Or grab electronic versions of this book and other documentation, learn what your favorite artists are doing with Line 6 gear, and see the latest products we're introducing for you.

Not on the Internet yet? This may be the time to make the big jump, and thereby ensure that you will get all the great resources we can offer for you and your PODXT.

Introduction

Welcome To PODXT...

Thank you for inviting PODXT into your life. Whether you use your PODXT as a direct recording miracle, a powerhouse preamp, a practice partner, or as a creative digital signal processing tool (and heck, why should it be just one of these?) — we think you'll agree that PODXT is about the most amazing thing to happen to the electric guitar since, well, since the guitar amplifier itself! PODXT delivers the incredible tones of the acclaimed Line 6 Point-to-Point Interactive modeling technology (as featured in our Vetta series amps) and fuses it with the wonderfully portable and easy to use POD, which has been the guitar recording world standard for years. So you've got the tonal heritage of the past century of guitar amplifier and stomp box design, *plus* no-compromise recording and direct sound excellence — all ready to roll when you are.

Who is Line 6?

As you may know, Line 6 first came on the scene several years back with a new kind of guitar amplifier — the first to put digital software modeling technology to work in a combo amp for guitarists. We also knew then that guitarists need great amp tone when recording, but generally don't have the room to crank up that classic stack, or the money to hire a team of ace engineers to get it to tape. So we squished our patented modeling technology down into a small, kidney-bean-shaped wonder called POD, and forever changed the world of guitar recording.

Once we'd gotten this whole modeling amp and POD thing started, it was time to see what we could do if we really cranked up the horsepower and took our modeling to the next level. I mean, once you've climbed to the top of the mountain, it's on to the next mountain, right? So, eyes glowing like power tubes, we stocked up on the Pepsi, gathered our genius engineers into a secret lab, fired up our extensive collection of amplifiers and stomp boxes... and spirited their treasured tones into a newly-supercharged modeling technology we dubbed Point-to-Point modeling. It first hit the streets in the award-winning Vetta amp, whose superb tone and unparalleled selection of dream amps, cabinets and effects make it a pretty good contender for the world heavyweight amp title. After that, we poured the same magic elixir into the classic POD and—ta-dah!—PODXT was born.

How does PODXT help you create a guitar tone that is out of this world, and then get that tone wherever you need it? Easy! It's…

Modeling

Modeling: just what is it, and why is it so important?

To answer that question, we'll start with tubes (better know as "valves" to our friends in England and elsewhere). Tubes, we can all agree, are the heart and soul of pretty much every legendary guitar amp, and are key to the warm, harmonic-rich tone quality of those amps. Solid state devices (transistors) are simply unable to duplicate tube warmth and performance. And "hybrids" — a tube in a circuit along with a bunch of transistors — are really a vain attempt at warming up a transistor-based tone. They fall short in any comparison to a 100% tube circuit. So that's it — tubes or nothin', right? Well, not any more....

You see, Line 6's team of crack engineer-guitarists has spent years understanding pretty much everything there is to know about tube-powered gear, including exactly how different types of tubes respond under various conditions typical of guitar amplifier design. How tubes process an input signal, how the signal is colored and shaped, at what point it begins to distort, the quality and characteristic of the distortion, what happens when the signal gets to other parts of the system — complicated stuff, but all analyzable as electronic data. A guitar pickup output, after all, is an electronic signal, and tubes and all the rest are really just a complex form of signal processing.

Having sussed it all out, the Line 6 engineers translated all this arcane knowledge into software that simulates the signal processing of guitar amps' tubes and other electronics, entirely within the digital domain. Cool, huh? The Line 6 crew also directed their caffeine-enhanced modeling attention to a study of guitar speaker cabinets and the important part they play in communicating great guitar tone. And the great variety of stomp box and rack effects that guitarists use to juice things up. They translated it all into yet more powerful software, and it's this revolutionary DSP (Digital Signal Processing) software-based modeling technology that gives Line 6 the power to create super silicon-based life forms like PODXT.

Amp, Cab and Effect Models

The tone and technology know-how of Line 6 thus comes to you as *Amp*, *Cab* and *Effect Models* based on a collection of gear recognized by guitarists the world over as true "tone classics." These models were tweaked through careful, scientific A/B comparisons to the gear that inspired them, with an ear open for the effects of different volume levels and settings of the originals' tone and gain controls. The gain

and equalization characteristics of the modeled gear were carefully measured so that changes to knobs on the models would mirror the effects of these changes on the originals as closely as possible. We're talkin' major attention to detail here. Tone control center frequencies, slopes, and cut/boost range were painstakingly analyzed, in addition to a whole host of factors unique to each piece of gear. Not only that, but since many classic amps and effects have highly interactive circuits, we paid careful attention to the way that the setting of one knob changes the way that another knob may behave. All in an effort to make our Models as much like the amps, cabs and effects in our collection as possible. The resulting Amp, Cab and Effect Models are the foundation of PODXT.

Now, then — here are a couple of things we want to be completely crystal clear on:

1. **The Line 6 modeling process is a patented, 100% digital software-based technology exclusive to Line 6.**

2. **Line 6 Modeling is not sampling, nor is it solid state; no special guitar, pickup, or cabling is needed.**

There's Magic in the A.I.R.

PODXT delivers its modeling tones through another innovation: Line 6's A.I.R. direct recording output. The A.I.R. (*a*coustically *i*ntegrated *r*ecording) technology is the result of intensive research and careful study of the tonal characteristics produced by the interaction of amplifiers, cabinets, speakers, microphones and the recording room during the recording process.

The direct output of many preamps, amplifiers and direct box-style amp replacements available today offer some limited form of cabinet simulation or speaker emulation. Those that happen to be more than simple high end roll-offs have little or no control options. Generic cabinet simulations cannot reproduce the markedly different tones resulting from the choice of speakers, wood, and other details of a great real-life speaker cabinet. Other equipment also fails to reproduce the significant tonal contribution of microphone selection and placement, and do nothing to reproduce the subtle ambience of the recording space.

The result is the familiar dissatisfaction with direct recording products — even those that deliver a reasonably usable basic tone fail to reproduce the "life" of the

guitar sound, and destroy the proper feel in the process. It is as if your guitar strings became heavier and less responsive, like they just went up a couple of gauges when you plugged into your direct box. And your sound lost its life.

PODxT's combination of Amp Models and A.I.R. technology provides superior direct tones by recreating *all* the elements contributing to a great recorded guitar sound, and giving you that tone with the same feel as playing through a real amp and speaker cabinet:

• The effect of the guitar amplifier circuit is emulated by the Amp Model you choose. Each model was developed from extensive study of a classic amplifier treasured as a tone classic.

• In a guitar amp, once the guitar signal passes through the electronics, it is output to one or more speakers in a speaker cabinet. The specific design of the speakers, how many there are, and how they are arranged contributes significantly to your guitar tone, as does the construction and resulting tone of the wood box itself. A Marshall head driving a single 12-inch speaker in an open-back cabinet, for instance, will sound dramatically different from the same head driving a 4x12 closed-back cabinet. Line 6 has carefully constructed virtual software speaker cabinets that emulate the contribution made by real speaker cabinets to get great guitar sound.

• Once the sound makes it out of the speaker cabinet, the next important link in the recording system is the microphone that receives that sound. Guitar recordists select different microphones, and arrange them in different placements, to get particular sounds. A microphone pointing directly into the cone of a speaker will hear something different than one positioned off-axis. Line 6 carefully analyzed the coloring that various microphones add to the guitar sound, as well as the effects of different mic placement techniques, and gave you control of these details in your PODxT.

• The guitar amp, cabinet, and microphone don't just sit in empty space. The room that they are in contributes importantly to the guitar sound you will record. Reverb can be used to capture the basic character of the space, simulating the effect of the sound reflecting off the room's walls, floors and ceiling. But there are other subtle details that have more to do with the "spread" of the sound as it passes through the air between the speaker and microphone. This final component is the key to the sense that the listener is in one position in the room, and the guitar sound is in

another position, and that the two are separated by a mass of air that sound spreads through to reach the listener.

All of these important sound-shaping components are accounted for in your PODXT. Turn the Amp Model knob to call up the amplifier emulation you want. PODXT automatically matches that amplifier with an appropriate cabinet and microphone setup, and gives you the sound of that setup coming through the air of a recording space. Turn the reverb knob to taste, and start recording incredible mic'd up sound. Press a button and twiddle a knob or two, and you can switch cabinets, change out mics and their placement, and adjust the "spread" of the sound in your virtual room as well.

The A.I.R. direct recording output is exclusive to Line 6. In combination with the Line 6 Amp, Cab and Effect Models, it is the key to PODXT's phenomenally satisfying direct recording sound.

And Away We Go....

So, now that you know what's in store, it's time to experience PODXT for yourself. Grab your favorite axe, plug in, and flip back to the handy **Quick Start Guide** on the first page of this chapter if you haven't already been through that. Then fold out the back cover and follow me, my friend, for the PODXT Grand Tour....

CONTROLS & CONNECTIONS

Now would be a good time to turn to the nifty back cover of this manual and notice that it folds out. Ooh, pretty pictures! The idea is to have this essential pictorial reference always opened out while you're thumbing through the manual. It's also got all the essential details for quickly getting around on your PODXT. The boxed numbers that pop up throughout this manual correspond to the numbers on the foldout's illustrations. The back side of the cover's got handy pictures for the FBV and FBV Shortboard foot controllers, plus signal flow and connection guides.

1 Power Switch - Flip this to bring your PODXT to life. PODXT Pro includes a standard IEC grounded power cable. For PODXT, **use only the included PX-2** power pack.

2 Input/Guitar In - Plug your guitar in here. (You techies will want to know this is a mono, un-balanced connection).

3 Phones - Plug your headphones in here for silent concertos. The volume is set by the **OUTPUT** knob. Any time you use headphones, it important to be sure they're not set for ridiculous volume before your slap them on your ears. Try an **OUTPUT** knob setting of about 10 o'clock when first putting the headphones on, them turn up from there if you need more volume.

So that you hear appropriate sound through the headphones, PODXT automatically switches to Studio Mode whenever headphones are connected (for more on Studio Mode, see "What are you connecting to?" on page **3•2**).

4 Output - This controls the overall output level of PODXT and also sets the headphone level. Changing the **OUTPUT** level does *not* change your tone, so you can get the tone you want at *any* volume level. This setting is *not* saved when you store settings into one of the PODXT's memory locations.

PODXT Pro users, note that this does not affect the level of the XLR Outputs in Live Mode (for more on Live Mode, see "What are you connecting to?" on page **3•5***).*

PODXT will give the best signal-to-noise performance when you have the **OUTPUT** control at max. With the **OUTPUT** control turned down low, you may get extra hiss—which obviously ain't what you want—if you turn up your mixer or recorder's output to compensate. In order to allow you to set the **OUTPUT** as high as possible when connecting to recording, mixing, and other studio gear, **be sure you are plugging PODXT's outputs into line level**, not microphone or guitar level inputs. Line level inputs should allow you to turn PODXT's **OUTPUT** up all the way (or close to it) and thereby get the best sound possible. If your gear has inputs that function as mic/line level inputs, try to set the trim for those inputs to the minimum level, and PODXT's **OUTPUT** to maximum, when setting levels.

5 Left & Right Output - *(See numbers 33 and 34 for PODxt Pro's outputs.)* These balanced 1/4-inch TRS (tip/ring/sleeve) connectors are ready to rock with pro +4dBu balanced equipment. They will also work happily with unbalanced –10dBV equipment and standard guitar cables. If you need mono output, you can use either one.

6 Pedal - Looks like a telephone connector on steroids. Connect optional Line 6 FBV or FBV Shortboard foot controllers here. PODXT's do *not* work with the Line 6 Floor Board and FB4.

7 USB - PODXT's USB jack lets you connect it directly to most computers, and record your PODXT directly to a wide variety of popular recording software. We've included a USB cable for use with PODXT driver software. That software—along with directions for using it—is free for you to download at **www.line6.com**.

8 MIDI In & Out - Connect PODXT to your MIDI equipment to select Channel Memories (via Program Change messages), or automate PODXT settings (via controllers and/or SySex). You can also back up PODXT's memory to your computer by using free software from *www.line6.com*. The PODXT **MIDI OUT** connects to another device's **MIDI IN**; its **MIDI IN** goes to another device's **MIDI OUT**. Please also see Chapter 7, **Deep Editing and MIDI Control**, to setup your MIDI gear with PODXT and find out what MIDI can do for PODXT and you.

9 Drive - This knob controls how hard you're driving the input of the chosen Amp Model. Like the input volume control on a non-master volume guitar amp, higher settings give you more "dirt."

10 Tone Controls - BASS, **MIDDLE**, **TREBLE**, **PRESENCE**. Just like any guitar amp, only when you change Amp Models, the response and interactivity of the controls changes, too — so they act like the tone controls of the original amp that inspired the Amp Model you've selected.

11 Chan Vol - This knob controls the relative volume level of the "channel" you are playing through — thus, **CHANNEL VOLUME**. Use this to balance levels between the sounds you store in two different PODXT Channel Memories (say between your rhythm and lead tones). In general, you want to set the **CHAN VOL** as high as possible to insure you're getting the best signal-to-noise ratio performance — but back off on this control if you're seeing CLIP in PODXT's display.

TIP:You probably want to have all of your favorite sounds as loud as possible, while also having the right difference in volume between your lead and rhythm sounds, clean and dirty sounds, etc. Right? OK, then, to get this happy balance, start with your favorite 'clean' sounds.Turn up their Chan Vol as high as you can without getting the CLIP indicator in PODxt's display when you strum hard. and save them that way.Then switch amongst them to see if some are too loud, and turn them down a bit to match well with the others. Next, move on to select your 'dirtier' crunch and lead tones, comparing them to the clean sounds and saving them with lower Chan Vol settings to match well with those clean sounds.

Now, each time you use your PODxt, you just have to set an Output volume level you like, and you can switch amongst your various sounds without unhappy volume differences.

12 Reverb - How much reverb do you want today? Spin this knob to set the Reverb level. Several flavors of reverb live inside PODXT, including springs, rooms, chambers, halls and plate reverbs.

13 Effects - This knob selects from PODXT's Effect Setups — which set up a combination of effects for you (all the details on effects are in Chapter 6, **Stompboxes & Effects**). Think of each Effect Setup as a virtual pedal board or outboard gear rack that you can match with any Amp Model. When you turn the **EFFECTS** knob, PODXT shows the name of the Effect Setup that is loaded and you'll hear the effects change instantly. The effect buttons light to show which effects are on. There are 64 of these effect "rigs" pre-programmed and ready for you to use.

14 Effect Tweak - This knob varies some aspect of the effect you've chosen. Turn it up and the effect will generally go deeper, louder, faster, longer or just plain more. You'll know what you're tweakin' because a window will pop up on PODXT's display to show you. The delay time is usually set by the **TAP** button. For the inside scoop, including how you can customize the **EFFECT TWEAK** knob see Chapter 4, **Creating & Storing Sounds**. If the effect that **EFFECT TWEAK** is "targeting" is off, then, big surprise, **EFFECT TWEAK** won't change anything. While the **EDIT** or **TUNE/ SYSTEM** button is lit, the **EFFECT TWEAK** knob adjusts parameter values instead.

15 Amp Models - When you spin this knob, it's essentially like changing what electronic "circuitry" is running inside PODXT to make your amp sound. (See the groovy details in Chapter 5, **Modeled Amps and Cabs**.) You'll see the Amp Model names change in PODXT's display. When you choose an Amp Model, Cabinet and Microphone Models are also loaded automatically. For instance, when you choose the Brit Hi Gain model (based on the classic Marshall JCM 800 head), a Cabinet Model based on a Marshall 4x12 will be loaded with it. You can also choose a different cabinet/mic setup by pressing the **CAB/A.I.R.** button (below).

In fact, Amp Models automatically load with all the amp-related settings pre-set for a ready to go tone. Drive, Bass, Mid, Treble, Presence, Cab/A.I.R., etc. will all be determined by the Amp Model you choose — giving you a ready-to-rock sound with the turn of just this one knob. Once you get familiar with PODXT, you can change these amp-associated defaults to customize the settings of each of the Amp Models to fit your tastes. *Note that when you're in Manual Mode, Drive, Bass, Mid, Treble, Presence, Channel Volume and Reverb are set by the physical knob positions instead of being automatically set with the amp selection.* Complete details are in **Chapter 5**.

16 Select - The PODXT has 64 Channel Memories that store a huge variety of complete amp-and-effect selections pre-programmed by the tone mavens at Line 6. They are arranged in 16 banks of four channels each. (The four are called A, B, C, and D.) You can think of each bank as a sort of virtual four-channel guitar amp — and you'll find that the same layout is used on the optional Line 6 foot controllers for PODXT (the FBV and FBV Shortboard) which are discussed later in **Chapter 8**.

You load PODXT channels by turning the **SELECT** knob. You can press one of the four "soft buttons" under the display to load one of the other channels of the current bank. When recalling a channel, you may have left the physical **BASS** knob at minimum, whereas the just-recalled channel has this control set to max. To change **BASS** (or anything else), just grab the knob you want and tweak. To leave the Channel Memory world and enter Manual operation, press any of the buttons under PODXT's display twice. The display will read **Manual Mode** to let you know you've got WYSIWYG (*what-you-see-is-what-you-get*) operation, and all the physical knob positions are being used to determine your sound. More on all this later.

When the **EDIT**, **SAVE** or **TUNE/SYSTEM** button is lit, the **SELECT** knob selects from the available display pages. When you press **EDIT**, it selects pages of effect and channel parameters; when you press **TUNE/SYSTEM**, it takes you through all of the Tuner and system-wide settings; when **SAVE** is lit, you'll find amp and effect customization features as well as MIDI dump operations. The vertical "scroll bar" on the left side of each display page shows you where you are in that group of pages.

17 Display - PODXT's LCD (*liquid crystal display*) is your window into every parameter and setting available. Here's how to get around:

1. When the **SAVE**, **EDIT** or **TUNE/SYSTEM** button is lit, a scroll bar on the left side of PODxT's display shows you where you are in the available display "pages." Press one of these buttons to see the scroll bar now. For those that really need to get all the nerdy details, each dot in that bar represents a page. As you turn the **SELECT** knob, you move through the pages and so does the little square. When you're on the first page, the little square is at the top. When you get to the last page, the square's at the bottom. Square goes up, square goes down. Square goes up, square goes down. Fun for the whole family!

2. Each page typically has words that appear in the bottom of the display. These words label things you can adjust. Press the button below the thing you want to adjust, then turn the **EFFECT TWEAK** knob to do your adjusting.

18 **Soft Buttons -** These four buttons operate differently depending on what you're doing. Generally, these allow you to instantly load one of 4 channels in a bank, or get you in and out of **Manual** mode when you double-press (see **SELECT** above). If the **EDIT**, **SAVE**, or **TUNE/SYSTEM** button is lit, you can press a Soft Button to select the item displayed above it so it can be adjusted with the **EFFECT TWEAK** knob.

19 **Effect On/Off Buttons -** These four buttons allow you to quickly turn any of the four effects on or off (the effects are on when the buttons are lit).

