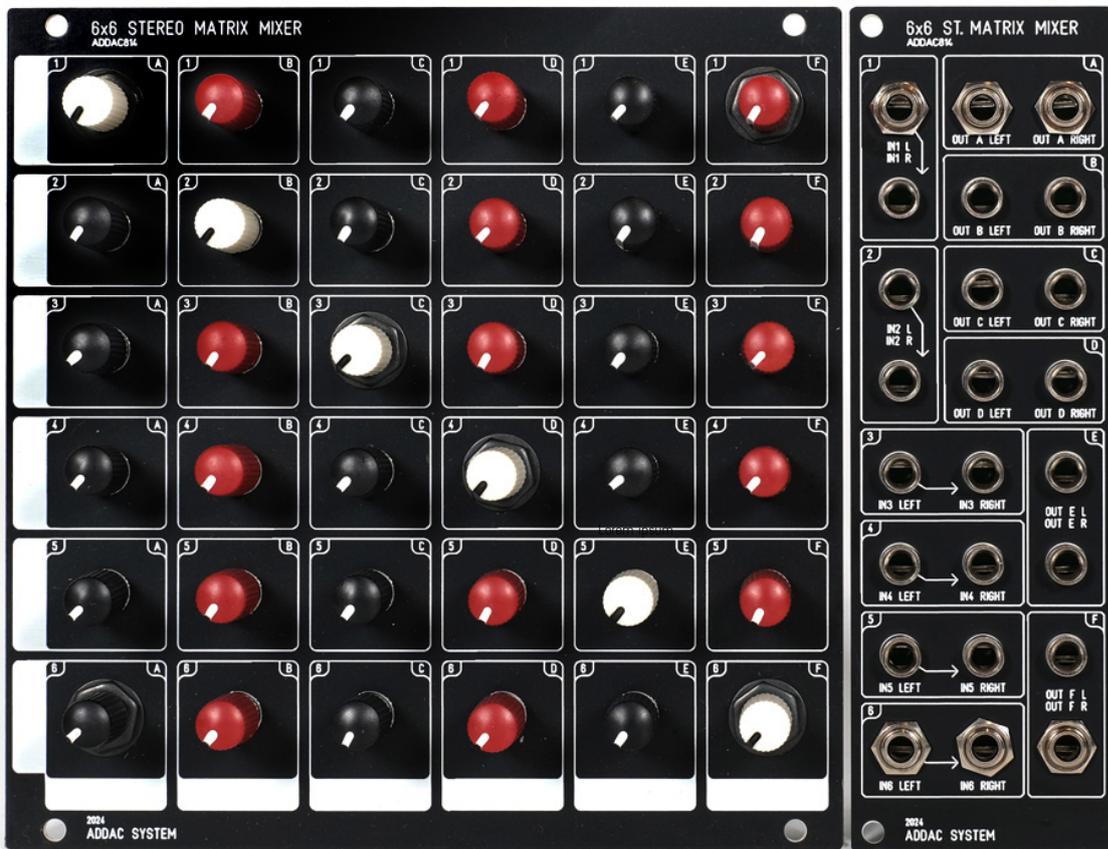**ADDAC** System
Instruments for Sonic Expression
Est.2009

INTRODUCING
ADDAC814
6x6 STEREO
MATRIX MIXER

USER'S GUIDE . REV02
March.2026

ADDAC
System

From Portugal with Love!

Welcome to:
ADDAC814
6x6 STEREO MATRIX MIXER USER'S GUIDE
Revision.02 March.2026

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.

25HP

8HP
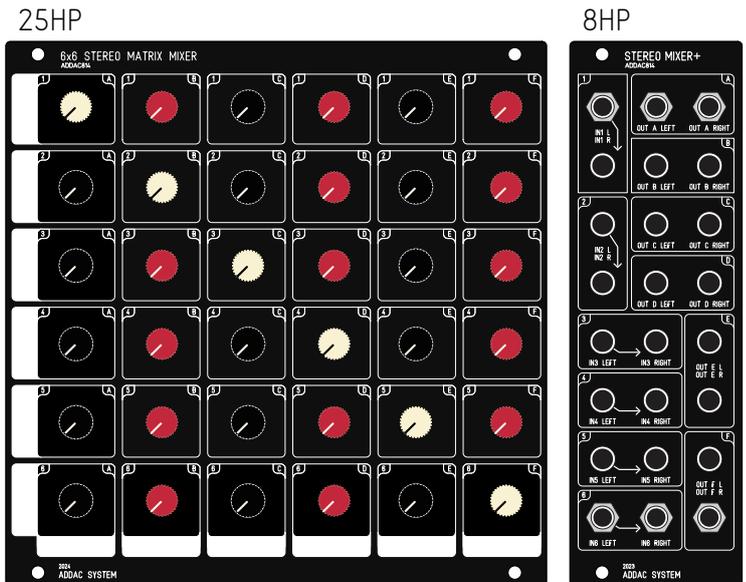
Ⓐ POWER RAILS RIBBON CABLE (Red Stripe Down)

Ⓑ INS/OUTS RIBBON CABLE (2x17 Connectors)
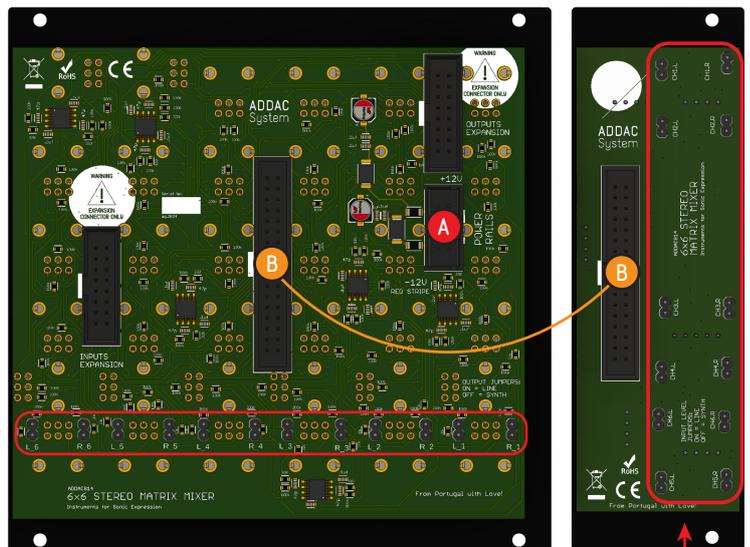
SYNTH / LINE LEVEL JUMPERS:
Jumpers set the Output level of each channel:.
No jumper = Synth level
With jumper = Line level

