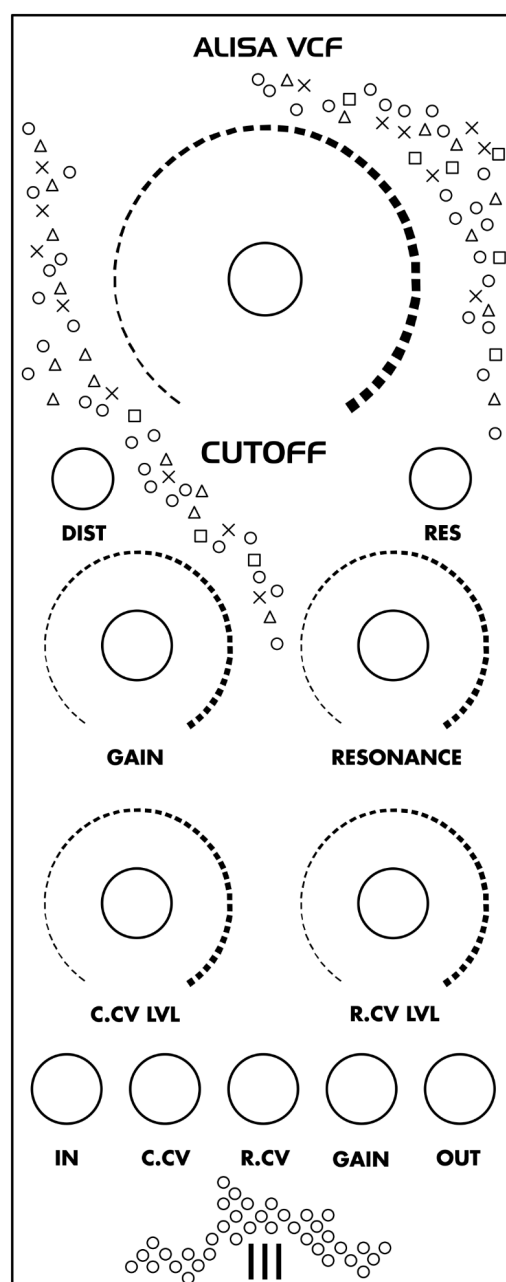


Tre Modular - Alisa VCF

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
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