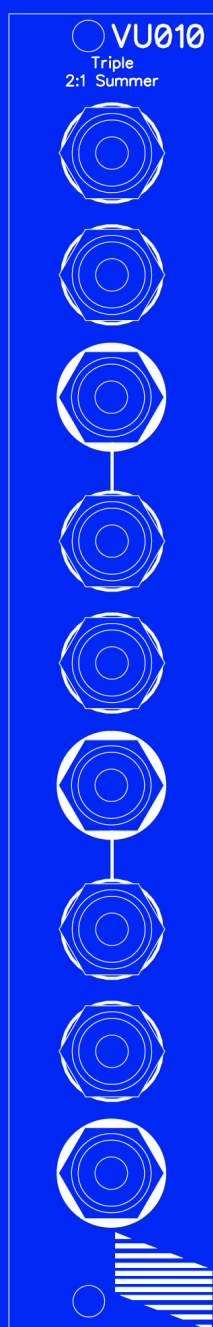


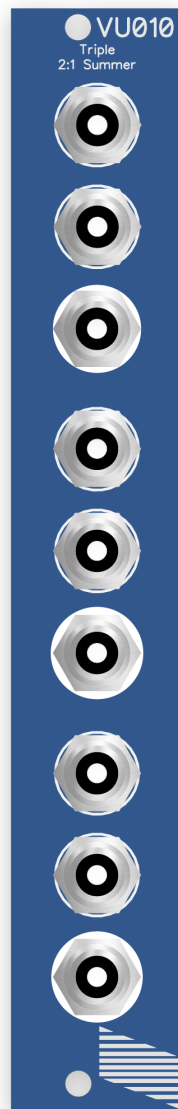
# VU010

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## Triple 2:1 mixer

User documentation / build guide





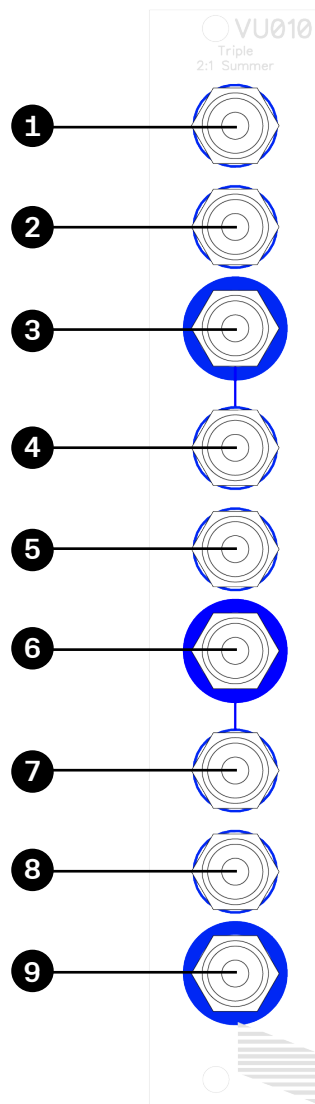
The VU010 features three 2-way mixer sub-modules which sum two 0-1V input signals into one 0-1V output signal.

The VU010 can be used as 3 independant 2-way mixers, or as a 4-input mixer by means of jack normalisation: outputs 1 & 2 to the input A of the 2nd & 3rd mixers, other signals added to input B of the 2nd & 3rd mixers.

### Specifications

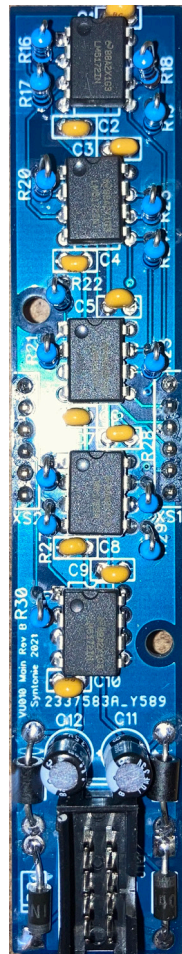
- 4HP
- 25 mA +12V
- 25 mA -12V
- 0 mA +5V
- 40mm depth

Special thanks to: **Lorenzo Ferronato** for the documentation design // And of course, **everyone who has supported Syntonie until now & those who will support it in the future.**



- (1) 1st mixer input A / 0-1V, 100k ohm
- (2) 1st mixer input B / 0-1V, 100k ohm
- (3) 1st mixer output (normalised to 2nd mixer input A) / 0-1V, 499 ohm
- (4) 2nd mixer input A / 0-1V, 100k ohm
- (5) 2nd mixer input B / 0-1V, 100k ohm
- (6) 2nd mixer output (normalised to 3rd mixer input A) / 0-1V, 499 ohm
- (7) 3rd mixer input A / 0-1V, 100k ohm
- (8) 3rd mixer input B / 0-1V, 100k ohm
- (9) 3rd mixer output / 0-1V, 499 ohm

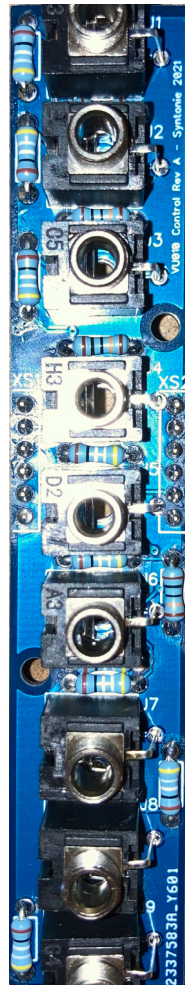
➤ When using normalisation, the output signals will be slightly attenuated.



