

**Passive matrix mixer** Standalone and eurorack

DECADEBRIDGE

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#### Layout.



**Quatrain** is an 8 in, 4 out passive matrix mixer that can be used as a standalone unit or installed into a eurorack system. It can be used to perform many different things including mixing CV signals, mixing audio signals to send to different destinations, creating feedback loops or sequencing voltages using sequential switches.

Quatrain draws no power from your eurorack system.

Size - 24 HP

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### Inputs.

**Quatrain** has 8 inputs (A-H). To explain how these are set up it's best to look at **Quatrain** in 2 halves.



On the left we have 4, 3.5mm, mono jack inputs (A-D).

On the right we have 4 more inputs (**E-H**).

All inputs have a switch for muting or connecting the signal to feed into the mixer. Connect your CV or audio signals to these inputs.



#### Inputs A-D. RED BOX.

Connect the signal you wish to send into the mixer to the jack sockets **A-D**. The switches to the right of these inputs mute or route the signal into the mixer. With the toggle switch in the up position the signal is muted and not passed into the mixer. With the toggle switch in the down position the signal is routed to the two rows of attenuators.

These are labelled on the mixer as:- A1, A2, B1, B2, C1, C2, D1, D2.

#### Inputs E-H. GREEN BOX.

Connect the signal you wish to send into the mixer to the jack sockets **E-H**. The 3 way toggle switches to the left of these inputs mute or select which input you are connecting to the attenuators. The signal will be muted with the toggle switch in the middle position. If the toggle switch is in the down position the signal will be routed from the jack sockets to the right (**E-H**) into the 2 rows of attenuators in the **GREEN BOX**. **A3(E)**, **A4(E)**, **B3(F)**, **B4(F)**, **C3(G)**, **C4(G)**, **D3(H)**, **D4(H)**.

If the switches are in the up position the signal from the inputs to the left of the mixer (**A-D**) will be routed into the attenuators (like a normal matrix mixer setup).

# Input routing.

We'll take the top row and look at how signals are routed into **Quatrain.** Refer to the table below to see how the signal is routed.



Switch A	Switch A/E	Routed
Up (muted)	Middle (muted)	No signal is passed through.
Up (muted)	Up (connected to A)	No signal is passed through to attenuators A1 and A2. The signal at A is routed to attenuators A3(E) and A4(E).
Down (connected)	Up (connected to A)	The signal at A is routed to all attenuators A1, A2, A3(E) and A4(E).
Down (connected)	Middle (muted)	The signal at A is routed to attenuators A1 and A2. No signal is passed through to attenuators A3(E) and A4(E).
Down (connected)	Down (connected to E)	The signal at A is routed to attenuators A1 and A2. The signal at E is routed to attenuators A3(E) and A4(E).

This allows you to switch signals quickly to create variartions and provides the user with a simple way to change up the routing of signals.

The inputs on each of the 4 rows are set up the same as the table above.

### Outputs.

Quatrain's outputs are located at the top of the. mixer.



#### Quatrain has 4 outputs (1-4).

The output sums together the mixed signals from the 4 potentiometers in the row below it. For example:-

Output 1 is the mixed signal of pots A1, B1, C1 and D1.

The toggle switch below the output routes or mutes the mixed signal to the output. In the up position the signal is muted. With the toggle switch in the down position the signal is routed to the output.

This is the same setup for all outputs.

#### Linked attenuators.



Quatrain features 4 linked attenuators which allow you to control two signals with one control.

The 4 switches highlighted link certain attenuators within the mixer when in the down position. The attenuators that can be linked are highlighted by the lighter knob colour and the link symbol between them.

If we take the first link switch (top left, labelled **A1-B2**) as an example.

If the toggle switch is in the up position attenuators **A1** and **B2** are independent of each other. If the toggle switch is in the down position attenuator **A1** will also control **B2**. Turning **B2** will have no affect on the incoming/outgoing signal in this situation.

The switches are labelled with the name of the pot that takes control of both signals first. For example, from left to right:-

# Switch A1-B2:-A1 controls both A1 and B2 when the switch is in the down position.

Switch D1-C2:-D1 controls both D1 and C2 when the switch is in the down position.

# Switch D4-C3:-

D4 controls both D4(H) and C3(G) when the switch is in the down position.

Switch A4-B3:-

A4 controls both A4(E) and B3(F) when the switch is in the down position.

If you are using Quatrain with a eurorack system the base plate doubles up as a 24 HP blank panel.

Jack\_Sl0w provided the beautiful artwork for this. Copyright © Jack\_Sl0w 2024.

You can find more of his work here:-

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