The Q141 Oscillator Aid is designed to add functionality to the Q106 Oscillator. A soft sync input and control allows multiple oscillators to track together with a smoother result than that provided by hard sync. A 6 position rotary switch allows quick selection of waveforms and adds a square wave (50% duty cycle pulse wave). An amplitude control allows the output levels to be adjusted. The selected waveform is available in both positive and negative polarity which can be useful when the oscillator is used as a modulation source for filters, amplifiers and other modules. Mount the Q141 Aid on the right or left side of the Q106 Oscillator. Wires from the Q141 attach to the Q106 circuit board.

Specifications

Panel Size: Single width 2.125"w x 8.75"h.

Power: None.

Controls and Connectors

Soft Sync Amount Control

Sets the level of the incoming sync waveform. Adjust this control to vary the amount of affect the signal has.

Soft Sync Input

Apply a signal here from another oscillator to cause the two oscillators to sync together. Normally this is a triangle or sine wave.

Wave Selector Switch

Allows quick changes in the waveform present at the 2 output Connectors.

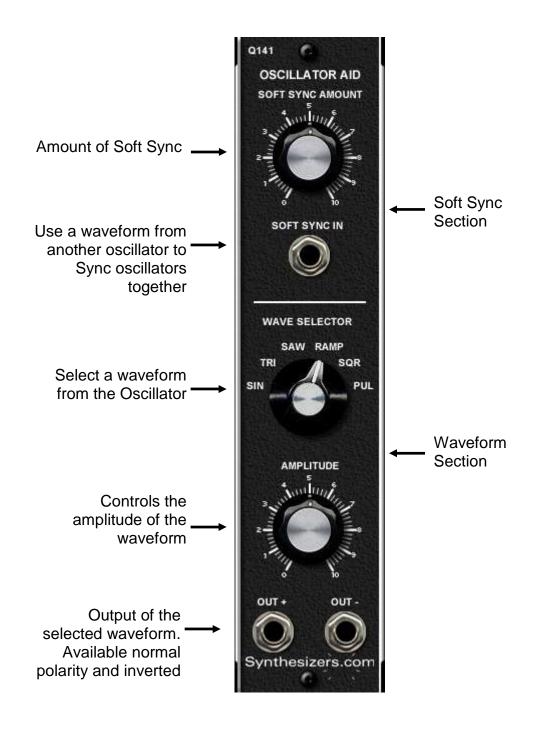
+Output Connector

This is the wave in its non-inverted form.

-Output Connector

This is the wave in its inverted form.



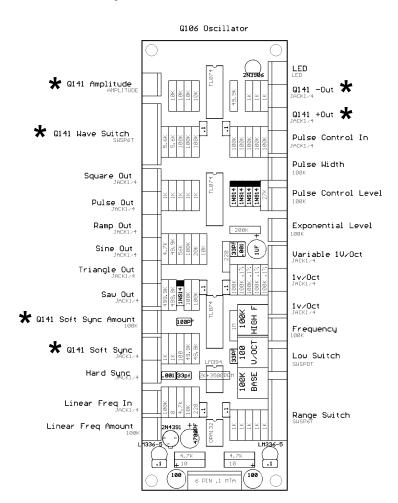


Testing

No calibration is required on this module.

- 1. Connect the cables from the Q141 to the Q106 oscillator per the PCB drawing.
- 2. View the waveforms present at the +OUTPUT and -OUTPUT connectors while switching the Waveform selector switch, and while adjusting the output level.
- 3. Apply a triangle waveform from another oscillator to the Soft Sync Input connector. Mix the outputs of both oscillators (any waveforms). There should be no affect when the Soft Sync Amount control is at 0, and various syncing results as the control is turned clockwise. Detuning the oscillators will also result in various effects.

PC Board Layout



Q141 Installation

First, power down the system.

Remove the oscillator that the Q141 will aid. It's not necessary to remove the power connector if there is enough cable length. There must be a single-width blank opening to the left or to the right of the Oscillator's location in which to mount the Q141.

There are 6 cables on the Q141 oscillator aid that must be connected to the Q106 Oscillator. Use the PCB drawing to locate the connectors and attach the cables.

Mount the modules in the cabinet.