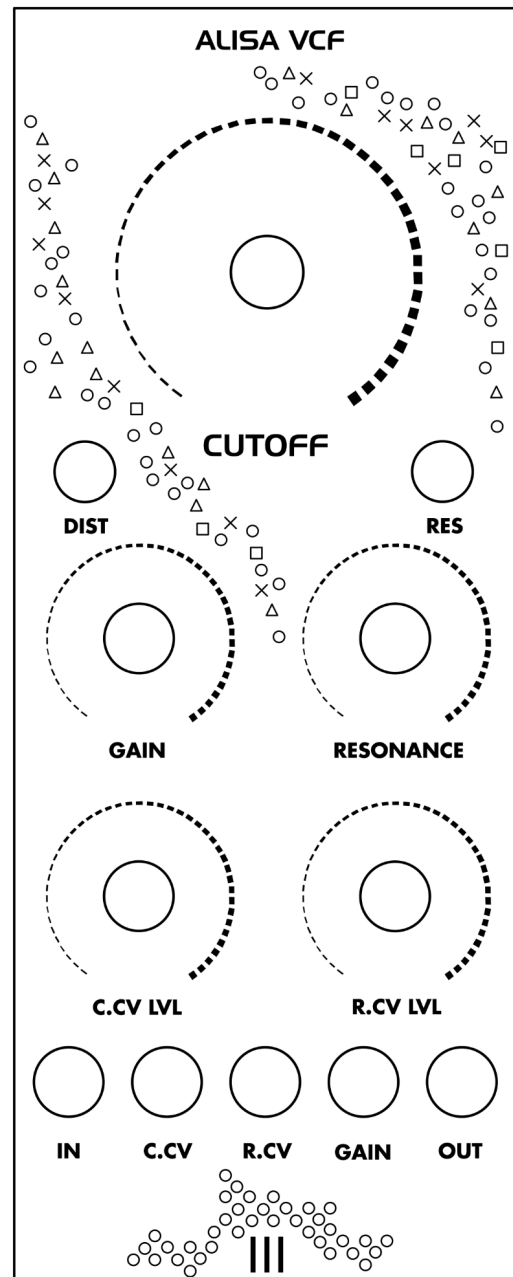


Tre Modular - Alisa VCF

DIY Assembly Guide v1.3

Thank you for choosing Tre Modular.

In this guide, we will walk you through the process of assembling your very own Tre Modular - Alisa VCF module.



Before You Begin:

Always adhere to proper soldering techniques, work in a well-ventilated space, and handle electronic components with care to ensure the longevity and optimal performance of your Alisa VCF.

Ensure you have all the necessary components listed in the Bill of Materials. Familiarize yourself with the provided component list, and if any questions arise, don't hesitate to ask at support@tremodular.com.

BOM (Bill of materials):

Capacitors:

33n x2
47n x1
100n x4
1uf x1
10uf x4

Resistors:

10r x2
75r x1
220r x1
1K x9
2K x4
2K2 x2
3K x1
4K7 x2
6k8 x1
10K x9
15K x2
20K x1
33K x3
39K x3
47K x3
68K x2
100K x10
120K x1
150K x4
330K x1

Diodes:

1N4002 x1
1N4148 x2
1N5819 x2
2V7 Zener x2

Transistors:

2N3904 x15
2N3906 x3

Potentiometers:

B10K x1
B100K x4
100r(101) Trimpot x1
50K(503) Trimpot x2

Buttons:

