GuitarPCB presents
D.S.O.T.M.

Welcome to my NostalgiTone Artist series. The **D.S.O.T.M.** is here to give you the ultimate sonic experience. We have combined the best, squeezing three incredible circuits into an artist-defining combo.

WattAmp: Experience the magic of early '70s Arena Rock with the WattAmp circuit - your gateway to authentic tube amp tones! Carefully crafted to mirror the iconic sound of a legendary player during his HiWatt era, this pedal packs all the punch, growl, and dynamic response of the cranked vintage amplifier. With its intuitive controls, dial in your perfect foundation preamp tone for those unmistakable boosted amplifier sounds that define an era. Elevate your tone, spark your creativity, and tap into the power of this legendary sound.

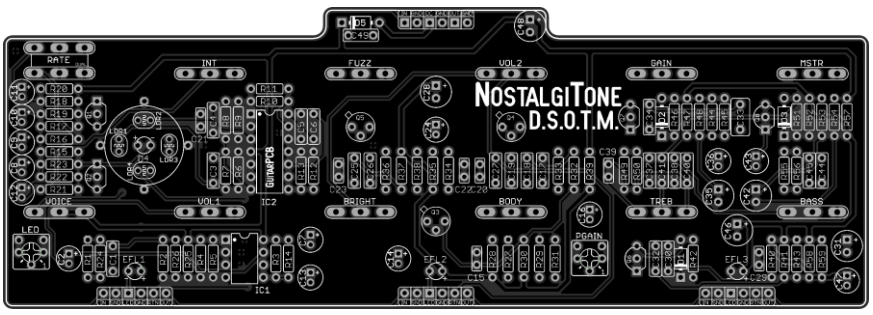
Luna Fuzz: Experience the Luna Fuzz, inspired by the legendary guitar tones of a certain player during the early '70s. This circuit offers a versatile range of sounds with modern design features. Unlike traditional silicon fuzz pedals, the Luna Fuzz delivers a thick, substantial sound without any temperamental behavior, seamlessly integrating with the WattAmp and Phaser for a complete sonic experience. With its vast range spanning from tight, aggressive overdrive to ultra-saturated fuzz, the Luna Fuzz opens endless possibilities for tone exploration.

Phaser: My Phaser utilizes LDRs (Light Dependent Resistors) to deliver smooth transitions between phase shifts, enhancing modulation for a more organic and delightful effect. By utilizing LDRs, we ensure easy availability of essential components, keeping costs reasonable. Moreover, it grants precise control over modulation speed and depth. Experience reduced noise levels, yielding a cleaner, more transparent sound. Positioned correctly in the signal chain, our Phaser faithfully reproduces the classic Phaser tone you would expect when used in tandem.

🔌 Easy Wiring: No more daunting wiring hassles! Say hello to beauty under the hood. Enjoy all-analog tones with modern features that will slip into your gig bag, ensuring you are always ready to unleash your musical magic.

🛠️ Available Components: We recognize the hurdles of component availability. Rest assured, we've carefully selected components for the **NostalgiaTone** series that are currently available from today's popular vendors.

Do not settle for the ordinary when you can have extraordinary. Elevate your tone with the **NostalgiTone** series combo builds from GuitarPCB. Get yours today and discover a world of sonic possibilities like never before!



Part	Value
R1	1M
R2	1M
R3	100k
R4	56k
R5	10k
R6	47k
R7	47k
R8	47k
R9	47k
R10	47k
R11	47k
R12	47k
R13	47k
R14	100k
R15	3k3
R16	220k
R17	3k3
R18	220k
R19	2M2
R20	15k
R21	4k7
R22	100k
R23	47k
R24	100R

