Build guide
508: Loop Detected ec500 VGA adapter

Introduction:

The ec500 is an expandable analog video synth system based on the ideas laid out by Jonas Bers in his CHA/V project. Briefly, the core concept is this: VGA monitors are still fairly ubiquitous, especially older flat-panels (although CRTs are more fun, sure). The VGA standard is readily hackable because it breaks out the six necessary components – red, green, blue, hsync, vsync, and ground – into separate pins. It's also fairly forgiving of signals out of spec (although the ec500 tries to keep those to a minimum).

This VGA adapter is how you interface your VGA signal provider with the ec500 system. By default, we use the same little red $5 VGA tester that Jonas used in the original CHA/V, but you can theoretically use anything else that outputs a VGA signal, up to & including your laptop, which I do **not** recommend, for the sole reason that I do **not** make any promises about this not damaging your laptop.

In essence, your VGA source plugs in to the right-hand side (w/the male pins), and your VGA display device plugs in to the left-hand side, and your ec500 error.core connects via the 16-pin ribbon cable in the center. That's all there is to it. This adapter routes the necessary signals – R, G, B, hsync, vsync, ground – to the ec500, and then brings back whatever mangled RGB you generate with the ec500, sending it along to your display device.

The build:

Super simple! Two VGA connectors -- **PAY ATTENTION TO THE GENDER MARKED ON THE BOARD** – and one 16-pin shrouded box header.

For the box header you should probably tack one pin & then make sure it's fully seated & not crooked before doing the rest.

For the VGA connectors, they sit tight enough that you can put them in, make sure they're seated, then flip the whole thing over & solder them in place while it's sitting on them on the table. Make sure you hit every pin (and don't blob up & bridge any of them together), **and** get the anchor pins good & soldered as well.

You should also have received some M3 screws and 10mm standoffs to make little legs to bring it up to the same height as the rest of the ec500 system.

Good luck!

-- Ross Grady, July 16, 2019