Dazatronyx Discrete Boost Bill of Materials

Parts	Qty	Value	Markings / notes
			Resistors
R4, R7	2	22Ω	Metal film, 1/4W, ***RED, RED, BLK, GLD, BRN***
R3, R6	2	1K	Metal film, 1/4W, ***BRN, BLK, BLK, BRN, BRN***
R2	1	33K	Metal film, 1/4W, ***ORG, ORG, BLK, RED, BRN***
R1, R5	2	1M	Metal film, 1/4W, ***BRN, BLK, BLK, YLW, BRN***
LED			Optional. See notes below
			Diodes
D1	1	12V zener 1W	Optional: for protection against accidental 18V input
LED	1	LED	
			Capacitors
C2	1	22n / 0.022µ	*223*, Polyester film greencap or box MKT, 5mm pitch
C1	1	100n / 0.1µ	*104*, Polyester film greencap or box MKT, 5mm pitch
C3, C4	2	1µ	*105*, CBB polypropylene or film MKT, 5.08mm pitch
			Semiconductors
Q1, Q2	2	N-channel JFET	2N5457 or BBMF5457 or J201 or MMBFJ201 etc.
IC1	1	ICL7660S	(DIP8 socket optional)
			Potentiometers (do not solder to PCB until all potentiometers are tightly assembled in the enclosure)
BODY	1	50KB	Single gang, linear, 16mm
MASTER	1	50KA	Single gang, logarithmic, 16mm. 100K can also work well.
GAIN	1	5KB	Trimpot 3362P
			Switches
BYPASS	1	3PDT foot switch	Latching type, off-board

Further notes:

- When drilling enclosures by hand, there will *always* be some margin of error in alignment, at least due to drill bit drift. **It is important not to solder any hardware to the board until all of the hardware is mounted in its final position**, with nuts fully tightened.
- This layout was designed for the Hammond 1590BS enclosure, with one Switchcraft #11 open frame mono socket, and one Switchcraft #12B open frame stereo socket (or other similar brands). The circuit board will fit snug, with barely any gap between the enclosure wall. A compatible drill layout is also available for 1590N1 / 125B enclosures, which have more space. Most home printers *do not* print accurately to scale. Test all printed drill layouts against a ruler, and adjust the scale as required.
- There is allowance to use *either* surface-mount, or through-hole transistors. I have tried various devices with success.
- There is a 33K SMD current limiting resistor already installed for the LED. This is sufficient for commonly available *high-intensity* clear LEDs. An additional parallel resistor can be included if the brightness is too dull. As a rough guide, regular-intensity clear LEDs may use approximately 10K, and traditional coloured LEDs approximately 1K. This can be tested and soldered from the top of the board after final assembly.
- With the BODY knob turned fully up, you get a flat and even boost across all frequencies. The tone frequency curve is set by C2.
- The gain trimpot can be replaced with a fixed resistor or link, across pins 1 and 3, or 2 and 3. Lower resistance will result in higher gain.
- If you don’t have access to PCB-mount pots, that’s okay. Component leads can be soldered to pots as long, flexible legs.

Debugging

I will do my best to answer any technical questions about the circuit, even small ones. Unfortunately however, I don’t have the resources to help you to debug any circuits which are not working correctly, as this will almost always be a soldering or assembly fault. General debugging support is best found online through DIY building groups.

Feedback

Any feedback or suggestions are always welcomed and may help contribute to future updates. My technical knowledge is limited, and I am happy to crowd-source as much free information as I can. Please consider that these documents may be revised at any time, so it is better to share a link, rather than the actual file.

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