

**ALM-009**  
**'Tangle Quartet'**  
**- Operation Manual -**



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# Introduction

'Tangle Quartet' is a high quality quad linear voltage controlled amplifier (VCA) providing individual level control of 4 signal inputs with both individual outputs and a combined 'mix' output (for non patched outputs) . Control signal inputs and associated attenuation controls allow for voltage control of signal levels. Control inputs are normalised to 5v thus providing manual mix control in the absence of control signals.

Feature list;

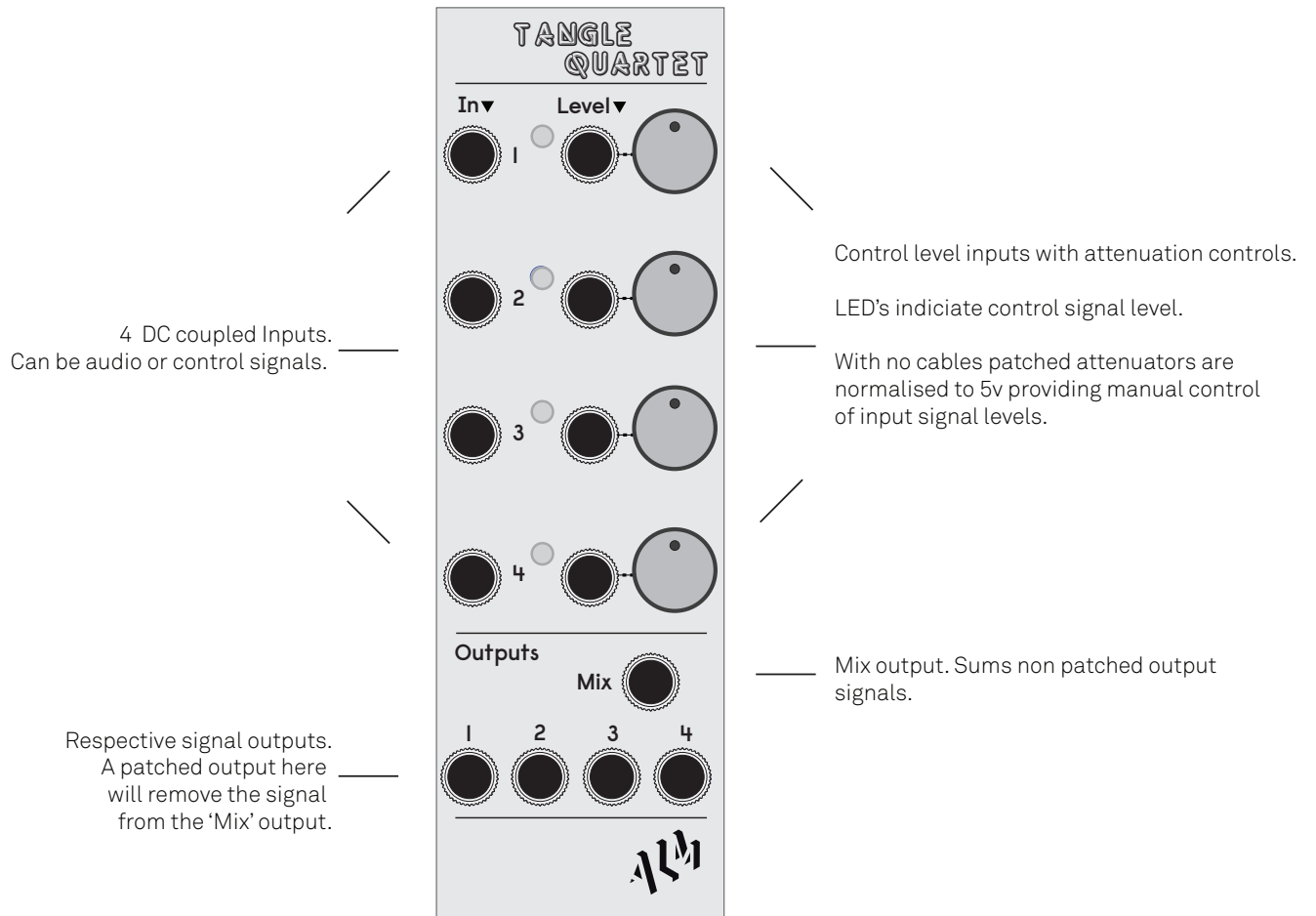
- 4 high quality clean bleed free linear VCA's in a compact 8hp.
- Utilises 2164 VCA IC's for high performance with low noise and low signal distortion.
- DC coupled inputs and non inverting outputs to support both audio and non audio signals.
- Normalised attenuation controls allow for manual mixer like operation with no control signal patched.
- Combined mix and individual outputs.
- Reverse polarity protection.
- Skiff friendly.
- Designed and Made in the UK.

## Technical Specifications

- Supply: +/-12V
- Current Draw: ~80ma
- Size: 8 HP
- Depth: 32mm (including power header)

# Core Operation

## Panel Layout



## General Usage

Audio or other signals are patched into any of the four inputs on the left side of the module. Each has an associated output at the lower part of the module - of which the level is set via the relevant control inputs and knobs on the right side of the module.

Each control signal can be attenuated with the associated control knob. With a +5v control signal and the attenuator knob turned fully CW the input signal is given unity gain (1:1). Reducing either the input control voltage level or turning the control knob CCW will reduce the gain lowering the output signal level. With a 0V (or less) control signal or the control knob turned fully CCW no input signal will be present at the output - it is fully attenuated. Signals beyond 5v will amplify the associated input signal. Each LED indicates the current control signal level post the attenuation control.

Each control input is normalised to +5v with no cable patched - this allows for manual control of input signal levels via just the control knob. This allows for the module to be used more like a regular mixer or attenuator.

As well as each input having an associated output there is also a mix output which combines all inputs which don't already have a patched output - i.e there individual output is not used.

# Limited Warranty

From the date of manufacture this device is guaranteed for a period of 2 years against any manufacturing or material defects. Any such defects will be repaired or replaced at the discretion of ALM. This does not apply to;

- Physical damage arising from mistreating (i.e. dropping, submerging etc).
- Damage caused by incorrect power connections.
- Overexposure to heat or direct sunlight.
- Damage caused by inappropriate or mis-use.
- Use of incorrect or non official firmware

No responsibility is implied or accepted for harm to person or apparatus caused through operation of this product.

By using this product you agree to these terms.

# Support

For the latest news, additional info, downloads and firmware updates please visit the ALM website at <http://busycircuits.com> and follow @busycircuits on twitter.

Please send any questions or comments to [info@busycircuits.com](mailto:info@busycircuits.com)