■ [Use the interactive BOM regarding component placement](#) / [Find the BOM here](#)

Place and solder the components in the following order:

- **1** Resistors (**be careful not to short resistors' leads as they stand vertically**)
- **2** Diodes/Ferrite Beads (**pay attention to the orientation of the diodes**)
- **3** Capacitors (**pay attention to the orientation of the electrolytics capacitors**)
- **4** IC sockets/ICs (**pay attention to the orientation**)
- **5** 10-pin power box header (**pay attention to the orientation**)
- **6** 6-pin header (**solder on the component side of the board, long pins are on the soldered side**)

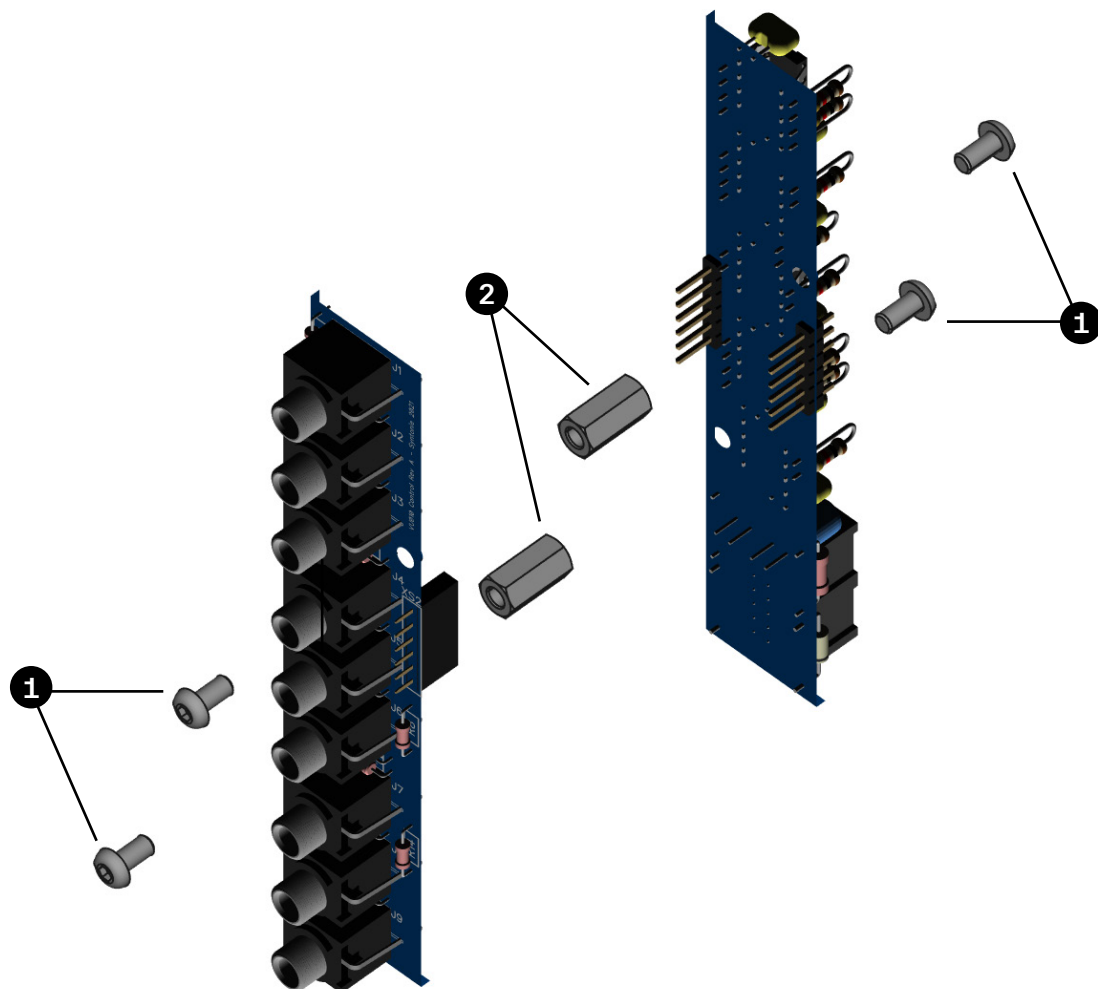


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■ [Use the interactive BOM to look for component placement](#) / [Find the BOM here](#)

Place and solder the components in the following order:

- **1** Resistors
- **2** Jacks (solder one pin and check that the component is correctly aligned. If so, then solder all the other pins)
- **3** 6-pin socket (solder pins to component side of board, socket is on soldered side)



(1) 6mm M3 screw

(2) 11mm M3 spacer

- **Rev B:** initial release

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## References

- The Summing Amplifier  
[https://www.electronics-tutorials.ws/opamp/opamp\\_4.html](https://www.electronics-tutorials.ws/opamp/opamp_4.html)
- LZX – Reference Designs  
<https://github.com/lzxindustries/lxdocs/blob/master/Reference%20Designs/LZX%20Interface%20Examples%20RevA.pdf>

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