GuitarPCB Presents

Crazy Train - Dual Combo

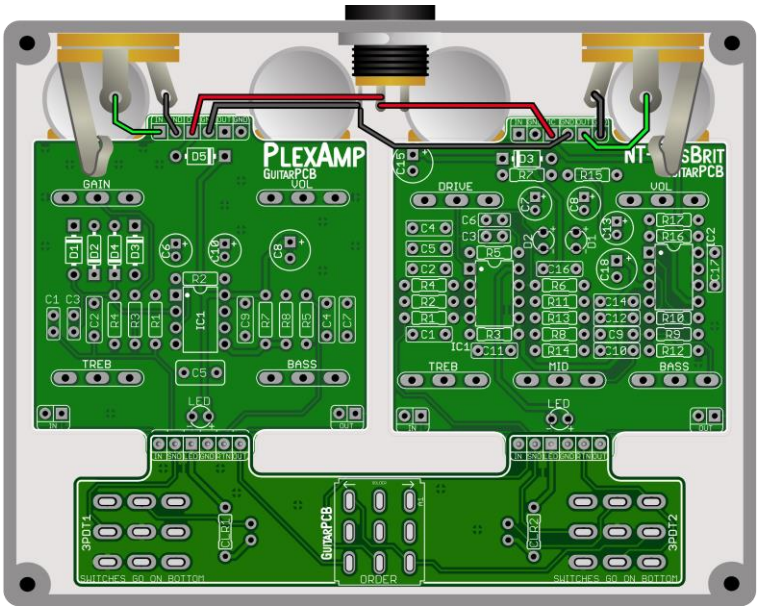
Introducing the Crazy Train Combo, a new Dual Combo that combines two iconic circuits to capture the legendary sound of Randy Rhoads. This Combo features the "British" and "Plexamp" circuits, designed to work in perfect harmony to recreate the searing tones that defined an era of rock.

The "British" circuit features a Marshall-style preamp and tone stack. It delivers the classic British crunch and dynamic response that formed the backbone of Randy Rhoads' sound. Whether you are playing rhythm or lead, this circuit offers the rich, harmonic complexity and punchy midrange that brings it to life.

The "Plexamp" circuit serves as a preamplifier boost, inspired by the legendary Dist+ Randy used to push his Marshall amplifier into distortion. Going a step further, this circuit includes an additional dual layer of EQ to shape the tone even more, delivering the extra edge and clarity that made Randy's sound so distinctive. Reverse the order (Boost second) for an entirely different set of useful tones.

Key Features:

- **Authentic Marshall-style British preamp and tone stack with adjustable Bass, Mids, and Highs for precise tonal control.**
- **Plexamp is used as a Preamp boost for soaring solos and powerful riffs, equally effective as a standalone feature.**
- **Built-in order switching for endless tonal possibilities, allowing you to easily reverse the signal path.**

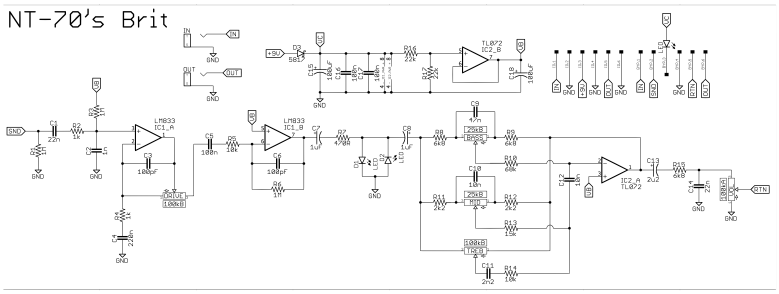


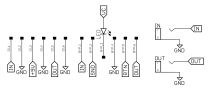
Order switching is built-in, with pin header connections making wiring a breeze.

Ideal for a 1590BB2 enclosure, featuring the same dimensions as a 1590BB but with 125B clearance for jacks.

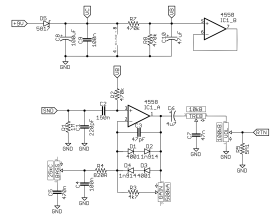
Included with each Dual Combo purchase. – (2) Mainboards, (2) pin headers, (1) Dual wiring board.

