

# Q175A MIDI Interface Aid

April 2019

The Q175A MIDI Interface Aid module operates in conjunction with the Q174 MIDI Interface module to provide additional Pitch/Gate outputs, an Arpeggiator and Portamento (glide between notes).

The Q175A can not operate stand-alone, it must be connected to the Q174 MIDI Interface module. Connectors from the Q175A module plug into the circuit board mounted on the Q174 module.

The Pitch/Gate jacks on the Q174 must be replaced with those provided with the Q175A.

The Q175A does not have the MIDI functions of the standard Q175. Pitch and Gate multiples are provided instead. This can save space in smaller systems by eliminating the need for an extra multiples module.

The Arpeggiator automatically cycles through notes that are held down. The operator has complete control over the cycling rate using the manual speed control, or it can be driven from an external clock to synchronize with sequencers and other devices. The manual Gate Width control determines the length of each note, or it can be controlled by the width of the pulse at the Clock input. Direction of the pattern can be selected Up, Down or Up/Down, and changed in real-time. The pattern can include just the notes being held, or those notes plus the next octave up. The Arpeggiator affects the first channel (the top section of Q174) only; the second channel (middle section of Q174) continues to operate as normal. During Arpeggiator operation, the Velocity output remains unchanged. Sending a CC15 causes the Arpeggiator to Hold notes pressed. Press the note again to turn it off.

Portamento (Glide) provides a gradual transition between notes as they change. Speed of the glide can be controlled manually as well as the curve type - Linear or Exponential. Glide settings affect the first channel (the top section) only, and operates when the Arpeggiator is active. Portamento On/Off can be controlled with CC65.



## Specifications

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

**Arpeggiator Speed Control:** 1hz - 100hz

**Arpeggiator External Clock Level:** +5V or 10Vpp

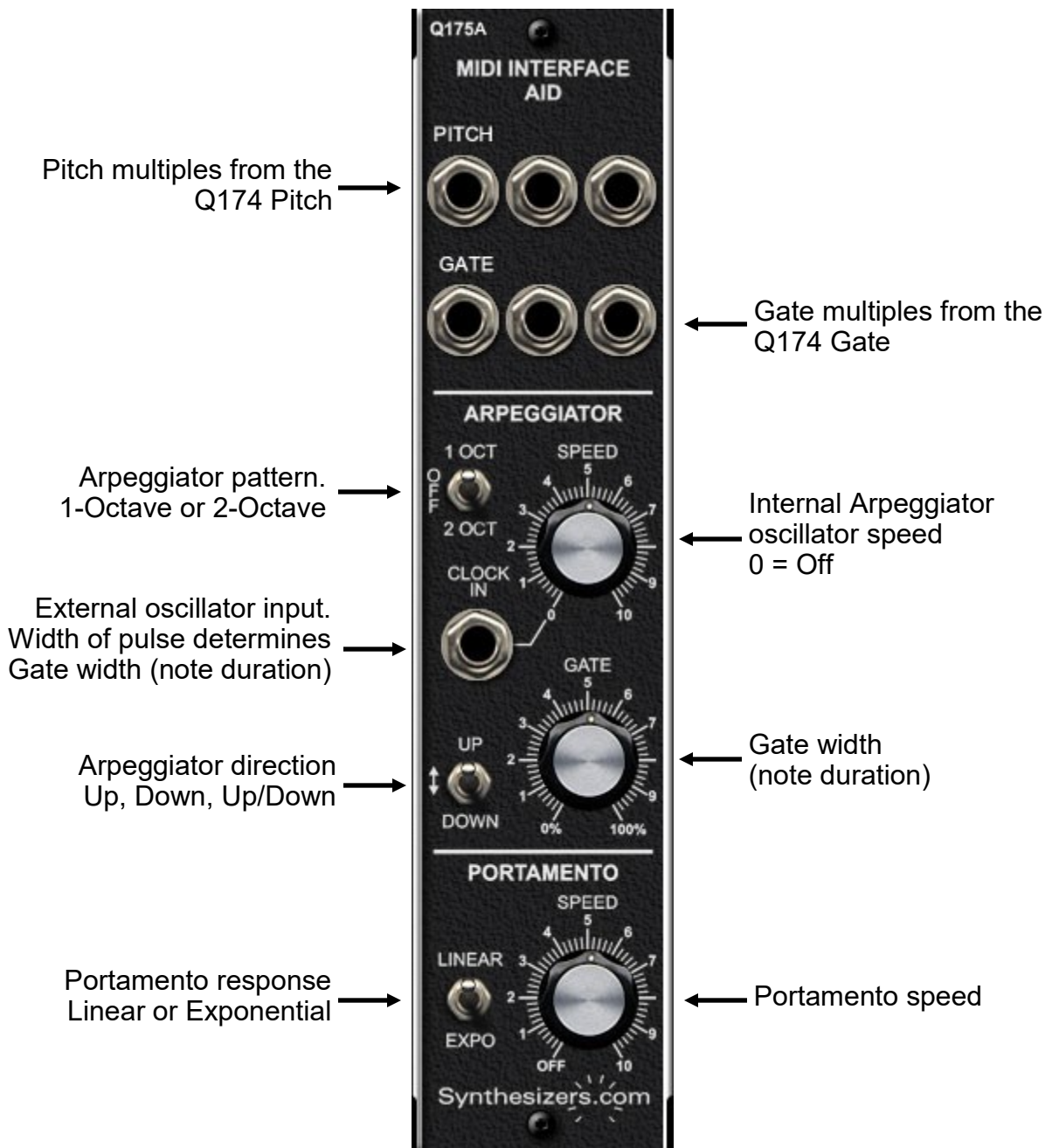
**Arpeggiator Maximum External Clock Speed:** 1Khz

