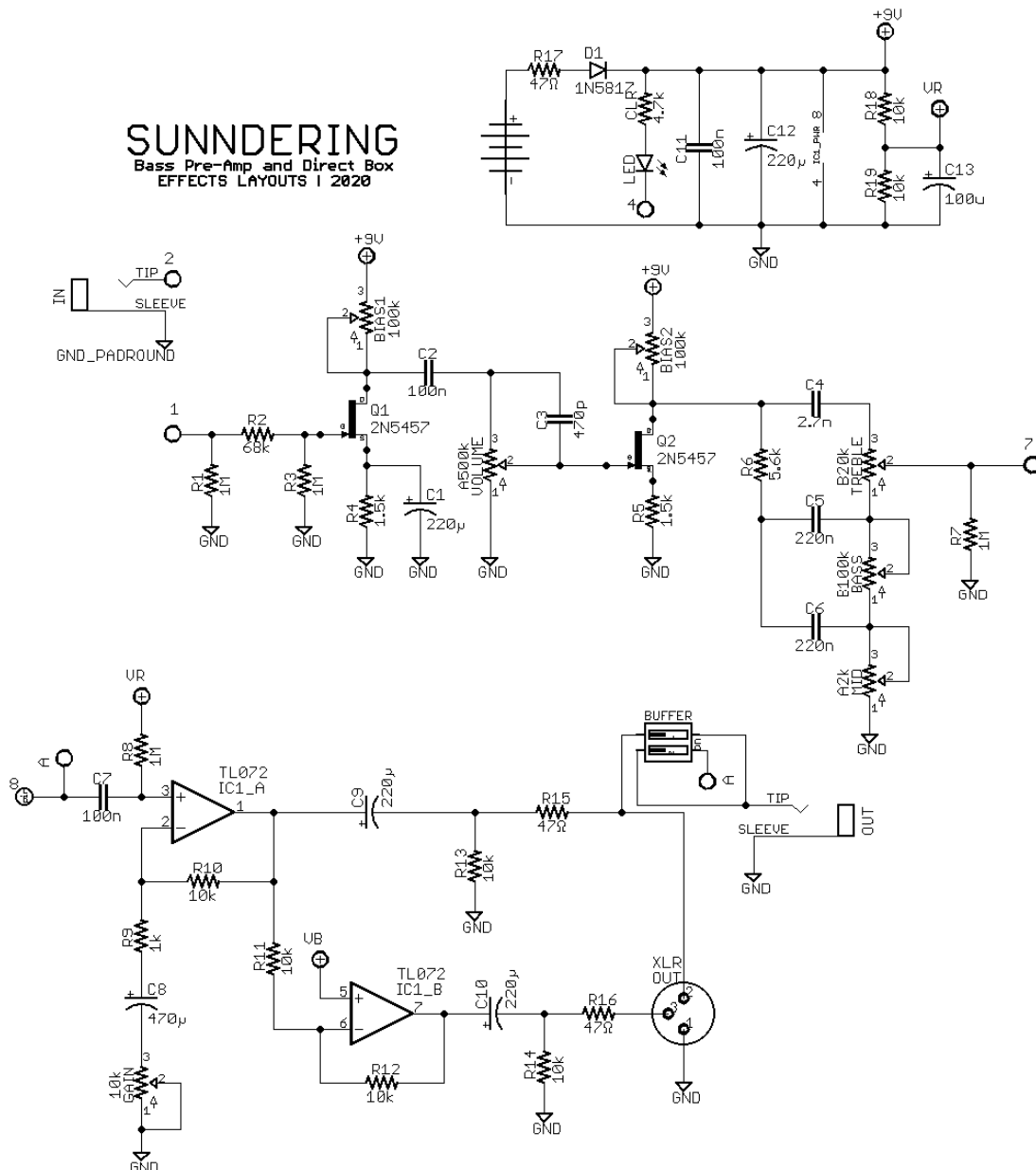


the sunndering preamp/di

DESCRIPTION

The SUNNDERING was born out of a need me and several other bass playing friends all had for a preamp pedal at the end of the signal chain (before going to the amp) that could be used to go directly to a PA or recording interface. The circuit itself is not all that complicated. Signal first goes through a simple JFET-based adaption of the Sunn 200s preamp (with an added mid control), then through an active DI circuit for the XLR output. Between these two halves of the circuit is a 2-position DIP switch. This switch allows the user to have either true bypass or buffered output through the unbalanced 1/4" output jack.

