# VC ARPEGGIATOR V3.1 Quick Start & Reference Guide 2015

In this Quick Reference I will let you know what each control and jack does for this module.

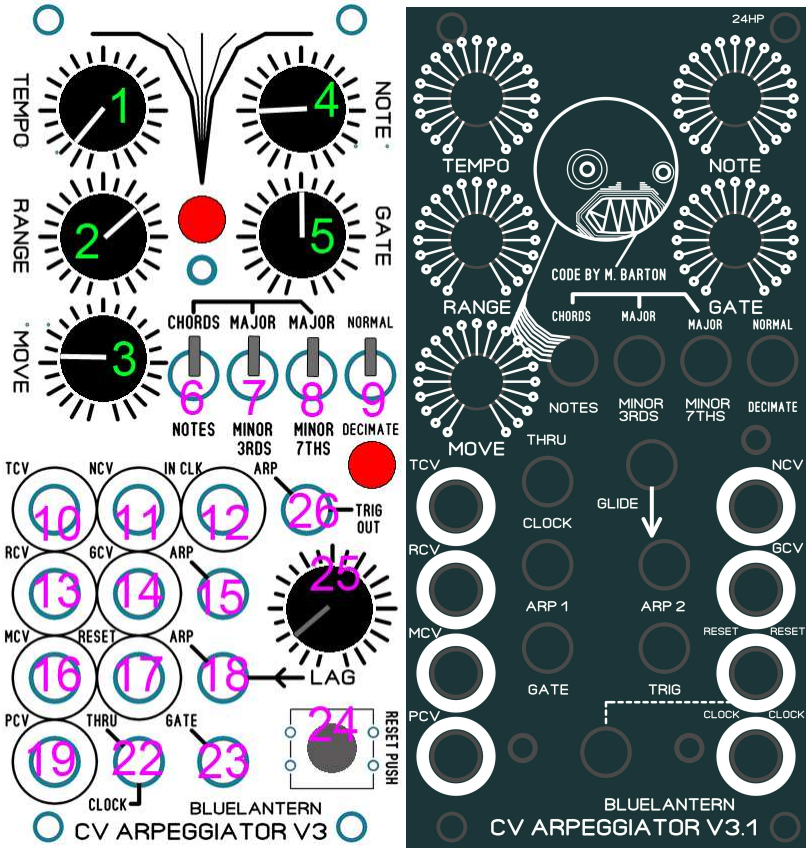
Here is a picture of the module so that you know which version this quick reference is for.


This module uses a pic chip from Barton Musical Circuits. http://www.bartonmusicalcircuits.com/

His project is called BMC 001 - SIMPLE CV QUANTIZER.

On the Blue Lantern adaptation I made every parameter voltage controllable and added a Lag function on one of the outputs. The other output has a unique 'Decimator' effect that you can select by toggle switch.

The following page will describe every jack and control knob found on the module.




Here are version 3.0 and v3.1 next to each other. The only change is some re-arranging of the jacks.

1. Tempo Knob : this controls the rate of the internal clock. When a external clock is connected to the 'in clk' jack (#12) the Tempo knob becomes a clock divider. In clock divider mode turn the knob fully counter clockwise to have it on X1. It is easier to start like this in divider mode. Use the LED located in the middle to see the division. Use the LED right below the switches to see the rate of the incoming clock on jack #12.
2. Range Knob : this sets the octave range of the arpeggio. When the knob is set fully clockwise the arpeggio will go through 5 octaves. You can select from 1-5 octaves.
3. Movement Knob: this controls how the generator moves through the note set. I made a table to show you the movements. Think of this as the pattern selector: Up down, alternating, random, 1 shot and hold, etc.
4. Note Knob: this controls the musical notes contained in the arpeggio. Switches # 6, 7, & 8 are used in conjuction with this knob control.
5. Gate Knob: this controls the gate or pulse width length. Use the LED in the middle to see the length. When the knob is turn counter clockwise you shorten the pulse.
6. Chord Selector Switch: Use this to toggle between the default notes or the chords: 3rds and 7ths (majors and minors).
7. 3rds Switch: this toggles between major or minor for the 3rds.
8. 7ths Switch: this toggles between major or minor for the 7ths.
9. Decimate switch: use this to turn on some digital aliasing for output jack 'arp' #15. This creates a glassy, ringmod kind of effect when a vco is patched from jack #15 to the vco CV input.
10. TCV : Tempo CV. This is where you can control voltage the Tempo knob.
11. NCV : Note CV. This is where you can control voltage the Note Knob.
12. IN CLK : This jack is used for external clock signals. You can use an external LFO here. It is best to have the tempo knob set fully counter clockwise when you first plug in to this jack.

13. RCV : Range CV. This jack is used to control voltage the Range knob.
14. GCV : Gate CV. This is used to control the Pulse width of the gate.
15. ARP jack output number one. This jack does not use the LAG circuit, only the decimate effect.
16. MCV : Movement CV. This jack is used to control voltage the Move knob.
17. Reset Jack: this is where you can patch a gate from an external module like a midi to cv converter or sequencer. This will reset the arpeggio pattern.
18. ARP jack output number two. This jack is not effected if the Decimate toggle switch is set to on. The LAG or portamento circuit is tied to this output.
19. PCV: Pitch CV input. Use this jack to shift the arpeggio sequence or 'transpose'. You can patch a midi to cv here and use a midi keyboard to 'shift the arpeggio'. Remember you are transposing the pattern only.

22. Thru Clock: This jack will pass through the clock if patched to the 'in clk' jack.

23. Gate Ouput jack. Use this to trigger and envelope generator for example.

24. Manual Reset button. Use this to manually reset the arpeggio pattern. Very useful.

25. Lag Knob. This is a note Glide or Lag Generator. It is only used for ARP out number two.

26. ARP TRIG OUT. This outputs short pulses to the speed of the middle LED. You can use this as a clock ouput from the internal clock generator in this module.

Take from the Barton Musical Circuits PDF. This is about the Movement knob:

**Movement** *controls how the note generator moves through the note set; whether to generate the top or bottom note of a note set after a reset event and how to react when reaching the bottom or top. It is also has a "random" function which moves through a note set at random. The following table displays the various modes of movement available at what voltages on pin 18.*

| Voltage | Name | On Reset Goes to | At End of Note set |
|---|---|---|---|
| *0-.7V* | *Up/Down* | *Bottom of note set* | *Reverses direction* |
| *.8-1.4V* | *Up Repeating* | *Bottom of note set* | *Goes back to bottom* |
| *1.5-2.1V* | *Down Repeating* | *Top of note set* | *Goes back to top of note set* |
| *2.2-2.8V* | *Pendulum* | *Bottom of note set* | *Holds note for 1 extra clock event at end, then reverses direction, on both bottom and top.* |
| *2.9-3.5V* | *Up and stay* | *Bottom of note set* | *Holds note until reset* |
| *3.6-4.2V* | *Down and stay* | *Top of note set* | *Holds note until reset.* |
| *4.2-5V* | *Random* | *Random note* | *n/a* |