

ADDAC System
Instruments for Sonic Expression
Est.2009

INTRODUCING
ADDAC814
6x6 STEREO
MATRIX MIXER



USER'S GUIDE . REV01
October.2024



From Portugal with Love!

Welcome to: ADDAC814 6x6 STEREO MATRIX MIXER USER'S GUIDE

Revision.01 October.2024

Tech Specs:
25HP + 8HP
(33HP total)
4.5cm deep
140mA +12V
140mA -12V

WELCOME

We're pleased to announce our take on matrix mixers, a 6x6 stereo matrix easily expandable to larger configurations.

Matrix mixers may need some time to get used to but they are very much self explanatory, each knob controls the volume of a matrix point routing the respective input to the desired output.

The flexibility of a matrix mixer is far superior to a standard mixer, the possibility to route any input to any single or multiple outputs allow for very complex chains, combining parallel and series processing while easily reconfigurable without any extra patching.

All Inputs Left channels are normalled to the Right Inputs.

Blank areas on the left and bottom edges of the panel allow for the user to write all the inputs and outputs sources that each channel is connected to.

Different colored knobs for faster visual recalling:
Black for A,C,E Outputs
Dark Red for B,D,F Outputs
Cream knobs for potential feedback diagonal: 1A, 2B, 3C, 4D, 5E, 6F.

DC coupled circuitry, can be used to mix both audio or cv signals.

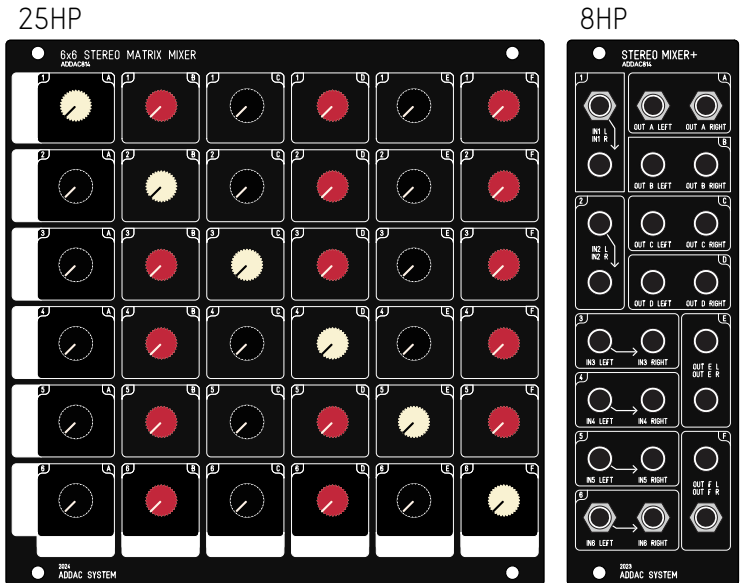
Jumpers on the back of both modules allow the user to set each channel independently to Line or Synth Level, making it easier to integrate with external sources, sound processors or guitar pedals.

INTERNAL CONNECTIONS

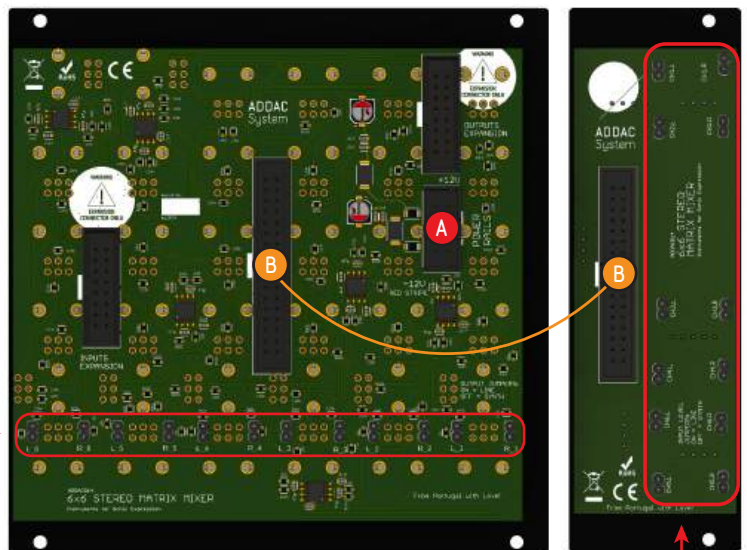
The control and input modules are connected via a large 36 wire ribbon cable, only the control module needs to be connected to the Busboard.

Extra IDC sockets are used for connecting larger configurations like 12x12 or 18x18. Other configurations are also possible: 6x12, 12x6, 18x6, etc...

Up to 12x12 all ribbon cables are provided, for larger matrixes custom ones will be necessary, contact us directly if planning to go BIG.