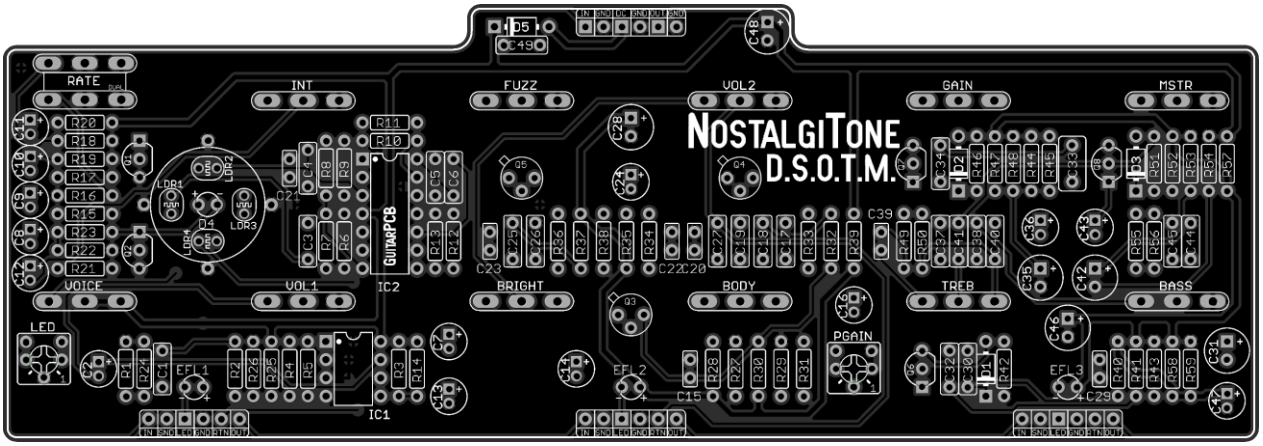
Part	Value
R25	10k
R26	10k
R27	1M
R28	470k
R29	100k
R30	10k
R31	100R
R32	820R
R33	100R
R34	100k
R35	56k
R36	56k
R37	2k7
R38	10k
R39	100R
R40	10M
R41	3k3
R42	3k3
R43	1k
R44	12k
R45	200k
R46	10M
R47	3k3
R48	3k3

Part	Value
R49	100k
R50	10k
R51	10M
R52	3k3
R53	3k3
R54	120R
R55	12k
R56	12k
R57	47R
R58	62k
R59	100k
C1	100n
C2	1uF
C3 - C6	10n
C7	1uF
C8	1uF
C9	1uF
C10	1uF
C11	47uF
C12	47uF
C13	10uF
C14	10uF

Part	Value
C15	100pF
C16	22uF
C17	5n6
C18	4n7
C19	220n
C20	470pF
C21	100pF
C22	220pF
C23	220pF
C24	22uF
C25	15n
C26	3n3
C27	2n2
C28	100uF
C29	330pF
C30	100n
C31	100uF
C32	220n
C33	470n
C34	47n
C35	100uF
C36	4u7
C37	4n7
C38	10n

Part	Value
C39	470pF
C40	10n
C41	100n
C42	100uF
C43	10uF
C44	2n2
C45	2n2
C46	100uF
C47	10uF
C48	220uF
C49	100n
D1 - D3	1N4739
D4	Yellow LED
D5	1N5817
IC1	TL072
IC2	TL074
Q1 - Q2	MPSA18
Q3 - Q5	BC108C
Q6 - Q8	BS170
EFL1	Status LED
EFL2	Status LED
EFL3	Status LED

Part	Value
MSTR	A100K
GAIN	A500K
TREB	B500K
BASS	A500K
VOL2	A100K
FUZZ	C1K
BODY	A100K
BRIGHT	B100K
INT	B25K
RATE	B100K Dual
VOL1	A100K
VOICE	B10K
LDR 1-4	PDV-P9203
LED	1K Trim
PGAIN	2K Trim
* CLR x3	1k8 - 4k7
EF1	6PIN Ribbon
EF2	6PIN Ribbon
EF3	6PIN Ribbon



Build Notes:

Included with the purchase of the main PCB board will be (3) standard foot switch wiring boards (6 pins), as well as (3) pieces of ribbon connector. This simplifies the wiring process while keeping troubleshooting to a minimum.

*** CLR x3** - Each wiring board requires an onboard (CLR) current limiting resistor. This is for the main board status LEDs. A value of 1k8 (Bright) to 4k7 (Dim) may be used.

Solder the wiring boards to your preferred 3PDT footswitch, attach one end of the ribbon cable to the wiring board, and then proceed to solder the three assembled footswitches to the main board. Utilize the top center pads for connecting power and the In/Out jacks.

