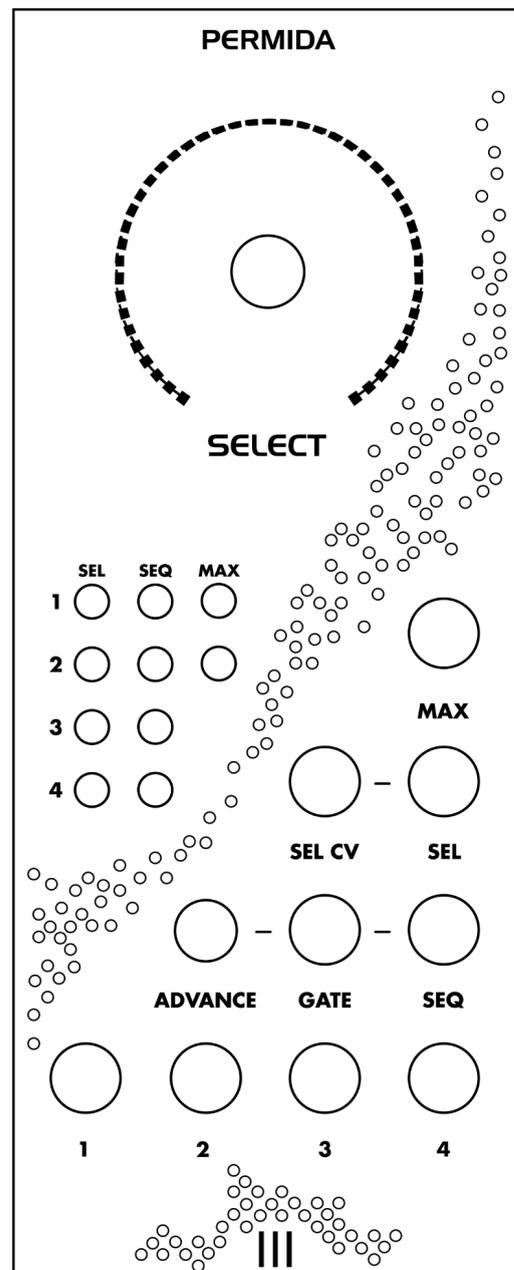# Tre Modular - Permida
DIY Assembly Guide v1.4

Thank you for choosing Tre Modular.

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

Before You Begin:

This guide assumes a basic soldering proficiency, so if you're new to the craft, consider practicing on a spare PCB to build confidence.

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 Permida.

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:
10n (103) - x1
100n (104) - x15
1uf (Electrolytic) - x1
10uf (Electrolytic) - x3