- A** POWER RAILS RIBBON CABLE (Red Stripe Down)
- B** INS/OUTS RIBBON CABLE (2x17 Connectors)



SYNTH / LINE LEVEL JUMPERS:
Jumpers set the Output level of each channel:
No jumper = Synth level
With jumper = Line level

OUTPUTS JUMPERS

INPUTS JUMPERS

FEEDBACK

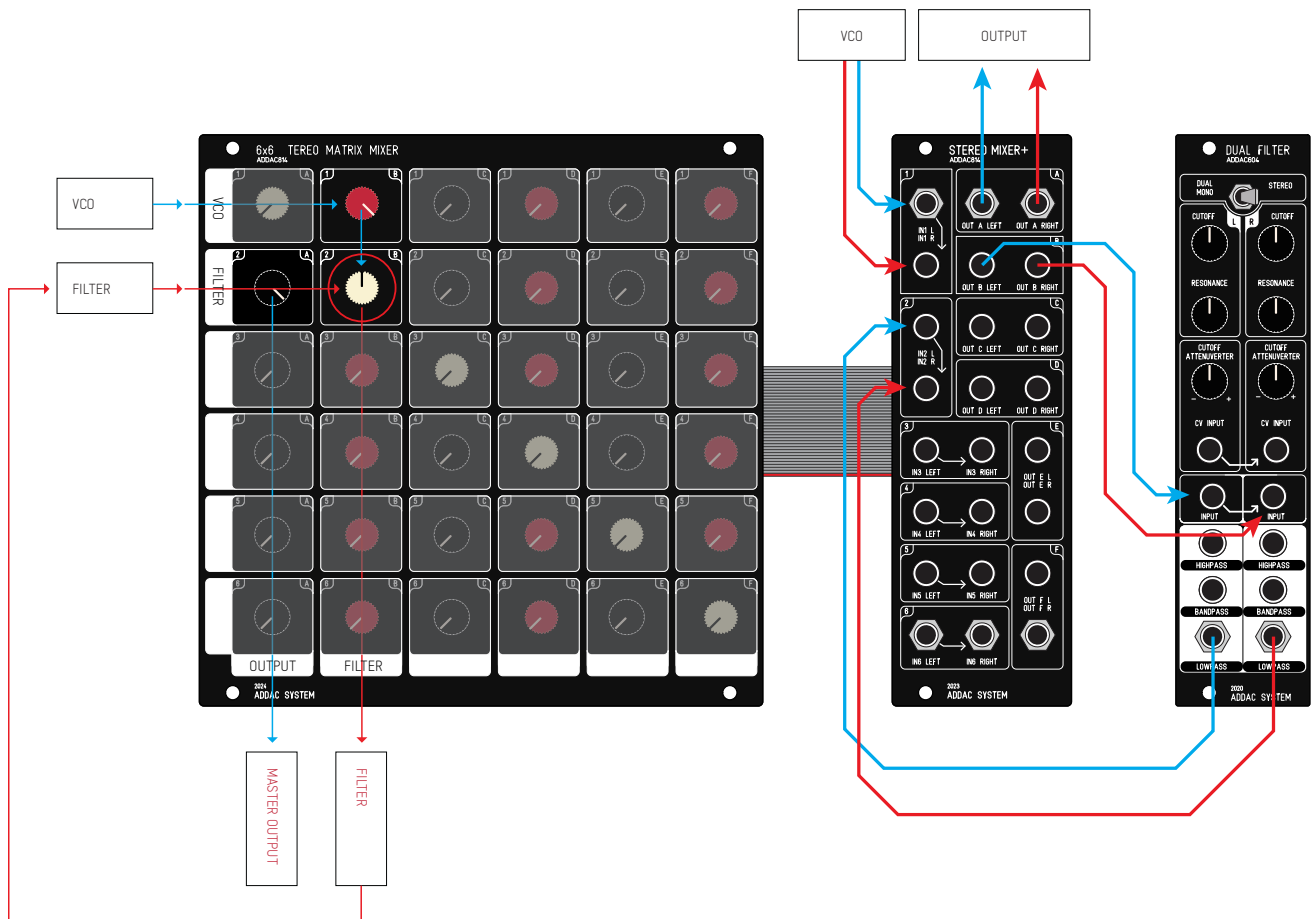
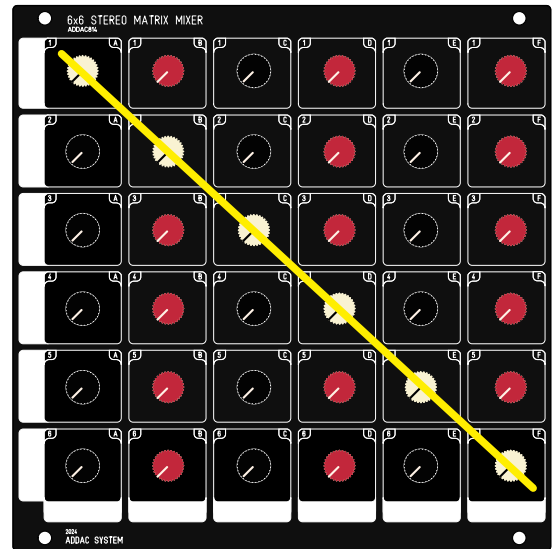
Feedback diagonal

This diagonal in matrix mixers routes the input X to the same X output. Depending on what is connected in those Ins/Outs it has the potential to generate feedbacks.

