

SFX V1 – ASSEMBLY GUIDE

This document will help you to build your module without any trouble! We will give the order in which the components should be placed on the boards to make your life easier during assembly.












If you want more information about how to build Eurorack modules and what tools you should have, go check our DIY electronics advice on our website: somethingmodular.fr

We also made an **online interactive BOM** so you can check components placement.

And again:

THANKS YOU FOR CHOOSING OUR KIT!! YOU'RE AWESOME!!

Now let's build this module, your module!

RESISTORS				
Qty	Value	Color	Code	Reference designator
1	470		Yellow, violet, black, black, brown	R26
4	680		Blue, gray, black, black, brown	R10, R11, R14, R15
3	1k		Brown, black, black, brown, brown	R5, R28, R29
2	15k		Brown, green, black, red, brown	R22, R23
1	20k		Red, black, black, red, brown	R4
4	56k		Green, blue, black, red, brown	R17, R18, R24, R25
8	100k		Brown, black, black, orange, brown	R2, R3, R6, R7, R8, R9, R19, R20
1	150k		Brown, green, black, orange, brown	R21
1	270k		Red, violet, black, orange, brown	R1
1	330k		Orange, orange, black, orange, brown	R27
3	1M		Brown, black, black, yellow, brown	R12, R13, R16

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DIODES

Diodes are **Polarized!**

The black or white line on the diode must match the white line on the diode symbol on the Silkscreen.

Qty	Value	Reference designator
2	1N5818	D1, D2
2	1N4148	D3, D5
2	3.3V Zener	D4, D6

Integrated Circuits

ICs are oriented and so are sockets. Solder the sockets first, take care of orientation: the notch or dot on one end of the IC should match the silkscreen.

Before putting the ICs, **ground yourself** (you can touch the metal on your kitchen sink faucet).

Now, place the ICs, take care of orientation.

Qty	Value	Reference designator
2	NE5532	U1, U2
1	LM13700	U3

CAPACITORS

Qty	Value	Code	Reference designator
4	10p	10	C9, C10, C13, C15
1	47p	47	C14
6	100n	104	C3, C4, C5, C6, C7, C8

ELECTROLYTIC CAPACITORS

Electrolytic Capacitors are **Polarized!**

Mind the polarity : the long leg is the positive lead, negative lead is denoted by a white line.

Qty	Value	Code	Voltage	Reference designator
3	10 μ F	10 μ F	≥ 25 V	C1, C2, C11

POWER CONNECTOR

This component should be soldered on the back of the PCB. Mind pin 1.

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TRIMMERS

Solder the trimmers with the screw facing out from the edge of the PCB.

Qty	Value	Reference designator
2	100k	RV3, RV4

FEMALE AND MALE PIN HEADERS

Place the female pin headers on the front side of board B, place the male pin headers on the back of board B. Put them inside each other.

Secure the spacer between board A and B.

Solder both female and male pin headers.

Qty	Value	Reference designator
2	1x06 Female Pin Header	J20, J21
2	1x06 Male Pin Header	J10, J11

Now that you have solder your pin headers, unscrew one of the M3 spacer screw. Put Board B aside. We will start by soldering potentiometers and small jacks onto Board A.

READ THIS BEFORE SOLDERING ANYTHING:

Install potentiometers and mini-jacks onto board A without soldering. Now place the front panel, secure few components (top potentiometer and bottom jacks for example). Check for any mechanical stress on components, PCB or panel. If there is none then you can solder.

Remember to do this little routine every time you put front panel components, soldering without putting the front panel components first you risk to have hard time to align the components to the panel holes.

3.5mm Jack Sockets

Qty	Value	Reference designator
6	PJ301M-12	J1, J2, J5, J6, J8, J9

Potentiometers - ALPHA 9MM POTS

Qty	Value	Reference designator
1	100k linear	RV1
1	10k linear	RV5

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Now secure again the M3 spacer screw between Board A and Board B. Place the 6.3mm jack sockets on the PCB. Put back the panel as you did before. Now you can solder the jack sockets.

6.35mm Jack Sockets		
Qty	Value	Reference designator
2	Rean NYS234	J4, J7

Now you can secure every jacks and pots nuts. Once you are done. Put the potentiometer knobs on.

CONGRATULATION, you've just finished building your new module !

FIRST POWER UP TEST :

Before powering up your module, use a multimeter to check that there is no short between +12V, -12V and Ground rails.

Now you can power up your module: Connect the power ribbon cable (the red wire on the power ribbon cable corresponds to -12V) and **Enjoy!**

CALIBRATION:

The goal of this calibration is to set the offset of the crossfader's VCAs using trimmers RV3 and RV4 to prevent CV signal from leaking into the audio signal.

Start by powering-up your module. Connect the "MIX OUT" to your speakers or headphones.

Connect a VCO (or any oscillator) to "MIX CV":

1 – Set the Crossfader Pot to "A" position. Adjust RV3 until you reach a setting where the volume of the VCO is minimum at "MIX OUT".

2 - Set the Crossfader Pot to "B" position. Adjust RV4 until you reach a setting where the volume of the VCO is minimum at "MIX OUT".

3 – Repeat both previous steps until you reach the minimum leakage of the VCO in the audio signal for both channels A and B. Move the Crossfader Pot to check if you get a louder leakage in any position. If so, gently adjust RV3 and RV4 until you get rid of it.

YOU'RE READY TO ROLL ! ENJOY YOUR NEW MODULE !