OUTPUTS JUMPERS
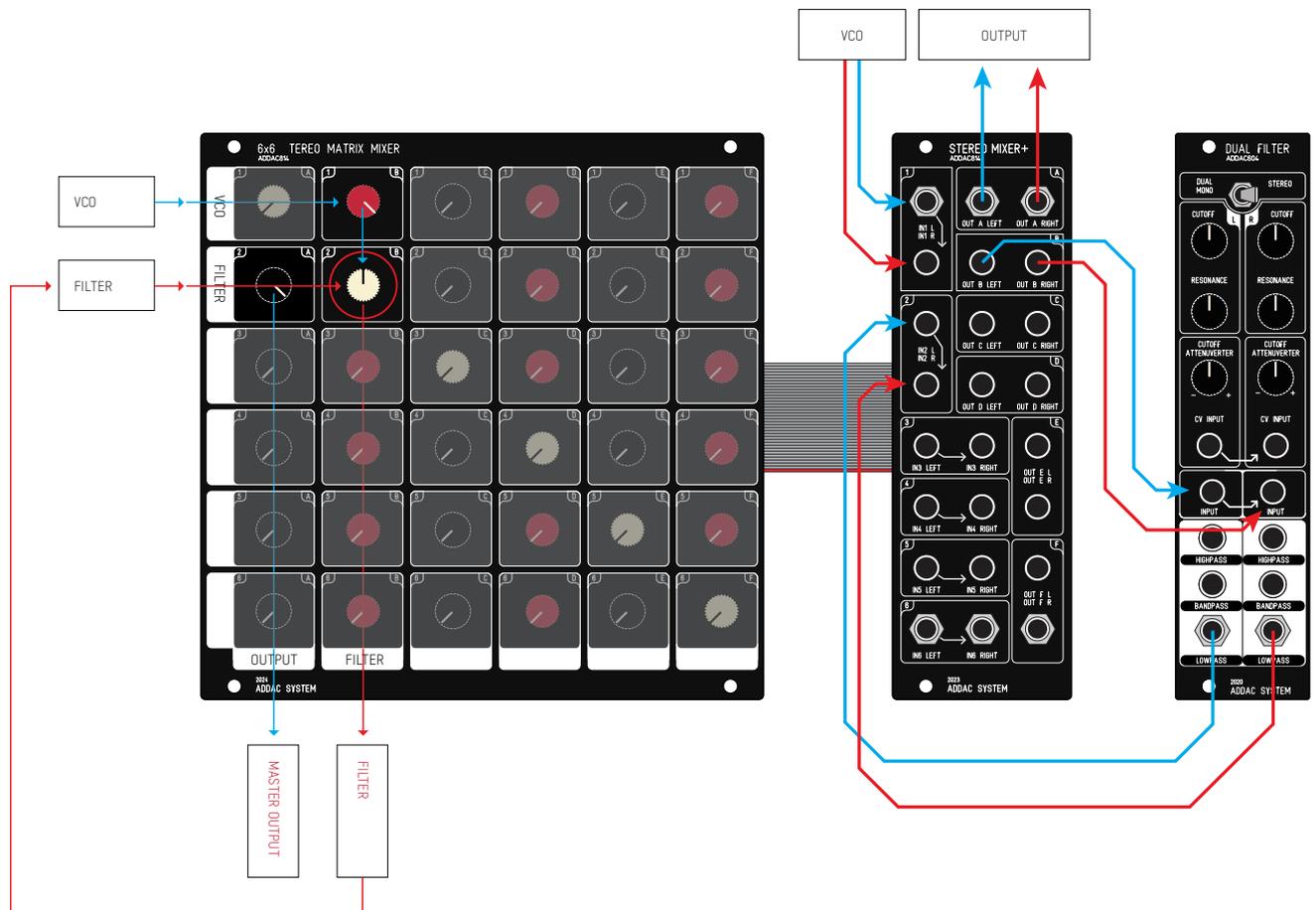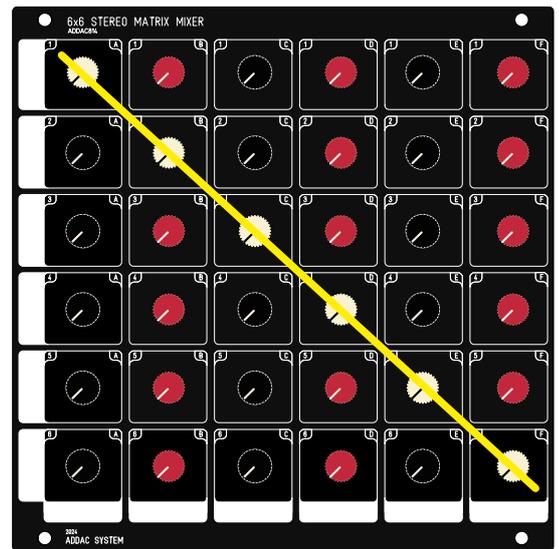
INPUTS JUMPERS

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.
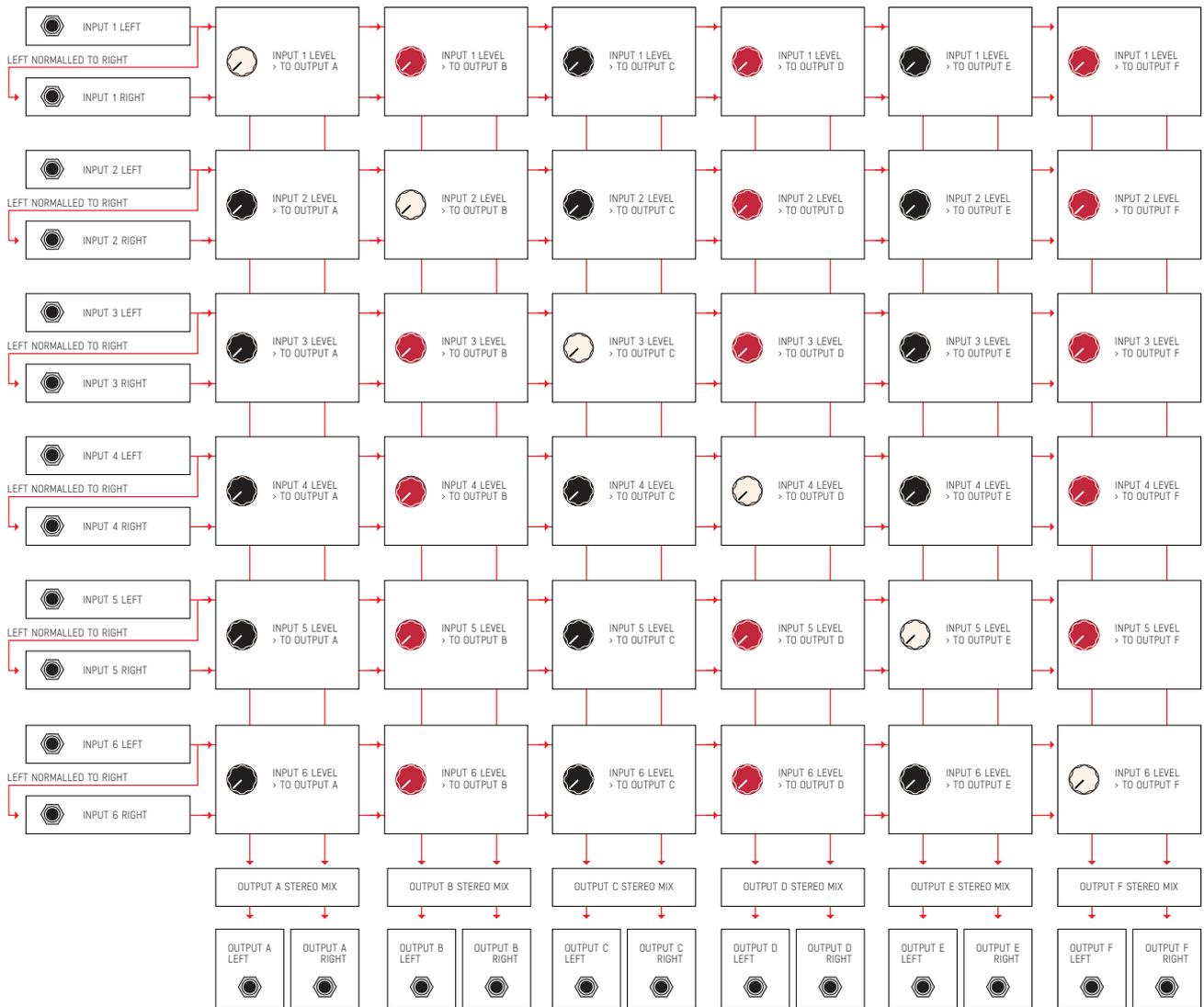
For ex: if we plug a VCO into input 1 and use the output A as the mixer output then when raising the level of input 1 to output A this will simply act as a volume control of the VCO into the output.