Visit the Shop Page from where you acquired the PCB to access artwork files and find a link to order pre-drilled enclosures from Tayda.

LDR1 - 4 requires part PDV-P9203. Do not substitute. **D5** requires a Yellow or clear White LED. Capping the location is not necessary since it will be inside an enclosure. Mount the LDRs facing the LED. This is an easy procedure that only requires the correct components (see photo).

TIPS:

- **Q6 – Q8 require Mosfet BS170. Do not use any other type such as 2N7000.**
- **D1 – D3** are Zener Diodes 9.1v. I used 1N4739A for my build.
- **Rate Potentiometer** requires a **Dual GangB100K** potentiometer so it has two sets of lugs.
- **Q3 – Q5** are BC108C but can also be BC109C. I suggest the C variant for the higher gain.
- **LED** trimmer provides precise control over LED brightness. When selecting the LED, options include Yellow or Clear White. Feel free to experiment and customize it to your preference. Aim the LDRs at the LED with a slight gap, following the photo example on the previous page. A light cap is unnecessary as the main board will be installed in an enclosure.
- **D5 LFO** The LED can be yellow or clear white. It is not critical like the LDRs.
- Avoid changing the values of resistors, capacitors, or potentiometer tapers, as they play a crucial role in both the functionality and the creation of the desired feel. All values are readily available.

Usage Guide:

Gain Mapping: Effective gain mapping is vital for optimizing your combo pedal setup. Avoid the inclination to turn all knobs to 10, as this rapidly leads to unwanted noise and feedback. Instead, explore the intricacies of control mapping to unlock a diverse range of tones. Consider that each of the three circuits contributes a substantial level of Gain, and when used together, they combine. Follow the suggestions below to extract the utmost from your NostalgiTone DSOTM combo pedal.
Example: The Vibe's dedicated Volume control, is louder than the bypass. However, maintaining headroom is crucial, especially with the abundance of gain and fuzz available to muddy the waters. Start by mapping the gain for the Fuzz, as it is the noisiest of the bunch. Set the Fuzz control to Noon or slightly lower, then adjust the Volume Control to just surpass unity gain when all other effects are bypassed. Next, bring in the Vibe effect and adjust its volume accordingly, with the Intensity around 1 o'clock. This approach should provide enough headroom for introducing the Vibe effect without it becoming lost in the noise.

1. **WattAmp:** Meticulously designed to emulate the distinctive sound of a renowned guitarist during his HiWatt era, this pedal encapsulates the power, grit, and nuanced responsiveness of the fully cranked vintage amplifier. To authentically recreate these tones, it is recommended to start with the Gain control set between 10:00 and 12:00, adjusting the Volume slightly higher. Lower Gain settings ensure smoother operation when paired with the Fuzz. Begin with the Tone controls centered at noon.
2. **Luna Fuzz:** For an optimal Fuzz experience, start with all controls set to noon. Adjust the Volume control to blend seamlessly with the WattAMP, embracing essential Gain mapping. Experiment with blending different amounts of Fuzz with WattAMP Gain for lead tones with plenty of sustain. Avoid maxing out the Fuzz control to prevent excessive noise, preserving an authentic Fuzz tone. Begin with the PGAIN trimmer at its midpoint, although you can adjust it higher or lower for a different Fuzz character. I recommend using BC108C or BC109C transistors for the Luna Fuzz, as the typical hFE found in the C variant offers optimal DSOTM performance.
3. **Phaser:** For the best DSOTM Phaser experience, start by centering all controls at noon. Adjust the Rate control as needed to achieve your desired tone. Set the Volume control to a reasonable level that complements the other circuits. Fine-tune the Intensity, starting from the classic noon position. The Voice control can add or subtract low-end tones, making noon an ideal starting point.
4. **Power Supply:** Always use a 9-volt power supply (nothing higher) with a 2.1mm plug and a negative tip.