**Arpeggiator Gate Width Control:** 5% - 100%

**Portamento Speed:** 1s - 50ms

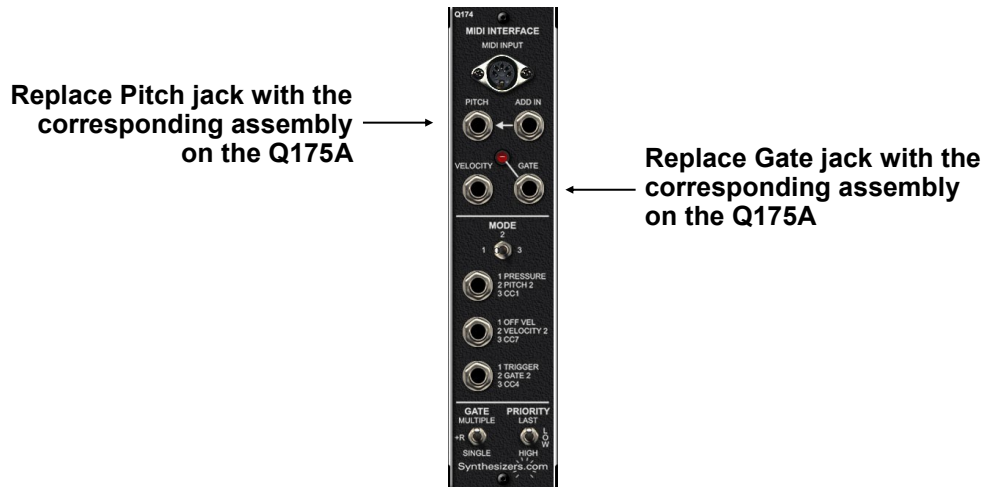
**Portamento Resolution:** 100hz

**Power:** +15V@0ma, -15V@0ma, +5V@0ma (the circuit is on the Q174 module)



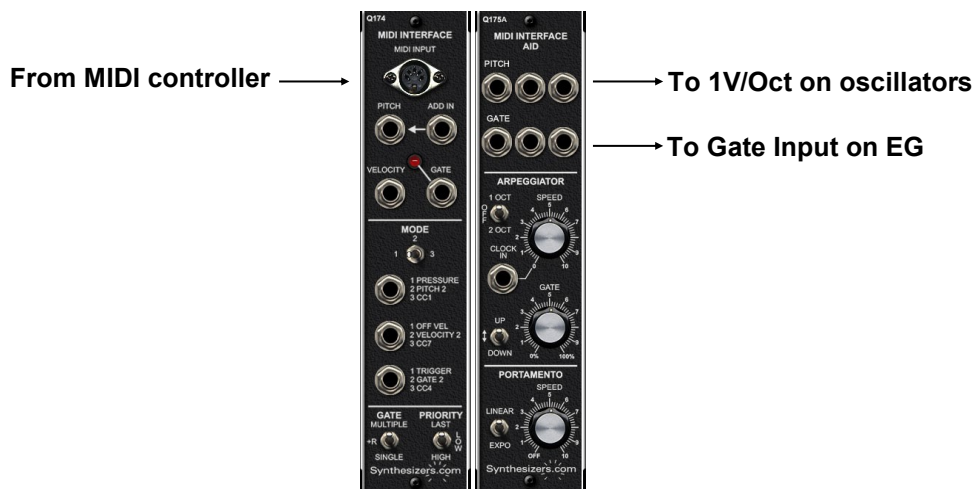
## Assembly Notes

If ordered alone, the Q175A will come with the Pitch and Gate multiple assemblies already installed. Each assembly has an extra Jack that replaces the corresponding Jack on the Q174. Simply unscrew the Jack on the Q174 and replace it with the Jack on the Q175A. No soldering is required.



## Patching Notes

Use one MIDI controller to control multiple oscillators and envelope generators without needing an extra multiple module. Simply patch the Q175A Pitch outputs to the 1V/Oct inputs on an oscillator and the Q175A Gate outputs to any number of envelope generators. Also try using the outputs to modulate filters, control sequencers, etc.



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## Circuit Board Connector Layout

The following drawing shows all of the connections for the Q174 and Q175A front panel along with jumper settings and the voltage adjustment. To attach the Q175A simply connect the cables per the drawing.

\* Replace these with connectors provided with the Q175A