- The **COMP (Gate)** button turns on/off the loaded Compressor effect
- The **STOMP** button turns on/off the loaded Stomp-Box effect
- The **MOD** button turns on/off the loaded Modulation effect
- The **DELAY** button turns on/off the loaded Delay effect.

Double-press one of these buttons to adjust the loaded effect or load a different one. For example, just press the **COMP** button two times quickly and you're instantly taken to the Compressor and Gate **EDIT** page. Double-pressing the **STOMP** button will quickly take you to the first Stomp Box **EDIT** page. Double-press the same button again (or press the **EDIT** button) to leave Edit Mode.

To turn off the built-in Noise Gate, double press the **COMP** button, then turn the Threshold parameter all the way down**.**

20 CAB/A.I.R. - Press the **CAB/A.I.R.** button once to pick a Cab Model to pair with your amplifier, select the microphone used on the cabinet and even set the amount of "room" that the mic captures. Unlike the **EFFECT ON/OFF** buttons, this button is not an on/off type control. A single press of this button simply lets you change cabs and mics quickly. When the Cabinets are off, this button's light will be off as well.

21 Save - When you want to store your own tweaked-up sounds in your PODXT this button is the key. Exactly how it works is detailed in Chapter 4, **Creating & Storing Sounds**. But you're probably impatient, so here are the basics:

When using a pre-programmed sound, PODXT will display the bank number, channel letter and channel name at the top of the display. If you turn one of the knobs or change a parameter in the **EDIT** mode pages, you'll notice an asterisk appears to the left of the bank number. This is a reminder to you that you have tweaked the memorized channel, and that you should *save* it if you want your PODXT to remember the tweak.

To save the changes you've made to a Channel Memory, press the **SAVE** button. The button will start to flash. Just press **SAVE** again if you want to overwrite the currently loaded Channel, using the same name. Or, if you'd like to change the name first, use the middle two Soft Buttons to select a character, then press the right soft button and turn the **EFFECT TWEAK** knob to change the character. Press the soft button under **DEST**, turn the **EFFECT TWEAK** knob, and you will see that you are switching through memory locations A, B, C, and D in each of the sixteen numbered banks. Pick one to store your sound in, and press that **SAVE** button a second time. The button's light will stop flashing, a progress bar will shown on the display, and the sound is stored at the location you chose, replacing the sound that was there before.

After the sound is stored, you can bring it back any old time by simply turning the **SELECT** knob to call up the location where you stored it. (See **Chapter 8** to learn how to do all this with your feet on the optional foot controllers).

If you aren't using one of the PODXT Channel Memories — you're in Manual mode, and you're just getting the sound of where the knobs are set — you can store that state into a memory location the same way. Press **SAVE**, then **DEST**, then use **EFFECT TWEAK** to choose a place to save to, and press **SAVE** again.

If you decide you don't want to store the sound after you've started saving, press any other button to cancel the save. (The save will also be canceled if you don't touch anything for 15 seconds after pressing **SAVE**.) If you accidentally save over a factory sound you liked, the **SAVE** button's additional pages let you recall the factory preset version of a Channel Memory any time. See **Chapter 4** for details on this feature.

The **SAVE** button also lets you customize any of the Amp Models and Effect Setups to your own taste, so your favorite version of the amp or effect comes up instantly when you turn **AMP MODELS** or **EFFECTS**. See **Chapter 4** for the details on that.

22 Edit - A deep-dive into tone central is available at the press of the **EDIT** button. While **EDIT** is lit, the **SELECT** knob selects pages of everything that makes up a Channel Memory. From here, you set all the effect parameters, select cabinets and microphones, and assign a parameter to the **EFFECT TWEAK** knob. To learn more about deep editing, please see **Chapter 4**.

23 Tune/System - Press that puppy and — shazam! Instant digital chromatic tuner. All Amp Model and effects processing are bypassed so you can hear those questionably-tuned strings clearly, should you choose to do so.

Play a note on your guitar and PODXT will show you what it is on that handy display; all notes are displayed as flats, so you'll see A♭ instead of G♯. Play that string you're trying to tune again, spin its tuning key so it goes sharp and flat, and the little ball will move to the right if it's sharp and back down to the left when the note's flat. The little ball will sit right in the middle when you've got it *just right*. Give PODXT's **TUNE/ SYSTEM** button a push and the tuner disappears just as swiftly as it came, taking you right back to normal operation.

Tuner Bypass/Volume - Normally, the audio will be muted while you're tuning, but if you prefer to hear yourself tune, press the button labeled Mute, and turn **EFFECT TWEAK** counter-clockwise to select Bypass.

Tuner Reference - Want a different reference than A=440Hz? When you're in the tuner mode, press the button labeled 440 Hz and turn the **EFFECT TWEAK** knob on PODXT while watching the display. This control lets you set the reference frequency anywhere from 430-450 Hz. This setting is stored so you don't have to reset it every time you turn on PODXT if you decide you want to be different (or if that piano in your rehearsal room has decided to be different).

24 Tap - PODXT allows you to control the time and speed of your effects by simply tapping on this button. To use the **TAP** control, just tap the button at the tempo you want and the effects that are set to "lock" to that tempo will change to match what you tapped. There's also a Tempo parameter near the end of the **EDIT** pages, so you'll see exactly what Tempo you've Tapped. This is especially useful if you are trying to nudge your **TAP** setting to just the right value. See **Chapter 4** to learn how to set up effects to follow the tempo that you've tapped.

PODxt Pro

The following controls and connections are found on the PODXT Pro only.

25 Input Level - The Normal setting of this switch is appropriate for most guitars. If you see the Clip light **28** coming on, that means you're overloading PODXT Pro's input. If that happens frequently, try the Pad setting here. This switches in input circuitry that's appropriate for hotter signals output by some guitars with active pickups, or from keyboards and other sources. For those non-guitar sources you may also want to try the rear panel **Line Level Input 29**, which is a balanced TRS connection. A separate CLIP indicator shows in the display if you are clipping in the internal DSP.

26 I/O & Dig Select - Press this to tell your PODXT Pro what it's connected to so it can give you the best sound, and to choose digital audio and other options.

- Press it once to select where you're going to connect your input source to the PODxt Pro, and exactly what you want to come out of the digital outputs.

- Press it a second time to tell PODXT Pro whether you're using it in the studio or live, how you have connected your effects loop and what kind of digital gear you have connected to PODXT Pro.

- Press it a third time and it will dismiss the pages and take you back to whatever was in the display before you pressed the button.

27 Signal Light - This lights to say, "Yep, I'm hearing some input." If you've got something feeding audio to your PODXT Pro but you can't hear it and don't see it here, press the **I/O & DIG SELECT** button **26** and be sure you've got the right input selected. (This light *doesn't* show input from USB, by the way.)

28 Clip Light - This lights to say, "Whoa, Nelly! That's *too much* input!" (And, again, it doesn't show the status of USB audio.) Reduce the output level of the device that's feeding your PODXT Pro, or try the Pad setting of the handy **Input Level 25** switch. For non-guitar sources, you may instead want to use the...

FEATURE FOCUS
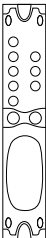
PODxt
PRO

29 Line Level Input - Here's a balanced connector for non-guitar sources (or the line level output of a wireless guitar system). It's also perfect for "re-amping"—feeding an already-recorded guitar into PODXT Pro for further processing. To use it, you'll also need to press the **I/O & DIG SELECT** button **26** and select the Line Input. The front panel's **Signal** light **27** shows you when you've got some signal coming, and the **Clip 28** light shows you when you're overdoing it and need to reduce the level you're feeding to PODXT Pro.

30 Unprocessed Guitar Out - This connector actually has at least a couple of potential uses. If you've got a separate rack-mount tuner, you can feed it with this signal for instance. But the real reason it's here is to let you do the kind of after the fact adjustments to your guitar tone that Pro Tools users with our Amp Farm plug-in software have come to rely on.

The idea is this: you record this unprocessed guitar out signal to your recording system. Then, you play it back through the **Line Level Input 29** of your PODXT Pro when you're mixing, and you can change amps, effects and every other aspect of your guitar tone with complete flexibility.

'Course, it would be pretty hard to record a good guitar take without hearing the amp and effects sound that you were planning to use, right? I mean, who can solo with a dry guitar signal? The answer is that you don't listen to this unprocessed signal while recording—instead, you monitor your PODXT Pro's left/right processed outputs during the recording process. You can even record both the unprocessed guitar out and the processed left/right outputs at the same time, so you're ready for complete flexibility in later tone adjustments, or you can just stick with what you had. Page **3•14** has details.

PODXT Pro's digital outputs can also send unprocessed signal, if you prefer to capture this signal digitally. You can set them to do this from the display pages of the **I/O & DIG SELECT** button **26**.

31 32 Effect Send & Return - The effects loop is designed for line level devices, like rackmount effect processors, not for stomp boxes (which you can run happily in front of your PODXT Pro). Use the left jacks if you want to run the send or return mono. You can choose to run the loop series or parallel from the display pages of the **I/O & DIG SELECT** button **26**. If you have the loop set to series, but nothing

FEATURE FOCUS
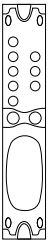
PODxt Pro

plugged into the loop return, PODXT Pro is smart enough to see this and disable the loop so you still get sound. See page **3•12** for more details.

33 Unbalanced Analog Out - The display pages of the **I/O & DIG SELECT** button **26** configure these outputs for Studio or Live Use. In Studio Mode, they're ready to plug into a recorder with unbalanced –10 dBV inputs. In Live Mode, they don't have speaker simulation, and are ready for connection to an onstage power amp. Whichever you choose, the front panel Output knob **4** determines how much signal you'll get at these jacks. You can use either jack as a mono output, by the way.

34 Balanced Analog Out - The **I/O & DIG SELECT** button **26** display "pages" configure these outputs for Studio or Live Use. In Studio Mode, they're ready to plug into a recorder with balanced +4 dBu inputs. In Live Mode, they're ready to send great sounding –10dBV signals to the house sound system or P.A. The front panel **Output** knob **4** does not affect the volume at these jacks in Live Mode. This lets you make onstage adjustments to your volume without affecting the P.A.'s levels.

35 Ground - This switch lets you lift the grounds of PODXT Pro's XLR Balanced Analog Outs. This can be handy if you get an audible hum caused by a ground loop when connecting to other grounded equipment.

36 AES/EBU & S/PDIF Inputs & Outputs - These jacks send and receive digital audio signals. The display "pages" of the **I/O & DIG SELECT** button **26** choose which of these connections to use, along with sample rate, word length ("bits") and other details. You can use digital input at the same time as analog output, or analog output as the same time as digital input, or any combination. You can even send digital audio into PODXT Pro with one rate and word length, and choose a different rate and word length for output.

PODXT Pro does not include a separate clock connector, but it can clock to the digital audio being received at either of its digital inputs, even if you are using an analog input to get audio into your PODXT Pro. You can, for instance, connect a digital output from your digital mixer PODXT Pro's S/PDIF input, press the **I/O & DIG SELECT** button **26**, set the **FORMAT** to **MATCH SPDIF** , and PODxt Pro will clock to your mixer. PODxt Pro will also format the digital audio it outputs to match the incoming format.

FEATURE FOCUS
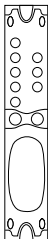
GETTING SET UP

The numbers in black boxes below and throughout the chapter refer to the back cover foldout's illustrations

PODXT is ready to give you world-class tone, no matter what you're plugging into. It's as happy to live on stage, plugged into your ol' standby amp, as it is working alongside the most elite of world-class recording systems. (And who wouldn't be?) To tell you what you need for where you're going, this chapter's got three sections:

PODxt - In the Studio

PODxt - Playing Live

PODxt Pro - Connection & Configuration

But first, it's the...

All Purpose Basics

1. Plug the power supply or cable into the wall, and connect it to the power connector on your PODXT.

2. Connect your guitar to PODXT's **INPUT** (PODXT Pro's **GUITAR IN**) **2**.

3. PODXT: Connect PODXT to whatever you're going to be playing it into. The **OUTPUT** connectors **5** are balanced 1/4-inch TRS (tip/ring/sleeve) connectors, ready to rock with pro +4dBu balanced equipment. They will also work quite happily with unbalanced -10dBV equipment and standard guitar cables. To run PODXT mono, you can use either the **LEFT** or **RIGHT** output.

PODXT Pro: Use either pair of rear panel outputs, and see the details in the third section of this chapter. Press the **I/O & DIG SELECT** button **26** to select Guitar (or whatever else you want) as your input.

PODXT — In The Studio

PODxt Pro users, fast forward to the PODXT Pro – Configurations & Connections section at the end of this chapter.

To use the USB connector, visit www.line6.com to download PODxt USB Driver Software which includes instructions for use.

What are you connecting to?

Your PODXT needs to adjust itself to deliver the best possible sound depending on what you're connecting to. Press the **TUNE/SYSTEM** **23** button and turn the **SELECT** **16** knob clockwise until the display asks, "What are you connecting to?"

Press the Soft Button below **DEST** and turn the **EFFECT TWEAK** knob **14** to select **STUDIO: DIRECT** mode. In this mode, Line 6's exclusive A.I.R. II DSP is active, and you are treated to a virtual speaker-cabinet-air-microphone experience that's so good you may never use a regular guitar amplifier and microphone set up again.

The **DEST** setting you select will be remembered by your PODXT, so you don't have to re-set it every time you power up. If you change it to a different setting for a special situation you come across, don't forget to change it back again to the setting you normally use once you get back to your standard setup. When you plug your headphones into PODXT, **DEST** will be automatically set to **STUDIO: DIRECT**, giving you the best tone for private jamming.

The Ins and Outs of Great Tone

If you're hooking your PODXT up to a recorder, mixer, or other equipment, be sure you are plugging its outputs into **line level inputs** on your other gear, as opposed to microphone level or guitar level inputs. This will insure that you get the best signal-to-noise ratio (lots of juicy guitar tone, not too much hiss) with PODXT. Some equipment only gives you a single input for both mic & line level sources, allowing you to trim low level signals (like mics) up to a high level at the inputs. If you are plugging your PODXT

into one of these inputs, try setting the trim to minimum, and twisting PODXT's **OUTPUT 4** and **CHANNEL VOLUME 11** knobs up to maximum. If your equipment has a couple of open line-level only inputs, you'll probably get better performance by plugging into these, rather than the wide-ranging mic-to-line level trimmed inputs.

Setting Levels

Start by setting PODXT to the sound you intend to use, strum hard, and set **CHANNEL VOLUME 11** as close to max as you can without getting the CLIP indicator in PODXT's display. Now play with the PODXT **OUTPUT** knob and any input volume control on your system so you can get the maximum sound level out of your PODXT without going so far that you overdrive the input on your system and cause unwanted distortion.

> **TIP: You probably want to have all of your favorite sounds as loud as possible, while also having the right difference in volume between your lead and rhythm sounds, clean and dirty sounds, etc. Right? OK, then, to get this happy balance, start with your favorite 'clean' sounds. Turn up their Chan Vol as high as you can without getting the CLIP indicator in PODxt's display when you strum hard. and save them that way. Then switch amongst them to see if some are too loud, and turn them down a bit to match well with the others. Next, move on to select your 'dirtier' crunch and lead tones, comparing them to the clean sounds and saving them with lower Chan Vol settings to match well with those clean sounds. Now, each time you use your PODxt, you just have to set an Output volume level you like, and you can switch amongst your various sounds without unhappy volume differences.**

Radiation Alert

You're also likely to find, especially if you are using a guitar with single coil pickups, that it is quite easy to pick up some serious noise from any computer CRT (which stands for *cathode ray tube*) display you might have in your studio. CRT displays are, after all, just special purpose ray guns that shoot photons at you all day long. Your guitar pickups receive and amplify the electro-magnetic fields that your display radiates, and you hear this in your audio signal as buzz and hum. Moving farther from the CRT, and turning your guitar so it does not directly face the computer's display, will minimize this problem. But if you find yourself in a tight studio setup, needing to lay down some quick tracks, and being pestered by CRT-induced buzz, you may find it helpful to do as we have sometimes done: set up your track to record and start your pre-roll; reach up and

flick your computer monitor's power switch off; record your guitar part; stop your recording, flick the monitor back on, and check out the buzz-free playback. Flatscreen LCD monitors generally don't cause hum and buzz. And just in case you're looking for an excuse to buy one... Line 6 **Variax** guitars are immune to this sort of radiation-induced hum also, since it does not use traditional magnetic pickups.

3 • 4

Pedal Power
PODXT has a couple of foot control options that make getting great guitar tracks even easier: the **LINE 6 FBV** and **FBV Shortboard**. While we'll go into all the details in a later chapter, it's good to know that both allow you to select PODXT channels, tap in your effect speeds/times/tempos, and kick in the tuner, plus both give you Wah and Volume pedal control. Whichever of these two Line 6 foot controllers you choose, it will plug into the PODXT 6 Pedal jack. Remember that the older Line 6 Floor Board and FB4 pedals will *not* work with your PODXT.

MIDI Mania
Those of you with MIDI-capable studios will find that your PODXT lets you control *everything* via MIDI. Using MIDI, you can select any PODXT Channel and automate any PODXT parameter. You are truly lord of your domain. Pretty neat, huh? Read the **Deep Editing & MIDI Control** chapter if you plan to venture into this realm.

PODXT — Playing Live

*PODXT Pro users, fast forward to the PODXT Pro – Configurations &
Connections section at the end of this chapter.*

Mount Up
If you perform live, you'll probably want to have the PODXT in a handy spot on stage.
One of the easiest ways to get it there is with the optional PODXT mic stand/amp top
adaptor you can get from Line 6 — it's described on the Line 6 web site (where it can
also be purchased). We know this is another shameless plug to get you to buy more
gear, but what the heck — this really is a handy little item to get the PODXT's
righteous red aluminum chassis wherever you need it for mid-show tweaking. And that
custom PODXT carry case is simply *smashing....* But let's get back to educational stuff:

Keeping Your Options Open
When you're playing live with PODXT, you've got a choice of setups. You can plug
straight out of the PODXT's outputs into the house system for awesome tone without
the hassle of mics and cabinets and all that other stage setup. You can also choose to
run PODXT into a power amp and speaker cabinets, using it as the ultimate preamp. Or,
you can plug your PODXT in between your guitar and a guitar amplifier so PODXT acts
as a tone shaping front end for the amp. Whichever setup you choose, you're gonna
have to tell your PODXT about it first. Read along and we'll get'cha dialed in like a pro.

What are you connecting to?
You can supply your PODXT with one of three answers to this question, and thereby
insure that your little red pal gives you the best possible tones in any setup. To start the
dialogue, press the **TUNE/SYSTEM 24** button and then turn the **SELECT 16** knob
until the display asks, "What are you connecting to?"

```
WHAT ARE YOU CONNECTING TO?
 ↑  STUDIO
 ↓  DIRECT
    DEST
```
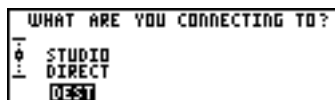
STUDIO DIRECT—When plugging PODXT straight into a P.A., or using in-ear
monitoring systems, press the Soft Button below **DEST** and turn the **EFFECT TWEAK**
knob **14** to select **STUDIO DIRECT** for amazing tone, night after night. Line 6

exclusive A.I.R. processing serves up a virtual speaker-cabinet-air-microphone experience so good you may never use a regular guitar amplifier and microphone on stage again. You're as powerful as the entire P.A.—and guaranteed to be in the mix!

