GuitarPCB Presents

Mule Kicker – Pro Combo

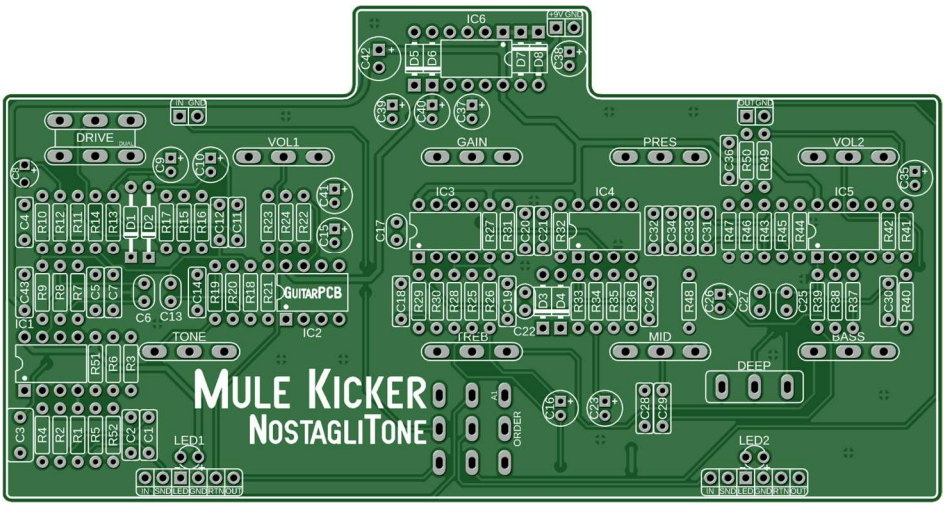
The Mule Kicker combines the soulful grit of a Warren Haynes-inspired, Soldano-based preamp with the unmistakable clarity and push of a true Klon[e] Centaur circuit. Each side can be used independently, stacked together, or reversed in order for unprecedented tonal versatility—ranging from responsive edge-of-breakup warmth to harmonically rich saturation.

The Mule Preamp is an all-analog preamp pedal based on the legendary Soldano circuit. Designed for rich saturation, tight lows, and articulate highs, it delivers authentic tube-like response. Perfect as a standalone preamp or a powerful drive pedal, the Mule provides the punch, articulation, and dynamic response expected from a top-tier tube amp circuit.

The Kicker stays true to the legendary Klon[e] circuit, delivering a transparent boost, rich harmonics, and dynamic touch sensitivity. It adds depth and clarity without coloring your core tone. With switchable order, you can place the Kicker before or after the Mule, unlocking a wide palette of unique tonal combinations to dial in your perfect sound.

Key Features:

- **Authentic Soldano-style preamp featuring a 3-band EQ, Presence control and a Deep switch for precise, responsive tone shaping.**
- **The Kicker Boost delivers the unmistakable clarity, rich harmonics, and transparent gain of the classic Klon[e] Centaur.**
- **Built-in order switching is the key to unmatched tone-shaping - unlocking sounds and dynamics you won't find anywhere else.**