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 it's 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

|	INPUT 1 LEVEL > TO OUTPUT A	INPUT 1 LEVEL > TO OUTPUT B	INPUT 1 LEVEL > TO OUTPUT C	INPUT 1 LEVEL > TO OUTPUT D	INPUT 1 LEVEL > TO OUTPUT E	INPUT 1 LEVEL > TO OUTPUT F
INPUT 1 LEFT / LEFT NORMALLED TO RIGHT / INPUT 1 RIGHT						
INPUT 2 LEFT / LEFT NORMALLED TO RIGHT / INPUT 2 RIGHT	INPUT 2 LEVEL > TO OUTPUT A	INPUT 2 LEVEL > TO OUTPUT B	INPUT 2 LEVEL > TO OUTPUT C	INPUT 2 LEVEL > TO OUTPUT D	INPUT 2 LEVEL > TO OUTPUT E	INPUT 2 LEVEL > TO OUTPUT F
INPUT 3 LEFT / LEFT NORMALLED TO RIGHT / INPUT 3 RIGHT	INPUT 3 LEVEL > TO OUTPUT A	INPUT 3 LEVEL > TO OUTPUT B	INPUT 3 LEVEL > TO OUTPUT C	INPUT 3 LEVEL > TO OUTPUT D	INPUT 3 LEVEL > TO OUTPUT E	INPUT 3 LEVEL > TO OUTPUT F
INPUT 4 LEFT / LEFT NORMALLED TO RIGHT / INPUT 4 RIGHT	INPUT 4 LEVEL > TO OUTPUT A	INPUT 4 LEVEL > TO OUTPUT B	INPUT 4 LEVEL > TO OUTPUT C	INPUT 4 LEVEL > TO OUTPUT D	INPUT 4 LEVEL > TO OUTPUT E	INPUT 4 LEVEL > TO OUTPUT F
INPUT 5 LEFT / LEFT NORMALLED TO RIGHT / INPUT 5 RIGHT	INPUT 5 LEVEL > TO OUTPUT A	INPUT 5 LEVEL > TO OUTPUT B	INPUT 5 LEVEL > TO OUTPUT C	INPUT 5 LEVEL > TO OUTPUT D	INPUT 5 LEVEL > TO OUTPUT E	INPUT 5 LEVEL > TO OUTPUT F
INPUT 6 LEFT / LEFT NORMALLED TO RIGHT / INPUT 6 RIGHT	INPUT 6 LEVEL > TO OUTPUT A	INPUT 6 LEVEL > TO OUTPUT B	INPUT 6 LEVEL > TO OUTPUT C	INPUT 6 LEVEL > TO OUTPUT D	INPUT 6 LEVEL > TO OUTPUT E	INPUT 6 LEVEL > TO OUTPUT F
	OUTPUT A STEREO MIX / OUTPUT A LEFT / OUTPUT A RIGHT	OUTPUT B STEREO MIX / OUTPUT B LEFT / OUTPUT B RIGHT	OUTPUT C STEREO MIX / OUTPUT C LEFT / OUTPUT C RIGHT	OUTPUT D STEREO MIX / OUTPUT D LEFT / OUTPUT D RIGHT	OUTPUT E STEREO MIX / OUTPUT E LEFT / OUTPUT E RIGHT	OUTPUT F STEREO MIX / OUTPUT F LEFT / OUTPUT F RIGHT

