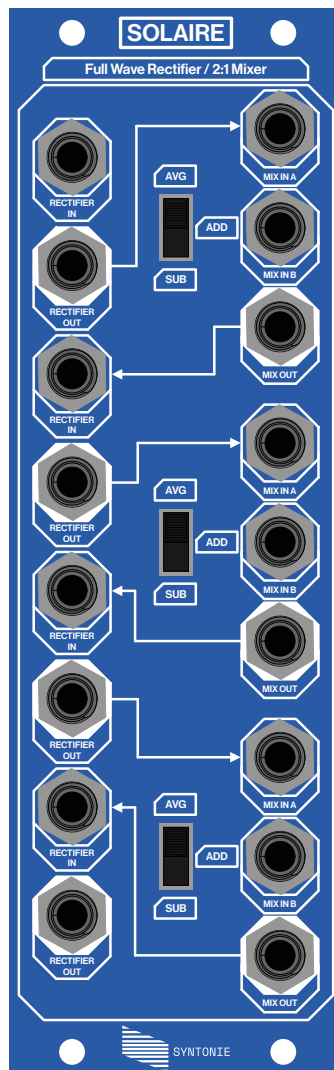

Solaire

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Full Wave Rectifier / 2:1 Mixer
User documentation



SYNTONIE



Solaire, the french word for solar, is a quad full wave rectifier and triple 2:1 mixer, with normalization between rectifier and mixer stages.

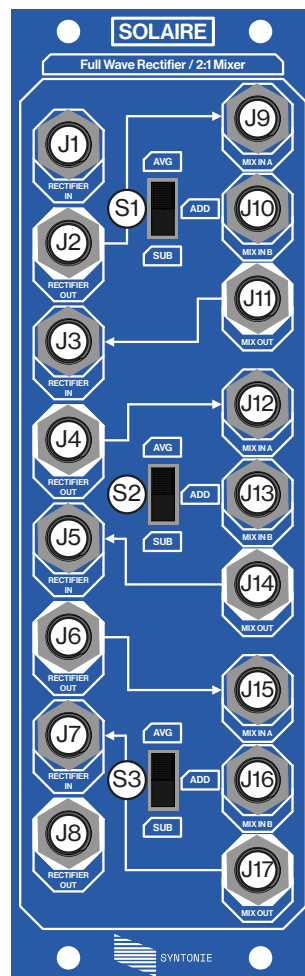
Rectifiers can be used for wave shaping and solarization type of effects, and mixers to blend two signal together.

Specifications

- 8HP
- 100 mA +12V (16pin or DC)
- 0 mA -12V
- 0 mA +5V
- 42mm depth

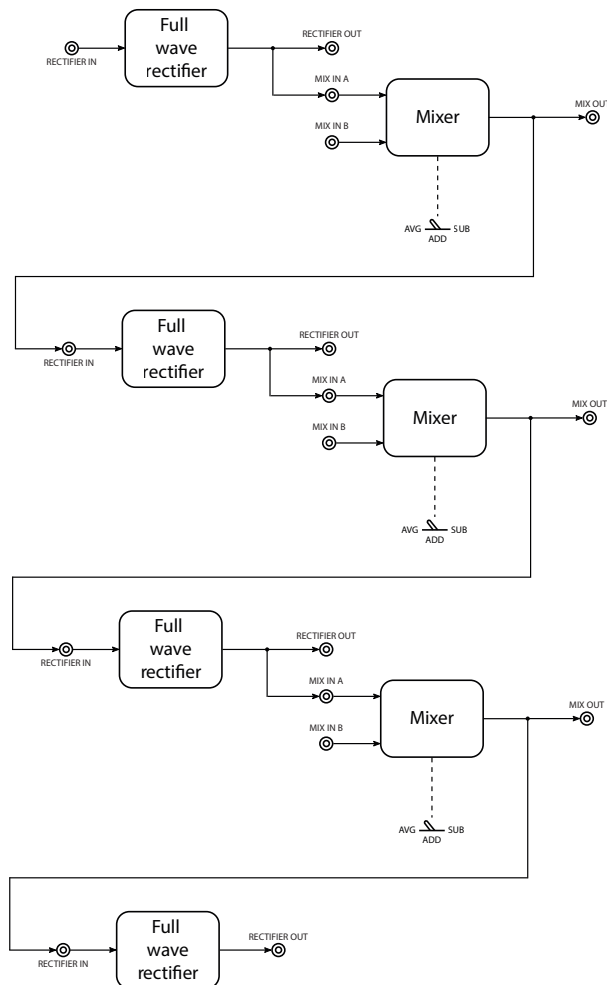
Special thanks to: LZX for the rectifier circuit from Cadet Ramp, which has been the starting point to design this module.

Lorenzo Ferronato for the documentation design. And of course, **everyone who has supported Syntonie until now & those who will support it in the future.**



- (J1) 1st rectifier input
- (J2) 1st rectifier output
- (J3) 2nd rectifier input
- (J4) 2nd rectifier output
- (J5) 3rd rectifier input
- (J6) 3rd rectifier output
- (J7) 4th rectifier input
- (J8) 4th rectifier output
- (J9) 1st mixer input A
- (J10) 1st mixer input B

- (J11) 1st mixer output
- (J12) 2nd mixer input A
- (J13) 2nd mixer input B
- (J14) 2nd mixer output
- (J15) 3rd mixer input A
- (J16) 3rd mixer input B
- (J17) 3rd mixer output
- (S1) 1st mixer mode selection switch
- (S2) 2nd mixer mode selection switch
- (S3) 3rd mixer mode selection switch



Here is the block diagram of Solaire, each **RECTIFIER OUT** is going to **MIX IN A** (except for the last rectifier), and each **MIX OUT** is going to the next **RECTIFIER IN**. Those connections are normalised, meaning that inserting a jack into one of those inputs will break the connection, allowing to use each stage individually.

The idea behind the normalisation of the stages is to connect a signal at the 1st rectifier input, and then add up to 3 other signals using the **MIX IN B** of each mixer in-between each rectifiers.

Each mixer features a switch that select if:

- **AVG**: both signals are added and the result averaged ($(A+B)/2$), so with 0V/+1V signals at the inputs, the output result will be 0V/+1V
- **ADD**: both signals are added ($A+B$), so with 0V/+1V signals at the inputs, the output result will be 0V/+2V
- **SUB**: signal B is subtracted from signal A ($A-B$), so with 0V->1V signals at the inputs, the output result will be -1V/+1V

