

GMSN!

Pure VCA v2
Build Doc



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Pure. Open. Modular.

GMSN Pure VCA Build Doc

Introduction

Building a Modular Synth is incredibly easy and rewarding. Not only do you get to build electronic devices from scratch, you also get an amazingly powerful electronic musical instrument when you're finished.

GMSN! started off as a Saturday club at the Centre for Contemporary Arts in Glasgow as a place for people to come together and share their passion for Synth DIY. It very quickly grew with new members joining every weekend, learning how to solder and even going on to design their own modules. Despite all of this we have never lost sight of what GMSN! is all about... having fun building synths and providing a platform for the community to support new members.

We now have a full, open source, modular synth which people can build, available from gmsn.co.uk. These designs are backed up by a [YouTube channel](#) with loads of helpful videos and most importantly, the [GMSN! Forum](#), where people from all around the world can get help and advice on their builds.

By following the steps outlined in this build doc you will be well on your way to building your own modular.

Let's get started!

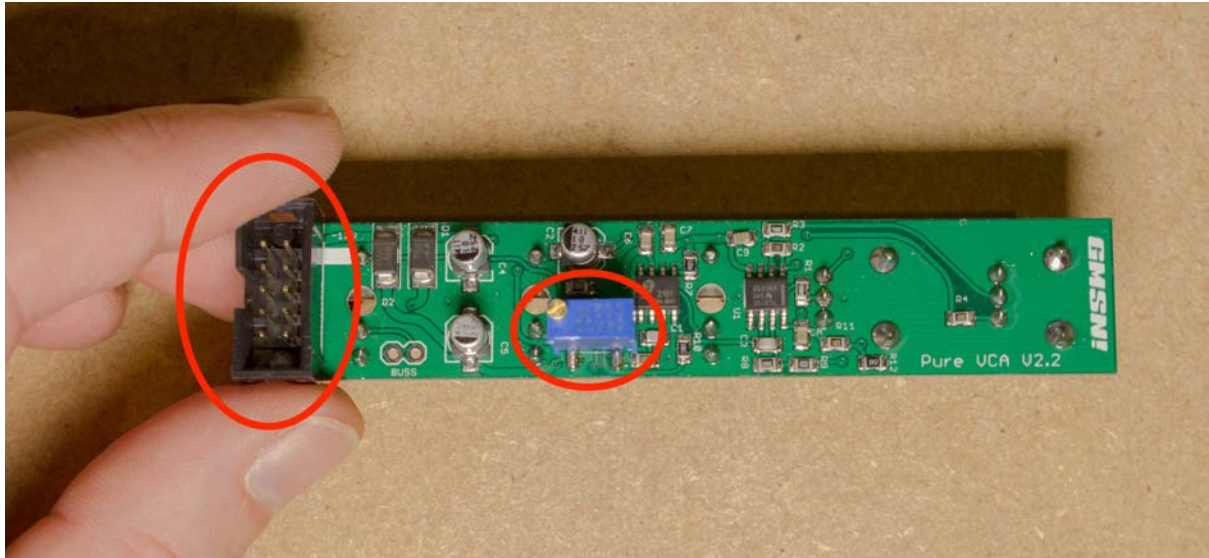
Quick Start

The high level steps to building the Pure VCA are as follows

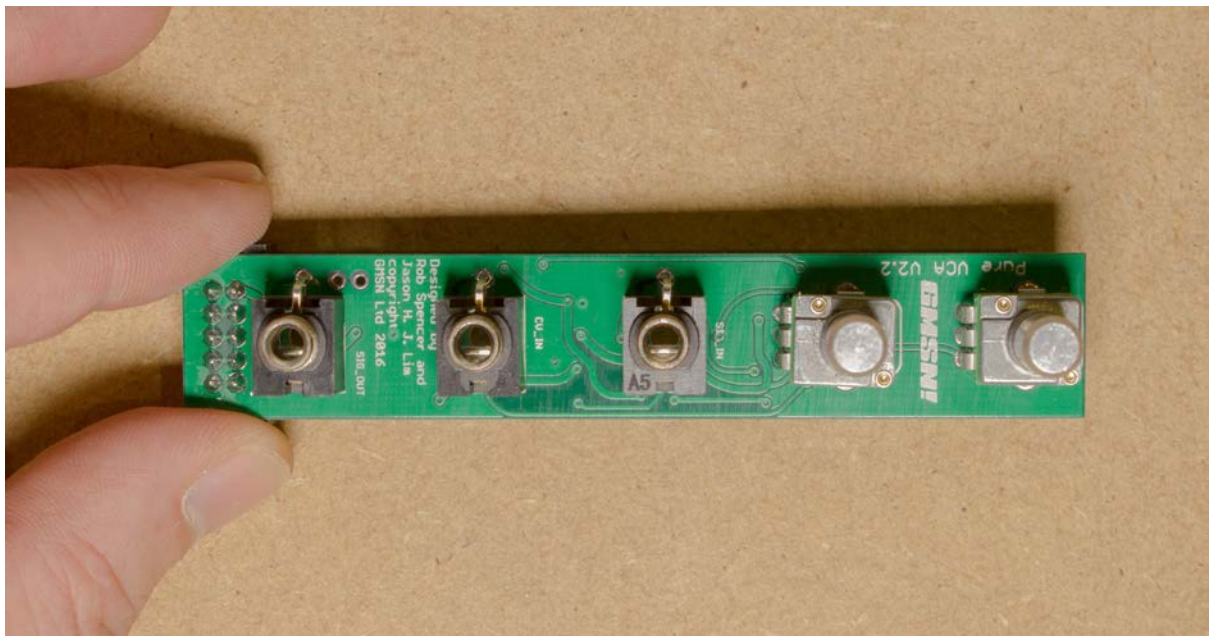
- 1) Follow the [SMD Soldering Video](#) and place all the SMD components as per the BoM.
- 2) Solder the trimmers and 10 pin shrouded header.
- 3) Place the jacks and pots, then fit the panel, before soldering them in place, ensuring they are all flush with the board.
- 4) Fit all the nuts for the jacks and pots, and the knobs on the pots
- 5) Test and calibrate.
- 6) Take loads of [photos](#) and post on [social media](#) how cool GMSN! is and how easy the modules are to make! :D