LIVE 2x12 & LIVE 4x12—Choose one of these when plugging into a combo amp, head and guitar cabinets, or power amp and guitar cabinets. The Mic and Room components of A.I.R. are turned off, and the Cabinet Models are revoiced to sound their best coming through the kind of speaker you choose. Plus you've got...

VIBE—When one of the **LIVE** modes is selected, press the Soft Button **26** below **VIBE** and turn the **EFFECT TWEAK** knob **14** to choose from a set of tuning options to further shape your sound to work best for your setup.

Note: When running PODxt through a guitar amp (as opposed to studio monitors or headphones) remember that different speaker/amp combinations sound wildly different. Consider the name of each LIVE and VIBE setting as a recommendation only, and experiment with all the options to see which sounds best for your particular setup.

PODXT remembers the **DEST** and **VIBE** settings you choose, so you don't have to re-set them every time you power up. If you change to a different setting when using a different setup, don't forget to change back to your standard setting once you get back to your regular setup.

Getting The Right Tone With An Amp

When you're playing PODXT into the front of a combo amplifier, it's a good idea to start off with your combo amp in neutral. What is "neutral," you ask? Well, if you only have one volume control on your amp, set it low enough to get a "clean" tone; that ensures PODXT's sounds come through as purely as possible. If you have a master volume in addition to a volume control on the input, set them both so that the first volume doesn't overdrive the master volume (so you're getting a clean tone). This will vary from amp to amp, but usually the input volume is going to be less than the master volume to get a clean, non-distorted sound. If you have passive tone controls, try setting your mid control at max, and your treble and bass controls at zero (this is actually "flat" equalization-wise on most amps). Active tone controls may vary, but just be sure you're not overdriving the amp so the PODXT tone comes through without extra coloration. Once you get going, you can tweak the amplifier settings to suit your tastes. Try to set the PODXT's **OUTPUT** so you're not overdriving the input of the amp.

If you have a guitar amp with an effect return or a jack that lets you connect directly to the input to the power amp, you can plug PODXT's output right into that connection and that will generally bypass the tone controls of the amp and avoid their coloring of PODXT's tones. When plugging into the effect return or amp directly this way, you want to choose **LIVE 2x12** or **LIVE 4x12** on the What Are You Connecting To? page.

3 • 7

External Stomp Boxes and PODXT
If you've been playing guitar for a while, you probably have some favorite pedals that you dig. And even though PODXT has now graced your life with some pretty hip stomp box and rack effects models, you probably still want to have the option of keeping those old pedals in your arsenal. No problem! Just remember that if you're going to use PODXT with those other effects boxes in front, they're going to act differently based on the Amp Model you've selected on your PODXT. It's just like you'd expect — different combinations will produce a veritable feast of tone! Some distortion boxes may sound overly harsh if you max their output volume into your PODxt. Try lowering the distortion box's volume, and you can always add more gain with PODXT's **DRIVE** knob or its own **STOMP** effects.

PODXT Pro — Configurations & Connections

To use the USB connector, visit www.line6.com to download PODxt USB Driver Software which includes instructions for use.

Selecting An Input
Press the **I/O & DIG SELECT** button **26** once to see this page where you select from PODXT Pro's many inputs and digital options:

```
┌──────┬───────────────────────┐
│      │ DIGITAL OUT           │
│ ⌀    │ 96KHZ                 │
│ ┴ GUITAR │ 24 BIT  NORMAL  +0 dB │
│ INPUT │ FORMAT   MODE    GAIN │
└──────┴───────────────────────┘
```
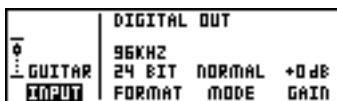
Press the far-left Soft Button below **INPUT** and select from these options:

GUITAR IN—Pick this when plugging your guitar straight into the front panel **INPUT 2** jack. When this is selected, audio from the rear panel's line level input and digital inputs is ignored.

LINE IN—Select this option when whatever you want to run through PODXT Pro is plugged into the rear panel **Line Level Input 29**. When this is selected, audio from the front panel input and the digital inputs is ignored.

AES LEFT, AES RIGHT, AES L+R—Select one of these to use the rear panel **AES/EBU 36** digital inputs. The **AES L+R** option merges the left and right AES inputs to mono, since PODXT Pro only allows a mono input. When this is selected, the front and rear panel analog inputs are ignored.

SPDIF LEFT, SPDIF RIGHT, SPDIF L+R—Select one of these for the rear panel **S/PDIF 36** digital inputs. The **SPDIF L+R** option merges the left and right SPDIF inputs to mono, since PODXT Pro only allows a mono input. When this is selected, the front and rear panel analog inputs are ignored.

FEATURE FOCUS
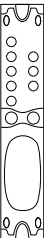
POD *XT PRO*

Input & Digital Out Options
Press the **I/O & DIG SELECT** button **26** once to see this page and select from PODXT Pro's many inputs and several digital options:

FORMAT: Sample rate, word length (bit depth), and clock source

```
         DIGITAL OUT
 ϙ
 ᴉ GUITAR  96KHZ
   INPUT   24 BIT  NORMAL  +0 dB
           FORMAT  MODE    GAIN
```

Press the Soft Button below **FORMAT** and spin the **EFFECT TWEAK 14** knob to choose to output any combination of 16, 20 or 24 bits along with 44.1, 48, 88.2 or 96 KHz. PODXT Pro will use its internal clock to generate the sample rate you choose.

Or choose **MATCH AES IN** or **MATCH SPDIF IN** from the **FORMAT** options, to have PODXT Pro clock to the sample rate being received, and output data in the same rate/bit format.

Clocking to external gear: Whatever you've selected as your input (including analog Guitar In or Line In), you can still pick **MATCH AES IN** or **MATCH SPDIF IN** for **FORMAT** to have PODXT Pro slave to the clock of your other digital equipment. For instance, feed PODXT Pro's digital input with an output from your digital mixer, choose that source for **FORMAT**, and PODXT Pro slaves to your digital mixer's clock and matches its digital audio format. Sweet.

FEATURE FOCUS

PODxt pro
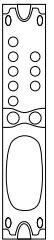
MODE: Normal or Dry Guitar

```
         DIGITAL OUT
 ___
  o      96KHZ
  ___    24 BIT   NORMAL   +0 dB
  GUITAR
  INPUT  FORMAT    MODE     GAIN
```

Press the Soft Button below **MODE** and spin the **EFFECT TWEAK 14** knob to choose **NORMAL** (delicious amp-cab-fx-mic-room processed sound comes out of the digital outs) or **DRYGTR** (unprocessed guitar comes out of the digital outs). See page **3•14** for more info on why this can be cool.

GAIN: Extra gain on the digital outs

```
         DIGITAL OUT
 ___
  o      96KHZ
  ___    24 BIT   NORMAL   +0 dB
  GUITAR
  INPUT  FORMAT    MODE     GAIN
```

FEATURE FOCUS

Press the Soft Button below **GAIN** and spin the **EFFECT TWEAK 14** knob to add up to 12 db of gain on the digital outs *only*. This can be used to increase the digital output level of sounds that don't have a lot of distortion or other settings that are driving their levels up.

"Danger, Will Robinson!" Well, not *danger*, really, but important to know: If you are recording the dry guitar signal via the digital output and intend to re-amp the signal by digitally feeding it back to PODXT Pro later, **DO NOT add gain**—leave the signal at +0db—*and* play the signal back from your recorder to PODXT Pro's digital input without an increase or decrease in level. If you dash madly forward and don't follow this advice, you'll be feeding the re-amp signal to PODxt Pro at a different level than the signal that was used while you were tracking the guitar in the first place, and the change in input gain to PODxt Pro will make it impossible to get a clean sound, or will give you a less gainy sound than you expect. Of course, if you're a danger-lover looking for unpredictable versatility during re-amping, this may be just your thing.... See page **3•14** for more on that.
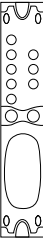
What are you connecting to?

You can supply your PODXT Pro with one of three answers to this question, and thereby insure that your trusty tone partner gives you the best possible sound in any setup. To start the dialogue, press the **I/O & DIG SELECT** button **26** twice to see the display ask, "What are you connecting to?"

```
WHAT ARE YOU CONNECTING TO?
  STUDIO
  DIRECT              SERIES   SPDIF
  DEST               FX LOOP  DIGOUT
```

3 • 11

STUDIO: DIRECT—When plugging PODXT Pro straight into a P.A., or using in-ear monitoring systems, press the Soft Button below **DEST** and turn the **EFFECT TWEAK** knob **14** to select **STUDIO: DIRECT** for amazing tone, night after night. Line 6 exclusive A.I.R. processing serves up a virtual speaker-cabinet-air-microphone experience so good you may never use a regular guitar amplifier and microphone on stage again. You're as powerful as the entire P.A.—and guaranteed to be in the mix!

LIVE: 2x12 & LIVE: 4x12—These modes are best when you are running into a power amp that is driving guitar cabinets. The Mic and Room components of A.I.R. are turned off, and the Cabinet Models are revoiced to sound their best coming through the kind of speaker you choose.

PODXT Pro remembers the **DEST** setting you choose, so you don't have to re-set every time you power up. If you change to a different setting when using a different setup, don't forget to change back to your standard setting once you're back to your regular setup.

FEATURE FOCUS
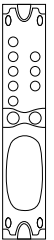
PODxt Pro

FX Loop

Press the Soft Button below **FX LOOP** and spin the **EFFECT TWEAK** **14** knob to choose **SERIES** or **PARALLEL** operation for the loop.

```
WHAT ARE YOU CONNECTING TO?
  STUDIO
  DIRECT          SERIES  SPDIF
    DEST          FX LOOP DIGOUT
```

Setting **LOOP** to **SERIES** means that PODXT Pro will send its full signal out to the effect, and then output the signal that returns from the effect. If you turn the effect off, or turn its output level all the way down, you won't hear anything. Use the mix control on the effect unit that's connected to the loop to determine how much effect you hear versus how much of the uneffected PODXT Pro sound.

If you set **LOOP** to **PARALLEL**, PODxt Pro will send a parallel copy of its signal to the loop, while simultaneously sending its signal to its own outputs as usual. Some people prefer this type of setup, because only a small portion of their tone is run through the effect, preventing some effect units from degrading their overall tone. When running parallel, you should set the mix control on the effect unit that's connected to the loop to 100% wet. Then adjust the balance of effect versus uneffected PODXT Pro sound by adjusting the output volume control of the connected effect unit.

PLEASE NOTE: Many effects can result in compromised sound when run in parallel, because the signal coming back from the effect unit is out of phase with the signal that has stayed in the PODXT Pro. This is generally not a problem for delay or reverb, as long as the external effect is running 100% wet. It *is* often a problem with modulation effects (chorus, phase, flange, etc.), compression, or any other effect that includes some unprocessed sound mixed with processed sound. For these effects, series is generally the way to go with the effects loop.

You can turn the loop on/off from a connected FBV foot controller or the loop on/off parameter in the last **EDIT** displays. This on/off state is stored with Channels that you save, so you can have some with the loop on, and some with the loop off.

AES/EBU or S/PDIF Data Format?

PODXT's AES/EBU and S/PDIF digital outputs are both active at the same time, and each have the electrical properties appropriate to their respective digital standards. The ones-and-zeroes digital data that is transmitted in the AES/EBU and S/PDIF standard is almost—but not exactly—the same.

Since both of PODXT Pro's physical digital outputs always sends the same data, we've given you the **DIGOUT** parameter to decide whether this data should be formatted according to the AES/EBU standard, or the S/PDIF standard. In practice, many pieces of equipment will accept either data format from either connector, but if you want to be sure you are sending exactly the right format that you prefer, this parameter is for you:

3 • 13

```
WHAT ARE YOU CONNECTING TO?
STUDIO
DIRECT          SERIES   SPDIF
DEST            FX LOOP  DIGOUT
```
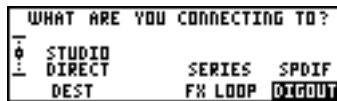
☢ Radiation Alert

You'll probably find, especially if you are using a guitar with single coil pickups, that it is quite easy to pick up some serious noise from any computer CRT (which stands for *cathode ray tube*) display you might have in your studio. CRT displays are, after all, just special purpose ray guns that shoot photons at you all day long. Your guitar pickups receive and amplify the electro-magnetic fields that your display radiates, and you hear this in your audio signal as buzz and hum. Moving farther from the CRT, and turning your guitar so it does not directly face the computer's display, will minimize this problem. But if you find yourself in a tight studio setup, needing to lay down some quick tracks, and being pestered by CRT-induced buzz, you may find it helpful to do as we have sometimes done: set up your track to record and start your pre-roll; reach up and flick your computer monitor's power switch off; record your guitar part; stop your recording, flick the monitor back on, and check out the buzz-free playback. Flatscreen LCD monitors generally don't cause hum and buzz. And just in case you're looking for an excuse to buy one... Line 6 **Variax** guitars are immune to this sort of radiation-induced hum also, since it does not use traditional magnetic pickups.

FEATURE FOCUS

PODxt Pro

Pedal Power

PODXT Pro has a couple of foot control options that make getting great guitar tracks even easier: the **LINE 6 FBV** and **FBV Shortboard**. While we'll go into all the details in a later chapter, it's good to know that both allow you to select PODXT Pro channels, tap in your effect speeds/times/tempos, and kick in the tuner, plus both give you Wah and Volume pedal control. Whichever of these two Line 6 foot controllers you choose, it will plug into the PODXT Pro Pedal **6** jack. Remember that the older Line 6 Floor Board and FB4 pedals will *not* work with your PODXT Pro.

MIDI Mania

Those of you with MIDI-capable studios will find that your PODXT Pro lets you control *everything* via MIDI. Using MIDI, you can select any PODXT Pro Channel and automate any PODXT Pro parameter. You are truly lord of your domain. Pretty neat, huh? Read the **Deep Editing & MIDI Control** chapter if you plan to venture into this realm.

Re-Amping with PODXT Pro

Having issues with commitment? PODXT Pro address your needs with its support for re-amping—the process of recording "dry," unprocessed guitar and then processing it "live" during mixing so that you have totally flexibility to adjust your tone. This is similar to the way most people record vocals without reverb—they may "audition" some reverb while tracking, but the vocal signal sent to their recorder is generally sent without the reverb, so they can make the final choice of reverb tone and amount during mixdown. Even if you don't plan to rely on re-amping all the time, you may find it handy to record a re-amp-ready dry guitar at the same time as your standard processed guitar signal, so the dry guitar is standing by if you need to salvage what might otherwise turn out to be an unusable take of a once-in-a-lifetime performance.

Analog Re-amping

Just like you would for normal recording, connect your guitar to the **Guitar In** jack on the front of the PODXT Pro. And connect PODXT Pro's left and right **Analog Outs** to your audio system to you can hear what's coming out of them. Play a little guitar just to make sure you're hearing it. OK so far.

FEATURE FOCUS

PODxt PRO
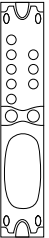
Now, connect the rear panel **Unprocessed Guitar Out** to an analog input of your recording device, and route it to a record track. This is the signal you will be recording so that it can be used for re-amping during mixdown. You may also, if you wish, track PODXT Pro's left and right outputs to your recorder at the same time.

Connect the monitor output from this record track that's receiving the unprocessed guitar signal to the rear panel **Line In** jack of PODXT Pro. Press the **I/O & DIG SELECT** button **26** once to see this page:

```
            DIGITAL OUT

           96KHZ
 LINE      24 BIT  NORMAL  +0dB
 INPUT     FORMAT  MODE    GAIN
```
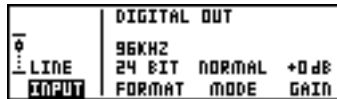
Press the Soft Button below **INPUT** and spin the **EFFECT TWEAK 14** knob to choose **LINE IN**. PODXT Pro is now ready to process the signal that's received at the **Line In**, while simultaneously sending your *unprocessed* guitar signal to the **Unprocessed Guitar Out**, so you can record it.

Dial up your tone as you normally would, and record. The dry signal will be recorded, and all the while you will hear the full Amp, Cab and Effects processing of your PODXT Pro at the same time. Like listening to reverb on your vocal while recording, *without* committing it to the recorded track. Pretty cool, huh?

Now, as you mix, you can adjust the guitar tone to your heart's content. Turn up the Drive a little, back off on the Chorus—heck, change the Amp Model and use a different modeled microphone selection. When you *are* ready to commit a processed sound to a track, you can record the left and right analog or digital outputs of the PODXT Pro to your recording system.

FEATURE FOCUS
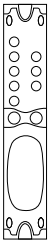
POD xt pro

Digital Re-amping

In this scenario, we're going to track PODXT Pro's analog outputs, while also recording a "safety" track of dry guitar digitally, so the dry guitar can be used later if you need to make a tone change.

Connect your guitar to the **Guitar In** jack on the front of the PODxt Pro. Connect PODXT Pro's left and right **Analog Outs** to your audio system so you can record them while you are also listening to what's coming out of them. Play a little guitar. Hear it? OK so far.

Press the **I/O & DIG SELECT** button **26** once to see this page if it's not already shown:

```
┌──────────────────────────────┐
│      │ DIGITAL OUT           │
│ φ    │ 96KHZ                 │
│ ↓GUITAR│ 24 BIT  DRYGTR  +0dB │
│  INPUT │ FORMAT  MODE    GAIN │
└──────────────────────────────┘
```
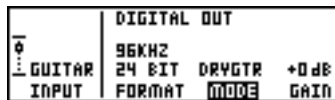
Press the Soft Button below **INPUT** and spin the **EFFECT TWEAK 14** knob to choose **GUITAR IN**. Select **DRYGTR** for the **MODE** option. Connect PODXT Pro's **AES/EBU** or **S/PDIF** digital outputs to your recorder. Do *not* monitor this signal while recording— you're simply "saving it for a rainy day" so that you can "fix it in the mix."

Also, be sure **GAIN** is set to +0dB; adding gain to get a hotter signal to your record track won't improve signal to noise ratio or any other aspect of audio quality, and *will* cause problems when you actually attempt to use this signal later for re-amping, so take our advice: don't do it!

Now, the idea is to record the main analog outputs to your recorder, while the dry guitar is also being recorded on a separate track. Monitoring the processed guitar signal and punching in/out works exactly as you would expect it to if you were recording any other analog signal into your recording app/device. The bonus here is that you also have a digitally recorded unprocessed guitar signal that can be used to create a new (or additional) sound that you can use later. Speaking of which...
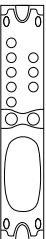
When you want to make use of that digitally recorded dry guitar signal, send it out of your recorder to one of PODXT Pro's digital inputs, and select that **INPUT** as **AES LEFT** has been selected here:

```
                DIGITAL OUT
 ♀ AES    96KHZ
 ≟ LEFT   24 BIT   NORMAL   +0 dB
  INPUT   FORMAT   MODE     GAIN
```

Don't change (increase or decrease) the playback level of the dry guitar track; send it out to PODXT Pro at exactly the same level it was recorded at. Then connect PODxt Pro's analog or digital outputs to your recorder, and you record processed guitar sound while making whatever tone changes best fit the needs of your final production.