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.
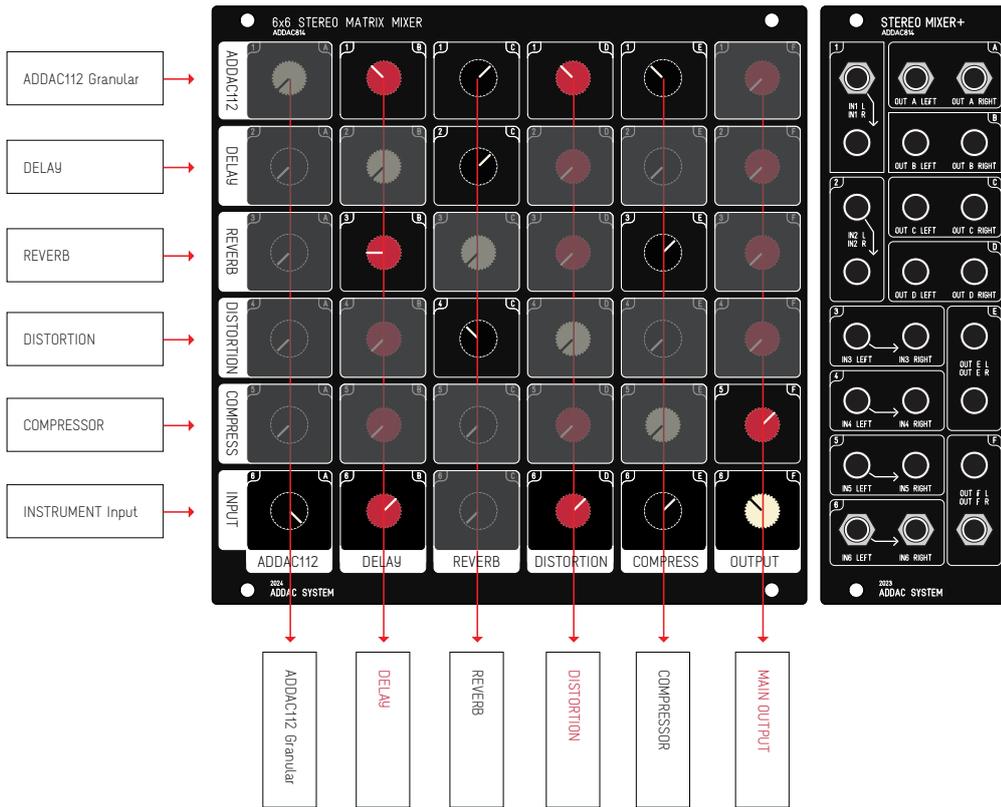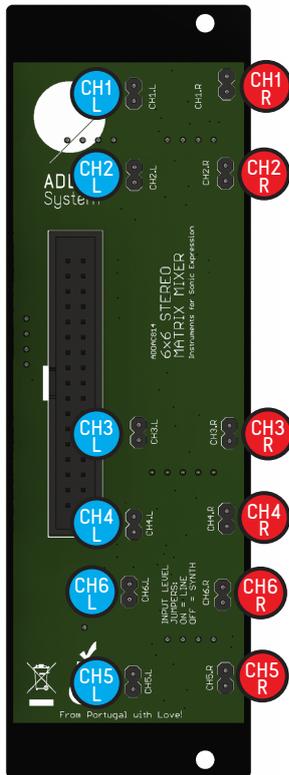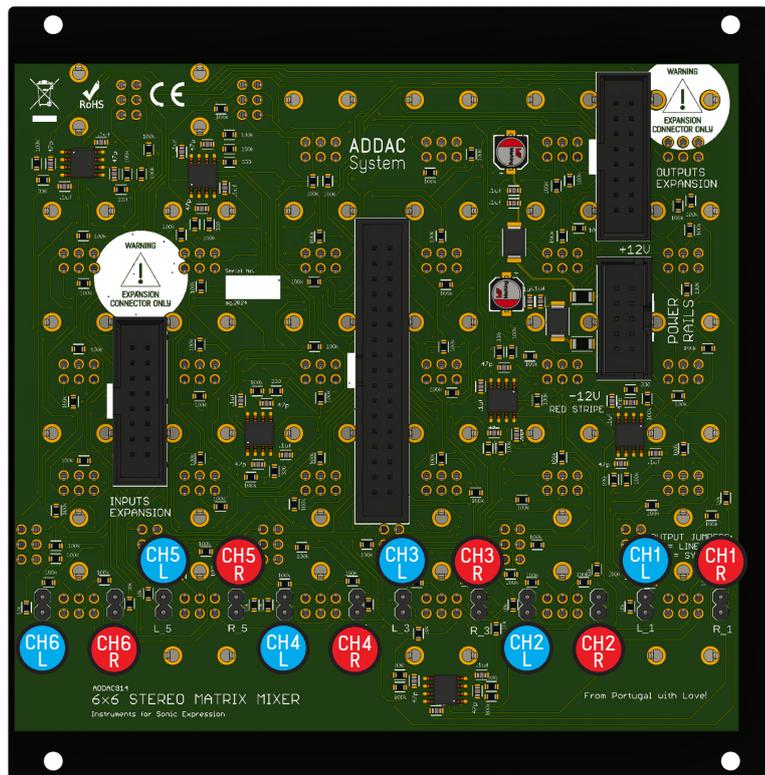

Routing Diagram
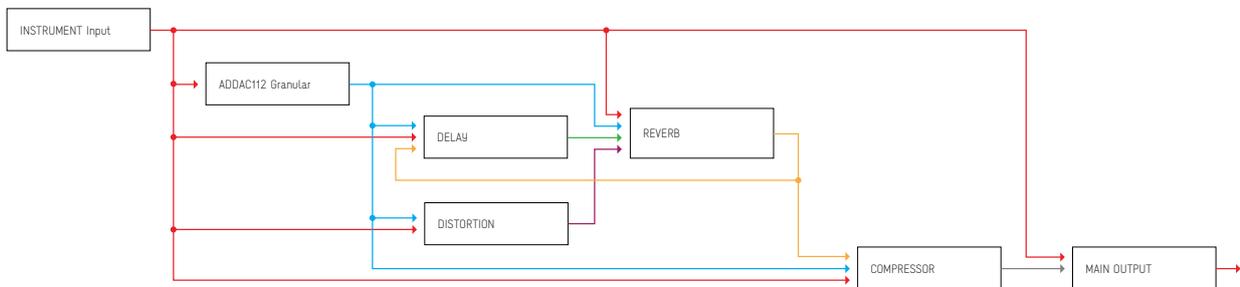
LINE / SYNTH LEVEL JUMPERS
Jumper locations and labelling
Here's the location and labelling of the Line/Synth level jumpers on the back of the 814 jacks and controls modules.

INS & OUTS

MAIN CONTROLS

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 indvidually as expansions.

ADDAC814

ADDAC814A
INS & OUTS

ADDAC814B
MAIN CONTROLS
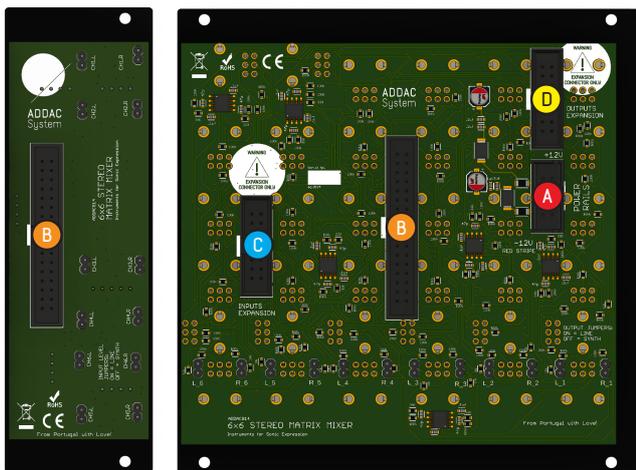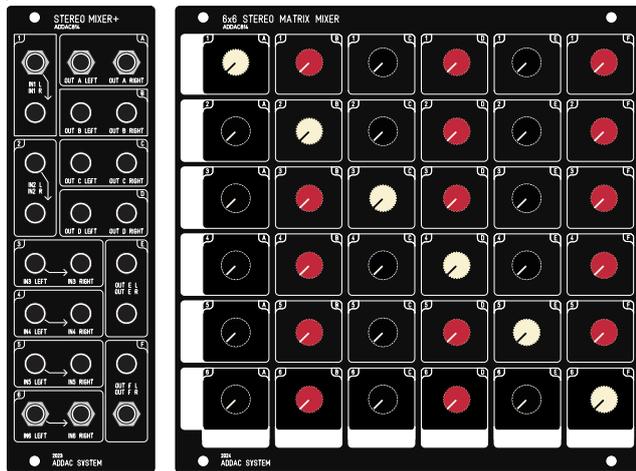
ADDAC814C
EXPANSION CONTROLS
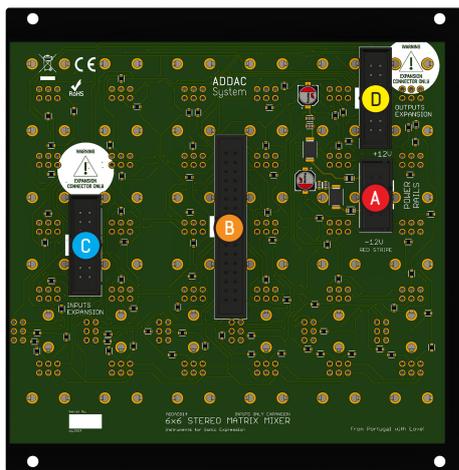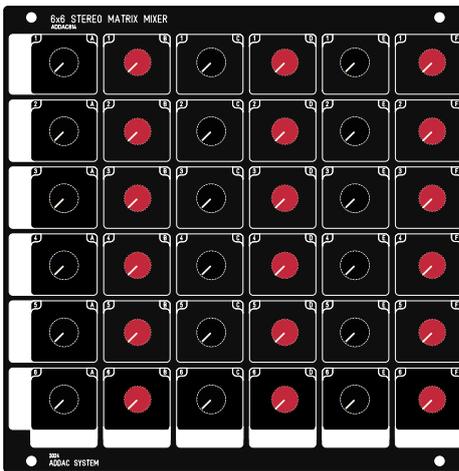
INS & OUTS   MAIN CONTROLS   EXPANSION CONTROLS