SCHEMATIC



BOM

Resistors

R1	1M
R2	68k
R3	1M
R4	1.5k
R5	1.5k
R6	5.6k
R7	1M
R8	1M
R9	1k
R10	10k
R11	10k
R12	10k
R13	10k
R14	10k
R15	47Ω
R16	47Ω
R17	47Ω
R18	10k
R19	10k
CLR	4.7k

Capacitors

C1	220μ
C2	100n
C3	470p
C4	2.7n
C5	220n
C6	220n
C7	100n
C8	470μ

C9	220μ
C10	220μ
C11	100n
C12	220μ
C13	100μ

Semiconductors

D1	1N5817
IC1	TL072
LED	3 or 5mm
Q1	2N5457 or MMBF5457
Q2	2N5457 or MMBF5457

Electromechanical

Bass	B100k
Bias 1	100k trim
Bias 2	100k trim
Buffer	2-position DIP switch
Gain	10k trim
Mid	A2k
Treble	B20k
Volume	A500k

Notes:

As in-spec through-hole 2N5457s are getting harder to source, pads are provided for the SMD equivalent (MMBF5457). Adjust the 2 bias trimmers till you get ≈4.5v on the drains of both JFETs. The Gain trim controls the gain of the active DI portion of the circuit. Adjust as needed.

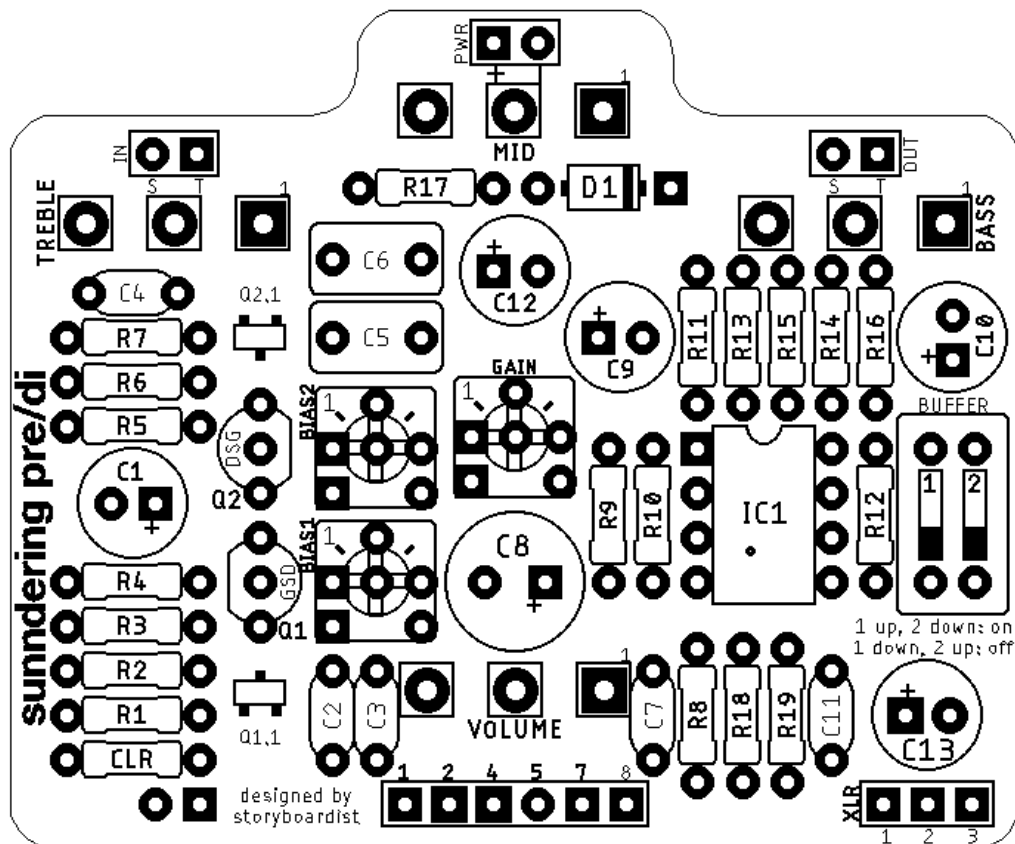
SHOPPING LIST

Value	Type (suggested)	Quantity
47Ω	¼ watt metal or carbon film	3
1k	¼ watt metal or carbon film	1
1.5k	¼ watt metal or carbon film	2
4.7k	¼ watt metal or carbon film	1
5.6k	¼ watt metal or carbon film	1
10k	¼ watt metal or carbon film	7
68k	¼ watt metal or carbon film	1
1M	¼ watt metal or carbon film	4
470p	Ceramic	1