FEATURE FOCUS
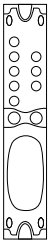
PODxt
PRO

CREATING & STORING SOUNDS

This chapter gives you the inside scoop on editing your new PODXT. Here, we'll take you through everything from loading and changing sounds to full customization of PODXT's Amp and Effect Models. Even you power users will want to read on and learn the tips and tricks to the quickest way around for instant tonal satisfaction.

Recalling Channel Memories

When you first turn your PODXT on, the display will look something like this:

```
1A J-B's Clean
AMP 15: DOUBLE VERB

 A       B      C       D
```
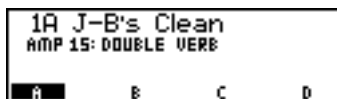
Use the **SELECT** knob to spin through the channels, which are organized into 16 Banks, where each Bank has four Channel Memories: A, B, C, D. (**Chapter 8** tells how to do this and more with your feet to make your guitar-playing hands happy!)

Try spinning that **SELECT** knob to find something you like. Need a bit more bass, or perhaps lots more drive? No problem! Simply reach up, grab a knob and twiddle away, my friend. In addition to the tone, volume and **REVERB** knobs, you've got those handy on/off buttons for the effects, plus the smart **EFFECT TWEAK** knob that is always ready to change the most important effects parameter.

Recalling Effect Setups

One of the handier functions of your new PODXT is the ability to create and save custom Effect Setups. Think of them like pre-wired pedal-boards, or pre programmed rack gear. Your PODXT sports 64 of these setups, and they are accessed by turning the **EFFECTS** knob. Give that knob a spin to see the names and hear the sounds of all those Effect Setups as you turn. Later in this chapter we'll show you how to save your own custom Effect Setups for use anytime, anywhere!

Stompbox-style Control

The PODXT lets you turn four PODXT effects on or off just as you would any other stompbox in your arsenal. The buttons above the PODXT display are the key:

Comp (Gate)—This button turns our model based on the studio-standard LA-2A compressor on or off. Double press for the **EDIT** page that's got the settings for the compressor settings along with the full-time **NOISE GATE**, which can be tweaked and turned on or off from the **EDIT** page.

Stomp—This is where the distortion boxes, some stomp box compressors and Auto Wah and Auto Swell live. Like all the other effect buttons, press to turn on or off, double-press to **EDIT**.

Mod—PODXT comes with several flavors of modulation effects. Use this button to turn the loaded one on or off, double-press to **EDIT**.

Delay—The delay models are found here. Press on, press off, double press to **EDIT**.

Editing Basics

In this section we'll take a trip into tweak. A Deep Dive into the way your PODXT works, and how to make it best work for you. PODXT's knobs, buttons and display give you direct access to absolutely every detail. No need to connect to a computer for detailed editing as is required for the original POD.

To begin your editing adventure, all you have to do is press the **EDIT** button to light it up. Now turn the **SELECT** knob. Well lookey here, everything you'd ever want to tweak on your PODXT is right there in front of you. To change something shown on the display, simply press the **SOFT BUTTON** directly below it and spin **EFFECT TWEAK**. Everything you tweak here, by the way, is remembered when you press **SAVE** and choose a Channel Memory to save to.

Double Press for Easy Access

Want to change the Mod effect, or pick a different Delay model? No worries! Press twice quickly on the **COMP**, **STOMP**, **MOD** or **DELAY** button any time to go straight to the first page of parameters for the associated effect. Another double-press will pop you right back out of **EDIT**, so you can surf for more tone. (The **CAB/A.I.R.** button just takes a single press to select its page, or leave **EDIT**.)

Inside the Edit Menu

When the **EDIT** button is lit, you'll see that there is a graphic representation of the **EDIT** "menu" on the left side of the PODxt's display. Turn the select knob, and notice that the box in the graphic slides up and down the menu, with each dot in the graphic representing one of the available **EDIT** pages. This "scroll bar" is there to help you keep your place in the great circle of life, er, **EDIT** pages.

Amp knob settings

With the **EDIT** button lit, spin the **SELECT** knob counterclockwise to select the first page from the **EDIT** menu. This page shows the knob settings for the current channel. It looks like this:

At the top of the display you'll also see the Amp Model name. Now, spin the **AMP MODELS** knob. See how the tone controls change? This shows you the settings that the helpful elves at Line 6 have programmed for each Amp Model. Read on to find out how to customize them for your taste.

Look carefully now... do you see the little 'dots' by the knobs? These tell you where the knobs were last saved. Reach up and spin the Drive knob. Notice that the knob moves on the display. Cool, huh? And notice that the little dots are still where they were. This allows you to compare your edit with the saved settings for this Channel Memory. Now, that's handy!

Cabinet and Mic settings (There's magic in the A.I.R.!)

From the Amp Knob display, turn **Select** one click to the right (you can also get here directly by pressing the **CAB/A.I.R.** button). You're now looking at something like this:

```
─A.I.R. SETTINGS
: CAB  5:1X12 LINE 6
: MIC  1:57 ON AXIS         14%
─    CAB          MIC    ROOM
```
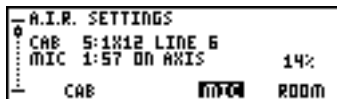
These are the advanced A.I.R. settings where you can mix and match any cabinet model with any amp, as well as dial in the perfect microphone setup.

Press the button under the displayed word **CAB**, then use the **EFFECT TWEAK** knob to spin through the available Cabinet models.

You can change the microphone selection or spread of the room the same way. Press the button under the displayed word **MIC**, then use **EFFECT TWEAK** to spin through the Mic options, or press the button under **ROOM** and dial in more or less room.

These settings allow you to completely customize the sound of the virtual recording environment we call A.I.R. — all without leaving the privacy of your own mind! Remember, you can get to this page at anytime from anywhere with a single press of the **CAB/A.I.R.** button.

Effects Editing

You edit all of PODxT's Effects the same way. Simply double-press any effect on/off button to jump directly to the first page for that effect, press a button beneath the display to select a parameter, and twiddle the **EFFECT TWEAK** knob to tweak what's selected. To get to any other page, whether for Reverb or whatever, turn the **SELECT** knob while the **EDIT** button is lit. And your handy "scrollbar" on the left of the display lets you know where you are. See? We knew you were a power user, deep down inside.

In general, most effects only have two pages worth of parameters to keep it simple, and the most common parameters are on the first page. So if you can't find what you're looking for on the first page, turn **SELECT** one click clockwise and you'll probably see what you need there.

Here's an example. Double-press the **STOMP** button. The Stompboxes only have one **EDIT** page that looks something like this:

As with all of the effects, the first button from the left below the display allows you to choose the effect model. You can also see that the Vetta Comp has 'knobs' for Sensitivity, and Level. Pressing the button under **SENS** selects it for tweaking via the **EFFECT TWEAK** knob.

Other effects, such as **DELAY** and **MOD**, have 2 pages of parameters:

Delay Edit Page 1

Delay Edit Page 2
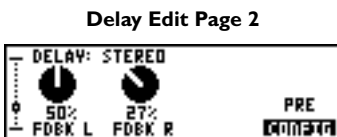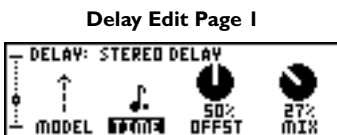
CONFIG, on page 2, is available for PODxT's volume pedal, Delay, and Mod. It lets you position each one either:

   PRE – in front of the amp, where you'd place a stompbox, or

   POST – after the amp, where you'd put a rack type effect.

A picture is worth a thousand words. Turn the page for a few good ones that illustrate this pre/post stuff.

Here's a typical routing with a **MOD** effect **PRE** and a **DELAY** running **POST**:

MODULATION   AMP/CAB – A.I.R. II   DELAY

4 • 6
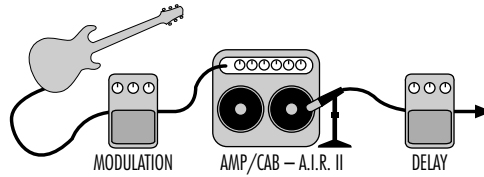
Here's another routing with both **MOD** and **DELAY** effects in the **PRE** position:

MODULATION   DELAY   AMP/CAB
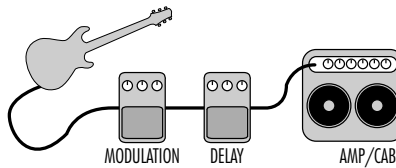
This is what the full signal flow looks like inside your PODxT, including the pre and post options for Mod, Delay and the Volume pedal:

GATE

VOLUME   WAH   STOMP   MODULATION   DELAY   AMP/CAB + A.I.R. II

COMP   VOLUME   MODULATION   DELAY   REVERB   LOOP
(PODXT Pro only)
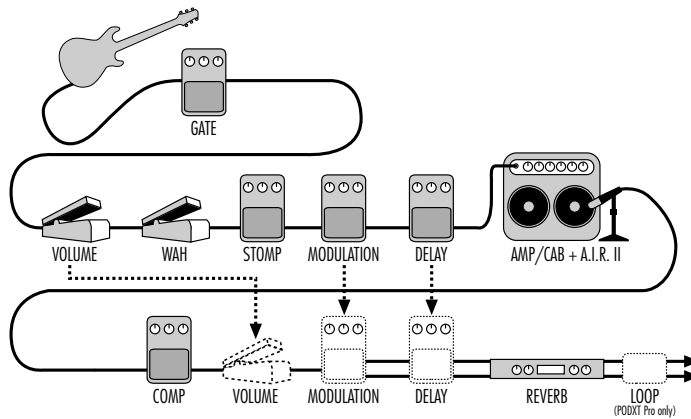
Setting your Tone to Tempo

You're probably wondering when we were going to let you in on the secret to giving your effects some groove. Well the secret is Note Values. Note values take the current tempo and apply a common set of calculations to derive delay times or modulation speeds that are perfectly in time with your music. Let's put it this way: Ever wanted to have a 16th note Tremolo feeding into a dotted-eighth note Delay? Now you can.

Whenever you want to set a Mod Speed or Delay Time to be groov-a-licious:

1. Select the Delay **TIME** or Mod **SPEED** by pressing the button below it.

2. Spin **EFFECT TWEAK** counter-clockwise until you start seeing little notes in the place where milliseconds or Hertz used to be.

3. Tap twice on the **TAP** button to set your tempo, and your Delay and/or Mod now match the tempo you tapped.

When you set your Delay time to match dotted-eighth notes, for instance, the **TIME** control will look like this:

Reverb

Our next stop on our little trip through the **EDIT** wonderland is the Reverb page. After all, what self-respecting twangmaster wouldn't want some reverb now and then? Here you'll find the ability to change the reverb model (PODXT's got plenty of them), as well as the associated parameters necessary to get that really groovy 'verb going on. The only thing you won't find is reverb Mix — that's because the mix is controlled by the dedicated **REVERB** knob.
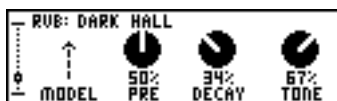
Wah and Volume

From the Reverb edit page, spin the **SELECT** knob one click clockwise and you'll find the **WAH** and **VOLUME** parameters. The display now looks something like this:

Let's check out the wah first. Over the last few years, many POD users have requested the ability to save the on/off state of the wah with a Channel Memory. That way when you recall that channel, the wah comes on automatically. Rejoice! Rejoice! Your wish has been granted by the all-merciful tone gods. And you didn't even have to sacrifice your 60's Telecaster in a fiery devotional ceremony! (Whew.) In fact, you can even save the position you want the wah to be set at when it comes on — by pressing the button below **POSI** and twiddling that **EFFECT TWEAK** knob.

Moving on to the right side of the Wah/Volume page.... Here you can determine the behavior of an expression pedal (like the Line 6 EX-1) connected to the optional FBV Shortboard. When **PEDAL** is set to **VOLUME**, the EX-1 will control PODxT's Volume and the Shortboard's built-in pedal will be dedicated to Wah. You can also choose the position of the volume pedal: **PRE** (before the amp model), or **POST**. When **PEDAL** is set to **TWEAK**, pedaling the expression pedal from heel to toe will move the **FX TWEAK** assigned parameter from its minimum value to its maximum value.

FX Tweak Knob Assign / Tempo Assign

Imagine this: you're in the middle of the most inspired gig of your life and you wish to tweak the one effect parameter that would send you over the top and into sonic nirvana...

Shazam! Your wish has been granted. Follow me to the next **EDIT** page that controls the **EFFECT TWEAK** knob assignment. It looks like this:
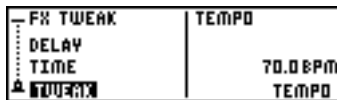
From this page, you can decide what the **EFFECT TWEAK** knob will be adjusting in this Channel Memory. Just press the button under the display that's labeled **TWEAK**, and use the **EFFECT TWEAK** knob to choose the perfect parameter.

The right side of this display shows you the tempo for this Channel Memory. This tempo is used to calculate the time/speed of any delay and modulation effects that you set to follow tempo. You set the tempo by tapping the **TAP** button a couple of times, or you can press the button beneath **TEMPO** and spin the **EFFECT TWEAK** knob until you get exactly the tempo that will make your heart beat with passion and joy!

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Saving Yourself

PODXT lets you save as many as 64 tones that you create as described earlier in this chapter. And even though we ship it to you chock full of some of our favorites, go ahead and save over whatever you want. We recommend spending some time with each of the factory sounds so you'll know which you want to keep, and which you'll want to save over. And don't worry, because we'll soon show you how to recall that favorite factory sound you just saved over and simply have to get back. You can also visit *www.line6.com* to check out the ToneTransfer database, surf around, pull a few down, and even add your own masterpieces to the lot.

Saving a Channel Memory
One of the simplest things to do with PODXT is call up a Channel Memory, make a few tweaks, and save that Channel without changing its name. To simply save a Channel you've changed, press **SAVE**, then **SAVE** again. That's it.

Of course, you might want to stick your sound somewhere else, or at least change the name so you know which one it is. PODXT lets you do that just as easily.

To save your edit to a new location - Make your edits, then press **SAVE**. This calls up a screen that looks something like this:

```
SAVE TO:
▼ 9B:BLUE MOOD
┊ "BLUE MOOD              "
  DEST    <CURSOR>    CHAR
```

Now, press the button under the display that reads **DEST** (short for destination) and then use the **EFFECT TWEAK** knob to pick a different Channel Memory. Pressing **SAVE** again will confirm your decision, and save your sound to that Channel Memory, replacing what was there before.

Give your tone a name - Make your edits, then press **SAVE**. Again, you'll see a display like the one above. Now, use the **CURSOR <** and **>** buttons to move the cursor under the letters you want to change. Press the button under **CHAR** (short for character) and then use **EFFECT TWEAK** to change the selected character. When you're done, press **SAVE** again to complete the job. See, that wasn't so bad.

Custom Save Amp Model

Using this powerful feature, you can pack your PODXT with all the special amp-tweaking genius that only you possess. This brilliance will then be available instantly at the turn of the **AMP MODEL** knob, loading your customized version of the Amp Model, including your chosen Cab Model, Mic selection and your personal tweak of the 'room'. This way, when you turn the **AMP MODEL** knob to load the Plexi-45 model, you'll get *your* personal Plexi-45, with all the controls set for your very own version. Here's how it works:

Choose an Amp Model, change the cab, tweak the room, and even use a different microphone. Press the **SAVE** button, then use the **SELECT** knob to show the display that looks like this:

```
  CUSTOM SAVE AMP MODEL
  AMP 5: MOOD

  SAVE SETTINGS W/ MODEL?
```
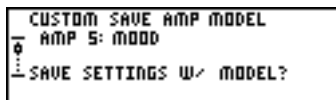
You have entered the land of **Custom Save**. Now, if you want your current settings to be recalled with this Amp Model, simply press **SAVE** again.

PODXT saves the following controls with an Amp Model, and loads them when you turn the **AMP MODELS** knob:

Controls you can customize
Amp Model
Cabinet Model
Microphone Model and Room amount
Drive, Bass, Middle, Treble and Presence controls
Channel Volume

Custom Save Effect Setup

As we mentioned earlier, you've got easy access to as many as 64 pre-wired pedal-boards and racks in your PODXT just by spinning the **EFFECTS** knob. We've setup 64 of these for you, but if you always use that tweaked-up fuzz box feeding into your favorite settings of an analog delay pedal, then phase it all up after the amp, *and* you use that over and over with different Amp Models, just make it your own custom Effect Setup. Then, you can mix it with any of your customized Amp Models any time you want.

It's easy, just:

Press **Save** and use the **Select** knob to scroll down to the page that looks like this:

```
CUSTOM SAVE EFFECTS SETUP TO:
FX 2:GATE FAZE DELAY
 "GATE FAZE DELAY "
  DEST    <CURSOR>      CHAR
```
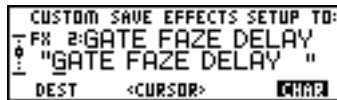
Where to put it — Press the button under the display that's labeled **DEST** (destination) and then use the **EFFECT TWEAK** knob to select a location to store it. You may decide to save these settings in the current location, or you can choose any of the 64 total spots.

What to name it — If you want to give your new Effect Setup a name, now's the time to do it! Use the **CURSOR <** and **>** buttons to move the cursor under the letters

you want to change. Press the button under **CHAR** (short for character) and then use **EFFECT TWEAK** to change the selected character.

Commitment — Pressing **SAVE** again will now take a snapshot of your current **COMP**, **GATE**, **STOMP**, **MOD**, **DELAY** *and* **REVERB** settings, and keep them forever and ever.

Single Channel Recall

Imagine this: you're in the middle of massive inspiration, moving at the speed of light, and before you know it... you just saved an edit over one of your favorite factory presets. Perish the thought! Fortunately, we've got you covered. To recall that favorite preset:

Press **SAVE**, and then use the **SELECT** knob to get to the page that looks like this:

```
SINGLE CHANNEL RECALL
  9B:BLUE MOOD

 SELECT
```

You can now press **SAVE** to recall the factory version of the chosen Channel Memory, or turn the **EFFECT TWEAK** knob to choose another Channel Memory you'd like to retrieve. Press **SAVE** again, and you've safely recovered that lost gem!

Complete Factory Recall

If for any reason, or just for the sheer mad joy of it, you decide you need to reset your PODxT's entire memory to its factory-programmed state, then boldly do this: Press **SAVE** once, then use the **SELECT** knob to scroll to the page that looks like this:

```
FACTORY RECALL
  RESTORES ALL FACTORY
  CHANNELS,AMPS,AND,FX.
```

Now ask yourself, "Do I really want to do this?" Now, ask it again. How about now? If this is truly your heart's desire, then press **SAVE** again and you'll have accomplished your goal. That'll wipe your PODxT's memory and reset it just like it was when it left the Line 6 factory.