(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.
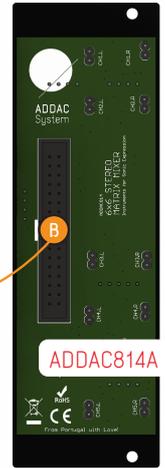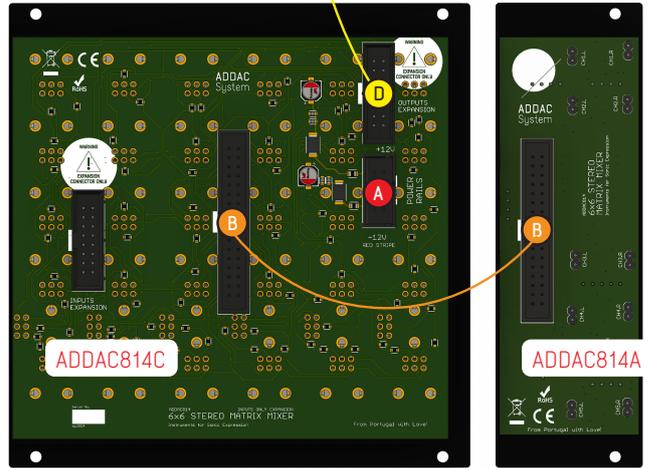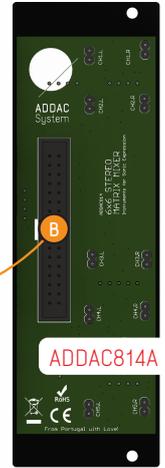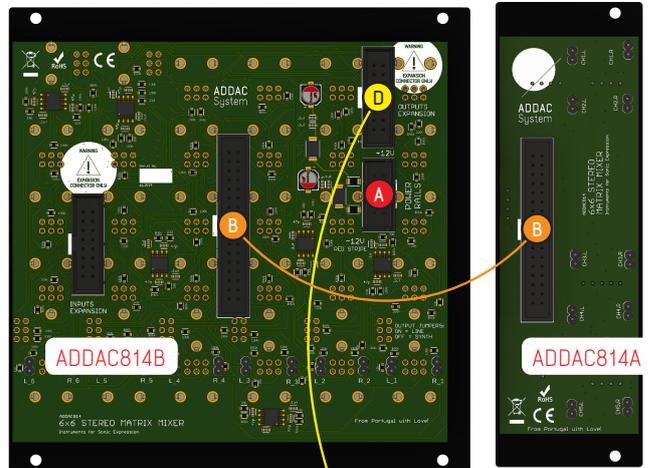
ADDAC814

INPUTS 1 to 6
OUTPUTS 1 to 6

JUMPERS:
OUTPUTS 1 to 6 (SYNTH/LINE)

JUMPERS:
INPUTS 1 to 6
(SYNTH/LINE)

ADDAC814B
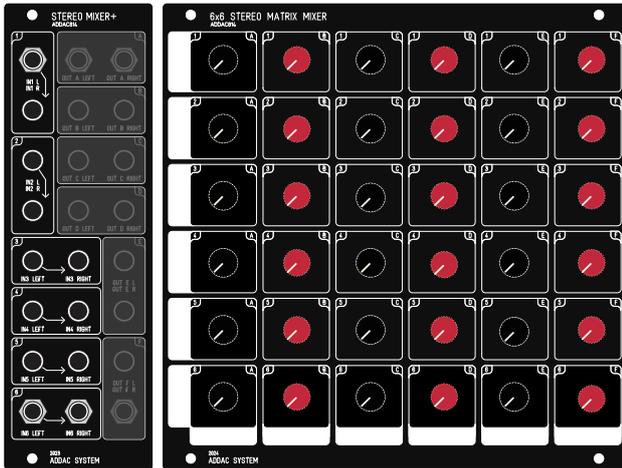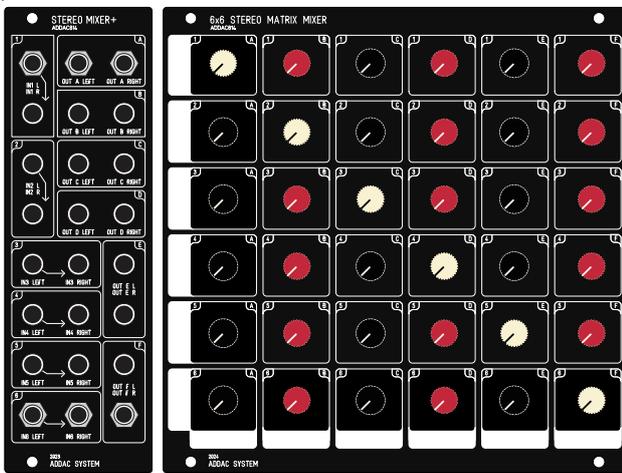
ADDAC814A

ADDAC814A

INPUTS 7 to 12
OUTPUTS UNUSED

ADDAC814C

ADDAC814A

JUMPERS:
INPUTS 7 to 12
(SYNTH/LINE)

ADDAC814 EXPANDER SET

A POWER RAILS RIBBON CABLE

B INS/OUTS RIBBON CABLE (2x17 Connectors)