Schematic:





PlexAmp



Bill of Materials British:

Part	Value	Part	Value	Part	Value	Part	Value
R1	1M	R13	15k	C7	1uF	IC1	LM833
R2	1k	R14	10k	C8	1uF	IC2	TL072
R3	1M	R15	6k8	C9	47n	* CLR x1	1k8 - 4k7
R4	1k	R16	22k	C10	10n	D1 - D2	LED
R5	10k	R17	22k	C11	2n2	D3	1N5817
R6	1M			C12	10n	LED	Status
R7	470R	C1	22n	C13	2u2		
R8	6k8	C2	1n	C14	22n	VOL	A100K
R9	6k8	C3	100pF	C15	100uF	DRIVE	B100K
R10	68k	C4	220n	C16	100n	BASS	B25K
R11	2k2	C5	100n	C17	100n	MID	B25K
R12	2k2	C6	100pF	C18	100uF	TREB	B100K

Bill of Materials PlexAmp:

Part	Value	Part	Value	Part	Value	Part	Value
R1	1M	C1	220pF	C9	100n	D1	1N4001
R2	470k	C2	150n	C10	47uF	D2	1N914
R3	4k7	C3	47pF	VOL	B100K	D3	1N4001
R4	820R	C4	100n	GAIN	A500K	D4	1N914
R5	5M1	C5	470n	BASS	C25K	D5	1N5817
R7	470k	C6	4u7	TREB	B10K		
R8	470k	C7	47n			LED	Status
		C8	100uF	IC1	4558	* CLR x1	1k8-4k7

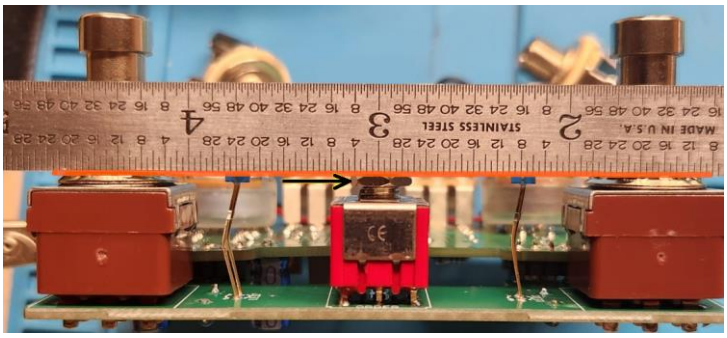
*** You'll need a 3PDT toggle switch On/On (solder lug version) with a short shaft (stubby) for order switching on the dual wiring board PCB.**

Note: BASS 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. Kits may provide any of these values.

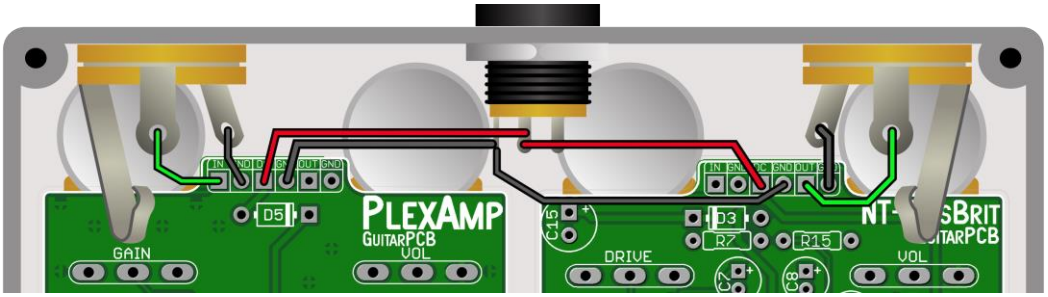
Build Notes:

1. **Solder the short side of both pin headers to the top of each main board, pointing upward. Next, solder all three switches, and (CLRs), to the dual wiring board. Dry hang the LEDs (optional) if mounting to the dual wiring board.**
2. **Since the dual wiring board offers an additional LED location for each circuit, you can choose your preferred setup. Whichever option you pick, solder a small jumper on the unused LED pads. (CLRs) are essential regardless of the location choice.**
3. **If you order the Tayda drilled enclosure with my link (see shop page) you must install the Status LEDs on the wiring board.**
4. **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.**
5. **Install the wiring board by sliding it over both pin headers. Once the foot switches and toggle switch are tightened within the enclosure, proceed to solder the long side of the pin header to the dual wiring board.**
6. *** 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).**
7. **Remove pot protectors for the side-by-side 3x tone section. Use non-conductive backing instead to save space between pots.**