Warning: *This will erase ALL the channels, as well as the custom amp and effect settings you might have created. Everything.* So be sure and ask yourself again, "Do I really want to do this?" If the answer is yes, go on ahead with your bad self.

MIDI Dumps

If you want to transfer one or more tones directly from one PODXT to another PODXT, or between PODXT and a MIDI data recorder, workstation, computer or sequencer, read on. You'll need a standard MIDI cable to do the deed. Connect the **MIDI Out** of your PODXT to the **MIDI In** of the receiving device.

You can then transfer:

- All Channels
- The Current Channel
- The Effect Setups
- The Amp Setups (including your customizations)

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Transferring All Channel Memories - This feature will let you send all of your PODXT Channel Memories out via MIDI for a complete back-up of the 64 Channel Memories:

Press **SAVE** once, and use the **SELECT** knob to scroll down to this page:
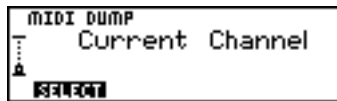
```
MIDI DUMP
    Current Channel

SELECT
```

Press the button under **SELECT**. Turn the **EFFECT TWEAK** knob to the left (counterclockwise) until the display reads:

```
MIDI DUMP
    All Channels

SELECT
```
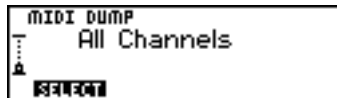
Now, if you press **SAVE** again, the entire set of 64 Channel Memories of your PODXT will be dumped out of its MIDI jack. If another PODXT is connected, its brain will be taken over by this data, making it a virtual clone of your own PODXT channels! Who knew cloning was so easy?

Transferring Only Some Channels - To transfer only one or more individual Channel Memories, Effects Setups or Amp Models from one PODXT to another, do this:

Press **SAVE** once, and use the **SELECT** knob to scroll down to the page that looks like this:

```
MIDI DUMP
    Current Channel

 SELECT
```

Turn the **EFFECT TWEAK** knob to tell PODXT what to transfer:

Any Channel Memory:

```
MIDI DUMP
 1A:PlexiLead

 SELECT
```

All Channel Memories:

```
MIDI DUMP
    All Channels

 SELECT
```

All Amp Models:

```
MIDI DUMP
    Amp Setups

 SELECT
```

All Effects Setups:

```
CUSTOM SAVE EFFECTS SETUP TO:
FX 2:GATE FAZE DELAY
 "GATE FAZE DELAY    "
 DEST   <CURSOR>      CHAR
```
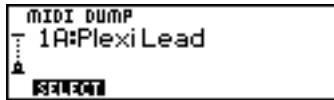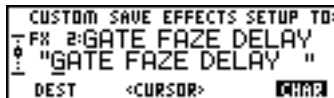
Now, if you press **SAVE** again, the MIDI dump you've selected will be transmitted out the MIDI jack, into the brain of a receiving PODXT, or into your computer or other MIDI device for backup.

MODELED AMPS & CABS

Which Amps and Cabs Are Modeled?

General Notes About the Models

As you may have guessed, we're tone fanatics here at Line 6. Once we've set our sights on creating a software emulation of a particular kind of amp, we will (and have) scour the globe in search of just the right specimen—that one, very particular amplifier that has the magic. We are also intensely mindful of the fact that, although amp model names may stay the same over the years, the circuit designs sometimes change radically. Amps from '57, '62, '65, '67, '75, and 2001 may all bear the same model name, yet sometimes have totally different sound and response, and quite often a different look as well. And as we all know, even two amps with the same circuit design, from the same era, can sound radically different, just on the basis of variance in component tolerances, among other things. Plus, there's the fact that every amp has its own special way of settling in over the years. And, just like people, some of them only get better with age. That's exactly why we went to so much trouble to find the very best examples we could of every amp that we wanted to model for PODXT. And it's why, when describing the software amp models that are emulations of other amplifiers, we've included photos here of the actual, individual amps that we lovingly selected, studied and measured—so that you'll know *exactly* which amp we're talking about.

So, now that you know what's in store, let's take a tour of the amp models that live inside your PODXT, and the original equipment that helped to make them possible.

There are 32 Amp Models living within your PODXT, plus 22 Cabinet Model selections. When you turn the **AMP MODELS** knob, you select an Amp/Cab combination. You can then mix'n' match different cabs with the amp by pressing the **CAB/A.I.R.** button and choosing any Cab model you like with the **EFFECT TWEAK** knob. **Chapter 4** tells you how you can customize PODXT to call up your favorite Amp/Cab combinations.

Line 6's Originals

We'll start the introductions with the original Amp Models that Line 6 created to give you even more tonal options than you could get from vintage gear alone:

Line 6 Clean

To create this Amp Model, we essentially grafted the preamp and tone stack of a JC-120 (Roland's popular "Jazz Chorus" solid state combo) onto the poweramp and transformer of a classic Marshall JTM-45 tube head, thereby giving you the crisp and clear front end typical of a solid state amp, but with a rich, satisfying tube amp-style bite as you turn it up.

Line 6 JTS-45

Since the design of early Marshalls was based on the Fender Tweed Bassman circuitry, we wondered what it would be like if we took the preamp and tone stack of our JTM 45 and ran it into the poweramp and transformer of our '58 Tweed Bassman. What we got was *way* happening, as JTS-45 will attest. Great grind and nice punch. A tone the whole family can enjoy.

Line 6 Class A

One of the most satisfying tonal experiences as a guitarist is to play through an amp that's driven to the point where the poweramp is just starting to distort, but before it achieves full clipping. For many players, this is the coveted 'sweet spot' they look for on an amp. Because we're not limited to physical reality when we're creating amps in the digital world, our goal for this one was to make an amp model that was nothing but sweet spot. One of the great side effects is the ease of coaxing feedback out of this one.

Line 6 Mood

And here we give you a fantasia tone, based on our memories of grunge guitar tones we have known and loved.

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?

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.

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 (sort of like a Dual Rectifier on 10 being used as a preamp for a Soldano), 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!

Line 6 Piezacoustic 2
This one is designed to work with the piezo output of solidbody 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.

Zen Master

This model is based on a Budda Twinmaster 2x12 combo. The Budda has a great, warm, Class A/B, sound. The Budda philosophy is all about power tube distortion. Simplicity is the key. With relatively low front end gain, highly interactive tone controls, and tube rectifier "sag," it's great at getting a classic cranked sound for small gigs and recording (it's all of 18 watts). Since the original Twinmaster has no mid control, we've added a little bonus to our model in the form of some post-Amp Model mid contouring available via PODxT's **MIDDLE** control. As is true for all such "bonus" tone controls on PODxT's models, you should set this control to 12 o'clock to get groovy with the unadorned Budda-style vibe.

We used the Twinmaster's Input 2, which is lower gain, when creating this model.

Small Tweed

Modeled after a 1953 "wide panel" Fender Tweed Deluxe, this 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.

Tweed B-Man

The classic '58 Fender Bassman 4x10 combo was 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 PODxT's **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 PODxT, 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. With PODxT, 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.

Tiny Tweed

Modeled after a 1961 Tweed Champ, this model has a great sound when the Drive is cranked (not bad clean, either). These amps were originally designed to be sold to beginners, but rock and rollers quickly discovered that you could get a great distorted sound at fairly low volume levels. Many of the classic guitar solos of the 50's were recorded through a Champ. The Champ had no tone control, only volume. With your PODXT, it's easy to get a classic Champ tone. Just leave the **BASS**, **MIDDLE** and **TREBLE** controls parked at 12 o'clock, which means they are "flat," making no contribution to the tone. Set **PRESENCE** to 0, and it will also be letting the unadorned classic Champ tone through. When you're ready to explore further sonic territory, spin those and work your magic.

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 to model during our development of Flextone and POD, we stumbled upon an extremely cool '64 Deluxe. We still haven't found one better.

Most players love a Deluxe 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 and is nicely captured here. The Deluxe 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 PODXT'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 for PODXT.

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Double Verb

The classic blackface Fender Twin (in this case, a 1965 Twin) was a real workhorse. Everybody used it, from jazz and country players to serious rockers. I myself remember seeing Johnny Winter at a concert where both he and Rick Derringer—am I dating myself or what?—were using six Twins stacked in a pyramid. Each. We were in the second balcony and it was REALLY loud even all the way back there. The Twin has a lot of tonal flexibility and is at home in a great many different situations. It never gets extremely overdriven and dirty, mostly just louder—a lot louder. This is *the* amp for the classic surf sound. Dial up the spring reverb, switch on the tremolo, crank up the volume, and look out for bikinis.

Like most everyone who owns one, we plugged into Input 1 of the Normal Channel for modeling purposes.

Two-Tone

Another amp made by Valco/Supro, this is the Gretsch 6156. One of its curiosities is that the output transformer is actually mounted on its single 10-inch speaker, rather than on the amp chassis. It also has a lovely wraparound grill cloth, for a real futuristic look (or what passed for it in the '50s).

Hiway 100

Based on a Hiwatt DR-103, this model gives a great, punchy sound that will cut through almost anything and retains great definition even when cranked. That's exactly what designer Dave Reeves was looking for when he left the Sound City division of Dallas Arbiter in 1966 to form HyLight Electronics. Though his first designs were more reminiscent of the Vox and Selmer amps of the day, it wasn't long before Reeves had started producing the amps that '60s Brit-Rock fans have become familiar with. Renowned for their 'tank-like' construction (due in part to Reeves' hiring of 'mil-spec' wiring specialist Harry Joyce), it was no small wonder this amp was the choice of Pete Townshend for so many years. It wasn't just Townshend using Hiwatt, either. Many of the then-current crop of British rockers like Pink Floyd, The Moody Blues, Manfred Mann, and Jethro Tull were also Hiwatt endorsees. Crank this one up and you can see for miles.

Plexi 45

This Amp Model is based on a '65 'block logo' (predates the "scrolled" Marshall logo) JTM-45 head, complete with a gold Plexiglas front panel. When the royal agents we had dispatched to the U.K. found this particular amp, we instantly fell in love. The amp even has the original KT-66s in it, still in great shape! It's one of the finest examples of a JTM-45 we've ever heard, and it's a constant battle at Line 6 to see who gets to take it home for the weekend.

Those interested in the genealogy of tone will be interested to note that the JTM-45 marked the beginning of Marshall's transition from a mellower Fender-like tone to the distinctive, bright "crunchy" sound of the later Marshalls.

Plexi Lead 100

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 Marshalls 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, PODxT's model is set up to do pretty darned near the same thing.

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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 a model of this setup, too.

Plexi Variac

Ahhh, the stuff of legend. According to the stories, part of the magic behind Edward Van Halen's 'Brown Sound' was a Marshall 100 watt Super Lead being purposely run at higher voltage through the auspices of a Variable AC Transformer (aka a 'Variac').

While we don't generally recommend experiments with high voltage sources, especially ones that might blow up precious gear, we felt it was our duty to see if the stories were true. So we cranked the Variac up to 140v AC and gave the '68 Super Lead a power workout. (Don't worry, it survived to rock again.) We're thinking those stories must not be too far from wrong.

Brit J-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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Brit JM Pre

Marshall's entry into the rackmount preamp world, the JMP-1, has been a favorite of 'big-hair' metal guitarists as well as many others looking for a tight, highly saturated tone without the compression of poweramp 'sag.' It was also one of the first MIDI-controllable preamps.

The overdrive flavor of the JMP is somewhat "Boogie-esque" and many people saw the JMP as Marshall's answer to the ADA MP-1 and Mesa Boogie preamps. First introduced in the early nineties, the JMP has enjoyed a recent surge of popularity with new metal bands looking for a really tight, aggressive, well focused tone without being overly scooped. Your seven string is gonna love our model developed from our careful study of the JMP-1.

Match Chief

We crafted this model from our studies of the Matchless Chieftain. The Matchless has an EL34-powered "modern class A" design — hence this model's name — and a unique tone (largely due to the complicated EQ scheme).

The Chieftain was designed by Mark Sampson at Matchless to blend a Fender/Marshall type front end with a classic 'spongy' and very reactive Class A power section.

With higher gain than the DC-30 (which is next in our hit parade), the Chieftain is a great roots-music amp. It also features the incredibly sexy feature of a light up front logo name plate, which may not affect tone, but it sure does look cool.

When, sad to say, Matchless went out of business, both the Chieftain and the DC-30 became highly collectable pieces of gear, with used ones often fetching up to a thousand dollars more than their original price. We're happy to do our part to keep the Matchless legacy alive with the Matchless models in your PODxt.

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Match D-30

This model is based on a Matchless DC-30.

The DC-30 was the amp that really put Matchless on the map. Mark Sampson, the amp's designer, who was generous enough to tell us the story of this amp's creation, set out to create a road-worthy Class A amp that could cover a wide range of tones.

Built like a tank (and weighing nearly as much), the DC-30 paid tribute to early Vox amps. So if you like a Vox AC-30 (or PODxT's model based on one), you'll also want to check out PODxT's model of the DC-30.

Recto Dual

This 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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Cali Crunch

We modeled this from our studies of a Mesa Boogie Mark IIc+.

Mesa Engineering started out with Randall Smith souping up old Fender Princeton amps for SF Bay area musicians. Over the years, the amps evolved, adding effects loops, switchable channels, and Randall's Simul-Class design, in which one pair of output tubes is run Class AB and the second pair run Class A. Boogies were really the first modern guitar amplifiers and were quickly adopted by many players looking for more 'oomph' in a smaller package. We used the Drive channel to do our modeling.

Jazz Clean

This 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.

Solo 100

This 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.

Super O

Yet more of the stuff of legend. Jimmy Page has admitted to using his '58 Tele and a Supro amp to record most of the first two Led Zeppelin albums. The only problem is, he's never really copped to *which* Supro model he used, since his simply saying the word 'Supro' caused a run on pawnshops and music stores everywhere, making it virtually impossible to find another one of whichever model it was that he used.

We went so far as to impose on our friendship with people we know who were actually present during the recording of "Led Zeppelin II" to see if they remembered anything about that particular amp. They didn't recall the specific model number, only that it was "a grey and silver tiny little bastard." Other sources have claimed that it was the 1x12-inch version. So, until Pagey speaks, the mystery remains, but, whatever the truth of those Zep sessions may be, we're confident that this Supro S6616 model can be a fine entrance ticket to the Houses of the Holy.

By the way, that's a 6x9-inch speaker in this amp, just like in your car stereo. Go figure.

Class A-15

Here's another Vox-inspired Amp Model. This model is based on Channel 1 of a wonderful 1960 AC 15. The sound is similar to the Vox AC 30 that was studied for Vetta, but this is a smaller amp (one, instead of two, 12-inch speakers) with a warmer, more "woody" sound.

Once again, the original amp had only a single tone control—a treble cut. We faithfully modeled that and then slipped in some post-Amp Model Bass and Mid contouring. Set the **BASS** and **MIDDLE** in neutral (12 o'clock, or halfway up), **PRESENCE** to 0, and play with the **TREBLE** control to get yourself some of those classic British invasion sounds.

To model this, we plugged into Input 2, which is slightly darker than Input 1, and gives you more of that classic warm sound that the AC 15 is famous for.

Class A-30 TB

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, PODXT's **MIDDLE** control acts like the original Cut knob on the AC 30.

For this model, we used the Hi gain input of the Brilliant channel. 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.

Tube Preamp
Not even close to being a guitar amp, but once we got started, we just couldn't stop ourselves. The thinking went like this: 'Once people get this PODxT, they're gonna wish they could use it for everything — warming up keyboards, crunching up drums, fuzzing up vocals. We've gotta give 'em something to do that!' So we did. The Tube Preamp Model lets you warm up any sound source the way producers and engineers often do in the studio with vintage tube gear. For more "edge" on vocals, try running your vocal tracks through PODxT. Or punch up (or munch up) a synth bass track by sending it through PODxT and cranking up the Drive and EQ controls to suit your taste. Although this is not actually a guitar amp model, you can even get some great guitar tones out of it. Also try using it as a direct box for bass. 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. You generally don't want to mix the pre-PODxT sound with the post-PODxT sound because of the comb filtering that results. Instead, jack the sound source right into PODxT and then only monitor it through PODxT. With the tone controls at 12 o'clock, the EQ is "flat."

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Cabinet Models
The following Cabinet Models are available on PODXT, and are accessed by pressing the **CAB/A.I.R.** button, then turning the **EFFECT TWEAK** knob:

Cabinet Model	Based On...
1x6 Super O	6x9 Supro S6616
1x8 Tweed	1961 Fender Tweed Champ
1x10 Gibtone	1x10 Gibson
1x10 G-Brand	Gretsch 6156
1x12 Line 6	Line 6 1x12
1x12 Tweed	1953 Fender Tweed Deluxe
1x12 Blackface	1964 Fender Blackface Deluxe
1x12 Class A	1960 Vox AC-15
2x2 Mini T	2x2" Fender Mini Twin
2x12 Line 6	Line 6 2x12
2x12 Blackface	1965 Fender Blackface Twin
2x12 Match	1995 Matchless Chieftain
2x12 Jazz	Roland JC-120
2x12 Class A	1967 Vox AC-30
4x10 Line 6	Line 6 4x10
4x10 Tweed	1959 Fender Bassman
4x12 Line 6	Line 6 4x12
4x12 Green 20's	1967 Marshall Basketweave with Greenbacks
4x12 Green 25's	1968 Marshall Basketweave with Greenbacks
4x12 Celest T-75	1978 Marshall with stock 70s
4x12 Celest V-30	1996 Marshall with Vintage 30s
4x12 Recto	4x12 Mesa Boogie
No Cab	You will probably want to use this Cabinet model with the Tube Preamp model for non-guitar sources. It is selected by default when you pull up the Tube Preamp Amp Model.

STOMPBOXES & EFFECTS

About the Stompboxes

What guitarist doesn't like Stomp boxes? PODXT's got a bunch of great stomp box models adapted from Line 6's DM4 Distortion Modeler, MM4 Modulation Modeler, and DL4 Delay Modeler pedals, and some brand spankin' new models that come straight from our flagship combo, Vetta. We've also given you a few of the ol' standby's like Ping Pong and Stereo Delay. Who says you can get too much of a good thing?

In this chapter, we're not only going to take a look at just which stomp box effects are modeled. We'll also be talking about how you go about tweaking them. So hold onto your hats and glasses, and please keep your hands and feet inside the car at all times.

6 • 1

Basic Effect Editing

PODXT features a collection of sought-after stomp boxes and effects that you can assemble with any Amp Model into small 'rigs' with complete channel switching, stomp box-style on/off and Tap Tempo. Add an FBV or FBV Shortboard foot controller and you've got it all, hands-free. And there's nothing hidden on this PODXT. Any parameter can be adjusted without the need for a computer. Effects can be turned on or off at any time just by pressing one of the effect on/off buttons above the display.

There are 4 effect on/off buttons:

Comp (Gate)—This is the button to turn our model based on the LA-2A compressor on or off. Double pressing this button allows you to edit the compressor settings. It also gives you access to the full-time **NOISE GATE**.

Stomp—This is where PODXT's distortion boxes and stomp box compressors live. Like all the other effect buttons, press to turn on or off, double-press to **EDIT**.