7X7mm Button locking x2

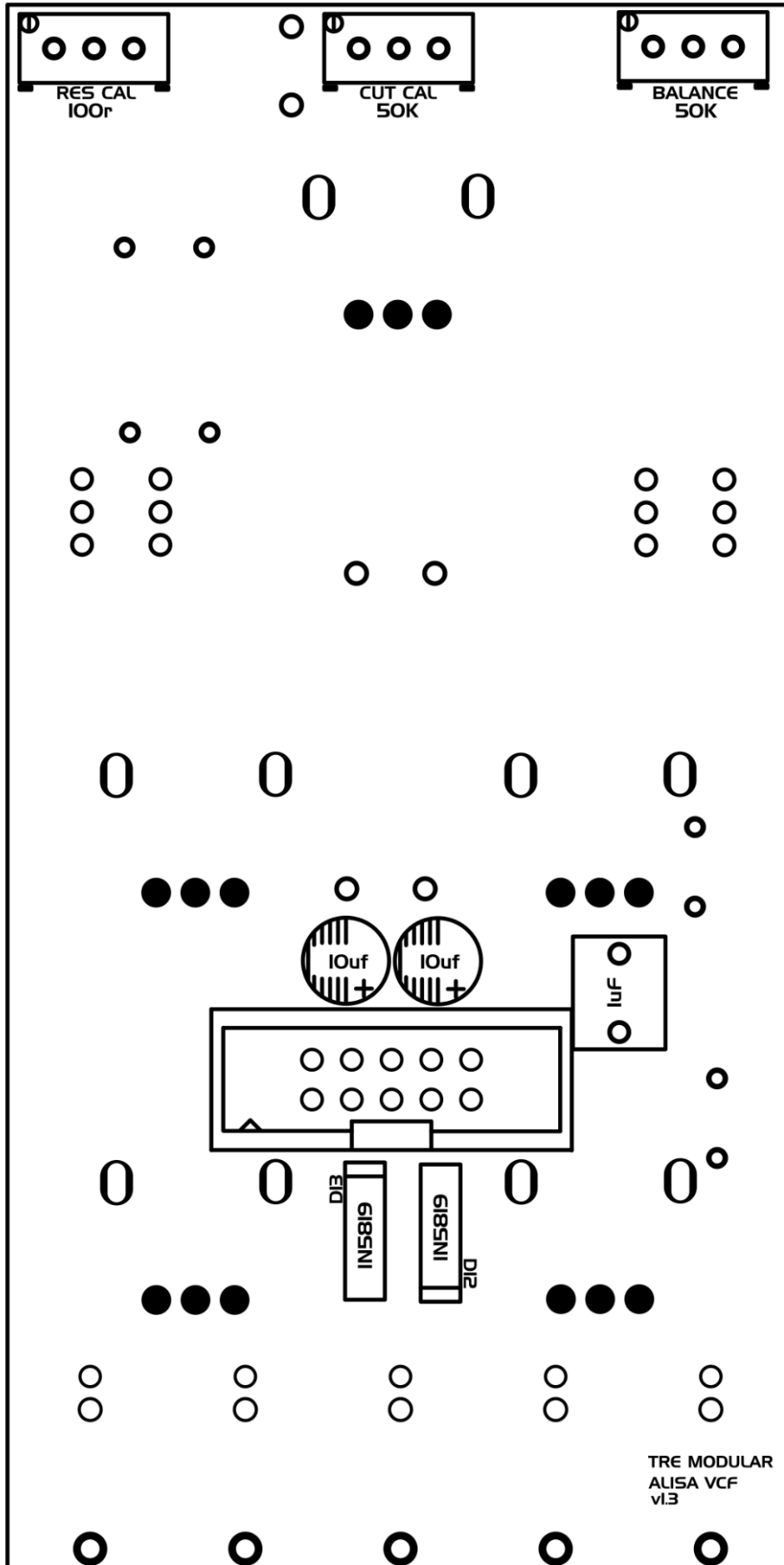
Connectors:

IDC-2.54-2X5P x1

Jack sockets:

Mono Switched x5

Back:



Assembly Guide:

Step 1: Identify and Sort Components

Organize the components into groups based on their types: resistors, capacitors, diodes, transistors, potentiometers, connectors, switches and jack sockets.

Step 2: Diodes (Front)

Insert and solder 1N4002 diode according to the legend.

Insert and solder 1N4148 diodes according to the legend.

Insert and solder 2v7 Zener diodes according to the legend.

When placing diodes ensure correct orientation, referring to the diode's polarity.

Step 3: Transistors

Place and solder all transistors in their designated locations.

Step 4: Capacitors (Front)

Solder all capacitors onto the designated positions on the PCB according to legend.

Start with physically smaller capacitors.

Ensure correct orientation of electrolytic capacitors, referring to the capacitors polarity.

Step 5: Resistors

Resistors are placed vertically.

Refer to the legend for resistor placement.

Start with the lowest resistance value and continue soldering resistors in ascending order, referring to the BOM and legend for values and placement.

For easier soldering, when a resistor is placed on the PCB, bend the leg closest to the resistor's body to keep it in place, and then solder the other leg. Once this is done, straighten the bent leg and proceed with soldering it in place.

Step 6: Diodes (Back)

Insert and solder 1N5819 diodes according to the legend.

Ensure correct orientation, referring to the diode's polarity.

Step 7: 10uf Capacitors (Back)

Solder 10uf capacitors onto the designated positions on the PCB according to legend.

Ensure correct orientation of capacitors, referring to the capacitors polarity.

Step 8: Power Connector (Back)

Solder the IDC connector (Power connector) into its designated spot.

Start by soldering one pin and reflow the solder if the connector is not aligned. If everything is aligned, proceed to soldering the rest of the pins.

Step 9: Trimpots (Back)

Solder the Trimpots into their designated spots. Start by soldering one pin and reflow the solder if it is not aligned. If everything is aligned, proceed to soldering the rest of the pins.

Step 10: Potentiometers, buttons and Jack Sockets

Insert all potentiometers, buttons and jack sockets into their positions on the PCB.

Make sure that the buttons are placed according to legend.

Put on the front panel and fasten it. Ensure everything is aligned properly and that the buttons are moving as they should. Solder everything in place.

Step 11: Final Inspection

Double-check your work against the BOM and legend.

Visually inspect your solder joints for bridges or cold joints.

Ensure all components are securely attached to the PCB.

Step 12: Calibration.

Power off your Eurorack system.

Connect the power cable, ensuring correct polarity.

Power on your Eurorack system.

Cutoff: Connect filter's output to your sound system. Turn the cutoff knob all the way to the left. Turn the calibration trimpot until the filter's output goes silent.

Turn the knob all the way to the right and make sure that filter is fully open.

Resonance: Turn the resonance knob all the way to the right. Turn the calibration trimpot until you hear a sudden increase in resonance. Tune the resonance so that the last ~5% of resonance control is after this sudden increase. You can adjust it to your taste, but be aware that if you turn the resonance too high it will start to clip.

Balance: For calibrating balance you will need to connect this filter to an oscilloscope and make sure that the signal is balanced around 0v. By default it should be close to being balanced.

If the module is working as it should. Insert the module into an available slot in your rack and secure it in place.

Enjoy!

Additional Information:

For any additional questions or support, please contact Tre Modular at support@tremodular.com.

Happy building!