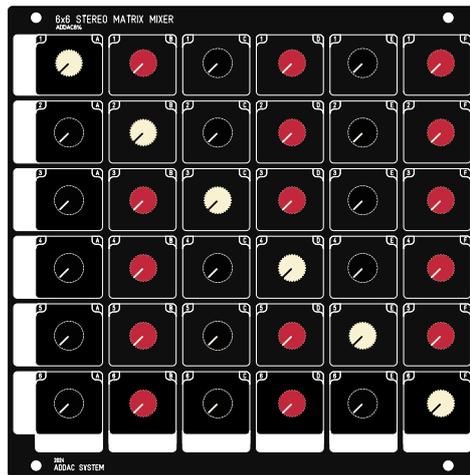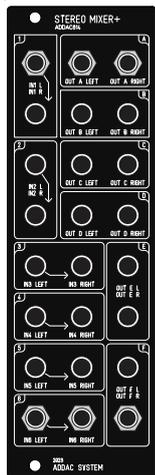**D** Vertical CONNECTION RIBBON CABLE (2x8 Connectors)

OTHER CONFIGURATIONS
6x12 Configuration

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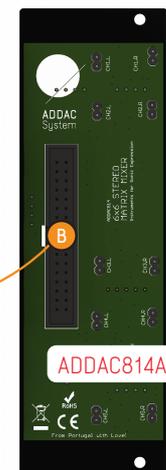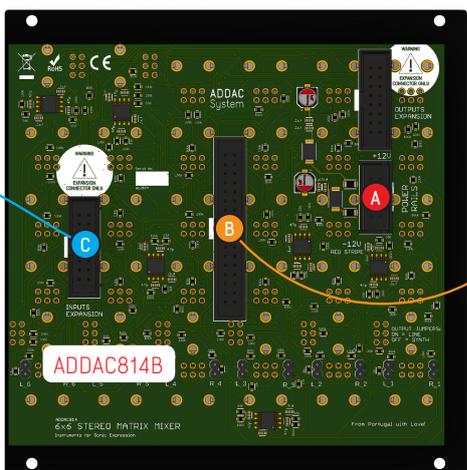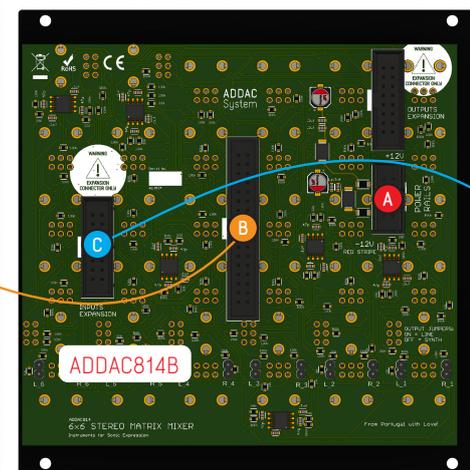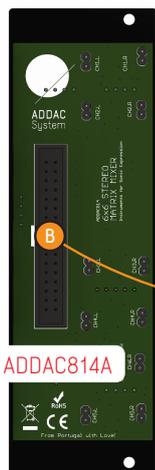In this configuration the second jack panel inputs are not used.

ADDAC814   ADDAC814 (with no cream knobs)

INPUTS 1 to 6   INPUTS UNUSED
OUTPUTS 1 to 6   OUTPUTS 7 to 12
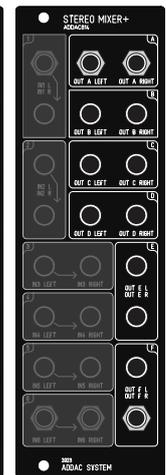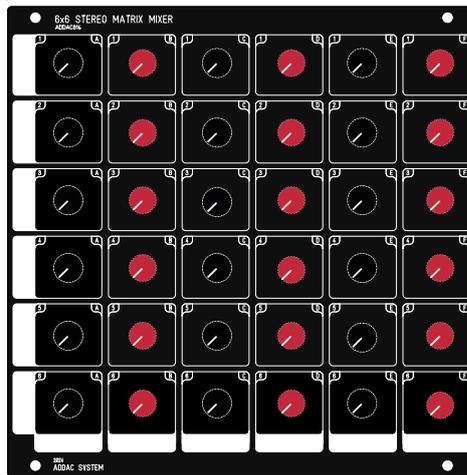
ADDAC814A   ADDAC814B   ADDAC814B   ADDAC814A

JUMPERS: JUMPERS: JUMPERS:
OUTPUTS 7 to 12 (SYNTH/LINE)   OUTPUTS 1 to 6 (SYNTH/LINE) INPUTS 1 to 6
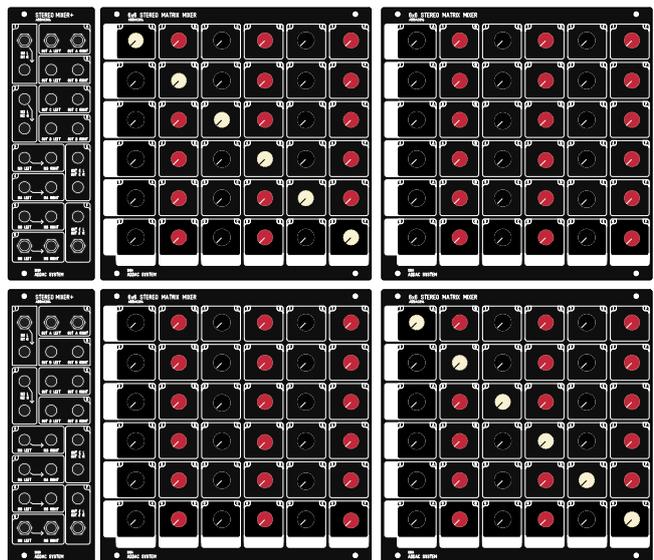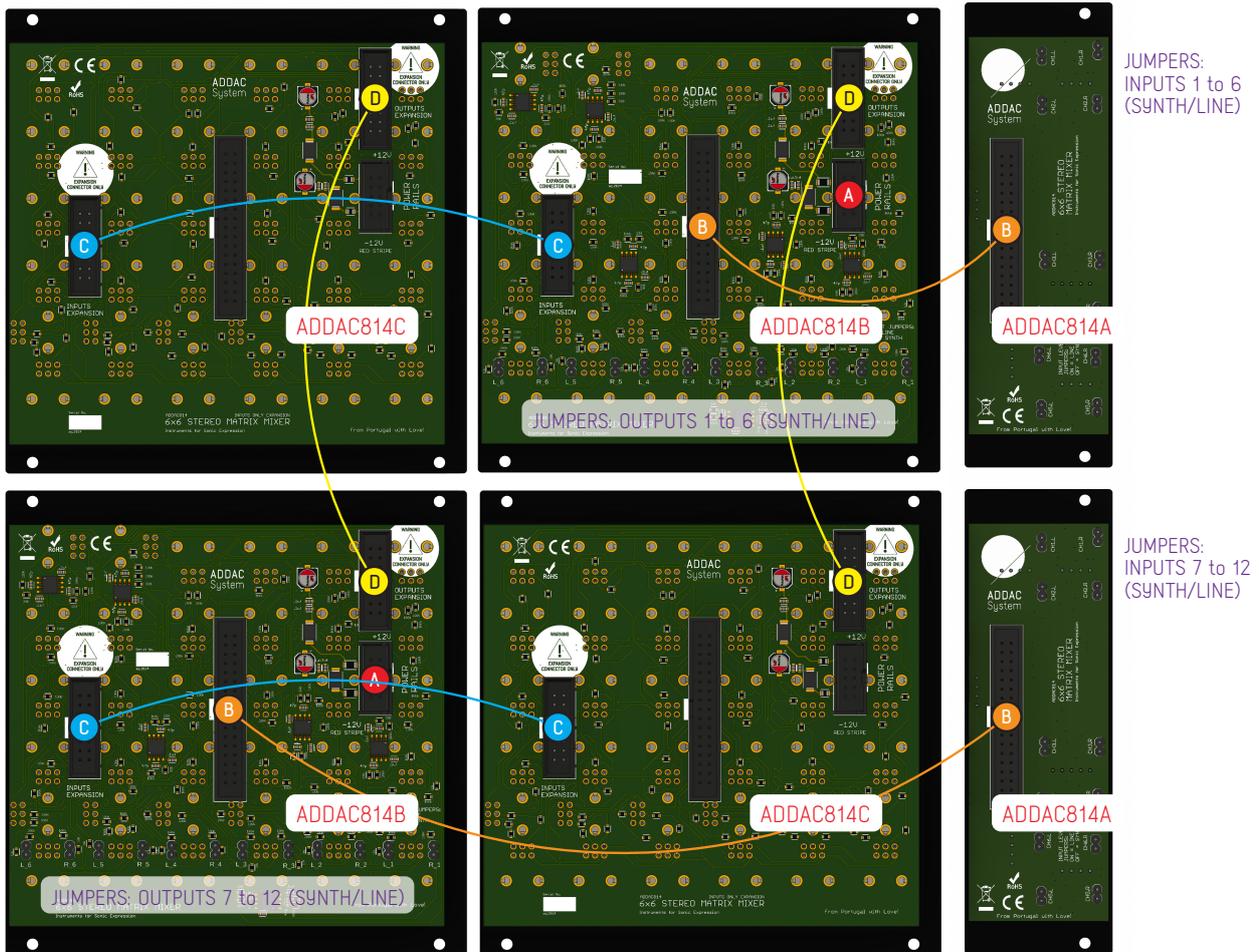   (SYNTH/LINE)