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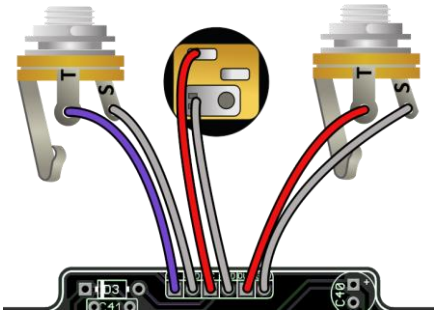
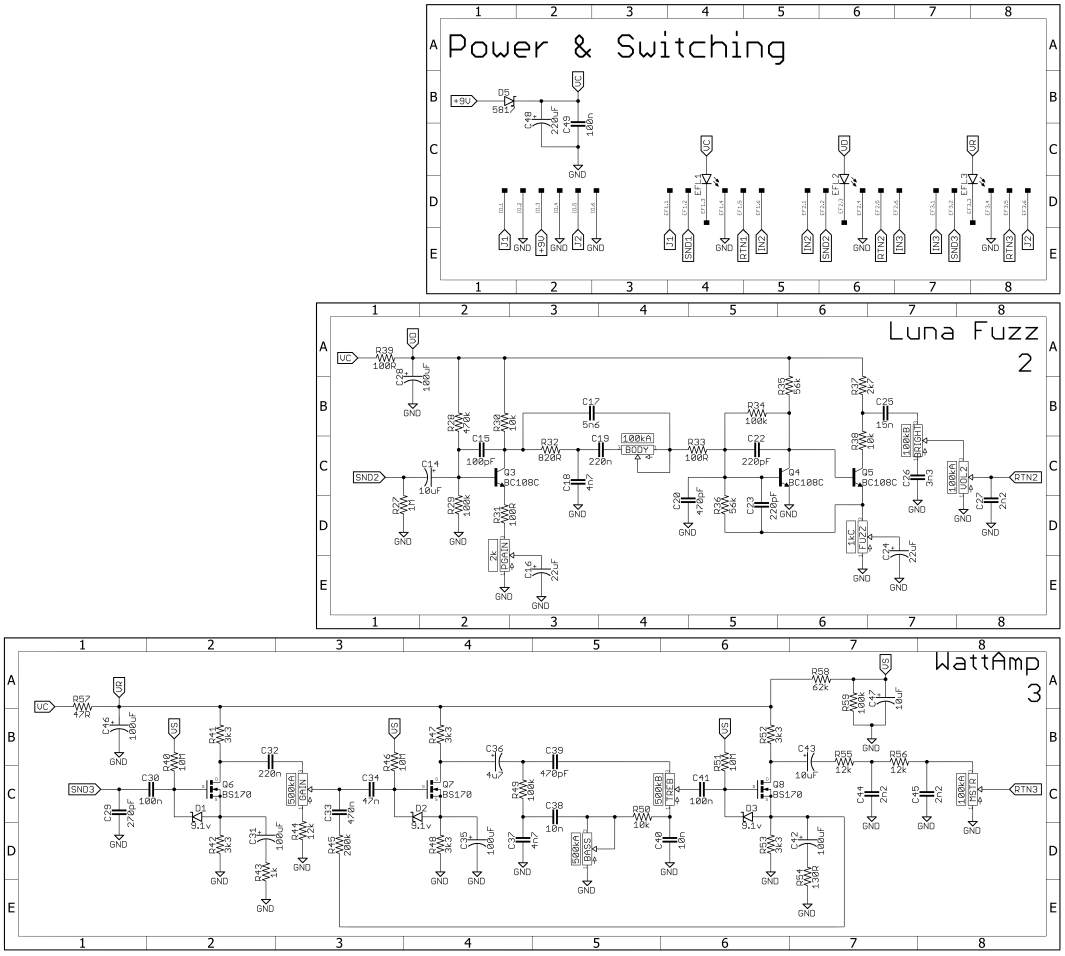
A link for a Tayda Pre-drilled enclosure is on the Shop page at GuitarPCB.com



Easy Wiring Guide


Power & Switching
+9V
D5
5817
C48
220uF
C49
100n
GND
VC
VD
VR
EFF1
EFF2
EFF3
J1
+9V
J2
SND1
RTN1
IN1
SND2
RTN2
IN2
SND3
RTN3
IN3

