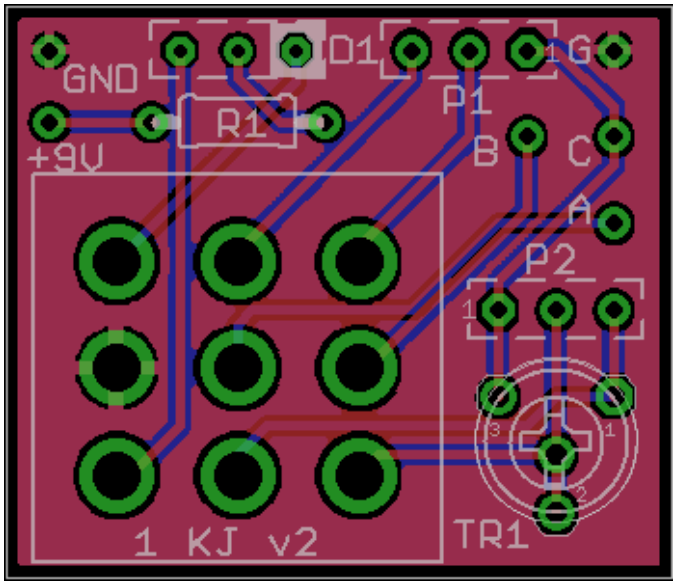
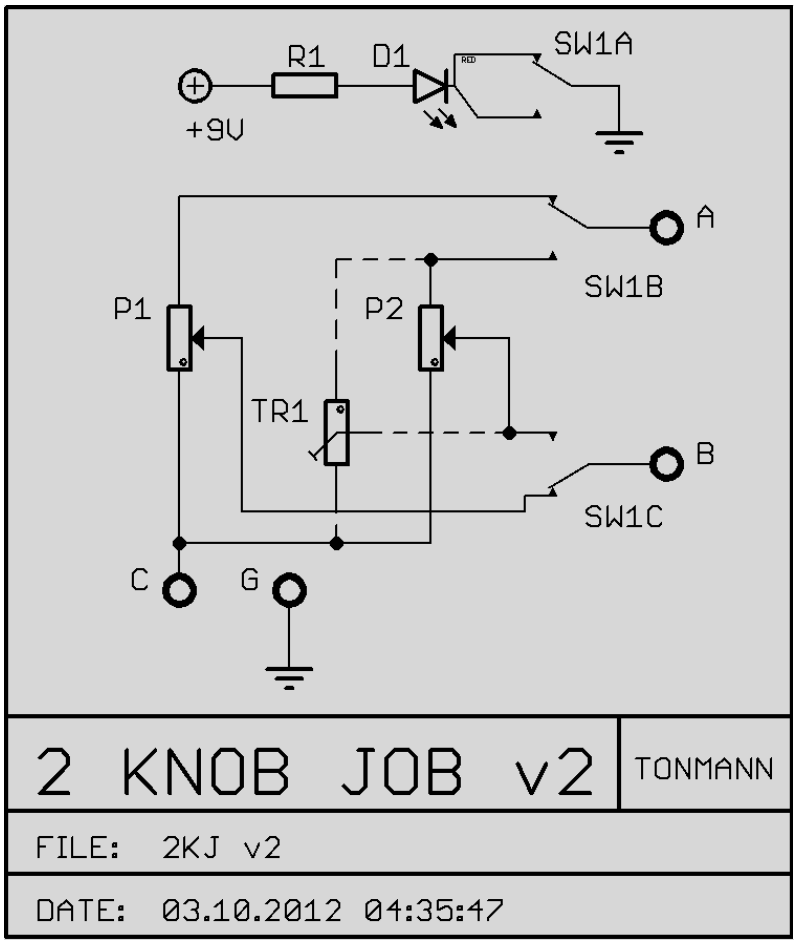
2 KNOB JOB v2

Board Dimensions (W x H) 1.15” x 0.99” ca. 29.2 mm x 25mm



The above image can be downloaded from
http://i647.photobucket.com/albums/uu198/tonmann/GuitarPCB%20Boards/2KJv2Layout.png
Printing at 300dpi will assist you in your enclosure layout



The idea of the 2KJ is to be able to switch between two independent pot settings on an effects pedal. Primarily with live playing in mind this is a useful tool if you need to switch quickly between two different settings – in the middle of a song for example