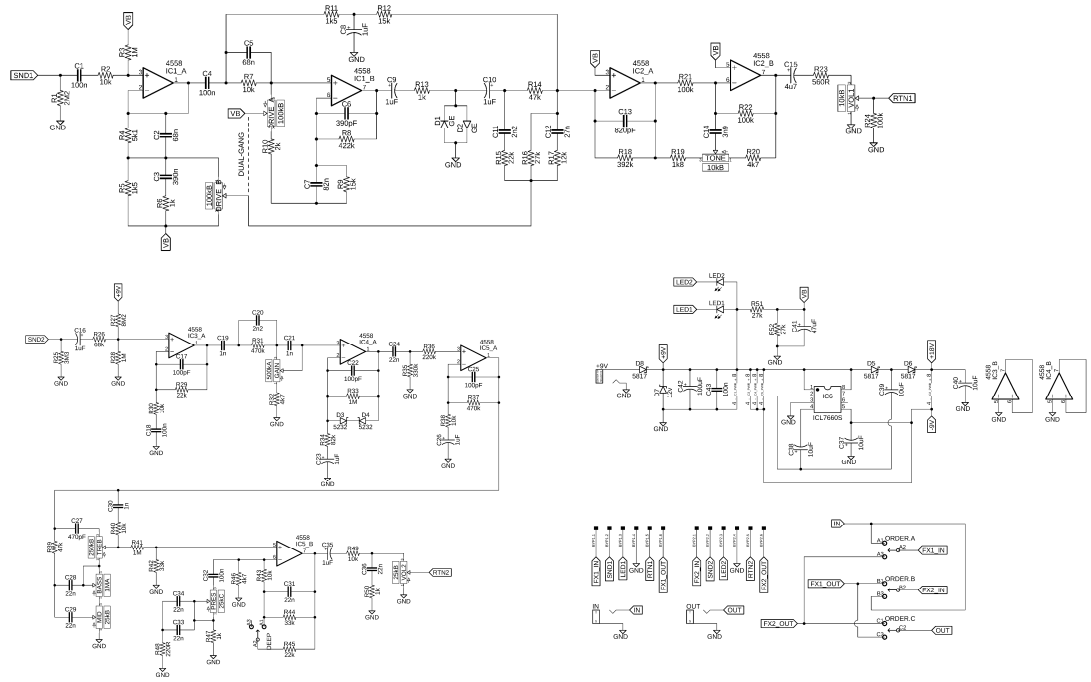


Order switching is built-in, with Ribbon Cable connections making wiring a breeze.

Ideal for a 1590XX or 1790NS (both are the same).

Included with each purchase. – (1) Mainboard, (2) ribbon cables, (2) wiring boards.

Schematic:



Bill of Materials:

Part	Value
R1	2M2
R2	10k
R3	1M
R4	5k1
R5	1k5
R6	1k
R7	10k
R8	422k
R9	15k
R10	2k
R11	1k5
R12	15k
R13	1k
R14	47k
R15	22k
R16	27k
R17	12k
R18	392k
R19	1k8
R20	4k7

Part	Value
R21	100k
R22	100k
R23	560R
R24	100k
R25	3M3
R26	68k
R27	10M
R28	1M
R29	22k
R30	10k
R31	470k
R32	4k7
R33	1M
R34	82k
R35	330k
R36	220k
R37	470k
R38	10k
R39	47k
R40	10k

Part	Value
R41	1M
R42	33k
R43	10k
R44	33k
R45	22k
R46	4k7
R47	1k
R48	220R
R49	10k
R50	1k
R51	27k
R52	27k
C1	100n
C2	68n
C3	390n
C4	100n
C5	68n
C6	390pF
C7	82n

Part	Value
C8	1uF
C9	1uF
C10	1uF
C11	2n2
C12	27n
C13	820pF
C14	3n9
C15	4u7
C16	1uF
C17	100pF
C18	100n
C19	1n
C20	2n2
C21	1n
C22	100pF
C23	1uF
C24	22n
C25	100pF
C26	1uF
C27	470pF

Part	Value
C28	22n
C29	22n
C30	1n
C31	22n
C32	100n
C33	22n
C34	22n
C35	1uF
C36	22n
C37	10uF
C38	10uF
C39	10uF
C40	10uF
C41	47uF
C42	100uF
C43	100n
* CLR x 2	1k8 - 4k7
LED1 - LED2	Status
ORDER switch	3PDT
DEEP switch	SPDT

Part	Value
IC1 - IC5	RC4558
IC6	ICL7660S
VOL1	B10K
DRIVE	B100K Dual
TONE	B10K
VOL2	B25K
PRES	C25K
GAIN	A500K
BASS	A1M
MID	B25K
TREB	B250K
D1 - D2	Germanium
D3 - D4	1N5232 - 5.6v
D5 - D6	1N5817
D7	1N4742A - 12v
D8	1N5817