Luna Fuzz
2
VC
VD
R39
100R
C28
100uF
R28
470k
R29
10k
C17
5n6
C15
100pF
R32
820R
C19
220n
100kA
BODY
R33
100R
R34
100k
R35
1M
C22
220pF
R37
47k
C25
15n
100kB
RIGHT
R38
10k
C26
3n3
100kA
VOL_2
C7
2n2
RTN2
SND2
C14
10uF
R27
1M
R30
100k
Q3
BC108C
Q4
BC108C
Q5
BC108C
C18
47n
C20
470pF
R36
56k
C23
220pF
R31
100R
2k
PRSNC
C16
22uF
1kC
FUZZ
C24
22uF
GND

WattAmp
3
VC
VB
VS
R67
47R
C46
100uF
R68
62k
R69
100k
C47
10uF
R40
10M
R41
3k3
C32
220n
C30
100n
SND3
C29
270pF
Q6
BS170
D4
9.1v
R43
3k3
C31
100uF
R44
12k
500kA
GAIN
R42
1k
C33
47n
R45
200k
C34
47n
R46
10M
R47
3k3
Q7
BS170
D2
9.1v
R48
3k3
C35
100uF
C36
4u7
C39
470pF
R49
100k
C38
10n
C37
47n
500kA
PRSNC
R50
10k
C40
10n
C41
100n
R51
10M
R52
3k3
Q8
BS170
D3
9.1v
R53
3k3
C42
100uF
D64
130R
C43
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R55
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R56
12k
C44
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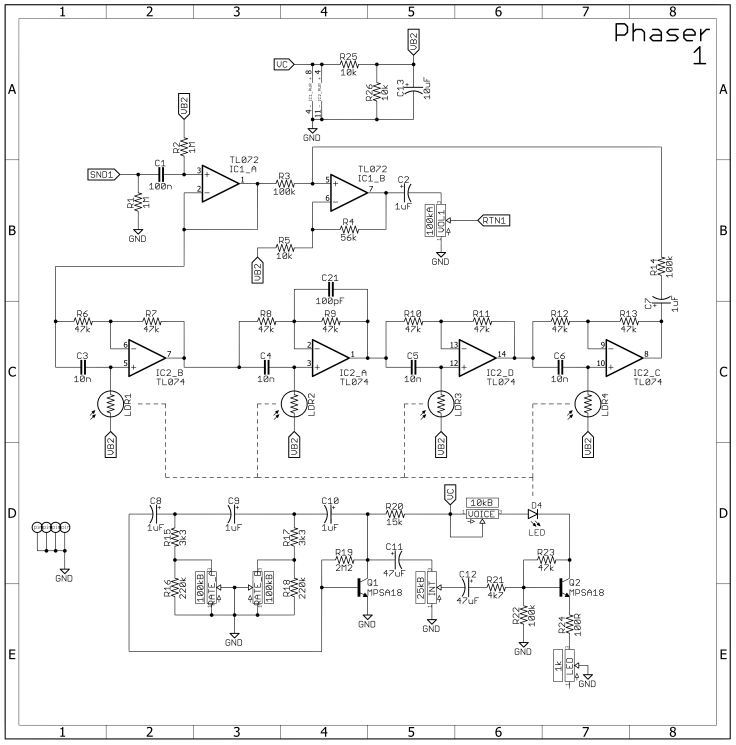
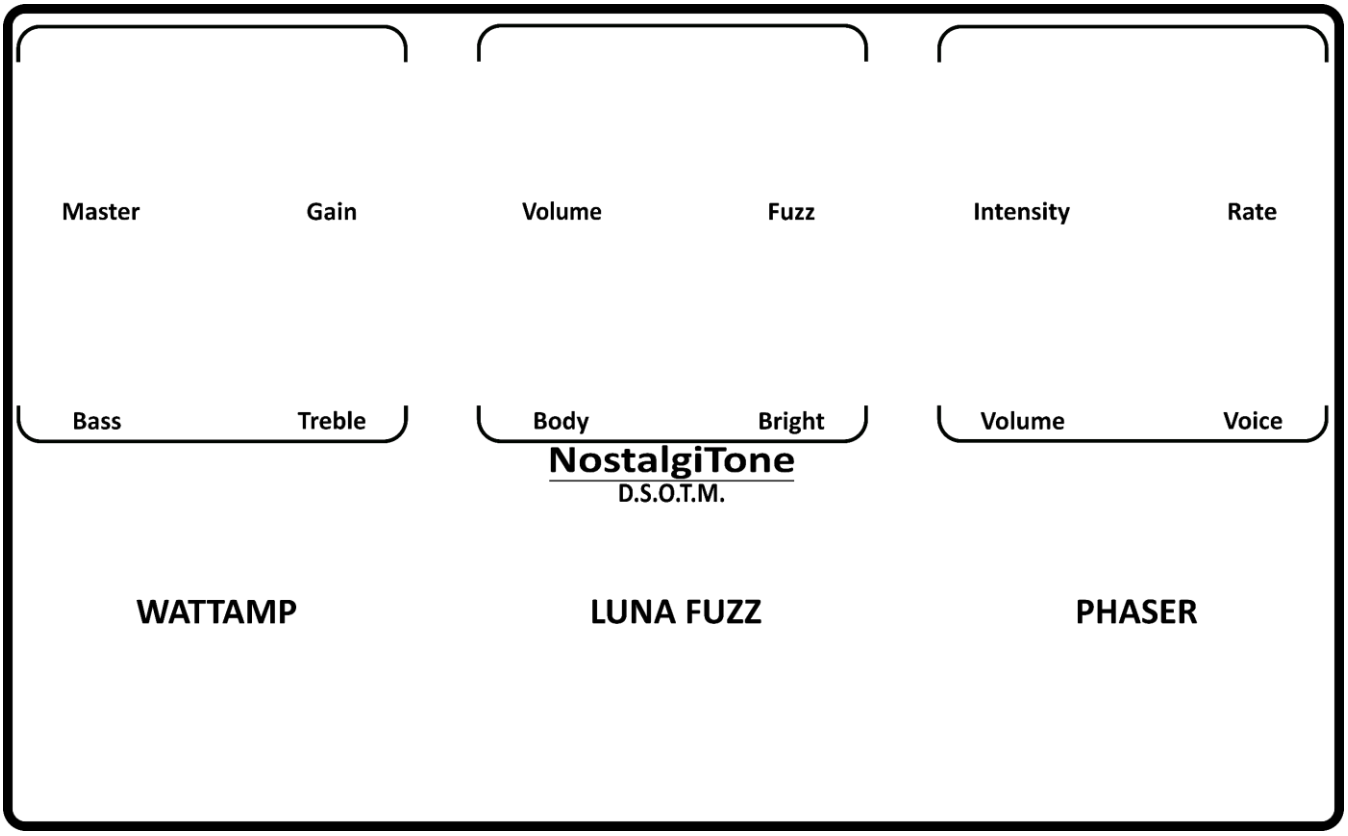
C45
2n2
100kA
TONE
RTN3


