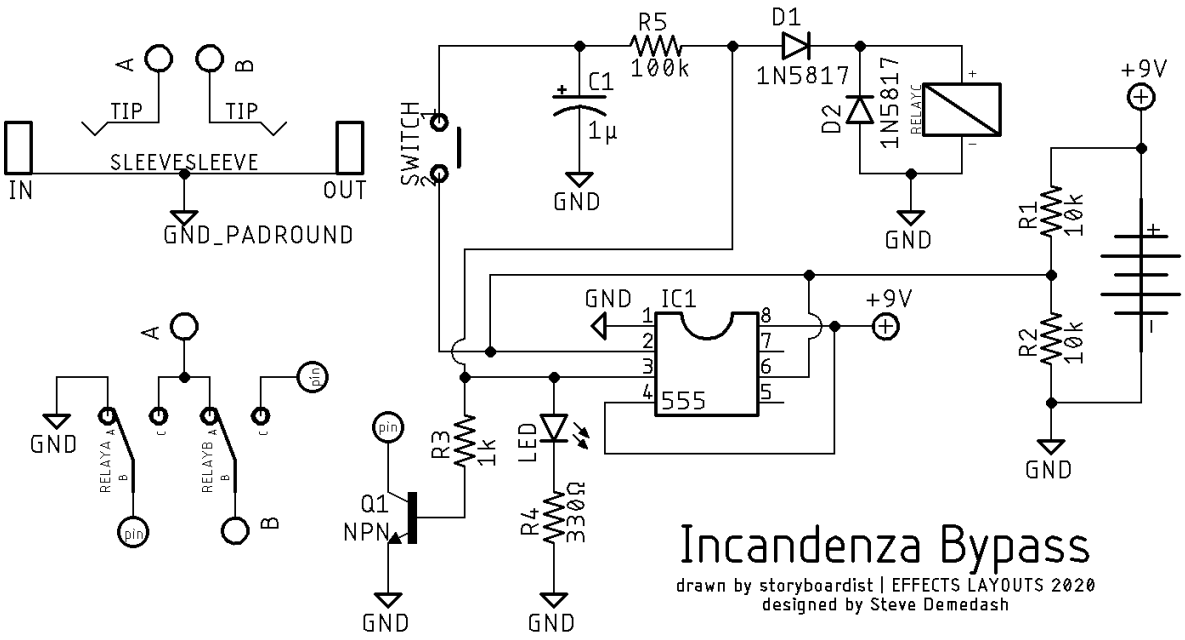
INCANDENZA BYPASS

DESCRIPTION

The INCANDENZA BYPASS was designed by Steve Demedash of Demedash Effects (big thanks to Steve for allowing me to offer this board). It's a simple approach to relay/soft-touch, true-bypass switching without having to program a microcontroller. A flip-flop circuit is based around a 555 timer, which triggers the relay when the momentary footswitch is pressed. This iteration of the INCANDENZA gives you the option to integrate the CLR/LED that's built into many EFFECTS LAYOUTS boards, or use the LED that built into the INCANDENZA board. More info on that below. And if you want a more detailed explanation of this circuit, visit the Demedash Effects website for Steve's full write up. Current draw is about 50mA.

SCHEMATIC



BOM

Resistors

R1	10k
R2	10k
R3	1k
R4	330Ω
R5	100k

Semiconductors

D1	1N5817
D2	1N5817
IC1	555
LED	3 or 5mm
Q1	2N3904, 2N5088, etc.

Capacitors

C1	1µ

Electromechanical

Relay	5v non-latching relay
Switch	Momentary

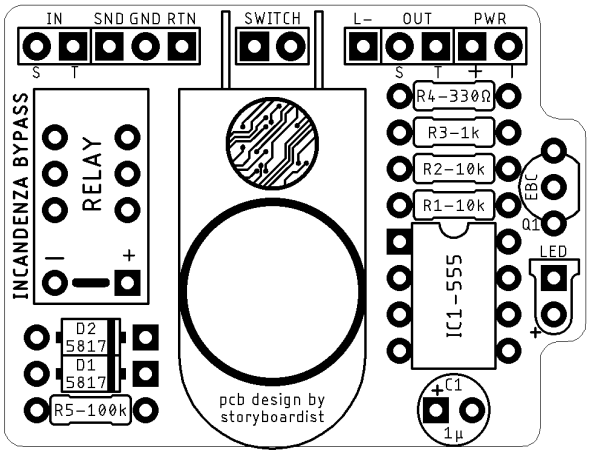
BUILD NOTES

I've used a couple different relays with good success with this circuit: Omron G6S-2 or Takamisawa NA5W-K. Others can be used, just be sure to compare datasheets and do your homework. The PCB is designed to mount the footswitch through the board. I use a plastic washer (like the ones found on 3PDT footswitches) to isolate the back of the board from the enclosure to avoid any shorting from occurring.

If you want to build this using the LED built into the INCANDENZA board, omit R3 and Q1. If you are using this with a PCB that has the CLR and LED built in, omit the LED and R4 on the INCANDENZA board, and connect the LED pad from your main board to the L- pad. This allows Q1 to turn on/off the LED once being triggered by the 555 timer. Any general NPN silicon transistor should work just fine for Q1. I've had good success with Texas Instrument manufactured 555 timers, but others should also work just fine.

The INCANDENZA works best when using top mounted jacks in a 125B. If using this board with another EFFECTS LAYOUTS board, double check the drill template to see if there is enough room to accommodate this board.

LAYOUT



DRILL TEMPLATE