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.

JUMPERS:
INPUTS 1 to 6
(SYNTH/LINE)

ADDAC814C

JUMPERS: OUTPUTS 1 to 6 (SYNTH/LINE)

ADDAC814B

ADDAC814A

JUMPERS:
INPUTS 7 to 12
(SYNTH/LINE)

ADDAC814B

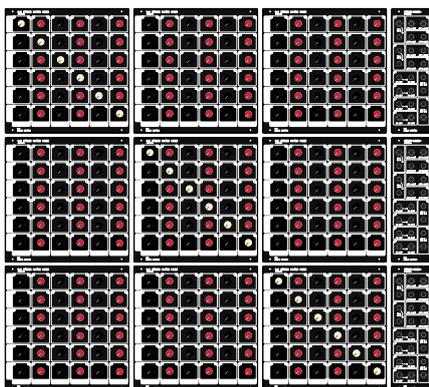JUMPERS: OUTPUTS 7 to 12 (SYNTH/LINE)

ADDAC814C

ADDAC814A

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.

JUMPERS: INPUTS 1 to 6 (SYNTH/LINE)

ADDAC814C

ADDAC814C

ADDAC814B
JUMPERS: OUTPUTS 1 to 6 (SYNTH/LINE)

ADDAC814A

JUMPERS: INPUTS 7 to 12 (SYNTH/LINE)

ADDAC814C

ADDAC814B
JUMPERS: OUTPUTS 7 to 12 (SYNTH/LINE)

ADDAC814C

ADDAC814A

JUMPERS: INPUTS 13 to 18 (SYNTH/LINE)

