

Q117 Sample & Hold

Jan 2003

The Q117 Sample and Hold module is used to capture a signal's voltage level and hold it. The sampling can be gated by an external signal such as an oscillator, by the internal oscillator, or manually. An LED indicates when a sample is being taken.

Specifications

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

Signal Levels: 10V PP maximum

Internal Oscillator: .5 to 25hz

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

Controls and Connectors

Input Level Control

Allows attenuation of the input signal.

Sample Rate

Sets the rate of the internal sample oscillator.

Internal/External Switch

Selects a sample gate from the internal oscillator or an external source.

Sample LED

Indicates that a sample gate is present. When the LED comes on, the input voltage will be captured.

Gate Connector

External gate signal input. Active high threshold of 1.5 volts. Must be in External mode. The input signal is latched on the rising edge of the gate signal.

Manual Button

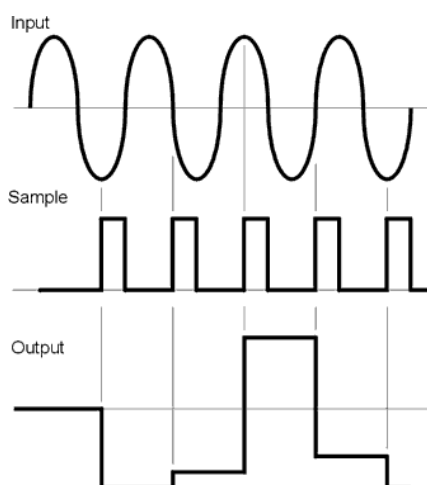
Allows manual creation of a gate signal.

Input Connector

Signal to be sampled (latched).

Output Connector

The sampled signal. This is the value of the input signal when the gate was released.



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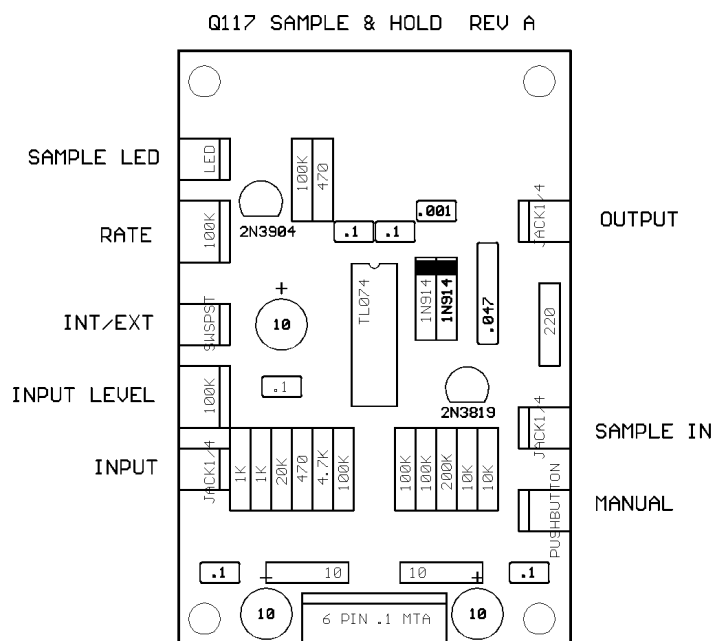
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Calibration and Testing

No calibration is required for this module.

1. Turn the Sample rate knob to 10.
2. Switch to Internal mode.
3. Turning Sample rate knob should adjust the speed of the LED.
4. Switch to External mode.
5. Pressing the Manual button should make the LED light.
6. Set the Input level to 10.
7. Apply a 100hz triangle to the input jack.
8. Apply a 10hz square wave to the gate input.
9. Connect the Output jack to an oscilloscope.
10. Oscilloscope should show stair-step triangle.
11. Input level knob should control the signal level.

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.