Mod—PODXT comes with several flavors of modulation effects. Use this button to turn them on or off, double-press to **EDIT**.

Delay—The delay models are here. Press on, press off, double press to **EDIT**.

Deep Dive Editing

All of PODxt's Stomp boxes and Effects share a similar way of editing and the real details are covered in **Chapter 4, Creating & Storing Sounds**. We'll go over the two basic ways to do it here. To edit any effect's parameters you can:

A. Press the **EDIT** button, then use the **SELECT** knob to scroll through the pages and find the parameters you're looking for, or

B. Double-press an effect on/off button (press it twice quickly) to go straight to the first page for that effect.

Stomp Effects: Distortions and Overdrives

Back before fuzzes, distortions, and overdrives existed, guitar players used to do stuff like slice their speakers with a razor blade to get that raunchy, distorted, lovely sound (check out Link Wray's 'Rumble' for an example). While it sounded great, it did make it impractical to turn around and play a nice smooth ballad on the same amp.

Enter the 'fuzz' box. Legend has it that the first such devices were designed to duplicate the sound of a faulty mixer input strip. Whether this story is true or not, soon everybody was getting some 'Satisfaction' through the modern miracle of floor-based distortion.

Stomp Effects: Compressors

A compressor takes quiet sounds and loud sounds coming into it, and makes them have a more similar volume, so the loudest sounds aren't so loud versus the quiet sounds, and the quiet sounds are closer to the level of the loudest sounds. The result is that a compressor can be set to keep boosting the level of your guitar signal as a note dies away, giving your guitar a longer note decay. In other words, plop a stomp box compressor down in front of an amp and you've got an instant sustain enhancer! As a side benefit, the compressor evens out your attacks and enables you to make up some gain (so you can hit the front end of your amp a bit hotter, but without extra before-the-amp distortion that a distortion box would create when boosting input level to your amp). We've provided you with a number of stompbox compression options in PODxt, so you can squash your signal 'til the cows come home.

Comp/Gate Effects

The Compressor effect available from the **COMP (GATE)** button is just the thing when you want to smooth out your levels the way that you would typically do in a recording studio. The **THRES** (Threshold) knob determines how aggressive you want the Compressor to be in smoothing things out. More negative numbers make the Compressor more active in taming your levels, so -32dB is a more aggressive setting that -16dB, say. The **GAIN** knob lets you add back level to compensate for the overall level reduction that the Compressor may cause.

The Gate effect helps eliminate unwanted noise when you're not playing, and can be especially valuable when using high gain sounds. Like a security gate, it's supposed to quickly open to pass the things that you want, and then swing closed to keep out the things that you don't want. Turn the **THRESH** all the way down to minimum to disable the Gate (**THRESH**'s value will then be **OFF**, as shown above). The **THRESH** knob determines how loud your playing has to be to open the gate. More negative numbers (where the knob is near its fully-counterclockwise setting) mean that the gate will open and allow sound through even when you are playing quietly, and less negative numbers (where the knob is near its fully-clockwise setting) mean that the gate will only allow sound to pass when you are playing pretty hard. The **DECAY** knob determines how fast the gate will swing closed. Like a gate in the real world, a fast decay means the gate might catch your trailing foot as you pass through—in this case, that means the gate will chop off the decay of your notes. And a slow decay means that as the gate swings slowly closed behind you, someone might have time to slip through behind you—in this case, that would be the unwanted noise that you hear as your notes decay. You'll have to experiment with the **DECAY** to get just the right happy medium for your particular guitar, playing style, and sound settings.

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Modulation Effects

Modulation effects are things that swoosh, pulse and warble—from phase shifters to flangers to choruses. Why are they called 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.

For Modulation effects, there are controls for **SPEED** and **DEPTH**. **SPEED** controls how fast (or slow) the modulating waveform sweeps. **DEPTH** controls the 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. Refer to the individual effects listed in the following pages of this chapter for details.

Tap Tempo

Many of PODXT's Delay and Mod effects feature the ability to set your **SPEED** or **DELAY TIME** to match your musical tempo. Tapping on PODXT's **TAP** button or your FBV's **TAP** switch on each beat of a song will set your tempo. Actually, you only need to Tap twice, but what the hey.

To tell a particular effect to "listen" to the Tap Tempo, all you have to do is spin the **EFFECT TWEAK** knob way down below the lowest **SPEED** or Delay **TIME**. For delays, you'll go down past 20 milliseconds and you'll see a whole note in the display. Keep turning until you see a quarter note. Now tap twice and you'll hear the delay time is in perfect sync with what you tapped. Give the Delay **TIME** another twiddle to select a half note, and the delay is now twice as long as it was before, since half notes are twice as long as quarter notes. Nifty, huh?

Setting a Mod speed for Tap Tempo works just like Delay **TIME**. Select a Mod effect's **SPEED** parameter, then turn the **EFFECT TWEAK** knob all the way down until you see notes showing for the **SPEED**. Tap away on your PODXT's **TAP** button and hear the results!

Here's the Delay page with a note selected for **TIME**:

If you know exactly what the tempo is and don't feel like tapping today, press the **EDIT** button if it isn't lit already, and spin **SELECT** to go all the way to the end of the **EDIT** pages. Well look at that! There's a **TEMPO** parameter for you to adjust. This is the tempo, in *Beats Per Minute*, of the current channel, and you can save it so that all the effects in this channel that you've told to use a note value will follow this tempo.

Reverb

When we set out to create PODxT, we devoted our fanatical modeling technology and energy for innovation to developing no-compromise reverb effects. PODxT'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, and usually multiple pickups to pick up the vibrations of the plate), spring reverbs (the kind guitar players know best), and even a couple of unique new models that you'll have to hear to appreciate.

6 • 5

Springs
Ahh, the 'sproing' of a good spring reverb tank. Ya say you wanna play surf music, neighbor? Well sir, you've come to the head of the stream! The only thing missing is the ugly crash when the bass player stumbles over your amp.

Lux Spring
The blackface Fender Deluxe amp had a two spring reverb tank, which we've modeled here.

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 Fender's earlier spring reverbs. Go find yourself a bevy of bikini-clad beauties, wax up your board, and dig in.

King Spring

A Line 6 original, inspired by the Sealy Posturepedic. If three springs are cool, how about a whole mattress full of Slinkies? Richer, denser, wigglier. A good night sleep is guaranteed, or we'll give you your money back.

Rooms

Over the years, inventive recording engineers have pressed all sorts of rooms into service as reverb chambers. Stairwells, hallways, and basements have been some of the popular choices. We've tried to present a good cross-section in your PODXT.

Small Room

As its name implies, this reverb model will give you the kind of sound you'd get when recording an amp that's mic'd up in a small room. Fortunately, unlike the small rooms that you might have handy at home, say, this room has well-tuned acoustics, no traffic noise coming from the nearby street, and you don't have to worry about the upstairs neighbors yelling, "Turn it down!"—don't you hate it when people ruin a good take like that?

Tiled Room

Think of this one as recording your guitar in the hall bathroom. All that porcelain has always made for great reverb, and lots of classic recordings were done by making the saxophone player stand in the 'necessary' and wail. Or at least that's what they told them. Sax players can be so naive.

Brite Room

A live, bright room to add life to any guitar track.

Halls

We're not talking about the passageway between your living room and bedroom. We're talking large, cavernous spaces here.

Dark Hall

A large concert hall with many reflections. This one is all about size and is great for that huge backdrop of reverb that doesn't get in the way even when turned all the way up.

Medium Hall

A medium sized hall with heavy reflections, this one is meant to be heard.

Large Hall
A very large concert hall. It doesn't get much bigger than this.

Chambers
Back in the day, there was no such thing as digital reverb. But people still wanted to be able to add more 'room' to the sounds they were recording. Someone got the bright idea of building a big empty room where sound bounced around nicely. They stuck a speaker in there, fed the sounds that needed loving through said speaker, and arranged microphones to pick up all the resulting ambience so it could be mixed back in with the music. These early reverb chambers all had a different personality, and some studio's reputations were made based on their individual reverb sound.

Rich Chamber
A rich chamber great for making that crunch tone even fatter.

Chamber
Typical of a studio chamber, this reverb goes well with just about anything.

Cavernous
Okay, so it does get bigger than Large Hall. Fire this 'verb up and get set for a long night of dandelion dreams.

Plates
Plate reverbs were the first type of 'mechanical' reverb. The basic design includes a big steel plate or sheet of gold foil with some sort of speaker driving it, and usually multiple pickups to capture the vibrations of the plate.

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.

Vintage Plate
A classic plate reverb that you won't forget.

Large Plate
Well with Large Hall and Cavernous lying around, we just had to dish up a big ol' Plate of goodness. This one makes a great bed of reverb for playing over and washes up real good with soap and water.

The Stomp Effects — Facial Fuzz

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Sometime in late 1966, an infamous circular stompbox 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 PODxT 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.

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, known more for its sweet sustain than for its buzz.

Electro-Harmonix was famous for their use of surplus parts, and the results of this practice were ever-changing circuit designs and parts specs. As you can see in the picture of our collection of Big Muffs, these pedals had several looks determined by the parts that Mike and the gang found at hand. Our sweetheart of the bunch is the one in the middle, known as the "triangle knob pattern" model. We know you'll agree, there's nothing like a slice of Pi.

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. Of course, we obsessed over which of our vintage 808s to model, and in the end we think you'll agree that our model of this green jewel makes a precious addition to PODXT.

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.

Through its life span, the Rat has seen several changes, and the unanimous choices for tone are the originals pictured here. Inside, these two Rats use the same board, and their circuits are identical. (For those that need to know, we modeled the smaller one.)

The **TONE** knob on PODXT's Rat model functions like the original Rat's "filter" control, which gives 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!

Octave Fuzz

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What was that? If it sounded like a phantom guitar possessed by The Ghost of Great Guitarists Past, then it probably was a Tycobrahe Octavia.

The Octavia is an example of a fuzz+octave effect. One pioneering user of this type of effect was Jimi Hendrix. The Tycobrahe Octavia in particular was used by Jeff Beck, and continues to be an essential part of Michael Landau's tone making tool kit.

The Octavia uses an audio output transformer and two germanium diodes to rectify (a fancy word for whack) the guitar signal, thus creating the high octave type sound. For our model, we studied the sweet-sounding original pictured here. We knew we had a keeper when every guitarist in the building wanted to take it home for a little of their own after hours "research."

Blue Comp

Roland/Boss jumped on the compressor stompbox bandwagon with the CS-1 Compression Sustainer. It has a fixed ratio, so the PODxT model based on it has the **SUSTAIN** control varying the threshold of the compressor circuitry. **LEVEL** does what you'd expect.

Red Comp

Probably the most widely used stompbox compressor, and pretty much the standard against which others are judged, the MXR Dynacomp has a fixed compression ratio with variable threshold and gain, which is what you get in the PODXT model.

The **SUSTAIN** knob varies your compression threshold, and **LEVEL** varies your (wait for it) level.

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Auto Wah

What self-respecting filter-junkie would be without a Mu-Tron III envelope follower? Part auto-wah, part triggered filter, it's all about wacky, and this model based on the Mu-Tron III gives it to you both coming and going. Go ahead – unbutton that shirt, put on the flares, and get down with your bad self!

The **SENS** knob varies the filter's response to your playing, and **Q** adjusts the filter's width.

Vetta Comp

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.

Auto Swell

This effect is an envelope generator, similar to the Boss SG-1 Slow Gear and other pedals. Each note or chord that you play ramps up. You can dial in the ramp time here to give you the kind of 'bowed' attacks that might otherwise require you to have your pinky rolling the volume knob on your guitar with every pick attack. Longer ramp times in combination with delay and reverb can keep you occupied for a pleasant hour or two, seeing what kind of chords you can come up with to blend into each other. You've got **RAMP** time to set over how long the swell takes to happen, plus **DEPTH** to determine how much the volume of your attacks is reduced.

The Modulation Effects

Sine Chorus
Your basic digital chorus (as opposed to the analog type vibe of the CE-1 chorus model), with a sine wave as the modulator. Smooth going down, with **BASS** and **TREBLE** controls for bassing and trebling.

Line 6 Flanger
Cooked up in the Line 6 labs, this creation really shines when you set **CONFIG** to **POST**, letting its stereo sweep offset serve up luscious harmonic shimmer.

Opto Trem
This one is based on the optical tremolo circuit that was used in the blackface Fender amps, like the '64 Deluxe 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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Bias Trem
One of our long time favorite pieces of 'Rube Goldberg' engineering, the old Vox tremolo (and a similar circuit in some blonde and brown Fender amps) got its pulse by literally varying the bias of the power amp tubes. While this tended to reduce the life span of the output tubes in these amps, it gave a beautifully liquid, uneven, and rather 'lumpy' sound that bears a distinct resemblance to a Uni-Vibe or other phase shifter (mainly because treating the tube bias in such a cavalier manner actually caused some phase shift to occur).

Auto Pan
Also known as a panner, this effect makes your sound go back and forth between the left and right channels. Sure to keep you up late at night.

Analog Chorus

The PODXT wouldn't be complete without paying homage to the original stompbox chorus, the Boss CE-1 Chorus Ensemble. The CE-1 came onto the music scene in 1977 and made waves with its big, warm and groovy chorus tones. It quickly found its way onto Andy Summers' pedal board and then into our homes via the classic albums recorded by The Police. The CE-1's controls included **SPEED**, **DEPTH** and a switch to go from chorus to vibrato mode (see below). The CE-1 is spacious, and sounds great feeding into a distorted amp.

The PODXT CE-1 model is every bit as warm and gooey as its inspiration. Dial up some lush landscape and enter into chorus heaven.

"Hey, wait a second!" you say, "The original CE-1 had a cool pitch vibrato mode, too. Whatcha gonna do about that?" Well, no worries, mate, we've got you covered. Since a chorus is, when you come right down to it, a pitch vibrato mixed with a dry signal, what the vibrato mode switch on a CE-1 did was simply turn off the dry signal. To get that effect here, just set the **MIX** knob to 100% wet (in other words, crank it all the way up), and, presto change-o, you've got vibrato. You can use the **DEPTH** knob to get as seasick as you want, too.

Jet Flanger

This is our model of the A/DA "studio quiet" Flanger. Introduced in 1977, this stompbox has a sweep range of 35-to-1 and a built-in compressor that work together with the tone circuitry to give the A/DA its signature jet-like sweep. It can be very dramatic with its unique wave shape and ability to create almost ring modulator-like effects at extreme settings.

When the model of the A/DA Flanger is selected for editing on PODXT, the knob below **DEPTH** controls the sweep range. **FDBK** adjusts feedback (in other words, how much of the effected signal is fed back to the input of the effect), and the **MANUAL** knob controls the length of the very short delay that's applied to the sweep to make the flanging effect happen.

Plug in, spin up the depth and feedback, and get ready for take-off!

Phaser

The unassuming metal box pictured above is the phaser that changed the world—the MXR Phase 90. 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. PODxT's Phaser model gives you additional flexibility with a **MIX** control and a **FEEDBACK** control to adjust the intensity of the effect.

U-Vibe

The now-legendary Uni-Vibe 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.

As with the CE-1 model's stealth vibrato mode, 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.

Rotary Drum+Horn

Fine furniture and cool tones—the Leslie 145 gave you both at once. This 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.

The **SPEED** knob for our model based on the Leslie acts like the Fast/Slow switch that came on the unit'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.

Rotary Drum

When they noticed that guitar players had started using Leslies, Fender decided to come out with its own, guitar-specific whirling dervish of a tone machine. Dubbed the Vibratone, it used a styrofoam baffle spinning in front of a 12-inch speaker, kicking all the sound out the sides of the box. One of the best known examples of a Vibratone tone is Stevie Ray Vaughan's classic 'Cold Shot'.

The editing controls for the Vibratone are the same as for the Leslie 145. Take it for a spin!

The Delay Effects — Analog Echo

Analog echo units like the DM-2 were designed as improvements over the tape echoes that came before them, using "bucket brigade" electronics to give guitarists echo units that were more reliable than the tape-based delays, with the added advantage of a low-power circuit that can be run on batteries.

Analog delays are treasured for the warm, distorted tones they produce, and PODxT's model based on the Boss DM-2 gets you the same sort of thing in a new digital realm of existence.

Analog w/Mod

Here's a model 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. Your PODxT's Analog w/Mod emulates that classic Memory Man tone with the added advantage of 2 seconds of delay time.

On page 2, you'll find the **MOD SPEED** and **DEPTH** control to set up the chorus on the delays.

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. PODxT's EP-1 model emulates the classic Echoplex tone with the extra advantage of up to 2 seconds of delay time.

On page 2, you'll find **FLUT** (wow and flutter) and **DRIVE** controls so that you can not only dial up some tube warmth like the original, but add that unique sound of a slipping, dirty capstan as well.

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Multi-Head

Long before Boss pedals, the RE-101 Space Echo was Roland's first venture into the world of effects processing. Instead of having one movable playback head (like the Echoplex) this machine has multiple stationary heads. You change delay times by switching amongst these heads, and then fine-tune delay time with a motor speed control. The groovy part is that you can play back on multiple heads at the same time to get multi-tap delay effects.

Page 2 controls includes a control for **HEADS**, which enables you to choose from the available combinations of the Multi-Head model's 4 virtual tape heads. There's also a **FLUT** (wow and flutter) control like the Echoplex EP-1 model.

Sweep Echo

This model is a Line 6 original. It first appeared on our DL4 Delay Modeler and has turned out to be a special favorite amongst the many DL4 users that we've spoken to.

The Page 2 knobs adjust the speed and depth of the sweeping filter part of the effect. sweep **SPEED** sets how fast the filter sweeps, and sweep **DEPTH** sets the range of frequencies that the filter affects, allowing you to create and explore your own shifting landscape of tonal possibilities. There's both subtle texture and serious weirdness to be found in this one. Try assigning one of the FBV pedals to control the Mix, and use a relatively short delay for some fun.

Digital Delay

This model is a straight up digital delay with **BASS** and **TREBLE** tone controls (located on Page 2, of course). Nothing fancy here, just basic echo-cho-cho-cho. After all, it's good to cleanse the palate every once in a while.

Stereo Delay

Ever asked yourself, "How did The Edge (U2) get that groovy sound on Where the Streets Have No Name"? Stereo delays, my friend. It's the secret to many a U2 song, as well as the "Big L.A. Solo" sound of the late '80s. Set one side as a fast echo with many repeats, and the other as a slow delay with just a few repeats. Voila, you're famous!

Run this effect post in order to hear it in stereo, with one delay on the left, and another on the right. The **TIME** parameter sets the left delay's time, while **OFFSET** sets the right delay time as a percentage of the left. So, if you set **TIME** to 500ms, and **OFFSET** to 50%, your right delay time will be 50% of 500ms—in other words, 250ms. Ignoring the particular value of the left delay time, 50% just means that your right delay happens in half the time. So if you think of the left delay as a quarter note, the right delay is an eighth note. The second page of parameters for this model gives you independent left and right **FEEDBACK** controls, so for instance you can have your left delay feedback set low for a small number of repeats, while the right feedback is set high to give you a large number of repeats.