Diodes:
1N4148 - x9
1N5819 - x2
LED - x10

Resistors:
1K - x9
10K - x16
15K - x3
47K - x3
68K - x2
100K - x12
270K - x9

Voltage Regulator:
LM78L05 - x1

Buttons:
Button (momentary) - 1x

Potentiometers:
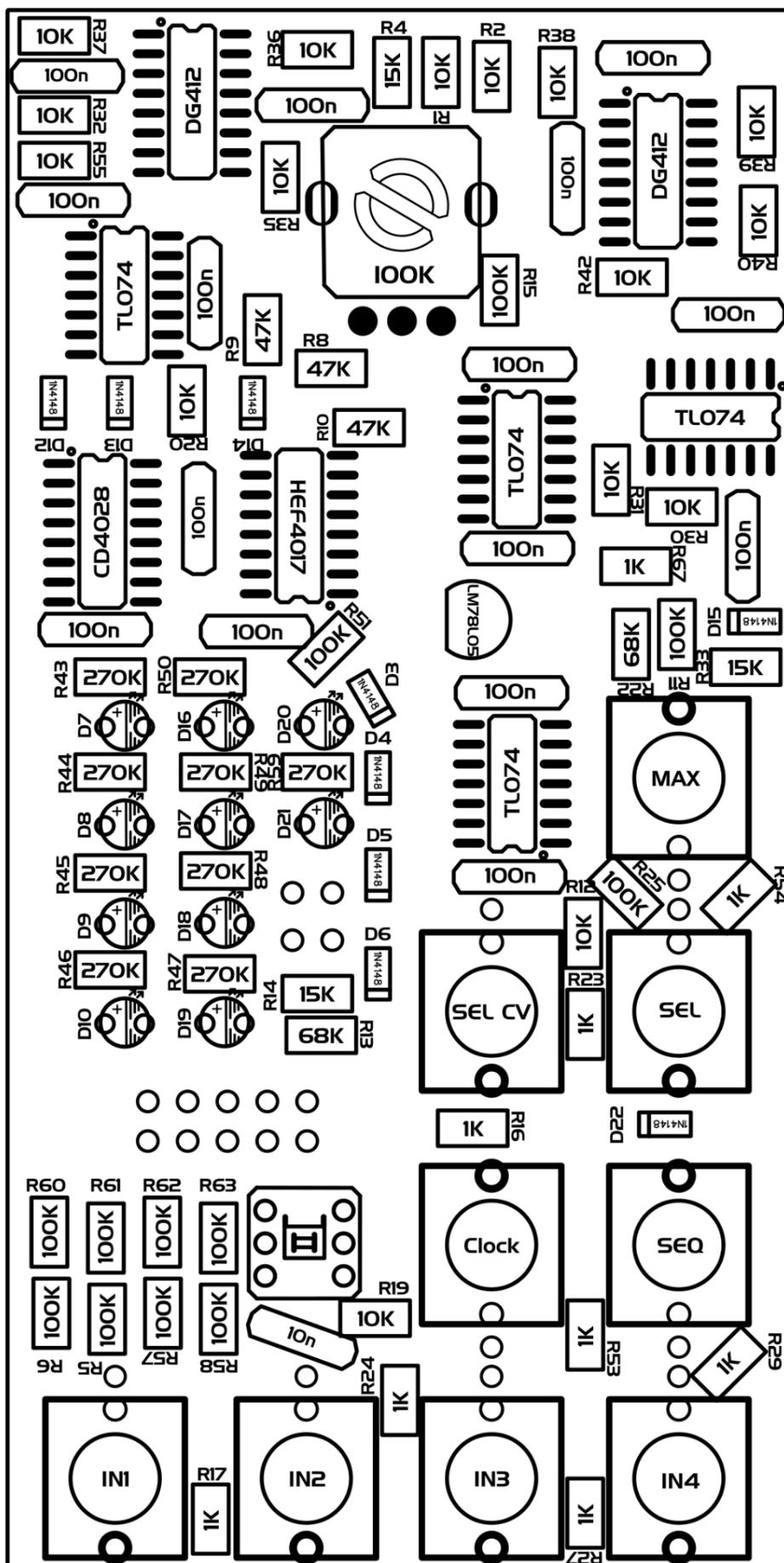B100K - x1

Connectors:
IDC-2.54-2X5P - x1
2 pin connector - x2

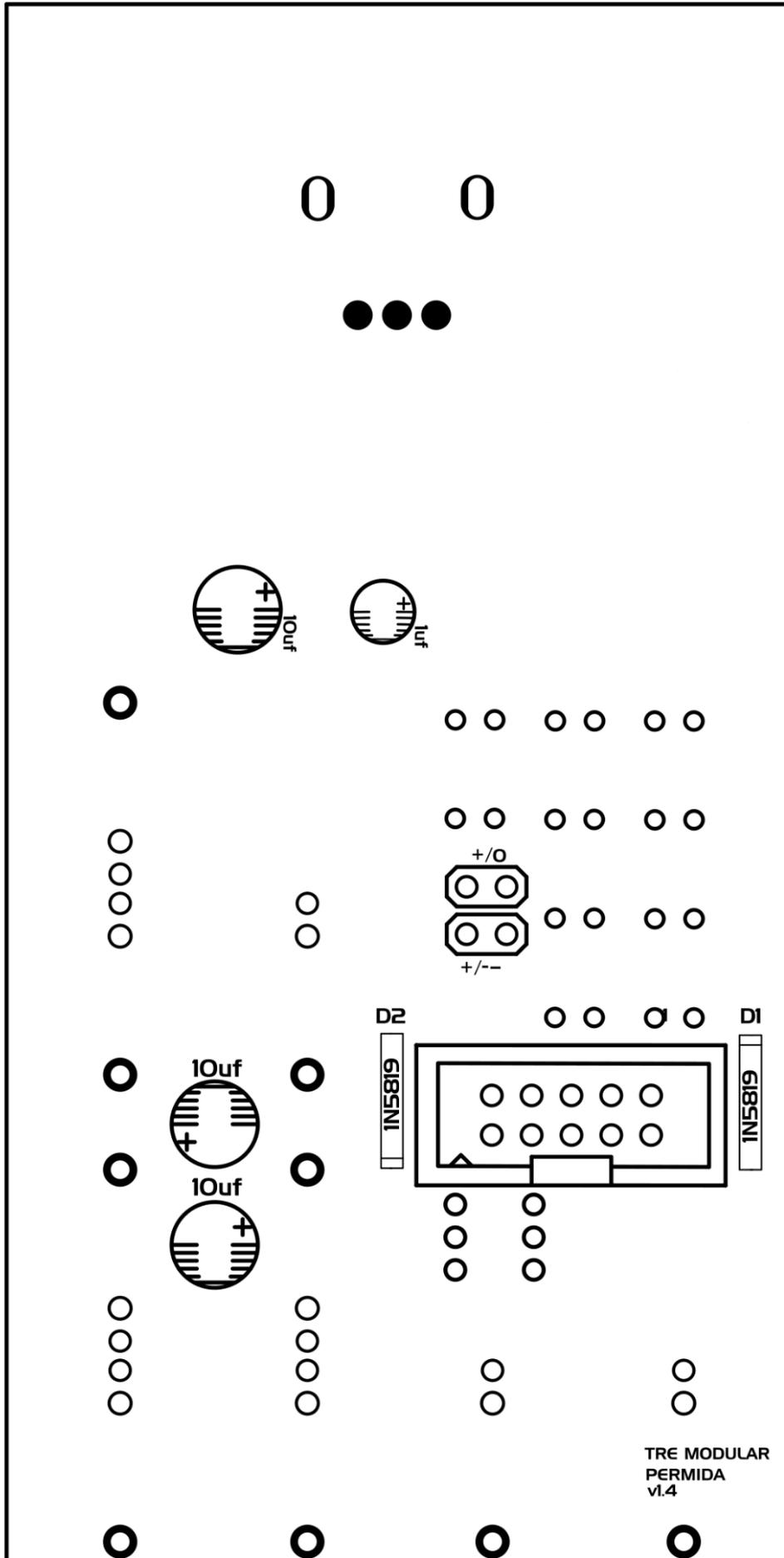**Jack sockets:**
Mono Switched x9

Legend:

Front:

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

Back:

10uf   1uf

+/0

+/--

D2   D1

1N5819   1N5819

10uf

10uf

TRE MODULAR
PERMIDA
v1.4

Assembly Guide:

Step 1: Identify and Sort Components

Organize the components into groups based on their types.

Step 2: Power regulator

Place and solder LM78L05 power regulator in its designated location.

Step 3: Diodes (Front)

Insert and solder 1N4148 diodes according to the legend.

1N4148 diodes are placed vertically.

Body of the 1N4148 diode should rest on the triangle part of the diode symbol.

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

For easier soldering, when 1N4148 diode is placed on the PCB, bend the leg closest to the diode'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 4: Capacitors (Front)

Start with soldering 100n ceramic capacitors onto their designated positions on the PCB according to legend.

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: Capacitors (Back)

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

Solder 1Uf capacitor onto the designated position on the PCB according to legend.