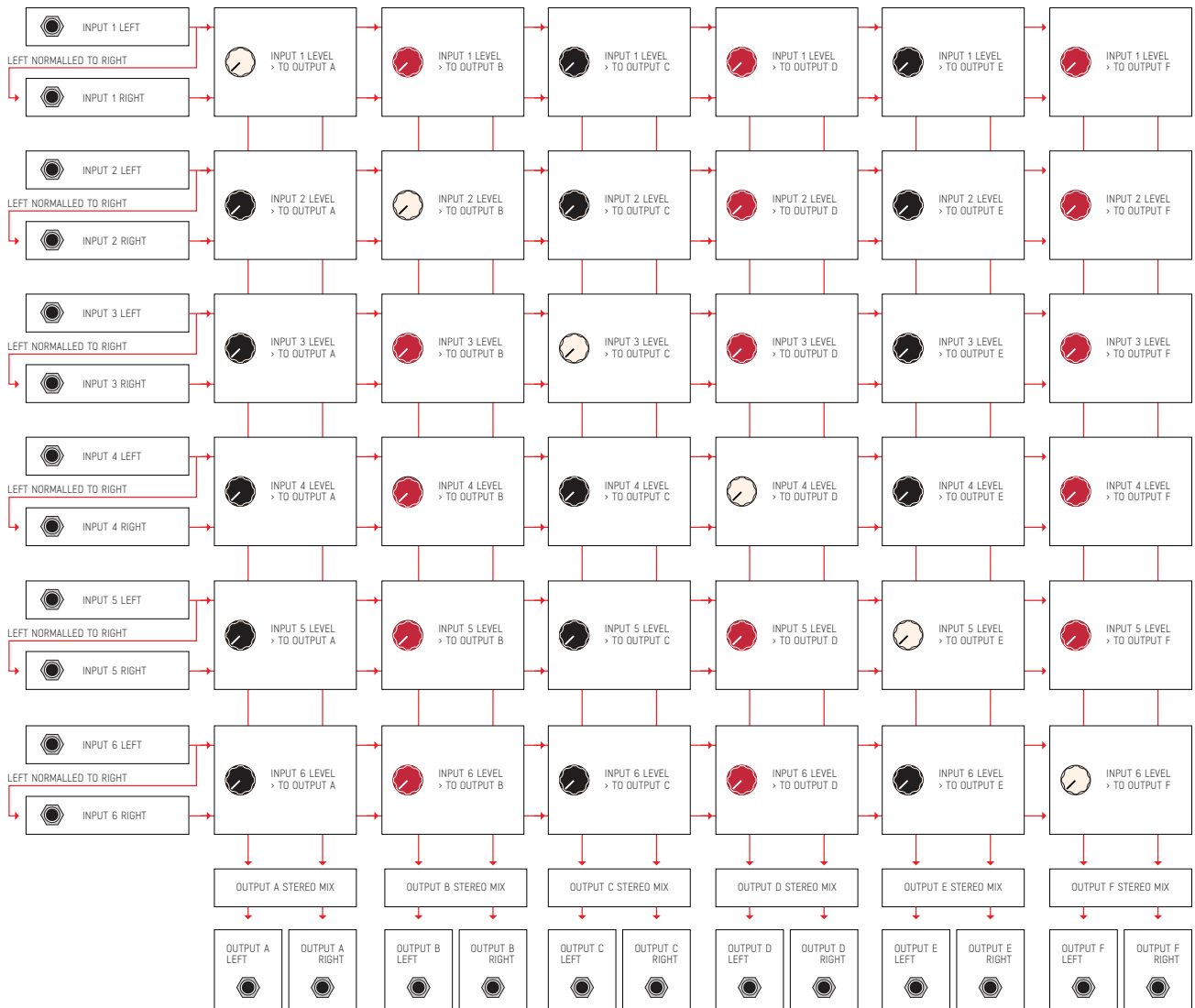
For ex: if we plug a VCO into input 1 and use the output A as the mixer output then when raising the level of input 1 to output A this will simply act as a volume control of the VCO into the output. If we add a Filter in In 2/Out B, patching the output of a Filter module into input 2 and the Matrix output B to the Filter input. Then we can route the VCO through the Filter using the 1B Knob and forward the filter output to the master output using the 2A Knob.

In this setup whenever we raise the level of knob 2B we'll be routing the output of the Filter module into its input generating a feedback in the Filter module (similar as increasing the filter's resonance). This can be used as a feature but also requires attention as it can lead to a drastic result.

We decided to use a different color for these knobs to highlight these special cases.