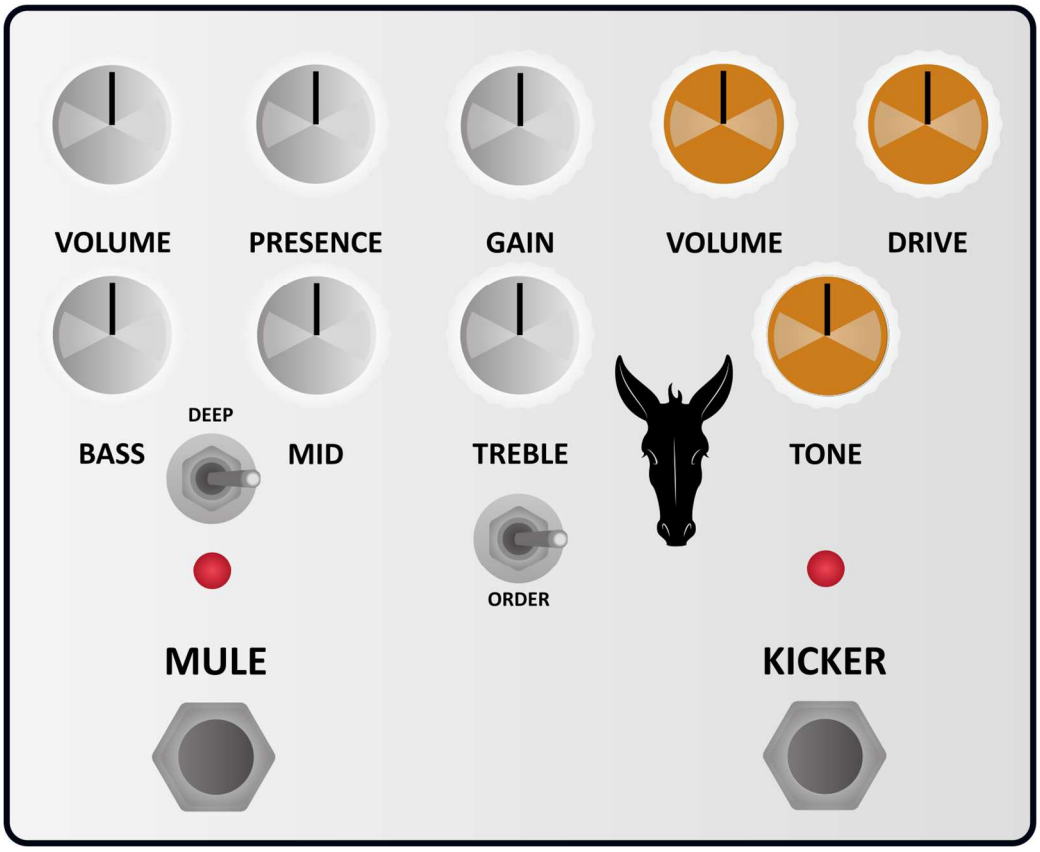
Important: Only use a 9-volt negative tip power supply to avoid damage. Both circuits already use a charge pump to double the voltage.

Presence POT: In place of the C25K pot, a C20K pot may be used since potentiometers have a wide tolerance. A W taper is also suitable, as it combines C taper behavior for the first half of its rotation and A taper for the second.