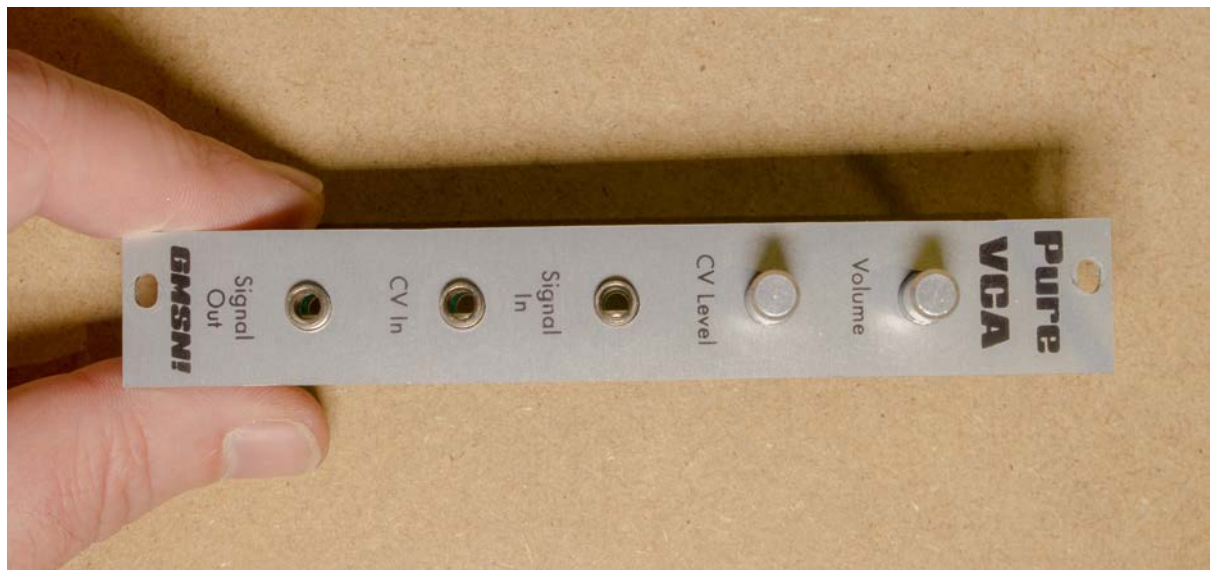
Step by step

- 1) Follow the [SMD Soldering Video](#) and place all the SMD components as per the BoM.
- 2) Solder the trimmers and 10 pin shrouded header.



- 3) Place the jacks and pots, then fit the panel, before soldering them in place, ensuring they are all flush with the board.





- 4) Fit all the nuts for the jacks and pots, and the knobs on the pots



- 5) Test and calibrate. There's not a great deal to calibrate on the VCA. If you know what you're doing and have test equipment that can trim Total Harmonic Distortion, then send a perfect sine through the VCA and adjust the trimmer to match the figures in the THAT2180 datasheet. If don't have this kind of test kit just leave the trimmer in the middle. The difference will probably only be audible to very experienced mastering engineers ☺
- 6) Take loads of [photos](#) and post on [social media](#) how cool GMSN! is and how easy the modules are to make! :D

Further Support

If you have any question or I haven't explained things very well in this build doc, please come and join the chat at the GMSN! Forum, chances are someone has already asked the question or if not someone will be able to answer.

If you have enjoyed build the Pure VCA, check out the other modules that make up the Pure Modular and help to keep GMSN! Open Source.

Many thanks and kind regards

Rob

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