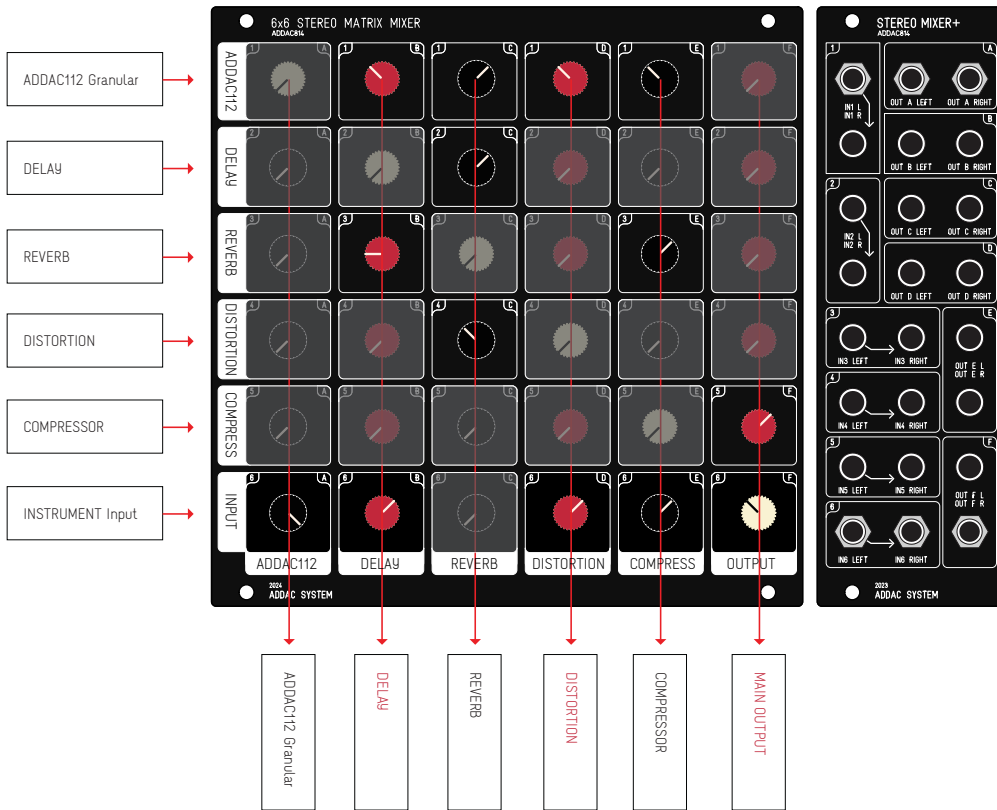


SIGNAL FLOW DIAGRAM

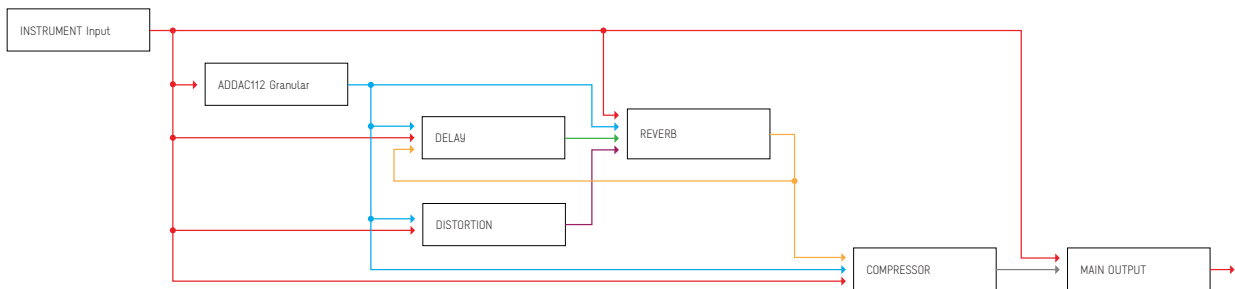


ROUTING EXAMPLE

This example shows the potential for complex chains with both parallel and series processing as well as some feedback action on a Delay > Reverb chain.



Routing Diagram



OTHER CONFIGURATIONS

EXPANDING THE MATRIX

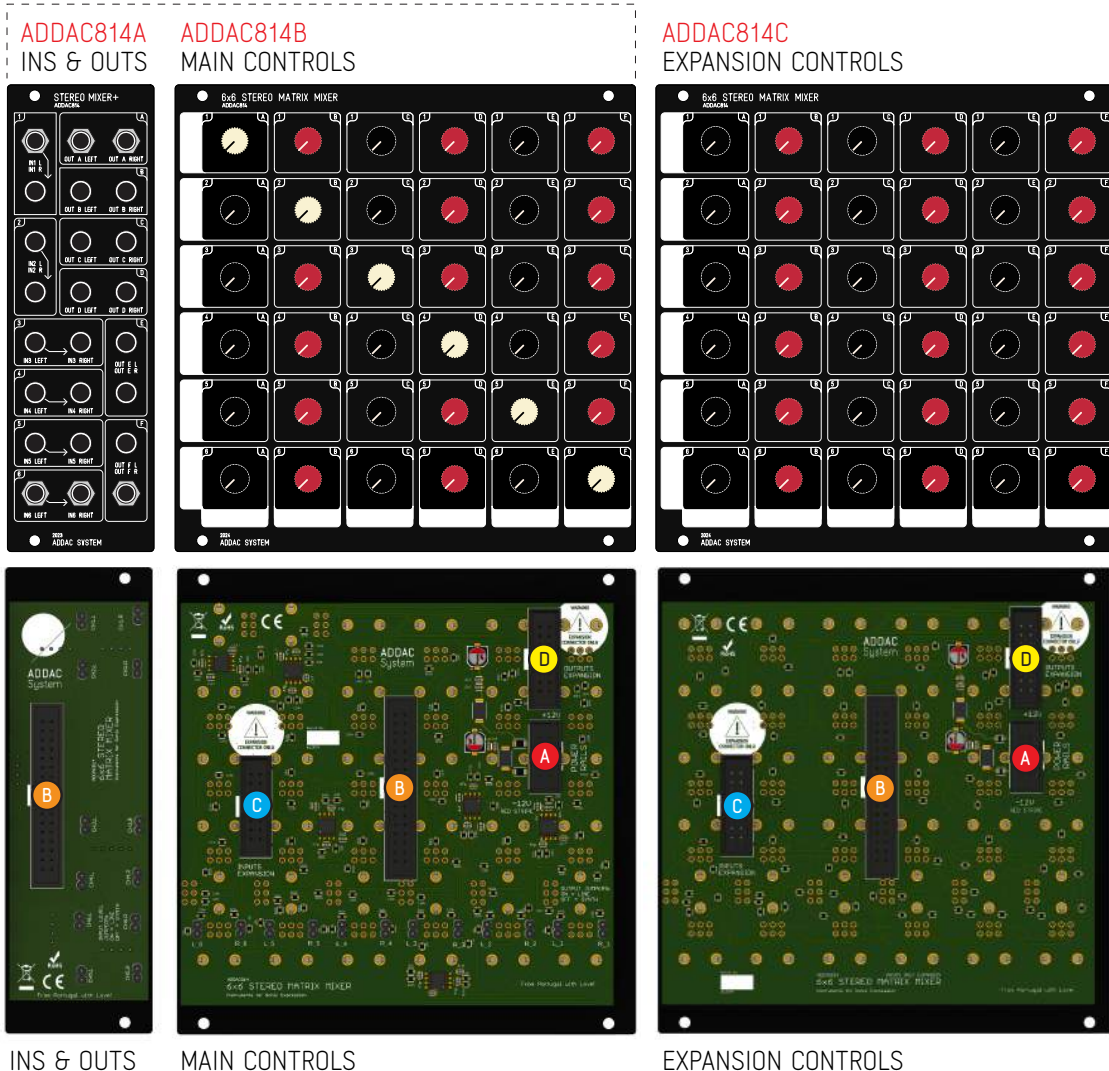
Expanding to larger matrixes is possible using the Expansion module, below you can see the diferences between the modules and their connections.