Ping Pong Delay

The Ping Pong Delay is the one delay that can be run as a Post Delay Effect, but not as a stompbox (since this kind of delay requires a stereo output to do its stuff). It has two separate channels of delay, with the output of each channel flowing into the other, going back and forth like a game of ping pong.

The **TIME** knob on Page 1 sets the time for the left side delay line.

The **OFFSET** knob on Page 2 sets the time for the right side delay line, as a percentage of the left delay's **TIME**. And **SPREAD** sets the stereo spread of the delays from mono to hard-panned left and right.

Sound too tricky? Just use the **TIME** knob (or Tap Tempo Button, if you want to set that up) to set the longer delay time you hear, and then turn **OFFSET** to adjust the shorter delay time. If you set Offset straight up at 12 o'clock, your left and right delays are evenly spaced. Then, once you've got your delay times set, use the **SPREAD** knob to adjust where the delay repeats appear in the stereo field.

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Reverse Delay

!seltaeB eht dna xirdneH imiJ ekil tsuJ — Take a step back in time with your cool new reverse delay. Whatever you play in comes back out at you backwards, delayed by the time you set (up to 2 seconds). To use this little wonder most effectively, try playing a legato lick, ignoring the reverse playback as well as you can. Longer licks can translate into very cool reverse phrases. We've seen Tom Petty guitarist Mike Campbell taking advantage of the Reverse Delay in the Line 6 DM4 Delay Modeler stompbox to play a backwards guitar solo live—on a worldwide TV broadcast, no less.

When using Reverse, try setting the **MIX** knob to full (100% wetness) so all you hear is the reversed sound—instant backwards guitar solo fun.

DEEP EDITING & MIDI CONTROL

MIDI Basics

What's MIDI?
MIDI (Musical Instrument Digital Interface) is a communications protocol designed to let various music-making machines exchange information. It allows one device to control another, and several devices to all be used together in coordination.

In/Out
PODxT has two MIDI connections: **IN** & **OUT**. You connect PODxT to other MIDI devices by connecting MIDI cables to these connectors. Each connection is a one-way street: information flows from the **OUT** of one device to the **IN** of another device. To allow information to flow back, you must connect a second cable, from **IN** to **OUT**.
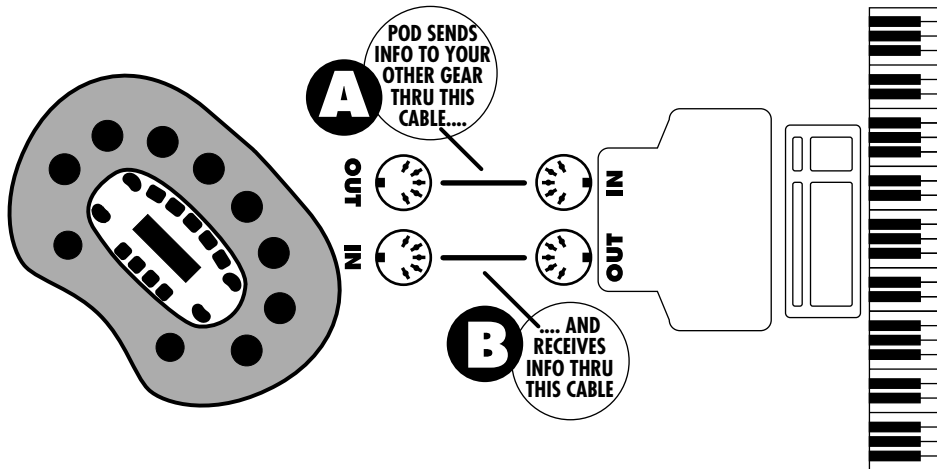
MIDI Channel
MIDI allows 16 different channels of information to be transmitted and received through one MIDI cable. The MIDI channel is independent of, and has nothing to do with, PODxT's preset channels for storing individual sound programs.

You tune PODxT in to listen to a particular MIDI channel (like choosing a channel on a TV or a station on a radio), and make sure the device that you want PODxT to listen to is transmitting on that same MIDI Channel. To set PODxT's MIDI channel, press the **TUNE/SYSTEM** button (which will light up). Use the Select knob to find the MIDI page that looks like this:

```
 MIDI
┋
┋   1    PGM ON    OUT
    CHANL PROGRAM OUTPUT
```
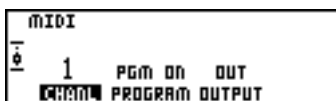
Channel—Press the button under **CHANL** and start spinning the **EFFECT TWEAK** knob to change the MIDI Channel. You can choose channels 1 thru 16, or OMNI—this means PODxT will 'listen' on all MIDI channels, which is fine if it's your only connected MIDI device. PODxT always accepts SysEx data on any channel, so if you are only working with Sysex data, this channel setting is only important to determine what channel your PODxT will send on.

Program Change—The PODxT allows you to process incoming MIDI Program Change messages (**PGM ON**), ignore these messages (**PGM OFF**), or pass the received program change regardless of the MIDI Output setting (**PGM ECHO**).

Output—PODxT's MIDI Out generally sends out the MIDI messages generated by your PODxT when this parameter is set to **OUT**. You also have the option of changing it to act as a MIDI Thru. When you choose **THRU** for the **OUTPUT**, PODxT will not generate any outgoing MIDI messages. Instead, it will take whatever comes in at its MIDI In and send it straight "thru" to the MIDI Out so you can get this same info to some other MIDI device. Note that in Thru mode, the MIDI Out simply passes on what's received at its MIDI In; it does not combine PODxT MIDI messages with this incoming MIDI data.

MIDI Messages
MIDI allows for several different kinds of messages, each with a different purpose:

MIDI Program Changes—Program change messages tell a device to switch from one sound or setup to another. With PODXT, program changes change from one Channel Memory to another. So, for instance, when PODXT receives program change number 1, it will select Bank 1, Channel A. When it gets program change number 2, it will select Bank 1, Channel B. And so on, as the chart in **Appendix B** shows.

MIDI Continuous Controllers—MIDI continuous controller messages (CC for short) allow you to control a device's parameters in real time. So, for instance, you can use a MIDI controller to vary the setting of PODXT's **DRIVE** control, or the **REVERB** level. Each of PODXT's parameters are mapped to a MIDI controller, so you can take full control of your PODXT. The chart in **Appendix C** lists each PODXT parameter, the controller assigned to it, and how that controller affects PODXT. Note that the wah and volume pedals of the FBV and FBV Shortboard also transmit MIDI controller messages via MIDI when used with your PODXT.

MIDI SysEx Commands—Sysex stands for "System Exclusive." SysEx commands are special commands that only a particular device understands—they are 'exclusive' to that device—as opposed to the more generic kind of program, controller, and other messages that almost all MIDI devices understand. PODXT uses SysEx to transmit its Channel Memories to another device, or to receive new Channels from another device. This exchange of data is typically called a "dump." Note that PODXT always accepts SysEx data on any MIDI channel; your choice of MIDI channel still determines what channel your PODXT will *send* Sysex data on.

Backing Up PODXT Programs to Other Devices

It's recommended that you backup the sounds programmed into your PODXT so that you can restore them in case of some future disaster. If you want to transfer sounds from PODXT to some other MIDI device for backup (like say a MIDI file player or a hardware sequencer or keyboard workstation), things work pretty much the same way as they do for PODXT-to-PODXT transfers. You'll need a standard MIDI cable to get everybody talking.

Connect the MIDI OUT of your PODXT to the MIDI IN of the receiving MIDI device. Press **TUNE/SYSTEM** so that it's lit, and turn **SELECT** to reach the MIDI page.

Transferring All Channels - This feature will let you send all of your PODXT presets out via MIDI for a complete back-up of all your Channels:

Press **SAVE** once, and use the **SELECT** knob to scroll down to the page that looks like this:
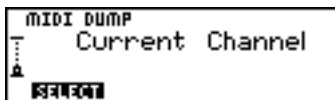
```
MIDI DUMP
    Current Channel

 SELECT
```

Now press the button under **SELECT**. Turn the **EFFECT TWEAK** knob to the left (counterclockwise) until the display reads:

```
MIDI DUMP
    All Channels

 SELECT
```
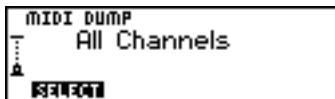
Now press **SAVE** again to make the transfer. PODXT's display will say, "**SENDING SYSEX... STANDY**," until the data transmission is complete.

Transferring Some Data - If you'd like to send a particular Channel memory out via MIDI, or just Effect Setups or Amp Models do this:

Press **SAVE** once, and use the **SELECT** knob to scroll down to the page that looks like this:

```
MIDI DUMP
    Current Channel

 SELECT
```
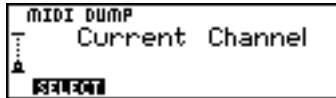
Turn the **EFFECT TWEAK** knob to select a Channel Memory, Amp Models, or Effect Setups that you'd like to transfer.

Any Channel Memory

```
MIDI DUMP
 1A:PlexiLead

 SELECT
```
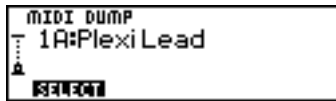
All Amp Models (including your customized ones)

```
MIDI DUMP
    Amp Setups

 SELECT
```
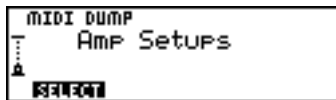
All Effect Setups (including your customized ones)

```
MIDI DUMP
    Effect Setups

 SELECT
```
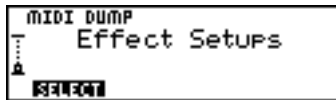
Now press **SAVE** again to make the transfer.

Restoring Data - You don't have to do anything special to restore data to your PODXT. Just send the data to PODXT via MIDI, and it will recognize and receive the data and show messages on its display to tell you what data it successfully receives.

Other Things You Can Do with MIDI

Changing PODxT Channels with MIDI Program Changes

The most basic thing to do with PODxT via MIDI is change channels. You may have a foot controller or other device that sends MIDI program change messages. Hook its MIDI **OUT** to PODxT's MIDI **IN**, set the MIDI Channels of both devices to be the same, and refer to the chart in **Appendix B** to see what program number on the foot controller will select which PODxT Channel. Note that both **MANUAL MODE** and the tuner can be selected with MIDI Program Change messages. You can also send MIDI Program change messages to PODxT from a MIDI sequencer to allow you to change PODxT sounds automatically in sync with your sequences.

Tweaking PODxT Tones with MIDI Controllers

If you have a hardware MIDI "fader box," assignable MIDI controllers on a keyboard, or a stand-alone or computer software-based MIDI sequencer, you can take control of any PODxT parameter via MIDI. The chart in **Appendix C** lists which PODxT parameter is controlled by which MIDI Controller. Remember to make sure that the MIDI Channels have been set properly when first setting up your PODxT with the gear that will control it. **To minimize "zipper" noise when controlling parameter changes via MIDI, try making gradual, rather than sudden changes to PODxT settings.**

Full MIDI Automation of PODxT

When you use PODxT with a MIDI sequencer, you can automate any PODxT parameter using MIDI Controller messages. This allows PODxT to give you the same kind of capabilities as Line 6's acclaimed Amp Farm software plug-in software for Pro Tools TDM systems, without the Pro Tools system!

The PODxT front panel knobs all send out appropriate MIDI controllers (as do the wah and volume pedals of the optional Floor Board foot controller) that you can record into a MIDI track as you play through your PODxT along with a MIDI sequence.

Hook your PODxT's MIDI OUT to a MIDI IN on your sequencing setup. Hook the sequencer MIDI OUT to PODxT's MIDI IN, and make sure PODxT and your sequencer are set to the same MIDI Channel. Be sure you set the MIDI **OUTPUT**

setting in **TUNE/SYSTEM** mode to **OUT**. Also, disable any MIDI "echo" or "soft thru" function in your sequencer so it doesn't send all MIDI coming from your PODXT right back to the it.

To allow MIDI-controlled automation, you need to set up a MIDI track in your sequencer to record the data flowing from PODXT's MIDI Out. Record-enable that track and start the sequencer recording. Slowly turn PODXT's **DRIVE** knob all the way up and then all the way down as your sequencer records, and then stop your sequencer. Now, look at the data that's been recorded into the PODXT MIDI track on your sequencer. You'll see that you've recorded MIDI controller #13 messages. This is the controller that's assigned to PODXT's Drive parameter. Play back the recorded MIDI track as you play through PODXT (or play back recorded direct guitar audio through PODXT), and you'll hear the Drive changes that you recorded into your MIDI track. **To minimize "zipper" noise when controlling parameter changes via MIDI, try making gradual, rather than sudden changes to PODXT settings.**

MIDI Setup Trouble-shooting

Here are some troubleshooting hints for computer MIDI setups, courtesy of Line 6's own product support gurus:

1. SoundBlaster type computer cards have more than one MIDI driver. The system will usually default to the driver for the built-in synth on the card, rather than the external MIDI port. This means that you must select the correct driver before the software can see the PODXT.

2. MIDI cables must run from **out** to **in** and vice versa—connect PODXT's MIDI *In* to your computer's MIDI *Out*. Think of it in terms of the direction that information is flowing; *out* of PODXT *in* to the computer. *Out* of the computer *in* to PODXT.

3. For non-SysEx communication, your PODXT and your MIDI software/hardware must be set to use the same MIDI Channel. If you've got PODxt on channel 1, set your other device or software to channel 1 so they can communicate. You can also set PODXT's MIDI Channel to **OMNI**, and it will listen to all channels.

PUTTING YOUR FEET TO WORK

The FBV Series Foot Controllers
PODXT is compatible with the optional Line 6 FBV and FBV Shortboard foot controllers. The FBV is designed to provide all the foot control functions needed for Line 6's Vetta series amps, and therefore includes a number of controls that aren't needed for PODXT. The Shortboard, on the other hand, is focused on PODXT features. So, we'll slant our presentation here toward the use of your PODXT with an FBV Shortboard, and if you've got a standard FBV, you'll find that it works pretty much the same way.

Meet the FBV Shortboard

The FBV Shortboard foot controller gives you a greatly expanded range of control over your PODXT, especially in live performances. The Shortboard provides foot switches for virtually every function of PODXT, a pedal that can be used for Wah or Volume and a separate input for the Line 6 EX-1 expression pedal.

Hooking up the Shortboard
The Shortboard comes complete with the necessary hookup cable, so all you have to do is plug it into the jack on the back of your PODXT that's labeled **PEDAL** (in case you ever need to replace it, it's a standard CAT-5 Ethernet cable that's available just about everywhere these days). Since the Shortboard is powered over the cable, there's no need for a 'wall-wart' or other external power supply. One cable, and you're done!

Pushing Your Buttons

1 **Bank Up - Bank Down:** Use these two switches to choose any of the 16 Banks of PODXT Channel Memories. Press A, B, C, or D to actually load the Channel Memory. You can also hold either one to quickly scroll through the banks.

2 **Channel A, B, C & D:** Load one of the four Channel Memories in the current Bank.

3 FX Loop: This will turn PODXT Pro's loop on/off. Although the other FBV switches act when you first step on them, this one doesn't switch the loop until you lift your foot *off* of it. PODXT users, the **COMP** sticker that came with your Shortboard magically relabels this switch to operate PODXT's **COMP** On/Off.

4 Stomp: *(Stomp Box 1 on FBV)* Use this switch to turn your **STOMP** effect on and off. The light above the switch will be lit when this effect is on.

5 Stomp Box 2: *(not on Shortboard)* Switches PODXT's Comp on and off.

6 Stomp Box 3: *(not on Shortboard)* Switches PODXT's Gate on and off.

7 Reverb: Switches PODXT's reverb on and off.

8 Modulation: Use this switch to turn your **MOD** effect on and off. The light above the switch will be lit when this effect is on.

9 Delay: Use this switch to turn your **DELAY** on and off. The light above the switch will be lit when this effect is on.

10 Tap Tempo: Tap twice on the **TAP TEMPO** switch to set the Tempo on PODXT. The light above the **TAP TEMPO** switch flashes to show you the current tempo in BPM (*beats per minute*). Hold the **TAP TEMPO** switch down for two seconds to activate PODXT's tuner. The Shortboard display shows the note you're playing and lets you know whether you're sharp or flat.

11 Wah and Volume Lights: One of these lights will come on when the Shortboard's built-in pedal is ready to control **WAH** or **VOLUME**. If an expression pedal is connected and set to control **VOLUME**, the **VOLUME** light will not come on.

12 Wah / Volume Pedal: Press this pedal fully forward to click the toe-switch, switching the pedal to control **WAH** or **VOLUME**. If an expression pedal is connected to the Shortboard's rear panel 1/4-inch jack and is set to control **VOLUME**, the Shortboard pedal controls **WAH** only, with the toe switch toggling the **WAH** on/off. If the expression pedal is set to provide remote control over the **EFFECT TWEAK** parameter, the **WAH / VOLUME** pedal will continue to switch between **WAH** and **VOLUME**. See Chapter 4, **Creating & Storing Sounds** for more details.

13 **External Pedal Jack**: You can connect an expression pedal (such as the Line 6 EX-1) to the Shortboard's rear panel 1/4-inch jack. The connected pedal can be set to control **VOLUME** or **EFFECT TWEAK**. See Chapter 4, **Creating & Storing Sounds** for more details on setting up the expression pedal.

Note: Any FBV switches not being used by your PODXT will send MIDI messages via PODXT's MIDI Output and can be used to control other devices. See **Appendix C** for details.

Saving and Naming with the FBV Shortboard

To prepare for saving, it's a good idea to browse through the various factory-stored preset sounds to decide which you can do without. Make a note of their Bank number and Channel letter so you can save your own sounds there instead.

1. **Save -** Step on the **FX LOOP** (**COMP**) switch until **NAME EDIT** is displayed.

2. **Name -** The Shortboard's **STOMP** and **MODULATION** switches (labeled **Cursor** in small text) select one of the characters of the channel name so you can change it. The **DELAY** and **REVERB** switches (labeled **Character** in small text) choose from the available letters, numbers and symbols. Once you've got a name you're happy with, go ahead to step 3.

3. **Pick a Bank -** The **BANK UP** and **BANK DOWN** switches pick a Bank you'd like to save to.

4. **Finish -** Press the **A, B, C** or **D** switch to store to that Channel Memory in the chosen Bank. The display will show **"SAVING"**.

   Cancel - You can cancel the save process at any time by pressing **TAP**.

Congratulations, you're all done!

Note: FBV owners, saving works the same way for you except that the **REVERB** and **PITCH/TREMOLO** switches are used for cursor control, and the **MOD** and **DELAY** switches change the character.

Using an EX-1

The FBV Shortboard allows you to connect an expression pedal, such as the Line 6 EX-1, to provide dedicated volume pedal control or act as remote control over the parameter assigned to the **EFFECT TWEAK** knob. This lets you remotely control the Rotary Drum Speed, for example, while allowing the on-board pedal to control **WAH** or **VOLUME** and it's even stored with a Channel Memory so you can change it on the fly. To set up this pedal:

1. Press the **EDIT** button and turn **SELECT** until you see the **Wah** and **Volume** parameters:

2. Press the button under **PEDAL** and select either **VOLUME**, to control the volume, or **TWEAK**, to control the **EFFECT TWEAK** parameter.