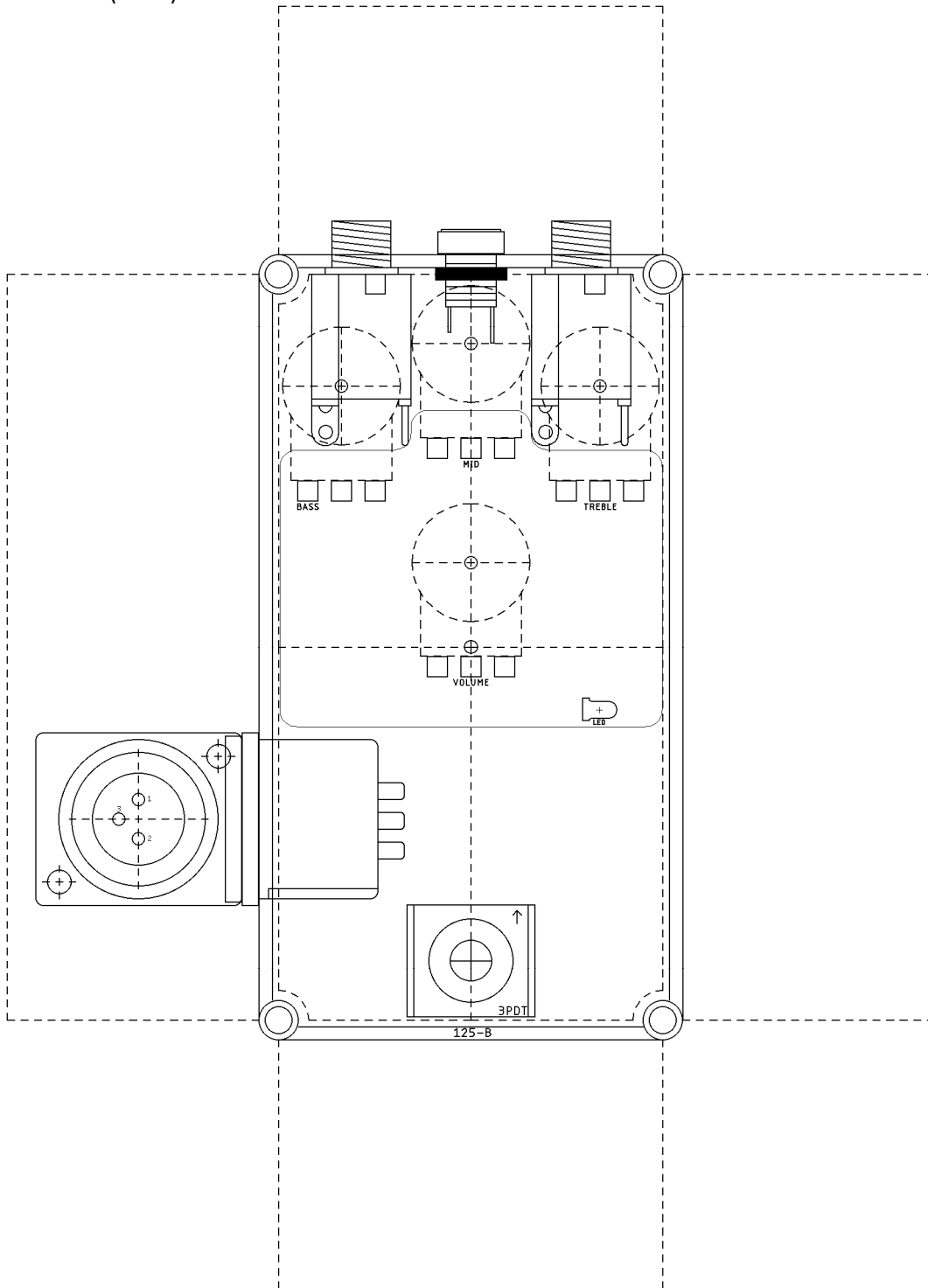
2.7n	Film	1
100n	Film	3
220n	Film	2
100μ	Electrolytic (35v or higher)	1
220μ	Electrolytic (35v or higher)	4
470μ	Electrolytic (35v or higher)	1
1N5817	Schottky rectifier diode	1
TL072	Dual opamp	1
LED	3 or 5mm	1
2N5457/MMBF5457	JFET	2
10k	Trim pot	1
100k	Trim pot	2
A2k	16mm right angle PC mount	1
A500k	16mm right angle PC mount	1
B20k	16mm right angle PC mount	1
B100k	16mm right angle PC mount	1
DIP	2-position DIP switch	1

The PCB is designed with these caps in mind: 220μF caps - <https://bit.ly/38GkhT8> 470μ cap - <https://bit.ly/30VHqOs>

LAYOUT



DRILL TEMPLATE (125B)



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Not for non-peer to peer resale.