Depending on the desired configuration the user will require diferent modules as described in the next pages.

ADDAC814 is sold as a pair: ADDAC814A + ADDAC814B

ADDAC814A & ADDAC814C can be bought individually as expansions.

ADDAC814



INS & OUTS

MAIN CONTROLS

EXPANSION CONTROLS

- A** POWER RAILS RIBBON CABLE
- B** INS/OUTS RIBBON CABLE (2x17 Connectors)
- C** EXPANSION RIBBON CABLE (2x8 Connectors)
- D** EXPANSION RIBBON CABLE (2x8 Connectors)

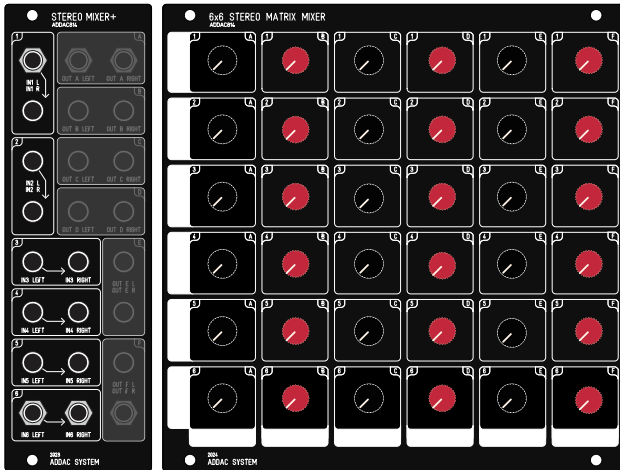
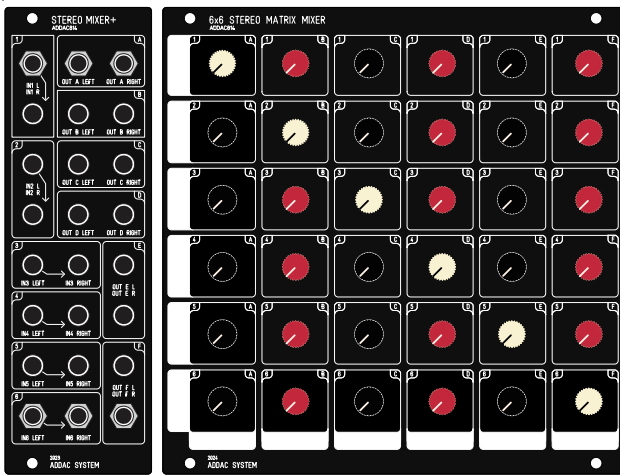
OTHER CONFIGURATIONS

12x6 Configuration

With an ADDAC814 + an Expander Set (ADDAC814A + ADDAC814C) one can expand the matrix to a 12x6 configuration. This will use 2 rows of your frame and take a 33HP space in each. In the 12x6 configuration the second jack panel outputs are not used.

ADDAC814

INPUTS 1 to 6
OUTPUTS 1 to 6



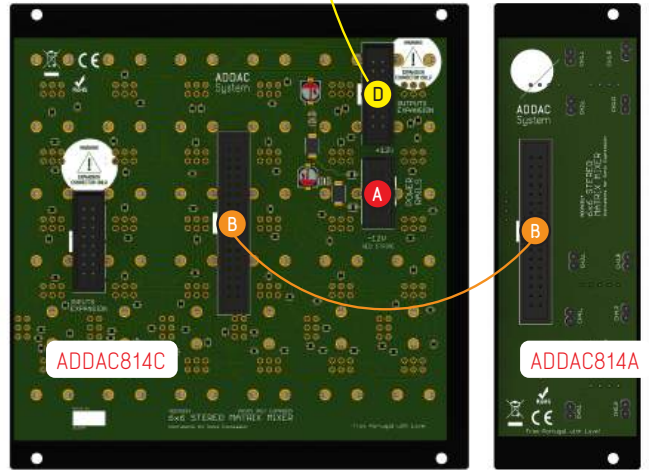
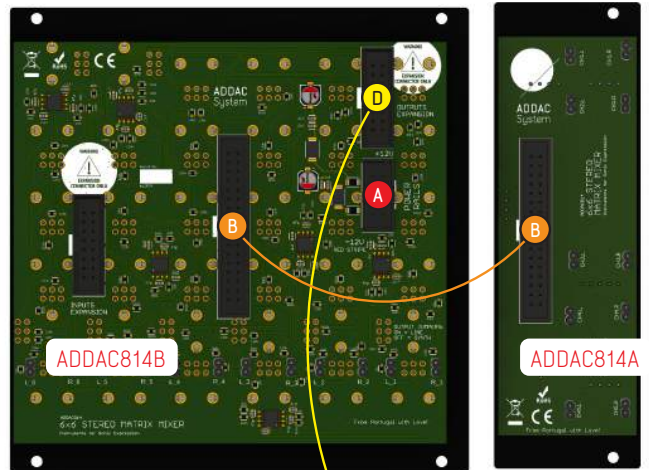
ADDAC814A
INPUTS 7 to 12
OUTPUTS UNUSED