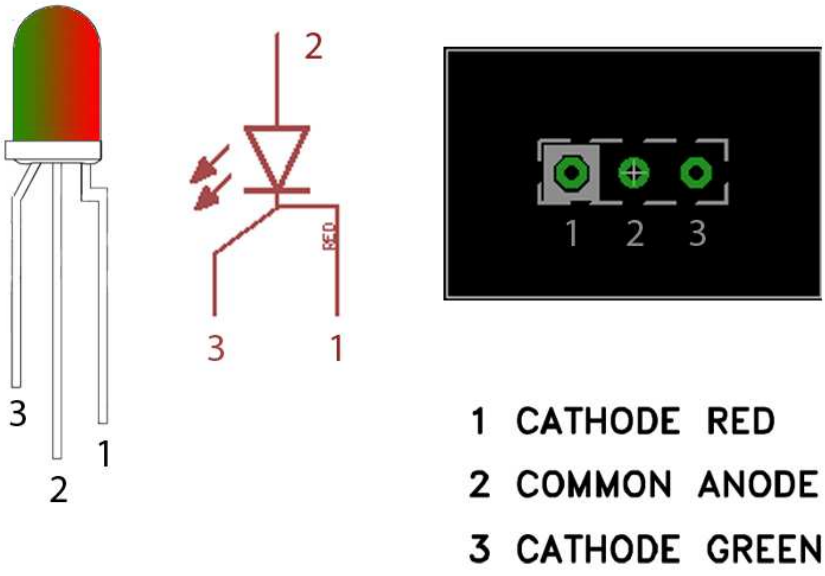
A typical use is as two volume pots, one pot is set to, let's say, give a unity gain output and the other pot is set to give a volume boost. The circuit is not confined to being used as two volume pots, the circuit can be utilized for gain, drive, tone, LFO speed pots etc.

Since there are so few components I won't do a BOM, each component should become clear as I go through the build instructions.

The value of the R1, the CLR (Current Limiting Resistor) is not critical. A value of 3k3 is suggested as this offers a good trade-off between LED brightness and current drawn. Choose values between 2k (brighter, more current) and 4k7 (dimmer, less current) according to taste.

STATUS LED

D1 is a common anode bi-colour LED



The diagram above shows the pin-out, schematic symbol and pad connection for a common anode LED.

The pin-out for the bi-colour LED is as follows:

1st Colour Cathode 90 degree bend in the lead
Common Anode Middle lead
2nd Colour Cathode 45 degree bend in the lead

The pad for lead 1 on the circuit board is marked with a white box.

When connected correctly the LED will light red when P1 is engaged and green when P2 /TR1 is engaged.

If you wish to use a standard LED, connect the anode to the middle pad and the cathode to the right pad to show P1 engaged or to the left pad to show P2/TR1 engaged.

The value of the pots is, of course, dependent on the main circuit board. Use values according to each individual circuit.

A trim pot (TR1) has been included as an alternative to the second pot (P2), **Do not install both P2 and TR1.**

The trim pot is useful if there isn't enough space on the enclosure for the second pot or in situations where you would like to "set and forget" a basic setting – these include unity output level (the output is at the same level as the bypassed signal), minimum gain setting, flat frequency response for a tone control etc.

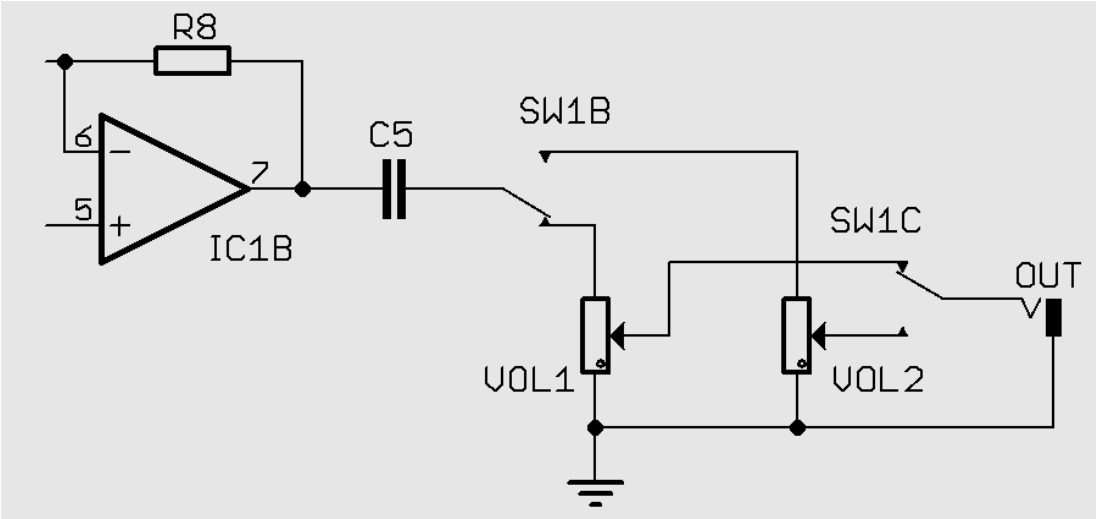
WIRING

The standard wiring between the 2KJ and the main circuit board is simple:

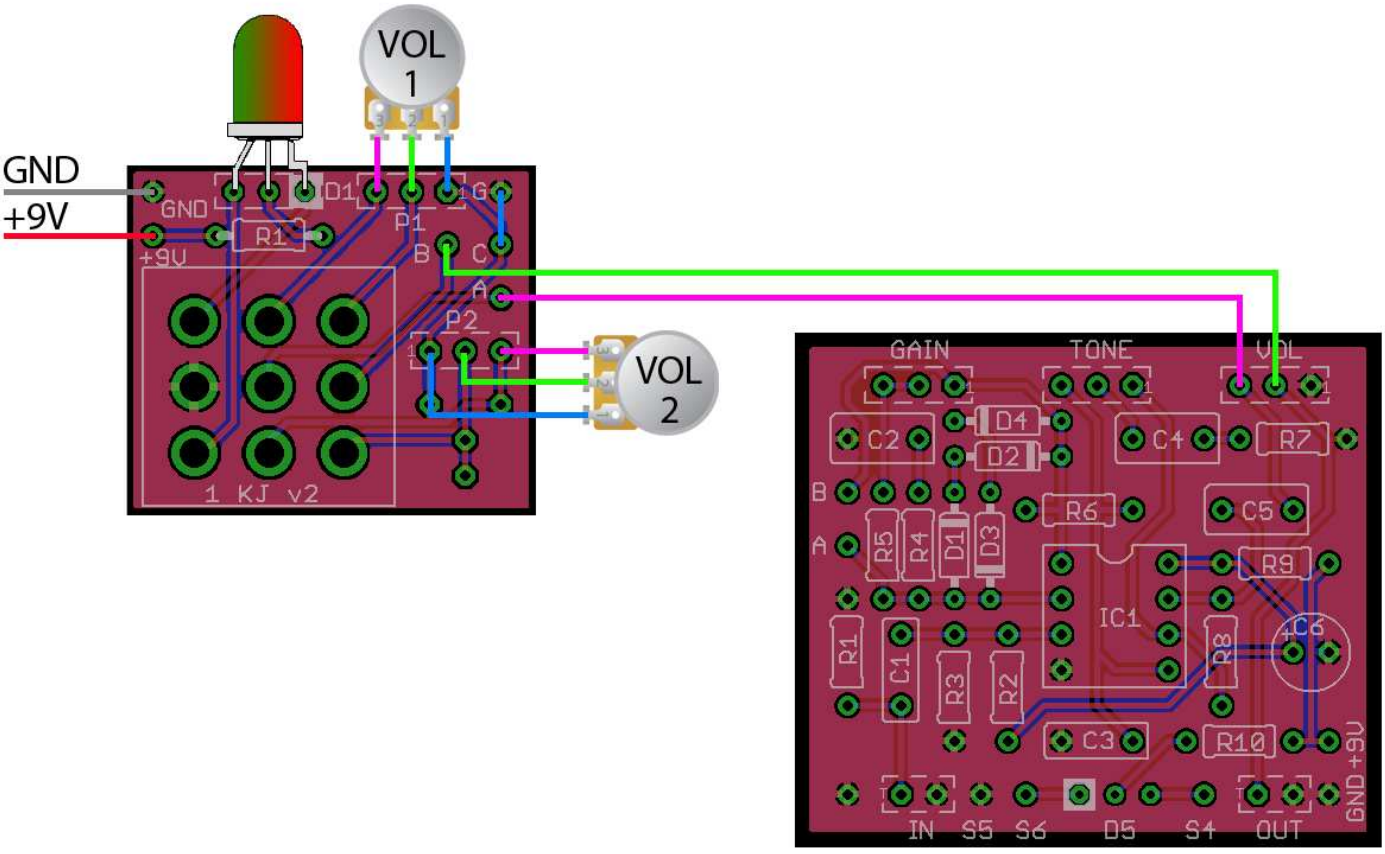
2KJ	Circuit Board Pot Pad
A	3
B	2
C	1

There are a few situations where you can save on some wiring as shown below. If you are in doubt you can always run three wires between the 2KJ and the main circuit board as detailed above.