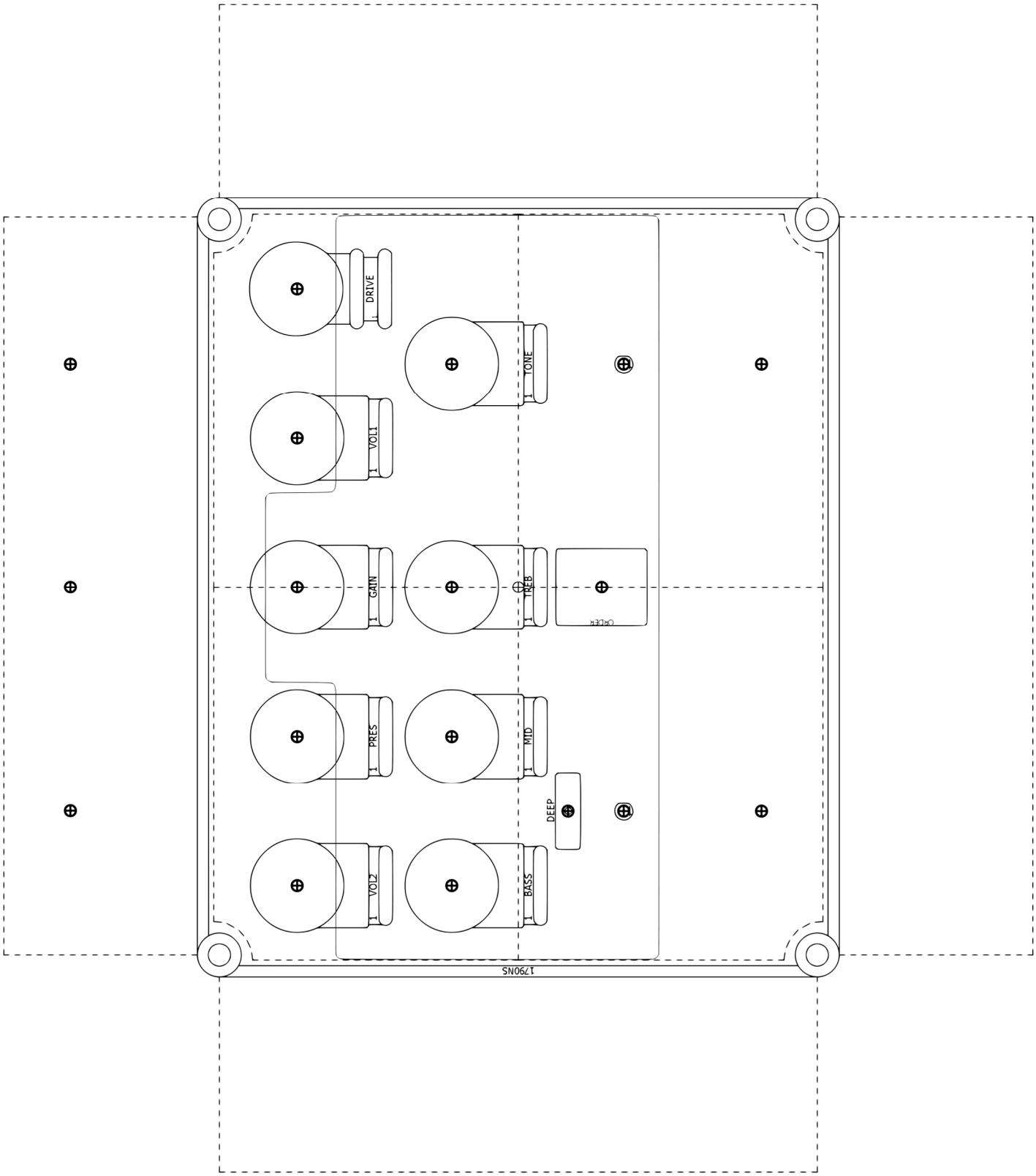
- **You need a 3PDT toggle switch (Order), and a SPDT toggle switch (Deep) solder lug On/On versions for the main PCB.**
- **D1 – D2 suggest Germanium however you may try other diodes.**
- **D3 – D4 requires 1N5232 5.6v diodes. Do not substitute.**
- **D7 requires a 1N4742A 12v diode. Do not substitute, and be sure to use the A version.**
- **The Drive pot requires a Dual Gang B100K potentiometer.**
- **IC1 – IC5 suggest RC4558 however you may try others dual opamps.**
- **IC6 requires ICL7660S. Do not substitute.**

Build Notes:

1. **Remove both nuts on each of the 3PDT foot switches for the best height match. Adjust the height of the inner Order Switch adjustment nut so it is level with the foot switches' height relative to the enclosure. Do not over-tighten the outer Switch nut.**
2. **There are two (CLR) Current Limiting Resistors crucial to protect and adjust the brightness of their corresponding status LED. You may use a value of 1k8 (Bright) to 4k7 (Dim).**



Easy Wiring Diagram



1590XX or 1790NS Drill Template (Print without scaling)

Free Art courtesy of GuitarPCB.