

Q113 8 Channel Mixer

Feb 2015

The Q113 Mixer provides common mixing functions needed in all systems. The mixer is broken into 2 sections of 4 inputs which can be combined to create an 8 channel unit. Each section has 3 inputs with attenuators and one that is set at 100%. Both DC and AC signals can be mixed.

Controls and Connectors

Input Level Controls

Allows attenuation of input signals.

Input Connectors

Input signals to be mixed.

Section Output Connectors

All four signals are mixed together and provided at this output.

Combined Output Connector

Both sections (all 8 signals) are mixed together and provided at this output.

Specifications

Panel Size: Dual width 4.25"w x 8.75"h.

Signal Levels: 10V PP maximum

Power: +15V@30ma, -15V@30ma



Usage and Patch Tips

Basics

A mixer is basically an electrical adder. All the signal inputs are added together and presented at the output. Three of the inputs on each section have attenuators and one does not. You can use a Q125 Signal Processor to attenuate signals before applying them to the unattenuated input. You can also use the unattenuated input to receive signals from other mixers to create a greater number of channels.

Making New Waveforms

You can create new waveforms by mixing two or more from a single oscillator. The signals will be in phase and create a new stable, unbeating waveform. This can create interesting harmonics that can then be filtered.

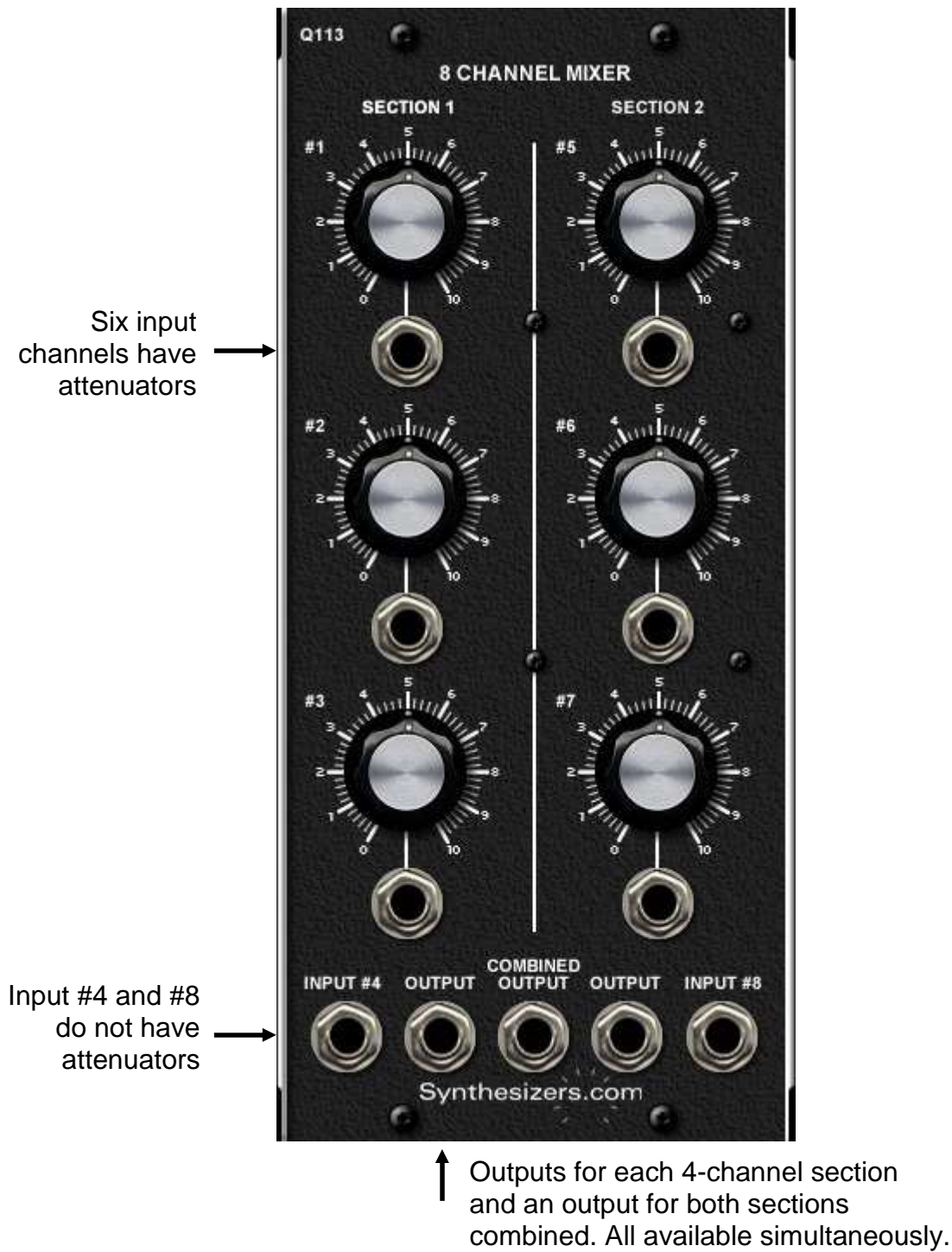
Mixing Control Signals

The mixer has DC inputs and outputs which means it can mix slow moving control signals. This can be helpful when you need to mix an envelope generator output and an oscillator output for use by the filter or other modules that have limited input connectors.

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The Q113 Mixer can operate as an 8-channel mixer or as two 4-channel mixers.



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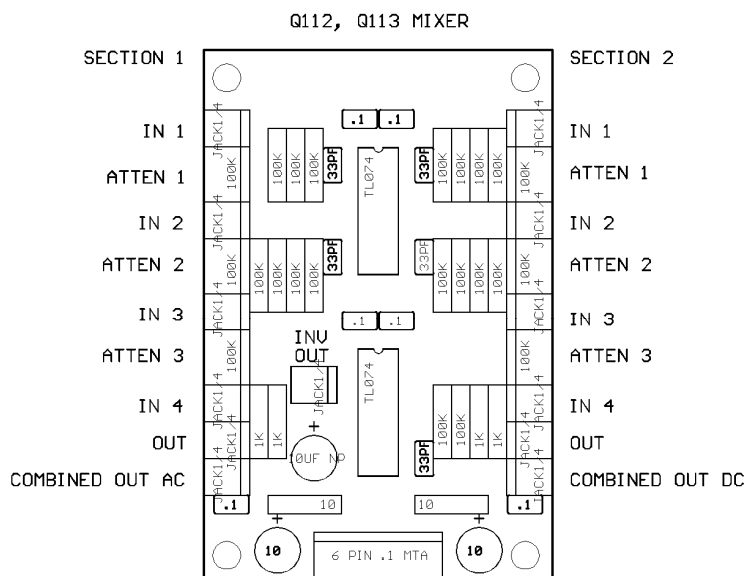
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Calibration and Testing

No calibration is required for this module.

1. Connect an oscilloscope to the output connector.
 2. Apply an 1Khz 10v PP waveform to each input and verify that the signal is present at the output.
- If the input has an attenuator, verify that it also operates correctly.

PC Board Layout



Power Connector

6 pin .1" MTA type connector made by AMP. Available from Mouser Electronics or Digi-Key. Modules have a male PCB mount connector and cable harnesses have a female.

Part Numbers:

Female cable mount: #6404416

Male PCB mount: #6404566

Pinout:

1 = +15v

2 = key (pin removed)

3 = +5v

4 = gnd

5 = -15v

Not all voltages are used on all modules.