VOLUME POT

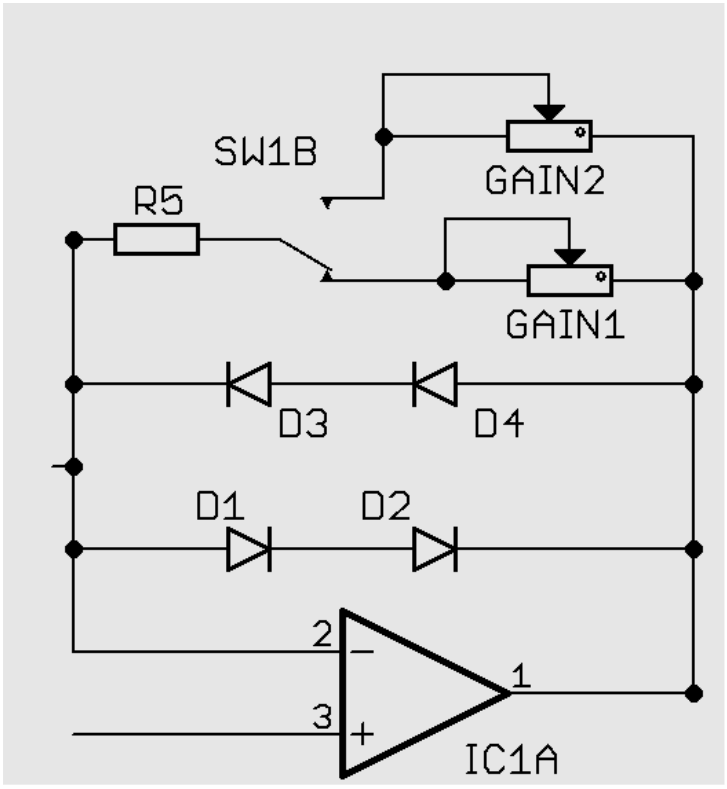


The diagram above shows the 2KJ being used as a volume pot at the output of the new Aeon Overdrive v2 circuit.



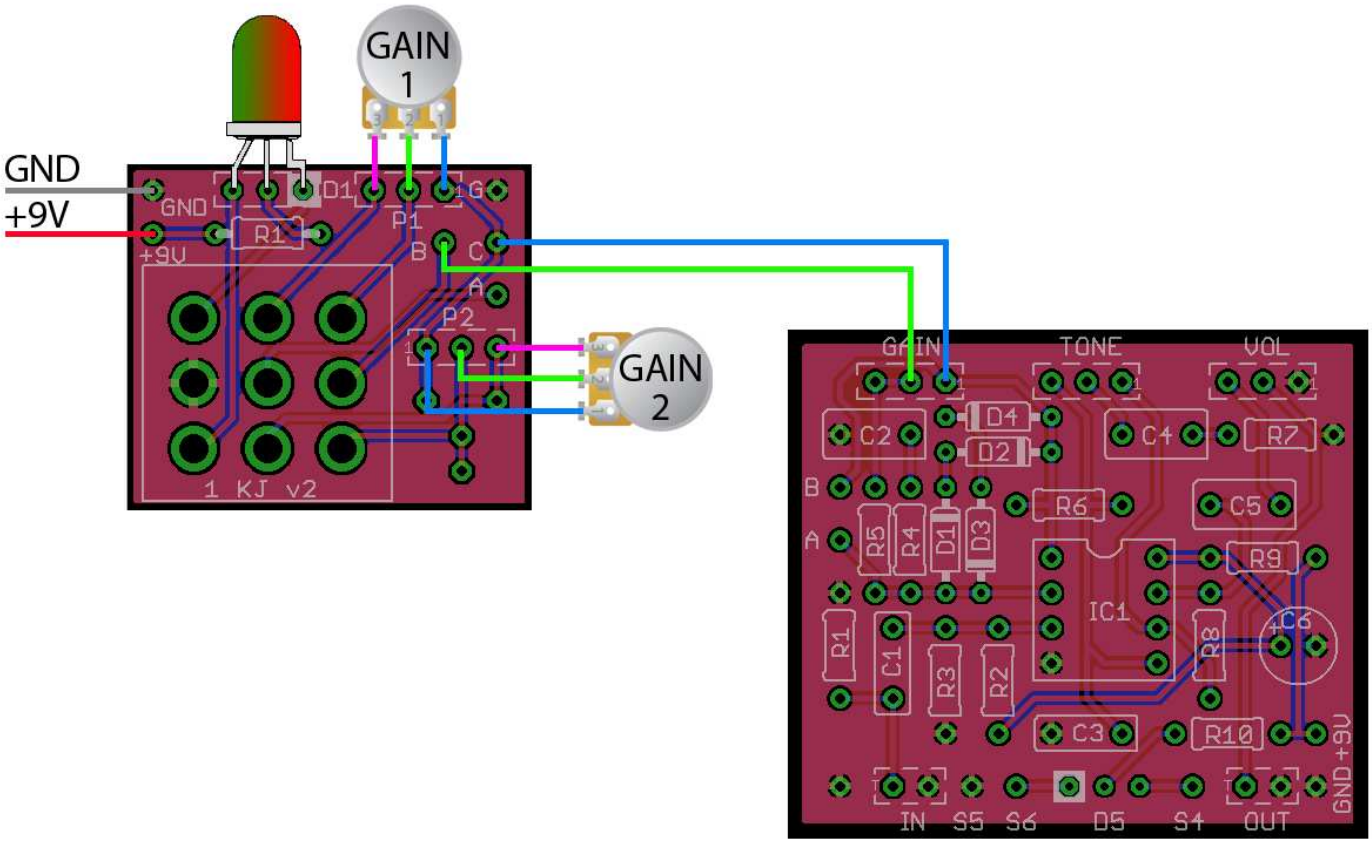
Looking at the last schematic, lug 1 of the volume pots are connected to ground. Although you could run a wire between pad C and pad 1 of the Volume pot, it is easier to use the ground pad G on the 2KJ; run a jumper between pads C and G.

