

Q128 Switch

Aug 2014

The Q128 Switch Module allows a signal to control two SPDT (single pole double throw) electronic analog switches. This configuration actually makes a DPDT switch (double pole double throw). These switches can be used to switch between patches during a sound, oscillate between two different filter settings, switch between left and right outputs, etc. An LED indicator shows the status of the switch and a push button allows manual operation.

Controls and Connectors

Control Connector

Voltage control of the switch positions.

=> 3V causes the Common connector to connect to the A connector.

< 3V causes the Common connector to connect to the B connector.

Manual Control Switch

Pressing causes the Common connector to connect to the B connector.

A On Indicator

Lights when the Common connector is connected to the A connector.

A Connector

Normally connected to the Common connector.

B Connector

Normally disconnected.

Common Connector

The common connection point between A and B.



Specifications

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

Signal Levels: 10V PP maximum, DC to 20khz

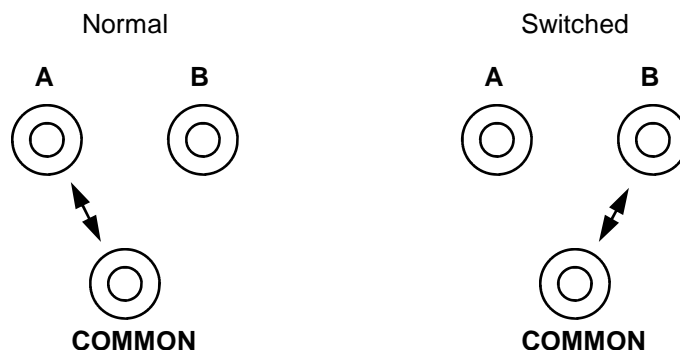
Off Isolation: -54db (-66db in series)

Control Frequency: 1khz maximum

Control Switching Threshold: 3V

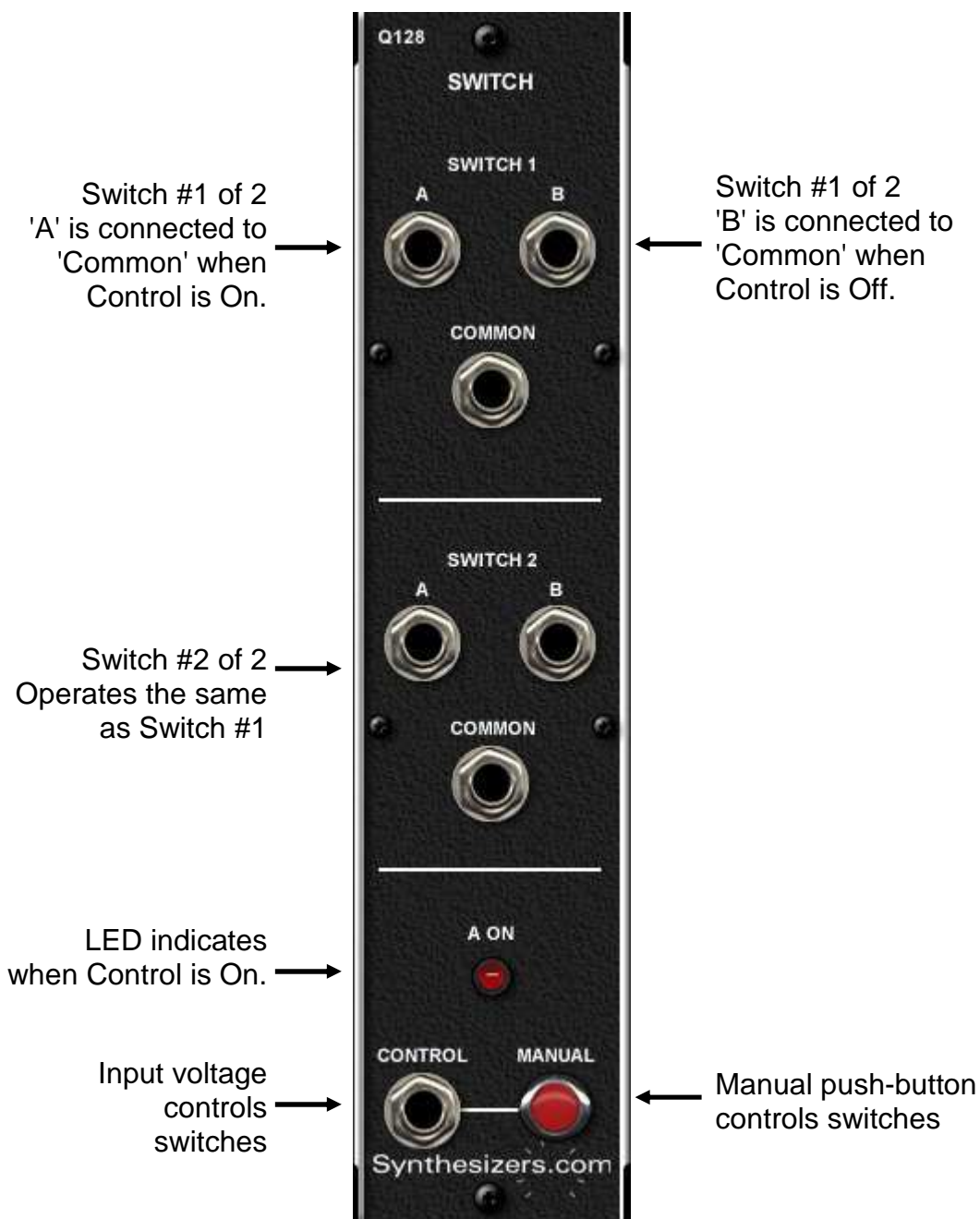
Power: +15V@2ma, -15V@2ma, +5@10ma.