ADDAC814B
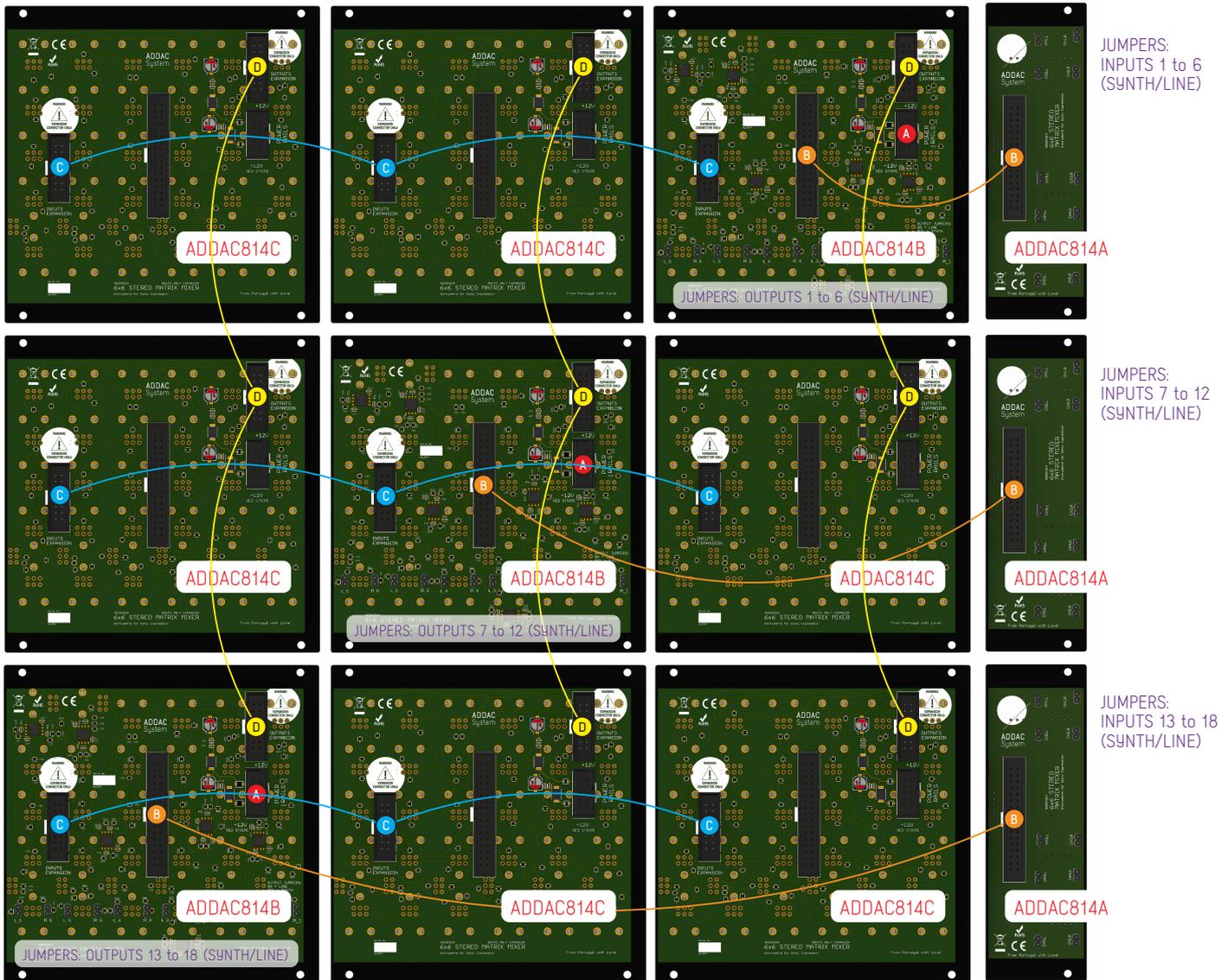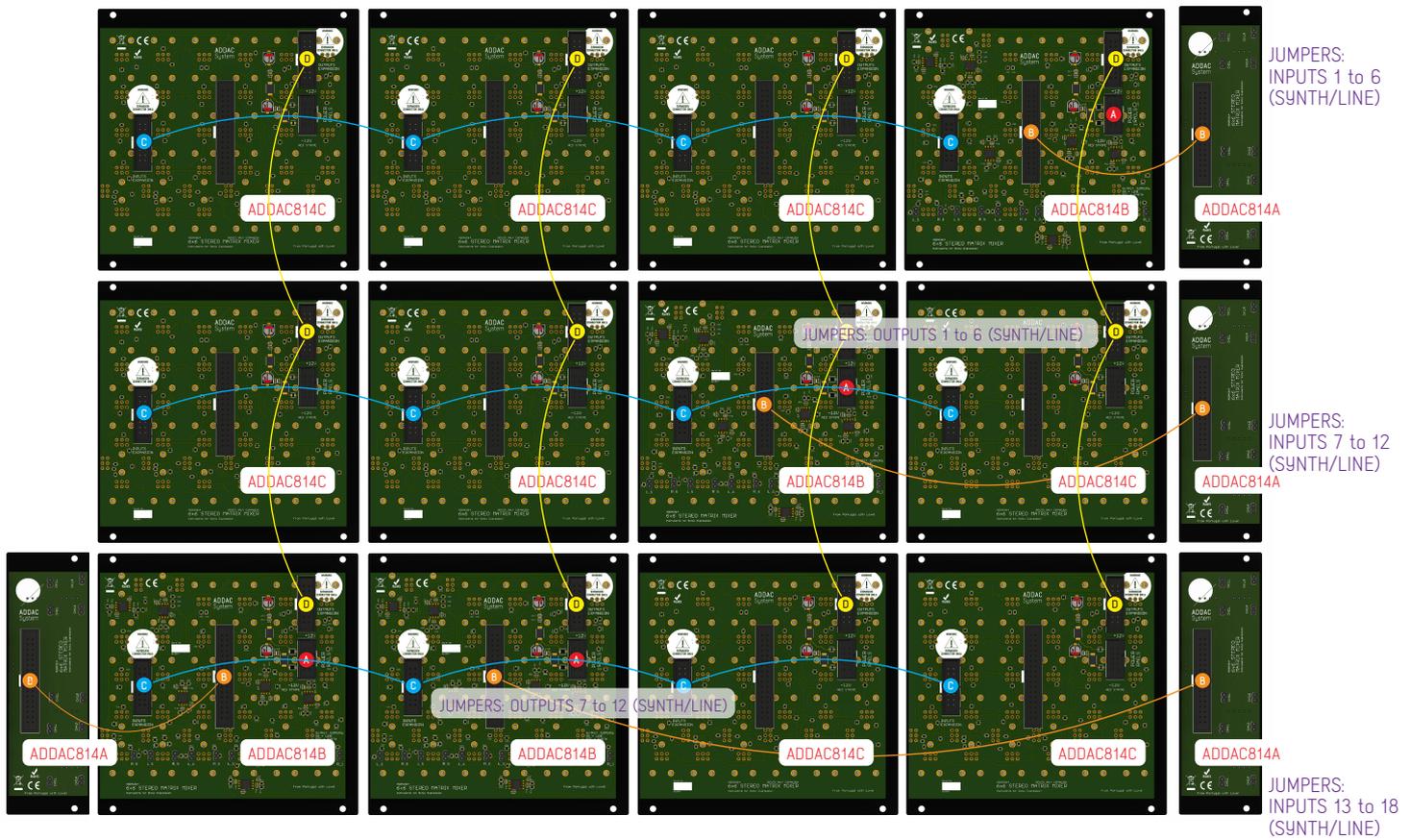JUMPERS: OUTPUTS 13 to 18 (SYNTH/LINE)

ADDAC814C

ADDAC814C

ADDAC814A

A POWER RAILS RIBBON CABLE

B INS/OUTS RIBBON CABLE (2x17 Connectors)

C Horizontal CONNECTION RIBBON CABLE (2x8 Connectors)

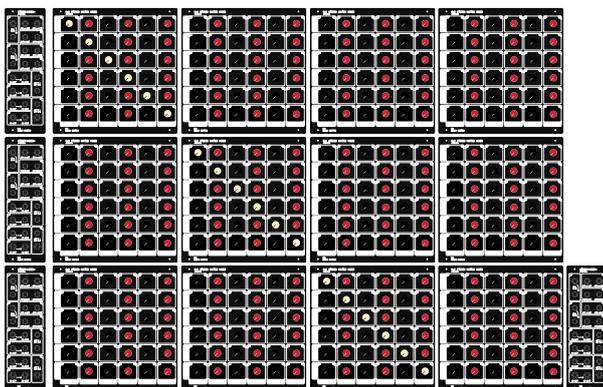**D** Vertical CONNECTION RIBBON CABLE (2x8 Connectors)

OTHER CONFIGURATIONS
18x24 Configuration

With 4 sets of ADDAC814 plus 8 ADDAC814C one can grow the matrix to a 18x24 configuration.
This will take an overall of 108HP in the top 2 rows + 116HP on the bottom row.
Custom ribbon cables will be necessary, contact us directly if planning to go this BIG.

JUMPERS: INPUTS 1 to 6 (SYNTH/LINE)

JUMPERS: OUTPUTS 1 to 6 (SYNTH/LINE)

JUMPERS: INPUTS 7 to 12 (SYNTH/LINE)

JUMPERS: OUTPUTS 7 to 12 (SYNTH/LINE)

JUMPERS: INPUTS 13 to 18 (SYNTH/LINE)

JUMPERS: OUTPUTS 13 to 18 (SYNTH/LINE)

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)

ADDAC814 USER'S GUIDE
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