Order Switch Height Adjustment



Easy Wiring Diagram



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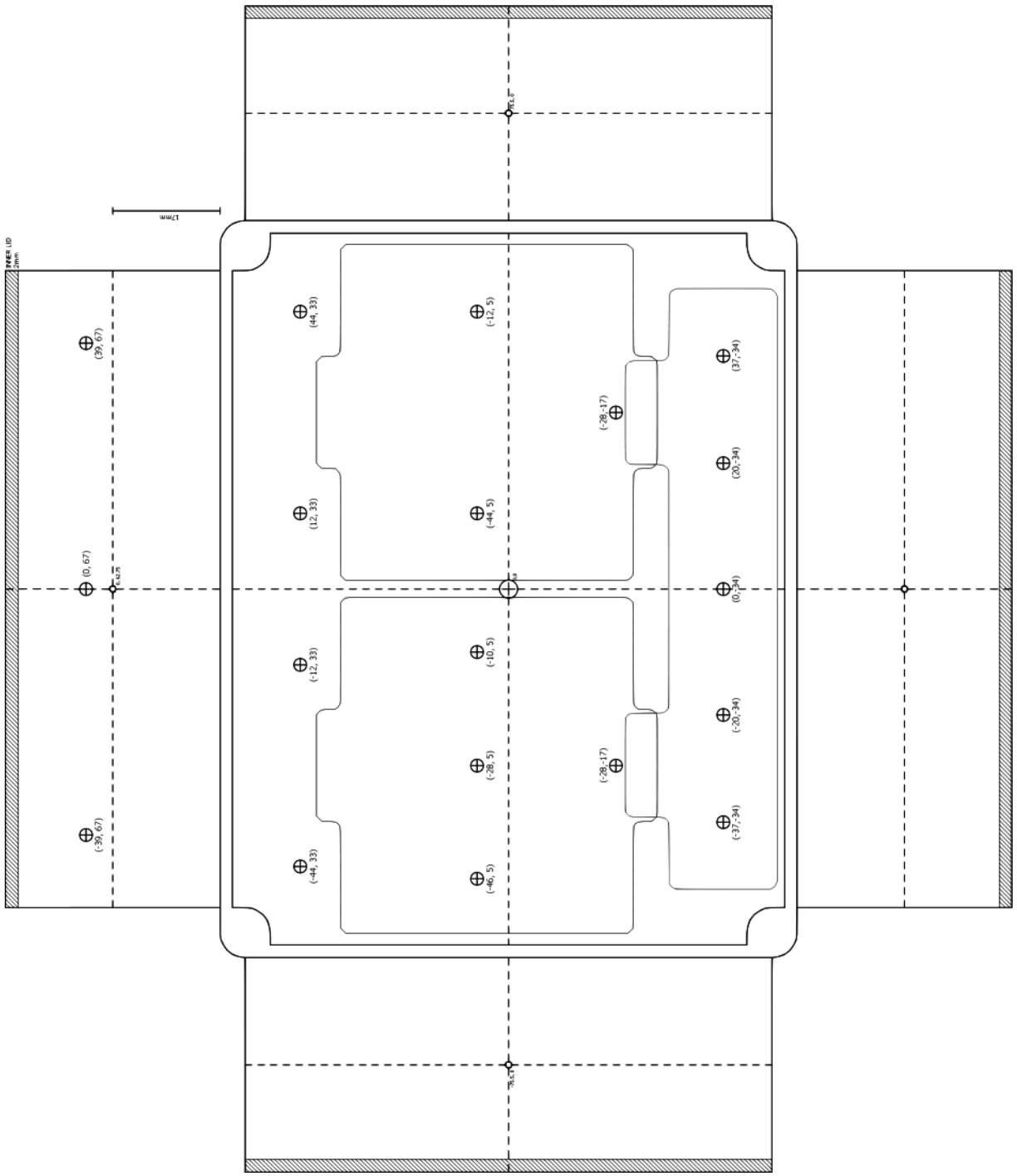

1590BB2 Drill Template

Drill only the holes required for your chosen project. LED holes can be located on either the wiring board or the main boards, giving you flexibility in how you lay out your build.

A link to a Tayda-drilled enclosure is available on the GuitarPCB Shop page. If you use the Tayda-drilled enclosure, both status LEDs must be installed on the dual wiring board.