ADDAC814C

ADDAC814 EXPANDER SET

JUMPERS:
OUTPUTS 1 to 6 (SYNTH/LINE)

JUMPERS:
INPUTS 1 to 6 (SYNTH/LINE)



JUMPERS:
INPUTS 7 to 12 (SYNTH/LINE)

- A** POWER RAILS RIBBON CABLE
- B** INS/OUTS RIBBON CABLE (2x17 Connectors)
- D** Vertical CONNECTION RIBBON CABLE (2x8 Connectors)

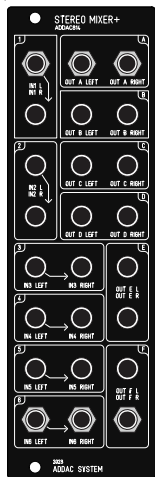
OTHER CONFIGURATIONS

6x12 Configuration

With two ADDAC814 one can expand the matrix to a 6x12 configuration. This will take an overall of 66HP. In this configuration the second jack panel inputs are not used.

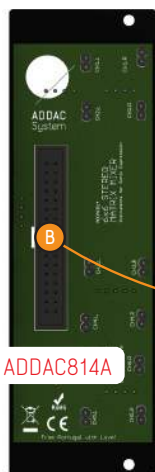
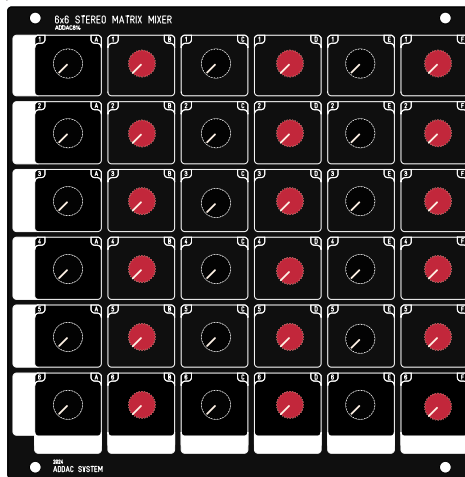
ADDAC814

INPUTS 1 to 6
OUTPUTS 1 to 6

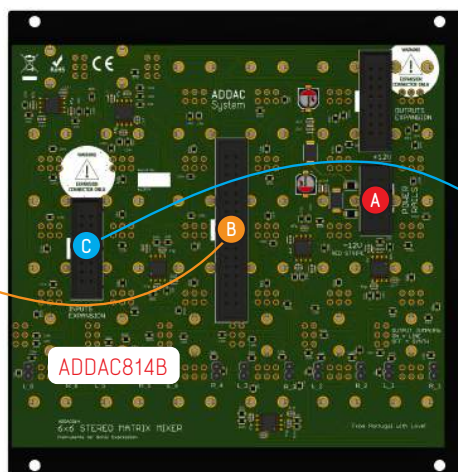


ADDAC814 (with no cream knobs)

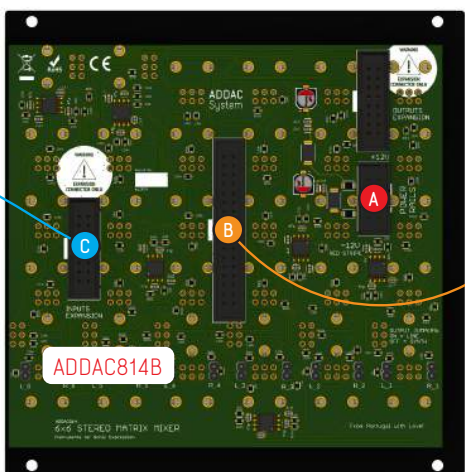
INPUTS UNUSED
OUTPUTS 7 to 12



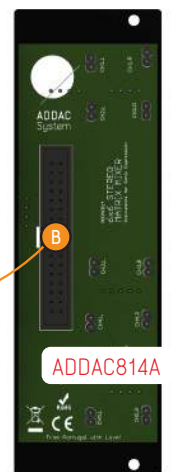
ADDAC814A



ADDAC814B



ADDAC814B



ADDAC814A

JUMPERS:
OUTPUTS 7 to 12 (SYNTH/LINE)

JUMPERS:
OUTPUTS 1 to 6 (SYNTH/LINE)