Phaser
1
VC
VB2
R25
10k
R24
10k
C13
10uF
R1
1M
SND1
C1
100n
TL072
IC1_A
R3
100k
TL072
IC1_B
C2
1uF
R4
56k
100kA
VOL_1
RTN1
R5
10k
R14
100k
C27
1uF
C21
100pF
R6
47k
R7
47k
R8
47k
R9
47k
R10
47k
R11
47k
R12
47k
R13
47k
C3
10n
C4
10n
C5
10n
C6
10n
IC2_B
TL074
IC2_A
TL074
IC2_D
TL074
IC2_C
TL074
LDR1
LDR2
LDR3
LDR4
C8
1uF
C9
1uF
C10
1uF
R20
10k
10kB
VOICE
D4
LED
R15
3k3
R17
3k3
R16
220k
100kB
MIX
R18
220k
100kB
R19
2M2
C11
47uF
25kB
IN
Q1
MPSA18
C12
47uF
R21
4k7
R23
47k
Q2
MPSA18
R22
100k
R24
100k
1k
LED
GND

Silkscreen Image: Obtain a High-Resolution version at the Shop Page where you purchased this PCB.



Drill Template Printing Tip:
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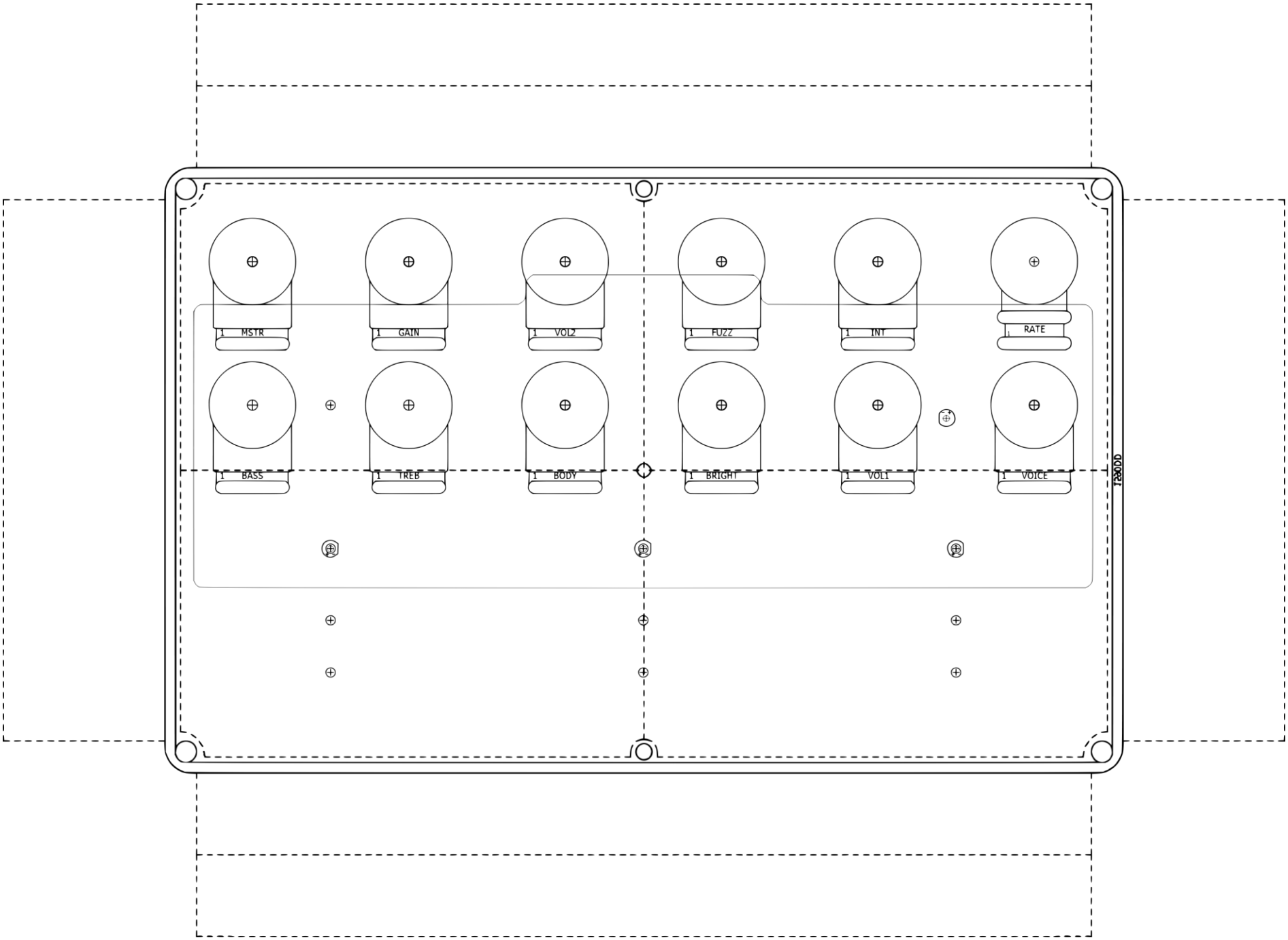
MSTR
GAIN
VOL2
FUZZ
INT
RATE
BASS
TREB
BODY
BRIGHT
VOL1
VOICE