Operation



Q128 Switch

Aug 2014



Q128 Switch

Aug 2014

Usage and Patch Tips

Basics

The Q128 contains 2 single pole double throw switches which are controlled together making a double pole double throw switch. The most common use of the switch is to route signals to various places under control of an oscillator. A simple On-Off function can also be performed by ignoring the B connector. Control of the switch can come from any voltage source including an oscillator, Keyboard Gate, sequencer, etc.

Crossing Two Signals

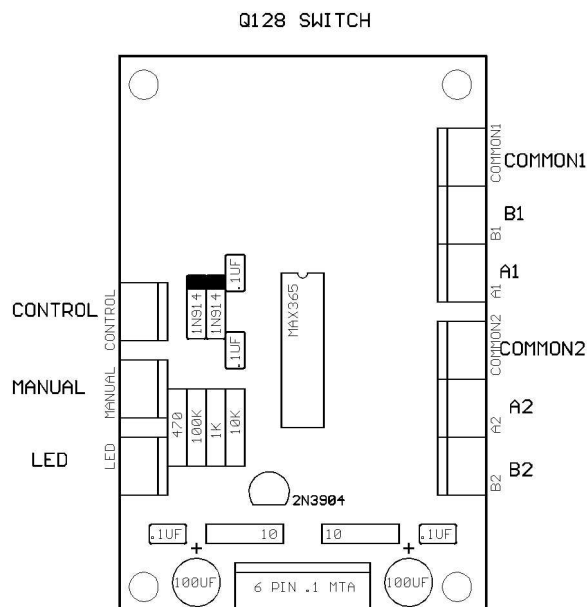
Two signals can be crossed by patching them into the common connectors, then criss-crossing A and B signals, then taking one output from A and one from B. When switched, the 2 signals will be crossed.

Calibration and Testing

No calibration is required for this module.

1. Apply power to the module. The LED should be ON.
2. Pressing the Manual control button should cause the LED to turn OFF.
3. Apply a 1khz +/-5volt waveform to the Common connector in the top section.
4. The signal should be present at the A connector that section.
5. Press the Manual control button and the signal should not be present at A, but should be present at B.
6. Apply a 1hz +/-5volt square wave to the Control connector and see that the signal moves from A to B.
7. Do this test on the bottom section also.

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.