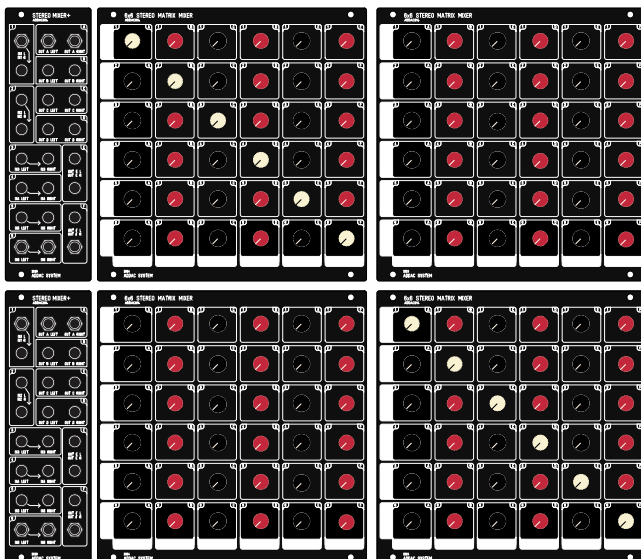
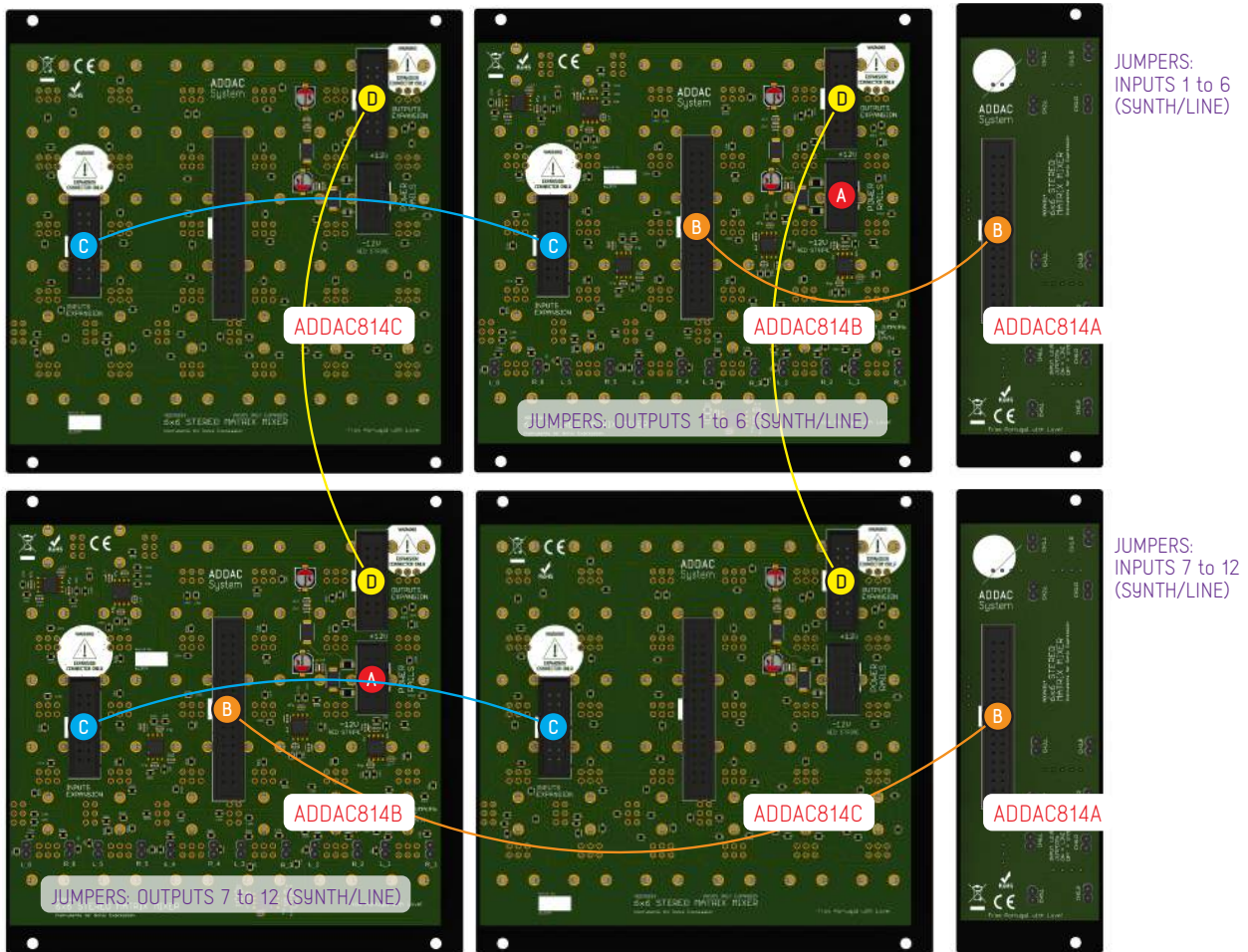
JUMPERS:
INPUTS 1 to 6 (SYNTH/LINE)

- A** POWER RAILS RIBBON CABLE
- B** INS/OUTS RIBBON CABLE (2x17 Connectors)
- C** Horizontal CONNECTION RIBBON CABLE (2x8 Connectors)

OTHER CONFIGURATIONS

12x12 Configuration

With two sets of ADDAC814 plus a pair of ADDAC814C one can expand the matrix to a 12x12 configuration. This will use 2 rows of your frame and take a 58HP space in each.