3. Be sure to save if you want to keep your changes.

When the **PEDAL** is set to **EFFECT TWEAK**, moving a connected EX-1 from heel to toe will move the **FX TWEAK** assigned parameter from its minimum value to its maximum value. When **PEDAL** is set to **VOLUME**, the FBV Shortboard's Volume light will go out, the EX-1 will control the PODxT's volume and the on-board pedal will be your dedicated wah pedal. Like the delay and mod effects, you can also choose the position of the volume pedal: **PRE** (before the Amp Model), or **POST** (after the Amp Model).

APPENDIX A: AMP MODELS

Amp Model	Based On	Cab Model	Mic
Tube Preamp	Tube Instrument Preamp	No Cab	67 Condenser
Line 6 Clean	Line 6 21st Century Clean	2x12 Line 6	57 On Axis
Line 6 JTS-45	Line 6 JTS-45	4x12 Green 25's	67 Condenser
Line 6 Class A	Line 6 Class A	1x12 Tweed	421 Dynamic
Line 6 Mood	Line 6 Mood	4x12 Green 20's	57 On Axis
Spinal Puppet	Line 6 Spinal Puppet	4x12 Brit V30's	421 Dynamic
Line 6 Chem X	Line 6 Chemical X	4x12 Brit T75	421 Dynamic
Line 6 Insane	Way too many hours of shredding	4x12 Brit T75	57 On Axis
Line 6 ACO 2	Line 6 Piezacoustic 2	No Cab	67 Condenser
Zen Master	Budda Twinmaster 2x12 Combo	2x12 Line 6	57 On Axis
Small Tweed	'53 Fender Deluxe	1x12 Tweed	421 Dynamic
Tweed B-Man	'58 Fender Bassman	4x10 Tweed	57 On Axis
Tiny Tweed	'60 Tweed Fender Champ	1x8 Tweed	421 Dynamic
Blackface Lux	'64 Fender Deluxe	1x12 Blackface	57 On Axis
Double Verb	'65 Blackface Fender Twin	2x12 Blackface	421 Dynamic
Two-Tone	Gretsch 6156	1x10 G-Brand	57 On Axis
Hiway 100	Hiwatt DR-103	4x12 Green 25's	57 Off Axis
Plexi 45	'65 Marshall JTM-45	4x12 Green 20's	57 Off Axis
Plexi Lead 100	'68 Marshall 'Plexi' Super Lead	4x12 Green 20's	57 On Axis
Plexi Jump Lead	'68 Marshall Super Lead Jumped	4x12 Green 25's	421 Dynamic
Plexi Variac	'68 Marshall Super Lead Variac'd	4x12 Green 25's	67 Condenser
Brit J-800	'90 Marshall JCM-800	4x12 Brit T75	67 Condenser
Brit JM Pre	Marshall JMP-1	4x12 Brit T75	421 Dynamic
Match Chief	'96 Matchless Chieftain	2x12 Match	57 On Axis
Match D-30	Matchless DC-30	2x12 Match	57 On Axis
Recto Dual	'01 Mesa Boogie Dual Rectifier	4x12 Recto	57 Off Axis
Cali Crunch	'85 Mesa Boogie Mark IIc+	1x12 Line 6	57 On Axis
Jazz Clean	'87 Roland JC-120	2x12 Jazz	67 Condenser
Solo 100	Soldano SLO-100 Head	4x12 Brit T75	57 On Axis
Super O	Supro S6616	1x6 Super O	57 On Axis
Class A-15	'60 Vox AC 15	1x12 Class A	57 Off Axis
Class A-30 TB	'63 Vox AC 30 with Top Boost	2x12 Class A	57 Off Axis

APPENDIX B: MIDI PROGRAM CHANGES

PODXT channels can be selected via MIDI program changes. Some devices number programs starting at zero. Some start at one. We start at zero (Manual Mode) and then work our way along through the stored channels as shown in this table:

POD Channel	MIDI Program Changes	POD Channel	MIDI Program Changes	PODxt Channel	MIDI Program Changes	PODxt Channel	MIDI Program Changes
Manual	0	5A	17	9B	34	13C	51
1A	1	5B	18	9C	35	13D	52
1B	2	5C	19	9D	36	14A	53
1C	3	5D	20	10A	37	14B	54
1D	4	6A	21	10B	38	14C	55
2A	5	6B	22	10C	39	14D	56
2B	6	6C	23	10D	40	15A	57
2C	7	6D	24	11A	41	15B	58
2D	8	7A	25	11B	42	15C	59
3A	9	7B	26	11C	43	15D	60
3B	10	7C	27	11D	44	16A	61
3C	11	7D	28	12A	45	16B	62
3D	12	8A	29	12B	46	16C	63
4A	13	8B	30	12C	47	16D	64
4B	14	8C	31	12D	48	Tuner	65
4C	15	8D	32	13A	49		
4D	16	9A	33	13B	50		

APPENDIX C: PODXT MIDI CONTROLS

Parameter	Notes	Cntrl #	Transmitted MIDI Range	Received MIDI Range
AMP Settings				
Amp Model	Selects Amp Setup	11	0-32	0-32
Drive		13	0-127	0-127
Bass		14	0-127	0-127
Mid		15	0-127	0-127
Treble		16	0-127	0-127
Presence		21	0-127	0-127
Chan Vol		17	0-127	0-127
Pan	0=Left, 64=Center, 127=Right	10	No Transmit	0-127
A.I.R. Settings				
Cabinet Model	0-22	71	0-22	0-22
Mic Selection	0=Shure SM-57, 1=Shure SM-57 Off Axis, 2=MD-421, 3=U-67	70	0-3	0-3
Room Level	0-100%	76	0-127	0-127
COMPRESSOR				
Compression Gain	0 to +31dB	5	0-127	0-127
Compression Threshold	-63dB<>0dB	9	0-126	0-127
Comp Enable	On, Off	26	Off=0/On=127	0-63=Off 64-127=On
NOISE GATE				
Gate Threshold	0 to -96dB	23	0-96	0-96
Gate Decay Time	0=.1 ms; 127= 1 sec	24	0-127	0-127
Noise Gate Enable	On, Off	22	Off=0/On=127	0-63=Off 64-127=On
STOMP Category Effects	(STOMP Parameters May Vary)			
STOMP Model	0=Facial Fuzz, 1=Fuzz Pi, 2=Screamer, 3=Classic Dist, 4=Octave Fuzz, 5=Blue Comp, 6=Red Comp, 7=Vetta Comp, 8=Auto Swell, 9=Auto Wah	75	0-9	0-9
STOMP Param 1	Not Used	27	0-127	0-127

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Parameter	Notes	Cntrl #	Transmitted MIDI Range	Received MIDI Range
STOMP Param 1 Note value	Not Used	78	See Note 1	See Note 1
STOMP Param 2	Model-dependent	79	0-127	0-127
STOMP Param 3	Model-dependent	80	0-127	0-127
STOMP Param 4	Model-dependent	81	0-127	0-127
STOMP Param 5	Not Used	82	0-127	0-127
STOMP Volume/Mix	0<>100%	83	0-127	0-127
Stomp Enable	On, Off	25	Off=0/On=127	0-63=Off 64-127=On
MOD Category Effects	(MOD Parameters May Vary)			
Modulation Model	0=Sine Chorus, 1=Analog Chorus, 2=Line 6 Flanger, 3=Jet Flanger, 4=Phaser, 5=U-Vibe, 6=Opto Trem, 7=Bias Trem, 8=Rotary Drum+Horn, 9=Rotary Drum, 10=Auto Pan	58	0-10	0-10
Mod Param 1	Model-dependent	29	0-127	0-127
Mod Param 1 Double Precision	Model-dependent	61	0-127	0-127
Mod Param 1 Note value	Model-dependent	51	See Note 1	See Note 1
Mod Param 2	Model-dependent	52	0-127	0-127
Mod Param 3	Model-dependent	53	0-127	0-127
Mod Param 4	Model-dependent	54	0-127	0-127
Mod Param 5	Model-dependent	55	0-127	0-127
Mod Volume/Mix	0<>100%	56	0-127	0-127
Mod Pre/Post	Pre, Post	57	Pre=0/Post=127	0-63=Pre 64-127=Post
Mod Enable	On, Off	50	Off=0/On=127	0-63=Off 64-127=On
DELAY Category Effects	(Delay Parameters May Vary)			
Delay Model	0=Analog, 1=Analog w/Mod, 2=Tube Echo, 3=Multi-Head, 4=Sweep Echo, 5=Digital Delay, 6=Stereo Delay, 7=Ping Pong, 8=Reverse Delay	88	0-8	0-8

Parameter	Notes	Cntrl #	Transmitted MIDI Range	Received MIDI Range
Delay Param 1		30	0-127	0-127
Delay Param 1 DBL Precision		62	0-127	0-127
Delay Param 1 Note value		31	See Note 1	See Note 1
Delay Param 2	Model-dependent	33	0-127	0-127
Delay Param 3	Model-dependent	35	0-127	0-127
Delay Param 4	Model-dependent	85	0-127	0-127
Delay Param 5	Model-dependent	86	0-127	0-127
Delay Volume/Mix	0<>100%	34	0-127	0-127
Delay Pre/Post	Pre, Post	87	Pre=0/Post=127	0-63=Pre 64-127=Post
Delay Enable	On, Off	28	Off=0/On=127	0-63=Off 64-127=On
REVERB Category Effects				
Reverb Type	0=Lux Spring, 1=Std Spring, 2=King Spring, 3=Small Room, 4=Tiled Room, 5=Brite Room, 6=Dark Hall, 7=Medium Hall, 8=Large Hall, 9=Rich Chamber, 10=Chamber, 11=Cavern-ous, 12=Slap Plate, 13=Vintage Plate, 14=Large Plate	37	0-14	0-14
Reverb Decay	Model dependent	38	0-127	0-127
Reverb Pre-Delay	Model dependent	40	0-127	0-127
Reverb Tone	0<>100%	39	0-127	0-127
Reverb Mix	0<>50%	18	0-127	0-127
Reverb Pre/Post	Pre, Post	41	No Transmit	0-63=Pre 64-127=Post
Reverb Enable	On, Off	36	Off=0/On=127	0-63=Off 64-127=On
WAH WAH				
Wah Position	0<>127	4	0-127	0-127
Wah Enable	On, Off	43	Off=0/On=127	0-63=Off 64-127=On

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Parameter	Notes	Cntrl #	Transmitted MIDI Range	Received MIDI Range
Volume Pedal				
Vol Pedal Position	Value Not Stored	7	0-127	0-127
Volume Pre/Post	Pre, Post	47	Pre=0/Post=127	0-63=Pre 64-127=Post
Volume/Tweak Pedal Assign		65	Volume=0 Tweak=127	0-63=Volume 64-127=Tweak
TEMPO Settings				
Tempo MSB	30.0-240.0 BPM	89	0-127	0-127
Tempo LSB		90	0-127	0-127
Tap	Tap	64	Tap Button or FBV sends 127	64-127=a Tap
Tweak	Tweak Controller	1	0-127	0-127
EFFECTS Setups				
Effect Setup	EFFECTS knob, Value Not Stored	19	0-63	0-63
Tweak Param Select	Valid values vary deending on loaded effects	108	0-13	0-13

Note 1:

Note Value Controller Values

   1 = Whole Note
   2 = Dotted Half Note
   3 = Half Note
   4 = Half Note Triplet
   5 = Dotted Quarter Note
   6 = Quarter Note
   7 = Quarter Note Triplet
   8 = Dotted Eighth Note
   9 = Eighth Note
10 = Eighth Note Triplet
11 = Dotted Sixteenth Note
12 = Sixteenth Note
13 = Sixteenth Note Triplet

APPENDIX D: FBV SERIES MIDI CONTROLS

PODXT Parameter	FBV Control	MIDI Controller #	Transmitted MIDI Range
Stomp On/Off	FBV "Stomp 1" switch FBV Shortboard "Stomp" switch	25	Off=0/On=127
Modulation On/Off	"Modulation" switch	50	Off=0/On=127
Delay On/Off	"Delay" switch	28	Off=0/On=127
Reverb On/Off	"Reverb" switch	36	Off=0/On=127
Tap (momentary)	"Tap" switch	64	Off=0/On=127
Wah	Left pedal on FBV Shared pedal on FBV Shortboard	4	0-127
Volume	Right pedal on FBV Shared pedal on FBV Shortboard	7	0-127
Tweak	Volume pedal can be assigned via PODXT Edit pages to operate Tweak parameter	1	0-127
Comp On/Off	FBV "Stomp Box 2" switch FBV Shortboard "FX Loop" switch controls this parameter when connected to PODXT; this parameter cannot be controlled from a Shortboard connected to PODXT Pro	26	Off=0/On=127
Gate On, Off	FBV "Stomp 3" switch (not available on Shortboard)	22	Off=0/On=127
Do not control PODxt parameters; can be used for control of other connected MIDI devices	FBV "Amp 1" switch	111	Off=0/On=127
	FBV "Amp 2" switch	112	Off=0/On=127
	FBV "Pitch/Tremolo" switch	113	Off=0/On=127
FX Loop On/Off *(PODxt Pro only)*	"FX Loop" switch	107	Off=0/On=127

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APPENDIX E: LINE 6 CONTACT

Customer Service
Before contacting the Line 6 Customer Service team, please take the time to look through this publication to see if it can answer your questions. Additional helpful information is on the Support page of the Line 6 web site (www.line6.com), including the searchable FAQTRAQ system which is often the fastest and easiest way to go answers.

If you need to talk to an actual human on the Line 6 Customer Service team by phone, it will generally help to take some notes for yourself before you call, to insure that you remember everything you want to ask about. In the USA or Canada, you can contact Line 6 at (818) 575-3600, 8AM to 5PM Monday through Friday (Pacific Time). Outside the USA and Canada, please contact your distributor directly to arrange service. The list of Line 6 distributors is available on the Internet at www.line6.com.

To obtain factory service:
If a member of the Line 6 Customer Service Team determines that your Vetta needs to be sent to Line 6 for service, you will be given a return authorization (RA) number. Products returned without an RA number will be returned to you at your sole expense. Pack the product in its original shipping carton and attach a description of the problem along with your name and a phone number where Line 6 can contact you if necessary. Ship the product insured and freight prepaid to Line 6 Customer Service, 6033 De Soto Avenue, Woodland Hills, CA 91367.

APPENDIX F: WARRANTY INFO

LINE 6 LIMITED WARRANTY INFORMATION

Sending in your registration card allows us to register key information so that we may handle problems faster and inform you of advance information, upgrades and other news. Thanks in advance for filling out your registration card and sending it to us. And good luck in your music!

Line 6, Inc. (hereinafter "Line 6") warrants that your new Line 6 product, when purchased at an authorized Line 6 dealer in the United States of America ("USA") or Canada, shall be free of defects in materials and workmanship for a period of one (1) year from the original date of purchase. Please contact your dealer for information on warranty and service outside of the USA and Canada.

During the warranty period, Line 6 shall, at its sole option, either repair or replace any product that proves to be defective upon inspection by Line 6.

Line 6 reserves the right to update any unit returned for repair and to change or improve the design of the product at any time without notice. Line 6 reserves the right to use reconditioned parts and assemblies as warranty replacements for authorized repairs.

This warranty is extended to the original retail purchaser. This warranty can be transferred to anyone who may subsequently purchase this product provided that such transfer is made within the applicable warranty period and Line 6 is provided with all of the following items: (i) all warranty registration information (as set forth on the registration card) for the new owner, (ii) proof of the transfer within thirty (30) days of the transfer purchase, and (iii) a photocopy of the original sales receipt. Warranty coverage shall be determined by Line 6 in its sole discretion.

This is your sole warranty. Line 6 does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of Line 6 or to make any warranty for Line 6.

Line 6 may, at it's option, require proof of original purchase date in the form of a dated copy of original authorized dealer's invoice or sales receipt.

Service and repairs of Line 6 products are to be performed only at the Line 6 factory or a Line 6 authorized service center. Line 6 may require advanced authorization of repairs to authorized service centers. Unauthorized service, repair or modification will void this warranty.

LINE 6 LIMITED WARRANTY INFORMATION

Sending in your registration card allows us to register key information so that we may handle problems faster and inform you of advance information, upgrades, and other news. Thanks in advance for filling out your registration card and sending it to us. And good luck in your music!

Line 6, Inc., warrants this product when purchased at an Authorized Line 6 Dealer in the United States of America or Canada, to be free of defects in materials and workmanship for a period of one year from the date of original purchase only upon completion and return of the Line 6 Warranty Registration form within 30 days from date of purchase. Please contact your distributor for information on warranty and service outside the USA and Canada. During the warranty period Line 6 shall, at its option, either repair or replace any product that proves to be defective upon inspection by Line 6. Line 6 reserves the right to update any unit returned for repair, and reserves the right to change or improve the design of the product at any time without notice. This warranty is extended to the original retail purchaser. This warranty can be transferred to anyone who may subsequently purchase this product within the applicable warranty period by providing Line 6 with all Warranty Registration information for the new owner and proof of transfer within 30 days of the purchase. Final determination of warranty coverage lies solely with Line 6. This is your sole warranty. Line 6 does not authorize any third party, including any dealer or sales representative, to assume any liability on behalf of Line 6 or to make any warranty for Line 6. Line 6 may, at its option, require proof of the original date of purchase in the form of a dated copy of the original authorized dealer's invoice or sales receipt. Service and repairs of Line 6 products are to be performed only at the factory (see below) unless otherwise authorized in advance by the Line 6 Service Department. Unauthorized service, repair or modification will void this warranty.

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DISCLAIMER AND LIMITATION OF WARRANTY

THE FOREGOING WARRANTY IS THE ONLY WARRANTY GIVEN BY LINE 6 AND IS IN LIEU OF ALL OTHER WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, EXCEEDING THE SPECIFIC PROVISIONS OF THIS WARRANTY ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS WARRANTY. UPON EXPIRATION OF THE APPLICABLE EXPRESS WARRANTY PERIOD (1 YEAR), LINE 6 SHALL HAVE NO FURTHER WARRANTY OBLIGATION OF ANY KIND, EXPRESS OR IMPLIED. LINE 6 SHALL IN NO EVENT BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES SUFFERED BY THE PURCHASER OR ANY THIRD PARTY, INCLUDING WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS OR BUSINESS, OR DAMAGES RESULTING FROM USE OR PERFORMANCE OF THE PRODUCT, WHETHER IN CONTRACT OR IN TORT. LINE 6 SHALL NOT BE LIABLE FOR ANY EXPENSES, CLAIMS, OR SUITS ARISING OUT OF OR RELATING TO ANY OF THE FOREGOING. Some states do not allow the exclusion or limitation of implied warranties so some of the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state. This warranty only applies to products sold and used in the USA and Canada. Line 6 shall not be liable for damages or loss resulting from the negligent or intentional acts of the shipper or its contracted affiliates. You should contact the shipper for proper claims procedures in the event of damage or loss resulting from shipment.