GAIN POT

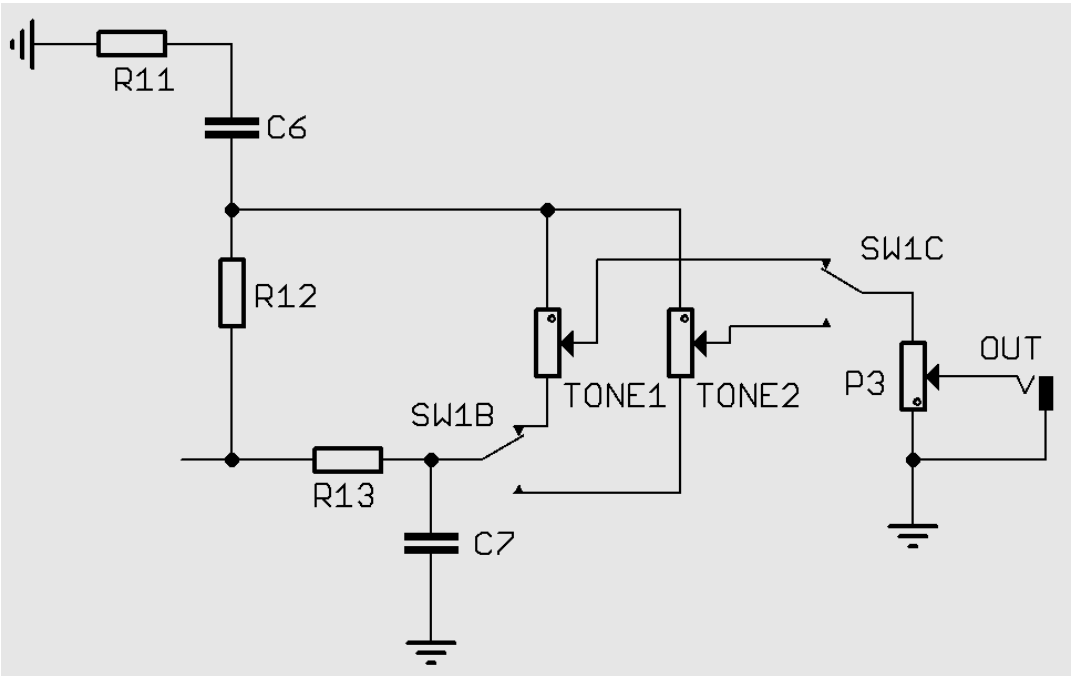


The diagram above shows the 2KJ being used as a Gain pot at the op amp stage of the new Aeon Overdrive v2 circuit.

Sometimes confusing for beginners; in the above diagram only two of the three pot lugs are really being used, since lug 3 is directly connected to lug 2 we can ignore the wire between pad A and pad 3 of the Gain Pot and just run two wires between the 2KJ and the Aeon Overdrive.



BLEND POT



The diagram above shows the 2KJ being used as a Blend pot at the tone filter stage of the new Hot Chilicon v2 circuit.

Notice that all three lugs are used separately for a Blend pot; in this instance all three wires between the 2KJ and the main circuit board must be installed.