

Yo MidiBox Peeps!

I just started working on this page, but it will be the future home of the boards and designs I have made over the course of making my own projects. You can also visit my [website](#) for stuff regarding my MidiBox projects, other hobbies, and my random blog posts about nothing :)

## Boards

All these boards (and schematics) were created with the free version of [EagleCAD](#). Some designs have been marked up with some custom layers required for [BatchPCB](#) (specifically the silk-screening process). I'm always open to ideas if you know how to make the designs better! Otherwise, they are here for the taking to do with as you please. I only ask that you give credit where credit is due if you plan on making your own modifications. This is just a request, however, and isn't required :)

### **C64 Optimized PSU**

This board is a re-creation of the power section of the [C64 Optimized PSU](#) schematic from ucapps. The nice thing is that it's quite tiny, although the regulator may tend to get hot my original design didn't account for adding a heatsink. For small setups, though, it should work.

Details about this board can be found on [this](#) forum post. I'll eventually add the schematics and board layout as a direct download from my website.

### **BankStick 7-1**

I built this board partly because I was having trouble building it on a prototype board. I based it off of the BankStick x8 schematic available from ucapps with minor modifications. I call it 7-1 because 7 chips can be placed on the board itself, with an optional header to make it possible to hook up an external BankStick.

The only problem I ran into with this board was that my design rules didn't exactly match those from BatchPCB and, as a result, my ground plane was split. It was easy to fix, however - I just soldered a wire from the GND of one of the chips to the GND on my DIL header. Since it's on the bottom, the aesthetics are preserved, although if I end up making another one of these you can bet I'll be fixing that ;)

Details can be found in [this](#) forum post.

### **SID-PWR**

This is a work-in-progress. I wanted to build a power supply that could efficiently power my MidiBox SID and did NOT use a C64 power supply. No offense to them as they work well but they are next to impossible to get into if a fuse blows, etc. While I may not be able to make a better power supply, I can make one that I can at least work on :)

My design basically uses a center-tapped 10V transformer so that I can use it to generate 10V and 5V AC. Each half is converted to DC and regulated, but I also added pico-fuses and some additional caps.

Some of the cap choices were black magic voodoo, I'll admit, but I figure more caps can't hurt (apart from adding a bit more resistance).

I have not tested this board yet (parts are in the mail so I can build it on a protoboard) so we'll see how it goes ;) I'm a bit worried about the headroom needed for the 7805.  $5 * 1.414 = 7.07$  which should be about enough. If it doesn't work, I'll have to go to a 12VCT transformer, which might be tolerable since I'm planning on using heatsinks.

More information about this board can be found in [this](#) forum post.

## ModMatrix

This is another situation where I figured it would be easier to have a board printed than try to wire something up on a protoboard. This board is for the Modulation Matrix part of the MidiBox-SID [control surface](#). At the time of this writing, I have not yet had this board printed as I'm waiting to take more measurements, settle on a front-panel design, etc. While it's untested, you can find the board layouts, schematic, and more info in [this](#) post.

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Last update: **2009/01/04 19:36**