Ensure the capacitor is oriented correctly, paying attention to its polarity.

Step 8: 2 pin connectors (Back)

Solder 2pin connectors into their designated spots. 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.

The connector will get hot fast when soldered. Don't hold them in place with bare hands.

When connectors are soldered in place, put the jumper on the desired CV response range.

Step 9: Power Connector (Back)

Solder the IDC connector (Power connector) into its designated spot. Pay attention to its orientation! 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 10: Potentiometers, Jack Sockets and buttons.

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

Pay attention to orientation of jack sockets. Some of them are placed upside down.

Pay attention to orientation of buttons. Notch in the button's shaft indicates the orientation of the button according to legend (see below).
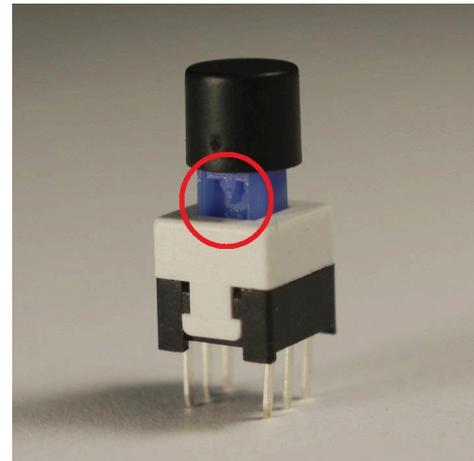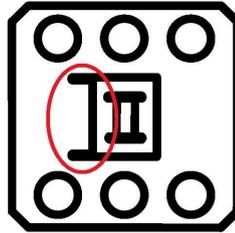
Put on the front panel and fasten it. Ensure everything is aligned properly and then solder everything in place.

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.

Clean off the flux from the board. Some fluxes can become conductive over time and result in shorts that can irreversibly damage the module.

Step 12: Installation

Power off your Eurorack system.

Connect the power cable, ensuring correct polarity.

Power on your Eurorack system.

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 patching!