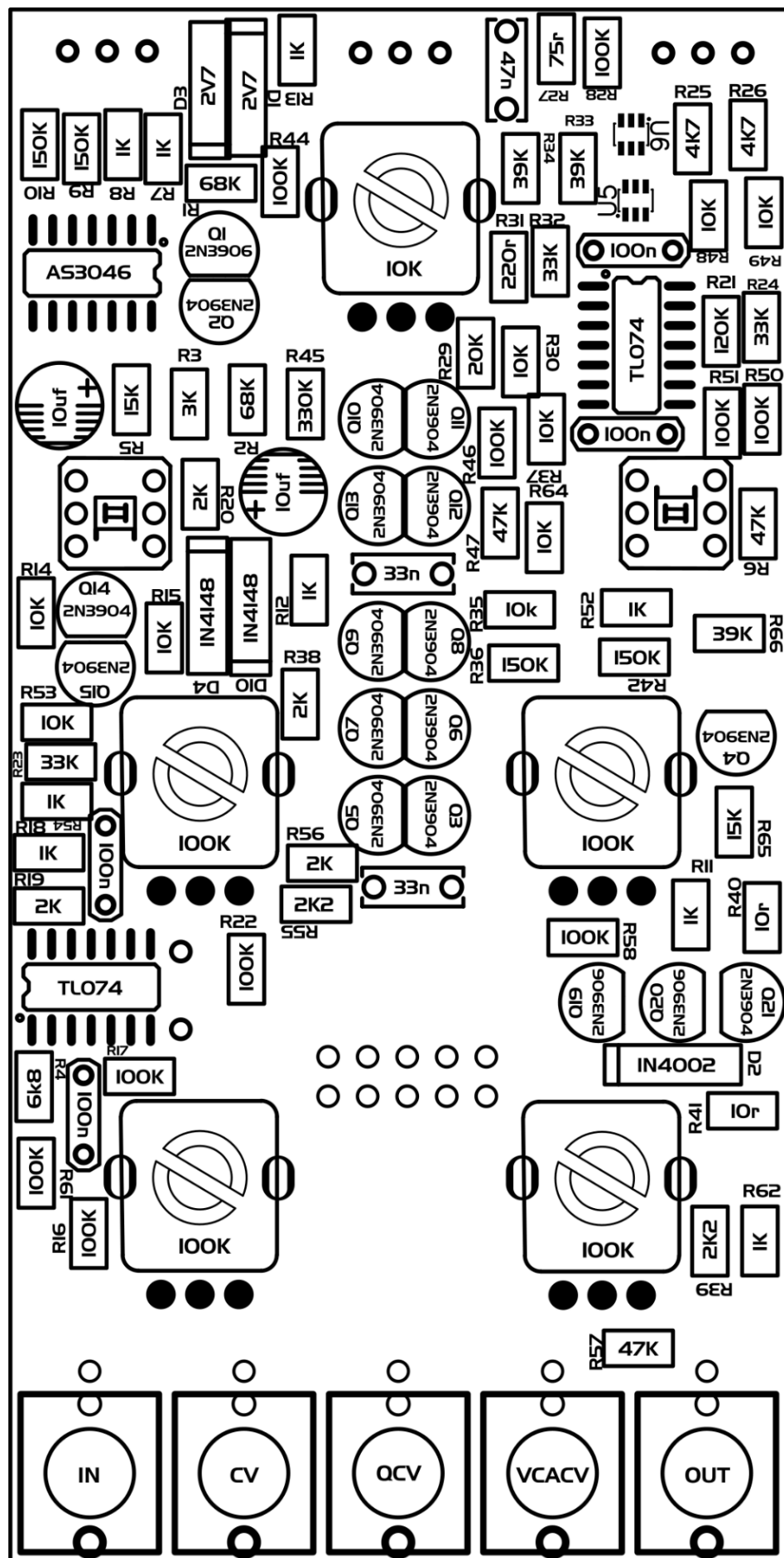
Connectors:

IDC-2.54-2X5P	x1
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Jack sockets:

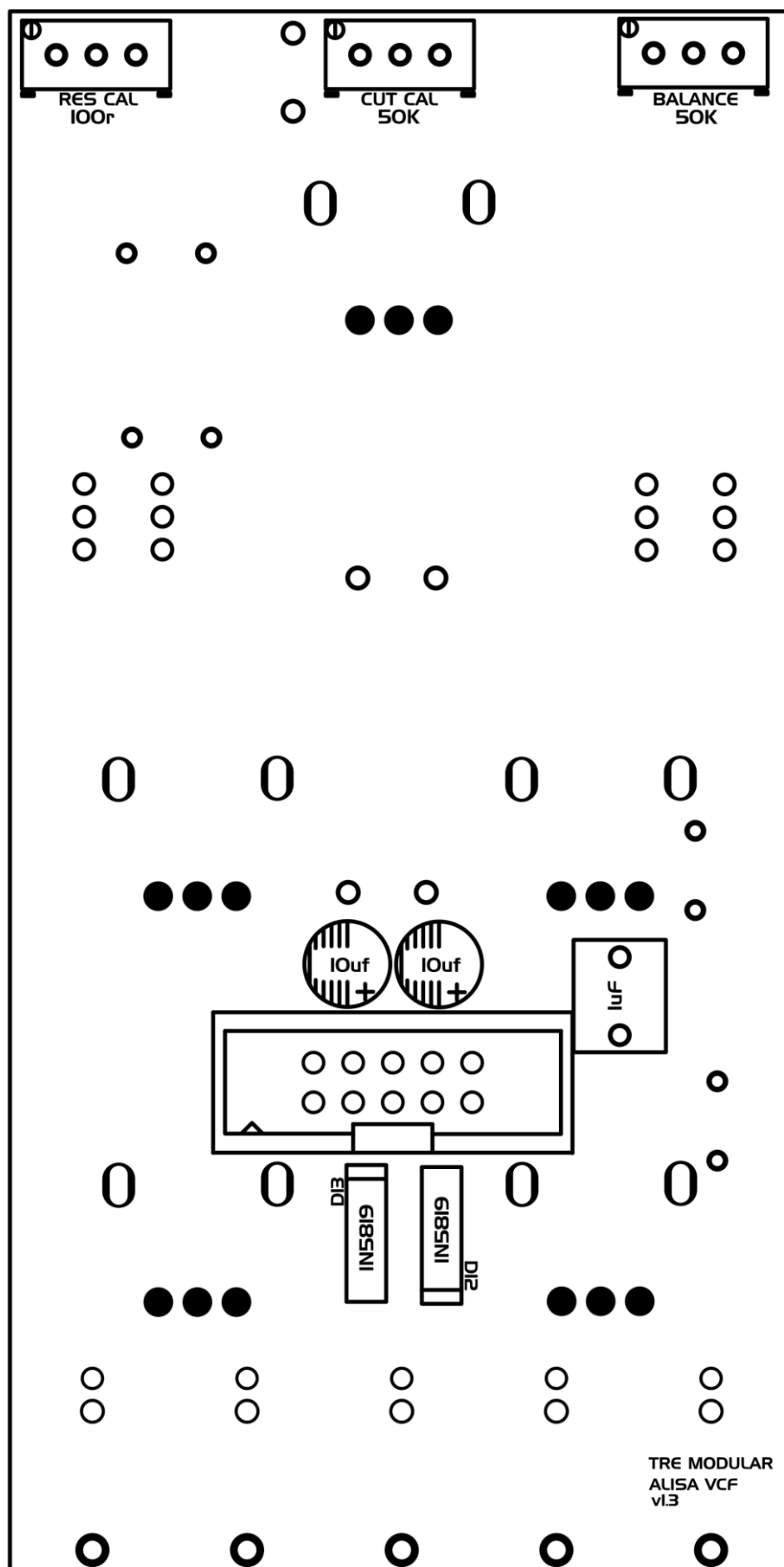
Mono Switched	x5
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Front:



*Buttons must be placed in specific orientation. See "Button orientation" section under step 10.

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.

Pay attention to orientation of buttons. Notch in the button's shaft indicates the orientation of the button according to legend.

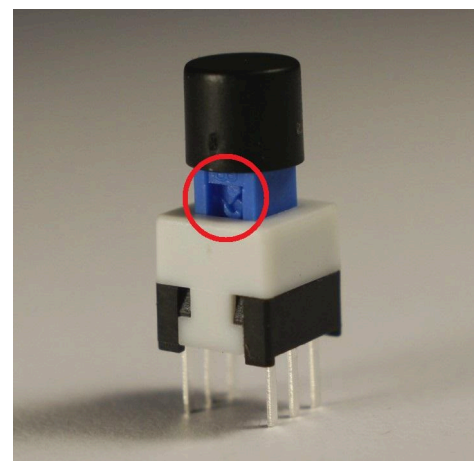
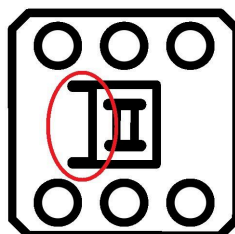
Put on the front panel and fasten it. Ensure everything is aligned properly and that the buttons are moving as they should. Solder everything in place.

Button orientation:

Look for a notch on the button's shaft marked in this picture. ->

This notch should be oriented facing notch symbol on the

legend marked in this picture.->



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!