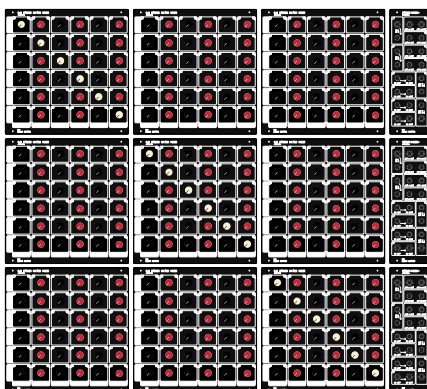
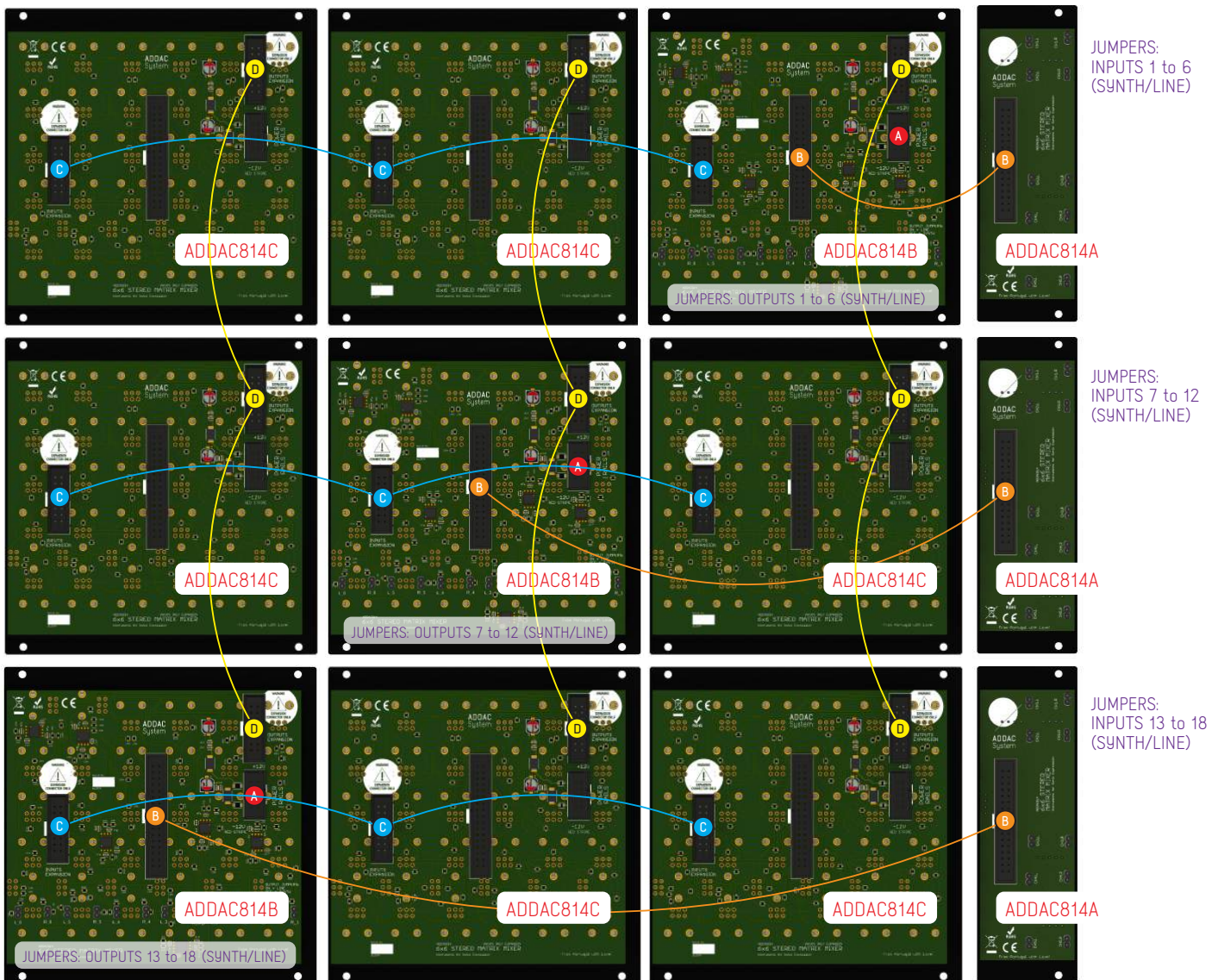


- A** POWER RAILS RIBBON CABLE
- B** INS/OUTS RIBBON CABLE (2x17 Connectors)
- C** Horizontal CONNECTION RIBBON CABLE (2x8 Connectors)
- D** Vertical CONNECTION RIBBON CABLE (2x8 Connectors)

OTHER CONFIGURATIONS

18x18 Configuration

With 3 sets of ADDAC814 plus 6 ADDAC814C one can grow the matrix to a 18x18 configuration. This will take an overall of 83HP in each 3 rows. Custom ribbon cables will be necessary, contact us directly if planning to go this BIG.



- **A** POWER RAILS RIBBON CABLE
- **B** INS/OUTS RIBBON CABLE (2x17 Connectors)
- **C** Horizontal CONNECTION RIBBON CABLE (2x8 Connectors)
- **D** Vertical CONNECTION RIBBON CABLE (2x8 Connectors)

For feedback, comments or problems please contact us at:
addac@addacsystem.com